BIRMINGHAM CITY COMMISSION AGENDA
MAY 22, 2023
MUNICIPAL BUILDING, 151 MARTIN
7:30 P.M.

I. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Therese Longe, Mayor

II. ROLL CALL

Alexandria Bingham, City Clerk

III. PROCLAMATIONS, CONGRATULATORY RESOLUTIONS, AWARDS, APPOINTMENTS, RESIGNATIONS AND CONFIRMATIONS, ADMINISTRATION OF OATHS, INTRODUCTION OF GUESTS AND ANNOUNCEMENTS.

ANNOUNCEMENTS

- Proclamation declaring the first Friday in June to be National Gun Violence Awareness Day
- Thank you for joining us at the DPS Open House on May 13th! Your presence made it a day of family fun and community engagement. We appreciate your support, enthusiasm, and interest in meeting our City staff, exploring equipment displays, and learning from informational exhibits. A special thanks to all city staff and volunteers who helped making this event a resounding success.
- Thank you to all the parade participants, vendors, and visitors who took part in the Celebrate Birmingham Parade and Party in Shain Park. We are grateful to the sponsors of the event and the multiple City departments and organizations that worked together to present this family-focused gathering. For a glimpse into the memorable moments, please visit www.bhamgov.org/parade to view photos and videos.

APPOINTMENTS

A. Advisory Parking Committee
   1. Michelle Moody

To appoint _____ to the Advisory Parking Committee as a regular member who is a resident to serve the remainder of a three-year term to expire September 1, 2025.

To appoint _____ to the Advisory Parking Committee as a regular member who is large retail owner to serve the remainder of a three-year term to expire September 4, 2023.

B. Employee Recognition
   1. Gavin Carrick, IT Assistant
   2. Mazumder Abdullaah, IT Assistant

IV. OPEN TO THE PUBLIC FOR MATTERS NOT ON THE AGENDA

V.	CONSENT AGENDA
	All items listed on the consent agenda are considered to be routine and will be enacted by one motion and approved by a roll call vote. There will be no separate discussion of the items unless a Commissioner or citizen so requests, in which event the item will be removed from the general order of business and considered under the last item of new business.

A. Resolution to approve the City Commission Budget Hearing meeting minutes of April 29, 2023.

B. Resolution to approve the City Commission workshop meeting minutes of May 8, 2023.

C. Resolution to approve the City Commission regular meeting minutes of May 8, 2023.

D. Resolution to approve the warrant list, including Automated Clearing House payments, dated May 11, 2023 in the amount of $1,176,829.18.

E. Resolution to approve the warrant list, including Automated Clearing House payments, dated May 17, 2023 in the amount of $1,326,509.93.

F. Resolution to approve a special event permit as requested by the Schools Offer Support to hold the Strides for SOS Race on October 1, 2023 contingent upon compliance with all permit and insurance requirements and payment of all fees and, further pursuant to any minor modifications that may be deemed necessary by administrative staff at the time of the event, or event cancellation that may be deemed necessary by administrative staff, leading up to or at the time of the event.

G. Resolution to opt into Oakland County's Urban County Community Development Block Grant (CDBG) programs for the years 2024, 2025 and 2026. Furthermore, to remain in Oakland County's Urban County Community Development programs, which shall be automatically renewed in successive three-year qualification periods of time, or until such time that it is in the best interest of the City to terminate the Cooperative Agreement.

H. Resolution to approve the deaccession and disposal of 87 redundant and damaged school yearbooks from the Birmingham Museum's permanent collection in accordance with the Birmingham Museum Collection Policy.

I. Resolution to approve the purchase of (3) 2023 GMC Sierra 1500 Trucks from Todd Wenzel Buick GMC of Westland, located at 35100 FORD RD, WESTLAND, MI 48185, through State of Michigan MiDeal Contract # 071B7700184, MiDeal Spec # 0073-4WDL, in the amount not to exceed $45,301.70 per truck for total amount not to exceed $135,905.10. In addition, to authorize the Mayor and City Clerk to sign the agreement on behalf of the City. Funds for this purchase are available in the FY 2022-2023 Auto Equipment Fund account #661.0-441.006.971.0100.

J. Resolution to award the project to ProPump & Controls, Inc. in the amount not to exceed $24,583.05. In addition, to authorize the Mayor and City Clerk to sign the agreement on

behalf of the City. Funding for this project is available in account #584.2-753.001-981.0100.

K. Resolution to approve an agreement with McKenna for the preparation of the City's Parks and Recreation Master Plan update in the amount not to exceed $68,500. In addition, to authorize the Mayor and City Clerk to sign the agreement on behalf of the City. Funding for this project has been budgeted in account # 101.0-751.000-811.0000.

L. Resolution awarding the contract to RAM Construction for the proposed work at the North Old Woodward Parking Structure in the amount of $803,286.00; further, to authorize the Mayor and City Clerk to sign the contract on behalf of the city.

VI. UNFINISHED BUSINESS

A. Public Hearing – Proposed Amendments to Chapter 126 (Zoning) – Outdoor Dining

1. Motion adopting a resolution adopting an ordinance to amend Chapter 126 (Zoning), Article 3, Section 3.04, Article 3, Section 3.16, Article 4, Section 4.44, and Article 9, Section 9.02 to provide clear and enforceable outdoor dining standards.

   AND

   Motion adopting an ordinance to amend Chapter 98 (Streets, Sidewalks and Other Public Places), Articles 2 and 3 to add language for outdoor dining facilities on public property.

VII. NEW BUSINESS

A. Public Hearing – Confirmation of Special Assessment District Roll 904 Brown Street Paving – Sidewalk and Streetscape

1. WHEREAS, Special Assessment Roll, designated Roll No. 904, has been heretofore prepared for collection, and

   WHEREAS, notice was given pursuant to Section 94-7 of the City Code, to each owner or party-in-interest of property to be assessed, and

   WHEREAS, the Commission has deemed it practicable to cause payment of the cost thereof to be made after the time of construction and

   WHEREAS, The Commission Resolution 05-104-23 provided it would meet this 22nd day of May, 2023 for the sole purpose of reviewing the assessment roll, and

   WHEREAS, at said hearing held this May 22, 2023, all those property owners or their representatives present have been given an opportunity to be heard specifically concerning costs appearing in said special assessment roll,

   NOW, THEREFORE, BE IT RESOLVED, that Special Assessment Roll No. 904 be in all things ratified and confirmed, and that the City Clerk be and is hereby instructed to endorse said roll, showing the date of confirmation thereof, and

to certify said assessment roll to the City Treasurer for collection at or near the time of construction of the improvement.

BE IT FURTHER RESOLVED, that special assessment shall be payable in ten (10) payments as provided in Section 94-10 of the Code of the City of Birmingham, with an annual interest rate of nine and one quarter percent (9.25%) on all unpaid installments.

Parcel ID/Sidwell Number	Street Address	SAD Assessment
08-19-36-208-015	325 S Old Woodward	$ 44,666.31
08-19-36-208-016	355 S Old Woodward	$ 24,899.56
08-19-36-208-004	34745 Woodward	$ 86,244.20
08-19-36-206-021	255 S Old Woodward	$ 35,820.42
08-19-36-207-010	34901 Woodward	$ 57,520.88
08-19-36-207-014	34901 Woodward Ave #200	$ 1,043.34
08-19-36-207-015	34901 Woodward Ave #3	$ 1,400.03
08-19-36-206-023	Alley	$ -
08-19-36-206-024	Peabody Parking Structure	$ -
		$ 251,594.74

B. Resolution to approve the construction project budget and award Brown Street Paving Project #5-23 (P) to V.I.L. Construction in the amount of $1,832,529.69 and not to exceed $1,924,156.18. In addition, to authorize the Mayor and City Clark to sign the agreement on behalf of the City after the review of V.I.L. Construction's insurance and bonds, contingent upon execution of the agreement and meeting all insurance and bonding requirements. Funding for this project has been budgeted in the following account:

Fund Account	Fund ID Number	Project Award	5% Contingencies	Total
Major Street Fund	202.0-449.001-981.0100	$705,388.34	$35,269.42	$740,657.75
Sidewalk Fund	101.0-444.000-981.0100	$567,178.95	$28,358.95	$595,537.90
Sewer Fund	590.0-537.000-981.0100	$551,152.91	$27,557.65	$578,710.55
Water Fund	591.0-544.000-981.0100	$8,809.50	$440.49	$9,249.99

To approve the appropriation and amendment of the fiscal year 2022/2023 budget as follows: Major Street Fund:

Revenues:		
202.0-000.000-400.0000	Draw from Fund Balance	$740,660
Total Revenue		$740,660
Expenditures:		
202.0-449.001-981.0100	Public Improvement	$740,660
Total Expenses		$740,660

General Fund:

Revenues:		
101.0-000.000-400.0000	Draw from Fund Balance	$595,540
Total Revenue		$595,540
Expenditures:		
101.0-449.001-981.0100	Public Improvement - Sidewalks	$595,540
Total Expenses		$595,540

Sewer Fund:

Revenues:		
590.0-000.000-400.0000	Draw from Net Position	$578,710
Total Revenue		$578,710
Expenditures:		
590.0-537.000-981.0100	Public Improvement	$578,710
Total Expenses		$578,710

Water Fund: Revenues:

590.0-000.000-400.0000	Draw from Net Position	$9,250
Total Revenue		$9,250
Expenditures:		
590.0-537.000-981.0100	Public Improvement	$9,250
Total Expenses		$9,250

C. Public Hearing – The Birmingham Plan 2040

1. Resolution to adopt and approve in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map, as recommended by the Planning Board.

D. Resolution to amend the Schedule of Fees, Charges, Bonds and Insurance for changes in water, sewer, storm water, industrial surcharge, and industrial waste control charge rates effective for bills with read dates on or after July 1, 2023 as recommended in the attached Water/Sewer Rate Changes Report for 2023-2024 by Finance Director Mark Gerber dated May 11, 2023 and approve the appropriation and amendment to the 2023-2034 Sewage Disposal Fund as follows:

Revenues:		
590.0-000.000-642.0003	Charges for Services-Storm Water	$174,740.00
Expenses:		
590.0-537.000-927.0100	Public Works-Acacia RTB	$24,940.00
590.0-537.000-927.0200	Public Works-Birmingham RTB	$45,440.00
590.0-537.000-927.0300	Public Works-Bloomfield RTB	$104,360.00
Total Expenses:		$174,740.00

E. Commission Items for Future Discussion. A motion is required to bring up the item for future discussion at the next reasonable agenda, no discussion on the topic will happen tonight.

F. Commission discussion on items from a prior meeting.

G. Motion adopting a resolution to meet in closed session to discuss the potential purchase of real property pursuant to MCL § 15.268 Sec. 8(d) of the Open Meetings Act.

(A roll call vote is required and the vote must be approved by a 2/3 majority of the commission. The commission will adjourn to closed session after all other business has been addressed in open session and reconvene to open session, after the closed session, for purposes of taking formal action resulting from the closed session and for purposes of adjourning the meeting.)

VIII. REMOVED FROM CONSENT AGENDA

IX. COMMUNICATIONS

X. REPORTS

A. Commissioner Reports
   1. Notice of Intention to Appoint to the Retirement Board
B. Commissioner Comments
C. Advisory Boards, Committees, Commissions' Reports and Agendas
D. Legislation
E. City Staff
   1. City Manager's Report
   2. Letter from Mary Kucharek regarding the Board of Ethics Advisory Opinion Concerning Commissioner Host
      i. 2023-01 Opinion Robb and Schrot
      ii. 2023-01 Opinion Fierro-Share

INFORMATION ONLY

XI. ADJOURN

Should you wish to participate in this meeting, you are invited to attend the meeting in person or virtually through ZOOM: **https://zoom.us/j/655079760** **Meeting ID: 655 079 760**
You may also present your written statement to the City Commission, City of Birmingham, 151 Martin Street, P.O. Box 3001, Birmingham, Michigan 48012-3001 prior to the hearing.

NOTICE: Individuals requiring accommodations, such as mobility, visual, hearing, interpreter or other assistance, for effective participation in this meeting should contact the City Clerk's Office at (248) 530-1880 (voice), or (248) 644-5115 (TDD) at least one day in advance to request mobility, visual, hearing or other assistance.
Las personas que requieren alojamiento, tales como servicios de interpretación, la participación efectiva en esta reunión deben ponerse en contacto con la Oficina del Secretario Municipal al (248) 530-1880 por lo menos el día antes de la reunión pública. (Title VI of the Civil Rights Act of 1964).

BIRMINGHAM
A WALKABLE CITY

PROCLAMATION

DECLARING THE FIRST FRIDAY IN JUNE TO BE NATIONAL GUN VIOLENCE AWARENESS DAY

This proclamation declares the first Friday in June to be National Gun Violence Awareness Day in the City of Birmingham to honor and remember all victims and survivors of gun violence and to declare that we as a country must do more to end this public health crisis.

WHEREAS, every day, more than 120 Americans are killed by gun violence and more than 200 are shot and wounded, with an average of more than 17,000 gun homicides every year; and

WHEREAS, Americans are 26 times more likely to die by gun homicide than people in other high-income countries; and

WHEREAS, Michigan has 1,382 gun deaths every year, with a rate of 13.7 deaths per 100,000 people, a crisis that costs the state $16.8 billion each year, of which $380.5 million is paid by taxpayers. Michigan has the 25th highest rate of gun deaths in the US; and

WHEREAS, gun homicides and assaults are concentrated in cities, with more than half of all firearm related gun deaths in the nation occurring in 127 cities; and

WHEREAS, cities across the nation, including in the City of Birmingham, are working to end the senseless violence with evidence-based solutions; and

WHEREAS, protecting public safety in the communities they serve is all mayors' highest responsibility; and

WHEREAS, support for the Second Amendment rights of law-abiding citizens goes hand-in-hand with keeping guns away from people with dangerous histories; and

WHEREAS, mayors and law enforcement officers —in partnership with local violence intervention activists and resources —know their communities best, are the most familiar with local criminal activity and how to address it, and are best positioned to understand how to keep their citizens safe; and

WHEREAS, gun violence prevention is more important than ever as we see an increase in firearm homicides, and nonfatal shootings across the country, increased calls to domestic violence hotlines, and an increase in city gun violence;

WHEREAS, in January 2013, Hadiya Pendleton was tragically shot and killed at age 15; and on June 2, 2023 to recognize the 26th birthday of Hadiya Pendleton (born: June 2, 1997), people across the United States will recognize National Gun Violence Awareness Day and wear orange in tribute to -
(1) Hadiya Pendleton and other victims of gun violence; and
(2) the loved ones of those victims; and

WHEREAS, the idea was inspired by a group of Hadiya's friends, who asked their classmates to commemorate her life by wearing orange; they chose this color because hunters wear orange to announce themselves to other hunters when out in the woods, and orange is a color that symbolizes the value of human life; and

WHEREAS, anyone can join this campaign by pledging to wear orange on June 2nd, the first Friday in June in 2023, to help raise awareness about gun violence; and

WHEREAS, by wearing orange on June 2, 2023 Americans will raise awareness about gun violence and honor the lives of gun violence victims and survivors; and

WHEREAS, we renew our commitment to reduce gun violence and pledge to do all we can to keep firearms out of the hands of people who should not have access to them, and encourage responsible gun ownership to help keep our families and communities safe.

THEREFORE BE IT RESOLVED, that I, Mayor Therese Longe of the City of Birmingham declares the first Friday in June, June 2, 2023, to be National Gun Violence Awareness Day. I encourage all citizens to support their local communities' efforts to prevent the tragic effects of gun violence and to honor and value human lives.

On Behalf of the City Commission and the residents of Birmingham on this 22nd day of May, 2023.

Therese Longe, Mayor

BIRMINGHAM
A WALKABLE CITY

NOTICE OF INTENTION TO APPOINT TO THE ADVISORY PARKING COMMITTEE

At the regular meeting of Monday, May 22, 2023, the Birmingham City Commission intends to appoint to the Advisory Parking Committee one regular resident member to serve the remainder of a three-year term to expire September 1, 2025 and one large retail member to serve the remainder of a three-year term to expire September 4, 2023.

Interested citizens may submit an application available at the City Clerk's Office or online at www.bhamgov.org/boardopportunities. Applications must be submitted to the City Clerk's Office on or before noon on Wednesday, May 17, 2023. These documents will appear in the public agenda for the regular meeting at which time the City Commission will discuss recommendations, and may make nominations and voter on appointments.

Committee Duties

The Advisory Parking Committee shall provide guidance to the City Commission in the management of Birmingham's Auto Parking System. The Committee shall recognize parking requirements of the CBD and fairly assess the costs to users. It will provide for attractive, maintained and safe facilities.

Applicant(s) Presented For City Commission Consideration:

Applicant Name	**Qualifications** Majority of members shall be residents. Membership shall be as follows: (1) large retail; (1) small retail; (1) professional firm; (1) Birmingham Shopping District; (1) restaurant owner; (1) downtown employee representative; (1) residential; (2) members who do not qualify under any of the previous categories; (1) resident shopper. (2) alternate members may be appointed who own property, own a business or work in the parking assessment district.
Michelle Moody	Resident Shopper, Consultant

NOTE: All members of boards and commissions are subject to the provisions of City of Birmingham City Code Chapter 2, Article IX, Ethics and the filing of the Affidavit and Disclosure Statement.

SUGGESTED ACTION:

To appoint _____ to the Advisory Parking Committee as a regular member who is a resident to serve the remainder of a three-year term to expire September 1, 2025.

To appoint _____ to the Advisory Parking Committee as a regular member who is large retail owner to serve the remainder of a three-year term to expire September 4, 2023.

BIRMINGHAM
A WALKABLE CITY

OFFICE USE ONLY
Meets Requirements? Yes No

Will Attend / Unable to Attend

APPLICATION FOR CITY BOARD OR COMMITTEE

Thank you for your interest in serving on a Board or Committee. The purpose of this form is to provide the City Commission with basic information about applicants considered for appointment. NOTE: Completed applications are included in the City Commission agenda packets. The information included on this form is open to the public. All Board and Committee members are subject to the provisions of the Ethics Ordinance (Chapter 2, Article IX of the City Code).

Information on various Boards and Committees and a list of current openings can be found on the City website at www.bhamgov.org/boardopportunities.

(Please print clearly)

Board/Committee of Interest: Parking Committee

Specific Category/Vacancy on Board: Resident shopper (see back of this form for information)

Name: Michelle Moody

Phone: 313-850-8072

Residential Address: 957 Pleasant St

Email *: mmoody1@yahoo.com

Residential City, Zip: Birmingham Mi, 48009

Length of Residence: 12 years

Business Address: virtual

Occupation: Consultant

Business City, Zip: n.a.

Reason for Interest: Explain how your background and skills will enhance the board to which you have applied

I have deep experience in designing both products and services. Parking is an experience that has the potential to make a community more desireable or less so if its a poor experience.

List your related employment experience: I recently retired from Ford Motor Company after 34 years. My experiences is in product managment, experience design, business development and marketing.

List your related community activities: Elections Inspector

List your related educational experience: B.S. - Finance and M.S. - Marketing

To the best of your knowledge, do you or a member of your immediate family have any direct financial or business relationships with any supplier, service provider or contractor of the City of Birmingham from which you or they derive direct compensation or financial benefit? If yes, please explain: No

Do you currently have a relative serving on the board/committee to which you have applied? No

Are you an elector (registered voter) in the City of Birmingham? Yes

Michelle Moody
Signature of Applicant

May 10, 2023
Date

Return the completed and signed application form to: City of Birmingham, City Clerk's Office, 151 Martin, Birmingham, MI 48009 or by email to clerksoffice@bhamgov.org or by fax to 248.530.1080.

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Updated 3/24/2021

By providing your email to the City, you agree to receive news & notifications from the City. If you do not wish to receive these messages, you may unsubscribe at any time.

ADVISORY PARKING COMMITTEE

Resolution No. 8-882-84 - August 6, 1984. Amended by Resolution No. 9-989-84
September 4, 1984. Amended by Resolution No. 05-152-00 May 22, 2000.
Amended by Resolution No. 05-139-17 May 22, 2017.
Amended by Resolution No. 10-258-19, October 28, 2019.

Terms: Three years
Appointment requirements for regular members: The majority of the members shall be residents and membership shall be as follows:

Downtown commercial representatives - large retail - 1 member; small retail - 1 member; professional firm - 1 member; Birmingham Shopping District - 1 member; restaurant owner - 1 member; downtown employee representative - 1 member; residential - two members who do not qualify under any of the previous categories, and one resident shopper.

2 alternate members may be appointed who own property, own a business or work in the parking assessment district.

The Advisory Parking Committee shall provide guidance to the City Commission in the management of Birmingham's Auto Parking System. The committee shall recognize parking requirements of the CBD and fairly assess the costs to users. It will provide for attractive, maintained and safe facilities.

Last Name Home Address	First Name	Home Business E-Mail	Appointed	Term Expires
Arpin 410 Southfield Road Birmingham 48009	**James J.**	313-949-0252 *jjarpin@gmail.com*	5/9/2022 Resident/Engineer/Consultant	9/4/2024
Astrein 13125 Ludlow Huntington Woods 48070	**Richard**	(248) 399-4228 *richard@astreins.com*	12/9/2019 BSD member	9/4/2024
Clark 348 Ferndale Ave Birmingham 48009	**Lisa**	(248) 921-0099 *lisakrug21@gmail.com*	3/30/2015 Downtown employee member	9/4/2023

Last Name Home Address	First Name	Home Business E-Mail	Appointed	Term Expires
Cobb 2056 Dorchester Birmingham	**Kelly** 48009	(313)434-4413 *kellywcobb@gmail.com*	4/25/2022 Restaurant Owner	9/4/2023
Kozlowski 421 Madison St Birmingham	**Kevin** 48009	248-930-7485 *kevin.kozlowski@gmail.com*	8/29/2022 Resident Shopper	9/1/2025
Petcoff 463 Henley Birmingham	**Mary-Claire** 48009	(410)-991-1460 *mcp@wwrplaw.com*	12/21/2020 Alternate	9/4/2023
Silverman 1200 Latham Birmingham	**Lisa** 48009	248-642-3337 *lisas229@aol.com*	10/7/2019 Downtown Professional Firm Representative	9/1/2025
Vacant			Resident Member	9/1/2025
Vacant			Large Retail	9/4/2023
Vaitas 2633 Endsleigh Drive Bloomfield Village	**Algirdas** 48301	(248) 593-3177 *alvortho@aol.com*	11/13/2006 Small retail	9/4/2024
Yert 490 Park St. Birmingham	**Jennifer** 48009	617-308-0080 *sulesq@yahoo.com*	8/13/2018 Alternate (Downtown employee)	9/4/2023

ADVISORY PARKING COMMITTEE

PURPOSE: There is hereby established an Advisory Parking Committee to provide guidance to the Birmingham City Commission in the management of the Birmingham Auto Parking System, including street parking meters, that will: recognize parking requirements of the various interests in the Central Business District (CBD); fairly assess the costs of the parking system to users of the facility; create the least possible traffic impact on the CBD and the immediately abutting residential areas; provide for attractive, well-maintained, safe facilities; include plans for an orderly and responsive answer to future parking needs.

MEMBERS: The Birmingham City Commission shall appoint the Advisory Parking Committee, consisting of nine (9) members, each to be appointed for a term of three (3) years, but in the first instance, three (3) members shall be appointed for terms expiring on the first Monday in September, 1985, three (3) members shall be appointed for terms expiring on the first Monday in September, 1986, and three (3) members shall be appointed for terms expiring on the first Monday in September, 1987.

The majority of the members shall be residents and membership shall be as follows:

I. *Downtown Commercial Representatives -

A. Large Retail - One (1) member
B. Small Retail - One (1) member
C. Professional Firm - One (1) member
D. Building Owner - One (1) member
E. Restaurant Owner - One (1) member

II. Downtown Employee Representative - One (1) member

III. Residential - Two (2) members who do not qualify under any of the above categories.

IV. Resident Shopper - One (1) member

Members of the Committee can be removed for cause determined at a public hearing at any time by the City Commission. Vacancies occurring shall be filled for the unexpired term by the City Commission.

ORGANIZATION: The Committee shall elect a Chairperson from its membership annually at its first meeting after the first Monday of September. The City Engineer shall be a non-voting, ex-officio member of the Committee and shall serve as the coordinating link between the Committee and various City Departments. A secretary shall be furnished by the City for the purpose of keeping Minutes of Committee meetings.

* Resolution 09-1057-85 determined that "Downtown" means parking assessment district

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MEETINGS: The Committee shall hold at least one (1) regular public meeting in each quarter on such date and at such time and place as may be established by resolution of the Committee. Special meetings may be called by the Chairperson of the Committee or by request of any three (3) members of the Committee. There shall be at least a two- (2-) day notice for any special meeting. The Committee shall adopt such rules for the conduct of its business as it may from time to time adopt by resolution. The Committee shall keep a written or printed record of its proceedings which shall be a public record and property of the City.

EXPENDITURES: The Committee shall have the power to expend such funds as may from time to time be appropriated to it by the City Commission for the purpose of carrying out the powers and duties of the Committee. Funds expended by the Committee shall be processed through regular City channels and be accounted for in the Auto Parking Fund Budget.

POWERS AND DUTIES: The Committee shall recommend:

1. A proper rate relationship between the charges for street meters, parking lot fees (short term and long term), and permit fees.

2. Parking fees that, while maintaining the financial integrity of the system, are still attractive to users.

3. The proper ratio between the number of short term, long term, and permit parkers in the attendant-operated lots and structures.

4. The area in each structure that should be assigned for short term, long term, and permit parking.

5. An equitable method of assigning permit parking spaces.

6. Financial objectives that reflect the requirements of ordinances and the need for information on the revenue received from specific users of the system.

7. A public relations program that will educate the public to the location of parking facilities, their ease of use, their close proximity to many fine stores offering a great variety of merchandise and the benefits of validated parking.

8. Corrective steps if the level of either maintenance or policing of the system facilities is inadequate.

9. Specific ordinance changes that will encourage private off-street parking in the CBD and/or to help to improve the system operation as a whole.

REPORTS: The Committee shall make and submit to the City Commission an annual report in January regarding the general activities, operations and accomplishments of the Committee for the preceding year. The Committee shall, from time to time, as occasion requires, advise the City Commission in writing on recommendations for the improvement of the Auto Parking System.

BUDGET: Not later than the first day of February of each year, the Committee shall present to the City Commission a request for funds which the Committee believes necessary to carry out its function as an advisory committee.

Adopted by Commission Resolution No. 08-882-84 - August 6, 1984

Revised by Commission Resolution No. 09-~~1028~~ 989-84 - September 1~~7,~~ 1984

CITY OF BIRMINGHAM

RESOLUTION NO. 05-139-17

A RESOLUTION TO AMEND RESOLUTION NO. 08-882-84 – AUGUST 6, 1984, ADVISORY PARKING COMMITTEE, MEMBERS:

THE CITY OF BIRMINGHAM RESOLVES:

To amend Resolution No. 08-882-84 – August 6, 1984, Advisory Parking Committee, Members, as follows:

MEMBERS: The Birmingham City Commission shall appoint the Advisory Parking Committee, consisting of nine (9) members, each to be appointed for a term of three (3) years, but in the first instance, three (3) members shall be appointed for terms expiring on the first Monday in September, 1985, three (3) members shall be appointed for terms expiring on the first Monday in September, 1986, and three (3) members shall be appointed for terms expiring on the first Monday in September, 1987.

The majority of the members shall be residents and membership shall be as follows:

I. Downtown Commercial Representatives –

A. Large Retail – One (1) member

B. Small Retail – One (1) member

C. Professional Firm – One (1) member

D. Building Owner – One (1) member

E. Restaurant Owner – One (1) member

II. Downtown Employee Representative – One (1) member

III. Residential – Two (2) members who do not qualify under any of the above categories.

IV. Resident Shopper – One (1) member

The city commission may appoint two alternate members who own property, own a business or work in the parking assessment district to serve as needed on the Advisory Parking Committee during their term of appointment. An alternate member may be called on a rotating basis to sit as a regular member of the Advisory Parking Committee in the absence of a regular member. An alternate member may also be called to service in the place of a regular member for the purpose of reaching a decision on a case in which the regular member has abstained for reasons of conflict of interest. An alternate member having been appointed shall serve in the case until a final decision has been made. An alternate member shall have the same voting rights as a regular member of the Advisory Parking Committee.

Members of the Committee can be removed for cause determined at a public hearing at any time by the City Commission. Vacancies occurring shall be filled for the unexpired term by the City Commission.

All other portions of Resolution No. 08-882-84 shall remain unaffected.

Dated this 22nd day of May, 2017.

Mark Nickita, Mayor

J. Cherilynn Brown, City Clerk

I, J. Cherilynn Brown, City Clerk of the City of Birmingham, do hereby certify that the foregoing resolution was passed by the Commission of the City of Birmingham, Michigan at a regular meeting held May 22, 2017.

J. Cherilynn Brown, City Clerk

05-152-00: INTERVIEW FOR ADVISORY PARKING COMMITTEE

Mr. Peter Wilde of the Townsend Hotel was interviewed for appointment to the advisory parking committee. Commissioner Lanzetta expressed concern about the legalities of the appointment of Mr. Wilde as the "large retail" member of this committee. The city attorney advised that the commission could amend the original resolution for the advisory parking committee to broaden the interpretation of large retail representative to include retail services as well as retail goods.

MOTION: Motion by Lanzetta, seconded by Chafetz:
To interpret the category of large retail representative on the advisory parking committee to include retail services as well as retail goods.

VOTE: Yeas, 4 Nays, None Absent, 3 (DeLaura, McKeon, Wooley)

MOTION: Motion by Moss, Seconded by Chafetz
To determine that Mr. Peter Wilde of the Townsend Hotel meets the criteria as the large retail representative on the advisory parking committee and, further, to continue this appointment until the city commission meeting of June 12, 2000.

VOTE: Yeas, 4 Nays, None Absent, 3 (DeLaura, McKeon, Wooley)

10-258 -19 AMEND ADVISORY PARKING COMMITTEE MEMBERSHIP

City Manager Valentine presented this item.

- Recommending a modification to the composition of the board to enable the City to fill some long-time vacancies.
- Replace a building owner with a BSD board member to participate on the board
- Remove the City Engineer and Replace with the City Manager or his designee.

Brad Host expressed that he thought it might be a mistake to eliminate a representative from Engineering.

MOTION: Motion by Commissioner Sherman, seconded by Commissioner Harris:
To adopt the resolution to amend Advisory Parking Committee membership to remove the Building Owner position and replace it with a board member of the Birmingham Shopping District and to remove the City Engineer (non-voting, ex-officio) position and to replace this position with the City Manager, or his/her designee.

VOTE:	Ayes:	5
	Nays:	0
	Absent:	2

05-139 -17 USE OF ALTERNATES, REPORTING BOARD ATTENDANCE, AND MODIFYING REQUIREMENTS FOR BOARD MEMBERS

Assistant to the City Manager Haines presented results of a review of board and committee attendance suggesting that three groups might benefit from having two alternate positions added to increase attendance and/or achieve quorum: 1) Advisory Parking Committee, 2) Parks and Recreation Board, and 3) Public Arts Board.

MOTION: Motion by Commissioner Bordman, seconded by Mayor Pro Tem Harris:

To amend the ordinances of the Advisory Parking Committee, the Parks and Recreation Board, and the Public Arts Board, to add 2 alternate positions to each as follows:

To amend Resolution No. 08-882-84 – August 6, 1984, Advisory Parking Committee, Members.

AND

To amend Part II of the City Code, Chapter 78, Parks and Recreation, Article II., Parks and Recreation Board, Section 78-26, Created; composition.

AND

To amend Part II of the City Code, Chapter 78, Public Arts Board, Article V., Public Arts Board, Section 78-103, Composition and terms of members.

AND

To direct the city clerk to standardize the attendance reporting of all city boards and committees as outlined in the May 12, 2017 memorandum to the city manager and as clarified by the Commission and to direct staff to amend the Recommended Process for Use of Alternates as clarified by Commissioner Bordman.

VOTE:	Yeas,	7
	Nays,	0
	Absent,	0

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Department Name

DATE: 05/22/2023

TO: Thomas M. Markus, City Manager

FROM: Eric Brunk, Information Technology Manager

SUBJECT: Staff Introductions

INTRODUCTION:
The information technology department is back to full staff with the addition of 2 part time employees.

BACKGROUND:
The Information Technology Department has been short staffed for the last 2 months due to the departure of 2 part-time employees. After a search for qualified candidates I would like to introduce our 2 new part-time employees: Gavin Carrick and Mazumder Abdullaah. Both Employees have an interest in the many aspects of Information Technology and are excited to be a part of the IT Department at the City.

Gavin is a student at Macomb Community College and is currently working on a 2-year degree in Information Technology. He is thinking about continuing on to a 4 year degree.

Mazumder is a student at Wayne State University and is finishing up a 4-year degree in Management Information Systems.

SUMMARY:
Please join me in welcoming them to our team.

Birmingham City Commission Minutes
Public Hearing on the 2023-2024 Recommended Budget
April 29, 2023
8:30 a.m.
Municipal Building, 151 Martin
Video Link: https://vimeo.com/820770118

I. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Therese Longe, Mayor, opened the meeting with the Pledge of Allegiance.

II. ROLL CALL

Alexandra Bingham, City Clerk, called the roll.

Present: Mayor Longe
tMPT Schafer
Commissioner Baller
Commissioner Boutros (left 12:05 p.m.)
Commissioner Haig
Commissioner Host

Absent: MPT McLain

Staff: City Manager Markus, City Clerk Bingham, Information Technology Manager Brunk, City Engineer Coatta, Library Director Craft, Museum Specialist Donnelly, Planning Director Dupuis, Assistant City Manager Fairbairn, Parking Systems Manager Ford, Finance Director Gerber, Building Official Johnson, Birmingham Shopping District Director Sheppard-Decius, Police Captain Wald, Fire Chief Wells, Department of Public Services Director Zielinski

III. PUBLIC HEARING – 2023-2024 RECOMMENDED BUDGET

With the Commission's concurrence, the Mayor appointed Commissioner Schafer to serve as temporary Mayor Pro Tem for the duration of the meeting.

CM Markus recommended that the public be given an opportunity to comment after every numbered section of the budget was presented.

The Mayor opened the public hearing at 8:33 a.m.

CM Markus and FD Gerber introduced the budget hearing and answered informational questions from the Commission.

There was no public comment regarding the budget hearing's introduction.

For the General Fund, ACM Fairbairn presented the Commission and the Manager's Office budgets, BO Johnson presented the City Hall & Grounds and the Property Maintenance-Library budgets, ACM Fairbairn presented the Human Resources budget, CC Bingham presented the Clerk's Office budget, and FD Gerber

presented the Finance Department, the Legal, and the General Administration budgets.

There was no public comment regarding the General Fund. Staff answered informational questions from the Commission.

Commissioner Baller recommended that City Manager reports be discussed earlier on during Commission meetings.

FD Gerber presented the Judicial budget.

There was no public comment regarding the Judicial budget. Staff answered informational questions from the Commission.

For Public Safety, PC Wald presented the Police and the Dispatch budgets, FC Wells presented the Fire and Emergency Management budgets, and BO Johnson presented the Building budget. BO Johnson noted a correction to page 62, he noted that the enforcement case totals listed were actually the number of Board of Zoning Appeals cases. He stated those numbers would be corrected in the final budget document.

There was no public comment regarding the Public Safety budgets. Staff answered informational questions from the Commission.

Commissioner Baller recommended the City emphasize the Fire Department's efficiency and response times as part of community outreach.

Commissioner Haig emphasized the importance of keeping the Building Department's permit and fee amounts aligned with the costs of processing the permits and reviews. He said he wanted to avoid those costs being passed along to the taxpayers.

The Mayor noted that the permit and fee amounts have to reflect the actual costs to the City and could not factor in inflationary or other considerations. She noted that the Commission can conduct regular reviews of the permit and fee amounts.

It was noted that the City has a policy that all fees be evaluated every year to ensure that they reflect the City's costs.

For Public Works, CE Coatta presented the Engineering budget and DPSD Zielinski presented the Public Services budget.

There was no public comment regarding the Public Works budgets. Staff answered informational questions from the Commission.

Commissioner Baller observed that CE Coatta and DPSD Zielinski made improvements to their Departments' budgeting and project planning processes.

Commissioner Boutros noted that increased efficiency would lead to increased savings in the future.

Commissioner Haig told DPSD Zielinski he wanted to exchange information regarding double-walled chemical tanks.

The Mayor noted that there was a large projected street light service gain from 54 miles to 70 miles. She

thanked CE Coatta and DPSD Zielinski.

FD Gerber presented the Health and Welfare budget.

There was no public or Commission comment regarding the Health and Welfare budget.

PD Dupuis presented the Community and Economic Development budget. He thanked FD Gerber and the Finance Staff for their help with the budgeting process.

The Mayor noted the Commissioners were provided with hard copies of page 209a, which was not included in the original agenda packet.

There was no public or Commission comment regarding the Community and Economic Development budget.

For Recreation and Culture, DPSD Zielinski presented the Parks & Recreation, Ice Arena, and Community Activities budgets. MS Donnelly presented the Birmingham Historical Museum budget.

There was no public comment regarding the Recreation and Culture budgets. Staff answered informational questions from the Commission.

The Mayor noted that MS Donnelly has some podcasts related to Birmingham history available on the Birmingham Historical Museum's website.

FD Gerber presented the Transfers Out and Special Revenue Funds budgets.

There was no public or Commission comment regarding the Transfers Out budget. There was no public comment regarding the Special Revenue Funds budgets. Staff answered informational questions from the Commission regarding the Special Revenue Funds budgets.

The Mayor noted that the major street fund and local street fund were each being supplemented by $3.5 million in tax dollars. She commented that those were significant investments.

For Enterprise Funds, PSM Ford presented the Automobile Parking System budget, FD Gerber presented the Water Supply System and the Sewage Disposal budgets, and DPSD Zielinski presented the Springdale and Lincoln Hills Golf Course budgets.

There was no public comment regarding the Enterprise Funds budgets. Staff answered informational questions from the Commission.

Commissioner Baller supported further discussion about a potential increase in parking rates.

Commissioner Haig explained that the weight of vehicles have significantly increased since the 1960s, when Birmingham's parking garages were built. He noted that the City might consider restriping the garages to hold fewer vehicles, both in order to maintain a safety margin and in order to extend the life of the garages. He noted that doing so would result in a decrease in net parking garage revenue, and that the City would have to explore the potential impacts of that change.

ITM Brunk presented the Information Technology budget.

There was no public comment regarding the Information Technology budget. Staff answered informational questions from the Commission.

Commissioner Baller congratulated ITM Brunk on becoming a City employee.

For Component Units, LD Craft presented the Baldwin Public Library budget, BSDD Sheppard-Decius presented the Principal Shopping District budget, and FD Gerber presented the Brownfield Redevelopment Authority and the Triangle District Corridor Improvement Authority (TDCIA) budgets. LD Craft noted an error on page 349, which indicated that the ending fund balance for the next fiscal year would be negative. She explained that the Library would be pulling funds from the Library Trust in order to ensure that the Library meets its fund balance minimum of $125,000 at the end of the next fiscal year.

There was no public comment regarding the Component Units budgets. Staff answered informational questions from the Commission.

Commissioner Baller recommended the City revise the Triangle District Corridor Plan. He said the TDCIA could potentially be repurposed under a new plan. He noted there were a lot of small parcels in the area. He also expressed disappointment that the budget revisions for the Library renovation required the removal of the proposed skylight from the plans.

In reply to Commissioner Haig, CM Markus said he would ask BSDD Sheppard-Decius to make a Commission presentation on the BSD's Business Mix Analysis.

FD Gerber presented the Debt Service Fund, the Greenwood Cemetery Perpetual Care Fund, and the Capital Projects Fund budgets.

There was no public comment regarding the Debt Service Fund, the Greenwood Cemetery Perpetual Care Fund, and the Capital Projects Fund budgets. Staff answered informational questions from the Commission.

In reply to Commissioner Baller, CM Markus said Staff would work on a presentation regarding the Capital Projects and also ways of communicating the information to the public.

Commissioner Baller noted that the City's debt was very low. He recommended that the City repair improved streets that are in poor condition, citing Oakland between Old Woodward and Woodward and portions of N. Adams as two potential examples. He said constituents tend to be very concerned about road conditions. He said he would like to see a comprehensive report on how the City was planning for road improvements, maintenance for unimproved and improved roads, and budgeting. The Commissioner added that Commission feedback should be solicited as part of that process.

Commissioners Baller and Host stated there seemed to be a few areas in this section of the budget where information was repeated.

In reply to Commissioner Baller and the Mayor, ACM Ecker said Staff would create a report that clarified how the the road scoring system related to the proposed Capital Projects, and which projects would include City-initiated assessments.

Commissioner Baller recommended that the City's Communications Department be more involved in communicating about street improvements and repairs.

CM Markus thanked everyone for the day.

The Mayor closed the public hearing at 1:35 p.m.

The Mayor thanked Staff for all of their work on the 2023-2024 Recommended Budget presentation.

IV. ADJOURN

Mayor Longe adjourned the meeting at 1:36 p.m.

Alexandria Bingham, City Clerk

Laura Eichenhorn, City Transcriptionist

DRAFT

Birmingham City Commission
Special Meeting Minutes - Workshop
Monday, May 8, 2023
6:45 p.m.
Vimeo Link: https://vimeo.com/822337549

This will be considered a workshop session of the City Commission. No formal actions will be taken. The purpose of this workshop is to participate in a discussion of the Process for Selecting a Mayor and Mayor Pro Tem.

I. Call to Order

Therese Longe, Mayor

II. Roll Call

City Clerk Bingham called the roll.

Present: Mayor Longe
Mayor Pro Tem McLain
Commissioner Baller
Commissioner Boutros
Commissioner Haig
Commissioner Host
Commissioner Schafer

Absent: None

Staff: City Manager Markus; City Clerk Bingham, City Attorney Kucharek

III. Presentation & Discussion

Mayor Longe introduced the topic.

Commission discussion was as follows:

- Commissioner Boutros served two consecutive terms as Mayor during the Covid-19 pandemic, which allowed for continuity;
- Mayor Longe served as Mayor Pro Tem during Commissioner Boutros' mayorship, and is now serving a second consecutive term as Mayor;
- It may be helpful for Mayoral terms to be two years, since there is a significant learning curve;
- It would be appropriate to have a workshop before the first meeting in November to determine how the Commission wants to handle Mayoral terms;
- The Commission deliberation regarding this topic would take place in public meetings;
- It may not be appropriate to expect that every Commissioner would serve as Mayor at some point;

- Mayoral qualifications should include being hardworking, having ample time to devote to the position, having deep and broad knowledge of City government gained through years of experience, having the confidence of fellow Commissioners, City administration, and other City boards, being able to run a meeting efficiently without fear or favor, and should be willing and able to serve;
- In certain circumstances it might be permissible for a Mayor to serve longer than two consecutive years;
- Emphasizing succession planning as part of the Mayoral terms would be appropriate;
- A Mayoral candidate should be prepared for, and committed to, the position;
- One former Mayor expressed in a personal conversation to Mayor Longe that allowing Commissioner Boutros to serve two consecutive years during the Covid-19 pandemic benefitted the City. Another former Mayor expressed to Mayor Longe in a personal conversation that they only served as Mayor because it was both customary and an honor, and that they felt in retrospect that they should not have served and that merit-based service was more appropriate;
- No other positions in the City are filled solely based on seniority;
- A Mayoral term should not be limited to a certain number of years, and rather should be based on desire, merit, and context as opposed to seniority;
- Mayors who serve more than one year in a row are able to better build and facilitate relationships, create more collaborations within the community and between communities, and learn more skills to benefit the community;
- Birmingham Mayors attend the monthly South Oakland Council of Mayors dinner, and many other municipalities' Mayors have commented that they did not interact much with the Birmingham Mayors in the past since they changed annually;
- Birmingham is a resource-rich community and could have more impact in southeast Michigan with a different Mayoral structure;
- Being a Mayor is an incredible amount of work;
- The Mayor Pro Tem role should be treated as an opportunity to train for the Mayoral position. The Mayor should keep the Mayor Pro Tem informed of the Mayoral processes and work, the Mayor Pro Tem should attend trainings and meetings relevant to the position, and the Mayor Pro Tem should solicit feedback, insight, and concerns from the community with the intent of relaying it to the Commission and Staff;
- A Mayor Pro Tem should not necessarily always become the next Mayor, as a Mayor Pro Tem or other parties may determine the Mayor Pro Tem does not have the temperament, patience, or other qualifications to serve as Mayor;
- A Mayor represents the City at events, ceremonies, and with visitors, determines how best to represent the City, aims to benefit the City's interests in a variety of contexts, leverages contacts for the benefit of the City, officiates weddings, writes and gives speeches, meets members of the community, spends a significant amount of time weekly reviewing the Commission agenda in order to know how to conduct the meeting, has at least one conversation per Commission agenda with either the City Manager or the City Attorney to clarify information, has regular conversations with the City Manager to discuss directions, priority, and approaches, provides civic education to members of the public, and regularly receives comments from members of the public and has to be mindful to engage according to the rules and norms that govern a City official;
- The Mayoral role requires approximately five to six hours during Commission meeting weeks and two to three hours during non-meeting weeks;
- The council-manager form of government is similar to an organization with a CEO and a Board. The City Manager is akin to the CEO, the Commission is akin to the Board, and the Mayor is akin to the Board Chair;
- The recording of this workshop should be made available to Birmingham schools as a civics lesson; and,
- The person serving as Mayor should strive to do so without self-interest, to the best of their ability, and to do so fairly.

The Mayor suggested that during the regular meeting a Commissioner propose that Staff draft changes to the Rules of Procedure to incorporate the workshop idea, which could be returned to the Commission for later review.

DRAFT

Commissioner Boutros said the Commission was undertaking these efforts to enhance the present system.

Commissioner Baller said the workshops are very beneficial and that there should be a December workshop on a substantive topic.

Commissioner Schafer recommended that mentorship of the Mayor Pro Tem by the Mayor be one of the priorities of the role.

IV. Public Comment

David Bloom recommended that the Commission maintain its previous method of appointing the Mayor Pro Tem and Mayor while increasing transparency, that the Commissioners not discuss the topic individually before the November workshop, and that the Mayor Pro Tem attend more meetings with the Mayor to promote continuity.

Mr. Bloom also recommended the Commission discuss, at a future point, how public comment should be conducted for Commission items such as the City Manager report.

V. Adjourn

Mayor Longe adjourned the meeting at 7:25 p.m.

Alexandria Bingham, City Clerk

Laura Eichenhorn, City Transcriptionist

DRAFT

Birmingham City Commission Minutes
May 8, 2023
Municipal Building, 151 Martin
7:30 p.m.
Vimeo Link: https://vimeo.com/822337549

I. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Therese Longe, Mayor, opened the meeting with the Pledge of Allegiance.

II. ROLL CALL

City Clerk Bingham called the roll.

Present: Mayor Longe
Mayor Pro Tem McLain
Commissioner Baller
Commissioner Boutros
Commissioner Haig
Commissioner Host
Commissioner Schafer

Absent: None

Staff: City Manager Markus; City Clerk Bingham, Assistant Director of Engineering Borton, City Engineer Coatta, Planning Director Dupuis, Assistant City Manager Ecker, Parking Services Manager Ford, Finance Director Gerber, City Attorney Kucharek, Parks and Recreation Manager Laird, Department of Public Services Director Zielinski

III. PROCLAMATIONS, CONGRATULATORY RESOLUTIONS, AWARDS, APPOINTMENTS, RESIGNATIONS AND CONFIRMATIONS, ADMINISTRATION OF OATHS, INTRODUCTION OF GUESTS AND ANNOUNCEMENTS

Announcements

- Proclamation Celebrating May as Jewish-American Heritage Month
- On May 1, 2023, Mayor Longe recognized 33 high school and middle school students who performed community service as members of the Birmingham Youth Assistance Youth in Service Program. These students set an excellent example for their peers, and they are appreciated for their contributions to the community.
- The DPS Open House will be on Saturday, May 13, 2023, from 10 a.m. to 2 p.m. at the Public Services facility at 851 S. Eton. The event promises to be a day of family fun, offering visitors the opportunity to meet City staff, view equipment displays, and peruse informational and educational exhibits. In addition, hot dogs and refreshments will be available to enjoy.
- The 2023 Celebrate Birmingham Parade and Party will be held on Sunday, May 21, 2023 beginning with the Parade at 1 pm on N. Old Woodward near Booth Park and concluding in Shain Park, where there will be a celebration with entertainment and family-friendly activities. The festivities in Shain Park will come to a close at 4 p.m.

Appointments

Jane Hoffman was interviewed for, but not appointed to, the Parks and Recreation Board. Commissioners Host and Haig encouraged Ms. Hoffman to consider submitting an application for another board position.

05-098-23 Appointment to the Board of Building Trades Appeals

Victor Saroki was interviewed by the Commission for the appointment.

MOTION: Nomination by MPT Boutros:
To appoint Victor Saroki to the Board of Building Trades Appeals as a regular member to serve the remainder of a three-year term to expire May 23, 2025.

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

05-099-23 Appointment to the Board of Building Trades Appeals

Bradley H. Klein was interviewed by the Commission for the appointment.

MOTION: Nomination by Commissioner Host:
To appoint Bradley H. Klein to the Board of Building Trades Appeals as a regular member to serve a three-year term to expire May 23, 2025.

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

05-100-23 Appointment to the Brownfield Redevelopment Authority

The Mayor noted that while Robert Runco was not present for an interview, he had served on the Board since 2005.

MOTION: Nomination by Commissioner Host, seconded by Commissioner Boutros:

To concur with the Mayor's appointment of Robert Runco as a regular member to the Brownfield Redevelopment Authority to serve a three-year term to expire May 23, 2026.

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

The Mayor noted for the public that the Brownfield Redevelopment Authority had additional openings.

05-101-23 Appointment to the Parks and Recreation Board

Jessica Einstein was interviewed by the Commission for the appointment.

MOTION: Nomination by Commissioner Baller:
To appoint Jessica Einstein the Parks and Recreation Board as an alternate member to serve the remainder of a three-year term to expire March 13, 2025

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

CC Bingham swore in the present appointees. It was noted that absent appointees would be sworn in at a later date.

Employee Recognition

1. Assistant Director of Engineering – Cory Borton

IV. OPEN TO THE PUBLIC FOR MATTERS NOT ON THE AGENDA

V. CONSENT AGENDA

05-102-23 Consent Agenda

The following items were pulled from the Consent Agenda:
Commissioner Baller: Item E – Agreement with Birmingham Little League

MOTION: Motion by Commissioner Boutros, seconded by MPT McLain:
To approve the Consent Agenda excluding Item E.

ROLL CALL VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

A. Resolution to approve the City Commission regular meeting minutes of April 24, 2023.

B. Resolution to approve the warrant list, including Automated Clearing House payments, dated April 26, 2023 in the amount of $420,133.99.

C. Resolution to approve the warrant list, including Automated Clearing House payments, dated May 4, 2023 in the amount of $577,736.42.

D. Resolution to set a public hearing date of June 5, 2023 for the proposed lot combination of 36877 Woodward Ave, Gasow Veterinary Clinic, Parcel ID #19-25-101-008, 19-25-101-009, 19-25-101-010, and 19-25-101-011.

F. Resolution to authorize the City Clerk to complete the Local Approval Notice at the request of Old Woodward Ventures, LLC to approve the request of Lawrence and Eunice's Living Trusts to transfer the membership of Old Woodward Ventures, LLC which is owned by Lawrence Bongiovanni, Trust, Kara Bongiovanni Trustee 50% and Eunice Bongiovanni, Trust Kara Bongiovanni Trustee 50%, which holds the Class C and SDM License with Sunday Sales (PM) and Outdoor Service Area located at 525 N Old Woodward, Birmingham, Oakland County, MI to 33.34% Kara Bongiovanni Living Trust, 33.33% Lawrence and Amy Bongiovanni Living Trust and 33.33% Joseph Bongiovanni.

G. Resolution to authorize the City Clerk to complete the Local Approval Notice at the request of Birmingham Ventures, Inc. to approve the request Eunice's Living Trusts to transfer the stock of Birmingham Ventures, Inc. which the stock is currently held by Eunice Bongiovanni, Living Trust Kara Bongiovanni Trustee, which holds the Class C and SDM License with Sunday Sales (PM) and Outdoor Service Area located at 505 N Old Woodward, Birmingham, Oakland County, MI to Kara Bongiovanni Living Trust, 170 shares, Lawrence and Amy Bongiovanni Living Trust 170 shares and Joseph Bongiovanni 170 shares.

H. Resolution to approve the Intergovernmental Agreement between the City of Birmingham, the City of Auburn Hills, Bloomfield Township and the City of Rochester to establish a regional youth academy for residents and students of the four communities. Furthermore, to authorize the Chief of Police to sign the agreement on behalf of the City of Birmingham and the Birmingham Police Department.

I. Resolution to approve the Program Year 2023 High Intensity Drug Trafficking Area (HIDTA) sub recipient agreement between the County of Oakland and the City of Birmingham. Further, to authorize the Mayor to sign the agreement on behalf of the City.

J. Resolution to appoint Jana Ecker as Representative and Scott Zielinski as Alternate Representative of the City of Birmingham on the SOCRRA Board of Trustee for the fiscal year starting July 1, 2023.

K. Resolution to appoint Melissa Coatta as Representative and Jana Ecker as Alternate Representative of the City of Birmingham on the SOCWA Board of Trustees for the fiscal year starting July 1, 2023.

L. Resolution to accept the resignation of Jane Schulak from the Public Arts Board, to thank her for her service and to direct the City Clerk to begin the process of filling the vacancy.

05-103-23 Agreement with Birmingham Little League (Item E)

In reply to Commission inquiry, PRM Laird and CM Markus answered brief informational questions about the proposed electrical outlets for the existing dugout storage areas and the proposed shade coverings.

Commissioner Baller said it might matter in the future which entity owned the shade coverings.

MOTION: Motion by Commissioner Baller, seconded by Commissioner Haig:
To approve the Agreement with Birmingham Little League. In addition, to authorize the Mayor and Clerk to sign the agreement on behalf of the City.

ROLL CALL VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

VI. UNFINISHED BUSINESS

VII. NEW BUSINESS

05-104-23 Brown Street Paving Hearing of Necessity for Sidewalk and Streetscape Special Assessment District (SAD)

The Mayor opened the public hearing at 7:58 p.m.

The Mayor disclosed that her spouse has a landlord at an unaffected location who also owns a property in this potential SAD. The Mayor stated she consulted with the City Attorney regarding the matter and was advised there was no conflict of interest because this represented no financial benefit or detriment to the Mayor or her spouse.

CE Coatta presented the item.

Public Comment

Steve Simona, on behalf of Woodward Brown Associates, said the GIS information was inconsistent with the frontage numbers in the packet. He said it would have been beneficial to do some improvements to the center island as part of the project.

CM Markus noted that the State has jurisdiction over the center island and would be making some improvements to it.

CE Coatta confirmed she would verify frontages with the Treasurer and Finance Departments.

CM Markus stated that the frontages would be confirmed at the hearing of confirmation, which would be the next hearing regarding the project.

Seeing no further public comment, the Mayor closed the public hearing at 8:08 p.m.

CE Coatta, CM Markus, and ACM Ecker answered informational questions from the Commission.

The Mayor noted this project was the result of a City effort to address a health, safety, and welfare issue at this intersection.

Commissioner Host noted that the report should have referenced the Peabody parking structure rather than the Chester parking structure.

Commissioner Haig noted that parcels 08-19-36-207-014 and 08-19-36-207-015 should be consistently referenced throughout the project's documentation.

MOTION: Motion by Commissioner Host, seconded by Commissioner Haig:
WHEREAS, Notice was given pursuant to Section 94-7 of the City Code, to each owner or party-in-interest of property and lots to be assessed, by first class mail, and by publication in a newspaper generally circulated in the City; and

WHEREAS, The City Commission has conducted a public hearing and has determined to proceed with the project of replacing sidewalks, reconfiguring roadway, and street scape on Brown Street from S. Old Woodward to Woodward Ave.; and

WHEREAS, The City has previously established a policy requiring replacement or improvement of sidewalks and street scape when the City street is open for repairs or reconstruction in the Central Business District; and

WHEREAS, The City Commission, after the public hearing, has determined that the Brown Street Paving Project is a necessity and is in the best interest of the City; and

WHEREAS, The Commission has approved the detailed plans and estimates of cost prepared by the City Engineer; and

WHEREAS, Formal bids have been received and the actual cost for sidewalk and streetscape has been determined; and

WHEREAS, The City Engineer has determined the boundaries of sidewalk and streetscape located within the limits of the following streets shall be installed as part of the Brown Street Paving Project (Contract #5-23(P)):

Brown Street – S. Old Woodward to Woodward Ave.; and

WHEREAS, The formula used in making the assessment is 75% of the contractor's charge for replacing sidewalks, reconfiguring roadway, and street scape (calculated at the rate of $853.68 per foot of frontage property).

THEREFORE LET IT BE RESOLVED, The City Commission has determined that the scope of the public improvement as described is in the best interest of the City and will be benefit the properties listed in the assessment roll, and the City Commission directs the Manager to prepare a Special Assessment Roll and present the same to the Commission for confirmation and further set a Public Hearing and give notice on May 22, 2023.

Parcel ID	**Street Address**	**Parcel ID**	**Street Address**
08-19-36-208-015	325 S Old Woodward	08-19-36-206-021	255 S Old Woodward
08-19-36-208-016	355 S Old Woodward	08-19-36-207-010	34901 Woodward
08-19-36-208-004	34745 Woodward	08-19-36-206-024	Peabody Parking Structure
08-19-36-207-014	34901 Woodward	08-19-36-207-015	34901 Woodward
08-19-36-206-023	Alley		

ROLL CALL VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

05-105-23 2023-2024 Budget Appropriations Resolution

FD Gerber presented the item.

MOTION: Motion by Commissioner Baller, seconded by Commissioner Haig:
To adopt the budget appropriations resolution for the City of Birmingham's budget and establishing the total number of mills for ad valorem property taxes to be levied for the fiscal year commencing July 1, 2023 and ending June 30, 2024.

Commissioner Host said he was concerned about the extra half a million dollars for the 48th District Court.

FD Gerber explained how the costs and revenues allocated to the City by the 48th District Court would change as a result of the recent shift in the funding units.

CM Markus noted that was an expected change.

Commissioner Haig emphasized the importance of value engineering the functions of the 48th District Court. He asked whether anyone at the City could help support those efforts.

CM Markus recommended that funding units and other interested parties get involved early on in the 48th District Court's annual budgeting process.

ACM Ecker noted that FD Gerber participated towards the end of the 48th District Court's most recent budgeting process.

The Mayor said the Commission would trust ACM Ecker to advocate for Birmingham and the other funding units to be involved early on in the 48th District Court's annual budgeting process.

MPT McLain noted for the public that 'ad valorem' means 'of assessed value'.

ROLL CALL VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

05-106-23 Monthly Parking Rate Increase

PSM Ford and CM Markus presented the item. PSM Ford answered informational questions from the Commission.

Commissioner comments on the item were as follows:

- The permit rate increases were quite reasonable;
- The permit rates should be reëvaluated yearly; and,
- Increasing the rates at different garages according to demand aligns with the Nelson Nygaard parking recommendations.

Commissioners also commented on how the parking system should be run, that the Commission should hold a workshop on the parking system, that the parking garages' new entry and exit machines were beneficial and well-received, that the parking system needs to be future proofed, and that additional revenue streams for the parking garages should be explored.

MOTION: Motion by Commissioner Boutros, seconded by Commissioner Host:
To amend the Birmingham Fee Schedule to increase the rate for monthly parking at the City's five parking garages from $50 to $70 at the Chester St. garage, from $70 to $90 at the N. Old Woodward, Park, and Peabody garages, and from $70 to $100 at the Pierce garage.

ROLL CALL VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

Commission Items for Future Discussion

There was Commission consensus to direct Staff to follow up with a draft for changes to the Mayoral Selection Process as discussed during the evening's workshop.

05-107-23 Parking Operations

MOTION: Motion by Commissioner Baller, seconded by Commissioner Host:
To schedule a workshop on parking operations.

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Mayor Longe
Commissioner Haig
Commissioner Schafer
Commissioner Baller

Nays, None

05-108-23 Leaf Blowers

MOTION: Motion by Commissioner Host, seconded by Commissioner Baller:
To discuss making leaf blowers and attendant noise issues an official agenda item.

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Commissioner Baller

Nays, Mayor Longe
Commissioner Schafer
Commissioner Haig

05-109-23 Noise on Woodward

MOTION: Motion by Commissioner Host, seconded by MPT McLain:
To discuss decreasing the noise from Woodward as an agenda item.

VOICE VOTE: Ayes, MPT McLain
Commissioner Boutros
Commissioner Host
Commissioner Baller
Mayor Longe
Commissioner Schafer
Commissioner Haig

Nays, None

Commission Discussion On Items From A Prior Meeting

VIII. REMOVED FROM CONSENT AGENDA

IX. COMMUNICATIONS

X. REPORTS

A. Commissioner Reports
1. Notice of Intention to Appoint to the Museum Board
2. Notice of Intention to Appoint to the Greenwood Cemetery Advisory Board
3. Notice of Intention to Appoint to the Ad Hoc Aging in Place Committee
4. Notice of Intention to Appoint to the Board of Ethics
5. Notice of Intention to Appoint to the Public Arts Board

B. Commissioner Comments

MPT McLain reported her recent activity with the Women Officials' Network, the Oakland County Economic Outlook Presentation, and with Birmingham elementary school students.

C. Advisory Boards, Committees, Commissions' Reports and Agendas
1. Birmingham Area Cable Board Annual Report, Budget, Financial Statement

There was brief Commission discussion regarding the item.

D. Legislation
E. City Staff
1. 3rd Quarter Investment Report
2. 3rd Quarter Budget Report
3. Recent Amendments to PA 33 - Police and Fire Protection Act

FD Gerber summarized the item.

4. Northwest corner of Maple and Fairfax Improvement – Pat Andrews Tribute

DPSD Zielinski, CM Markus, and CA Kucharek summarized the item and answered brief informational questions from the Commission.

INFORMATION ONLY

XI. ADJOURN

Mayor Longe adjourned the meeting at 9:25 a.m.

Alexandria Bingham, City Clerk

Laura Eichenhorn, City Transcriptionist

DRAFT

City of Birmingham
Warrant List Dated 05/11/2023

Meeting of 05/22/2023

Check Number	Early Release	Vendor #	Vendor	Amount
PAPER CHECK				
291991		005430	21ST CENTURY MEDIA- MICHIGAN	1,039.00
291991	*	005430	21ST CENTURY MEDIA- MICHIGAN	3,361.25
291992		BDREFUND	4-EVER-WATER-TITE LLC	100.00
291993	*	009479	ABC ENTERTAINMENT	2,490.00
291994	*	009507	AIR HANDLERS SERVICE CORP.	134,008.00
291995		BDREFUND	ALBERS LANDESIGNS	100.00
291996		009440	ALLIANCE ENTERTAINMENT, LLC	360.18
291997	*	000161	ALPHA PSYCHOLOGICAL SERVICES PC	775.00
291998		BDREFUND	AMERICAN STANDARD ROOFING	100.00
291999		000167	ANDERSON ECKSTEIN WESTRICK INC	854.50
292000		BDREFUND	ANITA L GALA TRUST	115.00
292001		BDREFUND	APK INVESTMENTS LLC	300.00
292002	*	007033	APPLIED IMAGING	9,565.63
292003		009202	AQUARIUM DESIGN INC	240.00
292004		000500	ARTECH PRINTING INC	49.00
292005		BDREFUND	ATLANTIC COAST WATERPROOFING	100.00
292006		BDREFUND	BABI CONSTRUCTION INC	4,000.00
292007		BDREFUND	BABI CONSTRUCTION INC	1,000.00
292008		000843	BAKER & TAYLOR BOOKS	149.99
292009		BDREFUND	BAKER KITCHEN AND BATH	100.00
292010		BDREFUND	BCM HOME IMPROVEMENT	200.00
292011		009568	BEDROCK EXPRESS LTD	344.25
292012		BDREFUND	BINGHAM DEVELOPMENT LLC	100.00
292013		003526	BOUND TREE MEDICAL, LLC	1,058.96
292014		BDREFUND	BRANDYWINE CONSTRUCTION LLC	6,000.00
292015		008545	JAIMI BROOK	118.75
292016		005717	BSB COMMUNICATIONS, INC.	435.00
292017		BDREFUND	C.J. ELLIS CONSULTING INC	500.00
292018		000902	CENGAGE LEARNING INC	30.39
292019		004269	CENTER POINT LARGE PRINT	111.88
292020		009137	CGS, INC	1,850.00
292021	*	000627	CONSUMERS ENERGY	2,402.80
292022	*	005320	COSTCO MEMBERSHIP	60.00
292023		BDREFUND	CREGGER SERVICES INC	813.18
292024		BDREFUND	CROMPTON, SCOTT C	100.00
292025		009024	THE D.M. BURR GROUP	4,819.00
292026		000575	DEMCO, INC	145.78
292027		BDREFUND	DIAZ, BRIAN A	100.00
292028		000190	DOWNRIVER REFRIGERATION	44.10
292029	*	000179	DTE ENERGY	17.98
292030	*	000179	DTE ENERGY	59.89
292031	*	000179	DTE ENERGY	389.48

City of Birmingham
Warrant List Dated 05/11/2023

Check Number	Early Release	Vendor #	Vendor	Amount
292032	*	000179	DTE ENERGY	101.77
292033	*	000179	DTE ENERGY	2,592.57
292034	*	000179	DTE ENERGY	123.37
292035	*	000179	DTE ENERGY	1,667.58
292036	*	000179	DTE ENERGY	80.69
292037		007505	EAGLE LANDSCAPING & SUPPLY	360.00
292038		BDREFUND	EARLE CONSTRUCTION LLC	100.00
292039		BDREFUND	FINN, ANTHONY T	100.00
292040		BDREFUND	Fireside Home Construction	719.77
292041		006654	FLEETPRIDE INC	141.92
292042	*	007314	FLEIS AND VANDENBRINK ENG. INC	2,684.25
292043	*	000929	CONNIE FOLK	31.00
292044		BDREFUND	FORCE BUILDING CO	2,000.00
292045		BDREFUND	FOREMAN CONSTRUCTION INC	1,060.00
292046		BDREFUND	FOUR SEASONS GARDEN CENTER	200.00
292047		BDREFUND	G & M GUTTER COMPANY INC	100.00
292048		BDREFUND	GALLERO, HALEY	200.00
292049		BDREFUND	GHIANDOLA, CHRISTOPHER	100.00
292050		BDREFUND	GILLETTE BROTHERS POOL & SPA	300.00
292051	*	004604	GORDON FOOD	200.84
292052		BDREFUND	GRENNAN CONSTRUCTION	300.00
292053		BDREFUND	HABITAT ENHANCERS LLC	200.00
292054	*	009527	HFF MICHIGAN HOLDINGS INC	263.99
292055	*	001956	HOME DEPOT CREDIT SERVICES	489.24
292056		BDREFUND	HOME DEPOT USA INC	500.00
292057		BDREFUND	HOME INSPECTION PLUS INC	200.00
292058	*	009563	HOWIES HOCKEY INC	97.92
292059		BDREFUND	HRH CONSTRUCTION LLC	2,500.00
292060		BDREFUND	HUNTER COLE HOMES	766.48
292061		000948	HYDROCORP	1,381.00
292062		000342	IBS OF SE MICHIGAN	845.19
292063		001090	INGRAM LIBRARY SERVICES	4,826.01
292065		BDREFUND	ITALY AMERICAN CONSTRUCTION CO	100.00
292066		BDREFUND	JEFF ZEFF	100.00
292067		BDREFUND	JEFFREY BURMAN	50.00
292068	*	009559	JENETTE MAITZ	891.00
292069	*	008564	JERRY'S TIRE INC	1,768.00
292070		BDREFUND	KEARNS BROTHERS INC	100.00
292071		BDREFUND	KELTER, MICHAEL J	100.00
292072	*	004088	KGM DISTRIBUTORS INC	626.00
292073		BDREFUND	KOZA, SEAN	500.00
292074		BDREFUND	KURTIS KITCHEN & BATH CENTERS	200.00
292075		BDREFUND	LABELLE SASH & SCREEN	100.00

City of Birmingham
Warrant List Dated 05/11/2023

Check Number	Early Release	Vendor #	Vendor	Amount
292076		BDREFUND	LAMARCO HOMES LLC	11,000.00
292077		009646	LARSON ELECTRONICS	14,708.50
292078	*	MISC	LERMAN, JOEL D	300.00
292079		006817	LEXISNEXIS RISK DATA MANAGEMENT INC	100.00
292080		BDREFUND	LOUIS LEVINE & SONS	1,000.00
292081		BDREFUND	M.W. MORSS ROOFING, INC.	200.00
292082		003781	MACNLOW ASSOCIATES	300.00
292083		001669	MACP	1,000.00
292084	*	009645	MARIA FOURNIER	200.00
292085		008793	MERGE MOBILE, INC.	73.00
292086		009351	MERRITT CIESLAK DESIGN PLC	1,600.00
292087		BDREFUND	METRO DETROIT SIGNS INC	300.00
292088		001660	MICHIGAN CAT	8,466.80
292089	*	006461	MID AMERICA RINK SERVICES	1,141.52
292090		009630	MIDWAY CLEANING CO, LLC	800.00
292091		000230	MIKE SAVOIE CHEVROLET INC	153.95
292092		008319	MKSK INC	6,288.75
292093		BDREFUND	MONIGOLD, JOHN	100.00
292094	*	009047	ROBERT MONTELEONE	200.00
292095		BDREFUND	MORGAN HELLER & ASSOCIATES	500.00
292096		BDREFUND	MR ROOF HOLDING CO LLC	100.00
292097	*	009644	NICOLE GERKEY	143.00
292098		BDREFUND	NORWOOD HOMES LTD	100.00
292099		002853	OAKLAND COMMUNITY COLLEGE	675.00
292100	*	004370	OCCUPATIONAL HEALTH CENTERS	258.00
292101	*	009478	ODP BUSINESS SOLUTIONS, LLC	1,165.63
292102		006785	OVERDRIVE, INC.	10,730.42
292103		BDREFUND	PELLA WINDOWS & DOORS, INC.	1,500.00
292104		009612	PLAYAWAY PRODUCTS LLC	934.42
292105		BDREFUND	POBLETE CEMENT	100.00
292106	*	001263	POSITIVE PROMOTIONS INC	741.30
292107	*	001263	POSITIVE PROMOTIONS INC	493.21
292108	*	MISC	REDFORD TOWNSHIP UNICYCLE CLUB INC	400.00
292109		BDREFUND	RENOVATIONS BY DESIGN	300.00
292110		BDREFUND	REVIVAL CONTRACTING INC	200.00
292111		000221	RUSSELL HARDWARE COMPANY	677.98
292112		BDREFUND	SACHSE CONSTRUCTION	500.00
292113		BDREFUND	SAPPHIRE BUILDING INC	9,400.00
292114		BDREFUND	SAROKI ARCHITECTURE	100.00
292115	*	004727	MARGARET SCHMALTZ	200.00
292116		BDREFUND	SCIGLIANO, ANTHONY P	1,000.00
292117		008815	SHI INTERNATIONAL CORP.	2,831.62
292118		BDREFUND	SIGNAL RESTORATION SERVICES	100.00

City of Birmingham
Warrant List Dated 05/11/2023

Check Number	Early Release	Vendor #	Vendor	Amount
292119	*	008073	SITEONE LANDSCAPE SUPPLY, INC	573.62
292120		007907	SP+ CORPORATION	1,604.00
292121	*	001005	STATE OF MICHIGAN	95.00
292122		004544	STRYKER SALES CORPORATION	66.60
292123	*	001095	SUBURBAN/PRESTIGE GLASS	480.00
292124		007408	T-MOBILE	672.55
292125		BDREFUND	TEMPLETON BUILDING COMPANY	300.00
292126		BDREFUND	THE LANDSCAPER	200.00
292127		BDREFUND	THORNTON & GROOMS INC.	618.19
292128		BDREFUND	TOWN BUILDING COMPANY	1,000.00
292129		BDREFUND	TRI PHASE COMMERCIAL CONST LLC	500.00
292130		BDREFUND	UNITED HOME SERVICES	100.00
292131	*	004580	V.I.L. CONSTRUCTION, INC.	147,760.35
292132	*	000293	VAN DYKE GAS CO.	112.36
292133	*	000158	VERIZON WIRELESS	102.97
292134	*	000158	VERIZON WIRELESS	76.02
292135	*	000158	VERIZON WIRELESS	149.25
292136	*	000158	VERIZON WIRELESS	152.98
292137		BDREFUND	VERUS DEVELOPMENT	300.00
292138		BDREFUND	WATERMARK HOMES	300.00
292139		BDREFUND	WEATHERGARD WINDOWS CO INC	200.00
292140		009026	WELLS FARGO VENDOR FIN SERV	677.87
292141		001490	WEST SHORE FIRE INC	5,437.94
292142		BDREFUND	WHEELER BUILDING, LLC	100.00
292143		BDREFUND	WILLIAM SCOTT MUTH	200.00
292144	*	004512	WOLVERINE POWER SYSTEMS	699.00
292145	*	008391	XEROX CORPORATION	32.21
292146	*	BDREFUND	ZWEIG, BRYAN M	200.00
			SUBTOTAL PAPER CHECK	$452,071.59

ACH TRANSACTION

7988	*	002284	ABEL ELECTRONICS INC	4,387.00
7989	*	008226	KATHERINE ABELA	1,068.00
7990	*	009126	AMAZON CAPITAL SERVICES INC	22.93
7991	*	009126	AMAZON CAPITAL SERVICES INC	14.49
7992	*	009126	AMAZON CAPITAL SERVICES INC	37.99
7993		009126	AMAZON CAPITAL SERVICES INC	34.99
7994		009126	AMAZON CAPITAL SERVICES INC	223.84
7995		009126	AMAZON CAPITAL SERVICES INC	247.48
7996		009126	AMAZON CAPITAL SERVICES INC	39.88
7997		009126	AMAZON CAPITAL SERVICES INC	81.98
7998		009126	AMAZON CAPITAL SERVICES INC	19.99
7999		009126	AMAZON CAPITAL SERVICES INC	49.44
8000		009126	AMAZON CAPITAL SERVICES INC	149.82

5D

City of Birmingham
Warrant List Dated 05/11/2023

Check Number	Early Release	Vendor #	Vendor	Amount
8001		009126	AMAZON CAPITAL SERVICES INC	100.97
8002		009126	AMAZON CAPITAL SERVICES INC	95.28
8003		009126	AMAZON CAPITAL SERVICES INC	139.99
8004	*	009126	AMAZON CAPITAL SERVICES INC	12.00
8005	*	009126	AMAZON CAPITAL SERVICES INC	73.40
8006		009126	AMAZON CAPITAL SERVICES INC	158.89
8007		009126	AMAZON CAPITAL SERVICES INC	428.48
8008	*	008655	ANGELO IAFRATE CONSTRUCTION	56,680.00
8009	*	003946	ARAMARK	195.16
8010	*	001357	ART/DESIGN GROUP LTD	1,611.00
8011	*	000517	BEIER HOWLETT P.C.	808.50
8012	*	000518	BELL EQUIPMENT COMPANY	1,101.80
8013	*	007345	BEVERLY HILLS ACE	67.47
8014	*	007624	BIRMINGHAM OIL CHANGE CENTER, LLC	38.47
8015	*	000542	BLUE WATER INDUSTRIAL PRODUCTS INC	89.25
8016	*	008983	BRENNA SANDLES	861.00
8017		000605	CINTAS CORPORATION	228.11
8018		000605	CINTAS CORPORATION	394.34
8019		001750	COMERICA BANK	1,151.92
8019		001750	COMERICA BANK	272,619.00
8020		003176	COMERICA BANK - RHC	1,070.67
8020		003176	COMERICA BANK - RHC	120,732.91
8021		002668	CONTRACTORS CLOTHING CO	316.83
8022		001367	CONTRACTORS CONNECTION INC	1,026.00
8023		009515	KAMERON DIMITRY	141.48
8024	*	000565	DORNBOS SIGN & SAFETY INC	44.15
8025	*	006528	DOWNTOWN PUBLICATIONS INC	328.00
8026	*	001077	DUNCAN PARKING TECH INC	6,393.15
8027		000196	EJ USA, INC.	5,335.58
8028	*	000995	EQUATURE	3,500.00
8029	*	000243	GRAINGER	72.10
8030		001318	HERC RENTALS	2,058.45
8031		007927	MICHELLE HOLLO	1,041.25
8032		000331	HUBBELL ROTH & CLARK INC	51,536.34
8033		000261	J.H. HART URBAN FORESTRY	47,516.75
8034	*	009249	JCC CREATIVE LLC	500.00
8035		009298	JCR SUPPLY INC	87.82
8036	*	003458	JOE'S AUTO PARTS, INC.	560.93
8037	*	008827	KANOPY, INC	346.80
8038		002013	MIDWEST TAPE	7,860.11
8039	*	009242	MILES PARTNERSHIP LLLP	2,980.00
8040	*	000462	MOTOR CITY INDUSTRIAL	1,740.34
8041	*	009331	MY CONCIERGE MICHIGAN, LLC	598.00

Meeting of 05/22/2023

City of Birmingham
Warrant List Dated 05/11/2023

Check Number	Early Release	Vendor #	Vendor	Amount
8042		009276	NEWTONS SOLUTIONS LLC	2,000.00
8043		001864	NOWAK & FRAUS ENGINEERS	25,632.00
8044	*	002767	OSCAR W. LARSON CO.	283.97
8045	*	001753	PEPSI COLA	823.97
8046	*	009655	POWERVAC	193.00
8047		002852	QMI GROUP INC	40.00
8048	*	001062	QUALITY COACH COLLISION	1,238.00
8049		009301	SECURE-CENTRIC INC	1,512.00
8050	*	003785	SIGNS-N-DESIGNS INC	990.00
8051		000254	SOCRRA	82,545.00
8052		009266	US SIGNAL COMPANY LLC	6,830.14
8053	*	000969	VIGILANTE SECURITY INC	1,515.50
8054	*	007900	RYAN WISEMAN	25.00
8055		009128	WITMER PUBLIC SAFETY GROUP INC	1,238.49
8056	*	002088	WM. CROOK FIRE PROTECTION CO.	870.00
			SUBTOTAL ACH TRANSACTION	$724,757.59
			GRAND TOTAL	$1,176,829.18

All bills, invoices and other evidences of claim have been audited and approved for payment.

Mark Gerber
Finance Director/ Treasurer

*-Indicates checks released in advance and prior to commission approval in order to avoid penalty or to meet contractual agreement/obligation.

City of Birmingham
Warrant List Dated 05/18/2023

Check Number	Early Release	Vendor #	Vendor	Amount
PAPER CHECK				
292147		005430	21ST CENTURY MEDIA- MICHIGAN	835.25
292148	*	000855	48TH DISTRICT COURT	279.00
292149	*	006965	7UP DETROIT	291.20
292150	*	009346	ACCUFORM PRINTING & GRAPHICS, INC	1,625.00
292151	*	009393	AMANDA MCBRIDE	300.00
292152		000167	ANDERSON ECKSTEIN WESTRICK INC	8,362.50
292153		007033	APPLIED IMAGING	274.76
292154	*	006759	AT&T	160.66
292155	*	006759	AT&T	475.00
292156		006759	AT&T	155.65
292157		009609	BALIAN LEGAL, PLC	600.00
292158		003526	BOUND TREE MEDICAL, LLC	3,698.15
292159		003907	CADILLAC ASPHALT, LLC	1,770.57
292160	*	000444	CDW GOVERNMENT INC	1,724.60
292161	*	000627	CONSUMERS ENERGY	1,087.71
292162	*	009145	CREATIVE COLLABORATIONS	3,800.00
292163		008559	DETROIT BATTERY COMPANY LLC	204.53
292164		007795	DG TECHNOLOGIES	820.00
292165	*	000179	DTE ENERGY	53.91
292166	*	000179	DTE ENERGY	42.25
292167	*	000179	DTE ENERGY	38.82
292168	*	000179	DTE ENERGY	1.93
292169	*	000179	DTE ENERGY	556.31
292170	*	000179	DTE ENERGY	14.91
292171	*	000179	DTE ENERGY	964.50
292172	*	000179	DTE ENERGY	154.59
292173	*	000179	DTE ENERGY	37.03
292174	*	000180	DTE ENERGY	50,220.03
292175		000274	E-Z-GO DIVISION OF TEXTRON INC	8,556.41
292176		004493	ELITE IMAGING SYSTEMS, INC	1,168.10
292177		004615	ENGLISH GARDENS	59.98
292178		MISC	ERIC OTTNEY	34.00
292179		001223	FAST SIGNS	992.68
292180		000936	FEDEX	139.76
292181		006654	FLEETPRIDE INC	868.25
292182	*	004604	GORDON FOOD	9.79
292183	*	007347	GREAT LAKES AWARDS, LLC	277.00
292184		000249	GUARDIAN ALARM	263.58
292184	*	000249	GUARDIAN ALARM	30.00
292185	*	001956	HOME DEPOT CREDIT SERVICES	209.98
292186	*	004839	INTERNATIONAL ASSOCIATION OF	215.00
292187		000344	J.T. EXPRESS, LTD.	5,441.71

City of Birmingham
Warrant List Dated 05/18/2023

Meeting of 05/22/2023

Check Number	Early Release	Vendor #	Vendor	Amount
292188	*	009403	JUSTIN ZAYID	600.00
292189		004904	KONICA MINOLTA BUSINESS SOLUTIONS	2,909.00
292190	*	000362	KROGER COMPANY	10.97
292191	*	009386	LAW OFFICE OF BRIAN P. FENECH	400.00
292192	*	009388	LAW OFFICE OF PATRICK G. GAGNIUK	600.00
292193	*	000888	MCKENNA ASSOCIATES INC	40,942.50
292194		002207	MICHIGAN AUTOMATIC SPRINKLER, INC.	380.50
292195	*	006461	MID AMERICA RINK SERVICES	87.15
292196		008319	MKSK INC	14,020.19
292197		007163	MOBILE HEALTH RESOURCES	1,584.30
292198	*	000477	OAKLAND COUNTY	495,270.52
292199	*	008712	OAKLAND COUNTY HEALTH DIVISION	942.00
292200	*	004370	OCCUPATIONAL HEALTH CENTERS	948.00
292201		000678	OCLC, INC.	319.87
292202	*	009478	ODP BUSINESS SOLUTIONS, LLC	89.59
292203		007718	OFF COURSE PRODUCTIONS INC.	713.00
292204		008669	OHM ADVISORS INC	1,952.75
292205	*	009624	PERFORMANCE ENVIRONMENT SERVICES	2,750.00
292206		005733	POWER LINE SUPPLY	57.87
292207	*	002806	SAM'S CLUB/SYNCHRONY BANK	545.68
292208		009548	SHARE CORPORATION	144.59
292209		007142	SHERWIN-WILLIAMS COMPANY	79.87
292210	*	001076	TAYLOR FREEZER OF MICH INC	325.00
292211		009552	TRAFFIC & SAFETY CONTROL SYSTEMS	22,298.00
292212		008941	UPTOWN MARKET OF BIRMINGHAM	205.38
292213	*	001279	US FIGURE SKATING ASSOC.	48.75
292214	*	000293	VAN DYKE GAS CO.	84.27
292215	*	000158	VERIZON WIRELESS	308.16
292216		005112	WOLVERINE	257.62
292217	*	008391	XEROX CORPORATION	315.34
41	*	009384	THE EDITH BLAKNEY LAW FIRM, PLLC	0.00
			SUBTOTAL PAPER CHECK	$686,005.97

ACH TRANSACTION

8060		009126	AMAZON CAPITAL SERVICES INC	151.00
8061	*	009126	AMAZON CAPITAL SERVICES INC	89.37
8062		009126	AMAZON CAPITAL SERVICES INC	63.32
8063		009126	AMAZON CAPITAL SERVICES INC	8.79
8064		009126	AMAZON CAPITAL SERVICES INC	72.58
8065	*	009383	BATTI LAW PLLC	600.00
8066	*	000517	BEIER HOWLETT P.C.	42,833.75
8067	*	007624	BIRMINGHAM OIL CHANGE CENTER, LLC	123.91
8068	*	003282	LISA MARIE BRADLEY	294.00
8069	*	009511	ERIC BRUNK	87.77

Meeting of 05/22/2023

City of Birmingham
Warrant List Dated 05/18/2023

Check Number	Early Release	Vendor #	Vendor	Amount
8070		007875	CANFIELD EQUIPMENT SERVICE INC.	224.50
8071	*	009122	CLAIRE CHUNG	598.00
8072		000605	CINTAS CORPORATION	184.27
8073	*	000605	CINTAS CORPORATION	147.68
8074		000605	CINTAS CORPORATION	38.82
8075	*	008044	CLUB PROPHET	540.00
8076	*	009195	CROWN CASTLE FIBER LLC	4,493.05
8077	*	000565	DORNBOS SIGN & SAFETY INC	971.20
8078		001230	FIRE SYSTEMS OF MICHIGAN LLC	104.25
8079	*	001663	SCOTT GREWE	3,858.00
8080	*	003938	HART PAVEMENT STRIPING CORP	9,000.00
8081		000331	HUBBELL ROTH & CLARK INC	299.60
8082	*	009390	IDUMESARO LAW FIRM, PLLC	600.00
8083	*	007870	J.C. EHRLICH CO. INC.	162.84
8084	*	009619	JACKLYN CONTRACTING, LLC	293,986.00
8085	*	003458	JOE'S AUTO PARTS, INC.	1,479.03
8086	*	007827	HAILEY R KASPER	823.50
8087	*	005876	KROPF MECHANICAL SERVICE COMPANY	1,281.02
8088	*	009392	LAMB LEGAL CONSULTING SERVICES	470.00
8089	*	009385	LAW OFFICE OF MICHAEL J. DICK	300.00
8090		005550	LEE & ASSOCIATES CO., INC.	24,260.00
8091	*	009398	MARCIA C ROSS PC	300.00
8092	*	000377	MICHIGAN MUNICIPAL LEAGUE	7,656.00
8093		000462	MOTOR CITY INDUSTRIAL	104.89
8094		001194	NELSON BROTHERS SEWER	940.00
8095		009276	NEWTONS SOLUTIONS LLC	975.00
8096	*	006359	NYE UNIFORM COMPANY	966.00
8097	*	001181	ROSE PEST SOLUTIONS	79.00
8098		005380	SALZBURG LANDSCAPE SUPPLY, INC	3,231.00
8099		009301	SECURE-CENTRIC INC	28.63
8100	*	000254	SOCRRA	50.00
8101	*	001097	SOCWA	199,972.88
8102		004887	TRUCK & TRAILER SPECIALTIES INC	32,275.00
8103		005861	UNIQUE MGMT SERVICE, INC	30.90
8104	*	000969	VIGILANTE SECURITY INC	802.60
8105		008711	VOLVIK USA	307.81
8106	*	009379	YELLOW DOOR LAW	4,638.00
			SUBTOTAL ACH TRANSACTION	$640,503.96

Meeting of 05/22/2023

City of Birmingham
Warrant List Dated 05/18/2023

Check Number	Early Release	Vendor #	Vendor	Amount
			GRAND TOTAL	$1,326,509.93

All bills, invoices and other evidences of claim have been audited and approved for payment.

Mark Gerber
Finance Director/ Treasurer

*-Indicates checks released in advance and prior to commission approval in order to avoid penalty or to meet contractual agreement/obligation.

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

City Clerk's Office

DATE: **May 22, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Alexandria Bingham, Clerk**

SUBJECT: **Special Event Application: Strides for SOS**

INTRODUCTION:
Schools Offer Support (a BPS non-profit) has submitted a Special Event application to hold the Strides for SOS Race on October 1, 2023. Set up for the event is scheduled for October 1, 2023 from 7:00 a.m. – 9:00 a.m. The event begins at 9:00 a.m. and concludes at 11:00 a.m. Tear down is scheduled for October 1, 2023 immediately following the event.

BACKGROUND:
The necessary departments reviewed the proposed event details submitted in the application, and departments provided feedback on requirements and estimated costs. DPS, Planning, Building, Engineering, Police and Fire have indicated their approval. SP+ Parking has been notified of the event for planning purposes.

Schools Offer Support (SOS) is a service organization in which parents and students work together to build a stronger community through acts of kindness. SOS has been able to fund and support a vast array of community needs. Some examples are:

- Food boxes, gift cards and childcare support for financially challenged families during the COVID-19 pandemic
- Tutoring programs for middle school and elementary students
- Thanksgiving dinners to dozens of families in need each year
- Holiday gifts purchased and wrapped for families in need
- Leaf raking for seniors in our community
- Financial aid for those faced with sudden emergencies
- Barbara and Sheldon Weisberg Laptop scholarships awarded to select college-bound seniors annually
- and much, much more

Respecting family privacy is paramount; all needs are filled anonymously.

The following events occur in month of October in Birmingham, and do not pose a conflict for this event:

Farmers Market	Sundays	Parking Lot #6

LEGAL REVIEW:
The City Attorney has reviewed and has no concerns or objections.

FISCAL IMPACT:
All costs associated with this event will be paid by applicant.

PUBLIC COMMUNICATIONS:
Schools Offer Support notified residents and businesses about the details of this event by letter which was mailed at least two weeks prior to the Commission meeting. The addresses that were notified were within 300 feet of the event space.

SUMMARY:
The City Commission is being asked to approve a special event permit for the Strides for SOS Race to be held October 1, 2023 from 9:00 a.m. to 11:00 a.m., with set up October 1, 2023 7:00 a.m. - 9:00 a.m. Tear down will begin October 1, 2023 immediately following the event.

ATTACHMENTS:
1. Special Event application
2. Notification letter with map of event area distributed to residents/businesses within 300 feet of the event area dated May 1, 2023. Notification addresses are on file in the Clerk's Office.
3. Hold Harmless Agreement
4. Department Approval page with comments and estimated costs

SUGGESTED COMMISSION ACTION:
To make a motion adopting a resolution to approve a special event permit as requested by the Schools Offer Support to hold the Strides for SOS Race on October 1, 2023 contingent upon compliance with all permit and insurance requirements and payment of all fees and, further pursuant to any minor modifications that may be deemed necessary by administrative staff at the time of the event, or event cancellation that may be deemed necessary by administrative staff, leading up to or at the time of the event.

23-00012145

CITY OF BIRMINGHAM
APPLICATION FOR SPECIAL EVENT PERMIT
PARKS AND PUBLIC SPACES

IMPORTANT: EVENTS UTILIZING CITY SIDEWALKS AND/OR STREETS MUST MEET WITH POLICE DEPARTMENT SPECIAL EVENT OFFICE TO REVIEW PROPOSED EVENT DETAILS PRIOR TO SUBMITTING APPLICATION.

Police Department acknowledgement: _____

I. EVENT DETAILS

- **Incomplete applications will not be accepted.**
- **Changes in this information must be submitted to the City Clerk, in writing, at least three weeks prior to the event**

FEES:	**FIRST TIME EVENT:**	**$200.00**
	ANNUAL APPLICATION FEE:	**$165.00**

(Please print clearly or type)

Date of Application 2/7/23

Name of Event Strides for SOS (Schools Offer Support)

Detailed Description of Event (attach additional sheet if necessary) See attached

Location Seaholm High School and surronding streets

Date(s) of Event Sunday, October 1, 2023 Hours of Event 9am - 11am

Date(s) of Set-up Sunday, October 1, 2023 Hours of Set-up 7am - 9am

NOTE: No set-up to begin before 7:00 AM, per city ordinance.

Date(s) of Tear-down Sunday, October 1, 2023 Hours of Tear-down immediately following

Organization Sponsoring Event Schools Offer Support (a BPS non-profit)

* Organization Address 2436 West Lincoln, Birmingham, MI 48009

Organization Phone 248.203.3700

Contact Person Amy Murray

Contact Phone 404.550.3450

Contact Email ctmurrays@gmail.com

* Can permit and billing for race be sent to:
Amy Murray
782 Smith
Birmingham, MI 48009

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II. EVENT INFORMATION

1. Organization Type non-profit community group
(city, non-profit, community group, etc.)

2. Additional sponsors or participants (Provide name, address, contact person, status, etc. for all additional organizations sponsoring your event.) Seaholm and Groves High School clubs and booster groups will help by volunteering. Parent board members will supervise

3. ***The city encourages collaboration amongst non-profit organizations to bring the greatest benefit to the community. Please explain your efforts to do so** In our efforts to assist families in need we have worked with other non-profits, such as Gleaners. Gleaners helped us provide food boxes to families in need.

4. Is the event a fundraiser? YES [X] NO [ ]
List beneficiary Schools Offer Support
List expected income 10,000 Attach information about the beneficiary.

5. First time event in Birmingham? YES [ ] NO [X]
If no, describe This race has been held as the Strides for SOS in 2021 and 2022. Previous to that it was the Birmingham Harriers Race.

6. Total number of people expected to attend per day 400-500

7. The event will be held on the following City property: (Please list)
   - [X] Street(s) See attached
   - [ ] Sidewalk(s)
   - [ ] Park(s)

13. Will there be signage in the area of the event? YES ☒ NO ☐

Number of signs/banners unknown

Size of signs/banners 18" x 24" at turns along route to direct runners.

Submit a photo/drawing of the sign(s). **A sign permit may be required.**

see attached

14. Will food/beverages/merchandise be sold? YES ☐ NO ☒

- Peddler/vendor permits must be submitted to the Clerk's Office, **at least two weeks prior to the event.**
- You must obtain approval from the Oakland County Health Department for all food/beverage sales/donations. Contact ehclerk@oakgov.com or 248-535-9612 to obtain Health Department approval.
- There is a $50.00 application fee for all vendors and peddlers, in addition to the $10.00 daily fee, per location.

LIST OF VENDORS/PEDDLERS
(attach additional sheet if necessary)

VENDOR NAME	GOODS TO BE SOLD	WATER HOOK-UP REQUIRED?	ELECTRIC REQUIRED?

DESCRIPTION: This event includes a 5K road running race and a 1 mile road running race to raise money for Schools Offer Support, a community nonprofit serving families in the local area. This event will take place at Seaholm High School, but includes the use of roads around the school. Please find enclosed the course map. The races begins promptly at 9 AM. Roads will be open as soon as all participants have passed a given barrier.

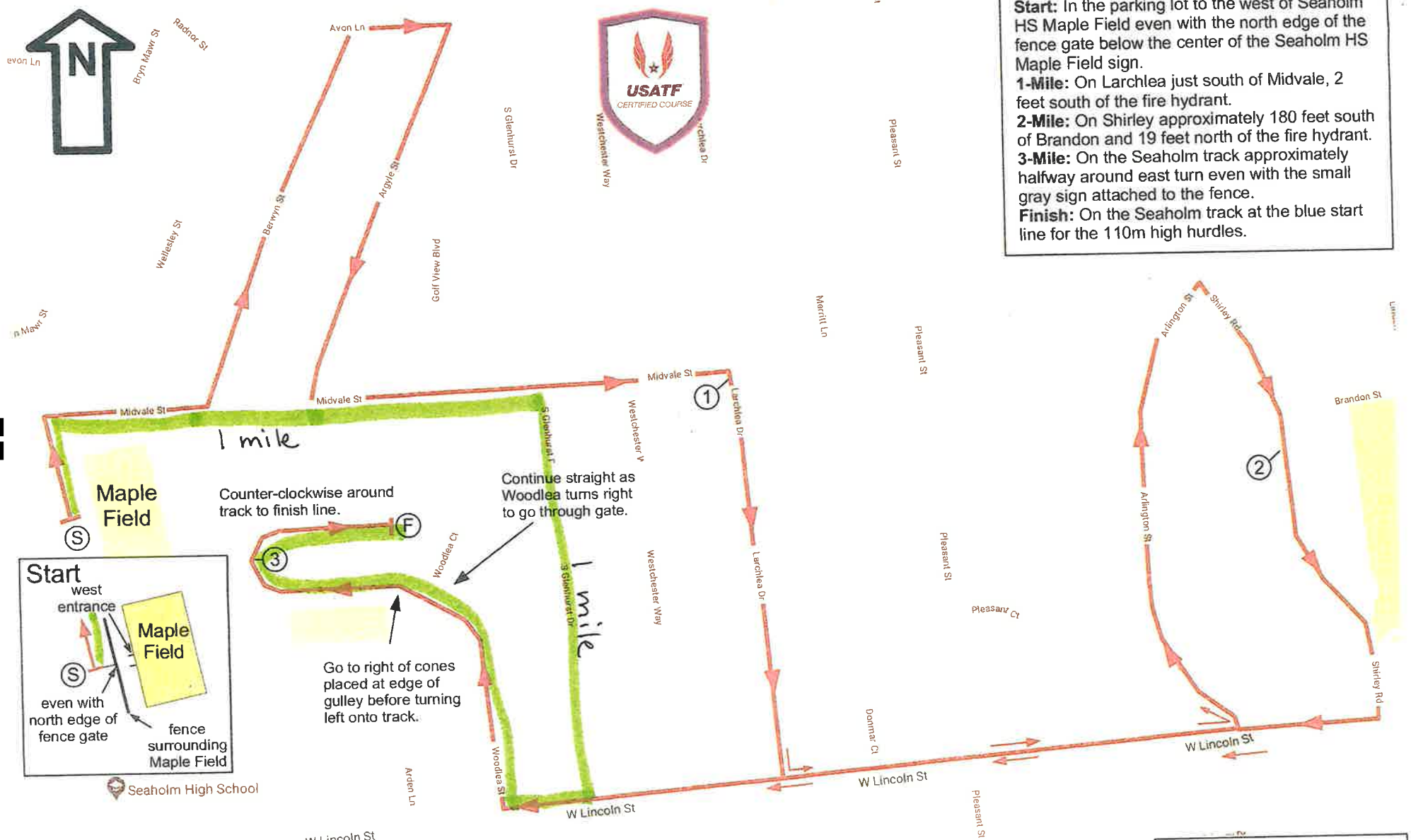
LOCATION: The start for both races will be in the Seaholm student parking lot and the finish will be on the Seaholm track. The 1 mile race will include Midvale Street, Glenhurst Street, Lincoln Street and Woodlea Court. The 5K course will include the following streets: Midvale Street, Berwyn Street, Avon Street, Argyle Street, Midvale Street, Larchlea Street, Lincoln Street, Arlington Street, Shirley Street, and Woodlea Court. Although not part of the race route, Wellesley Street will be affected for the very beginning of the race.

USATF Certificate
MI18019MN

Birmingham Harriers 5k Run/Walk
Birmingham, Michigan

Effective Dates
13-JUL-2018 to 31-DEC-2028

Start: In the parking lot to the west of Seaholm HS Maple Field even with the north edge of the fence gate below the center of the Seaholm HS Maple Field sign.
1-Mile: On Larchlea just south of Midvale, 2 feet south of the fire hydrant.
2-Mile: On Shirley approximately 180 feet south of Brandon and 19 feet north of the fire hydrant.
3-Mile: On the Seaholm track approximately halfway around east turn even with the small gray sign attached to the fence.
Finish: On the Seaholm track at the blue start line for the 110m high hurdles.



Unless otherwise noted, runners can use the entire width of all roads in order to follow the shortest possible route.

Measured by
Mark Neal
runnermark@gmail.com
1-JUL-2018

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Road Running Technical Council
USA Track & Field

Measurement Certificate

recognized by RRCA

Name of course: Birmingham Harriers 5k Run/Walk Distance: 5 km

Location (state): Michigan (city): Birmingham

Type of course: ☒ road race ☐ calibration

Measuring Methods: ☒ bicycle ☐ steel tape ☐ electronic distance meter

Measured by (name, address, phone & e-mail): Mark Neal
323 Griggs Street, Rochester, MI, 48307, 248-894-3846, runnermark@gmail.com

Race Contact (name, address, phone & email): Teresa McCardell
675 Yarmouth, Bloomfield Township, MI, 734-358-4110, terrimccardell@gmail.com

Date(s) when course measured: Jul. 01, 2018

Course Configuration: Point to point Number of measurements of entire course: 2

Elevation (meters above sea level) Start 227 m Finish 228 m Highest 229 m Lowest 217 m

Straight line distance between start & finish 325 m Drop -0.2 m/km Separation 6.5%

Type of Surface: Paved 93% Dirt 0% Gravel 0% Grass 1% Track 6%

Effective date of certification: Jul. 13, 2018 Certification code: MI18019MN

Notice to Race Director: Use this Certification Code in ***all*** public announcements relating to your race.

Be It Officially Noted That

Based on examination of data provided by the above named measurer, the course described above and in the map attached is hereby certified as reasonably accurate in measurement according to the standards adopted by the Road Running Technical Council. If any changes are made to the course, this certification becomes void, and the course must then be recertified.

Verification of Course — In the event a National Open Record is set on this course, or at the discretion of USA Track & Field, a verification remeasurement may be required to be performed by a member of the Road Running Technical Council. If such a remeasurement shows the course to be short, then all pending records will be rejected and the course certification will be cancelled.

This certification expires on December 31 in the year 2028

AS NATIONALLY CERTIFIED BY

Mark Neal Date: Jul. 13, 2018

Mark Neal • USATF/RRTC Certifier
323 Griggs Street, Rochester, MI, 48307 • 248-894-3846 • runnermark@gmail.com

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Schools Offer Support

ROOTED IN OUR COMMUNITY

MISSION STATEMENT

"Schools Offers Support (SOS) serves members of our community through outreach efforts, financial support, and volunteer activities. SOS is committed to helping those in need and teaching students that community matters."

Schools Offer Support (SOS) is a service organization in which parents and students work together to build a stronger community through acts of kindness. SOS has been able to fund and support a vast array of community needs. Some examples are:

- Food boxes, gift cards and childcare support for financially challenged families during the COVID-19 pandemic
- Tutoring programs for middle school and elementary students
- Thanksgiving dinners to dozens of families in need each year
- Holiday gifts purchased and wrapped for families in need
- Leaf raking for seniors in our community
- Financial aid for those faced with sudden emergencies
- Barbara and Sheldon Weisberg Laptop scholarships awarded to select college-bound seniors annually
- and much, much more

Respecting family privacy is paramount; all needs are filled anonymously.

2436 West Lincoln, Birmingham, Michigan 48009
schoolsoffersupport.org

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CERTIFICATE OF INSURANCE

Producer

SET SEG
1520 Earl Ave
East Lansing, MI 48823

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

Insured

Birmingham School District
31301 Evergreen Road
Beverly Hills, MI 48025

A MASB-SEG Property/Casualty Pool, Inc.

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE	EXPIRATION DATE	LIMITS	
A	**GENERAL LIABILITY** [X] Comprehensive Form [X] Premises/Operations [X] Incidental Medical Malpractice Coverage [X] Products/Completed Operations [X] Contractual [X] Independent Contractors [X] Broad Form Property Damage [X] Personal Injury	PC 0000114	7/1/22	7/1/23	BI & PD COMBINED OCCURRENCE BI & PD COMBINED AGGREGATE PERSONAL INJURY OCCURRENCE PERSONAL INJURY AGGREGATE	$1,000,000 N/A $1,000,000 N/A

DESCRIPTION The City of Birmingham is hereby added as an additional insured for liability but only as respects to the activities performed by or on behalf of the named Insured as it represents the Districts Strides for SOS Harriers Run Special Event 2021.

CERTIFICATE HOLDER

City of Birmingham
151 Martin Street
Birmingham, MI 48012

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL **30** DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Deana Coolidge

Deana Coolidge
PROPERTY/CASUALTY DEPARTMENT

Date July 30, 2022

Updated insurance must be submitted 2 weeks prior to the event.

Seaholm High School

Kyle Hall, Principal• 248.203.3702 • Fax: 248.203.3706• khall@birmingham.k12.mi.us
2436 West Lincoln Street, Birmingham, MI 48009

EXHIBIT A

HOLD HARMLESS AGREEMENT

FOR

ACTIVITY: ANNUAL STRIDES FOR SOS SK & 1 MILE WALK/RUN

DATE: October 1, 2023

"To the fullest extent permitted by law, the School District of the City of Birmingham agrees to defend, pay on behalf of **ANNUAL STRIDES FOR SOS SK & 1 MILE WALK/RUN** and hold harmless the City of Birmingham, its elected and appointed officials, employees and volunteers and others working on behalf of the City of Birmingham; against any and all claims, demands, suits, loss, including all costs connected therewith, for any damages which may be asserted, claimed or recovered against or from the City of Birmingham, its elected and appointed officials, employees, volunteers or others working on behalf of the City of Birmingham, by reason of personal injury, including bodily and death; and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this the activity authorized by this permit."

Authorized Representativel

Seaholm High School

Kyle Halt Principal• 248.203.3702 • Fax: 248.203.3706• kha//@birmingham.k12.mi.us
2436 West Lincoln Street, Birmingham, MI 48009

ADDITIONAL INSURED ENDORSEMENT

FOR

ACTIVITY: ANNUAL STRIDES FOR SOS SK & 1 MILE WALK/RUN

DATE: October 1, 2023

"It is understood and agreed that the following shall be Additional Insureds: the City of Birmingham, and including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees, and volunteers.

This coverage shall be primary to the Additional Insureds, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether said other available coverage be primary, contributing or excess."

(Signature of Authorized Representative)

Schools Offer Support
2436 W. Lincoln
Birmingham MI 48009

METROPLEX MI 480
1 MAY 2023 PM 6 L

US POSTAGE PITNEY BOWES
ZIP 48009 $ 000.48⁰
02 1W
0001404691 MAY 01 2023

RCVD May 3 2023

Clerk's Office
City of Birmingham
151 Martin St
Birmingham, MI 48009

48009-336851

SPECIAL EVENT NOTIFICATION

TO ALL PROPERTY/BUSINESS OWNERS

Birmingham City Code requires approval from the Birmingham City Commission to hold the following special event. The code further requires we notify any affected property/business owners of the date and time that the City Commission will consider our request, so that an opportunity exists for comments prior to this approval.

NAME OF EVENT: Strides for SOS (Schools Offer Support)
LOCATION: Streets Surrounding Seaholm High School
DATES/TIMES: Sunday, October 1, 2023. Setup 7 am, Race at 9 am, Ending at 10:30 am. Tear-down complete by Noon
DESCRIPTION: This event includes a 5K road running race to raise money for Schools Offer Support, a community non-profit serving families in the local area. Race begins at 9:00 am and roads will open as soon as all participants have passed a given barrier. There will be multiple volunteers along the course and at all intersections to help direct the runners.

DATE OF CITY COMMISSION MEETING:
Monday, May 22, 2023, 7:30PM

The City Commission meets in room 205 of the Municipal Building at 151 Martin. You may also attend virtually through ZOOM: https://zoom.us.com/j/655079760 Meeting ID: 655 079 760. A complete copy of the application to hold this special event is available for your review at the city clerk's office (248.530.1880)

EVENT ORGANIZER: Schools Offer Support 2436 W Lincoln, Birmingham MI 48009.
EVENT DAY CONTACT: Amy Murray 404-550-3450

TO MANAGERS OF BUILDINGS CONTAINING MORE THAN ONE UNIT: PLEASE POST THIS NOTICE AT THE MAIN ENTRANCE TO YOUR BUILDING.

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DEPARTMENT APPROVALS

EVENT NAME: Strides for SOS (Schools Offer Support

LICENSE NUMBER #23-00012145 **COMMISSION HEARING DATE: 05/22/23**

NOTE TO STAFF: Please submit approval by 4/1/23 **DATE OF EVENT: October 1, 2023**

DEPARTMENT	APPROVED	COMMENTS	PERMITS REQUIRED (Must be obtained directly from individual departments)	ESTIMATED COSTS (Must be paid two weeks prior to the event. License will not be issued if unpaid.)	ACTUAL COSTS (Event will be invoiced by the Clerk's office after the event)
PLANNING **101.0-000.000-636.0005** 248.530.1855	TBC	No Cost No Comment		$0	
BUILDING **101.0-000.000.636.0005** 248.530.1850	MJM	No department involvement	Any tents over 400 SQFT.	$0	
FIRE **101.0-000.000-636.0004** 248.530.1900	AS	Emergency response from the stations 1 crowd manager per 250 attendees		$0	
POLICE **101.0-000.000.636.0003** 248.530.1870	RK	Personnel and barricades		$2,013.48	
PUBLIC SERVICES **101.0-000.000-636.0002** 248.530.1642	CL	Barricade drop off		$300	
ENGINEERING **101.0-000.000.636.0002** 248.530.1839	KC	Obstruction	Obstruction	$65	
SP+ PARKING	AF	None	None	$0	$0
INSURANCE 248.530.1807		Need to submit COI no less than 2 weeks prior to event Need to submit Hold Harmless Agreement	None	$0	$0

CLERK **101.0-000.000-614.0000** 248.530.1803		Notification letters to be mailed by applicant April 4, 2023. Notification addresses on file in the Clerk's Office.	Applications for vendors license must be submitted no later than ____.	$165. pd	
				TOTAL DEPOSIT REQUIRED **$2378.48**	**ACTUAL COST**

FOR CLERK'S OFFICE USE

Deposit paid _____

Actual Cost _____

Due/Refund_____

Rev. 5/10/23
h:\shared\special events\- general information\approval page.doc

MEMORANDUM

Finance Department

DATE: **May 9, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Mark Gerber, Finance Director/Treasurer**

SUBJECT: **Community Development Block Grant Cooperative Agreement**

INTRODUCTION:
The City of Birmingham participates in the Oakland County Urban County Community Development Block Grant (CDBG) program. The U. S. Department of Housing and Urban Development (HUD) requires Oakland County to renew their Cooperative Agreements with participating communities every three years.

BACKGROUND:
The City is a current participant in this program. As a participant, there is currently a Cooperative Agreement on file with the county and is attached to this report. The three-year agreement is automatically renewed for each three-year cycle unless an amendment is required by HUD. There are no changes to the agreement necessary at this time.

In order for the City to renew the cooperative agreement, a certified copy of the County's recommended resolution must be sent to the County by June 12, 2023, indicating that the City wishes to opt into the Oakland County Urban County Community Development Block Grant (CDBG) program for program years 2024-2026 and will remain through automatic renewals in successive three-year qualification periods, or until such time that it is in the best interest of the City to terminate the cooperative agreement.

LEGAL REVIEW:
None needed.

FISCAL IMPACT:
The City receives approximately $36,000 annually that is used to provide senior services, minor home repair and ADA upgrades to public facilities.

PUBLIC COMMUNICATIONS:

None needed.

SUMMARY:
It is recommended that the City Commission opt into the Oakland County Urban County Community Development Block Grant (CDBG) program for program years 2021-2023 and will remain through automatic renewals in successive three-year qualification periods, or until such time that it is in the best interest of the City to terminate the cooperative agreement.

ATTACHMENTS:
- 2024-2026 Cooperative Agreement Letter

SUGGESTED COMMISSION ACTION:
Make a motion adopting the following resolution:

The City of Birmingham City Commission resolves to opt into Oakland County's Urban County Community Development Block Grant (CDBG) programs for the years 2024, 2025 and 2026. Furthermore, we resolve to remain in Oakland County's Urban County Community Development programs, which shall be automatically renewed in successive three-year qualification periods of time, or until such time that it is in the best interest of the City to terminate the Cooperative Agreement.

OAKLAND COUNTY MICHIGAN

OAKLAND COUNTY EXECUTIVE DAVID COULTER

NEIGHBORHOOD
& HOUSING DEVELOPMENT

Shane Bies, Manager
(248) 858-0493 | biess@oakgov.com

May 5, 2023

Therese Longe, Mayor
City of Birmingham
151 Martin St.
Birmingham, MI 48012-3001

RE: 2024-2026 Cooperation Agreement

Dear Mayor Longe:

We invite the City of Birmingham to continue to participate in the Oakland County urban county Community Development Block Grant (CDBG) program for program years 2024-2026. The City has participated during the past three years. During this period, approximately $108,107.00 has funded programs to address the needs of low-income residents.

The U. S. Department of Housing and Urban Development (HUD) requires the County to renew its Cooperation Agreement with participating communities every three years. Your participation is essential to the County and the other cities, townships and villages that combine demographics each year to achieve the highest level of federal funding for local projects. Participation in the urban county requires a three-year commitment and your community must remain in the program for the three-year duration. If your community chooses to remain with the urban county, it is ineligible to apply for grants under the State CDBG program while a part of the urban county. Besides the annual CDBG allocation, participating communities also benefit from the County's federally funded HOME Investment Partnerships and Emergency Solutions Grant (ESG) programs. HOME funds are combined with CDBG funds each year to improve local housing stock through our Home Improvement Program. HOME funds are also used to develop affordable rental and owner housing. ESG funds are used to meet the needs of the homeless through emergency shelters, rapid re-housing and homeless prevention activities.

As a current participant, there is a Cooperation Agreement between the City of Birmingham and Oakland County on file. This three-year Cooperation Agreement is automatically renewed for each three-year cycle unless an amendment is required by HUD. Your CDBG primary contact was provided a copy of the most current Cooperation Agreement and should have it on file. If you require a copy, please contact us.

In order to continue to participate in the Oakland County urban county program the City must submit the following document to the County by **Monday, June 12, 2023:**

> **A resolution (see attached) specifically designed to meet HUD requirements. Please ensure that the original resolution is signed, dated and certified by the City Clerk. Alternatively, the original resolution can be signed and dated by the City Clerk and embossed with a seal. Please send us the original resolution and keep a copy for your records.**

If you decide to opt out of the urban county program, a letter signed by the chief executive officer is required. The letter should state that the community intends to opt out of the Oakland County urban county program. Due to federal requirements, you must submit this letter to the County **and** to HUD. Please mail HUD's copy of the letter to Keith E. Hernandez, AICP, Director, Office of Community Planning and Development, U.S. Dept of Housing and Urban Development, Patrick V. McNamara Federal Building 477 Michigan Ave., Ste. 1600, Detroit MI 48226 by **Monday, June 12, 2023.** The County's copy of the letter should be mailed to Samantha Ferguson, Grant Compliance Coordinator, by **Monday, June 12, 2023.** If you have questions, please contact Samantha at (248) 858-5312.

Sincerely,

Shane Bies, Manager

cc: MARK GERBER, Director of Finance & Treasury

INTERESTED IN PARTICIPATING – RESOLUTION REQUIRED
Community Development Block Grant (CDBG) Program
Oakland County, Michigan
Urban County Qualification 2024-2026

Resolution Language

We resolve to opt into Oakland County's Urban County Community Development Block Grant (CDBG) programs for the program years 2024, 2025 and 2026. Furthermore, we resolve to remain in Oakland County's Urban County Community Development programs, which shall be automatically renewed in successive three-year qualification periods of time, or until such time that it is in the best interest of the local Community to terminate the Cooperative Agreement.

NOTE: Please ensure that the above resolution is signed, dated and certified in the originals by the Clerk. Alternatively, the resolution can be signed and dated by the Clerk and embossed with a seal. Please keep a copy for your records.

Please send the original by Monday, June 12, 2023 to:
Samantha Ferguson, Grant Compliance Coordinator
Oakland County Neighborhood & Housing Development
250 Elizabeth Lake Road #1900
Pontiac, MI 48341-0414

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM
Museum

DATE: **May 10, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Leslie Pielack, Museum Director**

SUBJECT: **Collection Deaccession-Birmingham Museum School Yearbooks**

INTRODUCTION:

The Birmingham Museum's permanent collection of school yearbooks dates back to the 1970s. Many of these yearbooks are over a century old. Over time, the museum has received additional yearbook copies that are in better condition than those originally accessioned, resulting in many additional copies to be stored and managed. In the interest of efficient use of resources, improving storage, removing damaged or mold-infested materials that threaten other items, and providing materials for public access and digitization, the museum is proposing a yearbook deaccession project that will enhance the remaining collection. The City, as owner of the collection, must approve the proposed object deaccession.

The **Birmingham Museum Collections Policy** was approved by the City Commission on December 7, 2020. It provides a specific deaccession process that is consistent with museum best practices and requires a careful review at multiple levels before coming to the City Commission for final approval. In accordance with this procedure, the Museum Board recommends that the City Commission approve the removal of the unneeded school yearbooks from the museum's permanent collection.

BACKGROUND:

The Birmingham Museum's permanent collection is based upon accessions that date to the 1970s, when the Birmingham Historical Society (a.k.a., Friends of the Birmingham Museum) began to collect items pertaining to Birmingham history. This has included objects of specific interest or relationship to Birmingham, such as school yearbooks. In 2001, when the museum was formally established as a professional operation by the City of Birmingham, the historical society's collection was transferred as a whole to the City's ownership. Museum staff has been working to organize and improve record keeping, to re-organize objects in the collection, and to make the collection more accessible to the public.

As part of its objective to digitize objects of local historical value for online access, museum staff recently undertook a project to assess the entire school yearbook collection, including inventory, condition, record-keeping, and storage needs. As a result, staff identified a number of duplications, mold contamination, and storage issues with the existing collection that should be addressed through the museum's deaccession procedure. Eighty-seven (87) yearbooks dating from 1919-1958 have been found that need deaccession. A deaccession of the unneeded and/or damaged yearbooks will improve remaining storage and preservation of the best remaining items. It will also make it possible to provide browsing copies as well as efficiently digitize the materials for the benefit of the general public, researchers, and genealogists.

The procedures for deaccession are outlined in the Birmingham Museum Collection Policy. They ensure that only necessary and well-considered deaccessions occur and that the rationale for removal is carefully evaluated. The procedure begins with an internal review by staff with recommendations to the Museum Board Collection Subcommittee, which reviews the proposed deaccession and decides whether to recommend it to the Museum Board. If so recommended, the Museum Board reviews the matter and decides whether to recommend the deaccession to the City Commission for final approval. After City Commission approval, the museum staff implement the deaccession through transfer, removal, and/or appropriate disposal or distribution based on accepted methods, museum standards and ethical practice.

On April 13, 2023, the Museum Board Collections Subcommittee reviewed the yearbook deaccession proposal, and agreed that the deaccession would enhance the remaining collection and improve options for digitization for public access. In accordance with the policy, the Collections Subcommittee recommended approval at the Museum Board level.

The Museum Board met on May 4, 2023 and reviewed the proposal and the Collections Subcommittee recommendations, and voted unanimously to recommend that the City Commission give final approval to the yearbook deaccession project as proposed.

LEGAL REVIEW:

In 2020, City Attorney Mary Kucharek provided a legal review of the Birmingham Museum Collections Policy, including the procedures for deaccession of items from the permanent collection prior to its submission for City Commission approval on December 7, 2020.

FISCAL IMPACT:

None.

SUSTAINABILITY COMMENTS:

Deaccessioning duplicate and mold-contaminated materials helps protect the remaining collection and makes physical storage of other materials more efficient. Deaccessioning extraneous printed matter also makes it possible to easily digitize it for long-term digital preservation and electronic public access.

PUBLIC COMMUNICATIONS:

None.

SUMMARY

The City of Birmingham owns the Birmingham Museum collection, which is professionally managed and cared for by museum staff according to accepted museum standards for the proper care and management of the object as long as it remains in the permanent collection. The Birmingham Museum also deaccessions objects that are not consistent with its mission and/or objectives in accordance with its Collection Policy. To protect the collection, the level of approval for deaccessioning includes several specified levels of authority before deaccession and disposal can occur.

After careful review by museum staff, the Museum Director, the Museum Board Collections Subcommittee, and the Museum Board, it is recommended that the City Commission approve the deaccession of 87 school yearbooks in the Birmingham Museum's permanent collection. This will permit enhancement of the remaining collection and its storage, more efficient use of museum resources, and facilitate digitization and greater public access.

ATTACHMENTS:

1. April 4, 2023 Birmingham Museum Proposed Deaccession Report
2. December 7, 2020 minutes, Birmingham City Commission (page 10), https://cms7files1.revize.com/birmingham/Document_Center/Agenda%20&%20Minutes/City%20Commission/Minutes/2020/20201207%20Minutes.pdf
3. April 13, 2023 minutes, Museum Board Collections Subcommittee, https://cms7files1.revize.com/birmingham/20230413-Collection%20Subcommittee%20Meeting%20Minutes.pdf
4. May 4, 2023 draft minutes, Museum Board
5. Birmingham Museum Collections Policy

SUGGESTED ACTION:

Make a motion adopting a resolution to approve the deaccession and disposal of 87 redundant and damaged school yearbooks from the Birmingham Museum's permanent collection in accordance with the Birmingham Museum Collection Policy.

Object Deaccession Record

THE BIRMINGHAM MUSEUM

Object/Title: Birmingham Schools Yearbooks, 87 school yearbooks from 1919-1958

Object ID Number(s): See attached inventory;

Justification for deaccessioning:

_____Out of scope
x Poor condition/loss of integrity
x Redundant
_____Storage, display, or conservation needed exceed resources
_____Non-legal possession
_____Fake, forgery, or reproduction
x Enhancement of remaining collection

Remarks: This deaccession will reduce the collection items to those of the best condition, which will help optimize storage resources and will eliminate duplicates, while facilitating digitization for public access.

Restrictions: x None

Donor or IRS n/a

Donna Casaceli and Justin Koch 4/5/2023

Signed: Museum Staff Date

Approved by Museum Director (date) 4/5/2023

Reviewed by Collections Subcommittee (date) 4/13/2023 Approved by Museum Board (date) 5/4/2023

Approved by City Commission (date) _____

Method of Disposition (to be completed by museum staff upon City Commission approval)

☐ Transferred Recipient:_____

Address:_____

Shipped via:_____ Picked up:_____ Date: 4/5/2023

☐ Sold Recipient:_____

Address: _____

Date sold:_____Sale price: _____

Shipped via:_____ Picked up:_____ Date:_____

☐ Destroyed Method:_____

Removal of object ID# (date)_____

PastPerfect, individual object, and deaccession records complete: (date)_____

Signed: (museum staff)_____Signed: (Museum Director) _____

5H

THE BIRMINGHAM MUSEUM

05-Apr-2023

Proposed Deaccession for Baldwin / Piper / Mapletonian Yearbooks

After a careful review of the entire collection of yearbooks held at the Birmingham Museum, it is recommended to deaccession 87 of the yearbooks for redundancy and/or poor condition.

A thorough survey was done to access the quality of each yearbook and to determine its significance to Birmingham's history. Those of high quality and significance will be kept in the collections and preserved. Those of poor-quality or with mold contamination will be removed.

The deaccessioning of the redundant yearbooks will open storage space, permit digitization, and allow the Museum to properly preserve our permanent collections.

Donna Casaceli
Museum Specialist - Archivist

556 West Maple Road Birmingham, MI 48009 248-530-1928
www.bhamgov.org/museum

Deaccession Inventory Sheet

THE BIRMINGHAM MUSEUM

Date: March 30th, 2023

Descriptive Information (Collection/Grouping): Baldwinian / Piper Yearbooks (page 1)

Staff: Justin Koch

Past Perfect/ Object ID #	Brief Description, dimensions, etc.	Comment: Reason for Deaccession
1989.75	1919, not signed	redundant / bad condition
1995.49.16	1919, not signed	redundant / bad condition
2003.12.1	1919, not signed	redundant / bad condition
2007.25.1	1919, Manley Bailey / Hana family	" "
2003.12.38	1920, Eloise Carnahan	" "
2007.25.2	1920, Manley Bailey / Hana Family	redundant / bad condition
2003.12.39	1920, not signed	" "
1989.75.1	1921, not signed	" "
2007.25.3	1921, Manley Bailey / Hana Family	" "
2007.25.4	1921, not signed	" "
2003.12.40	1921, not signed	" "
1995.49.3.1	1922, not signed	" "
1987.14.1	1922, not signed	" "
1987.14	1922, not signed	" "
2007.25.6	1922, not signed	" "
1988.32.1	1922, Phyllis + Julia Myhrs	" "
2003.12.41	1922, Eloise Carnahan	" "
1989.75.2	1922, Florence Langerman	" "
2007.25.8	1923, Manley Bailey / Hanna Family	redundant / bad condition
1995.49.4a	1923, not signed	" "
2003.12.42	1923, not signed	" "
1989.75	1923, not signed	" "
1987.14.2	1923, not signed	" "
1995.49.46	1923, not signed	" "
2007.25.9	1923, not signed	" "
2007.25.7	1923, Manley Bailey?	" "
2002.12.43	1924 not signed	" "
2007.25.11	1924, not signed	" "

Notes: Manley Bailey collected yearbooks and put his stamp inside - these are just a collection of several different yearbooks - many with mold -

2003.12 - donor collected - through yard sales, etc. several dozen yearbooks - many in poor or moldy condition

5H

Deaccession Inventory Sheet

THE BIRMINGHAM MUSEUM

Date: March 30th, 2023

Descriptive Information (Collection/Grouping): Baldwinian / Piper Yearbooks (Page 2)

Staff: Justin Koch

Past Perfect/ Object ID #	Brief Description, dimensions, etc.	Comment: Reason for Deaccession	
1989.75.3	1924, not signed	Redundant	bad Condition
1989.75	1924, not signed	"	"
2007.25.10	1924, not signed	"	"
1988.32.3	1924, not signed	"	"
2003.12.44	1925, not signed	"	"
1989.75	1925, not signed	"	"
2003.12.45	1925, not signed	"	"
2007.25.13	1925, not signed	"	"
2004.31.1	1925, not signed	"	"
2003.12.47	1926, not signed	"	"
2004.31.2	1926, not signed	"	"
2007.25.14	1926, not signed	"	"
1987.14.5	926, not signed	"	"
2003.12.46	1926, Dorris Root	"	"
1989.75	1927, not signed	redundant	bad condition
2008.12.49	1927, not signed	"	"
2003.12.49	1927, not signed	"	"
2007.25.15	1927, not signed	"	"
1988.32.4	1927, not signed	"	"
2004.31.3	1927, Katherine "Kelly" Hurt	"	"
1987.14.6d	1927, Emily Leech Walker	"	"
2003.12.50	1927, Gloward Schwallie	"	"
2002.93	1927, Mary Q. Johnson	"	"
2007.25.16	1928, not signed	"	"
2003.12.51	1928, not signed	"	"
2005.08.2	1928,	"	"
2007.25.17	1928, Manley Bailey	"	"
2004.31.4	1928, Katherine "Kelly" Hurt	"	"
1987.14	1928, Florence Ackerley		

5H

Deaccession Inventory Sheet

THE BIRMINGHAM MUSEUM

Date: March 30th, 2023

Descriptive Information (Collection/Grouping): Baldwinian / Piper Yearbook (Page 3)

Staff: Justin Koch

Past Perfect/ Object ID #	Brief Description, dimensions, etc.	Comment: Reason for Deaccession	
1988.32	1929, not signed	Redundant	Poor Condition
2006.16.1	1929, not signed	Redundant	Bad/Poor condition
2004.31.5	1929, Katherine "Kelly" Hunt	"	"
2003.12.52	1929, Doris Root	"	"
1987.14.7	1929, Florence Ackerley	"	"
2003.12.54	1930, not signed	"	"
2002.55.1	1930, Thomas Martindale	"	"
2003.12.53	1930, Bennet Root	"	"
1987.14	1930, Florence Ackerley	"	"
2004.31.6	1930, Katherine "Kelly" Hunt	"	"
2003.12.55	1931, not signed	"	"
2002.55.2	1931, Thomas Martindale	"	"
2003.12.56	1932, not signed	"	"
2003.12.57	1932, Franklyn Whitney	"	"
2003.12.29	1935, not signed	Redundant	Poor-Bad Condition
2005.34.1	1935, not signed	"	"
2004.72.8	1936, not signed	"	"
2003.12.30	1936, not signed	"	"
1987.15	1936, Florence Ackerley	"	"
2003.12.31	1937, not signed	"	"
2004.72.9	1937, not signed	"	"
1989.95.1	1938, not signed	"	"
2004.67.1	1938, not signed	"	"
2004.72.10	1938, Possibly Frank Pontoly (see bookmark)	"	"
2003.12.4.4	1940, not signed	"	"
2008.24.4	1945, not signed	"	"
2017.0.1.3	1958, not signed	"	"
2017.0.1.6	1964, not signed	"	"

5H

Deaccession Inventory Sheet

THE BIRMINGHAM MUSEUM

Date: March 30th, 2023

Descriptive Information (Collection/Grouping): Baldwinian / Pipe Yearbooks (Page 4)

Staff: Justin Koch

Past Perfect/ Object ID #	Brief Description, dimensions, etc.	Comment: Reason for Deaccession
2017.0.1.9	1970, Terry Mudge	Redundant / Poor Condition
2017.0.1.21	1959 Mapletonian, not signed	Redundant / Poor Condition

CITY OF BIRMINGHAM
MUSEUM BOARD MEETING
556 W. Maple
Thursday, May 5, 2023
5:00 PM

Members Present: Caroline Ashleigh (Alternate), Kristy Barrett, Bev Erickson, Alexandra Harris, Pat Hughes Marty Logue, Jay Shell

Members Absent: Judith Keefer

Student Members Present: Alexander Motea, Alexandra Schaufller

Administration: Museum Director Leslie Pielack

Guests: None.

Chairperson Logue called the meeting to order at 5:00 PM.

Approval of the Minutes
Minutes of March 2, 2023

MOTION: by Erickson, seconded by Shell:

To approve the minutes of March 2, 2023.

VOTE: Yeas, 7
Nays, 0

Minutes of April 13, 2023, Collections Subcommittee

MOTION: by Logue, seconded by Barrett:

To approve the minutes of the Collections Subcommittee for April 13, 2023.

VOTE: Yeas, 7
Nays, 0

New Business

The Museum Board reviewed the proposed school yearbook deaccession recommended by the Collections Subcommittee at their recent meeting. 85 yearbooks dating from 1919 to 1958 are being proposed to deaccession due to redundancy, poor condition, mold infestation, and storage issues. Removing these items from the permanent collection will permit efficient digitization for preservation and research purposes, provide copies for browsing, and reduce exposure of the remaining collection to mold deterioration. The remaining items are in the best condition, are the most appropriate to be maintained by the museum staff, and will benefit from improved storage, thus enhancing the collection.

DRAFT

MOTION: by Erickson, seconded by Logue:

To approve the yearbook deaccession recommended by the Museum Board Collection Subcommittee on April 13, 2023 and recommend final approval by the City Commission.

VOTE: Yeas, 7
Nays, 0

Communication and Reports

Several Museum Board members are up for renewal in July, and all intend to re-apply. Director Pielack updated members as to the status of the window restoration project and closure of the Allen House until June 15. She also provided an update regarding the Willits Street ADA Parking and Path project. Three contractors attended the pre-bid meeting and it is hoped that there will be two or three bids at the opening on May 19. The 2nd grade school tour program begins May 11 at the museum. It has been updated and other collaborations are planned with both public and private schools to provide content, resources, and presentations related to local history, especially diversity and area Underground Railroad heritage. Members discussed their interest in seeing the Greenwood Cemetery Advisory Board take up the matter of long term planning for cemetery marker preservation to prevent deterioration of the historic markers.

Member Comments

Ms. Harris shared her final watercolor portrait of George and Eliza Taylor, which is a rendering of a blurry sketch of the Taylors that was reproduced from an 1898 newspaper. The portrait is a fitting acknowledgement of their presence and importance to Birmingham history. Many thanks to Ms. Harris for her efforts, generosity, and expertise.

There were no public comments.

The next Regular Meeting is scheduled for Thursday, June 1, at 5:00 PM at the Hunter House. Ms. Logue adjourned the meeting at 5:47 PM.

COLLECTIONS POLICY

December 2, 2020

Museum Board

Tina Krizanic, Chair
Russ Dixon
Pat Hughes
Judith Keefer
Marty Logue
Caitlin Rosso

THE BIRMINGHAM MUSEUM

Approved/Accepted
Museum Board: 12/1/2020
City Commission: 12/7/2020

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ATTACHMENT 1	Terms and Definitions
ATTACHMENT 2	Deed of Gift
ATTACHMENT 3	Deaccession Record
ATTACHMENT 4	American Association of Museums Code of Ethics
ATTACHMENT 5	American Association of State and Local History Position on Non-Capitalization of Collections

I. PURPOSE AND SCOPE

The purpose of this document is to describe the nature of the collections at the Birmingham Museum and the policies needed to provide for their management, care, and intended use on behalf of the public. As conditions and requirements change, this document may be amended through a review process, as provided for in **Section III: Governance**.

A. Mission Statement

The Birmingham Museum will explore meaningful connections with our past, in order to enrich our community and enhance its character and sustainability. Our mission is to promote understanding of Birmingham's historical and cultural legacy through preservation and interpretation of its ongoing story.

B. Description and Scope of the Collection

The majority of the objects in the Birmingham Museum collection were collected by the Birmingham Historical Society and donated to the museum at its establishment by the City of Birmingham in 2001. The museum continues to acquire and accession objects consistent with its mission and scope on an ongoing basis, usually through personal donation. The City of Birmingham owns the collection, which is professionally managed and cared for by the Birmingham Museum according to accepted museum standards.

When formally accessioned into its permanent collection, the Birmingham Museum adheres to museum ethical standards for proper care and management of the object as long as it remains in the permanent collection (see **Section IV: Acquisition and Accession**). (Collection management procedures will be followed by museum staff to document, maintain, and manage the collection according to accepted professional museum standards, and are outlined in a separate document.) The museum collects, preserves, displays, and interprets tangible and intangible material related to the history of Birmingham of the following types:

1) Three-dimensional objects—approximately 8,000 objects consisting of furnishings; household objects; prints, paintings, and sculptural objects; textiles (such as quilts); garments and personal accessories; tools and agricultural objects; books; and Native American stone tools and other ethno-cultural objects.

2) Archives—documents, maps, scrapbooks, letters, news clippings, and other similar material related to Birmingham or its residents. Material in the archives may be digitized.

3) Photographs and Images—several collections of historic photographs of people and sites in and around Birmingham, from the mid-19th c. to the present, including prints, negatives, and slides. Photographic material may be digitized.

4) Audio, Video, and Digital Materials—vinyl, microcassette, CD, and DVD recordings of oral histories, personal interviews, and sound recordings; video recordings; and photographs and documents that are in digital format.

The Birmingham Museum also deaccessions objects that are not consistent with its mission and/or objectives. In this case, a formal procedure is followed that includes specified levels of authority before deaccession and disposal can occur (see **Section III: Governance**, and **Section V: Deaccession**).

C. Historic Landscape and Buildings

The Birmingham Museum site also includes two buildings and a historic landscape that are cared for by the museum, described as follows:

Historic Landscape—the museum site is a 4-acre park that previously belonged to Harry and Marion Allen 1926-1969. Prior to that, it was the site of the first brick school in Birmingham, built in the 1856, on land that was part of Elijah Willits' original land grant. The park is adjacent to the Rouge River public trails system. The site is important for its history as well as its natural setting. It features surviving built and planted elements from the Allens' period of residence, including an original stone wall and concrete improvements to the spring fed pool that are historically important. The landscape provides a historic sense of place and is a popular natural beauty park.

Buildings—two buildings of significance exist on the site; the 1822 John West Hunter House, (originally built on Hunter's land grant, and moved to the museum in 1969), and the 1926 Allen House, built for Harry Allen, the first mayor of the City of Birmingham. The Allen House is used for changing displays and storage of objects and archives, and the Hunter House is furnished in period objects as a historic homestead. The Hunter House is listed on the National Register of Historic Places as a locally significant site, and the Allen House and landscape are under review for the same designation. The buildings and the property are also part of the City of Birmingham's Mill Pond Historic District.

The landscape and buildings are under the care of the Birmingham Museum, but are not considered part of its collection nor subject to accession and deaccession activities as provided for by this collections policy.

II. COLLECTIONS ETHICS & ACCEPTED MUSEUM STANDARDS

The City of Birmingham owns the collection and the Birmingham Museum holds it in the public trust. In addition to the ethical standards and requirements of the City of Birmingham, the Birmingham Museum is guided by the ethical responsibilities and implications of standard practices for museums (see **Attachment 4: American Alliance of Museums Code of Ethics**). These industry standards provide ethical guidance for interaction with the collection by museum staff and the Museum Board in addition to City ethical guidelines. A museum Statement of Ethics incorporates these standards as part of this Collection Policy.

A. Birmingham Museum Statement of Ethics

The Birmingham Museum ascribes to the Code of Ethics adopted by the American Alliance of Museums, as expressed in the following Birmingham Museum Statement of Ethics:

> The Birmingham Museum makes a unique contribution to the public by collecting, preserving, managing, and interpreting historic materials, including its site, buildings, artifacts, documents, photographs, oral histories, digitized materials, and other tangible and intangible objects relating to Birmingham and the surrounding area. As an institution, the distinctive character of the Birmingham Museum derives to a large extent from its collection of historical materials, which it holds on behalf of the City of Birmingham in the public trust. The ethical stewardship of these collections carries with it the presumption of thoughtful and purposeful acquisition, rightful ownership, accurate documentation, appropriate care, reasonable utilization and access, and responsible disposal.

B. Capitalization of Collections

In accordance with the view that museums hold their collections in the public trust, professional museum organizations have adopted guidelines that recommend against capitalization of museum collections (see **Attachment 5**). This also serves to distinguish historic or cultural value from the market value of a collection. Professional best practices further recommend specific policies relating to any instance of sale or disposal of a museum collection object so that any resulting funds be restricted and used solely for the enhancement or improvement of the collection, not for museum operations or other purposes. This practice protects the collection from degradation and sale in order to pay debt, for instance, in keeping with the interests of the public trust. Therefore, a formal institutional statement for the Birmingham Museum on capitalization incorporates these guidelines as part of this Collection Policy.

C. Birmingham Museum Statement on Capitalization of Its Collections

The Birmingham Museum's Statement on Capitalization establishes the museum's collection as having historic and cultural value rather than market value, as follows:

> The City of Birmingham operates the Birmingham Museum on behalf of the public and owns the collection, which it holds in the public trust, for the purpose of the furtherance of public service through public exhibition, education, and research, and not for capital or financial gain. As such its collection will be protected, cared for, preserved, and kept

unencumbered for its historic and cultural value and will not be considered capitalized assets. Proceeds from sales of donated objects, collection objects, or insurance proceeds in the case of a loss of objects, shall be used only for collection replacement and direct care activities that maintain an equivalent or enhanced historic or interpretive value within its collections. Ongoing status of individual collection and archival objects is maintained digitally by museum staff with special museum collections software.

The majority of items in the Birmingham Museum collection have historical value only. In rare instances, a collection object may exceed $5,000 in value (as established by informal estimates or formal appraisal); these objects will be recorded and monitored according to Finance Department requirements for purposes of insurance and generally accepted accounting principles.

Proceeds from the sale of deaccessioned objects may not be used for operational expenses. Funds generated, if any, shall be used only to acquire new objects or to provide direct care for those objects remaining in the collection. Any proceeds from the sale of donated objects, collection objects, or insurance proceeds will be restricted and an accounting of those funds will be maintained by the City of Birmingham's Finance Department.

Procedures governing the disposal, deaccession process, sale and revenue of collection or donated objects are described in this Collection Policy under **Section V, Deaccession**. Levels of authority associated with accession and deaccession of items in the collection are detailed in **Section III, Governance and Responsibility**.

III. GOVERNANCE AND RESPONSIBILITY

A. Museum Board

The Museum Board serves in an advisory role that provides recommendations regarding the Birmingham Museum and site and the collecting, cataloguing, preparing, and display of objects and materials relating to the history of the city and the surrounding area. Board members are appointed by the City Commission to carry out this role and to oversee the operation of the museum and care of the collection to benefit the public and the study of area history. The Museum Board develops policies in accordance with its Strategic Plan that guide museum priorities and activities, including oversight of the collection and its management, in coordination with museum staff and professional museum standards. The Museum Board oversees and makes recommendations to the City Commission for deaccession and disposal of items in the Birmingham Museum permanent collection, and establishes a Collections Subcommittee whose duty is to make recommendations to the Museum Board regarding these activities.

B. Collections Subcommittee

The Museum Board shall establish a Collections Subcommittee for the museum consisting of up to three (3) members of the Museum Board. The Collections Subcommittee will meet as needed to review proposed deaccession of objects recommended by the Museum Director. The Collections Subcommittee shall recommend objects for deaccession to the Museum Board for consideration. The Collections Subcommittee shall also review and propose revisions to the Collections Policy to the Museum Board as needed.

C. Levels of Authority

Level of Authority refers to the approval level required to make decisions about collection accession and deaccession. To protect the collection, the level of approval for deaccessioning is equal to or greater than that for accessioning.

Accession to, and Deaccession from, the Birmingham Museum collection will be considered in accordance with the defined scope of the collection and the museum mission **(see also Section I: Purpose and Scope)**. Accession and deaccession carry greater responsibility regarding documentation, care, and planning. Acquisition and de-acquisition are distinct from Accession, as they refer to status of an object outside the formal accession process, either because the object is 1) still being considered for accession, 2) is in the Use or Study Collection, or 3) otherwise has been acquired by the museum but will not become part of the Permanent Collection.

1. Authority: Acquisition and De-acquisition –The Museum Director shall determine acquisition or de-acquisition status of an object in keeping with the museum's mission and scope of the collections. Acquisitioned objects are not brought into the permanent collection through the formal accession process, but are used as exhibit props, hands-on activities, or for educational purposes. They receive basic documentation and storage and tracked internally.

2. Authority: Accession*:* The Museum Director shall determine the appropriateness of an object offered for accession to the Permanent Collection, taking into consideration the object's historic value, condition, storage and access requirements, display, conservation, use of resources, or other applicable criteria in determining such appropriateness. The Museum Director may consult with the Collections Subcommittee and/or the Museum Board in regard to accessions as necessary. It is the Birmingham Museum's policy that no restrictions are attached by donors to objects offered to the museum. The Museum Director is responsible to oversee and the legal ownership transfer process and documentation from donor/source to the museum collection **(see Attachment 2: Deed of Gift)**.

3. Authority: Deaccession*:* The Museum Director shall make recommendations to the Collections Subcommittee for the deaccession of an object from the Birmingham Museum collection. Proposed object deaccessions will be subject to specific procedures for object deaccession **(see Section V: Deaccession)**. The Museum Director will provide details on the object's history, condition, and rationale for the deaccession. The Collections Subcommittee will review the Director's proposed deaccessions and recommend object deaccessions to the Museum Board, which will review and make final recommendations to the City Commission. Final approval for deaccession rests with the City Commission. The object may be disposed of through accepted methods, or transferred from the Permanent Collection to the Use or Study Collection **(see Attachment 3: Deaccession Record)**.

D. Collections Policy Approval and Review

The Birmingham Museum Collections Policy will be reviewed on a regular basis by the Collections Subcommittee, with recommendations to the Museum Board for review and approval, and will be reviewed at least once every three years by the Collections Subcommittee, with a report to the Museum Board and to the City Commission.

IV. ACQUISITION and ACCESSION

Collection objects may be acquired through gift/donation or through purchase, and may serve the museum mission in informal (display prop, hands-on exhibit in Use Collection) or formal ways (Permanent Collection). Acquisition and accession are distinct in that acquisition refers to an informal custodial function, which may be temporary, while accession formally adds an object into the Permanent Collection with all the associated responsibilities for permanent care.

A. Acquisition and De-acquisition

Acquisition is the first step in the collections process. Objects considered for acquisition are held in temporary custody by the museum while being evaluated. Acquisitioned objects may be transferred to the Use or Study Collections, or de-acquisitioned if deemed unsuitable, sold to enhance the collection, transferred to a more appropriate institution, or otherwise disposed of. If retained, acquisitioned objects will be subject to the following:

1. Conform to the museum's mission.
2. Have free and clear title.
3. Be able to be reasonably stored and cared for during the period of acquisition.
4. Not be subject to restrictions by the donor as a condition of transfer of ownership.
5. Objects may be acquisitioned and de-acquisitioned at the discretion of the Museum Director.

B. Accession

Accessioning is the formal process by which objects enter a museum's Permanent Collection **(see Attachment 2: Deed of Gift)**. It represents a commitment by a museum to preserve, display, and permanently care for the object in the public trust. Documentation and legal transfer of ownership records are kept, and the item will be preserved, tracked, stored, displayed, handled, and maintained in accordance with the highest museum standards. To be accessioned, an object must:

1. Conform to the museum's mission.
2. Conform to the scope and/or enhance the collection.
3. Have free and clear title.
4. Be able to be properly stored, protected, accessed, and cared for in accordance with generally accepted museum standards.
5. Not be subject to the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 governing ceremonial objects, artifacts, or human remains.
6. Objects offered to the Birmingham Museum for accession will be unrestricted gifts. Exceptions must be reviewed by the Collections Subcommittee and approved by the Museum Board.
7. Objects may be accessioned at the discretion of the Museum Director.
8. Upon accession, required records and a Deed of Gift will be generated to complete the transfer of ownership.
9. Files containing accession information, transfer of ownership, Deed of Gift, object identification, photographic, and other detail will be maintained permanently by the museum. Digital files will be backed up and maintained in secure off-site storage.

V. DEACCESSION

Occasional judicious removal of previously accessioned objects from the Permanent Collection is a valuable tool and activity used by museums to maintain and enhance the remaining collection. This can occur if the mission or scope of the collection changes, an object has become damaged, obsolete, a better-preserved example of the object becomes available, etc. Eliminating an object from the Permanent Collection may improve efficiency or increase resources that may be used for other objects or to add new objects to the collection. Deaccessioning is the process of formally removing objects from the collection deemed inappropriate for continued inclusion in the Permanent Collection.

A. Requirements for Deaccession

In considering deaccession for an object, the Birmingham Museum shall consider the primary goal of furthering the museum's mission. The Birmingham Museum will follow strict deaccession guidelines that reflect the highest level of accepted museum standards and ethics, in accordance with City of Birmingham standards and ethics, and in accordance with fiduciary duties of loyalty and care. Proceeds from the sale of deaccessioned objects may not be used for operational expenses. Funds generated, if any, shall be used only to acquire new objects or to provide direct care for those objects remaining in the collection.

Recommendations for deaccession shall be prepared in writing by museum staff, reviewed by the Collections Subcommittee, and recommended to the Museum Board for its review. Independent professional assessment may be sought if deemed appropriate. The Museum Board will make recommendations to the City Commission for deaccession of collection objects.

To be eligible for consideration for deaccession, one of the following criteria must be met:

1. The material is not relevant to the mission or scope of the collection, or another institution is deemed a more appropriate repository for long term care in the public trust.
2. The material has failed to retain its integrity, or has been lost or stolen and is deemed unrecoverable.
3. The material is a duplicate, or is redundant, and has no value as a set or part of a series.
4. The material cannot be preserved, housed, displayed, or cared for appropriately by the Birmingham Museum in the present or in the anticipated future.
5. The museum's possession of the material is not consistent with applicable law, e.g., it may be subject to the Native American Graves Protection and Repatriation Act (NAGPRA), have been stolen, illegally imported, etc.
6. The material is determined to be a fake, forgery, or reproduction.
7. The removal of the object will refine or improve the remaining collection.

Upon approved deaccession, the following rules will apply:

1. In accordance with the U.S. Tax Reform Act of 1984 and associated Internal Revenue Service regulations, no donated material shall be deaccessioned before a period of two years has passed.
2. Objects deaccessioned shall not be privately sold, given, or otherwise transferred to any employee or official of the city government, including the Museum Board, museum

staff, museum volunteers, or members of the Friends of the Birmingham Museum, or their family members.

3. Objects withdrawn from the Permanent Collection may be assigned to the Use or Study Collection by the Museum Director.
4. A complete record of deaccessioned objects shall be kept, and a copy shall be retained permanently. The deaccession documentation shall include an image of the object. The permanent Object ID# shall not be re-assigned.
5. Before disposal, the Birmingham Museum's object identification numbers shall be removed.
6. Funds derived from the deaccessioning and disposal of objects from the Birmingham Museum collection shall be restricted and used exclusively for the acquisition or purchase of objects for the collection, or for direct care of the collection. In no event shall proceeds be used for operating or capital expenses or for any purpose other than acquisition or direct care of the collection in a manner consistent with the Birmingham Museum's mission and collection scope.

Disposal of deaccessioned objects can occur through:

1. Transfer to the Birmingham Museum's Use or Study Collection.
2. Disposal (The disposal of hazardous materials will follow all applicable laws and regulations).
3. Transfer, sale, or trade to another museum.
4. Sale at public auction.

VI. LOANS

Museums commonly loan collection items in accordance with mission goals and standard practice. A loan provides for the transfer of temporary custody and legal responsibility for specific object(s) between entities holding a collection for a designated period of time. Incoming loans provide an opportunity for enhanced interpretive display and/or research of mission-related information. Outgoing loans build institutional collaboration and help expose the Birmingham Museum's collection to a wider audience.

The Birmingham Museum may initiate a loan of object(s) in private or institutional collections for the purposes of exhibition or study, and outside organizations may make requests of the Birmingham Museum. Loans are not made by the Birmingham Museum to individuals, or to public or private institutions whose purpose and mission are not aligned with the public interest. Incoming and outgoing loans are administered by museum staff and approved by the Museum Director in accordance with accepted museum standards.

Outgoing Loans:

1. Loan documents will specify the length of loan and other applicable terms, such as shipping and handling, security, environmental controls, display restrictions, credit lines, etc.
2. The borrowing institution may be required to submit a Standard Facility Report as a part of the loan agreement. The SFR is a widely recognized document that provides detailed description of an individual museum's physical and exhibit space, security, and related characteristics.
3. The borrowing institution is responsible for carrying and demonstrating "wall-to-wall" insurance coverage from the time the object(s) leave the Birmingham Museum until the object(s) is returned.

Incoming loans:

1. Loans may be requested by the Museum Director from other institutions or from private sources for the purposes of study, temporary display, or long term display.
2. A loan agreement will reflect the object(s') description, terms of the loan, contact information, insurance value of the object(s), special shipping requirements, if any, and other relevant information. Museum staff will also provide a copy of the Birmingham Museum Standard Facility Report, if requested, and a copy of the City of Birmingham's insurance certificate. The museum will not utilize incoming loans if the object(s') insurance value exceeds the insurance available.
3. While in the care of the Birmingham Museum, loaned object(s) will be properly secured and protected.

ATTACHMENT 1-Terms and Definitions

The following terms and definitions relate to standard museum practice as applied by the Birmingham Museum and referenced in this Collections Policy.

Accession – (1) an object or group of objects formally and legally accepted and recorded by a museum as part of its Permanent Collection; (2) the act of recording and processing an addition to the Permanent Collection. Accessioning objects commits the museum to their permanent care and protection, and therefore is done in accordance with the museum's mission and stated scope. Accession is distinct from the less formal status of Acquisition.

Acquisition – the status of an object in which it is in the possession of a museum and is being considered for formal addition (accession) into the Permanent Collection. Acquisition can also refer to objects that are acquired by the museum for the Use or Study Collection, but which are not accessioned. In some instances, donated objects may be acquired by the museum that are not accessioned, but may be disposed of through sale or trade in order to enhance the Permanent Collection..

Collection, Permanent—those objects in the Birmingham Museum's collection that are formally accessioned for preservation, care, protection, display, and/or interpretation by the museum in the interest of the public trust, and in keeping with the mission and scope of the museum.

Collection, Study—those objects in the Birmingham Museum's collection that are maintained for the purposes of research, education, and study, and which are preserved, stored and maintained with that purpose in mind, and in keeping with the mission and scope of the museum.

Collection, Use—those objects in the possession of the Birmingham Museum that are maintained for the purposes of education, interpretation, and display and which are stored and maintained with that purpose in mind, in keeping with the mission and scope of the museum. Use collection objects may be reproductions or redundant objects, and may be recorded and labeled to distinguish them from the Permanent Collection.

Collection Management—refers to procedures developed and implemented to ensure proper care of, and minimal risk to, a museum's collection. Such policies typically address a variety of issues such as storage, care, and treatment, as well as standards of recordkeeping for everything that is done to document, care for, and develop museum collections to make them available for use in the public trust. Collection management also refers to the planning and guidance for the collection to prevent unhindered collecting and the resultant administrative, legal, and ethical problems.

Deaccession—the formal and legal process of removing an object from a museum's Permanent Collection, undertaken in strict accordance with established procedure and review at multiple levels of authority, in order to improve the museum's collection or enhance its ability to fulfill its mission.

De-acquisition—refers to the disposal of an object in the Use or Study Collection, or an object that was received by the Birmingham Museum as a gift but not accessioned into the Permanent Collection.

Deed of Gift—document between donor and museum that legally transfers ownership and control of an object or group of objects to a museum. The document includes description, date, and clarification that the objects are offered and accepted as unrestricted gifts.

Disposal—action taken after an object is formally deaccessioned. It can include sale, trade, transfer, or in cases of objects of personal value, return of an object to the original donor as deemed appropriate.

Found in Collection—status of an object found in the possession of the museum, but which lacks accompanying information as to origin or accession.

Intervention—any activity that interacts with the object to effect changes in its condition or status.

Level of Authority—the approval level required to make decisions about collection accession and deaccession. Ordinarily, the level of approval for Deaccessioning is equal to or greater than that for accessioning.

Loan, Incoming—acceptance by a museum of responsibility for a collection object belonging to another individual or organization, on a temporary basis, for the purpose of study or exhibition, and not construed to be part of the museum collection.

Loan, Outgoing— legal transfer of responsibility for materials from a museum collection to an outside institution for a specific period of time, not construed to be transfer of ownership.

Loan Agreement—written document that specifies details related to the loan of objects from the Birmingham Museum to other institutions or entities. Term of loan, insurance requirements, credit line, and use are included.

Object Cataloging—the process through which information is recorded about an object or set of objects.

Standard Facility Report—document that outlines museum facilities and other information used by museums to assess conditions and make determinations regarding loans between institutions.

"Wall-to-Wall" Insurance Coverage—an element of fine art insurance that covers museum artifacts and works of art when on loan from the time they leave an institution to the time they are installed at another.

ATTACHMENT 2 Deed of Gift

Donor Information

Name: _____

Address: _____

City, State, Zip: _____

Phone:_____ Email: _____

Accession Number: _____

Description of Object:

The Birmingham Museum acknowledges with gratitude the gift(s) listed below, subject to the following conditions:

1. All gifts are subject to review by Museum Staff.
2. No gift shall be accepted with the condition that it be permanently exhibited.
3. No collection shall be accepted with the condition that it be kept intact.
4. No gift can be reclaimed by the donor or his / her heirs.
5. All gifts shall become the property of the City of Birmingham without conditions or encumbrances, and shall be utilized at the sole discretion of the Museum and City.

Donor Agreement

These donated objects have been given as an unrestricted gift and are now the property of the Birmingham Museum. I give, transfer and assign to the Birmingham Museum all right, title and interests, including all copyright, trademark and related interests, in, to and associated with the objects described above. I affirm that I am the legal owner of the objects donated, or am legally empowered to sign on behalf of the owner, and that said objects were collected or acquired in accordance with applicable laws. I agree that these objects may be displayed or reproduced in any medium, loaned, retained, transferred to another museum or disposed of in any such manner, at the sole discretion of the Birmingham Museum.

Dated:_____ _____
Donor / Agent

Date Received: _____ _____
Received By / Title

This gift is given in memory of: _____

ATTACHMENT 3 Object Deaccession Record

Object/Title:_____ Object ID Number(s): _____

Justification for deaccessioning:

_____ Out of scope
_____ Poor condition/loss of integrity
_____ Redundant
_____ Storage, display, or conservation needed exceed resources
_____ Non-legal possession
_____ Fake, forgery, or reproduction
_____ Enhancement of remaining collection

Remarks:_____
_____

Restrictions:_____None Donor or IRS _____

_____ Signed:
Museum Staff Date

Approved by Museum Director (date)_____
Reviewed by Collections Subcommittee (date) _____
Approved by Museum Board (date)_____
Approved by City Commission (date) _____

Method of Disposition (to be completed by museum staff upon City Commission approval)

___Transferred Recipient:_____
Address:_____
Shipped via:_____ Picked up:_____ Date:_____

___Sold Recipient:_____
Address:_____
Date sold:_____Sale price: _____
Shipped via:_____ Picked up:_____ Date:_____

___Destroyed Method:_____

Removal of object ID# (date)_____

PastPerfect, individual object, and deaccession records complete: (date)_____

Signed: (museum staff)_____Signed: (Museum Director) _____

ATTACHMENT 4 American Alliance of Museum's Code of Ethics (Excerpts)
http://www.aam-us.org/resources/ethics-standards-and-best-practices/code-of-ethics-for-museums. Accessed 2013-09-12.

Code of Ethics for Museums

Adopted 1991, amended 2000.

Please note that the Code of Ethics for Museums references the American Association of Museums (AAM), now called the American Alliance of Museums.

Ethical codes evolve in response to changing conditions, values and ideas. A professional code of ethics must, therefore, be periodically updated. It must also rest upon widely shared values. Although the operating environment of museums grows more complex each year, the root value for museums, the tie that connects all of us together despite our diversity, is the commitment to serving people, both present and future generations. This value guided the creation of and remains the most fundamental principle in the following Code of Ethics for Museums.

Code of Ethics for Museums

Museums make their unique contribution to the public by collecting, preserving and interpreting the things of this world. Historically, they have owned and used natural objects, living and nonliving, and all manner of human artifacts to advance knowledge and nourish the human spirit. Today, the range of their special interests reflects the scope of human vision. Their missions include collecting and preserving, as well as exhibiting and educating with materials not only owned but also borrowed and fabricated for these ends. Their numbers include both governmental and private museums of anthropology, art history and natural history, aquariums, arboreta, art centers, botanical gardens, children's museums, historic sites, nature centers, planetariums, science and technology centers, and zoos. The museum universe in the United States includes both collecting and non-collecting institutions. Although diverse in their missions, they have in common their nonprofit form of organization and a commitment of service to the public. Their collections and/or the objects they borrow or fabricate are the basis for research, exhibits, and programs that invite public participation.

Taken as a whole, museum collections and exhibition materials represent the world's natural and cultural common wealth. As stewards of that wealth, museums are compelled to advance an understanding of all natural forms and of the human experience. It is incumbent on museums to be resources for humankind and in all their activities to foster an informed appreciation of the rich and diverse world we have inherited. It is also incumbent upon them to preserve that inheritance for posterity.

Museums in the United States are grounded in the tradition of public service. They are organized as public trusts, holding their collections and information as a benefit for those they were established to serve. Members of their governing authority, employees and volunteers are committed to the interests of these beneficiaries. The law provides the basic framework for museum operations. As nonprofit institutions, museums comply with applicable local, state, and federal laws and international conventions, as well as with the specific legal standards governing trust responsibilities. This Code of Ethics for Museums takes that compliance as given. But legal standards are a minimum. Museums and those responsible for them must do more than avoid legal liability, they must take affirmative steps to maintain their integrity so as to warrant public confidence. They must act not only legally but also ethically. This Code of Ethics for Museums, therefore, outlines ethical standards that frequently exceed legal minimums.

Loyalty to the mission of the museum and to the public it serves is the essence of museum work, whether volunteer or paid. Where conflicts of interest arise—actual, potential or perceived—the duty of loyalty must never be compromised. No individual may use his or her position in a museum for personal gain or to benefit another at the expense of the museum, its mission, its reputation and the society it serves.

For museums, public service is paramount. To affirm that ethic and to elaborate its application to their governance, collections and programs, the American Association of Museums promulgates this Code of Ethics for Museums. In subscribing to this code, museums assume responsibility for the actions of members of their governing authority, employees and volunteers in the performance of museum-related duties. Museums, thereby, affirm their chartered purpose, ensure the prudent application of their resources, enhance their effectiveness and maintain public confidence. This collective endeavor strengthens museum work and the contributions of museums to society—present and future.

ATTACHMENT 4, CON'T
Governance

Museum governance in its various forms is a public trust responsible for the institution's service to society. The governing authority protects and enhances the museum's collections and programs and its physical, human and financial resources. It ensures that all these resources support the museum's mission, respond to the pluralism of society and respect the diversity of the natural and cultural common wealth. Thus, the governing authority ensures that:

- all those who work for or on behalf of a museum understand and support its mission and public trust responsibilities
- its members understand and fulfill their trusteeship and act corporately, not as individuals
- the museum's collections and programs and its physical, human and financial resources are protected, maintained and developed in support of the museum's mission
- it is responsive to and represents the interests of society
- it maintains the relationship with staff in which shared roles are recognized and separate responsibilities respected
- working relationships among trustees, employees and volunteers are based on equity and mutual respect
- professional standards and practices inform and guide museum operations
- policies are articulated and prudent oversight is practiced
- governance promotes the public good rather than individual financial gain.

Collections

The distinctive character of museum ethics derives from the ownership, care and use of objects, specimens, and living collections representing the world's natural and cultural common wealth. This stewardship of collections entails the highest public trust and carries with it the presumption of rightful ownership, permanence, care, documentation, accessibility and responsible disposal. Thus, the museum ensures that:

- collections in its custody support its mission and public trust responsibilities
- collections in its custody are lawfully held, protected, secure, unencumbered, cared for and preserved
- collections in its custody are accounted for and documented
- access to the collections and related information is permitted and regulated
- acquisition, disposal, and loan activities are conducted in a manner that respects the protection and preservation of natural and cultural resources and discourages illicit trade in such materials
- acquisition, disposal, and loan activities conform to its mission and public trust responsibilities
- disposal of collections through sale, trade or research activities is solely for the advancement of the museum's mission. Proceeds from the sale of nonliving collections are to be used consistent with the established standards of the museum's discipline, but in no event shall they be used for anything other than acquisition or direct care of collections.
- the unique and special nature of human remains and funerary and sacred objects is recognized as the basis of all decisions concerning such collections
- collections-related activities promote the public good rather than individual financial gain
- competing claims of ownership that may be asserted in connection with objects in its custody should be handled openly, seriously, responsively and with respect for the dignity of all parties involved.

ATTACHMENT 5 American Association for State and Local History Position on Capitalization of Collections (Excerpt)

Technical Leaflet #224, "Ethics Position Paper: The Capitalization of Collections." In *History News* , Vol. 58, No. 4 (Autumn). American Association of State and Local History, 2003, p. 2-3.

The AASLH Position on Capitalization

First stated in the AASLH Statement of Professional Standards and Ethics in 1990 and repeated without revision in 2002, the Association's position on the capitalization of collections is clear: 'Collections shall not be capitalized or treated as financial assets.' Why?

First and foremost, 501(c)(3) non-profit corporations and government agencies own, manage, interpret, and share historical resources in fiduciary trust on behalf of the citizens within the states in which they are incorporated. Even though a historical organization may be a private corporation, its collections are considered part of the public domain. Thus, when an institution owns and manages a collection, it acts as a fiduciary agent of a broader community. That is why museums and historical organizations are exempt from certain taxes—because of the public value of what they do, including and especially, care of the public's collections.

By capitalization, however, an institution makes a conscious decision to treat its collections just like any of its other financial assets, no different than bank accounts, investments, office equipment, or real estate. It should not be forgotten that the primary purpose of a collection is to fulfill the fiduciary purpose of the institution. The primary purpose of a financial asset is to be managed in such a way as to achieve financial stability and health for the organization.

As financial assets, capitalized collections are in danger of being used as security, attached by lien, sold, or otherwise encumbered to meet outstanding financial debts and obligations. If the institution is a unit of government, such as a city or state museum, the governing body might be forced to sell all or portions of the collections, just like the office equipment or a fleet of trucks, to meet payroll or to pay off bonded debt. This is not why the institution acquired its collections, why they have value, or why a donor received a tax deduction for contributing a collection to an institution. Capitalization of collections clearly violates the public's fiduciary interests in the collections.

Even if an institution does not capitalize its collections, it must take care not to treat those collections as if they were financial assets. During times of financial crisis, an institution might be tempted to sell collections to cover operating expenses, like utilities and salaries, or as security to obtain a line of credit. Not only is this bad financial practice that puts the institution's (and public's) collections at risk, but also it is unacceptable in meeting the institution's fiduciary obligations. Neither economic conditions nor bad financial management are excuses for treating collections as financial assets.

Consequences of Non-Capitalization

*The chief financial consequence of not capitalizing collections is that hundreds of thousands and perhaps millions of dollars of potential assets will not appear on the balance sheet. Some auditors and board members may suggest that this negatively affects the public picture of the institution's financial health. Since collections cannot be used to support the daily operations of an institution, the decision to not capitalize actually represents the most accurate financial position. By consciously choosing to protect its *(and the public's) collections, an institution acknowledges the public trust for which it receives substantial benefits, honors its mission, and makes a strong public statement of commitment.*

MEMORANDUM

Department of Public Services

DATE: **May 22, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Scott D. Zielinski, DPS Director**

SUBJECT: **Purchase of Three Pickup Trucks**

INTRODUCTION:
The Department of Public Services recommends the purchase of three 2023 GMC Sierra 1500 Crew Cab 4x4 w/ 6.5' Bed Trucks. One truck is a new fleet purchase of a truck at the request of the Engineering Department for the Construction Engineer ~~a~~ position. The other two trucks will replace vehicle #52, a 2012 GMC 1500, and vehicle #103 a 2014 GMC 1500. The three 2023 GMC Sierra 1500 Crew Cab 4x4 w/ 6.5' Bed Trucks will be purchased from TODD WENZEL BUICK GMC of WESTLAND, located at 35100 FORD RDWESTLAND, MI 48185, under the State of Michigan MiDeal Contract # 071B7700184, MiDeal Spec # 0073-4WDL.

BACKGROUND:
The Engineering Departments request to purchase a new truck for the Construction Engineer position, requires a vehicle with the capabilities to easily drive over curbs and access both construction sites and road projects while carrying supplies and tools needed for project work.

Additionally, the Department of Public Service's Vehicle Operations has identified vehicle's #52, a 2012 GMC 1500, and vehicle #103 a 2014 GMC 1500, are both due for replacement per the City's Replacement Guidelines for Sedans and Light Trucks.

The Department of Public Services reviews and scores factors including; age, hours of runtime/ miles of use, type of service, reliability, maintenance and repair costs, and the condition of the vehicle. The score of the vehicle determines the City's need to replace a vehicle, as seen in the table below.

Point Range	Rating	Replacement Recommendation
0-17	Excellent	Do Not Replace
18-22	Good	Re-evaluate for next year's budget
23-27	Satisfactory	Qualifies for replacement this year if budget allows
28+	Poor	Needs priority replacement

Truck #52

FACTOR	DESCRIPTION	POINTS
Age	1 point each year of age	11
Hours	1 point each 10000 miles of usage	8
Type of Service	Type 3 – Any Vehicle that pulls trailers, hauls heavy loads, and has off-road usage	3
Reliability	Level 3 – In shop more than twice within one month time period, no major breakdowns/road calls	3
Maintenance & Replacement Costs	Level 2 – Maintenance costs are 21-40% of replacement cost	2
Condition	Level 4 – Severe damage, rust, operating system, inoperable	4
	Total points 28+, poor, needs priority replacement	**31**

Truck #103

FACTOR	DESCRIPTION	POINTS
Age	1 point each year of age	9
Hours	1 point each 250hrs of usage	53
Type of Service	Type 3 – Any Vehicle that pulls trailers, hauls heavy loads, and has off-road usage	3
Reliability	Level 3 – In shop more than twice within one month time period, no major breakdowns/road calls	3
Maintenance & Replacement Costs	Level 5 – Maintenance costs are greater than or equal to 85% of cost	5
Condition	Level 4 – Severe damage, rust, operating system, inoperable	4
	Total points 28+, poor, needs priority replacement	**77**

The Department of Public Services was able to identify a dealership (Todd Wenzel Buick GMC of Westland) through MiDeals to both fill the purchase request for the Engineering Department for the new truck and replace trucks that have been identified as priority replacement vehicles. If approved the projected delivery date will be late June of this year. The Department of Public Services recommends completion of this purchase, as due to chip shortages associated within the auto industry, it has become increasingly difficult to purchase equipment.

LEGAL REVIEW:
This purchase has been reviewed and approved by the City Attorney.

FISCAL IMPACT:
The cost for the purchase of each individual truck is $45,301.70. The total purchase cost of the three trucks is $135,905.10. Funds are available in the Auto Equipment Fund, account #661.0-441.006-971.0100. There are currently no EV models of this type available for purchase at this time, the new trucks have improved carbon emissions and fuel economy compared to the 2012 and 2014 models being replaced.

PUBLIC COMMUNICATIONS:
This does not apply to this purchase.

SUMMARY:
Based on ~~a~~ the Engineering Departments request for the purchase of a new vehicle and based on age and condition of vehicles #52 and #103, the Department of Public Services recommends the purchase of the three 2023 GMC Sierra 1500's from Todd Wenzel Buick GMC of Westland. Upon receipt of the new vehicles, vehicles #52 and #103 will be listed on the Michigan Inter-governmental Trade Network (MITN) for public auction.

ATTACHMENTS:
Agreement of (Purchase of Trucks),
Todd Wenzel Buick GMC of Westland Quote for (3) 2023 GMC Sierra 1500,
Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro, model/ warranty information sheets

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution to approve the purchase of (3) 2023 GMC Sierra 1500 Trucks from Todd Wenzel Buick GMC of Westland, located at 35100 FORD RD, WESTLAND, MI 48185, through State of Michigan MiDeal Contract # 071B7700184, MiDeal Spec # 0073-4WDL, in the amount not to exceed $45,301.70 per truck for total amount not to exceed $135,905.10. In addition, to authorize the Mayor and City Clerk to sign the agreement on behalf of the City. Funds for this purchase are available in the FY 2022-2023 Auto Equipment Fund account #661.0-441.006.971.0100.

AGREEMENT OF Purchase of Three MiDeal GMC 1500 Crew Cab Trucks

THIS AGREEMENT is entered into this 8 day of May, 2023, by and between the **CITY OF BIRMINGHAM,** whose address is 151 Martin Street, Birmingham, MI 48009 (hereinafter referred to as the City) and Todd Wenzel Buick GMC of Westland a Michigan Corporation, whose address is 35100 Ford Road Westland, MI 48185, (hereafter referred to as Vendor) and the foregoing shall collectively be referred to as the parties.

WHEREAS, the City desires to purchase, pursuant to the government cooperative purchasing agreement under the State of Michigan MiDeal Contract # 071B7700184, MiDeal Spec # 0073-4WDL, for (3) 2023 GMC Sierra 1500 Crew Cab 4x4 w/ 6.5' Bed, as described in Attachment "A" ; and

WHEREAS, Vender has qualifications that meet the project requirements and has provided a response and cost proposal to perform the sale of required GMC Sierra 1500 Crew Cab Trucks.

NOW, THEREFORE, in consideration of the foregoing preambles, the adequacy of which is acknowledged by and between the parties to this Agreement, the parties agree as follows:

1. MUTUALLY AGREE: It is mutually agreed by and between the parties that the Vendor's Quotation for the (3) 2023 GMC Sierra 1500 Crew Cab 4x4 w/ 6.5' Bed trucks, provided via email, April 21, 2023, which includes a description of the truck accessory packages and extended warranty, shall be fully incorporated herein by reference and shall become a part of this Agreement, and shall be binding upon both parties hereto (attached hereto as Attachment "A"). The Vendor shall deliver (3) trucks as described to the DPS located at 851 S. Eton, Birmingham, MI, 48009 when available. Where DPS staff will inspect and receive.

2. TERM: This is an outright purchase and shall have no term.

3. TERMS OF PAYMENT: The Vendor will invoice the City for the sale. In no event shall invoices be submitted more than 45 days after completion of services. Submitted invoices shall include the following detailed information: the type of work performed, the time spent on the work, the individual who performed the work and the per-hour billing rate charged. The City may, at its sole discretion demand review and the right to request at any time further detailed accounting information for any or all bills. The right to inspection of any bill and invoice shall never be at any cost or billings to the City, nor shall preparation of said invoices be billed to the City or against the general retainer. Payment terms will be net 30 days unless otherwise specified by the City.

4. Vendor shall employ personnel of good moral character and fitness in performing all services under this Agreement.

5. CONFIDENTIAL AND OR PROPRIETARY INFORMATION: While the City

acknowledges it is unlikely, the Vendor_acknowledges that in performing services pursuant to this Agreement, certain confidential and/or proprietary information (including, but not limited to, internal organization, methodology, personnel and financial information, etc.) may become involved. The Vendor recognizes that unauthorized exposure of such confidential or proprietary information could irreparably damage the City. Therefore, the Vendor agrees to use reasonable care to safeguard the confidential and proprietary information and to prevent the unauthorized use or disclosure thereof. The Vendor shall inform its employees of the confidential or proprietary nature of such information and shall limit access thereto to employees rendering services pursuant to this Agreement. The Vendor further agrees to use such confidential or proprietary information only for the purpose of performing services pursuant to this Agreement.

6. INDEPENDENT VENDOR: The Vendor and the City agree that the Vendor is acting as an independent contractor with respect to the Vendor's role in providing services to the City pursuant to this Agreement, and as such, shall be liable for its own actions and neither Vendor nor its employees shall be construed as employees of the City. Nothing contained in this Agreement shall be construed to imply a joint venture or partnership and neither party, by virtue of this Agreement, shall have any right, power or authority to act or create any obligation, express or implied, on behalf of the other party, except as specifically outlined herein. Neither the City nor the Vendor shall be considered or construed to be the agent of the other, nor shall either have the right to bind the other in any manner whatsoever, except as specifically provided in this Agreement, and this Agreement shall not be construed as a contract of agency. The Vendor shall not be considered entitled or eligible to participate in any benefits or privileges given or extended by the City, or be deemed an employee of the City for purposes of federal or state withholding taxes, FICA taxes, unemployment, workers' compensation or any other employer contributions on behalf of the City.

7. COMPLIANCE WITH LAWS: Vendor agrees to fully and faithfully carry out the duties of set forth herein using its best efforts in accomplishing all assignments from the City, and further, in addition to upholding all federal, and state laws and applicable codes of professional conduct to which Vendor is subject, Vendor hereby agrees to be bound by all Federal, State, or City of Birmingham ordinances, rules, regulations and policies as are amended from time to time, and including without limitation the Fair Labor Standards Act, the Equal Employment Opportunity rules and regulations, the Transportation Safety Act and the Occupational Safety and Health Acts.

8. INDEMNIFICATION: To the fullest extent permitted by law, Vendor and any entity or person for whom the Vendor is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the City of Birmingham, its elected and appointed officials, employees and volunteers and others working on their behalf against any and all claims, demands, suits, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from the City, its elected and appointed officials, employees, volunteers or others working on their behalf, by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arise out of the acts, errors or omissions of the Vendor including its employees and agents, in the performance of this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or others working on behalf of the City.

9. WRITTEN NOTICES: Written notices regarding this Agreement shall be addressed to the following:

City: City of Birmingham
P.O. Box 3001
Birmingham, Michigan 48012
Attn: Scott Zielinski

Vendor:
Todd Wenzel Buick GMC of Westland
35100 Ford Road,
Westland, MI 48185
Attn: Albert Li

10. AMENDMENTS: No amendment, modification or supplement to this Agreement shall be binding unless it is in writing and signed by authorized representatives of the parties.

11. WAIVER OF BREACH: No waiver by either party of any breach of any of the terms, covenants or conditions herein contained by the other party shall be construed as a waiver of any succeeding breach of this same or of any other term, covenant or condition.

12. COMPLETE AGREEMENT: The parties agree that the conditions set forth in this Agreement sets forth all terms and conditions of Vendor agreement with the City of Birmingham. This Agreement supersedes all prior agreements or understandings between the parties. There are no promises, conditions or understandings other than those stated herein, and, that any prior negotiations, terms or conditions discussed between the City and the Vendor shall not constitute a part of this Agreement. The term "agreement" as used in this clause shall include any future written amendments, modifications, or supplements made in accordance herewith.

13. FAILURE TO PERFORM. If Vendor fails to perform its obligations hereunder, the City may take any and all remedial actions provided by the general specifications or otherwise permitted by law.

14. LEGAL PROCEEDINGS: Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suit in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by

the American Arbitration Association with one arbitrator being used, or three arbitrators in the event any party's claim exceeds $1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL §600.5001 et seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. In the event that the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suit in a federal or state court with jurisdiction over Oakland County, Michigan.

15. RESPONSE TO GOVERMENTAL COOPERATIVE PURCHASING AGREEMENT: The Vendor shall be held to and bound by all terms, conditions, warranties and representations which it made in its written response dated April 10, 2023 to the City's Request for Quote (attached hereto as Attachment "A"). In the event of a conflict in any of the terms of this Agreement and the Vendor's response, the terms of this Agreement shall prevail.

16. FAIR PROCUREMENT OPPORTUNITY: Procurement for the City of Birmingham will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City of Birmingham.

IN WITNESS WHEREOF, the parties hereto agree to be bound by the above terms and conditions, and Vendor, by its authorized signature below, expressly accepts this Agreement upon the above provided terms and conditions contained in this Agreement as of the date first above written.

Todd Wenzel Buick GMC of Westland

By: Albert Li

Its: Fleet Sales Manager

STATE OF MICHIGAN)
) ss:
COUNTY OF OAKLAND)

On this 8 day of MAY, 2023 before me personally appeared Albert Li, who acknowledged that with authority on behalf of Todd Wenzel Buick GMC to

do so he/she signed this Agreement.

Lisa C Hedger
Notary Public
Wayne County, Michigan
Acting in Wayne County, Michigan
My commission expires: 2027

LISA C. HEDGER
NOTARY PUBLIC, STATE OF MI
COUNTY OF WAYNE
MY COMMISSION EXPIRES Oct 27, 2027
ACTING IN COUNTY OF Wayne

CITY OF BIRMINGHAM:

By: _____
Therese Longe, Mayor

By: _____
Alexandria D. Bingham, City Clerk

APPROVED:

Thomas M. Markus, City Manager
(Approved as to substance)

Scott D. Zielinski, Director of Public Services
(Approved as to substance)

Mary M. Kucharek, City Attorney
(Approved as to form)

Mark A. Gerber, Finance Director
(Approved as to Financial Obligation)

TODD WENZEL BUICK GMC of WESTLAND

35100 FORD RD
WESTLAND, MI 48185

ALBERT LI
Fleet / Municipal Sales
Ph (734) 713-1065 Fax (734) 467-7181
ali@toddwenzel.com

State of Michigan MiDeal Contract # 071B7700184
MiDeal Spec # 0073-4WDL

City of Birmingham Pricing **(MiDeal Pricing)**

2023 GMC Sierra 1500 Crew Cab 4x4 w/ 6.5' Bed

7100# GVWR **Gas / Auto Trans** **Crew Cab w/ Std Box**

SPEC 73 - 2022 GMC Sierra 1500 Double Cab 4wd	**$ 25,537.00**
23M – 2023MY Refreshed Sierra Price Surcharge	$ 8,659.00
CRW – Upgrade to Full Four Door Crew Cab	$ 3,594.70
L82 – 5.3L Gas V8 w/ 6-Spd Auto Trans	$ 1,451.45
RC5 – LT265/70R17C All-Terrain Tires	$ 359.45
ZLQ –Heated Mirrors/Remote Keyless Entry/EZ TG	$ 632.45
Z82 – Trailering Equipment Package	$ 359.45
G80 – HD Locking Rear Differential	$ 359.45
JL1 – Integrated Trailer Brake Controller	$ 250.25
NZZ – Skid Plates	$ 136.50
Sub-Total	$ 41,339.70
MLP – Municipal G/A LED Lighting Pkg	$ 1,965.00
ELW – GM Ext Ltd Warranty (5yr/60k mile B2B)	$ 1,358.00
SBL – Spray On Bedliner (UTR, RhinoLining)	$ 589.00
DEL – Delivery per MiDeal (Birmingham, MI)	$ 50.00
Total	**$ 45,301.70**

(3) Units @ $45,301.70 ea = $ 135,905.10

Prices Quoted are for an Incoming MiDeal Factory Order.
(3) Identical Units Available.
FOB Birmingham, MI

Todd Wenzel Buick-GMC and Chevrolet

Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

Price Summary

PRICE SUMMARY

	MSRP
Base Price	$46,400.00
Total Options	$3,570.00
Vehicle Subtotal	$49,970.00
Destination Charge	$1,895.00
Grand Total	**$51,865.00**

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Data Version: 19217. Data Updated: Apr 19, 2023 6:41:00 PM PDT.

Todd Wenzel Buick-GMC and Chevrolet

Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

Selected Model and Options

MODEL

CODE	MODEL
TK10743	2023 GMC Sierra 1500 4WD Crew Cab 157" Pro

COLORS

CODE	DESCRIPTION
GAZ	Summit White

OPTIONS

CODE	DESCRIPTION
FE9	Emissions, Federal requirements
L84	Engine, 5.3L EcoTec3 V8
MHT	Transmission, 10-speed automatic, (Column shifter) electronically controlled
C5Y	GVWR, 7100 lbs. (3221 kg)
GU5	Rear axle, 3.23 ratio
1SA	Pro Preferred Equipment Group
RD6	Wheels, 17" x 8" (43.2 cm x 20.3 cm) painted steel, Silver
RC5	Tires, LT265/70R17C all-terrain, blackwall
RHM	Tire, spare LT265/70R17 all-terrain, blackwall
GAZ	Summit White
AZ3	Seats, front 40/20/40 split-bench
H2G	Jet Black, Vinyl seat trim
IOR	Audio system, GMC Infotainment System with 7" diagonal color touch-screen, AM/FM stereo
ZLQ	Fleet Convenience Package
Z82	Trailering Package
G80	Auto-locking rear differential
KC4	Cooling, external engine oil cooler
KNP	Cooling, auxiliary external transmission oil cooler
KW7	Alternator, 170 amps
JL1	Trailer brake controller, integrated
NZZ	Skid Plates

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Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

OPTIONS

CODE	DESCRIPTION
DLF	Mirrors, outside heated power-adjustable
K34	Cruise control, steering wheel-mounted
CTT	Hitch Guidance
R7N	Not Equipped with Steering Column Lock, see dealer for details
5H1	Key equipment, two additional key fobs
	Options Total

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Todd Wenzel Buick-GMC and Chevrolet
Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

Standard Equipment

Package	
	GMC Pro Safety includes (UEU) Forward Collision Alert, (UE4) Following Distance Indicator, (UKJ) Front Pedestrian Braking, (TQ5) IntelliBeam, (UHX) Lane Keep Assist with Lane Departure Warning, and (UHY) Automatic Emergency Braking (Includes (T8Z) Buckle to Drive.)
Mechanical	
	Pickup bed (Deleted when (ZW9) pickup bed delete is ordered on Regular Cab models.)
	Engine, 2.7L Turbo High-Output (310 hp [231 kW] @ 5600 rpm, 430 lb-ft of torque [583 Nm] @ 3000 rpm) (Not available with (VYU) Snow Plow Prep Package, (ZW9) pickup bed delete, (KC4) external engine oil cooler or (X31) X31 Off-Road Package. Includes (KW5) 220-amp alternator.) (STD)
	Transmission, 8-speed automatic, (Column shifter) electronically controlled with overdrive and tow/haul mode. Includes Cruise Grade Braking and Powertrain Grade Braking (Standard and only available with (L3B) 2.7L Turbo High-Output engine.) (STD)
	Rear axle, 3.42 ratio (Included and only available with (L3B) 2.7L Turbo High-Output engine.)
	GVWR, 7000 lbs. (3175 kg) (Requires Crew Cab or Double Cab 4WD model and (L3B) 2.7L Turbo High-Output engine. Requires Double Cab 4WD model and (L84) 5.3L EcoTec3 V8 engine.) (STD)
	Push Button Start
	Automatic Stop/Start (Not available with (FHS) E85 FlexFuel capability.)
	Transfer case, single speed, electronic Autotrac with push button control (4WD models only)
	Suspension Package, Standard
	Four wheel drive
	Battery, heavy-duty 730 cold-cranking amps/80 Amp-hr, maintenance-free with rundown protection and retained accessory power (Included and only available with (L84) 5.3L EcoTec3 V8 engine or (L3B) 2.7L Turbo High-Output engine.)
	Frame, fully-boxed, hydroformed front section
	Recovery hooks, front, frame-mounted, Black (Included with 4WD models or included on 2WD models with (PQA) 1SA Safety Plus Package or (WPB) Graphite Edition. Available on 2WD models as a free flow option.)
	Cargo tie downs (12), fixed
	Steering, Electric Power Steering (EPS) assist, rack-and-pinion
	Brakes, 4-wheel antilock, 4-wheel disc with DURALIFE rotors
	Capless Fuel Fill
	Exhaust, single outlet
	Exhaust, aluminized stainless-steel muffler and tailpipe
Exterior	
	Wheels, 17" x 8" (43.2 cm x 20.3 cm) painted steel, Silver (STD)

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Todd Wenzel Buick-GMC and Chevrolet
Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

Exterior

Tires, 255/70R17 all-season, blackwall (STD)

Tire, spare 255/70R17 all-season, blackwall (Included with (QBN) 255/70R17 all-season, blackwall tires.) (STD)

Wheel, 17" x 8" (43.2 cm x 20.3 cm) full-size, steel spare

Tire carrier lock keyed cylinder lock that utilizes same key as ignition and door (Deleted with (ZW9) pickup bed delete.)

Bumper, front chrome lower (Requires (VJH) rear chrome bumper and (E63) pickup bed. Required with (UD7) Rear Park Assist or (PQA) 1SA Safety Plus Package on 1SA unless ordered with (WBP) Graphite Edition.)

Bumper, rear chrome with bumper CornerSteps (Requires (V46) front chrome bumper and (E63) pickup bed.)

CornerStep, rear bumper

Grille (Chrome header with flat black grille insert bars)

Headlamps, LED projectors with Fade-on/Fade-off animation, LED turn signals and Daytime Running Lamps

IntelliBeam, automatic high beam on/off (Included and only available with (PDI) GMC Pro Safety.)

Taillamps, LED LED signature taillight and Fade-on/Fade-off animation, incandescent stop, turn and reverse light

Mirrors, outside manual, Black (Not available on Regular Cab models.)

Glass, solar absorbing, tinted

Lamps, cargo area, cab mounted integrated with center high mount stop lamp, with switch in bank on left side of steering wheel

Tailgate, standard (Deleted with (ZW9) pickup bed delete.)

Tailgate, gate function manual, no lift assist (Deleted with (ZW9) pickup bed delete or (QK2) GMC MultiPro Tailgate.)

Tailgate and bed rail protection caps, top

Tailgate, locking utilizes same key as ignition and door (Deleted with (ZW9) pickup bed delete or (QK2) GMC MultiPro Tailgate.)

Door handles, Black grained

Entertainment

Audio system, GMC Infotainment System with 7" diagonal color touch-screen, AM/FM stereo with seek-and-scan and digital clock, includes Bluetooth streaming audio for music and select phones; featuring wired Android Auto and Apple CarPlay capability for compatible phones (STD)

Audio system feature, 6-speaker system (Requires Crew Cab or Double Cab model.)

Bluetooth for phone connectivity to vehicle infotainment system

Interior

Seats, front 40/20/40 split-bench with covered armrest storage and under-seat storage (lockable) (STD)

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Todd Wenzel Buick-GMC and Chevrolet
Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

Interior

	Seat trim, Vinyl
	Seat adjuster, driver 4-way manual
	Seat adjuster, passenger 4-way manual
	Seat, rear 60/40 folding bench (folds up), 3-passenger (includes child seat top tether anchor) (Not available with Regular Cab model.)
	Floor covering, rubberized-vinyl (Not available with LPO floor liners.)
	Steering column, manual Tilt-Wheel and telescoping (Beginning February 27, 2023 certain vehicles will be forced to include (N37) manual tilt/telescoping steering column that will remove the (N33) Tilt-Wheel manual steering column. See the window label for the features on a specific vehicle.)
	Steering wheel, urethane
	Instrument cluster, 6-gauge cluster featuring speedometer, fuel level, engine temperature, tachometer, voltage and oil pressure
	Driver Information Center, 3.5" diagonal monochromatic display
	Exterior Temperature Display, located in radio display
	Brake lining wear indicator
	Windows, power front, drivers express up/down
	Window, power front, passenger express down
	Windows, power rear, express down (Not available on Regular Cab models.)
	Door locks, power
	Remote Keyless Entry
	USB Ports, 2, Charge/Data ports located on instrument panel
	Power outlet, front auxiliary, 12-volt
	Air conditioning, single-zone manual
	Air vents, rear (Not available with Regular Cab model.)
	Mirror, inside rearview, manual tilt
	Assist handles front A-pillar mounted for driver and passenger, rear B-pillar mounted

Safety-Interior

	Automatic Emergency Braking (Included and only available with (PDI) GMC Pro Safety.)
	Airbags, Dual-stage frontal airbags for driver and front outboard passenger; Seat-mounted side-impact airbags for driver and front outboard passenger; Head-curtain airbags for front and rear outboard seating positions; Includes front outboard Passenger Sensing System for frontal outboard passenger airbag (Always use seat belts and child restraints. Children are safer when properly secured in a rear seat in the appropriate child restraint. See the Owner's Manual for more information.)

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Todd Wenzel Buick-GMC and Chevrolet
Albert Li | (734) 713-1065 | ali@toddwenzel.com

Vehicle: [Fleet] 2023 GMC Sierra 1500 (TK10743) 4WD Crew Cab 157" Pro (✓ Complete)

Safety-Interior

HD Rear Vision Camera (Not available with (ZW9) pickup bed delete.)

Following Distance Indicator (Included and only available with (PDI) GMC Pro Safety.)

Forward Collision Alert (Included and only available with (PDI) GMC Pro Safety.)

Lane Keep Assist with Lane Departure Warning (Included and only available with (PDI) GMC Pro Safety.)

Seat Belt Adjustable Guide Loops, front row only (Included and only available with Crew Cab or Double Cab models.)

Buckle to Drive (Included and only available with (PDI) GMC Pro Safety.)

Tire Pressure Monitor System, auto learn includes Tire Fill Alert (does not apply to spare tire)

Rear Seat Reminder (Requires Crew Cab or Double Cab model.)

Safety-Mechanical

Front Pedestrian Braking (Included and only available with (PDI) GMC Pro Safety.)

StabiliTrak, stability control system with Proactive Roll Avoidance and traction control, includes electronic trailer sway control and hill start assist

Safety-Exterior

Daytime Running Lamps, LED signature lighting

WARRANTY

Warranty Note: <<< Preliminary 2023 Warranty >>>
Basic Years: 3
Basic Miles/km: 36,000
Drivetrain Years: 5
Drivetrain Miles/km: 60,000
Drivetrain Note: HD Duramax Diesel: 5 Years/100,000 Miles; Qualified Fleet Purchases: 5 Years/100,000 Miles
Corrosion Years (Rust-Through): 6
Corrosion Years: 3
Corrosion Miles/km (Rust-Through): 100,000
Corrosion Miles/km: 36,000
Roadside Assistance Years: 5
Roadside Assistance Miles/km: 60,000
Roadside Assistance Note: HD Duramax Diesel: 5 Years/100,000 Miles; Qualified Fleet Purchases: 5 Years/100,000 Miles
Maintenance Note: 1 Year/1 Visit

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BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Department of Public Services

DATE: **May 22, 2023**

TO: **Tom Marcus, City Manager**

APPROVED: **Scott Zielinski, DPS Director**

FROM: **Jacky Brito, Golf Manager**

SUBJECT: **Installation of Pump at Springdale Golf Course**

INTRODUCTION:
Springdale Golf Course is requesting the replacement of one irrigation pump which failed near the end of the 2022 golf season.

BACKGROUND:
The pump station at Springdale Golf Course has three (3) irrigation pumps, two main pumps and a sustain pump. In order for the irrigation system to perform at its maximum capacity, all three pumps need to be operating. ProPump & Controls, Inc was called and it was determined that one pump needs to be replaced due to wear and tear of seventeen (17) years of operation. The process will involve removing the roof off of the pump house, using a crane to lift the damaged pump, and replace it with the new pump.

The pump station electrical and software program is operated by Watertronics and only certified contractors are allowed to do any work on this system. Three contractors were contacted to supply quotes, but only two were certified to work on Watertronics and the non-certified contractor was unable to provide a quote. ProPump & Controls was for $24,583.05 and Irrigation Protection Services, Inc was for $25,794.00. ProPump & Controls is very familiar with our pump station and in the staff's opinion is qualified to perform this work. Quotes include a new pump, labor for removal and installation and shipping of the pump.

LEGAL REVIEW:
The City Attorney has reviewed and approved the agreement.

FISCAL IMPACT:
This work was not budgeted for 2022-2023, however, it is considered a priority to be completed. Therefore, items that were previously planned for 2022-2023 will be re-evaluated and postponed to future years in order to provide funding for this capital improvement. There is sufficient funding in other capital improvement accounts for this improvement.

PUBLIC COMMUNICATIONS:
If there is any disruption of play, all members will be notified prior to the installation.

SUMMARY:
The installation of the new pump will allow the irrigation system to run efficiently and provide healthy turf, and therefore, Department of Public Services recommend we proceed with this project.

ATTACHMENTS:

- Agreement for installation of new pump at Springdale Golf Course
- Attachment A – ProPump & Controls, Inc. Quote
- Attachment B – Iran Sanctions

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution to award the project to ProPump & Controls, Inc. in the amount not to exceed $24,583.05. In addition, to authorize the Mayor and City Clerk to sign the agreement on behalf of the City. Funding for this project is available in account #584.2-753.001-981.0100.

AGREEMENT FOR INSTALLATION OF NEW PUMP AT SPRINGDALE GOLF COURSE

THIS AGREEMENT is entered into this _____ day of ____, 2023, by and between the **CITY OF BIRMINGHAM,** whose address is 151 Martin Street, Birmingham, MI 48009 (hereinafter referred to as the City) and Pro Pump & Controls, LLC, whose address is 610 Old Mt Eden Road, Shelbyville, Kentucky, 40065 (hereafter referred to as Contractor) and the foregoing shall collectively be referred to as the parties.

WHEREAS, the City desires Pro Pump & Controls, Inc. to remove the failed irrigation pump at Springdale Golf Course and install a new irrigation pump according to the existing specifications of the current pump that is manufactured by Watertronics.

WHEREAS, Pro Pump & Controls, LLC has qualifications that meet the project requirements and has provided a response and cost proposal and at the request of Springdale formal specification and price quotes were received from two (2) qualified vendors to remove and install a new pump with the required specifications of the manufacture and all project requirements to complete this project.

NOW, THEREFORE, in consideration of the foregoing preambles, the adequacy of which is acknowledged by and between the parties to this Agreement, the parties agree as follows:

1. **MUTUALLY AGREE**: It is mutually agreed by and between the parties that the City's Request for Formal Specification of Price Quotes, which was received from the City on the 20th day of March 20, 2023 which includes the Contractors scope of services, responsibilities, fees and terms of the Agreement which shall be fully incorporated herein by reference and shall become a part of this Agreement and shall be binding upon both parties hereto. (Attached hereto as Attachment "A.") In the event of a conflict in any of the terms of this Agreement and Attachment "A", the terms of this Agreement shall prevail.

2. **FEES:** The fees for this entire project, which includes the removal and installation of shall be a total of Twenty-Four Thousand Five Hundred Eighty-Three Dollars and Five cents ($24,583.05), as are contained in Attachment "A." In addition, there will be a shipping fee not to exceed Three Thousand Dollars ($3,000).

3. **TERM:** The City shall have the right to unilaterally terminate this Agreement, with or without cause, on thirty (30) days written notice. In the event of termination, the Contractor shall receive compensation for services up to the date the termination takes effect, and the City shall be entitled to retain and use the results of all services, goods and information prepared by the Contractor through such date. The anticipated completion of the project is June 20, 2023.

4. **TERMS OF PAYMENT:** ProPump & Controls will send the City an invoice and requires a deposit of 50% to order the pump and the remaining balance of the invoice to be paid when the job completed satisfactory. The City may, at its sole discretion demand review and the right to request at any time further detailed accounting information for any or all bills. The right to inspection of any

bill and invoice shall never be at any cost or billings to the City, nor shall preparation of said invoices be billed to the City or against the general retainer.

5. The Contractor shall employ personnel of good moral character and fitness in performing all services under this Agreement.

6. INSURANCE SUBMISSION REQUIREMENTS: The Contractor has submitted proof to the City that it meets all City insurance requirements. Insurance, with coverage amounts at no less than the City's minimum requirements, must be held by the Contractor throughout the term of this Agreement. Certificates of Insurance as stated below will be required no later than five (5) business days from the date of the Contractor's acceptance of the terms of this Agreement.

7. CONFIDENTIAL AND OR PROPRIETARY INFORMATION: The Contractor acknowledges that performing services pursuant to this Agreement, certain confidential and/or proprietary information (including, but not limited to, internal organization, methodology, personnel and financial information, etc.) may become involved. The Contractor recognizes that unauthorized exposure of such confidential or proprietary information could irreparably damage the City. Therefore, the Contractor agrees to use reasonable care to safeguard the confidential and proprietary information and to prevent the unauthorized use or disclosure thereof. The Contractor inform its employees of the confidential or proprietary nature of such information and shall limit access thereto to employees rendering services pursuant to this Agreement. The Contractor further agrees to use such confidential or proprietary information only for the purpose of performing services pursuant to this Agreement.

8. INDEPENDENT CONTRACTOR: The Contractor and the City agree that the Contractor acting as an independent contractor with respect to the Contractor role in providing services to the City pursuant to this Agreement, and as such, shall be liable for its own actions and neither the Contractor nor its employees shall be construed as employees of the City. Nothing contained in this Agreement shall be construed to imply a joint venture or partnership and neither party, by virtue of this Agreement, shall have any right, power or authority to act or create any obligation, express or implied, on behalf of the other party, except as specifically outlined herein. Neither the City nor the Contractor shall be considered or construed to be the agent of the other, nor shall either have the right to bind the other in any manner whatsoever, except as specifically provided in this Agreement, and this Agreement shall not be construed as a contract of agency. The Contractor shall not be considered entitled or eligible to participate in any benefits or privileges given or extended by the City, or be deemed an employee of the City for purposes of federal or state withholding taxes, FICA taxes, unemployment, workers' compensation or any other employer contributions on behalf of the City.

9. COMPLIANCE WITH LAWS: The Contractor agrees to fully and faithfully carry out the duties of set forth herein using its best efforts in accomplishing all assignments from the City, and further, in addition to upholding all federal, and state laws and applicable codes of professional conduct to which the Contractor is subject the Contractor hereby agrees to be bound by all Federal, State, or City of Birmingham ordinances, rules, regulations and policies as are amended from time to time, and including without limitation the Fair Labor Standards Act, the Equal Employment Opportunity rules and regulations, the Transportation Safety Act and the

Occupational Safety and Health Acts.

10. NON-COMPLIANCE WITH INSURANCE REQUIREMENTS: Failure to deliver and maintain insurance in accordance with the terms of this Agreement will be cause for the City, by and through its City Manager, to terminate this Agreement, or at the City's option, the City may purchase on the open market such required insurance and shall be entitled to charge any additional cost to the Contractor, either by offset to any amounts due and owing the Contractor for services provided to the City, or, by separate bill and demand for payment. Nothing in this paragraph shall be deemed to create or be interpreted as establishing a "for cause" termination; The Contractor agrees and understands that its engagement is at will and may be terminated by the City Manager for any cause or no cause.

11. INDEMNIFICATION: To the fullest extent permitted by law, the Contractor and any entity or person for whom the Contractor is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the City of Birmingham, its elected and appointed officials, employees and volunteers and others working on their behalf against any and all claims, demands, suits, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from the City, its elected and appointed officials, employees, volunteers or others working on their behalf, by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arise out of the acts, errors or omissions of the Contractor including its employees and agents, in the performance of this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or others working on behalf of the City.

12. STANDARD INSURANCE REQUIREMENTS:

The Contractor shall maintain during the life of this Agreement the applicable types of insurance coverage and minimum limits as set forth below:

A. Workers' Compensation Insurance:

For Non-Sole Proprietorships: The Contractor shall procure and maintain during the life of this Agreement, Workers' Compensation Insurance, including Employers Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

For Sole Proprietorships: The Contractor shall complete and furnish to the City prior to the commencement of work under this Agreement a signed and notarized Sole Proprietor Form, for sole proprietors with no employees or with employees, as the case may be.

B. Commercial General Liability Insurance: The Contractor shall procure and maintain during the life of this Agreement, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than **$1,000,000** per occurrence

combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractor Coverage; (D) Broad Form General Liability Extensions or equivalent; (E) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

C. Motor Vehicle Liability: Contractor shall procure and maintain during the life of this Agreement Motor Vehicle Liability Insurance, including all applicable no-fault coverages, with limits of liability of not less than $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

D. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following **Additional Insureds: The City of Birmingham, including all elected and appointed officials, all employee and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof.** This coverage shall be primary to any other coverage that may be available to the additional insured, whether any other available coverage by primary, contributing or excess.

E. Professional Liability: If applicable, professional liability insurance with limits of not less than $2,000,000 per claim if the Contractor will provide services that are customarily subject to this type of coverage.

F. Coverage Expiration: If any of the above coverages expire during the term of this Agreement, the Contractor shall deliver renewal certificates and/or policies to the City at least (10) days prior to the expiration date.

G. Proof of Insurance Coverage: The Contractor shall provide the City of Birmingham at the time the Agreement is returned for execution, Certificates of Insurance and/or policies, acceptable to the City of Birmingham, as listed below.

1) Two (2) copies of Certificate of Insurance for Workers' Compensation Insurance, or a signed and notarized copy of the Sole Proprietor Form;
2) Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance;
3) Two (2) copies of Certificate of Insurance for Vehicle Liability Insurance;
4) Two (2) copies of Certificate of Insurance for Professional Liability Insurance, if applicable;
5) If so requested, Certified Copies of all policies mentioned above will be furnished.

H. Maintaining Insurance: Upon failure of the Contractor to obtain or maintain such insurance coverage for the term of the Agreement, the City of Birmingham may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the Agreement amount. In obtaining such coverage, the City of Birmingham shall

have no obligation to procure the most cost-effective coverage but may contract with any insurer for such coverage.

13. WRITTEN NOTICES: Written notices regarding this Agreement shall be addressed to the following:

City: City of Birmingham
P.O. Box 3001
Birmingham, Michigan 48012
Attn: Scott Zielinski, DPS

Contractor: Michael Kuhn & Associates, Inc.
2352 Dorchester Road
Birmingham, Michigan 48009

Attn: Mr. Michael Kuhn

14. COVID: The Contractor shall follow all of the City's COVID-19 safety protocols while on City property. Additionally, the Contractor's staff which will be in physical contact with City staff must have current vaccinations against COVID-19. The City, at its discretion, may ask for proof of vaccination of the Contractor's staff. Failure to provide proof of vaccination when requested will cause the City to request un-vaccinated personnel to leave, request alternate staff, and if the Contractor is unable to comply, this violation of safety protocols will constitute a breach of contract by the Consultation.

15. AMENDMENTS: No amendment, modification or supplement to this Agreement shall be binding unless it is in writing and signed by authorized representatives of the parties.

16. WAIVER OF BREACH: No waiver by either party of any breach of any of the terms, covenants or conditions herein contained by the other party shall be construed as a waiver of any succeeding breach of this same or of any other term, covenant or condition.

17. COMPLETE AGREEMENT: The parties agree that the conditions set forth in this Agreement sets forth all terms and conditions of the Contractor's agreement with the City of Birmingham. This Agreement supersedes all prior agreements or understandings between the parties. There are no promises, conditions or understandings other than those stated herein, and, that any prior negotiations, terms or conditions discussed between the City and the Contractor shall not constitute a part of this Agreement. The term "agreement" as used in this clause shall include any future written amendments, modifications, or supplements made in accordance herewith.

18. DIRECT OR INDIRECT INTEREST: If, after the effective date of this Agreement, any official of the City, or spouse, child, parent or in-law of such official or employee shall become directly or indirectly interested in this Agreement or the affairs of the Contractor, the City shall have the right to terminate this Agreement without further liability to the Contractor

if the disqualification has not been removed within thirty (30) days after the City has given the Contractor notice of the disqualifying interest. Ownership of less than one percent (1%) of the stock or other equity interest in a corporation or partnership shall not be a disqualifying interest. Employment shall be a disqualifying interest.

19. FAILURE TO PERFORM. If the Contractor fails to perform its obligations hereunder, the City may take any and all remedial actions provided by the general specifications or otherwise permitted by law.

20. LEGAL PROCEEDINGS: Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suit in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by the American Arbitration Association with one arbitrator being used, or three arbitrators in the event any party's claim exceeds $1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL §600.5001 et seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. In the event that the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suit in a federal or state court with jurisdiction over Oakland County, Michigan.

21. FAIR PROCUREMENT OPPORTUNITY: Procurement for the City of Birmingham will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City of Birmingham.

IN WITNESS WHEREOF, the parties hereto agree to be bound by the above terms and conditions, and the Contractor, by its authorized signature below, expressly accepts this Agreement upon the above provided terms and conditions contained in this Agreement as of the date first above written.

ProPump & Controls, Inc.

By: Bridget A. Hommrich
Its: Accounting Mgr.

STATE OF KENTUCKY)

) ss:
COUNTY OF SHELBY)

On this 3rd day of May, 2023, before me personally appeared Bridget Hommrich, who acknowledged that with authority on behalf of ProPump & Controls, Inc.

Associates, Inc. to do so he/she signed this Agreement.

Shanna Montes #KYNP39171
Notary Public
Shelby County, Kentucky
Acting in Shelby County, Kentucky
My commission expires: 10/25/25

SHANNA MONTES NOTARY PUBLIC STATE AT LARGE KENTUCKY

CITY OF BIRMINGHAM:

By: _____
Therese Longe, Mayor

By: _____
Alexandria D. Bingham, City Clerk

APPROVED:

Thomas M. Markus, City Manager
(Approved as to substance)

Scott D. Zielinkski, Director of DPS
(Approved as to substance)

Mary M. Kucharek, City Attorney
(Approved as to form)

Mark A. Gerber, Finance Director
(Approved as to Financial Obligation)

ATTACHMENT A

610 Old Mt. Eden Rd.
Shelbyville, KY 40065
Phone: 800-414-0677
Fax: 502-633-0733
www.propumpservice.com

North Carolina: 800-844-0677
South Carolina: 843-236-5661
Florida : 941-755-4589
Michigan : 800-426-0370

Mon Mar 20 14:04:46 GMT 2023

QO#-5890

Quote Prepared for:

Springdale G.C.

c/o City of Birmingham - DPS851
S. Eton,
Birmingham , MI , 48009

Quote Prepared by:

Travis Hudgens

Description of work: Replace 30 HP vertical turbine pump

Scope of work to be performed: **Install new 30 HP Watertronics Pump**

- Will remove broken pump
- Install new pump, pump column, line shaft and pump head
- Use pre-existing motor
- All labor included
- Crane charge included
- Set up and testing will be preformed after installation

Quote is dependent on customer providing a clear way for crane to work at pump house.
Customer will need to remove over hanging limbs to remove and install pump.
Lead time is 5-6 weeks from Watertronics

The price and terms of this quotation will be honored for thirty (30) days from the above date, after which time, it will be subject to review and acceptance by Pro Pump & Controls.

The price **does not** include shipping or taxes.

If there are unforeseen circumstances you will be informed and approve before proceeding.
Work includes a One Year Parts and Labor Warranty on new components.

Thank you for the opportunity to quote this work!

Regards,
Travis Hudgens
Service Technician

Quote Accepted By: **Date:** **Purchase Order:**

5J

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South Carolina: 843-236-5661
Florida : 941-755-4589
Michigan : 800-426-0370

Parts Estimate

Qty.	PN	Description	Unit Price	Line Total
1.00	SOMISC OH	SPECIAL ORDER MISC ITEMS-OH	$20,629.05	$20,629.05
1.00	/CRANE OH	Crane Rental Vendor PO	$1,500.00	$1,500.00
1.00	/FUEL SC OH	Fuel Surcharge OH	$150.00	$150.00
			Subtotal	$22,279.05
			Total Tax	$0.00
			Parts Total	$22,279.05

Labor Estimate

Step	Labor	Duration(Hours)	Rate/Hour	Total Amount
			Labor Total	$2,304.00
			Grand Total	$24,583.05

PROPUMP & CONTROLS INC

610 Old Mt. Eden Rd.
Shelbyville, KY 40065
Phone: 800-414-0677
Fax: 502-633-0733
www.propumpservice.com

North Carolina: 800-844-0677
South Carolina: 843-236-5661
Florida : 941-755-4589
Michigan : 800-426-0370

PAYMENT TERMS:

All Purchase Orders are subject to acceptance by ProPump & Controls, Inc. Receipt of production deposit, verification of acceptable credit, and confirmation of order are required before production. All orders subject to 50% production deposit. Balance due 30 days from date of invoice.

If shipment or installation is delayed, by no fault of ProPump & Controls, Inc., customer agrees to amend the contract or purchase order. Customer will take ownership of the product and request that ProPump & Controls, Inc. store it until shipment can be arranged. ProPump will invoice the customer based on the original terms of the order and customer will also accept liability for payment.

Please note that all payments in excess of $5,000 by credit card are subject to 2.65% service charge without prior agreement.

How to order:

Please help us expedite your order by providing the following: Is this sale taxable? (circle one) Yes No (If the order is non-taxable, a tax exempt certificate for the "ship to" state must be submitted with this order.)

Provide signature: Accepted for Buyer____

Date:______________________

Requested delivery date:____

Ship to address: ____

Street Address:____

City:______________________________County:_____________ State: _________

Zip: __________

Contact Name:____

Phone And Fax:____

Please return one signed copy of this quotation on acceptance. Merchandise delivered or shipped is due and payable to: ProPump & Controls, Inc. 610 Old Mt. Eden Road, Shelbyville, Ky. 40065. Fax number: 502-633- 0733 Phone 800-844- 0677. --

DELIVERY:

Delivery dates are estimates and confirmed shipment cannot be determined until all manufacturing details are known. ProPump & Controls Inc. will make reasonable efforts to establish a delivery schedule after receipt of an executed contract and all approvals. Seller shall not be liable for special or consequential damages caused by delay in delivery. Customer agrees to execute bill and hold contract in the event of order delay.

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www.propumpservice.com

North Carolina: 800-844-0677
South Carolina: 843-236-5661
Florida : 941-755-4589
Michigan : 800-426-0370

ACCEPTANCE:

If for any reason buyer is unable to accept delivery at the agree to date, then delivery shall be deemed completed in seller's warehouse for purposes of payment and seller shall store and subsequently deliver as provided above. Buyer will be responsible for additional handling fee of $250.00 and storage charges of $750.00 per month which will be added to invoice.

LATE FEES:

Late fee of 1 1/2 % of the unpaid balance will be charged per month on all accounts which are past due, plus any collections or attorney's fees incurred in settlement of past due accounts.

LIEN:

Seller retains a security interest in all products sold to buyer until the purchase price and other charges, if any, are paid in full as provided in Article 9 of the Uniform Commercial Code. Seller will file a Mechanics Lien or execute other documents as required to perfect the security interest in the products sold.

TAXES:

State, city and local taxes are excluded from the contract price unless otherwise noted. Sales tax will be invoiced on the contract price unless written exemption is provided.

FACTORY AUTHORIZED WARRANTY:

ProPump & Controls, Inc. warrants products manufactured by ProPump and associated component parts and/or labor, for defects in materials and workmanship for a period of one year following date of installation by ProPump, but not later than fifteen months from date of invoice if installed by others. For products sold by ProPump & Controls, Inc but manufactured wholly by others, ProPump will extend the manufacturer's warranty to the customer, and will assist in handling warranty claims. The foregoing constitutes ProPump & Control's sole warranty and has not nor does it make any additional warranty, whether express or implied, with respect to the pumping system or component. ProPump & Controls, Inc. makes no warranty, whether express or implied, with respect to fitness for a particular purpose or merchantability of the pumping system or component. ProPump & Controls, Inc. shall not be liable to purchaser or any other person for any liability, loss, or damage caused or alleged to be caused, directly or indirectly, by the pumping system. In no event shall ProPump & Controls, Inc. be responsible for incidental, consequential, or act of God damages, nor shall manufacturer's liability for damages to purchaser or any other person ever exceed the original factory purchase price.

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ATTACHMENT B

ATTACHMENT B - IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM
For INSTALLATION OF NEW PUMP AT SPRINGDALE GOLF COURSE

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

Bridget Hommrich	05/03/2023
PREPARED BY (Print Name)	**DATE**
Accounting Manager	05/03/2023
TITLE	**DATE**
Bridget A. Hommrich	bhommrich@propumpservice.com
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
ProPump and Controls, Inc.	
COMPANY	
610 Old Mount Eden Rd. Shelbyville, KY 40065	(502) 633-0677
ADDRESS	**PHONE**
NAME OF PARENT COMPANY	**PHONE**
ADDRESS	
27-4479000	
TAXPAYER I.D.#	

MEMORANDUM

Department of Public Services

DATE: **May 22, 2023**

TO: **Thomas Markus, City Manager**

FROM: **Scott Zielinski, DPS Director**
Carrie Laird, Parks and Recreation Manager

SUBJECT: **Parks and Recreation Master Plan- Consultant Selection**

INTRODUCTION

Birmingham's Parks and Recreation Master Plan (2018) is in need of an update. The Department of Public Services, with support from the Parks and Recreation Board, is recommending the selected consultant to prepare the five (5) year Parks and Recreation Master Plan be McKenna.

BACKGROUND:

Communities are required to develop a comprehensive citywide recreation plan to establish eligibility to apply for grants from the Michigan Department of Natural Resources (DNR). This will be the fifth, Five (5) Year Community Parks and Recreation Master Plan for the City of Birmingham. It serves as the city's playbook for Parks and Recreation, with a recommended capital project schedule as well.

The updated Parks and Recreation Master Plan will drive City long range planning efforts, direct decision making and the redevelopment of parks, facilities, open space, and our recreation system over the next five (5) to ten (10) years. The new updated plan will provide a vision, goals, and objectives to guide the City's elected officials, residents and staff on future needs as they relate to parks, trails, and recreation.

The selected Consultant will be familiar with other relevant city plans and initiatives including but not limited to the 2018 Parks & Recreation Plan, the DRAFT Birmingham 2040 Plan, the Multimodal Transportation Plan, the Downtown 2016 Plan, the Rouge Green Corridor Riparian & Aquatic Habitat Inventory & Management Plan, the Strategic Plan, ADA Guidelines and Universal Design Principles, and Environmental/Sustainable/ Green Infrastructure Best Practices.

The selected Consultant will have the overall responsibility for the update of the City's Parks and Recreation Master Plan, lead the plan efforts and be responsible for the timely completion of the plan. This includes, but is not limited to, preparing and maintaining a detailed timeline, conducting outreach for the plan, leading public hearings, conducting presentations, and document creation.

Coordination of public outreach will be an essential component of this process. The Consultant will conduct robust public participation, including surveys, a project website, and conduct public meetings, and topic-specific meetings, as necessary. The Consultant shall seek diverse participation in the planning process; providing ongoing and understandable information for all participants while using a variety of communication channels to inform and involve the community. In addition, the Consultant will coordinate with key stakeholders, residents, and outside agencies that provide services and/or expertise within the City of Birmingham.

The Consultant will establish a plan that will address the needs of the community, the recently adopted strategic plan, and serve as a guide for future park and recreation activities and development. The plan must be approved and accepted by the Michigan Department of Natural Resources (MDNR) in 2024. The final document must meet or exceed all MDNR Grant program requirements.

Sealed proposals were opened Thursday, April 27, 2023 for "Parks and Recreation Master Plan Update" for the City of Birmingham. The Request for Proposals (RFP) was entered into the Michigan Inter-governmental Trade Network (MITN) purchasing system. Three (3) firms responded. The results are displayed below:

Firm	**Cost**	**Total Meetings included in proposal**	**Meetings dedicated to Public Engagement**	**Surveys**	**Dedicated Website**	**Additional Meetings**
MCSA Group, Inc.	$49,544	Unclear	4	Yes	Engage	$1,200/mtg
ROWE Professional Services Company	$63,500	10-12	2	Yes	Yes	$800/mtg
McKenna	$68,500	34	12	Yes	Yes	$650/mtg

A team of city staff representing Planning, Parks and Recreation, and the Manager's office evaluated proposals. Evaluations consisted of the following criteria:
Ability to Provide Services as Outlined (0-30)
Related Project Experience (0-20)
Project Plan (0-15)
Project Team (0-15)
Cost of Services (0-5)
Timeline and Schedule for Completion (0-10)
References (0-5)

The average score for evaluations from staff are as follows:
McKenna: 93
MCSA Group, Inc: 76
ROWE Professional Services Company: 67

Additionally, all three (3) firms were invited to the May 9, 2023 Parks and Recreation Board Meeting to present their proposal and interview.

Following presentations, the Parks and Recreation Board also evaluated the proposals using the same criteria as City Staff and the average scores were are as follows:
McKenna: 92
MCSA Group, Inc.: 79
ROWE Professional Services Company: 68

The Parks and Recreation Board at the May 9, 2023 meeting made a motion to recommend McKenna as the selected Consultant to prepare the City's five (5) year Parks and Recreation Master Plan Update to the City Commission for approval.

LEGAL REVIEW:
The City Attorney has reviewed the agreement and has no objections to form or content.

FISCAL IMPACT:
This was a budgeted project and funds are available in the current 2022-2023 Approved Budget, Parks Other Contractual Services account # 101.0-751.000-811.0000 in order to hire a consultant to prepare the Parks and Recreation Master Plan Update.

As part of the preparation of the five (5) year Parks and Recreation Master Plan update, sustainability will be a key ingredient that McKenna's team is dedicated to. A planner assigned to this project will focus on the natural environment, having experience with strong and environmentally sensitive plans.

PUBLIC COMMUNICAITONS:
Throughout the process of updating the Parks and Recreation Master Plan, numerous public engagement activities will be taking place. Surveys; stakeholder meetings with various organizations that work in partnership with the city, homeowner associations among others; field days at events or programmed activities; public input sessions; and public meetings. All will be promoted and highlighted on the city website, newsletters and articles, email communications and social media.

SUMMARY:

City Staff and the Parks and Recreation Board completed independent evaluations of the proposals, McKenna scored the highest average score for both the City Staff and the Parks and Recreation Board.

City Staff and the Parks and Recreation Board recommend the award of the Parks and Recreation Master Plan project to McKenna. City Staff is confident in McKenna's ability to complete this work based on previous experience with McKenna preparing the city's 2018 Parks and Recreation Master Plan. Additionally, they have a working knowledge of Birmingham's park system and how it relates to the City's other plans and initiatives. McKenna's team includes sustainability experts, a certified aging in place planner, a public engagement specialist, a facilities, programming and operations analyst, and a dedicated project planner and project director.

ATTACHMENTS:

- A: Agreement including insurance
- B: Bidder's Agreement
- C: Cost Proposal
- D: Iran Sanctions Act Vendor Certification Form

Hyperlink Attachments:

- May 9, 2023 Parks and Recreation Board Meeting Agenda Packet Report including Consultant Proposals
- 2018 Parks & Recreation Plan
- Birmingham 2040 Plan
- Multimodal Transportation Plan
- Downtown 2016 Plan

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution to approve an agreement with McKenna for the preparation of the City's Parks and Recreation Master Plan update in the amount not to exceed $68,500. In addition, to authorize the Mayor and City Clerk to sign the agreement on behalf of the City. Funding for this project has been budgeted in account # 101.0-751.000-811.0000.

ATTACHMENT A
AGREEMENT
Parks & Recreation Master Plan Update

AGREEMENT to Draft an Updated Parks & Recreation Master Plan

This AGREEMENT, made this_____day of_____, 2023, by and between CITY OF BIRMINGHAM, having its principal municipal office at 151 Martin Street, Birmingham, MI (hereinafter called "City"), and_____McKenna_____, Inc., having its principal office at 235 E. Main St, Northville, MI 48167 (hereinafter called "Consultant"), provides as follows:

WITNESSETH:

WHEREAS, the City of Birmingham has heretofore advertised for bids for the procurement and performance of services required to perform an update to the City's five year Parks and Recreation Master Plan, and in connection therewith has prepared a request for sealed proposals ("RFP"), which includes certain instructions to bidders, specifications, terms and conditions.

WHEREAS, the Consultant has professional qualifications that meet the project requirements and has made a bid in accordance with such request for cost proposals to prepare an updated five-year Parks and Recreation Master Plan;

NOW, THEREFORE, for and in consideration of the respective agreements and undertakings herein contained, the parties agree as follows:

1. It is mutually agreed by and between the parties that the documents consisting of the Request for Proposal to provide services to update the City's five-year Parks and Recreation Master Plan and the Consultant's cost proposal dated___April 27_____, 2023 shall be incorporated herein by reference and shall become a part of this Agreement, and shall be binding upon both parties hereto (Attachment A). If any of the documents are in conflict with one another, this Agreement shall take precedence.

2. The City shall pay the Consultant for the performance of this Agreement in an amount not to exceed__$68,500_____, and if deemed necessary and approved by the City, __$650____ per meeting (additional meeting cost), as set forth in the Consultant's 2023 cost proposal to perform the scope of work as contained in the RFP (Attachment A).

3. This Agreement shall commence upon execution by both parties, unless the City exercises its option to terminate the Agreement in accordance with the Request for Proposals.

4. The Consultant shall employ personnel of good moral character and fitness in performing all services under this Agreement.

5. The Consultant and the City agree that the Consultant is acting as an independent Consultant with respect to the Consultant 's role in providing services to the City pursuant to this Agreement, and as such, shall be liable for its own actions and neither the Consultant nor its employees shall be construed as employees of the City. Nothing contained in this Agreement shall be construed to imply a joint venture or partnership and neither party, by virtue of this Agreement, shall have any right, power or authority to act

or create any obligation, express or implied, on behalf of the other party, except as specifically outlined herein. Neither the City nor the Consultant shall be considered or construed to be the agent of the other, nor shall either have the right to bind the other in any manner whatsoever, except as specifically provided in this Agreement, and this Agreement shall not be construed as a contract of agency. The Consultant shall not be entitled or eligible to participate in any benefits or privileges given or extended by the City, or be deemed an employee of the City for purposes of federal or state withholding taxes, FICA taxes, unemployment, workers' compensation or any other employer contributions on behalf of the City.

6. The Consultant acknowledges that in performing services pursuant to this Agreement, certain confidential and/or proprietary information (including, but not limited to, internal organization, methodology, personnel and financial information, etc.) may become involved. The Consultant recognizes that unauthorized exposure of such confidential or proprietary information could irreparably damage the City. Therefore, the Consultant agrees to use reasonable care to safeguard the confidential and proprietary information and to prevent the unauthorized use or disclosure thereof. The Consultant shall inform its employees of the confidential or proprietary nature of such information and shall limit access thereto to employees rendering services pursuant to this Agreement. The Consultant further agrees to use such confidential or proprietary information only for the purpose of performing services pursuant to this Agreement.

7. This Agreement shall be governed by and performed, interpreted and enforced in accordance with the laws of the State of Michigan. The Consultant agrees to perform all services provided for in this Agreement in accordance with and in full compliance with all local, state and federal laws and regulations.

8. If any provision of this Agreement is declared invalid, illegal or unenforceable, such provision shall be severed from this Agreement and all other provisions shall remain in full force and effect.

9. This Agreement shall be binding upon the successors and assigns of the parties hereto, but no such assignment shall be made by the Consultant without the prior written consent of the City. Any attempt at assignment without prior written consent shall be void and of no effect.

10. The Consultant agrees that neither it nor its subcontractors will discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight or marital status. The Consultant shall inform the City of all claims or suits asserted against it by the Consultant's employees who work pursuant to this Agreement. The Consultant shall provide the City with periodic status reports concerning all such claims or suits, at intervals established by the City.

11. The Consultant shall not commence work under this Agreement until it has, at its sole expense, obtained the insurance required under this paragraph. All coverages shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverages shall be with carriers acceptable to the City of Birmingham.

12. The Consultant shall maintain during the life of this Agreement the types of insurance coverage and minimum limits as set forth below:

    a. Workers' Compensation Insurance: Consultant shall procure and maintain during the life of this Agreement, Workers' Compensation Insurance, including Employers Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

    b. Commercial General Liability Insurance: Consultant shall procure and maintain during the life of this Agreement, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than **$2,000,000** per occurrence combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent; (E) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

    c. Motor Vehicle Liability: Consultant shall procure and maintain during the life of this Agreement Motor Vehicle Liability Insurance, including all applicable no-fault coverages, with limits of liability of not less than **$1,000,000** per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

    d. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following shall be *Additional Insureds*: The City of Birmingham, including all elected and appointed officials, all employee and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof. This coverage shall be primary to any other coverage that may be available to the additional insured, whether any other available coverage by primary, contributing or excess.

    e. Professional Liability: Professional liability insurance with limits of not less than $1,000,000 per claim if Consultant will provide service that are customarily subject to this type of coverage.

    f. Cancellation Notice: Workers' Compensation Insurance, Commercial General Liability Insurance and Motor Vehicle Liability Insurance (and Professional Liability Insurance, if applicable), as described above, shall include an endorsement stating the following: "Thirty (30) days Advance Written Notice of Cancellation or Non-

Renewal, shall be sent to: Finance Director, City of Birmingham, PO Box 3001, 151 Martin Street, Birmingham, MI 48012-3001.

g. Proof of Insurance Coverage: Consultant shall provide the City of Birmingham at the time the Agreement is returned for execution, Certificates of Insurance and/or policies, acceptable to the City of Birmingham, as listed below.

   i. Two (2) copies of Certificate of Insurance for Workers' Compensation Insurance;
   ii. Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance;
   iii. Two (2) copies of Certificate of Insurance for Vehicle Liability Insurance;
   iv. Two (2) copies of Certificate of Insurance for Professional Liability Insurance;
   v. If so requested, Certified Copies of all policies mentioned above will be furnished.

h. Coverage Expiration: If any of the above coverages expire during the term of this Agreement, Consultant shall deliver renewal certificates and/or policies to the City of Birmingham at least (10) days prior to the expiration date.

i. Maintaining Insurance: Upon failure of the Consultant to obtain or maintain such insurance coverage for the term of the Agreement, the City of Birmingham may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the Agreement amount. In obtaining such coverage, the City of Birmingham shall have no obligation to procure the most cost-effective coverage but may contract with any insurer for such coverage.

13. To the fullest extent permitted by law, the Consultant and any entity or person for whom the Consultant is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the City of Birmingham, its elected and appointed officials, employees and volunteers and others working on behalf of the City of Birmingham against any and all claims, demands, suits, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from and the City of Birmingham, its elected and appointed officials, employees, volunteers or others working on behalf of the City of Birmingham, by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or others working on behalf of the City of Birmingham.

14. If, after the effective date of this Agreement, any official of the City, or spouse, child, parent or in-law of such official or employee shall become directly or indirectly interested

in this Agreement or the affairs of the Consultant, the City shall have the right to terminate this Agreement without further liability to the Consultant if the disqualification has not been removed within thirty (30) days after the City has given the Consultant notice of the disqualifying interest. Ownership of less than one percent (1%) of the stock or other equity interest in a corporation or partnership shall not be a disqualifying interest. Employment shall be a disqualifying interest.

15. If Consultant fails to perform its obligations hereunder, the City may take any and all remedial actions provided by the general specifications or otherwise permitted by law.

16. All notices required to be sent pursuant to this Agreement shall be mailed to the following addresses:

City of Birmingham
851 S. Eton
Birmingham, MI 48009
(248)-530-1700
Attn: Carrie Laird

CONSULTANT
McKenna
235 East Main Street, Suite 105
Northville, MI 48167

17. Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suit in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by the American Arbitration Association with one arbitrator being used, or three arbitrators in the event any party's claim exceeds $1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL§600.5001 et. seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. In the event that the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suit in the Oakland County Circuit Court or the 48th District Court.

18. FAIR PROCUREMENT OPPORTUNITY: Procurement for the City of Birmingham will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City of Birmingham.

IN WITNESS WHEREOF, the said parties have caused this Agreement to be executed as of the date and year above written.

CONSULTANT

By: _____
John R. Jackson, AICP

Its: President

STATE OF MICHIGAN)
COUNTY OF OAKLAND) ss:
)

On this 27th day of April, 2023, before me personally appeared John Jackson, who acknowledged that with authority on behalf of McKenna to do so he/she signed this Agreement.

Gina C Sloan
Notary Public
Wayne County, Michigan
Acting in Wayne County, Michigan
My commission expires: July 28, 2028

GINA C SLOAN
Notary Public - State of Michigan
County of Wayne
My Commission Expires Jul 21, 2028
Acting in the County of Wayne

CITY OF BIRMINGHAM

By: _____
Therese Longe

Its Mayor

By: _____
Alexandria Bingham

Its: Clerk

APPROVED

Scott D. Zielinski, PE, DPS Director
(Approved as to Substance)

Mark Gerber, Director of Finance
(Approved as to Financial Obligation)

Mary Kucharek, City Attorney
(Approved as to Form)

Thomas M. Markus, City Manager
(Approved as to Substance)

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/15/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
McNish Group, Inc.
26622 Woodward Ave. Ste 200
Royal Oak MI 48067

CONTACT NAME: certs@mcnish.com
PHONE (A/C, No, Ext): 248-544-4800 FAX (A/C, No): 248-544-4801
E-MAIL ADDRESS: certs@mcnish.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : The Hartford	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED MCKEASS-02
McKenna Associates, Inc.
235 E Main St, Ste.105
Northville MI 48167-2499

COVERAGES **CERTIFICATE NUMBER:** 352681193 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY	Y	Y	35SBARU2022	1/1/2023	1/1/2024	EACH OCCURRENCE	$ 2,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 4,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 4,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY	Y	Y	35SBARU2022	1/1/2023	1/1/2024	COMBINED SINGLE LIMIT (Ea accident)	$ 2,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR	Y	Y	35SBARU2022	1/1/2023	1/1/2024	EACH OCCURRENCE	$ 1,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 1,000,000
	DED X RETENTION $ 10,000							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	N / A	Y	35WECPN2013	1/1/2023	1/1/2024	X PER STATUTE / OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Additional Insured as required by written contract on a primary and non-contributory basis: The City of Birmingham, including all elected and appointed officials, all employee and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof. Thirty (30) days prior written notice except ten (10) days for non payment shall be given to Certificate Holder in the event of cancellation or non-renewal of the insurance.

CERTIFICATE HOLDER

City of Birmingham
Finance Director
PO BOX 3001
151 Martin Street
Birmingham MI 48012

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/17/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Professional Concepts Insurance Agency, Inc.
1127 South Old US Highway 23
Brighton MI 48114-9861

CONTACT NAME: Certs@pciaonline.com
PHONE (A/C, No, Ext): (800)969-4041 FAX (A/C, No): (800)969-4081
E-MAIL ADDRESS: Certs@pciaonline.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : XL Specialty Ins. Co.	37885
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
McKenna Associates, Inc
City of Hamtramck
235 East Main Street, Suite 105
Northville MI 48167

COVERAGES CERTIFICATE NUMBER: 22-23 City of Hamtramck REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$
	CLAIMS-MADE / OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	POLICY / PRO-JECT / LOC						PRODUCTS - COMP/OP AGG	$
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS / NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB / OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB / CLAIMS-MADE						AGGREGATE	$
	DED / RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
A	Professional Liability			DPR5004469	10/1/2022	10/1/2023	Per Claim	$ 1,000,000
							Ann Aggregate	$ 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
30 day written notice provided to certificate holder and additional insured's for cancellation of coverages listed. 10 day notice for nonpayment of listed policies.

CERTIFICATE HOLDER
City of Birmingham
PO Box 3001
151 Martin Street
Birmingham, MI 48012-3001

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Mike Cosgrove/SUNNY
Michael Cosgrove

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ATTACHMENT B

BIDDERS AGREEMENT

Parks & Recreation Master Plan Update

BIDDERS AGREEMENT Parks & Recreation Master Plan Update

In submitting this proposal, as herein described, the Consultant agrees that:

1. They have carefully examined the specifications, terms and Agreement of the Request for Proposal and all other provisions of this document and understand the meaning, intent, and requirement of it.

2. They will enter into a written contract and furnish the item or items in the time specified in conformance with the specifications and conditions contained therein for the price quoted by the proponent on this proposal.

John R. Jackson, AICP	April 26, 2023
PREPARED BY (PRINT NAME)	**DATE**

AUTHORIZED SIGNATURE

President	info@mcka.com
TITLE	**EMAIL ADDRESS**

McKenna

COMPANY

235 East Main Street, Suite 105, Northville, MI 48167	248.596.0920
ADDRESS	**PHONE**

N/A

NAME OF PARENT COMPANY

ADDRESS	**PHONE**

ATTACHMENT C

COST PROPOSAL

Parks & Recreation Master Plan Update

COST PROPOSAL Parks & Recreation Master Plan Update

In order for the bid to be considered valid, this form must be completed in its entirety. The cost for the Scope of Work as stated in the Request for Proposal documents shall be a lump sum, as follows:

COST PROPOSAL	
ITEM	**BID AMOUNT**
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
TOTAL BID AMOUNT	$ 68,500
ADDITIONAL BID ITEMS	
Additional Meetings with City Staff and Boards	$ 650 (optional - if needed)
Other -	$
Other -	$
GRAND TOTAL AMOUNT	$ 68,500

Firm Name: McKenna

Authorized Signature: _____ Date: April 26, 2023

ATTACHMENT D

IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM

Parks & Recreation Master Plan Update

IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM

Parks & Recreation Master Plan Update

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

John R. Jackson, AICP	April 26, 2023
PREPARED BY (PRINT NAME)	**DATE**

AUTHORIZED SIGNATURE

President	info@mcka.com
TITLE	**EMAIL ADDRESS**

McKenna

COMPANY

235 East Main Street, Suite 105, Northville, MI 48167	248.596.0920
ADDRESS	**PHONE**

N/A

NAME OF PARENT COMPANY

ADDRESS	**PHONE**

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Parking System

DATE: **5/22/23**

TO: **Thomas M. Markus, City Manager**

FROM: **Aaron Ford, Parking Systems Manager**

SUBJECT: **2023 North Old Woodward Parking Structure Repair Project Award**

INTRODUCTION:
Structural assessment reports were completed at all five of the City's parking structures by Wiss, Janney, Elstner Associates, Inc. (WJE). As part of those assessments, WJE was asked to prepare a 5-year plan to address all the repairs needed. More "Immediate Repair Recommendations" were approved by the City Commission in September of 2021 and completed by the end of 2022. In November WJE submitted a proposal to design repairs and develop construction documents for each of the City's five parking structures as part of a long-term (3-5 years) repair plan with construction beginning in 2023. The North Old Woodward Garage is the first of the City's five garages to have work begin, starting in June 2023.

BACKGROUND:
In 2020 and 2021, WJE performed condition assessments at four of the five subject parking structures for the purpose of developing short, mid, and long-term repair and maintenance strategies, as well as solutions to rehabilitate and extend the useful life of the structures. Following the completion of the condition assessments, the City chose to perform limited repairs at the North Old Woodward, Chester, Park, and Peabody parking structures. WJE designed repairs, developed construction documents, and provided construction period services for the repair projects during fall 2021. Those projects have been completed. WJE also has previous experience, prior to the 2020-2021 assessment program, with the North Old Woodward and Pierce Street parking structures.

At a meeting with WJE on February 3, 2022, staff requested that WJE submit a proposal to design repairs and prepare construction drawings for the anticipated comprehensive repair projects at each parking structure, with the repair work to be performed over the subsequent years. The anticipated repair projects were to include all remaining repair recommendations outlined in WJE's original condition assessment reports, which generally consist of structural repairs, waterproofing and facade repairs. City staff also requested that WJE include aesthetic and serviceability improvements within the parking structures and stairwells, including painting, and lighting.

WJE retained a mechanical, electrical (lighting), and plumbing (MEP) sub consultant to assess the parking structures and assist with the assessment, design, and development of construction documents with respect to the MEP elements of the garages.

The primary project objectives of this bid package are to address the remaining concrete deterioration at the slab topside and overlay at the middle and south bays of Level 2 and Level 3, concrete deterioration at the slab edges at all levels, and limited concrete deterioration at the underside of all levels. An additional primary objective is to address the concrete and railing distress within the stair towers. The bidders scope of work does not include the MEP (Mechanical Electrical, Plumbing) elements. These repairs are being performed by a separate contractor hired by WJE and will be a separate contract that encompasses all five garages.

An Invitation to Bid (ITB) was posted to Michigan Inter-Governmental Trade Network (MITN) on Friday, March 24, 2023, which included a project manual with detail specifications and repair drawings prepared by WJE. A mandatory pre-bid meeting was held on Thursday, April 6, 2023 that was attended by six contractors. Deadline for bid submissions was Friday, April 28, 2023 at 2 p.m. at which time six bids were received and publicly opened.

Compnay Name	Bid Amount
PULLMAN SST. INC.	$ 1,082,550.00
RAM CONSTRUCTION	$ 717,220.00
DRV CONTRACTORS	$ 1,067,260.00
MARK 1 RESTORATION	$ 747,750.00
SMITH'S WATERPROOFING	$ 884,550.00
FASTDECKS, INC.	$ 1,371,814.00

RAM construction provided three references as required per the ITB.

1. Adam Drain – University of Michigan
2. Nick Amato – Transwestern
3. Jon Frederick, Wayne State University

All three references were contacted. All three provided positive feedback regarding their experiences. Specific questions were asked about completing the project on schedule and about crew size. All three stated that outside of weather, their projects were completed timely, there were no issues of small crews and they even complimented RAM's safety guidelines.

LEGAL REVIEW:
The City's attorney has reviewed and approved the Invitation to Bid and attached agreement.

FISCAL IMPACT:
RAMS's bid was $717,220. A 12% ($86,066) contingency is being included to cover any unexpected costs that may arise as repairs are made, bringing the total cost to $803,286. This work was budgeted in 2022-2023 and there is sufficient remaining budget for this project.

The current unrestricted net position of the APS fund is $25,785,265.

PUBLIC COMMUNICATIONS:
Pending an award by the City Commission, work is scheduled to begin on June 5, 2023. Notice will be posted at the garage immediately upon approval from the Commission to advise all users of the pending structure renovations. Also, emails will be sent to all permit holders for the NOW Structure.

SUMMARY:
WJE, who performed Condition Assessments on all five of the City's parking structures provided three repair recommendations in 2021: Immediate (within 1 year), Near-Term (within 1-2 years), and Long-Term (within 3-5 years). In September 2021, "Immediate Recommendations" were approved by the City Commission for the Park, Peabody, Chester, and North Old Woodward parking structures. These "Immediate Recommendations" were completed by late fall 2022.

At the request of staff, WJE submitted a proposal for Repair Design and Construction Document Development for all five parking structures. The proposal was for all remaining repairs. These repairs were part of the original assessment provided by WJE, however, they also include aesthetic and serviceability improvements and includes painting and lighting. Remaining repairs to the N. Old Woodward structure are being proposed. An ITB was posted to MITN for work to be completed at the N. Old Woodward structure. The work is expected to begin immediately after the award and be completed by the end of fall 2023.

The majority of the work will take place on levels 1-3 with half the levels being blocked off at a time. Work will also be performed to the stairwells and handrails.

ATTACHMENTS:
1. Invitation to Bid.
2. Project Manual, prepared by WJE.
3. N. Old Woodward Structure – Bid Tabulation for 2023 Repairs.
4. RAM Construction - Bid Documents
5. ITB Attachment B – Bidder's Agreement.
6. ITB Attachment C – Cost Proposal
7. ITB Attachment D – Iran Sanctions Act Vendor Certification Form
8. Agreement, Between RAM Construction and the City of Birmingham

SUGGESTED COMMISSION ACTION:
Make a motion to adopt the resolution awarding the contract to RAM Construction for the proposed work at the North Old Woodward Parking Structure in the amount of $803,286.00; further, to authorize the Mayor and City Clerk to sign the contract on behalf of the city.

INVITATION TO BID
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

Sealed proposals endorsed **"2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT"**, will be received at the Office of the City Clerk, 151 Martin Street, PO Box 3001, Birmingham, Michigan, 48012; until Friday, April 28, 2023 at 2:00 p.m. at which time bids will be publicly opened and read.

Bidders will be required to attend a mandatory pre-bid meeting on Thursday, April 6, 2023 at 9:30 a.m. onsite at the N. Old Woodward Garage, 333 N. Old Woodward, Birmingham, MI 48009. Bidders must register for the pre-bid meeting by Wednesday, April 5, 2023 at 2:30 p.m. by contacting Parking Systems Manager Aaron Ford at (248) 530-1257 or by email at aford@bhamgov.org

The City of Birmingham, Michigan is accepting sealed bid proposals from qualified professional firms to furnish all labor, equipment, material and supervision necessary to complete repairs as detailed in (1) municipal parking structure: N. Old Woodward Ave. This work must be performed as specified accordance with the specifications contained in the Invitation to Bid (ITB) prepared on behalf of the City of Birmingham, Michigan by Wiss, Janney, Eltner Associates, Inc. (WJE) of Southfield, Michigan.

The ITB, including the Specifications, may be obtained online from the Michigan Inter-governmental Trade Network at http://www.mitn.info or at the City of Birmingham, 151 Martin St., Birmingham, Michigan, ATTENTION: Parking Systems Manager Aaron Ford or by email at aford@bhamgov.org

The acceptance of any proposal made pursuant to this invitation shall not be binding upon the City until an agreement has been executed.

Submitted to MITN:	Friday, March 24, 2023
Pre-bid RSVP deadline:	Wednesday, April 5, 2023 at 2:30 p.m
Mandatory Pre-Bid Meeting:	Thursday, April 6, 2023 at 9:30 a.m. 333 N. Old Woodward, Birmingham, MI 48009
Deadline for Submissions:	April 28, 2023 at 2:00 p.m.
Contact Person:	Parking Systems Manager Aaron Ford 151 Martin Street Birmingham, MI 48009 Phone: (248) 530-1257 Email: aford@bhamgov.org

INVITATION TO BID
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

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INTRODUCTION

For purposes of this invitation to bid the City of Birmingham will hereby be referred to as "City" and the private firm will hereby be referred to as "Contractor."

The City of Birmingham, Michigan is accepting sealed bid proposals from qualified professional firms to **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT**. This work must be performed as specified accordance with the specifications outlined by the Scope of Work contained in this Invitation to Bid (ITB).

During the evaluation process, the City reserves the right where it may serve the City's best interest to request additional information or clarification from proposers, or to allow corrections of errors or omissions. At the discretion of the City, firms submitting proposals may be requested to make oral presentations as part of the evaluation.

It is anticipated the selection of a firm will be completed by May 5, 2023. An Agreement for services will be required with the selected Contractor. A copy of the Agreement is contained herein for reference. Contract services will commence upon execution of the service agreement by the City.

INVITATION TO BID (ITB)

The purpose of this ITB is to request sealed bid proposals from qualified parties presenting their qualifications, capabilities and costs to provide **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT** in one parking structure: N. Old Woodward.

MANDATORY PRE-BID MEETING

Prior to submitting a bid, interested firms are required to attend a pre-bid meeting to conduct an on-site visit of the location and access to the project location to make inquiries about the ITB. Thursday, April 6, 2023 at 9:30 a.m. 333 North Old Woodward, Birmingham, MI 48009**.**

INVITATION TO SUBMIT A PROPOSAL

Proposals shall be submitted no later than Friday, April 28, 2023 at 2:00 p.m. to:

City of Birmingham
Attn: City Clerk
151 Martin Street
Birmingham, Michigan 48009

One (1) original and one (1) copy of the bid proposal shall be submitted. The bid proposal should be firmly sealed in an envelope, which shall be clearly marked on the outside, **"2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT"**. Any bid proposal received after the due date cannot be accepted and will be rejected and returned, unopened, to the proposer. Proposer may submit more than one proposal provided each proposal meets the functional requirements.

INSTRUCTIONS TO BIDDERS

1. Any and all forms requesting information from the bidder must be completed on the attached forms contained herein (see Contractor's Responsibilities). If more than one bid is submitted, a separate bid proposal form must be used for each.

2. Any request for clarification of this ITB shall be made in writing and delivered to: Parking Systems Manager Aaron Ford, (248-530-1257, aforde@bhamgov.org), 151 Martin Street, Birmingham, MI 48009. Such request for clarification shall be delivered, in writing, no later than 5 days prior to the deadline for submissions.

3. All bid proposals must be submitted following the ITB format as stated in this document and shall be subject to all requirements of this document including the instruction to respondents and general information sections. All bid proposals must be regular in every respect and no interlineations, excisions, or special conditions shall be made or included in the ITB format by the respondent.

4. The contract will be awarded by the City of Birmingham to the most responsive and responsible bidder with the lowest price and the contract will require the completion of the work pursuant to these documents.

5. Each respondent shall include in his or her proposal, in the format requested, the cost of performing the work. Municipalities are exempt from Michigan State Sales and Federal Excise taxes. Do not include such taxes in the proposal figure. The City will furnish the successful company with tax exemption information when requested.

6. Each respondent shall include in their proposal the following information: Firm name, address, city, state, zip code, telephone number, and fax number. The company shall also provide the name, address, telephone number and e-mail address of an individual in their organization to whom notices and inquiries by the City should be directed as part of their proposal.

EVALUATION PROCEDURE AND CRITERIA

The evaluation panel will consist of City staff and any other person(s) designated by the City who will evaluate the proposals based on, but not limited to, the following criteria:

1. Ability to provide services as outlined.
2. Related experience with similar projects, Contractor background, and personnel qualifications.
3. Quality of materials proposed.
4. Overall Costs.
5. References.

TERMS AND CONDITIONS

1. The City reserves the right to reject any or all proposals received, waive informalities, or accept any proposal, in whole or in part, it deems best. The City reserves the right to award the contract to the next most qualified Contractor if the successful Contractor does not execute a contract within ten (10) days after the award of the proposal.

2. The City reserves the right to request clarification of information submitted and to request additional information of one or more Contractors.

3. The City reserves the right to terminate the contract at its discretion should it be determined that the services provided do not meet the specifications contained herein. The City may terminate this Agreement at any point in the process upon notice to Contractor sufficient to indicate the City's desire to do so. In the case of such a stoppage, the City agrees to pay Contractor for services rendered to the time of notice, subject to the contract maximum amount.

4. Any proposal may be withdrawn up until the date and time set above for the opening of the proposals. Any proposals not so withdrawn shall constitute an irrevocable offer, for a period of ninety (90) days, to provide the services set forth in the proposal.

5. The cost of preparing and submitting a proposal is the responsibility of the Contractor and shall not be chargeable in any manner to the City.

6. The successful bidder will be required to furnish a Performance Bond in an amount not less than 100% of the contract price in favor of the City of Birmingham, conditioned upon the faithful performance of the contract, and completion on or before the date specified.

7. Payment will be made within thirty (30) days after invoice. Acceptance by the City is defined as authorization by the designated City representative to this project that all the criteria requested under the Scope of Work contained herein have been provided. Invoices are to be rendered each month following the date of execution of an Agreement with the City.

8. The Contractor will not exceed the timelines established for the completion of this project.

9. The successful bidder shall enter into and will execute the contract as set forth and attached as Attachment A.

CONTRACTOR'S RESPONSIBILITIES

Each bidder shall provide the following as part of their proposal:

1. Complete and sign all forms requested for completion within this ITB.
   a. Bidder's Agreement (Attachment B - p. 20)
   b. Cost Proposal (Attachment C - p. 21)
   c. Iran Sanctions Act Vendor Certification Form (Attachment D - p. 22)
   d. Agreement (p. 11 – **only if selected by the City**).

2. Provide a description of completed projects that demonstrate the firm's ability to complete projects of similar scope, size, and purpose, and in a timely manner, and within budget.

3. Provide a written plan detailing the anticipated timeline for completion of the tasks set forth in the Scope of Work (p. 9).

4. The Contractor will be responsible for any changes necessary for the plans to be approved by the City of Birmingham.

5. Provide a description of the firm, including resumes and professional qualifications of the principals involved in administering the project.

6. Provide a list of sub-contractors and their qualifications, if applicable.

7. Provide three (3) client references from past projects, include current phone numbers. At least two (2) of the client references should be for projects utilizing the same materials included in the Contractor's proposal.

8. The Contractor will be responsible for the disposal of all material and any damages which occur as a result of any of employees or subcontractors of the Contractor during this project.

9. The contractor will be responsible for getting the building and parking permits at no cost to the contractor.

10. The successful bidder shall provide a Performance Bond in an amount not less than 100% of the contract price in favor of the City of Birmingham, conditioned upon the faithful performance of the contract, and completion on or before the date specified.

11. Provide a project timeline addressing each section within the Scope of Work and a description of the overall project approach. Include a statement that the Contractor will be available according to the proposed timeline.

CITY RESPONSIBILITY

1. The City will provide a designated representative to work with the Contractor to coordinate both the City's and Contractor's efforts and to inspect and verify any work performed by the Contractor.

2. The City will provide access to the City of Birmingham during regular business hours or during nights and weekends as approved by the City's designated representative.

SETTLEMENT OF DISPUTES

The successful bidder agrees to certain dispute resolution avenues/limitations. Please refer to paragraph 17 of the Agreement attached as Attachment A for the details and what is required of the successful bidder.

INSURANCE

The successful bidder is required to procure and maintain certain types of insurances. Please refer to paragraph 12 of the Agreement attached as Attachment A for the details and what is required of the successful bidder.

CONTINUATION OF COVERAGE

The Contractor also agrees to provide all insurance coverages as specified. Upon failure of the Contractor to obtain or maintain such insurance coverage for the term of the agreement, the City may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the contract amount. In obtaining such coverage, Birmingham shall have no obligation to procure the most cost effective coverage but may contract with any insurer for such coverage.

EXECUTION OF CONTRACT

The bidder whose proposal is accepted shall be required to execute the contract and to furnish all insurance coverages as specified within ten (10) days after receiving notice of such acceptance. Any contract awarded pursuant to any bid shall not be binding upon the City until a written contract has been executed by both parties. Failure or refusal to execute the contract shall be considered an abandoned all rights and interest in the award and the contract may be awarded to another. The successful bidder agrees to enter into and will execute the contract as set forth and attached as Attachment A.

INDEMNIFICATION

The successful bidder agrees to indemnify the City and various associated persons. Please refer to paragraph 13 of the Agreement attached as Attachment A for the details and what is required of the successful bidder.

CONFLICT OF INTEREST

The successful bidder is subject to certain conflict of interest requirements/restrictions. Please refer to paragraph 14 of the Agreement attached as Attachment A for the details and what is required of the successful bidder.

EXAMINATION OF PROPOSAL MATERIALS

The submission of a proposal shall be deemed a representation and warranty by the Contractor that it has investigated all aspects of the ITB, that it is aware of the applicable facts pertaining to the ITB process and its procedures and requirements, and that it has read and understands the ITB. Statistical information which may be contained in the ITB or any addendum thereto is for informational purposes only.

PROJECT TIMELINE

Submitted to MITN:	Friday, March 24, 2023
Pre-bid RSVP deadline:	Wednesday, April 5, 2023 at 230 p.m.
Mandatory Pre-Bid Meeting:	Thursday, April 6, 2023 at 9:30 a.m. 333 North Old Woodward, Birmingham, MI 48009 – N. Old Woodward Garage
Deadline for Technical Questions:	Wednesday, April 12, 2023 at 9:30 a.m.
Deadline for Addendum:	Friday, April 14, 2023 at 9:30 a.m.
Deadline for Submissions:	Friday, April 28, 2023 at 2:00 p.m. – Bids publicly opened 151 Martin Street, Birmingham, MI 48009 – City Commission Room 2nd floor**.**
Contract Signature Deadline:	Thursday, May 5, 2023 at 10:00 a.m.
Award of Bid:	Monday, May 8, 2023 7:30 p.m. Birmingham City Commission meeting
Construction Schedule:	Work to begin May 9, 2023 with expected completion by October 31, 2023

The Contractor will not exceed the timelines established for the completion of this project.

SCOPE OF WORK

The Contractor shall perform the following services in accordance with the requirements as defined and noted herein:

1. The primary project objectives of this bid package is to address concrete deterioration at the slab topside and overlay at the middle and south bays of Level 2 and Level 3, concrete deterioration at the slab edges at all levels, and limited concrete deterioration at the underside of all levels. An additional primary objective is to address the concrete and railing distress within the stair towers.

2. The Contractor shall be responsible for the disposal of all materials in a safe and legal manner.

3. The Contractor shall operate in a safe manner and will observe all MIOSHA guidelines.

4. The Contractor shall provide any and all manuals and/or warranty information related to this project to the City upon completion of the project, as specified in this ITB.

5. This section and referenced documents shall constitute the Scope of Work for this project and as such all requirements must be met.

AGREEMENT BETWEEN THE CITY OF BIRMINGHAM AND _____For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

This AGREEMENT, made this _____day of _____, 2023, by and between, the **CITY OF BIRMINGHAM** having its principal municipal office at 151 Martin Street, Birmingham, MI (hereinafter sometimes called "City"), and _____, Inc., having its principal office at _____ (hereinafter called "Contractor"), provides as follows:

WITNESSETH:

WHEREAS, the City of Birmingham, Michigan, is desirous of hiring a qualified professional firm to furnish labor, equipment, material and supervision necessary to complete repairs as detailed in the City owned parking structure known generally as: N. Old Woodward Ave.

WHEREAS, the City has heretofore advertised for bids for the procurement and performance of services required to perform **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT** as detailed in the specifications for N. Old Woodward Ave, and in connection therewith has prepared a request for sealed Invitation to Bid proposals ("ITB"), which includes certain instructions to bidders, specifications, terms and conditions.

WHEREAS, the Contractor has professional qualifications that meet the project requirements and has made a bid in accordance with such request for cost proposals to perform **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT**.

NOW, THEREFORE, for and in consideration of the respective agreements and undertakings herein contained, the parties agree as follows:

1. **MUTUALLY AGREED:** It is mutually agreed by and between the parties that the documents consisting of the Invitation to Bid to perform **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT** and the Contractor's cost proposal dated _____, 2023 shall be fully incorporated herein by reference and shall become a part of this Agreement, and shall be binding upon both parties hereto. (Attached hereto.) If any of the documents are in conflict with one another, this Agreement shall take precedence, then the ITB.

2. **TERM:** This Agreement shall have a term of _____ from the date stated above, and is renewable upon expiration for _____month terms. The City shall have the right to unilaterally terminate this Agreement, with or without cause, on thirty (30) days written notice. In the event of termination, the Contractor shall receive compensation for services up to the date the termination takes effect and the City shall be entitled to retain and use the results of all services, goods and information prepared by the Vendor through such date.

3. **FEES.** The City shall pay the Contractor for the performance of this Agreement in an amount not to exceed _____, as set forth in the Contractor's _____, 2023 cost proposal.

4. **TERMS OF PAYMENT:** The Contractor will invoice monthly for all labor supplied and work completed. In no event shall invoices be submitted more than 45 days after completion of services.

Submitted invoices shall include the following detailed information: the type of work performed, the time spent on the work, the individual who performed the work and the per hour billing rate charged. The City may, at its sole discretion demand review and the right to request at any time further detailed accounting information for any or all bills. The right to inspection of any bill and invoice shall never be at any cost or billings to the City, nor shall preparation of said invoices be billed to the City or against the general retainer. Payment terms will be net 30 days unless otherwise specified by the City.

5. **GOOD MORAL CHARACTER:** The Contractor shall employ personnel of good moral character and fitness in performing all services under this Agreement.

6. **INSURANCE SUBMISSION REQUIREMENTS:** The has submitted proof to the City that it meets all City insurance requirements. Insurance, with coverage amounts at no less than the City's minimum requirements, must be held by the Contractor throughout the term of this Agreement. Certificates of insurance as stated below will be required no later than five (5) business days from the date of Contractor's acceptance of the terms of this Agreement.

7. **CONFIDENTIAL AND / OR PROPRIETARY INFORMATION:** The Contractor acknowledges that in performing services pursuant to this Agreement, certain confidential and/or proprietary information (including, but not limited to, internal organization, methodology, personnel and financial information, etc.) may become involved. The Contractor recognizes that unauthorized exposure of such confidential or proprietary information could irreparably damage the City. Therefore, the Contractor agrees to use reasonable care to safeguard the confidential and proprietary information and to prevent the unauthorized use or disclosure thereof. The Contractor shall inform its employees of the confidential or proprietary nature of such information and shall limit access thereto to employees rendering services pursuant to this Agreement. The Contractor further agrees to use such confidential or proprietary information only for the purpose of performing services pursuant to this Agreement.

8. **INDEPENDENT CONTRACTOR:** The Contractor and the City agree that the Contractor is acting as an independent Contractor with respect to the Contractor 's role in providing services to the City pursuant to this Agreement, and as such, shall be liable for its own actions and neither the Contractor nor its employees shall be construed as employees of the City. Nothing contained in this Agreement shall be construed to imply a joint venture or partnership and neither party, by virtue of this Agreement, shall have any right, power or authority to act or create any obligation, express or implied, on behalf of the other party, except as specifically outlined herein. Neither the City nor the Contractor shall be considered or construed to be the agent of the other, nor shall either have the right to bind the other in any manner whatsoever, except as specifically provided in this Agreement, and this Agreement shall not be construed as a contract of agency. The Contractor shall not be entitled or eligible to participate in any benefits or privileges given or extended by the City, or be deemed an employee of the City for purposes of federal or state withholding taxes, FICA taxes, unemployment, workers' compensation or any other employer contributions on behalf of the City.

9. **COMPLIANCE WITH LAWS:** The Contractor agrees to fully and faithfully carry out the duties of set forth herein using its best efforts in accomplishing all assignments from the City, and further, in addition to upholding all federal, and state laws and applicable codes of

professional conduct to which the Contractor is subject, Contractor hereby agrees to be bound by all Federal, State, or City of Birmingham ordinances, rules, regulations and policies as are amended from time to time, and including without limitation the Fair Labor Standards Act, the Equal Employment Opportunity rules and regulations, the Transportation Safety Act and the Occupational Safety and Health Acts.

10. **NON-COMPLIANCE WITH INSURANCE REQUIREMENTS:** Failure to deliver and maintain insurance in accordance with the terms of this Agreement will be cause for the City, by and through its City Manager, to terminate this Agreement, or at the City's option, the City may purchase on the open market such required insurance and shall be entitled to charge any additional cost to the Contractor, either by offset to any amounts due and owing Contractor for services provided to the City, or, by separate bill and demand for payment. Nothing in this paragraph shall be deemed to create or be interpreted as establishing a "for cause" termination; Contractor agrees and understands that its engagement is at will and may be terminated by the City Manager for any cause or no cause.

11. **INDEMNIFICATION:** To the fullest extent permitted by law, the Contractor and any entity or person for whom the Contractor is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the City of Birmingham, its elected and appointed officials, employees and volunteers and others working on their behalf against any and all claims, demands, suits, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from the City, its elected and appointed officials, employees, volunteers or others working on their behalf, by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arise out of the acts, errors or omissions of the Contractor including its employees and agents, in the performance of this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or others working on behalf of the City.

12. **STANDARD INSURANCE REQUIREMENTS:**

The Contractor shall maintain during the life of this Agreement the applicable types of insurance coverage and minimum limits as set forth below:

A. Workers' Compensation Insurance:

For Non-Sole Proprietorships: Contractor shall procure and maintain during the life of this Agreement, Workers' Compensation Insurance, including Employers Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

For Sole Proprietorships: Contractor shall complete and furnish to the City prior to the commencement of work under this Agreement a signed and notarized Sole Proprietor Form, for sole proprietors with no employees or with employees, as the case may be.

B. Commercial General Liability Insurance: Contractor shall procure and maintain during the life of this Agreement, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than **$1,000,000** per occurrence combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractor Coverage; (D) Broad Form General Liability Extensions or equivalent; (E) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

C. Motor Vehicle Liability: Contractor shall procure and maintain during the life of this Agreement Motor Vehicle Liability Insurance, including all applicable no-fault coverages, with limits of liability of not less than $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

D. Pollution Liability Insurance: Contractor shall procure and maintain during the life of this Agreement Pollution Liability Insurance, with limits of liability of $1,000,000, per occurrence preferred, but claims made accepted.

E. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following **Additional Insureds: The City of Birmingham, including all elected and appointed officials, all employee and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof.** This coverage shall be primary to any other coverage that may be available to the additional insured, whether any other available coverage by primary, contributing or excess.

F. Professional Liability: If applicable, professional liability insurance with limits of not less than $2,000,000 per claim if Contractor will provide services that are customarily subject to this type of coverage.

G. Coverage Expiration: If any of the above coverages expire during the term of this Agreement, the Contractor shall deliver renewal certificates and/or policies to the City at least (10) days prior to the expiration date.

H. Proof of Insurance Coverage: The Contractor shall provide the City of Birmingham at the time the Agreement is returned for execution, Certificates of Insurance and/or policies, acceptable to the City of Birmingham, as listed below.

1) Two (2) copies of Certificate of Insurance for Workers' Compensation Insurance, or a signed and notarized copy of the Sole Proprietor Form;
2) Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance;
3) Two (2) copies of Certificate of Insurance for Vehicle Liability Insurance;
4) Two (2) copies of Certificate of Insurance for Professional Liability Insurance, if applicable;

5) If so requested, Certified Copies of all policies mentioned above will be furnished.

I. Maintaining Insurance: Upon failure of the Contractor to obtain or maintain such insurance coverage for the term of the Agreement, the City of Birmingham may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the Agreement amount. In obtaining such coverage, the City of Birmingham shall have no obligation to procure the most cost-effective coverage but may contract with any insurer for such coverage.

13. **WRITTEN NOTICES:** All notices required to be sent pursuant to this Agreement shall be mailed to the following addresses:

City: City of Birmingham
151 Martin Street
Birmingham, MI 48009
Attn: Parking Systems Manager, Aaron Ford

Contractor: _____
_____
_____
Attn: _____

14. COVID: The Contractor shall follow all of the City's COVID-19 safety protocols while on City property. Additionally, Contractor's staff which will be in physical contact with city staff must have current vaccinations against COVID-19. The City, at its discretion, may ask for proof of vaccination of Contractor's staff. Failure to provide proof of vaccination when requested will cause the City to request un-vaccinated personnel to leave, request alternate staff, and if the Contractor is unable to comply, this violation of safety protocols will constitute a breach of contract by the Contractor.

15. AMENDMENTS: No amendment, modification or supplement to this Agreement shall be binding unless it is in writing and signed by authorized representatives of the parties.

16. WAIVER OF BREACH: No waiver by either party of any breach of any of the terms, covenants or conditions herein contained by the other party shall be construed as a waiver of any succeeding breach of this same or of any other term, covenant, or condition.

17. COMPLETE AGREEMENT: The parties agree that the conditions set forth in this Agreement sets forth all terms and conditions of the Contractor's agreement with the City of Birmingham. This Agreement supersedes all prior agreements or understandings between the parties. There are no promises, conditions, or understandings other than those stated herein, and, that any prior negotiations, terms or conditions discussed between the City and the Contractor shall not constitute a part of this Agreement. The term "agreement" as used in this clause shall

include any future written amendments, modifications, or supplements made in accordance herewith.

18. **DIRECT OR INDIRECT INTEREST:** If, after the effective date of this Agreement, any official of the City, or spouse, child, parent or in-law of such official or employee shall become directly or indirectly interested in this Agreement or the affairs of the Contractor, the City shall have the right to terminate this Agreement without further liability to the Contractor if the disqualification has not been removed within thirty (30) days after the City has given the Contractor notice of the disqualifying interest. Ownership of less than one percent (1%) of the stock or other equity interest in a corporation or partnership shall not be a disqualifying interest. Employment shall be a disqualifying interest.

19. **FAILURE TO PERFORM.** If Contractor fails to perform its obligations hereunder, the City may take any and all remedial actions provided by the general specifications or otherwise permitted by law.

20. **LEGAL PROCEEDINGS:** Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suit in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by the American Arbitration Association with one arbitrator being used, or three arbitrators in the event any party's claim exceeds $1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL §600.5001 et seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. In the event that the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suit in a federal or state court with jurisdiction over Oakland County, Michigan.

21. RESPONSE TO REQUESTS FOR PROPOSALS: The Contractor shall be held to and bound by all terms, conditions, warranties and representations which it made in its written response dated _____, to the City's Request for Proposals dated _____. In the event of a conflict in any of the terms of this Agreement and the Contractor's _____ (date of response) response, the terms of this Agreement shall prevail.

22. **FAIR PROCUREMENT OPPORTUNITY**: Procurement for the City of Birmingham will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City of Birmingham.

IN WITNESS WHEREOF, the parties hereto agree to be bound by the above terms and conditions, and Contractor, by its authorized signature below, expressly accepts this Agreement upon the above provided terms and conditions contained in this Agreement as of the date and year above written.

CONTRACTOR

By: _____
CONTRACTOR

Its: INSERT TITLE HERE

STATE OF MICHIGAN)
) ss:
COUNTY OF OAKLAND)

On this _____day of _____, 20__, before me personally appeared _____, who acknowledged that with authority on behalf of _____ to do so he/she signed this Agreement.

_____
Notary Public
_____County, Michigan
Acting in _____ County, Michigan
My commission expires: _____

CITY OF BIRMINGHAM

By: _____
Therese Longe, Mayor

By: _____
Alexandria D. Bingham, City Clerk

Approved:

Thomas M. Markus, City Manager (Approved as to substance)	Aaron Ford, Parking Systems Manager (Approved as to substance)
Mark Gerber, Director of Finance (Approved as to financial obligation)	Mary M. Kucharek, City Attorney (Approved as to form)

ATTACHMENT A

ATTACHMENT B - BIDDER'S AGREEMENT
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

In submitting this proposal, as herein described, the Contractor agrees that:

1. They have carefully examined the specifications, terms and Agreement of the Invitation to Bid and all other provisions of this document and understand the meaning, intent, and requirement of it.

2. They will enter into a written contract and furnish the item or items in the time specified in conformance with the specifications and conditions contained therein for the price quoted by the proponent on this proposal.

PREPARED BY (Print Name)	**DATE**
TITLE	**DATE**
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
COMPANY	
ADDRESS	**PHONE**
NAME OF PARENT COMPANY	**PHONE**
ADDRESS	

ATTACHMENT C - COST PROPOSAL

For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

In order for the bid to be considered valid, this form must be completed in its entirety. The cost for the Scope of Work as stated in the Invitation to Bid documents shall be a lump sum, as follows:

Attach technical specifications for all proposed materials as outlined in the Contractor's Responsibilities section of the ITB (p. 6)

COST PROPOSAL	
ITEM	**BID AMOUNT**
Materials & Equipment	$
Labor	$
Miscellaneous (Attach Detailed Description)	$
TOTAL BID AMOUNT	$
ADDITIONAL BID ITEMS	
	$
	$
GRAND TOTAL AMOUNT	$

UNIT COST BID ITEMS	
	$ **per**

Firm Name_____

Authorized signature_____ Date_____

ATTACHMENT D - IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

PREPARED BY (Print Name)	**DATE**
TITLE	**DATE**
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
COMPANY	
ADDRESS	**PHONE**
NAME OF PARENT COMPANY	**PHONE**
ADDRESS	
TAXPAYER I.D.#	

CITY OF BIRMINGHAM
2023 NORTH OLD WOODWARD PARKING STRUCTURE
REPAIR PROJECT

333 NORTH OLD WOODWARD AVE.

BIRMINGHAM, MICHIGAN

WJE No. 2022.0566.1

April 4, 2023

Addendum 1

Prepared by

WISS, JANNEY, ELSTNER ASSOCIATES, INC.
30700 Telegraph Road, Suite 3580
Bingham Farms, Michigan 48025
248.593.0900

SECTION 00 01 10
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END OF SECTION 00 01 10

SECTION 00 41 44
BID FORM

PROJECT: 2023 North Old Woodward Parking Structure Repair Project
333 North Old Woodward Ave.
Birmingham, Michigan

BID DUE: Refer to City of Birmingham bidding instructions.

SUBMITTED TO: Aaron Ford
City of Birmingham
Email: aford@bhamgov.org

COPY TO: Wiss, Janney, Elstner Associates, Inc.
Attn: Mr. Justin Barden, PE
Email: jbarden@wje.com
Phone: 248-593-0900

Wiss, Janney, Elstner Associates, Inc.
Attn: Mr. Matthew Lewis, PE
Email: mlewis@wje.com
Phone: 248-593-0900

SUBMITTED BY: _____
Bidder name

_____
Bidder address

_____

_____
Date

Bidder certifies that:

A. Bidder has carefully read and understands Bidding Documents;
B. Bidder has visited site and become familiar with local conditions under which Work is to be performed, including verifying visible conditions, such as dimensions, materials, and attachments to remain, on existing facility; and
C. Bidder has correlated Bidder's personal observations with requirements of Bidding Documents. Bidding Documents include Project Manual and Drawings prepared by WJE and dated March 17, 2023 and addenda, as well as bidding documents prepared by the City of Birmingham.

Bidder shall notify Architect/Engineer of discrepancies, omissions, conflicts, or unclear meaning within Contract Documents; Architect/Engineer will interpret Contract Documents and, if necessary, issue written addendum. Contracted Work will be based on Architect/Engineer's interpretation of Contract Documents.

Bidder acknowledges receipt of following addenda.

No._____Dated_____
No._____Dated_____

Bidder may not withdraw Bid within 60 calendar days after Bid Due date.

Bidder agrees that Owner has right to waive informalities and irregularities in Bid received and to accept Bid which, in Owner's judgment, is in Owner's own best interests.

NOTE: Bidder shall state Unit Price Bid and Total Bid amount for each unit price item. Total Bid amount for each item shall be product of Estimated Quantity multiplied by Unit Price. Unit Price Bid and Total Bid amounts shall be written numerically in spaces provided.

GRAND TOTAL shall be sum of Total Bid amounts for various items and will be Contract Sum written in Owner-Contractor Agreement.

All words and numbers shall be written in non-erasable medium.

LUMP SUM PORTION OF BASE BID
Per Section 01 11 00 - Summary of Work

	Type of Work	**Total Bid**
1.	General Conditions	$_____
2.	Performance Bond and Labor and Material Payment Bond	$_____
3.	Installation of traffic-bearing membrane (traffic coating) in the three stair towers	$_____
4.	Installation of new expansion joint compression seal at the three roof level stair towers and one snow shoot	$_____
5.	Replace damaged and missing drain covers, and clean drain bowls	$_____
	Sum of Lump Sum Bid Items 1 through 5: **Subtotal L1:**	$_____

ALLOWANCE PORTION OF BASE BID
Per Section 01 21 00 - Allowances

	Type of Work	**Total Bid**
6.	Replace cracked and damaged drain lines at new drains with new cast iron pipes (allowance)	$ 10,000
	Sum of Allowance Bid Items: **Subtotal A1:**	$ 10,000

UNIT PRICE PORTION OF BASE BID
Per Section 01 22 00 - Unit Prices

Item	Description	Est. Qty.	Units	Unit Price	Total Bid
7.	Concrete overlay repair (Keynote 7)	2000	SF	$_____	$_____
8.	Partial-depth topside concrete slab repair (Keynote 8)	900	SF	$_____	$_____
9.	Partial-depth underside concrete slab repair (Keynote 9)	100	SF	$_____	$_____
10.	Concrete curb repair (Keynote 10)	100	SF	$_____	$_____
11.	Slab edge concrete repair (Keynote 11)	100	SF	$_____	$_____
12.	Slab on ground repair (Keynote 12)	50	SF	$_____	$_____
13.	Formed vertical concrete repair (Keynote 13)	150	SF	$_____	$_____
14.	Stair tower - partial-depth topside concrete slab repair (Keynote 14)	500	SF	$_____	$_____
15.	Stair tower - full-depth concrete slab repair (Keynote 15)	150	SF	$_____	$_____
16.	Stair tower stairs - partial-depth concrete topside repair (Keynote 16)	400	SF	$_____	$_____
17.	Stair tower stairs - partial-depth concrete underside repair (Keynote 17)	50	SF	$_____	$_____
18.	Stair tower railing post base replacement (Keynote 18)	35	EA	$_____	$_____
19.	Supplemental epoxy-grouted steel dowels	750	EA	$_____	$_____
20.	Supplemental steel reinforcement	2	ton	$_____	$_____
21.	Localized replacement of concrete masonry units (Keynote 21)	20	EA	$_____	$_____
22.	Localized repointing of masonry (Keynote 22)	300	LF	$_____	$_____
23.	Localized replacement of clay masonry bricks (Keynote 23)	60	EA	$_____	$_____
24.	Replace sealant at concrete overlay control joints (Keynote 24)	10,000	LF	$_____	$_____
25.	Replace sealant at cove (Keynote 25)	1,000	LF	$_____	$_____
26.	Rout and seal cracks in slab (Keynote 26)	3,500	LF	$_____	$_____
27.	Drain replacement (Keynote 27)	10	EA	$_____	$_____
28.	Brick Masonry Cleaning (Keynote 28)	400	SF	$_____	$_____
	Sum of Unit Price Bid Items 7 through 28:			**Subtotal U1:**	$_____

SUMMARY PORTION OF BASE BID

Subtotal L1: $_____

Subtotal A1: $10,000_____

Subtotal U1: $_____

Grand Total (Sum of Subtotals): $_____

Grand Total (in words): _____

_____Dollars

CONSTRUCTION SCHEDULE

The Contractor agrees to commence work under the Contract on or before a date to be specified in a written "Notice to Proceed." The Contractor proposes to complete all Base Bid work within _____ calendar days from the date specified in the Notice to Proceed.

The selected Contractor shall submit a detailed construction/work sequence schedule describing the work to be performed in each phase on an event by event basis, together with an estimate of time necessary to complete each phase of the Project.

ALTERNATE PORTION OF BASE BID

Per Section 01 11 00 - Summary of Work

Alternate bid amount is net adjustment to Contract Sum to incorporate Alternate into Work.

Type of Work	Total Bid
29. Alternate 1 – Architectural coating (non-elastomeric) at the following locations: ▪ Cast in place concrete columns. ▪ Cast in place concrete walls, including all faces of the internal walls at the roof level adjacent to the ramp, at the inside/interior face of the perimeter walls at the roof level, and at the inside/interior face of the perimeter and internal ramp walls at the first level. ▪ Cast in place concrete ceilings (underside of elevated slabs). ▪ Cast in place concrete stairs and landings (underside of landings, underside of risers, and exposed vertical surfaces (sides) of risers and landings). ▪ Concrete masonry units (CMU) at the interior-facing walls of the stair towers ▪ Concrete masonry units (CMU) at the exterior- (garage) facing walls of the mechanical rooms, restroom, and offices. ▪ Steel railings within the stair towers, including the new railing post base plates.	$_____
Sum of Alternates: **Subtotal A1:**	$_____

SUBCONTRACTORS

Indicate portion(s) of work to be completed by a subcontractor and name of subcontractor:

Portion of Work	**Subcontractor (if used)**
Waterproofing	_____
Concrete Repairs	_____
Caulking	_____
Plumbing	_____
Painting	_____
Other	_____

BIDDER'S ENDORSEMENT

I hereby certify that all statements herein are made on behalf of _____

_____
(Name and Address of Corporation, Partnership, or Person submitting bid)

of the City of _____State of _____

that I have examined and carefully prepared this Bid from the plans and specifications, and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

_____
(Signature)

_____
(Title)

END OF SECTION 00 41 44

SECTION 01 11 00
SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

F. Section Includes: Description of existing conditions and Work scope, and Contractor duties and use of premises.

1.2 CONTRACTOR DUTIES

A. Except as specifically noted, provide and pay for:
   1. Labor, materials, and equipment.
   2. Tools, construction equipment, and machinery.
   3. Water, heat, power, and lights required for construction beyond those available at facility.
   4. Other facilities and services necessary for proper execution and completion of Work.
   5. Legally required sales, consumer, and use taxes.
   6. Permits, government fees, and licenses as necessary for proper execution and completion of Work and as applicable at time of receipt of bids.

B. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities having jurisdiction, which bear on performance of Work.
   1. Take necessary safety precautions to prevent injury to construction personnel, non-construction personnel, Owner's property, and adjacent facilities.
   2. Perform work in a manner to minimize hazards due to the disturbance of lead containing materials (paint) and comply with MIOSHA requirements for assessing, monitoring, and protecting employees from lead hazard.
   3. Give required notices.
   4. Products shall comply with local regulations, including environmental restrictions.
   5. Promptly submit written notice to Architect/Engineer of observed variance of Contract Documents from legal requirements. It is not the Contractor's responsibility to make certain that Drawings and Specifications comply with codes and regulations.
      a. Propose appropriate modifications to Contract Documents for necessary changes.
      b. Assume responsibility for Work known to be contrary to such requirements, which is performed without notice.

C. Enforce strict discipline and good order among employees. Do not employ unfit persons or persons not skilled in their assigned tasks.

D. Provide 24-hour emergency contact information for Contractor and major subcontractors, including names and telephone numbers.

1.3 PROJECT CONDITIONS

A. **Description of Existing Structure:**
   1. The parking structure was constructed in 1966 and has five levels of parking with a centralized ramp system. The structural system on the supported levels consists of a two-way slab system comprised of reinforced concrete slabs supported on columns with drop panels. Level 1 is a reinforced concrete slab on ground, and Level 5 is uncovered rooftop

parking. The supported slabs are approximately 15 inches thick, which includes a concrete overlay that varies in thickness from approximately 1-1/2 to 3 inches. A traffic-bearing membrane (coating) is present on the roof level. The structure is square in plan with approximate dimensions of 200 feet by 200 feet, for a total area of 200,000 square feet of floor space between all levels. The facade at the corner towers is primarily brick masonry cladding with concrete masonry unit (CMU) backup; additionally, precast concrete units with an exposed aggregate finish extend from grade to the top of the corner towers, surrounding the windows and doors. A prestressed cable vehicle barrier system runs between the four corner towers.

B. **Description of Deterioration.** Deterioration of the structure includes, but is not limited to:
   1. Concrete slab and overlay:
      a. Unsound (delaminated) concrete is present on the topside of the elevated concrete slabs at the middle and south bays of Level 2 and Level 3.
      b. Spalled, loose, and delaminated concrete is present is small, localized areas on the underside of some elevated levels.
      c. Unsound concrete and spalls are present at localized areas at the interior slab edges.
      d. Unsealed cracks are present in many locations on the topside of the Level 2-4 slabs. A traffic coating was recently installed on Level 5.
   2. Stair towers:
      a. Spalled and delaminated concrete is present on the topside and underside of the stair tower landings (slabs). Spalled and unsound concrete is present in several locations on the topside of the steps, especially at the nosing. Spalled and unsound concrete is also present on the underside of the steps in localized areas.
      b. The bases of the stair tower railing posts are commonly corroded, and the connection of the railing posts to concrete slab is often failed.
      c. CMU is spalled in some locations at the bottom of the walls, and the mortar at the brick masonry cladding is deteriorated in multiple locations.

1.4 WORK SCOPE

A. The primary project objectives of this bid package are to address concrete deterioration at the slab topside and overlay at the middle and south bays of Level 2 and Level 3, concrete deterioration at the slab edges at all levels, and limited concrete deterioration at the underside of all levels. An additional primary objective is to address the concrete and railing distress within the stair towers.

B. Work includes, but is not limited to, the following activities:
   1. Concrete overlay repair
   2. Partial-depth topside and underside slab repairs
   3. Concrete curb repair
   4. Formed slab edge concrete repairs
   5. Slab on ground repairs
   6. Formed vertical concrete repairs
   7. Concrete repairs in stair towers
   8. Stair tower railing post base replacement
   9. Replacement and repair of CMU and brick masonry
   10. Replacement of sealant at construction joints
   11. Replacement of sealant at coves
   12. Routing and sealing of cracks
   13. Drain and drain component replacement
   14. Installation of traffic-bearing membrane within the stair towers

1.5 LUMP SUM WORK ITEMS

A. Lump Sum Item 1: General Conditions - All work defined in the Contract Documents not included in the other work items below. This includes, but in not limited to, supervision; mobilization; coordination and meetings; permits; personnel lifts; dust protection; submittals; mock-ups; shoring for concrete repairs; restriping of disrupted pavement markings; concrete material testing; protection of existing construction from damage; dumpsters; job site cleaning; temporary facilities and controls; temporary traffic control and signage; barricades; and project close out.

B. Lump Sum Item 2: Performance Bond and Labor and Material Payment Bond, each in the amount of 100 percent of the contract sum, held for a minimum of 1 year after acceptance of work.

C. Lump Sum Item 3: Installation of traffic-bearing membrane (traffic coating) in the three stair towers - This item includes, but is not limited to:
   1. Furnishing labor and materials
   2. Abrasive shotblasting horizontal surfaces to be coated, following concrete repairs
   3. Abrasive vertical surfaces to be coated, following wall and concrete repairs
   4. Air blast cleaning of all surfaces
   5. Protection of prepared surfaces from contamination until membrane installation
   6. New cove sealant at all interfaces between vertical and horizontal surfaces
   7. Detail strip of basecoat of membrane over all joints, cracks, and tie-ins
   8. Membrane system installation
   9. Upturning membrane at vertical surfaces
   10. Removing and resetting stair tower cover plates in bead of sealant
   11. Phasing of work to allow two stair towers open at any given time

D. Lump Sum Item 4: Installation of new expansion joint compression seal at the three roof level stair towers and one snow shoot. This includes removal of existing sealant, foam board, and grinding of concrete edges as required to install new compression seals and silicone sealant. The new expansion joint seals shall have factory formed joints. Refer to detail 6/S-503. Concrete repairs adjacent to joints shall be paid per Unit Price Items 7, 8, 9, and 11, as appropriate. Masonry repairs shall be paid per Unit Price Items 22 and 23, as appropriate.

E. Lump Sum Item 5: Replace damaged and missing drain covers and clean drain bowls - This item includes: at each floor drain on Levels 1-4, remove each drain grate and drain strainer, remove debris, and clean each drain; replace all damaged and missing floor drain grates and strainers using compatible materials and drain grates intended for vehicular traffic; reinstall drain grates and drain bowls. Notify engineer if components other than grates are damaged. Repair damaged drain lines per Allowance Item 1. Replace damaged drains per Unit Price Item 27. Replacement of (12) drain grates is assumed.

1.6 UNIT PRICE WORK ITEMS

F. Refer to Section 01 22 00 for description of work and basis for payment for unit price items on the east elevation.

G. Concrete Repair Items
   1. Concrete overlay repair (Keynote 7)
   2. Partial-depth topside concrete slab repair (Keynote 8)
   3. Partial-depth underside concrete slab repair (Keynote 9)
   4. Concrete curb repair (Keynote 10)
   5. Slab edge concrete repair (Keynote 11)

6. Slab on ground repair (Keynote 12)
7. Formed vertical concrete repair (Keynote 13)
8. Stair tower - Partial-depth topside concrete slab repair (Keynote 14)
9. Stair tower - Full-depth concrete slab repair (Keynote 15)
10. Stair tower stairs - Partial-depth topside concrete slab repair (Keynote 16)
11. Stair tower stairs - Partial-depth underside concrete slab repair (Keynote 17)
12. Stair tower railing post base replacement (Keynote 18)
13. Supplemental steel reinforcement
14. Supplemental epoxy-grouted steel dowels

H. Masonry Repair Items
1. Localized replacement of concrete masonry units (Keynote 21)
2. Localized repointing at brick masonry (Keynote 22)
3. Localized replacement of clay brick masonry units (Keynote 23)
4. Localized brick masonry cleaning (Keynote 28)

I. Waterproofing Repair Items
1. Replace sealant at concrete overlay control joints (Keynote 24)
2. Replace sealant at cove (Keynote 25)
3. Rout and seal cracks in slab (Keynote 26)
4. Drain replacement (Keynote 27)

1.7 ALTERNATE WORK ITEMS

A. Alternate 1 – Architectural coating (non-elastomeric) at the following locations:
1. Cast in place concrete columns.
2. Cast in place concrete walls, including all faces of the internal walls at the roof level adjacent to the ramp, at the inside/interior face of the perimeter walls at the roof level, and at the inside/interior face of the perimeter and internal ramp walls at the first level.
3. Cast in place concrete ceilings (underside of elevated slabs).
4. Cast in place concrete stairs and landings (underside of landings, underside of risers, and exposed vertical surfaces (sides) of risers and landings).
5. Concrete masonry units (CMU) at the interior-facing walls of the stair towers
6. Concrete masonry units (CMU) at the exterior- (garage) facing walls of the mechanical rooms, restroom, and offices.
7. Steel railings within the stair towers, including the new railing post base plates.

Refer to specification section 09 97 24.

1.8 SCHEDULE

A. Schedule: It is anticipated that work will begin in May 2023 with project completion by the end of October, 2023. Contactor shall provide adequate manpower as required to meet the project schedule.

B. Work to the lot west of the parking structure, separate from this repair project, is anticipated to begin in late April or early May. Coordinate with Owner as required.

1.9 CONTRACTOR USE OF PREMISES

A. Confine operations at Site to areas permitted by law, ordinance, permits, and Contract Documents.

B. Owner will occupy premises outside of Work area during construction period.

1. Cooperate with Owner to minimize conflicts and facilitate Owner usage.
2. Perform Work to avoid interference with Owner's day-to-day operations. Notify Owner's Representative at least 72 hours in advance of activities that will affect Owner's operations.
   a. Maintain utilities serving areas occupied by Owner or others. Do not interrupt utilities unless approved in writing in advance by Owner's Representative. Notify Owner's Representative at least 72 hours in advance of interruption. Provide temporary utility services if required.
3. Maintain vehicular, pedestrian, and emergency access to portions of facility that are in use. Keep entrances and exits clear of stored materials and construction equipment.
   a. Short interruptions in access may be permitted if approved in advance in writing by the Owner's Representative.
   b. Schedule deliveries to minimize interruptions.
4. Do not disturb Site outside of Work area.
5. Provide temporary protection around existing equipment and stored materials as required.
6. Minimize damage to building weatherproofing system during construction period, and promptly repair damage caused by construction operations. Protect building and occupants in Work area.
7. Notify the Owner's Representative at least one week in advance of when portions of Work area will be removed from use or returned to use.

C. Minimize interference with adjacent walkways and facilities.

D. Additional storage or operational area outside of Work area, either inside or outside of building, shall be coordinated in advance with the Owner's Representative.
   1. Construction equipment, tools, etc., shall not be stored in areas of Owner's continued use.
   2. Do not unreasonably encumber Site with materials or equipment.
   3. Do not load Project structure with weight that will endanger Project structure.
   4. Assume full responsibility for Site security and protection and safekeeping of products stored at Site.
   5. Obtain and pay for additional storage areas needed for operations.

E. Construction activities shall be limited to the following times:
   1. Mondays through Fridays 7:00 AM to 7:00 PM.
   2. Saturday 7:00 AM to 7:00 PM when mutually agreed upon with Owner.
   3. Only as permitted by ordinance, if more restrictive than above.

F. Contractor is not responsible for damage to electrical conduits embedded in concrete. Owner will pay for necessary electrical repairs.

1.10 OWNER OCCUPANCY

A. Owner will occupy areas outside of Work area where construction has been completed, before Substantial Completion. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building. Occupancy shall not constitute acceptance of total Work; assume responsibility for Work in re-occupied areas not in conformance with Contract Documents.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION 01 11 00

SECTION 01 21 00

ALLOWANCES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Administrative and procedural requirements for allowances.

1.2 ALLOWANCE ADJUSTMENT

A. As Work covered by allowance becomes known, submit cost proposal to Architect/Engineer for Work. See Section 01 20 10.
   1. Provide cost proposals from more than one source upon request.
   2. Provide breakdown of cost proposal upon request.
   3. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins. Prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed, upon request.
   4. Include costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other associated expenses as part of allowance.
   5. Include recommendations that are relevant to performing Work.

B. Owner will execute Change Order to authorize Allowance Work.
   1. Advise Architect/Engineer of date when Allowance Work must be authorized to avoid delaying Work.

C. Submit invoices and delivery slips to show actual quantities of materials delivered to site for Allowance Work.

D. Coordinate materials and their installation for Allowance Work with related materials and installations to ensure that Allowance Work is integrated and interfaced with related work. Furnish templates as required to coordinate installation.

E. At Project closeout, credit unused Allowance amounts to Owner.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION

3.1 SCHEDULE OF ALLOWANCES

A. Allowance No. 1 (Bid Form No. 6): Lump-Sum Allowance:
   1. Include the sum of $10,000 to replace the damaged drain lines with new cast iron pipes where floor drains are to be replaced, as required.
   2. Work shall comply with the Michigan Plumbing Code.
   3. Actual work performed will depend on the inspection of the conditions at floor drain replacement locations.

4. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

END OF SECTION

SECTION 01 22 00
UNIT PRICES

PART 1 - GENERAL

1.1 PAYMENT OF UNIT PRICE QUANTITIES

A. A portion of the work is to be paid for on a Unit Price basis based on actual quantities. The work items and basis of payment are listed below. These activities are described in Section 01 11 00 - Summary of Work and in the Drawings and are to be completed as per the Specification.
   1. Definition: Unit price, stated on the Bid Form, is the price per unit of measurement for materials and services for a specific Work activity. The Contract Sum may be increased or decreased by Unit Price adjustment, based on the difference between the estimated bid quantity and the actual Work quantity.
   2. Payment Procedures:
      a. As part of Project closeout, the Contract Sum will be modified by the unit price times the variation in the actual Work quantity from the estimated quantity included in the Bid Form, based on quantities measured by the Contractor and approved by the Architect/Engineer.

Bid Item	Type of Work	Unit
7	Concrete overlay repair (Keynote 7) The cost of this work includes: a) Furnishing labor and materials b) Partial-depth removal and disposal of sound and unsound concrete (average thickness of 3 inches) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and air blasting with compressed air e) Forming and recasting repair with ready-mix concrete or proprietary repair concrete f) Providing control joints in slab to match existing g) Curing Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft

Bid Item	Type of Work	Unit
8	Partial-depth topside concrete slab repair (Keynote 8) The cost of this work includes: a) Furnishing labor and materials b) Partial-depth removal and disposal of sound and unsound concrete (average thickness of 6 inches, including 3 inches of overlay) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air e) Coating exposed steel with two layers of corrosion-inhibiting coating f) Recasting repair with ready-mix concrete or proprietary repair concrete g) Providing control joints in slab to match existing h) Curing Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft
9	Partial-depth underside concrete slab repair (Keynote 9) The cost of this work includes: a) Furnishing labor and materials b) Shoring c) Removal and disposal of sound and unsound concrete (average thickness of 3 inches) d) Sawcutting edges of removal area e) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air f) Coating exposed steel with two layers of corrosion-inhibiting coating g) Forming and pumping repair area with ready-mix concrete or proprietary repair concrete h) Curing i) Stripping forms Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft

Bid Item	Type of Work	Unit
10	Concrete curb repair (Keynote 10) The cost of this work includes: a) Furnishing labor and materials b) Partial-depth removal and disposal of sound and unsound concrete (average thickness of 3 inches) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air e) Coating exposed steel with two layers of corrosion-inhibiting coating f) Forming and recasting repair with ready-mix concrete or proprietary repair concrete g) Curing Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft
11	Formed slab edge concrete repair (Keynote 11) The cost of this work includes: a) Furnishing labor and materials b) Shoring c) Removal and disposal of sound and unsound concrete (average thickness of 4 inches) d) Sawcutting edges of removal area e) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air f) Coating exposed steel with two layers of corrosion-inhibiting coating g) Restoring the section with formed and poured ready-mix concrete or proprietary flowable repair concrete h) Curing i) Stripping forms Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft

Bid Item	Type of Work	Unit
12	Slab on ground repair (Keynote 12) The cost of this work includes: a) Furnishing labor and materials b) Removal and disposal of sound and unsound concrete (average depth of 5 inches) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air e) Coating exposed steel with two layers of corrosion-inhibiting coating f) Installing new dowels and reinforcing steel shown in the details g) Compacting existing subgrade and adding crushed stone as necessary h) Forming and recasting repair with ready-mix concrete or proprietary repair concrete i) Providing control joints in slab to match existing j) Curing Payment based on surface area (square foot) of concrete repaired.	$/sq ft
13	Formed vertical concrete repair (Keynote 13) The cost of this work includes: a) Furnishing labor and materials b) Removal and disposal of sound and unsound concrete (average depth of 4 inches) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air e) Coating exposed steel with two layers of corrosion-inhibiting coating f) Forming and recasting repair with ready-mix concrete or proprietary repair concrete g) Curing h) Stripping forms Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft

Bid Item	Type of Work	Unit
14	Stair tower - Partial-depth topside concrete slab repair (Keynote 14) The cost of this work includes: a) Furnishing labor and materials b) Partial-depth removal and disposal of sound and unsound concrete (average thickness of 3 inches) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air e) Coating exposed steel with two layers of corrosion-inhibiting coating f) Recasting repair with ready-mix concrete or proprietary repair concrete g) Providing control joints in slab to match existing h) Curing Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/SF
15	Stair tower - Full-depth concrete slab repair (Keynote 15) The cost of this work includes: a) Furnishing labor and materials b) Shoring c) Removal and disposal of sound and unsound concrete (7inch nominal thickness) d) Sawcutting edges of removal area e) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air f) Coating exposed steel with two layers of corrosion-inhibiting coating g) Forming and recasting repair with ready-mix concrete or proprietary repair concrete h) Curing i) Stripping of forms Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft

Bid Item	Type of Work	Unit
16	Stair tower stairs - Partial-depth topside concrete slab repair (Keynote 16) The cost of this work includes: a) Furnishing labor and materials b) Partial-depth removal and disposal of sound and unsound concrete (average thickness of 3 inches) c) Sawcutting edges of removal area d) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air e) Coating exposed steel with two layers of corrosion-inhibiting coating f) Forming stair edge and recasting repair with ready-mix concrete or proprietary repair concrete g) Curing h) Stripping of forms Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft
17	Stair tower stairs - Partial-depth underside concrete slab repair (Keynote 17) The cost of this work includes: a) Furnishing labor and materials b) Shoring c) Removal and disposal of sound and unsound concrete (average thickness of 3 inches) d) Sawcutting edges of removal area e) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air f) Coating exposed steel with two layers of corrosion-inhibiting coating g) Forming and pumping repair area with ready-mix concrete or proprietary repair concrete h) Curing i) Stripping forms Note: The installation of supplemental steel reinforcing and dowels are paid under separate unit price items. Payment based on surface area (square foot) of concrete repaired.	$/sq ft

Bid Item	Type of Work	Unit
18	Stair tower railing post base replacement (Keynote 18) The cost of this work includes: a) Furnishing labor and materials b) Cutting of existing railing post c) Shoring/supporting of railing to remain d) Partial-depth removal and disposal of sound and unsound concrete as required to remove existing embedded post anchorage (6inch depth by 8inch width assumed) e) Sawcutting edges of removal area f) Sandblasting clean exposed concrete and steel reinforcing steel and air blasting with compressed air g) Coating exposed steel with two layers of corrosion-inhibiting coating h) Forming landing or stair edge and recasting repair with ready-mix concrete or proprietary repair concrete i) Curing j) Stripping of forms k) Fabrication of new railing post base l) Installation of new railing post base with epoxy anchors m) Placement of existing railing post into new base and welding of existing post to new base n) Refer to detail 5/S-502 Note: The installation of supplemental steel reinforcing and dowels for the concrete repair are paid under separate unit price items. Payment based on each railing post base installed.	$/each
19	Supplemental steel reinforcement The cost of this work includes: a) Furnishing and installing epoxy-coated (shop applied) conventional steel reinforcement in concrete repairs Payment based on weight (ton) of steel installed.	$/ton

Bid Item	Type of Work	Unit
20	Supplemental Dowels The cost of this work includes: a) Furnishing labor and materials b) Drilling holes for dowels c) Cleaning holes in accordance with manufacturer instructions d) Filling holes with adhesive grout e) Coordinating with and permitting inspector access to inspect holes after cleaning f) Installing dowels in accordance with manufacturer instructions g) Coating exposed portions of dowel with two layers of corrosion-inhibiting coating after installation Payment based on each dowel installed.	$/each
21	Localized replacement of concrete masonry units (Keynote 21) The cost of this work includes: a) Removing existing units b) Installing new units in-kind c) Coating new units to match existing Payment based on each units replaced.	$/each
22	Repointing of brick masonry (Keynote 22) The cost of this work includes: a) Removing existing mortar b) Cleaning and preparing surfaces for new mortar c) Installing new mortar in lift per details Payment based on length (linear feet) of mortar replaced.	$/ft
23	Localized replacement of concrete masonry units (Keynote 21) The cost of this work includes: a) Removing existing units b) Installing new units in-kind Payment based on surface area (square foot) replaced.	$/sq ft

Bid Item	Type of Work	Unit
24	Replace sealant at concrete overlay control joints (Keynote 24) The cost of this work includes: a) Furnishing labor and materials b) Removing existing sealant c) Routing joint d) Preparing concrete surface for new sealant e) Installing backer rod or bond breaker f) Applying primer for sealant g) Installing sealant h) Permitting sealant to cure adequate time Note: Replacement of concrete as required to restore the joint profile and address deterioration will be paid under separate unit price items. Payment based on length (linear feet) of sealant replaced.	$/ft
25	Replace sealant at cove (Keynote 24) The cost of this work includes: a) Furnishing labor and materials b) Removing existing sealant and preparing concrete to received new sealant c) Installing backer rod or bond breaker d) Applying primer for sealant e) Installing sealant f) Permitting sealant to cure adequate time Payment based on length (linear feet) of joint seal replaced.	$/ft
26	Rout and seal cracks in slab (Keynote 14) The cost of this work includes: a) Furnishing labor and materials b) Existing sealant removal, if present c) Routing crack d) Installing backer rod or bond breaker e) Applying primer f) Installing sealant g) Permitting sealant to cure adequate time Payment based on length (linear feet) of sealing cracks.	$/ft

Bid Item	Type of Work	Unit
27	Drain replacement (Keynote 27) The cost of this work includes: a) Furnishing labor and materials b) Removing existing damaged drain c) Installing new drain d) Attach new drain to plumbing Note: The concrete removal and repair required to replace drain are paid under separate unit price items. The installation of supplemental steel reinforcing and dowels are also paid under separate unit price items. Repairs to damaged drain lines are to be paid per Allowance Item 1.	
	Payment based each drain replaced.	$/each
28	Brick Masonry Cleaning (Keynote 28) The cost of this work includes: a) Furnishing labor and materials b) Cleaning of brick masonry	
	Payment based on surface area (square foot) cleaning.	$/sq ft

1.2 MEASUREMENT OF QUANTITIES

A. Measure work to be performed on a unit price basis according to the methods described in 1, 2, and 3 below. Payment will be made for work actually performed, based on quantities recorded by the Contractor and approved by the Engineer. Unless stated otherwise, records described below shall consist of both plan view drawings and tables cross-referenced to the drawings with the required data. Unless otherwise stated, the Engineer will verify the accuracy of the record by visual examination of the work performed and measurement of the quantities with a measuring wheel or similar method.
   1. Unit Price Items 7 to 18 and 21 to 28: The Contractor shall maintain a record of the location and quantity for each repair completed.
   2. Unit Price Items 18 and 19: The Contractor shall maintain a record of the location and quantity or weight of supplemental steel installed for each repair.
   3. The Contractor shall submit this record to the Engineer on a weekly basis.

B. The Contractor shall notify the Owner's Representative and the Engineer at once in writing of any unit price work that deviates materially from the prescribed basis for bidding and for which an adjustment in Unit Price is desired. The Contractor shall measure and quantify all such deviations, subject to verification by the Engineer, prior to any repair work which might make verification impossible. No adjustments in Unit Prices will be considered unless supporting field measurements are provided, and subject to the Owner's Representative's prior approval. Adjustments will only be considered if all repairs of a given type have been measured and all deviations, both plus and minus, have been included in the determination of the average deviation from the Unit Price basis.

END OF SECTION 01 22 00

SECTION 02 01 11
SHORING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Supply, installation, and removal of temporary shoring to support structural elements vertically.

B. Related Sections:
   1. Section 01 11 00 - Summary of Work
   2. Section 01 22 00 - Unit Prices
   3. Section 03 01 31 - Concrete Removal and Surface Preparation
   4. Section 03 01 34 - Concrete Replacements

1.2 PAYMENT

A. Include the following in General Conditions or unit prices as applicable:
   1. Design of shoring, developing shoring procedures, preparing shoring submittals, and providing and installing shoring.

1.3 COORDINATION

A. Coordinate with Owner's Representative and with other trades to ensure that shoring does not interfere with Owner use of Site or work of other trades.

1.4 SUBMITTALS

A. Product Data: Manufacturer's literature and technical data indicating type of shoring proposed for use and safe load-carrying capacity of shoring for heights and lengths of shoring components to be used.

B. Shop Drawings: Shop drawings showing locations, distribution, and quantity of shoring. Include connection and bearing details. Shop drawings shall be prepared by or under supervision of qualified, licensed Structural Engineer and shall be sealed by engineer.

C. Design Calculations: Calculations prepared by or under supervision of qualified, professional engineer licenced in Michigan, and sealed by engineer, indicating that shoring meets design criteria.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store shoring materials in approved storage area at Site, such that materials do not interfere with Owner's continued use of facility.

B. Limit stored materials on structure to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

1.6 PROJECT CONDITIONS

A. Comply with Owner's limitations and restrictions for Site use and accessibility.

PART 2 PRODUCTS

2.1 MANUFACTURED ASSEMBLIES

A. Design Criteria:
   1. Design for dead load and minimum 20-pound-per-square-foot construction load over tributary area of member being repaired, as follows:
      a. Design shall include a minimum factor of safety of 2.0.
      b. Design spreaders to distribute load over an effective area to result in a 2,500 psf or less bearing pressure on the concrete slab.
      c. Consider removal of loads from member and transfer of loads into structure below, without overloading structural members.
      d. Detail shoring to avoid interference with Owner operations.
      e. Consider shoring stiffness relative to stiffness of members being shored.

B. Shoring: Steel posts, steel frames, or other steel assemblies with sufficient capacity to support calculated shoring loads at spacing and positioning shown on shop drawings.
   1. Adjustable through positive means, such as screw jacks, to achieve tight fit to structure above and below and to compensate for elastic shortening of shores during loading and service.
   2. Use undamaged components, including bracing, supplied by shoring manufacturer.

2.2 ACCESSORIES

A. Spreaders:
   1. At bottom of shores: steel or timber cribbing with minimum a minimum cross section of 3-1/2 inches by 3-1/2 inches, or other material; with sufficient bearing area and length to distribute shoring reactions into supporting structural element below.
   2. At top of shores: Timber or steel spreader beams or wood bearing pads; to fully support member being shored without damage to member surface.

B. Shims: Wood or steel; at bearing points above shores to ensure tight contact with shored member.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements and other conditions affecting installation or performance of shoring Work.
   1. Ensure that work done by other trades is complete and ready for shoring Work.
   2. Notify Engineer in writing of conditions which may adversely affect installation or performance of shoring Work and recommend corrections.
   3. Do not proceed with shoring Work until adverse conditions have been corrected and reviewed by Engineer.
   4. Commencing shoring Work constitutes acceptance of Work surfaces and conditions.

3.2 INSTALLATION

A. Install shoring in accordance with manufacturer's recommendations and approved shop drawings at designated locations and at additional locations designated by Engineer.

Installed assembly shall be of such quality that assembly will support imposed loads without excessive settlement or deflection.

1. Position to avoid interference with Owner operations.
2. Install snug, plumb, and square. Install cross-bracing recommended by shoring manufacturer and shoring designer to prevent buckling failure of individual members and overall shoring stability failure. Extend shoring above and below level of repair work as required by shoring design.
3. Install spreader beams or bearing pads and shims as necessary, and adjust shores to ensure tight, uniform fit against structural element to be supported. Minimize differential loading of vertical shoring members.
4. Install timber cribbing wood or wood bearing pads as necessary to distribute loads into supporting elements. If more than 1 layer of cribbing is required, install each successive layer perpendicular to preceding layer.
5. If shoring is to be placed on coated or finished surface, protect surface from damage with plywood, plastic sheets, or other means.

B. Preload shores with screw jacks to bring shoring into a uniform, snug-tight condition.

C. Protect shores from damage from construction activities, Owner use of facility, and other causes.

D. Check shores daily and adjust as necessary to maintain snug condition, plumbness, and full effectiveness.

E. Modify and adjust shoring as required to meet conditions of work and to ensure Project safety.

3.3 REMOVAL OF SHORES

A. Remove shores when compressive strength of repair concrete exceeds 75 percent of its specified 28-day strength. Contractor may elect to have additional concrete strength tests performed at his own expense, to confirm when repair concrete meets removal requirements.

B. Store shoring materials in approved storage area at Site, such that materials do not interfere with Owner's continued use of facility. Promptly remove shoring materials from Site when no longer needed for work.

END OF SECTION 03 01 01

SECTION 03 01 31
CONCRETE REMOVAL AND SURFACE PREPARATION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Concrete removal and surface preparation prior to concrete replacement, including:
   1. Removal of unsound and sound concrete.
   2. Preparation of concrete and steel surfaces.
   3. Coating reinforcing bars and embedded steel with corrosion-inhibiting material.
   4. Supply and installation of supplemental epoxy-coated reinforcing bars.
   5. Supply and installation of epoxy-grouted steel dowels.

B. Related Sections:
   1. Section 01 22 00 - Unit Prices
   2. Section 02 01 11 - Shoring
   3. Section 03 01 34 - Concrete Replacements

1.2 UNIT PRICES

A. Perform the following Work on unit price basis:
   1. Concrete removal and surface preparation. Included in vertical and overhead concrete unit prices.
   2. Supply and installation of supplemental steel reinforcement. Payment based on nominal weight of bars installed.
   3. Supply and installation of epoxy-grouted dowels. Payment based on number of dowels installed.

1.3 COORDINATION

A. Coordinate with Owner's Representative and with other trades to ensure that adjacent areas are not adversely affected by concrete removal Work.

1.4 SUBMITTALS

A. Product Data: Manufacturer's literature and technical data for corrosion-inhibiting coating material, and epoxy for epoxy-grouted dowels, indicating applicability of product for proposed use.

B. Certificates:
   1. For installer of epoxy-grouted dowels: ACI-CRSI Certification as Adhesive Anchor Installer.

C. Epoxy-Coated Reinforcing Steel:
   1. Mill test reports for steel reinforcement, indicating conformance with ASTM A615/A615M.
   2. Certification from CRSI indicating that coating applicator is certified by CRSI Epoxy Plant Certification Program.

3. Certification statement from coating applicator that material, coating process, and coating properties conform to ASTM A775/A775M, including preheat temperatures, cure times, thickness checks, holidays detected, and bend test results for each bar size.

D. Confinement, Collection, and Disposal Plan: Written plan for confining, collecting, and disposing of broken concrete, sandblast grit, dust, debris, existing reinforcing, and other waste material resulting from removal operations and surface preparation.

1.5 QUALITY ASSURANCE

A. Mockups: Demonstrate adequacy of concrete removal and surface preparation procedures as part of mockups in 03 01 34 and 03 01 35.

B. Qualifications for Installer of Epoxy-Grouted Dowels: Experienced individual with current ACI-CRSI certification as Adhesive Anchor Installer.
   1. Applicable only for anchors in horizontal or upwardly inclined orientations.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials according to manufacturer's recommendations and in such manner as to prevent damage to materials or structure.

B. Deliver materials to Site in original containers and packaging with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, and directions for storing and mixing with other components.

C. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, or installation. Reject and remove from Site new materials which exhibit evidence of moisture during application, or have been exposed to moisture.

D. Store materials in original, undamaged containers in clean, dry, protected location on raised platforms with weather-protective coverings, within temperature and humidity range required by material manufacturer.

E. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

F. Conspicuously mark damaged or opened containers or containers with contaminated materials, and remove from Site as soon as possible.

G. Remove materials that cannot be applied within stated shelf life from Site and replace with new materials.

1.7 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to start of concrete removal Work. Notify Engineer of conditions found to be different than those indicated in the Contract Documents. Engineer will review situation and inform Contractor and Installer of changes.

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

C. Dust, Fume, and Noise Controls:
   1. Confine dust and debris to Work area and prevent from entering portions of facility that remain in use.
   2. Direct equipment exhaust away from occupied spaces. Vent equipment operating within structure to outside or condition exhaust gases with catalytic converter.
   3. Operate equipment at noise levels conforming to requirements of city, state, and federal laws and codes, and Owner limitations.

D. Maintain adequate ventilation during preparation and application of materials.

1.8 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials or mislocation of embedded elements such as reinforcing steel, which may interfere with proper execution of the Work.
   1. Notify Engineer of conditions that may interfere with proper execution of the Work prior to proceeding with Work.

PART 2 PRODUCTS

2.1 MATERIALS

A. Corrosion-Inhibiting Coating Materials: Use material specifically intended for reinforcing steel embedded in concrete.
   1. Zinc-rich Steel Primer:
      a. MasterProtect P 8100 AP, supplied by BASF Construction Chemicals, LLC.
      b. ECB - Electro-Chemical Barrier, supplied by Conproco,
      c. or approved equal.
   2. Epoxy Coating:
      a. Sikadur 32 Hi-Mod by Sika Corporation
      b. or approved equal.
   3. Cementitious Coating:
      a. Sika Armatec 110 EpoCem by Sika Corporation
      b. or approved equal

B. Epoxy-Coated Reinforcing Bars: Deformed bars with 60,000 psi minimum yield strength conforming to ASTM A615/A615M, Grade 60. Sizes as shown on Drawings or directed by Engineer.
   1. Reinforcing bars shall be shop-coated with fusion-bonded protective coating of epoxy powder applied by electrostatic spray method or electrostatic fluidized-bed method in accordance with ASTM A775/A775M.
      a. Reinforcing bars shall be supplied by certified CRSI epoxy-coating application plant. Furnish certification statement with each shipment.
      b. Repair Material: Liquid, two-part, epoxy repair material; supplied by epoxy resin manufacturer and complying with requirements of ASTM A775A/A775M.
   2. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars in place. Bar supports shall be manufactured from steel wire, plastic, or precast concrete in accordance with "Bar Support Specifications and Standard Nomenclature" in CRSI *Manual of Standard Practice*.

a. With epoxy-coated reinforcing steel, use metal chairs and supports coated with epoxy, plastic, or other inert dielectric polymer coating.

3. Plastic-Coated Tie Wire: Wire used to secure bars during concrete placement shall be 16-gauge steel wire, and shall be plastic coated to protect the reinforcing coating from physical damage.

C. Steel Wire and Welded Wire Reinforcement, Plain and Deformed: Steel wire and welded wire reinforcement shall conform with 65,000 pounds per square inch minimum yield strength conforming to ASTM A1064.
   1. Epoxy coated wire and welded wire reinforcement shall conform to the requirements of ASTM A884.
   2. Welded Wire Reinforcement shall be epoxy coated 6x6-W4xW4, unless otherwise approved by Engineer based on existing reinforcing. Use epoxy coated 6x6-W4xW4 for all new installations where not otherwise specified

D. Epoxy-Grouted Dowels:
   1. Dowels: ASTM A615/A615M, Grade 60, uncoated steel bars, cut true to length with ends square and free of burrs.
   2. Epoxy-Adhesive for Dowels: Adhesive must be supplied in pre-measured sausages. Use one of the following:
      a. HIT-HY 200-R hybrid adhesive supplied by Hilti, Inc.
      b. AC100+ Gold vinylester supplied by Powers Fasteners.
      c. Or approved equal.

2.2 FABRICATION

A. Fabricate and detail steel reinforcement to shapes and dimensions shown on Drawings in accordance with and within fabricating tolerances shown in CRSI's *Manual of Standard Practice*.

B. Bends and hooks shall conform to dimensions defined as "ACI Standard Hooks" in CRSI's *Manual of Standard Practice* unless otherwise shown on Drawings.

C. Welded Wire Reinforcing shall conform to the recommendations of the Wire Reinforcing Institutes WWR 400-R-03.

D. Do not bend or straighten reinforcing bars in manner that will injure coating material. Reduce rate of bending as necessary to minimize cracking or debonding of coating. Promptly coat visible cracking or debonding of coating in bending area and elsewhere, except that hairline cracks, 0.003 inches or less in width, at base of bar deformation need not be coated.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements and other conditions affecting concrete removal Work.
   1. Ensure that work done by other trades is complete and ready for concrete removal Work.
   2. Verify that areas and conditions under which concrete removal Work is to be performed permit proper and timely completion of Work.

3. Notify Engineer in writing of conditions which may adversely affect concrete removal Work and recommend corrections.
4. Do not proceed with concrete removal Work until adverse conditions have been corrected and reviewed by Engineer.
5. Commencing concrete removal Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Take precautions to ensure safety of people, including building users, and workmen, and animals, and protection of property, including adjacent building elements, equipment, landscaping, and motor vehicles.

B. Prevent construction debris and other materials from coming into contact with building users, motor vehicles, building equipment landscaping, and other surfaces that could be harmed by such contact.

C. Limit access to Work areas.

D. Erect temporary protective canopies, as necessary, over occupied areas that must remain in service during Work.

E. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

3.3 EQUIPMENT

A. Pneumatic Chipping Hammers:
   1. Nominal 30-lb class or less for removal of concrete at repair areas.
   2. Nominal 15-lb class or less for detail work adjacent to and beneath reinforcing steel.

B. Saws capable of sawcutting concrete to specified depth.

C. Sandblasting equipment capable of removing laitance, dirt, loose pieces of concrete, and surface contaminants from exposed concrete surfaces and rust, concrete, and surface contaminants from exposed steel surfaces.

D. High-pressure, oil-free compressed air equipment capable of removing dust and dirt from exposed concrete removal areas.

E. Percussive or rotary drilling equipment for making holes in concrete substrate for dowel installation.

3.4 CONCRETE REMOVAL AND SURFACE PREPARATION

A. Sound perimeter concrete surfaces and mark with paint areas of unsound concrete. Engineer will review markings before concrete removal Work begins. Provide a minimum of 24 hours advance notice to Engineer prior to commencing concrete removal.

B. Prior to concrete removal Work:
   1. Remove abandoned plumbing and electrical lines and associated fixtures that interfere with Work. Shore active plumbing and electrical lines and reattach at completion of Work. Owner will relocate active plumbing and electrical lines that cannot be temporarily supported.
   2. Install shoring as specified or directed by Engineer.
   3. Develop plan for confining and disposing of broken concrete and other debris from removal Work.
   4. Develop and implement plan for assessing and monitoring lead hazard during concrete removal. Perform removal to minimize hazards due to the disturbance of lead paint.

C. Concrete removal areas:
   1. Where possible, make rectangular in shape in plan.
   2. Avoid re-entrant corners.
   3. Extend at least 4 inches beyond edge of unsound concrete.

D. Create square edges of removal areas.
   1. Sawcut 3/4 inch at top surface removal areas. Do not saw through reinforcing steel, embedded electrical conduits, or other embedments.
   2. Chip or sawcut square edges of overhead and vertical removal areas at least 1/2 inch deep.

E. Remove unsound concrete and, as necessary, sound concrete to create minimum removal depth of 2 inches and gaps around partially exposed reinforcing bars of at least 3/4 inches.
   1. Exercise care to avoid cracking underlying sound concrete, punching through member, or damaging embedments such as electrical conduit.
   2. Limit chipping hammer size and impact angle to minimize damage to sound concrete. Impact angle shall be no more than 60 degrees to surface.
   3. Avoid abrupt changes in depth of removal.

F. Prepare concrete surfaces in repair areas to have a minimum peak-to-valley surface roughness of approximately 1/4 inch, meeting the requirements of ICRI CSP 7. Achieve preparation using chipping hammers or by scarification.

G. At full-depth removal areas, slope removal area edges downward and inward at a slope of one to one.

H. Notify Engineer and Owner's Representative of embedded electrical conduit encountered in removal areas. Proceed as directed by Engineer and Owner's Representative. Unless otherwise directed, remove abandoned conduit and wires in removal area.

I. Inspect and sound concrete surfaces in and around removal areas. Remove additional unsound concrete. Sawcut or chip square new removal area perimeter as necessary.

J. Sandblast clean surfaces of removal area, including vertical edges, to remove surface contaminants, loose pieces of concrete, and concrete that is bruised or micro-fractured and to roughen surfaces. Clean removal area surfaces with dry, oil-free compressed-air jet.

K. Inspect prepared concrete surfaces and remedy defects. Allow Engineer at least 48 hours to observe prepared surfaces prior to patch placement.

3.5 REINFORCEMENT PREPARATION

A. Leave existing reinforcing in place unless otherwise directed by Engineer.

B. Notify Engineer of reinforcing bars that are incorrectly located or have less than 1/2 inch of concrete cover; are damaged or fractured; or have lost more than twenty percent of their original cross-sectional area at any point. Engineer will determine remedial action.

C. Sandblast clean exposed steel surfaces, including existing reinforcement and embedments, to SSPC-SP 6/NACE No. 3 finish, with minimal rust or concrete debris. Clean steel surfaces with dry, oil-free compressed-air jet. Exercise care to clean undersides of reinforcing bars.

D. Inspect prepared steel surfaces and clean remaining contaminants. Allow Engineer at least 24 hours to observe prepared surfaces prior to coating steel.

E. Apply two coats of corrosion-inhibiting material on exposed steel surfaces.
   1. Batch, mix, and apply material according to recommendations of material supplier.
   2. Exercise care to coat difficult-to-reach surfaces, such as undersides of reinforcing bars.
   3. Minimize spillage on concrete surfaces. Remove materials that will act as bond breaker by chipping or other means.
   4. Inspect coated steel surfaces and apply additional coats to uncoated or thinly-coated areas. Allow Engineer at least 24 hours to observe prepared coated surfaces prior to concrete placement.

3.6 INSTALLATION OF EPOXY-GROUTED STEEL DOWELS

A. Remove and replace unsound concrete at dowel locations.
   1. Holes shall be dry-drilled using percussive tool. Other methods of drilling must be submitted to the Engineer for approval.
   2. Locate existing reinforcement with reinforcing bar locator and position holes to avoid existing reinforcement.
   3. Do not damage existing reinforcement.
   4. Make hole diameter at least 1/8 inch larger than dowel diameter, unless otherwise recommended by epoxy manufacturer.
   5. Remove epoxy from end of dowel, if present, to be epoxied into concrete.

B. Clean holes with stiff brush and dry, oil-free compressed-air jet to remove loose concrete, dust, and debris. Repeat brushing and blowing out hole until dust-free air emanates from hole.

C. Inject epoxy with tube into back of hole and fill hole to front, withdrawing tube to prevent entrapped air.
   1. Discard initial portion of epoxy according to manufacturer's directions. Change mixing tubes as recommended by the material manufacturer.
   2. Install sufficient material to completely fill annular space around dowel.

D. Insert dowel to bottom of hole and secure in center of hole, perpendicular to surface, until epoxy has set.

E. Promptly remove excess epoxy.

F. Apply two coats of corrosion-inhibiting material on exposed steel surfaces per Article 3.5 for dowels without shop applied epoxy coating.

3.7 NEW STEEL REINFORCEMENT

A. General: Comply with CRSI Manual of Standard Practice for placing reinforcement

B. Clean reinforcement of loose rust and mill scale, earth, ice and other foreign materials.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Do not weld reinforcement unless specifically approved by Architect/Engineer.

E. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

F. Install welded wire fabric in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges of adjoining sheets at least one mesh spacing plus 2 inches. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

G. Where directed by Architect/Engineer, coat new bars in accordance with requirements for existing reinforcing.

H. Epoxy-Coated Reinforcement as directed by Architect/Engineer: Use epoxy coated steel wire ties to fasten epoxy-coated reinforcement. Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D3963.

3.8 CLEANING

A. Remove and legally dispose of concrete and steel debris, sandblast materials, and excess materials.

END OF SECTION 03 01 31

SECTION 03 01 34
CONCRETE REPLACEMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Supply and placement of cast-in-place concrete for replacement applications, including formwork, reinforcement, concrete materials, mix design, batching procedures, placement procedures, finishes, and curing. Proprietary cementitious replacement materials are also included.

B. Related Sections:
   1. Section 01 22 00 – Unit Prices
   2. Section 03 01 01 – Shoring
   3. Section 03 01 31 – Concrete Removal and Surface Preparation

1.2 REFERENCES

A. Definitions:
   1. Cementitious Materials: Portland cement alone or in combination with one or more of fly ash, silica fume, and other pozzolans, or slag cement.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordinate Work to ensure that adjacent areas are not adversely affected. Coordinate:
   1. With Owner's Representative.
   2. With other trades:
      a. To ensure that work done by other trades is complete and ready for concrete replacement Work.
      b. To avoid or minimize work on, or in immediate vicinity of, concrete replacement Work in progress.
      c. To ensure that subsequent work will not adversely affect completed concrete replacements.

1.4 SUBMITTALS

A. Product Data: Manufacturer's literature including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; and mixing and application or placement instructions.
   1. Include temperature ranges for storage and application of materials, and special cold-weather application requirements or limitations.

B. Design Mixes: For each concrete mix, including required test reports.
   1. Proportions of materials.
   2. Mill tests and certification for cement, fly ash, and slag cement. Certification for silica fume.
   3. Sieve analysis for fine and coarse aggregate.
   4. Test results for deleterious substances in aggregates and potential aggregate reactivity.
   5. Slump during laboratory tests.

6. Air content during laboratory tests.
7. Three-, seven-, and 28-day laboratory compression test results. Minimum three cylinders at each test age.
8. Indicate:
   a. Amount of mix water to be withheld for later addition at Site.
   b. Range of high-range, water-reducing admixture dosage that may be added at Site without adversely affecting hardened concrete.

C. Field Quality Control: Batch tickets for ready-mix concrete.

1.5 QUALITY ASSURANCE

A. Contractor Qualifications: Experienced firm that has successfully completed concrete replacement work similar in material, design, and extent to that indicated for the Project. Must have successful construction with specified materials in local area in use for minimum of five years.
   1. Employ foreman with minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site at all times during the Work. Do not change foremen during the course of the Project except for reasons beyond the control of Contractor; inform Architect/Engineer in advance of any changes.

B. Ready-Mix Supplier Qualifications: ASTM C94/C94M; Certification of Production Facilities and Delivery Vehicles by National Ready Mixed Concrete Association.

C. Mockups: Construct mockup to demonstrate construction procedures, quality of Work, and aesthetic effects.
   1. Construct mockups on existing members, at locations designated by Architect/Engineer, under same weather conditions expected during Work. Provide access to mockup locations.
   2. Architect/Engineer will observe concrete removal and surface preparation work, prepared concrete removal areas, and installation of repair material. Notify Architect/Engineer and Owner's Representative at least seven days in advance of when mockups will be constructed.
   3. Photograph concealed portions of approved mockup before concealing, and retain photographs at Site.
   4. Sound surfaces after form removal to identify delaminations in repair and examine surfaces for evidence of segregation and poor consolidation..
   5. If Architect/Engineer or Owner's Representative determines mockup does not comply with requirements, modify mockup or construct new mockup until mockup is approved. Remove and replace mockups that are not approved.
   6. Approved mockups shall be maintained in undisturbed condition throughout Project as basis for acceptance of completed work and may become part of completed Work if undisturbed at time of Substantial Completion.
   7. Do not order materials or proceed with repair Work until mockups have been approved by Architect/Engineer and Owner's Representative.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials according to manufacturer's recommendations and in such manner as to prevent damage to materials or structure.

B. Deliver, store, and handle reinforcing steel to prevent bending and damage.
   1. Avoid damaging reinforcement coating.
   2. Repair damaged reinforcement coating according to ASTM D3963/D3963M.

C. For proprietary materials:
   1. Deliver materials to Site in original bags and containers with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, and directions for storing and mixing with other components.
   2. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, or installation. Reject and remove from Site new materials which exhibit evidence of moisture during application, or have been exposed to moisture.
   3. Store materials in original, undamaged bags or containers in a clean, dry, protected location on raised platforms with weather-protective coverings, within temperature range required by manufacturer. Manufacturer's standard packaging and covering is not considered adequate weather protection.

D. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

E. Conspicuously mark damaged or opened bags or containers or bags or containers with contaminated materials, and remove from Site promptly.

F. Remove materials that cannot be applied within stated shelf life from Site and replace with new materials.

1.7 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to the start of concrete replacement Work. Notify Architect/Engineer of conditions found to be different than those indicated in the Contract Documents. Architect/Engineer will review situation and inform Contractor of changes.

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

1.8 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the integrity or performance of the Work.
   1. Notify Architect/Engineer of conditions that may interfere with proper execution of the Work or jeopardize performance of the Work, prior to proceeding with the Work.

PART 2 PRODUCTS

2.1 FORM MATERIALS

A. Forms: Plywood, lumber, metal, plastic, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
   1. Use panels that will provide continuous, true, and smooth concrete surfaces.
   2. Furnish panels in largest practicable sizes to minimize number of joints.

3. Do not use rust-stained, steel, form-facing material.
4. For Smooth-Form Finish: Use form-facing material capable of producing smooth, uniform texture on concrete. Do not use form-facing materials with raised grain, torn surfaces, worn edges, dents, or other defects that will impair texture of concrete surface.

B. Accessories:
1. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 inch by 3/4 inch minimum.
2. Form Ties: Factory-fabricated; removable or snap-off metal or glass-fiber-reinforced plastic form ties; designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
   a. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of the exposed concrete surface.
   b. Furnish ties that, when removed, will leave holes not larger than 1 inch in diameter in the concrete surface.
3. Form-Release Agent: Commercially-formulated form-release agent that will not bond with, stain, or adversely affect the concrete surface and will not impair subsequent treatments of the concrete surface.
   a. Formulate form-release agent with rust inhibitor for steel, form-facing materials.

2.2 CONCRETE MATERIALS

A. Source Limitations: Obtain each type or class of cementitious material of same brand from same manufacturer's plant, each aggregate from one source, and admixtures through one source from single manufacturer.

B. Portland Cement: ASTM C150/C150M, Type I or II.

C. Fly Ash: ASTM C618, Class F or C.

D. Ground-Granulated Blast-Furnace Slag (GGBFS): ASTM C595.

E. Silica Fume: ASTM C1240, amorphous silica.

F. Aggregates: ASTM C33/C33M; from single source with documented record of at least ten years of satisfactory service using similar aggregates and cementitious materials in similar applications and service conditions.
1. Coarse Aggregates: Uniformly graded; 3/8-inch nominal maximum size; Class 4S.
2. Alkali Reactivity: Coarse and fine aggregates shall have expansion indicative of innocuous behavior; that is, less than 0.10 percent expansion after 16 days when tested according to ASTM C1260; or mitigating measures shall be included in concrete mix.
   a. Provide ASTM C1260 test results for aggregates proposed for use, performed within last year.
   b. If reported expansion is 0.10 percent or more at 16 days after casting, use mitigation measures shown to render innocuous results when tested according to ASTM C1260 or provide coarse and fine aggregates from a remote source, with expansion indicative of innocuous behavior when tested according to ASTM C1260. ASTM C1293 procedure may be substituted for ASTM C1260.

G. Water: Potable.

2.3 ADMIXTURES:

A. General: Admixtures certified by manufacturer to contain no more than 0.1 percent chloride ions and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.
   1. Air-Entraining Admixture: ASTM C260/C260M.
   2. Water-Reducing Admixture: ASTM C494/C494M, Type A.
   3. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
   4. Water-Reducing and Accelerating Admixture: ASTM C494/C494M, Type E.
   5. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D

2.4 PROPRIETARY REPLACEMENT MATERIALS

A. For Formed Vertical and Overhead Replacements: Pre-bagged concrete containing aggregate. Use one of the following or approved equal:
   1. MS-S10 Self-Consolidating Concrete by King Packaged Materials Company.
   2. Sikacrete 211 SCC by Sika Corporation.

B. For Horizontal Partial-Depth and Full-Depth Replacements: Pre-bagged concrete containing aggregate. Use one of the following or approved equal:
   1. MS-S10 Self-Consolidating Concrete by King Packaged Materials Company.
   2. Sikacrete 211 SCC by Sika Corporation.

C. For Trowel-Applied Vertical and Overhead Replacements: Polymer- or silica-fume-modified, cementitious, non-sag mortar that is specifically intended for this application. Only to be used at locations approved by Architect/Engineer. Use one of the following or approved equal:
   1. MasterEmaco N 400 by BASF Construction Chemicals, LLC.
   2. SikaTop 123 Plus by Sika Corporation.
   3. Mapei Planitop X, by Mapei.
   4. SikaQuick VOH, by Sika Corporation.

D. Do not use proprietary replacement materials that contain added gypsum.

2.5 CURING MATERIALS

A. Moisture-Retaining Cover: ASTM C171, white burlap-polyethylene sheet.

B. Water: Potable.

C. Membrane-Forming Curing Compound: ASTM C309, Type 1; Solvent-borne; VOCs less than 350 g/L and legal limits compatible with new coating. Silicate materials shall not be used.

2.6 CONCRETE MIXES

A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mixes or field-test data, according to ACI 301.
   1. Use qualified independent testing agency conforming to requirements of ASTM C1077 for preparing, testing, and reporting proposed mix designs for laboratory trial mix basis.

B. Partial Depth and Full Depth Replacements: Proportion normal-weight concrete mix as follows:
   1. 28-day Compressive Strength: 5,000 pounds per square inch.

2. Fly Ash or Slag Cement: Include 20 to 25 percent by mass of total cementitious materials, as cement replacement, unless otherwise approved.
3. Silica Fume: Maximum 10 percent by mass of total cementitious materials, as cement replacement, unless otherwise approved.
4. Maximum Water-Cementitious Materials Ratio, by weight: 0.40
5. Slump: 4 inches maximum.
   a. With High-Range, Water-Reducing Admixture:
      1) 2- to 4-inch slump prior to adding admixture.
      2) 8 inches maximum slump after admixture is added.
6. Air Content: Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having air content of 6 (+/- 1.5) percent, unless otherwise indicated.
7. Admixtures: Use admixtures according to manufacturer's written instructions.
   a. Use water-reducing admixture. Alternately use high-range, water-reducing admixture (superplasticizer), as required, for placement and workability.
   b. Use retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
   c. Use calcium nitrite based corrosion Inhibiting admixture with a minimum dosage of 3 gal/ yd^3
8. Shrinkage: 600 micro-strain maximum at 90 days when tested according to ASTM C157.
9. Bond Strength: ASTM C1583/1583M, ICRI Guide for Using In-Situ Tensile Pull-off Tests to Evaluate Bond of Concrete Surface Materials; 175 pounds per square inch minimum, failure away from bond line; unless properly prepared substrate precludes achieving minimum strength.

C. Vertical and overhead surface repairs: Proportion normal-weight concrete mix as follows:
1. 28-day Compressive Strength: 4,500 pounds per square inch.
2. Maximum Water-Cementitious Materials Ratio, by weight: 0.40.
3. Slump: 4 inches maximum.
   a. With High-Range, Water-Reducing Admixture:
      1) 2- to 4-inch slump prior to adding admixture.
      2) 8 inches maximum slump after admixture is added.
4. Air Content: Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having air content of 6 (+/- 1.5) percent, unless otherwise indicated.
5. Admixtures: Use admixtures according to manufacturer's written instructions.
   a. Use water-reducing admixture. Alternately use high-range, water-reducing admixture (superplasticizer), as required, for placement and workability.
   b. Use retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
6. No chlorides shall be intentionally introduced into concrete mix.
   a. In hardened concrete, limit acid-soluble chloride ion content to 0.10 percent by weight of cement when tested according to ASTM C1152/C1152M, or water-soluble chloride ion content to 0.08 percent by weight of cement when tested according to ASTM C1218/C1218M.
   b. If hardened concrete exceeds chloride ion limits above, limit water-extractable chloride ion content to 0.08 percent by weight of cement when tested according to ASTM C1524.
   c. Provide test results necessary to demonstrate concrete and aggregates do not exceed chloride ion limits, unless waived by Architect/Engineer.

7. Bond Strength: ASTM C1583/1583M, ICRI 210.3; 175 pounds per square inch minimum, failure away from bond line; unless properly prepared substrate precludes achieving minimum strength.

2.7 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI *Manual of Standard Practice*.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions for compliance with requirements and other conditions affecting installation or performance of concrete replacements.
   1. Ensure that work done by other trades is complete and ready for concrete replacement Work.
   2. Verify that areas and conditions under which concrete replacement Work is to be performed permit proper and timely completion of the Work.
   3. Notify Architect/Engineer in writing of conditions which may adversely affect installation or performance of concrete replacements and recommend corrections.
   4. Do not proceed with concrete replacement Work until adverse conditions have been corrected and reviewed by Architect/Engineer.
   5. Commencing concrete replacement Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Take precautions to ensure the safety of people, including building users, passers-by, and workmen, and protection of property, including adjacent building elements, landscaping, and motor vehicles.

B. Prevent construction debris and other materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

C. Protect paving and sidewalks, and adjacent building areas from mechanical damage due to scaffolding and other equipment.

D. Limit access to Work areas.

E. Erect temporary protective canopies, as necessary, over walkways and at points of pedestrian and vehicular access that must remain in service during Work.

F. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

3.3 FORMWORK

A. Design, erect, shore, brace, and maintain formwork according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
   1. Limit abrupt or gradual concrete surface irregularities to ACI 347R Class A, 1/8 inch.
   2. Form openings, chases, offsets, keyways, reglets, blocking, screeds, and bulkheads required in Work. Determine sizes and locations from trades providing such items.
   3. Chamfer exterior corners and edges of permanently exposed concrete to match existing.
   4. Construct forms tight enough to prevent loss of concrete mortar.

C. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, and recesses, for easy removal.

D. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

E. Provide temporary openings for cleanouts and inspection ports where the interior area of the formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

F. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris immediately before placing concrete.

G. Retighten forms and bracing before placing concrete to prevent mortar leaks and maintain proper alignment.

3.4 REMOVING AND REUSING FORMS

A. General: Formwork, for sides of beams, walls, columns, and similar parts of the Work, that does not support the weight of concrete, may be removed after cumulatively curing at not less than 50 degrees F for 24 hours after placing concrete, provided concrete is hard enough not to be damaged by form-removal operations and provided curing and protection operations are maintained.

B. Leave formwork for beam soffits, joists, slabs, and other structural elements that support the weight of concrete in place until concrete has achieved at least 75 percent of its 28-day design compressive strength.

C. Clean and repair surfaces of forms to be reused in the Work. Do not use split, frayed, delaminated, or otherwise damaged form-facing material, or patched forms, for exposed surfaces.

3.5 STEEL REINFORCEMENT

A. General: Comply with CRSI Manual of Standard Practice for placing reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Do not weld reinforcement unless specifically approved by Architect/Engineer.

E. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

F. Epoxy-Coated Reinforcement: Use epoxy-coated steel wire ties to fasten epoxy-coated reinforcement. Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D3963/D3963M.

3.6 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C94/C94M, and furnish batch ticket information.
   1. Deliver concrete to Site and discharge within 90 minutes or before 300 revolutions of mixer drum, whichever comes first, after introduction of mix water. When air temperature is between 85 and 90 degrees F, reduce mixing and delivery time to 75 minutes; when air temperature is above 90 degrees F, reduce mixing and delivery time to 60 minutes. Due to the nature of the Work, trucks with short loads may be required. Concrete that exceeds the specified time limits shall be rejected.
   2. Do not add water-reducing or high-range, water-reducing admixture indiscriminately to increase slump.
   3. Introduce high-range, water-reducing admixture at the Site with additional mixing per the manufacturer's recommendations.
   4. Reject concrete that arrives at the Site with a slump exceeding the maximum specified slump.

B. Site Mixing for proprietary patching materials:
   1. Batch and mix all concrete materials in conformance with manufacturer's written recommendations and instructions and as recommended in ACI 546.4R-20 Guide for Job Site Quality Control and Quality Assurance of Cementitious Packaged Materials.
   2. Site mix pre-bagged, proprietary materials only.
   3. Develop batching and mixing operations so that quality control is assured.
   4. Designate one or two individuals to batch and mix concrete. Fully instruct these individuals on batching and mixing procedures. No other persons shall batch or mix concrete without prior notification to Architect/Engineer.
   5. Maintain accurate mix proportions. Batch materials by weight on basis of whole bags of material. Maintain calibrated scale at site during concrete placement operations. Batching by volume is permitted if weight-volume relationship for each material is verified on daily basis, and aggregate moisture content is measured at least once daily and aggregate volume is adjusted for bulking.
   6. If the weight of the packaged material is out of tolerance (more than 2 percent), contact the manufacturer for recommendations.
   7. Combine and mix ingredients to uniform consistency in accordance with the manufacturer's recommendations. Mix concrete materials in appropriate drum or paddle type batch machine mixer. Provide sufficient number of mixers so that concrete placement operations will proceed uninterrupted and each patch is completely cast before patch concrete achieves initial set.

3.7 CONCRETE PLACEMENT

A. Before placing concrete, verify the following:
   1. Installation of formwork, reinforcement, and embedded items is complete.

2. Concrete surfaces and forms are clean of frost, ice, mud, debris, and water.
3. Forms are thoroughly wetted or oiled.
4. Reinforcement is securely tied in place and thoroughly cleaned of ice and other coatings that may reduce or destroy bond with concrete.
5. Required inspections have been performed.
6. Equipment for mixing and transporting concrete is clean.
7. Vibrators are operational.

B. Before sampling for testing and placing concrete, water may be added at Site, up to the amount allowed in the design mix.
   1. Do not add water after adding high-range, water-reducing admixture.

C. For top surface and full depth repair areas where new concrete will be cast against existing concrete surfaces, immediately prior to placing concrete work, paste portion of repair concrete mix into clean, dry concrete surface with broom, brush, or other tool. Do not allow paste to puddle. Remove and dispose of coarse aggregate. If paste dries before concrete is placed, remove and apply new paste.

D. For proprietary repair materials, cast new concrete against existing concrete surfaces prepared according to recommendations of repair material manufacturer and requirements of these Construction Documents.

E. Convey concrete from the mixer to the place of deposit in a manner such that no segregation or loss of materials occurs.

F. Deposit concrete:
   1. Place concrete as near as possible to its final position to avoid segregation due to re-handling or flowing.
   2. Do not allow concrete to fall a vertical distance from the point of discharge to the point of deposit that will cause segregation of materials.
   3. Do not allow concrete to disturb or displace reinforcing bars, floor drains, or other embedments.
   4. Place concrete at a rate so that the concrete is plastic and flows readily into corners of forms and into spaces around reinforcing bars.
   5. Place concrete continuously until the replacement volume or section is completed, with no cold joints.
   6. Dispose of concrete that has partially set prior to placement or that has been contaminated by foreign material.

G. Consolidate concrete with mechanical vibrating equipment, so that the concrete is thoroughly worked around reinforcement and other embedded items and into corners.
   1. Use internal vibrators with minimum speed of 7,000 vibrations per minute and that are sufficiently narrow to fit into spaces between reinforcing bars, formwork, and existing concrete. Have extra vibrators at the Site in case a vibrator does not work.
   2. Do not use vibrators to transport concrete.
   3. Insert and withdraw vibrators vertically at uniformly spaced locations no farther apart than the visible effectiveness of the vibrator.
   4. At each insertion, limit the duration of the vibration to the time necessary to consolidate the concrete without causing mix constituents to segregate.

H. Cold-Weather Placement: Protect concrete Work from physical damage or reduced strength due to frost, freezing, or low temperatures. Comply with ACI 306R and as follows.

1. When the air temperature has fallen or is expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 degrees F at the point of placement. Mix water and aggregates together before adding cement. Do not add cement if the temperature of the water/aggregate mixture exceeds 70 degrees F.
2. Do not use frozen materials or materials containing ice or snow.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix design.

I. Hot-Weather Placement: Protect concrete Work from physical damage or reduced strength due to rapid evaporation or overheating of concrete. Refer to Fig. 2.1.5 in ACI 305R for hot-weather conditions that may adversely affect concrete placement, finishing, and curing.

Do not allow the temperature of the concrete at the time of placement to exceed 90 degrees F. When hot-weather conditions exist, use one or more of the following procedures:
1. Place concrete at night or early in morning.
2. Cool ingredients before mixing to maintain the concrete temperature below 90 degrees F at the time of placement. Chilled mixing water or chopped ice may be used to control the temperature; include the water equivalent of the ice in the mixing water quantity. Use liquid nitrogen to cool the concrete at Contractor's option.
3. Cover steel reinforcement with water-soaked burlap so the steel temperature will not exceed the ambient air temperature immediately before embedding in concrete.
4. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep the subgrade moisture uniform without standing water, soft spots, or dry areas.
5. Provide windbreaks or sunshades, or both.

3.8 FINISHING TOP SURFACES

A. Float and broom finish top surfaces.
1. Float finish: Consolidate the surface with a power-driven float or by hand floating if the area is small or inaccessible to a power driven float. Re-straighten, cut down high spots, and fill low spots. Repeat float passes and re-straightening until the surface is left with uniform, smooth, granular texture.
2. Medium-Broom Finish: Apply medium-broom finish, perpendicular to traffic flow, on top surfaces subjected to vehicular or pedestrian traffic.
3. Do not wet concrete surfaces or add cement.

B. For large top partial depth and full-depth slab repair areas, finish and measure the surface so that the gap at any point between the concrete surface and an unleveled, freestanding, 10-foot-long straightedge, resting on two high spots and placed anywhere on the surface, does not exceed 1/4 inch. Slope concrete to prevent puddles and to align with adjacent surfaces.

C. At the tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

D. Hot-Weather Conditions: Fog the surface with water if hot, dry, or windy conditions cause moisture loss approaching 0.2 pounds per square foot per hour before or during finishing operations.

3.9 FINISHING FORMED SURFACES

A. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and fill tie holes and defective areas with mortar or concrete. Remove fins and other projections exceeding 1/8 inch in height. Do not apply rubbed finish to smooth-formed finish.

3.10 CONCRETE CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Maintain concrete above 55 degrees F and in a moist condition for at least seven days after placing.

B. Unformed Top Surfaces: Begin curing immediately after finishing concrete. Use moisture-retaining cover.
   1. Place cover in widest practicable width, with sides and ends lapped at least 12 inches.
   2. Seal sides and ends of cover by holding down with soil, concrete pieces, or some other weight, or by using waterproof tape or adhesive.
   3. Immediately repair holes or tears in cover during curing period, using cover material and waterproof tape.
   4. Re-wet concrete surface at least twice daily or as necessary to keep the concrete surface moist.

C. Formed Surfaces: Begin curing immediately after form removal.
   1. Apply a curing compound uniformly in a continuous operation by power spray or roller according to the manufacturer's written instructions and at twice the recommended coverage rate.
   2. Recoat areas subjected to heavy rainfall within three hours after initial application.
   3. Maintain the continuity of the coating and repair damage during curing period.

D. In cold weather, protect concrete from falling below 55 degrees F with insulating blankets or heated enclosures vented to the outside. If used, vent heaters to outside of the enclosure around the concrete replacement.

3.11 PROPRIETARY REPLACEMENT MATERIALS

A. Measure, batch, mix, place, finish, and cure per manufacturer’s recommendations.

3.12 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair defective areas designated by Architect/Engineer. Remove and replace concrete that cannot be repaired to Architect/Engineer's satisfaction.

B. Surface defects on exposed surfaces include:
   1. Voids, such as spalls, air bubbles, honeycomb, rock pockets, and form-tie voids, more than 1/4 inch in any dimension in solid concrete but not less than 1/2 inch deep.
   2. Cracks at least 1/16 inch wide. Notify Architect/Engineer of cracks that penetrate through section.
   3. Fins and other projections exceeding 1/8 inch.

C. Verify that concrete curbs, expansion joints, and transitions from one surface plane to another (inside and outside corners) are cleanly formed and free of broken edges and excess concrete.

D. Repair defects on concealed surfaces that affect concrete's durability and structural performance as determined by Architect/Engineer.

E. As soon as possible, cut out spalls, air bubbles, honeycombs, rock pockets, and voids. Make edges of cuts perpendicular to concrete surface. Clean voids and fill with repair mortar according to the manufacturer's recommendations. Use polymer- or silica fume-modified, cementitious, non-sag mortar that is specifically intended for this application. Use one of the following or approved equal:
   1. MasterEmaco N 425 manufactured by BASF Construction Chemicals, LLC.
   2. SikaTop 123 Plus manufactured by Sika Corporation.

F. Fill cracks with high-molecular-weight methacrylate, or low-viscosity methyl methacrylate or epoxy. Use one of the following or approved equal:
   1. Concrete Protector & Restorer CP&R 5741 Hi Mod Low Odor or 5742LO Low Mod manufactured by 3M.
   2. MasterSeal 630 manufactured by BASF Construction Chemicals, LLC.
   3. SikaPronto 19 TF manufactured by Sika Corporation.

G. After concrete has gained sufficient strength to be unaffected by grinding, grind off fins, other projections, and high areas.

H. Repair materials and installation not specified above may be used if approved by Architect/Engineer.

3.13 FIELD QUALITY CONTROL

A. Submit batch tickets for ready-mix concrete.

B. Testing Agency: Contractor shall engage a qualified independent testing and inspecting agency to sample materials and perform tests during concrete placement.

C. Provide:
   1. Access to Work.
   2. Materials for sampling.
   3. Site facilities for sampling, testing, and storage of materials.
   4. Incidental labor.

D. Testing Services: Sampling and testing of composite samples of fresh concrete shall be performed according to the following requirements:
   1. Testing Frequency: Obtain one composite sample of each concrete mix for each day's pour.
   2. Take samples from transport vehicle or mixer during discharge according to ASTM C172. Take samples at other locations if directed by Architect/Engineer.
   3. Slump: ASTM C143/C143M; one test for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change. If high-range, water-reducing admixture is used, perform one test prior to adding admixture.
   4. Air Content: ASTM C231/C231M; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
   5. Concrete Temperature: ASTM C1064/C1064M; one test for each composite sample; and one test hourly when air temperature is 40 degrees F and below or 80 degrees F and above.

6. Compression Test Specimens: ASTM C31/C31M.
   a. Cast four standard cylinder specimens for each composite sample, immediately after sample is taken. Store specimens at the Site for at least 16 hours at a temperature of 60 to 80 degrees F. Provide a temperature-controlled box or other enclosure if necessary.
   b. If requested by Architect/Engineer, take three additional cylinder specimens and field cure in the vicinity of the area that they represent and in the same manner as that portion of the structure.
7. Compressive-Strength Tests: ASTM C39/C39M.
   a. Test one laboratory-cured specimen at seven days and two at 28 days. Hold the fourth specimen in reserve in case additional testing is required.
   b. Test one field-cured specimen at three days and two at 28 days.
8. Test results shall be reported in writing to Owner's Representative, Architect/Engineer, concrete supplier, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain:
   a. Name of concrete testing and inspecting agency.
   b. Project identification name.
   c. Date of concrete placement.
   d. Specific location of concrete batch in Work.
   e. Concrete mix number, design compressive strength at 28 days, design slump range, and design air content range.
   f. Specimen number, cylinder size, dates of compression tests, compressive breaking strengths and types of break for seven- and 28-day tests, and measured slump, air content, and air and concrete temperatures.
   g. Statement that indicates whether test results are in conformance with Specifications.
9. Concrete strength is satisfactory if the average of two 28-day compressive-strength tests in each set of specimens equals or exceeds the specified 28-day compressive strength and neither test value is more than 500 pounds per square inch less than the specified 28-day strength.
10. If any seven-day compressive-strength test result is less than 75 percent of the specified 28-day compressive strength, submit revised mix design data for concrete that will conform to Specifications.
11. When the compressive strength of field-cured specimens is less than 85 percent of the companion laboratory-cured cylinders, evaluate operations and provide corrective procedures for protecting and curing the in-place concrete. Pay the cost of sampling and testing non-conforming field-cured specimens. Owner will pay the cost of sampling and testing conforming field-cured specimens.
12. Non-Conforming Concrete:
    a. If tests indicate that concrete is not in conformance with the Specification, remove and replace non-conforming concrete or perform additional testing, acceptable to Architect/Engineer, to verify conformance with the Specification, at no cost to Owner.
    b. Procure core samples in accordance with ASTM C42/C42M.
    c. If tests indicate that the slump, air entrainment, or other requirements have not been met, examine core samples petrographically, according to ASTM C856, to evaluate hardened concrete characteristics.
    d. If compressive-strength tests do not meet the acceptance requirements, procure three core samples from each portion of the structure represented by the unsatisfactory tests, and test in compression. The strength of concrete in the area represented by core tests is satisfactory if the average of three compressive strength tests equals or exceeds 85 percent of the specified 28-day compressive strength and no

compressive-strength test value is less than 75 percent of the specified 28-day compressive strength. If strength acceptance criteria are not met, remove and replace non-conforming concrete areas at no cost to Owner.

e. Perform additional inspection and testing, at no cost to the Owner, to determine the compliance of replaced or additional work with the specified requirements.

E. Chain drag or hammer tap concrete replacements to locate delaminations. Remove and recast delaminated replacements at no cost to Owner.

3.14 CLEANING

A. At the end of each workday, clean the Site and Work areas and place rubbish, empty cans, rags, and other discarded materials in appropriate containers.

B. After completing the concrete replacement Work:
   1. Clean soiling from adjacent surfaces. Exercise care to avoid scratching or damage to surfaces.
   2. Repair surfaces stained, marred, or otherwise damaged during concrete replacement Work.
   3. Clean up debris and surplus materials and remove from Site.

END OF SECTION 03 01 34

SECTION 03 15 11

EXPANSION JOINT SEALS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation, supply, and installation of expansion joint seals in concrete structures.

B. Related Sections:
   1. Section 01 11 00 - Summary of Work
   2. Section 03 01 34 - Concrete Replacements
   3. Section 07 92 00 - Joint Sealants

1.2 COORDINATION

A. Coordinate Work to ensure that adjacent areas are not adversely affected. Coordinate:
   1. With Owner's Representative.
   2. With other trades:
      a. To ensure that work done by other trades is complete and ready for joint seal installation.
      b. To avoid or minimize work on, or in immediate vicinity of, joint seal Work in progress.
      c. To ensure that subsequent work will not adversely affect completed joint seal installation.

1.3 SUBMITTALS

A. Product Data: Joint-seal manufacturer's literature including written instructions for evaluating, preparing, and treating substrate; technical data including material descriptions and dimensions of individual components; and installation instructions and construction details.

B. Template Drawings: Showing typical expansion joint cross-sections indicating dimensions and relationship to adjacent construction.

C. Certification: Signed by joint-seal manufacturer, certifying that Installer has been trained and approved by manufacturer to install joint seal.

D. Sample: Minimum 1-foot length of seal

E. Field Quality Control: Written report with joint locations, joint width measurements, date and time of measurements, high and low daily temperatures for week preceding measurements, and recommended joint-seal size.

F. Following completion of the Work, submit completed joint-seal warranty.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by joint-seal manufacturer to install joint seal. Must have successful installations of specified materials in local area in use for minimum of five years.
   1. Employ foreman with minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site at all times during the Work. Do not change foremen during the course of the Project except for reasons beyond the control of Installer; inform Architect/Engineer in advance of any changes.

B. Mockups: Install first section of joint seal to demonstrate installation procedures and quality of installation.
   1. Architect/Engineer will observe installation and completed joint seal. Notify Architect/Engineer and Owner's Representative seven days in advance of mockup installation.
   2. If Architect/Engineer determines mockup does not comply with requirements, modify mockup or construct new mockup until mockup is approved.
   3. Approved mockup will be standard for judging completed Work.
   4. Approved mockups may become part of completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials according to manufacturer's recommendations and in such a manner as to prevent damage to materials or structure.

B. Deliver materials to Site in original packages with seals unbroken, labeled with joint-seal manufacturer's name, product brand name and type, date of manufacture, lot number, and directions for storing and mixing with other components.

C. Store materials in original, undamaged containers in clean, dry, protected location on raised platforms with weather-protective coverings, within temperature range required by joint-seal manufacturer.

D. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

E. Conspicuously mark damaged or opened containers, containers with contaminated materials, or damaged materials, and remove from Site as soon as possible.

F. Remove materials that cannot be applied within stated shelf life from Site and replace with new materials.

1.6 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to start of joint seal Work. Notify Architect/Engineer of conditions found to be different than those indicated in the Contract Documents. Architect/Engineer will review situation and inform Contractor and Installer of changes.

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

C. Environmental Limitations: Install joint seals when existing and forecast weather conditions permit joint seal system to be installed according to joint-seal manufacturer's written instructions and warranty requirements.
   1. Verify joint gap at installation will permit proper functioning of joint seal.

1.7 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the integrity or performance of the Work.
   1. Notify Architect/Engineer of conditions that may interfere with the proper execution of the Work or jeopardize the performance of the Work, prior to proceeding with Work.

1.8 WARRANTY

A. Contractor's Warranty:
   1. Written warranty, signed by Contractor, including:
      a. Repair or replace joint-seal components that do not comply with requirements; that do not remain watertight; that fail in adhesion, cohesion, or general durability; or that deteriorate in a manner not clearly specified by submitted joint-seal manufacturer's data as an inherent quality of the material for the application indicated.
      b. Labor and materials to perform warranty work.
      c. Replace entire joint seal lengths unless high-quality, durable field splices can be installed.
   2. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 JOINT SEALS

A. Compression Seal: Neoprene or Santoprene; seal sizes to be determined by Contractor based on joint locations and actual joint widths, and approved by Architect/Engineer. Use one of the following or approved equal.
   1. Delastic Preformed Compression Seal manufactured by D. S. Brown.
   2. Iso-Flex Compression Seal manufactured by LymTal International, Inc.
   3. Wabo CompressionSeal manufactured by Watson Bowman Acme Corporation.

B. Joint Seal Size:
   1. Measure average, maximum, and minimum joint widths at every joint.
   2. Submit in writing joint locations, joint width measurements, date and time of measurements, high and low daily temperatures for week preceding measurements, and recommended joint seal size to Architect/Engineer for approval. Assume 160-degree thermal change, from -20 to 140 degrees, in sizing seal.

C. Accessories: Primers, bedding materials, bonding agents, lubricants, adhesives, sealants, and other accessories supplied or approved by joint-seal manufacturer.

2.2 FABRICATION

A. Prior to fabrication, field measure existing conditions to ensure proper fit.

B. Provide continuous joint seals in longest practical lengths, with minimum number of end joints.
   1. For straight sections, provide continuous lengths.
   2. Fabricate directional changes in shop whenever possible; use mitered and adhered or heat-welded corners.
   3. Fabricate with end closures, transitions, and intersections to provide continuous assembly.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions with Installer and joint-seal manufacturer's representative for compliance with requirements and for other conditions affecting installation or performance of joint seals.
   1. Ensure that work done by other trades is complete and ready for joint seal Work, including concrete construction and replacement.
   2. Verify that areas and conditions under which joint seal Work is to be performed permit proper and timely completion of Work.
   3. Notify Architect/Engineer in writing of conditions which may adversely affect installation or performance of joint seals and recommend corrections.
   4. Do not proceed with joint seal Work until adverse conditions have been corrected and reviewed by Architect/Engineer.
   5. Commencing joint seal Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Take precautions to ensure the safety of people, including building users, passers-by, and workmen, and animals, and protection of property, including adjacent building elements, landscaping, and motor vehicles.

B. Prevent construction debris and other materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

C. Limit access to Work areas.

D. Erect temporary protective canopies, as necessary, over walkways and at points of pedestrian and vehicular access that must remain in service during Work.

E. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

3.3 SURFACE PREPARATION

A. Prepare substrates according to joint-seal manufacturer's written instructions.

B. Provide clean, sound, dry concrete surfaces.
   1. Remove existing joint seals.
   2. Sawcut or form sides of joints straight and parallel. Adjust joint widths for temperature. Create shoulders for joint seals.
   3. Repair unsound concrete along joints to provide solid surface of clean, sound concrete, free of voids and honeycombing.
   4. Accurately position joint seal.

5. Clean concrete surfaces by sandblast or other means recommended by joint-seal manufacturer, to remove contaminants including form release agents, laitance, surface dirt and rust, and old sealant. Remove dust and other contaminants with compressed air.
6. Allow concrete and concrete replacement materials to fully cure prior to joint seal installation.

3.4 INSTALLATION

A. Install joint seal according to joint-seal manufacturer's written instructions. Field splices to be coordinated with and approved by joint-seal manufacturer.

B. Verify that joint widths are suitable for seal size and movement capability.

C. Compression Seals:
   1. Apply adhesive to sides of seal and sides of joint as required by Manufacturer.
   2. Compress joint seal, and slide into joint.
   3. Seal top edge on both sides of joint.

3.5 FIELD QUALITY CONTROL

A. Water Test:
   1. Construct water-retention barriers along sides of joints.
   2. Pond water on top of joint seal for 24 hours, and observe underside of deck for leakage.
   3. Repair leaking portions of joint seal and re-test.

3.6 CLEANING

A. Clean excess primer, adhesive, sealant, other products, and soiling from components and adjacent surfaces.

B. Repair surfaces stained, marred, or otherwise damaged during concrete replacement work.

C. Clean up debris and surplus materials and remove from Site.

3.7 PROTECTION

A. Protect joint seals from:
   1. Traffic until materials have cured.
   2. Damage by construction activities.

END OF SECTION

SECTION 04 01 20.52

BRICK MASONRY CLEANING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Cleaning brick, including removal of coating.
   1. Purpose of cleaning is to remove as much coating as possible without damaging brick.

B. Related Sections:
   1. General Notes Section, Masonry Repairs

1.2 UNIT PRICES

A. Perform the following Work on unit price basis:
   1. General cleaning of brick masonry. Payment based on area cleaned.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordinate Work to ensure that adjacent areas are not adversely affected. Coordinate:
   1. With Owner's Representative.
   2. With other trades:
      a. To ensure that work done by other trades is complete and ready for cleaning Work.
      b. To avoid or minimize work in immediate vicinity of cleaning Work in progress.
      c. To ensure that subsequent work will not adversely affect cleaned surfaces.

B. Notify Architect/Engineer of conflicts between Specifications and cleaning material manufacturer's recommendations. Perform Work according to Specifications unless Architect/Engineer authorizes changes in writing.

C. Sequencing: Perform cleaning and repair Work in the following sequence:
   1. Prior to cleaning, inspect for open mortar or sealant joints and other potential sources of water infiltration, and perform repairs and repointing as necessary to prevent intrusion of water and other cleaning materials into wall.
   2. Remove coatings, clean walls, and apply biocide as specified.
   3. Perform remaining repairs and repointing as specified.

1.4 SUBMITTALS

A. Product Data: List of products proposed for use, with Manufacturer's product literature and application instructions.

B. Certificates: Signed by supplier of micro-abrasive system, certifying that Subcontractor's personnel who will be working on Project, have been trained by supplier and are proficient in use of micro-abrasive system.

C. Chemical Test Report on Water: List of chemicals and other additives in water, identifying items which may render water unsuitable for use on cleaning Project.

D. Cleaning System Descriptions: Modify specified requirements based on approved mockups and submit complete written descriptions of cleaning systems, including materials and procedures.

E. Protection Plan: Written plan describing protection measures proposed for use on Project.

F. Containment, Collection, and Disposal Plan: Written plan describing methods for containing, collecting, and disposing of runoff during cleaning operations.

G. Cleaning Subcontractor Qualifications: Evidence that Subcontractor's *existing company* has minimum five years of continuous experience in use of specified cleaning system; list of at least five representative, successfully-completed projects of similar scope and size, including:
   1. Project name.
   2. Owner's name.
   3. Owner's Representative name, address, and telephone number.
   4. Description of work.
   5. Cleaning system, including materials and procedures, used.
   6. Project supervisor.
   7. Total cost of cleaning work and total cost of project.
   8. Completion date.

1.5 QUALITY ASSURANCE

A. Cleaning Subcontractor Qualifications: Experienced firm that has successfully completed cleaning work similar in material, design, and extent to that indicated for the Project. Must have successful use of specified cleaning system in local area for minimum of five years.
   1. Employ trained foreman with a minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site at all times during the Work. Do not change foreman during the course of the Project except for reasons beyond the control of Subcontractor; inform Architect/Engineer in advance of any changes.
   2. Employ laborers with training and at least three years of experience with the specified cleaning system.

B. Cleaning-System Manufacturer Qualifications: Firm regularly engaged in supplying cleaning system that has been used for similar applications with successful results; with technical representatives who are available for consultation and Site inspection and assistance at no additional cost to Owner.

C. Mockups: Apply cleaning system at one mockup location selected by Architect/Engineer to demonstrate procedures and effectiveness.
   1. Mockups to be 25 square feet unless noted otherwise.
   2. Prepare mockups on existing walls, at locations designated by Architect/Engineer and in presence of Architect/Engineer, under same weather conditions expected during Work. Provide access to mockup locations.
   3. Test adjacent materials and other materials that may be affected by cleaning system, to determine if materials need to be protected. Test areas shall be small and in unobtrusive locations.
   4. Include protection systems and devices proposed for use to counteract adverse effects of cleaning system, in mockup.
   5. Allow period of at least 14 days after mockup preparation for evaluation of effectiveness of cleaning system and for negative reactions.
   6. If Owner's Representative and Architect/Engineer determine mockup does not comply with requirements, modify mockup or construct new mockup until mockup is approved.

Modifications may include minor adjustments to application methods, dilutions, and dwell times of products within limits recommended by manufacturers.

7. Approved mockups shall be maintained in an undisturbed condition throughout the Project as a basis for acceptance of completed work and may become part of completed Work if undisturbed at time of Substantial Completion.
8. Record locations and materials and methods used for mockups on drawings and in field reports for reference as Work proceeds.
9. Do not order materials or proceed with Work until mockups have been approved by Architect/Engineer and Owner's Representative.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Site in original containers and packaging with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, directions for storing, and complete manufacturer's written instructions.

B. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, or installation. Reject and remove from Site new materials which have been exposed to moisture to their detriment.

C. Store and handle materials in accordance with manufacturer's written instructions, safety requirements, and all applicable laws and regulations. Remove from Site, and replace at no cost to Owner, any materials that are damaged or otherwise negatively affected by not being stored or handled in accordance with manufacturer's written instructions.

D. Store materials in original, undamaged containers and packaging in clean, dry, location on raised platforms and protected from weather, within temperature range required by manufacturer. Protect stored materials from direct sunlight and sources of ignition. Manufacturer's standard packaging and covering alone is ***not*** considered adequate weather protection.

E. Locate materials in a secure location approved by Owner's Representative

F. Conspicuously mark damaged or opened containers, containers with contaminated materials, damaged materials, and materials that cannot be used within stated shelf life and remove from Site as soon as possible. Replace discarded materials in a timely manner at no cost to Owner.

G. Limit stored materials on structures so as to preclude damage to materials and structures.

H. Maintain copies of all applicable Safety Data Sheets (SDS) with materials in storage area, such that they are available for ready reference on Site.

1.7 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to start of Work. Promptly notify Architect/Engineer of conditions found to be different than those indicated in the Contract Documents. Architect/Engineer will review situation and inform Contractor and Installer how to proceed.

A. Comply with limitations and restrictions for Site use, accessibility, and work hours imposed by codes, ordinances, rules, regulations, orders, laws, and other legal requirements of public authorities having jurisdiction, and by Owner.
   1. Comply with city, state, water department, and Federal regulations covering protection and waste water disposal.

B. Environmental Limitations:
   1. Perform cleaning Work when air temperature is 40 degrees Fahrenheit or above and is predicted to remain so for at least seven days after completion of cleaning.
   2. Do not perform chemical cleaning when air temperature is greater than 90 degrees Fahrenheit.
   3. Do not perform cleaning Work when winds are sufficiently strong to spread cleaning materials to unprotected areas.

C. Maintain adequate ventilation during preparation and application of cleaning materials.

1.8 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the performance of the Work.
   1. Notify Architect/Engineer of conditions that may interfere with or preclude proper execution of the Work or jeopardize the performance of the Work, prior to proceeding with the Work.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS

A. Water for Prewetting, Cleaning, and Rinsing:
   1. Clean, potable water, with iron content of less than two parts per million by weight.
   2. Provide chemical test results to confirm local water is suitable for use on cleaning Work.
   3. Notify Architect/Engineer and Owner's Representative of local water conditions that may make it unsuitable for cleaning, including presence of additives, water softeners, or other agents.

B. Coating Removal System:
   1. Peel Away 7 by Dumond Chemicals, Inc.
   2. Peel Away 1, followed by afterwash with Peel-Away Neutralizer, both by Dumond Chemicals, Inc.
   3. RemovALL 310 Architectural paint remover, by Napier Environmental Technologies, Inc.
   4. Aproved equal.

C. Auxiliary Materials:
   1. pH Indicator: Litmus paper or other indicator capable of identifying neutral solutions.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions with Cleaning Subcontractor and representatives of cleaning materials manufacturers and cleaning equipment suppliers, as applicable, for compliance with requirements and other conditions affecting performance of cleaning Work.
   1. Ensure that Work done by other trades is complete and ready for cleaning Work.

2. Verify that areas and conditions under which cleaning Work is to be performed permit proper and timely completion of Work.
3. Notify Architect/Engineer in writing of conditions which may adversely affect cleaning Work and recommend corrections.
4. Do not proceed with cleaning Work until adverse conditions have been reviewed by Architect/Engineer and, if necessary, corrections have been made.
5. Commencing cleaning Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Protect the following elements:
   1. Surfaces being cleaned from cleaning materials not designated for use on those surfaces.
   2. Decorative features, such as entrances and signs.
   3. Paving and sidewalks from staining or damage from cleaning operations.
   4. Windows, doors, joints, and other openings from infiltration of water or cleaning materials.
   5. Waterpoofing system components.

B. Comply with cleaning-material manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products.

C. Cover adjacent surfaces with materials that are proven to resist cleaners being used unless cleaners will not damage adjacent surfaces.

D. Take precautions to ensure safety of people (including building users, passers-by, and workers) and protection of property (including adjacent building elements, landscaping, and motor vehicles).

E. Erect temporary protective canopies and walls, as necessary, at walkways and at points of pedestrian and vehicular access that must remain in service during Work.

F. Take precautions to protect against air-borne materials and run-off.

G. Protect paving, sidewalk, and adjacent building areas from mechanical damage due to scaffolding and other equipment.

H. Prevent dust, debris, coating overspray/spatter, and other construction materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

I. Limit access to Work areas.

J. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

K. Protect from damage, all elements of completed work and original construction to remain.

3.3 EQUIPMENT

A. Spray Equipment: With pressure gages at compressor and spray nozzle, and volume meter at spray nozzle; ability to adjust pressure and volume at nozzle.

3.4 CLEANING, GENERAL

A. Perform cleaning Work in compliance with applicable codes and regulations that govern Work, including city, state, water department, OSHA, and Federal regulations, and with requirements of material manufacturers.

B. Use only cleaning products and methods indicated for wall material and location, and approved by mockups.
   1. Do not use wire brushes or scrapers.

C. Perform cleaning Work to achieve uniform coverage of surfaces and to produce uniform effect without streaking or damaging wall surface.

D. Keep wall wet below area being cleaned to prevent streaking from runoff.

E. Perform cleaning Work in strict accordance with approved mockup materials and procedures. Propose modifications to materials or methods as necessary to meet or exceed level of cleaning in mockups. Perform mockups of proposed modifications; do not proceed with modifications until approved in writing by Owner's Representative and Architect/Engineer.

F. Prewetting and Rinsing Procedures:
   1. For prewetting and rinsing:
      a. Prewet and rinse surfaces with warm water at minimum flow rate of 4 gallons per minute. Use hot water, if approved, to improve effectiveness of cleaning and rinsing. Do not use higher pressures or lower flow rates unless approved by mock-ups.
      b. Use stainless steel nozzle with 45-degree fan spray, held at least 12 inches from surface.
      c. Apply water in a horizontal sweeping motion, overlapping previous strokes vertically to produce uniform coverage.
   2. On hot days, in direct sunlight, or as necessary, prewet multiple times so cleaning solution is applied to wet surface.
   3. Rinse off cleaning solution, moving upward from bottom to top of surface at each access location.

G. Chemical Cleaner Application Methods: Apply chemical cleaner to surfaces in conformance with chemical cleaner manufacturer's written instructions and approved mockups.
   1. Use brush or spray application methods, at Contractor's option. Use brushes that are resistant to chemical cleaners being used.
   2. Do not spray apply at pressures exceeding 50 pounds per square inch, or less as determined by mockups.
   3. Adjust pressure and volume of spray to ensure that cleaning methods do not damage wall material.
   4. Do not allow chemical cleaners to remain on surface for periods longer than those recommended by chemical-cleaner manufacturer or specified.
   5. Control wind drift of chemical cleaners.

H. Collect and legally dispose of cleaning materials and debris.
   1. Neutralize alkaline and acid wastes for disposal off Owner's property.
   2. Dispose of runoff from cleaning operations by legal means, in manner that prevents soil erosion, undermining of pavement and foundations, damage to landscaping, and water penetration into building interior.

3.5 CLEANING BRICK MASONRY

A. Coating Removal with Peel Away 7:
   1. Apply Peel Away 7 on coating and cover with Peel Away Paper. Gently rub Paper to create adhesion with Peel Away 7.
   2. Allow to dwell for two hours.
   3. Remove by sliding Peel Away tool or putty knife into dried paste around edges of paper, and easing paint, paste, and paper away from surface in one piece. Remove as much of remaining residue as possible with Peel Away tool.
   4. To remove remaining residue:
      a. Mist surface lightly with water spray at maximum pressure of 50 pounds per square inch.
      b. Scrub with nylon-bristle brush to loosen residue.
      c. Rinse at maximum water pressure of 100 pounds per square inch.
   5. Collect debris and paper with paint and residue, place in plastic bags, and properly dispose of in compliance with local regulations.

B. Coating Removal with Peel Away 1 followed by afterwash with Peel Away Neutralizer:
   1. Apply Peel Away 1 on coating and cover with Peel Away Paper. Gently rub Paper to create adhesion with Peel Away 1.
   2. Allow to dwell for two hours.
   3. Remove by sliding Peel Away tool or putty knife into dried paste around edges of paper, and easing paint, paste, and paper away from surface in one piece. Remove as much of remaining residue as possible with Peel Away tool.
   4. To remove remaining residue:
      a. Mist surface lightly with water spray at maximum pressure of 50 pounds per square inch.
      b. Scrub with nylon-bristle brush to loosen residue.
      c. Rinse at maximum water pressure of 100 pounds per square inch.
   5. Spray on Neutralizer.
   6. Allow to dwell for at least six hours, until dry to touch.
   7. Rinse thoroughly. Scrub surface with nylon-bristle brush during rinsing.
   8. If white film appears on surface, repeat Neutralizer application.
   9. Collect debris and paper with paint and residue, place in plastic bags, and properly dispose of in compliance with local regulations.

C. Coating Removal with RemovALL 310:
   1. Spray RemovALL 310 on coating.
   2. Allow to dwell for 24 hours.
   3. Do not allow RemovALL 310 to dry. If it appears to be drying, reapply light coating and extend dwell time.
   4. Scrub with nylon-bristle brush to loosen residue.
   5. Rinse thoroughly with water at maximum temperature of 120 degrees F.
   6. Collect debris, place in plastic bags, and properly dispose of in compliance with local regulations.

3.6 FIELD QUALITY CONTROL

A. Architect/Engineer will monitor progress and quality of cleaning Work, possibly including:
   1. Observe completed Work and compare to approved mockups.
   2. Observe wall material with field microscope for damage.

3. Test samples of cleaning products and mixed solutions for conformance with Specifications and approved mockups.

B. Contactor Responsibilities:
1. Provide access to Work for Architect/Engineer, Owner's Representative, and other consultants hired by Owner.
2. Upon request, provide samples of cleaning products and mixed solutions to Architect/Engineer.

C. Remedy areas that do not satisfy requirements at no additional cost to Owner. Modify cleaning procedures as required and approved by Architect/Engineer.

3.7 SITE CLEANING

A. At the end of each workday:
1. At the end of each workday, broom-clean Site and Work areas and place all items to be discarded in appropriate containers.
2. Thoroughly rinse sidewalks to remove chemicals, dirt, pollutants, and other materials washed off building.

B. After completing cleaning Work:
1. Carefully remove protection materials, including tape, adhesive marks, and residue.
2. Clean spillage and soiling from adjacent surfaces using cleaning agents and procedures recommended by manufacturer of affected surface. Exercise care to avoid scratching or damage to surfaces.
3. Return building surfaces, landscaping, and grounds to condition prior to cleaning Work, including painted and glass surfaces, to satisfaction of Architect/Engineer at no additional cost to Owner.
4. Repair at no cost to Owner all items damaged during the Work.
5. Remove debris and surplus materials from Site.

C. Waste Management:
1. Collect surplus cleaning materials that cannot be reused and deliver to recycling or disposal facility.
2. Treat materials that cannot be reused as hazardous waste and dispose of per manufacturer's instructions

END OF SECTION

SECTION 05 04 00

MISCELLANEOUS STEEL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Fabrication and installation of miscellaneous steel elements.
   2. Connection to, or alteration of, existing steel elements.

B. Related Sections:
   1. Section 01 11 00 - Summary of Work
   2. Section 03 01 34 - Concrete Replacements

1.2 COORDINATION

A. Coordinate Work to ensure that adjacent areas are not adversely affected. Coordinate:
   1. With Owner's Representative.
   2. With other trades:
      a. To ensure that work done by other trades is complete and ready for joint seal installation.
      b. To avoid or minimize work on, or in immediate vicinity of, joint seal Work in progress.
      c. To ensure that subsequent work will not adversely affect completed joint seal installation.

1.3 SUBMITTALS

A. Product Data and Test Reports:
   1. Structural steel elements
   2. Bolts, nuts, and washers.

B. Fabricator Qualifications: Evidence that fabricator's *existing company* has minimum five years of continuous experience in similar steel fabrication work; list of at least five representative, successfully-completed projects of similar scope and size, including:
   1. Project name.
   2. Owner's name.
   3. Owner's Representative name, address, and telephone number.
   4. Description of work.
   5. Types of steel fabrication work.
   6. Project supervisor.
   7. Total cost of steel fabrication work and total cost of project.
   8. Completion date.

C. Installer Qualifications: Evidence that installer's *existing company* has minimum five years of continuous experience in similar steel installation work; list of at least five representative, successfully-completed projects of similar scope and size, including:
   1. Project name.

2. Owner's name.
3. Owner's Representative name, address, and telephone number.
4. Description of work.
5. Types of miscellaneous steel installation work.
6. Project supervisor.
7. Total cost of miscellaneous steel installation work and total cost of project.
8. Completion date.

D. Sample: 1 post base plate and anchor prior to production of all post bases

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Experienced firm that has successfully completed miscellaneous steel installation work similar in material, design, and extent to that indicated for Project. Must have successful construction with specified materials in local area in use for minimum of five years.
   1. Employ foreman with minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site at all times during the Work. Do not change foremen during the course of the Project except for reasons beyond control of Contractor; inform Architect/Engineer in advance of any changes.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver store, and handle materials to prevent damage to materials or structure.

B. Store elements off ground and spaced with pallets, dunnage, or other supports and spacers. Store to permit easy access for inspection and identification.

C. Store fasteners in protected place. Clean bolts and nuts that become rusty before use per manufacturer's written recommendations.

D. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid damage or permanent structure deflection.

1.6 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to installation of steel elements. Notify Architect/Engineer of conditions found to be different than those indicated in Contract Documents. Architect/Engineer will review situation and inform Contractor and Installer how to proceed

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

C. Handle and install materials in strict accordance with safety requirements required by local, state, and federal rules and regulations.

1.7 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the integrity or performance of the Work.
   1. Notify Architect/Engineer prior to proceeding with the Work of conditions that may interfere with, preclude proper execution of, or jeopardize the performance of the Work.

PART 2 - PRODUCTS

2.1 STEEL ELEMENTS

A. Plates and Bars: ASTM A36/A36M.

2.2 AUXILIARY MATERIALS

A. Welding Electrodes:
   1. Mild Steel: Comply with AWS D1.1 Table 5.3 requirements for Group II or higher steel specifications, and electrodes listed in approved WPSs.

B. Anchor Rods: ASTM F1554, Grade 36, Class 2A; plain finish; fully threaded.
   1. Nuts: ASTM A563, Grade B, hex, plain finish.
   2. Washers**:** ASTM F844, plain finish.

C. Paint, with color to match existing railing color:
   1. Carboline Company:
      a. Primer: Carbocrylic 3358.
      b. Finish Coat: Carbocrylic 3359.
   2. Pittsburgh Paints, PPG Architectural Finishes, Inc.:
      a. Primer: Speedhide 6-212.
      b. Finish Coat: Pitt-Tech 90-374.
   3. Sherwin Williams:
      a. Primer: Kem Bond HS Universal Metal Primer.
      b. Finish Coat: Sher-Cryl HPA High Performance Acrylic, [**gloss**] [**semi-gloss**].
   4. Tnemec Co., Inc.:
      a. Primer: Chembuild Series 135.
      b. Finish Coat: Endura-Shield Series 73.
   5. Approved equal.

2.3 FABRICATION

A. Fabricate and assemble in shop to greatest extent possible. Comply with requirements of AISC 303, including tolerances.
   1. Cut, drill, and punch elements cleanly and accurately.
      a. Remove burrs.
   2. Holes: Fabricate bolt holes, holes required for securing other work to steel elements, and holes for other work to pass through steel elements.
      a. Cut, drill, or punch holes cleanly and accurately, perpendicular to steel surfaces.
   3. Grind edges of members to be coated to minimum radius of about 1/32 inch unless otherwise indicated.
   4. Exposed Elements: Fabricate with accurate angles, surfaces, and straight edges.
      a. Fabricate seams and other connections that will be exposed to moisture in manner to exclude moisture. Provide weep holes where moisture may accumulate.
      b. Remove sharp or rough areas on exposed surfaces.

B. Welded Connections, Structural Steel: Comply with AWS D1.1/D1.1M for preheating, required profiles, tolerances, weld appearance, weld quality, and for methods used in correcting welding work.
   1. Perform welding in accordance with approved WPSs by properly certified welders.

2. Remove dirt, grease, oil, and foreign matter by pickling, power brushing, degreasing, machining, or grinding, prior to welding.
3. Preheat base metal and maintain interpass temperatures in accordance with AWS D1.1/D1.1M
4. Perform welding in a manner to:
   a. Minimize distortion of welded pieces.
   b. Obtain thorough fusion and required profile without cracking.
5. Remove slag from completed welds, and clean adjacent weld metal by brushing or other suitable means.

C. Cleaning: After assembly, including welding:
   1. Clean steel surfaces that are to remain unpainted according to SSPC-SP 1, Solvent Cleaning; SSPC-SP 2, Hand Tool Cleaning; and SSPC-SP 3, Power Tool Cleaning.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions with Installer for compliance with requirements and other conditions affecting installation or performance of miscellaneous steel elements.
   1. Verify elevations of bearing surfaces and locations of anchor rods, bearing plates, and other embedments.
   2. Ensure that Work done by other trades is complete and ready for steel installation.
   3. Verify that areas and conditions under which Work is to be performed permit proper and timely completion of Work.
   4. Notify Architect/Engineer in writing of conditions which may adversely affect installation or performance of steel elements. Do not proceed with steel installation until adverse conditions have been corrected and reviewed by Architect/Engineer. Commencing miscellaneous steel Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Take precautions to ensure safety of people (including building users, passers-by, and workers) and protection of property (including adjacent building elements, landscaping, and motor vehicles).
   1. Erect temporary protective canopies and walls, as necessary, at walkways and at points of pedestrian and vehicular access that must remain in service during Work.

B. Protect paving and sidewalk, and adjacent building areas from mechanical damage due to scaffolding and other equipment.

C. Prevent dust, debris, coating overspray/spatter, and other construction materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

D. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

E. Limit access to Work areas.

F. Protect from damage, all elements of completed work and original construction to remain.

3.3 INSTALLATION

A. General:
   1. Install miscellaneous steel elements in accordance with requirements of AISC 303.
   2. Position steel elements accurately in location, alignment, and elevation indicated; with edges and surfaces level, plumb, true, and free of rack.
      a. Maintain erection tolerances specified by AISC 303.
      b. Perform cutting, drilling, and fitting required to install steel elements.
   3. Provide temporary support for elements during installation to keep elements secure, plumb, and in alignment. Do not remove temporary supports until the installation is complete.
   4. Align and adjust various members forming part of the assembly before permanently fastening.
      a. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with adjacent elements.
      b. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
      c. Make allowances for difference between temperature at time of installation and mean temperature when structure is completed and in service.
   5. Splice members only where indicated on Drawings or shop drawings approved by Architect/Engineer.
   6. Do not enlarge holes unless approved by Architect/Engineer. If approved, ream holes to enlarge.

B. Base Plates:
   1. Clean bearing surfaces and bottom surface of plates of bond-reducing materials. Roughen concrete bearing surfaces prior to setting plates.
   2. Accurately set plates with wedges, shims, setting nuts, or leveling plates as required.
   3. Accurately position and plumb supported member.
   4. Install anchor rod washers and nuts and snug-tighten anchor rods.
   5. Paint base plates and the lower portion of the railing posts as required to cover all exposed steel surfaces after completion of welding.

C. Welded Connections, Structural Steel: Comply with AWS D1.1/D1.1M for preheating, required profiles, tolerances, weld appearance, weld quality, and for methods used in correcting welding work.
   1. Perform welding in accordance with approved WPSs by properly certified welders. Take precautions for fire hazards at adjacent construction.
   2. Remove dirt, grease, oil, and foreign matter by pickling, power brushing, degreasing, machining, or grinding, prior to welding.
   3. Preheat base metal and maintain interpass temperatures.
   4. Perform welding in manner to:
      a. Minimize distortion of welded pieces.
      b. Obtain thorough fusion and required profile without cracking.
   5. Remove slag from completed welds, and clean adjacent weld metal by brushing or other suitable means.
   6. Where existing members are to be welded, shore existing members in accordance with Drawings. Do not heat existing members more than necessary to achieve a satisfactory weld. Place welding work lead as close as possible to weldment being executed.

3.4 FIELD QUALITY CONTROL

A. Welded Connections: Welds will be visually inspected according to AWS D1.1/D1.1M and the requirements of the applicable building code. Acceptance criteria will be in accordance with AWS D1.1/D1.1M.

B. Correct deficiencies in Work that inspection and testing indicate do not comply with Contract Documents.

3.5 CLEANING

A. At the end of each workday, clean the Site and Work areas and place rubbish, empty cans, rags, and other discarded materials in appropriate containers.

B. After completing the miscellaneous steel Work:
   1. Clean all materials resulting from Work that are not intended to be part of the finished Work using appropriate cleaning agents and procedures. Exercise care to avoid damaging surfaces.
   2. Repair at no cost to Owner all items damaged during the Work.
   3. Remove and legally dispose of debris and surplus materials from Site.

END OF SECTION

SECTION 07 18 00

TRAFFIC COATING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation, supply, and application of traffic coating.

B. Related Sections:
1. Section 01 11 00 - Summary of Work
2. Section 03 01 34 - Concrete Replacements
3. Section 07 92 00 - Joint Sealants

1.2 REFERENCES

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordinate Work to ensure that adjacent areas are not adversely affected. Coordinate:
1. With Owner's Representative.
2. With other trades:
   a. To ensure that work done by other trades is complete and ready for traffic-coating Work.
   b. To avoid or minimize work on, or in immediate vicinity of, traffic-coating Work in progress.
   c. To ensure that subsequent work will not adversely affect quality of completed traffic coating.

B. Pre-application Meeting:
1. Conduct meeting at Site.
2. Time, date, location, and attendee notification to be facilitated by Contractor.
3. Review requirements for traffic coating, including:
   a. Construction schedule.
   b. Availability of materials, Applicator's personnel, equipment, and facilities needed to make progress and avoid delays.
   c. Site use, access, staging, and set-up location limitations.
   d. Approved mockup procedures.
   e. Impact of forecast weather conditions.
   f. Ventilation requirements.
   g. Surface preparation and substrate condition.
   h. Application procedures.
   i. Special details and sheet flashings.
   j. Minimum curing period.
   k. Testing and inspection requirements.
   l. Governing regulations.
4. Contractor's Site superintendent, traffic-coating manufacturer's technical representative, Applicator's foreman, Owner's Representative, and Architect/Engineer shall attend.

1.4 SUBMITTALS

A. Product Data: Traffic-coating manufacturer's literature including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; and application instructions.
   1. Include traffic-coating manufacturer's color chart.

B. Samples: For each type of traffic coating required, stepped samples on rigid backing large enough to illustrate build-up of traffic coatings, of same thickness and material indicated for Work.

C. Sample Warranties: Copies of traffic-coating manufacturer's warranty and Applicator's warranty, both stating obligations, remedies, limitations, and exclusions. Submitted with bid.

D. Following completion of the Work:
   1. Traffic-coating manufacturer's warranty inspection reports.
   2. Completed warranty from traffic-coating manufacturer.
   3. Completed warranty from Applicator.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: Experienced firm that has successfully completed traffic-coating work similar in material, design, and extent to that indicated for Project; that is approved, authorized, or licensed by traffic-coating manufacturer to apply traffic coating; and that is eligible to receive traffic-coating manufacturer's warranty. Must have successful installations of specified materials in local area in use for minimum of five years.
   1. Employ foreman trained by traffic-coating manufacturer and with minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site during Work. Do not change foremen during course of Project except for reasons beyond control of Installer; inform Architect/Engineer in advance of any changes.

B. Mockups: Prior to start of Work or purchase of material, apply traffic coating to at least 50 square feet of each substrate, at locations determined by Architect/Engineer, to demonstrate surface preparation, joint and crack treatment, thickness, texture, color, and standard of workmanship. The mockup shall include the proposed aggregate broadcast into the coating to demonstrate the slip resistance.
   1. If Architect/Engineer determines mockup does not comply with requirements, modify mockup or construct new mockup until mockup is approved.
   2. Approved mockup will be standard for judging completed Work.
   3. Determine tensile bond strength of membrane to substrate shall be conducted by the manufacturer's representative or testing agency in accordance with ASTM D7234, Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers during mockups as required to assure specified adhesion. Tensile bond strength of membrane to substrate shall be greater than or equal to 200 psi for vehicular traffic. Contractor to patch test areas with traffic coating system at no cost to Owner.
   4. Maintain approved mockups in undisturbed condition during Work as standard for judging completed Work. Mockups, if undamaged at time of Substantial Completion, may be incorporated into Work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Site in original containers and packaging with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, directions for storing, and complete manufacturer's written instructions.

B. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, or installation. Reject and remove from Site new materials which have been exposed to moisture to their detriment.

C. Store and handle materials in accordance with manufacturer's written instructions, safety requirements, and all applicable laws and regulations. Remove from Site, and replace at no cost to Owner, any materials that are damaged or otherwise negatively affected by not being stored or handled in accordance with manufacturer's written instructions.

D. Store materials in original, undamaged containers and packaging in clean, dry, location on raised platforms and protected from weather, within temperature range required by manufacturer. Protect stored materials from direct sunlight and sources of ignition. Manufacturer's standard packaging and covering alone is ***not*** considered adequate weather protection.

E. Locate materials in a secure location approved by Owner's Representative

F. Conspicuously mark damaged or opened containers, containers with contaminated materials, damaged materials, and materials that cannot be used within stated shelf life and remove from Site as soon as possible. Replace discarded materials in a timely manner at no cost to Owner.

G. Limit stored materials on structures so as to preclude damage to materials and structures.

H. Maintain copies of all applicable Safety Data Sheets (SDS) with materials in storage area, such that they are available for ready reference on Site.

1.7 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to start of traffic-coating Work. Notify Architect/Engineer of conditions found to be different than those indicated in the Contract Documents. Architect/Engineer will review situation and inform Contractor and Applicator how to proceed.

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

C. Ensure that drains are operational at the end of each workday or if precipitation is forecast.

D. Environmental Limitations: Apply traffic coating when existing and forecast weather conditions permit traffic coating to be installed according to traffic-coating manufacturer's written instructions and warranty requirements. Do not apply traffic coating under the following conditions, unless otherwise recommended by traffic-coating manufacturer and approved by Architect/Engineer.
   1. Apply only when substrate temperature is above 50 degrees F or more than 5 degrees F above dew point, or within range recommended by traffic-coating manufacturer.
   2. Apply only when ambient temperature is above 40 degrees F or within range recommended by traffic-coating manufacturer.

3. Do not apply to damp or wet substrate; when relative humidity exceeds 85 percent; in snow, rain, fog, or mist; or when snow, rain, fog, or mist is forecast during application or curing period. Apply only to frost-free substrate.

E. Maintain adequate ventilation during preparation and application of traffic-coating materials. Notify Owner's Representative at least one week in advance of Work with materials with noxious vapors. Review application schedule and venting precautions with Owner's Representative prior to beginning application.

1.8 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the integrity or performance of the Work.
   1. Notify Architect/Engineer of conditions that may interfere with the proper execution of the Work or jeopardize the performance of the Work prior to proceeding with the Work.

1.9 WARRANTIES

A. Manufacturer's Warranty:
   1. Written warranty, signed by traffic-coating manufacturer, including:
      a. Repair or replace traffic coating that does not comply with requirements; that does not remain watertight; that fails in adhesion, cohesion, or general durability; that experiences abrasion or tearing failure not due to misuse; that experiences surface crazing, fading or chalking; or that deteriorates in a manner not clearly specified by submitted traffic-coating manufacturer's data as an inherent quality of the material for the application indicated. Warranty does not include deterioration or failure of traffic coating due to failure of substrate prepared according to requirements, formation of new substrate cracks exceeding 1/16 inch in width, fire, vandalism, or snowplow abuse.
      b. Provide access to warranty repair and replacement areas.
   2. Warranty Period: Five years after Substantial Completion date.

B. Applicator's Warranty:
   1. Written warranty on warranty form at the end of the Section signed by Applicator, including:
      a. Repair or replace traffic coating that does not comply with requirements; that does not remain watertight; that fails in adhesion, cohesion, or general durability; that experiences abrasion or tearing failure not due to misuse; that experiences surface crazing, fading, or chalking; or that deteriorates in a manner not clearly specified by submitted traffic-coating manufacturer's data as an inherent quality of the material for the application indicated. Warranty does not include deterioration or failure of traffic coating due to failure of substrate prepared according to requirements, formation of new substrate cracks exceeding 1/16 inch in width, fire, vandalism, or snowplow damage.
      b. Provide access to warranty repair and replacement areas.
      c. Repair or replacement, to satisfaction of Owner, of other work or items which may have been displaced or damaged as consequence of defective Work.
      d. Make immediate emergency repairs within 48 hours of notice of leakage.
   2. Warranty Period: Five years after Substantial Completion date.

PART 2 - PRODUCTS

2.1 TRAFFIC COATING

A. Source Limitations: Obtain materials through one source from single traffic-coating manufacturer. Provide materials not available from traffic-coating manufacturer from sources approved by traffic-coating manufacturer. Provide new materials.

B. Use one of the following traffic coatings, or approved equal:
   1. Heavy-duty vehicular/pedestrian system:
      a. Iso-Flex 750U-HL HVT Deck Coating System by LymTal International, Inc., consisting 25 dry mils of base coat, 15 dry mils of wear course, 3/4 pound of sand per square feet, and 12 dry mils of lock coat.
      b. Auto-Gard Vehicular Traffic-Bearing Waterproofing with double-texturing, by Neogard, consisting of 20 dry mils of base coat, 32 dry mils of wearing surface coat, and 20 to 30 pounds of aggregate per 100 square feet.
      c. MasterSeal Traffic 1500 Extra-Heavy-Duty System by BASF Construction Chemicals, LLC, consisting of 20 dry mils of base coat, 20 dry mils of mid-coat, 15 dry mils of finish coat, and 50 to 70 pounds of aggregate per 100 square feet.
   2. Heavy-duty vehicular/pedestrian system (two-component):
      a. Iso-Flex 750U-HL HVT Deck Coating System by LymTal International, Inc., consisting 25 dry mils of base coat, 15 dry mils of wear course, 3/4 pound of sand per square feet, and 12 dry mils of lock coat.
      b. Auto-Gard FC T Vehicular Traffic-Bearing Waterproofing with double-texturing, by Neogard, consisting of 20 dry mils of base coat, 32 dry mils of wearing surface coat, and 20 to 30 pounds of aggregate per 100 square feet.
      c. MasterSeal Traffic 2500 Extra-Heavy-Duty System by BASF Construction Chemicals, LLC, consisting of 20 dry mils of base coat, 20 dry mils of mid-coat, 15 dry mils of finish coat, and 50 to 70 pounds of aggregate per 100 square feet.

C. Primer: Traffic-coating manufacturer's standard, factory-formulated primer recommended for substrate under conditions of service and application.

D. Joint Reinforcement: Traffic-coating manufacturer's standard reinforcement.

E. Aggregate: Clean silica sand, uniform in gradation, and approved by traffic-coating manufacturer.

F. Top Coat Color: Approved in advance in writing by Owner's Representative.

G. Provide a highly slip-resistant final texture, with a wet coefficient of friction exceeding 0.9 when tested according to ASTM C1028.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions with Applicator and traffic-coating manufacturer's representative for compliance with requirements and other conditions affecting performance of traffic coating.
   1. Ensure that work done by other trades is complete and ready for traffic-coating Work.

2. Verify compatibility with and suitability of substrates.
3. Verify that areas and conditions under which traffic-coating Work is to be performed permit proper and timely completion of Work.
4. Notify Architect/Engineer in writing of conditions which may adversely affect application or performance of traffic coating and recommend corrections.
5. Do not proceed with traffic-coating Work until adverse conditions have been corrected and reviewed by Architect/Engineer.
6. Commencing traffic-coating Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Comply with traffic coating manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products.

B. Cover adjacent surfaces with materials that are proven to resist traffic coating.

C. Take precautions to ensure safety of people (including building users, passers-by, and workers) and protection of property (including adjacent building elements, landscaping, and motor vehicles).

D. Take precautions to protect against air-borne materials and run-off.

E. Protect paving, sidewalk, and adjacent building areas from mechanical damage due to equipment.

F. Prevent dust, debris, coating overspray/spatter, and other construction materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

G. Limit access to Work areas.

H. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

I. Protect from damage, all elements of completed work and original construction to remain.

3.3 SURFACE PREPARATION

A. Equipment:
   1. Shot blast, scarification, and sandblasting equipment capable of abrading the top surface of the existing concrete slab. The equipment shall also remove all laitance, dirt and debris or other contaminants that may detrimentally affect the bond between the membrane and the structural slab.
   2. Concrete cleaning equipment such as Blastrac Concrete Cleaning System manufactured by Wheelabrator-Frye, Inc., or equal.
   3. Abrasive blasting equipment capable of removing contaminants and laitance from concrete surface.
   4. Compressed air equipment capable of removing dust and dirt from concrete surface.

B. Remove existing traffic coating and other materials to expose substrate.
   1. Existing traffic coating system is unknown and only present on select steps, where the coating is warn to the base coat and concrete substrate.

2. Do not begin removal of existing traffic coating when weather conditions are not conducive to maintaining watertightness or for application of new traffic coating.

C. At transition to CMU walls, provide a groove in the CMU, 4 inches above the nosing and parallel to the stair underside.

D. Clean and prepare concrete substrate according to traffic-coating manufacturer's written instructions. Provide clean, dust-free, and dry substrate.
   1. Verify that concrete has cured and aged for minimum time period recommended by traffic-coating manufacturer.
   2. Verify that substrate is sound and is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D4263.
   3. Verify that transitions from one surface plane to another (inside and outside corners) are cleanly formed and free of broken edges and excess concrete.
   4. Remove concrete fins and projections, concrete splatter, and other irregularities which would prevent monolithic, continuous application of traffic coating.
   5. Properly repair substrate defects such as delaminations, spalls, voids, form tie holes, honeycombing, and cracks, with latex-modified concrete or another material acceptable to traffic-coating manufacturer and Architect/Engineer.
   6. Remove grease, oil, asphalt solids, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
   7. Shotblast or scarify concrete to provide clean surface, free of laitance, dirt, and other loose or foreign material. Use care to avoid pockmarking concrete surface.
   8. Uniformly clean concrete surfaces by abrasive blast, according to ASTM D4259, to expose top surface of fine aggregate and provide sound surface, free of laitance, dirt, and other loose or foreign material. Use self-contained, recirculating, blast-cleaning apparatus. Remove remaining loose material and clean surfaces according to ASTM D4258. Produce surface texture equal to CSP 3 or 4 from ICRI Guide for Selecting and Specifying Concrete Surface Preparation.
   9. Level areas of surface scaling or rough, uneven areas where surface roughness is unacceptable for traffic-coating application, as determined by Architect/Engineer, with skim coat of epoxy or other material compatible with traffic coating and recommended by traffic-coating manufacturer.
   10. Rout cracks and joints designated by traffic-coating manufacturer's representative and verified by Architect/Engineer, remove existing sealant, and install new sealant.
   11. Abrasive blast clean curb, column, and wall surfaces that will receive traffic coating.
   12. Thoroughly sweep substrate and clean with oil-free compressed air.

E. Mask adjoining surfaces not receiving traffic coating to prevent spillage and overspray affecting other construction.

F. Close off deck drains and other deck penetrations to prevent spillage and migration of traffic-coating fluids.

G. Applicator and traffic-coating manufacturer's representative shall examine substrate to ensure that it is properly prepared and ready to receive traffic coating. Traffic-coating manufacturer's representative shall report in writing to Applicator and Architect/Engineer conditions which will adversely affect traffic-coating system application or performance. Do not proceed with traffic-coating application until these conditions have been corrected and reviewed by Architect/Engineer.

H. Proceed with application only after unsatisfactory conditions have been corrected. Commencing application constitutes acceptance of Work surface preparation and conditions.

3.4 APPLICATION

A. Provide and maintain barricades for vehicular and pedestrian traffic at traffic-coating areas during application and curing period.

B. Allow sealant, concrete replacement materials, and skim coats to fully cure prior to installing traffic coating.

C. Apply traffic coating material according to traffic-coating manufacturer's written recommendations.
   1. If pin-holing, blistering, or bubbling occurs, delay Work until later test areas are free of pinholes, blisters, or bubbling.
   2. Start traffic-coating application in presence of traffic-coating manufacturer's representative.
   3. Install joint reinforcement, centered on joints and horizontal edges of sheet-metal flashing and pans, in detail coat.
   4. Install sealant cant at intersections of horizontal and vertical surfaces.
   5. Batch and thoroughly mix components as recommended by the traffic-coating manufacturer.
   6. Apply detail coat at intersections of horizontal and vertical surfaces, at drains and other deck penetrations, and at cracks and joints.
   7. Apply traffic-coating system.
      a. Wipe detail coat to remove dust and contamination.
      b. Apply each coat in one uniform application, broadcast aggregate if required, and backroll for even coverage. Allow each coat to cure before apply next coat. Sweep or vacuum off excess aggregate.
      c. Apply at least 4 inches up sides of columns, walls, and other vertical surfaces, and up curb faces and across top curb surfaces.
      d. Omit aggregate on vertical surfaces.
      e. If pinholes occur in base coat, apply additional base coat material using flat squeegee or other tool approved by traffic-coating manufacturer, to fill holes before proceeding with subsequent coats.
      f. Prevent contamination or damage during application and curing.
      g. Verify that wet film thickness of each component coat complies with requirements every 100 square feet.

3.5 FIELD QUALITY CONTROL

A. Architect/Engineer will take a minimum of one sample (one-square inch) of new traffic-coating system for every 1,000 square feet of traffic-coating installed. Dry film thickness will be measured.
   1. Dry film thickness is satisfactory if not less than minimum thickness specified by traffic-coating manufacture or this Section, whichever is greater.
   2. If dry film thickness is too thin, apply additional material at no cost to Owner, or perform other remedial action recommended by traffic-coating manufacturer or Architect/Engineer.
   3. Patch sample areas with traffic-coating system.

B. Architect/Engineer may perform bond strength testing to verify adequate bond strength in accordance with ASTM D7234 Stard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers.
   1. Contractor to patch test areas with traffic coating system at no cost to Owner.

C. Chain drag traffic-coating areas at conclusion of Work to locate debonded areas. Remove and replace debonded areas.

3.6 CLEANING

A. At the end of each workday, clean Site and Work areas and place and place all items to be discarded in appropriate containers.

B. After completing traffic coating Work:
   1. Clean all materials resulting from Work that are not intended to be part of the finished Work using appropriate cleaning agents and procedures. Exercise care to avoid damaging surfaces.
   2. Repair at no cost to Owner all items damaged during the Work.
   3. Remove and legally dispose of debris and surplus materials from Site.

3.7 PROTECTION

A. Protect traffic-coating from damage and wear during remainder of construction period.

B. Replace Work or materials damaged beyond repair, in opinion of Architect/Egnineer, at no cost to Owner.

END OF SECTION

APPLICATOR'S WARRANTY FOR

[_____]

We (Applicator) hereby warrant materials and workmanship of Work which we have installed at above-referenced Project for a period of five (5) years from date of substantial completion. We agree to repair or replace traffic coating which fails to remain watertight; or fails in adhesion, cohesion, or general durability; or experiences surface crazing, fading or chalking; or deteriorates in any other manner not clearly specified by submitted manufacturer's data as an inherent quality of the material for the application indicated. Warranty does not include deterioration or failure of traffic coating due to failure of substrate prepared according to requirements, formation of new substrate cracks exceeding 1/16 inch in width, fire, vandalism, or snowplow damage.

We also agree to repair or replace to satisfaction of Owner, other work or items which may be displaced or damaged as a consequence of defective Work.

In event of our failure to comply with foregoing conditions, within seven days after being notified in writing by Owner, we collectively or separately do hereby authorize Owner or his successor in interest to proceed to have said defects repaired and made good at our expense and we will honor and pay costs and charges therefore upon demand.

Date of Substantial Completion: _____

Applicator's signature: _____

Typed name and title of company official signing above and issuing this warranty:

Name: _____ Title: _____

Date of Signature: _____

Contractor's signature: _____

Typed name and title of company official signing above for Contractor:

Name: _____ Title: _____

Date of Signature: _____

SECTION 07 92 00
JOINT SEALANTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation and installation of sealant in joints as indicated in Drawings and Specifications.

B. Related Sections:
   1. Section 01 11 00 - Summary of Work
   2. Section 01 22 00 - Unit Prices
   3. Section 09 96 53 - Concrete Replacements
   4. Section 07 18 00 - Traffic Coatings

1.2 ADMINISTRATIVE REQUIREMENTS

A. Coordinate Work to ensure that adjacent areas are not adversely affected; that new materials and building interior are kept continuously dry; and that continuous, watertight, new sealant installation is provided. Coordinate:
   1. With Owner's Representative.
   2. With other trades:
      a. To ensure that work done by other trades is complete and ready for sealant Work.
      b. To avoid or minimize work on, or in immediate vicinity of, sealant Work in progress.
      c. To ensure that subsequent work will not adversely affect completed sealant Work.

1.3 SUBMITTALS

A. Product Data: Sealant manufacturer's literature including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; and installation instructions.
   1. Include temperature ranges for storage and application of materials, and special cold-weather application requirements or limitations.
   2. SpecData sheet for substrate cleaner and substrate primer recommended by sealant manufacturer for specific substrate surface and conditions.

B. Samples: Sealant manufacturer's color sample card, either printed or with thin sealant beads, showing range of colors available for each product exposed to view.

C. Manufacturer's Reports and Certifications:
   1. Prior to sealant installation, report from sealant manufacturer with results of sealant compatibility, sealant and substrate staining, and mockup adhesion tests. Report shall:
      a. State that materials which come into contact with or in close proximity to sealant have been tested.
      b. Include sealant manufacturer's interpretation of test results relative to material performance, potential staining of sealant and substrates, dirt accumulation of sealant, and dirt runoff from sealant.

c. Include sealant manufacturer's recommendations for substrate preparation and primer needed to obtain durable adhesion and installation procedures successfully used in mockups and field tests.

2. Product Certificates: For each sealant product, accessory, related products, joint type, and substrate, sealant manufacturers' written approval of their products' use for specified conditions; based on mockups and field tests.

D. Following completion of the Work:
1. Sealant manufacturer's inspection report of completed sealant installation.
2. Completed warranty from sealant manufacturer.
3. Completed warranty from Installer.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Experienced firm that has successfully completed sealant work similar in material, design, and extent to that indicated for Project; that is approved, authorized, or licensed by sealant manufacturer to install sealant; and that is eligible to receive sealant manufacturer's warranty. Must have successful installations of specified materials in local area in use for minimum of five years.
1. Employ foreman with minimum five years of experience as foreman on similar projects, to be on Site at all times during Work. Do not change foremen during the course of the Project except for reasons beyond the control of the Installer; inform Engineer in advance of any changes.

B. Compatibility Tests: Include sealant and sealers or coatings that may come into contact with sealant following sealant installation.

C. Mockups: Install ten feet of sealant in each type of joint to verify and set quality standards for materials and installation procedures, and to demonstrate aesthetic effects.
1. Include each type of backing material, sealant, primer and other related products.
2. Mockups shall be accessible or located as indicated by Owner's Representative.
3. Notify Owner's Representative and Architect/Engineer seven days in advance of date when mockups will be constructed.
4. If Architect/Engineer determines mockup does not comply with requirements, modify mockup or construct new mockup until mockup is approved.
5. Mockups, when approved by Owner's Representative and Architect/Engineer, will become standard for Work.
6. Approved mockups may become part of completed Work if undisturbed at time of Substantial Completion.
7. Do not begin joint sealant Work until mockup is accepted by Owner's Representative and Architect/Engineer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials according to manufacturer's recommendations and in such a manner as to prevent damage to materials or structure.

B. Deliver materials to Site in original packages with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, and directions for storing and mixing with other components.

C. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, or installation. Reject and remove from Site new materials which exhibit evidence of moisture during application or which have been exposed to moisture.

D. Store materials in original, undamaged containers and packaging in clean, dry, protected location on raised platforms with weather-protective coverings, within temperature range required by manufacturer. Protect stored materials from direct sunlight. Manufacturer's standard packaging and covering is ***not*** considered adequate weather protection.

E. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

F. Conspicuously mark wet or damaged materials and remove from Site as soon as possible.

G. Remove and replace materials that cannot be applied within stated shelf life.

1.6 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to start of sealant Work. Notify Engineer of conditions found to be different than those indicated in the Contract Documents. Engineer will review situation and inform Contractor and Installer of changes.

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

C. Environmental Limitations: Install sealant when existing and forecast weather conditions permit sealant to be installed according to sealant manufacturer's written instructions and warranty requirements.
   1. Do not install sealant when ambient or substrate temperatures are below 40 degrees F or are expected to fall below 40 degrees F in next 12 hours.
   2. Do not proceed with installation during inclement weather except for temporary work necessary to protect building interior and installed materials. Remove temporary work and Work that becomes moisture damaged.

1.7 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the integrity or performance of the Work.
   1. Notify Engineer of conditions that may interfere with the proper execution of the Work or jeopardize the performance of the Work prior to proceeding with the Work.

1.8 WARRANTY

A. Installer's Warranty: The Contractor shall warrant the sealing of joints to be free of faults and defects in accordance with the General Conditions, except that the warranty shall be for a minimum of two (2) years from the date of Substantial Completion. Installed work discovered to contain faults or defects within the two year warranty period shall be repaired or replaced with materials in accordance with the specification at no cost to the Owner. The warranty shall be signed by the Contractor and Installer performing the work.

B. Manufacturer's Warranty: Manufacturer's standard form in which sealant manufacturer agrees to furnish the specified joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
   1. Warranty Periods: 5 years from date of Substantial Completion.

C. Warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
   1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
   2. Disintegration of joint substrates from natural causes exceeding design specifications.
   3. Mechanical damage caused by individuals, tools, or other outside agents.
   4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 PRODUCTS

2.1 ELASTOMERIC JOINT SEALANTS

A. General:
   1. Comply with ASTM C920 and other requirements indicated.
   2. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing on similar projects, mockups and preconstruction testing for Project, and field experience.
   3. Select products based on mockups, preconstruction testing, and sealant manufacturer's previous testing and experience.
   4. Source Limitations: Obtain each type of joint sealant through one source from single manufacturer.
   5. Colors of Exposed Joint Sealants: Selected and approved in writing by Owner's Representative, from sealant manufacturer's full range.
   6. Ensure sealant selected is compatible with Elastomeric Coating product used.

B. Single-Component, Non-sag, Polyurethane Sealants:
   1. DynaTred manufactured by Pecora Corporation.
   2. MasterSeal NP 1 manufactured by BASF Building Systems.
   3. SikaFlex-1a manufactured by Sika Corporation.
   4. Or approved equal

C. Multi-Component, Non-sag, Polyurethane Sealants:
   1. DynaTrol II-SG manufactured by Pecora Corporation.
   2. MasterSeal NP 2 manufactured by BASF Building Systems.
   3. SikaFlex-2c NS manufactured by Sika Corporation.
   4. Or approved equal.

D. Single-component, Non-sag, Silicone Sealants (to be used at roof level over new expansion joints):
   1. DOWSIL 790 Silicone Building Sealant manufactured by Dow Chemical Company.
   2. 890 NST manufactured by Pecora Corporation.
   3. SCS2700 SilPruf LM manufactured by Momentive Performance Materials Inc.
   4. Spectrem 1 manufactured by Tremco Commercial Sealants & Waterproofing.

5. Or approved equal.

2.2 AUXILIARY MATERIALS

A. General: Sealant-backer materials, primers, surface cleaners, masking tape, and other materials recommended by sealant manufacturer, that are non-staining and compatible with substrates; based on mockups, preconstruction testing, and sealant manufacturer's previous testing and experience.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions with Installer and sealant manufacturer's representative for compliance with requirements and for other conditions affecting installation or performance of sealant.
   1. Verify dimensions of sealant joints at Site by field measurement so that proper sealant profiles will be accurately maintained.
   2. Ensure that work done by other trades is complete and ready for sealant Work.
   3. Verify that areas and conditions under which sealant Work is to be performed permit proper and timely completion of Work.
   4. Notify Engineer in writing of conditions which may adversely affect installation or performance of sealant, including joints with widths less than those allowed by sealant manufacturer for applications indicated, and recommend corrections.
   5. Do not proceed with sealant Work until adverse conditions have been corrected and reviewed by Engineer.
   6. Commencing sealant Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Take precautions to ensure safety of people, including building users, passers-by, and workmen, and animals, and protection of property, including adjacent building elements, landscaping, and motor vehicles.

B. Prevent construction debris and other materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

C. Protect paving and sidewalks, and adjacent building areas from mechanical damage due to scaffolding and other equipment.

D. Limit access to Work areas.

E. Erect temporary protective canopies, as necessary, over walkways and at points of pedestrian and vehicular access that must remain in service during Work.

F. Comply with sealant manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products.

G. Cover adjacent surfaces with materials that are proven to resist sealant.

H. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

3.3 SURFACE PREPARATION

A. Remove existing sealant and other foreign material from joints.

B. Repair damaged or deteriorated substrate surfaces according to sealant manufacturer's written instructions and as approved by Engineer.

C. Clean joint substrates immediately before installing sealant, to comply with sealant manufacturer's written instructions based on mockups and preconstruction testing.
   1. Remove from substrate foreign material that could interfere with adhesion of sealant, including dirt, dust, existing sealant, oil, grease, and surface coatings.
   2. Provide dry substrate; prevent wetting of substrate prior to sealant installation.
   3. Clean porous substrates, such as concrete, masonry, stone, wood, by brushing, grinding, blast-cleaning, mechanical-abrading, or combination of methods to produce clean, sound substrate capable of developing optimum bond with sealant. Remove laitance and form-release agents from concrete. Remove loose particles remaining after cleaning operations by vacuuming or blowing out joints with oil-free, compressed air.
   4. Clean nonporous surfaces, such as metal, with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of sealant.
   5. Joints with silicone sealant and preformed sealant seals should generally be masked as subsequent cleanup of spillage and smears may be very difficult.

D. Install masking tape on adjacent surfaces to prevent permanent staining or damage due to contact with sealant or cleaning methods to remove sealant smears. Remove tape immediately after tooling sealant, without disturbing sealant.

3.4 INSTALLATION OF SEALANT

A. General: Comply with sealant manufacturer's written installation instructions for products and applications indicated, based on mockups and preconstruction testing.

B. Joint Priming: Prime joint substrates where recommended in writing by sealant manufacturer, based on mockups and preconstruction testing. Apply primer to comply with sealant manufacturer's written instructions.
   1. Confine primer to areas of sealant bond; do not allow spillage or migration onto adjoining surfaces.
   2. Limit priming to areas that will be covered with sealant in same day. Unless recommended otherwise by sealant manufacturer, reprime areas exposed for more than 24 hours.

C. Install sealant backer and position to produce cross-sectional shape and proper depth of installed sealant.
   1. Use properly-sized backer. Do not use multiple-backer units or braided-backer units to accommodate wide joints.
   2. Install backer with device that will provide consistent depth between substrate surface and outer surface of backer.
   3. Do not leave gaps between ends of sealant backers.
   4. Do not stretch, twist, puncture, or tear sealant backers.

5. Remove wet backers and replace with dry materials.

D. Install bond-breaker tape at back of designated joints.

E. Install sealant immediately after installing backer material; to produce uniform, cross-sectional shape and depth; to directly contact and fully wet joint sides and backer material; and to completely fill recesses in joint configuration.
   1. For Non-Sag Sealant:
      a. Install sealant flush with surface.
      b. Immediately after sealant application and before skinning or curing begins, tool joint with slightly concave surface, compressing sealant into joint to form smooth, uniform sealant bead; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint. Do not use tooling agent.
   2. For pourable sealants:
      a. Install sealant slightly below surface.
      b. Immediately after sealant application and before skinning or curing begins, lightly tool joint, compressing sealant into joint to form smooth, uniform sealant bead; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint. Do not use tooling agent.
      c. Remove excess sealant from surfaces adjacent to joints.

3.5 FIELD QUALITY CONTROL

A. At completion of Project, observe installed sealant for damage, deterioration, or air pokcets within the sealant bead. If damage or deterioration occurs, neatly cut out and remove damaged or deteriorated sealant, prepare and prime surfaces, and install new sealant. Replace sealant immediately so new sealant is indistinguishable from original Work.

3.6 CLEANING

A. As sealant Work progresses, clean off excess sealant or sealant smears by methods and with cleaning materials approved in writing by sealant manufacturer and manufacturers of products in which joints occur. Exercise care to avoid scratching or damage to surfaces.

B. At the end of each workday, clean Site and Work areas and place rubbish, empty cans, rags, and other discarded materials in appropriate containers.

C. After completing sealant Work:
   1. Repair surfaces stained, marred, or otherwise damaged during sealant Work.
   2. Clean up debris and surplus materials and remove from Site.

3.7 PROTECTION

A. Protect sealant during and after curing period from contact with contaminating substances and from damage, so sealants are without deterioration or damage at time of Substantial Completion.

END OF SECTION

SECTION 09 97 24
ARCHITECTURAL COATINGS (NON-ELASTOMERIC)

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation and application of architectural coating on the following substrates:
   1. Cast in place concrete columns, walls, and ceilings (underside of slabs)
   2. Concrete masonry units (CMU) at stair tower walls, mechanical rooms, and offices
   3. Steel railings within stairwells

B. Related Sections:
   1. Section 03 01 34 - Concrete Replacements
   2. Section 05 04 00 - Miscellaneous Steel
   3. Section 07 18 00 – Traffic Coating
   4. Section 07 92 00 – Joint Sealants

1.2 ADMINISTRATIVE REQUIREMENTS

A. Coordinate Work to ensure that adjacent areas are not adversely affected. Coordinate:
   1. With Owner's Representative.
   2. With other trades:
      a. To ensure that work done by other trades is complete and ready for coating Work.
      b. To avoid or minimize work on, or in immediate vicinity of, coating Work in progress.
      c. To ensure that subsequent work will not adversely affect completed coating.

B. Review previous repair and existing surface treatment materials to ensure compatibility with architectural coating to be used. Notify Architect/Engineer in writing of concerns with materials or primers installed by others and recommended remedies.

C. Schedule surface preparation, sealant, and coating application Work so that dust and other contaminants from surface preparation Work will not adversely affect wet, newly-coated surfaces.

1.3 SUBMITTALS

A. Product Data: Coating manufacturer's literature including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; mixing and application instructions; safety precautions for handling, storing, applying, and disposing of materials; and instructions for protecting surrounding areas from overspray. Include:
   1. Surfaces to which materials will be applied.
   2. Crack fillers, block fillers, and primers.
   3. Coating manufacturer's color chart showing full range of colors available.

B. Samples for Initial Selection: Provide manufacturer's color sample card showing full range of colors and sheens available.

1. Use contrasting colors for each coating layer within a coating system. Consult with coating manufacturer for appropriate selections based on initial color section.

C. Manufacturer's Certificate: Written certification from paint or stain manufacturer stating that specified surface preparation methods, paint or stain materials, and application procedures are appropriate for applications intended.

D. Applicator Qualifications: Evidence that Applicator's existing company has minimum 5 years of continuous experience in similar coating work; list of at least 5 representative, successfully-completed projects of similar scope and size, including:
1. Project name.
2. Owner's name.
3. Owner's Representative name, address, and telephone number.
4. Description of work.
5. Architectural coating used.
6. Project supervisor.
7. Total cost of coating work and total cost of project.
8. Completion date.

E. Inspection Plan: Submit an inspection plan including a sample of a daily Quality Control log. Plan shall include list of testing and inspection equipment to be used, and shall indicate the number and frequency of site visits by manufacturer's technical representative. It shall also include but not be limited to:
1. Pre-surface preparation for obvious defects and contamination to be removed in accordance with the specified preparation.
2. Measurement of ambient conditions of temperature, humidity, and dew points.
3. Evaluation of surface preparation, application, and compressor equipment to verify cleanliness and avoid contamination.
4. Evaluation of surface preparation and profile for conformance with standards.
5. Observation of coating mixing and application for conformance to manufacturer's instructions and mock-up(s).
6. Determination of dry film thickness of each coat applied for conformance to manufacturer's instructions and mock-up(s).
7. Monitor cleanliness and time between coats. Each coat shall be inspected for cleanliness before application of subsequent coats.

F. Sample Warranties: Copies of coating manufacturer's warranty and Contractor's warranty, both stating obligations, remedies, limitations, and exclusions. Submitted with bid.

G. Following completion of the Work:
1. Coating manufacturer's inspection report of completed coating application.
2. Completed warranty from coating manufacturer.
3. Completed warranty from Applicator.

1.4 EXTRA MATERIALS

A. Furnish and deliver to Owner four (4) gallons of each color and finish of architectural coating materials applied. Provide materials in unopened, factory-sealed containers for storage and identify with labels describing contents.

1.5 QUALITY ASSURANCE

A. The Owner's Representative will periodically observe progress, evaluate quality, and may perform tests of the coating.

B. Manufacturer
   1. Letter confirming use of coating system on project and compatibility with sealants.

C. Applicator Qualifications: Experienced firm that has successfully completed coating work on all substrates included in this project with similar materials, design, and extent to that indicated for Project. Must have successful applications of specified materials in local area in use for minimum of 5 years.
   1. Employ foreman with minimum five years of experience as foreman on similar projects, who is fluent in English, to be on Site at all times during Work. Do not change foremen during course of Project except for reasons beyond control of Applicator; inform Architect/Engineer in advance of any changes.

D. Mockups: Prepare surface and apply architectural coating on 4-foot-by-4 foot area of cast-in-place column, ceiling, and wall, concrete masonry wall, as well as a 4 foot long segment of railing at locations identified by Architect/Engineer and using the full-scale work to demonstrate surface preparation, crack and joint treatment, aesthetic affects, and quality of materials and execution. Leave portion of prepared surface and each coating layer exposed to view. Provide required color, sheen, and texture on each surface.
   1. Coating manufacturer's representative shall observe mockup and approve in writing surface preparation and coating application.
   2. Notify Owner's Representative and Architect/Engineer seven days in advance of date when mockup will be constructed.
   3. Owner may, at its expense, verify coating thickness and perform adhesion and pull-off tests. Contractor shall, at no cost to Owner, repair coating and substrate damaged by testing.
   4. If Architect/Engineer determines mockup does not comply with requirements, modify mockup or construct new mockup until mockup is approved. Pay for additional testing requested by Owner. Do not proceed with Work until mockup is approved by the Owner's Representative.
   5. Approved mockup will be acceptance standard for coating Work.
   6. Approved mockups may become part of completed Work if undisturbed at time of Substantial Completion.

E. Pre-Installation Meeting: Contractor, applicator, manufacturer's representative, and Owner's representative shall meet at the site to review procedures, acceptance of substrate surfaces, and coordination of Work with other trades.

1.6 SAFETY

A. At this time, it is assumed that the existing paint system does not contain any hazardous materials.

B. Owner to provide total metals RCRA-8 metals testing to confirm presence of hazardous materials in the existing system prior to Work commencement.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials according to manufacturer's recommendations and in such manner as to prevent damage to materials and structure.

B. Deliver materials to Site in original containers and packaging with seals unbroken, labeled with:
   1. Manufacturer's name.
   2. Product brand name and type.
   3. Color name and number.
   4. Date of manufacture and batch number.
   5. Directions for storing, handling, mixing with other components, and application, including precautions.
   6. Thinning instructions (if permitted).

C. Store materials in original, undamaged containers and, if permitted, partially-used materials in tightly-covered containers in clean, dry, well-ventilated, protected location on raised platforms with weather-protective coverings, within temperature range required by manufacturer. Protect stored materials from direct sunlight, heat, sparks, and flames. Manufacturer's plastic wrapping is not considered to be an adequate weather-protective covering.

D. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

E. Conspicuously mark damaged or opened containers or containers with contaminated materials, and remove from Site as soon as possible.

F. Remove and replace materials that cannot be applied within stated shelf life.

1.8 PROJECT CONDITIONS

A. Verify existing dimensions and details prior to start of coating Work. Notify Architect/Engineer of conditions found to be different than those indicated in Contract Documents. Architect/Engineer will review situation and inform Contractor and Applicator of changes.

B. Comply with Owner's limitations and restrictions for Site use and accessibility.

C. Environmental Limitations: Apply coating when existing and forecast weather conditions permit coating to be installed according to coating manufacturer's written instructions.
   1. Apply only when substrate and ambient temperatures are between 50 and 90 degrees F, or within range recommended by coating manufacturer.
   2. Do not apply in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above dew point; or when such conditions are imminent during the drying period.
   3. Do not apply to damp or wet substrate.
   4. Allow wet surfaces to dry thoroughly and attain temperature and conditions specified before starting or continuing coating operation.

D. Maintain adequate ventilation during preparation and application of coating materials.

E. Coordinate protection for adjacent buildings or occupied spaces with Owner as required. Coordinate protection or shutoff of HVAC intake areas for adjacent buildings with Owner.

1.9 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at variance with Contract Documents. Such conditions may interfere with Work and may consist of damage or deterioration of substrate or surrounding materials that could jeopardize integrity or performance of Work.
   1. Notify Architect/Engineer of conditions that may interfere with proper execution of Work or jeopardize performance of Work prior to proceeding with Work.

1.10 WARRANTY

A. Manufacturer's Warranty:
   1. Written warranty, signed by coating manufacturer, including:
      a. Materials to replace coating that does not comply with requirements; that fails in adhesion, cohesion, or general durability; that cracks, checks, fades, or chalks; or that deteriorates in manner not clearly specified by submitted coating manufacturer's data as inherent quality of material for application indicated.
      b. Failure of existing coatings underneath new coating is included in warranty.
      c. New coating shall closely match color of existing coating. Extend new coating to reveals, surface edges, or other natural termination points to minimize differences in appearance between new and existing coating.
   2. Warranty Period: 5 years after Substantial Completion date.

B. Contractor's Warranty:
   1. Written warranty, signed by Contractor, including:
      a. Repair or remove and replace coating that does not comply with requirements; that fails in adhesion, cohesion, or general durability; that does cracks, checks, fades, or chalks; or that deteriorates in manner not clearly specified by submitted coating manufacturer's data as inherent quality of material for application indicated.
      b. Failure of existing coatings underneath new coating is included in warranty.
   2. New coating shall closely match color of existing coating unless elected otherwise by Owner. Extend new coating to reveals, surface edges, or other natural termination points to minimize differences in appearance between new and existing coating.
   3. Warranty includes:
      a. Providing access to work area.
      b. Necessary surface preparation work.
   4. Warranty Period: 5 years after Substantial Completion date.

PART 2 PRODUCTS

2.1 ARCHITECTURAL COATING

A. Source Limitations: Obtain materials through one source from single coating manufacturer, or from sources approved by coating manufacturer.

B. Material Compatibility:
   1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Use the following or an approved equal.
   1. Primers: As required by manufacturer.
   1. Concrete and CMU Surfaces:
      a. Perma-Crete Vertical Concrete Stain, by PPG
      b. Loxon Vertical Concrete Stain, by The Sherwin Williams Company.
      c. Series 180 W.B. Tneme-Crete, by Tnemec.
   2. Stairwell Railings:
      a. Macropoxy 400 paint, by The Sherwin Williams Company.

D. Colors to be selected by the Owner from the manufacturers full range.

2.2 AUXILIARY MATERIALS

A. Use block fillers, crack fillers and sealants, detail materials, and primers recommended by architectural coating manufacturer.
   1. Auxiliary materials are anticipated within the stairwell CMU walls.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions with Applicator and coating manufacturer's representative for compliance with requirements and other conditions affecting application or performance of coating.
   1. Ensure that work done by other trades is complete and ready for coating Work.
   2. Verify that areas and conditions under which coating Work is to be performed permit proper and timely completion of Work.
   3. Verify compatibility with and suitability of substrates, including existing coatings.
   4. Verify adhesion of existing coatings.
   5. Notify Architect/Engineer in writing of conditions which may adversely affect application or performance of coating and recommend corrections.
   6. Do not proceed with coating Work until adverse conditions have been corrected and reviewed by Architect/Engineer.
   7. Commencing coating Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Coordinate with Owner to temporarily remove, non-destructively label, store and protect existing wayfinding signage on surfaces to be coated or re-coated. Coordinate removals with Owner.

B. Take precautions to ensure safety of people, including building users, passers-by, and workmen, and animals, and protection of property, including adjacent building elements, landscaping, and motor vehicles.

C. Prevent construction debris, coatings, and other materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

D. Protect paving and sidewalk, and adjacent building areas from mechanical damage due to scaffolding and other equipment.

E. Limit access to Work areas. Provide "Wet Paint" signs to protect newly coated surfaces.

F. Erect temporary protective canopies, as necessary, over walkways and at points of pedestrian and vehicular access that must remain in service during Work.

G. Take precautions to protect against air-borne materials and runoff.

H. Masking and Preparation:
   1. Remove hardware, light fixtures, and other items that will not be coated. If removal is impractical because of size or weight of item, protect item during surface preparation and coating application. After completing coating Work, reinstall items removed, using workers skilled in trades involved."
   2. Comply with coating manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products.
   3. Cover adjacent surfaces with materials that are proven to resist coating system.
   4. Mask off or protect from spillage and overspray surfaces not scheduled to receive coating, including garage slab surfaces.
   5. Mask off and protect conduit support hangers to prevent new paint from bonding to the hanger and restricting future movement.
   6. Remove masking and other protective measures at completion coating Work.

I. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

3.3 PREPARATION OF CONCRETE AND CMU SURFACES

A. Clean and prepare substrate according to coating manufacturer's written instructions. Provide clean, dust-free, dry, and sound substrate for coating application.
   1. Existing Coatings:
      a. Remove unbounded, peeling, flaking, or deteriorated coating by pressure washing or other means. Firmly adhered paint does not need to be removed.
      b. Do not etch existing coatings.
      c. Feather edges of existing coatings by sanding or other means, as recommended by coating manufacturer.
      d. Existing coatings are generally present at the following locations: stairwell walls, mechanical rooms, office rooms.
   2. Remove fins and projections, splatter, and other irregularities which would prevent monolithic, continuous application of coating.
   3. Properly patch substrate defects (such as voids, form tie holes, honeycombing, and cracks) with latex-modified mortar or another material acceptable to coating manufacturer and Architect/Engineer.
   4. Remove grease, oil, asphalt solids, form-release agents, curing compounds, and other contaminants or film-forming coatings that might impair bond of architectural coating. If chemical removal is necessary, rinse with clean water.
   5. Treat cracks, joints, changes in surface direction, and through-member penetrations with patching compound or sealant as recommended by coating manufacturer. Remove deteriorated existing sealant and other materials and replace with materials recommended by coating manufacturer.
   6. Fill pores, crevices, and voids in concrete masonry with block filler and allow filler to dry.
   7. Pressure wash surface to provide clean surface, free of laitance, dirt, and other loose or foreign material, and to slightly roughen surface.

B. Examine substrate with coating manufacturer to ensure that it is properly prepared and ready to receive coating.
   1. Coating manufacturer's representative shall report in writing to Contractor and Architect/Engineer conditions which will adversely affect coating system installation or performance.
   2. Do not proceed with coating application until these conditions have been corrected and reviewed by Architect/Engineer.
   3. Commencing application constitutes acceptance of Work surfaces and conditions.

3.4 PREPARATION OF STEEL RAILING SURFACES

A. Clean and prepare substrate according to coating manufacturer's written instructions. Provide clean, dust-free, dry, and sound substrate for coating application.
   1. Remove loose rust, loose or deteriorated paint, and other surface contaminants in accordance with SSPC-SP 2 or SSPC-SP 3.
   2. Lightly sand existing coating to remove sheen and slightly roughen.
   3. Feather edges of existing coating by sanding, grinding, or other means. At pedestrian handrails, minimize variations in the surface profile at transitions between existing coating and non-coated regions.
   4. Remove grease, oil, dirt, and other contaminants that might impair bond of coating. Use cleaner/degreaser or chemical removal as necessary; rinse thoroughly with copious amounts of clean water.

B. Examine substrate with coating manufacturer to ensure that it is properly prepared and ready to receive coating.
   1. Coating manufacturer's representative shall report in writing to Contractor and Architect/Engineer conditions which may adversely affect coating system application or performance and recommend corrections.
   2. Do not proceed with coating application until unsatisfactory conditions have been corrected and reviewed by Architect/Engineer.
   3. Commencing coating application constitutes acceptance of Work surfaces and conditions.

3.5 APPLICATION

A. General: Prepare and apply materials according to coating manufacturer's written instructions, at recommended rates and coverages.
   1. Test prepared surfaces for alkalinity, moisture, and other conditions as recommended by coating manufacturer.
   2. Verify that substrate has dried for minimum time period recommended by coating manufacturer.
   3. Application of primer coat layer of coating system to occur within same work day of completion of preparation/wash activities such that forms of contaminants will not develop or deposit on the surface and the surface remains in a clean, satisfactory condition.
   4. Verify that ambient air and substrate surface temperatures, relative humidity, and dew point are within ranges recommended by coating manufacturer and are forecast to remain within these ranges during coating curing period.
   5. Application of coating to occur within 7 days of completion of wash/preparation activities or following rain weather events where debris would be expected to wash down the parking structure. If application is initiated beyond 7 days after preparation, additional re-cleaning activities may be required at no additional cost to the owner.

B. Mix materials thoroughly to uniform, smooth consistency. Do not thin or dilute unless permitted by coating manufacturer; use recommended thinners within recommended limits.
   1. Stir as required during application.
   2. If surface film forms, do not stir film into material. Remove film and strain coating material before using.
   3. Maintain containers used for mixing and applying coating in clean condition, free of foreign materials and residue.

C. Apply coating by roller, spray, or brush. Use applicator and technique best suited for substrate and type of material being applied.
   1. Apply materials as soon as practicable after completion of surface preparation or full curing of previous material application.
   2. Do not coat over conditions detrimental to formation of durable coating film, such as dirt, dust, rust, scale, grease, or moist or scuffed surfaces.
   3. Apply barrier coat over incompatible primers or remove and reprime.
   4. Prime surfaces as necessary.
   5. Apply architectural coating in two coats to minimum thickness of 8 mils dry-film-thickness or as recommended by coating manufacturer, whichever is greater. Do not apply subsequent coats until the initial coat has fully cured.
      a. If undercoats or other conditions show through final coat, apply additional coats until coating film is of uniform finish, color, and appearance.
      b. Ensure that edges, corners, and crevices receive minimum dry film thickness.
      c. Brush Application: Work material into surface in even film. Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Neatly draw lines at edges and color breaks.
      d. Roller Application: Keep cover wet; do not dry roll. Apply material in sections. Lay on required amount of material, working material into grooves and rough areas. Then level material, working it into surface.
      e. Spray Application: Use spray application only when permitted by manufacturer's written instructions and authorities having jurisdiction. Apply material to provide equivalent hiding of brush-applied coat. Do not double back, building up film thickness of 2 coats in 1 application.
   6. Do not coat over UL, FMG, or other labels.

3.6 FIELD QUALITY CONTROL

A. Allow Owner, Owner's Representative, and Manufacturer's Representative access to observe progress and quality of portion of completed Work.

B. Material Coverage Rates.
   1. At beginning of application, calibrate material coverage rate with wet-mil thickness equivalent to minimum specified dry-mil thickness. Measure wet-mil thickness with thickness gauge.
   2. Measure wet-mil thickness at least once for every 200 square feet of surface coated. Adjust coverage rate to maintain minimum thickness.

C. Owner may, at its expense, perform following tests. Contractor shall provide access to test locations determined by Architect/Engineer.
   1. Measure dry-film thickness of coating. Coating thickness is acceptable if within specified range.

2. Perform adhesion tests per ASTM D3359, Test Method A, after coating has cured. Coating adhesion is acceptable if no peeling or coating removal occurs (Rating 5A).
3. Perform pull-off tests per ASTM D4541, after coating has cured. Coating application is acceptable if test results are at least 100 pounds per square inch for concrete and CMU substrates or 300 pounds per square inch for metal substrates, or as approved by the Architect/Engineer.
4. If coating application is acceptable, Owner will pay Contractor to repair substrate and coating as necessary at test locations.
5. If coating application is unacceptable, Architect/Engineer will determine remedy. Contractor shall remove and replace unacceptable coating or perform other remedial actions at no cost to Owner. Contractor shall also repair substrate and coating at test locations with unacceptable results at no cost to Owner. Contractor may, at own expense, perform additional measurements and testing to determine limits of areas with unacceptable coating.

D. Completed Work shall match approved mockup for color, texture, and coverage, in opinion of Architect/Engineer, and shall be free from flow-lines, streaks, blisters, and other surface imperfections. Remove, refinish, or recoat work not complying with specified requirements.

3.7 CLEANING

A. At end of each workday, clean Site and Work areas and place rubbish, empty cans, rags, and other discarded materials in appropriate containers.

B. After completing coating Work:
1. Clean accidental spillage, overspray, spatter, and misplaced paint from surfaces and restore the affected areas to its original undamaged condition. Exercise care to avoid scratching or damage to surfaces.
2. Repair surfaces stained, marred, or otherwise damaged during coating Work.
3. Clean up debris and surplus materials and remove from Site.

C. Waste Management:
1. Collect surplus coating materials that cannot be reused and deliver to recycling or disposal facility.
2. Treat materials that cannot be reused as hazardous waste and dispose of in appropriate manner.

END OF SECTION 09 97 24

SECTION 32 17 23.13

PAINTED PAVEMENT MARKINGS

PART 1 GENERAL

1.1 DESCRIPTION

A. Section Includes: Supply and application of pavement-marking paint.

B. Related Sections:
   1. Section 03 01 34 - Concrete Replacements
   2. Section 07 18 00 - Traffic Coating

1.2 SUBMITTALS

A. Product Data: Pavement-marking-paint manufacturer's literature including written instructions for evaluating, preparing, and treating substrate; technical data including tested physical and performance properties; and application instructions.

1.3 QUALITY ASSURANCE

A. Mockup: Apply pavement-marking paint on 1 square foot of each substrate to demonstrate surface preparation and application method.
   1. After pavement-marking paint has cured, Architect/Engineer may scrape paint with knife or similar to verify adhesion.
   2. If Architect/Engineer determines mockup does not comply with requirements, construct new mockup until mockup is approved.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle materials according to manufacturer's recommendations and in such a manner as to prevent damage to materials or structure.

B. Deliver materials to Site in original containers and packaging with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, lot number, and directions for storing and mixing with other components.

C. Keep materials dry and do not allow materials to be exposed to moisture during transportation, storage, handling, and installation. Reject and remove from Site new materials which exhibit evidence of moisture during application, or have been exposed to moisture.

D. Store materials in original, undamaged containers, and coatings, thinners, and cleaners in tightly-closed containers, in clean, dry, protected, well-ventilated location on raised platforms with weather-protective coverings, within temperature range required by pavement-marking-paint manufacturer. Protect stored materials from direct sunlight, sparks, and flame. Manufacturer's standard packaging and covering is not considered adequate weather protection.

E. Limit stored materials on structures to safe loading capacity of structure at time materials are stored, and to avoid permanent deck deflection.

F. Conspicuously mark damaged or opened containers or containers with contaminated materials, and remove from Site as soon as possible.

G. Remove and replace materials that cannot be applied within stated shelf life.

1.5 PROJECT CONDITIONS

A. Prior to commencing Work, document with drawings and sketches existing pavement markings, including parking stall striping and numerals, traffic lines and arrows, handicap stall markings, and crosshatching.

B. Verify existing dimensions and details prior to start of pavement-marking Work. Notify Architect/Engineer of conditions found to be different than those indicated in the Contract Documents. Architect/Engineer will review situation and inform Contractor of changes.

C. Comply with Owner's limitations and restrictions for Site use and accessibility.

D. Environmental Limitations: Apply pavement-marking paint when existing and forecast weather conditions permit pavement-marking paint to be applied according to pavement-marking-paint manufacturer's written instructions and warranty requirements.
   1. Do not apply when substrate or ambient temperature is outside of range recommended by pavement-marking-paint manufacturer.
   2. Do not apply to damp or wet substrate.

E. Handle and apply materials in strict accordance with safety requirements required by pavement-marking-paint manufacturer; Safety Data Sheets; and local, state, and federal rules and regulations. Maintain Safety Data Sheets with materials in storage area and available for ready reference on Site.

F. Maintain adequate ventilation during preparation and application of paint materials.

1.6 CHANGES IN WORK

A. During rehabilitation work, existing conditions may be encountered which are not known or are at a variance with the Contract Documents. Such conditions may interfere with the Work and may consist of damage or deterioration of the substrate or surrounding materials that could jeopardize the integrity or performance of the Work.
   1. Notify Architect/Engineer of conditions that may interfere with the proper execution of the Work or jeopardize the performance of the Work prior to proceeding with the Work.

1.7 WARRANTY

A. Applicator's Warranty:
   1. Prepare surface and replace pavement markings that fail in adhesion or cohesion or have unsatisfactory appearance, such as fading.
   2. Warranty does not include deterioration or failure of pavement-marking paint due to failure of substrate prepared according to requirements, fire, vandalism, or snow plow damage.
   3. Warranty Period: One year after Substantial Completion date.

PART 2 PRODUCTS

2.1 PAVEMENT-MARKING PAINT

A. Paint:
   1. Chlorinated-rubber pavement-marking paint conforming to requirements of TT-P-115;
   2. Oil/alkyd pavement-marking paint conforming to requirements of A-A-2886 and TT-P-115; or
   3. Acrylic-latex pavement-marking paint conforming to requirements of TT-P-1952
   4. 20-minute-maximum no-pick-up time.
   5. Colors: To match existing, approved in advance in writing by Owner's Representative.

PART 3 EXECUTION

A. Examine substrates and conditions with applicator for compliance with requirements and other conditions affecting application or performance of pavement-marking Work.
   1. Ensure that work done by other trades is complete and ready for pavement-marking Work.
   2. Verify that areas and conditions under which pavement-marking Work is to be performed permit proper and timely completion of Work.
   3. Notify Architect/Engineer in writing of conditions which may adversely affect application or performance of pavement-marking Work and recommend corrections.
   4. Do not proceed with pavement-marking Work until adverse conditions have been corrected and reviewed by Architect/Engineer.
   5. Commencing pavement-marking Work constitutes acceptance of Work surfaces and conditions.

3.2 PROTECTION

A. Take precautions to ensure safety of people, including building users, passers-by, and workmen, and animals, and protection of property, including adjacent building elements, landscaping, and motor vehicles.

B. Prevent construction debris and other materials from coming into contact with pedestrians, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

C. Limit access to Work areas.

D. Mask adjoining surfaces not receiving pavement-marking paint to prevent spillage and overspray affecting other construction.

E. Provide and maintain barricades for vehicular and pedestrian traffic at pavement-marking-paint areas during application and curing period.

F. Assume responsibility for injury to persons or damage to property due to Work, and remedy at no cost to Owner.

3.3 EQUIPMENT

A. Application equipment recommended by pavement-marking-paint manufacturer.

3.4 SURFACE PREPARATION

A. Clean and prepare substrate according to pavement-marking-paint manufacturer's written instructions. Provide clean, dust-free, and dry substrate.
   1. Verify that concrete and traffic coating has cured and aged for minimum time period recommended by pavement-marking-paint manufacturer.
   2. Verify that substrate is sound and is visibly dry and free of moisture.
   3. Remove grease, oil, asphalt solids, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from substrate.
   4. Thoroughly sweep substrate and clean with oil-free compressed air.

B. Examine substrate with applicator to ensure that it is properly prepared and ready to receive pavement-marking paint.
   1. Notify Architect/Engineer in writing of conditions which may adversely affect application or performance of pavement-marking paint and recommend corrections.
   2. Do not proceed with pavement-marking-paint application until adverse conditions have been corrected and reviewed by Architect/Engineer.
   3. Commencing application constitutes acceptance of Work surfaces and conditions.

3.5 APPLICATION

A. Allow sealant, replacement materials, and skim coats to fully cure prior to applying pavement-marking paint.

B. Apply pavement-marking paint according to pavement-marking-paint manufacturer's written recommendations.
   1. Apply one coat with minimum wet film thickness of 15 mils, or two coats, each with minimum wet film thickness of 15 mils**,** per manufacturer recommendations, to provide solid lines and markings with uniform, sharp, clean edges.
   2. Use masking and stencils.
   3. Touch-up lines and markings to provide clean, straight edges.
   4. Provide and maintain hand-held, all-purpose fire extinguisher near paint storage and mixing area.
   5. Provide solid parking stall stripes, center numerals, and other markings to match existing sizes, font, and other characteristics, as approved by Architect/Engineer.

3.6 CLEANING

A. At the end of each workday, clean Site and Work areas and place rubbish, empty cans, rags, and other discarded materials in appropriate containers.

B. After completing pavement-marking Work:
   1. Clean or block out overspray, splatter, spillage, soiling, and paint on unintended locations.
      a. Use cleaning agents and procedures recommended by manufacturer of affected surface. Exercise care to avoid scratching or damage to surfaces.
      b. Block out with opaque pavement-marking paint matching substrate color.
   2. Repair surfaces stained, marred, or otherwise damaged during pavement-marking Work.
   3. Clean up debris and surplus materials and remove from Site.

C. Waste Management:

1. Collect surplus materials that cannot be reused and deliver to recycling or disposal facility.
2. Treat materials that cannot be reused as hazardous waste and dispose of in an appropriate manner.

END OF SECTION

Wiss, Janney, Elstner Associates, Inc.
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May 10, 2023 - DRAFT

Aaron Ford
Parking Systems Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48009

North Old Woodward Parking Structure 2023 Repair Project - Bid Tabulation

WJE No. 2022.0566.1

Dear Mr. Ford:

As requested, Wiss, Janney, Elstner Associates, Inc. (WJE) has tabulated the competitive bid responses for the North Old Woodward Parking Structure 2023 Repair Project in Birmingham, Michigan. This letter summarizes the received bids, which are outlined in Table 1.

OVERVIEW OF BIDS

Six bids were submitted; the bids were submitted by Pullman SST, Inc., RAM Construction, DRV Contractors, Mark 1 Restoration, Smith's Waterproofing, and Fasdecks, Inc. Bids were due on Friday, April 28, 2023. Base bid totals ranged from $397,700 to $848,215. RAM Construction was the low bidder, and Fastdecks, Inc. was the highest bidder. The spread between the two low bidders is $450,515. Mark 1 Restoration was the second lowest bidder at $427,550, and Smith's Waterproofing, who was the contractor during the previous repair project at this structure, was the third lowest bidder at $427,750. The alternate bid, which includes architectural coating throughout the structure, ranged from $319,520 to $552,000. RAM construction was the low bidder, and DRV was the highest bidder. Mark 1 was the second lowest bidder, and Smith's waterproofing was the third lowest bidder. RAM was the lowest bidder overall, with the base bid and alternate bid totaling $717,220.

The received bids display some variety in pricing, bonding, and schedule. The variation may be a result of several factors including, but not limited to, current work backlogs, the timing of this bid event, and labor and material shortages. WJE outlines additional items below that should be considered.

The provided construction duration for RAM, Mark 1, and Smith's Waterproofing were 100 days, 150 days, and 150 days, respectively. Please note that weather conditions and cold temperatures will have a significant impact on the actual project schedule for this work. Further, the actual project completion date will vary based on the permit approval process, issuance of a written notice to proceed, material availability and lead times, and other factors.

BID ANALYSIS

RAM's base bid includes unit prices for some work items that are lower than WJE anticipated based on our experience with similar work, and that are lower than the other submitted bids. These work items

include the general conditions and stair railing post base replacement. Additionally, RAM's bid included a timeline that is shorter than the other bidders and shorter than WJE anticipated.

RAM's alternate bid total is significantly lower than four out of the other five bids (Mark 1 Restoration was similar to Ram), and it is only $78,000 lower than their base bid. It should be noted that the architectural coating alternate is an aesthetic decision made by the City, and the coating will require maintenance.

[PLACEHOLDER – DISCUSSION ABOUT INTERVIEW RESPONSES]

CONTRACTOR QUALIFICATIONS

We understand that the City is verifying contractor references that were submitted with the bids. WJE has successful prior project experience with all bidders. The Contract Documents require minimum experience levels for the construction superintendent and various installers, which will be verified by WJE prior to work commencement.

RECOMMENDATIONS

In our opinion, based on our review of the submitted bids, all bidders should be able to deliver a successful project for this scope. We find no cause at this time to not proceed with the low bidder. Regardless of who is selected, we recommend engineering oversight and periodic inspection be performed during the work to help ensure the work is being performed in accordance with intent of the Contract Documents.

Please let us know if you have further questions.

Sincerely,

Matthew Lewis, PE
Senior Associate and Project Manager

Enclosure:

- *Table 1 – Bidder Comparison*

WJE

North Old Woodward
Bid Summary

Items				RAM Construction		Smiths Waterproofing LLC		M one United Inc. dba: Mark 1 Restoration Services		DRV Contractors		Pullman SST, Inc		Fastdecks, Inc	
Base Bid															
Lump Sum Bid Items				**Total Price**		**Total Price**		**Total Price**		**Total Price**		**Total Price**		**Total Price**	
L1	General Conditions			$14,000.00		$97,000.00		$46,600.00		$23,800.00		$50,750.00		$50,500.00	
L2	Performance Bond and labor and Material Payment Bond			$5,000.00		$15,000.00		$7,000.00		$3,500.00		$14,250.00		$16,500.00	
L3	Installation of traffic-bearing membrane (traffic coating) in the three stair towers			$20,000.00		$46,000.00		$22,000.00		$18,000.00		$32,750.00		$90,000.00	
L4	Installation of new expansion joint compression seal at the three roof level stair towers and one show shoot			$19,000.00		$27,000.00		$11,750.00		$54,400.00		$10,600.00		$8,500.00	
L5	Replace damaged and missing drain covers,and clean drain bowls			$4,000.00		$8,000.00		$4,000.00		$15,500.00		$14,300.00		$6,500.00	
	Subtotal of Lump Sum Bid Items L1 through L8			**$62,000.00**		**$193,000.00**		**$91,350.00**		**$115,200.00**		**$122,650.00**		**$172,000.00**	
Allowances															
L6	Replace cracked and damaged drain lines at new drains with new cast iron pipes			$10,000.00		$10,000.00		$10,000.00		$10,000.00		$10,000.00		$10,000.00	
	Sum of Allowance Bid Items			**$10,000.00**		**$10,000.00**		**$10,000.00**		**$10,000.00**		**$10,000.00**		**$10,000.00**	
Unit Price Bid Items				**Unit Price**				**Unit Price**				**Unit Price**			
U1	Concrete overlay repair (Keynote 7)	2,000	SF	$26.00	$52,000.00	$20.00	$40,000.00	$38.00	$76,000.00	$32.00	$64,000.00	$35.70	$71,400.00	$50.00	$100,000.00
U2	Partial-depth topside concrete slab repair (Keynote 8)	900	SF	$36.00	$32,400.00	$25.00	$22,500.00	$38.00	$34,200.00	$35.00	$31,500.00	$49.50	$44,550.00	$80.00	$72,000.00
U3	Partial-depth underside concrete slab repair (Keynote 9)	100	SF	$75.00	$7,500.00	$55.00	$5,500.00	$80.00	$8,000.00	$98.00	$9,800.00	$120.00	$12,000.00	$200.00	$20,000.00
U4	Concrete curb repair (Keynote 10)	100	SF	$50.00	$5,000.00	$40.00	$4,000.00	$40.00	$4,000.00	$40.00	$4,000.00	$97.00	$9,700.00	$125.00	$12,500.00
U5	Slab edge concrete repair (Keynote 11)	100	SF	$75.00	$7,500.00	$45.00	$4,500.00	$75.00	$7,500.00	$275.00	$27,500.00	$110.00	$11,000.00	$200.00	$20,000.00
U6	Slab on ground repair (Keynote 12)	50	SF	$48.00	$2,400.00	$50.00	$2,500.00	$40.00	$2,000.00	$50.00	$2,500.00	$92.00	$4,600.00	$100.00	$5,000.00
U7	Formed vertical concrete repair (Keynote 13)	150	SF	$105.00	$15,750.00	$45.00	$6,750.00	$75.00	$11,250.00	$95.00	$14,250.00	$115.00	$17,250.00	$200.00	$30,000.00
U8	Stair tower - partial-depth topside concrete slab repair (Keynote 14)	500	SF	$40.00	$20,000.00	$20.00	$10,000.00	$45.00	$22,500.00	$45.00	$22,500.00	$65.00	$32,500.00	$150.00	$75,000.00
U9	Stair tower - full-depth concrete slab repair (Keynote 15)	150	SF	$70.00	$10,500.00	$55.00	$8,250.00	$100.00	$15,000.00	$100.00	$15,000.00	$165.00	$24,750.00	$200.00	$30,000.00
U10	Stair tower stairs - partial-depth concrete topside repair (Keynote 16)	400	SF	$42.00	$16,800.00	$20.00	$8,000.00	$45.00	$18,000.00	$55.00	$22,000.00	$96.00	$38,400.00	$175.00	$70,000.00
U11	Stair tower stairs - partial-depth concrete underside repair (Keynote 17)	50	SF	$105.00	$5,250.00	$55.00	$2,750.00	$100.00	$5,000.00	$200.00	$10,000.00	$160.00	$8,000.00	$300.00	$15,000.00
U12	Stair tower railing post base replacement (Keynote 18)	35	EA	$260.00	$9,100.00	$200.00	$7,000.00	$200.00	$7,000.00	$460.00	$16,100.00	$870.00	$30,450.00	$1,200.00	$42,000.00
U13	Supplemental epoxy-grouted steel dowels	750	EA	$45.00	$33,750.00	$10.00	$7,500.00	$25.00	$18,750.00	$30.00	$22,500.00	$22.00	$16,500.00	$35.00	$26,250.00
U14	Supplemental steel reinforcement	2	ton	$5,500.00	$11,000.00	$1,000.00	$2,000.00	$2,500.00	$5,000.00	$14,930.00	$29,860.00	$10,250.00	$20,500.00	$6,732.50	$13,465.00
U15	Localized replacement of concrete masonry units (Keynote 21)	20	EA	$45.00	$900.00	$65.00	$1,300.00	$100.00	$2,000.00	$100.00	$2,000.00	$80.00	$1,600.00	$200.00	$4,000.00
U16	Localized repointing of masonry (Keynote 22)	300	LF	$8.00	$2,400.00	$12.00	$3,600.00	$10.00	$3,000.00	$20.00	$6,000.00	$8.00	$2,400.00	$15.00	$4,500.00
U17	Localized replacement of clay masonry bricks (Keynote 23)	60	EA	$40.00	$2,400.00	$65.00	$3,900.00	$40.00	$2,400.00	$100.00	$6,000.00	$40.00	$2,400.00	$100.00	$6,000.00
U18	Replace sealant at concrete overlay control joints (Keynote 24)	10,000	LF	$4.50	$45,000.00	$5.00	$50,000.00	$5.00	$50,000.00	$5.00	$50,000.00	$4.75	$47,500.00	$6.00	$60,000.00
U19	Replace sealant at cove (Keynote 25)	1,000	LF	$4.50	$4,500.00	$5.00	$5,000.00	$5.00	$5,000.00	$6.00	$6,000.00	$7.20	$7,200.00	$7.50	$7,500.00
U20	Rout and seal cracks in slab (Keynote 26)	3,500	LF	$4.50	$15,750.00	$5.00	$17,500.00	$4.00	$14,000.00	$3.50	$12,250.00	$5.20	$18,200.00	$4.00	$14,000.00
U21	Drain replacement (Keynote 27)	10	EA	$2,500.00	$25,000.00	$1,000.00	$10,000.00	$1,500.00	$15,000.00	$1,230.00	$12,300.00	$1,000.00	$10,000.00	$3,500.00	$35,000.00
U22	Brick masonry cleaning (Keynote 28)	400	SF	$2.00	$800.00	$5.00	$2,000.00	$2.00	$800.00	$10.00	$4,000.00	$2.50	$1,000.00	$10.00	$4,000.00
	Subtotal of Base Bid Items U1 through U22			**$325,700.00**		**$224,550.00**		**$326,400.00**		**$390,060.00**		**$431,900.00**		**$666,215.00**	
	TOTAL			**$397,700.00**		**$427,550.00**		**$427,750.00**		**$515,260.00**		**$564,550.00**		**$848,215.00**	
Alternates															
A1	Architectural coating (non-elastomeric) at the specified locations			$319,520.00		$457,000.00		$320,000.00		$552,000.00		$518,000.00		$523,600.00	
	Sum of Alternates			**$319,520.00**		**$457,000.00**		**$320,000.00**		**$552,000.00**		**$518,000.00**		**$523,600.00**	

SECTION 00 41 44
BID FORM

PROJECT: 2023 North Old Woodward Parking Structure Repair Project
333 North Old Woodward Ave.
Birmingham, Michigan

BID DUE: Refer to City of Birmingham bidding instructions.

SUBMITTED TO: Aaron Ford
City of Birmingham
Email: aford@bhamgov.org

COPY TO: Wiss, Janney, Elstner Associates, Inc.
Attn: Mr. Justin Barden, PE
Email: jbarden@wje.com
Phone: 248-593-0900

Wiss, Janney, Elstner Associates, Inc.
Attn: Mr. Matthew Lewis, PE
Email: mlewis@wje.com
Phone: 248-593-0900

SUBMITTED BY: RAM Construction Services of Michigan, Inc.
Bidder name
13800 Eckles Road
Bidder address
Livonia, MI 48150

April 28, 2023
Date

Bidder certifies that:

A. Bidder has carefully read and understands Bidding Documents;
B. Bidder has visited site and become familiar with local conditions under which Work is to be performed, including verifying visible conditions, such as dimensions, materials, and attachments to remain, on existing facility; and
C. Bidder has correlated Bidder's personal observations with requirements of Bidding Documents. Bidding Documents include Project Manual and Drawings prepared by WJE and dated March 17, 2023 and addenda, as well as bidding documents prepared by the City of Birmingham.

Bidder shall notify Architect/Engineer of discrepancies, omissions, conflicts, or unclear meaning within Contract Documents; Architect/Engineer will interpret Contract Documents and, if necessary, issue written addendum. Contracted Work will be based on Architect/Engineer's interpretation of Contract Documents.

Bidder acknowledges receipt of following addenda.

No. 1 Dated April 4, 2023
No._____ Dated_____

Bidder may not withdraw Bid within 60 calendar days after Bid Due date.

Bidder agrees that Owner has right to waive informalities and irregularities in Bid received and to accept Bid which, in Owner's judgment, is in Owner's own best interests.

NOTE: Bidder shall state Unit Price Bid and Total Bid amount for each unit price item. Total Bid amount for each item shall be product of Estimated Quantity multiplied by Unit Price. Unit Price Bid and Total Bid amounts shall be written numerically in spaces provided.

GRAND TOTAL shall be sum of Total Bid amounts for various items and will be Contract Sum written in Owner-Contractor Agreement.

All words and numbers shall be written in non-erasable medium.

LUMP SUM PORTION OF BASE BID
Per Section 01 11 00 - Summary of Work

	Type of Work	Total Bid
1.	General Conditions	$ 14,000.00
2.	Performance Bond and Labor and Material Payment Bond	$ 5,000.00
3.	Installation of traffic-bearing membrane (traffic coating) in the three stair towers	$ 20,000.00
4.	Installation of new expansion joint compression seal at the three roof level stair towers and one snow shoot	$ 19,000.00
5.	Replace damaged and missing drain covers, and clean drain bowls	$ 4,000.00
	Sum of Lump Sum Bid Items 1 through 5: **Subtotal L1:**	$ 62,000.00

ALLOWANCE PORTION OF BASE BID
Per Section 01 21 00 - Allowances

	Type of Work	Total Bid
6.	Replace cracked and damaged drain lines at new drains with new cast iron pipes (allowance)	$ 10,000
	Sum of Allowance Bid Items: **Subtotal A1:**	$ 10,000

UNIT PRICE PORTION OF BASE BID
Per Section 01 22 00 - Unit Prices

Item	Description	Est. Qty.	Units	Unit Price	Total Bid
7.	Concrete overlay repair (Keynote 7)	2000	SF	$ 26.00	$ 52,000.00
8.	Partial-depth topside concrete slab repair (Keynote 8)	900	SF	$ 36.00	$ 32,400.00
9.	Partial-depth underside concrete slab repair (Keynote 9)	100	SF	$ 75.00	$ 7,500.00
10.	Concrete curb repair (Keynote 10)	100	SF	$ 50.00	$ 5,000.00
11.	Slab edge concrete repair (Keynote 11)	100	SF	$ 75.00	$ 7,500.00
12.	Slab on ground repair (Keynote 12)	50	SF	$ 48.00	$ 2,400.00
13.	Formed vertical concrete repair (Keynote 13)	150	SF	$ 105.00	$ 15,750.00
14.	Stair tower - partial-depth topside concrete slab repair (Keynote 14)	500	SF	$ 40.00	$ 20,000.00
15.	Stair tower - full-depth concrete slab repair (Keynote 15)	150	SF	$ 70.00	$ 10,500.00
16.	Stair tower stairs - partial-depth concrete topside repair (Keynote 16)	400	SF	$ 42.00	$ 16,800.00
17.	Stair tower stairs - partial-depth concrete underside repair (Keynote 17)	50	SF	$ 105.00	$ 5,250.00
18.	Stair tower railing post base replacement (Keynote 18)	35	EA	$ 260.00	$ 9,100.00
19.	Supplemental epoxy-grouted steel dowels	750	EA	$ 45.00	$ 33,750.00
20.	Supplemental steel reinforcement	2	ton	$ 5,500.00	$ 11,000.00
21.	Localized replacement of concrete masonry units (Keynote 21)	20	EA	$ 45.00	$ 900.00
22.	Localized repointing of masonry (Keynote 22)	300	LF	$ 8.00	$ 2,400.00
23.	Localized replacement of clay masonry bricks (Keynote 23)	60	EA	$ 40.00	$ 2,400.00
24.	Replace sealant at concrete overlay control joints (Keynote 24)	10,000	LF	$ 4.50	$ 45,000.00
25.	Replace sealant at cove (Keynote 25)	1,000	LF	$ 4.50	$ 4,500.00
26.	Rout and seal cracks in slab (Keynote 26)	3,500	LF	$ 4.50	$ 15,750.00
27.	Drain replacement (Keynote 27)	10	EA	$ 2,500.00	$ 25,500.00
28.	Brick Masonry Cleaning (Keynote 28)	400	SF	$ 2.00	$ 800.00
	Sum of Unit Price Bid Items 7 through 28:			**Subtotal U1:**	$ 325,700.00

SUMMARY PORTION OF BASE BID

Subtotal L1: $ 62,000.00

Subtotal A1: $ 10,000

Subtotal U1: $ 325,700.00

Grand Total (Sum of Subtotals): $ 397,700.00

Grand Total (in words):

Three hundred ninety seven thousand seven hundred Dollars

CONSTRUCTION SCHEDULE

The Contractor agrees to commence work under the Contract on or before a date to be specified in a written "Notice to Proceed." The Contractor proposes to complete all Base Bid work within 100 calendar days from the date specified in the Notice to Proceed.

The selected Contractor shall submit a detailed construction/work sequence schedule describing the work to be performed in each phase on an event by event basis, together with an estimate of time necessary to complete each phase of the Project.

ALTERNATE PORTION OF BASE BID

Per Section 01 11 00 - Summary of Work

Alternate bid amount is net adjustment to Contract Sum to incorporate Alternate into Work.

Type of Work	Total Bid
29. Alternate 1 – Architectural coating (non-elastomeric) at the following locations: ▪ Cast in place concrete columns. ▪ Cast in place concrete walls, including all faces of the internal walls at the roof level adjacent to the ramp, at the inside/interior face of the perimeter walls at the roof level, and at the inside/interior face of the perimeter and internal ramp walls at the first level. ▪ Cast in place concrete ceilings (underside of elevated slabs). ▪ Cast in place concrete stairs and landings (underside of landings, underside of risers, and exposed vertical surfaces (sides) of risers and landings). ▪ Concrete masonry units (CMU) at the interior-facing walls of the stair towers ▪ Concrete masonry units (CMU) at the exterior- (garage) facing walls of the mechanical rooms, restroom, and offices. ▪ Steel railings within the stair towers, including the new railing post base plates.	$ 319,520.00
Sum of Alternates: **Subtotal A1:**	$ 319,520.00

SUBCONTRACTORS

Indicate portion(s) of work to be completed by a subcontractor and name of subcontractor:

Portion of Work	Subcontractor (if used)
Waterproofing	N/A
Concrete Repairs	N/A
Caulking	N/A
Plumbing	N/A
Painting	Perkins Painting
Other	N/A

BIDDER'S ENDORSEMENT

I hereby certify that all statements herein are made on behalf of _____

RAM Construction Services of Michigan, Inc.
(Name and Address of Corporation, Partnership, or Person submitting bid)

of the City of Livonia State of Michigan

that I have examined and carefully prepared this Bid from the plans and specifications, and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

Robert A Mazur
(Signature) Robert A Mazur
Assistant Director
(Title)

END OF SECTION 00 41 44

ATTACHMENT B - BIDDER'S AGREEMENT
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

In submitting this proposal, as herein described, the Contractor agrees that:

1. They have carefully examined the specifications, terms and Agreement of the Invitation to Bid and all other provisions of this document and understand the meaning, intent, and requirement of it.

2. They will enter into a written contract and furnish the item or items in the time specified in conformance with the specifications and conditions contained therein for the price quoted by the proponent on this proposal.

Robert A. Mazur	April 28, 2023
PREPARED BY (Print Name)	**DATE**
Assistant Director	April 28, 2023
TITLE	**DATE**
	shamill@ramservices.com
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
RAM Construction Services of Michigan, Inc.	
COMPANY	
13800 Eckles Road, Livonia MI 48150	313-268-7484
ADDRESS	**PHONE**
RAM Construction Services of Michigan, Inc.	734-464-3800
NAME OF PARENT COMPANY	**PHONE**
13800 Eckles Road, Livonia, MI 48150	
ADDRESS	

ATTACHMENT C - COST PROPOSAL

For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

In order for the bid to be considered valid, this form must be completed in its entirety. The cost for the Scope of Work as stated in the Invitation to Bid documents shall be a lump sum, as follows:

Attach technical specifications for all proposed materials as outlined in the Contractor's Responsibilities section of the ITB (p. 6)

COST PROPOSAL	
ITEM	**BID AMOUNT**
Materials & Equipment	$ 131,241.00
Labor	$ 266,459.00
Miscellaneous (Attach Detailed Description)	$ N/A
TOTAL BID AMOUNT	$ 397,700.00
ADDITIONAL BID ITEMS	
Alternate #1 Architectural Coatings	$ 319,520.00
	$
GRAND TOTAL AMOUNT	$ 717,220.00

UNIT COST BID ITEMS	
See attached unit price breakdown	$ **per**

Firm Name RAM Construction Services of Michigan, Inc.

Authorized signature Robert A. Mazur Date April 28, 2023

Robert A. Mazur, Assistant Director

ATTACHMENT D - IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

Robert A. Mazur	April 28, 2023
PREPARED BY (Print Name)	**DATE**
Assistant Director	April 28, 2023
TITLE	**DATE**
Robert A Mazur	shamill@ramservices.com
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
RAM Construction Services of Michigan, Inc.	
COMPANY	
13800 Eckles Road, Livonia, MI 48150	313-268-7484
ADDRESS	**PHONE**
RAM Construction Services of Michigan, Inc.	734-464-3800
NAME OF PARENT COMPANY	**PHONE**
13800 Eckles Road, Livonia, MI 48150	
ADDRESS	
38-1164400	
TAXPAYER I.D.#	

PERKINS✦PAINTING

43422 West Oaks Dr. Suite 119 / Novi, MI. 48377 / (248)-238-0440
www.perkinspainting.com

RAM Construction Services of MI, Inc. ***April 26, 2023***

13800 Eckles Road
Livonia, Michigan 48150
(734) 464-3800 Ext. 240 Fax (734) 437-6206

We at Perkins Painting would like to thank you for the opportunity to quote on the **painting – 333 N. old Woodward – Birmingham, MI.** Perkins Painting prides itself on providing the highest quality services, which in return leads to many satisfied repeat customers. We propose to furnish labor, materials, and tools to paint according to the job specifications. Necessary touch ups will be made in areas where required after an inspection. We propose to do the following according to specifications:

Scope of Work:

29. Alternate 1 – Architectural coating (non-elastomeric) at the following locations:
    - Cast in place concrete columns.
    - Cast in place concrete walls, including all faces of the internal walls at the roof level adjacent to the ramp, at the inside/interior face of the perimeter walls at the roof level, and at the inside/interior face of the perimeter and internal ramp walls at the first level.
    - Cast in place concrete ceilings (underside of elevated slabs).
    - Cast in place concrete stairs and landings (underside of landings, underside of risers, and exposed vertical surfaces (sides) of risers and landings).
    - Concrete masonry units (CMU) at the interior-facing walls of the stair towers
    - Concrete masonry units (CMU) at the exterior- (garage) facing walls of the mechanical rooms, restroom, and offices.
    - Steel railings within the stair towers, including the new railing post base plates.

Price for Painting: $277,843.00

Notes: All work to be performed during normal working hours.

Exclusions: All other areas not mentioned & sand blasting.

RAM CONSTRUCTION SERVICES

Major Jobs Closed 2016-2023

Project Name	Company Name	Scope of Work	Contract Amount	Closed	RAM Personnel
Wayne State University 2015 P.S. #1 Renovations	Wayne State University	Concrete Repairs, Expansion Joints, Joint Sealants, Traffic Coating	$ 2,171,820.00	03/07/2017	100%
University of Wisconsin - Milwaukee Ramps	Department of Administration Division of Facilities	Concrete Repairs	$ 1,851,130.00	12/08/2020	100%
U of M Wallstreet West Parking Structure	Spence Brothers	Dampproofing, Expansion Joints, Joint Sealants, Sandblasting, Traffic Coating, Waterproofing	$ 1,539,761.94	10/04/2021	100%
Wayne State University Parking Structure #1 Reno	Wayne State University	Caulking, Concrete Repairs, Expansion Joints, Traffic Coating	$ 1,375,000.00	01/05/2017	100%
Quad Parking Ramp Repair	Div of State Facilities Development	Concrete Repairs	$ 1,129,796.81	04/06/2017	100%
Coleman A. Young-Expansion Joint/Waterproofing	Detroit - Wayne Joint Building Authority	Expansion Joints	$ 990,705.00	12/26/2017	100%
Wayne State University Parking Structure #2 Reno	Wayne State University	Caulking, Concrete Repairs, Expansion Joints, Traffic Coating	$ 828,950.00	01/05/2017	100%
777 / 789 E. Eisenhower Parking Garage Restoration	CBRE, Inc.	Concrete Repairs, Expansion Joints, Joint Sealants, Painting, Sealant, Traffic Coating	$ 741,052.00	11/29/2016	100%
GRCC Bostwick Parking Structure Restoration 2016	Grand Rapids Community College	Concrete Repairs, Epoxy Injection, Expansion Joints, Joint Sealants	$ 657,331.00	08/27/2016	100%
U of M Catherine Street Parking Structure	University of Michigan	Concrete Repairs	$ 642,205.00	12/19/2016	100%
U of M Medical Center P2	University of Michigan	Concrete Repairs	$ 619,602.40	11/11/2022	100%
Toledo Collins Park LSPS	Kokosing Industrial, Inc.	Air Barrier, Caulking, Fire Resistive, Stopping & Penetration Work, Masonry Restoration	$ 565,392.17	04/02/2019	100%
Parking Ramps 1235&6 2015 Restoration	Michigan State University	Caulking, Concrete Repairs, Expansion Joints, Joint Sealants, Traffic Coating	$ 561,361.06	03/07/2017	100%
Univerity of Toledo East/West Garage Repairs 2016	University of Toledo	Concrete Repairs	$547,480.00	12/08/2016	100%

RAM CONSTRUCTION SERVICES

COMPLETED PROJECT

JACK CASINO GARAGE

CLEVELAND, OH

SCOPES OF WORK:
CONCRETE REPAIRS
EXPANSION JOINTS
POST TENSION REPAIR

LOCATION:
CLEVELAND, OH

VALUE:
$168,388

OWNER:
JACK ENTERTAINMENT
100 PUBLIC SQUARE
ERIC TURNER
216-213-7040

ARCHITECT:
OSBORN ENGINEERING

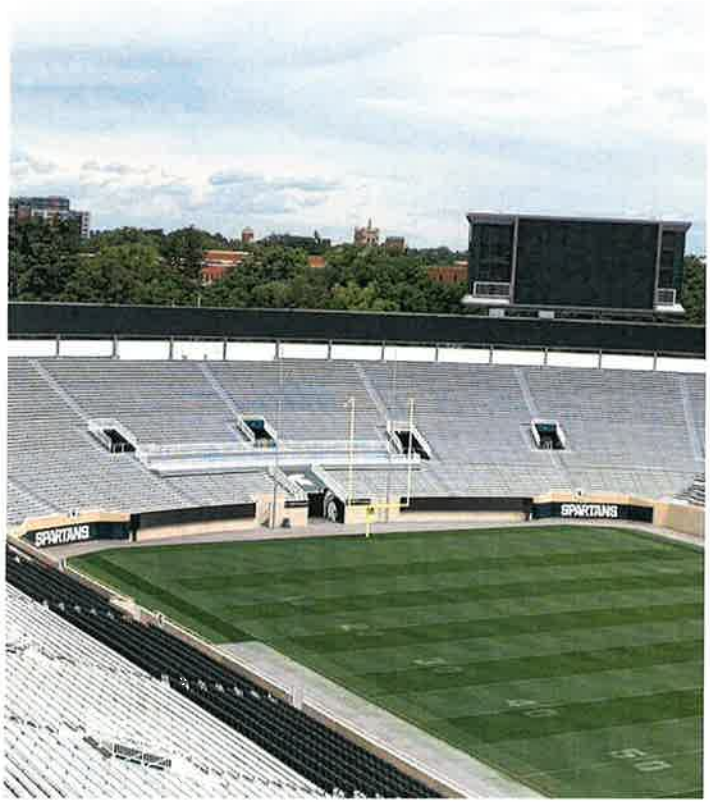
PROJECT STAFF:
PROJECT MANAGER - JERRY PHENNEY

RAM CONSTRUCTION SERVICES

COMPLETED PROJECT

MSU SPARTAN STADIUM NORTH END EAST SIDE BOWL RESTORATION

EAST LANSING, MI



SCOPES OF WORK:
CONCRETE REPAIRS
TRAFFIC COATING
CAULKING

LOCATION:
1123 E. WASHINGTON STREET
ANN ARBOR, MI 48104

VALUE:
$1,281,275

OWNER:
MICHIGAN STATE UNIVERSITY
1147 CHESTNUT ROAD, ROOM 101
EAST LANSING, MI 48824
JASON VAN ZEE
517-353-6358
VANZEEJAMSU.EDU

ARCHITECT:
WALKER CONSULTANTS

PROJECT STAFF:
PROJECT MANAGER - DAN CANEDO

RAM CONSTRUCTION SERVICES

COMPARABLE PROJECTS

ANN ARBOR PARKING STRUCTURE RESTORATION 2020

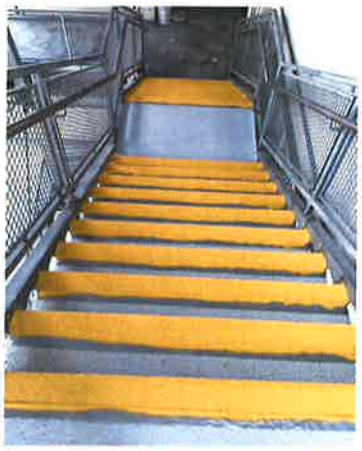
ANN ARBOR, MI

SCOPES OF WORK:
CONCRETE REPAIRS
EXPANSION JOINTS
TRAFFIC COATING

LOCATION:
1123 E. WASHINGTON STREET
ANN ARBOR, MI 48104

VALUE:
$1,175,075.26

OWNER:
ANN ARBOR DOWNTOWN DEVELOP AUTHORITY
150 SOUTH FIFTH STREET, SUITE 301
ANN ARBOR, MI 48104
JADA HAHLBROCK
734-997-1309
JHAHLBROCK@A2DDA.ORG



ARCHITECT:
WGI, INC.

PROJECT STAFF:
PROJECT MANAGER - DAN CANEDO & DANIEL LIEBAU

RAM®
CONSTRUCTION SERVICES

CURRENT PROJECT

DMC CENTER DECK PARKING STRUCTURE

DETROIT, MI

SCOPES OF WORK:
CONCRETE RESTORATION
CAULKING
COATING

LOCATION:
13990 JOHN R
DETROIT, MI 48201

VALUE:
$4,658,553

OWNER:
TENET HEALTHCARE
2020 FIELDSTONE PARKWAY
DAVID LIEB
DLIEB2DMC.ORG

ARCHITECT:
WALKER CONSULTANTS

PROJECT STAFF:
PROJECT MANAGER - TOM SZABO

RAM CONSTRUCTION SERVICES

CURRENT PROJECT

SOUTHFIELD TOWN CTR PKG STR CRITICAL REPAIRS 2021

SOUTHFIELD, MI

SCOPES OF WORK:
CONCRETE REPAIRS
EXPANSION JOINTS
STRUCTURE RENOVATION

LOCATION:
1000-4000 TOWN CENTER
SOUTHFIELD, MI 48075

VALUE:
$1,530,150

OWNER:
TRANSWESTERN
3000 TOWN CENTER, STE 2500
SOUTHFIELD, MI 48075
NICK AMATO
734-464-3800
NICK.AMATO@TRANSWESTERN.COM

ARCHITECT:
N/A

PROJECT STAFF:
PROJECT MANAGER - DAN CALLAHAN

RAM®
CONSTRUCTION SERVICES

CURRENT PROJECT

RIVERTOWN CROSSINGS PEDESTRIAN BRIDGE-REHABILITATION

GRANDVILLE, MI

SCOPES OF WORK:
CONCRETE REPAIRS
CONCRETE SURFACE COATINGS
EXPANSION JOINTS
JOINT SEALANTS
TRAFFIC COATING

LOCATION:
RIVERTOWN CROSSINGS
3700 RIVERTOWN PARKWAY
GRANDVILLE, MI 49418

VALUE:
$226,000

OWNER:
BROOKFIELD PROPERTIES
3700 RIVERTOWN PARKWAY SW
GRANDVILLE, MI 49418
HANK STUMP
313-257-7540
HANK.STUMP@BPRETAIL.COM

ARCHITECT:
N/A

PROJECT STAFF:
PROJECT MANAGER - DAN CANEDO

RAM®
CONSTRUCTION SERVICES

COMPLETED PROJECT

EDISON BUILDING PLAZA REPAIRS

TOLEDO, OH

SCOPES OF WORK:
CONCRETE REPAIRS
POST TENSIONING REPAIRS
WATERPROOFING-CRYSTALLINE

VALUE:
$813,564.08

OWNER:
PROMEDICA
100 MADISON AVE
TOLEDO, OH 43606
YURI OSTERHOUT
567-585-8156
YURI.OSTERHOUT@PROMEDICA.ORG

ARCHITECT:
WALKER PARKING CONSULTANTS

PROJECT STAFF:
PROJECT MANAGER - DAN CANEDO, MIKE HAF & TOM SZABO

20 CHESTNUT PARKING DECK REHABILITATION 2020

Wyandotte, Michigan

Services Provided

Joint sealant replacement
Concrete repair (partial and full depth floor)
Gutter system removal
raffic coating installation
Parking stall striping
Leak repairs
Overhead hazard knockdowns

Owner

General Contractor

20 Chestnut is a high rise condo association in the city of Wyandotte, MI that has a small two story parking structure on the property for the condo owners to utilize. At some point in the past few years some of the tenets had noticed large patches of concrete damage appearing on the upper level floor and had noticed leaks that had increased in frequency focused around the beam centered in the garage. After some observation and investigatory visits it was determined that the existing traffic coating was beyond its life and was failing, the underlying joint sealant was becoming debonded from the concrete allowing water to infiltrate, and recent concrete patches had not be recoated or protected in any manner leading to an exaggeration of existing issues. The Condo Owners Association was working on a budget but understood that work needed to be done to save the deck, and over the next couple of weeks a plan was formulated to address critical concrete repairs that were deemed hazardous and provide proper protection from the elements to the upper level. RAM worked diligently with the owners associated to not only devise a phasing plan that allowed the deck to remain in use amidst the on going work, but to also maintain constant and transparent communication to guarantee that work impact was minimal while continuing to push for project efficiency and client satisfaction.

RAM® CONSTRUCTION SERVICES

WWW.RAMSERVICES.COM

LIVONIA 734.464.3800	**CLEVELAND** 440.740.0100	**MINNEAPOLIS/ST. PAUL** 651.765.1950
GRAND RAPIDS 616.538.7520	**TOLEDO** 419.593.0031	**DETROIT** 313.965.6750

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PROJECT TIMELINE

2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

MAY 9, 2023
WORK TO BEGIN

SCHEDULE REQUIREMENTS
400 MAN-DAYS
100 DAYS WITH FOUR CREW MEMBERS

OCTOBER 31, 2023
WORK TO BE COMPLETED

13800 ECKLES RD. • LIVONIA, MICHIGAN 48150 • P 734.464.3800 • F 734.437.6206 • WWW.RAMSERVICES.COM

RAM®
CONSTRUCTION SERVICES

Founded in 1918, RAM Construction Services is the oldest and most experienced waterproofing and restoration contractor in the United States.

105 Years In Service

200,000+ Completed Projects

www.ramservices.com

OUR COMPANY

HISTORY

In 1973, Robert A. Mazur, a registered architect, husband, and father of four, purchased 50 percent of the Detroit division of Western Waterproofing, a company established in 1918.

Robert passed away suddenly in 1977, and his wife Evelyn stepped in to lead the family business. In 1980, their eldest son, Bob, joined the family business full-time at age 21. Soon after, the remaining 50 percent was purchased by the family. The company paid homage to the company's founder, Robert A. Mazur, in 2008 by officially rebranding Western Waterproofing as RAM Construction Services.

The company had 17 employees when Bob was named president of the firm in 1983. Under Bob's leadership, the company now employs more than 650 people and operates five offices in three states. RAM Construction Services is the largest Midwestern contractor specializing in the restoration of aging structures and skilled waterproofing. The company, headquartered in Livonia, completes more than 2,500 projects annually across the Midwest. RAM has played a large role in transforming the skyline of Detroit, helping to revitalize these iconic Detroit buildings – and literal "pillars" of the community – to their original stature.

CONSTANTLY EVOLVING

Built on integrity, RAM Construction provides quality work and maintains a safe work environment. The company's quest for continuous improvement, along with diversifying the product line, has helped RAM successfully navigate the many economic downturns over the years. With forward thinking, RAM Construction Services will continue to drive endless possibilities and evolve within the industry.

OUR VALUES

INTEGRITY

We are trusted partners who will work alongside your team every step of the way.

QUALITY

We are driven toward solutions and work diligently to develop and achieve long-lasting results.

SAFETY

The safety and well-being of our team is our top priority.

OUR SERVICES

BUILDING FACADE RESTORATION

Restoration on contemporary structures and historic buildings, with respect to current tenants, neighbors, general public, the environment and historical preservation grants, requires a company with years of experience on diverse projects. RAM Construction Services' renovation crews respect our clients, their timelines, and the building we restore.

CONCRETE RESTORATION

RAM is the leading specialty contractor in concrete restoration. We currently lead the Midwest in the restoration and waterproofing of aging parking decks, as well as performing all necessary structural and cosmetic concrete repairs to a wide variety of buildings, fountains, miscellaneous concrete structures, sidewalks, and even elevator pits.

DEPARTMENT OF TRANSPORATION

The projects and repairs faced by various Departments of Transportation require a specialized level of skill and ability. The expertise of RAM Construction Services and its years of experience working these projects make them a perfect fit for these demands.

NEW CONSTRUCTION WEATHERPROOFING

We understand the individual needs and requirements of every project and work hand in hand with architects, engineers and general contractors to ensure proper materials and techniques are utilized in every case. Whatever your building needs, RAM Construction Services is a valuable member of your team.

REPAIRS & MAINTENANCE

Annual maintenance of aging buildings and parking structures are vital for the safety and longevity of commercial properties. We help develop and streamline solutions to keep all structures safe and water-tight.

SCOPE OF WORK

WE SELF PERFORM ALL WORK:

NEW CONSTRUCTION WEATHERPROOFING

- FLUID-APPLIED WATERPROOFING
- SHEET APPLIED WATERPROOFING
- CRYSTALLINE WATERPROOFING
- HOT RUBBERIZED ASPHALT WATERPROOFING
- BENTONINE WATERPROOFING
- UNDER-SLAB WATERPROOFING
- GREEN ROOFS
- PEDESTAL PAVERS
- OPEN/CLOSED CELL SPRAY POLYUREHTANE FOAM
- POLYURETHAN COATING & FLOORING
- POLYUREA LINERS & WATERPROOFING SYSTEMS
- WATEPROOFING SEALERS
- CRACK INJECTIONS
- AIR & VAPOR BARRIER
- EPOXY FLOORING
- TRAFFIC COATING
- FIRE STOPPING
- JOINT SEALANTS
- NEEDLEGLAZING
- SEMI-RIGID JOINT FILLERS
- EXAPNSION JOINTS

BUILDING FACADE RESTORATION

- MASONRY REPAIR & RESTORATION
- REPOINTING/TUCKPOINTING
- STONE REPLACEMENT & RESTORATION
- STONE PATCHING
- BRICK REPLACEMENT
- MASONRY SEALERS & COATINGS
- NEEDLEGLAZING
- CONCRETE PATCHING
- EPOXY INJECTION
- TERRACOTTA RESTORATION
- STRUCTURAL STEEL CLEANING & RESTORATION

CONCRETE RESTORATION

- CONCRETE REPAIRS
- JOINT SEALANT REPLACEMENT
- ABOVE & BELOW GRADE WATERPROOFING
- PENETRATING SEALERS
- STRUCTURAL STEEL REPAIRS
- CARBON FIBER WRAP
- SELECTIVE DEMOLITION
- SHOTCRETE
- EPOXY INJECTION
- CRACK SEALING
- EXPANSION JOINT INSTALLATION & REPAIR
- HIGH-PRESSURE WATERBLAST CLEANING
- POST-TENSION REPAIRS
- TRAFFIC COATINGS

DEPARTMENT OF TRANSPORTATION

- EPOXY OVERLAYS
- HIGH FRICTION SURFACE TREATMENTS
- CONCRETE REPAIRS
- EPOXY & CHEMICAL GROUT INJECTION
- SHOTCRETE
- FLOW FILL SLOPE WALL REPAIR
- CARBON & GLASS FIBER WRAP
- CORROSION RESISTANT COATINGS
- PENETRATING SEALER
- SHOTBLASTING
- HIGH PRESSURE WATER BLASTING CLEANING
- JOINT SEALANT REPLACEMENT
- CRACK SEALING
- EXPANSION JOINTS

MAINTENANCE AND REPAIRS

- FAÇADE & CONCRETE CLEANING
- ELEVATOR LEAK REPAIR
- BASEMENT LEAK REPAIR
- WINDOW LEAK REPAIR
- PARKING STRUCTURE INSPECTIONS & MAINTENANCE PLANS
- EMERGENCY FALL HAZARD REMEDIATION
- YEARLY MAINTENANCE BUDGETS

SAFETY

WHAT SETS US APART

Our Safety program starts with our people. The value we place on individuals, the way we interact on the jobsite, and how we communicate with each other helps drive our safety culture.

ACCOUNTABILITY

We hold each other accountable for the safety of our workforce. Job site safety inspections are required by not only our Safety Captains, but also by our management team. Everyone works together to make sure safety requirements are being adhered to on every site.

PROACTIVITY

The RAM Safety Department works with outside agencies to provide safety audits at our jobsites to ensure that we are always in compliance and are updated on any new policies.

COMMUNICATION

Our Safety Captains along with members of our management team, attend monthly safety meetings under the direction of our Safety Department. The group discusses field safety observations, new and existing procedures, updates, and expectations as it relates to the safety of our workforce.

Make it SAFE...
Safety comes first in everything we do. We can only work as fast as we can be safe. The best production is safe production

Make it PERSONAL...
We work to live for our families, for our friends, and for each other. Always looking out for our brothers and sisters.

Make it HOME...
Everyone makes it home to their loved ones every day!

QUALITY

COMMITTED TO QUALITY

OUR PROGRAM

Managing quality is the responsibility of the entire RAM Construction team including Project Managers, Superintendent, Foreman, Warehouse Manager and Regional Director.

OUR APPROACH

- Prior to stepping foot on-site, we will conduct a preconstruction meeting to review our approach and finalize our means and methods.
- Adhere to established quality control standards.
- Prepare mock-ups when necessary for customer approval.
- Correct non-conforming items that do not meet our quality standards.
- Document completed work and provide daily quality and progress reports to management.
- Review finished quality and cleanliness of the jobsite with an owners representative before demobilizing.
- Complete a formal quality control inspection.

LOCATIONS

MICHIGAN

LIVONIA (HEADQUARTERS)
13800 ECKLES ROAD
LIVONIA, MICHIGAN 48150

DETROIT
719 GRISWOLD STREET, SUITE 250
DETROIT, MICHIGAN 48226

GRAND RAPIDS
4592 40TH STREET SE
KENTWOOD, MICHIGAN 49512

OHIO

CLEVELAND
100 CORPORATION CENTER, BLDG. #4
BROADVIEW HEIGHTS, OHIO 44147

TOLEDO
27 BROADWAY STREET, SUITE 100B
TOLEDO, OHIO 43604

MINNESOTA

BLAINE
9937 GOODHUE STREET NE
BLAINE, MINNESOTA 55449

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Robert T. Mazur
President
(810) 560-9966 | rmazur@ramservices.com

Background Experience:

Robert Mazur manages the corporate office in Livonia, Michigan as well as its two (2) subsidiaries and two (2) satellites. He is ultimately responsible for the overall operation of each office. Mr. Mazur negotiates all union contracts and interacts daily with the local and international unions on behalf of RAM Construction Services. He is accountable for maintaining RAM's overall relationship with our financial institutions, bonding and financial companies. Mr. Mazur is actively involved with our Safety Department; his support and guidance is paramount to the success of our company's safety culture. He has 43 years of extensive experience in the exterior facade restoration, waterproofing and sealant industries. He is a trusted partner to many of RAM's customers and spends time cultivating and maintaining relationships.

Areas of Expertise:

- ***Building Façade Restoration***
  Repointing/Tuck-Pointing, Concrete Restoration, High-Pressure Hydro Cleaning, Masonry Sealers & Coatings, High-Rise Exterior Façade Repairs
- ***Concrete Restoration***
  Waterproofing Sealers, Shotcrete, Post Tension Repairs, Epoxy Injection/Grout Injection
- ***New Construction Weatherproofing***
  Waterproofing – Above & Below Grade, Joint Sealants (*Hot & Cold Applied*), Sealing & Caulking of Wall Systems & Flooring Systems, Needleglazing
- ***Department of Transportation (DOT)***
  Epoxy Overlays/High Friction Surface Treatment (*HFST*), Carbon & Glass Fiber Wrap, Shotblasting, Shotcrete, Gunite, Pneumatically Placed Mortar

Professional Experience:

- President | RAM Construction Services of Michigan, Inc., Livonia, MI ▪ 1996 - Present
- Executive Vice President | Western Waterproofing Company, Livonia, MI ▪ 1988 - 1996
- Estimator/Project Manager | (Western Waterproofing Company), Livonia, MI ▪ 1978 - 1988

Education:

Marketing/Business Administration – Western Michigan University

Affiliations:

- Michigan Historic Preservation Network (MHPN)
- Association for Preservation Technology International (APTI)
- International Concrete Repair Institute (ICRI)
- Building Owners & Managers Association International (BOMA)
- International Facilities Management Association (IFMA)
- Sealants, Waterproofing, Restoration Institute (SWRI)
- Association of General Contractors (AGC)

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Andrew Sandzik
Vice President of Restoration
(734) 368-6854 | asandzik@ramservices.com

Background Experience:

Andrew Sandzik is VP of the Restoration Divisions at RAM Construction Services. His responsibilities include supporting all directors, project managers, superintendents, and field staff in the façade and concrete departments; while also overseeing bidding, contract procurement, project scheduling, resource coordination, subcontractor sequencing, problem solving, project progress/schedule updates/meetings, as well as project close-out and warranties. He has vast experience with developing and maintaining customer relationships, marketing, and negotiations.

Areas of Expertise:

- Masonry Repair and Restoration
- Building Façade Inspection
- Repointing/Tuckpointing
- Stone Replacement and Restoration
- Needleglazing
- Pressure Grouting
- Exterior Joint Sealing
- Masonry Sealers and Coatings
- Concrete Repairs
- Stone Patching
- Silicone Gun & trowel Applied Sealant
- Brick Replacement and Restoration
- Epoxy Injection
- Terracotta Restoration
- Sandblasting Steel/Metal
- Exterior Cleaning

Project Experience:

- Michigan Central Station – Detroit, Michigan
- Detroit Foundation Hotel – Detroit, Michigan
- Michigan State University Spartan Stadium – Lansing, Michigan
- Louis Kamper / Stevens Building – Detroit, Michigan
- 1265 Griswold – Detroit, Michigan

Education:

Bachelor's – Construction Management – Michigan State University

Certifications:

- Neogard Applicator Certification
- Watson Bowman Expansion Joint Certified
- Dale Carnegie Graduate
- Confined Space Certification

Training:

- 363 Leadership Program
- Karrass Effective Negotiating
- Skill Path Training- Managing Difficult People

Affiliations:

- Building Owners and Managers Association International – (BOMA)

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Bobby Mazur
Assistant Director/Project Manager
(248) 504-8860 | bobbym@ramservices.com

Background Experience:

Bobby Mazur is a Project Manager/Estimator for the Concrete Restoration division at RAM Construction Services. His responsibilities include bidding/contract procurement, project scheduling, resource/subcontractor coordination and sequencing, problem solving, project schedule updates, progress meetings, as well as project close-out and warranties. He also has experience with developing and maintaining customer relationships, marketing, and negotiations.

Areas of Expertise:

- Masonry Repair and Preservation
- Masonry Repointing
- Terracotta Preservation
- Exterior Cleaning
- Window Needle-glazing
- Concrete Restoration
- Masonry Sealers and Coatings
- Exterior Joint Sealing
- Stone Replacement and Preservation
- Building Façade Inspections
- Pressure Grouting
- Flexible and Metal Flashing Repairs

Project Experience:

Wayne State University – Detroit, Michigan

- Hydro Demolition
- Concrete Restoration
- Expansion Joints
- Traffic Coatings
- Joint Sealants

Renaissance Center – Detroit, Michigan

- Concrete Roadway / Overlay
- Waterproofing Membrane
- Expansion Joint Replacement
- Traffic Coatings
- Various Concrete Repairs
- Sidewalk Replacement
- Caulking
- Drain Replacement

Eastern Market Parking Garage – Detroit, Michigan

- Partial Depth Concrete Repairs
- Full Depth Concrete Repairs
- Joint Sealants
- Exterior Brick Removal
- Coordinating Subcontractors

Education:

- Master of Business Administration – Walsh College
- Bachelor's Degree in Construction Management - Michigan State University

Certifications and Training:

- OSHA – 40 Hours
- CPR/First Aid
- Karrass Effective Negotiating
- Dale Carnegie Training

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Scott Hamill
Project Manager/Estimator
(313) 268- 7484 | shamill@ramservices.com

Background Experience:

Scott Hamill is a Project Manager/Estimator for the Concrete Restoration division at RAM Construction Services. His responsibilities include project management, resource/subcontractor coordination and sequencing, Scheduling, budgets, attending bids and other onsite meetings. He also has experience with developing and maintaining customer relationships, marketing, and negotiations.

Areas of Expertise:

- Expansion Joint Replacement
- Building Inspections
- Traffic Bearing Membranes
- Traffic Coatings
- Drain / Drain Piping Replacements
- Exterior Joint Sealing
- Concrete Sealers and Coatings
- Vertical Caulking & Sealing
- Crack Repairs
- Concrete & Structural Repairs
- Overhead & Post Tension Repairs
- Silicone Gun & Trowel Applied Sealant
- Urethane Injection
- Epoxy Injection
- Excavate
- Exterior Cleaning

Project Experience:

Mott Community College – Flint, Michigan

- Expansion Joints
- Structural Concrete Repairs
- Structural Crack Repairs
- Overhead Concrete Repairs
- Post Tension Repairs

Cargill Salt Plant – St. Clair, Michigan

- Excavate
- Concrete Pads
- Drain Covers
- Concrete Repairs

City of East Lansing Parking Decks – East Lansing, Michigan

- Structural Concrete Repairs
- Structural Crack Repairs
- Fully System Deck Coating
- Partial Depth Concrete Repairs
- Full Depth Concrete Repairs

Marriott of Troy – Troy, Michigan

- Vertical Column Concrete Repairs
- Vertical Caulking and Sealing
- Install Concrete Flush to Vertical Column, Matching Design

Education:

- EMT / Paramedic
- Firefighting Degree & Certifications

Certifications and Training:

- CPR / First Aid
- Automated External Defibrillator (AED)

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Ron Clapper
Concrete Restoration Superintendent
810-523-2398| rclapper@ramservices.co

Background Experience:

Ron Clapper has over 20 years in residential construction. Responsibilities include managing and overseeing the Foreman for the Concrete Restoration Division, coordinating manpower, schedule projects and attends project meetings as needed. Ron works in the Concrete Restoration Division where he supervises crews primarily in Michigan and throughout the Midwest. The majority of this work deals primarily with universities, hospitals, city/county projects and stadiums.

Areas of Expertise:

- Epoxy Overlays
- Concrete Repairs
- Epoxy and Chemical Grout Injection
- Shotcrete, Gunite, Pneumatically Placed Mortar
- Carbon and Glass Fiber Wrap
- Corrosion Resistant Coatings
- Concrete Surface Coatings
- Structural Concrete Repairs
- Shotblasting
- High-Pressure "Water Blasting" Cleaning
- Joint Sealing
- Crack Sealing
- Expansion Joints
- Waterproofing
- Penetrating Sealers

Project Experience:

- City of Lansing Parking Structure Repairs – Lansing, Michigan
- WCAA Routine & On-Call Maintenance of Parking Decks, Parking Lots and Associated Facilities at Detroit Metropolitan Wayne County Airport – Detroit, Michigan
- Blue Cross Blue Shield Deck Rehab – Lansing, Michigan
- University of Michigan Structural Tunnel Repairs – Ann Arbor, Michigan
- 101 North Main Apartments – Traverse City, Michigan
- Oxmoor Apartments Parking Deck – Louisville, Kentucky
- U of M Hospital Ann Arbor Parking Decks – Ann Arbor, Michigan
- Ann Arbor DDA Parking Decks – Ann Arbor, Michigan
- Ludington Hydro Plant – Ludington, Michigan

Certifications & Training:

- Neogard Applicator Certification
- Watson Bowman Expansion Joint Certified
- ACI Concrete Certification
- ASI Structural Welding Certification
- Dale Carnegie Graduate
- AWP/Forklift Certified Trainer
- Lead and Asbestos
- OSHA 30 hour
- First Aid/CPR/AED
- Safe to Work Mods & Training
- Confined Space Certification
- Member of the safety committee and is actively involved with setting up specific training courses for the RAM team

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To Whom It May Concern,

The following are client references for the 2023 North Old Woodward Parking Structure Repair Project from RAM Construction Services of Michigan.

Adam Drain, University of Michigan
734-883-4490
adrain@umich.edu

Nick Amato, Transwestern
248-350-2222
Nick.amato@transwestern.com

Jon Frederick, Wayne State University
313-220-3519
Jon.frederick@wayne.edu

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ATTACHMENT B - BIDDER'S AGREEMENT
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

In submitting this proposal, as herein described, the Contractor agrees that:

1. They have carefully examined the specifications, terms and Agreement of the Invitation to Bid and all other provisions of this document and understand the meaning, intent, and requirement of it.

2. They will enter into a written contract and furnish the item or items in the time specified in conformance with the specifications and conditions contained therein for the price quoted by the proponent on this proposal.

Robert A. Mazur	April 28, 2023
PREPARED BY (Print Name)	**DATE**
Assistant Director	April 28, 2023
TITLE	**DATE**
Robert A Mazur	shamill@ramservices.com
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
RAM Construction Services of Michigan, Inc.	
COMPANY	
13800 Eckles Road, Livonia MI 48150	313-268-7484
ADDRESS	**PHONE**
RAM Construction Services of Michigan, Inc.	734-464-3800
NAME OF PARENT COMPANY	**PHONE**
13800 Eckles Road, Livonia, MI 48150	
ADDRESS	

ATTACHMENT C - COST PROPOSAL

For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

In order for the bid to be considered valid, this form must be completed in its entirety. The cost for the Scope of Work as stated in the Invitation to Bid documents shall be a lump sum, as follows:

Attach technical specifications for all proposed materials as outlined in the Contractor's Responsibilities section of the ITB (p. 6)

COST PROPOSAL	
ITEM	**BID AMOUNT**
Materials & Equipment	$ 131,241.00
Labor	$ 266,459.00
Miscellaneous (Attach Detailed Description)	$ N/A
TOTAL BID AMOUNT	$ 397,700.00
ADDITIONAL BID ITEMS	
Alternate #1 Architectural Coatings	$ 319,520.00
	$
GRAND TOTAL AMOUNT	$ 717,220.00

UNIT COST BID ITEMS	
See attached unit price breakdown	$ **per**

Firm Name RAM Construction Services of Michigan, Inc.

Authorized signature Robert A. Mazur, Assistant Director Date April 28, 2023

ATTACHMENT D - IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM
For 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

Robert A. Mazur	April 28, 2023
PREPARED BY (Print Name)	**DATE**
Assistant Director	April 28, 2023
TITLE	**DATE**
Robert A Mazur	shamill@ramservices.com
AUTHORIZED SIGNATURE	**E-MAIL ADDRESS**
RAM Construction Services of Michigan, Inc.	
COMPANY	
13800 Eckles Road, Livonia, MI 48150	313-268-7484
ADDRESS	**PHONE**
RAM Construction Services of Michigan, Inc.	734-464-3800
NAME OF PARENT COMPANY	**PHONE**
13800 Eckles Road, Livonia, MI 48150	
ADDRESS	
38-1164400	
TAXPAYER I.D.#	

AGREEMENT BETWEEN THE CITY OF BIRMINGHAM AND RAM CONSTRUCTION SERVICES OF MICHIGAN, INC. for 2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT

This AGREEMENT, made this 15th day of May, 2023, by and between, the **CITY OF BIRMINGHAM** having its principal municipal office at 151 Martin Street, Birmingham, MI (hereinafter sometimes called "City"), and RAM Construction Services of Michigan, Inc., having its principal office at 13800 Eckles Road, Livonia, MI 48150 (hereinafter called "Contractor"), provides as follows:

WITNESSETH:

WHEREAS, the City of Birmingham, Michigan, is desirous of hiring a qualified professional firm to furnish labor, equipment, material and supervision necessary to complete repairs as detailed in the City owned parking structure known generally as: N. Old Woodward Ave.

WHEREAS, the City has heretofore advertised for bids for the procurement and performance of services required to perform **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT** as detailed in the specifications for N. Old Woodward Ave, and in connection therewith has prepared a request for sealed Invitation to Bid proposals ("ITB"), which includes certain instructions to bidders, specifications, terms and conditions.

WHEREAS, the Contractor has professional qualifications that meet the project requirements and has made a bid in accordance with such request for cost proposals to perform **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT**.

NOW, THEREFORE, for and in consideration of the respective agreements and undertakings herein contained, the parties agree as follows:

1. **MUTUALLY AGREED:** It is mutually agreed by and between the parties that the documents consisting of the Invitation to Bid to perform **2023 NORTH OLD WOODWARD PARKING STRUCTURE REPAIR PROJECT** and the Contractor's cost proposal dated April 28, 2023 shall be fully incorporated herein by reference and shall become a part of this Agreement, and shall be binding upon both parties hereto. (Attached hereto.) If any of the documents are in conflict with one another, this Agreement shall take precedence, then the ITB.

2. **TERM:** This Agreement shall have a term of 6 months from the date stated above, and is renewable upon expiration for one month terms. The City shall have the right to unilaterally terminate this Agreement, with or without cause, on thirty (30) days written notice. In the event of termination, the Contractor shall receive compensation for services up to the date the termination takes effect and the City shall be entitled to retain and use the results of all services, goods and information prepared by the Vendor through such date.

3. **FEES.** The City shall pay the Contractor for the performance of this Agreement in an amount not to exceed $717,220.00 as set forth in the Contractor's North Old Woodward Parking Structure Repair Project, 2023 cost proposal.

4. **TERMS OF PAYMENT:** The Contractor will invoice monthly for all labor supplied and work completed. In no event shall invoices be submitted more than 45 days after completion of services.

Submitted invoices shall include the following detailed information: the type of work performed, the time spent on the work, the individual who performed the work and the per hour billing rate charged. The City may, at its sole discretion demand review and the right to request at any time further detailed accounting information for any or all bills. The right to inspection of any bill and invoice shall never be at any cost or billings to the City, nor shall preparation of said invoices be billed to the City or against the general retainer. Payment terms will be net 30 days unless otherwise specified by the City.

5. **GOOD MORAL CHARACTER:** The Contractor shall employ personnel of good moral character and fitness in performing all services under this Agreement.

6. **INSURANCE SUBMISSION REQUIREMENTS:** The has submitted proof to the City that it meets all City insurance requirements. Insurance, with coverage amounts at no less than the City's minimum requirements, must be held by the Contractor throughout the term of this Agreement. Certificates of insurance as stated below will be required no later than five (5) business days from the date of Contractor's acceptance of the terms of this Agreement.

7. **CONFIDENTIAL AND / OR PROPRIETARY INFORMATION:** The Contractor acknowledges that in performing services pursuant to this Agreement, certain confidential and/or proprietary information (including, but not limited to, internal organization, methodology, personnel and financial information, etc.) may become involved. The Contractor recognizes that unauthorized exposure of such confidential or proprietary information could irreparably damage the City. Therefore, the Contractor agrees to use reasonable care to safeguard the confidential and proprietary information and to prevent the unauthorized use or disclosure thereof. The Contractor shall inform its employees of the confidential or proprietary nature of such information and shall limit access thereto to employees rendering services pursuant to this Agreement. The Contractor further agrees to use such confidential or proprietary information only for the purpose of performing services pursuant to this Agreement.

8. **INDEPENDENT CONTRACTOR:** The Contractor and the City agree that the Contractor is acting as an independent Contractor with respect to the Contractor 's role in providing services to the City pursuant to this Agreement, and as such, shall be liable for its own actions and neither the Contractor nor its employees shall be construed as employees of the City. Nothing contained in this Agreement shall be construed to imply a joint venture or partnership and neither party, by virtue of this Agreement, shall have any right, power or authority to act or create any obligation, express or implied, on behalf of the other party, except as specifically outlined herein. Neither the City nor the Contractor shall be considered or construed to be the agent of the other, nor shall either have the right to bind the other in any manner whatsoever, except as specifically provided in this Agreement, and this Agreement shall not be construed as a contract of agency. The Contractor shall not be entitled or eligible to participate in any benefits or privileges given or extended by the City, or be deemed an employee of the City for purposes of federal or state withholding taxes, FICA taxes, unemployment, workers' compensation or any other employer contributions on behalf of the City.

9. **COMPLIANCE WITH LAWS:** The Contractor agrees to fully and faithfully carry out the duties of set forth herein using its best efforts in accomplishing all assignments from the City, and further, in addition to upholding all federal, and state laws and applicable codes of

professional conduct to which the Contractor is subject, Contractor hereby agrees to be bound by all Federal, State, or City of Birmingham ordinances, rules, regulations and policies as are amended from time to time, and including without limitation the Fair Labor Standards Act, the Equal Employment Opportunity rules and regulations, the Transportation Safety Act and the Occupational Safety and Health Acts.

10. **NON-COMPLIANCE WITH INSURANCE REQUIREMENTS:** Failure to deliver and maintain insurance in accordance with the terms of this Agreement will be cause for the City, by and through its City Manager, to terminate this Agreement, or at the City's option, the City may purchase on the open market such required insurance and shall be entitled to charge any additional cost to the Contractor, either by offset to any amounts due and owing Contractor for services provided to the City, or, by separate bill and demand for payment. Nothing in this paragraph shall be deemed to create or be interpreted as establishing a "for cause" termination; Contractor agrees and understands that its engagement is at will and may be terminated by the City Manager for any cause or no cause.

11. **INDEMNIFICATION:** To the fullest extent permitted by law, the Contractor and any entity or person for whom the Contractor is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the City of Birmingham, its elected and appointed officials, employees and volunteers and others working on their behalf against any and all claims, demands, suits, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from the City, its elected and appointed officials, employees, volunteers or others working on their behalf, by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arise out of the acts, errors or omissions of the Contractor including its employees and agents, in the performance of this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or others working on behalf of the City.

12. **STANDARD INSURANCE REQUIREMENTS:**

The Contractor shall maintain during the life of this Agreement the applicable types of insurance coverage and minimum limits as set forth below:

A. Workers' Compensation Insurance:

For Non-Sole Proprietorships: Contractor shall procure and maintain during the life of this Agreement, Workers' Compensation Insurance, including Employers Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

For Sole Proprietorships: Contractor shall complete and furnish to the City prior to the commencement of work under this Agreement a signed and notarized Sole Proprietor Form, for sole proprietors with no employees or with employees, as the case may be.

B. Commercial General Liability Insurance: Contractor shall procure and maintain during the life of this Agreement, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than **$1,000,000** per occurrence combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractor Coverage; (D) Broad Form General Liability Extensions or equivalent; (E) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

C. Motor Vehicle Liability: Contractor shall procure and maintain during the life of this Agreement Motor Vehicle Liability Insurance, including all applicable no-fault coverages, with limits of liability of not less than $1,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

D. Pollution Liability Insurance: Contractor shall procure and maintain during the life of this Agreement Pollution Liability Insurance, with limits of liability of $1,000,000, per occurrence preferred, but claims made accepted.

E. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following **Additional Insureds: The City of Birmingham, including all elected and appointed officials, all employee and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof.** This coverage shall be primary to any other coverage that may be available to the additional insured, whether any other available coverage by primary, contributing or excess.

F. Professional Liability: If applicable, professional liability insurance with limits of not less than $2,000,000 per claim if Contractor will provide services that are customarily subject to this type of coverage.

G. Coverage Expiration: If any of the above coverages expire during the term of this Agreement, the Contractor shall deliver renewal certificates and/or policies to the City at least (10) days prior to the expiration date.

H. Proof of Insurance Coverage: The Contractor shall provide the City of Birmingham at the time the Agreement is returned for execution, Certificates of Insurance and/or policies, acceptable to the City of Birmingham, as listed below.

1) Two (2) copies of Certificate of Insurance for Workers' Compensation Insurance, or a signed and notarized copy of the Sole Proprietor Form;
2) Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance;
3) Two (2) copies of Certificate of Insurance for Vehicle Liability Insurance;
4) Two (2) copies of Certificate of Insurance for Professional Liability Insurance, if applicable;

5) If so requested, Certified Copies of all policies mentioned above will be furnished.

I. Maintaining Insurance: Upon failure of the Contractor to obtain or maintain such insurance coverage for the term of the Agreement, the City of Birmingham may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the Agreement amount. In obtaining such coverage, the City of Birmingham shall have no obligation to procure the most cost-effective coverage but may contract with any insurer for such coverage.

13. **WRITTEN NOTICES:** All notices required to be sent pursuant to this Agreement shall be mailed to the following addresses:

City: City of Birmingham
151 Martin Street
Birmingham, MI 48009
Attn: Parking Systems Manager, Aaron Ford

Contractor: RAM Construction Services of Michigan, Inc.
13800 Eckles Road
Livonia, MI 48150
Attn: Scott Hamill, Project Manager

14. COVID: The Contractor shall follow all of the City's COVID-19 safety protocols while on City property. Additionally, Contractor's staff which will be in physical contact with city staff must have current vaccinations against COVID-19. The City, at its discretion, may ask for proof of vaccination of Contractor's staff. Failure to provide proof of vaccination when requested will cause the City to request un-vaccinated personnel to leave, request alternate staff, and if the Contractor is unable to comply, this violation of safety protocols will constitute a breach of contract by the Contractor.

15. AMENDMENTS: No amendment, modification or supplement to this Agreement shall be binding unless it is in writing and signed by authorized representatives of the parties.

16. WAIVER OF BREACH: No waiver by either party of any breach of any of the terms, covenants or conditions herein contained by the other party shall be construed as a waiver of any succeeding breach of this same or of any other term, covenant, or condition.

17. COMPLETE AGREEMENT: The parties agree that the conditions set forth in this Agreement sets forth all terms and conditions of the Contractor's agreement with the City of Birmingham. This Agreement supersedes all prior agreements or understandings between the parties. There are no promises, conditions, or understandings other than those stated herein, and, that any prior negotiations, terms or conditions discussed between the City and the Contractor shall not constitute a part of this Agreement. The term "agreement" as used in this clause shall

include any future written amendments, modifications, or supplements made in accordance herewith.

18. **DIRECT OR INDIRECT INTEREST:** If, after the effective date of this Agreement, any official of the City, or spouse, child, parent or in-law of such official or employee shall become directly or indirectly interested in this Agreement or the affairs of the Contractor, the City shall have the right to terminate this Agreement without further liability to the Contractor if the disqualification has not been removed within thirty (30) days after the City has given the Contractor notice of the disqualifying interest. Ownership of less than one percent (1%) of the stock or other equity interest in a corporation or partnership shall not be a disqualifying interest. Employment shall be a disqualifying interest.

19. **FAILURE TO PERFORM.** If Contractor fails to perform its obligations hereunder, the City may take any and all remedial actions provided by the general specifications or otherwise permitted by law.

20. **LEGAL PROCEEDINGS:** Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suit in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by the American Arbitration Association with one arbitrator being used, or three arbitrators in the event any party's claim exceeds $1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL §600.5001 et seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. In the event that the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suit in a federal or state court with jurisdiction over Oakland County, Michigan.

21. RESPONSE TO REQUESTS FOR PROPOSALS: The Contractor shall be held to and bound by all terms, conditions, warranties and representations which it made in its written response dated April 28, 2023, to the City's Request for Proposals dated March 24, 2023. In the event of a conflict in any of the terms of this Agreement and the Contractor's May 15, 2023 (date of response) response, the terms of this Agreement shall prevail.

22. **FAIR PROCUREMENT OPPORTUNITY:** Procurement for the City of Birmingham will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City of Birmingham.

IN WITNESS WHEREOF, the parties hereto agree to be bound by the above terms and conditions, and Contractor, by its authorized signature below, expressly accepts this Agreement upon the above provided terms and conditions contained in this Agreement as of the date and year above written.

CONTRACTOR

By: _____
Andrew Sandzik
CONTRACTOR

Its: VICE PRESIDENT

STATE OF MICHIGAN)
) ss:
COUNT OF WAYNE)

On this 15th day of May, 2023, Andrew Sandzik before me personally appeared, who acknowledged that with authority on behalf of RAM Construction Services of Michigan, Inc. to do so he signed this Agreement.

Kristen Wickens
_____
Notary Public
Wayne County, Michigan
Acting in Wayne County, Michigan
My commission expires: December 28, 2024

KRISTEN WICKENS
Notary Public, State of Michigan
County of Wayne
My Commission Expires 12-28-2024
Acting in the County of Wayne

CITY OF BIRMINGHAM

By: _____
Therese Longe, Mayor

By: _____
Alexandria D. Bingham, City Clerk

Approved:

Thomas M. Markus, City Manager
(Approved as to substance)

Aaron Ford, Parking Systems Manager
(Approved as to substance)

Mark Gerber, Director of Finance
(Approved as to financial obligation)

Mary M. Kucharek, City Attorney
(Approved as to form)

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Planning Division

DATE: May 22, 2023

TO: Thomas M. Markus, City Manager

FROM: Nicholas Dupuis, Planning Director

SUBJECT: Public Hearing to amend Chapter 126 (Zoning), Article 3, Section 3.04, Article 3, Section 3.16, Article 4, Section 4.44 and Article 9, Section 9.02 to provide clear and enforceable outdoor dining standards **AND** to amend Chapter 98 (Streets, Sidewalks and Other Public Places), Article 2 and Article 3, to add language for outdoor dining facilities on public property.

INTRODUCTION:
As a result of the temporary COVD-19 outdoor dining expansion resolution and continuing issues with outdoor dining patios encroaching into required clear paths and the addition of unapproved equipment/fixtures, heaters, and structures, the City Commission directed a review of outdoor dining requirements to evaluate potential changes that may clarify and/or enhance the outdoor dining environment within the City. At this time, the Planning Board has drafted revised regulations that are consistent, enforceable, and offer more clarity to outdoor dining establishments.

BACKGROUND:
On December 14, 2022 (Agenda – Minutes), the Planning Board held a public hearing to review the proposed ordinance amendments and moved to recommend approval to the City Commission amendments to Article 4, Section 4.44, Article 3, Section 3.04, Article 3, Section 3.16, and Article 9, Section 9.02 to provide clear and enforceable outdoor dining standards. A complete background of the outdoor dining ordinance study at the Planning Board level including dates, summaries, and links to previous agendas can be found in the attached Planning Board report.

On February 13, 2023 (Agenda – Minutes), the City Commission discussed the proposed ordinance at a public hearing and moved to postpone the public hearing to February 27, 2023 to afford time for staff to make the changes directed by the City Commission. The changes requested included:

1. The addition of language to phase out preexisting legal-nonconforming outdoor dining facilities from the public right of way.
2. Striking the provision requiring that outdoor dining fixtures and furnishings be brought in each night in the winter (but also adding language to ensure that the facilities are set up to be used and not being stored).

3. Adding utilities to the section outlining elements to be considered during outdoor dining reviews.

On February 27, 2023 (Agenda – Minutes), City Staff requested that the City Commission table the proposed ordinance amendments to provide staff with time to adjust the proposed language and address the concerns of the City Commission.

On April 24, 2023 (Agenda – Minutes), City Staff requested postponement of the public hearing to provide staff with additional time to adjust the proposed language and address the concerns of the City Commission.

At this time, staff has prepared a revised set of ordinance standards that address the concerns of the City Commission. Overall, the new outdoor dining ordinance is intended to provide the City and operators of outdoor dining facilities more clarity and consistency. The changes include setting expectations for outdoor dining reviews and approval processes, defining placement preferences to protect access to public space, establishing design standards, and enabling extended use of patios where weather and demand permits.

The specific changes from the public hearing on February 13, 2023 included in the attached language address the use of public property, the City's right to control the use of such, and the differences in drafting regulations for public versus private outdoor dining facilities. At its core, the City has the essential role of protecting the health, safety and welfare of the general public. As it relates to outdoor dining, it is also essential for the City to maintain a streetscape that is walkable, engaging, and accessible. For this reason, the ordinance language regulating outdoor dining facilities specific to the public right-of-way were relocated to Chapter 98 (Streets, Sidewalks and Other Public Places) of the Birmingham Code of Ordinances.

LEGAL REVIEW:
The City Attorney has reviewed the suggested resolution and the amended ordinance language and has no objections.

FISCAL IMPACT:
There are no direct fiscal impacts for this agenda item. However, the proposed ordinance language has the potential to affect rental income through the licensing of public space for outdoor dining facilities.

PUBLIC COMMUNICATIONS:
As required for the proposed Zoning Ordinance amendments, a legal ad was placed in a newspaper of local circulation to advertise the public hearing at the City Commission meeting on April 24, 2023. As for the amendments to the general ordinance, no public hearing notices are required when enacting general ordinances.

SUMMARY:
The Planning Division requests that the City Commission consider amendments to Chapter 126 (Zoning), Article 3, Section 3.04, Article 3, Section 3.16, Article 4, Section 4.44, and Article 9, Section 9.02.

AND

Consider amendments to Chapter 98 (Streets, Sidewalks and Other Public Places), Article 2 and Article 3.

ATTACHMENTS:
Please see the following attached documents:

- Proposed Amendments to Chapter 126 – Zoning
- Proposed Amendments to Chapter 98 – Streets, Sidewalks and Other Public Places
- Proposed Amendments to Chapter 126 – Zoning (REDLINED VERSION DEMONSTRATING CHANGES TO ARTICLE 4 ONLY FROM 2/13/23 PUBLIC HEARING)
- Outdoor Dining Data Sheet
- Final Planning Board Report

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution adopting an ordinance to amend Chapter 126 (Zoning), Article 3, Section 3.04, Article 3, Section 3.16, Article 4, Section 4.44, and Article 9, Section 9.02 to provide clear and enforceable outdoor dining standards.

AND

Make a motion adopting an ordinance to amend Chapter 98 (Streets, Sidewalks and Other Public Places), Articles 2 and 3 to add language for outdoor dining facilities on public property.

CITY OF BIRMINGHAM

ORDINANCE NO. _____

THE CITY OF BIRMINGHAM ORDAINS:

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CITY OF BIRMINGHAM:

TO AMEND CHAPTER 126, ARTICLE 3, SECTION 3.04 (C), SPECIFIC STANDARDS, TO REDUCE REDUNDANCY AND PROVIDE CONSISTENT OUTDOOR DINING REGULATIONS.

Article 3, Section 3.04 – Specific Standards (Downtown Overlay District)

C. Building Use: Buildings shall accommodate the following range of uses for the various designations on the Regulating Plan of the Downtown Birmingham Overlay District:

1. …
2. …
3. …
4. …
5. …
6. …
7. …
8. …
9. …
10. Bistros are permitted with a valid Special Land Use Permit with the following conditions:
    a. No direct connect additional bar permit is allowed and the maximum seating at a bar cannot exceed 10 seats;
    b. Alcohol is served only to seated patrons, except those standing in a defined bar area;
    c. No dance area is provided;
    d. Only low key entertainment is permitted;
    e. Bistros must have tables located ~~in~~ **within** the storefront space lining any street, or pedestrian passage;
    f. **All outdoor dining facilities are subject to the requirements located in Article 4, Section 4.44 of this Ordinance and Chapter 98 of the Birmingham Code of Ordinances;**
    g. A minimum of 70% glazing must be provided along building facades facing a street or pedestrian passage between 1 foot and 8 feet in height;

h. All bistro owners must execute a contract with the City outlining the details of the operation of the bistro; and

~~i.~~ Outdoor dining must be provided, weather permitting, along an adjacent street or passage during the months of May through October each year. Outdoor dining is not permitted past 12:00 a.m. **If there is not sufficient space to permit such dining on the street or passage adjacent to the bistro, alternative outdoor dining facility placement may be considered by the Planning Board.** ~~an elevated, ADA compliant, defined platform must be erected on the street adjacent to the bistro to create an outdoor dining area if the Engineering Department determines there is sufficient space available for this purpose given parking and traffic conditions.~~

~~j. Enclosures facilitating year round dining outdoors are not permitted.~~

~~k. Railings, planters or similar barriers defining outdoor dining platforms may not exceed 42" in height.~~

~~l. Outdoor rooftop dining is permitted with the conditions that surrounding properties are not impacted in a negative manner and adequate street level dining is provided as determined by the Planning Board and City Commission. Rooftop dining seats will count towards the total number of permissible outdoor dining seats.~~

ORDAINED this _____ day of _____, 2023 to become effective 7 days after publication.

_____

Therese Longe, Mayor

_____

Alex Bingham, City Clerk

CITY OF BIRMINGHAM

ORDINANCE NO. _____

THE CITY OF BIRMINGHAM ORDAINS:

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CITY OF BIRMINGHAM:

TO AMEND CHAPTER 126, ARTICLE 3, SECTION 3.16, SPECIFIC STANDARDS, TO REDUCE REDUNDANCY AND PROVIDE CONSISTENT OUTDOOR DINING REGULATIONS, AND TO PERMIT OUTDOOR DINING IN ALL VIAS.

Article 3, Section 3.16 – Specific Standards (Via Activation Overlay District)

A. Permitted and Prohibited Uses: To enhance the amenity and character of vias, **and** to enhance visual interest and encourage surveillance of urban spaces, active uses should be provided at the ground floor level along the majority of the edges of buildings located adjacent to vias. While buildings should accommodate these uses, care must be taken to avoid conflict with pedestrian movement in the via. To specifically encourage the activation of vias, the following uses are permitted within Active, Connecting, and Destination Vias:

    1. Retail sales and display;
    2. Public plazas and informal gathering spaces;
    3. **Outdoor Dining;**
    4. Art display; and
    5. Community Gardens.

    In addition, the following ~~uses are~~ **use is** also permitted within Connecting and Destination Vias:

    ~~1. Outdoor dining; and~~
    1. Special Events.

    The following are specifically prohibited in all vias:

    1. Automatic food and drink vending machines outdoors;
    2. Drive-in facilities or any commercial use that encourages patrons to remain in their automobiles while receiving goods or services;
    3. Unscreened trash receptacles; and
    4. Unscreened outdoor storage.

B. …
C. …

ORDAINED this _____ day of _____, 2023 to become effective 7 days after publication.

_____
Therese Longe, Mayor

_____
Alex Bingham, City Clerk

CITY OF BIRMINGHAM

ORDINANCE NO. _____

THE CITY OF BIRMINGHAM ORDAINS:

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CITY OF BIRMINGHAM:

TO AMEND CHAPTER 126, ARTICLE 4, SECTION 4.44, OUTDOOR DINING STANDARDS, TO SUPPORT PUBLIC HEALTH, ACTIVATE PUBLIC SPACE, FOSTER ECONOMIC DEVELOPMENT, SAFEGUARD THE USE OF PUBLIC PROPERTY, AND PROVIDE FLEXIBILITY FOR CURRENT TRENDS AND FUTURE DEMANDS FOR OUTDOOR DINING.

Article 4, Section 4.44 – Outdoor Dining Standards

This Outdoor Dining Standards section applies to the following districts:

B1 B2 B2B B2C B3 B4 MX O1 O2 TZ3

~~The following outdoor dining standards apply:~~

~~A. Outdoor Dining: Outdoor dining is permitted immediately next to the principal use, subject to Site Plan Review, and the following conditions:~~

~~1. Outdoor dining areas shall provide and service refuse containers within the outdoor dining area and maintain the area in good order.~~
~~2. All outdoor activity must cease at the close of business or as noted in subsection 3 below.~~
~~3. When an outdoor dining area is immediately adjacent to any single-family or multiple-family residential district, all outdoor activity must cease at the close of business or 10:00 p.m., whichever is earlier.~~
~~4. Outdoor dining may be permitted on the sidewalk throughout the year with a valid Outdoor Dining License.~~
~~5. All tables and chairs provided in the outdoor dining area shall be constructed primarily of metal, wood, or material of comparable quality.~~
~~6. Table umbrellas shall be considered under Site Plan Review and shall not impede sight lines into a retail establishment, pedestrian flow in the outdoor dining area, or pedestrian or vehicular traffic flow outside the outdoor dining area.~~
~~7. For outdoor dining located in the public right-of-way:~~

~~a. All such uses shall be subject to a license from the city, upon forms provided by the Community Development Department, contingent on compliance with all city codes, including any conditions required by the Planning Board in conjunction with Site Plan approval.~~

~~b. In order to safeguard the flow of pedestrians on the public sidewalk, such uses shall maintain an unobstructed sidewalk width as required by the Planning Board, but in no case less than 5 feet.~~

~~c. Outdoor dining is permitted to extend in the right-of-way in front of neighboring properties, with the written permission of the property owner(s) and with Planning Board approval, if such property is vacant or the first floor storefront(s) is/are vacant. Outdoor dining areas may extend up to 50% of the width of the neighboring lot(s) storefront(s), or up to 50% of the lot(s) frontage, if such lot is vacant.~~

~~d. City Commission approval is also required for outdoor dining extensions onto neighboring property if the establishment making such a request holds a bistro license.~~

~~e. An elevated, ADA compliant platform may be erected on the street in front of an eating establishment to create an outdoor dining area only if the Engineering Department determines there is sufficient space available for this purpose given parking and traffic conditions.~~

~~f. No such facility shall erect or install permanent fixtures in the public right-of-way.~~

~~8. Outdoor dining is permitted in a B1 District at a rate of 4 seats for every 12 linear feet of store frontage, with no more than 12 seats total per building; no elevated enclosed platforms on the street are permitted in a B1 District.~~

The following outdoor dining standards apply to both public outdoor dining facilities as permitted in Chapter 98 (Streets, Sidewalks and Other Public Places) and to outdoor dining facilities located on private property:

A. <u>Purpose and Intent</u>: The purpose of this section is to provide harmonious outdoor dining design in order to support public health, activate public space, foster economic development, safeguard the use of public property, and provide flexibility for current trends and future demands for outdoor dining.

B. <u>Outdoor Dining – General</u>: Outdoor dining is permitted immediately adjacent to and abutting the principal use, subject to review by the Planning Board, or by the Planning Division at the discretion of the Planning Board, and the conditions below. For the purposes of this section, outdoor dining facility shall include outdoor dining patios and/or outdoor dining platforms.

1. **All outdoor activity including cleaning, maintenance and closing procedures must cease at the close of business or as noted in subsection 2.**
2. **When an outdoor dining facility is immediately adjacent to and abutting any single-family or multiple-family zoned residential district, all outdoor activity must cease at the close of business or 10:00 p.m., whichever is earlier.**
3. **Reviews of outdoor dining facilities shall include, but are not limited to, the following elements: tables, chairs, umbrellas, portable heating elements, barriers, service stations, landscaping/plantings, utilities, awnings, canopies, lighting, host/hostess stands, entertainment, valet operations, and any other adjacent neighboring outdoor dining facilities.**
4. **Outdoor dining facilities may be permitted to extend in front of neighboring properties or tenant spaces with the written permission of the property owners(s) affected and with Planning Board approval. Written permission must be renewed annually and submitted with the Outdoor Dining Permit application(s) for each outdoor dining facility affected.**
5. **When not in use, outdoor dining facility elements shall not be stacked, consolidated, stored or relocated outdoors with the exception of active snow removal or active regular maintenance of an outdoor dining facility.**
6. **All outdoor dining facilities shall be designed to meet the requirements of this section, as well as all applicable building and fire codes.**

C. <u>Outdoor Dining – Design</u>: All outdoor dining facilities are subject to the following design standards:

1. **All outdoor dining elements, fixtures and furnishings must be constructed of high quality and durable materials that are compatible with the establishment and the environment in which the outdoor dining facility is located.**
2. **Outdoor dining facilities shall provide and service refuse containers within the outdoor dining facility and maintain the area in good order. Public trash receptacles are not permitted to be utilized by outdoor dining facilities.**
3. **Outdoor dining facilities shall not contain enclosures as defined in Article 9, Section 9.02 of the Zoning Ordinance.**
4. **Outdoor dining platforms within the adjacent street or parking space(s) shall be designed to be flush with the curb, and may not extend beyond the curb into the furnishing zone except to accommodate accessibility requirements.**

5. **Overhead weather protection such as umbrellas, awnings or canopies are subject to the following conditions:**

    i. **Overhead weather protection shall not impede sight lines into a retail establishment, obstruct pedestrian flow within the outdoor dining facility, obstruct pedestrian or vehicular traffic flow outside the outdoor dining facility, or contain signage or advertising.**
    ii. **Overhead weather protection on outdoor dining platforms must measure a minimum of 8 ft. from the finished floor of an outdoor dining platform, and shall not exceed 10 ft. in overall height;**

6. **Barriers defining outdoor dining facilities shall be constructed of quality and durable materials, and shall be maintained and placed in a consistent and organized fashion. Barriers may not exceed 42 inches in height measured from grade or finished floor.**
7. **Windbreaks are permitted within outdoor dining facilities and shall be affixed to, or integrally designed within a barrier. The total combined height of a barrier and windbreak shall not exceed 42 inches as measured from grade or finished floor. Windbreaks must be constructed of a clear, rigid and durable material such as Plexiglas, glass or acrylic. Eisenglass and other vinyl-based materials are prohibited.**
8. **Portable heating elements must be maintained and kept in an orderly fashion and in accordance with all applicable codes and ordinances. Propane or other fuels may not be stored on public property, and are subject to the Storage and Display Standards outlined in Article 4, Section 4.67 of the Zoning Ordinance.**
9. **All service functions and ancillary elements including, but not limited to, trash receptacles, service stations or host/hostess stands must be located within the approved outdoor dining facility, contained, and kept in a neat and orderly fashion. Service stations and host/hostess stands may not exceed 4 feet in height. The storage of dirty dishware outdoors is prohibited.**

D. **<u>Nonconforming Outdoor Dining Facilities</u>: Any outdoor dining facility existing at the time of the enactment of this ordinance, or any amendments thereto, that does not conform to the requirements of the district in which it is located may be continued or maintained subject to the following provisions, provided the facilities remain in compliance with the approved site plan and maintain a valid annual Outdoor Dining License:**

1. **If a nonconforming outdoor dining facility is destroyed, it shall be repaired, reconstructed or replaced, in conformity with all the provisions of the current applicable codes and ordinances, and any remnants of the former outdoor dining facility shall be removed from the property.**
2. **At the time that a non-conforming outdoor dining facility is replaced, renovated, or otherwise changed, the facility must be brought into compliance with the requirements of the current applicable codes and ordinances. Routine maintenance, including changing chairs and tables, umbrellas, waste receptacles, or other non-integral features is permitted for all existing outdoor dining facilities.**

ORDAINED this _____ day of _____, 2023 to become effective 7 days after publication.

_____
Therese Longe, Mayor

_____
Alex Bingham, City Clerk

CITY OF BIRMINGHAM

ORDINANCE NO. _____

THE CITY OF BIRMINGHAM ORDAINS:

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CITY OF BIRMINGHAM:

TO AMEND CHAPTER 126, ARTICLE 9, SECTION 9.02, DEFINITIONS, TO ADD DEFINITIONS FOR ENCOSURE, OUTDOOR DINING PATIO, AND PERMANENT FIXTURE.

Article 9, Section 9.02 – Definitions

Enclosure (outdoor dining): A vertical wall, panel, or other material that extends above 42 in. in height which provides extended relief from weather and impedes physical and/or visual access to the outdoor dining space. For the purposes of this definition, enclosure does not include exterior building walls.

Furnishing Zone: The area between the sidewalk and the curb where streetscape amenities such as planter boxes, streetlights, and tree wells are typically located.

~~**Outdoor Café:** An outdoor area accessory to an existing restaurant operation designated for consumption of food prepared within the restaurant and subject to the provisions of this ordinance.~~

Outdoor Dining Patio: A defined outdoor area accessory to an existing food and drink establishment designated for consumption of food and/or drink prepared within the establishment and subject to the provisions of this ordinance.

Outdoor Dining Platform: An elevated and defined outdoor area accessory to an existing food and drink establishment designated for consumption of food and/or drink prepared within the establishment that is located in a parking space and/or street and subject to the provisions of this ordinance.

Permanent Fixture (outdoor dining): Any element within an outdoor dining patio containing a foundation or other rigid attachment that prevents removal or that which requires extensive modifications to the public right-of-way.

Windbreaks: Temporary, seasonal elements in an outdoor dining facility provided to reduce the effect of harsh weather conditions for seated patrons.

ORDAINED this _____ day of _____, 2023 to become effective 7 days after publication.

_____
Therese Longe, Mayor

_____
Alex Bingham, City Clerk

AN ORDINANCE TO AMEND PART II OF THE CITY CODE, CHAPTER 98 – - STREETS, SIDEWALKS AND OTHER PUBLIC PLACES, ARTICLE II. – STREETS, TO ADD SEC. 98-38

THE CITY OF BIRMINGHAM ORDAINS:

The City Code, Part II, Chapter 98. – Streets, Sidewalks and Other Public Places, Article II. – Streets, Sec. 98-38 shall read as follows:

Sec. 98-38. – Outdoor Dining.

Outdoor dining facilities may be permitted on a public street or a public right-of-way only with a valid annual Outdoor Dining License, subject to review by the Planning Board, or by the Planning Division at the discretion of the Planning Board, the provisions of Chapter 126 – Zoning, and provided that the following conditions are met:

1) Approval of an Outdoor Dining License shall be contingent upon compliance with all current City codes and ordinances, including any conditions required by the City or the Planning Board in conjunction with site plan approval.

2) No such establishment shall erect or install permanent fixtures in the public right-of-way.

3) Operators of outdoor dining facilities shall be responsible for snow and ice removal, and shall remove snow and ice in a manner consistent with the regulations of the Department of Public Services.

4) Outdoor dining patios located in an alley or passage that has vehicular traffic are only permitted April 1 through December 31.

5) An ADA compliant platform may be erected in the on-street parking space(s) immediately in front of a food or drink establishment to create an outdoor dining facility from April 1 through December 31, subject to additional review by City administration.

6) All dining facilities, equipment and/or any objects associated with dining facilities, may be ordered for removal at the sole discretion of the City Commission if determined necessary for the public interest, health, safety or welfare.

Secs. 98-39. - 98-55. - Reserved.

All other Sections of Chapter 98. – STREETS, SIDEWALKS AND OTHER PLACES, ARTICLE II. – STREETS shall remain unaffected.

Ordained this _____ day of _____, 2023. Effective upon publication.

_____
Therese Longe, Mayor

_____
Alexandria D. Bingham, City Clerk

I, Alexandria D. Bingham, City Clerk of the City of Birmingham, do hereby certify that the foregoing ordinance was passed by the Commission of the City of Birmingham, Michigan at a regular meeting held _____, 2023 and that a summary was published _____, 2023.

_____
Alexandria D. Bingham, City Clerk

AN ORDINANCE TO AMEND PART II OF THE CITY CODE, CHAPTER 98 – - STREETS, SIDEWALKS AND OTHER PUBLIC PLACES, ARTICLE III. – SIDEWALKS, TO ADD SEC. 98-71

THE CITY OF BIRMINGHAM ORDAINS:

The City Code, Part II, Chapter 98. – Streets, Sidewalks and Other Public Places, Article III. – Sidewalks, Sec. 98-71 shall read as follows:

Sec. 98-71. – Outdoor Dining.

Outdoor dining facilities may be permitted on a public sidewalk or a public right-of-way only with a valid annual Outdoor Dining License, subject to review by the Planning Board, or by the Planning Division at the discretion of the Planning Board, the provisions of Chapter 126 – Zoning, and provided that the following conditions are met:

1) Approval of an Outdoor Dining License shall be contingent upon compliance with all current city codes and ordinances, including any conditions required by the City or the Planning Board in conjunction with site plan approval.

2) Placement of outdoor dining patios shall be limited to either the area immediately adjacent to the building in which an establishment resides, or in the furnishing zone, but not both. Limited exceptions to the placement of outdoor dining patios as noted in this subsection may be made by the Planning Board where the streetscape conditions demonstrate sufficient space to permit adequate pedestrian passage.

3) In order to safeguard the flow of pedestrians on the public sidewalk, such uses shall maintain an unobstructed sidewalk width as required by the Planning Board, but in no case less than 5 ft.

4) No such establishment shall erect or install permanent fixtures in the public right-of-way.

5) Operators of outdoor dining facilities shall be responsible for snow and ice removal, and shall remove snow and ice in a manner consistent with the regulations of the Department of Public Services.

6) Outdoor dining patios located in an alley or passage that has vehicular traffic are only permitted April 1 through December 31.

7) All dining facilities, equipment and/or any objects associated with dining facilities, may be ordered for removal at the sole discretion of the City Commission if determined necessary for the public interest, health, safety or welfare.

Secs. 98-72. - 98-90. - Reserved.

All other Sections of Chapter 98. – STREETS, SIDEWALKS AND OTHER PLACES, ARTICLE III. – SIDEWALKS shall remain unaffected.

Ordained this _____ day of _____, 2023. Effective upon publication.

_____
Therese Longe, Mayor

_____
Alexandria D. Bingham, City Clerk

I, Alexandria D. Bingham, City Clerk of the City of Birmingham, do hereby certify that the foregoing ordinance was passed by the Commission of the City of Birmingham, Michigan at a regular meeting held _____, 2023 and that a summary was published _____, 2023.

_____
Alexandria D. Bingham, City Clerk

REDLINED VERSION DEMONSTRATING CHANGES TO ARTICLE 4, SECTION 4.44 FROM 2/13/23 PUBLIC HEARING

Chapter 126, Article 4, Section 4.44 – Outdoor Dining Standards

This Outdoor Dining Standards section applies to the following districts:

B1 B2 B2B B2C B3 B4 MX O1 O2 T23

The following outdoor dining standards apply **to both public outdoor dining facilities as permitted in Chapter 98 (Streets, Sidewalks and Other Public Places) and to outdoor dining facilities located on private property**:

A. Purpose and Intent: The purpose of this section is to provide harmonious outdoor dining design in order to support public health, activate public space, foster economic development, safeguard the use of public property, and provide flexibility for current trends and future demands for outdoor dining.

B. Outdoor Dining – General: Outdoor dining is permitted immediately adjacent to and abutting the principal use, subject to review by the Planning Board, or by the Planning Division at the discretion of the Planning Board, and the conditions below. For the purposes of this section, outdoor dining facility shall include outdoor dining patios and/or outdoor dining platforms.

1. All outdoor activity including cleaning, maintenance and closing procedures must cease at the close of business or as noted in subsection 2.
2. When an outdoor dining facility is immediately adjacent to and abutting any single-family or multiple-family zoned residential district, all outdoor activity must cease at the close of business or 10:00 p.m., whichever is earlier.
3. Reviews of outdoor dining facilities shall include, but are not limited to, the following elements: tables, chairs, umbrellas, portable heating elements, barriers, service stations, landscaping/plantings, **utilities**, awnings, canopies, lighting, host/hostess stands, entertainment, valet operations, and any other adjacent neighboring outdoor dining facilities.
4. Outdoor dining facilities may be permitted to extend in front of neighboring properties or tenant spaces with the written permission of the property owners(s) affected and with Planning Board approval. Written permission must be renewed annually and submitted with the Outdoor Dining Permit application(s) for each outdoor dining facility affected.
5. **When not in use, outdoor dining facility elements shall not be stacked, consolidated, stored or relocated outdoors with the exception of active snow removal or active regular maintenance of an outdoor dining facility.**

FOR REFERENCE ONLY

6. ~~Outdoor dining facilities may be permitted on public property only with a valid annual Outdoor Dining License, provided that the following conditions are met:~~

   i. ~~Approval of an Outdoor Dining License shall be contingent upon compliance with all current city codes and ordinances, including any conditions required by the City or the Planning Board in conjunction with Site Plan approval.~~
   ii. ~~Operators of outdoor dining facilities shall be responsible for snow and ice removal, and shall remove snow and ice in a manner consistent with the regulations of the Department of Public Services.~~
   iii. ~~All outdoor dining facility elements such as railings, planters, tables, chairs, heaters, umbrellas, and the like must be stored indoors each night between January 1 and March 31 to allow for complete snow and ice removal.~~
   iv. ~~Outdoor dining patios located in an alley or passage that has vehicular traffic are only permitted April 1 through December 31.~~
   v. ~~An ADA compliant platform may be erected in the on-street parking space(s) immediately in front of a food or drink establishment to create an outdoor dining facility from April 1 through December 31, subject to an additional review by the Advisory Parking Committee.~~

7. All outdoor **dining** facilities shall be designed to meet the requirements of this section, as well as all applicable building and fire codes.

C. <u>Outdoor Dining – Design</u>: All outdoor dining facilities are subject to the following design standards:

1. All outdoor dining elements, fixtures and furnishings must be constructed of high quality and durable materials that are compatible with the establishment and the environment in which the outdoor dining facility is located.
2. Outdoor dining facilities shall provide and service refuse containers within the outdoor dining facility and maintain the area in good order. Public trash receptacles are not permitted to be utilized by outdoor dining facilities.
3. Outdoor dining facilities shall not contain enclosures as defined in Article 9, Section 9.02 of the Zoning Ordinance.
4. ~~In order to safeguard the flow of pedestrians on the public sidewalk, such uses shall maintain an unobstructed sidewalk width as required by the Planning Board, but in no case less than 5 ft.~~
5. ~~Placement of outdoor dining patios shall be limited to either the area immediately adjacent to the building in which an establishment resides, or in the furnishing zone, but not both. Limited exceptions to the placement of outdoor dining patios as noted in this subsection may be made by the Planning Board where the streetscape conditions demonstrate sufficient space to permit adequate pedestrian passage, and as permitted in Article 4, Section 4.44(B)(4).~~

FOR REFERENCE ONLY

6. Outdoor dining platforms within the adjacent street or parking space(s) shall be designed to be flush with the curb, and may not extend beyond the curb into the furnishing zone except to accommodate accessibility requirements.
7. ~~No such establishment shall erect or install permanent fixtures in the public right-of-way.~~
8. Overhead weather protection such as umbrellas, awnings or canopies are subject to the following conditions:

    i. Overhead weather protection shall not impede sight lines into a retail establishment, obstruct pedestrian flow within the outdoor dining facility, obstruct pedestrian or vehicular traffic flow outside the outdoor dining facility, or contain signage or advertising.
    ii. Overhead weather protection on outdoor dining platforms must measure a minimum of 8 ft. from the finished floor of an outdoor dining platform, and shall not exceed 10 ft. in overall height;

9. Barriers defining outdoor dining facilities shall be constructed of quality and durable materials, and shall be maintained and placed in a consistent and organized fashion. Barriers may not exceed 42 inches in height measured from grade or ~~the~~ finished floor ~~of an outdoor dining platform~~.
10. Windbreaks are permitted within outdoor dining facilities and shall be affixed to, or integrally designed within a barrier. The total combined height of a barrier and windbreak shall not exceed 42 inches as measured from grade or ~~the~~ finished floor ~~of an outdoor dining platform~~. Windbreaks must be constructed of a clear, rigid and durable material such as Plexiglas, glass or acrylic. Eisenglass and other vinyl-based materials are prohibited.
11. Portable heating elements must be maintained and kept in an orderly fashion and in accordance with all applicable ~~fire~~ **codes and ordinances**. Propane or other fuels may not be stored on public property, and are subject to the Storage and Display Standards outlined in Article 4, Section 4.67 of the Zoning Ordinance.
12. All service functions and ancillary elements including, but not limited to, trash receptacles, service stations or host/hostess stands must be located within the approved outdoor dining facility, contained, and kept in a neat and orderly fashion. Service stations and host/hostess stands may not exceed 4 feet in height. The storage of dirty dishware **outdoors** is prohibited.

D. Nonconforming Outdoor Dining Facilities: Any outdoor dining facility existing at the time of the enactment of this ordinance, or any amendments thereto, that does not conform to the requirements of the district in which it is located may be continued or maintained subject to the following provisions, provided the facilities remain in compliance with the approved site plan and maintain a valid annual Outdoor Dining License:

FOR REFERENCE ONLY

1. If a nonconforming outdoor dining facility is destroyed, it shall be repaired, reconstructed or replaced, in conformity with all the provisions of the current applicable codes and ordinances, and any remnants of the former outdoor dining facility shall be removed from the property.
2. At the time that a non-conforming outdoor dining facility is replaced, renovated, or otherwise changed, the facility must be brought into compliance with the requirements of the current applicable codes and ordinances. Routine maintenance, including changing chairs and tables, umbrellas, waste receptacles, or other non-integral features is permitted for all existing outdoor dining facilities.

ORDAINED this _____ day of _____, 2023 to become effective 7 days after publication.

_____
Therese Longe, Mayor

_____
Alex Bingham, City Clerk

FOR REFERENCE ONLY

OUTDOOR DINING DATA 2023

		Outdoor Dining Seats				Parking Spaces	Public Property	Approvals		Nonconformities		Amortization
		Public Property	Dining Platform	Private Property	TOTAL	Public Parking	Square Feet	Initial	Recent	1	2	# of Years
BISTRO LL - 944 SEATS (49%)	Whole Foods (Maple Road Taproom)	0	0	33	33	0	0		2017	-	-	N/A
	Salvatore Scallopini	34	0	0	34	0	462		2019	-	-	N/A
	Luxe Bar & Grille	48	0	0	48	0	439		2020	Furnishing Zone	-	4
	Bella Piatti	6	22	0	28	2	177		2010	Platform Height	Furnishing Zone	3
	Market North End	0	0	44	44	0	139		2013	Enclousure	-	3
	Adachi	0	0	67	67	0	0		2017	Number of Seats	-	3
	Bistro Joes	0	0	60	60	0	0		2013	Enclosure*	-	N/A
	Forest Grill	30	0	0	30	0	383		2007	-	-	N/A
	Social Kitchen & Bar	56	0	30	86	0	697		2018	Enclosure	Number of Seats	3
	Brooklynn Pizza	41	0	0	41	0	487		2019	-	-	N/A
	Elies Mediterranean	4	20	0	24	1	64		2009	Platform Height	Furnishing Zone	3
	Townhouse	52	24	0	76	1	867		2012	Service Station	Number of Seats	3
	Churchills	12	0	0	12	0	122		2011	-	-	N/A
	La Strada	0	20	16	36	2	0		2022	-	-	N/A
	Toast	19	40	0	59	2	248		2015	Platform Height	Furnishing Zone	3
	Tallulah	0	42	0	42	3	217		2010	Platform Height	Furnishing Zone	3
	Casa Pernoi	0	0	64	64	0	0		2022	Encolsure**	-	N/A
	Bell Bistro	4	0	0	4	0	33		2022	-	-	N/A
	EM Bistro	24	0	28	52	0	127		2020	-	-	N/A
	Bloom	36	0	0	36	0	539		2021	-	-	N/A
23	Whistle Stop	28	0	0	28	0	453		2021	-	-	N/A
944	Wilders	0	24	0	24	1	0		2022	Platform Height	-	6
49%	Sushi Japan	16	0	0	16	0	174		2021	Furnishing Zone	-	5
OTHER LL - 710 SEATS (37%)	Griffin Claw	0	0	62	62	0	0		2015	Barriers	-	3
	Dick O' Dows	36	24	20	80	1	141		2021	-	-	N/A
	Townsend Hotel (Rugby Grille)	16	16	0	32	2	271		2022	-	-	N/A
	220 Restaurant	0	36	78	114	3	352		2022	Platform Height	Umbrellas	6
	Phoenicia	36	0	0	36	0	518		2022	-	-	N/A
	Hazels	0	0	22	22	0	0		2018	-	-	N/A
	Streetside Seafood	8	12	0	20	1	141		2019	Furnishing Zone	Extension	3
	The Morrie	14	32	0	46	4	189		2021	Service Stations	-	5
	Birmingham Pub*	38	0	0	38	0	387		2021	-	-	N/A
	Shift/Sidecar/Slice	90	0	0	90	0	743		2021	Furnishing Zone	-	5
13	Sybil	4	0	8	12	0	61		2021	-	-	N/A
718	RH	0	0	128	128	0	0		2021	-	-	N/A
37%	Mare Mediterranean	14	24	0	38	2	183		2022	Platform Height	Furnishing Zone	6
NON-LL - 262 SEATS (14%)	Be Well	0	0	12	12	0	0		2012	-	-	N/A
	Birmingham Roast	24	0	0	24	0	211		2022	-	-	N/A
	Commonwealth	20	32	0	52	2	130		2018	Furnishing Zone	Platform Height	3
	Café Succo	0	0	16	16	0	0		2014	-	-	N/A
	Papa Joes	0	0	24	24	0	0		2012	-	-	N/A
	Canelle Patisserie	0	0	12	12	0	0		2022	-	-	N/A
	Birmingham Sushi Café	12	12	0	24	1	108		2012	Furnishing Zone	Platform Height	3
	Starbucks	24	0	0	24	0	779		2017	Furnishing Zone	-	3
	Work Company, LLC	6	0	0	6	0	101		2021	-	-	N/A
	Planthropie	4	8	0	12	1	57		2021	Furnishing Zone	-	5
	Paris Baguette	16	0	0	16	0	250		2022	-	-	N/A
	Hunter House Hamburgers	18	0	0	18	0	0		2022	-	-	N/A
	Svenska Café	0	0	14	14	0	0		2016	-	-	N/A
16	Sweet Green	8	0	0	8	0	139		2021	-	-	N/A
270	Bakehouse 46	4	0	0	4	0	27		2022	-	-	N/A
14%	Beyond Juice	4	0	0	4	0	22		2007	-	-	N/A
	Total	**806**	**388**	**738**	**1932**	**29**	**10437**					**21**
	Percentage of Total	42%	20%	38%	-							40%

*Private Property
**Private Property & Received a Variance in 2022

52 Total Outdoor Dining Patios
Recently Approved Outdoor Dining (Within 2023 Calendar Year)
* Application In Progress

••This document was created for data/tracking purposes for use by the Planning Division. This document is a living document that is updated as outdoor dining changes in the City of Brimingham.••

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Planning Division

DATE: December 14, 2022

TO: Planning Board Members

FROM: Nicholas Dupuis, Planning Director

SUBJECT: Outdoor Dining Ordinance – Public Hearing #2

On December 7, 2020 (Agenda – Minutes), the City Commission discussed amending the Zoning Ordinance to consider allowing the enclosure of outdoor dining areas during the winter months. The City Commission asked the Planning Board to consider this issue, and any regulations they may recommend should outdoor dining enclosures be permitted.

On June 21, 2021 (Agenda – Minutes), the City Commission and Planning Board met at a joint meeting to further discuss outdoor dining, and to get a clear direction as to what elements of outdoor dining should be addressed. In general, the City Commission and Planning Board discussed several topics spanning from enclosures to private vs. public space, but ultimately asked the Planning Board to take a comprehensive look at the entire outdoor dining ordinance.

On June 23, 2021 (Agenda – Minutes), the Planning Board discussed outdoor dining in further detail based on the joint meeting two days prior. The Planning Board settled on a list of goals that they would like to focus on in the ordinance review process, which includes the following:

- Incentivize outdoor off-season dining;
- Review the placement of decks and enclosures;
- Ensure that additional outdoor off-season dining does not become an extension of the indoor space;
- Solicit feedback from restauranteurs of all types in the City;
- Seek possible ideas from local, national and international examples;
- Review the current ordinance for issues;
- Review tickets that were given out to temporary outdoor dining operations;
- Review photos of the variety of temporary outdoor dining structures that were used around the City;

- Explore options for maintaining permanent aspects of outdoor dining structures even if the parts of the structures come down in different seasons;
- Discuss potential differences in policy for outdoor dining on public versus private property;
- Solicit feedback from Public Services and the BSD;
- Review agreements from temporary outdoor dining to see if any of the temporary policies might be worth integrating;
- Consider aspects like sidewalk widths and snow clearing in writing the policy;
- Maintain the current seating allowances for differently-sized establishments and maintain the differences for establishments holding different kinds of licenses for alcoholic beverage service; and,
- Recommend a permanent solution so that restauranteurs do not have to continue to adapt to changing policies.

Study Session #1 Summary

On July 14, 2021 (Agenda – Minutes), the Planning Board reviewed a high-level report on outdoor dining to guide future discussion. The topics included observations as to what constitutes "good" outdoor dining with national and local examples, as well as a local ordinance review for outdoor dining. The Planning Board discussed next steps and emphasized the need to (1) hear from different City Departments (code issues, retail neighbor conflicts, streetscape), (2) review available codes and ordinances from other areas of the country (enclosures, public vs. private, year-round), and (3) analyze information from national downtown associations or other related organizations (trends, social districts, success stories).

Study Session #2 Summary

On August 11, 2021 (Agenda – Minutes), the Planning Board reviewed another high-level report in which the Planning Division presented various departmental comments on outdoor dining, a national outdoor dining ordinance review, conversations with local cities, and a study of national organization input and trends. The Planning Division also provided some public feedback from Engage Birmingham, which surveyed the public for their opinion of the COVID-19 temporary outdoor dining expansions, which were overwhelmingly positive. Moving forward, the Planning Board expressed interest in getting into more detail on seasonal/year round dining and its effect on street activation, public versus public space, the potential for regulating different restaurants/licenses differently, and defining and establishing a purpose of outdoor dining in the City.

Study Session #3 Summary

On September 9, 2021 (Agenda – Minutes), the Planning Board discussed a report which contained comments from the Advisory Parking Committee, common issues with outdoor dining patios, information on the temporary COVID-19 patios, and also discussed the purpose of outdoor dining. In addition, the Planning Board was able to review an example of how the outdoor dining ordinance could look based on comments up to that point. Ultimately, the conversation started to get more granular with specific ordinance-related ideas ranging from an official stance on

enclosures to material guidelines to patio placement. There were several other requests for information including a review of Michigan Liquor Control Commission guidelines for outdoor dining, a review of the concept of windbreak versus wall, and the possibility of regulating outdoor dining by zones.

Study Session #4 Summary
On September 23, 2021 (Agenda – Minutes), the Planning Board discussed the MLCC rules for outdoor dining patios, the concept of a windbreak and whether or not they should be permitted, and also explored the different zoning districts in which outdoor dining is permitted. These topics led to more conversation about how overhead weather protection will interact with said overhead coverings, and what typed of overhead protection the Planning Board should permit. The Planning Board expressed an interest in taking a deeper dive into overhead weather protection and reviewing different options.

Study Session #5 Summary
On October 27, 2021 (Agenda – Minutes), the Planning Board focused much their conversation on overhead weather protection and which types may be considered within the new ordinance language, and what different issues might arise with the different styles. In addition, the Birmingham Fire Chief Paul Wells gave a brief overview of the fire code as it relates to overhead weather protection, and offered some guidance to the Planning Board regarding fire suppression and other aspects of outdoor dining. In addition to overhead weather protection, the Planning Board provided some clear direction on the subjects of windbreaks, year-round dining, and the role of outdoor dining decks.

Study Session #6 Summary
On December 8, 2021 (Agenda – Minutes), the Planning Board reviewed comments regarding outdoor dining from the Birmingham Shopping District (BSD). In addition to the BSD comments, the Planning Board also reviewed some updated comments from the Fire Department based on their additional research into the Fire Code. To round out the meeting, the Planning Board outlined several items that they feel need further discussion/decision moving forward:

- Whether establishments with liquor licenses and establishments without liquor licenses should be handled differently;
- Whether there should be on-season and off-season dates for outdoor dining, and what should happen to furniture and other equipment on public property if there are different 'seasons';
- Whether establishments should be permitted outdoor dining on both a sidewalk and a deck if requested, and if not, what the City wants to incentivize instead;
- What types of coverings and equipment should be allowed, and how specific the standards should be in terms of material, location, and other considerations;
- Whether outdoor dining should be permitted to extend beyond the storefront of an establishment, and if so, what the limitations should be;

- Whether outdoor dining decks should be limited to a certain number per block; and,
- Whether outdoor dining in public space and outdoor dining in private space should be regulated differently.

Study Session #7 Summary
On January 12, 2022 (Agenda – Minutes), the Planning Board discussed the several questions posed in the previous study session and came to a conclusion on most of them. In general, the Planning Board decided on a short extension to the regular outdoor dining season, treating all outdoor dining establishments alike, enhanced material and appearance standards, and allowing expansion of patios with neighbor consent. During this study session, the Planning Board also reviewed seating data for the different outdoor dining establishments, and was provided a map of all outdoor dining in the City, which is heavily concentrated downtown. Ultimately, the Planning Board asked Staff to take their comments and work them into a new revised set of ordinance amendments to review on February 9, 2022.

Study Session #8 Summary
On February 9, 2022 (Agenda – Minutes), the Planning Board worked on fine-tuning a set of ordinance amendments to try to finalize a few of their discussion points, and make sure the intent of the original direction of the City Commission was met. The Planning Board made several revision requests that were aimed at clarifying different aspects of the proposed ordinance, but especially relating to the barriers and enclosure regulations. In addition, the Planning Board made some requests to review various site plans from approved outdoor dining patios in the City to help guide the final discussions on the placement of patios, and other design limitations.

Study Session #9 Summary
On March 9, 2022 (Agenda – Minutes), the Planning Board took another long look at the proposed ordinance language and offered several minor changes to the text in an attempt to offer further clarity and consistency throughout the ordinance. In addition, the Planning Board discussed the remaining issues that were in need of direction. In short, the Planning Board decided that they did not wish to restrict outdoor dining patios to one contiguous patio, but did express interest in restricting platform dining to the street with no impingement on the furniture zone. Additionally, the majority of the Planning Board did not feel as though fixed awnings were appropriate over outdoor dining platforms, and sought additional language to restrict overhead weather protection to umbrellas on platforms. Finally, the Planning Board did not feel as though the numbers of platforms per block should be restricted.

Public Hearing #1 Summary
On March 9, 2022, the Planning Board moved to set a public hearing date of April 13, 2022 for a final review and recommendation to be forwarded to the City Commission. Due to a noticing issue, the Planning Board reset the public hearing to May 11, 2022 (Agenda – Minutes). At the public hearing, the Planning Division provided finalized ordinance language based on Planning Board comments, but also re-circulated the language to each department, as well as the City

Attorney to ensure that the language addressed their concerns, and would provide consistent and enforceable regulation. Ultimately, a motion to recommend approval to the City Commission failed 3-4. The driving factors behind the failed vote were concerns over the impact of the amended ordinance language on existing establishments, and some lingering design questions

Joint Meeting Summary

On June 20, 2022 (Agenda – Minutes), the Planning Board and City Commission held a joint meeting to discuss a few remaining policy considerations related to the overall outdoor dining study, as well as give the Commission a progress report. Three main questions were posed to the group:

1. Does the Commission wish to engage in any additional public input on the outdoor dining ordinance?
2. Does the Commission wish to consider a cap on the number of outdoor dining platforms permitted in the public rights-of-way by block, by area, or overall?
3. Should the Planning Board require additional documents and plans regarding the integration of valet operations and outdoor dining?

During the meeting, there was consensus that the City should use its constant contact email service to help inform the public of the upcoming outdoor dining study session. In addition, the group was in agreement that a non-conformity or sunset provision would be appropriate based on the nature of some of the larger changes proposed. Finally, it was unanimously accepted that a valet operations plan be included wherever outdoor dining facilities and valet operations coexist.

Study Session #10 Summary

On July 13, 2022 (Agenda – Minutes), the Planning Board discussed at length the final major design considerations that were unresolved, which included outdoor dining facilities in the furnishing zone, overhead weather protection, and windbreaks.

Study Session #11 Summary

On August 10, 2022 (Agenda – Minutes), the Planning reviewed revised ordinance language to reflect an adjustment to outdoor dining facility placement, the allowance of canopies and awnings on platforms, and other minor improvements.

Study Session #12 Summary

On September 14, 2022 (Agenda – Minutes), the Planning Division provided the minor revisions requested from the Planning Board from the previous meeting. The Planning Board discussed each section and provided staff with comments and requests for minor changes. At that time, the Planning Board indicated that the nonconforming section of the ordinance is the final hurdle, and provided commentary on what type of language best suited the outdoor dining ordinance based on the number of outdoor dining facilities and the time horizon for changes.

Study Session #13 Summary

On November 9, 2022 (Agenda) the Planning Board reviewed a document that contained all of the requested changes from the Planning Board, which was also reviewed by the City Attorney. The Planning Board fielded a large amount of public comment regarding the proposed "sunset" language in the nonconformity section, which the Planning board agreed to remove for the public hearing.

Public Hearing #2

The Planning Division has provided final ordinance language that considered the feedback received from the Planning Board at the last study session, as well as sample motion language below.

Sample Motion Language:

Motion to recommend to the City Commission APPROVAL of the amendments to Article 4, Section 4.44, Article 3, Section 3.04, Article 3, Section 3.16, and Article 9, Section 9.02 to provide more clear and enforceable outdoor dining ordinances.

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Treasury

DATE:	**May 22, 2023**
TO:	**Thomas M. Markus, City Manager**
FROM:	**Ryan Katz, Deputy Treasurer** **Mark Gerber, Finance Director/Treasurer**
SUBJECT:	**Confirmation of SAD Roll 904 Brown Street Paving – Sidewalk and Streetscape**

INTRODUCTION:

A public hearing on the confirmation of the special assessment roll for the Brown Street Paving Project is being held on May 22, 2023. The special assessment will reimburse the city for improvements made. If the City Commission approves the roll, the property owners who benefit from these improvements will be billed for the cost of the improvements.

Comments during the hearing of confirmation are limited to those questions specifically addressing the assessment roll pursuant to Section 94-9 of the City Code.

BACKGROUND:

At the City Commission meeting on May 8, 2023, the City Commission determined the necessity of the Brown Street Paving project and a Hearing of Confirmation of the Special Assessment Roll was set for May 22, 2023.

LEGAL REVIEW:

The purpose of this hearing is to review and hear any objections to the special assessment roll. The special assessment roll is a listing of all of the properties to be assessed for the improvements to the property. Pursuant to the City Code at section 94-9, whenever a special assessment roll shall be confirmed by the commission, it should be final and conclusive. Further the City Attorney has prepared a memo regarding the Special Assessment Appeal Process with the Michigan Tax Tribunal.

FISCAL IMPACT:

If confirmed, the preliminary assessment roll would be $251,594.74. Once the project is completed and final costs are known, the roll will be adjusted to actual costs as provided by City Code. Property owners have ten (10) years to pay the special assessment.

PUBLIC COMMUNICATIONS:

Property owners were notified by mail of the public hearing dates. If the City Commission confirms the special assessment rolls, the Treasurer's office will notify the property owners in the special assessment district of the confirmation and the lien on their property.

SUMMARY:

The Treasurer's office recommends that the City Commission conduct the public hearing of confirmation of special assessment district 904 and further to confirm the rolls as attached to this report.

ATTACHMENTS:

- Proposed Special Assessment Roll
- Memorandum: Hearing of Necessity for Brown Street Paving SAD
- Memorandum: Birmingham Special Assessment Appeal Process

SUGGESTED COMMISSION ACTION:

Motion adopting a resolution confirming special assessment roll 904 as follows:

WHEREAS, Special Assessment Roll, designated Roll No. 904, has been heretofore prepared for collection, and

WHEREAS, notice was given pursuant to Section 94-7 of the City Code, to each owner or party-in-interest of property to be assessed, and

WHEREAS, the Commission has deemed it practicable to cause payment of the cost thereof to be made after the time of construction and

The Commission Resolution 05-104-23 provided it would meet this 22nd day of May, 2023 for the sole purpose of reviewing the assessment roll, and

WHEREAS, at said hearing held this May 22, 2023, all those property owners or their representatives present have been given an opportunity to be heard specifically concerning costs appearing in said special assessment roll,

NOW, THEREFORE, BE IT RESOLVED, that Special Assessment Roll No. 904 be in all things ratified and confirmed, and that the City Clerk be and is hereby instructed to endorse said roll, showing the date of confirmation thereof, and to certify said assessment roll to the City Treasurer for collection at or near the time of construction of the improvement.

BE IT FURTHER RESOLVED, that special assessment shall be payable in ten (10) payments as provided in Section 94-10 of the Code of the City of Birmingham, with an annual interest rate of nine and one quarter percent (9.25%) on all unpaid installments.

Parcel ID/Sidwell Number	Street Address	SAD Assessment
08-19-36-208-015	325 S Old Woodward	$ 44,666.31
08-19-36-208-016	355 S Old Woodward	$ 24,899.56
08-19-36-208-004	34745 Woodward	$ 86,244.20
08-19-36-206-021	255 S Old Woodward	$ 35,820.42
08-19-36-207-010	34901 Woodward	$ 57,520.88
08-19-36-207-014	34901 Woodward Ave #200	$ 1,043.34
08-19-36-207-015	34901 Woodward Ave #3	$ 1,400.03
08-19-36-206-023	Alley	$ -
08-19-36-206-024	Peabody Parking Structure	$ -

$ 251,594.74

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Engineering Department

DATE: **May 8, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Melissa A. Coatta, City Engineer**

SUBJECT: **Brown Street Paving**
Hearing of Necessity for Sidewalk and Streetscape Special Assessment District (SAD)

INTRODUCTION:
The design has been completed and bids were accepted on Tuesday, May 2, 2023 for the Brown Street Paving Project, which includes the reconstruction of Brown Street from S. Old Woodward to Woodward Ave. The proposed work includes new sidewalk and streetscape features to match what was previously completed along Old Woodward and Maple Road.

BACKGROUND:
The Michigan Department of Transportation (MDOT) will improve pedestrian crossings at Woodward Ave. and Brown/Forest intersections starting in September 2023. The City Commission approved the reconfiguration of Brown Street from S. Old Woodward to Woodward Ave. to include a reduction of one lane eastbound at Woodward Ave., a midblock pedestrian crossing, and an additional median island west of Peabody Street.

The new streetscape on Brown Street will include:

- Enhanced version of the downtown standard sawcut concrete sidewalk with an exposed aggregate sidewalk between the main pedestrian sidewalk and the street curb.
- Professional-designed landscaping that includes enlarged raised planter beds framed by a 6-inch exposed aggregate curb, new street trees, and irrigation.

The proposed project is scheduled to start construction June 2023, with substantial project completion by August 4, 2023, and final project completion by August 18, 2023.

The City's policy has been to assess 75% of the streetscape improvements to the properties that share frontage with the improvements. The cost per property will be assessed as an average cost per linear foot of frontage for the improvements. The properties with multiple owners will share the cost of the frontage, and the amount will be based on the square footage of the building area

owned. The City will bill one-tenth of the assessment, as would be done on other special assessment districts, plus interest, on an annual basis, to make the cost more manageable for the property owners.

The parcels within the project zone that are subject to the sidewalk and street scape are highlighted on the attached map. Appended to this report is a list of properties that the department plans to include in the assessment district, along with estimated construction costs.

LEGAL REVIEW:
Chapter 94 – Special Assessments of the Birmingham City Code outlines the process by which a special assessment is conducted in the City of Birmingham. This project will follow the prescribed City Code procedures. Legal has reviewed and found no issues.

FISCAL IMPACT:
Revenues generated from the Streetscape SAD for the Brown Street Paving will defray the costs incurred by the City for the construction of these improvements. Consistent with previous projects of this nature, the City's policy is as follows:

- 75% of the streetscape improvements to the properties that share frontage with the improvements.
- Properties with multiple owners will share the cost of the frontage, and the amount will be based on the square footage of the building area owned.

The City pays for the balance of the costs, 25% of the streetscape improvements.

PUBLIC COMMUNICATIONS:
The Engineering Department held a property owner meeting on Thursday, March 23, 2023 to discuss the project, traffic access during construction, and special assessment.

Notice for the Confirmation of Roll is to be distributed by the Clerk's Office. The Engineering Department has sent all property owners a letter explaining the associated work.

The Engineering Department did receive phone calls from property owners with questions and proposed construction schedule.

SUMMARY:
The Engineering Department recommends that the City Commission declare necessity and approve a Special Assessment District for the Brown Street Paving. Should the Commission approve the Special Assessment District, a public hearing for confirmation of the roll will be held at the City Commission meeting on May 22, 2023.

ATTACHMENTS:

- Map of proposed Streetscape Special Assessment District (1 page)
- Brown Street Paving Plans (33 pages)
- Spreadsheet with Estimated Costs of Services (2 pages)
- Clerk's Confirmation of Public Hearing Notice (7 pages)

SUGGESTED COMMISSION ACTION:

WHEREAS, Notice was given pursuant to Section 94-7 of the City Code, to each owner or party-in-interest of property and lots to be assessed, by first class mail, and by publication in a newspaper generally circulated in the City; and

WHEREAS, The City Commission has conducted a public hearing and has determined to proceed with the project of replacing sidewalks, reconfiguring roadway, and street scape on Brown Street from S. Old Woodward to Woodward Ave.; and

WHEREAS, The City has previously established a policy requiring replacement or improvement of sidewalks and street scape when the City street is open for repairs or reconstruction in the Central Business District; and

WHEREAS, The City Commission, after the public hearing, has determined that the Brown Street Paving Project is a necessity and is in the best interest of the City; and

WHEREAS, The Commission has approved the detailed plans and estimates of cost prepared by the City Engineer; and

WHEREAS, Formal bids have been received and the actual cost for sidewalk and streetscape has been determined; and

WHEREAS, The City Engineer has determined the boundaries of sidewalk and streetscape located within the limits of the following streets shall be installed as part of the Brown Street Paving Project (Contract #5-23(P)):

Brown Street – S. Old Woodward to Woodward Ave.; and

WHEREAS, The formula used in making the assessment is 75% of the contractor's charge for replacing sidewalks, reconfiguring roadway, and street scape (calculated at the rate of $853.68 per foot of frontage property).

THEREFORE LET IS BE RESOLVED, The City Commission has determined that the scope of the public improvement as described is in the best interest of the City and will be benefit the properties listed in the assessment roll, and the City Commission directs the Manager to prepare a Special Assessment Roll and present the same to the Commission for confirmation and further set a Public Hearing and give notice on May 22, 2023.

Parcel ID	Street Address	Parcel ID	Street Address
08-19-36-208-015	325 S Old Woodward	08-19-36-206-021	255 S Old Woodward
08-19-36-208-016	355 S Old Woodward	08-19-36-207-010	34901 Woodward
08-19-36-208-004	34745 Woodward	08-19-36-206-024	Peabody Parking Structure
08-19-36-206-023	Alley	08-19-36-207-014	34901 Woodward
08-19-36-207-015	34901 Woodward		

Brown Street Sidewalk and Streetscape SAD

2 Foot Contours
5 Foot Contours
FEMA Base Flood Elevations
FEMA Cross Sections
100 yr - FEMA Floodplain
100 yr (detailed) - FEMA Floodplain
500 yr - FEMA Floodplain
FLOODWAY - FEMA Floodplain

Disclaimer: The information provided herewith has been compiled from recorded deeds, plats, tax maps, surveys and other public records. It is not a legally recorded map or survey and is not intended to be used as one. Users should consult the information sources mentioned above when questions arise. FEMA Flooplain data may not always be present on the map.

OAKLAND COUNTY MICHIGAN
Economic Development & Community Affairs

David Coulter
Oakland County Executive

Date Created: 4/18/2023

NORTH

1 inch = 100 feet

Oakland County One Stop Shop 2100 Pontiac Lake Road Bldg. 41 West Waterford, MI 48328 Phone: 248-858-0721 Web: www.advantageoakland.com

BIRMINGHAM

A WALKABLE CITY

ENGINEERING DEPARTMENT

BROWN STREET PAVING PROJECT

CONTRACT #5-23(P)

SHEET INDEX

COVER SHEET
T1 TOPOGRAPHIC SURVEY - BROWN STREET STA. P.O.B. TO 2+82
T2 TOPOGRAPHIC SURVEY- BROWN STREET STA. 2+82 TO P.O.E.
C1 UTILITY PLAN - BROWN STREET STA. P.O.B. TO 2+82
C2 UTILITY PLAN - BROWN STREET STA. 2+82 TO P.O.E.
C3 STORM PROFILE PLAN
C4 GRADING PLAN - BROWN STREET STA. P.O.B. TO 2+82
C5 GRADING PLAN - BROWN STREET STA. 2+82 TO P.O.E.
C6 INTERSECTION GRADING DETAIL (1 OF 2)
C7 INTERSECTION GRADING DETAIL (2 OF 2)
C8 PAVING PLAN - BROWN STREET STA. P.O.B. TO P.O.E.
C9 EXISTING AND PROPOSED CROSS-SECTION
C10 STRIPING AND SIGNAGE PLAN
C11 BROWN STREET DETOUR PLAN
C12 PEDESTRIAN ACCESS & TRAFFIC CONTROL PLAN
C13 NOTES AND DETAILS(1 OF 2)
C14 NOTES AND DETAILS(2 OF 2)

IRRIGATION PLANS

IR 1.0 IRRIGATION DESIGN
IR 1.1 IRRIGATION DETAILS

LANDSCAPE PLANS

L0.0 PLANT SCHEDULE AND NOTES
L1.0 OVERALL LANDSCAPE PLAN
L1.1 LANDSCAPE PLAN
L1.2 LANDSCAPE PLAN
L1.3 LANDSCAPE DETAILS
L1.4 LANDSCAPE DETAILS
L1.5 DECORATIVE FENCE ALTERNATE
L2.0 SOILS PLAN
L2.1 SOILS PLAN

Q1 QUANTITIES

CITY OF BIRMINGHAM STANDARD DETAILS

CBD STREETSCAPE STANDARD DETAILS
SIDEWALK RAMPS AND BRICK PAVER SIDEWALKS
SEWER STANDARD DETAILS
WATER MAIN STANDARD DETAILS

UTILITY NOTE

THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CIVIL ENGINEER

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MI 48342
CONTACT: MR. BRETT BUCHHOLZ, P.E.
CONTACT: MR. PAUL TULIKANGAS, P.E.
PHONE: (248) 332-7931
EMAIL: BBUCHHOLZ@NFE-ENGR.COM
EMAIL: PTULIKANGAS@NFE-ENGR.COM

LANDSCAPE ARCHITECT

MKSK
4219 WOODWARD AVE., STE. 305
DETROIT, MI 48201
CONTACT: MS. KRISTYN BOWDEN PLA, LEED GA
PHONE: (419) 283-6934
EMAIL: KBOWDEN@MKSKSTUDIOS.COM

Know what's below Call before you dig.

BENCHMARK NOTE

BENCHMARKS SET AND SHOWN PER SHEET WERE ESTABLISHED OFF OF THE CITY OF BIRMINGHAM BENCHMARK DATUM.

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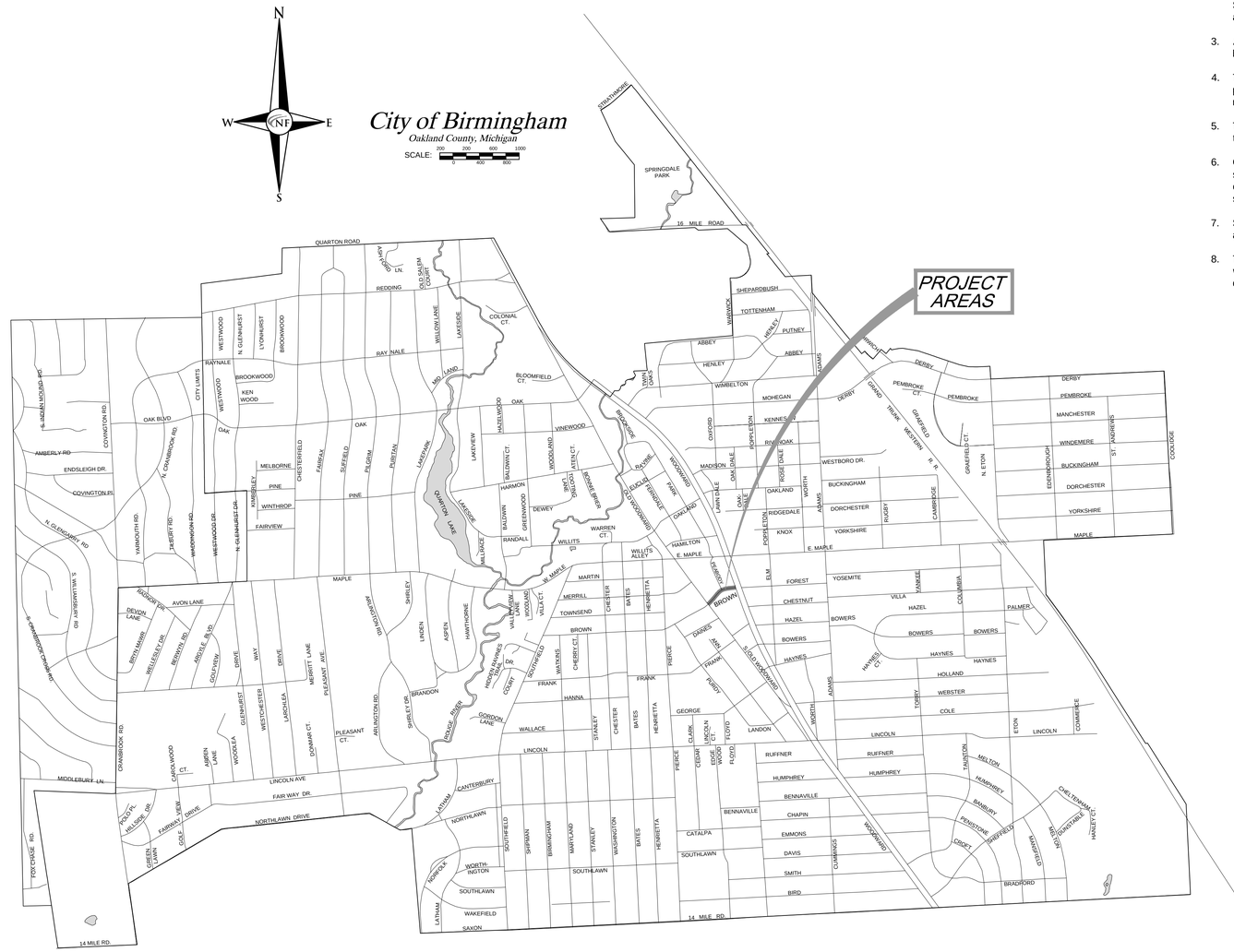
W NF E

S

City of Birmingham
Oakland County, Michigan

SCALE: 200 200 600 1000 / 0 400 800



These notes shall apply for all work within this contract:

1. The contractor shall notify MISS DIG 1-800-482-7171 at least 3 working days excluding Saturday, Sunday, and Holidays before making any excavations and notify the City of Birmingham Engineering Department a minimum of 24 hours prior to the start of construction (248-530-1850).
2. See the City of Birmingham drawings "Sewer Standard Details" and "Water Main Standard Details" for details of manholes, catch basins, inlets, and related sewer and water main work.
3. All excavation under or within three feet of pavement, public or private, shall be backfilled and compacted with sand.
4. The joints at the edges of all excavations in the pavement shall be sawcut, or pavement will be removed to existing joints, as directed by the Engineer. There is no separate pay item for saw cutting pavements.
5. The contractor shall be responsible for damage to existing utilities, pavement, trees, landscaping, gravel, etc., whether located on public or private property.
6. Catch basin and inlet castings scheduled for replacement, or new construction shall be EJIW 5000Z4 DI / 5000M4 DI Hinged Assembly unless specified otherwise. Manhole castings shall be EJIW 1040-A cover as noted on the detail sheets and plans, unless otherwise specified.
7. Storm, sewer and water main trench shall be backfilled with MDOT Class II sand and properly compacted to 95% of modified proctor density.
8. The contractor shall coordinate and cooperate with all other utility companies working in the same area, project related or not, during the same allotted construction period.

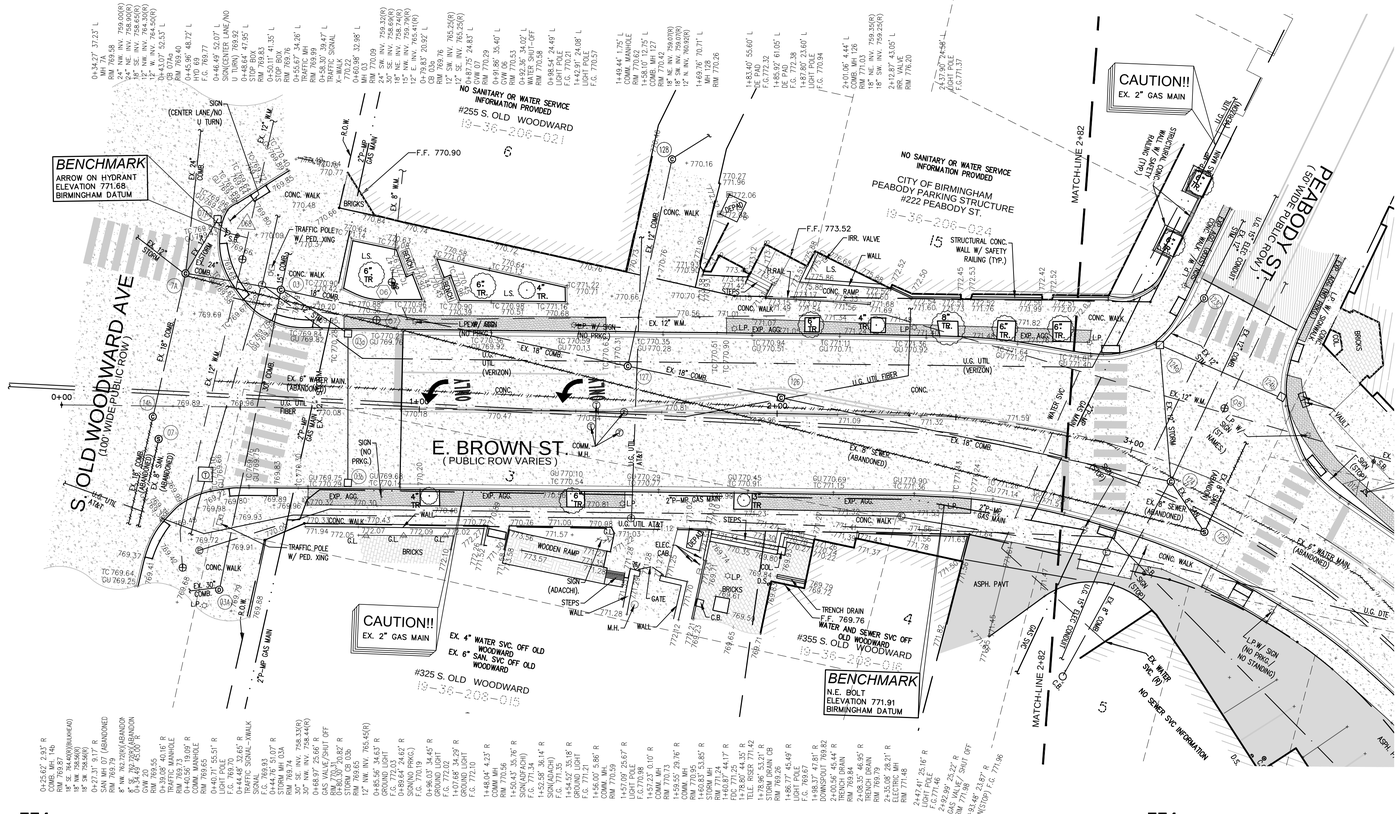
ALL WATER SERVICE, STORM AND SEWER TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR CLASS II (SAND) MATERIAL.

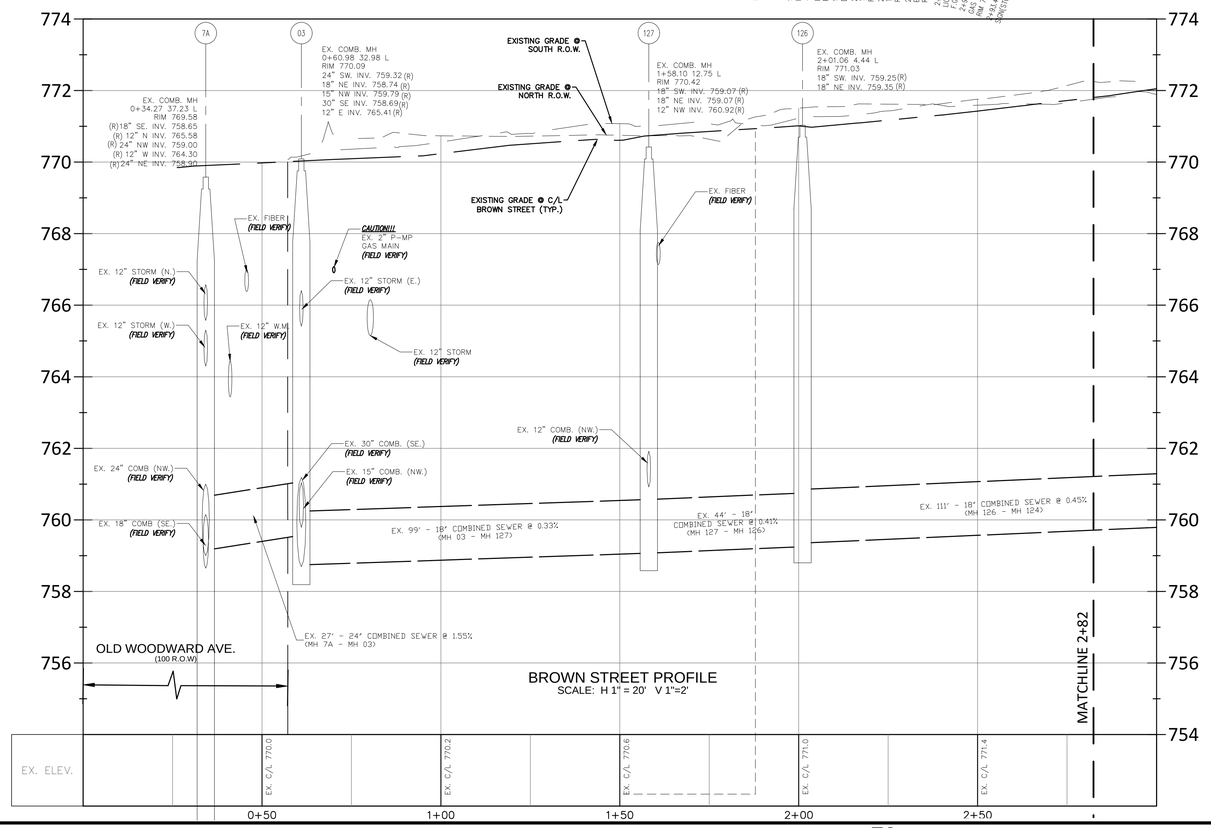
CAUTION!!! LIVE WATER MAIN
PRIOR TO CUTTING IN NEW MAIN FITTINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE EXISTING WATER MAIN SHUT-DOWN WITH THE CITY. MORE IMPORTANTLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY ENSURING THAT PRESSURES DO NOT EXIST IN THE MAIN AFTER SHUT-DOWN & PRIOR TO CUTTING THE MAIN. IF REQUIRED, THE CONTRACTOR SHALL UTILIZE A HYDRO-STOP DEVICE TO CLOSE OFF FLOW WHILE CUTTING IN NEW TEE.

BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

APPROVED DATE

APRIL 26, 2023 ADDENDUM #1





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NF ENGINEERS

CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project

CLIENT
BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Topographic Survey
Sta. P.O.B. to Sta. 2+82

811 Know what's below Call before you dig.

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER 2022101901728, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON 12/08/2022. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. **THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.**

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- EXISTING SAN. CLEAN OUT
- HYDRANT, GATE VALVE — EXISTING WATER MAIN
- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EX. R.Y. CATCH BASIN
- EXISTING BURIED CABLES
- UTILITY POLE, GUY POLE, GUY WIRE — OVERHEAD LINES
- LIGHT POLE
- SIGN
- EXISTING GAS MAIN

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY

DRAWN BY: G. Viju

DESIGNED BY:

APPROVED BY: B. Buchholz

DATE: December 08, 2022

SCALE: 1" = 20'

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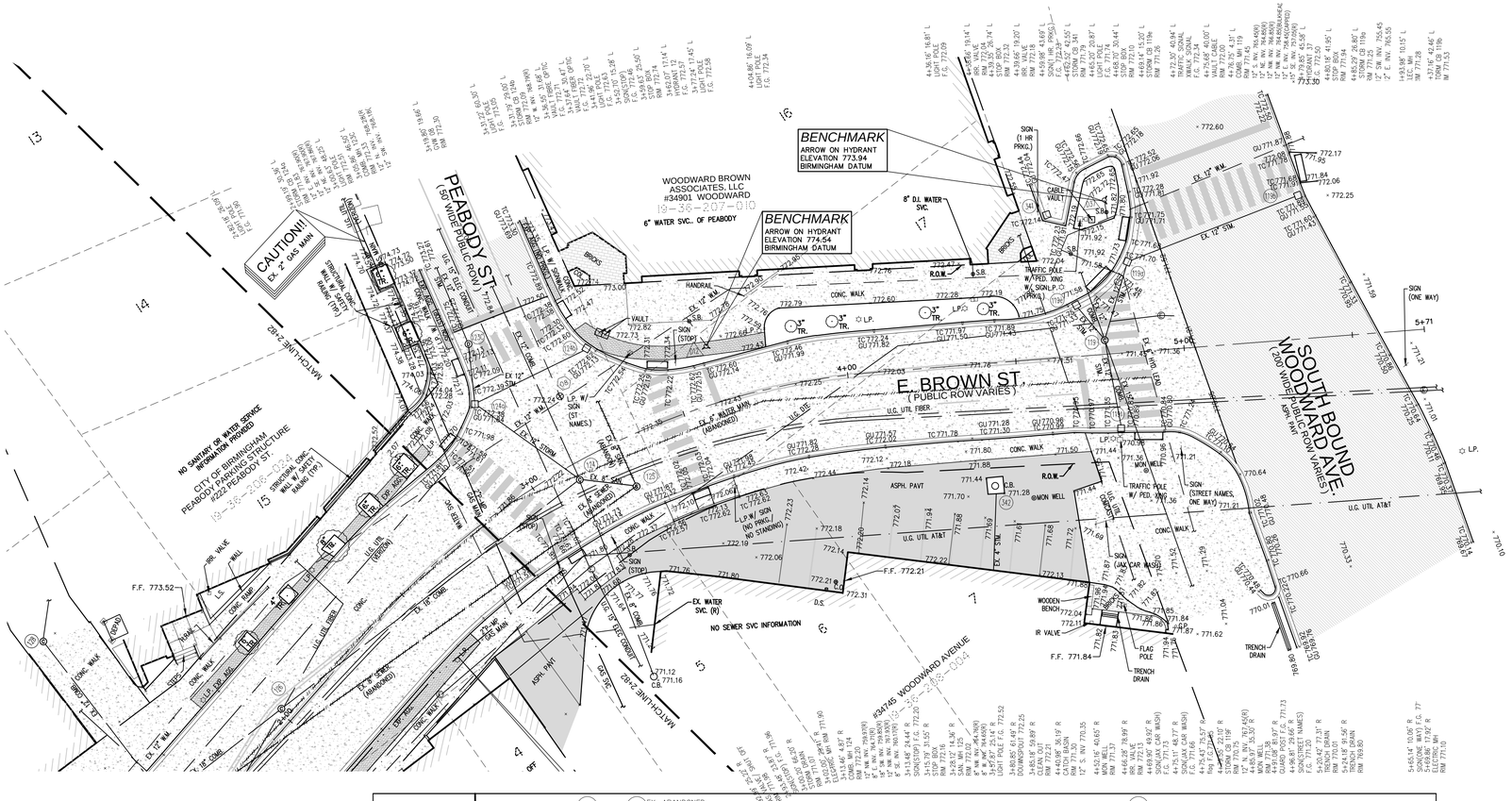
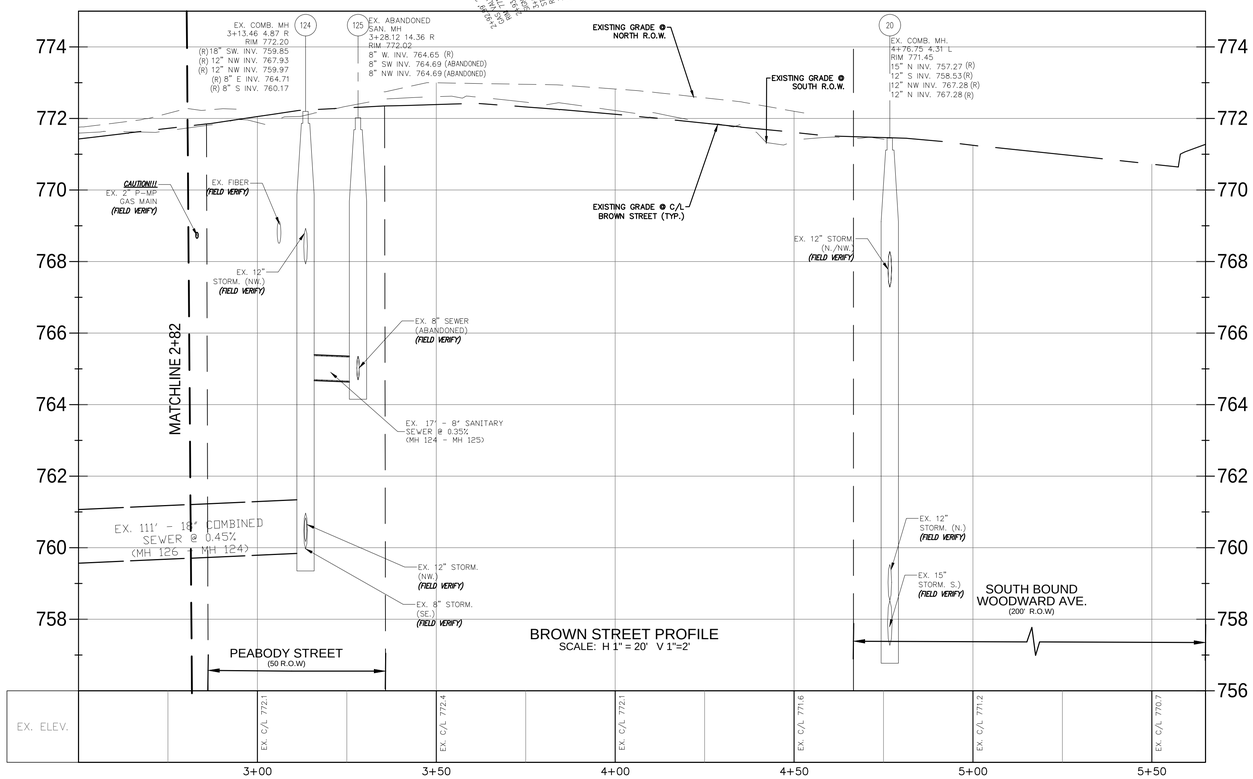
NFE JOB NO. **D162-01**

SHEET NO. **T1**





NF ENGINEERS

civil Engineers
Land Surveyors
Land Planners

NOWAK & FRAUS ENGINEERS
46777 Woodward Ave.
Pontiac, MI 48342-5032
Tel. (248) 332-7931
Fax. (248) 332-8257
WWW.nfe-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project

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151 Martin Street
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PROJECT LOCATION
Part of the Northeast ¼
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- LIGHT POLE
- SIGN
- EXISTING GAS MAIN

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY

DRAWN BY: G. Viju

DESIGNED BY:

APPROVED BY: B. Buchholz

DATE: December 08, 2022

SCALE: 1" = 20'

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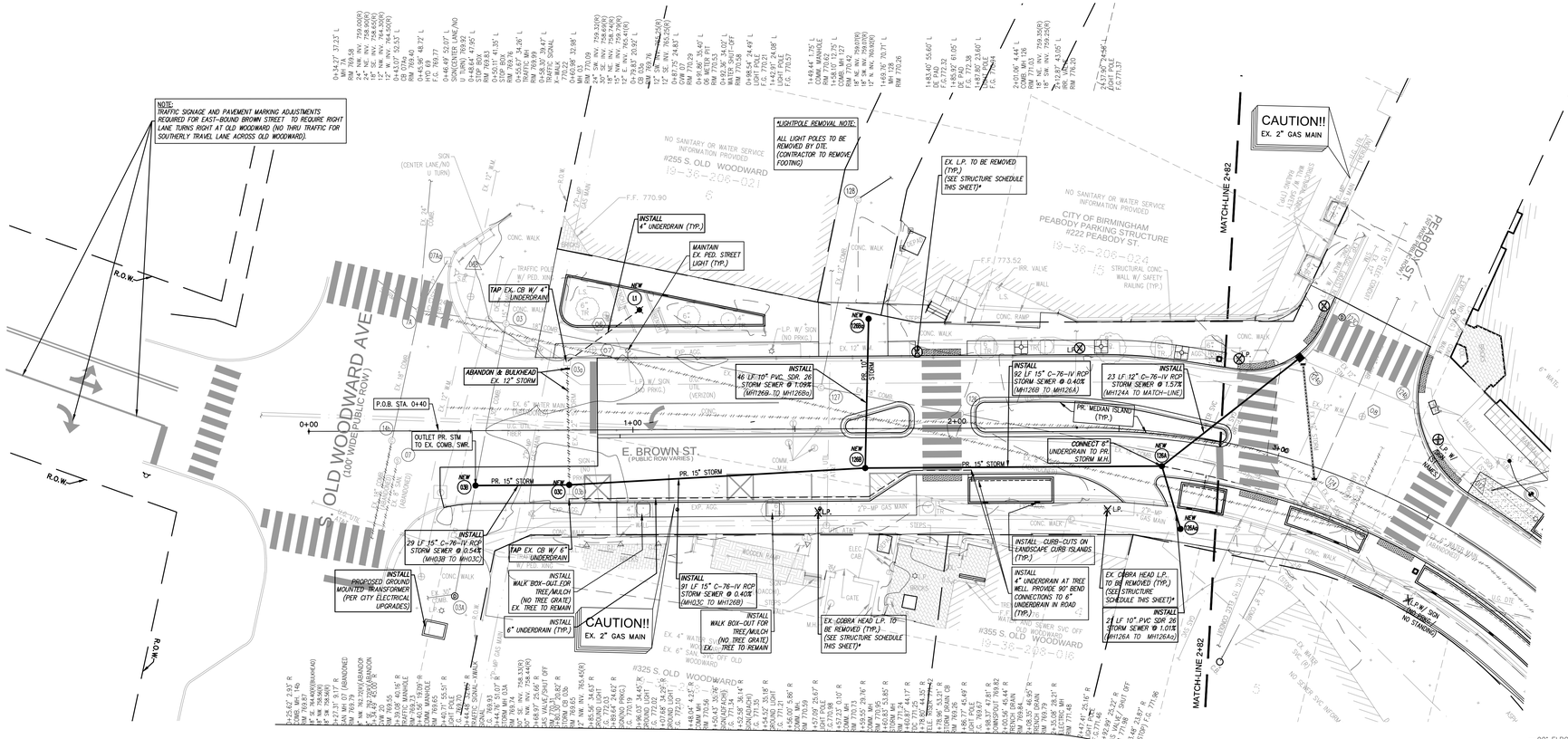
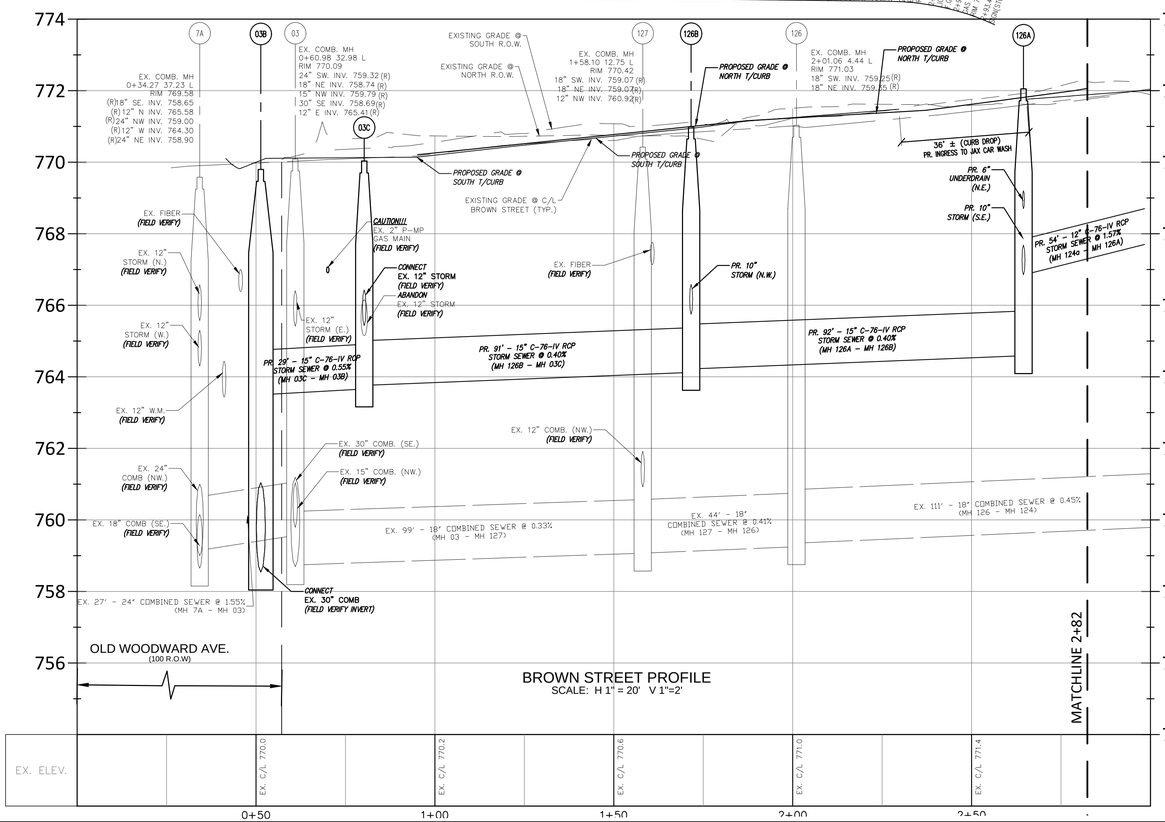
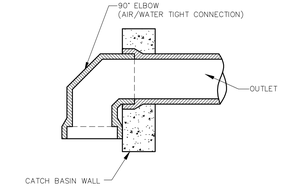
NFE JOB NO. D162-01

sheet no. T2







SEWER TRAP

N.T.S.

EX. COMB. SEWER STRUCTURE SCHEDULE

03 — ***MAINTAIN***
0+60.98' 32.98" L
MH 03
RIM 770.09
24" SW. INV. 759.32(R)
30" SE. INV. 758.69(R)
18" NE. INV. 758.74(R)
15" NW. INV. 759.79(R)
12" E. INV. 765.41(R)

03A — ***MAINTAIN***
0+44.76' 51.07' R
STORM MH 03A
RIM 769.74
30" SE. INV. 758.33(R)
30" NW. INV. 758.44(R)

07A — ***MAINTAIN***
0+34.27' 37.23' L
MH 7A
RIM 769.58
24" NW. INV. 759.00(R)
24" NE. INV. 758.90(R)
18" SE. INV. 758.65(R)
12" NW. INV. 764.30(R)
12" W. INV. 764.50(R)

14b — ***MAINTAIN***
0+25.62' 2.93' R
COMB. MH. 14b
RIM 769.87
18" SE. 764.40(R)(BULKHEAD)
18" NW. 758.56(R)
18" SW. 758.56(R)

127 — ***ADJUST***
1+58.10' 12.75' L
COMB. MH 127
RIM 770.42
PR. RIM 770.83
18" NE. INV. 759.07(R)
18" SW. INV. 759.07(R)
12" N. INV. 760.92(R)

126 — ***ADJUST***
2+01.06' 4.44' L
COMB. MH 126
RIM 771.03
PR. RIM 770.95
18" NE. INV. 759.35(R)
18" SW. INV. 759.25(R)

128 — ***MAINTAIN***
1+69.76' 70.71' L
MH 128
RIM 770.26

EX. STORM STRUCTURE SCHEDULE

MH — ***MAINTAIN***
1+60.83' 53.85' R
STORM MH
RIM 771.24

03a — ***TAP & BULKHEAD SE. CONNEC.***
0+79.83' 20.92' L
CB 03a
RIM 769.76
12" SW. INV. 765.25(R)
12" SE. INV. 765.25(R) ***BULKHEAD***
PR. 4" NE. 766.76

03b — ***TAP***
0+80.30' 20.82' R
STORM CB 03b
RIM 769.65
12" NW. INV. 765.45(R)
PR. 6" E. 766.15

07Ao — ***MAINTAIN***
0+43.07' 52.53' L
CB 07Ao
RIM 769.40

EX. WATER MAIN SCHEDULE

06 — ***ADJUST***
0+91.86' 35.40' L
GVW 06
RIM 770.53
PR. RIM 770.43

07 — ***ADJUST***
0+87.75' 24.83' R
GVW 07
RIM 770.29
PR. RIM 769.95

69 — ***MAINTAIN***
0+45.96' 48.72' L
HYD 69
F.G. 769.77

20 — ***MAINTAIN***
0+34.49' 45.00' R
GVW 20
RIM 769.55

EX. STREET LIGHT REMOVAL SCHEDULE

E. BROWN STREET, P.O.B. TO 2+82

NORTH

STATION	OFFSET	ITEM
STA. 1+37.68	23.60' N.	PEDESTRIAN STREET LIGHT
STA. 2+38.66	24.57' N.	PEDESTRIAN STREET LIGHT

SOUTH

STATION	OFFSET	ITEM
STA. 1+57.01	25.70' S.	COBRA HEAD LIGHT POLE
STA. 2+47.40	25.16' S.	COBRA HEAD LIGHT POLE

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Pr. Storm Sewer Structure Schedule

Structure Name	Structure Details
#03B PR. 6' DIA MANHOLE CONSTRUCT ONLINE (RE-CONNECT EX. 30" N.W. & S.E.) (FIELD VERIFY INVERT)	PR. RIM 769.80 EX. 30" NW. INV. 758.54 PR. 15" NE. INV. 763.50 EX. 30" SE. INV. 758.54
#03C PR. 4' DIA STORM MANHOLE W/ 2' SUMP CONSTRUCT ONLINE (RECONNECT EX. 12" STORM SE INV. 765.43 - FIELD VERIFY)	PR. RIM 770.04 PR. 15" NE. INV. 763.76 PR. 15" SW. INV. 763.66 EX. 12" SE. INV. 765.43 INSTALL P.V.C. GAS TRAP ON 15" DOWNSTREAM PIPE (S.W.)
#126A PR. 4' DIA STORM MANHOLE	PR. RIM 772.05 PR. 12" N. INV. 766.85 PR. 15" SW. INV. 764.59 PR. 10" SE. INV. 766.85 PR. 6" NE. INV. 768.70
#126Aa PR. 4' DIA MANHOLE (FOR FUTURE SE CONNECTION)	PR. RIM 771.59 PR. 10" NW. INV. 767.05
#126B PR. 4' DIA STORM MANHOLE	PR. RIM 770.98 PR. 15" NE. INV. 764.22 PR. 15" SW. INV. 764.12 PR. 10" NW. INV. 765.75
#126Ba PR. 4' DIA. M.H. (FOR FUTURE NW CONNECTION)	PR. RIM 770.70 PR. 10" SE. INV. 766.25
#L1 PR. 12" DIA. LANDSCAPE DRAIN W/ CAST-IRON BEE-HIVE COVER	PR. RIM 770.66 PR. 4" S. INV. 767.50

L.P. REMOVAL LEGEND

- EX. COBRA HEAD LIGHT POLE REMOVAL
- EXISTING PEDESTRIAN STREET LIGHT REMOVAL

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- HYDRANT, GATE VALVE — EXISTING WATERMAIN
- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- EXISTING BURIED CABLES
- UTILITY POLE, GUY POLE, GUY WIRE — OVERHEAD LINES
- LIGHT POLE
- SIGN
- EXISTING GAS MAIN
- MANHOLE — PR. SANITARY SEWER
- C.O., HYDRANT, GATE VALVE — PR. WATER MAIN
- INLET, C.B., MANHOLE — PR. STORM SEWER
- PR. R. Y. CATCH BASIN
- PROPOSED TREE GRATE

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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36
Town 2 North, Range 10 East
City of Birmingham, Oakland County, Michigan

SHEET
Utility Plan (1of 2)
Sta. P.O.B. to 2+82

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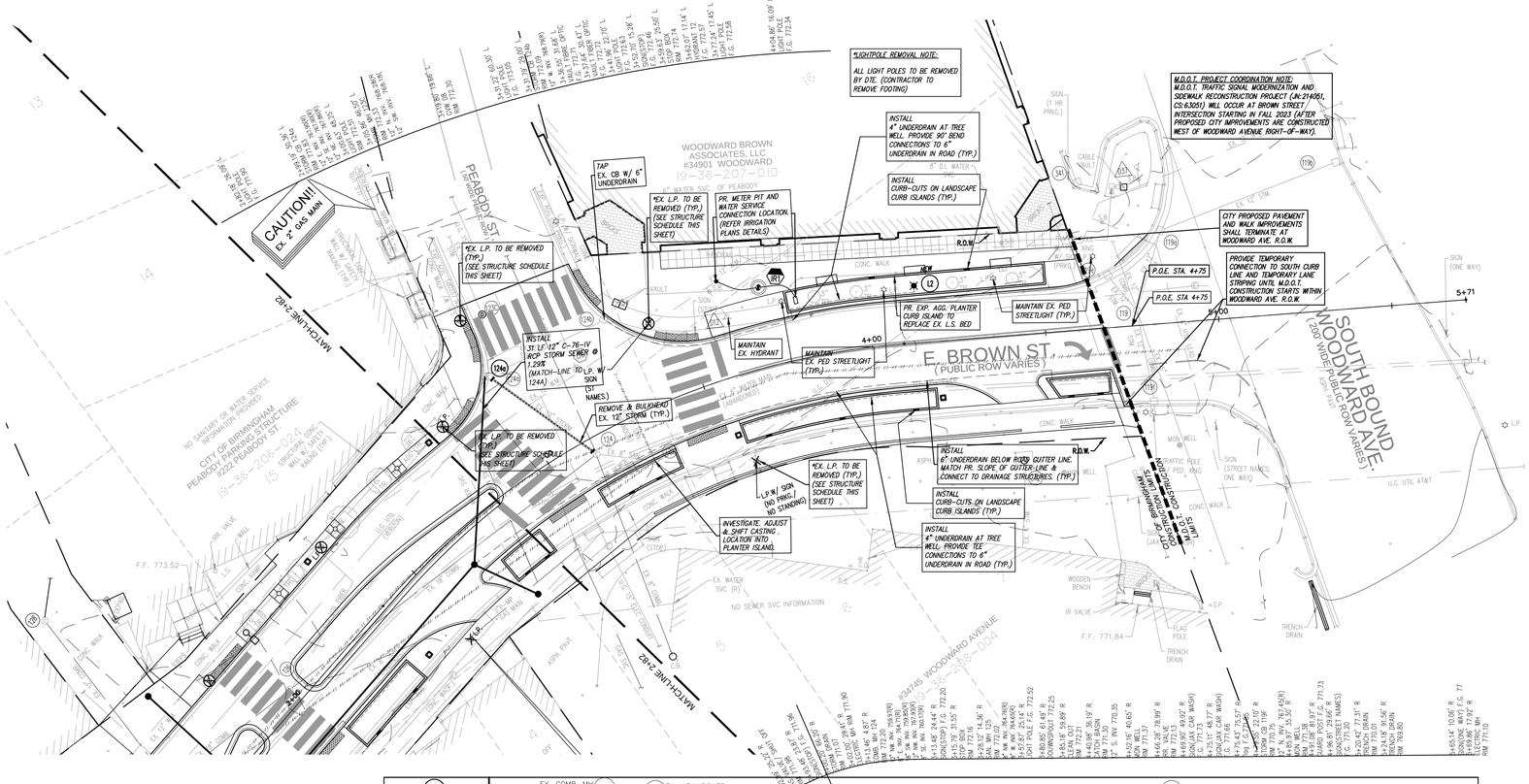
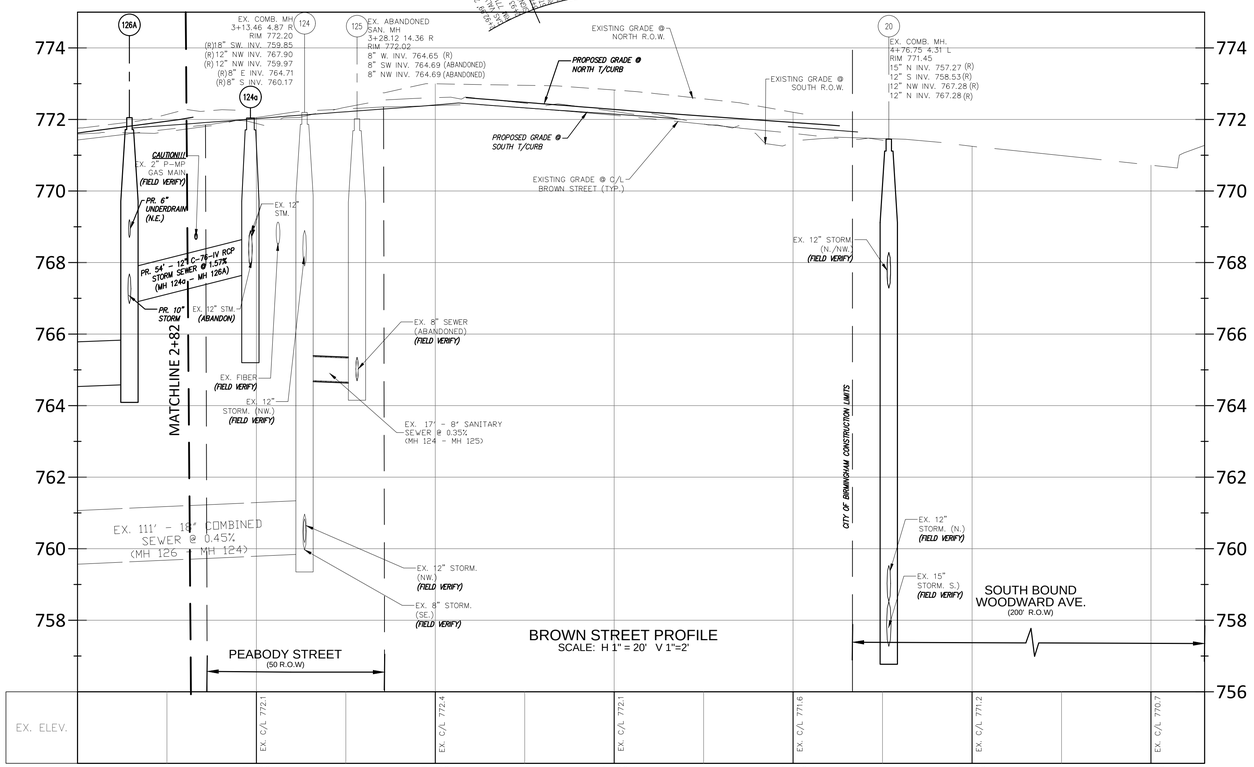
DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C1





EX. COMB. SEWER STRUCTURE SCHEDULE

(124) BULKHEAD & ADJUST
3+13.46' 4.87' R
COMB. MH 124
RIM 772.20
PR. RIM 772.16
12" NW. INV. 759.97(R) *(BULKHEAD)*
8" E. INV. 764.71(R)
18" SW. INV. 759.85(R)
12" NW. INV. 767.93(R)
8" SE. INV. 760.17(R)

(125) INVESTIGATE, ADJUST, & SHIFT CASTING LOCATION INTO PLANTER ISLAND.
3+28.12' 14.36' R
SAN. MH 125
RIM. 772.02
8" NW. INV. 764.76(R)
8" W. INV. 764.65(R)

(123c) ADJUST
3+05.86' 46.50' L
COMB. MH 123C
RIM 772.33
PR. RIM 772.50
12" N. INV. 768.28(R)
12" SW. INV. 768.18(R)

(119) MAINTAIN
4+76.75' 4.31' L
COMB. MH 119
RIM 771.45
12" S. INV. 765.45(R)
12" NE. INV. 764.85(R)
12" NW. INV. 766.85(R)
12" NW. INV. 764.85(BULKHEAD)
12" E. INV. 758.45(CAPPED)
15" SE. INV. 757.05(R)

EX. STORM STRUCTURE SCHEDULE

(119g) MAINTAIN
4+85.29' 26.80' L
STORM CB 119g
RIM 771.25
12" SW. INV. 755.45
12" E. INV. 765.55

(119e) MAINTAIN
4+69.14' 15.20' L
STORM CB 119e
RIM 771.26

(124a) TAP, BULHEAD INVESTIGATE, ADJUST & SHIFT CASTING INTO CURB LINE
2+99.19' 30.36' L
STORM CB 124a
RIM 771.83
12" E. INV. 767.90(R) *(BULKHEAD)*
12" SE. INV. 767.90(R)
12" NE. INV. 767.86(R)
PR. 12" SW. INV. 767.70

(CB) MAINTAIN
4+40.98' 36.19' R
CATCH BASIN
RIM 771.30
12" S. INV 770.35

(119b) MAINTAIN
5+37.16' 42.46' L
STORM CB 119b
RIM 771.53

(119f) MAINTAIN
4+79.55' 22.10' R
STORM CB 119f
RIM 770.75
12" N. INV. 767.45(R)

(124b) TAP
+31.79' 29.00' L
STORM CB 124b
RIM 772.09
PR. RIM 772.15
12" W. INV. 768.79(R)
PR. 6" E. 769.15

(341) MAINTAIN
4+62.52' 42.55' L
STORM CB 341
RIM 771.79

EX. WATER MAIN SCHEDULE

(08) MAINTAIN
3+19.80' 19.66' L
GVW CB
RIM 772.30

(12) MAINTAIN
3+62.07' 17.14' L
HYDRANT 12
F.G. 772.57

(WS1) INSTALL
STA. 3+72.16 22.85 L
IRRIGATION METER PIT ASSEMBLY W/ 1.5" WATER SERVICE
(PER DETAIL AND IRRIGATION PLANS)
PR. RIM 768.16

WATER SERVICE SCHEDULE

STATION	ADDRESS/DESC.	EX. W.M.	SVC. DIA.	SVC. MATERIAL	LENGTH NEEDED	NEW CURB BOX?
03+72.16 22.85L	NEW METER PIT	12"	1.5"	COPPER	25 L.F.	N.

EX. STREET LIGHT REMOVAL SCHEDULE

E. BROWN STREET, P.O.B. TO 2+82

NORTH

STATION	OFFSET	ITEM
STA. 2+82.19	26.08' L.	PEDESTRIAN STREET LIGHT
STA. 3+00.63	48.24' L.	PEDESTRIAN STREET LIGHT
STA. 3+42.07	22.67' L.	PEDESTRIAN STREET LIGHT

SOUTH

STATION	OFFSET	ITEM
STA. 3+57.87	25.14' R.	COBRA HEAD LIGHT POLE

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Structure Name	Structure Details
#L2 PR. 12" DIA. LANDSCAPE DRAIN W/ CAST-IRON BEE-HIVE COVER	PR. RIM 772.36 PR. 4" S. INV. 768.01

L.P. REMOVAL LEGEND

- EX. COBRA HEAD LIGHT POLE REMOVAL
- EXISTING PEDESTRIAN STREET LIGHT REMOVAL

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- HYDRANT, GATE VALVE — EXISTING WATERMAIN
- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- UTILITY POLE, GUY POLE — EXISTING BURIED CABLES
- GUY WIRE — OVERHEAD LINES
- LIGHT POLE
- SIGN
- EXISTING GAS MAIN
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- PROPOSED TREE GRATE

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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36 Town 2 North, Range 10 East City of Birmingham, Oakland County, Michigan

SHEET
Utility Plan (2 of 2)
Sta. 2+82 to P.O.E.

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02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
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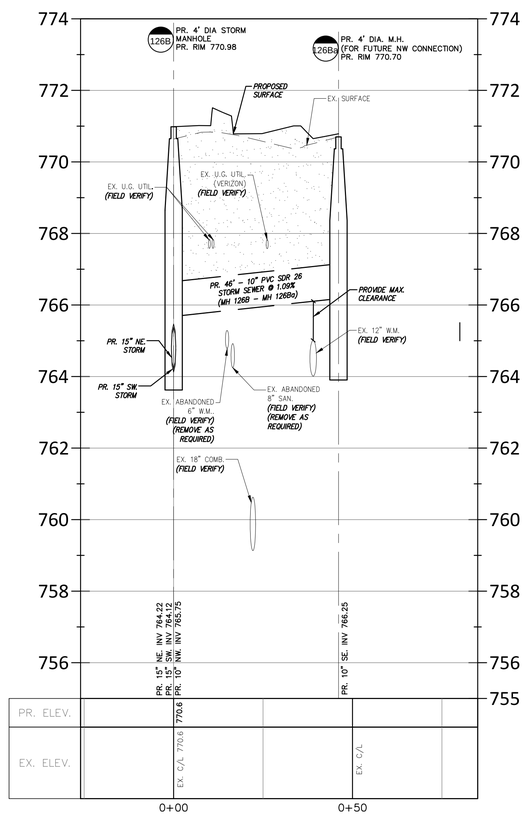
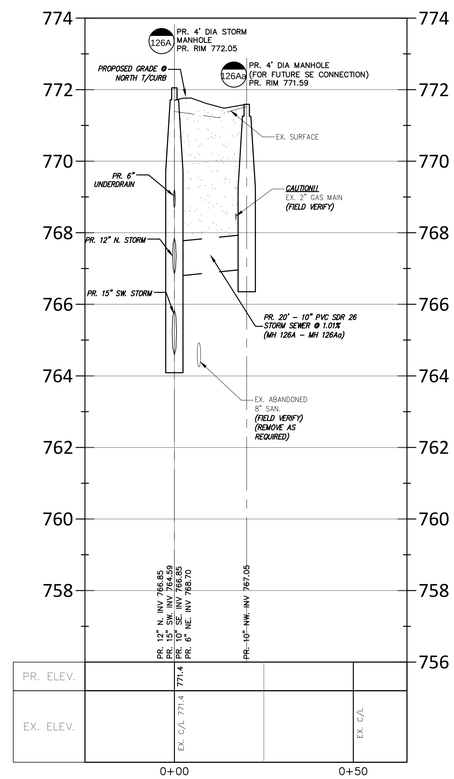
04-26-23	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C2



STORM PROFILE (MH 126B-MH 126Ba)



STORM PROFILE (MH 126A-MH 126Aa)

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Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Storm Profile Plan

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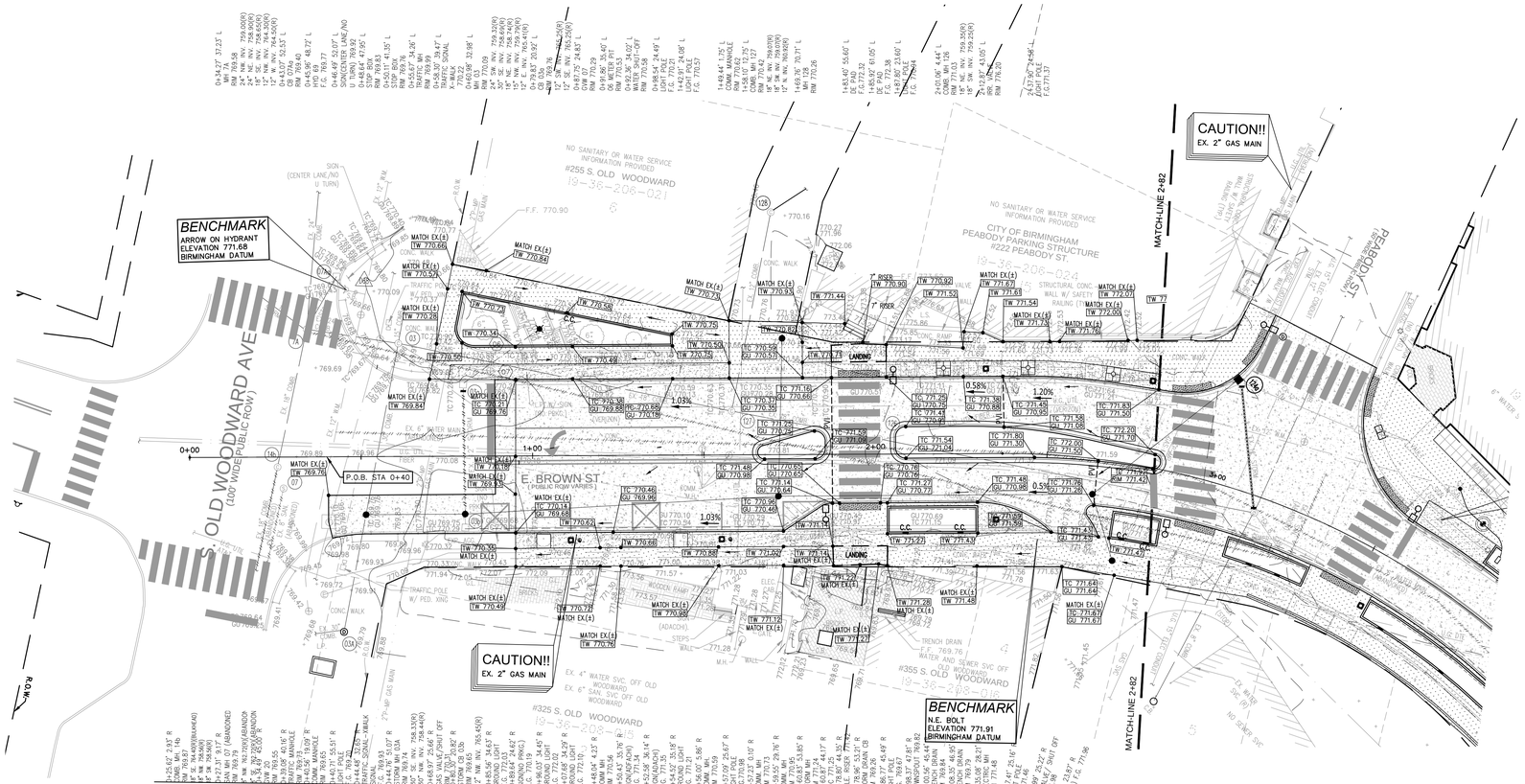
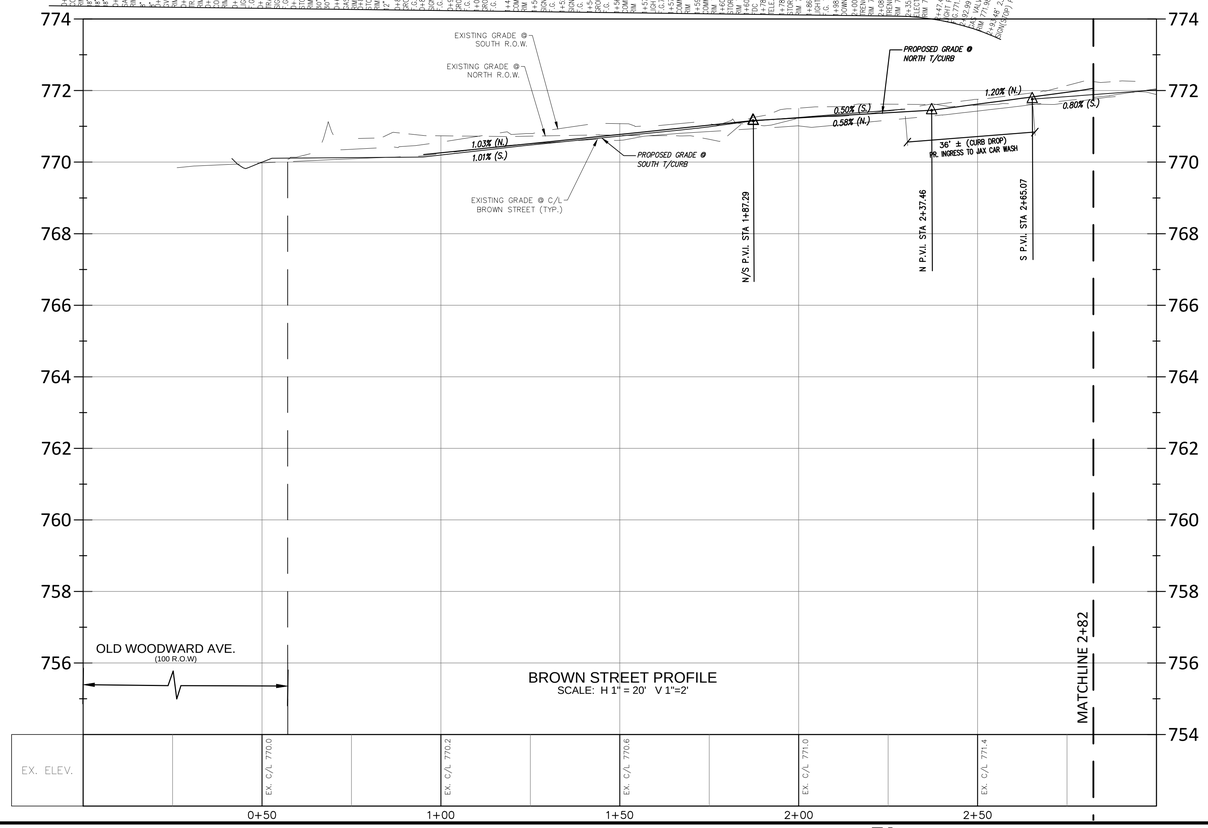
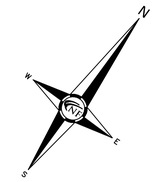
NFE JOB NO. D162-01
SHEET NO. C3







PAVING LEGEND

- PROPOSED 4" EXPOSED AGGREGATE SIDEWALK
- PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
- PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
- PROPOSED ASPHALT PAVEMENT
- PROPOSED WALK BOX-OUT FOR TREE/MULCH
- C.C. — PROPOSED CURB CUTS ON LANDSCAPE CURB ISLANDS

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
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- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
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- PROPOSED LIGHT POLE
- PROPOSED TREE GRATE
- PR. INTERSECTION LIGHT POLE
- PR. PEDESTRIAN LIGHT POLE
- PR. PARKING METER
- TC 700.00 — PR. TOP OF CURB ELEV.
- GU 700.00 — PR. GUTTER ELEVATION
- TW 700.00 — PR. TOP OF WALK ELEV.
- TP 700.00 — PR. TOP OF PVMT. ELEV.
- RIM 700.00 — PR. RIM ELEV.

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SHEET
Grading Plan (1 of 2)

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APPROVED BY: B. Buchholz
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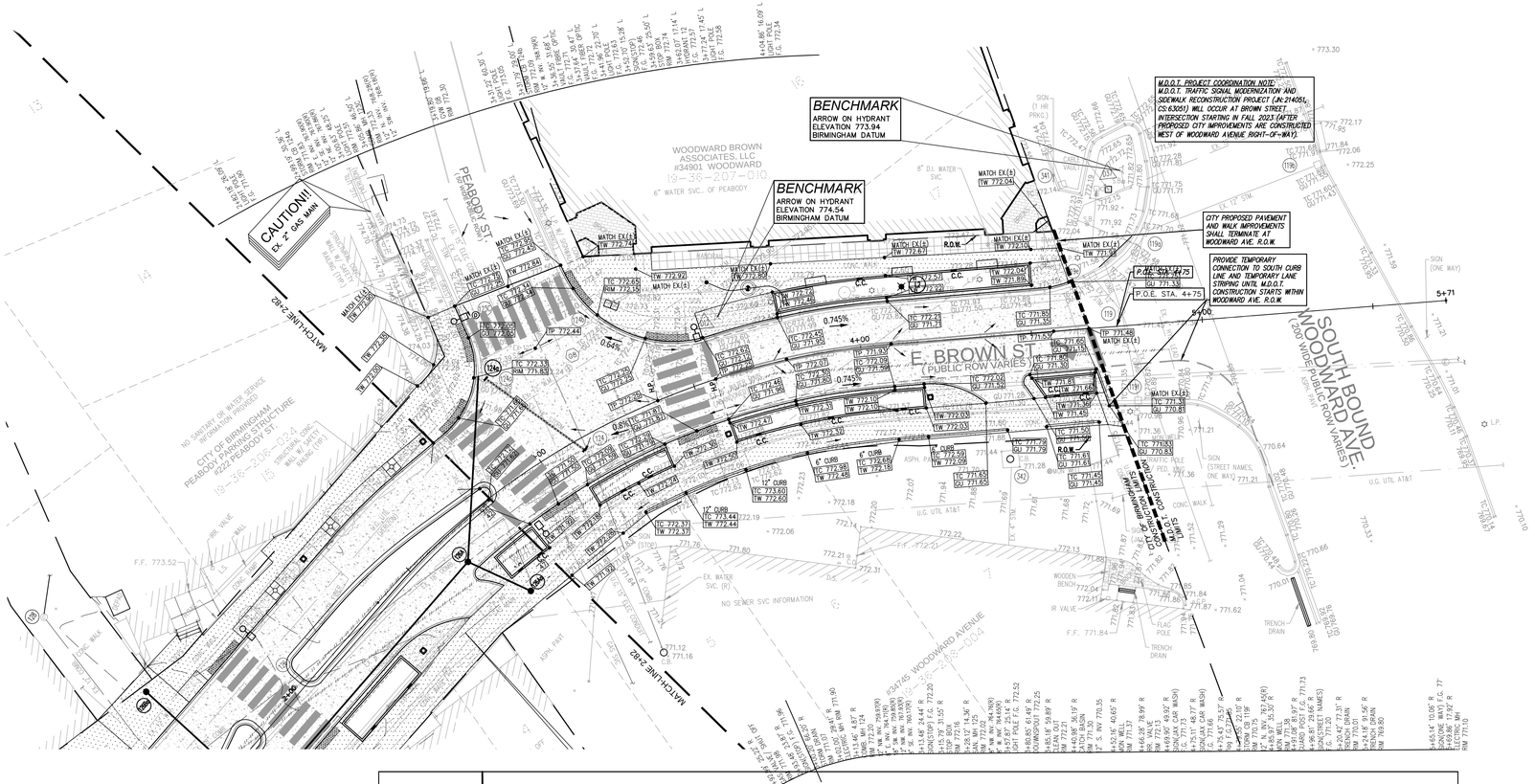
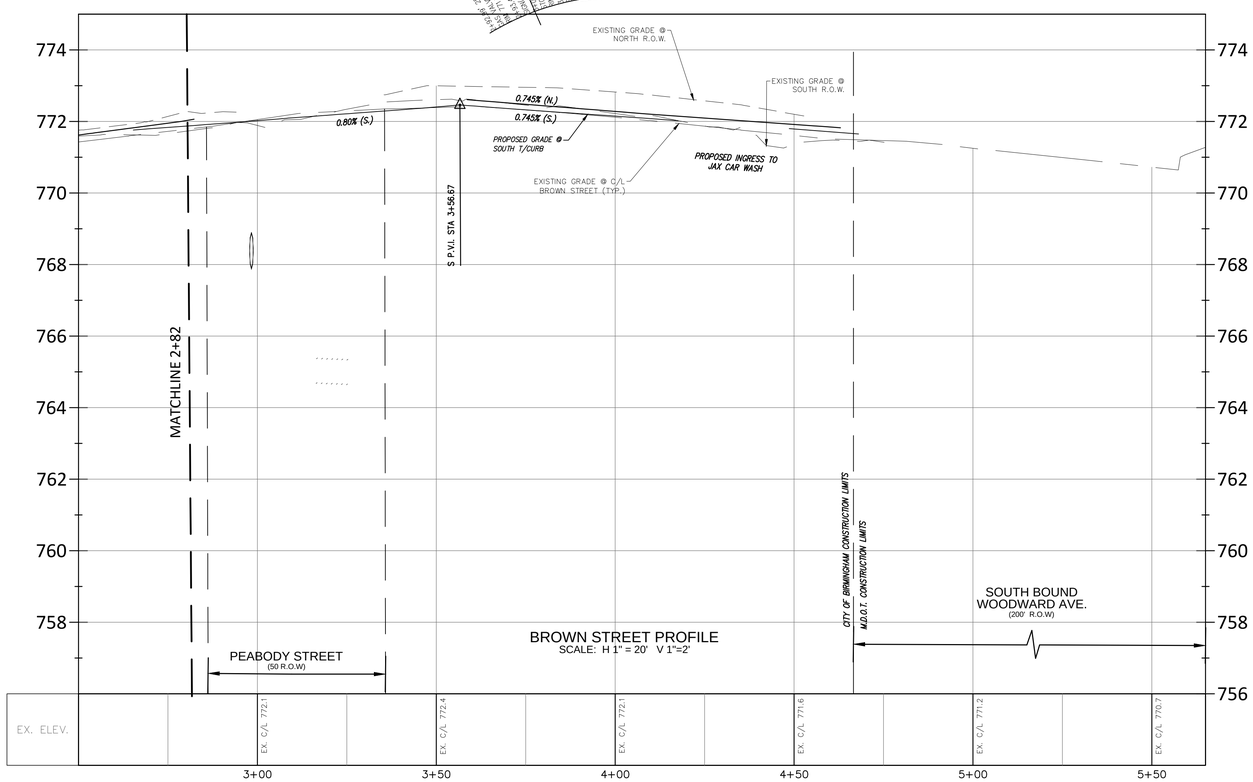
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C4





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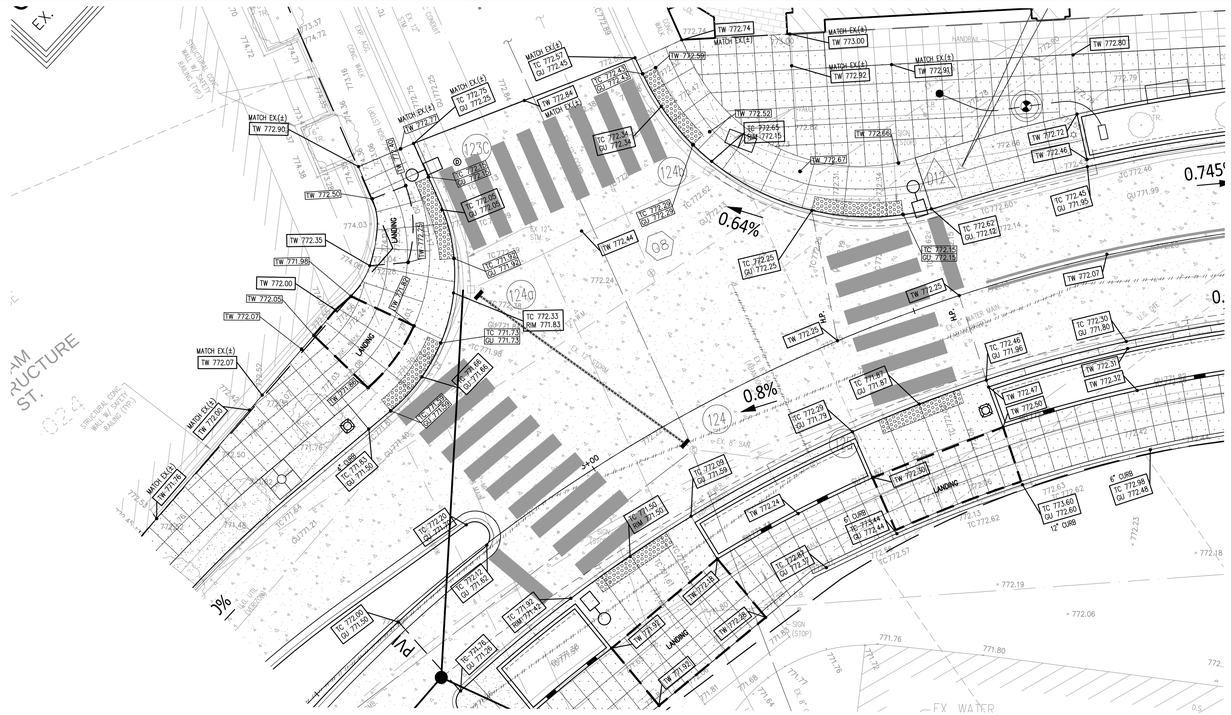
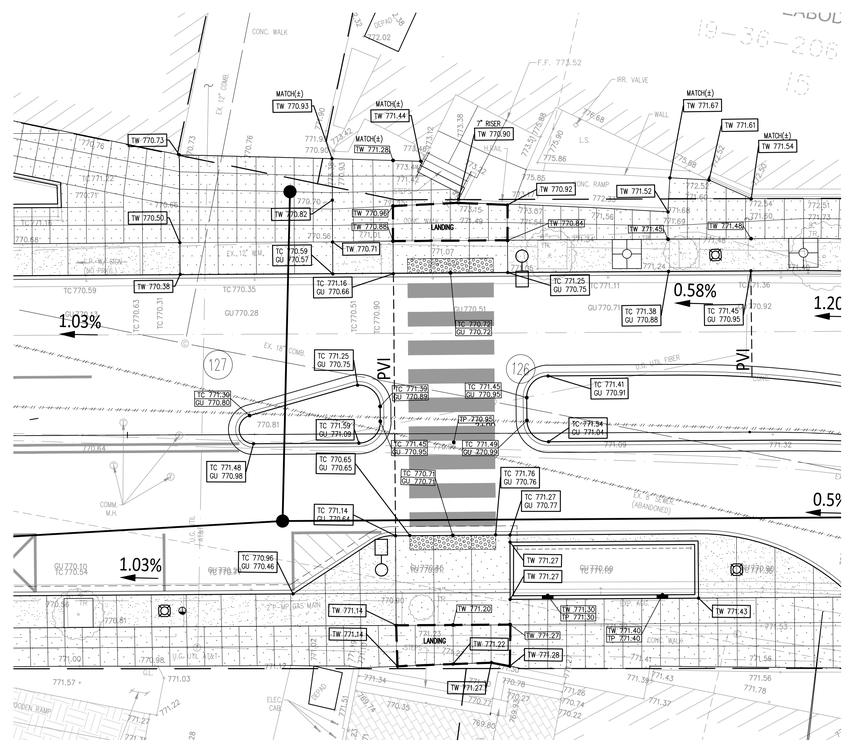
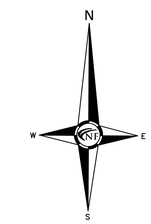
NFE JOB NO. D162-01
SHEET NO. C5







PAVING LEGEND

	PROPOSED 4" EXPOSED AGGREGATE SIDEWALK
	PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
	PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
	PROPOSED ASPHALT PAVEMENT
	PROPOSED WALK BOX-OUT FOR TREE/MULCH
C.C.	PROPOSED CURB CUTS ON LANDSCAPE CURB ISLANDS

LEGEND

MANHOLE	EXISTING SANITARY SEWER
	SAN. CLEAN OUT
HYDRANT / GATE VALVE	EXISTING WATERMAIN
MANHOLE / CATCH BASIN	EXISTING STORM SEWER
	EX. R. Y. CATCH BASIN
	EXISTING BURIED CABLES
UTILITY POLE / GUY POLE / GUY WIRE	OVERHEAD LINES
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN
C.O. / MANHOLE	PR. SANITARY SEWER
HYDRANT / GATE VALVE	PR. WATER MAIN
INLET / C.B. / MANHOLE	PR. STORM SEWER
	PR. R. Y. CATCH BASIN
	PROPOSED LIGHT POLE
	PROPOSED TREE GRATE
	PR. INTERSECTION LIGHT POLE
	PR. PEDESTRIAN LIGHT POLE
	PR. PARKING METER
TC 700.00	PR. TOP OF CURB ELEV.
GU 700.00	PR. GUTTER ELEVATION
TW 700.00	PR. TOP OF WALK ELEV.
TP 700.00	PR. TOP OF PVMT. ELEV.
RIM 700.00	PR. RIM ELEV.

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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Intersection Grading
Detail (1 of 2)

811
Know what's below
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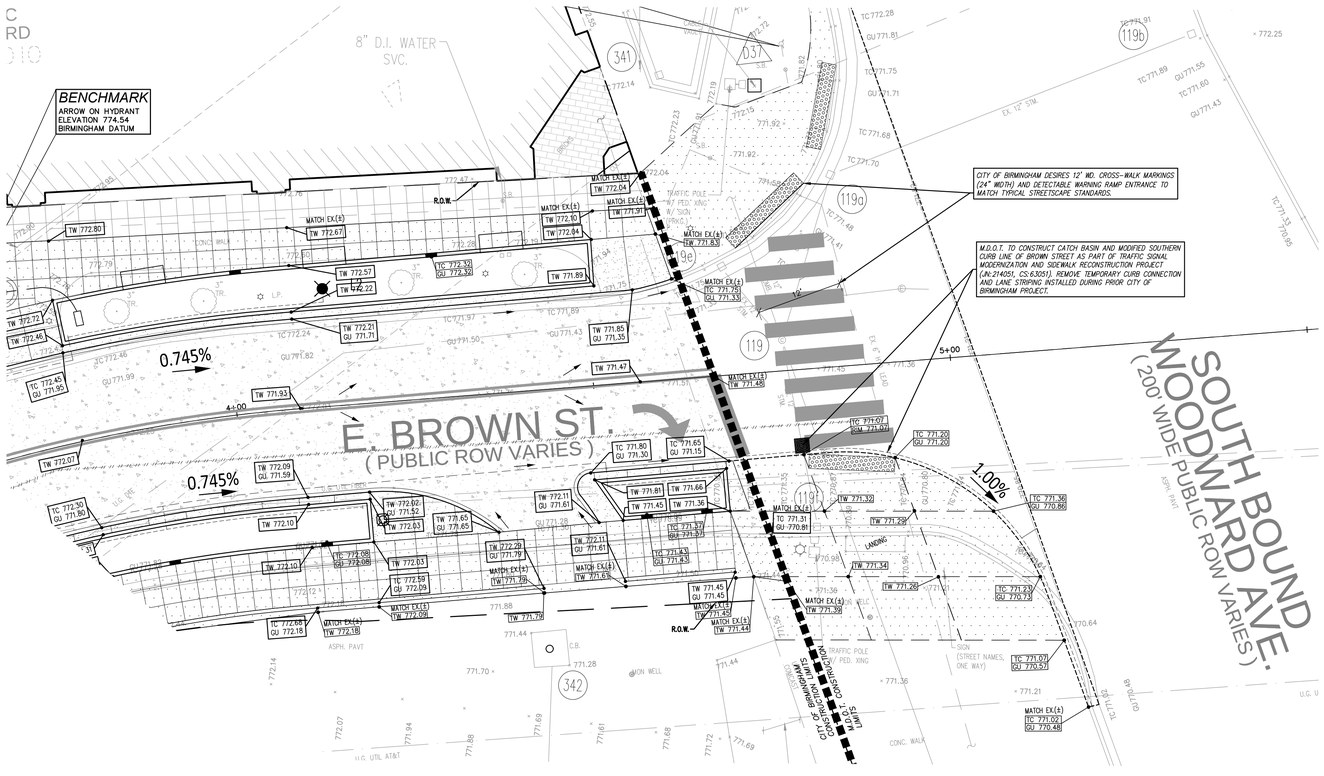
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
04-10-23	BIDS
04-26-23	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'
20 10 0 10 20 30

NFE JOB NO. D162-01
SHEET NO. C6

BROWN STREET/ WOODWARD AVENUE(M1) INTERSECTION GRADING DETAIL
(CITY CONSTRUCTION LIMITS)



BROWN STREET/ WOODWARD AVENUE(M1) INTERSECTION GRADING DETAIL
(M.D.O.T. CONSTRUCTION LIMITS)

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Birmingham, MI 48012

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SHEET
Intersection Grading
Detail Plan
(2 of 2)

PAVING LEGEND

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	PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
	PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
	PROPOSED ASPHALT PAVEMENT
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C.C.	PROPOSED CURB CUTS ON LANDSCAPE CURB ISLANDS

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	SAN. CLEAN OUT
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	EX. R. Y. CATCH BASIN
UTILITY POLE / GUY POLE	EXISTING BURIED CABLES
GUY WIRE	OVERHEAD LINES
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN
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DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C7

NEW PARKING METER POST & NEW STREET LIGHT SCHEDULE

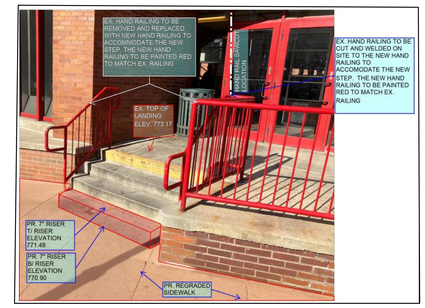
BROWN STREET P.O.E. to 2+82

NORTH WEST

STATION	OFFSET	ITEM	STATUS
STA. 00+98.54	24.48' N.W.	PED. STREET LIGHT	MAINTAIN
STA. 01+42.91	24.07' N.W.	PED. STREET LIGHT	MAINTAIN
STA. 02+04.69	24.73' N.W.	INTERSECTION LIGHT	NEW
STA. 02+32.28	24.77' N.W.	PED. STREET LIGHT	NEW
STA. 02+76.79	24.94' N.W.	PED. STREET LIGHT	NEW

SOUTH EAST

STATION	OFFSET	ITEM	STATUS
STA. 01+11.05	24.67' S.E.	PED. STREET LIGHT	NEW
STA. 01+13.55	24.52' S.E.	PARKING METER POST	NEW
STA. 01+55.05	24.58' S.E.	PED. STREET LIGHT	NEW
STA. 01+57.54	24.43' S.E.	PARKING METER POST	NEW
STA. 01+85.37	19.02' S.E.	INTERSECTION LIGHTING	NEW
STA. 02+35.03	19.21" S.E.	PED. STREET LIGHT	NEW



MODIFY STEPS & RAILING AT PEABODY PARKING STRUCTURE (LUMP SUM)

NEW PARKING METER POST & NEW STREET LIGHT SCHEDULE

BROWN STREET 2+82 to P.O.E.

NORTH WEST

STATION	OFFSET	ITEM	STATUS
STA. 03+00.63	48.24' N.	INTERSECTION LIGHT	NEW
STA. 03+55.34	16.46' N.	INTERSECTION LIGHT	NEW
STA. 03+77.23	17.45' N.	PED. STREET LIGHT	MAINTAIN
STA. 04+04.85	16.08' N.	PED. STREET LIGHT	MAINTAIN
STA. 04+36.29	17.03' N.	PED. STREET LIGHT	MAINTAIN

SOUTH EAST

STATION	OFFSET	ITEM	STATUS
STA. 02+89.00	18.18' S.	INTERSECTION LIGHT	NEW
STA. 03+77.23	17.45' S.	PED. STREET LIGHT	NEW
STA. 04+19.15	16.37' S.	PED. STREET LIGHT	NEW

REMOVAL NOTES & LEGEND

R1 — REMOVE EX. PAVEMENT FULL-DEPTH, INCLUDING CONC. CURB & GUTTER, EXCAVATE, AND INSTALL PR. PAVEMENT SECTIONS AS INDICATED (TYP.)

R2 — REMOVE EX. SIDEWALK (INCLUDING EX. BRICK PAVER WITH REINFORCED CONC. BASE AREAS) FULL-DEPTH, EXCAVATE & INSTALL PR. SIDEWALK SECTIONS AS INDICATED (TYP.)

R3 — REMOVE & REPLACE REMOVE EX. CURB & GUTTER AND INSTALL PR. 18" WD. CURB AND GUTTER PER M.D.O.T. DETAIL F2, MODIFIED (TYP.)

PAVING NOTES & LEGEND

- P5 — PR SAWCUT 4" CONC. SIDEWALK (LIGHT BROOM FINISH)
- P6 — PR. CONC. PAVT. W/ INTEGRAL CURB (8" THICK ON BROWN)
- P7 — PR. FULL-DEPTH ASPHALT REPAIR (MATCH EX. CONDITIONS)
- P8 — PR. EXPOSED AGG. CONC. SIDEWALK
- TH — THICKEN PR. CONC. WALK (6" & 8" THICK)
- AS — PR. ADA TRUNCATED DOMES – STRAIGHT
- AR — PR. ADA TRUNCATED DOMES – RADIAL
- 1 — ALL RIMS OF STRUCTURES, SHUT-OFFS, HANDHOLES & BOXES SHALL BE FLUSH TO PROPOSED FINISHED GRADES (TYP.)
- 2 — EXISTING SIDEWALK TO REMAIN & BE PROTECTED (OUTSIDE OF SHOWN REPAIR LIMITS) (TYP.)
- 3 — PROPOSED BIRMINGHAM GREEN BENCH (TYP.)
- 4 — PROPOSED MEDIAN ISLAND CURB & GUTTER, PER M.D.O.T. DETAIL F1/F2.
- 5 — PROPOSED MEDIAN LANDSCAPE ISLAND (SEE L.S. PLAN FOR PLANTING DETAILS)

PR. CURB & GUTTER, DETAIL F1/F2
PR. FLOW LINE

PR. INTEGRAL CURB PER M.D.O.T. DETAIL F2, MOD.

PR. EXP. AGG. PLANTER CURB (SEE L.S. PLAN FOR PLANTING DETAILS)

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LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
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- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
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- LIGHT POLE
- SIGN
- C.O., MANHOLE — EXISTING GAS MAIN
- HYDRANT, GATE VALVE — PR. SANITARY SEWER
- PR. WATER MAIN
- INLET, C.B., MANHOLE — PR. STORM SEWER
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- PROPOSED TREE GRATE
- PR. INTERSECTION LIGHT POLE
- PR. PEDESTRIAN LIGHT POLE
- PR. PARKING METER

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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
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Oakland County, Michigan

SHEET
Brown Street Paving Plan

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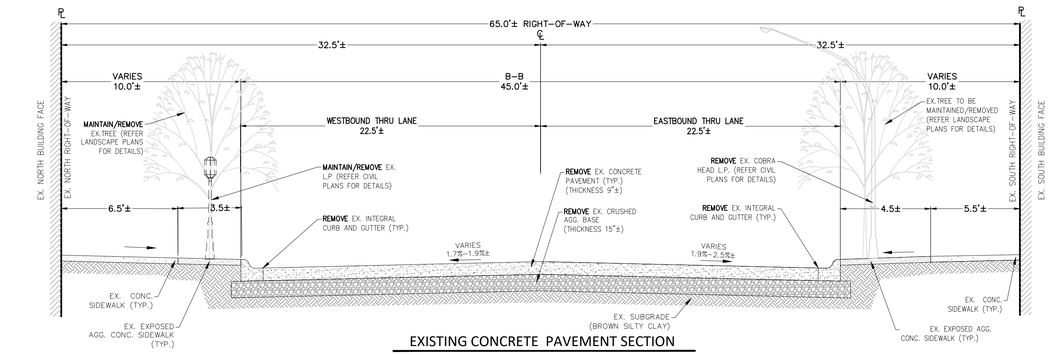
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'
20 10 0 10 20 30

NFE JOB NO. D162-01
SHEET NO. C8

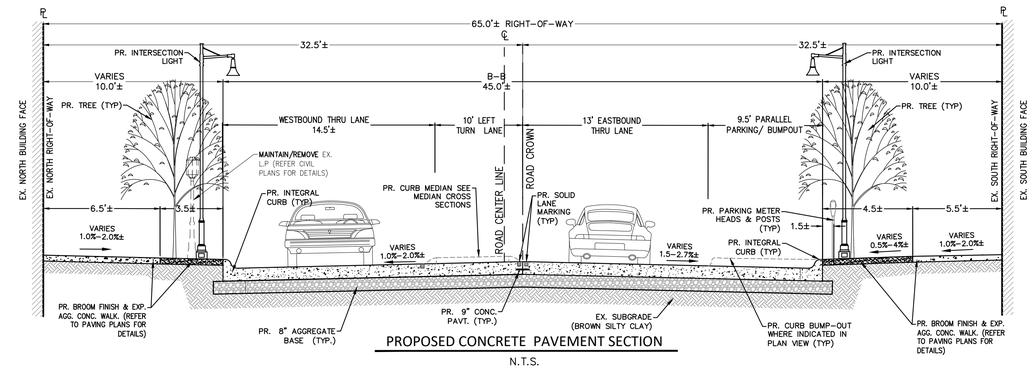


EXISTING CONCRETE PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. P.O.B. TO 3+00



PROPOSED CONCRETE PAVEMENT SECTION

N.T.S.

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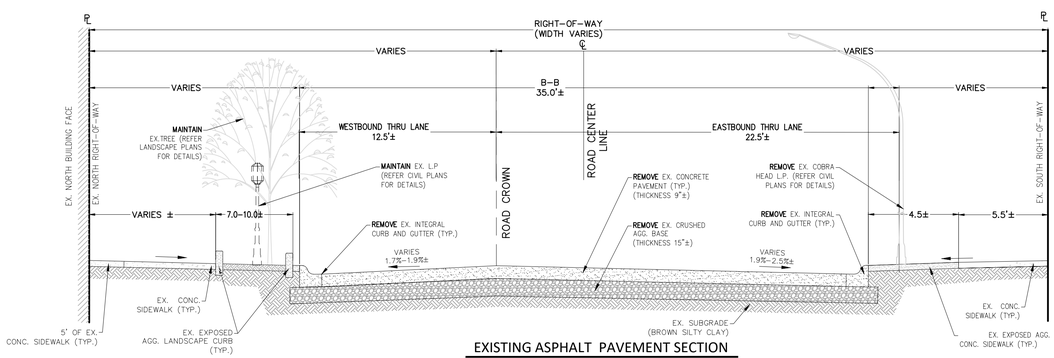
APPLIES TO: STA. P.O.B. TO 3+00

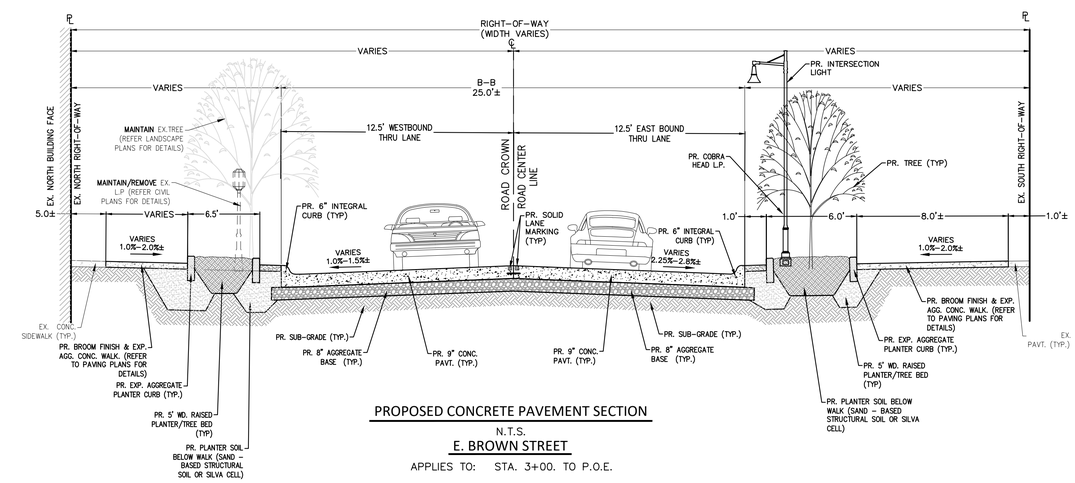


EXISTING ASPHALT PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. 3+00. TO P.O.E.



PROPOSED CONCRETE PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. 3+00. TO P.O.E.

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SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

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A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
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of Section 36
Town 2 North,
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Oakland County, Michigan

SHEET
Exisiting & Proposed
Cross-Section

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04-10-2023	BIDS

DRAWN BY: G. Viju

DESIGNED BY: G. Viju

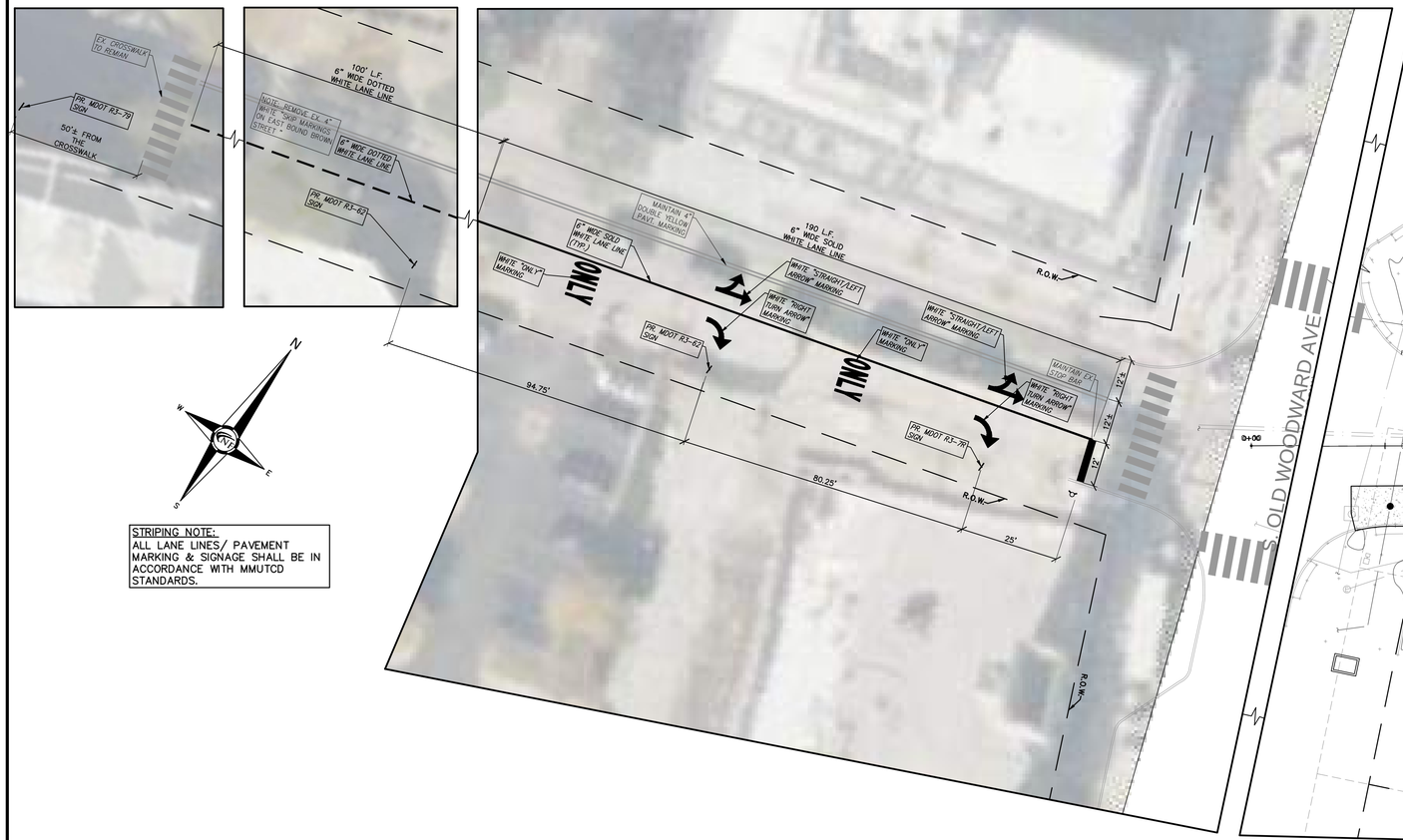
APPROVED BY: B. Buchholz

DATE: 03-16-2023

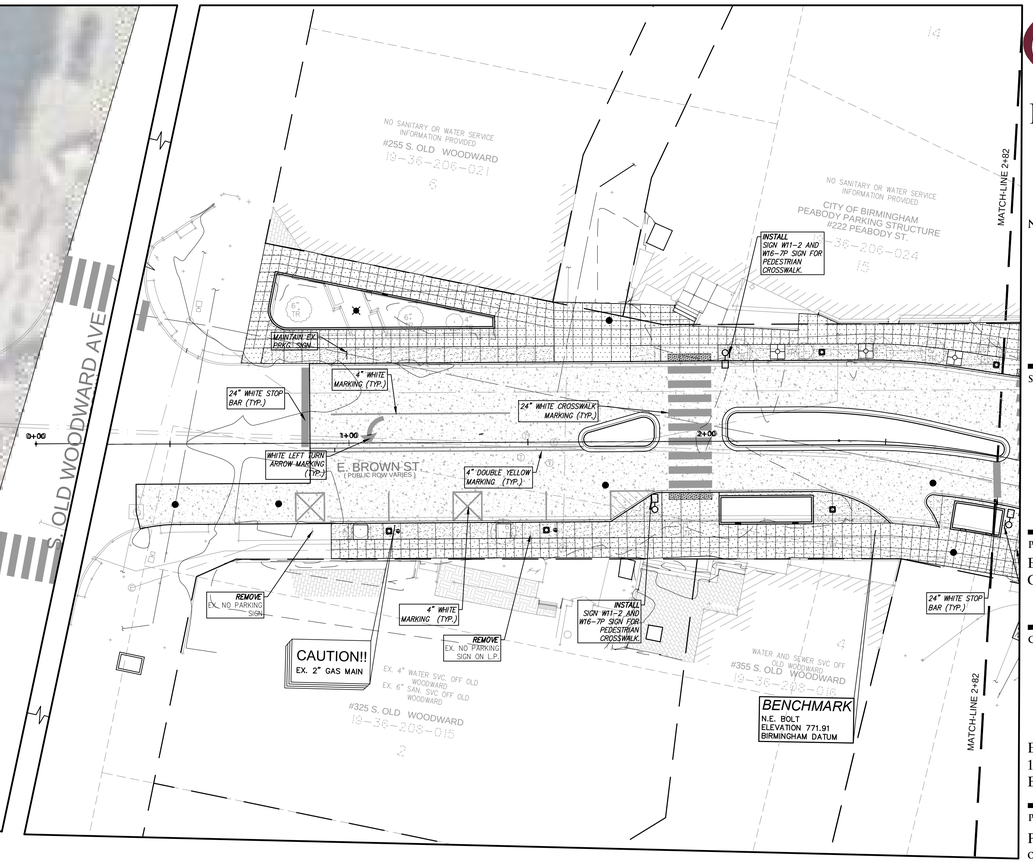
SCALE: N.T.S.

NFE JOB NO. D162-01

SHEET NO. C9



STRIPING NOTE:
ALL LANE LINES/ PAVEMENT MARKING & SIGNAGE SHALL BE IN ACCORDANCE WITH MMUTCD STANDARDS.



SIGN DETAIL-R3-7R
(30" x 30")

SIGN DETAIL-R3-62
(36" x 30")

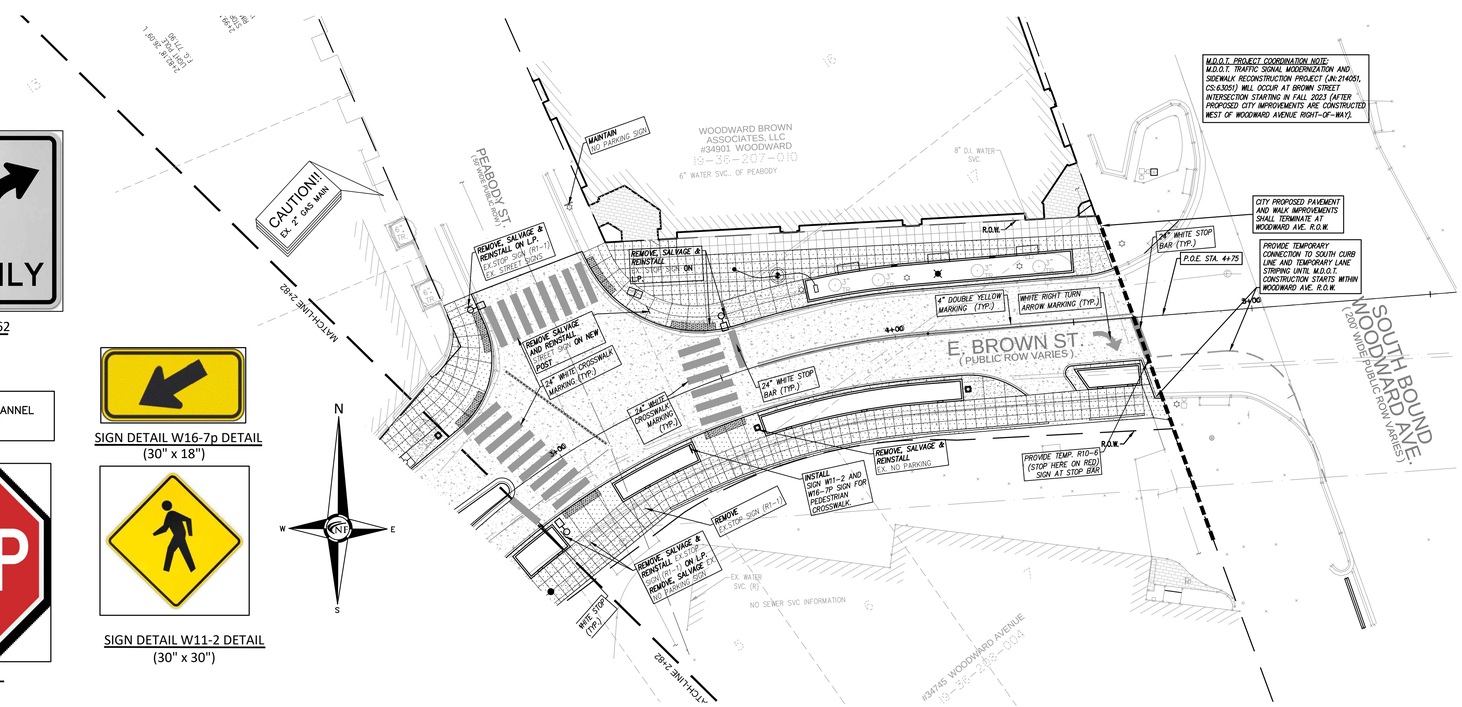
SIGN DETAIL-R10-6
(18" x 24")

NOTE:
ALL SIGN BACKS & U-CHANNEL POSTS SHALL BE PAINTED BIRMINGHAM GREEN

SIGN DETAIL-R1-1
(30" x 30")

SIGN DETAIL W16-7p DETAIL
(30" x 18")

SIGN DETAIL W11-2 DETAIL
(30" x 30")



M.D.O.T. PROJECT COORDINATION NOTE:
M.D.O.T. TRAFFIC SIGNAL MODERNIZATION AND SIDEWALK RECONSTRUCTION PROJECT (JN:214051, CS:63051) WILL OCCUR AT BROWN STREET INTERSECTION STARTING IN FALL 2023 (AFTER PROPOSED CITY IMPROVEMENTS ARE CONSTRUCTED WEST OF WOODWARD AVENUE RIGHT-OF-WAY).

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SHEET
Brown Street Striping and Signage Plan

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DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'
20 10 0 10 20 30

NFE JOB NO. D162-01
SHEET NO. C10

BROWN STREET CLOSED
OLD WOODWARD TO
WOODWARD

36" x 72" ADVANCE WARNING SIGN "A"
BLACK LEGEND ON ORANGE BACKGROUND

BROWN STREET CLOSED
OLD WOODWARD TO
WOODWARD
FOLLOW DETOUR

36" x 72" ADVANCE WARNING SIGN "B"
BLACK LEGEND ON ORANGE BACKGROUND

10" x 30"
ADVANCED WARNING SIGN "C"
BLACK LEGEND ON ORANGE
BACKGROUND

WOODWARD AVE. (M1)

10" x 30"
ADVANCED WARNING SIGN "D"
BLACK LEGEND ON ORANGE
BACKGROUND

SB. WOODWARD (M1)

10" x 30"
ADVANCED WARNING SIGN "E"
BLACK LEGEND ON ORANGE
BACKGROUND

SB. OLD WOODWARD

10" x 30"
ADVANCED WARNING SIGN "F"
BLACK LEGEND ON ORANGE
BACKGROUND

NB. WOODWARD (M1)

DETOUR

30" x 24"
ADVANCED WARNING SIGN "G"
BLACK LEGEND ON ORANGE
BACKGROUND
(PER. M.D.O.T. M4-9U)
(MOUNT BELOW WARNING
SIGN "C/D/E/F" WHERE INDICATED)

DETOUR

30" x 24"
ADVANCED WARNING SIGN "H"
BLACK LEGEND ON ORANGE
BACKGROUND
(PER. M.D.O.T. M4-9L)
(MOUNT BELOW WARNING
SIGN "C/D/E/F" WHERE INDICATED)

DETOUR

30" x 24"
ADVANCED WARNING SIGN "I"
BLACK LEGEND ON ORANGE
BACKGROUND
(PER. M.D.O.T. M4-9R)
(MOUNT BELOW WARNING
SIGN "C/D/E/F" WHERE INDICATED)

END
DETOUR

24" x 18"
ADVANCED WARNING SIGN "J"
BLACK LEGEND ON ORANGE BACKGROUND

BROWN STREET CLOSED
OLD WOODWARD TO
WOODWARD
SEEK ALT ROUTE

36" x 72" ADVANCE WARNING SIGN "K"
BLACK LEGEND ON ORANGE BACKGROUND

SIDEWALK
CLOSED

18" x 30"
ADVANCE WARNING SIGN "L"
BLACK LEGEND ON ORANGE
BACKGROUND

ROAD
CLOSED
AHEAD

36" x 36"
ADVANCE WARNING SIGN "M"
BLACK LEGEND ON ORANGE
BACKGROUND

ADVANCED WARNING SIGN "O"
R3-1

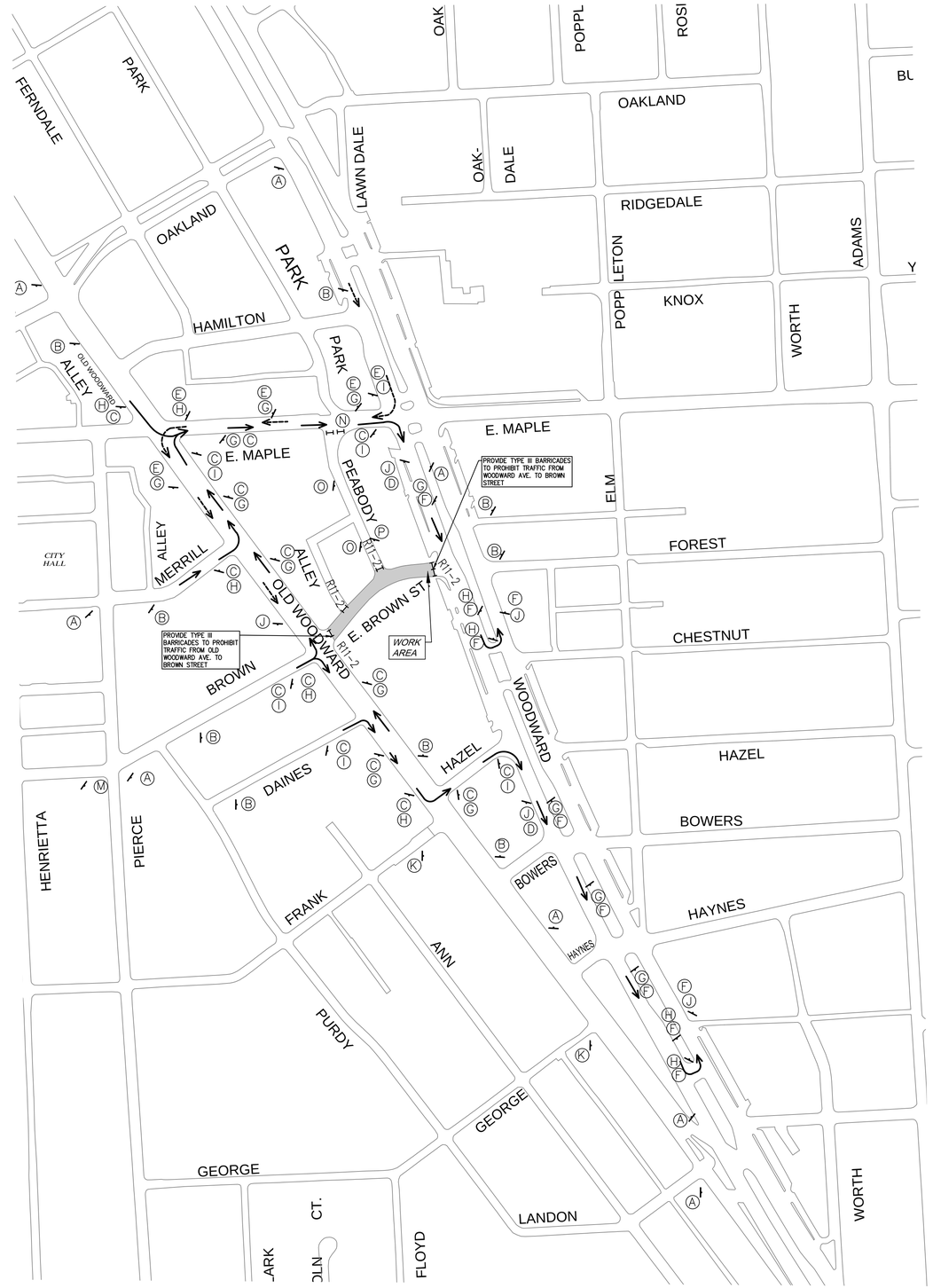
ADVANCED WARNING SIGN "P"
R3-2

SPECIAL ADVANCED WARNING SIGN QUANTITIES

DESIGNATION	DESCRIPTION	SIZE	QUANTITY
SIGN "A"	BROWN STREET CLOSED OLD WOODWARD TO WOODWARD	36"x72"	7
SIGN "B"	BROWN STREET CLOSED OLD WOODWARD TO WOODWARD FOLLOW DETOUR	36"x72"	9
SIGN "C"	WOODWARD AVE.(M1)	10"x30"	15
SIGN "D"	S.B. WOODWARD (M1)	10"x30"	2
SIGN "E"	S.B. OLD WOODWARD	10"x30"	5
SIGN "F"	N.B. WOODWARD (M1)	10"x30"	10
SIGN "G"	DETOUR W/ UP ARROW (M.D.O.T. M4-9U)	30"x24"	13
SIGN "H"	DETOUR W/ LEFT ARROW (M.D.O.T. M4-9L)	30"x24"	8
SIGN "I"	DETOUR W/ RIGHT ARROW (M.D.O.T. M4-9R)	30"x24"	5
SIGN "J"	END DETOUR	24"x18"	5
SIGN "K"	BROWN STREET CLOSED O.W.W. TO WOODWARD SEEK ALT ROUTE	36"x72"	2
SIGN "L"	SIDEWALK CLOSED	18"x30"	6
SIGN "M"	ROAD CLOSED AHEAD	10"x30"	2
SIGN "N"	ROAD CLOSED TO THRU TRAFFIC	18"x24"	1
SIGN "O"	NO RIGHT TURN (M.D.O.T. R3-1)	30"x24"	2
SIGN "P"	NO LEFT TURN (M.D.O.T. R3-2)	30"x24"	1

OTHER ADVANCED WARNING SIGN QUANTITIES AS SHOWN

DESIGNATION	DESCRIPTION	SIZE	QUANTITY
R11-2	ROAD CLOSED	48"x30"	9



SYMBOL KEY

- TYPE III BARRICADES
- ADVANCED WARNING SIGN
- DETOUR ROUTE (N.B./S.B. O.W.W.)
- DETOUR ROUTE (N.B./S.B. W.W.)

NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

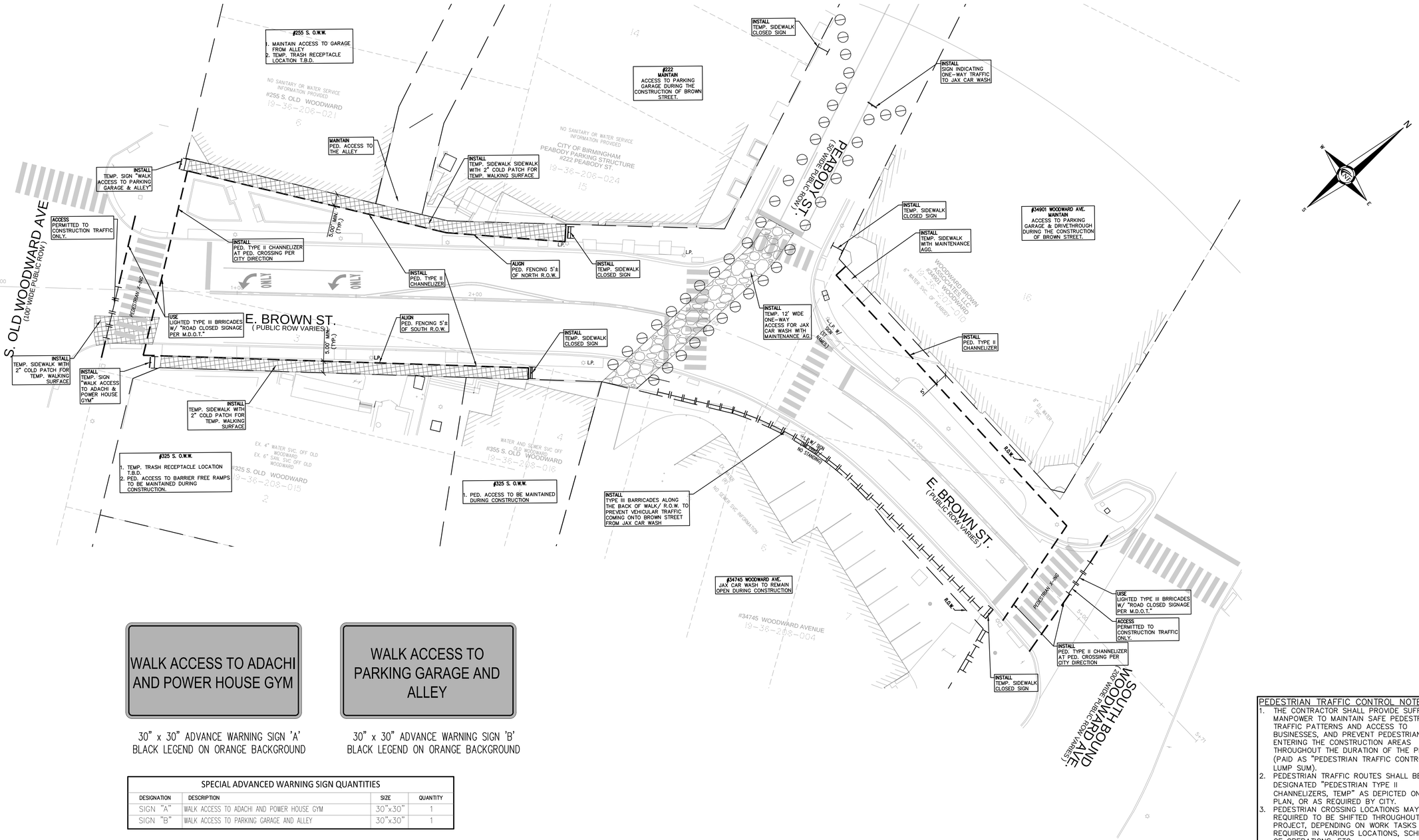
SHEET
Brown Street -Detour Plan

811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
03-16-2023	90% CITY REVIEW
04-10-2023	BIDS
04-26-2023	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: 03-16-2023
SCALE: N.T.S.

NFE JOB NO. D162-01
SHEET NO. C11



WALK ACCESS TO ADACHI AND POWER HOUSE GYM

30" x 30" ADVANCE WARNING SIGN 'A'
BLACK LEGEND ON ORANGE BACKGROUND

WALK ACCESS TO PARKING GARAGE AND ALLEY

30" x 30" ADVANCE WARNING SIGN 'B'
BLACK LEGEND ON ORANGE BACKGROUND

SPECIAL ADVANCED WARNING SIGN QUANTITIES

DESIGNATION	DESCRIPTION	SIZE	QUANTITY
SIGN "A"	WALK ACCESS TO ADACHI AND POWER HOUSE GYM	30"x30"	1
SIGN "B"	WALK ACCESS TO PARKING GARAGE AND ALLEY	30"x30"	1

PEDESTRIAN TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL PROVIDE SUFFICIENT MANPOWER TO MAINTAIN SAFE PEDESTRIAN TRAFFIC PATTERNS AND ACCESS TO BUSINESSES, AND PREVENT PEDESTRIANS FROM ENTERING THE CONSTRUCTION AREAS THROUGHOUT THE DURATION OF THE PROJECT (PAID AS "PEDESTRIAN TRAFFIC CONTROL", LUMP SUM).
2. PEDESTRIAN TRAFFIC ROUTES SHALL BE DESIGNATED "PEDESTRIAN TYPE II CHANNELIZERS, TEMP" AS DEPICTED ON THIS PLAN, OR AS REQUIRED BY CITY.
3. PEDESTRIAN CROSSING LOCATIONS MAY BE REQUIRED TO BE SHIFTED THROUGHOUT THE PROJECT, DEPENDING ON WORK TASKS REQUIRED IN VARIOUS LOCATIONS, SCHEDULE OF OPERATIONS, ETC.
4. TEMPORARY SIGNAGE AND SUPPLEMENTARY TRAFFIC CONTROLS SHALL BE PROVIDED AS NECESSARY TO NOTIFY PEDESTRIANS OF TEMPORARY WALK CLOSURES & PEDESTRIAN DETOUR ROUTES

PED. FENCE LEGEND

- PR. TEMP. TYPE II CHANNELIZER
- PR. 2" COLD PATCH FOR TEMP. WALKING SURFACE
- PR. TEMP. SIDEWALK WITH MAINTENANCE AGG.
- PR. LIGHTED TYPE III BARRICADE
- PR. TRAFFIC BARRELS

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SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Pedestrian Access &
Traffic Maintenance Plan

811 Know what's below Call before you dig.

DATE	ISSUED/REVISED
03-16-23	90% CITY REVIEW
04-10-23	BIDS

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'
20 10 0 10 20 30

NFE JOB NO. D162-01
SHEET NO. C12

1. BRICK PAVERS IN PUBLIC S.W. AREA SHALL BE REMOVED & DISPOSED OF AS DIRECTED BY CITY. ON PRIVATE PROPERTY BRICK PAVERS SHALL BE REMOVED AND STOCKPILLED FOR REINSTALLMENT AS DIRECTED BY CITY
2. ALL PAVEMENT TO BE REMOVED SHALL BE SAWCUT FULL DEPTH.
3. ANY GRAVEL REPLACEMENT NECESSARY FOR REGRADING DRIVEWAYS SHALL BE CONSIDERED INCLUDED IN THE COST OF CONCRETE DRIVE APPROACH.
4. ALL TREES NOT INDICATED FOR REMOVAL SHALL BE PROTECTED DURING CONSTRUCTION. WHERE NECESSARY, TREE ROOTS SHALL BE CUT CLEANLY. AT NO TIME WILL RIPPING OR TEARING OF TREE ROOTS BE ACCEPTABLE.
5. ALL DRIVEWAYS (BEHIND THE SIDEWALK) SHALL BE REPAIRED WITH A CROSS SECTION WHICH MATCHES THE EXISTING IN THICKNESS, OR A MINIMUM 4.0" BITUMINOUS MIXTURE No. 13A. IF THE EXISTING DRIVEWAY IS GREATER THAN 4.0" IN DEPTH, THE THICKNESS OF THE BITUMINOUS MIXTURE No. 13A SHALL BE ADJUSTED TO MAKE UP THE DIFFERENCE.
6. UNLESS OTHERWISE SHOWN, PROPOSED GRADES IN PROFILE ARE TOP OF CURB GRADES.
7. ROCKS, OR OTHER MISC. DEBRIS WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE, UNLESS DIRECTED OTHERWISE FROM THE CITY.
8. THE PAY ITEM "ADJUST STRUCTURE COVER" APPLIES ONLY TO PRE-EXISTING STRUCTURES TO BE ADJUSTED TO PROPOSED GRADES AS PART OF CONSTRUCTION.
9. IF THE CONTRACTOR HAS MULTIPLE CREWS WORKING THAT REQUIRES MULTIPLE CITY INSPECTORS ON A GIVEN WORK DAY, THE PAY ITEM "INSPECTOR CREW DAYS" SHALL BE MULTIPLIED BY THE CORRESPONDING NUMBER OF INSPECTORS REQUIRED DURING SAID WORK DAY.

PAVING NOTES

1. PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

   CONCRETE ROAD/PARKING: BASE COURSE – 21AA CRUSHED LIMESTONE AGGREGATE (8" THICK)
   MIX – PORTLAND CEMENT TYPE IA (AIR-ENTRAINED), TO COMPLY WITH MDOT 3500HP REQUIREMENTS (8" THICK ROAD TRAVEL LANES, 7" THICK ROAD PARKING AREAS).

   CONCRETE FLATWORK: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED), TO COMPLY WITH MDOT 3500 REQUIREMENTS

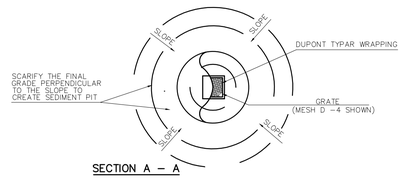
   ALL CONCRETE PAVEMENT AND FLATWORK MIXES USED ON THIS PROJECT SHALL COMPLY WITH A MINIMUM GROUND GRANULATED BLAST-FURNACE SLAG (GGBFS) SUBSTITUTION OF TWENTY-FIVE (25) PERCENT SUBJECT TO SEASONAL LIMITATIONS PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2003 EDITION, OR USE LOW ALKALI (0.6% OR LESS TOTAL CEMENT ALKALI) TYPE I OR TYPE II CEMENT.
2. PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.
3. ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.
4. ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-S164.
5. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2003 EDITION.
6. ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.
7. ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.
8. CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.
9. FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.
10. EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS (INCLUDED IN PAVING WORK).
11. EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADII.
12. SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.
13. ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.
14. FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.
15. R.A.P. NOT ALLOWED IN SURFACE / TOP COURSE OF ASPHALT.

WATER MAIN NOTES

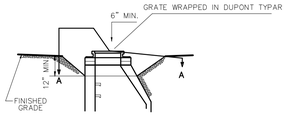
1. ALL WATER MAINS 4" AND LARGER SHALL BE DUCTILE IRON PIPE THICKNESS CLASS 54, WITH PUSH ON TYPE JOINTS AND CEMENT LINED (DOUBLE THICKNESS).
2. NEW WATER MAINS SHALL BE INSTALLED WITH A MINIMUM 5 FEET OF COVER. EXCEPTIONS WILL BE ALLOWED WHEN NECESSARY TO CONNECT TO EXISTING MAIN OR WHEN AUTHORIZED BY THE ENGINEER.
3. KNOWN WATER SERVICES BASED ON FIELD INFORMATION OR CITY RECORDS ARE SHOWN ON THE PLANS AS FOLLOWS: "C" = COPPER, "L" = LEAD AND "W.S." = WATER SERVICE TYPE UNKNOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL EXISTING SERVICES TO THE NEW MAIN AFTER IT HAS BEEN APPROVED FOR USE.
4. COAT ALL BOLTS ON MECHANICAL FITTINGS WITH TAR.
5. HYDRANT CONNECTION TO CONSIST OF 6" DUCTILE IRON PIPE, 6" GATE VALVE AND BOX, AND HYDRANT. HYDRANT SHALL BE EJIW MODEL 5BR WITH 6" MECHANICAL JOINT INLET, TWO PUMPER INLETS, ALL OPENING LEFT, 5'-6" TRENCH, PLUGGED DRAIN AND BLOCK BOLTS.
6. INSTALL GATE VALVE AS CLOSE TO HYDRANT AS PRACTICABLE.
7. GATE VALVES 4" AND LARGER MAY BE MUELLER BRAND SPECIFIED, OR APPROVED EQUIVALENT. ALL MATERIALS RELATIVE TO WATER SERVICE CONNECTIONS SHALL BE MUELLER BRAND.
8. IN ABANDONING MAINS, THE FOLLOWING SHALL BE DONE: PLUG ALL OPEN PIPE ENDS WITH MASONRY. DISCONNECT MAINS WHICH ARE TO BE ABANDONED FROM FITTINGS AT LIVE MAINS AND PLUG AND BLOCK THOSE FITTINGS. FILL MAIN TO BE ABANDONED WITH GROUT OR HYDRAULIC CEMENT.
9. WORK INDICATED BY (A) SHALL BE PERFORMED AFTER THE NEW MAINS ARE PLACED IN SERVICE.
10. THE LOCATIONS AND TYPES OF SERVICE LEADS IS BASED ON THE BEST AVAILABLE INFORMATION. THE EXACT LOCATION OF SERVICE LEADS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
11. WHERE APPLICABLE, THE APPROPRIATE SECTIONS OF EXISTING WATERMAIN SHALL BE SHUTDOWN AND DEPRESSURIZED PRIOR TO A) CUTTING AND REMOVING, B) CUTTING AND INSTALLING PROPOSED TEE CONNECTIONS, C) PERFORMING ANY AND ALL OTHER WORK AROUND/ADJACENT TO HYDRANTS AND ALL OTHER CONNECTIONS, WHILE MEETING AND/OR EXCEEDING APPLICABLE INDUSTRY SAFETY PRECAUTIONS AND MIOSHA STANDARDS.

STORM SEWER NOTES (where applicable)

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY. THE MUNICIPALITY STANDARD NOTES, DETAILS AND SPECIFICATIONS SHALL BE INCORPORATED AS PART OF THESE PLANS.
2. ALL STORM SEWER TRENCHES UNDER OR WITHIN THREE (3) FEET OF EXISTING OR PROPOSED PAVEMENT SHALL BE BACK FILLED WITH MDOT CLASS II MATERIAL (SAND) AND BE MACHINE COMPACTED TO A MINIMUM OF % OF THE MATERIAL'S MAXIMUM DENSITY. PAVEMENT SHALL INCLUDE PARKING LOTS, DRIVE APPROACHES, 95 CURB & GUTTER AND ADJACENT WALKS.
3. ALL STORM SEWER PIPE SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER UNLESS OTHERWISE INCLUDED ON THE PLANS.
4. STORM SEWER SHALL BE OF THE TYPE, SIZE & CLASS DESIGNATION INDICATED ON THE PLANS AND LIKEWISE BE INSTALLED AT THE PROPOSED LINE & GRADE INDICATED.
5. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM SPECIFICATION C-76 CL IV.
6. ALL MAN HOLE, CATCH BASIN, INLET, REAR YARD DRAINAGE STRUCTURES AND COVERS SHALL BE AS INDICATED ON THE PLANS AND CONSTRUCTED IN ACCORDANCE WITH MUNICIPALITY STANDARDS.
7. INSTALL TRAPS ON THE FIRST CATCH BASIN (TYPICALLY A 4' DIAMETER STRUCTURE WITH 2' SUMP) THAT IS UPSTREAM OF ITS CONNECTION TO A MAINLINE STORM OR SEWER MANHOLE, TO CAPTURE FLOATABLES AND TO MINIMIZE ESCAPE OF ODOR.
8. THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
9. EXACT GRADES AND INVERTS OF PROPOSED STORM SEWER ARE TO BE CHECKED WITH THE FIELD ENGINEER PRIOR AND DURING INSTALLATION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY PLAN INCONSISTENCY AND/OR UTILITY CONFLICTS.
10. ALL STORM SEWER PIPE JOINTS SHALL BE "PREMIUM JOINT" MODIFIED GROOVED TONGUE (M.G.T.) WITH SYNTHETIC RUBBER GASKETS CONFORMING TO ASTM SPECIFICATION C-443 & C-361, UNLESS OTHERWISE INDICATED ON THE PLANS.
11. FACILITY MANUFACTURED PRECAST TEE SECTIONS SHALL BE FOR ROOF DRAINS AND/OR SUMP PUMP LEADS AND LATERALS WHERE INDICATED ON THE PLANS. BLIND TOP CONNECTIONS INTO STORM SEWER WILL NOT BE PERMITTED BY BREAKING PIPE WALL.
12. THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL SITE INSPECTIONS.

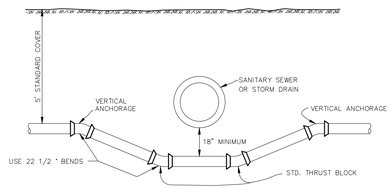


SECTION A – A



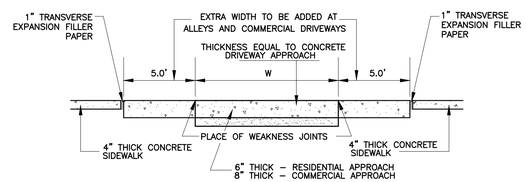
LOW POINT INLET FILTER & SEDIMENT PIT DETAIL

N.T.S.



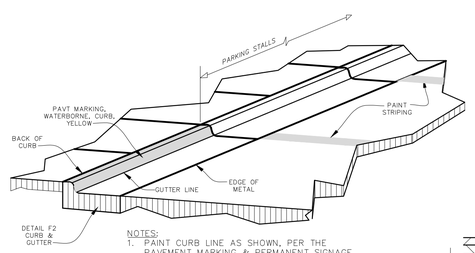
STANDARD SEWER OR STORM CROSSING

N.T.S.



THICKENED CONCRETE SIDEWALK (PLAIN)

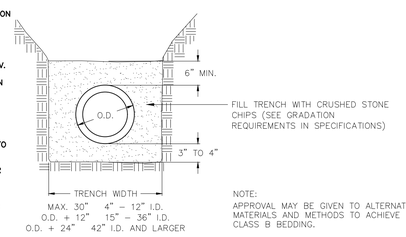
N.T.S.



NOTES:
1. PAINT CURB LINE AS SHOWN, PER THE PAVEMENT MARKING & PERMANENT SIGNAGE PLANS, AND/OR AS DIRECTED BY THE ENGINEER
2. NO CURB PAINT SHALL BE ALLOWED WITHIN AN M.D.O.T. RIGHT-OF-WAY.

CURB PAINT DETAIL

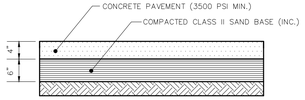
N.T.S.



NOTE:
APPROVAL MAY BE GIVEN TO ALTERNATE MATERIALS AND METHODS TO ACHIEVE CLASS B BEDDING.

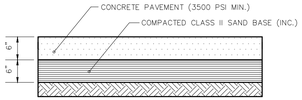
STANDARD PIPE BEDDING

N.T.S.



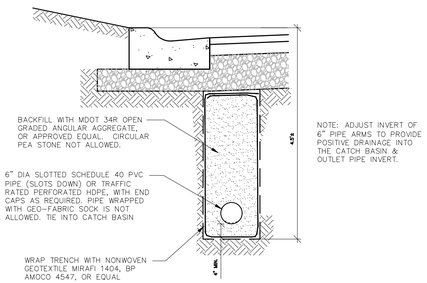
4" CONCRETE SIDEWALK SECTION

STANDARD SIDEWALK REPLACEMENTS/INSTALLATIONS N.T.S.



6" CONCRETE SIDEWALK SECTION

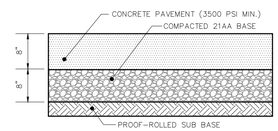
TO MATCH SPECIFIED PAVEMENT THICKNESS THROUGH DRIVE APPROACH N.T.S.



NOTE: ADJUST INVERT OF 6" PIPE ARMS TO PROVIDE POSITIVE DRAINAGE INTO THE CATCH BASIN & OUTLET PIPE INVERT.

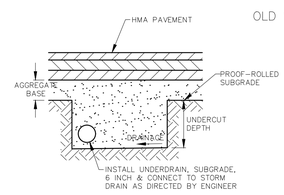
6" PERFORATED PIPE UNDERDRAIN DETAIL

N.T.S.



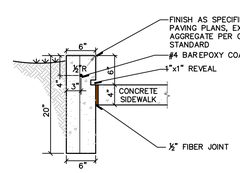
TYPICAL 8" CONCRETE SIDEWALK

FOR USE IN STANDARD SIDWALK IN WILLITS ALLEY APPROACH AND SIDEWALK RAMP/ CONCRETE BASE IN N.W. & S.E. CORNERS OF MAPLE INTERSECTION. N.T.S.



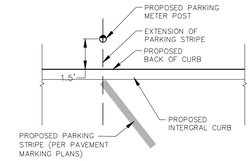
UNDERCUT DETAIL

N.T.S.

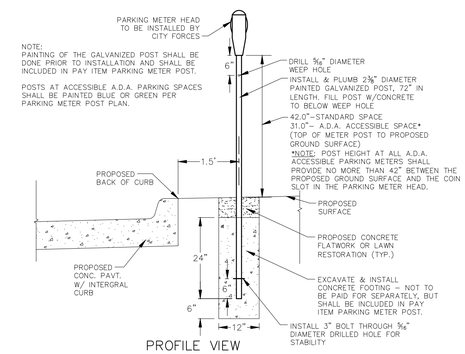


20" HGT. PLANTER CURB DETAIL

N.T.S.



PLAN VIEW



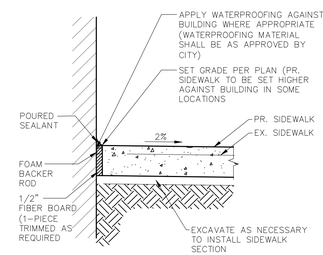
NOTE:
PAINTING OF THE GALVANIZED POST SHALL BE DONE PRIOR TO INSTALLATION AND SHALL BE INCLUDED IN PAY ITEM PARKING METER POST.

POSTS AT ACCESSIBLE A.D.A. PARKING SPACES SHALL BE PAINTED BLUE OR GREEN PER PARKING METER POST PLAN.

PROFILE VIEW

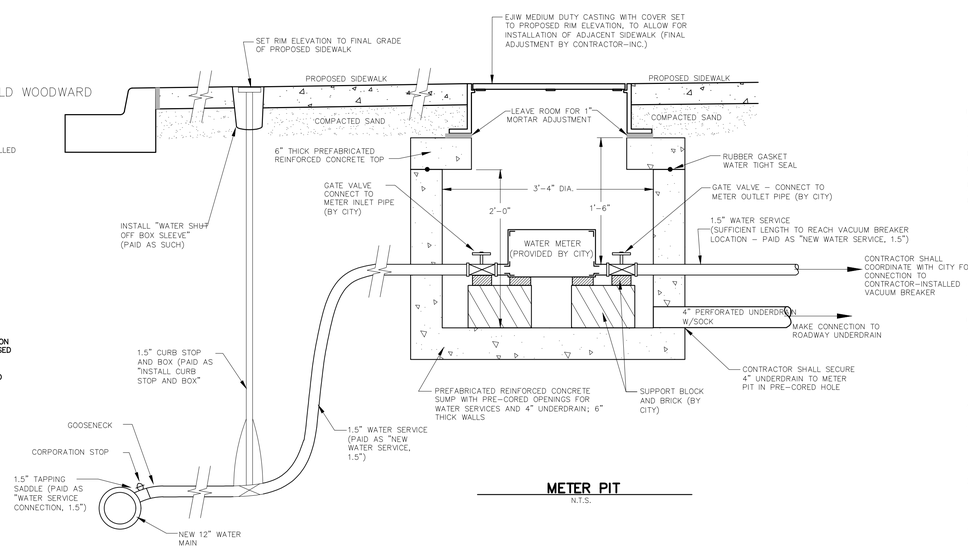
PARKING METER POST

N.T.S.



JOINT DETAIL AT BUILDING

N.T.S.



METER PIT

N.T.S.

NF ENGINEERS
CIVIL ENGINEERS
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LAND PLANNERS

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46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36 Town 2 North, Range 10 East City of Birmingham, Oakland County, Michigan

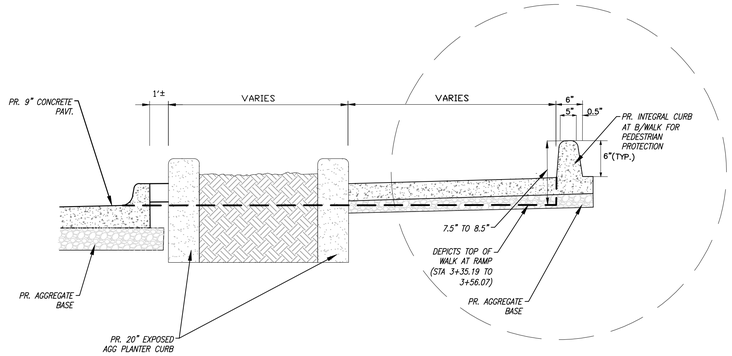
SHEET
Notes & Details (1 of 2)

811 Know what's below Call before you dig.

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY
02-04-23	CONCEPT PLAN
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
04-10-23	BIDS

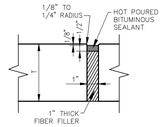
DRAWN BY: G. Viju
DESIGNED BY:
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: N.T.S.

NFE JOB NO. D162-01
SHEET NO. C13

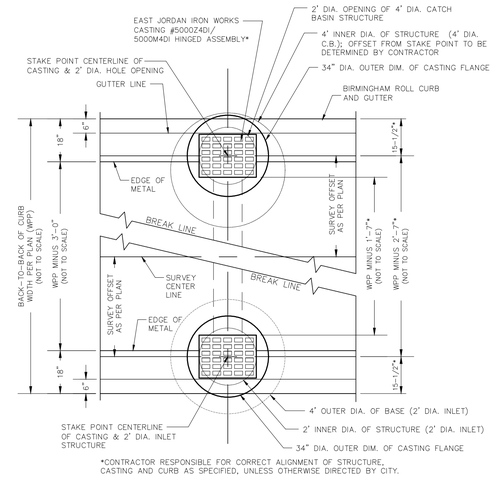


INTEGRAL CURB AT BACK OF CURB FOR PEDESTRIAN PROTECTION

N.T.S.



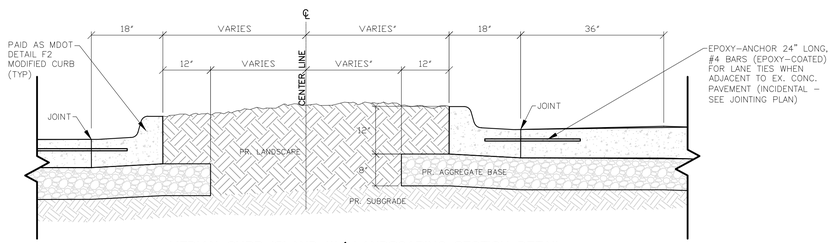
1" WIDE EXPANSION JOINT DETAIL



*CONTRACTOR RESPONSIBLE FOR CORRECT ALIGNMENT OF STRUCTURE, CASTING AND CURB AS SPECIFIED, UNLESS OTHERWISE DIRECTED BY CITY.

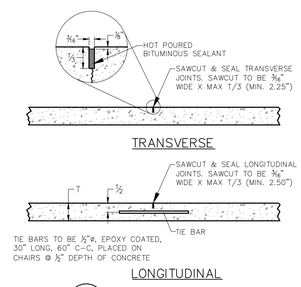
CURB, CATCH BASIN & INLET ALIGNMENT DETAIL PLAN VIEW

SCALE: 1" = 2'

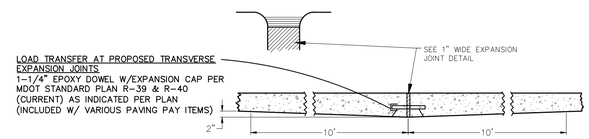


MEDIAN CURB ISLAND W/ LANDSCAPING SECTION DETAIL

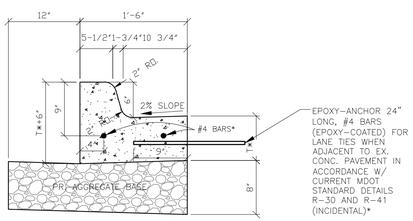
N.T.S.



6 CONTRACTION JOINT

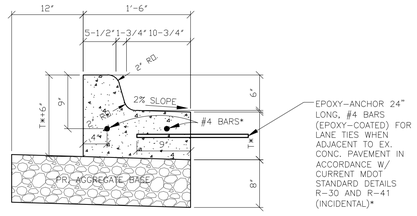


8 EXPANSION JOINT



CONCRETE CURB AND GUTTER, M.D.O.T. DETAIL F2 – MODIFIED (STANDARD PAN)

N.T.S.

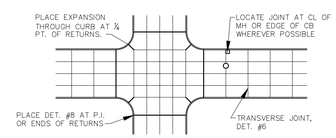


CONCRETE CURB AND GUTTER, M.D.O.T. DETAIL F2 – MODIFIED (REVERSE PAN)

N.T.S.

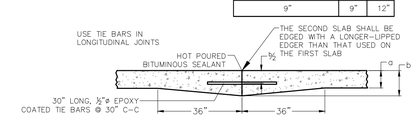
*NOTES:

1. "T" IS EQUAL TO THE THICKNESS & SLOPE IS EQUAL TO THE CROSS-SLOPE OF THE CONCRETE PAVEMENT WHEN CURB & GUTTER IS POURED INTEGRAL TO THE PAVEMENT.
2. OMIT #4 LONGITUDINAL EPOXY COATED BARS WHEN CURB & GUTTER IS POURED INTEGRAL OR TIED TO A NON-REINFORCED CONCRETE PAVEMENT.
3. PROPOSED CURB HEIGHTS INDICATED ARE TYPICAL, AND VARY WHERE INDICATED ON PLAN. CURB HEIGHTS SHALL MATCH EXISTING AT REPAIR LIMITS.
4. PROVIDE COMPACTED 21AA CRUSHED LIMESTONE AGGREGATE BASE UNDER CURB & GUTTER AND WITHIN 12" MINIMUM BEYOND BACK OF CURB; THICKNESS TO MATCH AGGREGATE BASE LAYER THICKNESS OF ADJACENT PROPOSED PAVEMENT
5. OMIT 24" LONG #4 EPOXY COATED BARS WHEN CURB & GUTTER IS POURED INTREGRAL OR TIED TO A NON-REINFORCED CONCRETE PAVEMENT.



TYPICAL JOINT LAYOUT

SLAB DESIGNATION	"a"	"b"
6"	6"	8"
7"	7"	9"
7-½"	7-½"	10"
8"	8"	11"
9"	9"	12"



5 CONSTRUCTION JOINT

NF ENGINEERS

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of Section 36
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Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Notes & Details (2 of 2)

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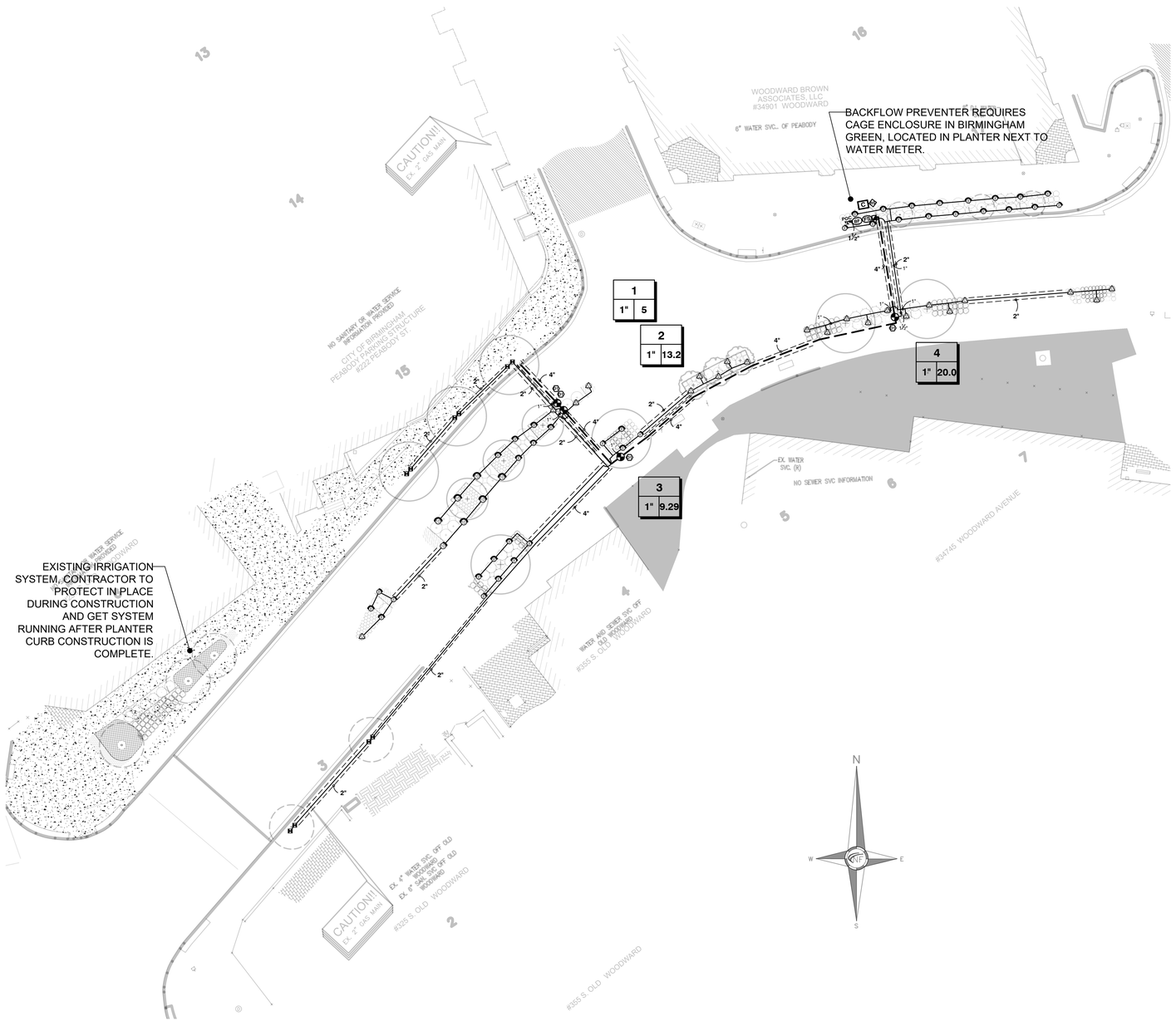
SHEET NO. C14

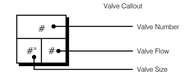


IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY
EST LCS RCS CST SST	Rain Bird 1812 15 Strip Series	21
Q T H F	Rain Bird 1812 8 Series MPR	38
Q T H F	Rain Bird 1812 10 Series MPR	7
1401 1402 1404 1408	Rain Bird 1804-1400 Flood	10

SYMBOL	MANUFACTURER/MODEL	QTY
	Rain Bird PGA Globe 1"	4
	Hunter HQ-44RC 1"	1
BF	Febco 825Y w/Cage enclosure 1"	1
C	Rain Master EGP-TW-S	1
RS	Irritrol RS1000	1
D1	Rain Master TW-D-1	4
FS	Irritrol FS-B150	1
POC	Point of Connection 1"	1
	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1"	935.5 l.f.
	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1 1/2"	4.5 l.f.
	Irrigation Mainline: PVC Class 160 SDR 26 1 1/2"	201.7 l.f.
	Pipe Sleeve: PVC Class 160 SDR 26 2"	277.9 l.f.
	Pipe Sleeve: PVC Class 160 SDR 26 4"	144.6 l.f.

Valve Callout



SCALE: 1" = 20' - 0"

0' 10' 20' 40'

IRRIGATION SPECIFICATIONS

1. IRRIGATION SYSTEM DESIGN BASED ON 20 GPM AT 50 PSI.
2. IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION(POC)ONLY. THE DESIGN IS BASED ON GALLONS PER MINUTE(GPM)AND POUNDS PER SQUARE INCH(PSI)FURNISHED BY OTHERS.
3. IRRIGATION CONTRACTOR IS TO VERIFY POINT OF CONNECTION IN THE FIELD. INSTALLER IS TO CONFIRM THE MINIMUM DISCHARGE REQUIREMENTS OF THE POINT OF CONNECTION AS INDICATED ON THE LEGEND PRIOR TO INSTALLATION.
4. THE PRESSURE REQUIREMENT AT THE POINT OF CONNECTION IS BASED ON NO MORE THAN 5 FEET OF ELEVATION CHANGE IN THE AREAS OF IRRIGATION.
5. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.
6. IRRIGATION CONTRACTOR WILL ARRANGE INSPECTIONS REQUIRED BY LOCAL AGENCIES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION AS REQUIRED. ALL WIRING TO BE PER LOCAL CODE. BACKFLOW PREVENTION TO BE PER LOCAL CODE.
7. LOCATION OF IRRIGATION COMPONENTS SHOWN ON DRAWING IS APPROXIMATE. ACTUAL PLACEMENT MAY VARY SLIGHTLY AS REQUIRED TO ACHIEVE FULL, EVEN COVERAGE.
8. ALL SPRINKLER HEADS SHALL BE INSTALLED PERPENDICULAR TO FINISH GRADES. EXCEPT AS OTHERWISE INDICATED.
9. INSTALL IRRIGATION MAINS WITH A MINIMUM 18" OF COVER BASED ON FINISH GRADES. INSTALL IRRIGATION LATERALS WITH MINIMUM 12" OF COVER BASED ON FINISH GRADES.
10. PIPE LOCATIONS ARE DIAGRAMMATIC. VALVES AND MAINLINE SHOWN IN PAVED AREAS ARE FOR GRAPHIC CLARITY ONLY.
11. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH PIPE SIZES AS INDICATED.
12. ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH APPROVED WATERPROOF WIRE CONNECTIONS AND BE IN A VALVE OR SPLICE BOX.
13. ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 2-WIRE, UL APPROVED DIRECT BURY.
14. THE DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWING SUPPLIED WITH THE DESIGN CRITERIA BEING SET(AREA TO BE IRRIGATED, EQUIPMENT MANUFACTURER AND MODEL TO BE USED, WATER SOURCE INFORMATION, ELECTRICAL POWER AVAILABILITY, ETC...). SITEONE LANDSCAPE SUPPLY BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR INSTALLATION THAT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCED INFORMATION SUPPLIED TO SITEONE LANDSCAPE SUPPLY LANDSCAPES IN RELATION TO THIS PROJECT, UNLESS OTHERWISE NOTED.

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Troy, Michigan 48083
Phone 248.588.2100
Fax 248.588.3528
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800.347.4272
Project Services Number: 316242

BROWN STREET
BIRMINGHAM, MI 48009

Design Date:	03/03/23
Revision Date:	03/16/23, 03/24/23, 04/07/23
Drawn By:	SW
Checked By:	C. BEST

MKSK
Planning
Urban Design
Landscape Architecture

4219 WOODWARD AVENUE, SUITE 305
DETROIT, MICHIGAN 48201
313.652.1101 MKSKSTUDIOS.COM

client / owner
City of Birmingham

project name
BROWN STREET PAVING PROJECT
CONTRACT #5-23P

project address
Birmingham, MI

consultant 1
Nowak & Frauss Engineers
46777 Woodward Ave.
Pontiac, MI 48342
p 248.332.7931

CONSTRUCTION DOCUMENTS
Issued for Construction

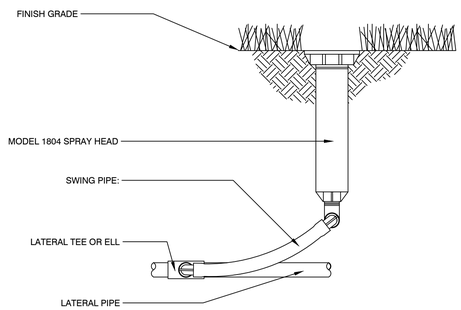
revision	date	issued
	03.16.2023	90% City Review
	04.10.2023	BIDS
1	XX.XX.XXXX	SET NAME

seal

issue date 03.XX.2023
project number dXXXXX

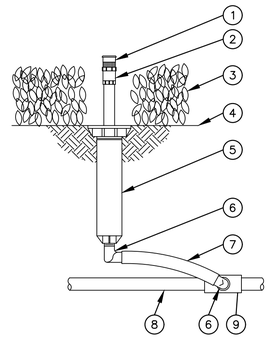
sheet name
IRRIGATION DESIGN

sheet number
IR 1.0



1 1804 SPRAY HEAD WITH SWING PIPE

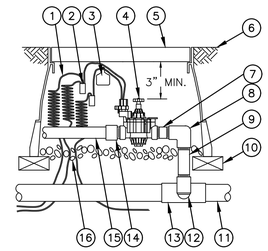
S1-SP-RAI-01



1. BUBBLER
2. PLASTIC ADAPTER
3. PLANT MATERIAL
4. FINISH GRADE/TOP OF MULCH
5. POP-UP SPRAY SPRINKLER:
6. 1/2-INCH MALE NPT x .490-INCH BARB ELBOW:
7. FLEX PIPE
8. PVC LATERAL PIPE
9. PVC SCH 40 TEE OR ELL

2 BUBBLER ON POP-UP SPARYHEAD

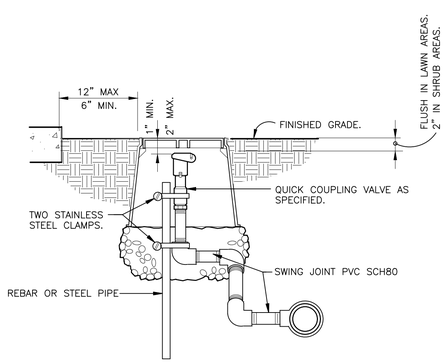
NTS



1. 30-INCH LINEAR LENGTH OF WIRE, COILED
2. WATERPROOF CONNECTION: RAIN BIRD SPLICE-1 (1 OF 2)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PGA
5. VALVE BOX WITH COVER: RAIN BIRD VB-STD
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE
12. SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. PVC SCH 40 MALE ADAPTER
15. PVC LATERAL PIPE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

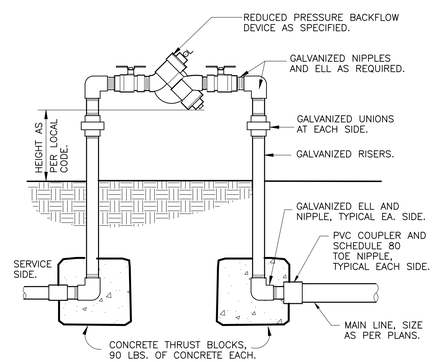
3 PGA SERIES ELECTRIC VALVE

S1-VA-RAI-02



4 QUICK COUPLING VALVE IN BOX

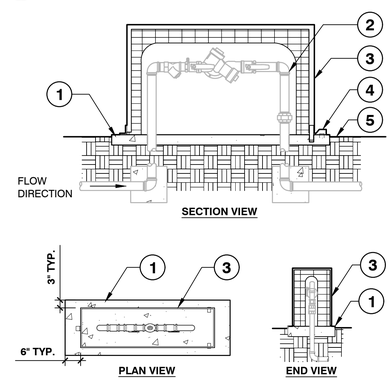
S1-QU-01



5 REDUCED PRESSURE BACKFLOW DEVICE

1" = 1'-0"

FX-IR-FX-BACK-03



1. 4" THICK CONCRETE FOOTING 1" ABOVE FINISHED GRADE
2. BACKFLOW PREVENTION DEVICE (SEE IRRIGATION PLAN FOR MAKE AND MODEL)
3. BACKFLOW CAGE (SEE IRRIGATION LEGEND FOR MAKE AND MODEL)
4. LOCK BOX
5. FINISHED GRADE

NOTES:

1. INSTALL BACKFLOW CAGE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. SEE BACKFLOW PREVENTION DEVICE DETAIL FOR REFERENCE.
3. LOCK BOX SHALL BE LOCATED ABOVE CONCRETE FOOTING
4. CONTRACTOR SHALL PROVIDE A LOCK AS APPROVED BY THE OWNER'S REPRESENTATIVE.

6 BACKFLOW CAGE

3/8" = 1'-0"

FX-IR-FX-BACK-01

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Troy, Michigan 48083
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Fax 248.588.3528
www.Siteone.com
800.347.4272
Project Services Number: 316242

BROWN STREET
BIRMINGHAM, MI 48009

Design Date:	03/03/23
Revision Date:	03/16/23, 03/24/23 04/07/23
Drawn By:	SW
Checked By:	C. BEST

MKSK
Planning
Urban Design
Landscape Architecture

4219 WOODWARD AVENUE, SUITE 305
DETROIT, MICHIGAN 48201
313.652.1101 MKSKSTUDIOS.COM

client / owner
City of Birmingham

project name
BROWN STREET PAVING PROJECT
CONTRACT #5-23P

project address
Birmingham, MI

consultant 1
Nowak & Frauss Engineers
46777 Woodward Ave.
Pontiac, MI 48342
p 248.332.7931

CONSTRUCTION DOCUMENTS
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revision	date	issued
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1	XX.XX.XXXX	SET NAME

seal

issue date 03.XX.2023

project number dXXXXX

sheet name
IRRIGATION DETAILS

sheet number
IR 1.1

PLANTING NOTES

1. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING PLANTING.
3. ALL PLANTS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO THEIR INSTALLATION AT THE SITE.
4. CONTRACTOR SHALL STAKE ALL TREE LOCATIONS AND LAYOUT SHRUBS PLANTINGS IN THE FIELD. OBTAIN APPROVAL OF LANDSCAPE ARCHITECT BEFORE STARTING PLANTING INSTALLATION.
5. ALL EXISTING PLANT MATERIAL SHOWN ON THIS PLAN IS TO BE PRESERVED UNLESS SPECIFICALLY NOTED OTHERWISE.
6. CONTRACTOR SHALL LEAVE THE SITE CLEAN AND ORDERLY DURING THE CONSTRUCTION PROCESS. REMOVE FROM SITE ALL EXCESS MATERIALS, SOIL, DEBRIS AND EQUIPMENT. STORE MATERIALS IN AN APPROVED LOCATION.
7. SHOVEL-CUT EDGING: SEPARATE MULCHED AREAS FROM TURF AREAS WITH A 45-DEGREE, 4- TO 6-INCH-DEEP, SHOVEL-CUT EDGE, PROVIDE CONTINUOUS SMOOTH EDGE.

OVERALL PLANT LIST

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARK
DECIDUOUS TREES						
TI AM	3	TILIA AMERICANA 'MCKSENTRY'	AMERICAN SENTRY LINDEN	3.5" Cal.	B&B	MATCH FORM
UL AM	4	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3.5" Cal.	B&B	MATCH FORM
ZE SE	3	ZELKOVA SERRATA 'JFS-KW1'	CITY SPRITE ZELKOVA	3.5" Cal.	B&B	MATCH FORM
ORNAMENTAL TREES						
MA JE	3	MALUS X 'JEFSPIRE'	PURPLE SPIRE COLUMNAR CRABAP	2" Cal.	B&B	MATCH FORM
PERENNIALS						
GE RO	24	GERANIUM X 'ROZANNE'	ROZANNE GERANIUM	#1 CONT.		24" O.C.
PA TE	892	PACHYSANDRA TERMINALIS 'GREEN CARPET'	GREEN CARPET PACHYSANDRA	24/FLAT		6" O.C.
PE LI	41	PEROVSKIA 'LITTLE SPIRE'	DWARF RUSSIAN SAGE	#2 CONT.		
RU HI	35	RUDBECKIA HIRTA	LITTLE GOLDSTAR BLACK EYED SUSAN	#1 CONT.		
GRASSES						
PE AL	91	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.		
SE AU	48	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	#1 CONT.		
SHRUBS						
HY PA	31	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	#5 CONT.		
IL GL	6	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	#3 CONT.		
JU SQ	18	JUNIPERUS SQUAMATA 'BLUE STAR'	BLUE STAR JUNIPER	#3 CONT.		
PI MU	21	PINUS MUGO 'HONEYCOMB'	HONEYCOMB MUGO PINE	#3 CONT.		

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Pontiac, MI 48342
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seal

issue date 03.16.2023
project number d23106

sheet name
PLANT SCHEDULE
AND NOTES

sheet number
L0.0

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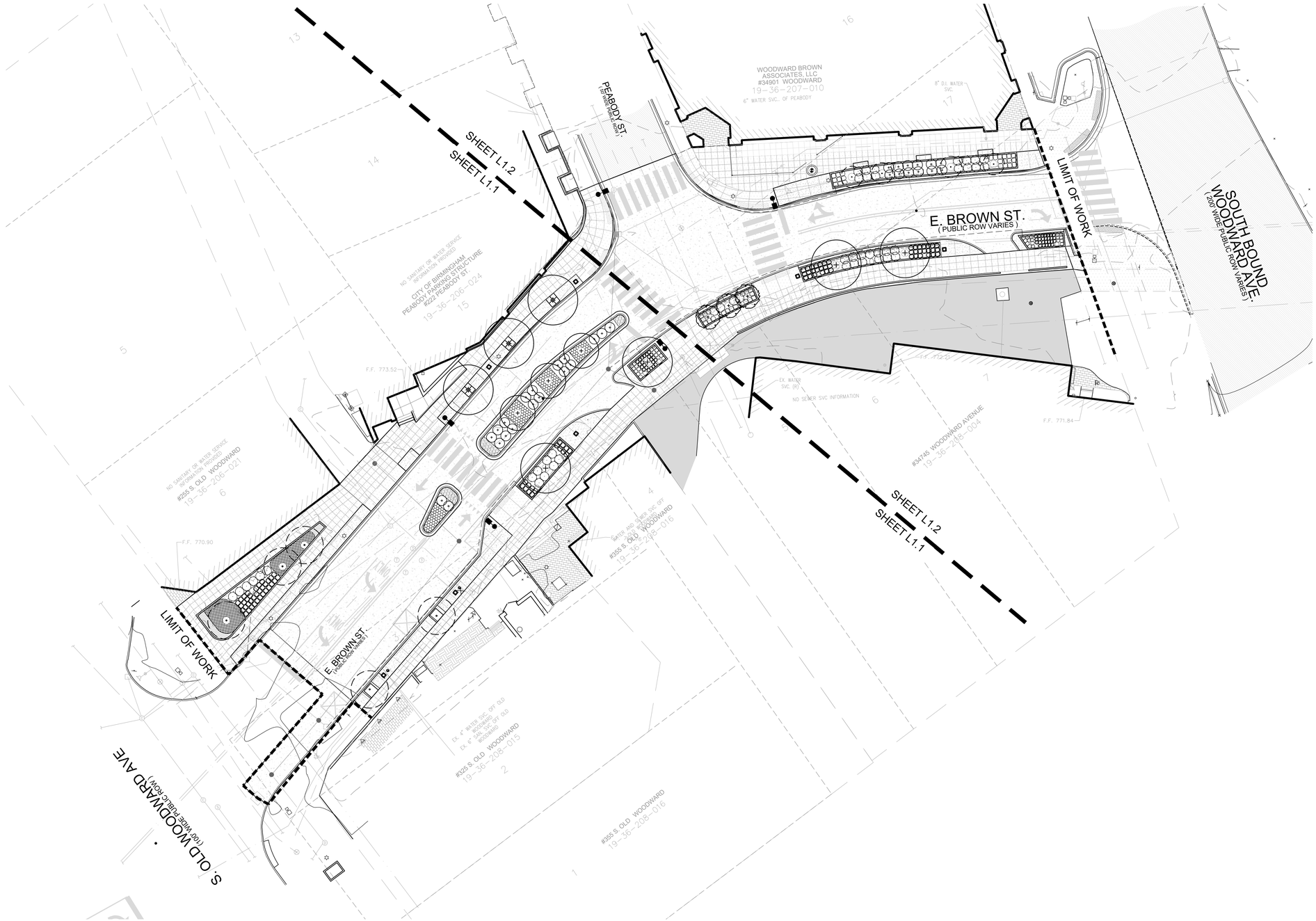

0 20' 40'
SCALE IN FEET

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client / owner
City of Birmingham

project name
BROWN STREET
PAVING PROJECT
CONTRACT #5-23P

project address
Birmingham, MI

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CONSTRUCTION DOCUMENTS
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issue date
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project number
d23106

sheet name
OVERALL
LANDSCAPE PLAN

sheet number
L1.0

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CODED NOTES:

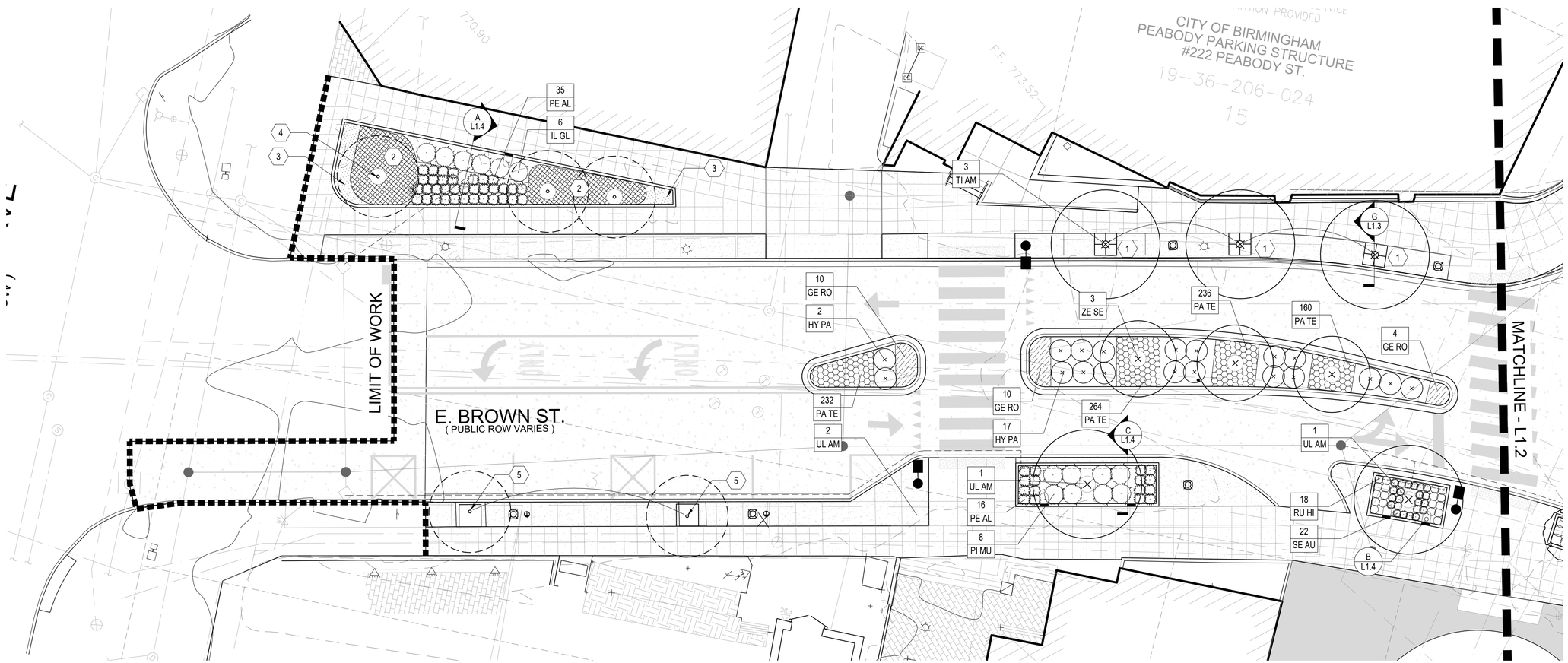
1. PROPOSED 4'X4' STEEL TREE GRATE FRAME. REFER TO CIVIL SET FOR DETAILS
2. PROTECT EXISTING BLACK-EYED SUSAN IN PLACE UNDER TREE CANOPY. LANDSCAPE ARCHITECT TO STAKE LIMITS IN FIELD.
3. ANNUAL PLANTINGS BY OWNER
4. EXISTING CRABAPPLE TREES (3) TO REMAIN
5. EXISTING TREE TO REMAIN, PROTECT IN PLACE, SEE SPECIFICATIONS FOR DETAILS. ALL DEMOLITION AND CONSTRUCTION WITHIN 15' DIA. OF TRUNK TO BE DONE BY HAND.

PLANT LIST - L1.1

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARK
DECIDUOUS TREES						
TI AM	3	TILIA AMERICANA 'MCKSENTRY'	AMERICAN SENTRY LINDEN	3.5" Cal.	B&B	MATCH FORM
UL AM	2	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3.5" Cal.	B&B	MATCH FORM
ZE SE	3	ZELKOVA SERRATA 'JFS-KW1'	CITY SPRITE ZELKOVA	3.5" Cal.	B&B	MATCH FORM
PERENNIALS						
GE RO	24	GERANIUM X 'ROZANNE'	ROZANNE GERANIUM	#1 CONT.		24" O.C.
PA TE	892	PACHYSANDRA TERMINALIS 'GREEN CARPET'	GREEN CARPET PACHYSANDRA	24/FLAT		6" O.C.
RU HI	18	RUDBECKIA HIRTA	LITTLE GOLDSTAR BLACK EYED SUSAN	#1 CONT.		
GRASSES						
PE AL	51	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.		
SE AU	22	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	#1 CONT.		
SHRUBS						
HY PA	19	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	#5 CONT.		
IL GL	6	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	#3 CONT.		
PI MU	8	PINUS MUGO 'HONEYCOMB'	HONEYCOMB MUGO PINE	#3 CONT.		

PLANTING LEGEND

	ANNUALS (BY OWNER)
	PERENNIALS (MEDIAN) SEE DETAIL D, SHEET L1.3
	EXISTING BLACK-EYED SUSAN TO REMAIN
	GROUNDCOVER



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sheet number
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CODED NOTES:

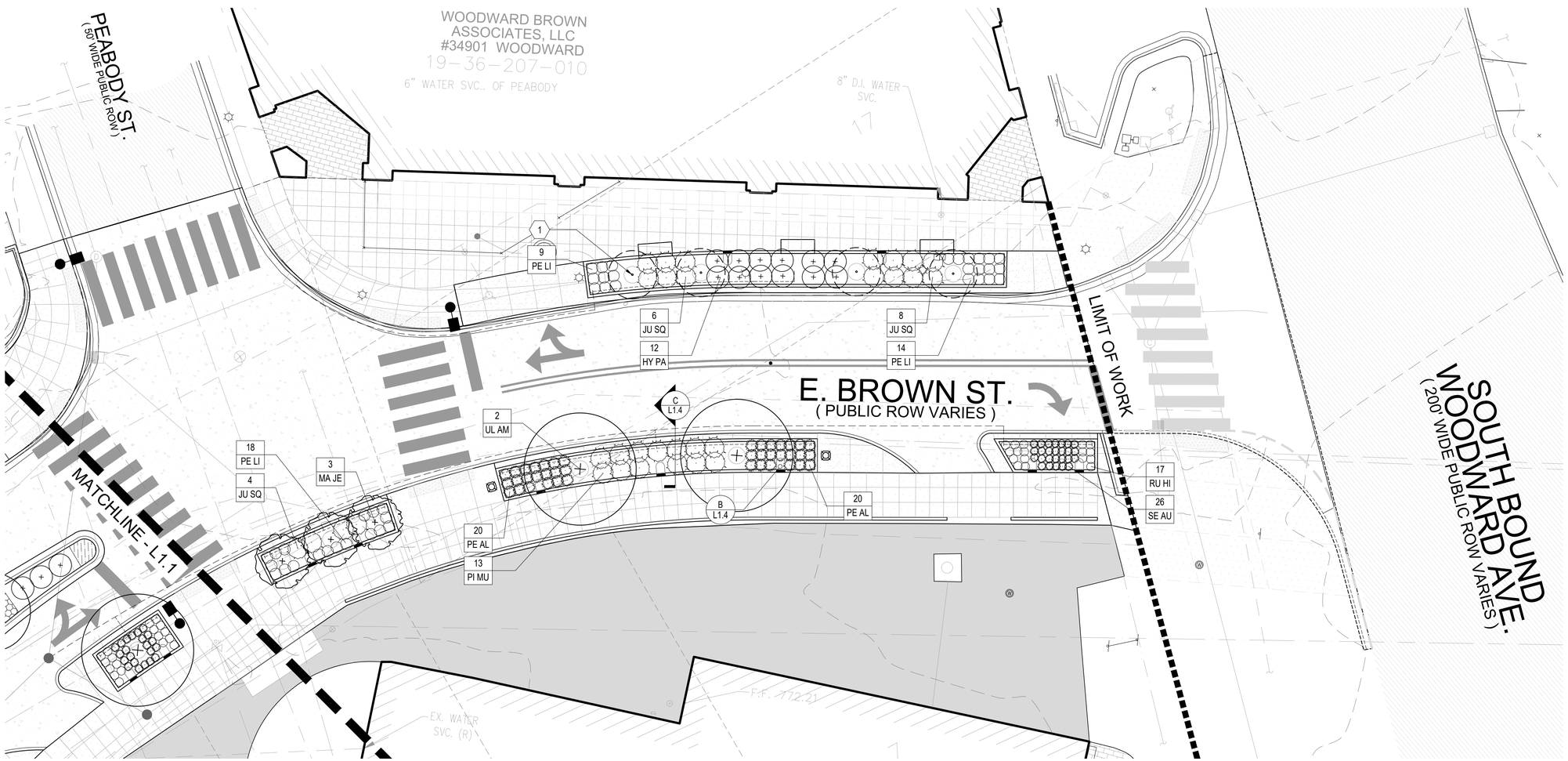
1 EXISTING GINKGO TREES TO REMAIN (4)

PLANT LIST - L1.2

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARK
DECIDUOUS TREES						
UL AM	2	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3.5" Cal.	B&B	MATCH FORM
ORNAMENTAL TREES						
MA JE	3	MALUS X 'JEFSPIRE'	PURPLE SPIRE COLUMNAR CRABAP	2" Cal.	B&B	MATCH FORM
PERENNIALS						
PE LI	41	PEROVSKIA 'LITTLE SPIRE'	DWARF RUSSIAN SAGE	#2 CONT.		
RU HI	17	RUDBECKIA HIRTA	LITTLE GOLDSTAR BLACK EYED SUSAN	#1 CONT.		
GRASSES						
PE AL	40	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.		
SE AU	26	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	#1 CONT.		
SHRUBS						
HY PA	12	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	#5 CONT.		
JU SQ	18	JUNIPERUS SQUAMATA 'BLUE STAR'	BLUE STAR JUNIPER	#3 CONT.		
PI MU	13	PINUS MUGO 'HONEYCOMB'	HONEYCOMB MUGO PINE	#3 CONT.		

PLANTING LEGEND

	ANNUALS (BY OWNER)
	PERENNIALS (MEDIAN) SEE DETAIL D, SHEET L1.3
	EXISTING BLACK-EYED SUSAN TO REMAIN
	GROUNDCOVER



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L1.2

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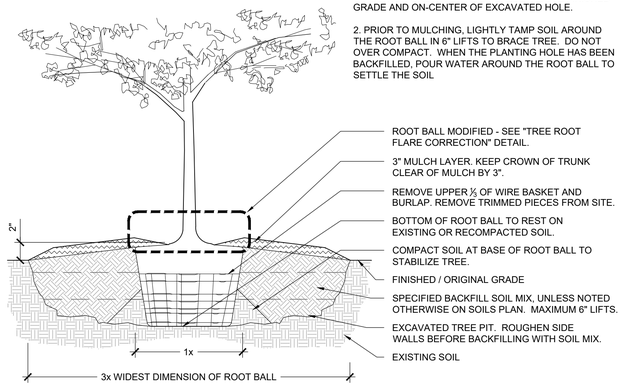
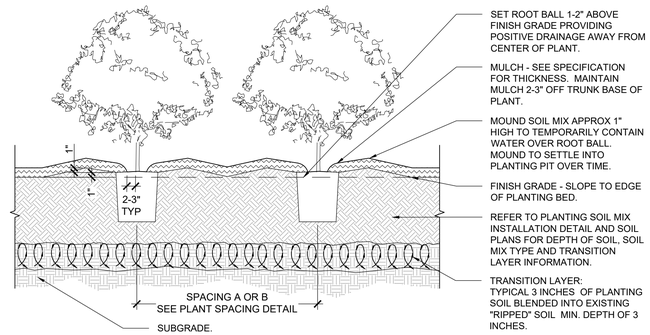
NOTE:
1. POSITION CROWN OF ROOT BALL 2" ABOVE FINISHED GRADE AND ON-CENTER OF EXCAVATED HOLE.

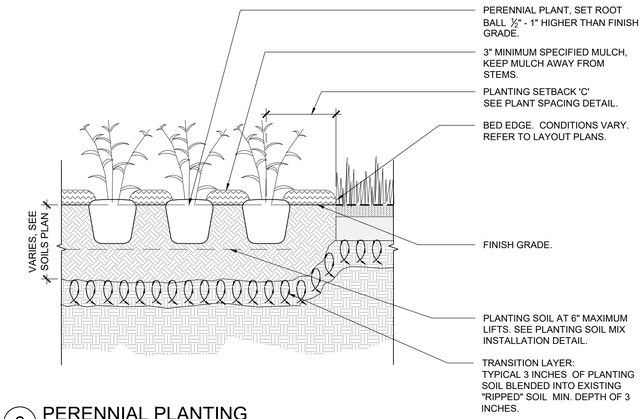
2. PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND THE ROOT BALL TO SETTLE THE SOIL



A TREE PLANTING DETAIL
SCALE: 3/4" = 1'-0"

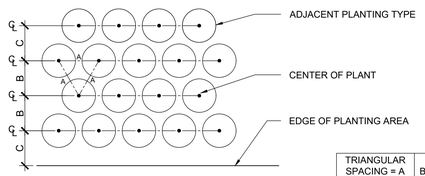


B SHRUB PLANTING DETAIL (MASS PLANTING AND HEDGES)
SCALE: 1" = 1'-0"



C PERENNIAL PLANTING
SCALE: 1" = 1'-0"

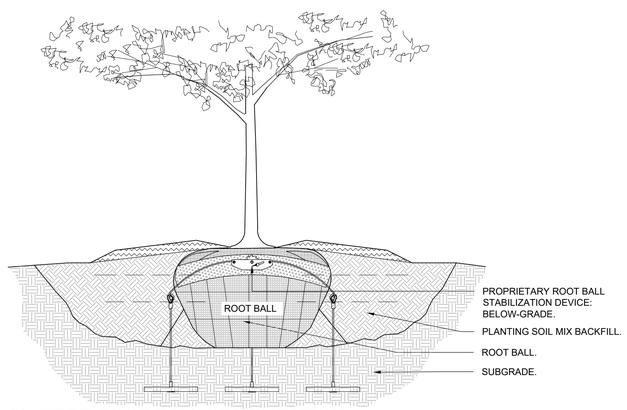
NOTE:
LAYOUT PLANTS ALONG PERIMETER OF PLANTING BED FIRST, PARALLEL TO AND UNIFORMLY OFFSET FROM EDGE OF BED. FILL OUT INTERIOR OF BED ON UNIFORM GRID AS SHOWN.



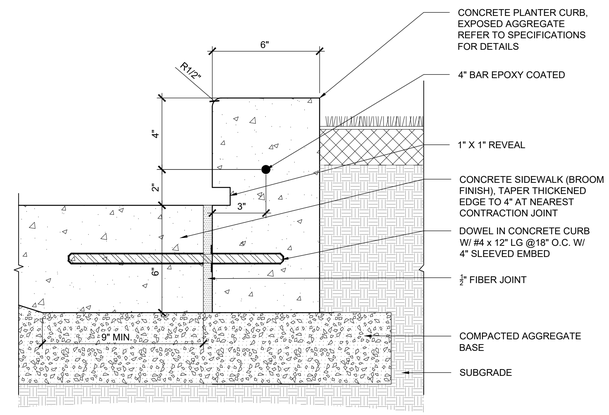
"C"= 30" SETBACK FOR SHRUBS
18" SETBACK FOR PERENNIALS
12" SETBACK FOR GROUNDCOVER

TRIANGULAR SPACING = A	DISTANCE BETWEEN ROW = B	TOTAL AREA (SF) PER PLANT
6"	5"	0.21
8"	7"	0.39
9"	8"	0.50
10"	8 1/2"	0.59
12" (1')	10 1/2"	0.88
15"	13"	1.35
18"	15 1/2"	1.94
21"	18"	2.63
24" (2')	21"	3.50
30"	26"	5.42
36" (3')	31"	7.80
48" (4')	42"	13.84

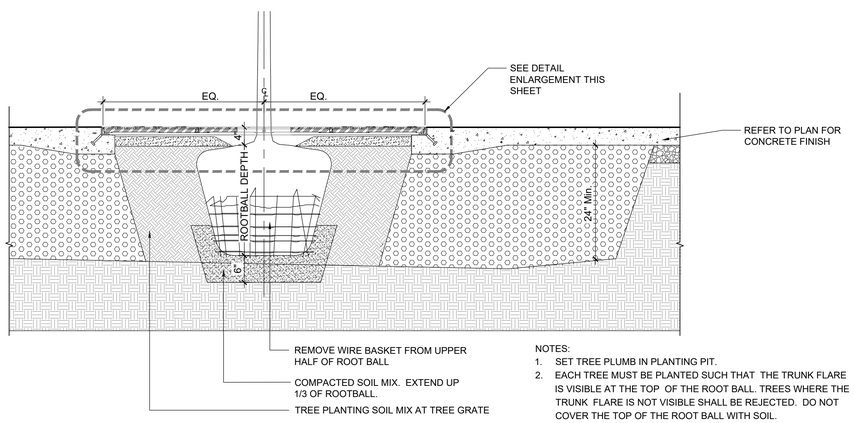
D PLANT SPACING, TYPICAL
SCALE: 1" = 1'-0"



E TREE ROOT BALL STABILIZATION
SCALE: 3/4" = 1'-0"

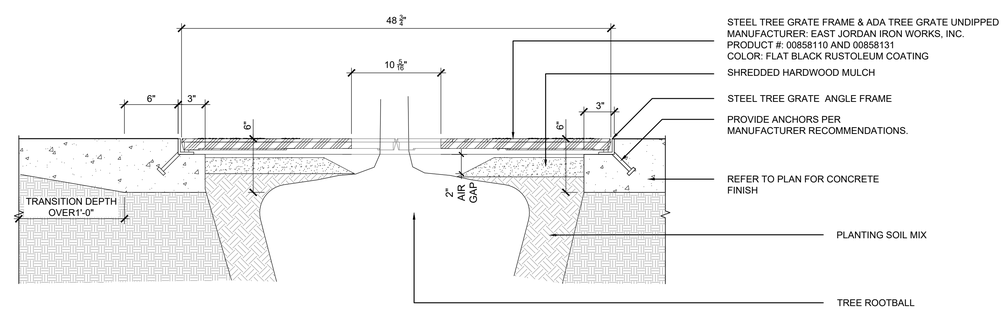


F 12" HGT. SHALLOW PLANTER CURB DETAIL
SCALE: 3" = 1'-0"



NOTES:
1. SET TREE PLUMB IN PLANTING PIT.
2. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

G TREE PLANTING IN TREE GRATE
SCALE: 3/4" = 1'-0"



DETAIL ENLARGEMENT
SCALE: 1 1/2" = 1'-0"

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BROWN STREET PAVING PROJECT CONTRACT #5-23P

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sheet name
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sheet number
L1.3

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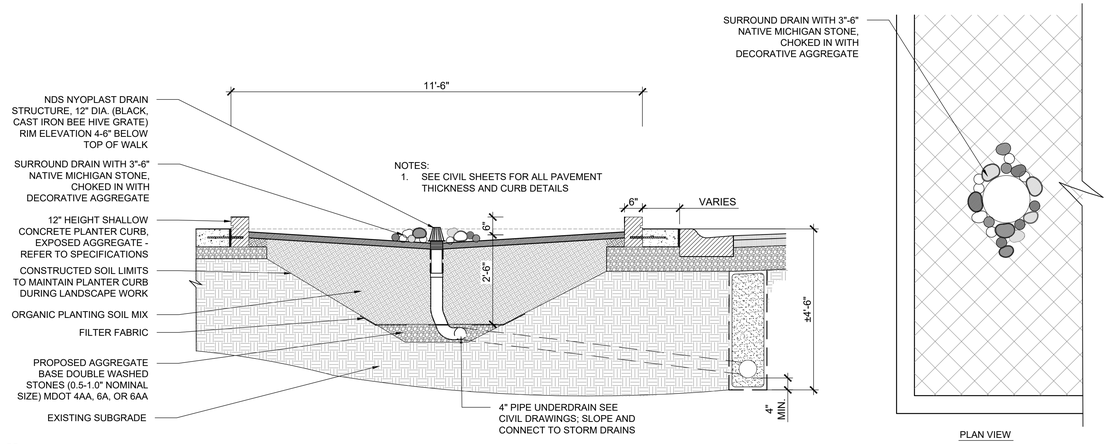
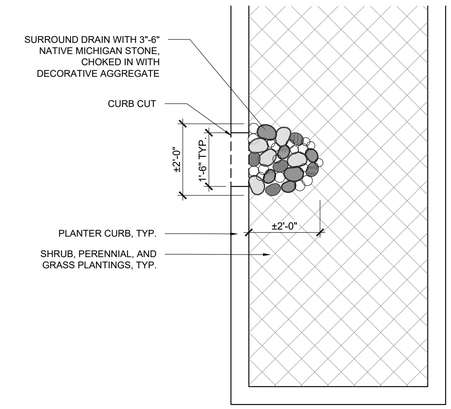
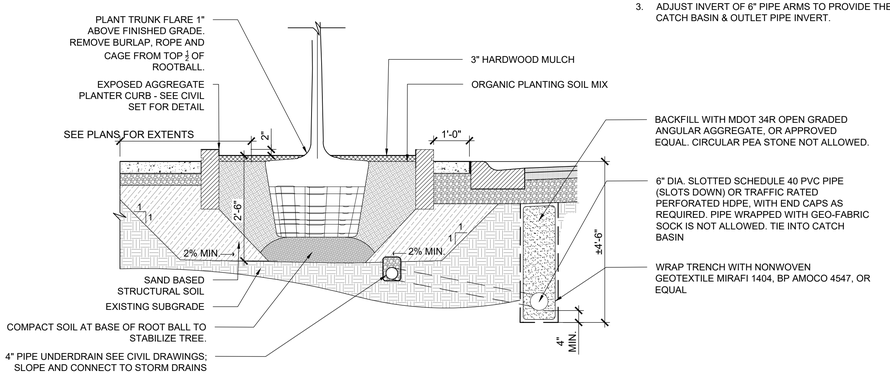


A PLANTER DRAIN & AGGREGATE SECTION AND PLAN ENLARGEMENT
SCALE: 1/2" = 1'-0"



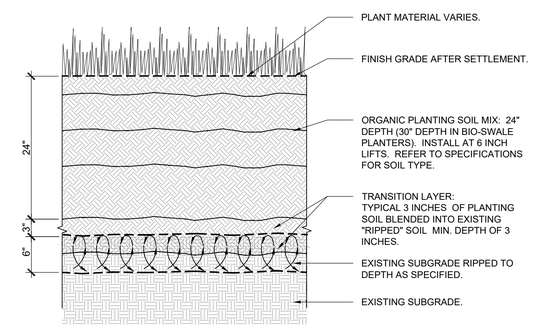
B TYPICAL AGGREGATE - CURB CUT PLAN ENLARGEMENT
SCALE: 1/2" = 1'-0"

NOTES:
1. FIELD VERIFY ALL EXISTING UTILITIES, STRUCTURAL SOIL DEPTHS MAY VARY DUE TO UTILITY LOCATIONS. ACTUAL LIMITS OF SAND BASED STRUCTURAL SOIL MAY VARY BASED ON FIELD CONDITIONS. CONTRACTOR SHALL MAINTAIN APPROXIMATE 1,000 CF OF SOIL VOLUME PER TREE.
2. SEE TYPICAL SECTION SHEETS FOR ALL PAVEMENT THICKNESS AND CURB DETAILS.
3. ADJUST INVERT OF 6" PIPE ARMS TO PROVIDE THE CATCH BASIN & OUTLET PIPE INVERT.



C TREE PLANTING IN STRUCTURAL SOIL AND PLANTER DRAINAGE DETAIL
SCALE: 1/2" = 1'-0"

TRANSITION LAYER NOTE:
DEPTH OF PLANTING SOIL MIX TYPE AND BLENDING DEPTHS OF PLANTING MIX INTO RIPPED SUBGRADE MAY VARY. REFER TO SPECIFICATIONS.



D ORGANIC PLANTING SOIL MIX INSTALLATION
SCALE: 1" = 1'-0"

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sheet number
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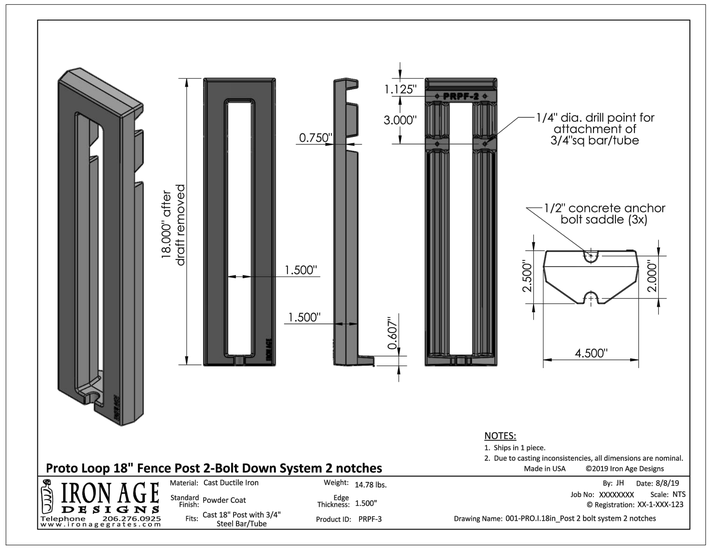
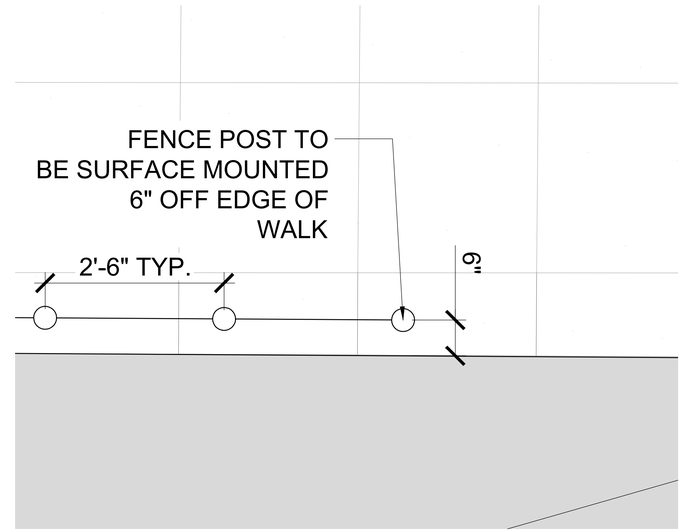
PROTO PLANTER FENCE



PROTO PLANTER FENCE - CUT SHEET



DECORATIVE FENCE ALTERNATE - PLAN ENLARGEMENT

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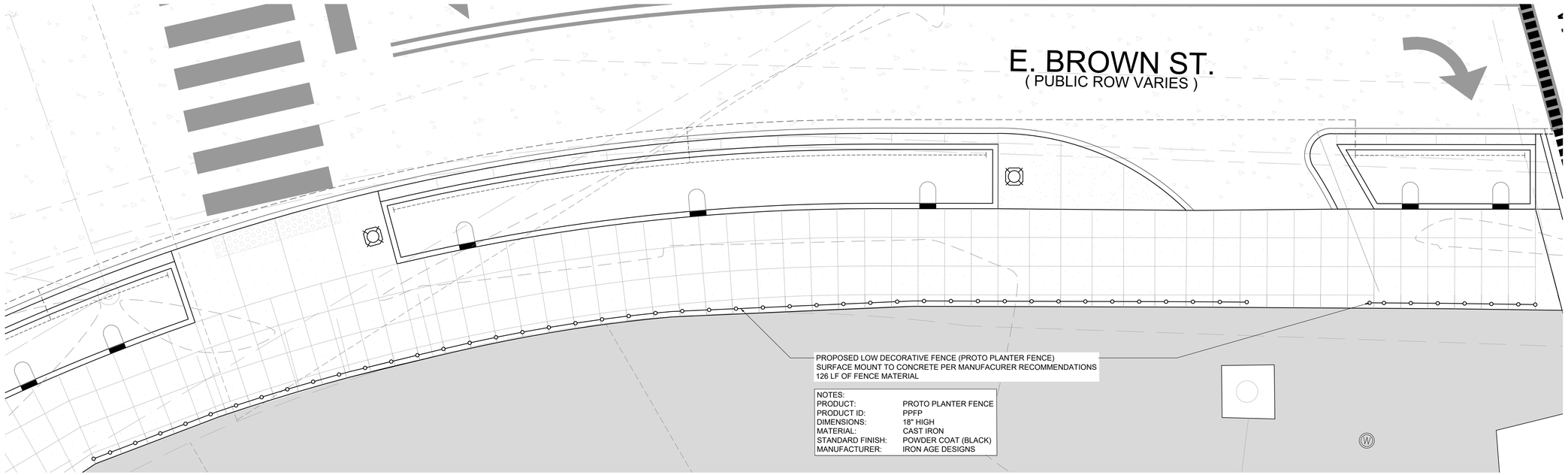

DECORATIVE FENCE ALTERNATE

0 5' 10'
SCALE IN FEET

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sheet name
DECORATIVE FENCE ALTERNATE

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CODED NOTES:

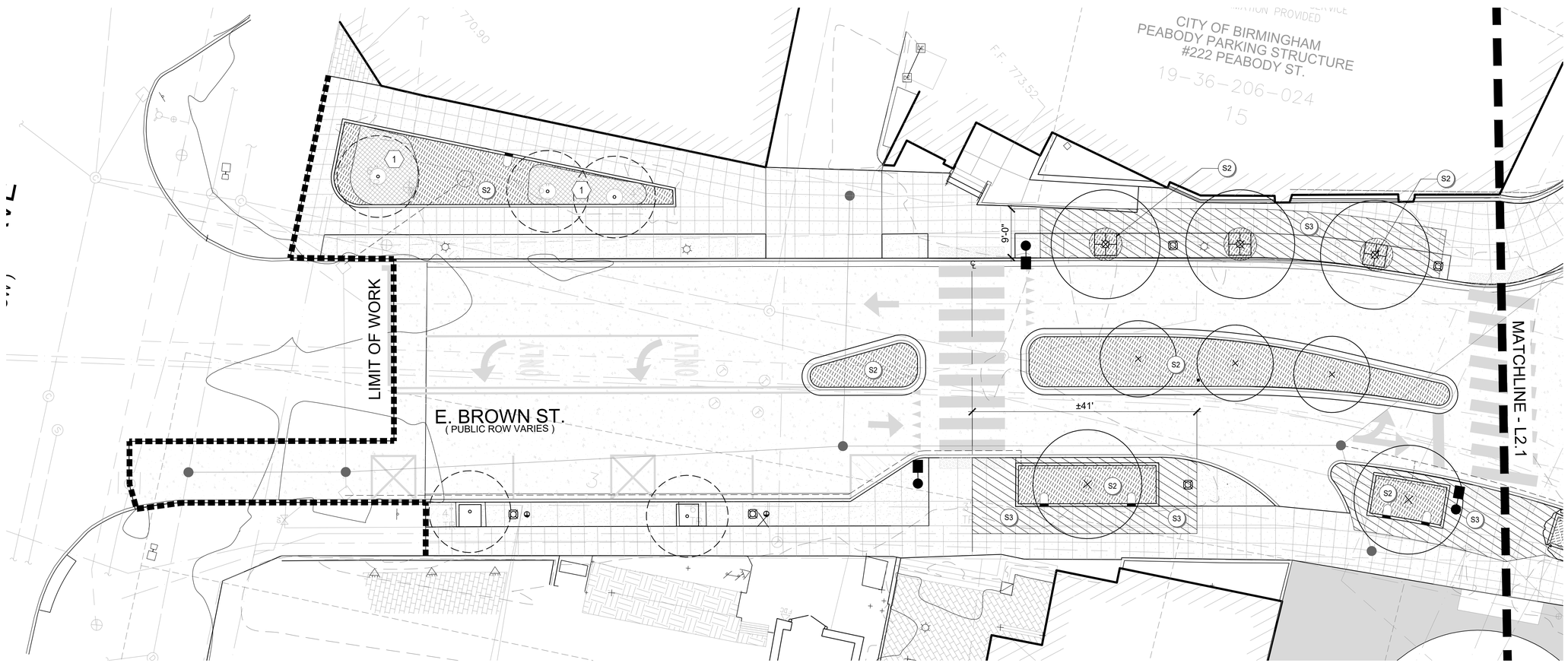
1. NO NEW SOIL TO BE ADDED BENEATH TREE CANOPY, VERIFY LIMITS IN FIELD

SOILS NOTES

1. DO NOT EXCAVATE WITHIN SOIL PRESERVATION/TREE PROTECTION AREAS UNLESS OTHERWISE INDICATED. REFER TO DEMOLITION PLAN AND/OR TREE PROTECTION PLANS FOR ADDITIONAL INFORMATION.
2. EXISTING SITE SOILS TO BE EXCAVATED AND REMOVED FROM SITE.
3. SUBGRADE SOILS FOR PLANTING AREAS MUST BE DECOMPACTED BY RIPPING SOILS AS DESCRIBED IN EACH PLANTING SOIL MIX SPECIFICATION.
4. AREAS WITHIN GRADING LIMITS OR DISTURBED BY CONSTRUCTION ACTIVITIES SHALL HAVE EXISTING SOILS DECOMPACTED AND REPAIRED TO ORIGINAL STATE OR PROPOSED PROJECT CONDITIONS. OWNER'S REPRESENTATIVE TO REVIEW AND APPROVE SOILS AND REPAIRS PRIOR TO REPAIR WORK COMMENCING.
5. PLANTING SOIL MIX DEPTHS INDICATED ARE POST COMPACTION AND SETTLEMENT DEPTHS REPRESENTING FINAL GRADE WITHIN SPECIFIED COMPACTION AND GRADING TOLERANCES. COMPENSATE FOR SETTLING AND COMPACTION AS NECESSARY.
6. EXCAVATE AND CONFIRM PLANTING AREA SUBGRADES ARE TO THE DEPTHS NOTED ON SOIL DRAWINGS AND DETAILS. WHERE EXCAVATION IS TOO DEEP, BACKFILL WITH EXISTING SOILS AND COMPACT TO 85 - 90% PROCTOR. DO NOT START THE SOIL MIX INSTALLATION UNTIL SUB-GRADE CONDITIONS HAVE BEEN CORRECTED AND APPROVED BY THE LANDSCAPE ARCHITECT.
7. PROJECT MANUAL SPECIFICATIONS FOR PLANTING SOIL MIX AND FINISH GRADING APPLY.

SOILS LEGEND

S1	SOIL TYPE 1 - EXISTING PLANTING BEDS ORGANIC PLANTING SOIL MIX - (DEPTH VARIES, NOT ON ROOTBALL / TREE TRUNK)
S2	SOIL TYPE 2 - PERENNIALS, SHRUBS & TREES ORGANIC PLANTING SOIL MIX - 24" SEE DETAIL D, SHEET L1.4
S3	SOIL TYPE 3: SAND BASED STRUCTURAL SOIL MIX - 30" SEE DETAIL C, SHEET L1.4



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SOILS PLAN

sheet number
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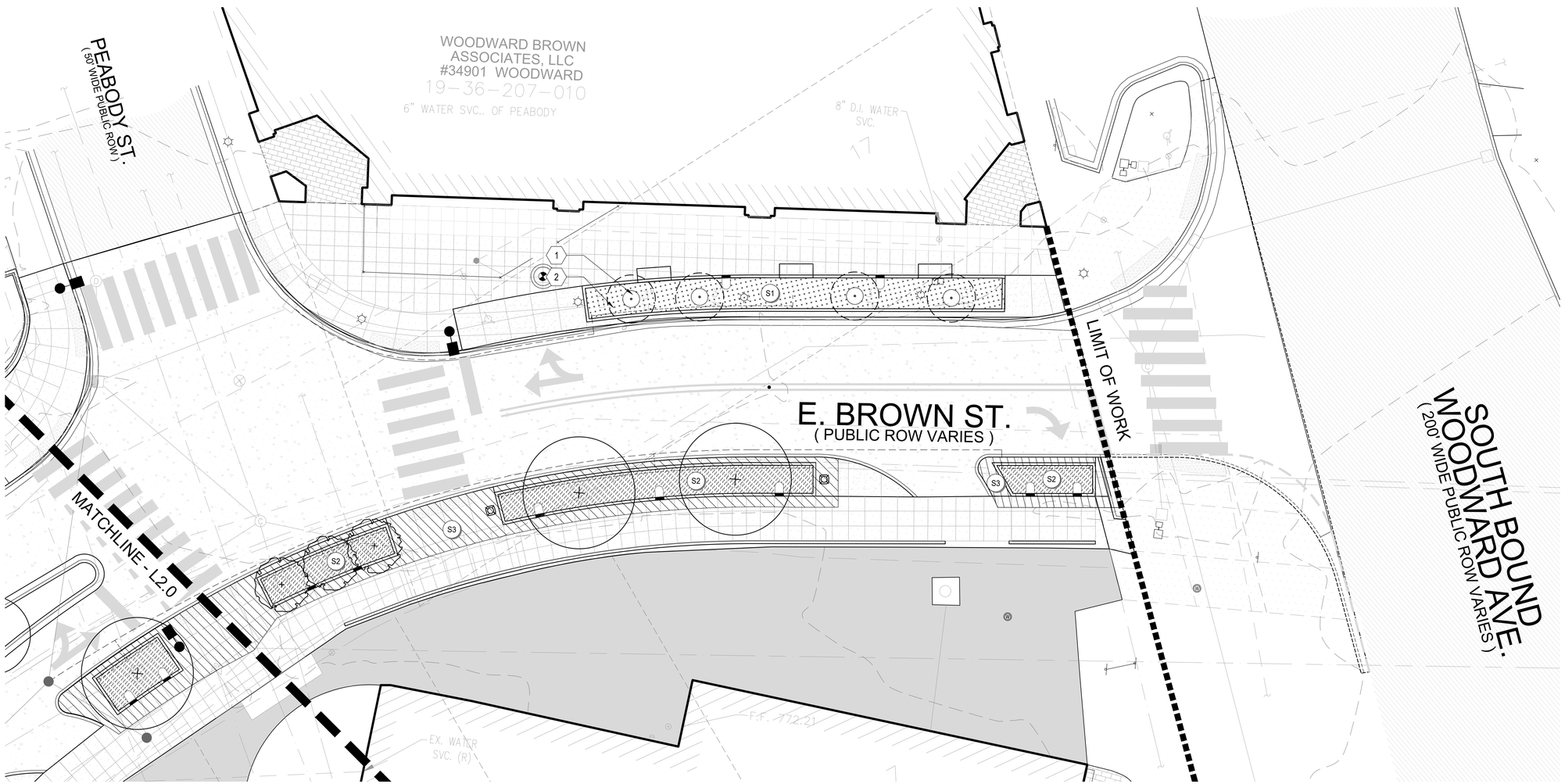
CODED NOTES:

1. NO NEW SOIL TO BE PLACED OVER ROOTBALL OF EXISTING TREES
2. BACKFILL EXCAVATED HOLES DUG FOR NEW PLANT MATERIAL WITH ORGANIC PLANT MIX AS NEEDED

SOILS LEGEND

S1	SOIL TYPE 1 - EXISTING PLANTING BEDS ORGANIC PLANTING SOIL MIX - (DEPTH VARIES, NOT ON ROOTBALL / TREE TRUNK)
S2	SOIL TYPE 2 - PERENNIALS, SHRUBS & TREES ORGANIC PLANTING SOIL MIX - 24" SEE DETAIL D, SHEET L1.4
S3	SOIL TYPE 3: SAND BASED STRUCTURAL SOIL MIX - 30" SEE DETAIL C, SHEET L1.4



0 10' 20'
SCALE IN FEET

MKSK
Planning
Urban Design
Landscape Architecture

4219 WOODWARD AVENUE, SUITE 305
DETROIT, MICHIGAN 48201
313.652.1101 MKSKSTUDIOS.COM

client / owner
City of Birmingham

project name
BROWN STREET PAVING PROJECT CONTRACT #5-23P

project address
Birmingham, MI

consultant 1
Nowak & Frauss Engineers
46777 Woodward Ave.
Pontiac, MI 48342
p 248.332.7931

CONSTRUCTION DOCUMENTS
Issued for Construction

revision	date	issued
	04.10.2023	BIDS
	03.16.2023	90% CITY REVIEW

seal

issue date 03.16.2023
project number d23106

sheet name
SOILS PLAN

sheet number
L2.1

T:\Projects\2023\d23106-Birmingham MI, Brown Street Streetscape\BIM_CAD_GIS\CAD\Sheets\d23106-L2.1-SOILS PLAN.dwg Apr 07, 2023 - 8:48am-jgoff

ENGINEER'S OPINION OF PROBABLE COST
BROWN STREET PAVING PROJECT (CONTRACT #5-23P)

NO.	ITEM DESCRIPTION	PAY UNIT	SHEET C1 Utility	SHEET C2 Utility	SHEET C7 Paving	SHEET C8 Striping/Signage	SITE-ONE Irrigation	MKSK Landscape	TOTAL QUANTITY
	SEWER PAY ITEMS								
1	15" Storm Sewer, C76, CL-IV, Trench A	LF	212	-					212
2	12" Storm Sewer, C76, CL-IV, Trench A	LF	23	31					54
3	10" Storm Sewer, PVC SDR 26, Trench A	LF	67	-					67
4	New 6'-0" Diameter Combined Sewer Manhole (Construct Online)	EA	1	-					1
5	New 4'-0" Diameter Storm Manhole w/ 2' Sump & 15" Dia. Gas Trap (Construct Online)	EA	1	-					1
6	New 4'-0" Diameter Storm Manhole	EA	4	-					4
7	New 12" Diameter PVC Landscape Drain w/ Metal Bee-Hive Grate	EA	1	1					2
8	6" Perforated Pipe Underdrain (w/ Trench Detail)	LF	145	220					365
9	4" Perforated Pipe Underdrain (w/ Geotextile Sock)	LF	75	145					220
10	Sewer Tap, 12"	EA	-	1					1
11	Sewer Tap, 6"	EA	1	1					2
12	Sewer Tap, 4"	EA	1	-					1
13	Reconstruct Manhole (if and where needed)	VF	-	-					15
14	Remove & Replace Structure Cover (as directed by City)	LB	-	-					825
15	Investigate, Adjust & Shift Casting Location	EA	-	2					2
16	Removal and Disposal of Contaminated Material, Type 2	CY	-	-					25
17	Removal and Disposal of Contaminated Material, Type 3	CY	-	-					25
18	Remove Ex. 12" Storm Sewer	LF	-	36					36
19	Abandon Ex. 12" Storm Sewer	LF	36	-					36
20	Bulkhead Structure, 12"	EA	1	2					3
21	Bulkhead Pipe, 12"	EA	-	-					1
22	Bulkhead Pipe, 10"	EA	-	-					1
23	Bulkhead Pipe, 8"	EA	-	-					1
24	CCTV Sewer Inspection	LS	-	-					1
	SUBTOTAL SEWER PAY ITEMS								
	WATER MAIN PAY ITEMS								
25	New Water Service, 1.5", Trench A, Copper	LF	25	-					25
26	Water Service Connection, 1.5"	EA	1	-					1
	SUBTOTAL WATER MAIN PAY ITEMS								
	PAVING PAY ITEMS								
27	Station Grading	STA			4.4				4.4
28	Subgrade Undercutting	CY			-				100
29	Excavation for Tree Wells	CY			-				125
30	Removing Concrete Sidewalk & Ramp (sawcutting included)	SY	515	320	-				835
31	Removing Pavement Full Depth (Curb & Gutter included)	SY	1,060	910	-				1,970
32	Aggregate Base, MDOT 21AA Limestone, 8"	SY	950	760	-				1,710
33	Concrete Pavement, Non-reinforced, 9", incl. integral Detail F2 Curb & Gutter	SY	860	725	-				1,585
34	Furnish & Install Tree Grate	EA			3				3
35	Concrete Sidewalk, 4", Scoring Treatment	SF			6445				6,445
36	Concrete Sidewalk, 6", Scoring Treatment (Includes Ramps)	SF			855				855
37	Concrete Sidewalk, 8", Scoring Treatment	SF			400				400
38	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment	SF			1698				1,698
39	Concrete Sidewalk, 6", Exposed Aggregate, Scoring Treatment	SF			217				217
40	Handicap Ramp Truncated Domes (per ramp)	SF	48	144	-				192
41	Concrete Curb & Gutter, 18", MDOT Type F2, Modified	LF	220	11	-				231
42	20" Hgt. Planter Curb, Exposed Aggregate	LF	101	411	-				512
43	12" Hgt. Planter Curb, Exposed Aggregate	LF	144		-				144
44	Intergral Curb at Back of Walk for Pedestrian Protection	LF		126	-				126
45	Remove Ex. 4" Skip Lane Markings on Brown Street (west of Old Woodward)	LF			-	90			90
46	Pavement Marking, Polyurea, 6 inch, Solid Lane Line, White	LF			-	190			190
47	Pavement Marking, Polyurea, 6 inch, Dotted Lane Line, White	LF			-	100			100
48	Pavement Marking, Polyurea, 4 inch, White	LF			-	228			228
49	Pavement Marking, Polyureal, 4 inch, Yellow	LF			-	515			515
50	Pavement Marking, Polyurea, 24 inch Stop Bar, White	LF			-	55			55
51	Pavement Marking, Polyurea, 24 inch Crosshatching, White	LF			-	384			384
52	Pavement Marking, Polyurea, Rt Turn Arrow, White	EA			-	3			3
53	Pavement Marking, Polyurea, Lt Turn Arrow, White	EA			-	1			1
54	Pavement Marking, Polyurea, Straight/Left Arrow, White	EA			-	2			2
55	Pavement Marking, Polyurea, Only, White	EA			-	2			2
56	Recessing Pavt Mkrg, Longit	LF			-	1023			1,023
57	Recessing Pavt Mkrg, Transv	SF			-	1450			1,450
58	Adjust Structure Cover	EA	3	5	-				8
59	Cold Patch	TON			-				25
60	Maintenance Aggregate	LS			-				1
	SUBTOTAL PAVING PAY ITEMS								
	IRRIGATION PAY ITEMS								
61	Meter Pit	EA					1		1
62	Sprinkler Assembly	EA					76		76
63	Valve Assembly	EA					4		4
64	1-1/2 inch PVC Mainline	LF					202		202
65	1-1/2 inch Polyethylene lateral line	LF					5		5
66	1 inch Polyethylene lateral line	LF					936		936
67	Communication Cable - two wire	LF					202		202
68	Irrigation Controller	EA					1		1
69	Rain Sensor	EA					1		1
70	Two Wire Decoders	EA					4		4
71	4" PVC Sleeve	LF					145		145
72	2" PVC Sleeve	LF					278		278
	SUBTOTAL IRRIGATION PAY ITEMS								
	LANDSCAPE PAY ITEMS								
73	Structural Soil Mix (30" depth)	CFT						5,073	5,073
74	Organic Plant Soil Mix - Plant Beds (24" depth)	CFT						3,713	3,713
75	Native MI Stone (3"-6") choked in w/ decorative aggregate	LS						1	1
76	Shredded Hardwood Mulch (3" depth)	CY						24	24
77	TILIA AMERICANA 'MCKSENTRY' (3-3.5" CAL.)	EA						3	3
78	ULMUS AMERICANA 'PRINCETON' (3-3.5" CAL.)	EA						4	4
79	ZELKOVA SERRATA 'JFS-KW1' (3-3.5" CAL.)	EA						3	3
80	MALUS X 'JEFSPIRE' (2" CAL.)	EA						3	3
81	HYDRANGEA PANICULATA 'JANE' (#5)	EA						31	31
82	ILEX GLABRA 'SHAMROCK' (#3)	EA						6	6
83	JUNIPERUS SQUAMATA 'BLUE STAR' (#3)	EA						18	18
84	PINUS MUGO 'HONEYCOMB' (#3)	EA						21	21
85	GERANIUM X 'ROZANNE' (#1)	EA						24	24
86	PACHYSANDRA TERMINALIS 'GREEN CARPET' (24/FLAT)	EA						892	892
87	PEROVSKIA 'LITTLE SPIRE' (#2)	EA						41	41
88	RUDBECKIA HIRTA (#1)	EA						35	35
89	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' (#2)	EA						91	91
90	SELSERIA AUTUMNALIS (#1)	EA						48	48
	SUBTOTAL LANDSCAPE PAY ITEMS								
	GENERAL PAY ITEMS								
91	Critical Path Time Schedule	LS							1
92	Mobilization, (Max. 5% of Bid)	LS							1
93	Water and Sewer Allowance	LS							1
94	Street Light Conduit, 4" PVC Schedule 40, 4' deep	LF							90
95	Salvage Existing Signs	LS							1
96	New Signs	SF							64
97	Sign Post, U-Channel	LF							108
98	Modify Steps & Railing at Peabody Parking Structure	LS			1				1
99	Removing Street Light Foundation	EA	4	4					8
100	Parking Meter Post	EA			2				2
101	Inlet Filter	EA							10
102	Road Closure Assessment; _____ Days @ $5,000/Day	DAYS							-
103	Traffic Maintenance and Control; _____ Days @ $500/Day (Minimum)	DAYS							-
	SUBTOTAL GENERAL PAY ITEMS								
	ALTERNATE #1								
104	DEDUCT - Intergral Curb at Back of Walk for Pedetrian Protection	LF			-126	0			-126
105	Low Ornamental Fence	LF			126	126			126

NF ENGINEERS

CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

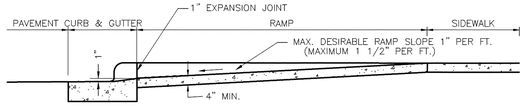
SHEET
Quantities

811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
03-16-2023	90% CITY REVIEW
04-10-2023	BIDS
04-26-2023	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: 03-16-2023
SCALE: N.T.S.

NFE JOB NO. D162-01
SHEET NO. Q1



SECTION A–A

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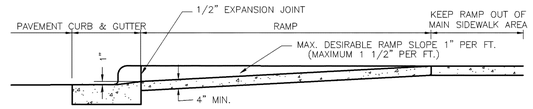

SECTION G–G

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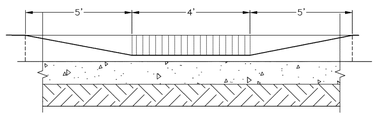

SECTION B–B

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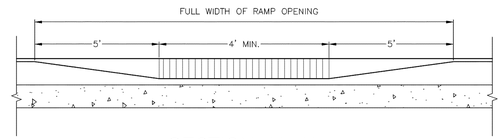

SECTION H–H

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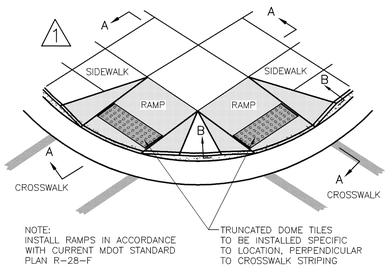
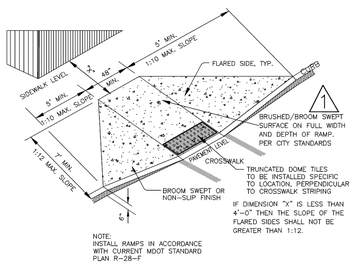


SIDEWALK RAMP TYPE 1

(TWO RAMPS ARE SHOWN)

N.T.S.



CURB RAMP FOR DISABLED

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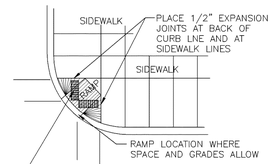
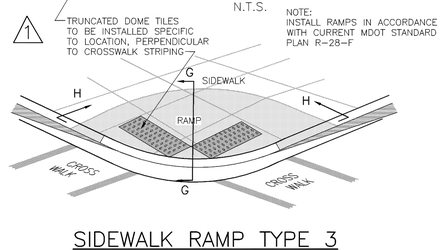


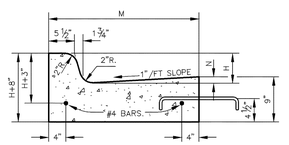
PLAN VIEW

N.T.S.



SIDEWALK RAMP TYPE 3

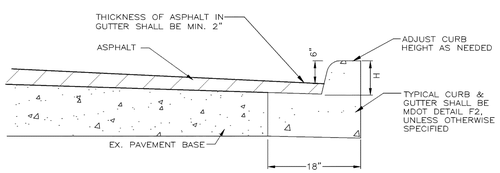
N.T.S.



BAR MAY BE LOCATED
ABOVE OR BELOW LANE TIE

THE "H" DIMENSION SHALL BE AS SPECIFIED, TO ENABLE A MINIMUM 6" CURB HEIGHT. H = TBD

DETAIL	DIMENSIONS M	DIMENSIONS N	LANE TIES	CONCRETE CU. YD./LIN. FT.
F1	1'–6"	7/8"	AS SHOWN	0.0484
F2	1'–6"	7/8"	OMITTED	0.0484



MDOT DETAIL F

(WITH ASPHALT OVERLAY)

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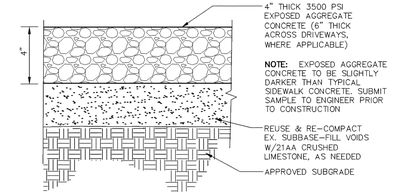


EXPOSED AGGREGATE SIDEWALK PROCEDURE:

1. SURFACE RETARDANT: EXPOSED AGGREGATE FINISH SHALL BE EXPOSED BY USE OF SURFACE RETARDANT "PRECO EAC–S" OR APPROVED EQUAL.

2. CONCRETE SHALL BE PLACED, LEVELED & FLOATED IN A NORMAL FASHION (SEEDING WILL NOT BE PERMITTED)..

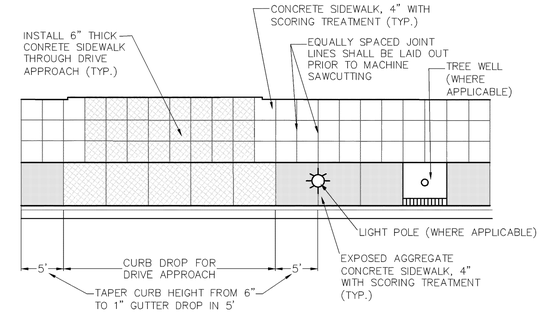
3. IMMEDIATELY AFTER THE SLAB HAS BEEN SCREENED AND DARBLED, THE AGGREGATE SHALL BE WASHED IN A UNIFORM MANNER UNTIL ENTIRE SURFACE IS EXPOSED. A THOROUGH "EXPOSING" OF THE EMBEDDED AGGREGATE SHALL BE PERFORMED UNTIL ALL AGGREGATE IS LEFT JUST ABOVE THE SURFACE, LEAVING NO HOLES OR OPENING IN THE SURFACE.

4. THE SURFACE SHALL THEN BE BRUSHED AND WASHED UNTIL ALL THE AGGREGATE IS EXPOSED AND FREE OF CEMENT FILM.

5. AFTER INITIAL CURING, THE EXPOSED AGGREGATE SIDEWALK SHALL BE SEALED WITH TRANSPARENT CONCRETE SEALER, AS APPROVED BY THE ENGINEER.

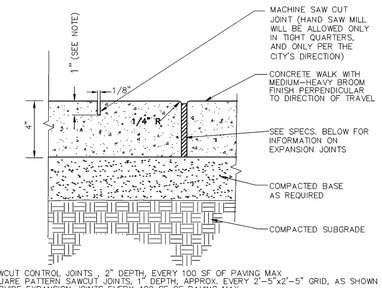
EXPOSED AGGREGATE WALK DETAIL

N.T.S.



CONCRETE DRIVE APPROACH & SIDEWALK JOINT LAYOUT

N.T.S.



NOTE:
1. SAWCUT CONTROL JOINTS , 2" DEPTH, EVERY 100 SF OF PAVING MAX.
2. SQUARE PATTERN SAWCUT JOINTS, 1" DEPTH, APPROX. EVERY 2'–5"x2'–5" GRID, AS SHOWN
3. PROVIDE EXPANSION JOINTS EVERY 400 SF OF PAVING MAX.

EXPANSION JOINT MATERIAL SPECS:
1. EXPANSION JOINT MATERIAL: RESILIENT, NON–EXTRUDING TYPE PREMOLDED BITUMINOUS IMPREGNATED FIBERBOARD.

2. SEALANT BACKER ROD: COMPRESSIBLE ROD STOCK OF POLYETHYLENE FOAM OR OTHER FLEXIBLE, PERMANENT, DURABLE NON–ABSORPTIVE MATERIAL AS RECOMMENDED FOR COMPATIBILITY BY SEALANT MANUFACTURE. TEMPORARILY INSTALL ABOVE FIBER BOARD TO CREATE SPACE FOR JOINT SEALANT AT THE APPROPRIATE GRADE. REMOVE PRIOR TO INSTALLING JOINT SEALANT.

3. JOINT SEALANT: TWO PART POLYSULFIDE SEALANT, SELF LEVELING, LIGHT GRAY COLOR. SUBMIT COLOR SAMPLE FOR APPROVAL. FEDERAL SPECIFICATIONS TT–S–0027E, TYPE 1, DOW CORNING #780 OR EQUAL. INSTALL AFTER REMOVING BACKER ROD TO COMPLETELY COVER FIBER BOARD.

SAWCUT AND EXPANSION JOINT DETAIL FOR CONCRETE SIDEWALK

N.T.S.

CONCRETE SIDEWALK MIX DESIGNS:

PLAIN CONCRETE MIX:

SAND: 2NS SAND, ASTM C–33 1350 POUNDS
COURSE AGGREGATE: 6AA LIMESTONE PRESQUE ISLE
ASTM C–33 1680 POUNDS
CEMENT: TYPE 1, ASTM C150 588 POUNDS
WATER: CITY TAP WATER 31.5 GALLONS
ADMIXTURE: ASTM C260, DAREX A.E.A.
BY W.R. GRACE CO. 11.3 OZ./CU. YD.

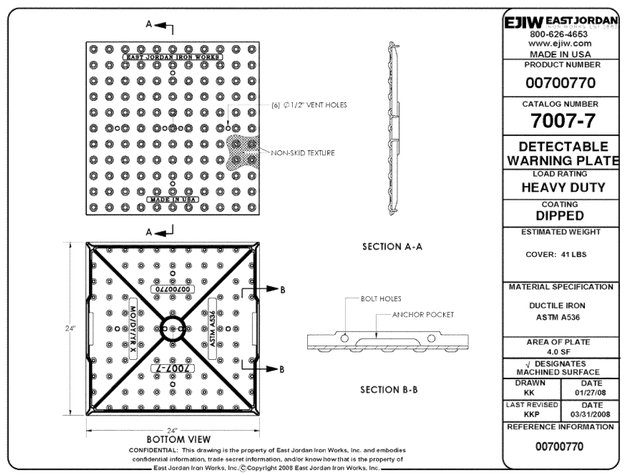
EXPOSED AGGREGATE CONCRETE MIX:

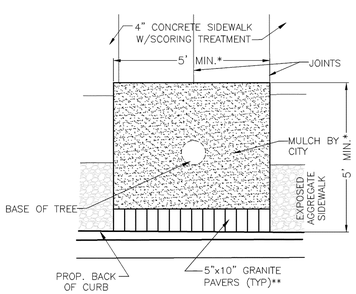
SAND: 2NS SAND, ASTM C–33 1080 POUNDS
COURSE AGGREGATE: 17A
ASTM C–33 1980 POUNDS
CEMENT: TYPE 1, ASTM C150 588 POUNDS
WATER: CITY TAP WATER 31.5 GALLONS
ADMIXTURE: ASTM C260, DAREX A.E.A.
BY W.R. GRACE CO. 11.3 OZ./CU. YD.

* PEBBLE, WASHED, SUBMIT SAMPLE

CONCRETE STRENGTH SHALL BE 3,500 PSI AT 28 DAYS, WITH 6% + OR – ENTRAINED AIR. MIX DESIGN SHALL NOT HAVE LESS THAN 6.25 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE APPROVED BY THE CITY OF BIRMINGHAM ENGINEERING.

2 HANDICAP TRUNCATED DOMES





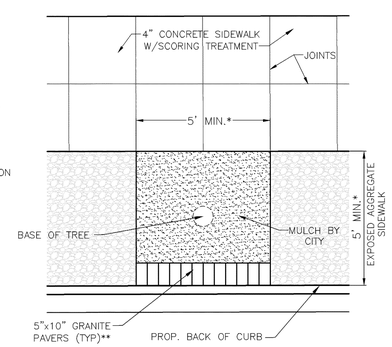
NOTE:
INSTALL 2 – 2" PVC SLEEVES BETWEEN TREE WELLS FOR FUTURE UNDERGROUND IRRIGATION, AS REQUIRED. INSTALLATION PER THE CITY OF BIRMINGHAM STANDARDS. TIE INTO PROPOSED WATER METER PITS.

*TREE WELL NOTE:
TREE WELL DIMENSIONS CAN BE MODIFIED BASED ON RIGHT–OF–WAY CONSTRAINTS.

**GRANITE PAVER NOTE:
GRANITE PAVER INSTALLATION SHALL APPLY FOR TREE WELLS ADJACENT TO PARALLEL PARKING SPACES ON A STREET. GRANITE PAVERS SHALL BE 'CARNE LIAN' (COLOR) BY COLD SPRING GRANITE COMPANY SET IN A FULL MORTAR BED WHERE INDICATED ON THE DRAWINGS. SUBMIT SAMPLES OF PAVERS (FOR COLOR AND FINISH) AND GROUT COLOR TO CITY OF BIRMINGHAM ENGINEERING FOR APPROVAL. LAYOUT PATTERN IS AS NOTED IN THE PLANS.

TREE WELL DETAIL #1

N.T.S.



TREE WELL DETAIL #2

N.T.S.

NOTES:

1. SURFACE TEXTURE OF SIDEWALK RAMPS SHALL BE THAT OBTAINED BY A COURSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.

2. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON SIDEWALK RAMPS, FREE OF SAGS AND SHORT GRADE CHANGES.

3. IF POSSIBLE, DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.

4. SIDEWALK RAMP 3 SHALL BE INSTALLED ONLY AT THE CITY'S DIRECTION.

5. REMOVE AND REPLACE CONCRETE CURB AND GUTTER SECTION AT CURB DROPS ON NON–ASPHALT SURFACED GUTTERS. USE EXISTING JOINTS OR SAW CUT FOR JOINTS. SAW CUT AT 18" FROM BACK OF CURB (FOR CURVED SECTIONS SAW CUT AT MINIMUM OF 12" AND AT A MAXIMUM OF 24" FROM BACK OF CURB). TIE NEW CONCRETE SECTION TO EXISTING PAVEMENT WITH HOOK BOLTS OR RED HEADS AT MAXIMUM OF 40" C.C.

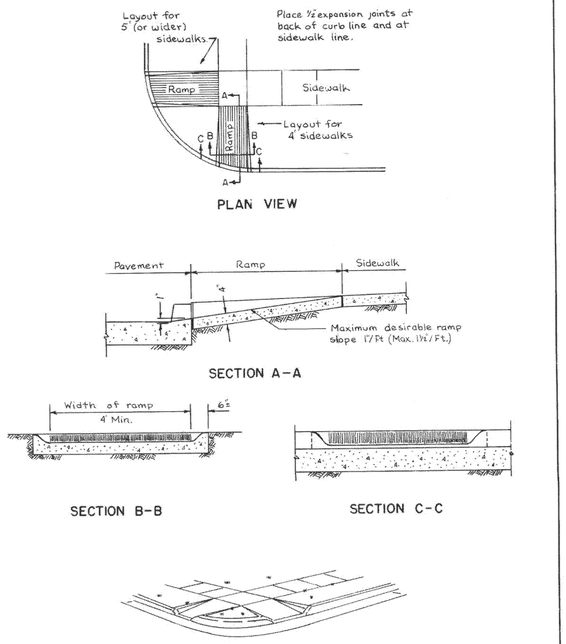
REVISIONS REVISIONS No.		DATE	BY
1	Added Truncated Dome details	07–05–07	City
2	Revised Truncated Dome details	06–26–08	City

CITY OF BIRMINGHAM, MICHIGAN
ENGINEERING DEPARTMENT

CBD STREETSCAPE STANDARD DETAILS

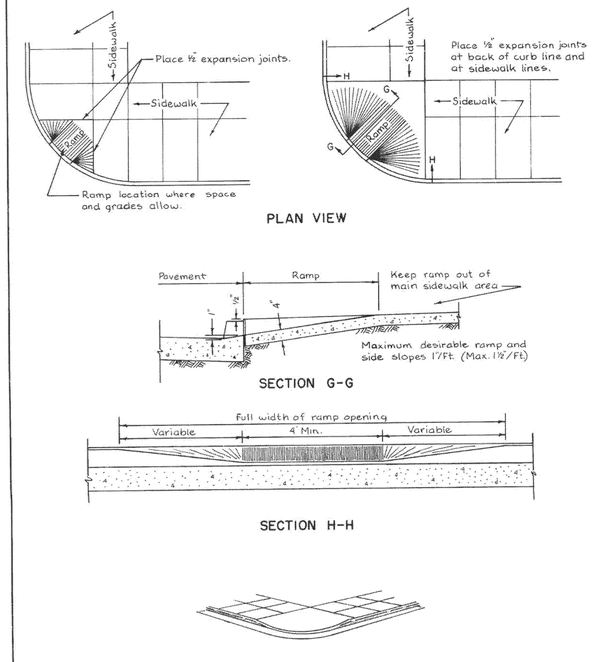
SCALE: HORIZONTAL
VERTICAL
ACCT. NO.
DRAWN BY: NF
APPROVED BY
CHECKED BY
CITY ENGINEER
SHEET OF SHEETS
DATE: April 4, 2003

HOWARD STIFFLER 4-75 MC 3049-



SIDEWALK RAMP TYPE 1

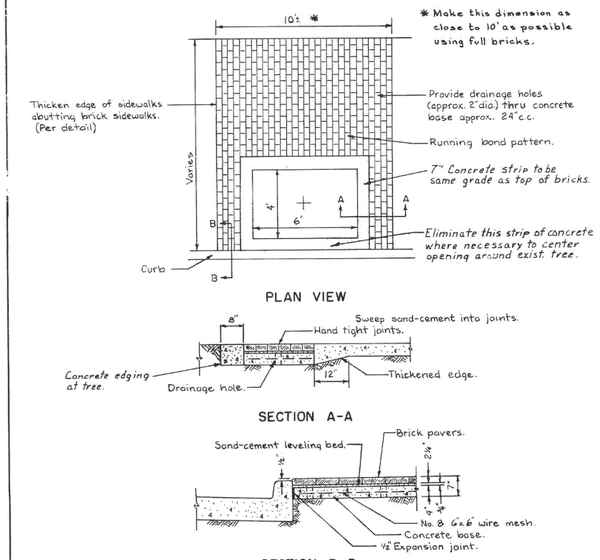
1



Note: This detail may also be used where the curb line is straight, for mid-block crosswalks.

SIDEWALK RAMP TYPE 3

3



NOTES

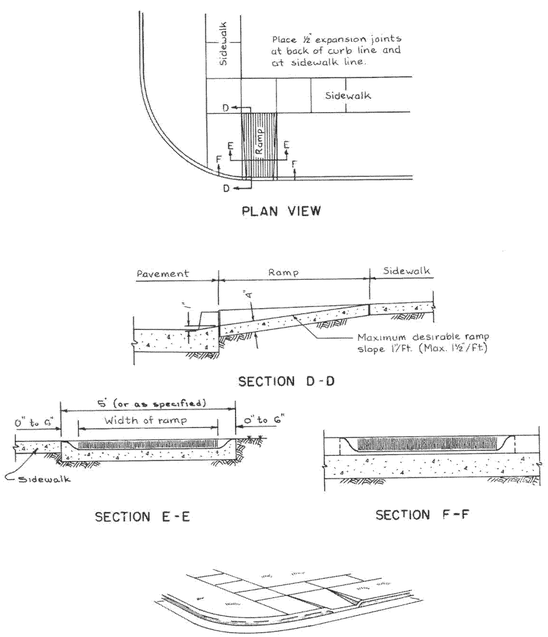
1. Place 8" concrete edging along all unconfined brick edges. Where prairie film (stone epoxy) is to be installed by City, place temporary wood edging (1"x4" or larger).
2. Sand-cement to be 1 part cement for each 6 parts sand.
3. Brick pavers to be 4"x8"x2¼".
4. Brick panels to be centered (as measured parallel to curb) on existing or proposed trees.

BRICK PAVER SIDEWALK

5

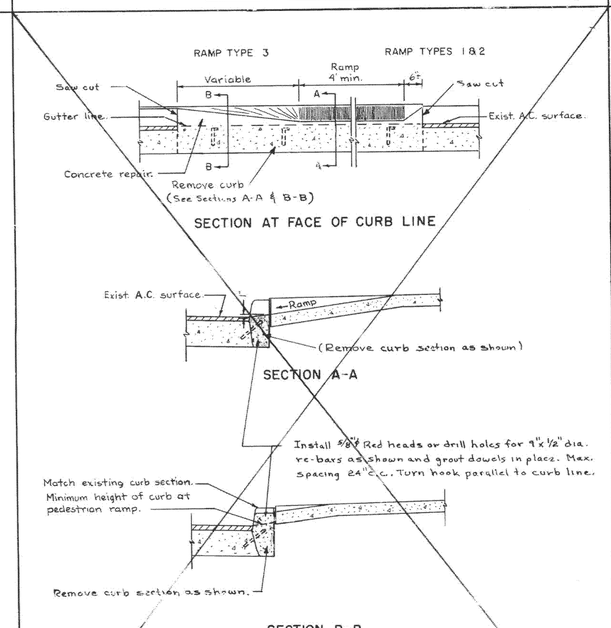
NOTES FOR SIDEWALK RAMPS

1. Surface texture of the ramp shall be that obtained by a course brooming, transverse to the slope of the ramp.
2. Care shall be taken to assure a uniform grade on the ramp, free of sags and short grade changes.
3. If possible, drainage structures should not be placed in line with ramps. Except where existing drainage structures are being utilized in the new construction, location of the ramp should take precedence over location of drainage structure.
4. Use of sidewalk ramp type 2 shall be restricted to locations where it is not feasible to use type 1 or 3.
5. The normal gutter line profile shall be maintained through the area of the ramp.
6. **Remove and replace concrete curb and gutter section at curb drops on non-asphalt surfaced gutters.** Use existing joints or saw cut for joints. Saw cut at 18" from back of curb (for curved sections saw cut at minimum of 12" and at maximum of 24" from back of curb). Tie new concrete section to existing pavement with hook bolts or red heads at maximum of 24" c.c. (see detail 4).



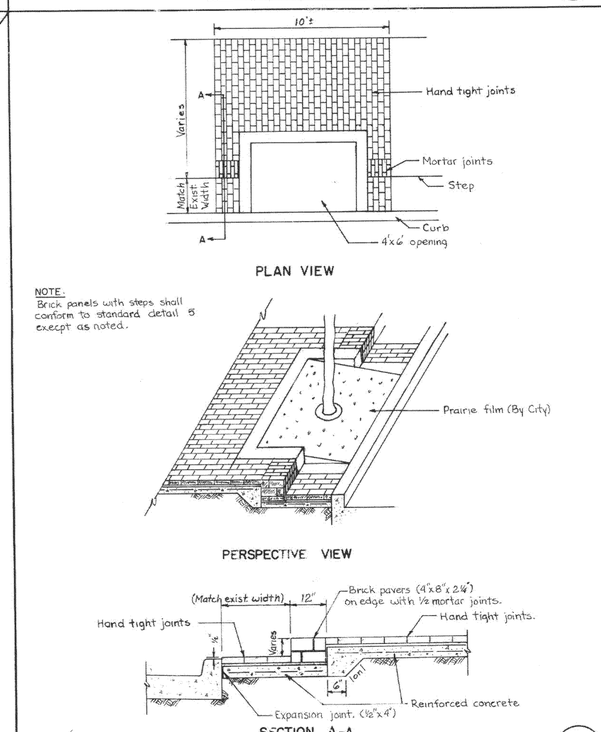
SIDEWALK RAMP TYPE 2

2



CURB REPAIR AT RAMPS
(FOR ASPHALT SURFACED PAVEMENTS)

4



BRICK PANELS AT STEPS

6

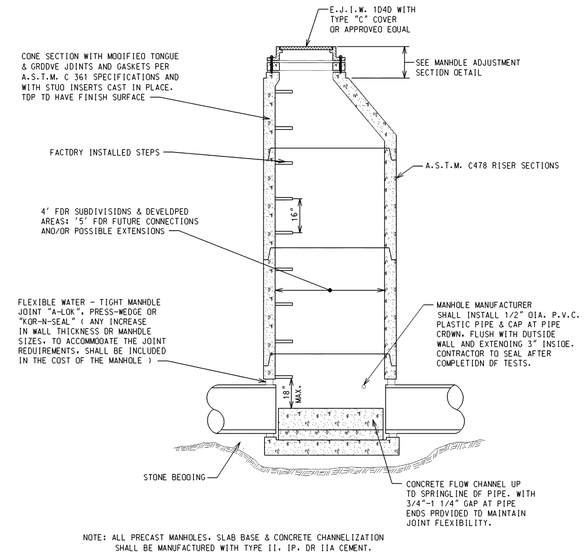
REVISIONS		
NO.	DATE	BY
1.	8-25-76	RLB
2.	4-22-77	RLB
3.	6-23-78	RGS
4.	3-26-90	RGS
5.	9-17-92	JN

CITY OF BIRMINGHAM, MICHIGAN
ENGINEERING DEPARTMENT

STANDARD DETAILS

SIDEWALK RAMPS AND BRICK PAVER SIDEWALKS

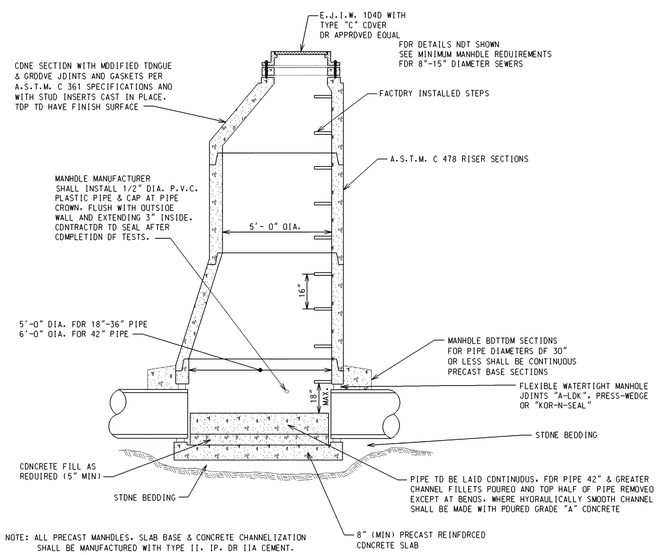
SCALE: HORIZONTAL
VERTICAL
ACCT. NO.
DRAWN BY RLB 3-9-76
CHECKED BY 3-31-76
APPROVED BY
CITY ENGINEER
SHEET 1 OF 1 SHEETS
DATE 3-9-76



NOTE: ALL PRECAST MANHOLES, SLAB BASE & CONCRETE CHANNELIZATION SHALL BE MANUFACTURED WITH TYPE II, IP, OR IIA CEMENT.

SEWER MANHOLE

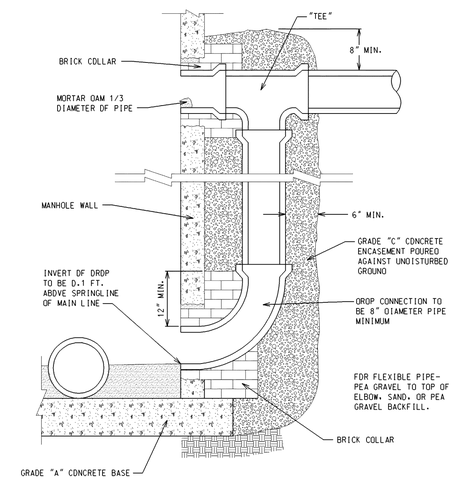
(8" THRU 15" DIA. SEWERS)



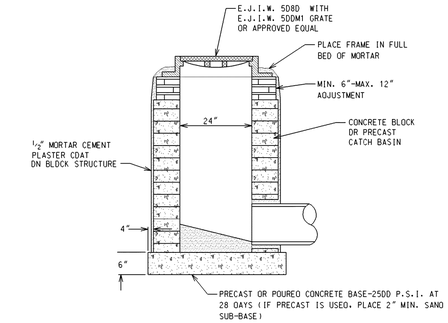
NOTE: ALL PRECAST MANHOLES, SLAB BASE & CONCRETE CHANNELIZATION SHALL BE MANUFACTURED WITH TYPE II, IP, OR IIA CEMENT.

SEWER MANHOLE

(18" THRU 42" DIA. SEWERS)

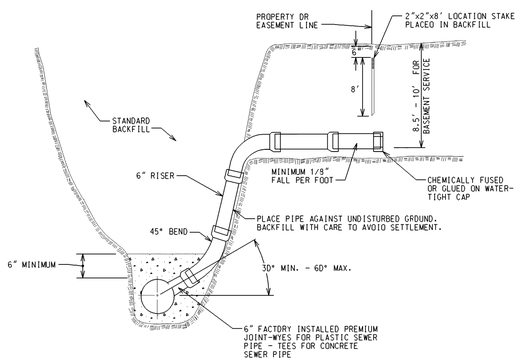


EXTERNAL DROP CONNECTION



2 FT. DIAMETER INLET

NOTE:
FOR CATCH BASINS OR INLETS WITHIN YARD AREAS USE E.J.I.W. 1040 WITH TYPE "N" COVER OR APPROVED EQUAL

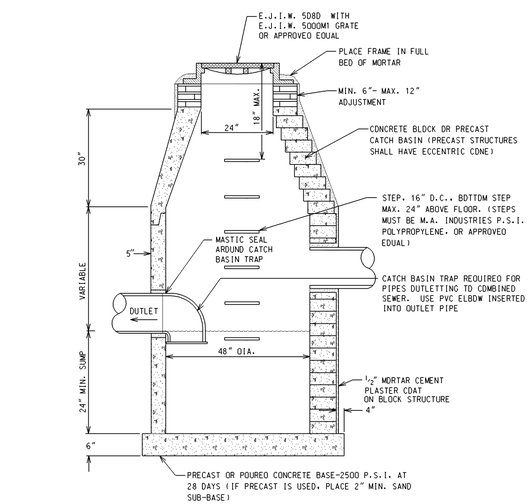


BUILDING LEAD DETAIL

0' - 15' COVER

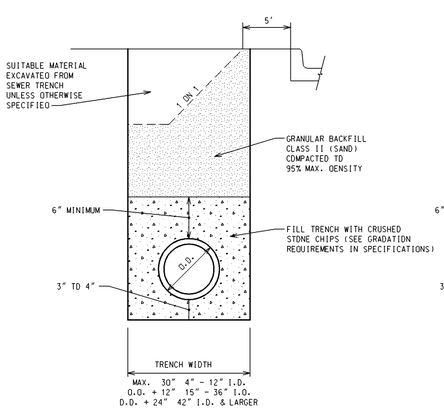
KOR-N-TEE TAP FOR CONCRETE

NO SCALE



SANITARY MANHOLE ADJUSTMENT SECTION DETAIL

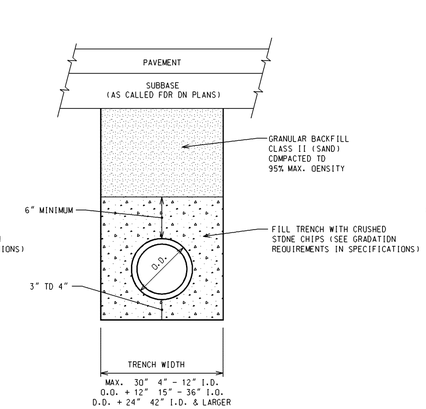
4 FT. DIAMETER CATCH BASIN

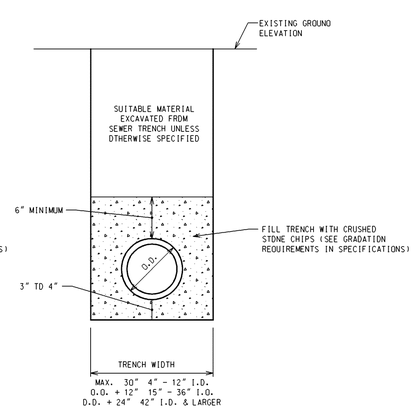


TRENCH DETAIL "A"

SEWER UNDER ROAD BED OR WITHIN THE INFLUENCE OF ROAD BED

NOT TO SCALE

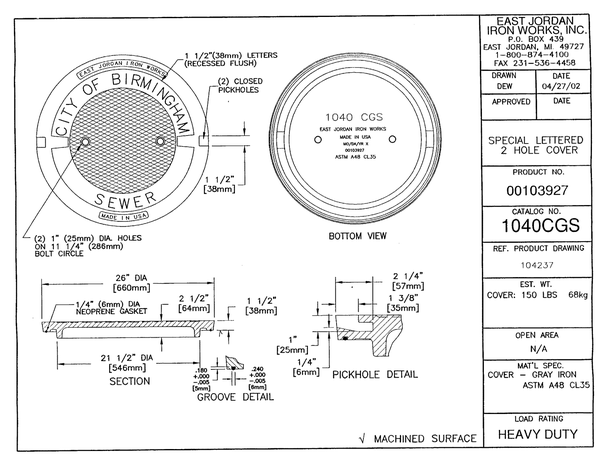




TRENCH DETAIL "B"

SEWER NOT UNDER ROAD BED

NOT TO SCALE



EAST JORDAN IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI 49727
1-800-874-4100
FAX 231-536-4458

DRAWN DEW	DATE 04/27/02
APPROVED	DATE

SPECIAL LETTERED 2 HOLE COVER

PRODUCT NO. 00103927

CATALOG NO. 1040CGS

REF. PRODUCT DRAWING 104237

EST. WT. COVER: 150 LBS 68kg

OPEN AREA N/A

MAT'L SPEC. COVER - GRAY IRON ASTM A48 CL35

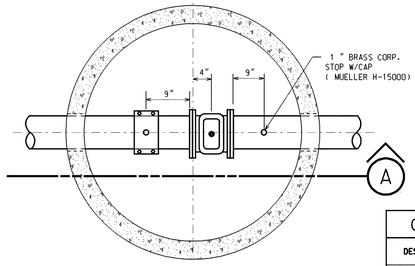
LOAD RATING HEAVY DUTY

City of Birmingham
A Walkable Community

151 MARTIN STREET BIRMINGHAM, MICHIGAN 48102

SEWER STANDARD DETAILS

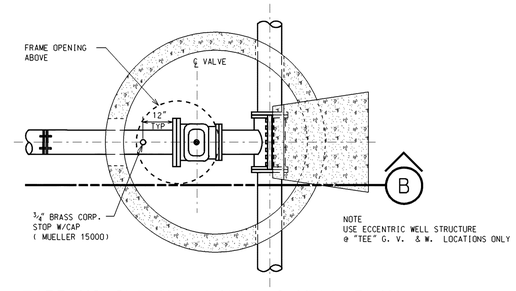
DATE	ADDITION AND/OR REVISION	DRAWN	PROJECT NO.	SHEET NO.
		DESIGNED	DATE JANUARY 2007	
		APPROVED	SCALE	



GATE WELL PLAN

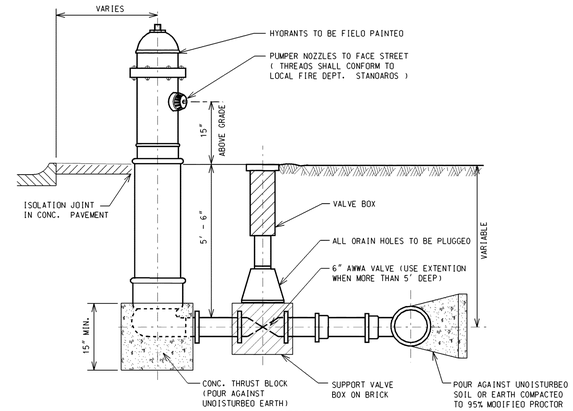
NO SCALE

GATE WELL SCHEDULE				
		PIPE DIA. INCHES		
DESCRIPTION	DIM.	6" & 8"	12"	16"
INSIDE DIA.	A	60"	72"	72"
WALL THICK.	B	5"	7"	7"
VALVE BLOCK THICK.	C	4"	4"	4"

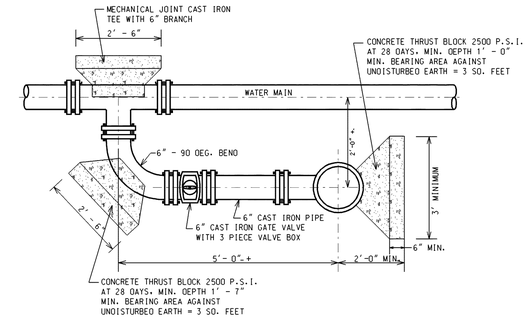


TAPPING SLEEVE, VALVE & WELL PLAN

NO SCALE



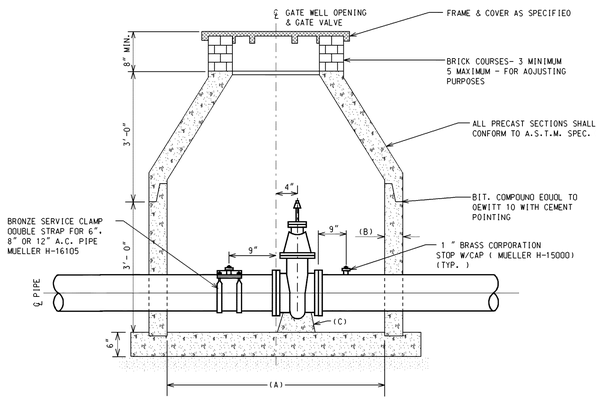
ELEVATION



"L" HYDRANT CONNECTION

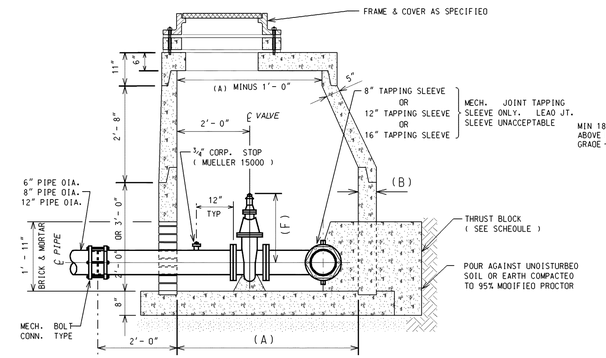
NO SCALE
W-9

NOTE: FOR CONSTRUCTION OF NEW FIRE HYDRANT TO EXISTING "LIVE" WATERMAIN, USE 6" TAPPING SLEEVE VALVE & BOX TO MAKE CONNECTION, AND DELETE "6" CAST IRON GATE VALVE WITH 3 PIECE VALVE " AS SHOWN ON DETAIL .



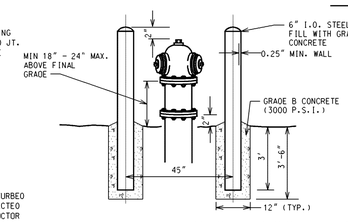
SECTION "A" GATE WELL

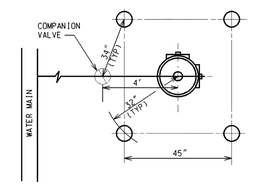
NO SCALE
W-1 & W-3



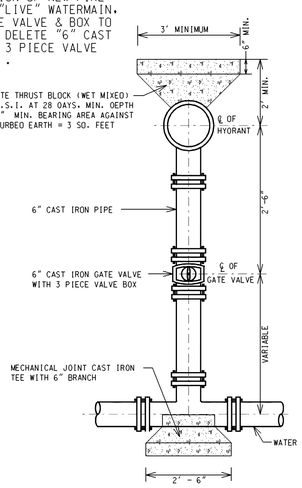
SECTION "B" TAPPING SLEEVE, VALVE & WELL

NO SCALE
W-4





FIRE HYDRANT GUARD POSTS DETAIL

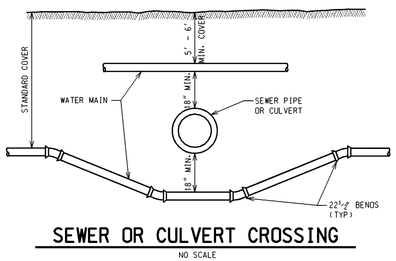


STRAIGHT HYDRANT CONNECTION

NO SCALE
W-10

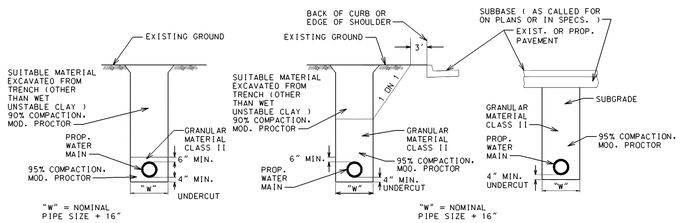
DITCH AND STREAM CROSSING

NO SCALE



SEWER OR CULVERT CROSSING

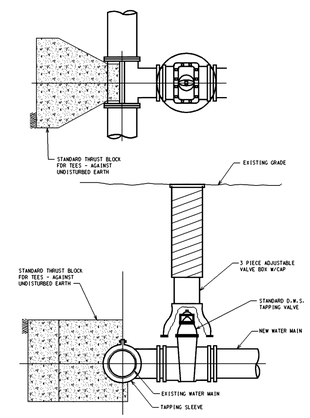
NO SCALE



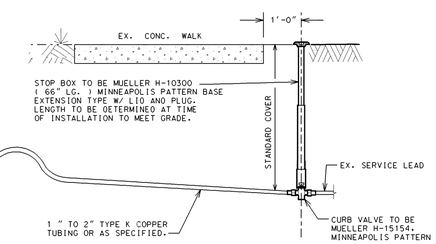
PROP. WATER MAINS NOT UNDER PAVED SURFACE

PROP. WATER MAINS UNDER PAVED SURFACE OR WITHIN INFLUENCE OF PAVED SURFACE

BEDDING DETAILS

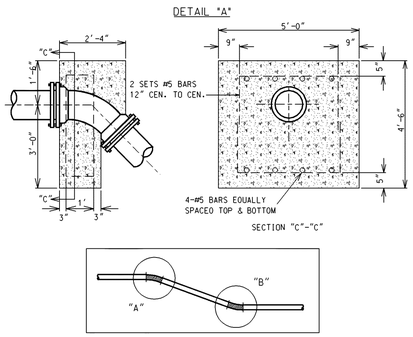


TAPPING SLEEVE & VALVE W/VALVE BOX

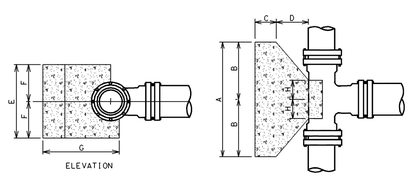


WATER SERVICE CONNECTION (TYP)

NO SCALE



VERTICAL BEND THRUST BLOCKS FOR 8"-12" MAINS



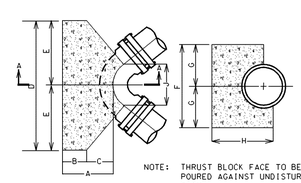
THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE FOR THRUST BLOCKS TO BE WET MIXED 2500 P.S.I.

SCHEDULE OF THRUST BLOCK DIMENSIONS			
	TEE SIZE		
CODE	8"x8" 12"x8" 16"x8" 24"x8"	12"x12" 16"x12" 24"x12"	16"x16" 24"x16"
A	3'-0"	4'-0"	5'-0"
B	1'-6"	2'-0"	2'-6"
C	0'-9"	0'-9"	1'-0"
D	1'-0"	1'-4"	1'-8"
E	2'-0"	3'-0"	4'-0"
F	1'-0"	1'-6"	2'-0"
G	8"	2'-2"	
	12"	2'-6"	2'-10"
	16"	2'-10"	3'-1"
	24"	3'-3"	3'-7"
H	8"	0'-6"	
	12"	0'-6"	0'-10"
	16"	0'-6"	0'-10"
	24"	0'-6"	0'-10"

CONCRETE THRUST BLOCK FOR TEES

N.T.S.



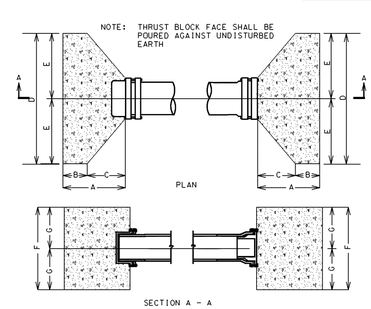
NOTE: THRUST BLOCK FACE TO BE POURED AGAINST UNDISTURBED EARTH

CONCRETE FOR THRUST BLOCKS TO BE WET MIXED 2500 P.S.I.

SIZE	ANGLE	A MIN.	B MIN.	C	O	E	F	G	H MIN.	J
6"	45°	1'-6"	0'-9"	0'-9"	1'-6"	0'-9"	1'-6"	0'-9"	1'-8"	0'-10"
6"	90°	1'-6"	0'-9"	0'-9"	2'-0"	1'-0"	2'-0"	1'-0"	1'-8"	0'-10"
8"	45°	1'-9"	0'-9"	1'-0"	2'-4"	1'-2"	2'-0"	1'-0"	1'-11"	1'-4"
8"	90°	1'-9"	0'-9"	1'-0"	3'-4"	1'-8"	2'-6"	1'-3"	1'-11"	1'-2"
12"	22-1/2°	1'-9"	0'-9"	1'-0"	2'-6"	1'-3"	2'-0"	1'-0"	2'-0"	1'-4"
12"	45°	2'-1"	0'-9"	1'-4"	3'-6"	1'-9"	2'-6"	1'-3"	2'-4"	1'-4"
12"	90°	2'-1"	0'-9"	1'-4"	5'-6"	2'-9"	3'-0"	1'-6"	2'-4"	1'-8"
16"	22-1/2°	2'-8"	1'-0"	1'-8"	3'-4"	1'-8"	2'-6"	1'-3"	3'-0"	1'-2"
16"	45°	2'-8"	1'-0"	1'-8"	5'-4"	2'-8"	3'-0"	1'-6"	3'-0"	1'-6"
16"	90°	2'-8"	1'-0"	1'-8"	6'-0"	3'-0"	5'-0"	2'-6"	3'-0"	1'-8"
24"	90°	4'-7"	1'-0"	3'-7"	10'-0"	5'-0"	7'-0"	3'-6	5'-4"	2'-4"

CONCRETE THRUST BLOCK FOR BENDS

N.T.S.



SIZE	A MIN.	B MIN.	C	O	E	F	G
8"	1'-11"	0'-9"	1'-2"	3'-0"	1'-6"	2'-0"	1'-0"
12"	2'-1"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"
16"	2'-8"	1'-0"	1'-8"	5'-0"	2'-6"	4'-0"	2'-0"

CONC. THRUST BLOCKS FOR PLUGS & CAPS

City of Birmingham
A Walkable Community

151 MARTIN STREET BIRMINGHAM, MICHIGAN 48102

WATER MAIN STANDARD DETAILS

DATE:	ADDITION AND/OR REVISION	DRAWN	PROJECT NO.	SHEET NO.
		DESIGNED	DATE APRIL 2005	WM-1
		APPROVED	SCALE	

BROWN STREET PAVING

PROJECT CONTRACT #5-23 (P)

NO.	ITEM DESCRIPTION	Qty	Units	UNIT BID COST	UNIT COST X QTY
	PAVING PAY ITEMS				
30	Removing Concrete Sidewalk & Ramp (sawcutting included)	835	SY	$ 51.75	$ 43,211.25
35	Concrete Sidewalk, 4", Scoring Treatment	6445	SF	$ 12.25	$ 78,951.25
36	Concrete Sidewalk, 6", Scoring Treatment (Includes Ramps)	855	SF	$ 14.25	$ 12,183.75
37	Concrete Sidewalk, 8", Scoring Treatment	400	SF	$ 15.25	$ 6,100.00
38	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment	1698	SF	$ 25.50	$ 43,299.00
39	Concrete Sidewalk, 6", Exposed Aggregate, Scoring Treatment	217	SF	$ 30.50	$ 6,618.50
40	Handicap Ramp Truncated Domes (per ramp)	192	SF	$ 107.00	$ 20,544.00
60	Maintenance Aggregate	1	LS	$ 19,500.00	$ 19,500.00
33	Concrete Pavement, Non-reinforced, 9", incl. integral Detail F2 Curb & Gutter	1585	LF	$ 156.00	$247,260.00
41	Concrete Curb & Gutter, 18", MDOT Type F2, Modified	231	LF	$ 51.00	$ 11,781.00
31	Removing Pavement Full Depth (Curb & Gutter included)	1970	SY	$ 51.75	$101,947.50
				Paving Subtotal	$591,396.25
				Per/LFT	$ 732.04
	LANDSCAPE ITEMS				
73	Structural Soil Mix (30" depth)	5,073	CFT	$ 3.00	$ 15,219.00
74	Organic Plant Soil Mix - Plant Beds (24" depth)	3,713	CFT	$ 3.50	$ 12,995.50
75	Native MI Stone (3"-6") choked in w/ decorative aggregate	1	LS	$ 2,000.00	$ 2,000.00
76	Shredded Hardwood Mulch (3" depth)	24	CY	$ 80.00	$ 1,920.00
77	TILIA AMERICANA 'MCKSENTRY' (3-3.5" CAL.)	3	EA	$ 1,000.00	$ 3,000.00
78	ULMUS AMERICANA 'PRINCETON' (3-3.5" CAL.)	4	EA	$ 900.00	$ 3,600.00
79	ZELKOVA SERRATA 'JFS-KW1' (3-3.5" CAL.)	3	EA	$ 900.00	$ 2,700.00
80	MALUS X 'JEFSPIRE' (2" CAL.)	3	EA	$ 700.00	$ 2,100.00
81	HYDRANGEA PANICULATA 'JANE' (#5)	31	EA	$ 95.00	$ 2,945.00
82	ILEX GLABRA 'SHAMROCK' (#3)	6	EA	$ 95.00	$ 570.00
83	JUNIPERUS SQUAMATA 'BLUE STAR' (#3)	18	EA	$ 70.00	$ 1,260.00
84	PINUS MUGO 'HONEYCOMB' (#3)	21	EA	$ 75.00	$ 1,575.00
85	GERANIUM X 'ROZANNE' (#1)	24	EA	$ 20.00	$ 480.00
86	PACHYSANDRA TERMINALIS 'GREEN CARPET' (24/FLAT)	892	EA	$ 2.75	$ 2,453.00
87	PEROVSKIA 'LITTLE SPIRE' (#2)	41	EA	$ 20.00	$ 820.00
88	RUDBECKIA HIRTA (#1)	35	EA	$ 20.00	$ 700.00
89	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' (#2)	91	EA	$ 30.00	$ 2,730.00
90	SELSERIA AUTUMNALIS (#1)	48	EA	$ 20.00	$ 960.00
				Landscape Subtotal	$ 58,027.50
				Per/LFT	$ 71.83
	IRRIGATION ITEMS				
61	Meter Pit	1	EA	$ 8,700.00	$ 8,700.00
62	Sprinkler Assembly	76	EA	$ 100.00	$ 7,600.00
63	Valve Assembly	4	EA	$ 800.00	$ 3,200.00
64	1-1/2 inch PVC Mainline	202	LF	$ 18.25	$ 3,686.50
65	1-1/2 inch Polyethylene lateral line	5	LF	$ 9.00	$ 45.00
66	1 inch Polyethylene lateral line	936	LF	$ 1.20	$ 1,123.20
67	Communication Cable - two wire	202	LF	$ 2.00	$ 404.00
68	Irrigation Controller	1	EA	$ 6,000.00	$ 6,000.00
69	Rain Sensor	1	EA	$ 300.00	$ 300.00
70	Two Wire Decoders	4	EA	$ 625.00	$ 2,500.00
71	4" PVC Sleeve	145	LF	$ 25.00	$ 3,625.00
72	2" PVC Sleeve	278	LF	$ 11.00	$ 3,058.00
				Irrigation Subtotal	$ 40,241.70
				Per/LFT	$ 49.81
				TOTAL	$689,665.45
				TOTAL PER/LFT	$ 853.68

BROWN STREET PAVING						
PROJECT CONTRACT #5-23 (P)						
Breakdown						
SAD COST						
Street Address	Sidwell	Frontage Length (LFT)	Assessable Frontage Length (LFT) (75%)	Bid Unit Cost for Assessment	Estimate SAD Assessment for Street with Frontage	City Cost
325 S Old Woodward	08-19-36-208-015	141.01	105.76	$ 853.68	$ 90,283.45	$ 30,094.48
355 S Old Woodward	08-19-36-208-016	48.00	36.00	$ 853.68	$ 30,732.61	$ 10,244.20
34745 Woodward	08-19-36-208-004	189.00	141.75	$ 853.68	$ 121,009.66	$ 40,336.55
255 S Old Woodward	08-19-36-206-021	82.00	61.50	$ 853.68	$ 52,501.55	$ 17,500.52
34901 Woodward	08-19-36-207-010	208.60	156.45	$ 853.68	$ 133,558.81	$ 44,519.60
**Chester Parking Structure*	08-19-36-206-024	*119.26*	*119.26*	$ 853.68		$ 101,810.32
**Alley*	08-19-36-206-023	*20.00*	*20.00*	$ 853.68		$ 17,073.67
Total		807.87	640.72		$ 428,086.09	$261,579.36
** - City Property Does not get assesment*						

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Clerk's Office

DATE: **May 3, 2023**

TO: **Melissa Coatta, City Engineer**

FROM: **Christina Woods, Deputy Clerk**

SUBJECT: **Clerk's Confirmation of Public Hearing Notice: Brown Street Sidewalk and Streetscape**

The public hearing notice process has been completed for Brown Street Sidewalk and Streetscape. Please see attachments for further confirmation.

Mailing Date:4/25/2023
Test Mail Return Date:
Publishing Dates in the Oakland Press: April 28, 2023 and May 5, 2023
Posted on www.bhamgov.org/publicnotices: 4/25/2023

Attachments:

1. Public Hearing Notice
2. Addresses
3. Mailing Letter
4. Mail Machine Counter Report
5. Proof of publishing for 4/28/2023. Second publishing date will be 5/5/2023

NOTICE OF PUBLIC HEARINGS	
BIRMINGHAM CITY COMMISSION	
PUBLIC HEARING OF NECESSITY **PUBLIC HEARING OF CONFIRMATION**	
Meeting Date, Time, Location:	HEARING OF NECESSITY FOR SPECIAL ASSESSMENT DISTRICT Monday, May 8, 2023, 7:30 PM Municipal Building, 151 Martin, Birmingham, MI 48009
Meeting Date, Time, Location:	HEARING FOR CONFIRMATION OF THE ROLL Monday, May 22, 2023, 7:30 PM Municipal Building, 151 Martin, Birmingham, MI 48009
Project Location:	**Brown Street Sidewalk and Streetscape SAD**
Nature of Improvement:	For the purpose of a Special Assessment District for sidewalk and streetscape improvements adjacent to all properties within the project area on Brown Street, from S. Old Woodward Ave. to Woodward Ave
City Staff Contact:	Melissa Coatta, City Engineer mcoatta@bhamgov.org, (248)530-1839
Notice Requirements:	Mail to affected property owners Publish April 28 2023 and May 5 2023
Approved minutes may be reviewed at:	City Clerk's Office or www.bhamgov.org/commissionagendas

Should you have any statement regarding the above, you are invited to attend the meeting in person or virtually through ZOOM: **https://zoom.us/j/655079760 Meeting ID: 655 079 760**

You or your agent may appear at the hearings to express your views; however, if you fail to protest either in person or by letter received on or before the date of the hearing, you cannot appeal the amount of the special assessment to the Michigan Tax Tribunal. Mail any correspondence to: City Clerk, P.O. Box 3001, Birmingham, MI 48012.

The property owner may file a written appeal of the special assessment with the State Tax Tribunal within 30 days after the confirmation of the special assessment roll if that special assessment was protested at the hearing held for the purpose of confirming the roll.

All special assessments, including installment payments, shall, from the date of the confirmation thereof, constitute a lien on the respective lots or parcels assessed, and until paid shall be charged against the respective owners of the lots or parcels assessed.

Persons with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk's Office at 248.530.1880 (voice) or 248.644.5115 (TDD) at least one day in advance to request mobility, visual, hearing or other assistance.

Number	Parcel	Name 1	Name 2	Address	City	State	Zip
1	1936206021	PARK PLAZA OF BIRMINGHAM LLC		210 S OLD WOODWARD AVE STE 230	BIRMINGHAM	MI	48009
2	1936206023	CITY OF BIRMINGHAM		151 MARTIN ST	BIRMINGHAM	MI	48009
3	1936206024	CITY OF BIRMINGHAM		151 MARTIN ST	BIRMINGHAM	MI	48009
4	1936207010	WOODWARD BROWN ASSOCIATES LLC		32820 WOODWARD AVE STE 200	ROYAL OAK	MI	48073
5	1936207010	LJ PROPERTIES MI LLC		34915 WOODWARD AVE	BIRMINGHAM	MI	48009
6	1936207010	DAVID J CONNELL REVOC TRUST	DAVID J CONNELL TRUSTEE	34901 WOODWARD AVE STE 500	BIRMINGHAM	MI	48009
7	1936207010	WOODWARD BROWN ASSOCIATES LLC		32820 WOODWARD AVE STE 200	ROYAL OAK	MI	48073
8	1936208004	BMW KAR WASH LLC		28845 TELEGRAPH RD	SOUTHFIELD	MI	48034
9	1936208015	325 S OLD WOODWARD LLC		330 HAMILTON ROW STE 300	BIRMINGHAM	MI	48009
10	1936208016	FULLER CENTRAL PARK PRPRTS		112 PEABODY ST	BIRMINGHAM	MI	48009
11	1936206021	Occupant		255 S OLD WOODWARD AVE	BIRMINGHAM	MI	48009
12	1936207010	Occupant		34901 WOODWARD AVE	BIRMINGHAM	MI	48009
13	1936207010	Occupant		34901 WOODWARD AVE # 200	BIRMINGHAM	MI	48009
14	1936207010	Occupant		34901 WOODWARD AVE # 3	BIRMINGHAM	MI	48009
15	1936208004	Occupant		34745 WOODWARD AVE	BIRMINGHAM	MI	48009
16	1936208015	Occupant		325 S OLD WOODWARD AVE	BIRMINGHAM	MI	48009
17	1936208016	Occupant		355 S OLD WOODWARD AVE	BIRMINGHAM	MI	48009
18		City of Birmingham	City Clerk's Office	151 Martin	Birmingham	MI	48009

BIRMINGHAM
A WALKABLE CITY

Tuesday, April 25, 2023

TO:
City of Birmingham
City Clerk's Office
151 Martin
Birmingham, MI 48009

RE: Brown Street Paving Project
Sidewalk and Street Scape Special Assessment District

As part of the improved pedestrian crossing by the Michigan Department of Transportation (MDOT) at the Woodward Avenue and Brown Street/Forest Avenue intersection, the City will reconstruct the pavement along Brown Street between S. Old Woodward Avenue to Woodward Avenue. The proposed work will include new concrete pavement and sidewalk and streetscape features from the new back of curb to the limits of the road right-of-way.

The streetscape improvements will consist of an enhanced version of the downtown standard sawcut concrete sidewalk with an exposed aggregate sidewalk between the main pedestrian path and the street curb. Elements of the new streetscape design to be constructed as part of this project include:

- All new concrete and exposed aggregate sidewalks from the building face to the back of the curbs.
- Enlarged, raised planter beds, framed by a 6-inch high exposed aggregate curb, with irrigation, and professionally designed landscaping.

Construction on this project is anticipated to start in the summer of 2023 and be completed by the end of August 2023.

With this letter you are receiving a notification for a public hearing, with the Public Hearing of Necessity being scheduled to occur on **Monday, May 8, 2023** at the regularly scheduled City Commission meeting at 7:30 p.m. This is to consider a Special Assessment District (SAD) for sidewalk and streetscape improvements as part of the Brown Street Paving Project.

Consistent with previous projects of this nature, it has been the City's policy to assess 75% of the streetscape construction to the properties that share frontage with the improvements. The cost per property will be assessed as an average cost per linear foot of frontage for the improvements. The properties with multiple owners will share the cost of the frontage, and the amount will be based on the square footage of the building area owned. The City will bill one-tenth of the assessment, as would be done on other special assessment districts, plus interest, on an annual basis, to make the cost more manageable for the property owners.

151 Martin Street • P.O. Box 3001 • Birmingham, MI 48012-3001
(248) 530-1800 • Fax (248) 530-1080 • www.bhamgov.org

If you have any questions or concerns, please contact the Engineering Office at (248) 530-1850. You have the opportunity to speak directly to the City Commission at the Public Hearing of Necessity that will be held on May 8, 2023.

Sincerely,

Melissa A. Coatta, P.E.
City Engineer

151 Martin Street • P.O. Box 3001 • Birmingham, MI 48012-3001
(248) 530-1800 • Fax (248) 530-1080 • www.bhamgov.org

Mail Machine Counter Report

Funds Report	Available:	$103.58	PBP Account Number:	35884980
	Used:	$19,896.42	Indicia Number:	0001404691
	Total Pieces:	30293	Meter Number:	1404691
	Control Sum:	$20,000.00	Meter Name:	
	Resettable Piece Count:	18	Printed:	APR 25 2023 2:41 PM
	Piece Count Value:	$10.80		

MLB

Mexico has 'unprecedented appetite for baseball' after WBC

By Carlos Rodríguez
The Associated Press

MEXICO CITY » Major League Baseball is heading south of the border again to play a regular season series. After previous stops in Monterrey, Mexico City will be the host this time, and the timing seems perfect.

The San Diego Padres will play against the San Francisco Giants next weekend at the Alfredo Harp Helu (AHH) Stadium in the country's capital, where fans are eager to watch more baseball after Mexico's deep run at the World Baseball Classic.

Bolstered by Cuban defector Randy Arozarena and Mexican-born big leaguers like Julio Urías and Jose Urquidy, Mexico made it to the semifinals before losing to eventual champion Japan. The journey included a stunning victory over the United States in Phoenix with tens of thousands of Team Mexico fans on hand.

"Those two weeks of the World Baseball Classic are probably the ones where everybody was talking about baseball across the country more than ever before," said Horacio De la Vega, the president of the Mexican Baseball League.

ASSOCIATED PRESS FILE PHOTO

A Mexico fan cheers during the fourth inning of a World Baseball Classic game between Japan and Mexico, March 20, in Miami.

"Clearly that outcome of the tournament is giving us a boost, we have packed stadiums in preseason games, while in the past we used to have them at 10-20% capacity," added De la Vega in an interview with The Associated Press. "We have an unprecedented appetite for baseball."

That interest in baseball was evident in the preseason but also last weekend when Liga Mexicana de Beisbol played the first series of the regular season.

In the capital, fans flooded the gates of AHH Stadium for a three-day series featuring the local Diablos Rojos del México playing against the Tigres de Quintana Roo.

"I've been a Diablos Rojos fan my whole life, so this is not a new passion for me, but I've known a lot of people that have been asking me recently about the sport and that they want to come and see if for themselves," said Ramiro Aguirre, a 35-year-old accountant who was at the stadium for the opening series.

NHL

Playoffs: Kraken, Bruins, Hurricanes & Stars can advance

By Stephen Whyno
The Associated Press

The defending champions are on the ropes, and the best team in the NHL has another chance to move on to the second round of the playoffs.

All four first-round series resuming Friday night feature a Game 6 with potential elimination. The most surprising team on the brink is Colorado, down 3-2 to the Kraken with the series going back to Seattle.

There are a pair of second chances in the East, with top-seeded Boston trying to put away Florida and Carolina looking to advance past the New York Islanders. Out West, Dallas is on the verge of knocking off Minnesota and moving on.

All eyes now are on the Avalanche, who are one loss away from being the first reigning Stanley Cup champion to lose to a team making its first playoff appearance in franchise history.

"With the culture we have here, belief is the biggest thing and that's instilled from the top down, so that's never going to go away," veteran forward Andrew Cogliano said Thursday. "But I think we're at a point now where action is much louder than words."

It's time for action from the Bruins, too, after they missed their first chance to move past the Panthers, with an overtime loss Wednesday punctuated by uncharacteristic mistakes.

As captain Patrice Bergeron said afterward, he and his teammates can't give an opportunistic opponent "freebies" as they did in Game 5 at home.

Game 6 is on the road at Florida, and the Bruins still have the series lead looking to be the 10th Presidents' Trophy winners in the past 11 years to win at least one series.

"I'm sure we're going to come back with a real good, determined effort," Boston coach Jim Montgomery said. "I have a lot of confidence in our team."

Confidence isn't lacking for the Avalanche, either, especially after their Cup run a year ago. They'll also get a boost with the return of 2022 playoff MVP Cale Makar from a one-game suspension.

But much like Boston, the pressure is on Colorado.

"They're playing loose, they're confident," coach Jared Bednar said of the Kraken. "Obviously the guys in their room are like, 'Yeah, we want to win,' but expectations are on our team."

Griner

FROM PAGE 1

Griner kept a low profile following her return to the U.S. while adjusting to life back home, outside of appearances at the Super Bowl, the PGA Tour's Phoenix Open and an MLK Day event in Phoenix.

She returned to the spotlight at a news conference on Thursday, an event attended by roughly 200 people inside the lobby of the Footprint Center, home of the Phoenix Mercury and the NBA's Phoenix Suns.

Arizona Gov. Katie Hobbs, Griner's wife, Cherelle, and members of the Mercury organization gave the WNBA star a standing ovation as she appeared from behind a banner and climbed onto the riser.

"Different than a basketball press conference today," said Griner, her eyes beaming and a huge smile across her face. "A LOT of media in here today."

Griner gained international attention in February 2022, when she was arrested after Russian authorities said a search of her luggage revealed vape cartridges containing cannabis oil. She later pleaded guilty and was sentenced to nine years in prison.

After months of negotiations between Washington and Moscow, Griner was exchanged in the United Arab Emirates for Russian arms dealer Viktor Bout on Dec. 8.

Griner kept her emotions in check during the news conference while thanking everyone who helped secure her release, including President Joe Biden, but had to take a moment to compose herself after being asked about her resiliency through the ordeal.

"I'm no stranger to hard times," Griner said, fighting back tears. "Just digging deep. You're going to be faced with adversities in life. This was a pretty big one. I just relied on my hard work to get through it."

Harbaugh

FROM PAGE 1

not gonna have a letdown as the months go on, but this is the best version of football I've seen since I've been here the last eight years."

The Wolverines bring back 84% of their offensive production. Quarterback J.J. McCarthy and running backs Blake Corum and Donovan Edwards will work behind the nation's best offensive line. The defense is loaded, especially in the front seven, and linebackers Ernest Hausmann (Nebraska) and Josaiah Stewart (Coastal Carolina) are transfers who showed this spring they're capable of making big impacts.

Quarterback questions

As many as six quarterback competitions will continue into the fall. The battles: Kyle McCord vs. Devin Brown at Ohio State, Brendan Sorsby vs. Tayven Jackson at Indiana, Payton Thorne vs. Noah Kim and Katin Houser at Michigan State, Jeff Sims vs. Casey Thompson at Nebraska, Brendan Sullivan vs. Ryan Hilinski at Northwestern and Gavin Wimsatt vs. Evan Simon at Rutgers.

Eight teams appear set at quarterback: McCarthy at Michigan, Cade McNamara at Iowa, Luke Altmyer at Illinois, Taulia Tagovailoa at Maryland, Athan Kaliakmanis at Minnesota, Drew Allar at Penn State, Hudson Card at Purdue and Tanner Mordecai at Wisconsin.

Jackson (Tennessee), Sims (Georgia Tech), McNamara (Michigan), Altmyer (Mississippi), Card (Texas) and Mordecai (SMU) are transfers.

Inheriting a winner

Purdue's Walters, the former Illinois defensive coordinator, is the rare head coach who takes over a winning team.

The Boilermakers won the West Division last season, were 36-34 and went to four bowls in six seasons under Jeff Brohm, who left for Louisville.

"Yeah, it's not a rebuild, right?" Walters said. "I'm trying to elevate and really dive into it and understand the tradition and the standard here. It will be my job to raise that standard and continue to race and win championships."

Among Purdue's starters in the Big Ten championship game, seven on offense and four on defense were on the spring roster.

Draft

FROM PAGE 1

able to physically withstand all the hits in the NFL.

Kyler Murray, the No. 1 overall pick in 2019, is the only other QB since 2003 to be selected in the first round after weighing in at 207 pounds or less at the combine.

"I'm confident in my abilities," Young said Wednesday. "I don't know how to play the game another way. I've been this size relative to the people around me my entire life. I focus on what I control, and I can't grow. That doesn't fall into that category. I can't get any taller. I focus on myself. I'm confident in myself with what I've been able to do and I'm excited for the work it's going to take."

The Panthers have sought an answer at quarterback since moving on from Cam Newton, who was the No. 1 overall pick in 2011 and the NFL MVP in 2015 when he led the Panthers to a 15-1 record and a Super Bowl appearance.

Young had a spectacular career at Alabama and the Panthers are hoping he can deliver the franchise's first Lombardi Trophy. He played in a pro-style offense under offensive coordinator Bill O'Brien, the former Texans head coach who has returned to the NFL to run New England's offense.

The Lions traded down to select Alabama running back Jahmyr Gibbs with the No. 12 pick overall, giving up their first pick and a third-rounder to Arizona for a first-round selection and the 34th spot overall.

Opener

FROM PAGE 1

by Ava Gushen in the bottom of the inning.

"We're starting to get into it. Offensively and defensively, we have a game plan, and everyone knows what those are, and when they're supposed to be doing it," Smith said. "Right now, we're just making sure our pitchers are hitting their spots, and if we get out-hit, we've gotta out-hit them back. We got ourselves in a little lull, where our bats got a little cold, and then it was too late."

he opener went the opposite way, with Ratich reaching on a fielder's choice and coming home on a wild pitch to make it 1-0 Clarkston in the second. Cady made it 2-0 with a third-inning sacrifice fly, then — after the Raiders tied it 2-2 with RBI singles by Carillo and Collins in the fourth — put the Wolves back ahead with an RBI triple in the fifth. Gracie Cantley's RBI double made it 4-2 after six, then Wolves starting pitcher, Nakenna Knowlton, helped her own cause with a leadoff triple in the seventh, scoring an insurance run on an RBI double by Cady, who then scored on Tolmie's RBI single.

The split could eventually be big for what should be a very tight OAA Red race, where every win is critical, and sweeps are a bonus.

"Everyone is in this league for a reason, and they're going to be competitive, and I think everyone's going to approach it with a sense of scrappiness, and they're going to take runs where they can get runs, and we're going to have to have that same mentality," Smith said. "We're going to have to make sure that we stick to our game plan — and if there are some hits that don't go our way, we're going to have to make sure that we're focusing on being baserunners, not heroes."

Clarkston (2-1, 1-1 OAA Red) returns to action Thursday at rival Lake Orion (8-0, 2-0 OAA Red), while North Farmington (3-3, 1-1 OAA Red) visits Rochester Adams (6-3-2, 2-0 OAA Red) on Thursday.

On the air

TODAY

AUTO RACING
Formula 1, Qualifying, Baku City Circuit, Baku, Azerbaijan: 8:55 a.m., ESPNU
NASCAR Xfinity Series, Qualifying, Dover Motor Speedway, Dover, Del.: 3 p.m., FS1
NHRA, Qualifying, zMAX Dragway, Concord, N.C.: 7 p.m., FS1
Formula 1, Grand Prix Sprint Shootout, Baku City Circuit, Baku, Azerbaijan: 4:25 a.m. (Saturday), ESPN2
COLLEGE BASEBALL
Iowa at Penn St.: 5 p.m., BTN
Texas at TCU: 7 p.m., ESPNU
Alabama at LSU: 7 p.m., SEC
Minnesota at Nebraska: 8 p.m., BTN
UCLA at Stanford: 10 p.m., ESPNU
COLLEGE LACROSSE (men)
Boston U. at Army: 8:15 p.m., CBSSN
COLLEGE LACROSSE (women)
Loyola (Md.) at Navy: 6 p.m., CBSSN
COLLEGE SOFTBALL
Florida A&M at Jackson St.: 4:30 p.m., ESPNU
GOLF
PGA Tour Champions, The Insperity Invitational, First Round, The Woodlands Country Club - Tournament Course, The Woodlands, Texas: Noon, GOLF
PGA Tour, The Mexican Open, Second Round, Vidanta Vallarta, Jalisco, Mexico: 3:30 p.m., GOLF
LPGA Tour, The JM Eagle LA Championship, Second Round, Wilshire Country Club, Los Angeles: 6:30 p.m., GOLF
DP World Tour, The Korea Championship, Third Round, Jack Nicklaus Golf Club Korea, Incheon, South Korea: Midnight, GOLF
HORSE RACING
NYRA, America's Day at the Races: 4 p.m., FS2
MLB BASEBALL
Kansas City at Minnesota: 4 p.m., MLB
Baltimore at Detroit: 6:30 p.m., BSD
Atlanta at NY Mets or Pittsburgh at Washington: 7 p.m., MLB
NBA BASKETBALL
Western Conference First Round, Sacramento at Golden State, Game 6: 8:10 p.m., ESPN
Western Conference First Round, Memphis at LA Lakers, Game 6: 10:30 p.m., ESPN
NFL DRAFT
2023 NFL Draft, Rounds 2-3, Kansas City, Mo.: 7 p.m., ABC/ESPN/NFL
2023 NFL Draft, Rounds 2-3, Kansas City, Mo.: 8 p.m., ESPN2
NHL HOCKEY
Eastern Conference First Round, Carolina at NY Islanders, Game 6: 7 p.m., TBS
Eastern Conference First Round, Boston at Florida, Game 6: 7:30 p.m., TNT
Western Conference First Round, Dallas at Minnesota, Game 6: 9:30 p.m., TBS
Western Conference First Round, Colorado at Seattle, Game 6: 10 p.m., TNT

UP NEXT

TIGERS

Today
vs. Baltimore, 6:40 p.m., BSD
Saturday
vs. Baltimore, 1:10 p.m., BSD
Sunday
vs. Baltimore, 1:40 p.m., BSD

CITY OF BERKLEY, MICHIGAN NOTICE OF PUBLIC HEARING REGARDING THE PROPOSED 2023/24 CITY OPERATING BUDGET

The City Council of the City of Berkley, Michigan will hold a public hearing during its regularly scheduled Meeting of the City Council at 7 p.m. on May 15, 2023. **The property tax millage rate proposed to be levied to support the proposed operating budget of the City will be a subject of this hearing.** The maximum millage rates proposed to be levied for operating purposes is as follows net of tax increment capture:

Purpose:	Rate Per $1,000 Taxable Assessed Value	Estimated Net Tax Levy Revenues
General Operation	5.3747	$3,915,724
General Operation – Voted	2.5552	$1,861,584
Public Safety Operation	1.6120	$1,174,418
Sanitation Operation	1.6120	$1,174,418
Community Promotion	.0652	$47,501
Public Safety Pension	2.7000	$1,751,844
Infrastructure	1.8507	1,231,062
Debt Millage	0.000	0.00
Total Proposed City Levy:	**15.7698**	**$11,489,046**
Downtown Development Authority	$1.8184	$37,863

Copies of the proposed operating budget will be available for public inspection on the City of Berkley website at www.berkleymich.org and through the office of the Berkley City Clerk starting on May 1, 2023.

The City of Berkley will make reasonable arrangements to accommodate special needs upon receiving 72-hour advance notice. Contact Victoria Mitchell, City Clerk at (248) 658-3319 at Berkley City Hall for special services.

Victoria Mitchell, City Clerk
City of Berkley

Published Friday, April 28, 2023

NOTICE OF PUBLIC HEARINGS

BIRMINGHAM CITY COMMISSION

PUBLIC HEARING OF NECESSITY
PUBLIC HEARING OF CONFIRMATION

Meeting Date, Time, Location:	HEARING OF NECESSITY FOR SPECIAL ASSESSMENT DISTRICT Monday, May 8, 2023, 7:30 PM Municipal Building, 151 Martin, Birmingham, MI 48009
Meeting Date, Time, Location:	HEARING FOR CONFIRMATION OF THE ROLL Monday, May 22, 2023, 7:30 PM Municipal Building, 151 Martin, Birmingham, MI 48009
Project Location:	Properties within project location: 325 S. Old Woodward: 08-19-36-208-015 355 S. Old Woodward: 08-19-36-208-016 34745 Woodward Ave: 08-19-36-208-004 255 S. Old Woodward: 08-19-36-206-021 34901 Woodward Ave: 08-19-36-207-010
Nature of Improvement:	For the purpose of a Special Assessment District for sidewalk and streetscape improvements adjacent to all properties within the project area on Brown Street, from S. Old Woodward Ave. to Woodward Ave
City Staff Contact:	Melissa Coatta, City Engineer mcoatta@bhamgov.org, (248)530-1839
Notice Requirements:	Mail to affected property owners Publish April 28 2023 and May 5 2023
Approved minutes may be reviewed at:	City Clerk's Office or www.bhamgov.org/commissionagendas

Should you have any statement regarding the above, you are invited to attend the meeting in person or virtually through ZOOM: **https://zoom.us/j/655079760 Meeting ID: 655 079 760**

You or your agent may appear at the hearings to express your views; however, if you fail to protest either in person or by letter received on or before the date of the hearing, you cannot appeal the amount of the special assessment to the Michigan Tax Tribunal. Mail any correspondence to: City Clerk, P.O. Box 3001, Birmingham, MI 48012.

The property owner may file a written appeal of the special assessment with the State Tax Tribunal within 30 days after the confirmation of the special assessment roll if that special assessment was protested at the hearing held for the purpose of confirming the roll.

All special assessments, including installment payments, shall, from the date of the confirmation thereof, constitute a lien on the respective lots or parcels assessed, and until paid shall be charged against the respective owners of the lots or parcels assessed.

Persons with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk's Office at 248.530.1880 (voice) or 248.644.5115 (TDD) at least one day in advance to request mobility, visual, hearing or other assistance.

MEMORANDUM

DATE: **09/19/2022**

TO: **Tom Markus, City Manager & Birmingham City Commission**

FROM: **Mary Kucharek**

RE: **Birmingham Special Assessment Appeal Process**

QUESTION: If there's a special assessment and a person wants to appeal to the tax tribunal what's the process?

STEPS TO APPEAL A SPECIAL ASSESSMENT TO THE TAX TRIBUNAL

1. Protest

- Appearance and protest at the public hearing of necessity or the public hearing of confirmation of the roll is required in order to appeal the special assessment to the Michigan Tax Tribunal.
    - An owner or interested party, or his or her agent, may appear and protest in person or by letter, at the public hearing for necessity or at a hearing for confirmation of the roll. The letter must be received by the City Commission prior to the public hearing if an in-person protest is not possible. A person must protest in order to appeal the special assessment to the Michigan Tax Tribunal within 30 days of the hearing.
- The hearing required by this section may be held at any regular or special meeting of the City Commission.

2. Initiating Appeal

- An appeal is started by the printing and mailing of a completed petition form or by e-filing a petition form.
    - This form can be found at the State of Michigan website or

https://www.michigan.gov/taxtrib/-/media/Project/Websites/taxtrib/Folder16/Petition-Forms/web_SP_A_Petition_Form_final_670139_7.pdf?rev=1b62b0570e364c50925fba6dceed791f&hash=B53E24E9F1B701B195C2407E5B4A0C74

3. Notice of Hearing

- You will receive a Notice of Hearing at least 45 days before the hearing.
- The notice will provide the date, time, and location of the hearing.

4. Hearing

- Parties are required to submit their documents to the Tribunal and the other party at least 21 days before the scheduled hearing date, as provided by TTR 287.
- A party may request that a hearing be conducted "on the file" or telephonically.
- A party may request that a hearing be adjourned.

6. Opinion and Judgment

- If the presiding judge is a Tribunal member, the Opinion and Judgment will be a Final Opinion and Judgment. The parties may file a motion for reconsideration or appeal the Final Opinion and Judgment to the Michigan Court of Appeals, as provided by MCL 205.753 and the Michigan Rules of Court.
- If the presiding judge is a Hearing Officer or Administrative Law Judge, the Opinion and Judgment will be a Proposed Opinion and Judgment. The parties may file exceptions to a Proposed Opinion and Judgment within 20 days of the entry of the Proposed Opinion and Judgment. A copy of those exceptions must be sent to the other party. The other party will have 14 days to respond to the exceptions. If after 20 days no exceptions are filed a Tribunal Member will review the case and issue a Final Opinion and Judgment. If exceptions are timely and properly filed, after the time for a response a Tribunal Member will review the file and issue a Final Opinion and Judgment.

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Engineering Department

DATE: **May 22, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Melissa A. Coatta, City Engineer**

SUBJECT: **Brown Street Paving Project**
Contract # 5-23 (P) Contract Award

INTRODUCTION:
Bids for the Brown Street Paving Project Contract #5-23 (P) were opened on May 2, 2023. Two (2) bids were received for consideration, and the Engineering Department is recommending awarding this contract to V.I.L. Construction.

BACKGROUND:
At the October 24, 2022 meeting, the City Commission approved the reconfiguration of E. Brown Street from S. Old Woodward to Woodward Ave to include reducing to one lane eastbound at Woodward Ave with an extended sidewalk, a midblock pedestrian crossing, and additional median island west of Peabody Street. The Michigan Department of Transportation (MDOT) will improve pedestrian crossings at Woodward Ave. and Brown/Forest intersections starting in September 2023.

The Engineering Department opened and read bids on May 2, 2023. Two (2) bids were received, as listed in the attached summary. The lowest bid was approximately $880,477.35 higher (80%) than the engineer's estimate provided prior to the project being advertised for bid. Factors that influence the bid pricing include rising labor and material costs, shortages in limestone aggregate base, and the project timeline.

A post-bid meeting was conducted with V.I.L. Construction to review the detail of their bid and discuss valve engineering (VE) items that could reduce the project's cost. V.I.L. Construction submitted five (5) VE items for the City to review:

1. Planter boxes as plain concrete: -$38,704.00
2. Raise storm sewer elevation: -$5,323.22
3. Utilize existing 12" storm from 033b as an outlet: -$44,043.50
4. Switch limestone 21aa to 21 crushed concrete: -$4,531.50
5. 9” concrete roadway to 7” of asphalt: -$60,900.94
6. Reduction in time of project / “Road Closure Assessment” (4 days): -$20,000.00

The Engineering Department recommends proceeding with VE Items 1, 2, 4, 5 and 6 for a total cost savings of $129,459.66. VE Item 3 is not recommended due to the existing slope and capacity of the 12" storm. The letter of recommendation for the award from our engineering consultant, Nowak & Fraus Engineers, is attached for reference.

This contract also includes a bid item of "Road Closure Assessment" at $5,000.00 a day, with the lower bidder bidding 52 days. This bid item was previously in use on S. Old Woodward Project, and Maple Road Project. This bid item is to help evaluate bids and serve as a scheduling metric to determine a bonus, if the contractor completes the project ahead of the number of days bid, or a penalty payment if the contractor goes over the number of days bid. In previous projects, there has been no payment by the City on this bid item.

As is required for all of the City's construction projects, V.I.L. Construction has submitted a 5% bid security with their bid which will be forfeited if they do not provide the signed contracts, bonds, and insurance required by the contract following the award by the City Commission.

LEGAL REVIEW:
The City's standard contract language was used for this bidding document which the City Attorney had reviewed and approved. No legal issues exist based on the documentation.

FISCAL IMPACT:
This project was not budgeted for in the 2022/2023 fiscal year, and a budget amendment is required. The total construction cost for the project is estimated to be $1,924,156.18 which includes the V.I.L. Construction bid amount of $1,832,529.69 and a 5% construction contingency. The project award will be funded by the following account:

Fund Account	Fund ID Number	Project Award	5% Contingencies	Total
Major Street Fund	202.0-449.001-981.0100	$705,388.34	$35,269.42	$740,657.75
Sidewalk Fund	101.0-444.000-981.0100	$567,178.95	$28,358.95	$595,537.90
Sewer Fund	590.0-537.000-981.0100	$551,152.91	$27,557.65	$578,710.55
Water Fund	591.0-544.000-981.0100	$8,809.50	$440.49	$9,249.99

PUBLIC COMMUNICATIONS:
The Engineering Department held a property owner meeting on Thursday, March 23, 2023, to discuss the project, traffic access during construction, and special assessment. Property owners received the required notification for the sidewalk and streetscape special assessment district. Communication with property owners in the project area will be included in the general project announcement.

SUMMARY:
The Engineering Department recommends the Brown Street Paving Project #5-23 (P) be awarded to V.I.L. Construction.

ATTACHMENTS:

- Project Area Map (1 page)
- Bid Summary (3 pages)
- Nowak and Fraus Recommendation Letter (2 pages)
- Contract (236 pages)
- Plans (33 pages)

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution to approve the construction project budget and award Brown Street Paving Project #5-23 (P) to V.I.L. Construction in the amount of $1,832,529.69 and not to exceed $1,924,156.18. In addition, to authorize the Mayor and City Clark to sign the agreement on behalf of the City after the review of V.I.L. Construction's insurance and bonds, contingent upon execution of the agreement and meeting all insurance and bonding requirements. Funding for this project has been budgeted in the following account:

Fund Account	Fund ID Number	Project Award	5% Contingencies	Total
Major Street Fund	202.0-449.001-981.0100	$705,388.34	$35,269.42	$740,657.75
Sidewalk Fund	101.0-444.000-981.0100	$567,178.95	$28,358.95	$595,537.90
Sewer Fund	590.0-537.000-981.0100	$551,152.91	$27,557.65	$578,710.55
Water Fund	591.0-544.000-981.0100	$8,809.50	$440.49	$9,249.99

To approve the appropriation and amendment of the fiscal year 2022/2023 budget as follows:

Major Street Fund:

Revenues:		
202.0-000.000-400.0000	Draw from Fund Balance	$740,660
Total Revenue		$740,660
Expenditures:		
202.0-449.001-981.0100	Public Improvement	$740,660
Total Expenses		$740,660

General Fund:

Revenues:		
101.0-000.000-400.0000	Draw from Fund Balance	$595,540
Total Revenue		$595,540
Expenditures:		
101.0-449.001-981.0100	Public Improvement - Sidewalks	$595,540
Total Expenses		$595,540

Sewer Fund:

Revenues:		
590.0-000.000-400.0000	Draw from Net Position	$578,710
Total Revenue		$578,710
Expenditures:		
590.0-537.000-981.0100	Public Improvement	$578,710
Total Expenses		$578,710

Water Fund:

Revenues:		
590.0-000.000-400.0000	Draw from Net Position	$9,250
Total Revenue		$9,250
Expenditures:		
590.0-537.000-981.0100	Public Improvement	$9,250
Total Expenses		$9,250

Brown Street Paving Project Limits

2 Foot Contours
5 Foot Contours
FEMA Base Flood Elevations
FEMA Cross Sections
100 yr - FEMA Floodplain
100 yr (detailed) - FEMA Floodplain
500 yr - FEMA Floodplain
FLOODWAY - FEMA Floodplain

Disclaimer: The information provided herewith has been compiled from recorded deeds, plats, tax maps, surveys and other public records. It is not a legally recorded map or survey and is not intended to be used as one. Users should consult the information sources mentioned above when questions arise. FEMA Flooplain data may not always be present on the map.

OAKLAND COUNTY MICHIGAN
Economic Development & Community Affairs

David Coulter
Oakland County Executive

Date Created: 4/18/2023

NORTH

1 inch = 100 feet

7B

Oakland County One Stop Shop 2100 Pontiac Lake Road Bldg. 41 West Waterford, MI 48328 Phone: 248-858-0721 Web: www.advantageoakland.com

City of Birmingham
Lincoln Hills Golf Course Hole #1 Tee-Box & Cart Path Improvements
Contract # 2-23 (G)
Bid Summary

NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY	VIL Construction		Diponio Contracting	
	SEWER PAY ITEMS						
1	15" Storm Sewer, C76, CL-IV, Trench A	LF	212	$ 346.00	$ 73,352.00	$ 440.00	$ 93,280.00
2	12" Storm Sewer, C76, CL-IV, Trench A	LF	54	$ 274.00	$ 14,796.00	$ 420.00	$ 22,680.00
3	10" Storm Sewer, PVC SDR 26, Trench A	LF	67	$ 262.00	$ 17,554.00	$ 410.00	$ 27,470.00
4	New 6'-0" Diameter Combined Sewer Manhole (Construct Online)	EA	1	$ 15,900.00	$ 15,900.00	$ 23,000.00	$ 23,000.00
5	New 4'-0" Diameter Storm Manhole (Construct Online)	EA	1	$ 8,800.00	$ 8,800.00	$ 14,200.00	$ 14,200.00
6	New 4'-0" Diameter Storm Manhole	EA	4	$ 6,900.00	$ 27,600.00	$ 9,700.00	$ 38,800.00
7	New 12" Diameter PVC Landscape Drain w/ Metal Bee-Hive Grate	EA	2	$ 2,500.00	$ 5,000.00	$ 4,600.00	$ 9,200.00
8	6" Perforated Pipe Underdrain (w/ Trench Detail)	LF	365	$ 46.00	$ 16,790.00	$ 85.00	$ 31,025.00
9	4" Perforated Pipe Underdrain (w/ Geotextile Sock)	LF	220	$ 43.00	$ 9,460.00	$ 80.00	$ 17,600.00
10	Sewer Tap, 12"	EA	1	$ 2,300.00	$ 2,300.00	$ 3,000.00	$ 3,000.00
11	Sewer Tap, 6"	EA	2	$ 1,900.00	$ 3,800.00	$ 1,500.00	$ 3,000.00
12	Sewer Tap, 4"	EA	1	$ 1,700.00	$ 1,700.00	$ 1,500.00	$ 1,500.00
13	Reconstruct Manhole (if and where needed)	VF	15	$ 250.00	$ 3,750.00	$ 1,700.00	$ 25,500.00
14	Remove & Replace Structure Cover (as directed by City)	LB	825	$ 2.50	$ 2,062.50	$ 10.00	$ 8,250.00
15	Investigate, Adjust & Shift Casting Location	EA	2	$ 450.00	$ 900.00	$ 6,000.00	$ 12,000.00
16	Removal and Disposal of Contaminated Material, Type 2	CY	25	$ 116.00	$ 2,900.00	$ 130.00	$ 3,250.00
17	Removal and Disposal of Contaminated Material, Type 3	CY	25	$ 61.00	$ 1,525.00	$ 150.00	$ 3,750.00
18	Remove Ex. 12" Storm Sewer	LF	36	$ 69.00	$ 2,484.00	$ 100.00	$ 3,600.00
19	Abandon Ex. 12" Storm Sewer	LF	36	$ 72.00	$ 2,592.00	$ 100.00	$ 3,600.00
20	Bulkhead Structure, 12"	EA	3	$ 550.00	$ 1,650.00	$ 1,100.00	$ 3,300.00
21	Bulkhead Pipe, 12"	EA	1	$ 475.00	$ 475.00	$ 900.00	$ 900.00
22	Bulkhead Pipe, 10"	EA	1	$ 450.00	$ 450.00	$ 800.00	$ 800.00
23	Bulkhead Pipe, 8"	EA	1	$ 425.00	$ 425.00	$ 800.00	$ 800.00
24	CCTV Sewer Inspection	LS	1	$ 1,600.00	$ 1,600.00	$ 2,300.00	$ 2,300.00
	SUBTOTAL SEWER PAY ITEMS				$ 217,865.50		$ 352,805.00
	WATER MAIN PAY ITEMS						
25	New Water Service, 1.5", Trench A, Copper	LF	25	$ 28.50	$ 712.50	$ 250.00	$ 6,250.00
26	Water Service Connection, 1.5"	EA	1	$ 5,100.00	$ 5,100.00	$ 5,000.00	$ 5,000.00
	SUBTOTAL WATER MAIN PAY ITEMS				$ 5,812.50		$ 11,250.00
	PAVING PAY ITEMS						
27	Station Grading	STA	4.4	$ 28,800.00	$ 126,720.00	$ 175,000.00	$ 770,000.00
28	Subgrade Undercutting	CY	100	$ 94.00	$ 9,400.00	$ 100.00	$ 10,000.00
29	Excavation for Tree Wells	CY	125	$ 43.50	$ 5,437.50	$ 300.00	$ 37,500.00
30	Removing Concrete Sidewalk & Ramp (sawcutting included)	SY	835	$ 51.75	$ 43,211.25	$ 140.00	$ 116,900.00
31	Removing Pavement Full Depth (Curb & Gutter included)	SY	1,970	$ 51.75	$ 101,947.50	$ 155.00	$ 305,350.00
32	Aggregate Base, MDOT 21AA Limestone, 8"	SY	1,710	$ 58.50	$ 100,035.00	$ 101.00	$ 172,710.00
33	Concrete Pavement, Non-reinforced, 9", incl. integral Detail F2 Curb & Gutter	SY	1,585	$ 156.00	$ 247,260.00	$ 125.00	$ 198,125.00
34	Furnish & Install Tree Grate	EA	3	$ 2,900.00	$ 8,700.00	$ 4,000.00	$ 12,000.00
35	Concrete Sidewalk, 4", Scoring Treatment	SF	6,445	$ 12.25	$ 78,951.25	$ 27.50	$ 177,237.50
36	Concrete Sidewalk, 6", Scoring Treatment (Includes Ramps)	SF	855	$ 14.25	$ 12,183.75	$ 30.00	$ 25,650.00
37	Concrete Sidewalk, 8", Scoring Treatment	SF	400	$ 15.25	$ 6,100.00	$ 31.00	$ 12,400.00
38	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment	SF	1,698	$ 25.50	$ 43,299.00	$ 40.00	$ 67,920.00
39	Concrete Sidewalk, 6", Exposed Aggregate, Scoring Treatment	SF	217	$ 30.50	$ 6,618.50	$ 45.00	$ 9,765.00

40	Handicap Ramp Truncated Domes (per ramp)	SF	192	$ 107.00	$ 20,544.00	$ 105.00	$ 20,160.00
41	Concrete Curb & Gutter, 18", MDOT Type F2, Modified	LF	231	$ 51.00	$ 11,781.00	$ 50.00	$ 11,550.00
42	20" Hgt. Planter Curb, Exposed Aggregate	LF	512	$ 147.00	$ 75,264.00	$ 145.00	$ 74,240.00
43	12" Hgt. Planter Curb, Exposed Aggregate	LF	144	$ 137.00	$ 19,728.00	$ 135.00	$ 19,440.00
44	Intergral Curb at Back of Walk for Pedestrian Protection	LF	126	$ 76.50	$ 9,639.00	$ 75.00	$ 9,450.00
45	Remove Ex. 4" Skip Lane Markings on Brown Street (west of Old Woodward)	LF	90	$ 2.00	$ 180.00	$ 1.00	$ 90.00
46	Pavement Marking, Polyurea, 6 inch, Solid Lane Line, White	LF	190	$ 2.70	$ 513.00	$ 2.65	$ 503.50
47	Pavement Marking, Polyurea, 6 inch, Dotted Lane Line, White	LF	100	$ 2.70	$ 270.00	$ 2.65	$ 265.00
48	Pavement Marking, Polyurea, 4 inch, White	LF	228	$ 1.80	$ 410.40	$ 1.75	$ 399.00
49	Pavement Marking, Polyureal, 4 inch, Yellow	LF	515	$ 1.80	$ 927.00	$ 1.75	$ 901.25
50	Pavement Marking, Polyurea, 24 inch Stop Bar, White	LF	55	$ 14.00	$ 770.00	$ 13.50	$ 742.50
51	Pavement Marking, Polyurea, 24 inch Crosshatching, White	LF	384	$ 14.00	$ 5,376.00	$ 13.50	$ 5,184.00
52	Pavement Marking, Polyurea, Rt Turn Arrow, White	EA	3	$ 200.00	$ 600.00	$ 195.00	$ 585.00
53	Pavement Marking, Polyurea, Lt Turn Arrow, White	EA	1	$ 200.00	$ 200.00	$ 195.00	$ 195.00
54	Pavement Marking, Polyurea, Straight/Left Arrow, White	EA	2	$ 220.00	$ 440.00	$ 215.00	$ 430.00
55	Pavement Marking, Polyurea, Only, White	EA	2	$ 200.00	$ 400.00	$ 195.00	$ 390.00
56	Recessing Pavt Mkrg, Longit	LF	1,023	$ 1.00	$ 1,023.00	$ 0.99	$ 1,012.77
57	Recessing Pavt Mkrg, Transv	SF	1,450	$ 3.00	$ 4,350.00	$ 2.95	$ 4,277.50
58	Adjust Structure Cover	EA	8	$ 450.00	$ 3,600.00	$ 2,000.00	$ 16,000.00
59	Cold Patch	TON	25	$ 201.00	$ 5,025.00	$ 500.00	$ 12,500.00
60	Maintenance Aggregate	LS	1	$ 19,500.00	$ 19,500.00	$ 16,000.00	$ 16,000.00
	SUBTOTAL PAVING PAY ITEMS				$ 970,404.15		$ 2,109,873.02
	IRRIGATION PAY ITEMS						
61	Meter Pit	EA	1	$ 8,700.00	$ 8,700.00	$ 12,000.00	$ 12,000.00
62	Sprinkler Assembly	EA	76	$ 100.00	$ 7,600.00	$ 86.45	$ 6,570.20
63	Valve Assembly	EA	4	$ 800.00	$ 3,200.00	$ 806.26	$ 3,225.04
64	1-1/2 inch PVC Mainline	LF	202	$ 18.25	$ 3,686.50	$ 17.45	$ 3,524.90
65	1-1/2 inch Polyethylene lateral line	LF	5	$ 9.00	$ 45.00	$ 2.33	$ 11.65
66	1 inch Polyethylene lateral line	LF	936	$ 1.20	$ 1,123.20	$ 0.80	$ 748.80
67	Communication Cable - two wire	LF	202	$ 2.00	$ 404.00	$ 1.36	$ 274.72
68	Irrigation Controller	EA	1	$ 6,000.00	$ 6,000.00	$ 20,000.00	$ 20,000.00
69	Rain Sensor	EA	1	$ 300.00	$ 300.00	$ 229.08	$ 229.08
70	Two Wire Decoders	EA	4	$ 625.00	$ 2,500.00	$ 656.06	$ 2,624.24
71	4" PVC Sleeve	LF	145	$ 25.00	$ 3,625.00	$ 13.16	$ 1,908.20
72	2" PVC Sleeve	LF	278	$ 11.00	$ 3,058.00	$ 3.65	$ 1,014.70
	SUBTOTAL IRRIGATION PAY ITEMS				$ 40,241.70		$ 52,131.53
	LANDSCAPE PAY ITEMS						
73	Structural Soil Mix (30" depth)	CFT	5,073	$ 3.00	$ 15,219.00	$ 16.00	$ 81,168.00
74	Organic Plant Soil Mix - Plant Beds (24" depth)	CFT	3,713	$ 3.50	$ 12,995.50	$ 3.78	$ 14,035.14
75	Native MI Stone (3"-6") choked in w/ decorative aggregate	LS	1	$ 2,000.00	$ 2,000.00	$ 2,600.00	$ 2,600.00
76	Shredded Hardwood Mulch (3" depth)	CY	24	$ 80.00	$ 1,920.00	$ 76.59	$ 1,838.16
77	TILIA AMERICANA 'MCKSENTRY' (3-3.5" CAL.)	EA	3	$ 1,000.00	$ 3,000.00	$ 1,285.00	$ 3,855.00
78	ULMUS AMERICANA 'PRINCETON' (3-3.5" CAL.)	EA	4	$ 900.00	$ 3,600.00	$ 1,055.29	$ 4,221.16
79	ZELKOVA SERRATA 'JFS-KW1' (3-3.5" CAL.)	EA	3	$ 900.00	$ 2,700.00	$ 994.02	$ 2,982.06
80	MALUS X 'JEFSPIRE' (2" CAL.)	EA	3	$ 700.00	$ 2,100.00	$ 672.36	$ 2,017.08
81	HYDRANGEA PANICULATA 'JANE' (#5)	EA	31	$ 95.00	$ 2,945.00	$ 85.78	$ 2,659.18
82	ILEX GLABRA 'SHAMROCK' (#3)	EA	6	$ 95.00	$ 570.00	$ 81.18	$ 487.08
83	JUNIPERUS SQUAMATA 'BLUE STAR' (#3)	EA	18	$ 70.00	$ 1,260.00	$ 70.46	$ 1,268.28
84	PINUS MUGO 'HONEYCOMB' (#3)	EA	21	$ 75.00	$ 1,575.00	$ 79.65	$ 1,672.65
85	GERANIUM X 'ROZANNE' (#1)	EA	24	$ 20.00	$ 480.00	$ 21.44	$ 514.56
86	PACHYSANDRA TERMINALIS 'GREEN CARPET' (24/FLAT)	EA	892	$ 2.75	$ 2,453.00	$ 2.69	$ 2,399.48

87	PEROVSKIA 'LITTLE SPIRE' (#2)	EA	41	$ 20.00	$ 820.00	$ 18.38	$ 753.58
88	RUDBECKIA HIRTA (#1)	EA	35	$ 20.00	$ 700.00	$ 19.91	$ 696.85
89	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' (#2)	EA	91	$ 30.00	$ 2,730.00	$ 32.17	$ 2,927.47
90	SELSERIA AUTUMNALIS (#1)	EA	48	$ 20.00	$ 960.00	$ 18.38	$ 882.24
	SUBTOTAL LANDSCAPE PAY ITEMS				$ 58,027.50		$ 126,977.97
	GENERAL PAY ITEMS						
91	Critical Path Time Schedule	LS	1	$ 1,400.00	$ 1,400.00	$ 20,000.00	$ 20,000.00
92	Mobilization, (Max. 5% of Bid)	LS	1	$ 98,000.00	$ 98,000.00	$ 157,000.00	$ 157,000.00
93	Water and Sewer Allowance	LS	1	$ 25,000.00	$ 25,000.00	$ 250,000.00	$ 250,000.00
94	Street Light Conduit, 4" PVC Schedule 40, 4' deep	LF	90	$ 30.00	$ 2,700.00	$ 30.00	$ 2,700.00
95	Salvage Existing Signs	LS	1	$ 1,700.00	$ 1,700.00	$ 1,000.00	$ 1,000.00
96	New Signs	SF	64	$ 26.00	$ 1,664.00	$ 25.00	$ 1,600.00
97	Sign Post, U-Channel	LF	108	$ 15.50	$ 1,674.00	$ 15.00	$ 1,620.00
98	Modify Steps & Railing at Peabody Parking Structure	LS	1	$ 4,200.00	$ 4,200.00	$ 10,000.00	$ 10,000.00
99	Removing Street Light Foundation	EA	8	$ 950.00	$ 7,600.00	$ 800.00	$ 6,400.00
100	Parking Meter Post	EA	2	$ 1,700.00	$ 3,400.00	$ 200.00	$ 400.00
101	Inlet Filter	EA	10	$ 230.00	$ 2,300.00	$ 150.00	$ 1,500.00
102	Road Closure Assessment; _____ Days @ $5,000//Day	DAYS	5,000	52	$ 260,000.00	50	$ 250,000.00
103	Traffic Maintenance and Control; _____ Days @ $500/Day (Minimum)	DAYS	5,000	52	$ 260,000.00	50	$ 250,000.00
	SUBTOTAL GENERAL PAY ITEMS				$ 669,638.00		$ 952,220.00
	ALTERNATE #1						
104	DEDUCT - Intergral Curb at Back of Walk for Pedetrian Protection	LF	-126	$ 76.50	$ (9,639.00)	$ 75.00	$ (9,450.00)
105	Low Ornamental Fence	LF	126	$ 158.00	$ 19,908.00	$ 500.00	$ 63,000.00
	SUBTOTAL ALTERNATE #1 ITEMS				$ 10,269.00		$ 53,550.00
	NON-CONTRACTUAL CITY COSTS (NOT PAY ITEMS)						
	New DTE Pedestrian Street Light Installation	EA	7		$ -		$ -
	New DTE Intersection Light Pole Installation	EA	3		$ -		$ -
	SUBTOTAL NON-CONTRACTUAL CITY COSTS (NOT PAY ITEMS)				$ -		$ -
			Total Bid		**$ 1,972,258.35**		**$ 3,658,807.52**

CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

May 16, 2023

City of Birmingham
151 Martin Street
Birmingham, MI 48012

Attn: Ms. Melissa A. Coatta, P.E.
City Engineer

Re: Recommendation for Bid Award
Brown Street Paving Project - Contract #5-23P
NFE Job #D162-01

Dear Ms. Coatta,

Bids for the subject project were received, opened, and read on Tuesday, May 2nd, 2023, at 2:00 p.m. at City Hall. A total of two (2) bids were received and read. The bids have been tabulated, checked, and are in order. The low bidder for the project is V.I.L. Construction, Inc. (V.I.L.), with a total base bid amount of $1,961,989.35. We note that the bid amount is substantially greater than the Engineer's Opinion of Probable Cost, which was $1,081,512.00, by an amount of $880,477.35, which represents an approximate 80% increase over the estimated cost for the project.

Our office has experience working with V.I.L. on previous successful projects in Birmingham and other surrounding communities. We have reviewed the references included with their bid and find them to be reputable and acceptable. Based on previous experience we are confident in V.I.L.'s ability to perform the scope of work for this project.

A post-bid interview was conducted with Anthony Vani from V.I.L. to confirm the project scope and schedule requirements, discuss reasons for relatively high costs, and review potential value-engineering (VE) options to help reduce costs. Mr. Vani confirmed he understood the project scope and schedule, and indicated the relatively aggressive schedule was one reason for high costs. Other reasons Mr. Vani discussed included inflation, high labor costs, and a local scarcity for trucking and materials which contributes to scheduling uncertainty. During the meeting, V.I.L. and the city representatives also discussed potential VE options, which included reducing depth of the proposed storm sewer, using crushed concrete instead of limestone for road aggregate base, changing sidewalk planter curbs from exposed aggregate to standard concrete, and changing the road pavement from concrete to asphalt. After V.I.L. provided some additional pricing, it has been determined that the total deduction value for the acceptable VE alternates is $129,459.66, resulting in an adjusted contract value of $1,832,529.69. It should also be noted that the contract will include $240,000 for the pay item: "Road Closure Assessment". While this pay item was included to help evaluate bids and serve as a scheduling metric to determine bonus or penalty payments based on the contractor's work progress, at most only a fraction of this total cost will be paid by the City.

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MI 48342-5032
WWW.NOWAKFRAUS.COM
VOICE: 248.332.7931
FAX: 248.332.8257

In summary, in our capacity as Design and Consulting Engineers for the City of Birmingham, we have evaluated the bid pricing and contractor qualifications received from V.I.L. and are confident on their ability to perform the scope of work for this project. Although the bid pricing was substantially higher than estimated costs, implementation of VE alternates will help reduce overall costs, and we understand the City of Birmingham's desire to complete this project this year in coordination with MDOT's upcoming work in the Woodward Avenue right-of-way at the Brown Street intersection. We therefore recommend that Contract #5-23P for the Brown Street Paving Project be awarded to V.I.L. Construction, Inc. in the amount of **$1,832,529.69.**

Please do not hesitate to contact our office if you have any questions or comments.

Sincerely,

Paul Tulikangas, P.E.
Associate / Engineering Manager

Brett Buchholz, P.E.,
Principal

BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

CITY OF BIRMINGHAM

ENGINEERING DEPARTMENT

Contractor's Name: V.I.L. Construction, Inc. Copy #

7B

BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)
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Appendices:

A.	G2 Consulting Group - Report on Geotechnical Investigation	16 Pages
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C.	EJIW Tree Grate No. 8581	2 Pages

BROWN STREET PAVING PROJECT CONTRACT#5-23(P)

SWORN STATEMENT OF QUALIFICATIONS

In order to provide the City of Birmingham with Contractors and Subcontractors who will carry out the work in a timely and satisfactory manner, a Sworn Statement of Qualifications must be submitted to the Engineering Division, City of Birmingham, prior to the bid opening by close of business, **5:00 p.m., Monday, April 24, 2023**. The qualifications of the General Contractor and Subcontractors to be used on the project will be reviewed on the basis of the proposed bidder's past performance on sewer, water main, and/or paving work of a similar nature for the City of Birmingham and other owners. Those bidders and bidders' subcontractors who are determined not to be suitable to bid on any work shall be notified in writing of the determination before the bids are opened.

The Bidder must answer all questions. If more space is needed to complete a question, attach a separate sheet.

Name: V.I.L. Construction, Inc.

Address: 6670 Sims Drive
Sterling Heights, MI 48313

Telephone: (586) 979-6020 Fax: (586) 979-7355 Email: a_vani@comcast.net

Website:

Number of Years Operating Under Your Present Name: 51

General Nature of Work Performed: Underground Utility Installation, Mass Grading, Fine Grading, Restoration, Bank Stabilization, etc...

Number of construction crews **employed by your company** relating to the type of work under this contract: 4

Number of construction personnel that constitutes a crew (foreman, pipe layers, excavator, and loader operators, etc.): 4-6 Depending on the task

Number of construction crews the company **will place on site full-time** in order to complete this project, in its entirety, within the designated time frame: 1-2 Depending on the Operation

The undersigned states that he/she has performed sewer and/or paving work similar in character and condition to that described in the Proposal. List three (3) projects that have been completed over the last three (3) years, including all work performed for the City of Birmingham. The contract amount must be, at minimum, within 50% of the engineer's estimate, except for work that was performed for the City of Birmingham. References provided below the 50% minimum will not be accepted.

REFERENCE PROJECT #1:

Project Name: Southfield Section 24

Owner: City of Southfield

Contact Person: Matt Slicker Telephone No.: (248) 454-6300

Contract Amount: $ 10,700,000

Final Contract Price: $ 10,800,000

Date Completed: November 2020

Description of Work Performed:

2 Miles of concrete roadway reconstruction

2 Miles of Water Main with 300 water services

7,000 lf of sanitary sewer

6,000 lf of storm sewer

REFERENCE PROJECT#2:

Project Name: Bridgeman Reconstruction

Owner: City of Farmington Hills

Contact Person: John Beisel Telephone No.: (248) 871-2533

Contract Amount: $ 980,000

Final Contract Price: $ 980,000

Date Completed: October 2020

Description of Work Performed:

Installed 1,600 lf of sanitary sewer, 500 lf of storm sewer and half a mile of road reconstruction

REFERENCE PROJECT #3:

Project Name: West Oakland Reconstruction

Owner: City of Farmington

Contact Person: Matt Parks Telephone No.: (734) 522-6711

Contract Amount: $ 1,500,000

Final Contract Price: $ 1,500,000

Date Completed: September 2022

Description of Work Performed:

Reconstruction with Water Main and Misc. Storm Sewer 2,000 LF of roadway

List major work presently under contract:

Name of Project	Percent Complete	Owner	Engineer	Contract Amount
Neff and Cranford	1 %	City of Grosse Pointe	AEW	$ 2,600,000
Breitmeyer	0 %	City of Mount Clemens	AEW	$ 1,678,000
Birmingham Parking Lot	90 %	City of Birmingham	HRC	$ 235,000
Farmington Road (Sub)	10 %	MDOT	HRC	$ 500,000 (VIL Work)
Bear Creek Culvert	0 %	RCOC	RCOC	$ 836,000

SUBCONTRACTOR INFORMATION:

The Bidder agrees to use the following subcontractors for the performance of the work of their respective trades for this project, unless otherwise approved in writing by the Owner prior to signing of the contract. Contractor shall include, at a minimum, the subcontractor that will perform any work with a total value of 25% or more of the contract total value.

Name, Address & Telephone Number of Subcontractor	Type of Work By Subcontractor	Percentage of Contract Value by Subcontractor
GM & Sons, Inc. 46900 West Road Novi, MI 48377	Concrete	250,000

CONTRACTOR QUESTIONAIRE:

Have you, at any time, failed to complete a contract?

____ Yes __X__ No

Are there any judgements, claims or suits pending by or outstanding against you?

____ Yes __X__ No

If the answer to either question is Yes, submit details on separate sheet.

List all judgments against your firm due to construction contracts in the last three (3) years. Include separate pages if necessary.

CERTIFICATION

I hereby certify that the above information is true and correct this 19th day of April, 2023.

By: V.I.L. Construction, Inc.

Signature and Title: , President

Written Name: Anthony Vani

Address: 6670 Sims Drive, Sterling Heights, MI 48313

STATE OF MICHIGAN)
) SS
County of Macomb)

Subscribed and Sworn to before me, a Notary Public, in and for Macomb County, Michigan,

on this 19th day of April, 2023.

Notary Public

In and for the County of Macomb, Michigan.

My commission Expires: 2-13-27

INSTRUCTIONS

Complete all requested information on this form and submit it to the City of Birmingham at the information shown below before the close of business **5:00 p.m., Monday April 24, 2023**.

Fax: (248) 530-1290
Email: mcoatta@bhamgov.org,

Receipt of the form may be confirmed by calling (248) 530-1850.

Copies of this Sworn Statement form will be sent by facsimile or email to prospective bidders upon request.

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

PROPOSAL

BROWN STREET PAVING PROJECT

CONTRACT #5-23(P)

TO THE CITY OF BIRMINGHAM, MICHIGAN:

The undersigned, being familiarized with the local conditions affecting the cost of the work and the Contract Documents including all those sections listed in the Index, hereby proposes to perform everything noted herein and to provide and furnish all labor, materials, except as otherwise specified, necessary to construct and complete in a workmanlike manner all of the work required to be performed for **2023 Brown Street Paving Project #5-23(P)** in conformance with the requirements shown or implied in the above contract documents all of which are hereby made a part of this contract at the following unit prices as here stated and further defined in the specifications.

Bidder has examined copies of all Contract Documents and of following addenda:

Date		Addendum Number
04-26-23		1
04-28-23		2
04-28-23		3

Bidder must write out in words the unit price of each item on the line provided under each pay item.

SEWER PAY ITEMS					
No.	**ITEMS FOR BID**	**QTY**	**UNITS**	**UNIT PRICE**	**AMOUNT**
1.	15" Storm Sewer, C76, CL-IV, Trench A @ Three Hundred Forty-Six Dollars	212	LF	346.00	73,352.00
2.	12" Storm Sewer, C76, CL-IV, Trench A @ Two Hundred Seventy-Four Dollars	54	LF	274.00	14,796.00
3.	10" Storm Sewer, PVC SDR 26, Trench A @ Two Hundred Sixty-Two Dollars	67	LF	262.00	17,554.00
4.	New 6'-0" Diameter Combined Sewer Manhole (Construct Online) @ Fifteen Thousand Nine Hundred Dollars	1	EA	15,900.00	15,900.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
5	New 4'-0" Diameter Storm Manhole w/ 2' Sump & 15" Dia. Gas Trap (Construct Online) @ Eight Thousand Eight Hundred Dollars	1	EA	8,800.00	8,800.00
6.	New 4'-0" Diameter Storm Manhole @ Six Thousand Nine Hundred Dollars	4	EA	6,900.00	27,600.00
7.	New 12" Diameter PVC Landscape Drain w/ Metal Bee-Hive Grate @ Two Thousand Five Hundred Dollars	2	EA	2,500.00	5,000.00
8.	6" Perforated Pipe Underdrain (w/ Trench Detail) @ Forty-Six Dollars	365	LF	46.00	16,790.00
9.	4" Perforated Pipe Underdrain (w/ Geotextile Sock) @ Forty-Three Dollars	220	LF	43.00	9,460.00
10.	Sewer Tap, 12" @ Two Thousand Three Hundred Dollars	1	EA	2,300.00	2,300.00
11.	Sewer Tap, 6" @ One Thousand Nine Hundred Dollars	2	EA	1,900.00	3,800.00
12.	Sewer Tap, 4" @ One Thousand Seven Hundred Dollars	1	EA	1,700.00	1,700.00
13.	Reconstruct Manhole (if and where needed) @ Two Hundred Fifty Dollars	15	VF	250.00	3,750.00
14.	Remove & Replace Structure Cover (as directed by City) @ Two Dollars and Fifty Cents	825	LB	2.50	2,062.50
15.	Investigate, Adjust & Shift Casting Location @ Four Hundred Fifty Dollars	2	EA	450.00	900.00
16.	Removal and Disposal of Contaminated Material, Type 2 @ One Hundred Sixteen Dollars	25	CY	116.00	2,900.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
17.	Removal and Disposal of Contaminated Material, Type 3 @ Sixty-One Dollars	25	CY	61.00	1,525.00
18.	Remove Ex. 12" Storm Sewer @ Sixty-Nine Dollars	36	LF	69.00	2,484.00
19.	Abandon Ex. 12" Storm Sewer @ Seventy-Two Dollars	36	LF	72.00	2,592.00
20.	Bulkhead Structure, 12" @ Five Hundred Fifty Dollars	3	EA	550.00	1,650.00
21.	Bulkhead Pipe, 12" @ Four Hundred Seventy-Five Dollars	1	EA	475.00	475.00
22.	Bulkhead Pipe, 10" @ Four Hundred Fifty Dollars	1	EA	450.00	450.00
23.	Bulkhead Pipe, 8" @ Four Hundred Twenty-Five Dollars	1	EA	425.00	425.00
24.	CCTV Sewer Inspection @ One Thousand Six Hundred Dollars	1	LS	1,600.00	1,600.00
	SUBTOTAL SEWER PAY ITEMS			$ 217,865.50	

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

WATER MAIN PAY ITEMS

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
25.	New Water Service, 1.5", Trench A, Copper @ Twenty-Eight Dollars and Fifty Cents	25	LF	28.50	712.50
26.	Water Service Connection, 1.5" @ Five Thousand One Hundred Dollars	1	EA	5,100.00	5,100.00
	SUBTOTAL WATER MAIN PAY ITEMS			$ 5,812.50	

PAVING PAY ITEMS

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
27.	Station Grading @Twenty-Eight Thousand Eight Hundred Dollars	4.4	STA	28,800.00	126,720.00
28.	Subgrade Undercutting @ Ninety-Four Dollars	100	CY	94.00	9,400.00
29.	Excavation for Tree Wells @ Forty-Three Dollars and Fifty Cents	125	CY	43.50	5,437.50
30.	Removing Concrete Sidewalk & Ramp (saw cutting included) @ Fifty-One Dollars and Seventy-Five Cents	835	SY	51.75	43,211.25
31.	Removing Pavement Full Depth (Curb & Gutter included) @ Fifty-One Dollars and Seventy-Five Cents	1,970	SY	51.75	101,947.50
32.	Aggregate Base, MDOT 21AA Limestone, 8" @ Fifty-Eight Dollars and Fifty Cents	1,710	SY	58.50	100,035.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
33.	Concrete Pavement, Non-reinforced, 9", incl. integral Detail F2 Curb & Gutter @ One Hundred Fifty-Six Dollars	1,585	SY	156.00	247,260.00
34.	Furnish & Install Tree Grate @ Two Thousand Nine Hundred Dollars	3	EA	2,900.00	8,700.00
35.	Concrete Sidewalk, 4", Scoring Treatment @ Twelve Dollars and Twenty-Five Cents	6,445	SF	12.25	78,951.25
36.	Concrete Sidewalk, 6", Scoring Treatment (Includes Ramps) @ Fourteen Dollars and Twenty-Five Cents	855	SF	14.25	12,183.75
37.	Concrete Sidewalk, 8", Scoring Treatment @ Fifteen Dollars and Twenty-Five Cents	400	SF	15.25	6,100.00
38.	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment @ Twenty-Five Dollars and Fifty Cents	1,698	SF	25.50	43,299.00
39.	Concrete Sidewalk, 6", Exposed Aggregate, Scoring Treatment @ Thirty Dollars and Fifty Cents	217	SF	30.50	6,618.50
40.	Handicap Ramp Truncated Domes (per ramp) @ One Hundred Seven Dollars	192	SF	107.00	20,544.00
41.	Concrete Curb & Gutter, 18", MDOT Type F2, Modified @ Fifty-One Dollars	231	LF	51.00	11,781.00
42.	20" Hgt. Planter Curb, Exposed Aggregate @ One Hundred Forty-Seven Dollars	512	LF	147.00	75,264.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
43.	12" Hgt. Planter Curb, Exposed Aggregate @ One Hundred Thirty-Seven Dollars	144	LF	137.00	19,728.00
44.	Integral Curb at Back of Walk for Pedestrian Protection @ Seventy-Six Dollars and Fifty Cents	126	LF	76.50	9,639.00
45.	Remove Ex. 4" Skip Lane Markings on Brown Street (west of Old Woodward) @ Two Dollars	90	LF	2.00	180.00
46.	Pavement Marking, Polyurea, 6 inch, Solid Lane Line, White @ Two Dollars and Seventy Cents	190	LF	2.70	513.00
47.	Pavement Marking, Polyurea, 6 inch, Dotted Lane Line, White @ Two Dollars and Seventy Cents	100	LF	2.70	270.00
48.	Pavement Marking, Polyurea, 4 inch, White @ One Dollar and Eighty Cents	228	LF	1.80	410.40
49.	Pavement Marking, Polyurea, 4 inch, Yellow @ One Dollar and Eighty Cents	515	LF	1.80	927.00
50.	Pavement Marking, Polyurea, 24 inch Stop Bar, White @ Fourteen Dollars	55	LF	14.00	770.00
51.	Pavement Marking, Polyurea, 24 inch Crosshatching, White @ Fourteen Dollars	384	LF	14.00	5,376.00
52.	Pavement Marking, Polyurea, Rt Turn Arrow, White @ Two Hundred Dollars	3	EA	200.00	600.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
53.	Pavement Marking, Polyurea, Lt Turn Arrow, White @ Two Hundred Dollars	1	EA	200.00	200.00
54.	Pavement Marking, Polyurea, Straight/Left Arrow, White @ Two Hundred Twenty Dollars	2	EA	220.00	440.00
55.	Pavement Marking, Polyurea, Only, White @ Two Hundred Dollars	2	EA	200.00	400.00
56.	Recessing Pavt Mkrg, Longit @ One Dollar	1,023	LF	1.00	1,023.00
57.	Recessing Pavt Mkrg, Transv @ Three Dollars	1,450	SF	3.00	4,350.00
58.	Adjust Structure Cover @ Four Hundred Fifty Dollars	8	EA	450.00	3,600.00
59.	Cold Patch @ Two Hundred One Dollars	25	TON	201.00	5,025.00
60.	Maintenance Aggregate @ Nineteen Thousand Five Hundred Dollars	1	LS	UNIT PRICE 19,500.00	AMOUNT 19,500.00
	SUBTOTAL PAVING PAY ITEMS			$ 970,404.15	

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

IRRIGATION PAY ITEMS

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
61.	Meter Pit @ Eight Thousand Seven Hundred Dollars	1	EA	8,700.00	8,700.00
62.	Sprinkler Assembly @ One Hundred Dollars	76	EA	100.00	7,600.00
63.	Valve Assembly @ Eight Hundred Dollars	4	EA	800.00	3,200.00
64.	1-1/2 inch PVC Mainline @ Eighteen Dollars and Twenty-Five Cents	202	LF	18.25	3,686.50
65.	1-1/2 inch Polyethylene lateral line @ Nine Dollars	5	LF	9.00	45.00
66.	1 inch Polyethylene lateral line @ One Dollar and Twenty Cents	936	LF	1.20	1,123.20
67.	Communication Cable - two wire @ Two Dollars	202	LF	2.00	404.00
68.	Irrigation Controller @ Six Thousand Dollars	1	EA	6,000.00	6,000.00
69.	Rain Sensor @ Three Hundred Dollars	1	EA	300.00	300.00
70.	Two Wire Decoders @ Six Hundred Twenty-Five Dollars	4	EA	625.00	2,500.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
71.	4" PVC Sleeve @ Twenty-Five Dollars	145	LF	25.00	3,625.00
72.	2" PVC Sleeve @ Eleven Dollars	278	LF	11.00	3,058.00
	SUBTOTAL IRRIGATION PAY ITEMS			$ 40,241.70	

LANDSCAPE PAY ITEMS					
No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
73.	Structural Soil Mix (30" depth) @ Three Dollars	5,073	CFT	3.00	15,219.00
74.	Organic Plant Soil Mix - Plant Beds (24" depth) @ Three Dollars and Fifty Cents	3,713	CFT	3.50	12,995.50
75.	Native MI Stone (3"-6") choked in w/ decorative aggregate @ Two Thousand Dollars	1	LS	2,000.00	2,000.00
76.	Shredded Hardwood Mulch (3" depth) @ Eighty Dollars	24	CY	80.00	1,920.00
77.	TILIA AMERICANA 'MCKSENTRY' (3-3.5" CAL.) @ One Thousand Dollars	3	EA	1,000.00	3,000.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
78.	ULMUS AMERICANA 'PRINCETON' (3-3.5" CAL.) @ Nine Hundred Dollars	4	EA	900.00	3,600.00
79.	ZELKOVA SERRATA 'JFS-KW1' (3-3.5" CAL.) @ Nine Hundred Dollars	3	EA	900.00	2,700.00
80.	MALUS X 'JEFSPIRE' (2" CAL.) @ Seven Hundred Dollars	3	EA	700.00	2,100.00
81.	HYDRANGEA PANICULATA 'JANE' (#5) @ Ninety-Five Dollars	31	EA	95.00	2,945.00
82.	ILEX GLABRA 'SHAMROCK' (#3) @ Ninety-Five Dollars	6	EA	95.00	570.00
83.	JUNIPERUS SQUAMATA 'BLUE STAR' (#3) @ Seventy Dollars	18	EA	70.00	1,260.00
84.	PINUS MUGO 'HONEYCOMB' (#3) @ Seventy-Five Dollars	21	EA	75.00	1,575.00
85.	GERANIUM X 'ROZANNE' (#1) @ Twenty Dollars	24	EA	20.00	480.00
86.	PACHYSANDRA TERMINALIS 'GREEN CARPET' (24/FLAT) @ Two Dollars and Seventy-Five Cents	892	EA	2.75	2,453.00
87.	PEROVSKIA 'LITTLE SPIRE' (#2) @ Twenty Dollars	41	EA	20.00	820.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
88.	RUDBECKIA HIRTA (#1) @ Twenty Dollars	35	EA	20.00	700.00
89.	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' (#2) @ Thirty Dollars	91	EA	30.00	2,730.00
90.	SELSERIA AUTUMNALIS (#1) @ Twenty Dollars	48	EA	20.00	960.00
	SUBTOTAL LANDSCAPE PAY ITEMS			$ 58,027.50	

GENERAL PAY ITEMS

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
91.	Critical Path Time Schedule @ One Thousand Four Hundred Dollars	1	LS	1,400.00	1,400.00
92.	Mobilization, (Max. 5% of Bid) @ Ninety-Eight Thousand Dollars	1	LS	98,000.00	98,000.00
93.	Water and Sewer Allowance @ Twenty-Five Thousand dollars	1	LS	$25,000.00	$25,000.00
94.	Street Light Conduit, 4" PVC Schedule 40, 4' deep @ Thirty Dollars	90	LF	30.00	2,700.00

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
95.	Salvage Existing Signs @ One Thousand Seven Hundred Dollars	1	L;S	1,700.00	1,700.00
96.	New Signs @ Twenty-Six Dollars	64	SF	26.00	1,664.00
97.	Sign Post, U-Channel @ Fifteen Dollars and Fifty Cents	108	LF	15.50	1,674.00
98.	Modify Steps & Railing at Peabody Parking Structure @ Four Thousand Two Hundred Dollars	1	LS	4,200.00	4,200.00
99.	Removing Street Light Foundation @ Nine Hundred Fifty Dollars	8	EA	950.00	7,600.00
100.	Parking Meter Post @ One Thousand Seven Hundred Dollars	2	EA	1,700.00	3,400.00
101.	Inlet Filter @ Two Hundred Thirty Dollars	10	EA	230.00	2,300.00
102.	Road Closure Assessment; 52 Days @ $5,000/Day (See Notes 1 & 2 below)	52	DAYS	$5,000	260,000.00
103.	Traffic Maintenance and Control; 52 Days @ $ 5,000 /Day (See Notes 1 & 2 below)	52	DAYS	5,000.00	260,000.00
	SUBTOTAL GENERAL PAY ITEMS				$ 669,638.00

Note (1) = The quantity for Traffic Maintenance & Control MUST match the number provided for the Road Closure Assessment.
Note (2) = The unit price for Traffic Maintenance & Control MUST be a minimum of $500 per day.

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

ALTERNATE #1					
104.	DEDUCT - Integral Curb at Back of Walk for Pedestrian Protection @ Seventy-Six Dollars and Fifty Cents	-126	LF	76.50	-9,639.00
105.	Low Ornamental Fence @ One Hundred Fifty Eight Dollars	126	LF	158.00	19,908.00
SUBTOTAL ALTERNATE#1 PAY ITEMS				$ 10,269.00	

TOTAL BID:	$ 1,961,989.35

TOTAL BID (WRITE OUT IN WORDS):

One Million Nine Hundred Sixty-One Thousand Nine Hundred Eighty-Nine Dollars and Thirty-Five Cents

Accompanying this proposal is a certified check, bid bond or bank draft in the amount of five (5) percent of the total bid, payable to the City of Birmingham, Michigan, which it is agreed will be forfeited to the City of Birmingham if the undersigned fails to enter into a contract in conformity with the form of contract incorporated herein, and furnish bonds and insurance as specified within twenty-one (21) days after the contract is awarded to the undersigned or withdraws this bid within sixty (60) days of the date hereof.

In submitting this bid, it is understood that the right is reserved by the City of Birmingham, Michigan to reject any or all bids.

The undersigned hereby agrees to execute a contract with the City of Birmingham, Michigan according to the forms attached hereto and furnish the required bonds, all within twenty-one (21) days after the award of the contract; and will fully complete all work as stated under TIME OF COMPLETION and LIQUIDATED DAMAGES in Supplemental Instructions to Bidders.

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

The Bidder will identify the business entity as individuals, or if doing business under assumed name, indicate assumed name, partnership (naming partners) and indicate official capacity of persons executing proposal and bid.

Contractor's Name V.I.L. Construction, Inc.

Street Address 6670 Sims Drive

City Sterling Heights County Macomb

State/Zip Code MI 48313

Telephone 586-979-6020 Fax 586-979-7355

Date 5-2-2023

Signed by

Print Name: Anthony Vani

Title: President

If a corporation, give state in which incorporated: Michigan

Witnessed:

Print Name: Michael Vani

Name of Superintendent Nicholas Higgins
Supervision & time sequence according to the General Requirements

Give below at least three (3) references as to ability to do work proposed.

Name Matt Slicker Address 555 Hulet Drive, Bloomfield Hills, MI 48303

Firm Hubbell, Roth, and Clark, Inc. Telephone (248) 454-6300

Name Matt Parks Address 34000 Plymouth Road, Livonia, MI 48150

Firm OHM Advisors, Inc. Telephone (734) 522-6711

Name Greg Marker Address 34000 Plymouth Road, Livonia, MI 48150

Firm OHM Advisors, Inc. Telephone (734) 522-6711

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

Give below the last five (5) projects worked on, including those currently in progress, in chronological order. The names need not all be different from those listed above:

Project #1: Name of Project: Long Lake Emergency Sanitary Sewer Repair

Date Started September 2022 Finished Ongoing

Name Christopher Ross Address 555 Hulet Drive, Bloomfield Hills, MI 48303

Firm Hubbell, Roth, and Clark, Inc. Telephone (248) 454-6300

Project #2: Name of Project: Riverside Bank Stabilization - Auburn Hills

Date Started March 2022 Finished Live Stakes installed January 2023

Name Jerry Ashburn Address 2365 Pontiac Road, Ste 201, Auburn Hills, MI

Firm OHM Advisors, Inc. Telephone (248) 751-3100

Project #3: Name of Project: Northwestern Highway Improvements (Subcontract to Proline)

Date Started August 2022 Finished November 2022

Name Matt Slicker Address 555 Hulet Drive, Bloomfield Hills, MI 48303

Firm Hubbell, Roth, and Clark, Inc. Telephone (248) 454-6300

Project #4: Name of Project: Orchard Lake Over Tributary Culvert Replacement

Date Started July 2022 Finished September 2022

Name Mason Ali Address 31001 Lahser Road, Beverly Hills, MI 48025

Firm RCOC Telephone (248) 858-4804

Project #5: Name of Project: Union Lake Culvert Replacement

Date Started June 2022 Finished October 2022

Name Mason Ali Address 31001 Lahser Road, Beverly Hills, MI 48025

Firm RCOC Telephone (248) 858-4804

FOR REFERENCE ONLY. REFER TO SECTION 101 CONTRACT PROPOSAL FOR CONTRACT PAY ITEMS AND COSTS.

Give below all the subcontractors to be used on the project: If additional space is necessary, please use the back of this page. Should the contractor wish to use any subcontractors that are not on this list after award, the contractor shall submit a written request to the Engineer and obtain authorization for same, prior to proceeding. All subcontractors not listed must receive written approval from the City of Birmingham, prior to working on this project.

Name Hugh A. Gallegos Address 46900 West Road, Novi, MI 48377

Firm GM & Sons, Inc. Telephone 248-956-7939

Type of Work to be Performed: Concrete Paving and Concrete Sidewalk

Name Greg Moody Address 1968 Barrett Drive, Troy, MI 48084

Firm PK Contracting Telephone 248-362-2130

Type of Work to be Performed: Pavement Markings

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

END OF SECTION

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)
V.I.L. Construction, Inc.
6670 Sims Road
Sterling Heights, MI 48313

SURETY:
(Name, legal status and principal place of business)
Hartford Accident and Indemnity Company
One Hartford Plaza
Hartford, CT 06155-0001

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)
City of Birmingham
151 Martin Street
Birmingham, MI 48012

BOND AMOUNT: Five Percent (5%) of Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)
2023 Brown Street Paving Project - Contract #5-23 (P) - Street Reconstruction

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this **1st** day of **May, 2023**

(Witness)

(Witness)

V.I.L. Construction, Inc.
(Principal) *(Seal)*
(Title) Anthony Vari, President

Hartford Accident and Indemnity Company
(Surety) *(Seal)*
(Title) **Susan L Small, Attorney-In-Fact**

Init.

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POWER OF ATTORNEY

Direct Inquiries/Claims to:
THE HARTFORD
BOND, T-11
One Hartford Plaza
Hartford, Connecticut 06155
Bond.Claims@thehartford.com
call: 888-266-3488 or fax: 860-757-5835

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Name: VTC INSURANCE GROUP
Agency Code: 35-351225

- [X] Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- [X] Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
- [X] Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
- [ ] Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- [ ] Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- [ ] Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- [ ] Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- [ ] Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, up to the amount of Unlimited :

Jeffrey A. Chandler, Alan P. Chandler, Ian J. Donald, Bryan Formsma, Wendy L. Hingson, Kathleen M Irelan, Meagan L. Reynolds, Susan L. Small, Robert Trobec, T.L. Young of TROY, Michigan

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by ☒, and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on May 23, 2016 the Companies have caused these presents to be signed by its Assistant Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.

Shelby Wiggins, Assistant Secretary

Joelle L. LaPierre, Assistant Vice President

STATE OF FLORIDA
COUNTY OF SEMINOLE } **ss.** Lake Mary

On this 20th day of ! "#, 2021, before me personally came Joelle LaPierre, to me known, who being by me duly sworn, did depose and say: that (s)he resides in Seminole County, State of Florida; that (s)he is the Assistant Vice President of the Companies, the corporations described in and which executed the above instrument; that (s)he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that (s)he signed his/her name thereto by like authority.

Jessica Ciccone
My Commission HH 122280
Expires June 20, 2025

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of May 1st, 2023.

Signed and sealed in Lake Mary, Florida.

Keith D. Dozois, Assistant Vice President

PROPOSAL

BROWN STREET PAVING PROJECT

CONTRACT #5-23(P)

TO THE CITY OF BIRMINGHAM, MICHIGAN:

The undersigned, being familiarized with the local conditions affecting the cost of the work and the Contract Documents including all those sections listed in the Index, hereby proposes to perform everything noted herein and to provide and furnish all labor, materials, except as otherwise specified, necessary to construct and complete in a workmanlike manner all of the work required to be performed for **2023 Brown Street Paving Project #5-23(P)** in conformance with the requirements shown or implied in the above contract documents all of which are hereby made a part of this contract at the following unit prices as here stated and further defined in the specifications.

Bidder has examined copies of all Contract Documents and of following addenda:

Date		Addendum Number
04-26-23		1
04-28-23		2
04-28-23		3
05-15-23		4

Bidder must write out in words the unit price of each item on the line provided under each pay item.

SEWER PAY ITEMS					
No.	**ITEMS FOR BID**	**QTY**	**UNITS**	**UNIT PRICE**	**AMOUNT**
1.	15" Storm Sewer, C76, CL-IV, Trench A @_____	212	LF	$346.00	$73,352.00
2.	12" Storm Sewer, C76, CL-IV, Trench A @_____	54	LF	274.00	$14,796.00
3.	10" Storm Sewer, PVC SDR 26, Trench A @_____	67	LF	262.00	$7,074.00
4.	New 6'-0" Diameter Combined Sewer Manhole (Construct Online) @_____	1	EA	$15,900.00	$15,900.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
5	New 4'-0" Diameter Storm Manhole w/ 2' Sump & 15" Dia. Gas Trap (Construct Online) @_____	1	EA	$8,800.00	$8,800.00
6.	New 4'-0" Diameter Storm Manhole @_____	4	EA	$6,900.00	$27,600.00
7.	New 12" Diameter PVC Landscape Drain w/ Metal Bee-Hive Grate @_____	2	EA	$2,500.00	$5,000.00
8.	6" Perforated Pipe Underdrain (w/ Trench Detail) @_____	365	LF	$46.00	$16,790.00
9.	4" Perforated Pipe Underdrain (w/ Geotextile Sock) @_____	220	LF	$43.00	$9,460.00
10.	Sewer Tap, 12" @_____	1	EA	$2,300.00	$2,300.00
11.	Sewer Tap, 6" @_____	2	EA	$1,900.00	$3,800.00
12.	Sewer Tap, 4" @_____	1	EA	$1,700.00	$1,700.00
13.	Reconstruct Manhole (if and where needed) @_____	15	VF	$250.00	$3,750.00
14.	Remove & Replace Structure Cover (as directed by City) @_____	825	LB	$2.50	$2,062.50
15.	Investigate, Adjust & Shift Casting Location @_____	2	EA	$450.00	$900.00
16.	Removal and Disposal of Contaminated Material, Type 2 @_____	25	CY	$116.00	$2,900.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
17.	Removal and Disposal of Contaminated Material, Type 3 @_____	25	CY	$61.00	$1,525.00
18.	Remove Ex. 12" Storm Sewer @_____	36	LF	$69.00	$2,484.00
19.	Abandon Ex. 12" Storm Sewer @_____	36	LF	$72.00	$2,592.00
20.	Bulkhead Structure, 12" @_____	3	EA	$550.00	$1,650.00
21.	Bulkhead Pipe, 12" @_____	1	EA	$475.00	$475.00
22.	Bulkhead Pipe, 10" @_____	1	EA	$450.00	$450.00
23.	Bulkhead Pipe, 8" @_____	1	EA	$425.00	$425.00
24.	CCTV Sewer Inspection @_____	1	LS	$1,600.00	$1,600.00
SUBTOTAL SEWER PAY ITEMS				$217,865.50	

WATER MAIN PAY ITEMS					
No.	**ITEMS FOR BID**	**QTY**	**UNITS**	**UNIT PRICE**	**AMOUNT**
25.	New Water Service, 1.5", Trench A, Copper @_____	25	LF	$28.50	$712.50
26.	Water Service Connection, 1.5" @_____	1	EA	$5,100.00	$5,100.00
SUBTOTAL WATER MAIN PAY ITEMS				$5,812.50	

PAVING PAY ITEMS					
No.	**ITEMS FOR BID**	**QTY**	**UNITS**	**UNIT PRICE**	**AMOUNT**
27.	Station Grading @_____	4.4	STA	$28,000.00	$126,720.00
28.	Subgrade Undercutting @_____	100	CY	$94.00	$9,400.00
29.	Excavation for Tree Wells @_____	125	CY	$43.50	$5,437.50
30.	Removing Concrete Sidewalk & Ramp (saw cutting included) @_____	835	SY	$51.75	$43,211.25
31.	Removing Pavement Full Depth (Curb & Gutter included) @_____	1,970	SY	$51.75	$101,947.50
*32.	Aggregate Base, MDOT 21AA Crushed Concrete, 8" @_____	1,710	SY	$55.85	$95,503.50

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
*33.	HMA 7" @_____	1,585	SY	$104.50	$165,632.50
34.	Furnish & Install Tree Grate @_____	3	EA	$2,900.00	$8,700.00
35.	Concrete Sidewalk, 4", Scoring Treatment @_____	6,445	SF	$12.25	$78,951.25
36.	Concrete Sidewalk, 6", Scoring Treatment (Includes Ramps) @_____	855	SF	$14.25	$12,183.75
37.	Concrete Sidewalk, 8", Scoring Treatment @_____	400	SF	$15.25	$6,100.00
38.	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment @_____	1,698	SF	$25.50	$43,299.00
39.	Concrete Sidewalk, 6", Exposed Aggregate, Scoring Treatment @_____	217	SF	$30.50	$6,618.50
40.	Handicap Ramp Truncated Domes (per ramp) @_____	192	SF	$107.00	$20,544.00
*41.	Concrete Curb & Gutter, 18", MDOT Type F2, Modified @_____	1,071	LF	$51.00	$54,621.00
*42.	20" Hgt. Planter Curb, Plain Concrete @_____	512	LF	$88.00	$45,056.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
*43.	12" Hgt. Planter Curb, Plain Concrete @_____	144	LF	$78.00	$11,232.00
44.	Integral Curb at Back of Walk for Pedestrian Protection @_____	126	LF	$76.50	$9,639.00
45.	Remove Ex. 4" Skip Lane Markings on Brown Street (west of Old Woodward) @_____	90	LF	$2.00	$180.00
46.	Pavement Marking, Polyurea, 6 inch, Solid Lane Line, White @_____	190	LF	$2.70	$513.00
47.	Pavement Marking, Polyurea, 6 inch, Dotted Lane Line, White @_____	100	LF	$2.70	$270.00
48.	Pavement Marking, Polyurea, 4 inch, White @_____	228	LF	$1.80	$410.40
49.	Pavement Marking, Polyurea, 4 inch, Yellow @_____	515	LF	$1.80	$927.00
50.	Pavement Marking, Polyurea, 24 inch Stop Bar, White @_____	55	LF	$14.00	$770.00
51.	Pavement Marking, Polyurea, 24 inch Crosshatching, White @_____	384	LF	$14.00	$5,376.00
52.	Pavement Marking, Polyurea, Rt Turn Arrow, White @_____	3	EA	$200.00	$600.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
53.	Pavement Marking, Polyurea, Lt Turn Arrow, White @_____	1	EA	$200.00	$200.00
54.	Pavement Marking, Polyurea, Straight/Left Arrow, White @_____	2	EA	$220.00	$440.00
55.	Pavement Marking, Polyurea, Only, White @_____	2	EA	$200.00	$400.00
56.	Recessing Pavt Mkrg, Longit @_____	1,023	LF	$1.00	$1,023.00
57.	Recessing Pavt Mkrg, Transv @_____	1,450	SF	$3.00	$4,350.00
58.	Adjust Structure Cover @_____	8	EA	$450.00	$3,600.00
59.	Cold Patch @_____	25	TON	$201.00	$5,025.00
60.	Maintenance Aggregate @_____	1	LS	$19,500.00	$19,500.00
***Indicates pay item name or quantity was revised or replaced as part of value-engineering proposal accepted by City of Birmingham.**					
SUBTOTAL PAVING PAY ITEMS				$888,381.15	

IRRIGATION PAY ITEMS

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
61.	Meter Pit @_____	1	EA	$8,700.00	$8,700.00
62.	Sprinkler Assembly @_____	76	EA	$100.00	$7,600.00
63.	Valve Assembly @_____	4	EA	$800.00	$3,200.00
64.	1-1/2 inch PVC Mainline @_____	202	LF	$18.25	$3,686.50
65.	1-1/2 inch Polyethylene lateral line @_____	5	LF	$9.00	$45.00
66.	1 inch Polyethylene lateral line @_____	936	LF	$1.20	$1,123.20
67.	Communication Cable - two wire @_____	202	LF	$2.00	$404.00
68.	Irrigation Controller @_____	1	EA	$6,000.00	$6,000.00
69.	Rain Sensor @_____	1	EA	$300.00	$300.00
70.	Two Wire Decoders @_____	4	EA	$625.00	$2,500.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
71.	4" PVC Sleeve @_____	145	LF	$25.00	$3,625.00
72.	2" PVC Sleeve @_____	278	LF	$11.00	$3,058.00
SUBTOTAL IRRIGATION PAY ITEMS				$40,241.70	

LANDSCAPE PAY ITEMS					
No.	**ITEMS FOR BID**	**QTY**	**UNITS**	**UNIT PRICE**	**AMOUNT**
73.	Structural Soil Mix (30" depth) @_____	5,073	CFT	$3.00	$15,219.00
74.	Organic Plant Soil Mix - Plant Beds (24" depth) @_____	3,713	CFT	$3.50	$12,995.50
75.	Native MI Stone (3"-6") choked in w/ decorative aggregate @_____	1	LS	$2,000.00	$2,000.00
76.	Shredded Hardwood Mulch (3" depth) @_____	24	CY	$80.00	$1,920.00
77.	TILIA AMERICANA 'MCKSENTRY' (3-3.5" CAL.) @_____	3	EA	$1,000.00	$3,000.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
78.	ULMUS AMERICANA 'PRINCETON' (3-3.5" CAL.) @_____	4	EA	$900.00	$3,600.00
79.	ZELKOVA SERRATA 'JFS-KW1' (3-3.5" CAL.) @_____	3	EA	$900.00	$2,700.00
80.	MALUS X 'JEFSPIRE' (2" CAL.) @_____	3	EA	$700.00	$2,100.00
81.	HYDRANGEA PANICULATA 'JANE' (#5) @_____	31	EA	$95.00	$2,945.00
82.	ILEX GLABRA 'SHAMROCK' (#3) @_____	6	EA	$95.00	$570.00
83.	JUNIPERUS SQUAMATA 'BLUE STAR' (#3) @_____	18	EA	$70.00	$1,260.00
84.	PINUS MUGO 'HONEYCOMB' (#3) @_____	21	EA	$75.00	$1,575.00
85.	GERANIUM X 'ROZANNE' (#1) @_____	24	EA	$20.00	$480.00
86.	PACHYSANDRA TERMINALIS 'GREEN CARPET' (24/FLAT) @_____	892	EA	$2.75	$2,453.00
87.	PEROVSKIA 'LITTLE SPIRE' (#2) @_____	41	EA	$20.00	$820.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
88.	RUDBECKIA HIRTA (#1) @_____	35	EA	$20.00	$700.00
89.	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' (#2) @_____	91	EA	$30.00	$2,730.00
90.	SELSERIA AUTUMNALIS (#1) @_____	48	EA	$20.00	$960.00
SUBTOTAL LANDSCAPE PAY ITEMS				$58,027.50	

GENERAL PAY ITEMS

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
91.	Critical Path Time Schedule @_____	1	LS	$1,400.00	$1,400.00
92.	Mobilization, (Max. 5% of Bid) @_____	1	LS	$98,000.00	$98,000.00
93.	Water and Sewer Allowance @_Twenty-Five Thousand dollars	1	LS	$25,000.00	$25,000.00
94.	Street Light Conduit, 4" PVC Schedule 40, 4' deep @_____	90	LF	$30.00	$2,700.00

No.	ITEMS FOR BID	QTY	UNITS	UNIT PRICE	AMOUNT
95.	Salvage Existing Signs @_____	1	LS	$1,700.00	$1,700.00
96.	New Signs @_____	64	SF	$26.00	$1,664.00
97.	Sign Post, U-Channel @_____	108	LF	$15.50	$1,674.00
98.	Modify Steps & Railing at Peabody Parking Structure @_____	1	LS	$4,200.00	$4,200.00
99.	Removing Street Light Foundation @_____	8	EA	$950.00	$7,600.00
100.	Parking Meter Post @_____	2	EA	$1,700.00	$3,400.00
101.	Inlet Filter @_____	10	EA	$230.00	$2,300.00
*102.	Road Closure Assessment; _____ Days @ $5,000/Day (See Notes 1 & 2 below)	48	DAYS	$5,000.00	$240,000.00
*103.	Traffic Maintenance and Control; _____ Days @ $_____/Day (See Notes 1 & 2 below)	48	DAYS	$5,000.00	$240,000.00

***Indicates pay item name or quantity was revised or replaced as part of value-engineering proposal accepted by City of Birmingham.**
Note (1) = The quantity for Traffic Maintenance & Control MUST match the number provided for the Road Closure Assessment.
Note (2) = The unit price for Traffic Maintenance & Control MUST be a minimum of $500 per day.

SUBTOTAL GENERAL PAY ITEMS	$629,638.00

VALUE ENGINEERING CREDITS – Lump Sum (Items not accounted for in revised bid pay items and/or quantities noted above)					
104.	V.E. #2 – Raise Storm Sewer @_____	-1	LS	$5,323.22	-$5,323.22
105.	V.E. #4 – 2" Less Excavation for Pavement @_____	-1	LS	$2,113.44	-$2,113.44
SUBTOTAL V.E. LUMP SUM CREDITS				-$7,436.66	

TOTAL CONTRACT AMOUNT:	$1,832,529.69

TOTAL BID (WRITE OUT IN WORDS):

_____

_____

Accompanying this proposal is a certified check, bid bond or bank draft in the amount of five (5) percent of the total bid, payable to the City of Birmingham, Michigan, which it is agreed will be forfeited to the City of Birmingham if the undersigned fails to enter into a contract in conformity with the form of contract incorporated herein, and furnish bonds and insurance as specified within twenty-one (21) days after the contract is awarded to the undersigned or withdraws this bid within sixty (60) days of the date hereof.

In submitting this bid, it is understood that the right is reserved by the City of Birmingham, Michigan to reject any or all bids.

The undersigned hereby agrees to execute a contract with the City of Birmingham, Michigan according to the forms attached hereto and furnish the required bonds, all within twenty-one (21) days after the award of the contract; and will fully complete all work as stated under TIME OF COMPLETION and LIQUIDATED DAMAGES in Supplemental Instructions to Bidders.

The Bidder will identify the business entity as individuals, or if doing business under assumed name, indicate assumed name, partnership (naming partners) and indicate official capacity of persons executing proposal and bid.

Contractor's Name _____

Street Address _____

City _____ County _____

State/Zip Code _____

Telephone _____ Fax _____

Date _____

Signed by _____

Print Name: _____

Title: _____

If a corporation, give state in which incorporated: _____

Witnessed: _____

Print Name: _____

Name of Superintendent _____
Supervision & time sequence according to the General Requirements

Give below at least three (3) references as to ability to do work proposed.

Name _____ Address _____

Firm _____ Telephone _____

Name _____ Address _____

Firm _____ Telephone _____

Name _____ Address _____

Firm _____ Telephone _____

Give below the last five (5) projects worked on, including those currently in progress, in chronological order. The names need not all be different from those listed above:

Project #1: Name of Project: _____

Date Started _____ Finished _____

Name _____ Address _____

Firm _____ Telephone _____

Project #2: Name of Project: _____

Date Started _____ Finished _____

Name _____ Address _____

Firm _____ Telephone _____

Project #3: Name of Project: _____

Date Started _____ Finished _____

Name _____ Address _____

Firm _____ Telephone _____

Project #4: Name of Project: _____

Date Started _____ Finished _____

Name _____ Address _____

Firm _____ Telephone _____

Project #5: Name of Project: _____

Date Started _____ Finished _____

Name _____ Address _____

Firm _____ Telephone _____

Give below all the subcontractors to be used on the project: If additional space is necessary, please use the back of this page. Should the contractor wish to use any subcontractors that are not on this list after award, the contractor shall submit a written request to the Engineer and obtain authorization for same, prior to proceeding. All subcontractors not listed must receive written approval from the City of Birmingham, prior to working on this project.

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

Name _____ Address _____

Firm _____ Telephone _____

Type of Work to be Performed: _____

END OF SECTION

BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

CONTRACT

THIS AGREEMENT made the _____ day of_____, 2023, by and between the CITY OF BIRMINGHAM, Oakland County, Michigan, hereinafter called the "City", and V.I.L. Construction, Inc. of the City of Sterling Heights, County of Macomb, State of Michigan, hereinafter called the "Contractor", relative to Contract No. 5-23(P), otherwise known as: BROWN STREET PAVING PROJECT in the amount of $1,832,529.69 to wit:

1. The documents consisting of RFP, including all exhibits and the General Contract Conditions, and the Bid shall be incorporated herein by reference, shall become a part of this Agreement, and shall be binding upon both parties hereto. If there is a conflict between these documents, this Agreement shall control, then the RFP, and then the Bid.

2. The Contractor shall furnish all labor, materials, and appliances necessary, and to all the work as set forth in the Proposal, and in accordance with the plans and specifications, which have been made a part of this agreement in a manner, time and place, as therein set forth.

    a. The Contractor shall provide a Performance Bond, which form is attached hereto and incorporated herein by reference to protect the City and conditioned upon the faithful performance of the contract in accordance with the plans, specifications, and terms hereof.

    b. The Contractor shall provide a Payment Bond which form is attached hereto and incorporated herein by reference for the protection of the claimants as defined in MCL §129.201(6) to supply labor or materials to the principal Contractor or his Subcontractor and the prosecution of the work provided for in this contract.

3. Time is of the essence of this agreement. All the work to be performed by the Contractor shall be completed on or before the Time of Completion, as set forth in the Supplemental Instructions to Bidders. The Contractor shall pay to the City as liquidated damages, the amount per day as set forth under Liquidated Damages in the Supplemental Instructions to Bidders, for each calendar day after the date specified under Time of Completion that the work to be performed by the Contractor is not completed. Liquidated damages are established because of the difficulty in ascertaining actual damages which the City might sustain and are not intended as a penalty.

4. The City promises and agrees to pay said Contractor for all labor, materials and appliances supplied, and for all work performed under this agreement at the unit prices provided in the attached Proposals and Specifications.

5. For the faithful performances of the terms of this agreement, said parties respectively bind themselves, their successors, heirs, executors, administrators, and assigns.

IN WITNESS WHEREOF, the parties execute this agreement as of the day and year first written above.

CITY OF BIRMINGHAM

Attest _____
City Clerk

By: _____
Mayor

Witnessed _____

_____

By: _____

_____
Contractor

APPROVAL (1.135 City Code)

_____
City Manager as to Substance

_____
City Attorney as to Form

_____
Director of Finance as to Financial Obligation

_____
City Engineer

SECTION 115
IRAN SANCTIONS ACT CERTIFICATION FORM

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

PREPARED BY
(Print Name)

DATE

TITLE

DATE

AUTHORIZED SIGNATURE

E-MAIL ADDRESS

COMPANY

ADDRESS

PHONE

NAME OF PARENT COMPANY

ADDRESS

PHONE

TAXPAYER I.D.#

BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

PERFORMANCE BOND

KNOW ALL PEOPLE BY THESE PRESENTS that we, the undersigned _____ _____as Principal, and _____as Sureties, are hereby held and firmly bound unto the **CITY OF BIRMINGHAM, MICHIGAN** in the sum of _____ Dollars ($_____), in lawful money of the United States, for the payment of which we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns this _____ day of _____, 2023.

WHEREAS, the above bounded Principal has entered a certain written contract with the above-named City of Birmingham, Michigan dated _____ day of _____, 2023 for the construction of _____ _____ _____, which contract is hereby referred to and made a part hereof as fully and to the same extent as if the same were entirely written herein,

AND THE SAID SURETY, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder of the specifications accompanying the same shall in anywise affects its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work or to the specifications.

NOW, THEREFORE, the condition of the above obligation is such that if the Principal shall fully perform the annexed contract according to the terms thereof, or as such terms may be changed or modified by mutual agreement, and shall guarantee all work furnished against all defects and incidental damage to other property for a period of one (1) year following final acceptance of the work, then this obligation shall be void, otherwise the same shall remain in full force and effect.

This Bond is provided in compliance with and subject to the provisions of Act 213 of the Public Acts of Michigan for 1963, as amended by Act 351 of the Public Acts of Michigan for 1972, also known as MCL §129.201 et. seq.

WITNESSED:

_____ _____

_____ _____

_____ _____
Principal

_____

_____

_____

BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

PAYMENT BOND

KNOW ALL PEOPLE BY THESE PRESENTS, that we _____ _____of the _____ _____ hereinafter called the "Principal" and _____ _____ hereinafter called the "Surety", are held and firmly bound unto those persons known as "Claimants", as defined in MCL §129.206(6) supplying labor or materials to the Principal or his subcontractors and the prosecution of the work provided for in a certain Contract by and between the City of Birmingham and the Principal in the sum of _____ Dollars ($_____), in lawful money of the United States, for the payment whereof, we bid ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally this _____ day of _____, 2023.

WHEREAS the above named Principal has entered into a Contract with the CITY OF BIRMINGHAM, MICHIGAN dated the _____ day of _____, 2023, wherein said principal has covenanted and agreed as follows, to wit:

To furnish all the labor and materials _____

_____

_____

and,

WHEREAS this Bond is given in compliance with and subject to the provisions of Act No. 213 of the Public Acts of Michigan for 1963, as amended by Act. No. 351 of the Public Acts of Michigan for 1972, also known as MCL §129.201 et seq.

NOW, THEREFORE, the condition of the above obligation is such that if all persons or claimants as defined in Public Act 213 of 1963 supplying labor or materials to the principal contractor or his subcontractors in the prosecution of the work provided for in the contract are paid, the obligation of this Bond shall be void; otherwise, it shall be in full force and effect.

WITNESSED:

_____

_____

_____

_____

_____

_____
Principal

_____

_____

_____
Surety

To: CITY OF BIRMINGHAM
151 MARTIN
P.O. BOX 3001
BIRMINGHAM, MI 48012-3001

Date Submitted: _____

Date Received: _____

REQUEST FOR PARTIAL PAYMENT

Partial Payment Request # ____

The undersigned (the "Contractor") hereby requests payment for work performed on BROWN STREET PAVING PROJECT- CONTRACT #5-23(P) for the period beginning _____ and ending ____ _____. Attached is an itemized list of completed quantities delivered to date.

During the above period, did Contractor incur additional costs for labor or materials because the bid package was missing important information? _____ (if yes, you must provide details of the additional costs and the missing information).

During the above period, did Contractor incur additional costs for labor or materials because the bid package contained information that was not true? _____ (if yes, you must provide details of the additional costs and the untrue statements).

During the above period, did Contractor incur additional costs for labor or materials because the site conditions were different from what you expected? _____ (if yes, you must provide details of the additional costs and the site conditions, both what you expected and what you encountered).

During the above period, did Contractor incur additional costs for labor or materials because of any reasons not mentioned above? _____ (if yes, you must provide details of the additional costs and the reasons the same were incurred).

The above does not include additional work through work directives issued by the City of Birmingham as described on the attached or as covered by an agreed basis of payment attached. _____.

Contractor hereby certifies, represents and warrants that all suppliers, subcontractors and employees have been paid in full for all materials and labor provided on the job during the above period. Contractor certifies, represents and warrants that there have been no change orders issued or requested during the above period, except for the following:_____

_____.

Contractor certifies, represents and warrants that Contractor will never request payments, other than the request made in this form, for any work performed or materials provided during the above period, except for the following unresolved items: _____

_____.

Attached are the following documents
Further detailing the above.

1. _____

2. _____

3. _____

Contractor:

_____
(Company or Contractor Name)

_____
(Signature of Officer of the Company)

_____
Type or Print Name and Title

CONTRACTOR'S AFFIDAVIT

To: CITY OF BIRMINGHAM
151 MARTIN ST.
P.O. BOX 3001
BIRMINGHAM, MI 48012-3001

Date Submitted_____

Date Received_____

REQUEST FOR FINAL PAYMENT

Payment Request # _____

The undersigned _____
Name of Contractor

hereby represents that on _____ he/she (it) was awarded a contract by
Date

The City of Birmingham hereafter called the Owner to complete construction, in accordance with the terms and conditions of Contract No. 5-23(P), Contract Name BROWN STREET PAVING PROJECT; and the undersigned further represent that the subject work has now been accomplished and the said contract has now been completed.

The undersigned hereby warrants and certifies that all of his/her (its) indebtedness arising by reason of the said contract has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for labor and material used in accomplishing the said contract, have been fully paid or satisfactorily settled. The undersigned further agrees that if any such claim should hereafter arise, he/she (it) shall assume responsibility for the same immediately upon request to do so by the Owner.

The undersigned, for a valuable consideration, the receipt of which is hereby acknowledged, does further hereby waive, release and relinquish any and all claims or right of lien which the undersigned now has or may hereafter acquire upon the subject premises for labor and material used in accomplishing said project owned by the Owner.

This affidavit is freely and voluntarily given with full knowledge of the facts on this ____ day of _____, 2023.

Company or Contractor Name:_____

Signature of Officer of Company:_____

Type or Print Name and Title: _____ _____
Name Title

Subscribed and sworn to before me, a Notary Public in and for _____County,

Michigan on this _____ day of _____, 2023.

_____, Notary Public

My commission expires: _____

SWORN STATEMENT

STATE OF MICHIGAN)
) ss:
COUNTY OF OAKLAND)

_____ , being duly sworn, deposes and says that _____ is the Contractor for an improvement to the following described real property situated in the County of Oakland, City of Birmingham, State of Michigan, described as follows:

in accordance with the general requirements of the Contract by and between the CITY OF BIRMINGHAM and _____ the following is a statement of each subcontractor, supplier and laborer for the payment of wages or fringe benefits and withholdings is due but unpaid with whom the (contractor)(subcontractor) has (contracted) (subcontracted) for the performance under the contract with the CITY OF BIRMINGHAM, and that the amounts due to the persons as of the date hereof are correctly and fully set forth opposite their names as follows:

Name of Subcontractor Supplier or Laborer	Type of Improvement Furnished	Total Contract Price	Amount Already Paid	Amount Currently Owing	Amount of Laborer Wages	Amount of Laborer, Fringe Benefits and Withholdings Due but Unpaid

TOTALS

The contractor has not procured material from, or subcontracted with, any person other than those set forth above, and owes no money for the improvement other than the sums set forth above.

Deponent further says that he or she makes the foregoing statement as the (contractor)(subcontractor) or as _____ of the (contractor)(subcontractor) for the purpose of representing to the CITY OF BIRMINGHAM that the Payment Bond for labor and materials is free from claims for the possibility of claims except as specifically set forth above.

Deponent further says that he or she is a duly authorized representative of the (contractor)(subcontractor) and has been authorized to give this release of all claims against the City arising under or by virtue of contract _____ dated _____.

_____

Deponent

Subscribed and sworn to before me

this ____ day of _____, 2023

_____
Notary Public

_____ County, Michigan

My Commission Expires:

WORK DIRECTIVE

From: CITY OF BIRMINGHAM
151 MARTIN
P.O. BOX 3001
BIRMINGHAM, MI 48012-3001

Time:_____ Date: _____

Work Directive No. _____

To: Contractor:_____

Name and # of Contract: Brown Street Paving Project, Contract #5-23(P)

The following changed condition(s) is recognized by the City of Birmingham for the above referenced Contract. In order to ensure continuation of the progress of the contract this work directive is issued for the following work described below:

_____

_____

_____

_____

_____

The basis for payment will be: _____ Written Quotation from the contractor.

_____Unit Bid Prices _____ Time and Material

_____Other (describe) _____

A written quotation shall include a detailed description of the tasks involved and the expected timetable to be completed along with a firm quotation for cost.

A time and material basis for work shall be supplemented with agreed quantities and prices between the contractor's field representative authorized to act on behalf of the contractor and the city inspector. It also shall be backed up by unit prices for time, material and equipment supplied to the City in a timely manner. Should this information not be readily available, it shall be provided the following day or a basis for payment shall be agreed to in writing within 24 hours of agreeing to a time and material work directive.

Any other basis shall be approved by all parties in writing before starting work. Should a utility cause the delay, names and approval shall be obtained if possible by their agent.

Approved:

_____	_____	_____
Contractor Supt. Date	City Inspector Date	City Engineer Date

ADVERTISEMENT

CITY OF BIRMINGHAM, MICHIGAN
2023 BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

Sealed proposals endorsed "BROWN STREET PAVING PROJECT CONTRACT #5-23(P)" will be received from contractors by the City of Birmingham, at the office of the City Clerk, located at 151 Martin Street, Birmingham, Michigan, until **2:00 p.m. local time, on Tuesday, May 2, 2023**. The proposals will be opened and publicly read aloud at that time. Bids submitted after the exact time specified for receipt will not be considered.

The project will include installation of new storm sewers, underdrains, concrete pavement, sidewalks, landscape planter curbs, new landscaping, and irrigation on Brown Street between Old Woodward Avenue and Woodward Avenue (M1). **Approximate quantities are as follows: 333 linear feet of storm sewer; 585 linear feet of underdrains, 1,585 square yards of new concrete pavement, 10,000 square feet of new sidewalks, 656 feet of new landscape planter curbing, plus other work to make a complete project.**

Bidders shall review and comply with all Contract Documents, and supplemental information, as defined in the Information For Bidders.

Bidding documents for this project must be obtained electronically through the Michigan Inter-governmental Trade Network (MITN), which may be accessed at https://www.bidnetdirect.com/mitn. Vendors wishing to obtain copies of the bidding documents will need to register through the MITN website. Electronic versions of bidding documents will be posted to MITN starting **Monday, April 10, 2023**.

In order to provide the City of Birmingham with Contractors and Subcontractors who will carry out the work in a timely and satisfactory manner, a fully completed Sworn Statement of Qualifications must be submitted to the Engineering Department of the City of Birmingham prior to the bid opening. This shall be done for the above project before the close of business **(5:00 p.m.) on Monday, April 24, 2023**. Copies of the Sworn Statement form will be sent by facsimile or email to prospective bidders upon request. The qualifications and list of references for the General Contractor and all Subcontractors to be used on the project will be reviewed on the basis of the proposed bidder's past performance on work of a similar nature for the City of Birmingham and other owners. Those bidders and bidder's subcontractors who are determined not to be suitable to bid on any work shall be notified in writing of the determination before the bids are opened. This information may be faxed to (248) 530-1290, and confirmed received by calling (248) 530-1850. Information may also be emailed at the address given on the form.

The successful bidder shall be required to post bonds, and to comply with the contract requirements of the City Charter. Bids are firm, and no bid may be withdrawn for a period of sixty (60) days after opening of bids.

Procurement for the City of Birmingham will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City of Birmingham. The City reserves the right to reject any and all bid proposals, to waive any irregularity in any of the bid proposals submitted, and to accept any proposal which it shall deem to be the most favorable to the interest of the City.

A certified check or bid bond in the amount of five percent (5%) of the base bid must accompany each bid proposal.

CHERILYNN MYNSBERGE
CITY CLERK

Published in:
Birmingham Eccentric
MITN

SECTION 301
SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

1.01 TIME OF COMPLETION

The Contractor shall be allowed to commence the project as soon as all bonds and insurance submittals have been approved, and the pre-construction meeting has been held.

It is anticipated that the project will receive approval from the Birmingham City Commission on **Monday, June 5, 2023.** The Contractor shall be allowed to commence the project as soon as all bonds and insurance submittals have been approved, the contract has been executed, and the pre-construction meeting has been held. The pre-construction meeting is anticipated to occur the week of **Monday, June 12, 2023**. Upon review of the submitted bids received on **Tuesday, May 2, 2023,** the City will issue a Notice of Intent to Award Letter to the confirmed low bidder the following week (on or before **Friday, March 12, 2023).** After receipt of this letter, the Contractor will be allowed to submit shop drawings and material submittals for review by the City to initiate this process and allow for expedited ordering of materials upon final execution of the contract.

The Contractor shall have the project substantially completed by **Friday, August 4, 2023**, including all landscaping restoration. Substantial completion shall be defined as all roadway, sidewalk and driveway pavement being placed and cured, and all greenbelt areas restored to final grade with topsoil and sod. The Contractor shall have all work on the project finally completed by **Friday, August 18, 2023**. Final completion shall be defined as having all punch list work competed, pavement markings and permanent signage installed, satisfactory establishment of landscaping restoration, and all temporary signage, traffic controls, and all other equipment and materials removed from the site.

LIQUIDATED DAMAGES

A. The contractor shall pay to the City of Birmingham as liquidated damages, the sum of one-thousand dollars ($1,000) per day for each calendar day after the time period specified under "Time of Completion" that the work to be performed by the contractor is not completed. Liquidated damages in this amount shall also apply for each day that the project is not substantially complete beyond the date specified under "Time of Completion", regardless of the actual time work began. Liquidated damages are established to compensate the City and the public for the costs of the inconvenience caused by the contractor by extending the work beyond the time specified. Liquidated damages are in place of actual damages, which the City of Birmingham might sustain, and are not intended as a penalty.

B. In addition to the overall project Time of Completion requirements listed above, the following job requirements shall be placed on this Contract:

   The Contractor shall provide the Engineer with a written comprehensive time schedule that details the various steps in the Contract to ensure that the order of the utility and paving operations is clear and meets phasing requirements specified in the drawings for each work area.

   The contractor's schedule shall also be subject to the pay item: "Road Closure Assessment". Bidders are advised to review this specification section in detail.

C. For the purpose of determining Liquidated Damages, the Contract Time for work shall be increased proportionally to increases in contract value (if any) for this portion of the work provided that the following conditions are met:

1. Increase in contract value is greater than 10% of the base bid;
2. The parties have not adjusted the Contract Time by other mutually agreeable means such as an executed change order;
3. Adjustments in time on account of unusual weather shall be made in accordance with Section 108.08.D. of the 2020 MDOT Standard Specifications for Construction. The Contractor shall submit a written request for a time extension due to unusual weather conditions, along with supporting documentation, within fourteen (14) days after the last day of the calendar month in which the delay occurred. Failure to notify the City within this time limit shall constitute a waiver of claim for a time extension on account of unusual weather.

1.02 QUESTIONS REGARDING THE CONTRACT DOCUMENTS

A. All questions about meaning or intent of Contract Documents shall be submitted to the Engineer in writing. Address written inquiries to:

Melissa A. Coatta, P.E.
City Engineer
City of Birmingham Engineering Department
P.O. Box 3001
Birmingham, MI 48012
Phone: 248-530-1850
Fax: 248-530-1290
Email: mcoatta@bhamgov.org

B. Replies will be issued by Addenda delivered to all parties recorded by as having received Contract Documents for Bidding. Questions received less than five (5) days prior to date for opening of Bids will not be answered. Only answers contained in formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Any Addendum issued during pre-bid period shall be included in the Bid, shall become part of Contract Documents, and shall be acknowledged on Bid Form.

1.03 PROJECT SCHEDULE

A. The Contractor shall submit their preliminary construction schedule within fourteen (14) days of the award of this Contract, along with the signed contract, and required bonds and insurance certificates.

B. Details on the schedule shall be sufficient to meet the requirements set forth in paragraph 1.02 above, or else the Engineer shall have the right to reject and request further information to meet the needs of this requirement.

1.04 HOURS OF WORK

A. Typically, work of this nature is allowed six (6) days a week, from 7:00 AM to 7:00 PM, Monday through Saturday, excluding major holidays, such as Memorial Day, July 4th and Labor Day.

1.05 CONTRACTOR SUPERVISION

A. The Contractor shall have a competent superintendent or foreman available at all times, authorized to act for the contractor as agent on the work, who thoroughly understands the plans and specifications, and who shall receive instructions from the Engineer. The superintendent or foreman shall be responsible for all subcontractors. The superintendent or foreman shall be designated by name prior to commencement of the work, and shall be available ON SITE for proper

management of the project for the duration of the contract, regardless of whether or not the contractor or subcontractors are engaged in activity on the project.

1.06 WORK AREA

A. The contractor for this project shall be alert to the fact that the work areas are very visible to the public, and that his work operations have a direct impact on a large number of people on a daily basis. The work shall be organized to minimize the number of work days as much as possible. Also, the contractor shall keep his work area as clean and dust-free as practical at all times.

1.07 STATEMENT OF QUANTITIES

A. The quantities indicated in the proposal are the engineer's estimate of quantities required for the project, and bids will be computed, reviewed, analyzed and compared using these quantities. While these quantities have been estimated with as much accuracy as practical beforehand, they should not be construed as defining, or limiting the amount of work to be performed under this Contract, but rather as information furnished to bidders as an approximate estimation of the work items, and as a basis for comparing bids.

1.08 COORDINATION CLAUSE

A. The following coordination issues are brought to the Contractor's attention for consideration when preparing their bid and planning the construction:

1. Utility owners, such as Detroit Edison, AT&T, and Consumer's Energy, may be relocating their facilities during construction operations. The Contractor is to cooperate with and help facilitate such operations.
2. The Contractor shall protect all existing infrastructure, materials, and operations of the City of Birmingham.
3. Emergency services must be given immediate passage through the construction site.
4. The Contractor shall be responsible to coordinate with the City of Birmingham Police and Fire Departments regarding road closures connected to execution of work in this Contract.
5. There are other construction projects that will be in operation during the term of this Contract and may impact local traffic. The Contractor shall so conduct their operations to cooperate fully with the other contractors, and minimize conflicts to ensure maximum safety and courtesy in the expedient completion of this work.

END OF SECTION

SECTION 310
GENERAL INSTRUCTIONS TO BIDDERS

1.01 CONTRACT PRICE

A. Proposals are solicited on the basis of unit prices and/or lump sum prices which are to be clearly set forth in the Proposal Form. The final contract price on the accepted proposal will be determined by multiplying the number, or fraction thereof, units of work actually performed, or labor, material, or appliances actually supplied by the price designated for such items in the proposal. The total bid figure on the proposal form is merely for purposes of estimating and comparing costs, and under no circumstances on unit price contracts does it constitute or imply the total contract price.

1.02 FORM OF PROPOSAL

A. All proposals must be made in the form attached hereto. Additional copies of this proposal form for the bidder's files may be obtained on request at the City Engineering Department.

B. All prices stated in the proposals must be plainly written in figures.

C. All information called for on the proposal must be furnished to enable a fair comparison of the bids.

D. The place of residence of each bidder, or the official address in the case of a firm or company, with county and state, must be given with the signature.

E. Each proposal must be enclosed in a sealed envelope addressed to the City Clerk of the City of Birmingham, and endorsed upon the outside with the name of the project, as it appears in the advertisement for bids.

1.03 CONFORMITY TO PLANS AND SPECIFICATIONS

A. Proposals must be made in full conformity to all the conditions, as set forth in the plans and specifications for the work now on file in the office of the City Engineer.

1.04 AGENCY

A. Anyone signing a proposal as agent of another or others must submit with the proposal, legal evidence of their authority to do so.

1.05 LEGAL STATUS OF BIDDER

A. The legal status of the bidder, that is, as a corporation, a partnership or an individual, must be stated in the proposal. A corporation bidder must name the state in which its articles of incorporation are held, and must give title of the official having authority under the bylaws to sign contracts. A partnership bidder must give the full names and addresses of all partners.

1.06 CERTIFIED CHECK, BIDDER'S BOND OR BANK DRAFT

A. Each proposal must be accompanied by a certified check, bidder's bond or bank draft in an amount not less than five (5) percent of the total price, drawn to the order of the City of Birmingham, as a guarantee of good faith on the part of the bidder and subject to the conditions stipulated in the proposal form.

B. No proposal shall be withdrawn for a period of sixty (60) days after the date set for the opening of bids.

C. A single check, bond or draft may serve to cover two (2) or more alternative proposals when such alternative proposals are submitted by the same bidder.

D. The bid deposit of all except the three (3) lowest bidders will be returned within three (3) weeks after the opening of bids. The bid deposit of the three (3) lowest bidders will be returned within two (2) weeks after the contract has been executed by both parties.

1.07 OBLIGATION TO EXECUTE CONTRACT

A. The bidder whose proposal is accepted will be required to execute the contract, and to furnish sureties hereafter specified, within twenty-one (21) days after receiving notice of such acceptance; and in case of refusal or failure to do so, the bidder shall be considered to have abandoned all rights and interest in the award, and the bid deposit may be declared to be forfeited to the City, as liquidated damages and not a penalty, and the contract may be awarded to another.

1.08 BONDS

A. The successful bidder will be required to furnish two (2) bonds, each on the forms provided as follows:

1. A Performance Bond in an amount not less than 100% of the contract price in favor of the City of Birmingham, conditioned upon the faithful performance of the contract, and completion on or before the date specified.

2. A Payment Bond for labor or material running to the claimants, which is defined in MCL §129.206 as those persons supplying labor or materials to the principal contractor or subcontractors in the prosecution of the work provided for in this contract in an amount not less than 100% of the contract price for the protection of those persons supplying labor, materials or both.

B. The cost of all bond premiums is incidental to the other work on this project and shall be included in the Contractor's bid price(s) for the work. No additional or separate payment shall be made to the Contractor for providing the required bonds.

1.09 INDEMNITY

A. The Contractor shall indemnify the City of Birmingham in accordance with the INDEMNITY section set forth in the General Requirements.

1.10 INSURANCE

A. The Contractor shall not commence work under this contract until obtainment of the insurance required under this paragraph. All coverages shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverages shall be with insurance carriers acceptable to the City of Birmingham. The cost of all insurance premiums is incidental to the other work on this project and shall be included in the Contractor's bid price(s) for the work. No additional or separate payment shall be made to the Contractor for providing the required insurance coverage.

1. **Workers' Compensation Insurance:** The Contractor shall procure and maintain during the life of this contract, Workers' Compensation Insurance, including Employers Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

2. **Commercial General Liability Insurance:** The Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than $3,000,000 per occurrence combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent

Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent; (E) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.

3. **Motor Vehicle Liability:** The Contractor shall procure and maintain during the life of this contract Motor Vehicle Liability Insurance, including all applicable no-fault coverages, with limits of liability of not less than $3,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

4. **Additional Insured:** Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement starting the following shall be Additional Insureds. The City of Birmingham, including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof. This coverage shall be primary to any coverage that may be available to the additional insured, whether any other available coverage be primary, contributing or excess.

5. **Pollution Liability Insurance:** CONTRACTOR shall procure and maintain during the life of this Agreement Pollution Liability Insurance, with limits of liability of not less than $1,000,000, per occurrence preferred, but claims made accepted.

6. **Cancellation Notice:** Workers' Compensation Insurance, Commercial General Liability Insurance and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following: "Thirty (30) days Advance Written Notice of Cancellation or Non-Renewal shall be sent to the Finance Department, City of Birmingham, P.O. Box 3001, 151 Martin Street, Birmingham, Michigan 48012.

7. **Owners Contractors Protective Liability:** The Contractor shall procure and maintain during the life of this contract, an Owners Contractors Protective Liability Policy with limits of liability not less than $3,000,000 per occurrence, combined single limit, Personal Injury, Bodily Injury and Property Damage. The City of Birmingham shall be "Name Insured" on said coverage. Thirty (30) days' Notice of Cancellation shall apply to this policy.

B. Proof of Insurance Coverage: The Contractor shall provide the City of Birmingham at the time the contracts are returned for execution, Certificates of Insurance and/or policies, acceptable to the City of Birmingham, as listed below:

1. Two (2) copies of Certificate of Insurance for Workers' Compensation;
2. Two (2) copies of Certificate of Insurance for Commercial General Liability;
3. Two (2) copies of Certificate of Insurance for Vehicle Liability Insurance;
4. Original policy, or original binder pending issuance of policy, for Owners Contractors Protective Liability Insurance;
5. If so requested, Certified Copies of all policies mentioned above will be furnished.

C. Coverage Expiration: If any of the above coverages expire during the term of this contract, the Contractor shall deliver renewal certificates and/or policies to the City of Birmingham at least ten (10) days prior to the expiration date.

D. Maintaining Insurance: The CONTRACTOR also agrees to provide all insurance coverage as specified. Upon failure of the CONTRACTOR to obtain or maintain such insurance coverage for the term of the agreement, the City of Birmingham may, at its option, purchase such coverage from

the contract amount. In obtaining such coverage, the City of Birmingham shall have no obligation to procure the most cost-effective coverage but may contract with any insurer for such coverage.

1.11 EXAMINATION OF SITE

A. It is expected that each bidder will make a personal examination of the entire site of the proposed work, and of its surroundings. It will be assumed that each bidder, before offering his proposal, has obtained firsthand information concerning any probable interference and the available facilities for transporting, handling and storing of construction equipment and materials, and concerning other conditions which may affect his work.

1.12 LEGAL CONDITIONS

A. Bidders are notified that they should acquaint themselves with the various provisions in the laws of the State of Michigan, and in the ordinances and regulations of the City of Birmingham and Oakland County, with respect to the carrying on of public improvements.

1.13 BIDDER'S ABILITY

A. It is the intention of the City to award the contract for this job to a contractor whose construction skill and financial resources are fully equal to the task of prosecuting the work in a satisfactory manner, and of bringing it to completion within the time limit specified. With this end in view, the Form of Proposal calls for at least three (3) references concerning his ability to do this particular class of work, and a reference list of the last five (5) projects, including those not completed or currently being performed. The mere ability to offer bonds will not be taken as sufficient evidence of responsibility on the part of the bidder. If the contract is awarded to a foreign company, a certificate of authority to do business in this state must accompany executed contract.

1.14 PAYMENTS

A. Partial payments will be made monthly to the Contractor during the satisfactory progress of the working accordance with the Payments section of the General Requirements.

1.15 RIGHT TO ACCEPT, REJECT AND TO WAIVE DEFECTS

A. The City reserves the right to accept any proposal, to reject any or all proposals, and to waive any defect or irregularity in any proposal, if it appears advantageous to the City to do so.

B. In particular, any alterations, erasure or interlineation in the Specifications which are made a part, specifically, of these instruments, or of the Form of Proposal, shall render the accompanying proposal irregular and subject to rejection by the City. In case any explanation, additions or alterations are to be offered, they shall be indicated on separate sheets attached to the proposal form and referred to therein.

C. Proposals which are clearly unbalanced, will also be considered as irregular, and will be subject to instant rejection by the City.

END OF SECTION

SECTION 400
GENERAL REQUIREMENTS

1.01 DEFINITION OF TERMS

A. The intent and meaning of words and expressions, or pronouns used in their stead, occurring in these specifications or in other contract documents, shall be interpreted as described under Section 101.03 Definitions of Terms of the Current Standard Specifications for Construction adopted by the Michigan Department of and Transportation, with the following additions or exceptions:

1. City - The corporation of the City of Birmingham, Michigan.
2. Commission - The Commission of the City of Birmingham, Michigan, and any other board, body, official or officials to which or to whom the powers belonging to the said Commission shall, by virtue of any act or acts, hereafter passed or be held to appertain.
3. Engineer - The person holding the position or acting in the capacity of the City Engineer of the City of Birmingham, Michigan, acting either directly or through his properly authorized agents, such agents acting within the scope of the duties entrusted to them.
4. Directed, required, permitted, etc. - Whenever in the specifications the words “as directed”, “as required”, “as permitted”, or words of like effect are used, it shall be understood that the direction, requirements or permission of the Engineer is intended; similarly the words “approved”, “acceptable”, “satisfactory”, or words of like import shall mean approved by, or acceptable, or satisfactory to the Engineer.

1.02 INTENT OF THE PLANS, SPECIFICATIONS AND CONTRACT

A. The intent of the plans, specifications and contract is to provide for the completion of the work in substantial compliance with the details as shown thereon, and as described herein. The Contractor shall furnish all labor, materials, equipment, tools, transportation and necessary supplies, and shall perform all operations required to complete the work in accordance with the specifications, and the lines, grades and cross sections provided for on the plans, or by authorization.

1.03 EXTRA WORK

A. No extra work shall be started, or extra material furnished, until such extra work or furnishing of extra material is authorized in writing by the Engineer.

B. The price for such extra work or material must be approved by the Engineer. Said price may be a unit price, a lump sum price, or if the Engineer so elects, the work shall be done on a force account basis, which will be paid for in the following manner:

1. For all labor, teams and foremen in direct charge of the specific work, the Contractor shall receive the actual rate of wage paid for each and every hour that said labor, teams and foremen are actually engaged in such work, plus 20% of the sum thereof.
2. For materials and supplies, the Contractor will receive the actual cost of such materials delivered on the work, including freight charges, as shown by original receipted bills, plus 15% of the sum thereof.
3. For any machinery and equipment owned or rented by the Contractor, which it may be deemed necessary or desirable to use on extra work, the Contractor will be paid at the actual charge-out rate, if reasonable, for his own equipment, or at the actual rental price paid, if reasonable, for rented equipment for each and every hour that such equipment is used on the work, to which sum 15% will be added.

4. Bond premium, workmen's compensation insurance, personal injury public liability and property damage public liability insurance, unemployment compensation, and Federal Social Security will be paid for at actual cost, to which sum 15% will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such insurance.

5. The compensation as herein provided shall be accepted by the Contractor as payment in full for extra work done by force account, and the said percentages shall cover profit, superintendence, general expense, overhead, and the use of small tools and equipment for which no rental is allowed.

1.04 ALTERATION IN CHARACTER OF WORK

A. Should the Contractor encounter, or the Engineer encounter, during the progress of the work, sub-surface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, the Engineer's attention shall be called immediately to such conditions before they are disturbed. The Engineer shall thereupon investigate the conditions, and if he finds that they materially differ from those shown on the plans and indicated in the specifications, he shall at once make such changes in the plans and/or specifications, as he may find necessary.

1.05 COORDINATION OF SPECIFICATIONS AND PLANS

A. In case of discrepancy, written figures shall govern over numerals, figured dimensions shall govern over scaled dimensions, plans shall govern over standards specifications, supplemental specifications shall govern over standard specifications and plans, and special provisions shall govern over supplemental specifications.

B. The Contractor shall not take advantage of any apparent error or omission in the plans or specifications, but the Engineer shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the plans and specifications.

1.06 AUTHORITY OF ENGINEER

A. The Engineer shall decide all questions which may arise as to the quality and acceptability of materials furnished and work performed, and as to the manner of performance and rate of progress of the work; all questions which may arise as to the interpretation of the plans and specifications; and all questions as to the satisfactory and acceptable fulfillment of the terms of the contract by the Contractor.

1.07 INSPECTION

A. Inspectors may be appointed and directed to inspect all materials used, and all work done. The inspection may extend to all parts of the work, and to the preparation or manufacture of the materials for use in the work. The Inspectors will not be authorized to revoke, alter, enlarge or relax any of the provisions of these specifications, nor to change the plans in particular. The Inspector on the work will inform the Engineer as to the progress of the work, the manner in which it is being done, and the quality of the materials being used. He will also call to the attention of the Contractor any failure to follow the plans and specifications that he may observe. In case of any dispute arising between the Contractor and the Inspector as to the materials furnished, or the manner of performing the work, the Inspector shall have the authority to reject materials or suspend the work until the question at issue can be referred to and be decided by the Engineer. In no instance shall any action or omission on the part of the Inspector relieve the Contractor of the responsibility of completing the work in accordance with the plans and specifications.

B. The Engineer and his duly authorized Inspector, shall at all times have the right to enter the premises upon which the work under this contract is being done, and to inspect said work and to ascertain whether or not the construction is carried out in accordance with the terms of the contract or specifications; and the Contractor shall render all necessary assistance and provide all reasonable facilities and give ample time for such inspection.

1.08 SUPERVISION

A. The Contractor shall give his personal supervision to the faithful prosecution of the work. In case of his absence, he shall have a competent superintendent or foreman on the work site who shall follow, without delay, all instructions of the Engineer or his assistants in the prosecution and completion of the work, and every part thereof in conformity with this contract. He shall also have full authority to supply material and labor immediately.

B. The Contractor's supervisor shall be responsible to act on behalf of the Contractor. This includes being always present or available, making decisions on behalf of the Contractor and Subcontractor, scheduling, monitoring work progress on a continued basis, communicating with City representatives, etc. His name shall be submitted prior to the start of work, with all appropriate ways of contacting him. He shall remain the responsible Contractor's representative throughout completion of the project, including any subcontract work associated with this contract. If it is necessary to replace this person, it shall have the approval of the Engineer.

1.09 TIME AND SEQUENCE OF WORK

A. The Contractor shall have control over the sequence of order of execution of the several parts of the work to be done under this contract, and over the methods of accomplishing the required results, except as some particular sequence or method may be distinctly demanded by these specifications and plans, or by the express provisions of the contract.

B. The Engineer may make such reasonable requirements that in his judgment are necessary for the proper and effective protection of work partially or wholly completed, and to these requirements the Contractor shall strictly conform.

C. The Contractor shall submit a written work plan prior to starting construction. This shall include a written schedule, critical path or equal, to focus in on the date required for completion. This schedule must be updated periodically (not to exceed two (2) weeks) if it becomes necessary to modify the plan. This does not relieve the Contractor of the responsibility to complete the contract according to contractual stipulations. Any modification to the time schedule must obtain prior written approval from the Engineer.

D. Once the Contractor has mobilized, the Contractor must execute the contract in a continuous, expeditious manner, and may not suspend prosecution of work without written permission of the Engineer.

1.10 RELATION TO OTHER CONTRACTORS

A. The Contractor shall so conduct his operations as not to interfere with or injure the work of other Contractors employed by the City on adjoining or related work, and he shall promptly make good any injury or damage which may be done to such work by him.

B. Should a contract for adjoining work be awarded to another Contractor, and should the work on one of these contracts interfere with that of the other, the Engineer shall decide which Contractor shall cease work for the time being, and which shall continue, or whether the work of both contracts shall continue at the same time and in what manner. In case territory of one contract should be the necessary means of access to another contract, the Engineer shall have power to grant reasonable

privileges with respect to the transportation or movement of personnel, equipment or materials, as he may adjudge to be necessary or expedient, and in the best interest of the City. Any decision which the Engineer may make as to method and time of conducting work or the use of the territory shall not be made the basis of any claim for damage, but an extension of time may be claimed if justified by the circumstances, the same as in the case of other delays caused by the acts of the City. Any difference of opinion or conflict of interest which may arise between the Contractor and other Contractors or workmen of the City regarding adjoining work, shall be determined and adjusted by the Engineer.

1.11 CONSTRUCTION STAKES

A. The location, alignment, elevation and grade of the work will be determined by the Engineer, who will set such stakes as are necessary to properly mark these elements. The Contractor shall assume full responsibility for detail dimensions and elevations measured from the lines, grades and elevations so established.

B. The Engineer may require the Contractor, at the Contractor's expense, to provide such masts, scaffolds, batter boards, straightedges, templates or other devices as may be necessary to facilitate laying out, inspecting and constructing the work.

C. The Contractor shall exercise proper care in the preservation of all stakes set for his use, or for the use of the Engineer, and if such stakes are injured, lost or removed by the Contractor's operations, the cost of resetting may be charged to the Contractor. The Department will be responsible for the accuracy of lines, slopes and grades established by the City, except that the Contractor shall not take advantage of any obvious errors or omissions.

1.12 SOIL CONDITIONS

A. The Contractor shall make his own determination of the soil conditions and he shall complete the work in whatever materials, and under whatever conditions he may encounter or create, without extra cost of the City.

1.13 MATERIALS FURNISHED BY THE CITY

A. When specified, the City of Birmingham may furnish materials at no cost to the Contractor. All other materials necessary to complete the project shall be furnished by the Contractor.

B. Materials to be furnished by the City will be at the Department of Public Works Yard at Eton Road and Holland Avenue. The Department of Public Works will require the Contractor to provide a written authorization from the Engineer before releasing any materials. The Contractor shall load and transport all such materials from the Department of Public Works Yard to the construction site, at his own expense.

C. The City may, at its discretion, furnish to the Contractor, any materials, supplies or transportation required for extra work, and the Contractor shall not be entitled to any allowance or percentage on account of materials, supplies or transportation so furnished.

1.14 STORED MATERIAL

A. Materials and equipment distributed, stored or placed upon or near the site of the work shall be at all times so disposed as not to interfere with work being executed by the City, or by other Contractors in the City employ, or with street drainage, fire hydrants, or with access thereto, and not to hinder any more than may be necessary the ordinary pedestrian or vehicular traffic of the streets. Such material shall be stored in such a manner as to facilitate inspection.

1.15 REJECTED MATERIAL

A. If any materials used in the work, brought upon the ground, or selected for use in the work are condemned by the Engineer on account of bad or improper workmanship, or as being unsuitable or not in conformity with the specifications, the Contractor shall forthwith remove from the work or its vicinity, without delay, all such rejected or condemned material of whatever kind. Upon failure to do so within forty-eight (48) hours after having been so directed by the Engineer, the condemned material may be removed by the City and the cost of said removal deducted from any money that is then due, or that may thereafter become due to the Contractor. No payment shall be made until such materials, work or workmanship has been removed and proper materials and workmanship substituted therefor.

1.16 WATER SUPPLY

A. Water for construction purposes may be taken from the City mains, at no charge, subject to the rules of the City Water Department. Special approval of the Engineer must be obtained prior to the opening of any fire hydrant.

B. The Contractor shall provide for his employees an adequate supply of drinking water taken from the City mains.

1.17 SANITARY REGULATIONS

A. Necessary convenience, properly secluded from public observation, shall be constructed where needed for the use of laborers on the work. Such conveniences shall be located, constructed and maintained, subject to the approval of the Engineer and the collections therein shall be removed at such times, and to such places as he shall direct. The Contractor shall obey and enforce such sanitary regulations as may be prescribed by the County Health Department.

1.18 PERMITS AND LICENSES

A. The Contractor shall procure all permits and licenses and pay all charges and fees necessary and incident to the due and lawful prosecution of the work. Unless otherwise stated in these contract documents, there will be no charge for any permits required by the City of Birmingham.

1.19 LAWS AND ORDINANCES

A. The Contractor shall keep himself fully informed of all local ordinances and regulations, state and national laws in any manner affecting the work herein specified. He shall at all times observe and comply with, and shall cause all his agents and employees to observe and comply with, said ordinances, laws and regulations, and shall protect and indemnify the City and its duly authorized officers and agents against any claim or liability arising from or based on the violation of any such laws, ordinances, regulations, etc.

B. The Contractor shall obey and abide by all the laws of the State of Michigan and of the Federal Government relating to the employment of labor on public work and all Charter provisions and ordinances of the City of Birmingham regulating or in respect to public improvements.

C. The Contractor and his Subcontractors shall not discriminate against any employee or applicant for employment, to be employed in the performance of this contract, with respect to hire, tenure, terms, conditions or privileges of employment, because of sex, race, color, religion, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

1.20 PROPERTY AND SURVEY MONUMENTS

A. Before any monuments or stakes marking the boundaries of property along or near the work are removed or disturbed, the Contractor shall notify the Engineer in sufficient time so that they can be properly located and reset.

B. All precautions shall be taken to avoid disturbance of permanent survey monuments of any City, County or State authority, and when any of these are disturbed or destroyed, the Contractor shall restore them to the satisfaction of such authority and shall pay all costs incurred by such authority in connection therewith.

1.21 BUILDING AND OTHER STRUCTURES ENCOUNTERED

A. Full responsibility shall be assumed by the Contractor for the protection of all buildings and other structures, public or private, including tracks, pavements, driveways, curbs, poles, signs, hydrants, underground pipes and conduits and other structures of every sort that may be encountered in or adjacent to the work.

B. Wherever settlement or lateral movement of structures might occur, adequate underpinning or other means of support shall be installed. Where necessary, such support shall be installed in advance of construction.

1.22 PROTECTION TO TREES AND SHRUBBERY

A. The Contractor shall take all prudent and feasible measures that will reduce or eliminate the impacts of development and construction on City owned trees. Trees or shrubbery shall be surrounded by protective cushioning, posts or fencing before construction work begins, if, in the judgment of the Staff Arborist, such precautions are necessary. Further detailed information is included in the supplemental specifications section of the contract if applicable.

1.23 DUST CONTROL

A. All Contractors working on projects that require removal of the paved surface during construction shall provide dust control as directed by the Engineer, at no additional cost to the City. When weather conditions are such that dusty conditions can be created, the Contractor shall be prepared to act. When dry conditions are declared by the Engineer, the Contractor shall always have a water truck and calcium chloride on site, to be applied as needed. The Contractor shall be pro-active with respect to applying dust control measures as needed.

1.24 PROTECTION AND RESTORATION OF PROPERTY

A. The Contractor shall restore, at his own expense, any and all public or private property damaged or injured in consequences of any act or omission on his part, or on the part of his employees or agents, to a condition similar and equal to that existing before such damage or injury was done. If the Contractor neglects to repair or make restoration, the Engineer may, after forty-eight (48) hours written notice to the Contractor, proceed to make such repairs or restoration, and will deduct the cost thereof from any monies that are or may become due to the Contractor.

1.25 RESPONSIBILITY FOR DAMAGE TO WORK

A. The Contractor shall protect his work and materials from damage, due to the nature of the work, the action of the elements, the carelessness of other contractors, or from any cause whatever, until the completion and acceptance of the work. Should any damage occur, he shall repair or replace it at his own expense and complete the work to the satisfaction of the Engineer.

1.26 INDEMNITY

A. To the fullest extent permitted by law, the CONTRACTOR and any entity or person for whom the CONTRACTOR is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the CITY OF BIRMINGHAM, its elected and appointed officials, employees and volunteers and any others working on behalf of the CITY OF BIRMINGHAM against, any and all claims demands, suites, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from and the CITY OF BIRMINGHAM, its elected and appointed officials, employees, volunteers or others working on behalf of the CITY OF BIRMINGHAM, by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or other working on behalf of the CITY OF BIRMINGHAM.

1.27 INSURANCE

A. The Contractor shall comply with the INSURANCE requirements set forth in the General Instructions to Bidders.

1.28 PUBLIC TRAVEL

A. The Contractor shall at no additional compensation make suitable and adequate provisions, unless otherwise authorized by the Engineer, for the safe and free passage of persons and vehicles by, over or under the work while it is in progress.

B. The Contractor shall obtain permission from the Engineering Department to close or block any street. The Contractor shall notify the Engineering Department at least four (4) hours before closing or blocking any street.

1.29 PUBLIC SAFETY

A. The Contractor shall furnish, erect and maintain a good and sufficient fence, railing or barrier around all exposed portions of his work, to effectively prevent any accident in consequences of his operations and to protect the work. Such fences, railings and barriers shall be illuminated from sunset to sunrise by suitable and sufficient lights, flares or torches, in such a manner as to make them clearly visible to approaching pedestrians and/or traffic.

B. When equipment and materials are located within the construction site, or within any public right-of-way, the public shall be safe-guarded by suitable and sufficient signs, lights, barricades or other means furnished and maintained by the Contractor.

C. If any portion of the work is not properly barricaded, signed or lighted by one-half (1/2) hour after sunset, the necessary barricades, signs and lights may be placed by the City and all costs to the City for such work will be charged to the Contractor. The furnishing, erection and maintenance of barricades, signs and lights by the City will not relieve the Contractor of his responsibility for the protection of traffic and the work.

D. The Contractor shall provide such traffic regulators and watchmen as are necessary to insure safe and convenient travel by the public and to protect the work.

E. Barricades, signs and lights shall be erected in accordance with the provisions of the Michigan Manual of Uniform Traffic Control Devices.

1.30 MAINTAINING SERVICE TO DRAIN, WATER MAINS, ETC.

A. The Contractor shall maintain in continuous and effective service all drains, sewers, watercourses and water mains touched during the progress of the work. If it should become necessary to temporarily divert or obstruct the flow of any watercourse or drain, written consent must first be obtained from the Engineer, and then the Contractor shall assume full responsibility for the consequences.

1.31 NOTIFICATION OF UTILITIES

A. The Contractor shall notify all utilities of his intention to excavate or otherwise cause any underground disturbance, by calling MISS DIG at least three (3) full working days before commencing such excavating or disturbances.

B. The rights are reserved to both the City and to the owners of public utilities or franchises to enter upon the work for the purpose of making repairs to their installations and making changes in their installations necessitated by the work.

1.32 SUBLETTING OR ASSIGNING

A. The Contractor shall perform without subletting, at least twenty-five (25) percent of the work provided for in this contract, computed based on cost.

B. The subletting of any portion of the contract work shall be subject to approval by the Engineer, but such approval shall not relieve the Contractor of responsibility for the work of such Subcontractors who likewise shall be bound by all pertinent provisions of these specifications. Before any work is sublet, the Contractor shall satisfy the Engineer that the proposed Subcontractor is suitably equipped and experienced in that kind of work, and that he has proper financial resources to enable him to carry it out.

C. No assignment by the Contractor of any principal construction contract or any part thereof, or of the funds to be received thereunder by the Contractor will be recognized unless such assignment has had the approval of the Engineer, and the Surety has been given due notice of such assignment in writing.

D. No assignment will receive approval unless the instrument of assignment contains a clause to the effect that it is agreed that the funds to be paid the assignee under the assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms or corporations rendering such services or supplying such materials.

1.33 DISCHARGE OF EMPLOYEES

A. The Contractor shall employ only competent, skillful persons to do the work. Whenever the Engineer shall notify the Contractor in writing that, in his opinion, any employee on the work is incompetent, impertinent, disobedient, unfaithful, disorderly or otherwise unsatisfactory, that employee shall be discharged from the work and shall not again be employed on it except with the written consent of the Engineer.

1.34 PROSECUTION OF WORK

A. The Contractor shall begin work in accordance with the detailed progress schedule after execution of the Contract by the City. He shall prosecute the work in the order given in the progress schedule, with force and equipment adequate to complete the major items, portions, or sections within the time limit therein fixed for completion. In case of failure to proceed with the work as rapidly as is provided in the progress schedule, or if it appears at any time that such work is not being prosecuted

in such manner as to insure its completion within the time specified, the Engineer shall have the right to require the Contractor to furnish and place in operation such additional force and equipment as the Engineer shall deem necessary to bring the work up to the progress schedule; with or without notice to the Surety, place such working force and equipment on the work and charge the Contractor the cost of the labor and such rental and depreciation rates for the plant and equipment as in his judgment is reasonable, and for such time as the plant and equipment are in service.

1.35 EXTENSION OF TIME

A. If the Contractor is obstructed or delayed in the prosecution or completion of the work by reason of the neglect, delay or default of any other Contractor having a contract with the City for adjoining or contiguous work; by reason of any damage that may happen thereto by the unusual action of the elements; by reason of the abandonment of the work by the employees in a general strike; the Contractor shall have no claim of damages for any such cause or delay. He shall, however, be entitled to such extension of the time specified for the completion of the work as the Engineer shall determine to be just and proper, provided however, that such claim for such extension of time is made by the Contractor in writing to the Engineer within one (1) week from the time when any such cause for delay occurs.

1.36 SUNDAY AND HOLIDAY WORK

A. No work shall be done on Sundays, or upon any days celebrated as holidays by the City of Birmingham, except in case of emergency, or to protect work from damage or injury. All Sunday or holiday work must have prior written approval of the Engineer.

1.37 NIGHT WORK

A. No work shall be carried on from 7:00 p.m. to 7:00 a.m., except in case of emergency, or to protect from damage or injury work that has already been done. All night work must have the prior written approval of the Engineer. This provision does not apply to work covered under the provision entitled “shutting off water”.

1.38 MEASUREMENT OF QUANTITIES

A. Quantities of work completed under the contract will be measured by the Engineer according to United States standard measures. When material is measured by weight in tons, the unit shall be the ton of two thousand (2000) pounds.

B. All longitudinal measurements for area of base courses, surface courses and pavements will be made along the actual surface of the roadway. For all transverse measurements for area of base courses, surface courses and pavement, the dimensions used in calculating the pay area shall be the neat dimensions provided in the plans or by authorization.

C. Structures will be measured according to neat lines provided on the plans or by authorization.

D. All materials which are specified for measurement by the cubic yard “Loose Measure” will be measured at the location where used on the project under construction, unless otherwise provided.

1.39 CLEANING UP

A. Upon completion of the actual work of construction, the Contractor shall clean up and leave in a neat condition all the premises which he has occupied during the construction period.

B. Before the time of the final estimate, the Contractor shall remove from the premises, debris, rubbish and all unused materials, together with all tools and equipment, or shall deposit them at such points and in such a manner as the Engineer may require.

C. Before leaving the grounds, the Contractor shall replace and put in good repair all fences, telephone poles and lines, roadways and other property that may have been damaged by him in the progress of the work.

1.40 ENVIRONMENTAL PROTECTION

A. Contractor shall at all times be responsible to ensure that no chemicals, pollutants or other harmful or hazardous materials are spilled, discharged or otherwise released into the environment or onto City property, rights-of-way or into the storm or sanitary systems. Should such a release occur, Contractor shall immediately take action to extract the contaminants and prevent further exposure and damage. Contractor shall immediately contact the City and all other required governmental agencies to assess and determine the necessary and appropriate remediation activities. Contractor shall be responsible for all costs and damages stemming from the release including, but not limited to, the cost to remove and dispose of the contaminant, repair/replace/restore the affected areas, and all costs incurred by the City or governmental agency in response.

1.41 UNNOTICED DEFECTS

A. Any defective work or material that may be discovered by the Engineer before the final acceptance of the work, or before final payment has been made, shall be removed and replaced by work and material which conform to the specifications. Failure to neglect on the part of the Engineer to condemn or reject bad or inferior work or materials shall not be construed to imply acceptance of such work or materials.

1.42 FINAL INSPECTION

A. As soon as practicable, after the completion of all the work covered by the Contract, the Engineer shall make the final inspection of the work. If the work is found to comply with all the terms of the Contract plans and specifications, the Engineer shall accept the completed work with reasonable promptness. If the work is not acceptable to the Engineer at the time of such inspection, he shall advise the Contractor as to the defects to be remedied before final acceptance.

B. If within a period of ten (10) days after such notification the Contractor has not taken steps to speedily complete the work as outlined by the Engineer, the Engineer may, without further notice to the Contractor and without in any way impairing the Contractor, make such arrangements as he may deem necessary to have the work completed in a satisfactory manner. The cost of so completing the work may be deducted from any monies due, or which may become due the Contractor.

C. Use by the City or public of all or any part of the work before acceptance shall not be construed as acceptance of the part used.

1.43 PAYMENTS

A. Partial payments will be made monthly on the basis of the value of work completed during the estimated period, less the percentages retained as specified herein, provided the work is progressing in accordance with the progress schedule, provided the contract provisions are being fulfilled, and provided the time of completion has not elapsed.

B. The Contractor shall be responsible to submit requests for partial payments in writing by completing the Request for Partial Payment form supplied in the contract and/or by the City with the attached appropriate quantities as measured or estimated by the Superintendent.

C. Request for Final Payment shall be made by an officer of the company submitting final quantities to the Engineer based upon the value of the work performed and materials completed in accordance with the contract. Prior to final payment, and as a condition thereto, the Contractor shall furnish

the City with a duly executed, notarized, "Contractor's Affidavit", stating that all bills and claims have been satisfied, except as stated therein, and a release of all claims against the City arising under and by virtue of this Contract.

D. If the Contractor fails to submit a request for a payment, as specified, the Engineer may at his (her) discretion prepare a Contractor's Estimate for such payment.

E. When submitting a request for partial or final payment, the Contractor shall complete the appropriate forms as included in Section 140 of the Contract. When requesting a partial payment, the Contractor shall submit the "Request for Partial Payment" form and the "Sworn Statement" form. When requesting final payment, the Contractor shall complete the "Request for Final Payment" form and the "Sworn Statement" form.

F. When the Contractor determines that work will need to be completed outside of the specified pay items, the "Work Directive" form shall be submitted to the Engineer and approved prior to said work commencing.

G. Except as hereinafter provided, the City will retain ten (10) percent from the partial payments of the amount earned up to fifty (50) percent of the Contract price. After fifty (50) percent of the Contract work is in place, the City will not hold additional retainage, unless the Engineer determines that the Contractor is not making satisfactory progress. If the Engineer determines the Contractor is not making satisfactory progress, the City may retain up to ten (10) percent of the value of the work over fifty (50) percent of the Contract price.

H. After final acceptance of the Contract work by the Engineer, he shall process a final estimate for the total amount due the Contractor, less the total amount of all previous payments. Except as hereinafter provided, the total amount due the Contractor shall include interest earned on retained amounts from partial payments.

I. Prior to final payment, and as a condition thereto, the Contractor shall furnish the City with a duly executed, notarized, affidavit or certificate, stating that all bills and claims have been satisfied, except as stated therein, and a release of all claims against the City arising under and by virtue of this Contract.

J. In case evidence exists that all bills with respect to the work have not been paid in full, the Engineer may retain out of any amounts due the Contractor, sufficient sums to cover all such unpaid bills.

K. Except as hereinafter provided, and at the City's option, a dispute regarding the percent retained from partial payments or regarding payment of interest on retained amounts, shall be settled in accordance with the provisions of Act 524 of the Public Acts of Michigan for 1980.

L. For a Contract having a dollar value of less than $30,000.00, or a Contract having three (3) months or less between the date of the Contractor and the Contract Time of Completion:

1. The City will retain ten (10) percent of the amount earned from partial payments.
2. The City will not pay interest on amounts retained from partial payments.
3. The provision to settle disputes in accordance with Act 524 will not apply.

1.44 SETTLEMENT OF DISPUTES

A. Any controversy of claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suite in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by the American Arbitration Association with one arbitrator being used, or three

arbitrators in the event any party's claim exceeds $1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL§600.5001 et. seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. If the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suite in the Oakland County Circuit Court or the 48th District Court.

1.45 MAINTENANCE AND GUARANTY

A. The Contractor shall guarantee all the work furnished under this Contract against all defects in workmanship and materials, and incidental damage to other property, for a period of one (1) year following the date of the final acceptance of the work by the City. The Performance Bond shall fully cover all guarantees contained in this article.

1.46 CONFLICT OF INTEREST

A. The Contractor shall not directly or indirectly employ or otherwise use a City official of the City of Birmingham in conjunction with this contract. If subsequent to entering into the Contract a City official, a spouse, child or parent shall become directly or indirectly interested in the contract, the City shall have the right to terminate the contract without further liability if the disqualification has not been removed within thirty (30) days after the City has given notification of the disqualifying interest.

END OF SECTION

SECTION 411
ROAD CLOSURE ASSESSMENT

1.01 DESCRIPTION.

A. This contract includes a procedure under which the Contractor is assessed for each day or portion thereof for road closures on Brown Street. This section establishes the process and contract items to enable the City to administer the road closure assessment procedure.

B. During the performance of work to which the Road Closure Assessment applies as listed in this section, the Contractor must conform to the requirements of the traffic detour and staging plans contained in the contract.

1.02 BID SUBMISSION, AWARD AND EXECUTION OF THE CONTRACT.

A. The Contractor must submit a number of days bid for the item of Road Closure Assessment as applicable to the contract. The City will make payments under this item as applicable to the contract. Details of the payment and assessment procedures are provided in section 1.05 of this specification.

1. Preparation of Bid. This contract includes Road Closure Assessment, as a number of days. Road Closure Assessment must be bid. A negative amount will not be permitted for this item. OMISSION OF THIS ITEM, WHEN CALLED FOR, SHALL BE CAUSE FOR REJECTION OF THE BID.

2. The amount bid for this item must be based on the bidder's estimate of the number of days of road closure required on Brown Street, and the assessment values as described in this special provision. All days in which any closure on Brown Street is in place shall be assessed a road closure day. In accordance with the detour and pedestrian fence/maintenance drawings, the Contractor shall be allowed to completely close Brown Street to all vehicular traffic, with the exception being the temporary gravel access route between Peabody and the Jax Carwash entrance, which must be maintained throughout the project. Pedestrian routes surrounding Brown Street shall also be closed and/or modified in accordance with applicable drawings.

3. The number of days bid for this item will affect the determination of the lowest bidder. The Contractor should not include the anticipated Road Closure Assessments to the City in other items of the contract, as unbalancing may occur and the bid may be rejected.

4. Consideration of Bids. The item Road Closure Assessment will become part of the Contractor's total bid for the purpose of determining the low bidder. The lowest total bid, including the Road Closure Assessment bid item, as verified by the City, will be used to determine the total price bid. The total bid price will then be used in the selection calculation outlined in Section 302 of the Contract to determine the successful bidder of this project.

1.03 DEFINITION OF TERMS.

A. For the purpose of this section, the following definitions apply.

1. Road Closure. For the purpose of assessing a road closure, a road closure means denying traffic to any portion of Brown Street (including adjacent street parking areas) as a result of the work of this project. The Road Closure shall be in conformance with the temporary traffic control plans as depicted in the bidding documents. Brown Street shall be closed to all vehicular access for east and west-bound traffic for the duration of the project. The only allowable vehicular traffic through the construction zone shall be the temporary gravel access

route between Peabody and the Jax Carwash entrance, which must be maintained throughout the project.

2. Road Closure Definition - For the purpose of this provision, the calculation of the Road Closure shall be based on any portion of a day that is less than four (4) hours during normal working hours (7 AM to 7 PM) that a designated road closure exists will be considered as a half day for assessing road closure assessments. Any portion of a day more than four (4) hours that a designated road closure exists, will be considered as a full day for assessing road closure assessments.

3. Road Closure Bonus/Assessment – For the purposes of submitting a complete bid, the Contractor shall apply the number of days closed to the figure of $5,000, as listed in the Proposal form. Should the Contractor be successful in bringing the project to Substantial Completion, as defined in Section 301 of the Contract, in less days than bid, shall be paid a bonus of **$5,000** per day for the difference from actual to bid. Should the Contractor require additional days of Road Closure to bring the Contract to Substantial Completion, as defined in Section 301 of the Contract, shall be assessed a penalty of **$5,000** per day for the difference from the actual to bid.

4. Total Contract Amount. The total contract amount paid to the Contractor based on the contract unit prices for all items of work included in the proposal with the exception of Road Closure Assessment, any adjustments as provided for in the contract documents, any assessment of incentive, disincentive or liquidated damages as provided for in the contract documents.

1.04 ROAD CLOSURE

A. Calculation. Road Closure Assessment applies at any time during the contract unless otherwise specified in the proposal or by the Engineer. Road Closure Assessments apply to road closures during periods of work activity and no work activities (including holidays and weekends) unless otherwise specified.

1.05 MEASUREMENT AND PAYMENT.

A. Road Closure Assessments will be measured in days, and will be the total count of calendar days that designated roads are closed or partially closed within the project limits. Any incentive payment for Road Closure Assessments will be made using the procedures as detailed below.

B. Assessments:

1. The Engineer will keep records of the days assessed for road closure. The Contractor and the Engineer will compare records of the days assessed for road closure and bring these records into agreement at least once per week. The dollar value of road closure assessments will be determined by multiplying the number of days of road closure (or portions thereof) for Brown Street by the assessment daily rate of five-thousand dollars per day ($5,000.00 per day) for the actual number of days the road is closed. A tally of cumulative road closure assessments will be kept by the Engineer and will be subtracted from the original Road Closure Assessment days bid when reviewing partial progress payments. This process will continue until completion of the contract work. Upon completion of the work, if the total number of days is less than the bid amount, the remaining difference will be awarded to the Contractor as a bonus in the final payment. Likewise, if the total number of days is greater than the bid amount, the excess days will be subtracted from the contract value as a penalty.

C. If the Contractor proposes changes in the detour or phasing plans and associated changes to the requirements for maintaining traffic, and these changes are approved by the Engineer, the cost of these changes will be the Contractor's responsibility.

D. Road Closure Assessments applies to restricting through traffic from all or any portion of the through travel lanes on Brown Street. If the Contractor chooses to completely open the road when specific work areas are still underway, the City will negotiate the street opening, provided that no flagging of traffic is required.

1.06 EXAMPLE INCENTIVE CALCULATIONS.

A. If the cumulative road closure assessments exceed the contract number of days bid for Road Closure Assessment, the difference will be offset against monies otherwise due the Contractor for other items of work, either in the progress payment for which the contract Road Closure Assessments number of days sum is exceeded or in the final payment. For example, if the total number of days that the road was closed exceeds the number bid by three (3), the final payment will reflect a deduction of $15,000 in the total amount paid at the end of the Contract, from that which would otherwise be due.

B. If the cumulative road closure assessments do not exceed the contract number of days bid for this item, no deduction will be made from the progress payments or final payment against monies otherwise due the Contractor for other items of work for Road Closure Assessments, and the Contractor will be awarded a bonus for the amount of days the Contractor accomplished the work in advance of what was bid. For example, if the project is accomplished in sixty (60) work days, but the amount bid in the Road Closure Assessment bid item was sixty-five (65) days, the Contractor shall receive a bonus payment of the difference (i.e. 5 days times $5,000, or $25,000).

C. Should the actual project schedule fall behind so that additional Road Closure Days are accumulating, and completion has passed the Contract substantial completion date of **Friday August 4, 2023** (as referenced in Section 301 of this Contract Document), then the City will assess both the $5,000 penalty for the road closure assessment <u>and</u> $1,000 for liquidated damages referenced in Section 301 per day.

1.07 ADJUSTMENTS TO WORK THAT AFFECT ROAD CLOSURE ASSESSMENT

A. If the quantity of other work under the Contract varies from that stated in the Proposal, the Road Closure Assessments number of days bid shall be increased or decreased in proportion to changes in the total value of work under the Contract. This revision in the contract number of days Road Closure Assessments amount shall be agreed upon at the time the Contract quantities are revised.

END OF SECTION

SECTION 450
BIRMINGHAM GREEN PAINT COLOR

A. Description.

The color information below is provided so all items included in this contract that are specified to be painted or furnished in "Birmingham Green" color meet the City standards:

CMYK
C: 81 M: 41 Y: 82 K: 38

RGB
R: 42 G: 87 B: 58

HEX #2A573A

PMS: 7483C

END OF SECTION

SECTION 500
WATER MAIN CONSTRUCTION

PART 1. GENERAL

1.01 SUMMARY

A. The work of this section shall consist of the installation of water mains, valves, risers, corporations, boxes, hydrants, water services and connections, of the size and character and at the locations shown on the drawings. This work shall include the provision of all labor, materials, equipment, and supervision required, including excavation, bedding, backfill, testing and sterilization and other incidental work necessary for a complete system. The Contractor shall set crosses, tees, bends, sleeves, and other special fittings in the main where shown on the drawings or directed by the Engineer. All unconnected openings of such special fittings shall be closed by standard plugs. All special fittings shall be incidental to the water main construction.

1.02 REFERENCES

A. Unless otherwise specified, all water main pipe materials shall conform to the latest edition of the applicable AWWA standard for construction.

B. Performance and material requirements shall meet specific Reference Standards as referred to hereinafter under individual items.

C. Unless otherwise specified, all materials shall also conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 CERTIFICATION AND INSPECTION

A. All pipe and fittings delivered to the job shall be accompanied by certification papers showing that the pipe and fittings have been tested in accordance with the applicable Specifications for this project. All pipe and fittings will be inspected upon delivery to the jobsite. No cracked, broken or damaged pipe will be allowed in this work.

B. Each piece of ductile iron pipe and each fitting shall have its weight and class designation conspicuously painted or cast on it. All other pipe materials shall have the class designation painted thereon. Where required, other designation marks shall be painted on the pipe or fittings to indicate correct location in the pipeline in conformity to a detailed layout plan.

1.04 SHOP DRAWINGS AND GUARANTEES

A. Contractor shall furnish shop drawings and guarantees of the items to be furnished under this section of the Contract. Design details of joints and joint restraint shall be submitted to the Engineer for consideration and approval before ordering any pipe.

PART 2. MATERIALS

2.01 WATER MAIN PIPE

A. All water main pipe supplied and installed on this project shall be Pressure Class 54 Ductile Iron Pipe (DIP) conforming to ANSI A21.5, latest revision.

B. Joints shall be push-on type conforming to ANSI A21.11, latest revision.

C. Ductile iron pipe shall be cement mortar lined and bituminous seal coated, in accordance with ANSI A21.4, latest revision.

2.02 POLYETHYLENE ENCASEMENT

A. All ductile iron pipe and fittings shall be encased with polyethylene encasement in accordance with the requirements of ANSI/AWWA Standard C105/A21.5-10.

B. Polyethylene encasement materials shall be manufactured of virgin polyethylene possessing the following characteristics:

1. Type, Class, Grade, other Characteristics:
   a. In accordance with A.S.T.M. Specification D-1248-84 or latest revision thereof.
   b. Type……I
   c. Class A…… A natural color where exposure to weather (including sunlight) is less than forty-eight (48) hours total burial OR Black where exposure to weather (including sunlight) may be more than forty-eight (48) hours. Exposure to weather should be kept to a minimum, and in no case should it exceed ten (10) days.
   d. Grade……. E-1
   e. Flow Rate (formerly Melt Index) …….0.4 maximum
   f. Tensile Strength……. 1200 psi
   g. Elongation……...300%
   h. Dielectric Strength…. Volume resistivity, ohm-Cm3 = 1015 volts per mil thickness.
   i. Polyethylene tube material shall have a thickness of .008” (8-mils). Thickness tolerance shall not exceed 10% of the total tube thickness. A suggested tube size for each pipe diameter is listed in Table 1 below. For pipe sizes greater than 24”, tube size may be determined by multiplying the nominal pipe diameter by 2.25 to obtain minimum flat tube width.

TABLE 1: Polyethylene Flat Tube Width (Inches)

Nominal Pipe Diameter (Inches)	Ductile Iron Pipe, Bell & Spigot Joints	Ductile Iron Pipe with Mechanical Joints
4	16	16
6	20	20
8	24	24
10	27	27
12	30	30
14	34	34
16	37	37
18	41	41
20	45	45
24	54	54

C. Adhesive tape used to connect Water main Polyethylene Encasement shall be a general-purpose adhesive tape two (2) inches wide and approximately ten (10) mils thick, such as Scotchrap No. 50, Polyken No. 900, or Tapecoat CT. Tape used for repair of damage to the polyethylene shall possess a life expectancy equal to that of the polyethylene.

2.03 FITTINGS

A. Ductile Iron Water Main Fittings shall be furnished in accordance with ANSI A21.10, latest revision.

B. Joints shall be mechanical joint or push-on, conforming to ANSI A21.11, latest revision. When called for on the plans or supplemental specifications, fittings shall be cement mortar lined as detailed for pipe.

C. When connecting to existing water mains, oversized fittings may be required to match the outer diameter of the older water mains. The Contractor shall determine sizes as necessary.

2.04 HYDRANTS

A. Hydrants shall be EJIW model 5BR with 6" mechanical joint inlet, two pumper nozzle, all opening left, 5'6" bury, plugged drain, block bolts.

2.05 GATE VALVES AND BOXES

A. All gate valves shall be of the resilient seat wedge type with mechanical joints.

B. Gate valves shall be designed for 150 psi working pressure and meet the requirements of AWWA Specification C509.

C. Gate valves shall be cast iron body, fully bronze mounted, bronze stem, O ring stem seal, non-rising stem and wedge disc with resilient rubber seat ring disc seat. Gate valves shall have a clear waterway equivalent in area, when fully open, equal to that of the connecting pipe.

D. Valves shall be made to open when turned to the left, or counterclockwise.

E. The gate valves shall have square wrench nuts.

F. Gate valves of the size specified shall be produced by either Mueller or East Jordan Iron Works.

G. Valve boxes shall be of the three (3) piece adjustable height type with cast iron curves with a 5 1/4" shaft diameter. The cover shall be marked "WATER". The length of the box shall be adequate for the depth of cover at the valve location.

2.06 WATER LEADS

A. All water service leads shall be of Type K copper of the sizes called for on the plans.

2.07 CORPORATION STOPS

A. Corporation stops shall be Mueller Model No. H-15000

B. Corporation Stops shall have an AWWA Taper threaded inlet with copper flare straight connection outlet.

C. Corporation Stops shall be manufactured and tested to meet ANSI/AWWA Standard C800.

D. Corporation stops shall be constructed of heavy-duty brass components meeting the requirements of ASTM B62.

2.08 CURB STOPS AND BOXES

A. Curb Stops shall be manufactured and tested to meet ANSI/AWWA Standard C800.

B. Curb stops shall be constructed of heavy-duty brass components meeting the requirements of ASTM B62.

C. Inlet and outlet shall both have copper flare straight connections.

D. Curb stops valve shall have Minneapolis pattern thread top

E. Curb stop valves shall be Mueller Model No. H-15154

F. Curb stop valves shall be Mueller Model No. H-10300.

G. Curb stop boxes shall be cast iron extension type with lid and plug and shall have a Minneapolis pattern base with a 1-1/4" inner diameter upper section. Curb stop boxes shall be furnished to include a valve box riser (EJIW 8500) and cover (EJIW 6800) to allow for a flush rim elevation to the sidewalk grade.

PART 3. CONSTRUCTION

3.01 CARE IN HANDLING PIPE

A. The pipe shall be distributed at the site by the Contractor as required and care shall be exercised to prevent injury to the pipe in handling. Proper tools and implements for safely handling the pipe and other materials shall be provided by the Contractor, and particular care shall be exercised to prevent the abrasion of the pipe coating which shall be repainted, if injured, with coal tar varnish properly mixed with oil and heated before applying. The Contractor shall keep on hand a sufficient supply of the coal tar varnish for such purpose.

B. Care shall be taken in handling cement-lined pipe. Hooks inserted inside the pipe shall have blunt ends which will spread the bearing to more than two (2) square inches of cement surface.

C. Pipe must be protected from falling, either from truck to ground or into the trench and, when distributed along the line or stored near a road, must be kept clear of passing vehicles.

D. All materials will be inspected before placing in the trench, and if defective, marked "REJECTED" and removed from the work by the Contractor at no additional expense to the City. All damaged materials shall be replaced by the Contractor at no cost to the City.

3.02 MATERIALS FURNISHED BY THE CITY

A. See the "General Requirements" section for materials furnished by the City.

3.03 SHUTTING OFF WATER

A. The Contractor shall familiarize himself with the locations of existing gate valves, and have the gates made easily accessible for emergency shut-offs. He shall always keep on the job all the necessary equipment to shut the water off and to make immediately emergency repairs without undue delay.

B. WARNING: Since some water mains and valves are old, it is not uncommon for valves to not shut off "tight". In such cases, it may be necessary to close additional valves and/or for the Contractor to contend with a flow of water through such valve(s).

C. In case of an emergency break in a water line due to his construction operations, it shall be the Contractor's responsibility to supply water for immediate needs to those deprived of such service.

3.04 EXISTING STRUCTURES AND UTILITIES

A. The Contractor shall notify all utilities of his intention to excavate or otherwise cause any underground disturbance, by calling MISS DIG at least three (3) full working days before commencing such excavation or disturbance.

B. Underground structures and utilities are shown on the construction drawings as an aid to the Contractor, but the Owner does not guarantee their location or that other underground structures or utilities may not be encountered. No attempt has been made to show utility services on the plans, and it shall be the Contractor's responsibility to locate them. The City will, whenever

possible, and when requested by the Contractor, stake the location of sewer and water services at the street right-of-way line.

C. In crossing over or under underground utilities, the Contractor shall use all possible care in protecting the utilities and to maintain their free unobstructed continuous use. The Contractor will be required without additional compensation to repair, replace or rebuild any such improvement injured or damaged by him, and he shall be responsible to the department, companies, individuals, or corporations controlling such improvements.

D. All underground utilities shall be supported on a foundation of sand or sand-gravel thoroughly compacted by mechanical tamping to prevent future settlement and possible failure of the utility. "Cement reinforced sand backfill" rather than "sand or sand 'gravel" shall be used under sewers and sewer services. Gas mains and gas services shall be supported in accordance with the requirements of the Consumer Power Company.

3.05 TRENCH EXCAVATION

A. Excavation shall be open cut. All work shall be done to true line and grade. The Contractor shall protect all line and grade stakes and he will be held responsible for any defective work occasioned by his negligence in this regard.

B. The trench shall be of sufficient depth to provide a cover above the crown of the pipe of at least five (5) feet.

C. The bottom of trench shall be excavated neatly to the required grade and filled two (2) inches with MDOT Class II sand thoroughly compacted by tamping before the pipe is laid.

D. Methods and equipment for excavating shall be such as will produce a trench without excessive width or irregularity. The width of trench shall be sufficient to allow the pipe to be laid and jointed properly and to allow the backfill to be placed and compacted properly.

E. The Contractor shall take great care to protect all trees and shrubs along the site of the work. No equipment will be permitted which causes excessive damage to existing trees along the site of the work.

F. If the trench at any point along the line will be opened nearer than six (6) feet to the face of the trunk of an existing tree, and in the opinion of the Engineer the excavation would be injurious to the tree, he may require the Contractor to tunnel under the tree at no extra cost to the City.

G. Selected excavated material may be used for backfilling under trees and it shall be thoroughly tamped to completely fill the excavated space.

H. Where the trench must be cut through concrete or asphalt pavement, driveways, or sidewalk particular care shall be taken not to damage adjoining areas. All cuts through existing concrete or asphalt pavements, and driveways shall be made with a concrete saw, except where an existing parallel joint is located not more than two (2) feet beyond the line of the intended saw cut. In that case the pavement or driveway shall be removed and replaced to the existing joint. Sidewalks shall not be saw cut and all removal and replacement shall go to existing joints. Pavement breaking using a drop weight may be limited or prohibited by the Engineer, if the Engineer determines the use of such equipment is causing damage to adjacent structures.

3.06 TUNNELING

A. Tunneling, Boring and Jacking under pavements or streets will not be allowed without the approval of the Engineer in writing, or unless noted on plans or in the Specifications. Where tunneling is permitted there shall be a minimum clear space of not less than six (6) inches between

the outside of the pipe in the tunnel and the face of the excavation or the sheeting or bracing that is nearest the pipe. Upon completion of the construction work in the tunnel, the sheeting and bracing (if any) shall be left in place and all the remaining space between the outside of the pipe and the excavation shall be filled with cement reinforced sand backfill thoroughly compacted. The Contractor shall receive no additional compensation for sheeting and bracing left in place in the tunnel.

3.07 EXCAVATED MATERIAL

A. The materials excavated and to be used in backfilling shall be so handled and stored as to cause as little inconvenience as possible to the public travel and adjoining property owners. The materials excavated and not suitable or needed for backfilling shall be disposed of by the Contractor at his own dumpsites.

B. Payment for handling the surplus excavated material, as outlined above, shall be included in the unit prices quoted in the proposal for pipe installation.

3.08 LAYING PIPE

A. Water mains shall be laid with a minimum of five (5) feet of cover from the top of the main to the final surface grade above the main, unless otherwise designated on the plans, authorized by the Engineer, or necessary to connect to existing fittings.

B. Before laying pipe, all lumps, blisters, and excess coal tar coating shall be removed from the bell and spigot ends of each pipe; the outside of the spigot and the inside of the bell shall then be wire brushed and wiped clean and dry.

C. Before lowering, and while suspended, the pipe shall be inspected for defects and rung with a light hammer to detect cracks. Any defective, damaged, or unsound pipe shall be rejected. The interior of each piece shall be inspected for cleanness and cleared of any dirt or foreign matter before being lowered into the trench.

D. Each length of pipe shall have bearing upon the sub-grade throughout the length of the barrel. The pipe will not be permitted to rest in the trench on any hard unyielding object such as stone, brick, etc. Blocking pipe up to proper level with blocking of any kind will not be permitted.

E. Unless otherwise directed, pipe shall be laid with bell ends facing the direction of laying. After a length of pipe is placed in the trench the spigot shall be centered in the bell of the adjacent pipe, the pipe shoved into position and brought into true alignment, and there secured with sand, carefully tamped under and on each side of the pipe.

F. When the temperature is above 60 degrees F., the spigot of each pipe laid shall be brought tightly home in the bell of the preceding pipe. When the temperature is below 60 degrees F., the pipe shall be laid with the spigot end approximately 1/16" from the face of the bell to allow for expansion.

G. Wherever deflections at joints are required by changes in grade or alignment or to plumb valve stems, the deflection at any joint shall not exceed three-quarters of the maximum deflection recommended by the manufacturer of the joint used.

H. Where necessary to cut pipe, cutting shall be done with approved tools and cut ends of pipe shall be square and regular. Cutting shall be done in a manner to avoid damage to lining and coating.

I. Spigot ends of field cut pipe shall be tapered back one-eighth (1/8) inch at an angle of thirty (30) degrees with the centerline of the pipe.

J. All branches or other openings shall be bulkheaded until either capped or connected. The end of the pipe shall be bulkheaded and braced at the end of each day's work.

K. Tools or other objects shall not be stored or left in the pipe.

3.09 JOINTING OF PIPE

A. Molded rubber gasket slip on type joints shall be used for jointing of pipe. Prior to positioning the rubber gasket, the bell and spigot shall be wiped clean. After properly positioning the gasket in the bell, the joint shall be lubricated with an approved lubricant.

B. The spigot end shall be centered into the bell end until it engages the gasket. The joining pipe shall then be aligned both vertically and horizontally before applying force to make the joint. Any deflection shall be taken after the joint assembly has been completed.

C. Mechanical joints may be used as an alternate for the slip-on type joining, if approved by the Engineer.

3.10 INSTALLATION OF POLYETHYLENE ENCASEMENT

A. Polyethylene encasement shall be installed on all new pipe and fittings installed on this project. Although not intended to be a completely air- and water-tight enclosure, the polyethylene shall provide a continuous barrier between the pipe and the surrounding backfill.

B. On Pipe:

1. Cut polyethylene tube to a length approximately two (2) feet longer than the length of the pipe section. Slip the polyethylene around the pipe, centering it to provide a one (1) foot overlay on each adjacent pipe section, and bunching it accordion fashion until it clears the pipe ends.
2. Lower the pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate installation of the polyethylene.
3. After completing the joint, make the overlap. Pull the bunched-up polyethylene from the preceding length of pipe, slip it over the end of the new length of pipe, and secure in place with one circumferential turn of tape, plus enough new pipe section over the end of the first wrap until it overlaps the joint at the end of the preceding length of pipe. Tape it in place. Take up the slack width to make a snug, but not tight, fit along the barrel of the pipe, securing the fold as necessary with adhesive tape at quarter points.
4. Repair any rips, punctures, or other damage to the polyethylene with tape, or with a short length of polyethylene tube cut open, wrapped around the pipe, and secured with tape. Proceed with installation of the next section of pipe.

C. On Pipe – Alternate Method:

1. Cut polyethylene tube to a length approximately one (1) foot shorter than the length of the pipe section. Slip polyethylene around the pipe, centering it to provide six (6) inches of bare pipe at each end. Make polyethylene snug, but not tight; tape down at quarter points and secure ends as described above.
2. Before making up a joint, slip a three (3) foot length of polyethylene tube over the end of the proceeding pipe section, bunching it accordion fashion. After completing the joint, pull the three (3) foot length of polyethylene over the joint, overlapping the polyethylene previously installed on each adjacent section of pipe by a least one (1) foot; make snug, tape down, and secure each end as described above.
3. Repair any rips, punctures, or other damage to the polyethylene as described above. Proceed with installation of the next section of pipe in the same manner.

D. Bends, Reducers, Offsets, and other fittings that can be wrapped in a polyethylene encasement tube shall be covered with polyethylene in the same manner as the pipe.

E. Valves and other odd-shaped fittings which cannot practically be wrapped in a tube, shall be wrapped with a flat sheet obtained by splitting open a length of polyethylene tube. This sheet shall be passed under the valve and brought up around the body of the stem. Seams shall be made by bringing the edges together, folding over twice, and tamping down. Slack width and overlaps at joints shall be handled as described above. Tape polyethylene securely in place at valve stem and other penetrations.

F. Openings for branches, service taps, blow-offs, air valves and similar appurtenances shall be made by making an X-shaped cut in the polyethylene and temporarily folding the film back. After the appurtenance is installed, replace the film, and repair the cut, as well as other damaged areas in the polyethylene, with tape. Branches, service taps, blow-offs, air valves and similar appurtenances shall not be wrapped with polyethylene unless otherwise specified or shown on the drawings.

G. Junctions Between Wrapped and Unwrapped Pipe:

1. Where polyethylene wrapped pipe joins a pipe which is not wrapped, extend the polyethylene tube to cover the unwrapped pipe three (3) feet, unless shown on the drawings. Secure the end with circumferential turns of tape.

3.11 COATING OF BOLTS

A. All bolts and nuts installed by the Contractor shall be coated with coal tar.

3.12 SHORING, SHEETING AND BRACING

A. Where necessary for the safety of persons, adjoining structures, or property, or the work itself, the Contractor shall adequately sheet or shore the trenches and sides of all excavations and shall provide adequate support for such sheeting or shoring. The sheeting, shoring and supports shall be furnished, placed and maintained by the Contractor during the time of need for same.

B. As the excavations are backfilled, the Contractor shall carefully pull the sheeting and remove its supports in such a manner as not to endanger persons, adjoining structures or property or the work, taking care that the space left unfilled by the removal of the sheeting is compactly backfilled. No extra compensation will be allowed for removal of sheeting, shoring or supports.

3.13 THRUST BLOCKING

A. Bends, tees, dead end of pipe or fittings and hydrants shall have concrete thrust blocks installed in accordance with the details as shown on the contract drawings. No separate payment will be made for thrust blocks. This work is incidental to the installation of the water main.

3.14 GATE VALVES

A. The cost of installing gate valves in new water mains and in hydrant connections shall be included with the appropriate pay item for construct gate wells, install gate valve and box, or hydrant connection.

B. Payment for installing gate valves in existing mains will be made at the contract unit price each.

C. Gate valves and valve boxes shall be furnished by the Contractor.

3.15 GATE WELLS

A. Gate wells shall be constructed at the locations as indicated on the contract drawings.

B. Gate well walls are to be built of pre-case concrete meeting ASTM C-471, concrete block masonry, or brick masonry laid in full and close joint of cement mortar. The outside of masonry gate wells shall be plastered to a thickness of one-half (1/2) inch with mortar. The inside joints shall be left smooth. The ring shall be set in a bed of mortar and adjusted to the grade set by the Engineer.

C. Gate wells will be paid for at the contract unit price each, which will be payment in full for furnishing all materials (including Construction castings), for all necessary excavation, backfilling, disposal of surplus material, removing and replacing pavement, curb, curb and gutter, sidewalk, and driveways, and constructing the structure complete.

D. Where gate wells are constructed over new gate valves, the unit price shall cover furnishing and installing both the gate well and the gate valve.

3.16 HYDRANT INSTALLATION

A. Hydrants shall be set plumb and to the grade established by the Engineer.

B. Payment for hydrant installation will be made at the contract unit price each, which price will be payment in full for excavation; furnishing and installing a tee in the water main; furnishing and installing the hydrant, the gate valve, and the gate valve box; blocking; and backfilling.

C. Six (6) inch hydrant connection pipe from the main to the hydrant will be paid for at the contract unit price per lineal foot for installing six (6) inch ductile iron pipe.

3.17 HYDRANT REMOVAL

A. Wherever possible, hydrants to be removed shall be left in service until new hydrants to be installed are in service. The Contractor shall do all necessary excavation required and shall remove the hydrant and hydrant valve (if any) and cap and plug the hydrant connection at the main. After the connection has been capped or plugged, necessary concrete blocking shall be placed and before backfilling, the connection shall be tested for leakage. Salvaged hydrants and fittings shall be delivered by the Contractor to the Department of Public Services Yard.

B. Payment for hydrant removal will be made at the contract unit price each, which price will be payment in full for excavation, removing hydrant and gate valve, plugging, blocking, backfilling, removing the existing surface materials, and replacing the surface materials with the same type and thickness of material as removed.

3.18 BACKFILLING OPEN TRENCHES

A. Before the usual backfilling is commenced, sand backfill shall be placed along the side and under the lower haunches of the pipe up to the top or crown of the pipe for the full width of the trench. This sand backfill shall be placed manually in layers not exceeding six (6) inches in thickness. Each layer shall be thoroughly compacted by mechanical tamping or vibrating. The cost of placing this sand backfill to the top of the pipe shall be included in the unit price bid for installation of the pipe.

B. Insofar as practicable, without interfering with the progress of the work, the Contractor shall keep streets, driveways and sidewalks open to safe use by the public.

C. All trenches and excavations under existing pavement, proposed pavement, existing roadways, driveways or sidewalk shall be backfilled with sand or gravel and thoroughly compacted by mechanical tamping or vibrating in layers not exceeding 12 inches in depth. The Engineer may

require the Contractor to further consolidate the backfill by the water jetting method after compaction by mechanical means.

D. Backfill shall not be placed against any portion of a structure until it (structure) has passed inspection.

E. Where the trench or excavation is in the parkway between the roadway and the street line or in unimproved streets, excavated material may be used in completing the backfill. Care shall be taken in placing this backfill to make sure that all boulders, pieces of concrete and such other material that might damage the pipe or structure, or prevent consolidation are not allowed to remain in the backfill material and it shall be compacted by tamping, jetting, or using compacting equipment.

F. If a bulldozer or other machine is used to place the backfill material, no material shall be pushed or dropped into the trench but shall be placed on the sloping ends of the completed backfill and allowed to roll in place to the bottom of the trench.

G. All trenches and excavations shall be backfilled as soon as inspection is completed to avoid unnecessary risk of damage to the line and to reduce the risk of accidents involving the public.

H. After backfilling is completed, the Contractor shall promptly remove all surplus and waste materials from the site, leaving the site and all places disturbed or affected by the work in a neat and orderly and dust free condition.

3.19 NEW WATER MAIN CONNECTIONS TO EXISTING MAINS

A. When connecting to existing water mains, oversized fittings may be required to match the outer diameter of the older water mains. The Contractor shall determine if oversized fittings are necessary for each connection, and shall provide all necessary materials, parts, tools, labor, equipment and all incidental work required for the connection. No additional compensation will be made for the use of oversized fittings on any connection to an existing water main.

3.20 CONNECT WATER SERVICES TO NEW MAIN

A. This item involves connecting water services to new water mains. The water services to be connected to the new mains are currently connected to water mains that will be removed or abandoned under this contract.

B. The Contractor shall install corporations in the new main and connect the services at the corporations. Locations and sizes of existing water services are shown on the plans in accordance with the best information available to the City. However, there will be no adjustment made in pay items if the locations or sizes are different than those shown on the plans.

C. If the Contractor encounters a lead water service during the installation of the water main or water service connections, they shall notify the City of the lead water service. Once the material of the service is verified by the City, the Contractor shall remove and replace the lead service with a type K copper service to the property line.

D. New pipe necessary to make the connections shall be Type K Copper and shall be of the same size as the existing service.

E. For water service connections where the existing water service will cross the trench of the proposed water main installation, payment will be made for installing a water service connection using the existing water service lead (unless it is a lead water service). No payment will be made for installing new Type K Copper water service on these leads. Any new Type K Copper water

service required on these services shall be considered incidental to the construction of the water service connection.

3.21 MAINTENANCE OF TRENCHES

A. During the period between the time when a section of water main is completed and the time when the final pavement surface is replaced, the Contractor shall maintain the top of the trench in a suitable condition for traffic to use. The Contractor shall place a minimum thickness of three inches of cold-mix asphalt in all areas where pavements have been removed. Such cold-mix asphalt shall be maintained, and supplemented, if necessary, until such time as permanent pavement is replaced.

B. There is no separate pay item for maintenance of trenches, as that work is considered incidental to the water main construction.

3.22 SURFACE RESTORATION

A. Surfaces removed or damaged for the construction shall be replaced as follows, unless otherwise specified on the plans:

1. Existing Surface	Replaced By
a. Gravel (driveways, shoulders, etc.)	8" 23A aggregate
b. Bituminous mat	5" full-depth asphalt
c. Asphalt (full-depth or over aggregate)	5" full-depth asphalt
d. Concrete pavement	8" concrete
e. Asphalt surfaced concrete	8" concrete and 2" asphalt surfacing
f. Concrete sidewalk	4" concrete, except 6" at drives
g. Grass surface	3" topsoil plus seed or sod

B. For asphalt surfaces, the top shall be a wearing course mixture at one (1) inch minimum thickness. The balance of the thickness shall be: (a) leveling course mixture when over a concrete base and (b) base course mixture when in a full-depth asphalt.

C. Surfaces not described above, which are damaged for the construction, shall be replaced with the same type and thickness of material removed.

D. All surface restoration shall comply with the City's Standard Details and specifications for the specific type of work being done.

3.23 FLUSHING

A. Upon completion, the new main shall be flushed with potable water until the water runs clear in color and no foreign matter is discharged. The main shall be slowly filled and due care taken to expel all air from the main. A temporary connection may be installed to conduct the water out of the trench. Flushing shall be done in a manner that will not cause damage to adjacent property.

3.24 PRESSURE TEST

A. The completed main shall be pressure tested with water at a pressure of 150 pounds per square inch. This pressure shall be maintained for at least two hours and for such longer time as the Engineer may require. The leakage, as measured by water meter or by other means approved by the Engineer, from the section of main under test pressure shall not exceed a rate of 11.65 U.S. gallons per inch of main diameter per mile of pipe in twenty-four (24) hours. (See "Water Main Disinfection & Leakage Test" table at the end of this specification section).

B. In case the leakage under test exceeds the maximum above specified, the leaks shall be discovered and repaired in an approved manner.

C. Any faulty pipe, fittings, valves, or other accessories included in work under this Contract and disclosed during testing shall be replaced with sound material and the test shall be repeated until specified requirements are met.

3.25 CLEANSING AND DISINFECTION OF NEW WATER MAIN

A. Before the new water mains and appurtenances are placed in service, they shall be cleansed, sterilized, and the water passing through them must show by tests safe bacteriological results.

B. All rules and practices of the Oakland County Health Department, the Michigan Department of Public Health, and the Michigan Department of Environmental Quality must be strictly followed.

C. The Contractor shall provide all necessary connections at the points of beginning of the individual sections of mains for applying chlorine to the mains for disinfection purposes.

D. After water mains laid under this contract have been acceptably tested and flushed, they shall be disinfected by the Contractor, in accordance AWWA Standard C651. All new mains and pipe shall be chlorinated with up to fifty (50) parts per million or more of liquid chlorine, or approved equal, and the chlorinated water allowed to stand in the mains for twenty-four (24) hours, at the end of which period the chlorinated water at all parts of the new mains shall show a free available chlorine residual of not less than twenty-five (25) parts per million. If less than twenty-five (25) parts per million residual is shown at the end of the first twenty-four (24) hour period, additional chlorine shall be added until a residual of not less than twenty-five (25) parts per million at all parts of the new system is shown after a subsequent twenty-four-hour period. The chlorinated water shall then be removed from the mains by the Contractor and the mains left full of water ready for use. (See "Water Main Disinfection & Leakage Test" table at the end of this specification section).

E. After satisfactory chlorination of the mains has been completed as described above, and the chlorinated water flushed out and the mains filled with potable water, the Southeastern Oakland County Water Authority will take bacteriological samples of the water in the mains for analysis. If the analyses of samples show the Construction water to be unpotable because of unsatisfactory disinfection of the mains, the mains shall be re-chlorinated at the Contractor's expense until satisfactory samples are obtained. Any charges by the Water Authority for re-testing the water shall be paid by the Contractor.

3.26 PAYMENT FOR WATER MAINS

A. Measurement of completed and accepted water main laid will be made in lineal feet, measured on the axis of the pipe laid from the beginning to the end and shall include measurements through fittings and valves. Branches will be measured in lineal feet from the center of the tee or cross, on the supplying water main, to the end of the pipe or special casting including the cap or plug in the case of a dead end and to the center of hydrants.

B. The unit price per lineal foot of pipe laid shall include all excavating; tunneling; boring and jacking; sheeting; bracing; shoring and de-watering of trench; removing and replacing pavement, sidewalk, or other type of existing surface; furnishing, laying and jointing of pipe and fittings; installing gate valves; connecting to existing water main; installing blocking; all backfilling; flushing; pressure testing; and disinfecting.

3.27 WATER MAIN DISINFECTION & LEAKAGE TEST

TABLE 2: WATER MAIN DISINFECTION AND LEAKAGE TEST				
Nominal Pipe Diameter (Inches)	Contents Per 1,000 Feet of Pipe		Pounds of Calcium Hypochlorite @ 65% to obtain 50 PPM Per 1,000 Feet of Pipe	Allowable Leakage (L)* in Gallons of Water Per 1,000 Feet of Pipe at 150 PSI in Two Hour Test
	Cubic Feet	Gallons		
4	87.3	650	0.42	0.74
6	196	1,470	0.94	1.10
8	349	2,610	1.67	1.47
10	545	4,080	2.62	1.84
12	785	5,880	3.77	2.21
16	1,396	10,400	6.67	2.94
*L = 11.65 gallons per day, per mile, per inch diameter at 150 psi., per AWWA C600.				

SECTION 507

METER PIT SPECIFICATIONS

DECRIPTION

This work shall be done in accordance with the City of Birmingham standards, the Michigan Department of Transportation's 2012 Standard Specifications for Construction, and as specified herein.

CONSTRUCTION METHODS

This item includes the installation of an enclosed underground water meter pit that will service the proposed landscaping irrigation system, as shown and detailed on the plans.

The work involved for the water tap, water service, and 4" underdrain as featured on the plans will be paid for separately. Coring the hole in the meter pit structure will be incidental to this pay item.

All work must be inspected and accepted by the engineer prior to backfilling and final acceptance.

The water meter shall be furnished and installed by the City, therefore the Contractor shall coordinate his work with the City to ensure proper installation of the meter.

The Contractor shall perform the water service tap to the City water main in accordance with City standards.

MEASUREMENT & PAYMENT

The completed work as measured for the meter pit assembly and the water service will be paid for at the contract unit price for the following contract pay item and includes all material, equipment, and labor to complete this item.

Pay Item	Pay Unit
Meter Pit	Each

END OF SECTION

SECTION 600
SEWERS AND RELATED STRUCTURES

PART 1. GENERAL

1.01 SUMMARY

A. This work shall include the furnishing of all labor, materials and construction equipment necessary for the construction of sewers of the size and character shown on the drawings and specified herein including the furnishing and installing of the pipe and bedding and necessary testing. This work shall include the provision of all labor, materials, equipment, and supervision required, including excavation, bedding, backfill, testing and sterilization and other incidental work necessary for a complete system.

B. The work of this section shall also consist of the furnishing and construction of manholes and catch basins including inlets as detailed on the Drawings and at the locations shown on the Drawings. Concrete, excavation and backfill shall be as specified in this section and other sections of the specifications. Manholes and catch basins shall be complete with frames, inlets, etc., to meet new or existing pavement surfaces, sidewalks, or grades and shall be included in the work under this section of the Contract.

C. Contractor shall check entire length of route for acceptability of site conditions, up to and including soil conditions, to perform this work prior to bidding and again prior to mobilizing on the site to perform the various work items.

1.02 REFERENCES

A. Performance and material requirements shall meet specific Reference Standards as referred to hereinafter under individual items.

B. Unless otherwise specified, all materials shall also conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 CERTIFICATION AND INSPECTION

A. All pipe and fittings delivered to the job shall be accompanied by certification papers showing that the pipe and fittings have been tested in accordance with the applicable Specifications for this project. All pipe and fittings will be inspected upon delivery to the jobsite. No cracked, broken or damaged pipe will be allowed in this work.

B. Each piece of pipe and each fitting shall have its weight and class designation conspicuously painted or cast on it. All other pipe materials shall have the class designation painted thereon. Where required, other designation marks shall be painted on the pipe or fittings to indicate correct location in the pipeline in conformity to a detailed layout plan.

1.04 SHOP DRAWINGS AND GUARANTEES

A. Contractor shall furnish shop drawings and guarantees of the items to be furnished under this section of the Contract. Design details of joints and joint restraint shall be submitted to the Engineer for consideration and approval before ordering any pipe.

PART 2. MATERIALS

2.01 SEWER PIPE

A. All sewer pipe supplied and installed on this project shall be of the sizes and types called for on the drawings.

1. Reinforced Concrete Sewer Pipe (RCSP): ASTM C 76, Class as designated on the drawings or special design conforming to ASTM C655;

2. ABS Solid Plastic Pipe: ASTM D-2751, SDR 23.5;

3. PVC Schedule 40 Sewer Pipe: ASTM D1785 "Standard Specification for PolyVinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120";

4. Polyvinyl Chloride Pipe (PVC) - ASTM D-2241, SDR 26. PVC compounds to meet ASTM D-1784.

5. Polyvinyl Chloride Pipe (PVC) - ASTM D-2241, SDR 23.5. PVC compounds to meet ASTM D-1784.

B. Precast Concrete Pipe shall meet the requirements of ASTM C76.

2.02 SEWER POINT REPAIR MATERIALS

A. The materials acceptable for use in making a point repair are listed below:

1. Sewer Pipe - The following types of sewer pipe may be used as replacement pipe for a point repair. They shall conform to the appropriate American Society for Testing Materials (ASTM) Specification as listed below and any other ASTM or other applicable specification:

a. PVC Schedule 40 Sewer Pipe for 10" and smaller only.
b. ASTM C76 Class IV Concrete Sewer Pipe for 12" diameter and larger.
c. Approved Equal

2. Sewer Connections and Appurtenances

a. Service Connection - Any service connection replaced during a point repair shall conform to the pipe manufacturer's recommendations and specifications and applicable ASTM Specifications, for the service connection and for installation of such. The material of the connection shall be like the sewer pipe it will be connected to.

2.03 PIPE BEDDING

A. All sewer six (6) inches in diameter and larger laid on this project shall be installed in conformance with the bedding requirements established on the cross-section on the plan. The gradation requirements for the crushed stone chips shall be according to the following:

1. Crushed stone chips shall be made from crushing sound limestone, dolomite ledge rock, or other materials as approved by the Engineer. Material shall be hard, tough, and durable. The crushing process shall produce material of which 85% to 100% of the particles shall have at least one machine fractured face. Crushed pea gravel will be acceptable if it meets these criteria:

a. For sewer pipe 18" in diameter or less, crushed stone chips meeting the gradation requirements of the following table may be used:

GRADATION REQUIREMENTS FOR 3/8" CRUSHED STONE CHIPS
(18" DIAMETER PIPER OR SMALLER)

Sieve Size	Percentage Passing by Weight
½"	100%
3/8"	90 - 100%
No. 8	0 - 15%
No. 30	0 - 3%

For purposes of this specification, MDOT Aggregate Mix No. 29A, using crushed limestone, will meet the requirements of this specification.

b. For pipe larger than 18" in diameter, crushed stone chip bedding meeting the requirements of the following table may be used:

GRADUATION REQUIREMENTS FOR 3/4" CRUSHED STONE CHIPS
(LARGER THAN 18" DIAMETER)

Sieve Size	Percentage Passing by Weight
1"	100%
3/4"	90 - 100%
3/8"	20 - 55%
No. 4	0 - 10%
No. 8	0 - 5%

For purposes of this specification, MDOT Aggregate Mix No. 17A, using crushed limestone, will meet the requirements of this specification.

2.04 STRUCTURES

A. Unless otherwise noted on the drawings or in supplemental specifications, precast manhole sections shall be used for all new sewer structures, including manholes, catch basins, and inlets. All concrete shall be 4,000 pounds per square inch, as determined by core test or cylinders. All precast sections shall bear the stamp of an approved testing laboratory as having been tested and delivered from tested stock of the manufacturer, at the expense of the Contractor. Precast reinforced manhole sections shall meet the requirements of current A.S.T.M. C-478.

B. The top section shall be an eccentric cone with one straight side (with manhole steps installed in straight side at the factory). The top section shall be set at an elevation to provide for three (3) courses of brick between the top face and the manhole frame when set to grade. All precast

manholes shall be standard tongue and groove using mastic joint materials equal to DeWitt No. 10. All interior joints shall be pointed with mortar and all visible leaks must be stopped.

C. Manhole frames and covers shall be E.J.I.W. #1040-A. Drainage structure frames and covers shall be E.J.I.W. #5080 with M1 grates, except where modified on the plan.

D. Cast iron manhole steps shall be castings meeting the requirements of A.S.T.M. Specifications for "Gray Iron Castings," A48, Class No. 35B. The steps shall be approximately 10" x 10" x 3". Steps in precast manhole sections shall be cast in place at the plant.

E. All manholes shall have channeled bottoms. For sewers 12" diameter or less, the channel shall be 3/4 depth of pipe. For sewers larger than 12" diameter, the channel shall be a minimum of 9" deep.

2.05 GRANULAR BACKFILL

A. Contractor shall install compacted sand backfill meeting MDOT Class II specifications, compacted to 95% maximum modified proctor density in the locations required per MDOT Standard Detail R-83-B, or where called for on the plans.

PART 3. EXECUTION

3.01 MEASUREMENT AND PAYMENT

A. Where called for in the proposal, the compensation to the Contractor for the sewer installation of the diameter specified will be paid for at the contract unit price per lineal foot measured in place along the center of the pipe. The contract unit price for this work shall be payment in full for furnishing the materials including wyes and all necessary excavation, sheeting or bracing, draining, laying, jointing, bedding, backfilling, disposal of surplus materials, testing, and restoration, and all other work incidental to the construction of the sewer. Final measurements for sewer will be total lineal feet from center to center of standard manholes or center of manholes to face of tunnel sewers where connection only is made thereto.

B. Junction chambers, gate chambers, and other special structures will not be included in measurements of the sewer. Sewer measurements at these structures will end and begin respectively at inside wall of outlet and inlet end respectively, unless otherwise indicated on the plans.

C. Unless specified otherwise, manholes and drainage structures will be paid for at the contract unit price each, which price shall be payment in full for furnishing the materials, including the required fittings, frames, and full grates, steps, and for all labor, equipment and tools, all necessary excavation, backfilling, disposal of surplus material, and all work incidental to the completed structures.

3.02 PIPE DELIVERY

A. A test certificate from an independent testing laboratory showing strength of pipe when tested in accordance with the applicable A.S.T.M. Standards shall be submitted to the Engineer before pipe is delivered to the job site. One certificate shall be furnished for each size of pipe. The Engineer may require additional tests of pipe stored at the plant or delivered to the job, should he have reason to believe that inferior pipe is being delivered on the job. The cost of each test shall be borne by the Contractor. The pipe supplier shall also furnish a certificate stating that all pipe supplied was manufactured from substantially the same material and in the same manner as pipe tested and all pipe delivered to site shall have the test stamp of the testing laboratory making such tests.

B. The pipe shall be distributed at the site by the Contractor as required, and care shall be exercised to prevent injury to the pipe in handling. Proper tools and implements, for safely handling the pipe and other materials, shall be provided by the contractor.

C. Pipe must be protected from falling, either from truck to ground or into the trench, and when distributed along the line or stored near a road, must be kept clear of passing vehicles.

D. The Contractor shall place the pipe to cause the least amount of interference to be abutting property owners and traffic using the street. Barricades and lighting shall be provided at intersections and other locations where the pipe will interfere with pedestrian or vehicular traffic.

E. All damage caused by storage of the pipe on the construction site shall be repaired by the Contractor, including but not limited to sidewalks, driveways, lawns, and shrubbery. No pipe shall be allowed to be stored longer than three days prior to beginning construction on the section of sewer.

F. All materials will be inspected before placing in the trench, and if defective, marked "REJECTED" and removed from the site by the Contractor. All damaged materials shall be replaced by the Contractor at no additional cost to the City.

3.03 EXISTING STRUCTURES AND UTILITIES

A. Underground structures and utilities are shown on the construction drawings as an aid to the contractor, but the owner does not guarantee their location or that other underground structures or utility services on the plans, and it shall be the Contractor's responsibility to locate them. The City will, whenever possible, and when requested by the Contractor, stake the location of sewer and water services at the street right-of-way line.

B. In crossing over or under underground utilities, the Contractor shall use all possible care in protecting the utilities and to maintain their free unobstructed continuous use. The contractor will be required without additional compensation to repair, replace or rebuild any such improvement injured or damaged by him, and shall be responsible to the department, companies, individuals or corporation controlling such improvements.

C. All underground utilities shall be supported on a foundation of sand or sand-gravel thoroughly compacted by mechanical tamping in order to prevent future settlement and possible failure of the utility. Under sewers and sewer services "cement reinforced sand backfill" rather than "sand or sand gravel" shall be used. Gas mains and gas services shall be supported in accordance with the requirements of the Consumers Power Company.

3.04 MAINTAINING FLOW

A. All combined sewers will likely have continuous dry weather flows, all of which shall be diverted in a safe manner to cause no inconvenience to the public. Special care must be taken to ensure that no part of the work is built under water, and the work must remain dry until all concrete and/or mortar has set up.

3.05 EXCAVATION

A. Excavation shall be open cut from the surface. All work shall be done to true line and grade. The Contractor shall remove all obstructions or encumbrances (except those which are specifically noted to be preserved) which may be in the proposed line of the sewer, the cost of doing such work shall be included in the contract unit price per lineal foot for laying sewer.

B. Trenches shall not be excavated for a distance greater than fifty (50) feet in advance of completed sewer without the permission of the Engineer.

C. Excavated material permitted to be used for backfill may be deposited along the line of work where space permits provided it does not cause damage to trees, shrubs, fences, etc., nor cause excessive inconvenience to public travel and adjoining property owners, nor endanger the bank of the trench by imposing too great a load thereon. All material in excess of the quantity permitted for backfilling and all materials unsuitable for backfilling shall be hauled away by the Contractor at his expense in an expeditious manner.

D. Excavation shall be of sufficient widths and depths to provide adequate room for the construction and installation of the work to the lines, grades, and dimensions called for on the drawings, except the width of a trench from the invert to a height twelve inches above the top of the sewer barrel shall not be greater than as follows:

Pipe Size	Maximum Trench Width
12" or less	30"
15" to 36"	O.D. + 12"
42" or greater	O.D. + 24"

E. If the trench width as specified above is exceeded, the Contractor shall install, at his own expense, concrete cradling or other approved bedding, to support the additional backfill load. In case the bottom of the trench is unsuitable as a foundation, it shall be further excavated and prepared. If the unsuitable condition of the foundation is caused by factors beyond the Contractor's control, the additional excavation and preparation will be paid for as extra work.

F. Where, through the Contractor's construction procedure, or because of poor existing ground conditions, it is impossible to maintain alignment and grade properly, the Contractor shall, at his own expense, excavate below grade and replace with large size aggregate or slag in order to insure the pipe, when laid, will maintain correct alignment and grade.

G. If the trench at any point along the line will be opened nearer than six (6) feet to the face of the trunk of an existing tree, and in the opinion of the Engineer the excavation would be injurious to the tree, he may require the Contractor to tunnel under the tree.

H. Selected excavated material may be used for backfilling under trees and it shall be thoroughly tamped to completely fill the excavated space between the pipe and excavation by means of mechanical tampers.

I. Where the trench must be cut through concrete or asphalt pavement, driveways, or sidewalk, particular care shall be taken not to unnecessarily damage adjoining areas. All cuts through existing concrete or asphalt pavement, sidewalks or driveways are to be resurfaced with like materials. Pavement breaking using a drop weight is prohibited.

J. Excavation shall be sheeted and braced as necessary to ensure complete working safety and to protect adjoining structures or conduits. If at any time the Engineer has reason to believe that the sheeting or bracing installed by the Contractor is insufficient, he may require that an additional amount shall be placed, but such requirement or failure to make such requirements shall not relieve the Contractor from his liability.

K. No extra compensation shall be paid the Contractor for sheeting or bracing left in place, unless ordered left in place by the Engineer and then only a fair salvage value for the material left in place shall be paid. The Contractor shall receive no extra compensation for sheeting or bracing left in place in tunnels.

3.06 TUNNELING

A. Tunneling under pavements or streets will not be allowed without the approval of the Engineer in writing, or unless noted on plans or in the Specifications. Where tunneling is permitted, there shall be a minimum clear space of not less than six (6) inches between the outside of the pipe in the tunnel and the face of the excavation or the sheeting or bracing that is nearest the pipe.

B. All space outside the finished sewer wall shall be filled with 1:2 cement-sand grout applied under pressure.

C. Facilities for ventilation and lighting shall be supplied as necessary for reasonable working conditions and for inspection.

D. Any excess trench excavation made below the pipe shall be refilled with crushed stone, sand, or concrete as directed by the Engineer. Under all conditions, sewer pipe shall have a firm bearing which will insure permanent grade and alignment and proper support against crushing load.

E. Upon completion of the construction work in tunnel, the sheeting and bracing, if any, shall be left in place and all the remaining space between the outside of the pipe and the excavation shall be filled with cement reinforced sand backfill and thoroughly compacted.

F. When boring under pavement, the pit must be a minimum of ten (10) feet away from the pavement edge, unless previously approved by the Engineer.

3.07 LAYING PIPE

A. Unless otherwise allowed under specific specifications for a particular type of sewer or unless permitted by the Engineer, construction shall begin at the outlet end of sewer and proceed upgrade.

B. All pipe shall be laid true to line and grade and the ends of the pipe shall abut against each other with the bell end facing the direction of laying. Each pipe as laid shall be checked by the Contractor with line and a grade pole or a laser beam to ensure that this result is obtained.

C. Alignment of laser beams shall be checked with sufficient frequency to assure compliance with plans.

D. Each pipe shall be inspected for defects prior to being lowered into the trench and inside of pipe and outside of spigot shall be cleaned of any dirt or foreign matter.

E. Proper support and bedding of all pipe through the full length of the barrel shall be made by constructing bedding as required and detailed on the plans. Special care shall be observed to avoid load on bells of bell and spigot pipe. Each pipe shall be pushed firmly against pipe previously placed and carefully aligned.

F. Mechanical means, consisting of a cable placed inside the pipe with a suitable winch, jack, or come-along for pulling the pipe home and holding the pipe in position, shall be used where the manual means will not result in pushing and holding the pipe in position.

G. Work executed during the winter shall receive exceptional attention to avoid excessive backfill load on pipe. If sides of trench are frozen, the amount of selected material tamped above the pipe shall be increased to at least two feet. No frozen backfill material shall be used.

H. At manholes the pipe shall be placed on a concrete cradle from the manhole to the point where the sewer trench does not exceed the specified width and shall be done in accordance with the City of Birmingham "Underground Structures and Water Main Standards".

3.08 JOINTS

A. All sewer joints shall be sealed with flexible, watertight, rubber type gaskets; pre-cast die molded bituminous material as used on slip seal pipe; or an approved equal. Before placing the pipe in position in the trench adjusted to grade, the joint compound on both ends of the pipe shall be painted with suitable solvent or lubricant material. The spigot or tongue ends of the pipe to be laid shall be inserted and shoved home against the base of the socket last laid. Throughout this operation every effort shall be taken to prevent sand or gravel from entering the joint or pipe.

B. Joint material shall be applied to the pipe on the day the pipe is placed in the trench. Joint material shall be stored in closed containers when unattended.

C. Concrete pipe 36" and larger shall have all joints inside cement pointed, with cement mortar compound of one (1) part cement and two (2) parts of sand. Mastic compound or any foreign material within 3/4" below inside finish of pipe shall be thoroughly removed before cement grout is applied.

3.09 MANHOLES, DRAINAGE STRUCTURES

A. Manholes and drainage structures shall be constructed of the type and in accordance with the details shown on the plans and at the locations shown on the plans. All necessary steps, frames, and covers shall be furnished and installed. Covers shall be set at the required final elevation so that no subsequent adjustment shall be necessary.

B. Excavation shall be carried to the depth required to permit the construction of the required base and bottom of excavation shall be trimmed to a uniform horizontal bed. The excavation shall be sufficiently wide to allow for shoring, bracing, or form work, should any or all be necessary, and to allow for accessibility in plastering the exterior of brick masonry. The excavated section shall be completely de-watered before any concrete is placed thereon.

C. Concrete shall be Grade A 3,000 pounds per square inch compressive strength, minimum content 1.375 barrels per cubic yard.

D. Brick shall be made of clay or shale or concrete brick and shall be whole, thoroughly and evenly burned, of close and uniform texture, free from cracks and warps, with even faces and uniform texture, and uniform in shape and size. Brick shall show a minimum average compressive strength of 2,000 pounds per square inch and average absorption of water in twenty-four (24) hours of not more than 22 percent of dry weight.

E. The brick shall be laid radially in courses in a full bed of mortar with interior joint not more than 1/4" in width. Whole bricks only shall be used except to effect closure and to fill in the outside portion of the radial joints. Each seventh course shall be laid in "stretchers," the intervening courses shall be composed of "headers". Below a depth of thirteen (13) feet, walls of brick manholes shall be laid in alternative stretcher and header courses.

F. When completed, manholes and drainage structures shall have sand or gravel placed uniformly around the structure in one foot lifts and compacted in place. No backfill shall be placed around manholes or structures for twenty-four (24) hours, if an outside plaster coat has been applied.

G. Manholes and Structures shall not be placed under conditions which may be expedited to result in defective work. If the soil at the established grade is not sufficiently stable to properly support structures, the Contractor, at his own expense, shall excavate up to 24" below grade and refill the trench to the proper grade with compacted crushed stone chips. If stable support cannot be established in this manner, the work shall be discontinued until plans for change in construction have been submitted by the Contractor to the Engineer for approval and approval has been granted.

3.10 SERVICE CONNECTIONS

A. Service connections shall be made to sewers with "wyes" manufactured on the sewer pipe. Breaking holes in the pipe will not be allowed without specific authorization of the Engineer.

3.11 SHEETING AND BRACING

A. Where necessary in order to construct the work called for by the contract, to ensure the safety of the men, or to protect other things of value, the Contractor shall adequately sheet or brace all open excavation or tunnels. The Contractor shall install additional sheeting or bracing as directed by the Engineer, but such order, or failure to give such order, shall not release the Contractor from his liability for damage to person or property under this contract.

B. All sheeting, shoring and bracing, unless left in place as ordered by the Engineer, shall be removed from open trench work progressively with the backfilling operations in order to prevent slides from the sides of the trench. All sheeting left in place shall be cut off five (5) feet below ground line.

3.12 PUMPING, BAILING AND DRAINING

A. The Contractor shall provide and maintain adequate pumping and drainage facilities for removal and disposal of waste from trenches or other excavation.

B. Where the work is in ground containing an excessive amount of water, the Contractor shall provide, install, maintain, and operate suitable well points, connecting manifolds, and reliable pumping equipment to operate same to insure proper construction of the work.

C. In no case shall water be allowed to rise in or about the pipe before the joint has become thoroughly set. No walking on or over the pipes after they are laid, except as may be necessary in tamping the earth in refilling, will be permitted until they are covered with earth to a depth of twelve (12) inches.

D. Drainage or discharge lines shall be connected to adjacent public storm sewers or extended to nearby watercourses wherever possible. In any event, all pumping and drainage shall be done without damage to any highway or other property, public or private, and without interference with the rights of the public or private property owners.

E. The Contractor shall receive no extra compensation for providing, maintaining, or operating any de-watering or drainage facilities.

3.13 BACKFILLING

A. It is the intent of these specifications that all of the excavation be backfilled with thoroughly consolidated, suitable material in such a manner that the alignment and grade of the construction work in the excavation be not disturbed and that the subsequent settlement of the surface over the excavation and adjacent thereto be avoided as far as possible.

B. Insofar as practicable, without interfering with the progress of the work, the Contractor shall keep streets, driveways and sidewalks open to safe use by the public.

C. All trenches and excavations under existing pavement, proposed pavement, existing roadways, driveways or sidewalk shall be backfilled with sand or gravel and thoroughly compacted by mechanical tamping or vibrating. Where the existing roadway or driveway is gravel surfaced, the top eight (8) inches of the backfill shall be road gravel. The Contractor will not be required to replace any oil treatment or seal coat; however, he shall maintain the top of the trench in a dust free manner until completion of the project. No additional payment will be allowed for the sand or gravel backfill, the cost of which shall be included in the unit price bid for the installation of the pipe and structures.

D. Backfill shall not be placed against any portion of a structure until it (structure) has passed inspection.

E. Where the trench or excavation is in the parkway between the roadway and the street line or in unimproved streets, excavated material may be used in completing the backfill. Care shall be taken in placing this backfill to make sure that all boulders, pieces of concrete and such other material that might damage the pipe or structure, or prevent consolidation are not allowed to remain in the backfill material and it shall be compacted by tamping, jetting, or by use of compacting equipment.

F. If a bulldozer or other machine is used to place the backfill material, no material shall be pushed or dropped into the trench, but shall be placed on the sloping ends of the completed backfill and allowed to roll in place to the bottom of the trench.

3.14 EMERGENCY REPAIR

A. When the Contractor is not actively performing work on a particular construction site, but where delayed construction operations, testing and/or surface restoration work yet remains to be completed to meet the requirements of the Specifications, situations may arise of an emergency nature as a result of such uncompleted work which may affect directly or indirectly public and/or private property or which may ultimately, either directly or indirectly, affect the health, safety, and welfare of individuals or the general public. While these situations can readily develop as emergencies, the Engineer shall direct field related operations and require immediate efforts by the Contractor to remedy the deficiency in a method of his choosing because of his expertise in the field, time being of the essence. The correction of the emergency which may arise when no construction activity exists on the construction site shall be handled in the following manner.

1. The Engineer shall inspect the site, take any necessary photographs and/or prepare any necessary sketches of conditions at the site to determine that the situation constitutes an emergency.

2. The Engineer then has three (3) alternate sources of manpower and equipment to be selected to remedy the emergency in the following order:

   a. The Contractor under contract with the Owner to perform all work on the site location in question.
   b. The City's Department of Public Services (DPS).
   c. An independent contractor designated by the Engineer.

B. Since the nature and extent of most unfinished work on a particular construction site is well known by both the Engineer's authorized agent and the Contractor at the time of declaring an "emergency situation" as set forth herein before the Contractor, under contract to the Owner for the particular project, the Contractor would be the first party notified and would be expected to respond immediately with necessary labor and equipment to remedy the problem.

C. If a reasonable time to respond to the emergency notification is not evident, in the best judgment of the Engineer, then the Contractor shall be judged to have waived his rights to physically correct the problem, but not to his obligations to pay for such physical correction or damages resulting therefrom. The Engineer shall then contact the City's DPS for their assistance in correcting the "emergency situation". Where existing commitments by the DPS prohibits their immediate response to the request of the Engineer, the Engineer shall finally direct that corrective measures be performed by the independent contractor noted above to perform such work when so directed.

D. Since the cost for all remedial work undertaken by the Contractor on this project shall be borne by the Contractor and it is necessary to engage the assistance of the DPS or an independent contractor, then all costs incurred shall be deducted from monies due and payable to the Contractor on the particular project as set forth on any ensuing regular job estimates.

E. Typical costs which will be deducted from the contractor monies due would be as follows:

1. Payroll wages, benefits, and taxes.
2. Material bills.
3. Equipment rental (Detroit area rates) and mobilization costs.
4. 15% profit and overhead for independent contractor.
5. Inspection costs.

3.15 POINT REPAIRS TO SEWER LINES

A. It is the intent of the specifications to provide a basis by which a contractor can successfully and completely make a point repair to a sanitary sewer line. This basis shall cover all aspects of a point repair including methods, materials, and payment for work.

B. A point repair to a sanitary sewer line shall be defined as a repair made at a specified location on a sanitary sewer line.

C. A point repair shall be classified by the inside diameter of the pipe and the length of pipe replaced.

D. Methods:

1. The method by which a repair shall include all supervision, labor, equipment and materials necessary to perform and successfully complete the following items:

a. Excavating a trench deep enough to uncover a sanitary sewer line, wide enough to work in, and long enough to uncover up to twenty (20) linear feet of sewer pipe while providing protection of adjacent utilities, pavements, etc.
b. Remove any landscaping fences, asphalt, concrete, base material, storm sewer, etc., that interferes with the repair made at each specified point, and for the replacement of said landscaping, fences, asphalt, concrete, base materials, storm sewer, etc., in the same or better condition as found. Any such item not replaced in the same or better condition as found, as determined by the Engineer, shall be redone at the Contractor's expense.
c. De-water any trench where excess water accumulates and installation, as required, of compacted sand backfill under paved area.

d. Replace and reshape the bottom of the trench so that the grade of the pipe replaced will match that required for the existing sewer line. Any material replaced in the bottom of the trench shall be compacted to prevent sags in the sewer line due to settlement of the trench material.
e. Repair and replace up to twenty (20) feet of the existing sewer pipe with the properly sized pipe the same as existing, as needed.
f. Repair and replace any house service lateral encountered within the required twenty (20) linear feet of uncovered pipe with properly sized service, as specified and with enough sewer pipe to reconnect to the service line where it was severed.
g. Tie all new laid sewer pipe to existing sewer pipe, main sewer lines and service lines, so that no possible source of infiltration/inflow (a leak in the line) may be created.

h. Any sewer pipe broken by the Contractor, outside of the required twenty (20) linear feet of pipe, shall be replaced or repaired at the Contractor's expense. All such occurrences shall be pointed out by the Contractor to the Engineer when they happen. The materials to use for making the tie-in shall be properly sized.

i. Backfill the open excavation so that the ground elevation will most nearly match the elevation before excavation.

E. Bypass Pumping:

1. On all sewer lines in which a point repair is to be made, the normal flow of sewage shall be re-routed by bypass pumping.

END OF SECTION

SECTION 605
INTERNAL SEWER INSPECTION

PART 1 GENERAL

1.1 SUMMARY

A. It is the intent of these specifications to provide a basis for which a sewer line can be internally inspected by a Closed-Circuit Television (CCTV) camera. The inspection shall include providing the Owner with digital videos, images, and reports that include condition and other descriptive data related to the sewer. This basis shall include all aspects of televising including method, equipment, and payment for work.

B. This Section shall include all supervision, labor, equipment, materials, traffic control, temporary plugging and/or bypassing of flow, disposal of debris, required cleaning, video media, still pictures and any applicable electrical service necessary to successfully complete the inspection and assessment of the designated lines, as well as the required reporting and deliverables which includes the Contractor providing the Owner with applicable recommendations for corrective actions.

C. The Contractor shall provide and furnish all required skilled and unskilled labor, materials, fuel, machinery, tools, so that the contract and all work required to be done under the contract can and will be carried on continuously and expeditiously to completion, in all respects to the satisfaction of the Owner.

D. The sewer lines for which televising is required are shown in these Contract Documents.

1.2 REFERENCES

A. Abbreviations and Acronyms
1. NASSCO - National Association of Sewer Service Contractors
2. PACP - Pipeline Assessment and Certification Program
3. MACP - Manhole Assessment and Certification Program
4. LACP - Lateral Assessment and Certification Program

B. Definitions
1. Reverse Setups - a situation that arises when the television camera cannot pass through the manhole section, making it necessary to reverse the positions of the television equipment and enter the sewer from the opposite direction

1.3 QUALIFICATIONS

A. The Contractor performing the work shall be a company specializing in performing internal sewer inspections and shall have a minimum experience of at least three other projects of similar size and scope within the last five years that included surveying, processing, and interpretation of data associated with CCTV inspections.

B. The work shall be performed under the supervision of personnel trained and certified in the use of NASSCO's PACP for the inspection of sewer mains, LACP for the inspection of laterals and MACP for the inspection of manholes.

1.4 SUBMITTALS

A. Prior to initiation of work, the Contractor shall submit for Owner review and approval the following:
1. Data sheets for proposed CCTV equipment, description of proposed electronic storage device (hard drive, etc.) and proposed electronic file formats.
2. Description of proposed software for recording inspection logs along with a sample of a typical log and samples of all required reports as described in this Section.
3. Proposed sequence and schedule, and sample resident/business notification letter.
4. Contact information for Contractor's staff including mobile phone and email, and emergency contact information.

1.5 QUALITY ASSURANCE

A. After completion of one week of Internal Sewer Inspection (or alternative period as approved by the Owner), the Contractor shall provide the Owner with a sample of the required deliverables for the work completed for review and approval of format.

1.6 REPORTING

A. The Contractor shall record all defects such as radial and linear cracks no matter how minor, dips, blockages, or obstructions, pipe joint conditions, infiltration and calcite buildup, lateral connections, root infiltration, deterioration of pipe material surface, penetrating utilities, etc. The Contractor shall record the characteristics and defects observed using the NASSCO PACP/MACP/LACP Inspection Report format and coding for each sewer segment. All pipes, manholes, laterals and other structures shall be in identified using Owner naming convention. The operators NASSCO certification number shall be recorded on the Report.

B. Location of defects shall be given as a distance from the starting point and location around the pipe (i.e., 2 o'clock)

C. The Contractor shall provide the following reports for each inspected segment that include all descriptions in NASSCO format of all defects found as part of the survey, all NASSCO header information, and identify the asset using the Owner's identification system:
1. Graphic Reports, include:
   a. Linear sketch of the inspected manhole or pipe/lateral segment showing defect locations
   b. List of the individual defects
   c. Defect "grade" assigned using the NASSCO PACP/MACP/LACP Condition Grading System guidelines.
2. Tabular Reports, include:
   a. List of the individual defects

b. A defect "grade" using the NASSCO PACP/MACP/LACP Condition Grading System guidelines
c. NASSCO segment scores, including
1) Overall Pipe Rating (Structural, Maintenance, and Overall)
2) Pipe Rating Index (Structural, Maintenance, and Overall), and
3) Quick Scores (Structural, Maintenance and Overall.)

3. Defects by Inspection Report
a. Generated at completion of the project, or at intermediate milestones as required by the Owner
b. Includes:
1) A tabular list of all segments inspected to date,
2) The surveyed length for each segment,
3) A count of defects encountered for each segment,
4) Quick rating scores and,
5) The overall pipe rating index

D. Submit Samples of Contractor Reports for Owner approval prior to starting project.

E. Provide Final Reports in accordance with Required Deliverables.

F. Sample reports are provided at the end of this Section.

1.7 REQUIRED DELIVERABLES

A. The Contractor shall deliver to the Owner one hard copy each of the Graphic Report and Tabular Report for each segment inspected, and one hard copy of the Defects by Inspection Report that summarizes all segments inspected during the project. The copies shall be housed in protective three-ring binders labeled to include the Project Name, Contractor Contact Information, Project Date and area surveyed. The Contractor shall also submit preliminary copies of the Graphic Report and Tabular Report for areas completed for review by the Owner as the project progresses. All reports shall also be provided in Adobe PDF format. The final Defects by Inspection report shall also be provided in an editable format, such as Microsoft Excel format.

B. The Contractor shall deliver to the Owner digital copies of all video recordings, still photos, and other media for the segments inspected. The files shall be accessible using commonly-installed software, or a viewer may be provided instead.

C. All electronic records and digital files shall be provided to the Owner on a suitable data storage device (CD, DVD, hard drive, etc.) The devices shall be labelled to correspond with the hard copy inspection reports. Labels shall be permanent with complete project information.

D. The Owner reserves the right to reject any or all televising and recording of sewer segments due to poor quality or clarity of defects. If necessary, the Contractor shall re-inspect those segments as determined by the Owner at no additional cost to the Owner.

E. All video recordings, still images and reports shall become property of the Owner without restriction for copying, re-use or publication.

1.8 ACCEPTANCE

A. A daily log of work accomplished shall be duly recorded and acknowledged by the Owner and the Contractor's superintendent.

B. All inspection recordings and reports will be reviewed by the Owner. The Owner shall have the authority to reject all or any portion of recordings not conforming to Specifications. These areas shall be re-inspected at no additional charge.

1.9 SAMPLE REPORTS

A. Sample of the required reporting is provided at the end of this Specification (Section 3.8).

PART 2 PRODUCTS

2.1 INSPECTION EQUIPMENT

A. General:
1. Provide equipment as required for the proposed work to perform inspections of sewer mains, manholes and/or laterals. Laterals shall be inspected from mainline to property line or cleanout located in streets, street rights-of-way, and off-road easements.
2. Equipment shall include but not be limited to portable CCTV equipment, vehicles capable of transporting TV equipment and accessing remote easements, cleaning equipment, and any additional equipment and supplies required to allow for communication between personnel and to maintain a safe working environment. The Contractor shall have on site fans and/or blowers necessary to remove any fog or steam that may be present, during or caused by the inspection of the piping system. All cost incurred in the use of fans or blowers shall be considered incidental to this project. No inspection of pipe shall proceed while fog is present.
3. Necessary playback equipment shall be readily accessible in the field for Owner to perform periodic review of the inspection work.

B. Sewer Main CCTV:
1. All equipment used for televising sewer lines shall be of the highest quality and shall have high performance capabilities. It shall be operative in 100 percent humidity conditions and shall be specifically designed for the proposed work.
2. The CCTV camera shall be of the remotely operated pan and tilt type. The rotating camera and light head configuration shall provide 240 degrees of pan and tilt angle measuring centerline to centerline and minimum 65-degree lens viewing angle.
3. The camera shall be color and shall provide a minimum of 460 lines of horizontal resolution and 400 lines of vertical resolution.
4. The color camera shall be equipped with the necessary circuitry to allow for either automatic or remote adjustment of the optical focus and iris from the power control unit at the viewing station.

5. Mounting: Cameras may be mounted on conventional camera skids, floating skids or rafts, or maybe handheld and carried manually through larger diameter sewers.
6. Lighting: Suitable to allow clear picture of entire inner pipe wall extending at least 10 feet in front, including black High-Density Polyethylene (HDPE) pipe.
7. Image: Capable of self-righting itself.
8. Features: Equipment shall have a display feature capable of showing following information.
    a. Project name.
    b. Contractor's name.
    c. Date and time of inspection.
    d. Inside pipe diameter and type.
    e. Manhole identification (upstream manhole to downstream manhole).
    f. On-going footage counters accurate within 0.2 foot.
9. Operator narration capability: Follow NASSCO standards.
10. Recording of a single section of sewer onto two different media storage devices will not be acceptable. Each sewer segment shall be documented in a continuous video.

C. Lateral CCTV:
1. Shall conform to sewer main CCTV, except as modified herein and be able to inspect laterals as small as 3-inches diameter for up to 70 feet from sewer mainline.
2. Launched from within mainline sewer: Unit shall be mounted on tread tractor that moves through sewers and positions inspection camera launcher opposite lateral line connection.
3. Launched from within cleanout: Unit shall be able to travel to mainline sewer.
4. Shall be of the self-leveling type.
5. Display shall include lateral address. Manhole CCTV.
6. Color Video Camera:
    a. Shall conform to sewer main CCTV, except as modified herein and be specifically designed and constructed for this application.
    b. Capable of capturing both video and high-resolution stills.
    c. High-resolution, pan and tilt or rotating head (manually performed or motor operated) with wide viewing angle lens and either automatic or remote focus and iris control.
    d. Lighting: Suitable for use with digital color inspection cameras and manhole and structure sizes as identified in contract.
    e. Operative in 100 percent humidity conditions.

D. Software:
1. Software for logging condition and feature coding shall conform to current NASSCO standards:
    a. Sewer Mains: Follow PACP
    b. Laterals: Follow LACP
    c. Manholes: Follow MACP
2. The software shall offer all coding compliant with PACP standards and validate each entry before it can be saved.

3. The footage reading from the camera equipment shall be automatically entered into the survey log and shall directly correspond to the noted defect location throughout the pipe graphic and tabular reports generated.
4. Software shall be compatible with Microsoft Windows operating system and shall be capable of importing and exporting data to and from the standard PACP database.
5. Recorded audio-video files shall be in a format viewable by commonly available software, either directly or via export. Any additional software required viewing files in their native format shall be provided at no additional cost with the deliverables.

PART 3 EXECUTION

3.1 GENERAL

A. The Contractor shall be responsible for securing the site and protection of the Owner's personnel and public. Any necessary traffic control shall be in accordance with the current Michigan Manual of Uniform Traffic Control Devices.

B. All inspection and recording of sewer features and condition shall be in accordance with NASSCO standards.

C. Unless otherwise noted, a sewer line shall be cleaned as specified in these Contract Documents prior to insertion of the television camera.

D. Maintain sewer isolation by temporary plugging or bypass pumping, as required by the Contract Documents. Contractor shall conduct operations to prevent backups and sewer overflows and coordinate all activities with Owner. Should bypass pumping be required, the Contractor shall have personnel witnessing the pumping continuously during operations to assure that the capacity of bypass pumping equipment is sufficient.

E. For sewers impacted by wet weather, including storm sewers, combined sewers and sewers with significant inflow and/or infiltration, work shall be coordinated with weather forecasts. No work shall be scheduled within 24 hours before or after an anticipated precipitation event.

F. The Contractor shall notify affected residents/businesses one day prior to starting cleaning and sewer inspection with a "Resident Notification Letter" informing the residents/businesses of the Contractor's activities and to provide contact information for the Contractor and Owner. The Contractor shall submit the letter for Owner review and approval prior to notification.

G. The Owner shall have the authority to designate areas for which coverage may be added or omitted.

3.2 INSPECTION PREPARATION

A. The Contractor shall be responsible for having the necessary camera skids, floats, and rafts available to allow for inspection in a manner acceptable to the Owner under live flow conditions. The following general criteria shall be followed:

1. No inspections shall be performed where flow depths exceed 50% of pipe diameter without prior approval of the Owner.
2. The maximum flow depth for remote inspection work is 33% of the pipe diameter. The Contractor may be required to perform inspections during off-peak hours (night inspections) if specifically requested by the Owner to achieve this maximum flow standard.
3. No maximum flow depth has been established for manual (walk-through) inspections since depths in excess of one-third pipe will probably make such inspection methods unsafe.
4. Pipes 60 inches in diameter and larger and having flow depths of less than 20% of the pipe diameter, shall be manually inspected unless the Contractor provides the owner with reasons for deeming manual inspections to be impractical or unsafe.

3.3 INSPECTION METHOD FOR SEWER MAIN LINES

A. All recording of the piping system shall be a continuous record from structure to structure. The camera shall be positioned at the center of the sewer pipe. All inspection shall be completed during times of dry weather flow, and the camera shall record in the same direction as the flow. Inspection against the flow especially during high flow conditions must be approved by the Owner.

B. The rate of speed shall be adjusted to produce a clear, concise record of the piping system and shall not exceed 30 feet per minute for conventional CCTV cameras. Travel shall stop for minimum of 10 seconds to record lateral connections, mainline connections, defects, features, and other observations. Advanced Digital Video Survey (DVS) inspection camera systems with high digital image recording resolution and lighting characteristics will be allowed to record at faster rates subject to Owner review and approval of images.

C. The camera pan/tilt and zoom-in/zoom-out rates shall be controlled sufficient such that during playback all angles or magnifications may be viewed clearly. Lighting shall be sufficient to ensure true color and minimal glare/reflective distortions.

D. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line.

E. If there is interference in the sewer line that will not allow the CCTV equipment to pass, then it shall be backed out of the line and an attempt shall be made to inspect the line from the manhole at the other end. If the entire length of the sewer line cannot be televised because of two or more obstructions, then the Owner shall be notified to determine how to proceed.

3.4 INSPECTION METHOD FOR LARGER DIAMETER SEWER MAIN LINES ("WALKABLE")

A. Manual inspections will be required in lines where conditions will allow the Contractor's inspection crew to safely walk through the sewer and shall conform to the requirements for sewer main lines except as otherwise modified herein.

B. Manual pipe inspections (walk-through inspections) shall be conducted in such a manner as to transmit the video signal to an above-ground viewing room to permit the Owner to watch the inspection work live on a color monitor in the viewing facility.

C. Direct voice communication between the Owner, the in-pipe inspection personnel, and the recording technician in the above-ground unit shall be always maintained during the manual inspection work. Video recording equipment shall also be located above ground in the inspection truck and accurate, continuous footage readings shall be superimposed on the video recording of permanent record.

D. The Contractor shall conform to all regulations and requirements for confined space entry and shall prepare and submit a health and safety plan to the Owner prior to initiation of any work.

E. The Contractor shall provide for coordination of flow control.

3.5 INSPECTION METHOD FOR LATERALS

A. Follow sewer main line procedure above, modified as follows:
   1. Verify accessible cleanout exists near limits of inspection prior to performing internal inspection. Notify Owner if no cleanout is available.
   2. Isolate section inspected by bypassing flow or turning off property water. Prevent backflow into laterals.

3.6 INSPECTION METHOD FOR MANHOLES

A. Obtain still photos of exterior of manhole and surrounding area and include manhole identification in photo. This may be done by placement of a whiteboard in the photo or post-editing of image to include the data.

B. Interior manhole inspection
   1. Start at manhole rim in line with largest diameter outgoing pipe.
   2. Rotate camera clockwise until 360-degree panorama is complete. Provide still photos of noted defects and features following MACP. Lower camera two to three vertical feet and repeat procedure until bench invert is reached.
   3. Record vertical location of all defects and features and position in manhole. All photos and report logs shall include the manhole structure ID and location within manhole.

3.7 CLEANUP

A. The Contractor shall be responsible to clean up any debris or spills during each day of work and restore conditions to existing as soon as possible.

B. The Contractor shall be responsible for the disposal of personal protection equipment used during the work.

3.8 SAMPLE REPORT

Tabular Report Owner Asset ID#

Setup XXX	Surveyor XXX		Certificate # XXX		System Owner OWNER NAME
Drainage		Survey Customer OWNER NAME			
P/O #		Date YYYY/MM/DD	Time 17:10	Street STREET NAME	
City LOCATION		Further location details CAMERA IS HEADING SOUTH			
Up ID #XXX		Rim to invert	Grade to invert	Rim to grade	Ft
Down ID #XXX		Rim to invert	Grade to invert	Rim to grade	Ft
Use Sanitary/Combined/Storm	Direction Down		Flow control Not Controlled	Media No XXX	
Shape Circular	Height 18	Width	ins Preclean J	Date Cleaned YYYY/MM/DD	
Material Vitrified Clay Pipe		Joint length	Total length	Length Surveyed 187.8	
Lining		Year laid	Year rehabilitated	Weather Dry	
Purpose Capital Improvement Program Assessment		Cat		Pressure	
Additional info			Structural	O & M	Constructional
Location Light Highway			Miscellaneous	Hydralic	
Project PROJECT NAME			Work Order		
Northing		Easting	Elevation		
Coordinate System			GPS Accuracy		

Count	Video	CD	Code		Grade	In1	In2	%	Jnt	Fr	To	ImRef	Remarks
0.0			ST	Start of Survey									
0.0			AMH	Manhole									C-039
0.0			MWL	Water Level				0					
20.6			CM	Crack Multiple	3					02	04		
20.6			TB	Tap Break-in		6.000				02			WEST
33.2			TB	Tap Break-in		6.000				02			WEST
87.6		S01	RFJ	Roots Fine Joint	1				J	05	07		
92.6			TF	Tap Factory		6.000				09			EAST
94.3			FC	Fracture Circumferential	2					05	07		
117.0			TB	Tap Break-in		6.000				03			WEST
128.7		F01	RFJ	Roots Fine Joint	1				J	05	07		
187.8			AMH	Manhole									C-040
187.8			FH	End of Survey									

187.8 Ft Total Length Surveyed

Scores						
Structural:	Pipe Rating 5	Pipe Ratings Index 2.5	Quick Rating 3121
O&M:	Pipe Rating 8	Pipe Ratings Index 1.6	Quick Rating 1500
Overall:	Pipe Rating 13	Pipe Ratings Index 1.9	Quick Rating 3121

Contractor Logo/Name, Address and Contact Information

SECTION 610
FLOWABLE FILL

PART 1. GENERAL

1.01 SUMMARY

A. This work shall include the furnishing of all labor, materials and construction equipment necessary for the providing flowable fill for the abandonment of sewers and/or structures of the size and character shown on the drawings and specified herein.

B. Where called for on the drawings' certain areas of the excavation and areas of existing structures and sewers to be abandoned shall be backfilled with flowable fill.

1.02 REFERENCES

A. Performance and material requirements shall meet specific Reference Standards as referred to hereinafter under individual items.

B. Unless otherwise specified, all materials shall also conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 SUBMITTALS

A. The method used to measure fly ash and cement shall be submitted for acceptance. The contractor's proposed method shall be one that compliments the type of mixing plant being used and provides assurance that the percentage of cement is being satisfactorily controlled. Cement content shall be based on the dry weight of the fly ash in the mix. The batched weight of fly ash shall be corrected for its moisture content. Water shall be measured, although its control will be a function of consistency (slump and workability) of the mix.

PART 2. MATERIALS

2.01 FLOWABLE FILL

A. Flowable fill shall consist of a mixture of fly ash, cement and water such as "C-Fill" as manufactured by Clawson Concrete or "M-Crete" as manufactured by Michigan Foundation or equal.

B. Cement shall be Portland Cement conforming to A.S.T.M. C 150 Type I. Air entrained cement, pozzolan, and other types of cement shall not be used. Fly ash shall conform to the requirements of A.S.T.M. C618, Class F. Water shall be potable.

C. The stabilized fly ash mixture shall contain 4 to 5% Portland cement based on the dry weight of the fly ash. Occasional batches of mixture with a cement content of 3 to 4% will be allowed provided immediate action is taken to restore the cement content to the specified range. Mixtures containing less than 3% shall not be used. The mixture shall have a slump of 10 to 12 inches at the point of placement. The mix temperature shall not be lower than 50°. The mixture shall have a compressive strength of 100 psi minimum at twenty-eight (28) days.

PART 3. EXECUTION

3.01 PREPARATION

A. Prior to abandoning sewers with flowable fill, the Contractor shall install all necessary bulkheads in sewers and/or structures and ensure that they will not leak when flowable fill is placed.

3.02 MIXING

A. The flowable fill may be mixed by a pug mill, central concrete mixer, turbine mixer or other acceptable equipment or method. Provisions shall be made to maintain the mix temperatures and slump as stated.

3.03 PLACEMENT

A. The material shall be placed by end or side dumping, tremie, pump, conveyors, or other suitable method. Lines and grades shall be as shown on the design drawings. Stabilized fly ash shall be protected from freezing temperatures for the initial twenty-four (24) hours after placement. Protection may consist of earth cover, straw, or a sacrificial layer of the stabilized fly ash mix.

3.04 MEASUREMENT & PAYMENT

A. Unless it is identified in the Proposal as a separate pay item, installation of flowable fill is incidental to the other work of this project.

END OF SECTION

SECTION 702
STATION GRADING

This work shall be done in accordance with the requirements of the Michigan Department of Transportation 2020 Standard Specifications for Construction, except as herein described:

The work of Station Grading shall consist of constructing earth grades by excavating and removing soil, aggregate and/or other materials and placing embankment as necessary to develop the cross section and sub-grade specified in the plans. The work shall include the salvaging and stockpiling of selected materials; disposing of surplus or unsuitable material; furnishing, placing and compacting of embankment materials; trimming of the earth grade and maintaining the work in a finished condition until acceptance by the Engineer.

Any of the existing material that is excavated and deemed suitable, as determined by the Engineer, may be used for the road embankment material. The Contractor shall be responsible for the proper disposal of any existing material that is excavated and deemed unsuitable by the Engineer.

If it is required to provide off site material for the road embankment, the Contractor shall provide 21AA crushed limestone or Class II granular material, as directed by the Engineer.

Station Grading shall include the following items:

- Stripping of vegetation and topsoil within the grading limits.
- Excavation for curb, sidewalk, drive approaches and driveways.
- Removing old brick, sub-pavement or other incompatible materials found.
- Backfilling behind the curb and adjacent to sidewalks, drive approaches and driveways with Engineer approved materials.
- Grading from the back of curb to sidewalk, right of way line or grading limits, and within medians and planter beds to the required depth to receive all topsoil and specialty mulch surfaces.
- Removal of parking meter posts and respective foundations.
- All earth excavation, embankment and grading for streets within the project area, connecting streets, and parking areas. The estimated amount of net earth excavation required for the project is 250 cubic yards. The estimate above is based on “in-place” yards and does not account for trenching of underground utilities or subgrade underdrain.
- Proof-rolling subgrade.

The completed work for Station Grading shall be measured in stations along the construction centerlines and paid for at the contract unit price.

The hauling and installation of any off-site material that may be required for road embankment will not be paid for separately, but shall be included in the pay item for Station Grading.

The Contractor shall be responsible for determining his own volume of earthwork required to construct the proposed roadway to the grade specified in the construction plans. No additional compensation will be made for any variation between the estimated amount stated above and the final amount of earth excavation required to construct the roadway.

END OF SECTION

SECTION 710
PORTLAND CEMENT CONCRETE PAVEMENT CONSTRUCTION

PART 1. GENERAL

1.01 SUMMARY

A. This section includes the provision of all labor, materials, equipment, supervision and incidentals required for the furnishing and placement of ready mixed Portland Cement Concrete (PCC) pavement and curbs and gutter.

1.02 REFERENCES

A. Unless otherwise specified, all materials shall conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 SUBMITTALS

A. Contractor shall submit proposed mix design for all PCC pavements to be supplied on this project.

B. Contractor shall submit certifications for all aggregate and classified granular fill materials to be supplied on this project.

PART 2. MATERIALS

2.01 CONCRETE

A. Provide materials in accordance with subsection 601.02 of the Standard Specifications for Construction and the contract. Concrete Grade 3500HP requires optimized aggregate gradation and 25 to 40 percent replacement of the Portland cement in the concrete mixture with a supplementary cementitious material (slag cement, fly ash). Do not use other concrete Grades or Types in lieu of Grade 3500 HP. Prepare the optimized aggregate gradation and perform process control according to the procedure for Optimized Aggregate Gradation included in the contract.

B. The concrete mixture supplied on this project shall conform to the requirements of the Concrete Durability Requirements section for resistance to alkali-silica reactivity (ASR) and for air entraining requirements.

C. Concrete provided on this project shall be Ready Mixed Concrete; central mixed or transit mixed concrete is permitted. The source of ready mixed concrete shall be approved by the Engineer.

D. Admixtures - Admixtures shall be used only when specified or authorized by the Engineer.

E. The City reserves the right to make air and slump tests on any or all loads of concrete supplied to the job prior to placing the concrete in the grade. Concrete shall not be placed in the grade until such tests have been completed and approved by the Engineer. Concrete not meeting the specifications will be rejected. Re-tempering of rejected concrete for re-use on the job will not be allowed.

F. Water shall not be added to the concrete at any time without specific permission by the Engineer.

2.02 AGGREGATE BASE COURSE

A. Unless otherwise specified on the drawings, or in the specifications, the aggregate base course to support the PCC pavement shall be MDOT 21AA crushed limestone compacted to 95% of the maximum modified proctor density.

B.

PART 3. CONSTRUCTION

3.01 EXAMINATION

A. Contractor shall verify the existing conditions prior to submitting a bid on the project.

3.02 EQUIPMENT

A. All equipment used in the construction of the work shall be inspected and shall meet approval of the Engineer prior to start of construction. All equipment, tools and machinery shall be maintained in a satisfactory working condition.

3.03 MAINTAINING TRAFFIC

A. The Contractor shall furnish, erect and maintain road construction barricades in accordance with current Michigan Manual of Uniform Traffic Control Devices.

B. The Contractor shall always allow access to abutting property along the job. It is not intended that this shall permit access to the property during the actual processes of construction, however, the Contractor shall provide for temporary crossings and crossovers over the work partially completed prior to final completion of the construction. No roadway surface shall be opened to traffic prior to authorization by the Engineer.

3.04 CONCRETE PAVEMENT REMOVAL

A. Caution shall be exercised during pavement breaking operations, and the use of a crane and ball type pavement breaker will not be permitted. Equipment used for this work shall be such as will not cause damage to adjacent buildings and underground utilities.

B. Concrete pavement removal will be paid for at the contract unit price per square yard, which shall include the removal of adjacent curb or curb and gutter, and any asphaltic concrete surfacing. No additional payment will be made for pavement removal with reinforcing.

3.05 CUTTING TREE ROOTS

A. Tree roots larger than two (2) inches in diameter shall not be cut beyond a point three (3) inches in back of the proposed curb line, and no tree roots shall be cut beyond a point twelve (12) inches in back of the proposed curb line. The above limits may be exceeded only with specific authorization by the City Parks and Recreation Department.

3.06 EXCAVATION

A. All earth and other material shall be excavated for the full depth and width of the cross section, as given on the plans.

B. Trees and stumps to be removed will be removed by the City at no cost to the Contractor. Removing and disposing of shrubs, brush and trees or stumps less than four (4) inches in diameter shall be considered as incidental to the work of excavation.

C. The Contractor shall rough grade as close as possible to finished subgrade, leaving a minimum to be removed in fine grading.

D. Excavation material shall be disposed of by the Contractor in the following order of preference:

1. Along the site of the work to fill requirements of the work.
2. At the Contractor's own dump sites.

E. Excavation will be determined by the average end area method of all material included above the base between backs of curbs, or edges of pavement where no curb is constructed. Excavation and fill required from curb to property line will be classed as grading. Concrete pavement removal and other items included in separate pay items will be deducted from excavation. Asphalt removal will be considered part of excavation.

F. Excavation for manholes, catch basins, inlets and gate wells shall be included in the price bid for these items.

G. All excavated material stored along the line of work between curb and sidewalk on improved lawns shall not be left longer than forty-eight (48) hours. Said lawns or otherwise improved parkway shall be left in a neat and clean state within the specified forty-eight (48) hours.

H. Excavated material removed in fine grading or any other operations shall be removed from any completed pavement slab, before any slab is opened for traffic whatsoever, including Contractor's equipment.

3.07 PREPARATION OF SUBGRADE

A. The subgrade shall be smoothed, trimmed and compacted in the required line, grade and cross section to receive the pavement. The roadbed shall be compacted to at least ninety-five (95) percent of the maximum unit weight. The subgrade thus formed shall be maintained in a smooth and compacted condition until pavement has been placed. Should the subgrade between the forms become rutted or disturbed in any manner, the subgrade shall be reshaped and compacted as specified herein.

B. Compaction shall be accomplished by self-propelled steel wheeled or a pneumatic-tired roller weighing not less than five (5) tons or a self-propelled vibratory compactor of adequate size to compact the subgrade to the required density.

C. No concrete shall be placed on the subgrade until the subgrade has been approved by the Engineer.

D. The cost for preparation of subgrade will be paid for under the items "Earth Excavation" or "Station Grading", as noted in the Proposal, and not as a separate pay item.

E. The roadbed and adjacent grade shall be maintained in such condition that the work will be well drained at all times. If it is necessary, in the prosecution of the work, to interrupt existing surface drainage, sewers or underdrainage, then temporary drainage facilities shall be provided until the permanent drainage work is completed. The construction of all temporary drainage facilities shall be considered as incidental to the construction of the project.

F. The Contractor shall perform a proof roll on the subgrade, to be witnessed by the Engineer to determine if there are areas that are unstable or need additional compaction. Proof rolling of subgrade shall be performed with a pneumatic-tired rolling equipment, developing a load of thirty (30) to fifty (50) tons. In a systematic manner acceptable to the Engineer, the equipment shall perform a minimum of three (3) passes over the designated areas(s). When proof rolling of the subgrade shows an area to be unstable as determined by the Engineer, the unstable material shall be removed and replaced to the limits designated by the Engineer.

3.08 INSTALLING ROADWAY BASE

A. Aggregate base shall be placed on streets, roadways, shoulders and driveways at the thickness shown on the drawings in not more than six (6) layers. Such surface shall be compacted to 95% density and shall meet lines and grades established on the drawings or meeting existing pavements.

B. The aggregate base shall not be placed if the subgrade is saturated.

3.09 ADJUSTING CASTINGS

A. Existing manholes, water valve gate wells, catch basins and other like surface structures shall be raised, lowered, shifted in alignment or reconstructed if necessary to fit the proposed line or grade. This work will be paid for at the unit price as bid in the proposal. If there are no work items listed in the proposal for this work, it shall be considered incidental to the other work of the project.

3.10 FORMS

A. Forms shall be of metal, of any approved section which will insure their rigidity under the impact, thrust and weight of the heaviest machine carried on them.

B. Forms shall have a minimum length of ten (10) feet, and shall have a depth not less than the edge thickness of the work prescribed. Forms with a height of eight (8) inches or more shall have a base width of at least eight (8) inches. Other forms shall have a minimum base width of six (6) inches. The forms shall be straight, free from distortion and shall show no vertical variation greater than one-eighth (1/8) of an inch in ten (10) foot lengths from the true plane surface on the top of the forms when tested with a ten (10) foot straight edge.

C. Flexible forms and hand finishing will be required on all pavement where the edge of pavement radius is less than two hundred (200) feet.

D. When tree roots may not be cut enough to allow room to use forms as specified above, wood forms (planks) may be used.

E. The method of connections between form sections shall be such that a locked joint is formed free from vertical movement in excess of one-eighth (1/8) of an inch and horizontal movement in excess of one-quarter (1/4) on an inch under the impact, thrust and weight of the heaviest machine carried on the forms. Each form shall be fully pinned with pins of an adequate length, and the soil under the forms shall be thoroughly compacted by use of a mechanical form tamper or vibrator.

F. All forms shall be thoroughly cleaned and oiled before concrete is placed against them.

G. Forms shall be set at least three hundred (300) feet in advance of the paver, in order to allow ample time for inspection and checking prior to the placing of concrete.

3.11 POURING CONCRETE

A. The roadway base and subgrade shall be in a moist condition, but not saturated, at the time concrete is placed.

B. Concrete shall be handled from the mixer to the place of deposit as rapidly as possible, and by methods which will prevent separation of the ingredients. The concrete shall be deposited directly into the forms as nearly as possible in its final position, so as to avoid re-handling. The piling up of concrete in the forms will not be permitted. No concrete which has partially hardened shall be deposited in the work.

C. Before beginning a run of concrete, all hardened concrete or foreign material shall be completely removed from the inner surface of the mixer and conveying equipment. Before depositing any concrete, all debris or other foreign matter shall be removed from the space to be occupied by the concrete; all reinforcing steel shall be secured in its proper locations and shall be inspected and approved by the Engineer.

D. Concrete shall be worked into all the recesses and corners of the forms and closely compacted around the reinforcing steel by means of thorough spading or an approved method of mechanical vibration.

E. When the air temperature falls to 40°F and is dropping, no concrete shall be placed. Pouring may be started when the temperature is 35°F in the shade, away from artificial heat, and is rising. All concrete during curing shall be protected in freezing weather by straw, hay or tarpaulins, for not less than seventy-two (72) hours after pouring.

F. No concrete shall be poured on a frozen, dry, saturated, or uncompacted subgrade.

3.12 PAVEMENT CONSTRUCTION

A. Concrete shall be placed only on subgrade prepared as previously specified. After the concrete has been deposited, it shall be struck off and consolidated by an approved finishing machine to such an elevation that when all finishing operations are completed, the surface will conform to the required finished grade. While striking off, a uniform ridge of concrete at least two (2) inches above the finished pavement grade shall be maintained ahead of the screed for its entire length. In consolidating, the finishing machine shall operate over each section of the pavement at least twice. Only sufficient mortar shall be worked to the surface to provide for a dense smooth finish. Excessive operation of the machine over a given area will not be permitted. Segregated particles of coarse aggregate, which may collect in front of the screed, shall be thoroughly mixed by hand with the mass of concrete already on the subgrade.

B. The concrete shall then be floated by means of a hand operated wood float not less than five (5) feet long.

C. As soon as the above operations are completed, all laitance, surplus water and inert materials shall be worked entirely off the pavement, and the surface made smooth by scraping or dragging with a rigid straightedge ten (10) feet in length.

D. The straightedge shall be placed at the center of the slab, with the blade parallel to the centerline, and pulled slowly and uniformly to the edge. This operation shall be repeated until the surface of the concrete is free from irregularities and makes contact at all points with the bottom of the straightedge. The straightedge shall then be moved forward one-half (1/2) its length and the operations repeated.

E. Depressions found in the surface shall be filled with fresh concrete and consolidated by floating with long handled float not less than five (5) feet in length. This float may also be used to smooth sections of the surface that may have become rough or torn by scraping the straightedge. Where a wood float does not give satisfactory surface, the Contractor will be required to provide metal or metal-shod long handled floats.

F. The surface will then be tested for smoothness with the straightedge. During this operation, the contact of the straightedge with the concrete shall be uniform over the entire length tested. At the time of testing, the surface shall be free from soft mortar or excessive water.

G. As soon as all excessive moisture has disappeared, and while it is still possible to produce a uniform surface of gritty texture, the pavement shall be finished by dragging a seamless strip of damp burlap or cotton fabric, not less than five (5) feet, nor more than six (6) feet in width, over the full width of the pavement. The fabric shall be renewed as often as necessary, to obtain the required texture.

H. Transverse connection joints shall be raised one-eighth (1/8) inch above the slab and finished with a notched wood float, not less than five (5) feet long, to eliminate high or low spots following

burlap wrapping. The edge next to all expansion and construction joints shall be rounded with a finishing tool having a radius of one-quarter (1/4) inch.

I. The finishing of the surface and any joints shall be done from a bridge which does not touch the concrete at any point. The finished concrete shall be free from porous or open spots; no portion of the surface shall vary more than one-quarter (1/4) inch below a straightedge ten (10) feet in length laid on the pavement parallel to the centerline of the street.

J. Immediately following final finishing operations, the gutter line shall be water tested to assure uniform grade and complete drainage.

K. Should any unevenness appear in the surface of the pavement more than allowed by the Specifications, the Contractor shall at once take measures to eliminate such unevenness. After the concrete has obtained its initial set, no depressions shall be fixed by filling with concrete. In case the unevenness covers a large area of the slab, then the entire slab shall be removed and replaced with new concrete.

L. Any laitance deposited on pavement shall be immediately cleaned off.

M. The paving mixer will not be permitted on completed pavement and vehicles will be permitted only after the concrete has obtained a compressive strength of 3,500 psi. Any equipment wheels (including finishing machine) shall operate at least one (1) foot from the edge of the pavement.

3.13 JOINTS

A. Pre-molded bituminous expansion joints, construction joints, pre-molded bituminous contraction joints and sawed longitudinal contraction joints shall be placed in all pavements. All of the above mentioned joints shall be included in the price bid per square yard of pavement. Care must be exercised in joint construction, to insure vertical planes and complete separation at the joint.

B. Expansion Joints - Expansion joints shall be one (1) inch thick and of the pre-molded non-extruding bituminous fiber filler type. Joints shall be perpendicular to the subgrade and extend entirely through the concrete to between one-quarter (1/4) inch and one-half (1/2) inch below the top of the pavement. Expansion joint material shall bear uniformly on subgrade. After the concrete has set, and before the pavement has been opened to traffic, the joint shall be thoroughly cleaned and filled to the surface of the pavement with a hot poured rubber-asphalt type joint sealer.

C. Contraction Joints - Transverse contraction joints shall be made of pre-molded bituminous material one-quarter (1/4) inch thick. Contraction joints shall be edged at the curb. Contraction joints shall be properly aligned and shall butt against adjacent sections, with no space between ends.

D. All the longitudinal contraction joints shall be cut with a self-propelled concrete saw to a width and depth as shown on the plans, prior to any traffic being permitted on the new pavement. Sawed joints shall be cleaned by washing and blowing out with air immediately after sawing, and permitted to dry out at least twenty-four (24) hours prior to sealing. Joints shall be sealed with a hot poured rubber asphalt type joint sealing material applied with pressure equipment designed for that particular purpose.

E. If the Contractor elects to construct a full width pavement with a center longitudinal contraction joint, said joint shall be cut in more than twelve (12) hours, and no more than thirty (30) hours after the pouring and finishing of that part of the pavement.

F. Construction Joints - Longitudinal construction joints shall be placed as shown on plans. Construction joints shall also be placed at the ends of all pours, and at places where paving operations are stopped for a period of more than one-half (1/2) hour, except where such pours end at expansion joints. The second pour of concrete shall be edged with a longer lipped edging tool

than the first concrete pour. Joints shall be sealed with a hot poured rubber-asphalt type joint sealing material applied with pressure equipment designed for that particular purpose.

3.14 REMOVAL OF FORMS

A. Forms shall not be removed from freshly placed concrete until it has set for at least twelve (12) hours. They shall be carefully removed and in such a manner that no damage will be done to the edge of the pavement.

B. After the forms have been removed, the ends of all joints shall be cleaned and all honeycombed areas pointed.

C. The sides of the pavement shall be covered with curing material, or with at least twelve (12) inches of wetted earth, wetted straw or other suitable curing agent, except where honeycombed areas are to be pointed. Such areas shall be covered with wetted burlap until the pointing has been completed, at which time they shall be cured as specified above.

3.15 WHITE MEMBRANOUS CURING

A. After finishing operations have been complete, and immediately after the free water has left the surface, the surface of the pour shall be completely coated and sealed with a uniform layer of white membranous curing compound.

B. The compound shall be applied in continuous uniform film by means of mechanical pressure sprayer equipment at a rate of not less than two (2) gallons per twenty-five (25) square yards of surface. The equipment shall provide adequate stirring of the compound during application. The equipment for applying the compound must be approved by the Engineer before work is started.

C. If rain falls on the newly coated pavement before the film has dried sufficiently to resist damage, or if the film is damaged in any other way, the Contractor will be required to apply a new coat of material to the affected areas equal in curing value to that specified for the original coat.

3.16 CLEAN-UP AND GRADING

A. The Contractor shall perform final grading the area between the edge of the new pavement and the sidewalk, or the property line if there is no sidewalk. This area shall be graded to drain to the curb.

B. Wherever lawn areas are unnecessarily damaged by the Contractor, he will be required to repair any such areas at his own expense.

3.17 GRADING AT INTERSECTIONS

A. The Contractor shall grade from the completed paving at a grade not exceeding one (1) inch in twenty (20) inches at all places where the paving adjoins the roadways. At existing roadways, the re-graded area shall be finished with the same type of material as removed. At places where paving adjoins gravel or gravel treated roadways, the regarded area shall be finished with a road gravel at a minimum thickness of six (6) inches compacted. However, the Contractor will not be required to replace any oil treatment or seal coat.

B. There will be no additional payment for this work, and the cost of such should be included in the price bid for the concrete pavement.

3.18 CURB, CURB AND GUTTER

A. Joints in integral curb shall line up with, and be the same type as, those in the concrete pavement.

B. Joints in separate straight curb and in curb and gutter shall line up with, and be the same type as, those in adjacent concrete pavement, but spacing shall in no case exceed ten (10) feet. The Contractor shall use face forms on all straight curbs.

C. The face and top of the curb shall be finished smooth and true to line, grade and cross section. No more troweling than necessary shall be done. Prior to the initial set of the concrete, the curb face shall be lightly brushed to give a slightly roughened surface. The curb shall be dropped to within (1) inch of the gutter at integral curb shall proceed simultaneously and follow immediately the placing of pavement concrete.

D. Form excavations on the street side of curb and gutter sections shall be backfilled with road gravel and thoroughly compacted.

3.19 DRIVES

A. The Contractor shall remove and replace, or construct gravel, asphalt, or concrete drives adjacent to new construction, where designated by the Engineer.

B. Drives shall be constructed on a uniform slope from the gutter to the sidewalk, property line or place designated by the Engineer.

C. Gravel Drives - The existing material shall be excavated and road gravel placed at a minimum thickness of six (6) inches compacted.

D. Asphalt Drives - The existing material shall be excavated, and a minimum thickness of one and one half (1 1/2) inches of hot mix asphalt pavement placed on a road gravel base, with a minimum compacted thickness of five (5) inches. A neat joint shall be cut when meeting existing asphaltic concrete.

E. Concrete Drives - Concrete drives shall be six (6) inches thick, unless otherwise designated. A portion of an existing concrete drive to be removed shall be removed to an existing joint, or to a joint made with a concrete saw. Concrete drives shall be constructed in accordance with the procedures and specifications for Cement Concrete Pavement.

F. Payment will be made at the contract unit price per square yard, and for the designated thickness, which will be payment-in-full for excavating material other than concrete, and for constructing the drive complete.

G. Payment for concrete removal will be made at the contract unit price per square yard. Payment for saw cutting will be made at the contract unit price per lineal foot.

3.20 CONCRETE HEADERS

A. Concrete end headers shall be placed at the end of all pavements, including street returns not connecting with concrete or asphaltic concrete pavements.

B. Payment will be made at the contract unit price per square yard for the adjoining concrete pavement.

3.21 SAW CUTTING

A. Payment for saw cutting will be made at the contract unit price per lineal foot for saw cutting designated on the plans, or designated by the Engineer.

B. No additional payment will be made for saw cutting pavement joints or for saw cutting done for the Contractor's convenience.

3.22 DAMAGE BY CONSTRUCTION

A. Sidewalks, driveways, etc., unnecessarily damaged by construction operations shall be repaired or replaced as directed by the Engineer, at no additional cost to the City.

3.23 MEASUREMENT AND PAYMENT

A. Concrete pavement will be paid for at the contract unit price per square yard, which will be payment in full for furnishing all materials (not including pavement reinforcement), dowels, tie bars, joint dowel hook bolts, and all joint materials; laying, curing and protecting the concrete; constructing the pavement complete; grading at intersections; and maintaining traffic.

B. Payment for integral curb will be included in the contract unit price per square yard for concrete pavement with integral curb.

END OF SECTION

SECTION 711
PORTLAND CEMENT CONCRETE DURABILITY REQUIREMENTS

PART 1. GENERAL

1.03 SUMMARY

B. All Portland cement concrete mixtures supplied by the Contractor for this project shall have been tested under this specification and shown to be resistant to excessive expansion caused by alkali-silica reactivity (ASR) and provides adequate air entrainment for freeze thaw durability. The contractor shall construct the project with practices outlined in this specification.

C. All labor, materials, equipment, supervision and incidentals required for complying with the requirements of this section shall be incidental to the other work of this project.

1.04 REFERENCES

B. Unless otherwise specified, all materials shall conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.05 SUBMITTALS

B. Contractor shall submit proposed mix design for all Portland cement concrete mixtures to be supplied on this project.

C. Contractor shall submit certifications for all aggregate and classified granular fill materials to be supplied on this project.

PART 2. MATERIALS

2.03 PORTLAND CEMENT CONCRETE MIXTURE COMPONENTS

A.	Portland cement	ASTM C-150
B.	Fine Aggregate	ASTM C-33
C.	Coarse Aggregate	ASTM C-33
D.	Fly Ash, Class F	ASTM C-618
E.	Slag Cement, Grade 100, 120	ASTM C-689
F.	Silica Fume	ASTM C-1240
G.	Blended Cements	ASTMC-595
H.	Air Entraining Admixtures	ASTM C-260
I.	Chemical Admixtures	ASTM C-494
J.	White Membrane Cure	ASTM C-309 Type 2

PART 3. EXECUTION

3.03 ALKALI-SILICA REACTIVITY

A. Provide documentation to the Engineer that the concrete mixture does not present the potential for deleterious expansion caused by alkali-silica reactivity (ASR). Provide current ASR test results (valid for 2 years from completion of testing), for the fine aggregate that is proposed to be used in the concrete, from an independent testing laboratory proficient in ASR testing. The independent

testing laboratory must certify in writing, including a signed statement that all testing was conducted in accordance with the designated standard test procedures, described herein. Test results must conform to the specified criterion for one of the following standard test methods. ASR testing is not required for concrete pavement repairs and temporary concrete pavements. Use the Rounding Method described in ASTM E 29 when determining significant digits for reporting expansion test results.

1. Method 1. ASTM C 1293. Concrete Prism Test. If the expansion of concrete prisms is not greater than 0.040 percent (rounded to the nearest 0.001 percent) after 1 year, the fine aggregate is considered non-deleterious to ASR and may be used in the JMF.

2. Method 2. ASTM C 1567. Mortar Bar Test. If no previous test data are available for the fine aggregate that shows it is resistant to ASR using Method 1, above, replace 25 to 40 percent of the Portland cement in the concrete mixture with a supplementary cementitious material. A blended cement meeting the requirements of ASTM C 595 containing the above Portland cement and supplementary cementitious material proportions may also be used.

   Demonstrate the ability of the supplementary cementitious material to control the deleterious expansion caused by ASR by molding and testing mortar bars according to the standard test method described in ASTM C 1567 using the mix proportions and constituent sources for both the aggregates and the cementitious materials that will be used for the project. Make at least three test specimens for each cementitious materials-aggregate combination. If the average of three mortar bars for a given cementitious materials-aggregate combination produces an expansion less than 0.10 percent (rounded to the nearest 0.01 percent) at 14 days of immersion, the JMF associated with that combination will be considered non-deleterious to ASR. If the average expansion is 0.10 percent (rounded to the nearest 0.01 percent) or greater, the JMF associated with that combination will be considered not sufficient to control the deleterious expansion caused by ASR and the JMF will be rejected.

3. Method 3. ASTM C 1260. Mortar Bar Test. If the expansion of the mortar bars is less than 0.10 percent (rounded to the nearest 0.01 percent) at 14 days of immersion, the fine aggregate is considered non-deleterious to ASR and may be used in the concrete without the need for ASR mitigation. The Engineer will not approve the use of the JMF if the expansion exceeds the respective threshold limits for the respective ASTM test method used.

3.04 QUALITY CONTROL

A. The Owner and Contractor shall monitor the concrete that is delivered to the project site so as to ensure that the approved mix design is being followed. The supplier shall include on the delivery ticket for each batch of concrete delivered to the job, the identification and proportions of each material batched. In lieu of individual batch tickets a detailed summary report showing the batch weights for each load may be submitted, at the end of each production shift, provided that individual ticket information is supplied upon request for inspection and testing personnel.

B. When concrete is placed during cold weather, below 40 degrees F, the use of accelerators, heated aggregates, silica fume and/or additional forms of cold weather protection will be required. Cold weather will not eliminate the requirement for furnishing and placing a concrete mix that is considered resistant to ASR attack.

C. Prior to cool weather placement, temperatures between 40- and 60-degrees F, the set time of the proposed mix shall be verified under anticipated field conditions. This information shall be used when scheduling pours and saw crews.

3.05 AIR ENTRAINMENT

A. Air entrainment shall be accomplished by addition of an approved air entraining agent. Air content as determined by ASTM C 231 or ASTM C 173, shall be determined on each day of production as early and as frequently as necessary until the air content is consistently acceptable. Acceptance testing for air content shall be on the grade ahead of the placement operation.

B. Paver placement:

1. The target air content of the in-place finished plastic concrete is 6.0%. During production acceptance will be at the point of acceptance sampled ahead of the paver, the target value referred to as the Acceptance Air Content (AAC). The AAC will be determined by the air loss experienced during transportation, consolidation and placement of the concrete. The difference between the as-produced concrete in front of the paver and the in-place air content will be considered the air loss. The AAC for the project will be 6.0% plus an amount equal to the air loss.

2. To establish the initial target AAC on the first day of paving, the first load shall be tested at the plant. For up to the first ten (10) loads, the AAC measured prior to placement shall be at least 8.0% and no more than 12.0%. After initial testing at the plant at least two sample sets shall be tested to determine the actual air loss during placement. A set shall consist of two (2) samples of concrete from the same batch, one taken at the point of discharge and the other from the in-place concrete behind the paver. The air loss from the two (2) sets shall be averaged and added to 6.0% to establish the AAC (rounded to the next higher 0.5%). The project acceptance air tests shall be taken prior to placement and shall be within the range of the AAC plus 2.0% or minus 1.0%.

3. After the AAC has been established it shall be verified and/or adjusted through daily checks of the air loss through the paver. The loss through the paver shall be checked twice daily. A Revised AAC shall be established if the average air loss from two (2) consecutive tests deviates by more than 0.5% from the current accepted air loss.

C. Hand placed concrete:

1. The air content for non-slip form paving shall be 7.0% plus 1.5% or minus 1.0% at point of placement.

3.06 CONSTRUCTION PROCESSES

A. Aggregate control

1. Gradation control – The Contractor shall provide a detailed stockpile management plan, describing their process control procedure for shipping, handling, and stockpiling of each aggregate including workforce training.

2. Moisture control – All aggregate materials must be conditioned to a moisture content of not less than saturated surface dry (SSD) prior to batching. A watering process using some type of sprinkler system is required on all coarse aggregate material stockpiles.

B. Mixing

1. Central mix plants

a. The total volume of the batch shall not exceed the designated size of the mixer or the rated capacity as shown on the manufacturer's rating plate.

b. Drum Mix Plants:

i. After all solid materials are assembled in the mixer drum; the mixing time shall be a minimum of sixty (60) seconds and a maximum of five (5) minutes. The mixing time may be decreased if the ASTM C-94 11.3.3 mixer efficiency tests show that the concrete mixing is satisfactory. The Engineer may require an increase in the minimum mix time if the mixer efficiency test determines that the concrete is not being mixed satisfactorily. The minimum mixing time shall start after the mixer is fully charged. Mixers shall be operated at the speed recommended by the manufacturer as mixing speed. The mixer shall be charged so that a uniform blend of materials reached the mixer throughout the charging cycle. Any additional slump water required shall be added to the mixing chamber by the end of the first 25% of the specified mixing time. Mixers shall not be used if the drum is not clean or if the mixing blades are damaged or badly worn.

c. Ribbon mixers:

i. After all solid materials are assembled in the mixer; the mixing time shall be a minimum of thirty (30) seconds and a maximum of 2.5 minutes. The mixing time may be decreased if the ASTM C-94 11.3.3 mixer efficiency tests show that the concrete mixing is satisfactory. The Engineer may require an increase in the minimum mix time if the mixer efficiency test determines that the concrete is not being mixed satisfactorily. The minimum mixing time shall be indicated by an accurate timing device which is automatically started when the mixer is fully charged. Mixers shall be operated at the speed recommended by the manufacturer as mixing speed. The mixer shall be charged so that a uniform blend of materials reached the mixer throughout the charging cycle. After any additional slump water is added to the mixing chamber the mixing shall continue for a minimum of ten (10) seconds. Mixers shall not be used if the mixer is not clean or if the mixing blades are damaged or badly worn.

2. Truck mixers

a. The capacities and mixing capabilities shall be as defined in ASTM C 94, and each unit shall have an attached plate containing the information described therein. The plate may be issued by the Truck Mixer Manufacturer. The mixer capacity shall not be exceeded, and the mixing speeds shall be within the designated limits. Truck mixers shall be equipped with a reliable reset revolution counter. If truck mixers are used for mixing while in transit, the revolution counter shall register the number of revolutions at mixing speed.

b. An authorized representative of the concrete producer shall certify that the interior of the mixer drum is clean and reasonably free of hardened concrete, that the fins or paddles are not broken or worn excessively, that the other parts are in proper working order, and that the unit has been checked by the representative within the previous thirty (30) calendar day period to substantiate this certification. The current, signed certification shall be always with the unit.

c. The required mixing shall be between seventy (70) and ninety (90) revolutions. The mixing shall be at the rate designated by the manufacturer and shall produce uniform, thoroughly mixed concrete.

d. The Engineer may inspect mixer units at any time to assure compliance with certification requirements, and removal of inspection ports may be required. Should the Engineer question the quality of mixing, the Engineer may check the slump

variation within the batch. Should the slump variation between two (2) samples taken, one (1) after approximately 20% discharge and one (1) after approximately 90% discharge of the batch, show a variation greater than 3/4 inch (20 mm) or 25% of the average of the two, whichever is greater, the Engineer may require the mixing to be increased, the batch size reduced, the charging procedure be modified or the unit removed from the work.

e. The practice of adding water on the site shall be discouraged. After the first round of trucks has been adjusted on the grade the amount of water added at the plant shall be adjusted and shall become the point of adjustment throughout the pour. All water additions on site shall be approved by the Engineer.

C. Curing

1. Apply liquid curing compound in a fine atomized spray to form a continuous, uniform film on the horizontal surface, vertical edges, curbs and back of curbs immediately after the surface moisture has disappeared, but no later than thirty (30) minutes after concrete placement. With approval of the Engineer, the timing of cure application may be adjusted due to varying weather conditions and concrete mix properties.
2. The cure system shall be on site and tested prior to concrete placement.
3. Apply a curing compound at a rate of application not less than two (2) gallons per twenty-five (25) square yard; keep the material thoroughly mixed per the manufactures recommendation and do not dilute the compound.
4. The finished product shall appear as a uniformly painted solid white surface. Areas exhibiting a blotchy or spotty appearance shall be recoated immediately.

END OF SECTION

SECTION 712
CONCRETE SIDEWALK CONSTRUCTION

PART 1. GENERAL

1.01 SUMMARY

A. This section includes the provision of all labor, materials, equipment, supervision and incidentals required for the construction of concrete sidewalks and ramps, and associated work, including detectable warning plates for sidewalk ramps as required for compliance with the American with Disabilities Act.

B. Related Sections: The following sections contain requirements that relate to this Section:

1. Concrete Durability Requirements

1.02 REFERENCES

A. Unless otherwise specified, all materials shall conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

B. All sidewalk and ramp shall meet ADA requirements for slope, surface finish, width, and all other requirements.

1.03 SUBMITTALS

A. Contractor shall submit proposed mix design for all concrete to be supplied for sidewalk construction.

B. Contractor shall submit certifications for all aggregate and classified granular fill materials to be supplied on this project.

PART 2. MATERIALS

2.01 CONCRETE

A. The concrete mixture shall be meet the requirement of MDOT Mixture 3500, with 6AA coarse aggregate and Type 1A Portland Cement.

B. The concrete mixture supplied on this project shall conform to the requirements of the Concrete Durability Requirements section for resistance to alkali-silica reactivity (ASR).

C. Admixtures shall be used only when specified or authorized by the Engineer.

D. The City reserves the right to make air and slump tests on any or all loads of concrete supplied to the job prior to placing the concrete in the grade. Concrete shall not be placed on the grade until such tests have been completed and approved by the Engineer. Concrete not meeting the specifications will be rejected. Re-tempering of rejected concrete for re-use on the job will not be allowed.

E. Water shall not be added to the concrete at any time without specific permission by the Engineer.

2.02 TRUNCATED DOMES / DETECTABLE WARNING

A. Truncated Domes / Detectable Warning shall be manufactured of cast iron, and shall at a minimum have the following properties:

Slip Resistance (ASTM C-1028):	1.10 Dry / 1.06 Wet
Wear Resistance (ASTM C-501):	7333
Impact Resistance (ASTM D-1709)	>238 Newtons
Adhesion to Concrete (Bond Strength ASTM D-482)	>5000 lbs.
Tensile Strength (ASTM A-48)	35,000 PSI

B. Truncated Domes / Detectable Warning shall be supplied with a natural finish. Black asphalt dip finish is acceptable as well, if all of the detectable warning plates at each intersection (all corners) that are constructed as a part of the work have the same finish.

C. Truncated Domes / Detectable Warning shall be supplied at each sidewalk ramp in accordance with ADAAG and/or MDOT requirements, whichever is more stringent.

D. Truncated Domes / Detectable Warning shall be at least two (2) feet deep along the direction of travel. The detectable warning plate width shall generally be five (5) feet, unless otherwise specified on the drawings or in the field by the Engineer. Radial plates may be used where called for on the drawings, or in the field by the Engineer.

E. Truncated Domes / Detectable Warning shall be manufactured by East Jordan Iron Works or approved equal.

2.03 FORMS

A. Forms shall be of metal or wood, and of an approved section. Materials, other than metal or wood shall not be used for forms, unless specifically authorized by the Engineer.

B. Forms shall be straight, free from distortions, and shall show no vertical variation greater than one-eighth (1/8) of an inch in ten (10) foot lengths from the true plane surface on the top of the forms when tested with a ten (10) foot straight edge, and shall show no lateral variations greater than one-quarter (1/4) of an inch from the true plane surface on the vertical face of the form when tested with a ten (10) foot straight edge.

PART 3. CONSTRUCTION

3.01 EXAMINATION

A. Contractor shall verify the existing conditions prior to submitting a bid on the project.

3.02 PREPARATION

A. If removal and replacement of the existing sidewalk is specified in the work item, the Contractor shall remove the existing sidewalk to the extent shown on the plans, or as directed by the Engineer in the field.

B. During removals and construction, Contractor shall protect all adjacent sidewalks, pavement, curb and gutter, and drive approaches from damage. Any adjacent infrastructure that is damaged by the Contractor during construction shall be replaced by the Contractor at no additional cost to the City.

C. The subgrade shall be formed by trenching or filling to the required elevation for bottom of concrete, or to bottom of subbase, if a subbase is specified. All sod and vegetative matter shall be stripped from the subgrade.

D. The subgrade after grading shall be thoroughly tamped or otherwise compacted, to insure its stability. Any soft, spongy or otherwise unstable areas in the subgrade shall be removed and replaced with granular fill.

E. In cuts, the subgrade shall be made sufficiently wide to permit the proper placing of forms, and in fills, the subgrade shall be made at least one (1) foot wider on each side than the required width of sidewalk.

F. All fills shall be of granular material and shall be placed in thoroughly compacted layers not to exceed six (6) inches in depth. Compaction shall be accomplished using mechanical equipment or hand tamps with metal bases.

G. Existing sidewalks or paved areas under proposed sidewalks shall be removed, except where grade will allow at least two (2) inches of granular fill to be placed over them.

3.03 SIDEWALK THICKNESS

A. Unless otherwise noted on the drawings, sidewalks shall be at least four (4) inches thick, except at ramps and across driveways, where they shall be at least six (6) inches thick.

3.04 DISPOSAL OF WALK AND EXCAVATED MATERIALS

A. The old walk, after removal, and excavated materials shall be disposed of by the Contractor at his own expense. He shall provide his own dump. When directed by the Engineer, the Contractor shall leave removed sod in an area adjacent to the construction. The Contractor will not be held responsible for the sod after that time or responsible for the condition of the area under which the sod was placed.

3.05 PREPARATION OF SUBGRADE

A. The subgrade shall be formed by trenching or filling to the required elevation for bottom of concrete, or to bottom of subbase, if a subbase is specified. All sod and vegetative matter shall be stripped from the subgrade.

B. The subgrade after grading shall be thoroughly tamped or otherwise compacted, to insure its stability. Any soft, spongy or otherwise unstable areas in the subgrade shall be removed and replaced with granular fill.

C. In cuts, the subgrade shall be made sufficiently wide to permit the proper placing of forms, and in fills, the subgrade shall be made at least one (1) foot wider on each side than the required width of sidewalk.

D. All fills shall be of granular material and shall be placed in thoroughly compacted layers not to exceed six (6) inches in depth. Compaction shall be accomplished using mechanical equipment or hand tamps with metal bases.

E. Existing sidewalks or paved areas under proposed sidewalks shall be removed, except where grade will allow at least two (2) inches of granular fill to be placed over them.

3.06 PROTECTION OF TREES

A. Where a tree is less than twenty-four (24) inches from the existing walk, or at the Engineer's discretion, the Contractor may be required to curve the walk around the tree, maintaining the full width of the walk through the curve. The Contractor shall cut and remove all tree roots that are in the sidewalk grade. Merely shaving the roots in order to place the sidewalk at proper grade and thickness will not be acceptable. The cost of the work of cutting and removing the roots and curving the walk around the trees shall be included in the unit price bid. The City may elect to cut and remove certain tree roots with their own forces, but the Contractor shall submit his bid based on performing all of the necessary root cutting and removal.

3.07 BARRICADES AND LIGHTS

A. Barricades and lights shall be placed in accordance with the "Public Safety" section of the "General Requirements" section of these specifications. In addition, the following requirements shall be met.

B. Barricades used under this contract shall be "horses" or other barricades approved by the Engineer. Barricades made of rope, wood siding and other similar types will not normally be approved by the Engineer.

C. Barricades shall be placed where sidewalks under construction join sidewalks or driveways which are open for use.

D. Lights shall be placed at the beginning and end of construction in each block. Where such lights are more than five hundred (500) feet apart, intermediate lights shall be placed so that the distance between any light does not exceed five hundred (500) feet.

3.08 FORMS

A. Forms shall be of metal or wood, and of an approved section. Materials, other than metal or wood shall not be used for forms, unless specifically authorized by the Engineer.

B. Forms shall be straight, free from distortions, and shall show no vertical variation greater than one-eighth (1/8) of an inch in ten (10) foot lengths from the true plane surface on the top of the forms when tested with a ten (10) foot straight edge, and shall show no lateral variations greater than one-quarter (1/4) of an inch from the true plane surface on the vertical face of the form when tested with a ten (10) foot straight edge.

3.09 FORMING

A. Forms must be used for all edges of all sidewalk construction. Where proposed walk abuts existing concrete, and the edge of the existing concrete is true to line and grade, the existing concrete, with or without expansion paper, will be considered a form for the new sidewalk.

B. Forms shall be installed true to line and grade established by the Engineer. They shall be adequately staked and braced to remain online and grade during the placement of concrete.

C. Walk shall pitch to the center of the street at the rate of one-quarter (1/4) inch per foot of width, unless otherwise provided. Forms shall be of the full depth specified for the walk.

D. Before placing concrete, forms shall be thoroughly cleaned and oiled.

3.10 PLACING AND FINISHING CONCRETE

A. Before beginning a run of concrete, all hardened concrete or foreign material shall be completely removed from the inner surface of the mixer and conveying equipment. Before depositing any concrete, all debris or other foreign matter shall be removed from the space to be occupied by the concrete.

B. The subgrade shall be thoroughly wetted, and the concrete shall be deposited thereon to the proper depth. So called "two course" pouring will not be permitted. Concrete shall be handled from the mixer to the place of deposit as rapidly as possible and by methods which will prevent separation of the ingredients. The concrete shall be deposited directly into the forms as nearly as possible in its final position, to avoid re-handling. The piling up of concrete in the forms will not be permitted. No concrete which has partially hardened shall be deposited in the work.

C. Concrete shall be worked into all the recesses and corners of the forms by means of thorough spading of an approved method or mechanical vibration.

D. When the air temperature falls to 40°F and is dropping, no concrete shall be placed. Pouring may be started when the temperature is 35°F in the shade, away from artificial heat, and is rising. All concrete during curing shall be protected from freezing by straw, hay or tarpaulins, for not less than seventy-two (72) hours after pouring.

E. No concrete shall be poured on a frozen, dry or uncompacted subgrade.

F. The concrete shall be alternately tamped and struck off with a strike board until all voids are removed and the surface has the required grade and cross section. The strike board shall be long enough so it can always be in contact with both forms. The surface shall be floated with a wood or aluminum float, followed by a steel float, just enough to produce a smooth surface free from irregularities. All edges and joints shall be rounded to a radius of one-quarter (1/4) inch with an approved finishing tool. The surface shall then be brushed to slightly roughen the surface and remove the finishing tool marks.

G. The end of a run of concrete shall not remain unformed for more than one-half (1/2) hour, by which time a header form shall be placed. If a header is not placed, the concrete shall be removed back to the last transverse joint prior to continuing the pour. Headers, when used, shall not vary more than six (6) inches in location from the normal transverse joint location.

3.11 JOINTS

A. Joints shall be constructed true to line, with their face's perpendicular to the surface of the sidewalk and shall not vary more than one-quarter (1/4) inch from their designated position. Transverse joints shall be constructed at right angles to the centerline of the sidewalk, and longitudinal joints shall be constructed parallel to the centerline, unless otherwise required.

B. When the sidewalk is constructed in partial width slabs, transverse joints in the succeeding slab shall be placed in line with like joints in the adjacent slab. In the case of widening existing sidewalks, transverse joints shall be placed in line with like joints in the existing sidewalk.

C. The concrete at the faces of all joints shall be thoroughly spaded and compacted to fill all voids, and the surface shall be finished smooth and true to grade.

D. Expansion Joints - Expansion joints shall be of the pre-molded non-extruding bituminous fiber filler type.

E. In new sidewalk, one-half (1/2) inch thick expansion joints shall be placed at intervals of not more than fifty (50) feet. In repairing existing sidewalk, at least one and one-half (1 1/2) inch expansion joints shall be used in the repair, unless existing expansion joints are less than thirty (30) feet on either side of the repair.

F. One-half (1/2) inch thick expansion joints shall also be placed at junctions with sidewalks, drives, buildings and other rigid structures. Three-quarter (3/4) inch thick by five (5) inch expansion joints shall be placed at all curb junctions and between sidewalk and abutting parallel curb or gutter.

G. Contraction Joints - Insofar as feasible, joints shall be spaced at intervals equal to the width of the walk and with maximum transverse and longitudinal intervals of ten (10) feet. Joints shall be produced by use of slab division forms extending the full width and one-half (1/2) the depth of the walk. The joints shall be of not less than one-eighth (1/8) inch, nor more than one-quarter (1/4) inch in width and shall be finished smooth and true to line.

H. Slab division forms shall remain in the concrete a sufficient length of time to insure permanent separation of the concrete.

3.12 WHITE MEMBRANOUS CURING

A. After finishing operations have been completed, and immediately after the free water has left the surface, the surface of the sidewalk shall be completely coated and sealed with a uniform layer of white membranous curing compound.

B. The compound shall be applied in a continuous uniform film by means of mechanical pressure sprayer equipment at a rate of not less than one (1) gallon per two hundred (200) square feet of surface. The equipment shall provide adequate stirring of the compound during application. The equipment for applying the compound must be approved by the Engineer before work is started.

C. If the compound is too thick for satisfactory application during cold weather, the material may be warmed in a water bath at temperatures not over 100°F. Thinning with solvents will not be permitted.

D. If rain falls on the newly coated sidewalk before the film has dried sufficiently to resist damage, or if the film is damaged in any other way, the Contractor will be required to apply a new coat of material to the affected areas equal in curing value to that specified for the original coat.

3.13 SIDEWALK RAMPS

A. Sidewalk ramps shall be constructed in accordance with these Concrete Sidewalk Construction Specifications, and in accordance with MDOT Standard Detail R-28, latest edition.

B. Surface texture of ramps shall be that obtained by a coarse brooming, transverse to the slope of the ramps. The normal gutter line profile shall be maintained through the area of ramps.

C. There is no separate pay item for sidewalk ramps. The sidewalk portion of ramps will be paid for as concrete sidewalk construction. Work required at the curb for ramps will be paid for under a curb pay item, depending on the type of curb work performed.

D. Each ramp shall include a Truncated Domes / Detectable Warning installed at the back of the curb. The Truncated Domes / Detectable Warning shall generally be five (5) feet wide by two (2) feet deep. If that is not possible given the site constraints, then they shall be at least as wide as the existing adjacent sidewalk. Radial Truncated Domes / Detectable Warning plates may be required in some locations.

3.14 REMOVAL OF FORMS

A. Forms shall not be removed from freshly placed concrete until it has set for at least twelve (12) hours. They shall be carefully removed, and in such a manner that no damage will be done to the edge of the sidewalk.

3.15 PROTECTION OF EXISTING LAWNS

A. The Contractor shall use extreme care while replacing existing sidewalks or constructing new sidewalks in existing lawns not to damage the lawns. The Contractor shall remove a maximum of six (6) inches of sod beyond the edges of the sidewalk. He shall remove the sod after cutting it with a square nosed shovel on a parallel line to the sidewalk.

B. The Contractor shall always protect existing lawns during his work. Equipment or vehicles will not be permitted on established lawns. The Contractor will be held responsible for all damage to lawns more than six (6) inches away from sidewalk construction. Sod and other excavated materials shall not be placed on existing lawns. Any lawn area damaged as a result of the Contractor's operations may be repaired by the City at the Contractor's expense.

3.16 UNDERGROUND SPRINKLER SYSTEMS

A. Some of the houses in the sidewalk replacement area may have underground sprinkler systems for their lawns. The owners of these sprinkler systems have been notified that they are responsible for locating for the Contractor, all underground sprinkler equipment adjacent to any sidewalk that is to be replaced. The Contractor will be required to use caution when working around these known underground sprinkler systems, and shall repair any damage to sprinklers if, in the opinion of the Engineer, insufficient care was taken to prevent damage to the sprinkler system.

3.17 SERVICE WALKS

A. Where the grade of a new or replaced sidewalk does not meet the grade of a private service walk, the Contractor may be required to replace a portion of the service walk. The Contractor will be required to replace only that portion of the service walk that the Engineer determines is necessary to eliminate a hazard or drainage problem.

B. Payment for replacement of service walks will be made at the contract unit price for four (4) inch concrete sidewalk replacement.

3.18 CONSTRUCTION AT PAVED DRIVEWAYS

A. Sidewalk Replacement at Concrete Driveways

1. The existing sidewalk shall be removed without damaging the driveway. Expansion joints shall be replaced along each edge of the sidewalk, and the sidewalk shall be replaced using the expansion paper at the drive as forms.

B. Sidewalk Replacement at Asphalt Driveways

1. The existing sidewalk, and a maximum of four (4) inches of asphalt on each side of the sidewalk, shall be removed without damaging the rest of the drive. A neat joint shall be cut in the asphalt prior to removing the sidewalk. The sidewalk shall be formed across the driveway. Wood forms may be used in such locations. Upon completion of the sidewalk construction, the Contractor shall place road gravel in the form excavations. There will be no additional payment made for cutting the neat joints, removing asphalt and placing road gravel in the form excavations. The City shall then be responsible to have the remaining asphalt replaced by others.

2. Where an asphalt driveway is in good condition and at a suitable grade, the Engineer may direct that the sidewalk be removed and replaced without removing a portion of the driveway. In such case, the Contractor shall use caution to avoid damage to the asphalt. Also, the Contractor will not be required to set forms. The Contractor should avoid getting cement on the surface of any asphalt drive.

C. New Sidewalk at Concrete Driveways

1. The Contractor shall saw cut and remove that portion of the driveway necessary to be removed to construct the sidewalk, and necessary to be removed because of grade. The sidewalk shall be formed across the driveway, and following the removal of the forms, the remaining portion of the driveway removed shall be replaced.

D. New Sidewalk (asphalt drives)

1. The Contractor shall cut neat joints in the asphalt at locations determined by the Engineer. The Contractor shall remove the asphalt between the neat joints, shall form the sidewalk across the drive, and following the removal of the forms, shall fill the form excavations with road gravel. There will be no additional payment made for cutting the neat joints, removing the asphalt and placing road gravel in the form excavations.

3.19 CONSTRUCTION AT UNPAVED DRIVEWAYS

A. The Contractor shall backfill the form excavation across unpaved drives with the same type material as exists in the adjacent driveway.

3.20 FINAL GRADING

A. For new sidewalk construction, the Contractor shall grade to a uniform slope from the top of the walk to top of the curb, and from the walk to the property line. In the event there is no curb, grading shall be done for 10 (ten) feet towards the centerline of the street to the existing grade. If this provision should involve destroying or re-grading established lawns and parkways, the Contractor shall confer with the Engineer before starting such grading.

B. Grading and clean-up work shall be done as soon as possible following the completion of any section of sidewalk, and in no case shall more than two (2) consecutive days (excluding Sundays and holidays) elapse from the time any section of sidewalk is placed until the adjacent grading and clean-up is completed.

C. In establishing lawns, the Contractor shall place a minimum of two (2) inches of topsoil in all form excavations and on all re-graded areas. The topsoil shall be tamped and graded, and then seeded with grass seed. Clean excavated material may be used to fill under the required topsoil. Topsoil and seed used shall be of a high quality and approved by the Engineer. Topsoil shall be free of sticks, stones, clumps of clay, debris and similar materials.

D. In unimproved areas, clean excavated material may be used for grading.

3.21 PAYMENT

A. Payment will be made by unit price per square foot of walk constructed, and price bid shall include excavating; removal of existing sidewalk; granular fill (not more than four (4) inches thick); preparation of the base; forming, furnishing, placing and finishing of concrete; placing of jointing material; curing; removal of forms; and grading as specified.

B. There will be no additional payment for removing and replacing unstable subgrade.

C. No deductions in payment will be made for areas of sidewalk construction occupied by manhole castings, utility boxes, pole bases and similar objects, provided no one such object occupies more than ten (10) square feet of the new (or replaced) sidewalk. Where any one such object occupies more than ten (10) square feet of the new (or replaced) sidewalk, no payment will be made for sidewalk within that area.

END OF SECTION

SECTION 715
EXPOSED AGGREGATE CONCRETE CONSTRUCTION

PART 1. GENERAL

1.01 SUMMARY

A. The work of this section shall consist of the construction of exposed aggregate sidewalks, planter curbs, and weirs. This work shall include the provision of all labor, materials, equipment, and supervision required, including excavation, bedding, forming, pouring and finishing, plus other incidental work necessary for a complete system.

1.02 REFERENCES

A. All work performed under this section shall meet the requirements of Section 712 Sidewalk Construction, unless specifically modified by this section.

B. Performance and material requirements shall meet specific Reference Standards as referred to hereinafter under individual items.

C. Unless otherwise specified, all materials shall also conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 SUBMITTALS

A. Contractor shall furnish a mix design for the exposed aggregate concrete mixture to be supplied on this project.

B. Contractor shall furnish product data sheets and MSDS information for all admixtures, curing compounds and sealants.

1.04 SAMPLES

A. Samples for Verification: Prepare (3) 2” x 12” x 12” Mockup Samples with 3 varying retardant levels. Samples to be reviewed and selected prior to installation of full-scale mock-up.

1. Label each sample on backside with permanent marker with the following: Retardant Level / Exposure Time
2. Design intent is to match the smoother finish from Phase 1/# Old Woodward Reconstruction projects.

1.05 QUALITY ASSURANCE

A. The Contractor shall submit Mockups: Build full scale mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups of full-thickness sections of concrete paving to demonstrate typical joints; surface finish, texture, and color; curing; and standard of workmanship and as indicated in the pre-construction meeting.
2. Shadow-reveal will be reviewed in field for best construction purposes.
3. Obtain the City’s and Landscape Architect's approval of mockups before starting construction.
4. All finished product work shall match the approved mockup.

PART 2. MATERIALS

2.01 EXPOSED AGGREGATE CONCRETE MIX:

A.	Sand:	2NS	ASTM C-33	1,080 pounds
B.	Course Aggregate:	17A	ASTM C-33	1,980 pounds
C.	Cement:	Type 1	ASTM C150	588 pounds
D.	Water:	City Tap Water		31.5 gallons
E.	Admixture:	Darex A.E.A. (W.R. Grace)	ASTM C260*	11.3 oz./cu.yd.

F. Concrete strength shall be 4,000 psi at twenty-eight (28) days, with 6% + or – entrained air. Mix design shall not have less than 6.25 sacks of cement per cubic yard and shall be approved by the City of Birmingham Engineering.

2.02 EXPANSION JOINTS:

A. Material for the joint shall be resilient, non-extruding type pre-molded bituminous impregnated fiberboard. All expansion joints shall be filled with sealant, using a two part polysulfide sealant, self leveling, light gray color. Submit color sample for approval. Federal Specifications TT-S-0027e, Type 1, Dow Corning #780 or equal.

B. A sealant backer rod shall be used of compressible rod stock of polyethylene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility by sealant manufacture.

2.03 SURFACE RETARDANT:

A. The exposed aggregate finish surface shall be exposed by use of surface retardant “Preco EAC-S” or approved equal.

B. Retarders and sealers shall be clear; white or colored retarders and sealers will not be permitted.

PART 3. CONSTRUCTION

3.01 INSTALLATION:

A. The installation method referred to as “seeding” will not be permitted.

B. Concrete shall be placed, leveled and floated in normal fashion. Shortly following floating, retardant may be sprayed or brushed over the surface following manufacturer’s specifications.

C. Immediately after the slab has been screened and darbied, the aggregate shall be “washed” in a uniform manner until entire surface is exposed. A thorough ‘exposing’ of the embedded aggregate shall be performed until all aggregate is left just above the surface, leaving no holes or openings in the surfaces.

D. The surface shall then be brushed and washed until all the aggregate is exposed and free of cement film.

A 1” expansion joint shall be placed between the existing buildings and new pavement (sidewalk). All other expansion joints shall be ½” unless otherwise noted. Provide expansion joints as shown in the plans unless otherwise determined by the City, and between plain and exposed aggregate sidewalk.

END OF SECTION

Section 716

PARKING METER POSTS

PART 1. GENERAL

1.01 SUMMARY

A. This work shall be as specified in Section 810 and other appropriate sections of the Michigan Department of Transportation 2020 Standard Specifications for Construction, in accordance with the 2005 edition of the Michigan Manual of Uniform Traffic Control Devices, as amended, and as specified herein:

1.02 REFERENCES

A. Performance and material requirements shall meet specific Reference Standards as referred to hereinafter under individual items.

B. Unless otherwise specified, all materials shall also conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 SUBMITTALS

A. Contractor shall provide submittals for the steel posts to be used as parking meter posts.

B. Contractor shall furnish product data sheets and MSDS information for all paint products to be used under this section.

PART 2. MATERIALS

2.01 PARKING METER POSTS

A. The Contractor shall supply a 3 lb. steel post 72 inches long for each parking meter location, with the intent that 42 in. (max height) to any workable part on the meter will be exposed above the proposed pavement surface. The outer diameter of the 2 and 3/8th inches in diameter. The steel post, sign hardware and strapping shall be painted.

B. Whenever a post will house either a single- or double-parking meter head wherein one of the meters is designated as for use at a handicap reserved parking space, the post shall be lowered as per the detail sheet on the plans to ensure that all operating parts of the meter are no more than 42” high from the proposed sidewalk grade.

2.02 PAINT

A. All items to be painted shall be primed first. Primer shall consist of (2) parts DuPont 2540 S primer and one (1) part DuPont 2505 S primer sealer or approved equal. The primer shall be mixed and applied using airless spray per the manufacturer’s recommendations.

B. The paint shall consist of three (3) parts DuPont Chroma-One B1800G, one (1) part DuPont Chroma-One Activator 7005, and one (1) part DuPont Chroma One Spot Reducer 7075 or approved equal. The color of the paint shall conform to the City’s “Birmingham Green” for all standard meters and “Standard Handicap Blue” for all handicap meters. The paint shall be mixed and applied using airless spray per the manufacturer’s recommendations.

PART 3. CONSTRUCTION

3.01 REMOVALS

A. Wherever road reconstruction work will conflict with existing parking meter posts, the Contractor shall notify the Engineer with seventy-two (72) hour notice minimum when demolition of existing street areas shall commence. The City will be responsible to remove all existing parking meters prior to demolition, and store said meters in a safe location off site.

B. The Contractor shall remove all parking meter posts as a part of the demolition process. Parking meter posts shall vary with respect to their footing; some will have virtually no footing, while others may have substantial concrete anchoring the post underground. No matter what condition the parking meters posts are in, removal of the posts shall be incidental to the cost of the removal of the post.

C. The parking meter posts shall become the property of the Contractor.

3.02 FURNISHING AND INSTALLING NEW PARKING METER POSTS

A. In selected areas of downtown street construction, the Contractor will be asked to install new parking meter posts in designated locations, as part of a street or sidewalk reconstruction project.

B. The Contractor shall be responsible to keep damage to the paint surface in transit to the job site to a minimum, and to touch up any minor damage that is incurred during transit or installation.

3.03 INSTALLATION

A. Two methods of installation shall be allowed, depending upon the nature of the project. The first option is the preferred method.

1. If the posts are available prior to the installation of concrete sidewalk, the contractor shall install the parking meter posts like a standard sign installation. Concrete shall be installed around the post as needed to provide a footing, if the existing ground is not virgin or stiff enough to ensure that the post is secure. The new sidewalk shall be poured around the parking meter post after it has already been set.
2. If the posts are not available at the time of concrete sidewalk installation, the Contractor shall install a 4 in. PVC sleeve perpendicular to the concrete surface, with the upper end flush with the concrete surface. The sleeve shall be barricaded off if the sidewalk is opened to the public prior to pole installation. Once the poles are available, the Contactor shall core a hole through the sleeve, and grout the post to seal off the remaining open space through the depth of the sidewalk.

B. Option 1 shall be used exclusively in those areas where a parking meter post is not being set in new concrete.

C. The Contractor is encouraged to review the Parking Meter Post Detail provided on the accompanying plans that further information relative to the parking meter posts, including the installation of a weep hole as required for each post.

D. The City shall be responsible to install the parking meters on the new posts after the posts have been installed.

END OF SECTION

SECTION 721
CONCRETE CURING AND SEALING COMPOUNDS

PART 1. GENERAL

1.01 SUMMARY

A. This section covers curing and sealing compounds for both new and existing exterior exposed aggregate concrete surfaces. This work is related to the installation of exposed aggregate concrete sidewalks. Refer to Section 712 and Section 715 for concrete installation information.

1.02 REFERENCES

A. AASHTO M 148 – Liquid Membrane-Forming Compounds for Curing Concrete.

B. ASTM C 309 – Liquid Membrane-Forming Compounds for Curing Concrete.

C. ASTM C 1315 – Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.

D. Federal Specification TTC 800A.

1.03 SUBMITTALS

A. The Contractor shall submit all manufacturers' product data to the City for approval prior to installation, including surface preparation and application instructions.

PART 2. MATERIALS

2.01 ACCEPTABLE MANUFACTURERS

A. The Euclid Chemical Company, or W.R. Meadows, or Equal.

2.02 CURING AND SEALING COMPOUND

A. Concrete curing and Sealing Compound shall be an acrylic copolymer-based curing, sealing, hardening, and dust proofing membrane – Euclid Super Rez-Seal, W.R. Meadows Expo-Gloss or approved equal.

B. Concrete Curing and Sealing Compound shall meet or exceed the following standards:

1. AASHTO M 148, Type 1 and 1D.
2. ASTM C 309, Type 1 and 1D, Class B.
3. ASTM C 1315, Type 1, Class C.
4. Federal Specification TTC 800A, Type 1.
5. Maximum VOC content of 700 g/L in accordance with EPA 40 CFR Part 59, Table 1, Subpart D for concrete curing and sealing compounds.

C. Concrete Curing and Sealing Compound shall be USDA approved, UV Resistant and Non-yellowing.

PART 3. EXECUTION

3.01 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer. Contractor shall store materials in clean, dry area in accordance with manufacturer's instructions. Care should be taken to store the materials in such a manner that they are secure from access to the public. The Contractor shall not use the road right of way for overnight storage of sealing and curing compounds. Keep containers sealed until ready for use. Contractor shall protect materials during handling and application to prevent damage or contamination.

3.02 ENVIRONMENTAL REQUIREMENTS

A. The Contractor shall not apply curing and sealing compound when the concrete surface or air temperatures are below 40 degrees F (4 degrees C).

B. The Contractor shall not apply curing and sealing compound when material temperature is below 50 degrees F (10 degrees C).

3.03 INSTALLATION

A. Contractor shall examine concrete surfaces to receive curing and sealing compound and notify the Engineer if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions are corrected.

B. Contractor shall prepare concrete surfaces in accordance with manufacturer's instructions. Ensure surfaces are clean and free of standing water. Remove dirt, dust, oil, grease, sealers, and other materials that may prevent adhesion of curing and sealing compound.

C. Contractor shall apply curing and sealing compound to concrete surfaces in accordance with manufacturer's instructions. Curing and sealing compounds shall be installed at a uniform coverage rate in accordance with manufacturer's instructions. Apply as soon as possible after finishing and immediately after disappearance of surface moisture sheen, when used to cure freshly placed concrete.

D. Protect horizontal surfaces from traffic until curing and sealing compound has cured.

END OF SECTION

SECTION 860
IRRIGATION

GENERAL

All work shall be done in accordance with the 2012 Michigan Department of Transportation Standard Specifications for Construction, except as herein described.

DESCRIPTION OF WORK:

A. Furnish all labor, materials, supplies, equipment, tools, and transportation, and perform all operations in connection with and reasonably included in the complete installation of the irrigation system as shown on the drawings, the installation details, and as specified herein. The system shall be constructed to grades and conform to areas and locations as shown on the drawings. Removal and or restoration of existing improvements, excavation and back-fill, and all other work in accordance with plans and specifications are required.

B. Extent of irrigation system work is shown on drawings and by provisions of this Section.

C. Sprinkler lines shown on the drawings are essentially diagrammatic. Spacing of the sprinkler heads or quick coupling valves are shown on the drawings and shall be exceeded only with the permission of the Engineer.

D. Items of work specifically included are:

1. Procurement of all applicable licenses, permits, and fees.
2. Coordination of all utilities.
3. Connection of electrical power supply to the irrigation control system.
4. Sleeving for irrigation pipe and wire.

QUALITY ASSURANCE:

A. The “Contractor” shall maintain continuously a competent superintendent, satisfactory to the Engineer, with authority to act for him in all matters pertaining to the work.

B. The “Contractor” shall coordinate his work with the other trades.

C. The “Contractor” shall confine his operations to the area to be improved and to the areas allotted him by the Engineer for material and equipment storage.

SUBMITTALS:

A. Submit samples and/or material certificates in accordance with Section 105 of the MDOT 2003 Standard Specifications for Construction.

B. **Materials List:** Include backflow device, valves, sprinklers, controller, wire connectors, pipe, fittings to be used on the project prior to purchasing materials. Quantities of material need not be included.

C. **Manufacturer's Data:** Submit manufacturer's catalog cuts, specifications, and operating instructions for equipment shown on the materials list.

D. **Shop Drawings:** Upon irrigation system acceptance, submit written operating and maintenance instructions. Provide format and contents as directed by the Engineer. Include instruction sheets and parts lists for all operating equipment.

E. **Project Record (As-Built) Drawings:**

1. Submit record drawings under this provision.

2. Record pipe and wiring network alterations. Record work that is installed differently than shown on the construction drawings. Record accurate reference dimensions, measured from at least two permanent reference points of each irrigation system valve, each controller or control unit, each sleeve end, each stub-out for future pipe or wiring connections, and other irrigation components enclosed within a valve box.

3. Before construction completion, obtain from the Engineer a reproducible Mylar copy of the drawings. Using technical drafting pen or CAD, duplicate information contained on the project drawings maintained on site. Label each sheet "Record Drawings". Completion of the record drawings will be a prerequisite for the review at the completion of the irrigation system installation.

RULES AND REGULATIONS:

A. Work and materials shall be in accordance with the latest edition of the MDOT Specifications, National Electric Code, the Uniform Plumbing Code as published by the Western Plumbing Officials Association, and applicable laws and regulations of the governing authorities.

B. If quantities are provided either in these specifications or on the drawings, these quantities are provided **for information only**. It is the "Contractor's" responsibility to determine the actual quantities of all material, equipment, and supplies required by the project and to complete an independent estimate of quantities and wastage.

DELIVERY, STORAGE AND HANDLING:

A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.

B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, either threaded or plain.

C. Store and handle materials to prevent damage and deterioration.

D. Provide secure, locked storage for valves, sprinkler heads and similar components that cannot be immediately replaced, to prevent installation delays.

CODES AND STANDARDS:

A. The entire installation shall fully comply with all local and state laws and ordinances and with all established codes applicable thereto.

B. In all cases where inspection of the sprinkler system work is required and/or where portions of the work are specified to be performed under the direction and/or inspection of the Engineer, the "Contractor" shall notify the Engineer at least 24 hours in advance of the time and such inspection and/or direction is required.

C. Any necessary re-excavation or alterations to the system needed because of failure of the "Contractor" to have the required inspections shall be performed at the "Contractor's" own expense.

TESTING:

A. Notify the Engineer three days in advance of testing.

B. Pipelines jointed with rubber gaskets or threaded connections may be subjected to a pressure test at any time after partial completion of backfill. Pipelines jointed with solvent-welded PVC joints shall be allowed to cure at least 24 hours before testing.

C. Subsections of mainline pipe may be tested independently, subject to the review of the Engineer.

D. Furnish clean, clear water, pumps, labor, fittings, and equipment necessary to conduct tests or retests.

E. Volumetric Leakage Test:

1. Cap riser of mainline components for volumetric pressure tests. Backfill to prevent pipe from moving under pressure. Expose coupling and fitting.

2. Purge all air from the pipeline before test.

3. Subject mainline pipe to the anticipated operating pressure of 100 PSI for two hours. Maintain constant pressure. The amount of additional water pumped in during the test shall not exceed 1.24 gallon per 100 joints of 3-inch diameter pipe and 1.6 gallons per 100 joints of 4-inch diameter pipe. Replace defective pipe, fitting, joint, valve, or appurtenance. Repeat the test until the pipe passes test.

4. Cement or caulking to seal leaks is prohibited.

F. Operational Test:

1. Activate each remote-control valve in sequence from controller. The Engineer will visually observe operation, water application patterns, and leakage.

2. Replace defective remote-control valve, solenoid, wiring, or appurtenance to correct operational deficiencies.

3. Replace, adjust, or move water emission devices to correct operational or coverage deficiencies.

4. Replace defective pipe, fitting, joint, valve, sprinkler, or appurtenance to correct leakage problems. Cement or caulking to seal leaks is prohibited.

5. Repeat test(s) until each lateral passes all tests. Repeat tests, replace components, and correct deficiencies at no additional cost to the owner.

CONSTRUCTION REVIEW:

A. The purpose of on-site reviews by the Engineer is to periodically observe the work in progress, the "Contractor's" interpretation of the construction documents, and to address questions regarding the installation.

B. Scheduled reviews such as those for irrigation system layout or testing must be scheduled with the Engineer as required by these specifications.

C. Impromptu reviews may occur at any time during the project.

D. A review will occur at the completion of the irrigation system installation and project record (as-built) drawing submittal. The Engineer may note any deficiencies in the irrigation system at the Engineer's discretion for the Contractor to replace or repair, at any time.

MATERIALS

GENERAL:

Use materials that are new and without flaws or defects of any type. All material overages at the completion of the installation are the property of the "Contractor" and are to be removed from the site.

SUBSTITUTIONS:

The Contractor shall use materials as specified unless otherwise determined by the Engineer.

SLEEVING:

Material as indicated on the plans and/or elsewhere in the Specifications.

PIPE AND FITTINGS:

A. **Mainline Pipe and Fittings:**

1. Use Class 160, SDR-26, rated at 160 PSI, conforming to the dimensions and tolerances established by ASTM Standard D2241. Use solvent weld pipe for lateral pipe. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standards D2466 and D1784 for PVC pipe. Use primer approved by the pipe manufacturer and purple in color. Solvent cement to conform to ASTM Standard D2564, of a type approved by the pipe manufacturer appropriate to weather conditions.

2. Provide pipe homogeneous throughout and free from visible cracks, holes, foreign materials, blisters wrinkles and dents.

3. Provide pipe continuously and permanently marked with manufacturer's name or trademark, size schedule and type of pipe working pressure at 73 degrees F. and (NSF) approval.

4. All pipes damaged or rejected because of defects shall be removed form the site at the time of said rejection.

B. **Lateral Pipe and Fitting:**

5. All sprinkler laterals pipe downstream from the zone valves, sized 2" and smaller shall be flexible non-toxic polyethylene (PE) pipe. Use SDR-11.5, PE23, rated at PSI that is National Sanitation Foundation (NSF) approved, conforming to ASTM Standard D2239. Use Type 1, PVC insert fitting conforming to ASTM Standard D2609 designed for use with flexible polyethylene (PE) pipe. Use stainless steel worm gear clamps (including stainless steel screw) to join pipe and fittings.

6. Use Class 160, SDR-26, rated at 160 PSI, conforming to the dimensions and tolerances established by ASTM Standard D2241. Use solvent weld pipe for lateral pipe. Use Schedule 40, Type 1, PVC solvent weld fittings conforming to ASTM Standards D2466 and D1784 for PVC pipe. Use primer approved by the pipe manufacturer and purple in color. Solvent cement to conform to ASTM Standard D2564, of a type approved by the pipe manufacturer appropriate to weather conditions.

7. For drip irrigation laterals downstream of zone control valves, use UV radiation-resistant polyethylene pipe manufactured from prime Union Carbide or a Union Carbide licensee with a minimum of 2% carbon black. Use PVC/compression line fittings compatible with the drip lateral pipe. Use tubing stakes or landscape fabric staples to hold aboveground pipe in place.

C. **Specialized Pipe and Fittings:**

1. All above grade pipe shall be copper pipe: Use Type "M" rigid conforming to ASTM Standard B88. Use wrought copper or cast bronze fitting, soldered, or threaded per the installation details. Use 95% tin and 5% antimony solder.

2. Galvanized steel pipe: Use Schedule 40 conforming to ASTM Standard A120. Use galvanized, threaded, standard weight malleable iron fittings.

3. Ductile iron pipe: Use Class 50 conforming to ANSI A21.51. Use a minimum of Class 53 thickness pipe for flanged piping. Use mechanical joints conforming to ANSI A21.10 and ANSI A21.11 (AWWA C111) or flanged fittings conforming to ANSI/AWWA C110 and ANSI B16.1 (125#).

4. Use a dielectric union wherever a copper-based metal (copper, brass, and bronze) is joined to an iron-based metal (iron, galvanized steel, and stainless steel).

5. Low-Density Polyethylene Hose:

   a. Use pipe specifically intended for use as a flexible swing joint.
      Inside diameter: 0.490 ± 0.010 inch.
      Wall thickness: 0.100 ± 0.010 inch.
      Color: Black

   b. Use spiral barb fittings supplied by the same manufacturer as the hose.

6. Assemblies calling for threaded pipe connections shall use PVC Schedule 80 nipples and PVC Schedule 40 threaded fittings.

7. Joint sealant: Use only Teflon-type tape or Teflon-based paste pipe joint sealant on plastic threads. Use non-hardening, nontoxic pipe joint sealant formulated for use on water-carrying pipes on metal threaded connections.

D. **Thrust Blocks:**

1. Use thrust blocks for fitting on pipe greater than or equal to 3-inch diameter or any diameter rubber gasket pipe.

2. Use 3,000-PSI concrete.

3. Use 2-mil plastic.

4. Use No. 4 re-bars wrapped or painted with asphalt tar-based mastic coating.

MAINLINE COMPONENTS:

A. **Main System Shutoff Valve:** per local practice and in compliance with local code.
B. **Winterization Assembly:** per local practice and in compliance with the local code.
C. **Backflow Prevention Assembly:** as presented in the installation details.
D. **Master Valve Assembly:** as presented in the installation details.
E. **Flow Sensor Assembly:** as presented in the installation details.
F. **Isolation Gate Valve Assembly:** as presented in the installation details. Install a separate valve box over a 3-inch depth of ¾-inch gravel for each assembly.

G. **Pressure Regulator Assembly:** as presented in the installation details. Install a separate valve box over a 3-inch depth of ¾-inch gravel for each assembly.

H. **Quick Coupling Valve Assembly:** double swing joint arrangements as presented in the installation details.

I. **Manual Drain Valve Assembly:** as presented in the installation details. Install a separate sump consisting of three cubic feet of ¾" gravel for each drain valve.

SPRINKLER AND BUBBLER IRRIGATION COMPONENTS:

A. **Remote Control Valve (RCV) Assembly for Sprinkler and Bubbler Laterals:** as presented in the installation details. Use splice kit wire connectors to join control wires to solenoid valves. Install a separate valve box over a 3" depth of ¾" gravel for each assembly.

B. **Sprinkler Assembly:** as presented in the drawings and installation details. Use the sprinkler manufacturer's pressure compensating screens to achieve specified operating conditions on each sprinkler and to control excessive operating pressures.

C. **Bubbler Assembly:** as presented in the drawings and installation details.

CONTROL SYSTEM COMPONENTS:

A. **Irrigation Controller Unit:**

1. As presented in the drawing and installation details.

2. Lighting protection: Provide 8-foot copper-clad grounding rod at controller location.

3. Wire markers: pre-numbered or labeled with indelible non-fading ink, made of permanent, non-fading material.

B. **Control Wire:**

1. Use Rainbird Maxi Cable, Type UF or PE cable, UL approved for direct underground burial from the controller unit to each remote decoder.

2. Color: Use white for common ground wire. Use red or black colors for decoder wires. Wire color shall be continuous over its entire length.

3. Splices: Use DBYR-6 wire connector with waterproof sealant. Wire connector to be of plastic construction.

C. **Instrumentation:**

1. As presented in the drawing and installation details.

2. Provide, install and test a soil moisture monitor to override irrigation in the event of high soil moisture levels and a rain sensor to prevent irrigation during or immediately after rainfall

events, and a temperature sensor to prevent irrigation when temperatures drop below a user-preset threshold.

D. **Power Wire:**

1. Electric wire from the power source to satellite control unit shall be solid or stranded copper, Type UF single-conductor cable, UL approved for direct underground burial. Power wires shall be black, white, and green in color. Size as presented in the drawings. The "Contractor" is responsible for verifying that the power wire sizes shown on the drawings are compatible and adequate for the control system being used.

2. Splices: Use DBY splice kit connectors.

3. Conduit: PVC Schedule 40.

4. Warning tape: Inert plastic film highly resistant to alkalis, acids, or other destructive chemical components likely to be encountered in soils. Tape to be three inches wide, colored yellow and imprinted with "CAUTION: BURIED ELECTRIC LINE BELOW."

OTHER COMPONENTS:

A. **Tools and Spare Parts:** Provide operating keys, servicing tools, test equipment, spare parts, and other items indicated in the general notes of the drawings.

B. **Other Materials:** Provide imported fill material as required to complete this work. Provide other materials or equipment shown on the drawings or installation details, which are part of the irrigation system, although such items may not have been referenced in these specifications.

INSPECTION AND REVIEWS

A. **Site Inspections:**

1. Verify construction site conditions and note irregularities affecting work of this section. It shall be the contracting installer's responsibility to report to the Engineer any deviations between drawings, specifications, and the site. Failure to do so before the installing of equipment and resulting in replacing and/or relocation of equipment shall be done at the "Contractor's" expense.

2. Examine final grades and installation conditions. Do not start irrigation system work until unsatisfactory conditions are corrected.

3. Beginning work of this section implies acceptance of existing conditions.

B. **Utility Locations:**

1. Call MISS DIG 1-800-482-7171

2. The exact location of all existing utilities and structures and underground utilities are not indicated on the drawings; their locations shall be determined by the "Contractor", and he shall conduct his work to prevent interruption of service or damage to them.

3. Arrange for and coordinate with local authorities the location of all underground utilities.

4. Repair any underground utilities damaged during construction. Make repairs at no additional cost above the contract price.

5. The "Contractor" shall protect existing structures and utility services and be responsible for their replacement if damaged by him.

C. **Irrigation System Layout Review:**

1. Irrigation system layout review will occur after the staking has been completed unless specifically waived in writing by the Engineer. Notify the Engineer one-week in advance of review.

2. The Engineer at this review will identify modifications.

LAYOUT OF WORK:

A. Stake out the irrigation system. Items staked include: sprinklers, pipe, control valves, manual drains, quick coupling valves, backflow preventer, controller, and isolation valves.

B. Install all mainline pipe and mainline components inside of project property lines.

C. Minor adjustments in system layout will be permitted to clear existing fixed obstructions. Final system layout shall be acceptable to the Engineer.

EXCAVATION, TRENCHING, AND BACKFILLING:

A. Excavating shall be considered unclassified and shall include all materials encountered, except materials that cannot be excavated by normal mechanical means.

B. Excavate to permit the pipes to be laid at the intended elevations and to permit workspace for installing connections and fittings.

C. Minimum cover (distance from top of pipe or control wire to finish grade):

1. 14-inch over mainline pipe and over electrical conduit.

2. 16-inch over control wire.

3. 10-inch over lateral pipe to sprinklers and bubblers and over manifold pipe to drip system zone control valves.

4. 8-inch over drip in turf or paved areas downstream of drip system zone control valves.

5. 3-inch minimum mulch cover over drip lateral pipe in planting beds downstream of drip system zone control valves.

6. PVC UV radiation-resistant lateral pipe shall be installed directly on the soil surface.

D. PVC or PE lateral pipes may be pulled into the soil using a vibratory plow device specifically manufactured for pipe pulling. Minimum burial depths equal minimum cover listed above provided soil moisture content and other conditions are suitable to allow for full depth of bury with a minimum of stretching and scraping of the pipe. The Engineer reserves the right to determine suitability or conditions.

E. Backfill only after lines have been reviewed and tested.

F. Excavated material is generally satisfactory for backfill. Backfill shall be free from rubbish, vegetable matter, and stones larger than 2 inches in maximum dimension. Remove material not suitable for backfill. Backfill placed next to pipe shall be free of sharp objects, which may damage the pipe.

G. Backfill un-sleeved pipe by depositing the backfill material equally on both sides of the pipe in 6-inch layers and compacting each layer to 90% Standard Proctor Density, ASTM D698-78. Use of water for compaction, "puddling," will not be permitted.

H. Enclose pipe and wiring beneath roadways, walks, curbs, etc., in sleeves. Minimum compaction of backfill for sleeves shall be 95% Standard Proctor Density, ASTM D698-78. Use of water for compaction around sleeve, "puddling," will not be permitted.

I. Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades.

J. Where utilities conflict with irrigation trenching and pipe work, contact the Engineer for trench depth adjustments.

K. Provide approved fine grained earth fill or sand to point 4" above the top of pipe, where soil conditions are rocky or otherwise objectionable.

L. Excavate trenches and install piping and backfill during the same working day. Do not leave open trenches or partially filled trenches open overnight.

SLEEVING AND BORING:

All requirements are as specified in the plans and/or elsewhere in the Specifications for jacked-bored or directionally drilled sleeves or casings.

ASSEMBLING PIPE AND FITTING:

A. **General:**

1. Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends.

2. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.

3. All mainline and continuously pressurized pipe is to be installed using open trenches. Lateral pipe may be installed by "Plowing" if soil conditions permit, and soils do not contain gravel, rock, construction debris, or other potential damaging material.

4. Trenches may be curved to change direction or avoid obstructions within the limits of the curvature of the pipe. Minimum radii of curvature are 25 feet for 2-inches diameter pipe and 100 feet for 2 ½, 3, and 4-inch diameter pipe. All curvature results from the bending of the pipe lengths. No deflection will be allowed at a pipe joint.

B. **Mainline and Fittings:**

1. Use only strap-type friction wrenches for threaded plastic pipe.

2. PVC Rubber-Gasketed Pipe:

   a. Use pipe lubricant. Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practices.

   b. Epoxy-coated steel fittings shall not be struck with a metallic tool. Cushion blows with a wood block or similar shock absorber.

3. PVC Solvent Weld Pipe:

   a. Use a primer and solvent cement. Join pipe in a manner recommended by the manufacturer and in accordance with accepted industry practices.

   b. Cure for 30 minutes before handling and 24 hours before allowing water in pipe.

   c. Snake pipe from side to side within the trench.

4. Fittings: the uses of cross type fittings or saddle-tees are not permitted.

5. Install thrust blocks on the mainline pipe work in accordance with pipe manufacturer's written instructions.

C. **Lateral Pipe and Fittings:**

1. Use only strap-type friction wrenches for threaded plastic pipe.

2. PVC Solvent Weld Pipe:

   a. Use primer and solvent cement. Join pipe in the manner recommended by the manufacturer and in accordance with accepted industry practices.

   b. Cure for 30 minutes before handling and 24 hours before allowing water in the pipe.

   c. Snake pipe from side to side within the trench.

3. Polyethylene (PE) Pipe:

   a. Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practices.

   b. Snake pipe from side to side within the trench.

c. Double clamp pipe 1-1/2” diameter and larger.

4. UV Radiation-Resistant Polyethylene Pipe:

a. Join pipe in the manner recommended by the manufacturer and in accordance with accepted industry practices.

b. Snake pipe side to side within the trench, on the soil surface, and hold in place with the tubing stakes or landscape fabric staples spaced every five feet. Pipe is not to compressed or crimped by the stake or staple or other construction activity.

5. Fittings: The use of cross types of fittings and /or saddle tees are not permitted.

D. **Specialized Pipe and Fitting:**

1. Copper Pipe:

a. Buff surface to be joined to a bright finish. Coat with solder flux.

b. Solder so that a continuous bead shows around the joint circumference.

2. Galvanized Steel Pipe:

a. Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practices.

b. Use factory-made threads whenever possible. Field-cut threads will be permitted only where necessary. Cut threads on axis using clean, sharp dies.

c. Apply Teflon-type tape or pipe joint compound to the male threads only.

3. Ductile Iron Pipe:

a. Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practices.

b. Insert dielectric union wherever a copper-based metal (copper, brass, bronze) and an iron-based metal (iron, galvanized steel, and stainless steel) are joined.

4. Low-Density Polyethylene Hose: Install per manufacturer’s recommendations.

5. PVC Threaded Connections:

a. Use only factory-formed threads. Field-cut threads are not permitted.

b. Use only Teflon-type tape or Teflon-based paste.

6. Threaded Connections:

   a. When connection is plastic to metal, the plastic component shall have male threads and the metal component shall have female threads.

   b. Make metal-to-metal, threaded connections with Teflon-type tape or pipe joint compound applied to the male threads only.

E. **Thrust Blocks:**

1. Use cast-in-place concrete bearing against undisturbed soil.

2. Size, orientation, and placement shall be as shown on the installation details.

3. Wrap fitting with plastic to protect bolts, joint, and fitting from concrete.

4. Install re-bar with mastic coating as shown on the installation details.

INSTALLATION OF MAINLINE COMPONENTS

A. Main System Shut Off Valve: Install where indicated on the drawing.

B. Winterization Assembly: Install where indicated on the drawing.

C. Backflow Prevention Assembly: Install where indicated on the drawing. Install assembly so that its elevation, orientation, access, and drainage conform to the manufacturer's recommendations and all applicable health codes.

D. Master Valve Assembly: Install where indicated on the drawing.

E. Flow Sensor Assembly: Install where indicated on the drawing.

F. Isolation Gate Valve Assembly: Install where indicated on the drawings. Locate at least 12 inches from and align with adjacent walls or edges of paved areas.

G. Pressure Regulator Assembly: Install where indicated on the drawing. Locate at least 12 inches from and align with adjacent walls or edges of paved areas. Adjust to provide an output pressure of 100 PSI.

H. Quick Coupling Valve Assembly: Install where indicated on the drawings.

I. Manual Drain Valve Assembly: Install where indicated on the drawings and at other low points in the mainline piping.

INSTALLATION OF SPRINKLER AND IRRIGATION COMPONENTS:

A. **Remote Control Valve (RCV) Assembly for Sprinkler and Bubbler Laterals:**

1. Flush mainlines before installation of RCV assembly.

2. Install where indicated on the drawing. Wire connectors and waterproof sealant shall be used to connect control wires to remote control valve wire. Install connectors and sealant per the manufacturer's recommendations.

3. Install only one RCV to a valve box. Locate valve box at least 12 inches from and align with nearby walls and edges of paved areas. Group RCV assemblies together where practical. Arrange grouped valve boxes in rectangular patterns. Allow at least 12 inches between valve boxes.

4. Adjust RCV to regulate the downstream operating pressure.

5. Attach ID tag with controller station number to control wiring.

B. **Sprinkler Assembly:**

1. Flush lateral pipe before installing sprinkler assembly.

2. Install per the installation details at locations shown on the drawings.

3. Locate rotor sprinklers 6 inches from adjacent walls, fences, or edges of paved areas.

4. Locate spray sprinklers 3 inches from adjacent walls, fences, or edges of paved areas.

5. Install sprinklers perpendicular to the finish grade.

6. Supply appropriate nozzle or adjust arc of coverage of each sprinkler for best performance.

7. Adjust the radius of throw of each sprinkler for best performance.

C. **Bubbler Assembly:**

1. Flush lateral pipe before installing bubbler assembly.

2. Install bubbler assembly per the installation details at locations shown on the drawings.

3. Adjust the output flow of each bubbler for performance.

INSTALLATION OF CONTROL SYSTEM COMPONENTS:

A. **Irrigation Controller Unit:**

1. The location of the collector unit as depicted on the drawings is approximate; the engineer/landscape architect/owner's representative will determine the exact site location during sprinkler layout review.

2. Lighting protection: Drive 8-foot copper-clad grounding rod into the soil. If rock prevents driving, bury at least four feet deep. Use one rod for each controller. Connect controller to ground rod with AWG No. 10 solid conductor copper wire. Secure wire to grounding rod with brass or bronze clamp. Locate the connection in a separate valve box.

3. Attach wire markers to the ends of control wires inside the controller unit housing. Label wires with the identification numbers (see drawings) of the remote-control valve to which the control wire is connected.

4. Install a 120-volt, 15-amp switched and grounded 3-prong receptacle with GFCI inside the controller unit housing.

5. Connect control wires to the corresponding controller terminal.

B. **Control Wire:**

1. Bundle control wires where two or more are in the same trench. Bundle with pipe wrapping tape at 10-foot intervals.

2. Control wiring may be chiseled into the soil using a vibratory plow device specifically manufactured for pie pulling and wire installation. Appropriate chisel must be used so that wire is fed into a chute on the chisel, and wire is not subject to pulling tension. Minimum burial depth must equal minimum cover previously listed.

3. Provide a 24-inch excess length of wire in an 8-inch diameter loop at each 90-degree change of direction, at both ends of sleeves and at 100-foot intervals along continuous runs of wiring. Do not tie wiring loop. Coil 24-inch length of wire within each remote-control valve box.

4. Install common ground wire and one control wire for each remote-control valve. Multiple valves on a single control wire are not permitted.

5. If a control wire must be spliced, make splice with wire connectors and waterproof sealant, installed per the manufacturer's instructions. Locate splice in a valve box that contains an irrigation valve assembly, or in a separate 6-inch round valve box.

6. Use same procedure for connection to valves as for in-line splices.

7. Unless noted on plans, install wire parallel with and below PVC mainline pipe.

8. Protect wire not installed with PVC mainline pipe with a continuous run of warning tape placed in the backfill six inches above the wiring.

C. **Instrumentation:**

1. Install sensor per the installation details and manufacturer's recommendations. Install at locations shown on the drawings.

2. Install electrical connections between central control unit components and sensors per manufacturer's recommendations.

D. **Power Wire:**

1. Route power wire as directed on plans. Install with a minimum number of field splices. If a power wire must be spliced, make splice with recommended connector, installed per manufacturer's recommendations. Locate all splices in a separate 10-inch round valve box. Coil 2 feet of wire in valve box.

2. All power wire shall be laid in a trench. The use of a vibratory plow is not permitted.

3. Green wire shall be used as the common ground wire from power source to all satellites.

4. Carefully backfill around power wire to avoid damage to wire insulation or wire connectors.

5. Unless noted on plans, install wire parallel with and below mainline pipe. Install wire 2 inches below top of PVC mainline pipe.

6. Encase wire not installed with PVC mainline pipe in electrical conduit with a continuous run of warning tape placed in the backfill, 6 inches above wiring.

INSTALLATION OF OTHER COMPONENTS:

A. **Tools and Spare Parts:** Prior to the review at completion of construction, supply to the Engineer operating keys, servicing tools, spare parts, test equipment, and any other items indicated in general notes on the drawings.

B. **Other Materials:** Install other materials or equipment shown on the drawings or installation details which are part of the irrigation system, even though such items may not have been referenced in these specifications.

CLEANUP:

Upon completion of work, remove from the site all machinery, tools, excess materials, and rubbish.

MEASUREMENT AND PAYMENT

The completed work as measured for Irrigation will be paid for at the contract unit price for the following contract pay items and includes all material, equipment, and labor to complete these items.

PAY ITEM	PAY UNIT
Sprinkler Assembly	Each
Valve Assembly	Each
1-1/2-inch PVC Mainline	Foot
1-inch Polyethylene lateral line	Foot
1-1/4-inch Polyethylene lateral line	Foot
Communication Cable –two wires	Foot
Irrigation Controller	Each
Rain Sensor	Each
4” PVC Sleeve	Foot
2” PVC Sleeve	Foot
Conduit Stub for Street Light Hanging Basket	Each

END OF SECTION

SECTION 881 – ORGANIC PLANTING SOIL MIX

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Manufactured soil mix in this section shall hereafter be referred to as Organic Planting Soil Mix or OPS Mix.

B. This Section applies only to the manufacturing and delivery of the planting soil mix to the site. Refer to Finish Grading for subgrade preparation, placement, and final grading.

1.02 SUMMARY

A. Section Includes:

1. All labor, materials, equipment, and testing requirements necessary to provide and mix soil components, and deliver to site as specified herein, including but not necessarily limited to the following:

   a. Construct the specified Organic Planting Soil Mix profile using the specified materials and techniques as contained herein, on the drawings.

      1) Imported or 'Off the shelf' products from authorized soil manufacturing facilities or suppliers.

2. Test, furnish and deliver all soil materials, including off-site borrow soils and soil amendment materials, such as composted materials, used in the OPS mix or per detail sections shown on the drawings.

1.03 REFERENCES AND STANDARDS

A. The following references are used herein and shall mean:

1. ASTM: American Society of Testing Materials
2. NCR221: Recommended Soil Testing Procedures for the North Central Region
3. SSSA: Soil Science of America, Methods of Soil Analysis, Part 1 & Part 3
4. TMECC: Test Methods for the Examination of Composting and Compost
5. USDA: United States Department of Agriculture
6. USEPA: United States Environmental Protection Agency

B. Standard Specifications: Regional, State or Municipal Standard Specification Documentations for the location of proposed usage.

1.04 DEFINITIONS

A. Compost: An organic material that has been aerobically composted and stabilized from feedstocks such as green waste (yard debris), biosolids or other suitable organic materials.

B. Debris or Deleterious Materials: Elements including, but not limited to concrete, concrete masonry, wood, excavated rock and rock fragments, rubble, overburden soils, abandoned utility structures, trash, refuse, and litter.

C. Finish Grade: Elevation of finished surface of a Soil System after specified compaction and natural settling.

D. Sand: A naturally occurring mineral that has been processed to remove coarse gravel, silt and clay and sized to meet the specifications.

E. Soil: A mineral soil from the A Horizon or B Horizon of a well-drained site and having a USDA soil texture classification of a Sandy Loam – Loamy Sand and an organic matter content of not greater than 3% by weight as specified below.

F. Soil System: Exclusive to this technical specification section, a profile consisting of the native topsoil blended with an approved composted material.

G. Subgrade: Surface or elevation of subsoil remaining after completing excavation or backfill of soils or other materials immediately beneath transition mix or other Soil System.

H. Transition Layer: The specified soil mix (in this case = OPS) is homogeneously blended into the existing native soil substrate to create a conversion layer between the native and specified soil mix (OPS). Transitions mixes and depths vary pending specified soil mix and plantings. Refer to drawings for depths.

1.05 SUBMITTALS

A. Refer to and comply with specifications for submittal procedures and criteria.

B. Product Data: Submit technical descriptive data for each manufactured or packaged product of this Section. Include manufacturer's product testing and analysis and installation instructions for manufactured or processed items and materials.

1. Locations: Submit locations of material sources and suppliers.

C. Soil System Components and Soil Mix Suppliers

1. Landscape Architect shall have the right to reject any soil supplier.

2. Soil mix suppliers shall have a minimum of 5-years of experience at supplying “Manufactured” type soils.

3. Submit supplier name, address, email, telephone, and fax numbers and contact name.

4. Submit certification that accepted supplier can provide enough materials and mixes for the entire project and within the limitations of the Project Schedule.

D. Certificates: Submit certified analysis for each chemical soil amendment and fertilizer material specified (specimen label) and as used (product label). Including guaranteed analysis and weight for packaged materials.

E. Soil System Testing Submittals: Engage an independent testing agency to qualify the Organic Planting Soil (OPS) components and specified final planting mixes. The Contractor shall submit representative samples of all component materials which are intended to be used to make mixes and all final mixes to an agricultural soil testing laboratory acceptable to the Landscape Architect.

1. All soil tests shall be performed in accordance with the current methods provided by ASTM, SSSA or USEPA, unless otherwise noted. All reports prepared by the testing laboratory shall be sent to the Landscape Architect for approval. Samples of all soil materials to be brought to the site must be approved before delivery.

2. After reviewing the Testing Agency report and as directed by the Landscape Architect, deficiencies in the sand, organic materials, mix components or final soil mix are to be corrected by the Contractor.
3. Soil Component Submittals shall include the following:
    a. Date issued.
    b. Project Title and names of Contractor and supplier.
    c. Testing laboratory name, address and telephone number, and name(s), as applicable, of each field inspector or laboratory contact.
    d. Date, place, and time of sampling or test, with record of temperature and weather conditions.
    e. Location of material source.
    f. Type of test.
    g. Results of tests including identification of deviations from acceptable ranges.
    h. Soil pH and Buffer pH Test.
    i. Analysis for levels of heavy metals to include arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc. Test results shall be cited in milligrams per kilogram dry weight with comparisons to USEPA 40 CFR Table 3 of 503.13 Pollutant Concentrations.
    j. Particle size analysis shall be performed and compared to the USDA Soil Classification System per ASTM D422 (hydrometer test). The USDA sand and gravel classifications shall be determined on material retained on the #270 sieve following a wet washing procedure.
    k. Deleterious materials shall be determined by ASTM D 5286.
    l. Percent of organic matter by weight shall be determined by ASTM D 2974 Method C, loss on ignition at 440ºC.
    m. Saturated hydraulic conductivity shall be determined by ASTM F1815.
    n. Analysis for nutrient levels in parts per million or pound per acre including Nitrate Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Iron, Manganese, Zinc, Copper, Boron and Sodium as Exchangeable Sodium Percentage (ESP) per NCR221.
    o. Soluble salts shall be determined by electrical conductivity of a 1:2 soil/water slurry reported in millimhos per cm.
    p. Cation Exchange Capacity (CEC) per NCR221 using the ammonium acetate method.
    q. Soil analysis reports shall also show recommendations for soil additives, including organic and inorganic soil amendments, necessary to accomplish mix objectives noted.
4. Compost Component Testing Submittals
    a. Report (s) of analyses from producers of composted organic materials are required. The compost shall be analyzed using the USCC STA test methods and reporting format, unless otherwise noted. Submit USCC STA Compost Technical Data Sheet for the delivered compost and dated within 9 months of delivery.
        1) Contact the testing laboratory to review testing and sampling requirements before sending samples.

b. Composted organic amendments shall be sampled according to the Michigan Dept. of Environmental Quality, State Law / Legislation Code: Part 115, Solid Wastes Management, 1994 PA 451.

c. Maintain clear and concise records of testing and sampling procedures.

F. Testing Agencies: The following firms are acceptable testing agencies for the various components.

1. Soils and mixes shall be determined by an A2LA Accredited Lab, such as Turf Diagnostics and Design, 613 E. 1st Street, Linwood, KS, 66052, tel. 855-769-4231, www.turfdiag.com or other qualified soil physical testing laboratory approved by the Landscape Architect.

a. Certified Local Agencies may be used pending approval by Landscape Architect.

2. Although the report(s) may contain the laboratory's comments or recommendations to the Landscape Architect regarding amendment requirements or procedures, the report shall not be interpreted as prescribing or dictating procedures or indicating quantities of soil materials for the work of this Contract.

3. Changing testing laboratories during the mix development phase or for quality assurance testing must be authorized by the Landscape Architect.

G. Statement(s) of Qualifications: Submit within 45 days of notice to proceed to confirm qualifications of the selected testing agencies.

H. Submit samples of all listed materials to the Landscape Architect for approval:

1. Organic Planting Soil (final mix), 5 lb. packaged.

I. Submit for approval at least two weeks prior to installation a written plan for mixing, transporting, and storing materials.

1.06 QUALITY ASSURANCE

A. The OPS mix is comprised of approved topsoil, additional organic amendment, and possibly other soil amendment materials, as determined by the testing laboratory. Each component of the OPS mix must meet the specification and be verified by testing as specified herein, prior to delivery to the site.

B. Soil System Components of the OPS mix will not be accepted unless they meet all submittal, testing and certification requirements including the testing and certification reports in the format specified herein.

C. Inspections and Testing

1. Soil, compost, and other material testing as well as “Soil System Mix” testing required in this Section or additionally required by the Landscape Architect shall be furnished and paid for by Contractor.

2. The Landscape Architect reserves the right to take and analyze at any time such additional samples of materials as deemed necessary for verification of conformance to specification requirements. The contractor shall furnish samples for this purpose upon request and shall perform testing as requested.

3. Samples of individual components to the OPS mix shall be submitted by the Contractor for testing and analysis to the approved testing laboratory.

a. OPS soil components shall not be used until test reports from the approved testing

laboratory have been received and approved by the Landscape Architect.

4. OPS Mix Components and Soil System Mix samples that do not meet the Specifications will require the Contractor to re-submit additional samples for testing. Costs for re-testing will be the responsibility of the Contractor.

   a. When OPS mix samples do not meet specification, make the needed adjustments to the mix per the test result recommendations. Retest new OPS mix sample and resubmit tests reports indicating amendment changes until approved.

5. Observations and periodic testing will be made by the Owner or its designated representative on materials delivered to the site. OPS mix not meeting the requirements of the Specifications shall be removed or amended by the Contractor at no cost to the project.

D. Qualifications:

1. Testing Laboratory: Experienced person (s) employed by public or private testing laboratory, qualified and capable of performing tests, making soil recommendations, and issuing reports as specified. The Testing Laboratory shall submit a Statement of Qualifications regarding the specified testing. The Testing Laboratory shall be as approved by the Landscape Architect.

2. It shall be the responsibility of the Contractor to see that the specifications are being adhered to. Failure of the Landscape Architect to immediately reject unsatisfactory workmanship or to notify the Contractor of his/her deviation from the specifications shall not relieve the Contractor of his/her responsibility to repair and/or replace unsatisfactory work.

E. Pre-Installation Conferences: Person(s) responsible for soil preparation and mixes of this Section shall attend Pre-Installation Conference(s) to coordinate with work of other sections.

1.07 PROJECT CONDITIONS

A. Investigate the conditions of site and public thoroughfares and roads as to availability, clearances, loads, limits, restrictions, and other limitations affecting transportation to, ingress and egress of this work site. Conform to all governmental regulations regarding the transportation of materials to, from, and at the job site, and secure in advance such permits as may be necessary.

B. Environmental Requirements for Soils, Soil Components and Soil System Mixes:

1. Perform both off-site mixing and on-site soil work only during suitable weather conditions. Do not work or place soil when frozen, excessively wet, or dry, or in otherwise unsatisfactory condition.

2. Soil Mixes shall not be handled or hauled during rain or wet weather or when near or above the point where maximum compaction will occur.

3. When stockpiling is permitted, the Contractor shall install silt fence around the perimeter of the stockpile area and maintain the silt fence until the stockpile is removed. Planting Soil Mixes shall be kept in neat and separate piles from other excavated material.

C. Sequencing and Scheduling: Adjust, relate together and otherwise coordinate work of this Section with other Project work as contained in all other Sections of the Project Specifications.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Packaged Materials: Deliver packaged materials to the location where soils are to be mixed, in unopened bags or containers, each bearing the name, guarantee, and trademark or the producer, material composition, manufacturer's certified analysis, and the weight or the material. Retain packages for the Landscape Architect.

B. Store and handle packaged materials in strict compliance with manufacturer's instructions and recommendations. Protect all materials from weather, damage, and theft.

C. Soil mixes or amendment materials stored on site temporarily in stockpiles prior to placement shall be protected from intrusion of contaminants and erosion. All temporary storage means, and methods shall be approved by the Landscape Architect.

D. After mixing, soil mixes shall be covered with a tarpaulin until time of actual use and protected from contamination, excessive rainfall, excess water entering the site or erosion.

E. Stockpiling

1. On-site and Certified Mixing Facility stockpiles should be restricted to no more than the needs of what can be used in a 72-hr. period. Under no circumstances shall on-site or off-site stored material exceed 500 cubic yards.

2. Stockpiles should be no more than 6 feet in height to prevent anaerobic conditions within the pile. Stockpiled composts should be turned every other week (unless otherwise instructed by the Landscape Architect) to prevent anaerobic conditions excessive water absorption and anaerobic conditions. Storage areas for topsoil, soil components or planting system mixes shall be constructed on well drained land, away from the stream.

PART 2 - PRODUCTS

2.01 GENERAL

A. All Organic Planting Soil components shall fulfill the requirements as specified.

B. Site salvaged topsoil will not be permitted for use as an OPS "Soil System Mix" component.

C. For the purposes of this specification, all OPS mix is mixed off site, tested, approved, and imported from a certified facility.

2.02 SOIL SYSTEM MIX – COMPONENT MATERIALS

A. Soil Component

1. A clean, loamy, friable mineral soil free from heavy or stiff clay lumps (3/4'' max dia.), stones, cinders, concrete, brick, roots, sticks brush, litter, plastics, metals, refuse or other deleterious materials in accordance with ASTM D 5286-92.

2. The soil shall be free of herbicides, petroleum-based materials, manures, or other substances of a hazardous or toxic nature which may inhibit plant growth.

3. The soil shall be free of noxious weeds, seeds or vegetative parts of weedy plants that cannot be selectively controlled in the planting.

4. The soil shall be taken from the A Horizon or B Horizon of a well-drained site and have a USDA soil texture classification of a Sandy Loam or Loamy Sand. The soil shall have the following particle size distribution:

U.S.D.A. Particle Name	Size (mm)	Allowable Limit
Gravel	2.00 – 4,75	Less than 5%
Sand	0.05 – 2.00	70 - 80 %
Silt	0.002 – 0.05	12 - 27 %

Clay	minus 0.002	5 - 15 %

5. Perform the following tests and submit test reports showing the following criteria are met:
   a. The particle size analysis as defined above.
   b. The pH shall be approx. 6.5 to 8.0 (NCR 221)
   c. The soluble salts shall be less than 1.5 mmoh/cm (NCR 221)
   d. The organic matter content shall be 3.0 to 6.0% (ASTM D 2974 Method C)
   e. Certified test results of bulk topsoil stored by certified suppliers must be within the last 12 months from the date of bid opening.
6. Representative samples shall be taken for each 500_cu. yds. of stockpiled soil and submitted to the soil physical testing laboratory for qualification to the specification above.
7. Provide certification from the supplier that the topsoil does not contain any toxic substances harmful to plant growth.

B. Composted Organic Mix Component

1. The organic amendment shall be stable, mature aerobically composted yard debris (green waste) compost. Leaf humus compost, manure composts, biosolids compost, peat, peat-humus, and mushroom compost products are not acceptable.
2. Compost Component Testing submittal results, per the Quality Assurance requirements shall meet the following characteristics:
   a. The compost shall be a homogeneous material essentially free of soil clods, lumps, roots, and stones.
   b. The compost shall have a man-made foreign material (hard plastics, metal, glass, etc.) content less than 1.5% as material retained on a U.S. Std.No.5 (4 mm) sieve (TMECC 03.06)
   c. The compost shall be screened such that a minimum of 90% passes a U.S. Std. 3/4” sieve and that no more than 10% passes a U.S. Std. No.10 sieve on a dry weight basis.
   d. The compost shall have a pH of 7.2 to 8.0.
   e. The compost shall have a soluble salts content less than 6.0 millimhos per cm. when determined on a 1:5 compost/water slurry.
   f. The compost shall have an organic matter content of not less than 35% by weight determined by ASTM D2974-87 Method C on material passing a U.S. Std.1/4” sieve.
   g. The compost shall have a carbon to nitrogen (C:N) ratio less than 36:1.
   h. The compost shall have a Solvita® Maturity Index between 6 and 7.
   i. The compost shall have a moisture content of 35% to 65%.
   j. The compost shall have a dry bulk density of 0.17 to 0.35 grams per cubic centimeter (g/cc).
   k. The compost shall be tested for nitrate nitrogen, phosphorus, potassium, calcium, magnesium, iron, manganese, zinc, copper, boron, and sodium using the SME-DTPA extraction method (NCR-221)
   l. The heavy metal content as determined by TMECC 04.06 shall not exceed the following limits:

Element	Concentration Limits (mg/Kg d.w.)
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	50
Nickel	420
Selenium	36
Zinc	2800

m. The compost shall meet all applicable state regulations based on the feedstock type.

n. All compost testing shall be done in conformance with the U.S. Compost Council's publication Test Methods for the Examination of Composting and Compost (TMECC) unless otherwise specified above.

2.03 ORGANIC PLANTING SOIL MIX (OPS):

A. OPS "Soil System" Mix – Non-proprietary Requirements:

1. For bidding, the OPS Mix shall substantially conform to a mix of 4 parts of the approved Soil and 1 part (vol./vol.) of the approved Compost. The actual Soil: Compost ratio will be determined by the soil physical testing laboratory to meet the required performance specification:

   a. Organic Matter Content: 5 to 8 percent

   b. pH Level: 5.5 to 7.8 percent

2. The controlling factor will be the percent (%) organic matter by weight specified for OPS mix. Note that the intended volume ratios of the Organic Amendment (compost) components will be, in large part, determined by the organic matter content of the compost.

B. Uniformly mix components using a mechanical soil blender designed for such purpose.

1. Perform initial tests to confirm compliance with the OPS mixes organic matter content specifications.

2. Follow the OPS System Mix recommendations provided by the soil testing laboratory to achieve the target organic matter content for OPS soil. These test results, when approved, will establish the standard to which all other test results must conform.

3. Provide one sample test from each 500 cu. yds. of manufactured material using the testing as noted above.

C. Adequate quantities of OPS mix shall be provided to attain all design finish grades after compaction at greater than between 80 to 85 percent Proctor. Verify quantities for placement as specified to suit site conditions.

D. Mixing of soil and compost: Add compost as recommended by the testing laboratory to achieve the specified organic matter content for the OPS mix. Other amendments shall not be added to

OPS mix unless approved by the Landscape Architect and additional tests have been conducted to verify type and quantity of amendment.

E. After OPS mix has been placed and where organic levels need to be higher for key areas, add and blend in 3 inches of approved composted organic material for every 2 percent increase to the "in-place" OPS mix.

PART 3 - EXECUTION

3.01 GENERAL

A. Spec Section– Finish Grading applies.

END OF SECTION 881

SECTION 882 - PLANTINGS

1.0 GENERAL

A. This section includes all labor, tools, machinery, materials, and processes required for the installation, maintenance, and establishment of trees, plants, and seeding until acceptance by owner.

1.1 METHOD OF MEASUREMENT

Measurement shall be as indicated for each plant species. The cost associated with wrapping, bracing, mulching, staking, fertilizing, and watering shall be included in the unit price bid for each item 661 - planting trees, shrubs, perennials, and vines. Refer to planting schedule for additional information pertaining to each plant species.

1.2 BASIS OF PAYMENT

The accepted planting items will be paid for at the contract price designated for each item included in the general summary. All costs for work in this section are to be included in the price. The costs for planting soil mixes shall be included in ITEM SPECIAL: Tree Planting Soil Mix, Furnished and Placed; and ITEM SPECIAL - Sand-Based Structural Soil, Furnished and Placed.

1.3 SUBMITTALS

A. Product data for fertilizers, organic and mineral mulch, pesticides, herbicides and pre-emergent including product label and manufacturer's application instructions.
B. Product certificates signed by manufacturers certifying that their products comply with specified requirements.
C. Product data for tree stabilization and tree grates.
D. Plant warranty printed on installer's letterhead.
E. Qualification data of installer demonstrating capabilities and experience. Include lists of completed projects with project names and addresses, names and address of designer and owner, and other information specified.
F. Nursery tagging/digging schedules and planting schedule indicating anticipated dates and locations for each type of specified planting. Include required digging schedule to meet installation completion date described in this section.
G. Samples of organic and mineral mulch (1-gallon bags).
H. Maintenance instructions: for recommended procedures to be established by city for maintenance of planting areas during a calendar year. Submit before expiration of required initial maintenance periods.

1.4 QUALITY ASSURANCE

A. Installer shall be a qualified landscape installer whose work has resulted in successful plant establishment similar in scope and complexity to this project.
B. Professional membership: installer shall be a member in good standing of the American Nursery and Landscape Association.
C. Experience required: Minimum of five years' experience in landscape installation. Installer to maintain an experienced full-time supervisor on project site when work is in progress. Installer's

field supervisor shall have certification as a certified landscape technician - exterior, with installation, maintenance, and irrigation specialty areas, designated clt-exterior and as a state licensed, commercial pesticide applicator.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver packaged materials in original unopened containers showing weight, analysis, and name of manufacturer. Protect materials from moisture and deterioration during delivery and while stored at site.
B. Deliver bulk materials to approved storage areas. Do not dump or store bulk materials near structures, utilities, walkways, and pavements, or on existing turf areas or plants. Each delivery of bulk fertilizers, lime, and soil amendments shall contain appropriate certificates.
C. Trees: deliver spring dug trees. If trees must be summer dug, root balls will need to be enlarged per ANSI Z60.1. Special care shall be given to summer dug trees to ensure their survival if planted in the summer.
D. Do not prune before delivery, except as approved by city forester. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery. Contractor shall be responsible for maintaining the stored material off-site in a healthy and vigorous condition until installation. Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately.
E. Deliver plants with waterproof, legible identification labels.
F. Temporary storage: no new plants shall remain in temporary storage over the winter or summer. Plants that are not planted immediately upon delivery shall be protected as follows:

    1. Plants shall remain on the site of the work no longer than 3 days before being planted or placed in storage.
    2. The root balls shall be kept moist, and their solidity carefully preserved. To prevent drying out or freezing, store plants in a compact group with soil, peat moss, sawdust, or other acceptable material placed around and between the balls, so they are completely covered.

G. Do not remove container-grown stock from containers before time of planting.
H. Water root systems of trees and shrubs stored on site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition. Handle balled and burlap stock by the root ball.
I. If any plant material appears to be physically damaged, either through abuse or neglect, accidental or intentional, the contractor shall be responsible for removing the plant(s) and replacing them with materials that meet the specifications.
J. Bulbs: unpack bulbs as soon as they arrive. Check the quality, rejecting any soft or mushy bulbs or any that show signs or rot or mildew. If the bulbs cannot be planted immediately, store them in a cool, dry and dark place. Ensure sufficient air circulation.

1.6 PROJECT CONDITIONS

A. Planting restrictions: plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion. Spring: April 1 to June 1, fall: August 15 to October 15.

B. Weather limitations: proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.
C. Notification: notify field engineer and landscape architect in writing at least seven days prior to installation of plant materials.
D. Verify location and extent of underground utilities. Protect existing utilities, paving, and other facilities from damage caused by plant installation.
E. Determine location of underground utilities and perform work in a manner which will avoid damage. Hand excavates, as required.
F. Excavation: when conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify owner before planting.
G. Coordinate installation of planting materials during normal planting seasons for each type of plant material required.
H. Restrict traffic from planting areas. Erect temporary signs and barriers as required.
I. Provide necessary watering equipment required for plant establishment and maintenance period.
J. Plant installation shall not occur until fine grading has been approved in writing by landscape architect.
K. A complete list of plants, including a schedule of sizes, quantities, and other requirements, is included on the drawing. If discrepancies or omissions occur in the plant materials list, the planting plan shall govern.

1.7 PRE-INSTALLATION CONFERENCE

Conduct at the project site with field engineer and landscape architect.

1.8 SEQUENCING

Install plants only after utilities, pavements, irrigation, and other work affecting the ground surface has been completed.

1.9 WARRANTY

A. Warrant plant materials to remain alive and be in a healthy, vigorous growing condition for a period of one year after date of city acceptance.
B. Defects and causes to warranty replacement include death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by city, abnormal weather conditions unusual for warranty period, or incidents that are beyond contractor's control.
C. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season. Replace planting materials that are more than 25 percent dead or in an unhealthy condition at end of warranty period. A limit of one replacement planting will be required, except for losses or replacements due to failure to comply with requirements.
D. Inspection of the plants will be made by the field engineer, city representative, and landscape architect at appropriate intervals, to be determined at the pre-installation conference.
E. Maintain trees and shrubs by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening, and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings.
F. Apply pesticides as required to keep trees and shrubs free of insects and disease.
G. Maintain trees and shrubs for 1-month maintenance following city acceptance of trees and shrubs work.

H. Maintain groundcover and by watering, weeding, fertilizing, and other operations as required to establish healthy, viable plantings.
I. Maintain groundcover for 1-month maintenance following city acceptance of groundcover work.

2.0 PLANT MATERIAL - GENERAL

A. Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable at no additional charge. Larger plants shall not be cut back to size indicated.
B. All plants provided shall be nursery grown conforming to ANSI Z60.1 under climatic conditions like those in the locality of the project for a minimum of 2 years.
C. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark growth on all edges.
D. Provide "specimen" plants with a special height, shape, or character of growth. Tag specimen trees or shrubs at the source of supply. When specimen plants cannot be purchased locally, provide sufficient photographs of the proposed specimen plants for approval.
E. Provide plants typical of their species or variety; with normal, densely-developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sun scald injuries, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation. All plants shall have a fully developed form without voids and open spaces.

2.1 TREES AND SHRUB MATERIAL

A. Furnish nursery-grown trees and shrubs conforming to ANSI z60.1 American Standard for Nursery Stock, with healthy root systems developed by transplanting or root pruning.
B. Provide plants typical of their species, cultivar, or variety in a healthy, vigorous growing condition with normal, well-shaped, fully developed branching structure free of voids or open spaces in the crown, free of disease, insects, eggs, larvae, and any infestation, and free of defects such as knots, frost crack, sun scald, injuries, abrasions, and disfigurement.
C. Size: provide trees and shrubs of sizes conforming to ansi z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to designer, with a proportionate increase in size of root balls and provided that oversized plants will not be pruned to size indicated.
D. Measurements: measure trees and shrubs according to ansi z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
E. Height of branching shall bear relationship to the size and kind of tree so that the crown of the tree will be in good balance with the trunk as the tree grows. General guideline for branching is one half the height of the tree. Evergreen trees shall be branched to the ground.
F. All trees and shrubs shall be labeled with securely attached, waterproof tag bearing legible designation of botanical and common name and certification. This tag shall remain on the plant through final inspection by the owner and upon approval, removed by the contractor.
G. All trees and shrubs shall be no. 1 grade specimen plants with growth and branching habit typical of the specified condition. No park grade (no. 2 or 3 grade) plants will be accepted.
H. All trees within a species shall have matching form. All plant material shall be of the size and type specified. If substitutions are required, all substitutions must be approved by the landscape architect.

I. Use only burlap and jute twine on b & b stock. No plants will be accepted with plastic burlap or plastic twine.
J. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.
K. Dig balled and burlap-wrapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feed root system necessary for full recovery of the plant. Cracked or mushroomed balls are not acceptable. Root balls shall be no smaller than 11" in diameter for each 1" in caliper specified.
L. Trees with a main trunk forming a "y" shape are unacceptable:

1. Excurrent growth habit, while young, (e.g.: Acer, Celtis, Fraxinus, Liriodendron, Platanus, Quercus, Tilia, etc.) With a single main trunk with one obvious, dominant leader. Trees with a "bayonetted" leader that have the main trunk forming a "Y" shape are unacceptable.
2. Decurrent growth habit, while young: (e.g.: Cornus, Hibiscus, Malus, many Prunus, Syringa, Viburnum, etc.) May have co-dominant leaders but main leaders that form a "Y" shape or possess an acute angle of attachment (with included bark) with the main stem are unacceptable.
3. Trees that are fastigiate or columnar having acute angles of branch attachment (e.g.: Carpinus Betulus "Columnaris", Fagus Sylvatica "Dawyck") must have a structurally sound main scaffold, and trunks that form a "Y" shape are unacceptable.

M. Shrubs and small plants shall meet the requirements for spread and height indicated in the plant list. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.

1. Single stemmed or thin plants will not be accepted.
2. Side branches shall be fully developed, well twigged, balanced, and full to the ground.

N. Plants may be inspected and approved at the place of growth for compliance with specification requirements for quality, size, and variety.

1. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work.
2. Inspection of plants by the city representative and landscape architect before digging shall be an option.

2.2 GROUNDCOVERS AND HERBACEOUS PLANTS

Furnish ground covers and herbaceous plants established and well rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ansi z60.1 for the pot size indicated and per plant list. Bottom of pots shall be opened or 'pinched' prior to installation.

2.3 PRODUCTS

A. Commercial fertilizer: commercial-grade complete fertilizer of neutral character, consisting of fast-and slow-release nitrogen, 50 percent derived from natural organic sources of urea-form, phosphorous, and potassium.

1. Agriform 21gpt planting tablets, 21-gram weight, 20-10-5 by analysis, 2-year formula. A.m. leonard, inc., 1-800-433-0633.

B. Slow-release fertilizer: granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the composition recommended to remedy deficiencies found in soil tests.

C. Organic mulch:

1. Mulch shall be a finely shredded double processed hardwood mulch of uniform texture and size and shall be a slow decomposing all organic material. It shall not contain an excessive amount of acid that may adversely affect plant growth. Shredded mulch shall be aged to be uniformly dark brown in color. Mulch application shall be raked smooth, pre-emergent herbicide applied, and then mulched to a depth of 3", and then thoroughly watered.
2. Shredded hardwood shall be aged (stockpiled) at least six months prior to placement around plants and shall be free of all ash species material. Mulch shall be as noted on details and placed to a 3" depth unless noted otherwise.

D. Mineral mulch: mineral mulch for tree grate installations: hard, durable stone, washed free of loam, sand, clay, and other foreign substances, of following type, size range, and color:

1. Type: pea gravel
2. Size range: 3/8 inch.
3. Color: charcoal gray

E. Tree stabilization:

1. Above grade stabilization: 2-inch x 2-inch hardwood stakes with arborties.

F. Pesticides: registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

G. Pre-emergent herbicide (selective and non-selective): effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer. Post-emergent herbicide (selective and non-selective): effective for controlling weed growth that has already germinated.

H. Antidesiccant: water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's instructions.

I. Tree pit sumps: #57 washed, uncrushed drainage aggregate.

J. Water: potable and from a clean drinking water source.

3.0 SCHEDULING

A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Spring Planting: March 1 to June 1.
2. Fall Planting: September 1 to Nov. 15.

B. No planting shall be done on frozen ground or when the temperature is 32 Degrees Fahrenheit or lower.

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable, and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.
C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by owner and replace with new planting soil.
D. Begin plant installation only after finished grading has been approved in writing by owner and landscape architect. Examine planting areas to verify they are ready to receive work under this section. Start of installation constitutes acceptance of work by other trades.
E. Begin plant installation only after all submittals for soil testing, analysis, and required amendments have been identified, reviewed, and accepted in writing by owner and landscape architect.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

3.3 FINISH GRADING

Specified under planting soils furnished and placed.

3.4 LAYOUT OF PLANT MATERIAL

A. Lay out individual tree locations and areas for multiple plantings. Stake locations, outline areas, and secure owner acceptance before the start of planting work. Adjust as required. Excavate to dimensions shown on drawings. Spread soils per plan as described on landscape soils plan sheets and associated details.
B. The locations of the proposed trees and shrubs are approximate and may be re-arranged at the direction of the landscape architect when obstructions are encountered.

3.5 PLANTING

A. Where trees and shrubs are shown on the plans, the individual plant pits shall be dug on centers per the spacing noted on the landscape plans.
B. Plant pits shall be excavated as shown on the drawings. Where obstructions are encountered allow for a minimum of 12" (inches) of backfill mixture around the sides of the balls. The bottom of the hole shall be dug no deeper than the root ball to be planted.
C. Remove all rock or other obstructions encountered in excavation to a depth of not less than 3' and no less than 6" below bottom of ball or roots.
D. If an auger is used in digging plant pits and polished (shiny) sides occur in clay or heavy soil, the use of such an auger shall be discontinued and the holes shall be dug with a backhoe or another approved method.
E. Test drain beds and pits by filling with water twice in succession. Conditions permitting retention of water for more than 24 hours shall be brought to the attention of the engineer.
F. Root prune container grown plants before planting. Cut sides with 3 to 5 vertical slashes and make 1 to 2 cuts at bottom of container formed roots.
G. Set balled and burlap stock plumb and in center of pit or trench with first root / root collar to grades as indicated. Place tree stock on setting layer of compacted planting soil.
H. Set plant material in the pit to proper grade and alignment as it held before. Set plants upright, plumb and faced to give the best appearance or relationship to each other or adjacent structure. Set plant material no more than 1"above the finish grade.
I. Do not use planting stock if ball is cracked or broken before or during planting operation.
J. After balled and burlap trees are set, place soil mix around bases of balls and fill all voids. Use 2 fertilizer tablets for each tree of 2 1/2" caliper or less, use 3 tablets for trees of 3" caliper or greater. Thoroughly compact and water planting soil mixture around balls. No filling will be permitted around trunks or above stems. Backfill the pit with planting mixture. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each pit to retain water. To compensate for shrinkage, fix finished grade of planting soil mixture before watering at an elevation higher than desired finished grade.
K. Remove all burlap, ropes, and wires from the top 1/3 of balls. All plasticized burlap, containers and twine must be removed and disposed of off-site. The top section of wire baskets shall be bent backward into the plant pit or cut away so that no metal protrudes above grade. All nursery marking ribbon and liner tags shall be removed. However, tree species/cultivar tags shall not be removed by anyone other than the city representative.
L. Install stabilization and bracing according to planting details.
M. Set container-grown stock plumb and in center of plant pit or trench with first root / root collar to grades as indicated. Carefully remove containers so as not to damage root balls. Place stock on setting layer of compacted planting soil.
N. The groundcover planting holes shall be dug through the mulch. Before planting, biodegradable pots shall be split, and non-biodegradable pots shall be removed. Root systems of all potted plants shall be split or crumbled. The groundcover plants shall be planted such that the roots of the plant are surrounded by soil below the mulch. Potted plants shall be set so that the top of the pot is even with the existing grade. Spacing to the plants shall be at an equal distance apart as specified on the plans. Water the entire groundcover bed.
O. Prune according to ANSI a300 standard, limit to broken damaged, or diseased branches. Do not cut tree leaders. Prune shrubs to retain natural character. Shrub sizes indicated are size after pruning.

3.6 ESTABLISHMENT AND MAINTENANCE

A. Provide full maintenance by skilled employees of landscape installer.
B. Maintenance shall begin immediately after each plant is planted and continue until acceptance in writing by owner and landscape architect.
C. Plants shall be watered, mulched, and pruned, weed growth controlled and otherwise maintained as needed. Settled plants shall be raised and realigned and tree stabilization tightened and repaired.
D. Apply treatments as required to keep plants free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
E. Install and maintain temporary piping, hoses, and watering equipment to convey water from sources. Lay out temporary watering system to avoid walking over muddy or newly planted areas. Water plants at rate required to maintain health and vigor unless rainfall precipitation is adequate.
F. Watering: The contractor is required to furnish, deliver, apply, measure, and schedule a sufficient amount of water necessary to keep each plant alive throughout the one-year warranty period. Thoroughly water all plant material at the time of planting regardless of soil moisture content. Continue to water throughout the warranty period.
G. After acceptance: The owner will begin maintenance upon project acceptance. It shall be the responsibility of the owner to weed, mulch, and prune as necessary for the continuous vigor of the plants.
H. The contractor shall warranty all plants to be in satisfactory growing condition and to live for a period of one year from completion of project. All plants installed prior to December 31st shall be guaranteed to break into growth (not just bud break), the following spring. Plants will be replaced once during the guarantee period.
I. Replant as required according to the specifications of the original material. Replacement plants are subject to a new period of establishment.

3.7 CLEANING AND PROTECTION

Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, soil, debris, and equipment. Repair any damage.

END OF SECTION 882

SECTION 884 – SAND-BASED STRUCTURAL SOIL

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. The Specified Soil Mix in this section shall be manufactured off-site and hereafter be referred to as SBSS (Sand Based Structural Soil).

B. This Section applies only to the manufacturing and delivery of the planting soil mix to the site. Refer to Section 32 20 19 – Finish Grading for subgrade preparation, placement, and final grading.

1.02 SUMMARY

A. Section Includes:

1. All labor, materials, equipment, and testing requirements necessary to complete soil component selection, soil preparation, and mixing as shown on the drawings and specified herein, including but not necessarily limited to the following:

   a. Construct the specified Soil Mix profile using the specified materials and techniques as contained herein, on the drawings.

      1) Imported or 'Off the shelf' products from authorized soil manufacturing facilities or suppliers.

2. Test, furnish, and deliver specified soil materials, and other soil amendments specified or required by Testing Analysis results for use in the Soil Systems.

1.03 REFERENCES AND STANDARDS

A. The following references are used herein and shall mean:

1. ASTM: American Society of Testing Materials
2. NCR221: Recommended Soil Testing Procedures for the North Central Region
3. SSSA: Soil Science of America, Methods of Soil Analysis, Part 1 & Part 3
4. TMECC: Test Methods for the Examination of Composting and Compost
5. USDA: United States Department of Agriculture
6. USEPA: United States Environmental Protection Agency

1.04 DEFINITIONS

A. Compost: An organic material that has been aerobically composted and stabilized from feedstocks such a green waste (yard debris), biosolids or other suitable organic materials.

B. Debris or Deleterious Materials: Elements including, but not limited to, concrete, concrete masonry, wood, excavated rock and rock fragments, rubble, overburden soils, abandoned utility structures, trash, refuse, and litter.

C. Finish Grade: Elevation of finished surface of a Soil System after specified compaction and natural settling.

D. Sand: A naturally occurring mineral that has been processed to remove coarse gravel, silt and clay and sized to meet the specifications.

E. Soil: A mineral soil from the A Horizon or B Horizon of a well-drained site and having a USDA soil texture classification of a Clay Loam - Loam and an organic matter content of not greater than 3% by weight as specified below.

F. Soil System: Exclusive to this technical spec section, a profile consisting of the native topsoil blended with an approved sand material.

G. Subgrade: Surface or elevation of subsoil remaining after completing excavation or backfill of soils or other materials immediately beneath transition mix or other Soil System.

H. Transition Layer: The specified soil mix (in this case = SBSS) is homogeneously blended into the existing native soil substrate to create a conversion layer between the native and specified soil mix (SBSS). Transitions mixes and depths vary pending specified soil mix and plantings. Refer to drawings for depths.

1.05 SUBMITTALS

A. Refer to and comply with specifications for submittal procedures and criteria.

B. Product Data: Submit technical descriptive data for each manufactured or packaged product of this Section. Include manufacturer's product testing and analysis and installation instructions for manufactured or processed items and materials.

1. Locations: Submit locations of material sources. Submit location of mixing site(s).

C. Soil System Components and Soil Mix Suppliers

1. Landscape Architect shall have the right to reject any soil supplier.
2. Soil mix suppliers shall have a minimum of 5-years of experience at supplying custom planting mixes.
3. Submit supplier name, address, email, telephone, and fax numbers and contact name.
4. Submit certification that accepted supplier can provide enough materials and mixes for the entire project and within the limitations of the Project Schedule.

D. Certificates: Submit certified analysis for each chemical soil amendment and fertilizer material specified (specimen label) and as used (product label). Including guaranteed analysis and weight for packaged materials.

E. Soil System Testing Submittals: Engage an independent testing agency to qualify SBSS components and specified soil mixes. The Contractor shall submit representative samples of all component materials which are intended to be used to make mixes and all final mixes to an agricultural soil testing laboratory acceptable to the Landscape Architect.

1. All tests shall be performed in accordance with the current methods provided by ASTM, SSSA or USEPA, unless otherwise noted. All reports prepared by the testing laboratory shall be sent to the Landscape Architect for approval. SBSS Base Mix and SBSS Planting Mix brought to the site must be approved before delivery.
2. After reviewing the Testing Agency report and as directed by the Landscape Architect, deficiencies in the sand, organic materials, mix components or final soil mix are to be corrected by the Contractor.
3. Sand and Soil Component Test reports shall include the following:

a. Date issued.

b. Project Title and names of Contractor and supplier.

c. Testing laboratory name, address and telephone number, and name(s), as applicable, of each field inspector or laboratory contact.

d. Date, place, and time of sampling or test, with record of temperature and weather conditions.

e. Location of material source.

f. Type of test.

g. Results of tests including identification of deviations from acceptable ranges.

h. Soil pH and Buffer pH Test.

i. Analysis for levels of heavy metals to include arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc. Test results shall be cited in milligrams per kilogram dry weight with comparisons to USEPA 40 CFR Table 3 of 503.13 Pollutant Concentrations.

j. Particle size analysis shall be performed and compared to the USDA Soil Classification System per ASTM D422 (hydrometer test). The USDA sand and gravel classifications shall be determined on material retained on the #270 sieve following a wet washing procedure.

k. Deleterious materials shall be determined by ASTM D 5286.

l. Percent of organic matter by weight shall be determined by ASTM D 2974 Method C, loss on ignition at 440° C.

m. Saturated hydraulic conductivity shall be determined by ASTM F1815.

n. Analysis for nutrient levels in parts per million or pound per acre including Nitrate Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Iron, Manganese, Zinc, Copper, Boron and Sodium as Exchangeable Sodium Percentage (ESP) per NCR221.

o. Soluble salts shall be determined by electrical conductivity of a 1:2 soil/water slurry reported in millimhos per cm.

p. Cation Exchange Capacity (CEC) per NCR221 using the ammonium acetate method.

q. Soil analysis reports shall also show recommendations for soil additives, including organic and inorganic soil amendments, necessary to accomplish mix objectives noted.

F. Testing Agencies: The following firms are acceptable testing agencies for the various components.

1. SBSS physical analysis on Sands, Soils and mixes shall be determined by an A2LA Accredited Lab, such as Turf Diagnostics and Design, 613 E. 1st Street, Linwood, KS, 66052, tel. 855-769-4231, www.turfdiag.com or other qualified soil physical testing laboratory approved by the Owner’s Representative.

   a. Certified Local Agencies may be used pending approval by Owner’s Representative.

2. Although the report(s) may contain the laboratory's comments or recommendations to the Owner’s Representative regarding amendment requirements or procedures, the report shall not be interpreted as prescribing or dictating procedures or indicating quantities of soil materials for the work of this Contract.

3. Changing testing laboratories during the mix development phase or for quality assurance testing must be authorized by the Landscape Architect.

G. Statement(s) of Qualifications: Submit within 45 days of notice to proceed to confirm qualifications of the selected testing agencies.

H. Submit samples of all listed materials to the Landscape Architect for approval:

1. Sand, each source, 2-4 lbs. packaged.
2. Topsoil, each source, 2-4 lbs. packaged.
3. SBSS Mix, as specified, 5 lbs. packaged.

I. Submit for approval at least two weeks prior to installation a written plan for mixing, transporting, storing, placing, and settling installed materials.

1.06 QUALITY ASSURANCE

A. Mix component (s) will not be accepted unless they meet all submittal, testing and certification requirements including the testing and certification reports in the format specified herein.

B. Inspections and Testing

1. Sands, soils, and other materials testing, as well as Soil System Mix testing required in this Section or additionally required by the Landscape Architect shall be furnished and paid for by Contractor.
2. The Landscape Architect reserves the right to take and analyze at any time such additional samples of materials as deemed necessary for verification of conformance to specification requirements. The contractor shall furnish samples for this purpose upon request and shall perform testing as requested.
3. Samples of all individual Soil System Components shall be submitted by the Contractor for testing and analysis to the approved testing laboratory.
   a. Soil System Components for the SBSS Mix shall not be used until test reports from the approved testing laboratory have been received and approved by the Landscape Architect.
   b. Soil System Components or Samples that do not meet the Specifications will require the Contractor to re-submit additional samples for testing. Costs for re-testing will be the responsibility of the Contractor.
   c. When SBSS System Mixes do not meet specification, make the needed adjustments to the mix, and retest the soil mix per the test results recommendations. Retest new Soil System Mix sample and resubmit tests reports indicating amendment changes until mix meets specification.
4. Observations and periodic testing will be made by the Owner or its designated representative on materials delivered to the site. Any Soil System Mixes not meeting the requirements of the Specifications shall be removed by the Contractor at no cost to the project.
5. As necessary, make all mix amendments to achieve the required specifications and resubmit tests reports indicating amendment changes until approved.

C. Qualifications:

1. Testing Laboratory: Experienced person or persons employed by public or private testing laboratory, qualified and capable of performing tests, making soil recommendations, and

issuing reports as specified. The Testing Laboratory shall submit a Statement of Qualifications regarding the specified testing. The Testing Laboratory shall be as approved by the Landscape Architect.

2. It shall be the responsibility of the Contractor to see that the specifications are being adhered to. Failure of the Landscape Architect to immediately reject unsatisfactory workmanship or to notify the Contractor of his/her deviation from the specifications shall not relieve the Contractor of his/her responsibility to repair and/or replace unsatisfactory work.

D. Pre-Installation Conferences: Person(s) responsible for soil preparation and mixes of this Section shall attend Pre-Installation Conference(s) to coordinate with work of other sections.

1.07 PROJECT CONDITIONS

A. Investigate the conditions of site and public thoroughfares and roads as to availability, clearances, loads, limits, restrictions, and other limitations affecting transportation to, ingress and egress of this work site. Conform to all governmental regulations regarding the transportation of materials to, from, and at the job site, and secure in advance such permits as may be necessary.

B. Environmental Requirements for Soils, Soil System Components and Soil System Mixes:

1. Perform off-site mixing only during suitable weather conditions. Do not work soil when frozen, excessively wet, or dry, or in otherwise unsatisfactory condition.

2. SBSS mixes shall not be handled or hauled during rain or wet weather or when near or above the point where maximum compaction will occur.

3. When stockpiling is permitted, the Contractor shall install silt fence around the perimeter of the stockpile area and maintain the silt fence until the stockpile is removed. SBSS mix shall be kept in neat and separate piles from other excavated material.

C. Sequencing and Scheduling: Adjust, relate together and otherwise coordinate work of this Section with other Project work as contained in all other Sections of the Project Specifications.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Packaged Materials: Deliver packaged materials to the location where soils are to be mixed, in unopened bags or containers, each bearing the name, guarantee, and trademark or the producer, material composition, manufacturer's certified analysis, and the weight or the material. Retain packages for the Landscape Architect.

B. Store and handle packaged materials in strict compliance with manufacturer's instructions and recommendations. Protect all materials from weather, damage, and theft.

C. SBSS mixes or amendment materials stored on site temporarily in stockpiles prior to placement shall be protected from intrusion of contaminants and erosion. All temporary storage means, and methods shall be approved by the Landscape Architect.

D. After mixing, SBSS shall be covered with a tarpaulin until time of actual use and protected from contamination, excessive rainfall, excess water entering the site or erosion.

E. Stockpiling:

1. On-site and Certified Mixing Facility stockpiles should be restricted to no more than the needs of what can be used in a 72-hr. period. Under no circumstances shall on-site or off-site stored material exceed 500 cubic yards.

2. Stockpiles should be no more than 6 feet in height to prevent anaerobic conditions within the pile. Stockpiled composts should be turned every other week (unless otherwise instructed by the Landscape Architect) to prevent anaerobic conditions excessive water absorption and anaerobic conditions. Storage areas for topsoil shall be constructed on well drained land, away from the stream.

PART 2 - PRODUCTS

2.01 GENERAL

A. Subgrade soils may be site salvaged and used only as subgrade material.

B. Soil component used for SBSS System Mix must be off-site borrow, (no exceptions).

C. All mix components shall fulfill the requirements as specified.

D. Samples of individual components of the Soil System Mix shall be submitted by the Contractor for testing and analysis to the approved testing laboratory.

E. No component for the Soil System Mix shall be used until test reports from the approved testing laboratory have been received and approved by the Landscape Architect.

F. Make all mix amendments to achieve the required specifications and resubmit test reports indicating amendment changes until approved.

G. Verify testing of on-site sub-soils for suitability of placement and compaction is per specifications and sub-surface drainage is adequate.

H. All testing requirements shown below must be adhered to and meet specifications.

2.02 SOIL MIX - COMPONENT MATERIALS

A. Sand Component

1. The sand shall be a clean, sharp, natural silica sand that has been suitably washed and classified (sieved). Suitable sands may be referred to in commerce as a uniform, ASTM-33 concrete sand (preferred) or a coarse mason's sand. The selected sand must meet the following U.S.D.A. particle size distribution as well as the other gradation characteristics listed in Part 3 when tested in accordance with the ASTM D-422 using U.S.D.A. particle size classifications.

2. The allowable particle size distribution is as follows:

U.S.D.A. Particle	Percent Class Size (mm)	Retained
Gravel	> 3.34	0 - 3
Fine Gravel	2.00 - 3.34	0 - 10
		Not more than 12% combined Gravel + Fine Gravel
Very Coarse Sand	1.00 - 2.00	10 - 25
Coarse Sand	0.50 - 1.00	20 - 40
Medium Sand	0.25 - 0.50	20 -40
Fine Sand	0.10 - 0.25	0 - 10
Very Fine Sand	0.05 - 0.10	0 - 10
Silt + Clay	> 0.05	0 - 10

(Combined Silt+Clay)

3. Other Gradation Characteristics must fall within the limits specified below:
   a. Fineness Modulus (FM) - 2.5 to 3.2
   b. Coefficient of Uniformity - 2.5 to 3.5 preferred (> 4.1 acceptable)
4. The sand shall meet the following specifications. Perform the following tests and submit test reports showing the following criteria are met:
   a. The particle size analysis/distribution as defined above.
   b. The pH shall be 5.5 to 8.0.
   c. The soluble salts shall be less than 0.5 mmoh/cm (NCR 221).
   d. The organic matter content shall be less than 1.0% (ASTM D 2974 Method C).
   e. The material drainage rate shall be greater than 20 inches per hour and the total porosity shall be greater than 40 percent when compacted and tested at 85 percent Proctor.
5. Provide certification from the supplier that the sand does not contain any toxic substances harmful to plant growth.

B. Soil Component

1. Off-site (borrow) soils meeting the specifications below are to be used as the soil component for the SBSS Mix. The source or location of the soil used shall be communicated to the Owner's Representative.
2. Soils shall be clean, loamy, friable mineral soil essentially free from heavy or stiff clay lumps (3/4" max dia.). Once qualified for SBSS use, soil shall be processed and screened to meet this requirement.
3. Soils shall be essentially free of stones, cinders, concrete, brick, roots, sticks brush, litter, plastics, metals, refuse or other deleterious materials in accordance with ASTM D 5286-92. The soil shall be free of herbicides, petroleum-based materials, manures, or other substances of a hazardous or toxic nature which may inhibit plant growth.
4. The soil shall be free of noxious weeds, seeds or vegetative parts of weedy plants that cannot be selectively controlled in the planting.
5. The soil shall be taken from the A Horizon or B Horizon of a well-drained site and have a USDA soil texture classification of a Sandy Loam or Loamy Sand. The soil shall have the following particle size distribution:

U.S.D.A. Particle Name	Size (mm)	Allowable Limit
Gravel	2.00 – 4,75	Less than 5%
Sand	0.05 – 2.00	70 - 80 %
Silt	0.002 – 0.05	12 - 27 %
Clay	minus 0.002	5 - 15 %

6. Perform the following tests and submit test reports showing the following criteria are met:
   a. The particle size analysis as defined above.
   b. The pH shall be approx. 6.5 to 8.0 (NCR 221).

c. The soluble salts shall be less than 1.5 mmoh/cm (NCR 221).

d. The organic matter content shall be 3.0 to 6.0 percent (ASTM D 2974 Method C).

e. Certified test results of bulk soils stored by certified suppliers must be within the last 12 months from the date of bid opening.

7. Representative samples shall be taken for each 500 cu. yds. of stockpiled soil and submitted to the soil physical testing laboratory for qualification to the specification above.

8. Provide certification from the supplier that the soil does not contain any toxic substances harmful to plant growth.

2.03 SAND BASED STRUCTURAL SOIL MIX (SBSS)

A. Adequate quantities of SBSS Soil Mix shall be provided to attain all design finish grades after compaction at greater than 95 percent Proctor (ASTM D698-12). Verify quantities for placement as specified to suit site conditions.

B. For bidding, the SBSS Mix shall substantially conform to a mix of 4 parts approved Sand Component and 1 part (vol./vol.) approved Soil Component. The actual Sand to Soil ratio will be determined by the soils physical testing laboratory meeting the required performance specification shown below.

C. At least six weeks prior to mixing at a certified mixing facility, submit to the physical soil testing laboratory a 4-gallon volume (minimum) of the approved Sand and a 4-gallon volume (minimum) of the approved Soil.

D. Using the approved sand and the approved soil, instruct the Soil Testing Laboratory to provide a SBSS Mix design such that the mix contains 75 to 85 percent Sand Component, with 15 to 25 percent Soil Component (Silt + Clay). The Organic matter content derived only from the organic matter contributed from the soil component shall be less than 3 percent.

E. Manufacture 10 to 20 cu. yds. of SBSS Soil Mix using the Sand to Soil ratio specified by the laboratory using a mechanical soil blender designed for such purpose. Submit a representative sample, of not less than 5 pounds, to the soil physical testing laboratory for comparison to the test mix prepared by the soil physical testing laboratory.

F. If the manufactured SBSS Mix results do not substantially match the laboratory test mix, manufacture another 20 to 30 cu. yds. following the recommendations provided by the soil testing laboratory. Repeat as necessary until the test results substantially match.

1. The final test results and criteria, when approved by the Landscape Architect, shall establish the standard to which all subsequent SBSS Mix tests must conform.

G. The SBSS Mix shall have one sample tested for particle size distribution only from each 500 cu. yds. of manufactured material prepared.

2.04 FERTILIZERS AND OTHER SOIL AMENDMENT MATERIALS

A. Fertilizers and other soil amendment materials will only be used based on results of the approved final mix soil analysis and the recommendations of a qualified landscape Agronomist.

1. All fertilizers used shall be labeled showing the brand name, minimum guaranteed analysis, nutrients derived from statement, package weight and manufacturer's name and address.

2. Limestone: Ground Agricultural Limestone with a minimum of 88 percent of calcium and magnesium carbonates. Ground limestone material shall have total 100 percent passing the

10-mesh sieve, minimum of 90 percent passing the 20-mesh sieve and a minimum of 60 percent passing the 100-mesh sieve as packaged or prior to pelletizing.

3. Sulfur: Granular, Biodegradable with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.

4. Agricultural Gypsum: Finely ground product containing a minimum of 90 percent calcium sulfate.

PART 3 - EXECUTION

3.01 GENERAL

A. Spec Section: Finish Grading applies.

END OF SECTION 884

SECTION 885 – LANDSCAPE STONE

PART 1 - GENERAL

1.01 SUMMARY

A. The work shall consist of furnishing and installing natural landscape stone, such as ledge rock and/or boulders, constructed and in conformance with the details shown on the contract drawings, and/or as directed by the Landscape Architect.

B. Stonework shall consist of the following:

1. Native Michigan Stone "3-6"
2. Decorative Aggregate

1.02 REFERENCES

A. The following is a list of standards which may be referenced in this section:

1. ASTM International (ASTM):
   a. D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft^3 (600 kN-m/m^3)).

1.03 SUBMITTALS

A. Contractor shall provide samples of all specified materials to Landscape Architect for approval.

B. Contractor shall submit certified laboratory test certificates for all items required in this section.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain each type of stone, joint material, and setting material from single source with resources to provide materials and products of consistent quality in appearance and physical properties.

2.02 BOULDERS (NATIVE STONE)

A. Native MI stone and aggregate to be used in the construction retaining grade, lining drainage swales and structures, and various features. Hard, durable stone, washed free of loam, sand, clay, and other foreign substances, of following type, size range, and color.

B. Basis of Design Manufacturer:

Rock Shoppe
6275 Gotfredson Rd
Plymouth, MI 48170
Ph. No.: (734) 455-3923
https://www.rock-shoppe.com/contact-us.html

C. Native Michigan Stone 3”-6”

1. “Rock Shoppe Skippers”

D. Decorative Aggregate:

1. “Rock Shoppe Pea Gravel”

2.03 GEOTEXTILES

A. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Survivability: As follows:
   a. Grab Tensile Strength: 247 lbf; ASTM D 4632.
   b. Sewn Seam Strength: 222 lbf; ASTM D 4632.
   c. Tear Strength: 90 lbf; ASTM D 4533.
   d. Puncture Strength: 90 lbf; ASTM D 4833.
3. Apparent Opening Size: No. 60sieve, maximum; ASTM D 4751.
4. Permittivity: 0.02 per second, minimum; ASTM D 4491.
5. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.
6. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
   a. Mirafi 140N nonwoven drainage fabric manufactured by Mirafi, Inc., Charlotte, NC 28224.

PART 3 - EXECUTION

3.01 GENERAL EXCAVATION AND EMBANKMENT

A. Excavate to the line and grade specified in the contract documents. Minimize over-excavation.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 98 percent.
2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 98 percent.

D. Subbase: Install aggregate subbase to a compacted depth of 8 to 12-inches minimum. Install the subbase in multiple 3 to 4-inch lifts, and compact to a minimum 95% Standard Proctor Density (ASTM D698).

END OF SECTION

SECTION 900
SUPPLEMENTAL SPECIFICATIONS

1.01 SCOPE

A. The Supplemental Specifications apply particularly to this Contract. If there are parts of these Specifications, which differ from other sections of these Specifications, the Supplemental Specifications shall control. The 2020 M.D.O.T. Standard Specifications for Construction shall apply for all work items within this contract, except as modified in this Contract Document.

B. The work covered by this Contract shall consist of those items listed in the proposal. The Contractor shall, for the amount of money earned, based on unit prices stated in the Contract Documents, furnish and provide all labor, tools, equipment and materials, and do all work required in excavating and laying new water main and sewer, removing and replacing existing pavement, installing supplemental systems such as fiber optic, irrigation, electrical and other work related to the project. All of the items of work are to be done in accordance with the plans and Contract Documents of which these Specifications are a part.

1.02 MATERIALS

A. All materials shall be new and of the grades specified, and shall be the best of their respective kinds for the uses intended. The terms "approved" and "or approved equal" mean that the Engineer must be consulted and his approval given before the material in question is purchased or installed in the work. The approval of any material by the Engineer does not mean the acceptance of the material actually furnished if it should be found defective or inadequate for the purpose intended.

B. Special brands or grades of material or devices specified or shown on the drawings are named for the purpose of establishing a standard of quality and character desired. Other materials of equality and adaptability for the purpose for which they are intended may be substituted, but shall have the approval of the Engineer as to the equality and adaptability before being incorporated in the work.

C. The Contractor shall order or arrange for materials well in advance of their expected use in the work, as far as practicable, in order to allow time for inspection, etc., and thus avoid unnecessary delays which may otherwise occur.

D. Unless otherwise specified, all materials shall conform to the latest edition of STANDARD SPECIFICATIONS FOR CONSTRUCTION, adopted by the Michigan Department of Transportation.

1.03 STORM SEWER, VARIOUS SIZES

A. All Storm Sewers shall be constructed of Class IV Reinforced Concrete Pipe (RCP) in the sizes indicated on the plans, unless otherwise shown on the plans.

B. Several catch basins leads are specified on the plans for 10” SDR 26 PVC Sewer.

C. Stormwater detention system piping and appurtenances is specified on the plans for Corrugated Metal Pipe (CMP), Type II Aluminized, 14 Gauge Thickness, Perforated or solid-wall per plans. A detailed shop drawing of the proposed detention system shall be furnished to the Engineer from the Contractor’s pipe manufacturer, and shall include pipe material, finish, gauge thickness, lengths, diameters, inverts, pipe jointing band details, and connection details for all stubs, risers and bends. A detail shall also be provided for concrete collars and finishing details of each riser structure at the sidewalk surface.

D. Contractor shall be responsible for installing gas traps in the first structure upstream of any connection to a combined sewer.

E. All proposed sewers and leads, 6" and up, shall be backfilled in accordance with the standard pipe bedding detail as shown in the plans.

F. All removal of existing storm sewers specified on the plans shall be incidental. Removed sewer pipe shall be hauled offsite immediately upon excavation, or deposited in a water tight dumpster, in accordance with Oakland County Health Department regulations. Removed sewers may not be stockpiled within the right-of-way awaiting final removal.

G. Within the proposed road surface, backfill shall consist of crushed stone to six inches over the top of the pipe, and then compacted sand up to the proposed aggregate road base. All backfill and compaction shall be incidental to the cost of the new sewer installation.

1.04 NEW MANHOLE, VARIOUS SIZES

A. All new manhole structures shall include an EJ 1040CGS, with "City of Birmingham Sewer" noted on it.

B. Adjusting the rim to the proposed elevation noted on the plans is incidental to the installation of a new structure.

1.05 NEW CATCH BASIN OR INLET, VARIOUS SIZES

A. All new catch basins or inlet structures shall include an EJIW 5000Z4 DI / 5000M4 DI Hinged Assembly (in the curb line). All new pre-cast structures shall accommodate proposed pipe sizes and inverts identified on the plans, including underdrains.

B. Adjusting the rim to the proposed elevation noted on the plans is incidental to the installation of a new structure.

1.06 PERFORATED PIPE UNDERDRAIN, 6" & 4"

A. The 6" Underdrain pay item is proposed for those runs of pipe proposed under the street curb line, and includes a wrapped trench as detailed on the Plans. All costs related to the construction of the trench as well as the pipe are included in this pay item, per foot.

B. The 4" Underdrain pay item is proposed for those runs of pipe that drain each individual tree well, as well as specialty items such as the water meter pit and drainage weir. No special trench detail is required for this pay item, but the pipe supplied shall be wrapped in an approved sock material.

1.07 SEWER TAP, VARIOUS SIZES

A. Whenever the Contractor must create a new hole in a sewer structure, it shall be paid for as a SEWER TAP. All taps to existing structures or sewers shall be core drilled. A flexible rubber boot and appropriate clamps shall be used at the joint. The tapping pipe outside of the structure or sewer will be supported by placing 2,500 PSI concrete fill under the pipe from spring line to undisturbed earth. Width of concrete fill support shall be the tapping pipe outside diameter plus twelve (12) inch minimum. Payment for sewer taps shall be based on the unit price bid for SEWER TAP, and the nominal inside diameter of tapping pipe.

1.08 RECONSTRUCT MANHOLE (IF & WHERE NEEDED)

A. Prior to starting work, the City shall inspect all existing manholes, catch basins, inlets, and gate wells to determine their condition, and recommend needed repairs. Reconstruction will be paid for by the vertical foot, and will vary from minor repairs to the chimney to extensive mortar joint and brick repairs throughout. Final cover adjustments to meet the final pavement grade shall be

included in the cost for reconstruction, and shall not be paid for separately under "Adjusting Structure Cover".

B. All structure reconstructs shall be paid according to the pay item "Reconstructing Structure", regardless of the diameter of the structure being reconstructed.

1.09 REMOVE AND REPLACE STRUCTURE COVER

A. As a part of the work of this pay item, the Contractor shall furnish and install the specified manhole covers or inlet covers, along with any adjusting rings necessary to bring the structures to grade. There are also several manholes, catch basins, inlets, and gate well frames and covers that are noted to remain in service. The Engineer and Contractor shall inspect each casting to verify its suitability to continued service. Those castings that, in the opinion of the Engineer, should be replaced shall be removed and replaced under this pay item, with the weight of the new casting being used to determine the value. Any existing frames and castings removed shall be delivered to the City of Birmingham Department of Public Service yard at 851 S. Eton Road, or disposed of by the Contractor as directed by the Engineer at no additional cost to the Owner.

1.10 INVESTIGATE, ADJUST & SHIFT CASTING LCOATION

A. This pay items applies specifically to two existing sewer structures shown on the plans where the existing casting location needs to be shifted to align with proposed streetscape elements such as road curb and gutter or landscape planter curbing:

1. Existing Storm Sewer Catch Basin CB 124a: Requires location into re-constructed curb & gutter, which is approximately within 1-foot of the existing curb and gutter that will be removed.

2. Existing Sanitary Manhole MH 125: Requires relocation into the proposed landscape planter. The current location of the casting is such that it conflicts with the proposed exposed aggregate curbing that will retain a landscaping bed in the proposed streetscape. It is anticipated that the casting will need to shift approximately 2 feet south/southeast from it's current location.

B. Work included in this pay item includes necessary time for Contractor superintendent and/or crew foreman to review the conditions of each existing structure, and determine with the City Inspector the extent of the required shift based on field conditions. It is recommended that the Contractor coordinates with the City to have the proposed locations staked in the field in advance of performing this work. Each structure should be evaluated to determine with the upper portion of the structure is made of pre-cast concrete and can be rotated to help facilitate the proposed location, or if there are alternate means and methods to relocate the castings that are acceptable to the City. Work includes modifying each structure as determined based upon the field evaluation with the City. Work also includes adjusting each casting to the correct vertical elevation as indicated in the plans.

1.11 REMOVAL AND DISPOSAL OF CONTAMINATED MATERIALS, TYPES II & III

A. Line items have been included in the Proposal for Removal and Disposal of Contaminated Material. Based on experience of past excavations near the Old Woodward corridor, there is a possibility of encountering contaminated soils. The purpose of including the line items is to obtain a price for removal and disposal (per ton) in the event that the Contractor encounters these materials during construction. The City will be responsible for testing any suspected contaminated material.

B. The following indicators shall be used by the Owner's onsite representative during excavation to identify materials suspected of being contaminated and requiring disposal in an appropriate licensed landfill:

- Materials other that general construction debris of a color not consistent with the natural soils observed in the area;
- Materials other than general construction debris of a consistency that is not consistent with the natural soils observed in the area;
- Man-made containers, vessels, tanks, or barrels;
- Electric devices;
- Insulation or fibrous material that may contain asbestos;
- Material that emits a chemical or petroleum odor.

C. Based on these observations, materials in question shall be stockpiled separately, inspected, and representative samples will be collected and screened in the field by qualified personnel. Samples to be subjected to further laboratory testing shall be selected based on the results of field screening and observations made by the Owner's onsite representative during excavation.

D. Materials shall be stored on plastic sheeting (or other material depending on nature of contamination) at a predesignated, secure location, and covered with plastic sheeting (or other material depending on nature of contamination) until removed from the site and disposed of.

E. Based on the field screening and laboratory analysis, the Contractor will be advised by the Owner as to the required method of disposal.

F. The unit price bid for Removal and Disposal of Contaminated Material (if and where needed) shall include the cost of interruption to normal construction procedures, temporary stockpiling, stockpile protection, removal and disposal of the existing material, and all related work. Payment will be at the Contract unit price bid per ton as measured at the landfill where the contaminated material is disposed.

G. For the purposes of bidding, Type II disposal will be for materials that must be hauled to a typical household sanitary landfill. Type III disposal will be for materials that must be taken to a landfill that accepts construction debris.

1.12 REMOVE EXISTING SEWERS, VARIOUS SIZES

A. The Contractor shall excavate, remove, and dispose of the entire sewer pipe, and backfill the excavation with compacted sand.

1.13 ABANDON EXISTING SEWERS, VARIOUS SIZES

A. Sections of existing sewers shall be abandoned as shown on the plans and called for in the proposal. This pay item shall include pipe bulkheads as needed, and installing flowable fill in the pipe. The Contractor shall submit to the Engineer the mix design to be used for the flowable fill. ALL bulkheads required to complete the abandonment of the specified sewers shall be included in the cost of this work.

1.14 BULKHEAD STRUCTURE, VARIOUS SIZES

A. The pay item BULKHEAD STRUCTURE, VARIOUS SIZES, included in this contract is intended to provide a water-tight repair at existing drainage structures to remain where an existing sewer pipe will be removed from the structure as identified in the plans.

1.15 BULKHEAD PIPE, VARIOUS SIZES

A. Due to the length of history that has occurred in this area, it is highly likely that unexpected and unknown pipelines will be found within various excavations. When excavating, if other unknown pipelines are encountered, and it is determined that the pipeline is no longer active (as confirmed by the Engineer), the Contractor shall proceed to bulkhead the pipeline to make a permanent closure of it. The Contractor shall be paid for each bulkhead constructed, as per the bid unit prices. This pay item shall apply only to existing pipes with a dimeter of 8" or larger. All bulkheads to existing pipes less than 8" in diameter shall be considered incidental.

B. In the event that the City elects to abandon a section of existing sewer in place using flowable fill, any associated bulkheads required at existing pipe openings to contain the flowable fill shall be considered incidental to the cost for the sewer abandonment.

1.16 CCTV SEWER ACCEPTANCE INSPECTION

A. Contractor shall provide a video inspection record of all sewer mains and service leads installed for the project in accordance with the written specification section 605. The video inspection shall occur after sewer trenches have been backfilled and compacted to final elevation.

1.17 NEW WATER SERVICE, TRENCH A, VARIOUS SIZES

A. The service shall be installed as depicted on the plans. All fittings related to connecting each building to the new main shall be Mueller brand.

B. Assuming all underground work is completed early in the project, while the main pedestrian sidewalks are still in service, the Contractor shall backfill and provide a temporary walkable surface to accommodate pedestrian traffic in a safe manner until the City sidewalks are removed in their entirety. Installation of a temporary cold patch surface in the sidewalk or other pedestrian areas shall be required before opening the sidewalk again to the public, to be paid for separately.

1.18 NEW WATER MAIN CONNECTIONS TO EXISTING WATER MAIN (VARIOUS SIZES)

A. The Contractor shall notify the City at least forty-eight (48) hours before any scheduled water main shut down to make the proposed water main connections. The Contractor may also be required to assist in notifying the properties that will be affected by the shutdown. The Contactor shall complete all required testing on the new water main prior to making the connections to the existing water system.

B. Oversized fittings may be required for making connections to older existing water mains. Use of oversized fittings on water main connections is incidental to the bid price for water main connections.

1.19 STATION GRADING

A. Refer to Section 702 of these Specifications for more detailed information on this pay item.

B. Proposed grading for the road and sidewalks results in a different overall road profile from the existing road to accommodate ADA requirements and overall grading design for the project. However the old and new roads are at similar average elevations between the right-of-way lines. As a result, it is estimated that **250 cubic yards** of net cut will be required to meet the grades of the new streets, including excavation for pavement, sidewalks, and associated aggregate base layers, but not including excavation and backfill for utility trenches. Imported clean fill may be required to meet the proposed grades in certain locations and shall be included in this pay item, and not paid for separately. Similarly, haul-off of excavated material that cannot be used due to

material properties or is not required to establish proposed grades shall be included in the pay item, and not paid for separately.

C. The work required for excavating at tree wells shall be paid for separately under a different pay item, and is not included in this work.

1.20 SUBGRADE UNDERCUTTING

A. Once the subbase is exposed, it shall be proof rolled as a part of the preparation for new pavement. Proof rolling shall be done with a pneumatic tired roller capable of being loaded with ballast. The roller shall be operated in a systematic manner and uniform speed over the exposed subgrade soils so that all areas of the exposed surface are tested. Maximum vehicle speed during proof rolling shall not exceed five (5) MPH. Proof rolling is incidental to the other work of this project and shall not be paid for separately.

B. Those areas that require additional excavation shall be verified by the Engineer prior to proceeding with additional excavation into the subbase. The additional excavation shall be paid for under the pay item, "Subgrade Undercutting." All work of this nature shall be done in the presence of the Engineer. The areas excavated below the subbase grade shall be backfilled with 21AA Limestone, as a part of the cost of the unit price for "Subgrade Undercutting."

C. Should the excavations become deeper than expected, and should the Engineer specify 1 x 3 stone in place of 21AA limestone, the Contractor shall backfill said areas for the same unit price as bid for the 21AA limestone.

1.21 EXCAVATION FOR TREE WELLS

A. As identified in the Landscape pay items and as detailed on the plans, the Contractor shall remove and replace a specified volume of existing materials at each tree well location, to be backfilled a sand based structural soil. Specifications for the special soils are detailed in the landscape specifications and/or drawings.

B. For each planter with a proposed tree planting, Structural Soil backfill shall be used in accordance with the landscaping plans.

C. The Contractor and Engineer shall meet on site at each tree well location once the area has been staked for all existing utilities, but before excavation for this pay item begins. As shown on the landscape detail sheets, the Contractor will be encouraged to extend the structural backfill area between tree wells, or if possible, extending under the street or adjacent sidewalks. The Contractor shall avoid excavation too close to the face of buildings, so as to avoid closing the pedestrian sidewalks for this activity. The Contractor shall anticipate significant excavation by hand in order to work around other existing shallow utilities, such as gas mains, fiber optic or telecommunications, electric, etc. The Contractor is encouraged to consider the placement of other new systems in the sidewalk area, such as electric, DTE Electric, and irrigation in such a manner to allow these excavations to occur afterward with as little conflict as possible.

1.22 REMOVING CONCRETE SIDEWALK & RAMP (SAWCUTTING INCLUDED)

A. Sections of City sidewalk will be removed and replaced as a part of the project. The portion of the existing sidewalks adjacent to the buildings shall be maintained until the new road has been installed. This provision is to provide a solid walking path for the patrons that need to access their businesses on foot as a result of the work. Once the concrete street pavement is completed, the remaining portions of sidewalks can be removed and replaced according to the schedule described below. Once other pavements are installed, and the Contractor is ready to remove and replace sidewalks adjacent to buildings, only enough quantity of existing sidewalk shall be removed such

that it can be prepared, formed, and installed again within 48 hours or less. It is imperative that sidewalk removal and replacement be conducted in such a manner that discontinuous sidewalk sections shall be kept to a minimum.

B. The Contractor shall notify the City at least seven (7) days ahead of when they plan to remove or close off the all private drive approaches within the sidewalk areas so that the City can notify the property owner.

C. The unit price for removing concrete sidewalks and ramps shall include all costs for the complete removal and disposal of the concrete sections, including any saw cutting required to maintain pedestrian traffic in the manner described on the plans.

D. This pay item also covers the removal of any alley and driveway approaches as shown on the drawings. The Contractor shall sawcut and keep in place that part of the drive approach that acts as the public sidewalk so that the sidewalk remains open and safe until it is time to build new sidewalk in the immediate area. The unit price for removing the concrete drive approach shall include all costs for the complete removal and disposal of the concrete sections, including any saw cutting required.

1.23 REMOVING PAVEMENT FULL DEPTH (CURB & GUTTER INCLUDED)

A. This pay item shall apply to the full depth removal of the pavement and integral curb and gutter over the entire length of the project. The Contractor may at their option remove the asphalt overlay and the concrete separately; however, the payment for this item shall include all removal to the existing base below the pavement.

B. The Contractor shall consider traffic maintenance requirements when removing the street pavements. The traffic control and phasing diagrams on the plans will require that some of the old pavement is left intact during earlier phases of construction in order to maintain local traffic access through the construction area. Saw cutting required to keep the old pavement lanes stable while removing portions required to be removed, shall be incidental to the cost of this item.

C. Due to the close proximity of the adjacent buildings, and the age of some of the adjacent buildings, the Contractor is encouraged to use care when considering methods of pavement destruction and removals.

1.24 CONCRETE PAVEMENT, NONREINFORCED, 9”, INCL. INTEGRAL DETAIL F2 CURB & GUTTER

A. This pay item shall include all concrete pavement with integral curb and gutter, measured by the square yard, where designated on the plan. This pay item will apply to the new main line concrete pavement on the project, as well as parking areas. Saw cutting and sealing of the joints shall be included in the cost per square foot. Hook bolts shall be provided at 40” O.C. when butting up against existing concrete pavement. No separate payment will be provided for this preparatory work. The Contractor shall not open any new concrete to full traffic duty until all joints have been sawed and sealed per these Specifications.

B. Concrete pavement shall be placed in accordance with Section 602.03 of the MI Dept. of Transportation Standard Specifications for Construction. In addition, the Contractor shall use a self-propelled form riding paving machine with auger screws to convey the concrete between the forms. The approved paving machine will have an internal vibrator to consolidate the concrete and a screed with a weight and rigidity to strike off the concrete to the required grade and profile. The proposed paving machine must be identified and approved by the Engineer as a part of the Pre-Qualification process (Section 095 of the Contract).

C. The concrete pavement provided under this pay item, along with all other concrete pay items, shall comply with Section 711 for durability and resistance to alkali-silica reactivity. The Contractor shall be responsible to close the area off entirely as needed to ensure that the new pavement is not driven on by any vehicles for a minimum of seven (7) days.

D. The Contractor shall gap construction of concrete pavements as-needed to conform to the overall project traffic and phasing requirements. No additional compensation shall be provided for required pavement gaps.

E. The Contractor shall plan to pour the integral curb and gutter section as a part of the mainline concrete pour. Separate pours for the concrete curb and gutter section shall not be approved, except where noted on the plans.

F. All saw cutting and joint sealing, as detailed in Section 710 of these Specifications, shall be incidental to this pay item.

1.25 AGGREGATE BASE, MDOT 21AA LIMESTONE, 8”

A. This pay item shall include all earth excavation and base compaction required to provide a stable surface to install the eight (8) inch stone base, using 21AA limestone, required, as detailed in the proposed pavement cross sections. Installation of the aggregate base shall be paid for by the square yard.

B. Aggregate base placement shall extend a minimum of 12 inches beyond the proposed back of curb for all pavements.

1.26 FURNISH & INSTALL TREE GRATE

A. This pay item includes furnishing the proposed EJIW tree grate (specification per manufacturer cut sheet included as Appendix) and installing within the new concrete sidewalk areas in accordance with manufacturer requirements, including anchoring requirements for the tree grate frame into the new concrete.

1.27 CONCRETE SIDEWALK, 4” SCORING TREATMENT

A. Details relative to jointing, mix designs, caulking, and sealer are provided on the details sheet attached to the plans for this project.

B. The sidewalks shall be sawcut a minimum of 1” deep throughout the project. Caulked expansion joints shall be provided between any buildings and the new pavement, between the scored sidewalk and the exposed aggregate sidewalk, and the exposed aggregate sidewalk and the concrete curb and gutter. Expansion joints shall not be paid for separately.

C. The unit price for sidewalk installation shall include all materials, labor, equipment, and other work necessary for grading, grade preparation, 6” sand base, forming, and pouring the concrete sidewalk, and saw cutting the sidewalk joints per the plans.

D. Note that the Contractor will not be allowed to install sidewalks adjacent the curb until the new street light foundations are in place, and ready for use. If this issue causes a delay outside of the control of the Contractor, the Contractor shall notify the City in writing and document any delay that is caused by DTE Energy or their contractor not installing the street light foundations in a timely manner. Based upon any documented delays, the City will negotiate the amount of time lost as a result of this issue.

1.28 CONCRETE SIDEWALK, 6” SCORING TREATMENT (INCLUDES RAMPS)

A. All concrete sidewalks where identified on the plans shall be a minimum of six (6) inches thick unless otherwise called for on the plans, as well as all sidewalk ramps at intersections. All six (6) inch thick sidewalks on the project shall be paid for under this pay item.

B. The unit price for sidewalk installation shall include all materials, labor, equipment, and other work necessary for grading, grade preparation, 6” sand base, forming, and pouring the concrete sidewalk, and saw cutting the sidewalk joints per the plans.

1.29 CONCRETE SIDEWALK, 8” SCORING TREATMENT (INCLUDES RAMPS)

A. All concrete sidewalks within alley approaches where identified on the plans shall be a minimum of eight (8) inches thick unless otherwise called for on the plans. All eight (8) inch thick sidewalks on the project shall be paid for under this pay item.

B. The unit price for sidewalk installation shall include all materials, labor, equipment, and other work necessary for grading, grade preparation, forming, and pouring the concrete sidewalk, and saw cutting the sidewalk joints per the plans.

C. Base material for eight (8) inch thick sidewalks shall be 8” thick 21AA aggregate base included under a separate pay item.

1.30 CONCRETE SIDEWALK, 4” TO 6”, EXPOSED AGGREGATE SCORING TREATMENT

A. Details relative to jointing, mix designs, caulking, and sealer are provided on the details sheet attached to the plans for this project.

B. The unit price for sidewalk installation shall include all materials, labor, equipment, and other work necessary for grading, grade preparation, 6” sand base, forming, and pouring the concrete sidewalk, and saw cutting the sidewalk joints per the plans.

C. The Contractor shall provide a local example of their work using a similar mix design as specified on the plans, or construct a mockup prior to constructing exposed aggregate sidewalk for the project. The exposed aggregate sidewalk shall be sealed after curing.

D. The Contractor shall gap construction of concrete sidewalks that function as drive approaches to private properties as-needed to conform to the overall project traffic and phasing requirements. No additional compensation shall be provided for required pavement gaps.

1.31 HANDICAP RAMP TRUNCATED DOMES

A. Each sidewalk ramp constructed as a part of this project shall include a detectable warning plate of truncated domes. The Contractor shall supply and install cast iron plates as manufactured by East Jordan, or approved equal. Payment for the handicap ramp truncated domes shall be per square foot of detectable warning surface installed. In general, each ramp shall include a 2 foot by 5 foot detectable warning surface of truncated domes. In cases where there is not enough space for separate ramps, radial plates may be specified on the plans.

1.32 CONCRETE CURB & GUTTER, F2 MODIFIED

A. This pay item pertains to proposed median curb islands in Brown Street, which shall be constructed as curb & gutter section separate from the road pavement.

1.33 20” HGT. PLANTER CURB, EXPOSED AGGREGATE

A. Work includes constructing the proposed 20” tall by 6” wide planter curbs in accordance with the plan detail. The exposed aggregate concrete mixture shall be in accordance with the separate

technical specification. Work also includes construction of mockups per the specification to allow the City to review finishing options. Work also includes constructing curb drops at plan locations to allow for sidewalk surface drainage to enter the planters.

1.34 12" HGT. PLANTER CURB, EXPOSED AGGREGATE

A. Work includes constructing the proposed 12" tall by 6" wide planter curbs in accordance with the plan detail. The exposed aggregate concrete mixture shall be in accordance with the separate technical specification. Work also includes constructing curb drop(s) at plan locations to allow for sidewalk surface drainage to enter the planters. Work also includes installation of dowels to connect to the adjacent concrete sidewalk.

1.35 INTERGAL CURB AT BACK OF WALK FOR PEDESTRIAN PROTECTION

A. This work includes all labor, materials, and equipment to form a variable-height concrete curb integral to the concrete sidewalk per the grading plans and plan detail. The proposed location for this work is on the south side of Brown Street, along a portion of the frontage with Jax Carwash. The intent of the curb is to provide protection for pedestrians using the new sidewalk from accidental vehicles access from the adjacent property, where the current pavement elevation is equal to the proposed back of walk elevation. Note that this pay item may be included as a deduction as part of Alternate #1, which is to install a low ornamental fence in the same location in lieu of the integral curb.

1.36 LOW ORNAMENTAL FENCE

A. This work is included as part of Alternate #1, which also includes a deduction to remove the integral curb at back of walk for pedestrian protection from the scope of work. If Alternate #1 is selected, the Contractor shall provide unit costs for the deduction of the curb, as well as unit costs for the low ornamental fence, which will be installed in lieu of the curb. Details and specifications for the fence are shown on plan sheet L1.5.

1.37 PAVEMENT MARKINGS, POLYUREA

A. The installation of polyurea pavement markings is proposed for all new concrete pavement areas within the project limits. All pavement marking materials and placement specifications shall be in conformance with applicable section of current MDOT specifications.

1.38 RECESSING PAVEMENT MARKINGS

A. Recessing of the new concrete pavements for proposed polyurea pavement markings is proposed for all new concrete pavement areas within the project limits. All work associated with recessing the pavement to accommodate proposed pavement markings shall be in conformance with applicable section of current MDOT specifications.

1.39 ADJUST STRUCTURE COVER

A. All manhole covers that are within the work area that need adjustment, but do not need any repairs below the top six (6) inches beneath the casting shall be paid for under this pay item. If additional work is required below the top six (6) inches beneath the casting, then all of the work, including the adjustment, shall be paid for under the "RECONSTRUCT MANHOLE (IF & WHERE NEEDED)". The repair shall be measured vertically from the top of the existing cover to the ending point of the repair. The adjustment of all new structures shall be included in the price of the new structure, and shall not be paid for under this pay item.

1.40 COLD PATCH

A. This pay item is to be used for installing cold patch temporary pavement repairs at the following locations:

1. To infill removed pedestrian sidewalk areas on the north and south side of Brown Street which will function as pedestrian access routes that need to be maintained throughout the project duration. The Contractor is encouraged to maintain these existing walks as long as possible in areas where pedestrian traffic must be maintained.

2. To infill road pavement that will be removed for the proposed storm sewer outlet connection on Brown Street, near the east side of the Old Woodward intersection, which will function as a primary pedestrian detour access route for the project duration.

B. The Contractor shall install and maintain cold patch over maintenance aggregate (paid under the lump sum pay item) to ensure a smooth walking surface for pedestrians, at an approximate typical thickness of 2 inches.

C. This pay item shall not be used on other areas of the project without explicit direction from the Engineer. The cold patch required on the sidewalks where trenches for sewer and water services are replaced shall be incidental to those pay items.

1.41 MAINTENANCE AGGREGATE

A. The Contractor will be responsible to provide temporary maintenance aggregate at designated places on the project, primarily to allow for vehicular access within the project area. For example, once the pavement has been removed, maintenance aggregate shall be placed as needed to maintain a temporary road for vehicles accessing local businesses, such as the Jax Carwash.

B. The Contractor is encouraged to maintain existing pavement as long as possible in areas where pedestrian traffic must be maintained, to avoid the need to maintain aggregate on a regular basis.

C. The Contractor is encouraged to set a price for this pay item that adequately covers additional material and grading as needed during the time such areas are needed for traffic maintenance.

1.42 CRITICAL PATH TIME SCHEDULE

A. As referenced in the Supplemental Instructions to Bidders, the Contractor shall submit a critical path time schedule using software developed for this purpose clearly demonstrating the order and time expected to undertake the various tasks of this project. The critical path schedule shall be reviewed and approved by the Engineer prior to acceptance and payment of this pay item. The time schedule shall have the following components:

1. The total time required for any closure on Brown Street to traffic shall match or be less than that shown on the bidding document for the Road Closure Assessment.

2. The order of the various tasks shall be laid out clearly with beginning and ending points in time to convey that items that must be finished prior to another task (such as final pavement installation) shall be completed prior to the date referenced for the following task.

3. The schedule shall be detailed to demonstrate the order of mainline utility installations, which shall accommodate traffic and phasing requirements detailed on the project drawings.

4. The schedule shall be detailed to demonstrate the order of concrete pavement and sidewalk installations, which shall accommodate vehicular and pedestrian traffic requirements detailed in the project drawings.

1.43 MOBILIZATION

A. The purpose of this pay item is to provide payment to the Contractor for the cost of delivering equipment and materials to the job site as needed throughout the project. The Contractor shall not charge more than 5% of the total cost of the project for this pay item. Providing a price in excess of 5% could be grounds for invalidation of the bid.

B. Payment for this pay item shall be divided into 4 equal parts, with payment arriving on each of the first four disbursements. The Contractor should anticipate being paid approximately every 30 days for work on this Contract.

1.44 WATER & SEWER ALLOWANCE

A. Due to gaps in some of the water or sewer records, there may be some exploratory work required to ensure that all building utility services are replaced and/or reconnected as needed. City staff will endeavor to assist the Contractor wherever possible to keep such work to a minimum.

B. Payment under this pay item shall only apply when additional work was required as a result of missing information for water or sewer service connections, or for work that is not normally associated with the pay items as presented in the plans and specifications. The Contractor and the City shall agree to the time spent on a daily basis that will apply under this provision. In addition, the Contractor shall submit a written statement for each such incident, documenting all labor and equipment charges on an hourly basis used, as well as any materials used, to be paid for under this provision.

C. For bidding purposes, the allowance shall be the flat amounts listed in the proposal sections. Any amendment may render the bid invalid.

1.45 STREET LIGHT CONDUIT, 4” PVC SCHEDULE 40, 4’ DEEP

A. This work item is not called out in any specific location on the plans. It has been provided as a pay item if it is determined through the various elements of the work, that it would be desirable for the City or an adjacent property owner to install such a conduit for future access. The Contractor shall install the conduit either under the road or sidewalk areas if so directed by the Engineer.

1.46 SALVAGE EXISTING SIGNS

A. The Contractor shall protect and work around all existing signs wherever possible. If signs need to be removed to accommodate underground work, they shall be replaced with a new post and salvaged sign prior to the end of the project.

B. Any STOP signs removed shall be erected again at the end of the day either on a temporary or permanent basis, with a permanent installation required prior to the end of the project. All sign removals and replacements, including relocations where noted on the plans, shall be paid for under the lump sum of Salvage Existing Signs.

C. Street name signs shall be stored in a safe location during construction, and installed back in the same location upon completion of the project. The salvaged signs shall be paid for accordingly.

D. It is anticipated that several signs will be removed and not needed with the new street configuration. The Contractor shall store these signs until the City has determined if they are needed, at which time they will be retrieved at the designated storage area by City personnel, at no additional cost to the Contractor.

1.47 NEW SIGNS

A. The contractor shall provide new street signs as called for on the plans, with all materials and legends in accordance with the latest edition of the Michigan Manual of Traffic Control Devices. New signs shall be fabricated from nominal 0.080 inch thick aluminum sheet meeting the requirements of ASTM B 209. All new signs shall be paid for by the square foot of sign area installed.

B. All new signs shall be painted City color "Birmingham Green" to match the signs currently installed throughout the downtown area. All signs shall be painted in a paint shop using professional quality spray paint methods. The Contractor shall submit information relative to the location, method, and materials to be used for painting of the sign backs to the Engineer for approval prior to proceeding. The cost of the painting shall be included in the price per square foot.

1.48 SIGN POSTS, U-CHANNEL

A. All new signs posts shall be buried 4 to 5 feet below the ground, with an adequate length above the ground to mount all of the new proposed signs above the specified bottom height of the sign. Sign posts shall be a ridgeback U-channel galvanized steel, with a weight of three (3) pounds per linear foot.

B. All new sign posts shall be painted the City color "Birmingham Green" to match the sign posts currently installed throughout the downtown area. All posts shall be painted in a paint shop using professional quality spray paint methods. The Contractor shall submit information relative to the location, method, and materials to be used for painting of the posts to the Engineer for approval prior to proceeding. The cost of the painting shall be included in the price per linear foot.

1.49 MODIFY STEPS & RAILING AT PEABODY PARKING STRUCTURE

A. This lump sum pay item includes all labor, materials, and equipment necessary to add one additional step ("riser") to the existing staircase as needed to meet proposed design elevations for the project, and also to remove and replace sections of the existing handrail so that it services the entire finished staircase. Costs shall also include necessary welding to connect the new hand railing to the existing, and field painting of the new railing sections to match the existing red color scheme.

1.50 REMOVING STREET LIGHT FOUNDATION

A. As a part of this project, the City of Birmingham will be contracting with DTE Energy to remove and replace most of the pedestrian style street lights within the project zone.

B. The DTE contractor will first be responsible for disconnecting power to the existing lights, and removing the existing poles and fixtures. It is likely that this will be during the underground phase of the project. The Contractor will then be responsible for removing the existing streetlight foundations and disposing of them.

C. Once it is clear that the DTE contractor will be mobilizing to install the conduit and new foundations, the Contractor will be expected to remove all sidewalks immediately behind the existing curbs to allow their work to begin. The DTE contractor shall then leave the site to allow the sidewalk construction to commence. The DTE contractor will return to the site once the sidewalk installation is complete, to install the new street light poles and fixtures.

1.51 INLET FILTER

A. Installation of this item shall follow the standard details prepared by the Oakland County Water Resources Commissioner. The detail for the "Inlet Filter" shall be modified appropriately to accommodate the proposed flat catch basin covers.

B. This pay item will be required on existing catch basins during all excavation, removal, subbase preparation, etc.

1.52 TRAFFIC MAINTENANCE AND CONTROL

A. The Contract Proposal indicates that this pay item shall be paid for by the Day. The Contractor shall enter into the Proposal the same number used on the proceeding pay item, "Road Closure Assessment." Insertion of a number of days other than that entered for Road Closure Assessment shall be grounds for invalidating the bid submittal. The Contractor shall enter a unit price for this pay item to cover all costs pertinent to this work, with a minimum number of $500 per day. Whatever costs the Contactor must expend before or after the days included in the Road Closure time period shall be incidental to the price bid.

B. The Traffic Maintenance & Control pay item has been priced per Day to acknowledge the importance of checking all work areas and signing on a daily basis. The Engineer will also be checking the completeness of the signing and road closure features on a daily basis, and will ask for corrections as noted. The Contractor shall have a minimum of one representative on site with the Engineer at the end of the work day verifying that the condition of the traffic control signage is approved before leaving the project site for the day. The following shall be grounds for not receiving payment for this pay item for any given day:

1. If the Engineer has requested signage to be addressed prior to the Contractor leaving the site and it has not been done, or has not been done satisfactorily. The Engineer shall photograph and document incomplete signage conditions when observed, for the record.

2. If the Contractor's staff has all left the job site for the day before determining whether or not traffic control conditions have been approved by the Engineer. If problems are later identified by the Engineer, they shall be photographed and documented, for the record.

3. When not paying for this pay item under the conditions noted in #2 above, the Engineer shall consider how the discrepancy may have occurred. For example, if the problem is located outside of an area that would have been impacted by the Contractor, and if it appears that the discrepancy was caused by the public (such as the relocation of a barricade) at a time of day that the Contractor would not have reasonably known about the problem, then payment will not be docked for that day. Nevertheless, it shall be the Contractor's responsibility to make the effort to check all pertinent areas at the end of the work day so that this condition does not routinely occur.

C. The Contractor shall have all needed and relevant construction signing on site and ready to install prior to closing the street.

D. The anticipated vehicular and pedestrian traffic control detours and are detailed on various plan sheets:

1. Advanced Warning and Detour Signage plan sheets have been provided as a specific guide for directing traffic around and through the construction area. Sig

2. As shown on the Pedestrian Access and Traffic Maintenance Plan, pedestrian passageways that must be maintenance during the project shall be provided using a combination of type III barricades, type II channelizing devices, maintenance aggregate, and cold patch. All barricades

and channelizing devices shall be completely in place before work begins in a designated area of the street.

3. Main Line Concrete Paving

   A. Sidewalks shall remain open and accessible where indicated during this period.

   B. The Contractor shall endeavor to provide a full seven-day cure on the new concrete before vehicles are being driven on it. All joints shall be sawed and sealed in accordance with the Concrete Specifications prior to directing through traffic loadings on new concrete pavement.

4. Sidewalk Removal and Replacement

   A. The Contractor shall plan sidewalk work adjacent to buildings in two workday increments. Removal of sidewalks is a serious impediment to the adjacent businesses, therefore, no more than what can be removed and replaced (with the proposed concrete material) shall be removed at one time. Once removals begin for a certain area, the Contractor shall direct pedestrians on to the new adjacent concrete pavement to get around the work area. The Contractor shall provide plywood bridges to those businesses that need access as soon as possible while the concrete cures. The Contractor shall consider the costs of traffic maintenance through these difficult areas in the total cost of the concrete sidewalk installation.

   B. Once regular concrete has been poured and is open to the public, the Contractor shall proceed with installing that remaining concrete work between the main pedestrian paths, and the new curb and gutter sections.

E. Prior to closing any of the streets on this project, the Contractor shall supply cones, barriers, and warning signs in accordance with the MUTCD, and in accordance with the Detour Plan and Pedestrian Access and Traffic Maintenance Plan attached to these specifications. Road closure signage shall not be erected more than two (2) work days in advance of planned closing, and erection of signing shall not begin until approved by the Engineer.

F. The Contractor shall provide all materials, labor and equipment necessary to install, maintain and remove traffic control devices and to maintain access for vehicular and pedestrian traffic requirements outlined on the plans.

G. The work zone shall be left in a safe, passable condition each night while the job is in progress, again to allow access to residents, during these stages.

H. Once the concrete is installed, and seven (7) days curing has been accomplished, the Contractor shall immediately begin preparing for sidewalk and drive approach construction, again, placing concrete expeditiously to allow the curing time to begin as soon as practical.

I. The Contractor shall maintain signs and barricades as necessary to maintain traffic on this route as shown on the traffic control diagrams in the drawings.

J. The Contractor shall endeavor to keep the cross streets, as well as the local access lane (within the construction zone) as clean and dust free as practical during construction, so that through traffic can be maintained as much as practical.

END OF SECTION

APPENDIX – A

G2 CONSULTING GROUP

REPORT ON GEOTECHNICAL INVESTIGATION

CONSULTING GROUP

Report on Geotechnical Investigation

Brown Street Reconstruction Project S. Old Woodward Avenue to Woodward Avenue Birmingham, Michigan

Latitude 42.544974˚ N
Longitude 83.212166˚ W

Prepared for:

City of Birmingham
151 Martin Street
Birmingham, Michigan 48009

G2 Project No. 220913
January 3, 2023

g2consultinggroup.com

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CONSULTING GROUP

January 3, 2023

Ms. Melissa A. Coatta, P.E.
City Engineer
City of Birmingham
151 Martin Street
Birmingham, Michigan 48009

Re: Report on Geotechnical Investigation
Brown Street Reconstruction Project
S. Old Woodward Avenue to Woodward Avenue
City of Birmingham, Michigan
G2 Project Number 220913

Dear Ms. Coatta:

We have completed the geotechnical investigation for the Brown Street Reconstruction Project in Birmingham, Michigan. This report presents the results of our observations and analyses and our recommendations for pavement section design and construction and sewer and water main construction as they relate to the geotechnical conditions along the route.

We appreciate the opportunity to be of service to the City of Birmingham on this project and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding this report or any other matter pertaining to the project, please contact us.

Sincerely,

G2 Consulting Group, LLC

Jeffrey M. Hayball, P.E.
Project Manager

Noel J. Hargrave-Thomas, P.E.
Principal

JMH/NJHT/ljv

Enclosures

EXECUTIVE SUMMARY

The project includes paving and underground improvements along E. Brown Street from S. Old Woodward Avenue to Woodward Avenue in downtown Birmingham, Michigan. E. Brown Street generally consists of three lanes (two east bound lanes and one west bound lane) with a center turn lane at S. Old Woodward Avenue.

Underground improvements include combined sewer reconstruction and water main replacement. Invert depths of the proposed new utilities were not available upon completion of this report. However, we assume the new sewer and water main will have a minimum of 6 feet of cover. It is our understanding the new underground utilities will be constructed using open cut installation methods. The existing pavements are proposed to be reconstructed in conjunction with the underground improvements and consist of new Portland cement concrete (PCC) pavement sections. The age of the existing pavements and traffic counts were not available upon completion of this report. Based on review of Google Earth Historical Aerial Photographs, it appears the pavements were constructed prior to 1999.

The route is paved with Portland cement concrete pavements and ranges in thickness from 9 to 9-1/4 inches. Crushed limestone sandy gravel aggregate base underlies the Portland cement concrete pavement within borings B-1 and B-2 and extends to depths of 2 feet and 1-3/4 feet, respectively. Stiff to very stiff silty clay fill with occasional sand seams is present below the aggregate base within the borings and extends to depths ranging from 2-1/2 to 4-1/2 feet. Native stiff to hard silty clay underlies the silty clay fill within the borings and extends to the explored depths of 10 and 15 feet. Groundwater was observed at an approximate depth of 4 feet during drilling operations within soil boring B-1. No measurable groundwater was observed within boring B-1 upon completion of drilling operations. Groundwater was not encountered during or upon completion of drilling operations within boring B-2. It appears the groundwater encountered within boring B-1 is perched within the sand seams atop of the relatively impermeable native silty clay.

Temporary unsurcharged trench excavations for the proposed open-cut sewer installation operations and portions of the water main replacement must be sloped back at a minimum of 1H:1V (horizontal: vertical) within the existing stiff cohesive soils and 3/4H:1V within the very stiff to hard cohesive soils. Where seepage from excavation cuts is observed, the slopes must be flattened sufficiently to achieve stability, but in no case left steeper that 3H:1V at and below the seepage level. We anticipate construction operations to be performed in dry conditions. However, any accumulations from groundwater seepage or runoff should be controllable from pumping properly constructed sumps.

Given the existing cohesive subgrade conditions, we anticipate a moderate amount of subgrade treatment by undercut may be required during construction operations. We recommend construction operations be performed during the summer months and the exposed subgrade is not left exposed to rain events.

We recommended a new pavement section for E Brown Street consists of 9 inches of MDOT 3500HP Portland cement concrete pavement over 8 inches of MDOT 21AA aggregate base. The proposed pavement section should provide support for 3 million 18-kip equivalent single axle loads (ESALs) over a 30-year design life.

Do not consider this summary separate from the entire text of this report, with all the conclusions and qualifications mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the Appendix of this report.

PROJECT DESCRIPTION

The project includes paving and underground improvements along E. Brown Street from S. Old Woodward Avenue to Woodward Avenue in downtown Birmingham, Michigan. E. Brown Street generally consists of three lanes (two east bound lanes and one west bound lane) with a center turn lane at S. Old Woodward Avenue.

Underground improvements include combined sewer reconstruction and water main replacement. Invert depths of the proposed new utilities were not available upon completion of this report. However, we assume the new sewer and water main will have a minimum of 6 feet of cover. It is our understanding the new underground utilities will be constructed using open cut installation methods. The existing pavements are proposed to be reconstructed in conjunction with the underground improvements and consist of new Portland cement concrete (PCC) pavement sections. The age of the existing pavements and traffic counts were not available upon completion of this report. Based on review of Google Earth Historical Aerial Photographs, it appears the pavements were constructed prior to 1999.

SCOPE OF SERVICES

The field operations, laboratory testing, and engineering report preparation were performed under direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering in this area. Our scope of services for this project is as follows:

1. We performed full depth pavement cores at two (2) locations along E. Brown Street. We performed soil borings at the two (2) pavement core locations. Soil boring B-1 was drilled on E. Brown Street, east of S. Old Woodward Avenue, extending to a depth of 15 feet below pavement grade. Soil boring B-2 was performed on E. Brown Street, west of Woodward Avenue, extending to a depth of 10 feet.

2. We measured and photographed pavement core samples from the route and performed laboratory testing on representative samples obtained from the soil borings. Laboratory testing included visual engineering classification, moisture content, and unconfined compressive strength determinations.

3. We prepared this engineering report. The report includes recommendations for design pavement sections, paving materials, and construction considerations for underground construction and pavement construction including grade preparation and subgrade stabilization, as necessary.

FIELD OPERATIONS

G2 Consulting Group, LLC (G2) selected the core sample and soil boring locations and depths in consultation with representatives of the City of Birmingham. The soil boring locations were determined in the field and marked by a representative of G2 prior to drilling operations. The approximate soil boring locations are shown on the Soil Boring Location Plan, Plate No. 1. Ground surface elevations were not available upon completion of this report. However, we recommend the soil boring locations be surveyed in the field so the soil stratigraphy can be assigned an elevation.

We used a gas powered core rig equipped with a 6-inch diameter diamond-tipped core barrel to core the pavement at the pavement core and soil boring locations. Pavement cores were drilled through the full depth of the existing pavement structure to obtain an accurate determination of the pavement thickness. Core samples were delivered to our laboratory for length measurements and photographs.

The soil borings were drilled using a truck-mounted rotary drilling rig. Continuous flight, 2-1/4-inch inside diameter, hollow-stem augers were used to advance the boreholes. The soil samples were obtained at intervals of 2-1/2 feet within the upper 10 feet and at 5 feet intervals, thereafter, by the

Standard Penetration Test (SPT) method ASTM D1586, which involves driving a 2-inch diameter split-spoon sampler into the soil with a 140-pound weight falling 30 inches. The sampler is generally driven three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sampler the last 12 inches is termed the Standard Penetration Resistance (N). The blow counts for each 6-inch increment and the resulting N-value are presented on the soil boring logs.

The soil samples were placed in sealed containers in the field and brought to the laboratory for testing and classification. During the drilling operations, the G2 professional engineer maintained logs of the encountered subsurface conditions, including changes in stratigraphy and observed groundwater levels of the soil borings to be used in conjunction with our analyses of the subsurface conditions. The final boring logs are based on the field logs and laboratory soil classification and testing. After completion of the drilling operations, the boreholes were backfilled with excavated soil and capped with a compacted bituminous cold patch mixture.

LABORATORY TESTING

Pavement core samples and soil samples from the borings were delivered to the G2 laboratory in Troy, Michigan for photographs and length measurements of the core samples and basic index tests on soil samples. Photographs and length measurements for the core samples are presented as Figure No. 3 in the Appendix.

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent to pavement design and underground utility construction. An experienced geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System.

Laboratory testing included natural moisture content and unconfined compressive strength determinations. The unconfined compressive strengths were determined by using a spring-loaded hand penetrometer. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring-loaded cylinder.

The results of the moisture content and unconfined compressive strength laboratory tests are indicated on the soil boring logs at the depths the samples were obtained. We will hold the soil samples for 60 days from the date of this report. If you would like the samples, please let us know.

EXISTING PAVEMENT CONDITIONS

The E. Brown Street route between S. Old Woodward Avenue and Woodward Avenue consists of two east bound lanes and one west bound lane. A left turn lane is present along E. Brown Street at the intersection with S. Old Woodward Avenue. The route is paved with Portland cement concrete pavements and ranges in thickness from 9 to 9-1/4 inches.

The pavement is generally in fair to poor condition based upon surface distress which includes low to moderate severity joint and transverse cracking along approximately half of the pavement surface. It appears some crack sealing and surface patching have been performed in the past. The pavements are crowned, allowing surface runoff water to drain into the adjacent curbs and gutters present along the pavement edge.

EXISTING SUBSURFACE CONDITIONS

Crushed limestone sandy gravel aggregate base underlies the Portland cement concrete pavement within borings B-1 and B-2 and extends to depths of 2 feet and 1-3/4 feet, respectively. Silty clay fill with occasional sand seams is present below the aggregate base within the borings and extends to depths

ranging from 2-1/2 to 4-1/2 feet. Native silty clay underlies the silty clay fill within the borings and extends to the explored depths of 10 and 15 feet.

The silty clay fill is stiff to very stiff in consistency with moisture contents of 13 and 17 percent and unconfined compressive strengths of 3,000 and 5,000 pounds per square foot (psf). The native silty clay is stiff to hard in consistency with natural moisture contents ranging from 14 to 18 percent and unconfined compressive strengths ranging from 2,500 to 9,000 psf.

The stratification depths shown on the soil boring logs represent the soil conditions at the boring locations. Variations may occur between borings. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than what is shown. We have prepared the boring logs on the basis of laboratory classification and testing as well as field logs of the soils encountered.

Soil Boring Location Plan, Plate No. 1, and Soil Boring Logs, Figure Nos. 1 and 2, are presented in the Appendix. Photographs of the pavement core samples are included as Figure No. 3. The soil profiles described above are generalized descriptions of the conditions encountered at the boring location. General Notes Terminology defining the nomenclature used on the soil boring logs and elsewhere in this report are presented on Figure No. 4.

GROUNDWATER CONDITIONS

Groundwater observations were performed during and upon completion of drilling operations. Groundwater was observed at an approximate depth of 4 feet during drilling operations within soil boring B-1. No measurable groundwater was observed within boring B-1 upon completion of drilling operations. Groundwater was not encountered during or upon completion of drilling operations within boring B-2. It appears the groundwater encountered within boring B-1 is perched within the sand seams atop of the relatively impermeable native silty clay.

The long-term static groundwater level in the project area is expected to lie near the transition from brown to gray colored clay soils at approximately 12 feet below grade. Fluctuations in perched and long term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation. It should also be noted that groundwater observations made during drilling operations in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the low permeability of such soils and the tendency of drilling operations to seal off the natural paths of groundwater flow.

WATER MAIN AND SEWER CONSTRUCTION RECOMMENDATIONS

General

It is our understanding the project includes local combined sewer reconstruction and water main replacement. We assume the proposed utilities will be constructed with a minimum of 6 feet of cover. It is our understanding the new underground utilities will be constructed using open cut installation methods. Once the proposed pipeline profile becomes available and the pipeline installation methods for each segment of the pipeline alignment have been established, G2 should be notified so that we can review our recommendations presented herein.

Open Cut Excavations

Temporary unsurcharged trench excavations for the proposed open-cut sewer installation operations and portions of the water main replacement must be sloped back at a minimum of 1H:1V (horizontal: vertical) within the existing stiff cohesive soils and 3/4H:1V within the very stiff to hard cohesive soils. Where seepage from excavation cuts is observed, the slopes must be flattened sufficiently to achieve stability, but in no case left steeper that 3H:1V at and below the seepage level. If the temporary

construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the embankments to prevent runoff water from entering the excavation and eroding the slope faces. The soils exposed in slope faces should be inspected by qualified personnel so modifications of the slopes can be made if variations in the soil or water conditions occur. If sufficient space for open cut consideration is not available trench box shoring may be used.

Trench box shoring may be used provided some lateral deflection of adjacent soils can be tolerated. If a trench box is used, excavations should be performed from within the trench box, such that no unsupported vertical cut is allowed to exist. A trench box is not recommended where adjacent utilities, roadways, or structures are located less than a lateral distance delineated by a plane extending upward from the bottom edges of the excavation at a 1H:1V slope.

All excavations should be safely sheeted, shored, sloped, or brace in accordance with MI-OSHA requirements. If material is stored or equipment is operated near the excavation, stronger shoring must be used to resist the extra pressure due to the superimposed loads. Care should always be exercised when excavating near existing buildings, roadways, or utilities to avoid undermining. In no case should excavations extend below the level of adjacent structures or utilities unless underpinning is planned.

Groundwater Control

Groundwater was encountered within soil boring B-1 at an approximate depth of 4 feet during drilling operations. No measurable groundwater was observed within boring B-2 during drilling operations. It is assumed the proposed underground utilities will have a minimum of 6 feet of cover. We anticipate construction operations to be performed in dry conditions. However, any accumulations from groundwater seepage or runoff should be controllable from pumping properly constructed sumps.

Pipeline Support

Based on the observed subsurface conditions and the anticipated invert elevations, we expect the proposed utility will generally be supported on very stiff to hard cohesive soils. In general, these soils are adequate for support of the utilities; however, where loose granular soils are encountered from possible existing utility backfill within any open-cut excavations, we recommend the utility trench invert be compacted to further densify any loose granular material on stabilization crushed aggregate. Sewer pipe bedding should be used to provide sewer pipe line and grade. Bedding material should consist of compacted sand or MDOT 6A open grade aggregate. Differential movements of the sewer pipeline may occur if the trench bottom is not adequately stabilized. The exposed subgrade should be visually evaluated for stability prior to the backfilling of the construction excavations.

Trench Backfill

The existing fill soils and native silty clay soils encountered within the soil borings generally do not meet the gradation requirements of MDOT Class II granular fill, therefore, these soils are not suitable to be reused as engineered within construction excavations. We recommend clean granular engineered fill should be used to backfill around the water main and sewers and the remainder of the utility trench. The engineered fill or bedding should be placed up to the springline of the pipe, while making sure that the void beneath the haunches of the pipe are completely filled. The initial lift should be compacted using light-duty compaction equipment, such as walk-behind vibratory plate compactors, and should be compacted in a manner that will not disturb the pipe alignment. The next lift of engineered fill may then be placed in 9-inch thick lifts to 9 inches above the top of the pipe. Again, light-duty compaction equipment should be used to complete the compaction of the engineered fill.

After the bedding material and initial lift of backfill has been placed and compacted, the remainder of the trench should be backfilled in an engineered manner. The engineered fill should be free of organic matter, frozen soil, clods, or other harmful material. Backfill should be placed in loose layers not to exceed 9 inches in thickness and should be mechanically compacted to achieve a density of at least 95

percent of the materials maximum dry density as determined by the Modified Proctor compact test (ASTM D1557) or in accordance with the latest version of the Michigan Department of Transportation "Density Testing and Inspection Manual". Granular engineered fill material should be placed and compacted at moisture contents within 2 percent above or below the optimum moisture content.

PAVEMENT RECOMMENDATIONS

General

We understand the existing pavements along E. Brown Street within the project limits will be reconstructed. At the time of the investigation, finished site grades were not available; however, we anticipate the proposed pavements will be supported on cohesive soils or engineered fill placed over newly installed utilities. These soils should be suitable for support of proposed pavements following satisfactory completion of subgrade preparation operations as described in the Pavement Subgrade Preparation Recommendations section of this report. In general, cohesive soils are considered to be of poor quality for the direct support of conventional pavement structures, have poor drainage characteristics, and are considered to be highly frost susceptible.

Pavement Subgrade Preparation Recommendations

The Portland cement concrete pavement and underlying aggregate base should be completely removed. The exposed subgrade should be graded to promote effective subsurface drainage and then compacted. Once a rough grade has been achieved, the exposed subgrade should be evaluated for stability. We recommend subgrade soils be proof rolled using a fully loaded tri-axle dump truck. Any unstable or unsuitable areas noted should be improved by additional compaction or removed and replaced with engineered fill.

Given the existing cohesive subgrade conditions, we anticipate some subgrade treatment by undercut may be required during construction operations. We recommend construction operations be performed during the summer months and the exposed subgrade is not left exposed to rain events.

Subgrade undercuts, if required, should be evaluated by a qualified engineering technician to determine if subgrade stabilization is necessary. We recommend that undercut excavations, where required, be backfilled MDOT 21AA placed in an engineered manner. A drain tile should be placed at the deepest portion of subgrade undercuts and connected to the closest catch basin to prevent trapped water from collecting in the granular cut soils or the subgrade should be sloped towards utility installation backfill to drain the undercut. Lift thicknesses should not exceed 9 inches. All engineered fill should be compacted to a density of at least 95 percent of the maximum density determined by the Modified Proctor (ASTM D 1557) method of testing. All engineered fill material should be placed and compacted at approximately the optimum moisture content. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade.

Pavement Design

We performed pavement design analyses in accordance with the "AASHTO Guide for Design of Pavement Structures". The subgrade soils will generally consist of stiff silty clay fill or engineered fill placed over utilities. Based on the existing subgrade soils, we have provided design pavement sections based on an effective modulus of subgrade reaction, k, of 50 pounds per cubic inch (pci).

No information regarding the type or amount of traffic along the existing roadways were available upon completion of this report. However, we assume traffic along the roadways is primarily cars with the occasional garbage and delivery truck. If any actual traffic volume information becomes available, G2 Consulting Group should be notified so we can reevaluate our recommendations. A design pavement thickness evaluation was performed for the route using methods outlined in the 1998 AASHTO Guide for

the Design of Pavement Structures and input parameters recommended by the MDOT Pavement Selection Manual. The subgrade value is representative of the cohesive subgrade soils that are present along most of the routes. The analysis assumes that any soft or weak subgrade is identified at the time of construction by proof roll testing and is corrected by subgrade undercut treatment or additional vibratory compaction.

For the proposed new pavement section, we estimated a serviceability loss of 2.0, a standard deviation of 0.39 for rigid pavements, a reliability factor of 0.95, load transfer coefficient of 3.2, a drainage coefficient of 1.0, a Portland cement concrete modulus of rupture of 670 psi, and an elastic modulus of the Portland cement concrete slab of 4,200,000 psi.

We recommended a new pavement section for E. Brown Street consists of 9 inches of MDOT 3500HP Portland cement concrete pavement over 8 inches of MDOT 21AA aggregate base. The proposed pavement section should provide support for 3 million 18-kip equivalent single axle loads (ESALs) over a 30-year design life.

Aggregate base should consist of MDOT 21AA aggregate. MDOT 3500HP grade concrete is recommended for mainline paving. MDOT 3500 grade concrete is recommended for sidewalk or flatwork with a section thickness of 6 inches or less. It is recommended that 3500HP and 3500 grade concrete mixtures contain at least 25 percent GGBFS substitution for Portland cement or use low alkali (0.6% or less total cement alkali) Type I or Type II cement.

Pavement Drainage

Proper pavement drainage is essential given the cohesive soil conditions. We recommend edge drains be provided continuously along curbs since they can become a source of water infiltration into the pavement subgrade. Such drains should extend to minimum depths of 4 inches below the bottom of the proposed aggregate base course or granular fill placed within undercut areas. These drains could be connected to nearby catch basins. In addition, we recommend a minimum of 2 finger drains be installed at each catch basin location, extending a minimum of 15 feet from the catch basin. The pavement and subgrade should be properly sloped to promote effective surface and subsurface drainage and prevent water from ponding. We also recommend pavement subbase materials consist of non-frost-susceptible aggregates where possible.

Pavement Maintenance

We recommend that the joints within newly constructed pavements be sealed with hot rubber to prevent moisture intrusion into the subgrade soils below, as well as prevent spalling of the joint due to material entering the joint.

Regular timely maintenance should be performed on the pavement to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with a hot-applied elastic crack filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils. In addition, regular joint maintenance should be performed.

GENERAL COMMENTS

We have formulated the evaluations and recommendations presented in this report relative to underground utility construction, site preparation, and pavement reconstruction on the basis of data provided to us relating to the general location for the proposed pavement improvements. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

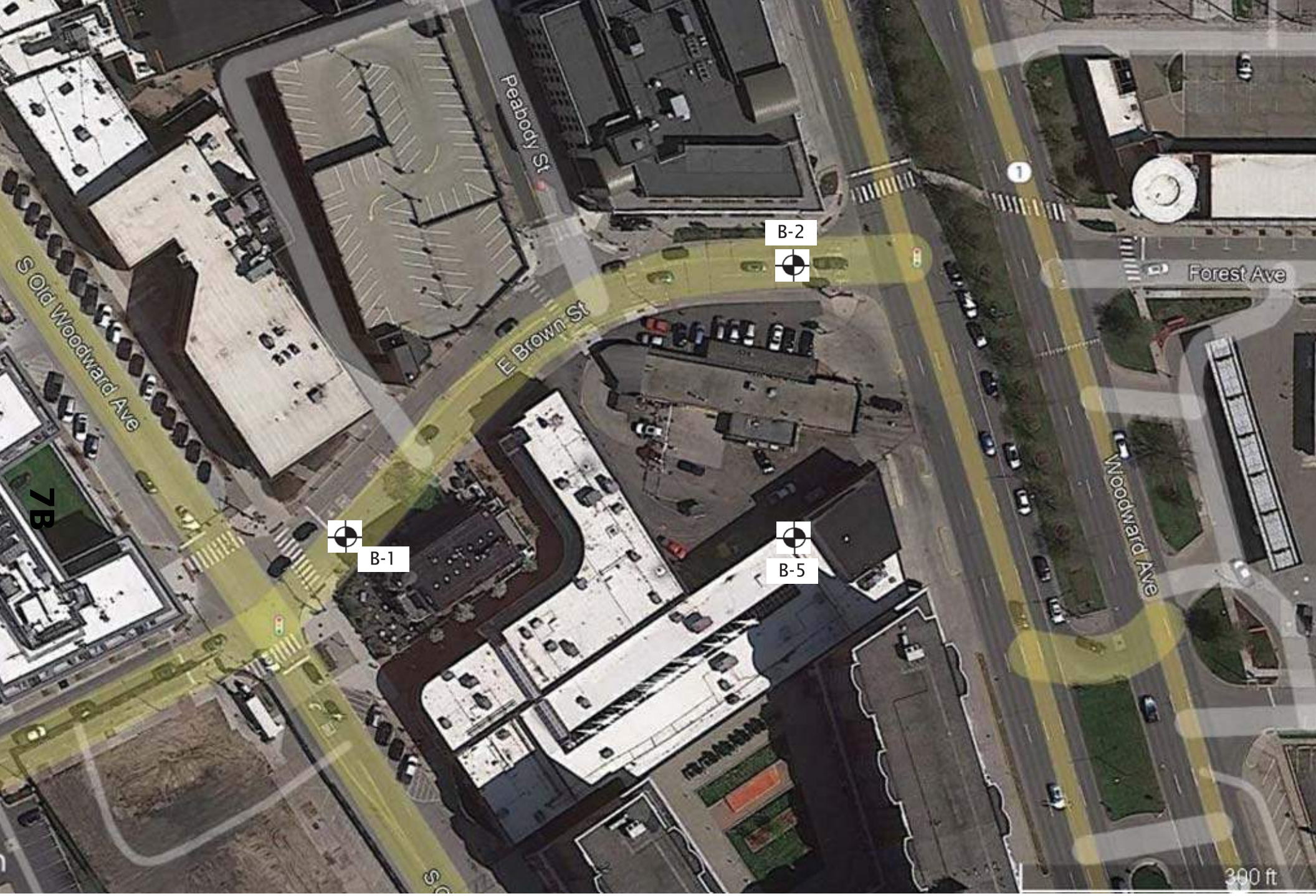
The scope of the present investigation was limited to evaluation of subsurface conditions for the support of the new underground utilities, pavements, and other related aspects of the development. No chemical, environmental, or hydrogeological testing or analyses were included in the scope of this investigation. If changes occur in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

We have based the analyses and recommendations submitted in this report upon the data from soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate No. 1. This report does not reflect variations that may occur between the actual boring locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.

Soil conditions at the site could vary from those generalized on the basis of soil borings made at specific locations. It is, therefore, recommended that G2 Consulting Group, LLC be retained to provide soil engineering services during the site preparation and pavement construction phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.

APPENDIX

Soil Boring Location Plan	Plate No. 1
Soil Boring Logs	Figure Nos. 1 and 2
Pavement Core Sample Photographs	Figure No. 3
General Notes Terminology	Figure No. 4



7B

oil Borings performed by Strata Drilling, Inc. on December 8, 2022

Soil B
Brown Str S. Old Woo Bir

Project Name: Brown Street Reconstruction Project

Project Location: S. Old Woodward Avenue to Woodward Avenue
Birmingham, Michigan

G2 Project No. 220913

Latitude: N/A Longitude: N/A

Soil Boring No. **B-1**

G2 CONSULTING GROUP

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: N/A

DEPTH (ft)	PRO-FILE	
		Portland Cement Concrete (9 inches) — 0.8
		Crushed Limestone Aggregate Base: Gray Sandy Gravel with trace silt (15 inches) — 2.0
		Fill: Stiff Brown Silty Clay with trace sand and gravel, occasional sand seams — 4.5
5		Stiff Brown and Gray Silty Clay with trace sand and gravel — 6.0
10		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel — 12.0
15		Very Stiff Gray Silty Clay with trace sand and gravel — 15.0
20		End of Boring @ 15 ft

SOIL SAMPLE DATA

DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
	AS-1					
	S-1	2 4 3	7	17.0		3000*
5	S-2	2 2 3	5	14.2		2500*
	S-3	7 8 8	16	13.5		7500*
10	S-4	8 13 13	26	13.9		9000*
15	S-5	5 7 8	15	14.8		5000*
20						

Total Depth: 15 ft
Drilling Date: December 8, 2022
Inspector: J. Hayball, P.E.
Contractor: Strata Drilling, Inc.
Driller: D. Watkins

Drilling Method:
6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Water Level Observation:
4 feet during; dry upon completion

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Auger cuttings and capped with cold patch

Figure No. 1

SOIL / PAVEMENT BORING 220913.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/14/22

Project Name: Brown Street Reconstruction Project

Project Location: S. Old Woodward Avenue to Woodward Avenue
Birmingham, Michigan

G2 Project No. 220913

Latitude: N/A Longitude: N/A

Soil Boring No. B-2

G2 CONSULTING GROUP

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: N/A

DEPTH (ft)	PRO-FILE	
		Portland Cement Concrete (9-1/4 inches) — 0.8
		Crushed Limestone Aggregate Base: Gray Sandy Gravel with trace silt (11-3/4 inches) — 1.8
		Fill: Very Stiff Brown Silty Clay with trace sand and gravel, occasional sand seams — 2.5
5		Stiff Brown and Gray Silty Clay with trace sand and gravel — 6.0
10		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel — 10.0
15		End of Boring @ 10 ft
20		

SOIL SAMPLE DATA

SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
AS-1					
S-1	8 4 7	11	12.5		5000*
S-2	3 3 4	7	17.9		3000*
S-3	5 6 7	13	15.4		6000*
S-4	5 10 14	24	16.7		9000*

Total Depth: 10 ft
Drilling Date: December 8, 2022
Inspector: J. Hayball, P.E.
Contractor: Strata Drilling, Inc.
Driller: D. Watkins

Drilling Method:
6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Water Level Observation:
Dry during and upon completion

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Auger cuttings and capped with cold patch

Figure No. 2

SOIL / PAVEMENT BORING 220913.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/14/22

Photographic Documentation
Brown Street Reconstruction Project
Birmingham, Michigan
G2 Project No. 220913

Core Photograph of B-1: Portland Cement Concrete = 9 inches

Core Photograph of B-2: Portland Cement Concrete = 91/4 inches

Figure No. 3

CONSULTING GROUP

GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

PARTICLE SIZE

Boulders		- greater than 12 inches
Cobbles		- 3 inches to 12 inches
Gravel	- Coarse	- 3/4 inches to 3 inches
	- Fine	- No. 4 to 3/4 inches
Sand	- Coarse	- No. 10 to No. 4
	- Medium	- No. 40 to No. 10
	- Fine	- No. 200 to No. 40
Silt		- 0.005mm to 0.074mm
Clay		- Less than 0.005mm

CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

COHESIONLESS SOILS

Density Classification	Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

SAMPLE DESIGNATIONS

AS - Auger Sample – Cuttings directly from auger flight
BS - Bottle or Bag Samples
S - Split Spoon Sample - ASTM D 1586
LS - Liner Sample with liner insert 3 inches in length
ST - Shelby Tube sample - 3 inch diameter unless otherwise noted
PS - Piston Sample - 3 inch diameter unless otherwise noted
RC - Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

Figure No. 4

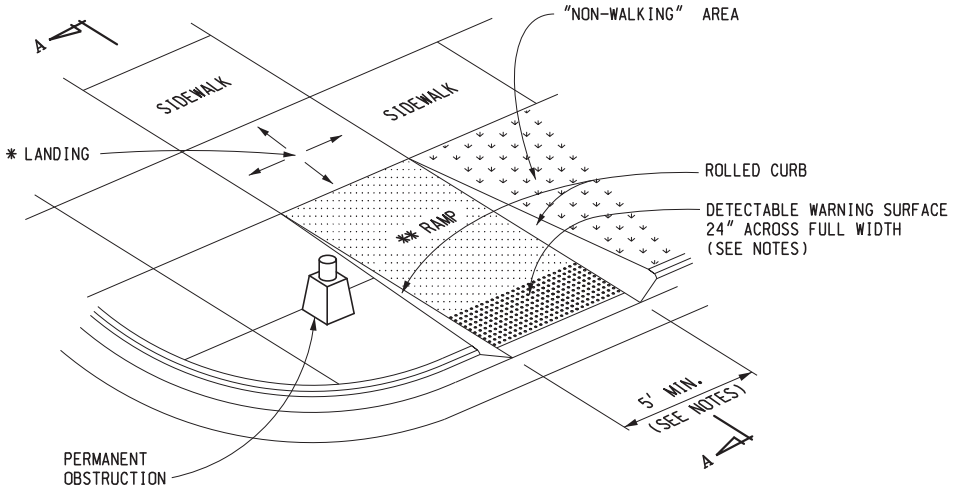
APPENDIX – B

MDOT SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

R-28-J

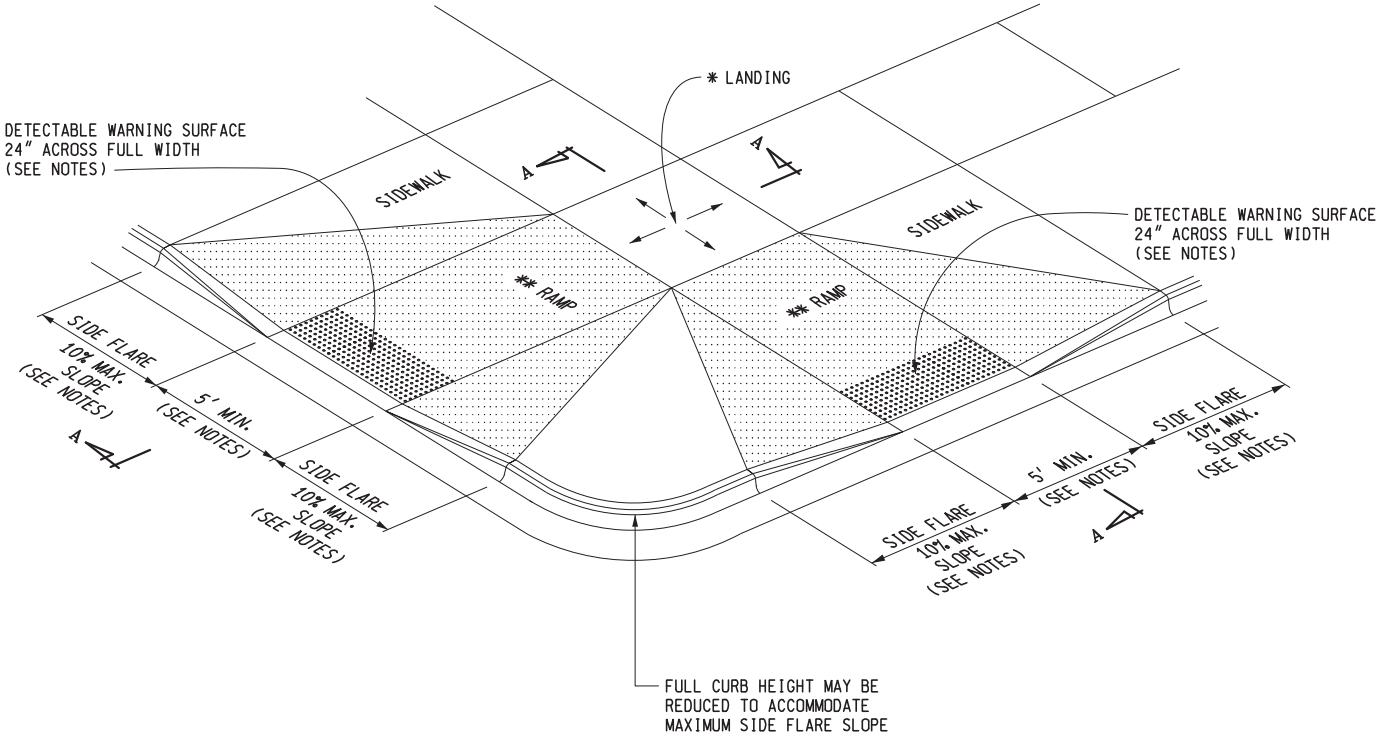
* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5′ x 5′. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% – 7% (8.3% MAXIMUM). SEE NOTES.



CURB RAMP TYPE R

(ROLLED SIDES)



CURB RAMP TYPE F

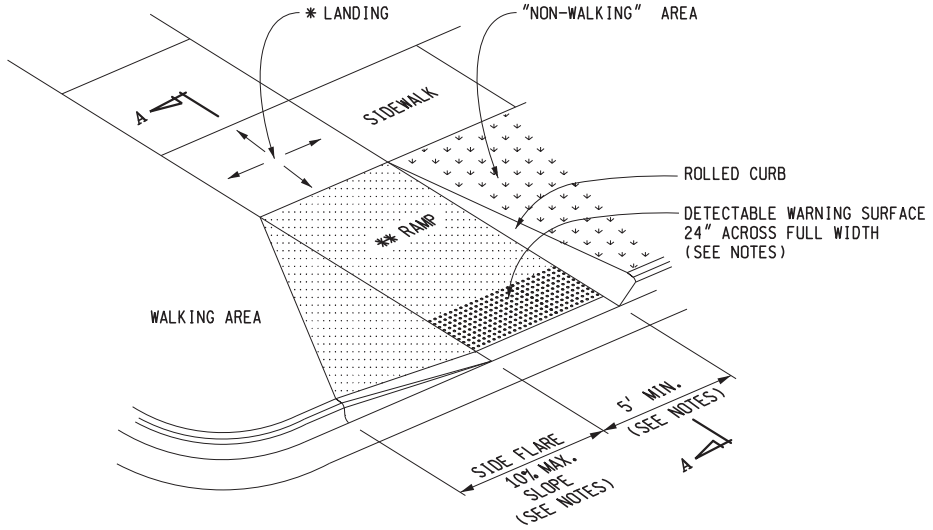
(FLARED SIDES, TWO RAMPS SHOWN)

MDOT Michigan Department of Transportation PREPARED BY DESIGN DIVISION DRAWN BY: B.L.T. CHECKED BY: W.K.P.	DEPARTMENT DIRECTOR Paul C. Ajegba APPROVED BY: _____ DIRECTOR, BUREAU OF FIELD SERVICES APPROVED BY: _____ DIRECTOR, BUREAU OF DEVELOPMENT	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS

F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 1 OF 7

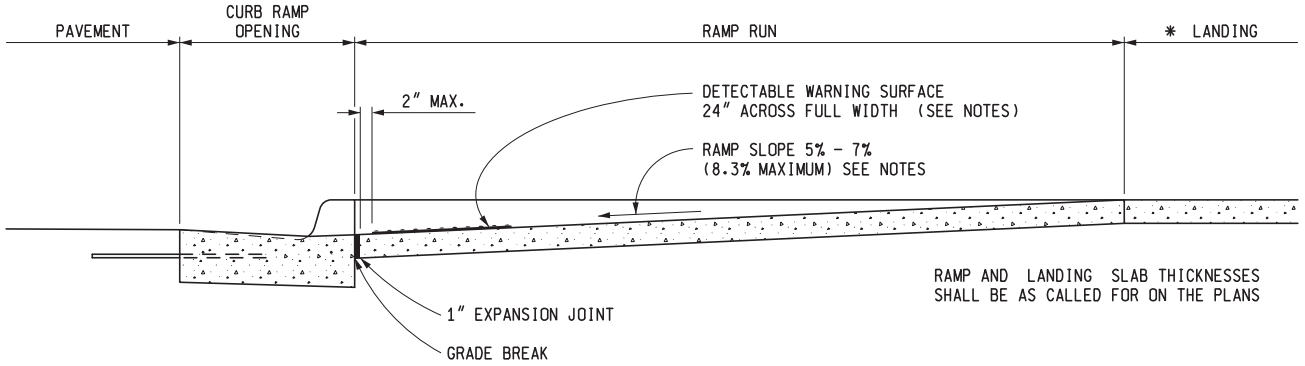
* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5′ x 5′. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% – 7% (8.3% MAXIMUM). SEE NOTES.



CURB RAMP TYPE RF

(ROLLED / FLARED SIDES)

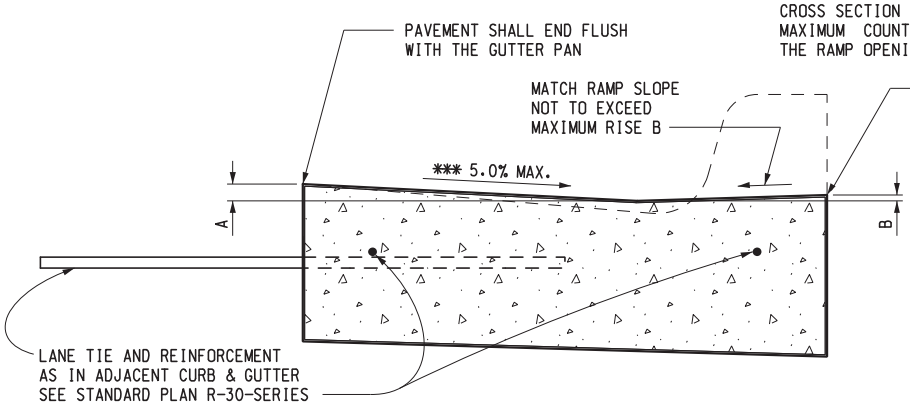


SECTION A-A

CURB TYPE	MAXIMUM RISE (INCHES)	
	A	B
B1	3/4	1
B2	3/4	1
B3	3/4	1
D1	3/4	1
D2	3/4	1
D3	3/4	1
C1	1/2	1/2
C2	1/2	1/2
C3	3/4	1/2
C4	3/4	1/2
C5	1	1/2
C6	1	1/2
F1	1/2	1/2
F2	1/2	1/2
F3	3/4	1/2
F4	3/4	1/2
F5	1	1/2
F6	1	1/2

FOR CURB TYPES SEE STANDARD PLAN R-30-SERIES

*** TRANSITION ADJACENT GUTTER PAN CROSS SECTION TO PROVIDE 5.0% MAXIMUM COUNTER SLOPE ACROSS THE RAMP OPENING.



SECTION THROUGH CURB RAMP OPENING

(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION

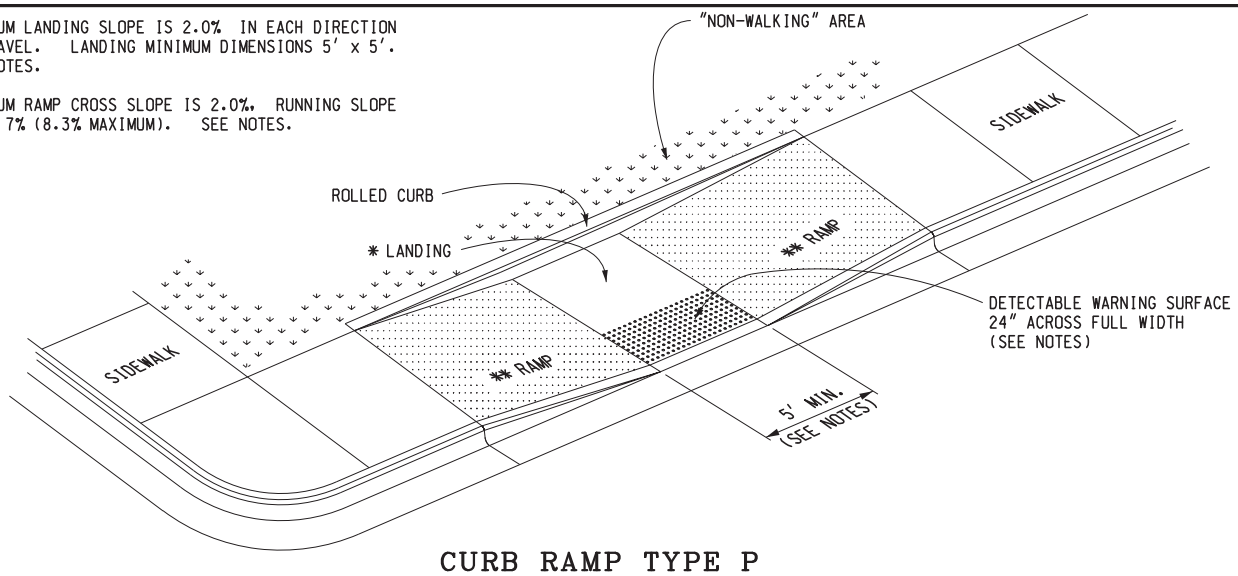
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CURB RAMP AND DETECTABLE WARNING DETAILS

F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 2 OF 7

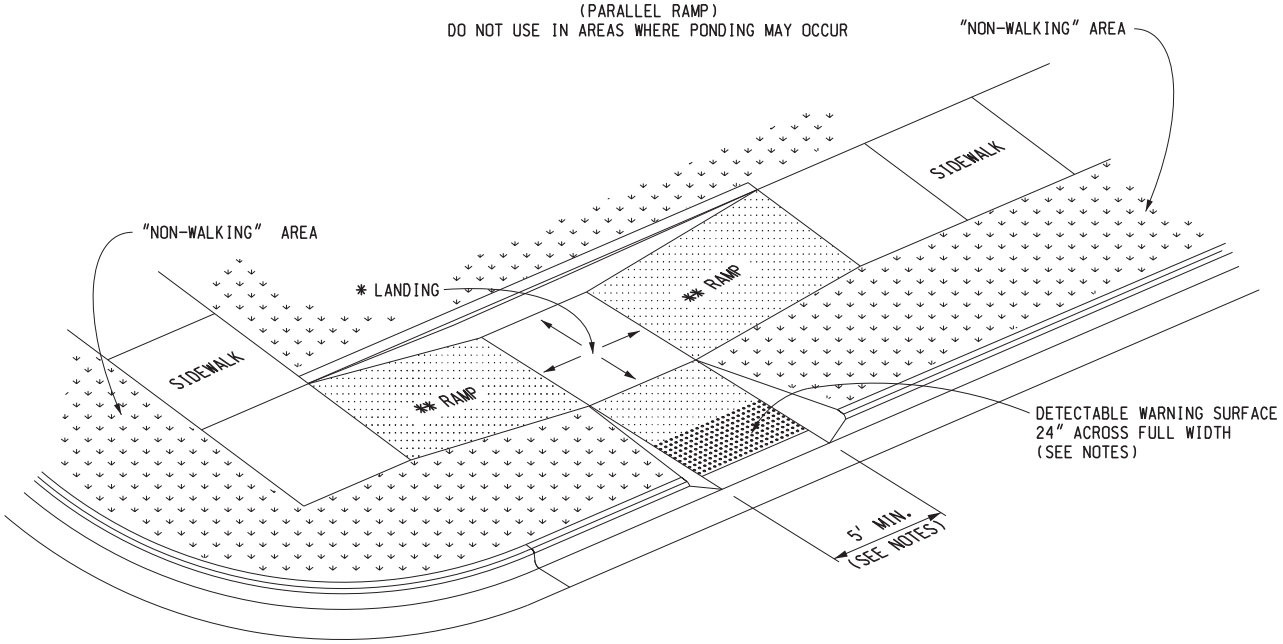
* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5′ x 5′. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% – 7% (8.3% MAXIMUM). SEE NOTES.



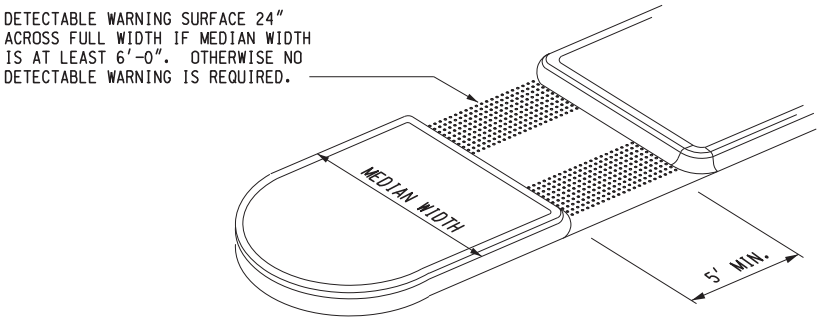
CURB RAMP TYPE P

(PARALLEL RAMP)
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR



CURB RAMP TYPE C

(COMBINATION RAMP)



CURB RAMP TYPE M

(MEDIAN ISLAND)

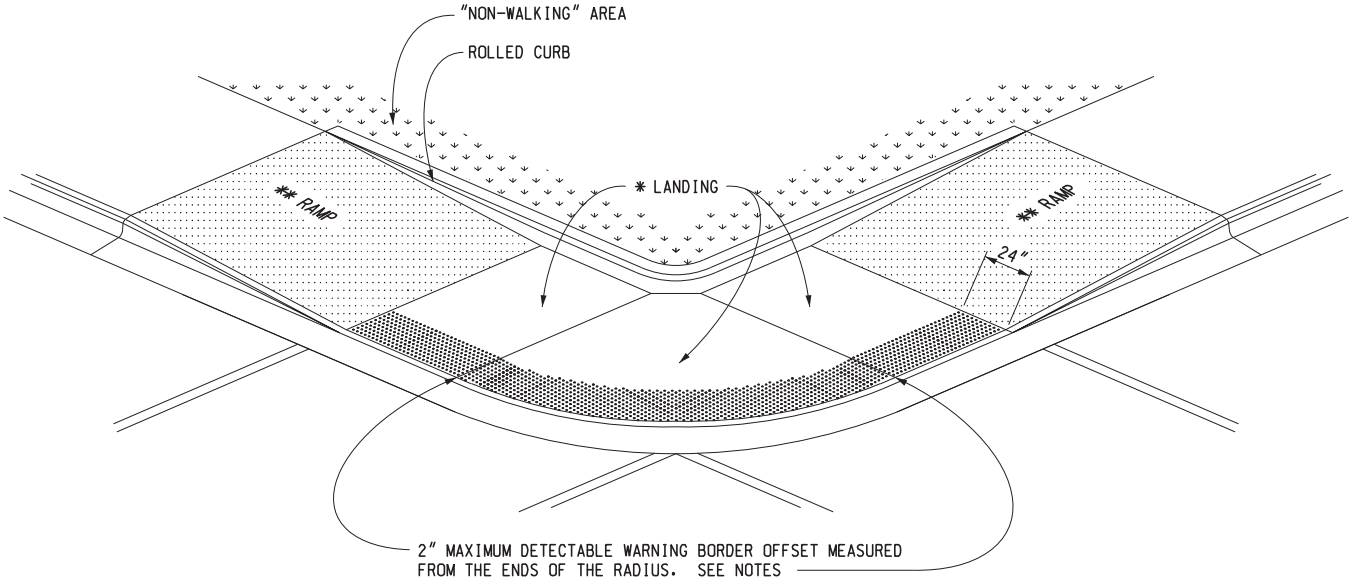
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CURB RAMP AND DETECTABLE WARNING DETAILS

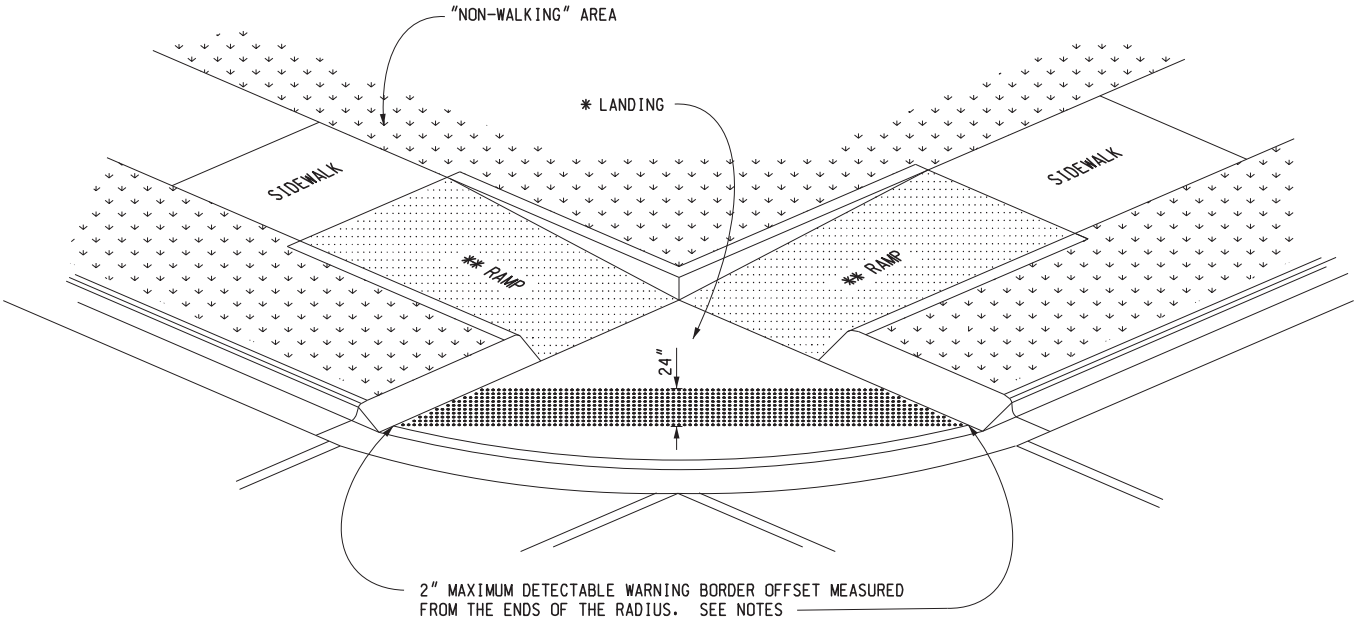
F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 3 OF 7

* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5′ x 5′. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% – 7% (8.3% MAXIMUM). SEE NOTES.



(RADIAL DETECTABLE WARNING SHOWN)



(TANGENT DETECTABLE WARNING SHOWN)

CURB RAMP TYPE D

(DEPRESSED CORNER)

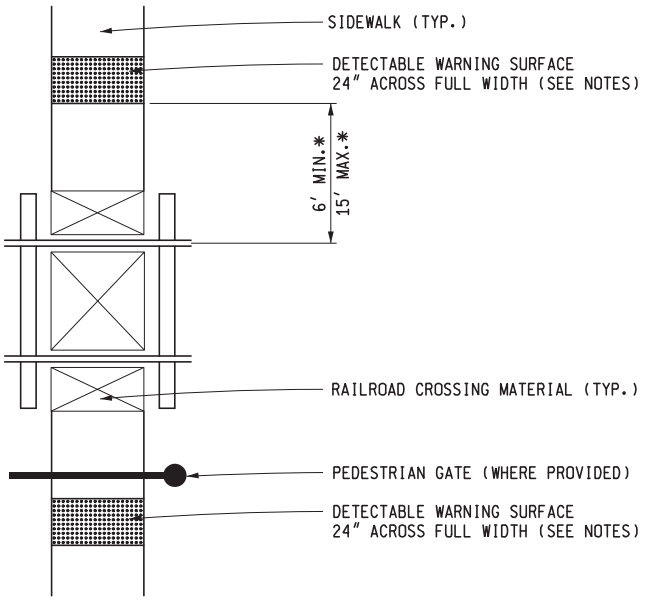
USE ONLY WHEN INDEPENDENT DIRECTIONAL RAMPS CAN NOT BE CONSTRUCTED FOR EACH CROSSING DIRECTION

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

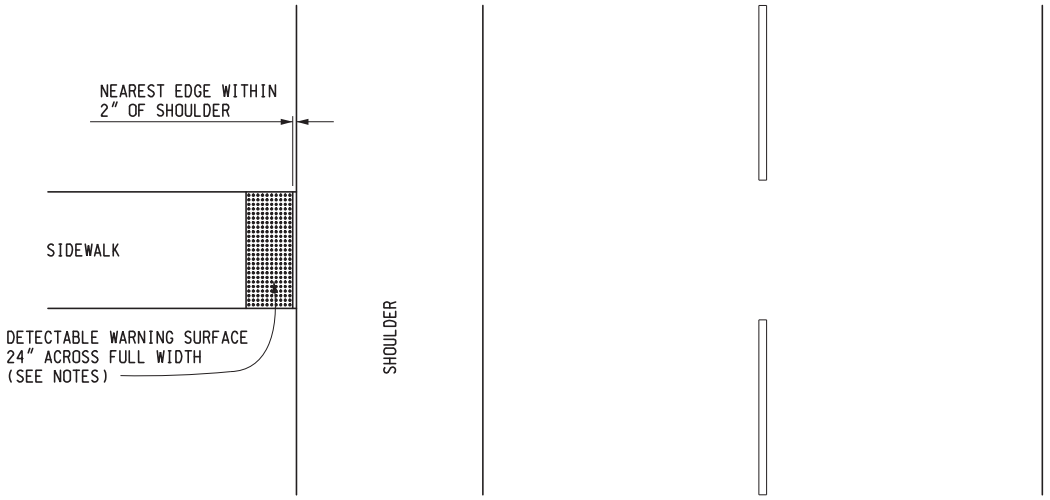
CURB RAMP AND DETECTABLE WARNING DETAILS

F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 4 OF 7

* THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE RAIL CROSSING IS 6′ MINIMUM AND 15′ MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. DO NOT PLACE DETECTABLE WARNING ON RAILROAD CROSSING MATERIAL.



DETECTABLE WARNING AT RAILROAD CROSSING

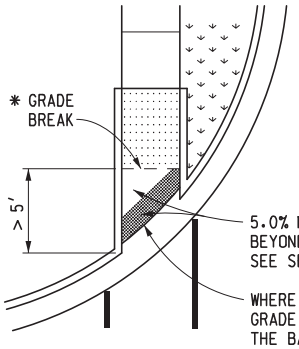


DETECTABLE WARNING AT FLUSH SHOULDER OR ROADWAY

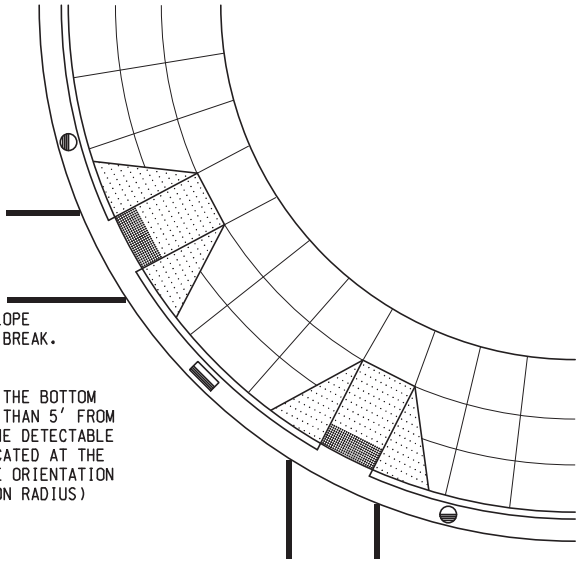
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CURB RAMP AND DETECTABLE WARNING DETAILS

F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 5 OF 7



CURB RAMP LOCATED IN RADIUS (TYPE R SHOWN)
(GRADE BREAK OFFSET GREATER THAN 5')

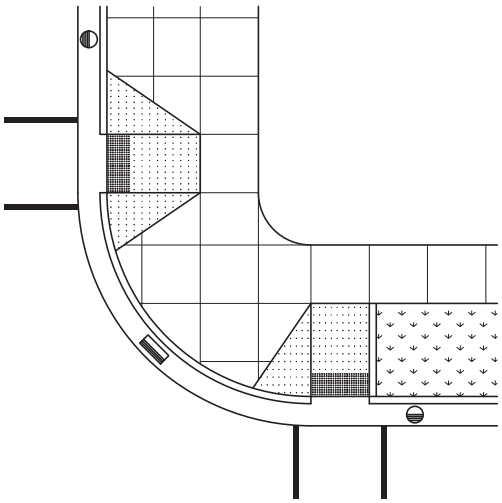


CURB RAMP PERPENDICULAR TO RADIAL CURB (TYPE F SHOWN)

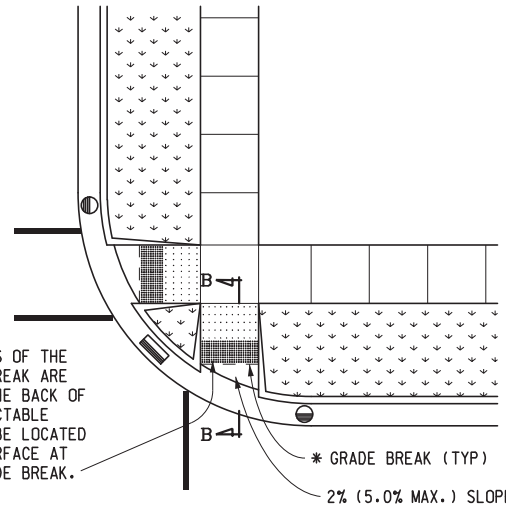
(USE WITH RADIAL CURB WHEN THE CROSSWALK AND CURB RAMP ARE NOT ALIGNED)

LEGEND

- SLOPED SURFACE
- DETECTABLE WARNING
- "NON-WALKING" AREA
- CROSSWALK MARKING
- PREFERRED LOCATION OF DRAINAGE INLET (TYP.)
- ALTERNATE LOCATION OF DRAINAGE INLET (TYP.)



CURB RAMP PERPENDICULAR TO TANGENT CURB
(TYPE F AND TYPE RF SHOWN)

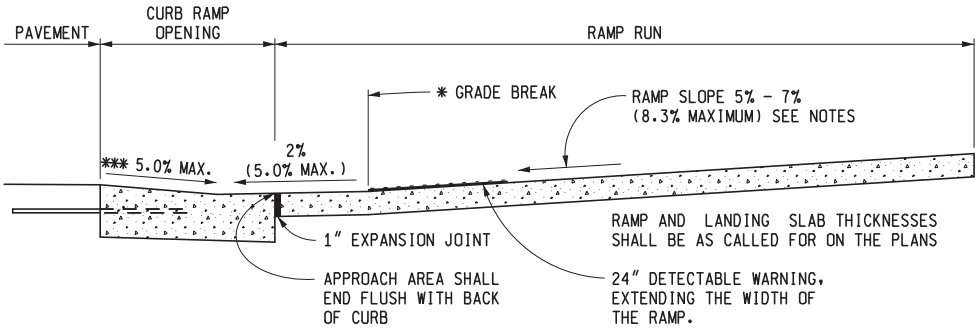


CURB RAMP LOCATED IN RADIUS (TYPE R SHOWN)
(GRADE BREAK OFFSET LESS THAN 5')

* GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL.

*** TRANSITION ADJACENT GUTTER PAN CROSS SECTION TO PROVIDE 5.0% MAXIMUM COUNTER SLOPE ACROSS THE RAMP OPENING.

SEE SHEET 2 FOR CURB RAMP OPENING DETAILS.



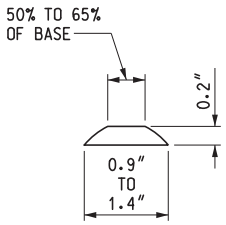
SECTION B-B

CURB RAMP ORIENTATION

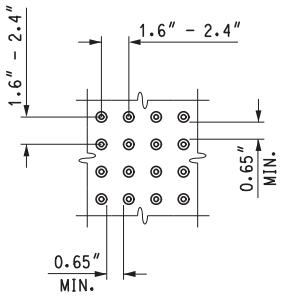
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CURB RAMP AND DETECTABLE WARNING DETAILS

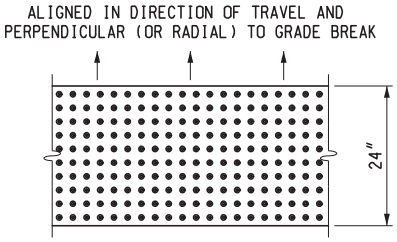
F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 6 OF 7



DOME SECTION



DOME SPACING



DOME ALIGNMENT

DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

CURB RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

WHEN 5′ MINIMUM WIDTHS ARE NOT PRACTICABLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4′ AND LANDINGS TO NOT LESS THAN 4′ x 4′.

CURB RAMPS WITH A RUNNING SLOPE ≤5% DO NOT REQUIRE A TOP LANDING. HOWEVER, ANY CONTINUOUS SIDEWALK OR PEDESTRIAN ROUTE CROSSING THROUGH OR INTERSECTING THE CURB RAMP MUST INDEPENDENTLY MAINTAIN A CROSS SLOPE NOT GREATER THAN 2% PERPENDICULAR TO ITS OWN DIRECTION(S) OF TRAVEL.

DETECTABLE WARNING SURFACE COVERAGE IS 24″ MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL AND THE FULL WIDTH OF THE RAMP/PATH OPENING EXCLUDING CURBED OR FLARED CURB TRANSITION AREAS. A BORDER OFFSET NOT GREATER THAN 2″ MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.3% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH NOT INCLUDING LANDINGS OR TRANSITIONS.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER′S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN ½″. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE ROADSIDE CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE CURB RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, UNPAVED SURFACE OR PERMANENT FIXED OBJECTS. WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.

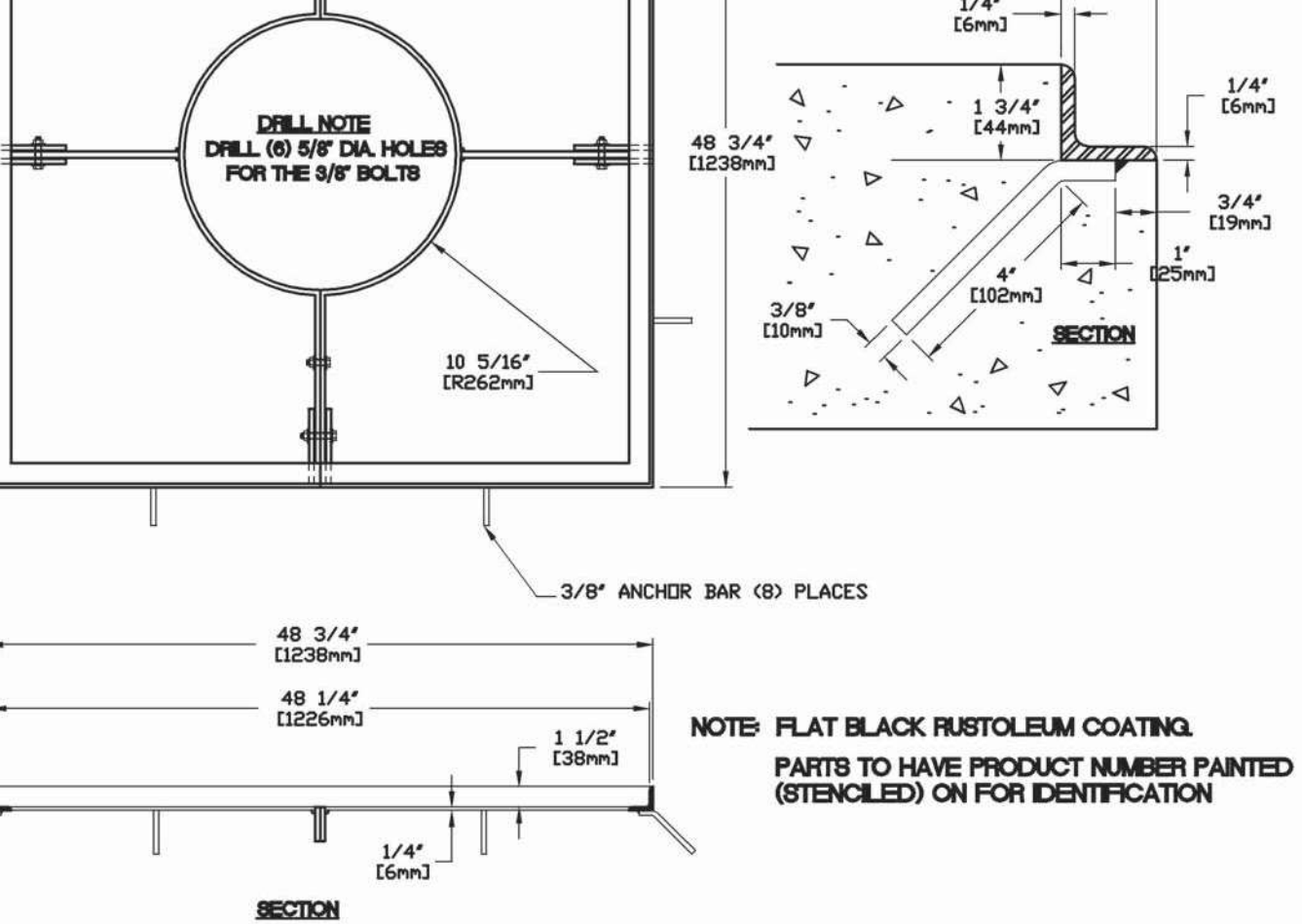
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CURB RAMP AND DETECTABLE WARNING DETAILS

F.H.W.A. APPROVAL	5-8-2020 PLAN DATE	R-28-J	SHEET 7 OF 7

APPENDIX – C

E.J.I.W. TREE GRATE No. 8581
CUT SHEET



NOTE: FLAT BLACK RUSTOLEUM COATING.
PARTS TO HAVE PRODUCT NUMBER PAINTED (STENCILED) ON FOR IDENTIFICATION

STEEL
TREE GRATE
FRAME

PRODUCT NO.
0085811

CATALOG NO.
8581

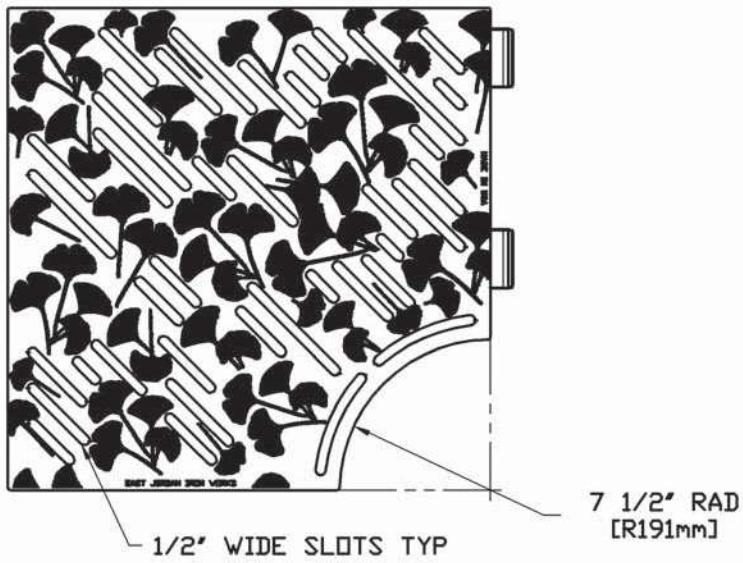
REF. PRODUCT DRAW
00858110

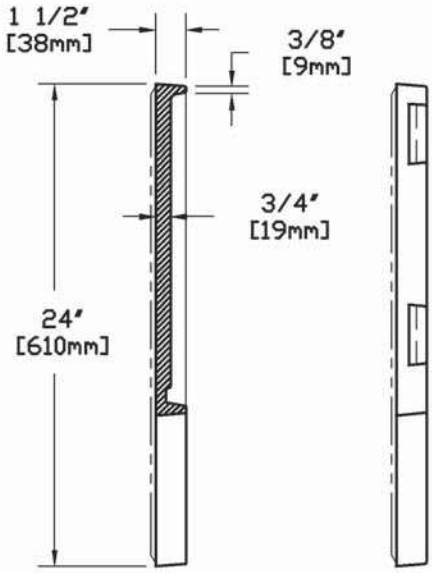
EST. WT.
FRAME: 82 LBS (3

OPEN AREA
N/A

MAT'L SPEC.
FRAME - A 36 ST

LOAD RATING
NON-TRAFFI





GRATE SECTION

7B

EAST JORDA
IRON WORKS,
P.O. BOX 439
EAST JORDAN, MI. 4
1-800-874-4100
FAX 231-536-44

DRAWN	DAT
SMH	07/01/
APPROVED	DAT

ADA
TREE GRAT
UNDIPPED

PRODUCT NO.
0085813

CATALOG NO.
8581

REF. PRODUCT DRAW
00858131

EST. WT.
1/4 GRATE:
95 LBS (43k

OPEN AREA

BIRMINGHAM

A WALKABLE CITY

ENGINEERING DEPARTMENT

BROWN STREET PAVING PROJECT

CONTRACT #5-23(P)

SHEET INDEX

COVER SHEET
T1 TOPOGRAPHIC SURVEY - BROWN STREET STA. P.O.B. TO 2+82
T2 TOPOGRAPHIC SURVEY- BROWN STREET STA. 2+82 TO P.O.E.
C1 UTILITY PLAN - BROWN STREET STA. P.O.B. TO 2+82
C2 UTILITY PLAN - BROWN STREET STA. 2+82 TO P.O.E.
C3 STORM PROFILE PLAN
C4 GRADING PLAN - BROWN STREET STA. P.O.B. TO 2+82
C5 GRADING PLAN - BROWN STREET STA. 2+82 TO P.O.E.
C6 INTERSECTION GRADING DETAIL (1 OF 2)
C7 INTERSECTION GRADING DETAIL (2 OF 2)
C8 PAVING PLAN - BROWN STREET STA. P.O.B. TO P.O.E.
C9 EXISTING AND PROPOSED CROSS-SECTION
C10 STRIPING AND SIGNAGE PLAN
C11 BROWN STREET DETOUR PLAN
C12 PEDESTRIAN ACCESS & TRAFFIC CONTROL PLAN
C13 NOTES AND DETAILS(1 OF 2)
C14 NOTES AND DETAILS(2 OF 2)

IRRIGATION PLANS

IR 1.0 IRRIGATION DESIGN
IR 1.1 IRRIGATION DETAILS

LANDSCAPE PLANS

L0.0 PLANT SCHEDULE AND NOTES
L1.0 OVERALL LANDSCAPE PLAN
L1.1 LANDSCAPE PLAN
L1.2 LANDSCAPE PLAN
L1.3 LANDSCAPE DETAILS
L1.4 LANDSCAPE DETAILS
L1.5 DECORATIVE FENCE ALTERNATE
L2.0 SOILS PLAN
L2.1 SOILS PLAN

Q1 QUANTITIES

CITY OF BIRMINGHAM STANDARD DETAILS

CBD STREETSCAPE STANDARD DETAILS
SIDEWALK RAMPS AND BRICK PAVER SIDEWALKS
SEWER STANDARD DETAILS
WATER MAIN STANDARD DETAILS

UTILITY NOTE

THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CIVIL ENGINEER

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MI 48342
CONTACT: MR. BRETT BUCHHOLZ, P.E.
CONTACT: MR. PAUL TULIKANGAS, P.E.
PHONE: (248) 332-7931
EMAIL: BBUCHHOLZ@NFE-ENGR.COM
EMAIL: PTULIKANGAS@NFE-ENGR.COM

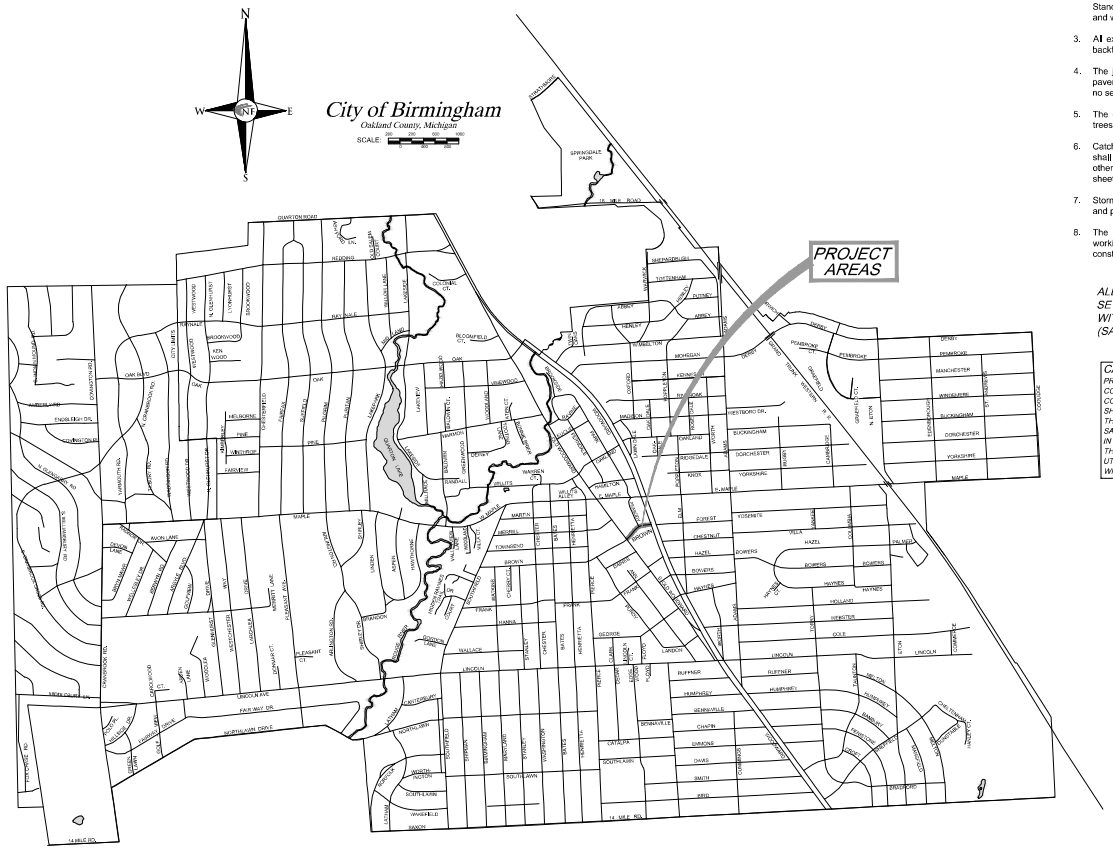
LANDSCAPE ARCHITECT

MKSK
4219 WOODWARD AVE., STE. 305
DETROIT, MI 48201
CONTACT: MS. KRISTYN BOWDEN PLA, LEED GA
PHONE: (419) 283-6934
EMAIL: KBOWDEN@MKSKSTUDIOS.COM

Know what's below Call before you dig.

BENCHMARK NOTE

BENCHMARKS SET AND SHOWN PER SHEET WERE ESTABLISHED OFF OF THE CITY OF BIRMINGHAM BENCHMARK DATUM.



These notes shall apply for all work within this contract:

1. The contractor shall notify MISS DIG 1-800-482-7171 at least 3 working days excluding Saturday, Sunday, and Holidays before making any excavations and notify the City of Birmingham Engineering Department a minimum of 24 hours prior to the start of construction (248-530-1850).
2. See the City of Birmingham drawings "Sewer Standard Details" and "Water Main Standard Details" for details of manholes, catch basins, inlets, and related sewer and water main work.
3. All excavation under or within three feet of pavement, public or private, shall be backfilled and compacted with sand.
4. The joints at the edges of all excavations in the pavement shall be sawcut, or pavement will be removed to existing joints, as directed by the Engineer. There is no separate pay item for saw cutting pavements.
5. The contractor shall be responsible for damage to existing utilities, pavement, trees, landscaping, gravel, etc., whether located on public or private property.
6. Catch basin and inlet castings scheduled for replacement, or new construction shall be EJIW 5000Z4 DI / 5000M4 DI Hinged Assembly unless specified otherwise. Manhole castings shall be EJIW 1040-A cover as noted on the detail sheets and plans, unless otherwise specified.
7. Storm, sewer and water main trench shall be backfilled with MDOT Class II sand and properly compacted to 95% of modified proctor density.
8. The contractor shall coordinate and cooperate with all other utility companies working in the same area, project related or not, during the same allotted construction period.

ALL WATER SERVICE, STORM AND SEWER TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR CLASS II (SAND) MATERIAL.

CAUTION!!! LIVE WATER MAIN

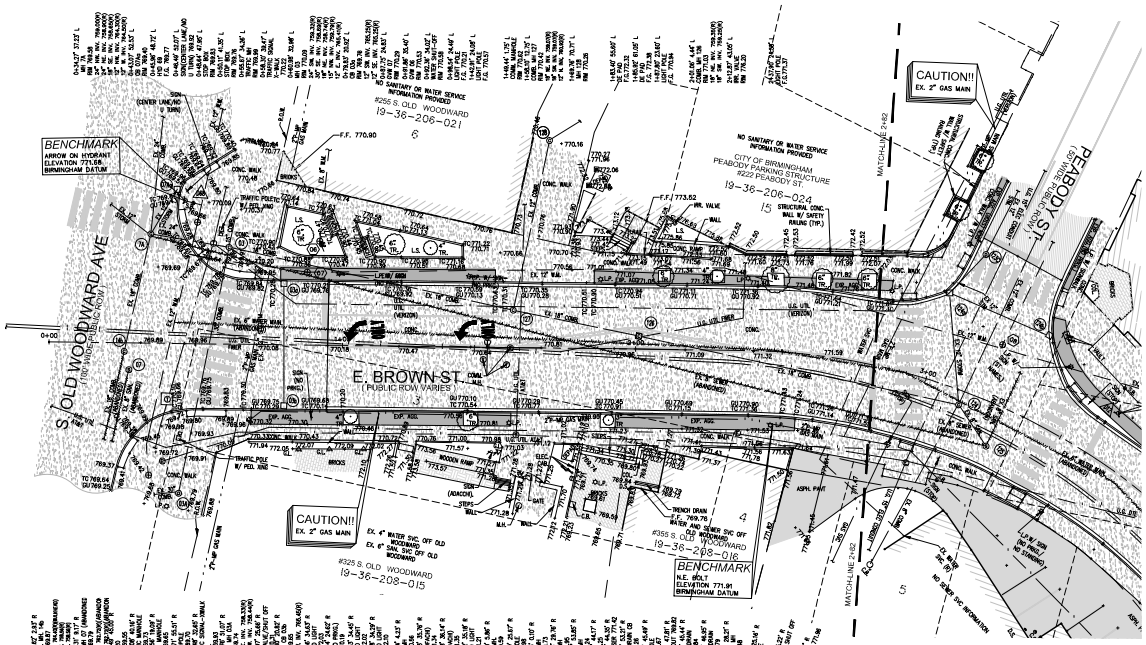
PRIOR TO CUTTING IN NEW MAIN FITTINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE EXISTING WATER MAIN SHUT-DOWN WITH THE CITY. MORE IMPORTANTLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY ENSURING THAT PRESSURES DO NOT EXIST IN THE MAIN AFTER SHUT-DOWN & PRIOR TO CUTTING THE MAIN. IF REQUIRED, THE CONTRACTOR SHALL UTILIZE A HYDRO-STOP DEVICE TO CLOSE OFF FLOW WHILE CUTTING IN NEW TEE.

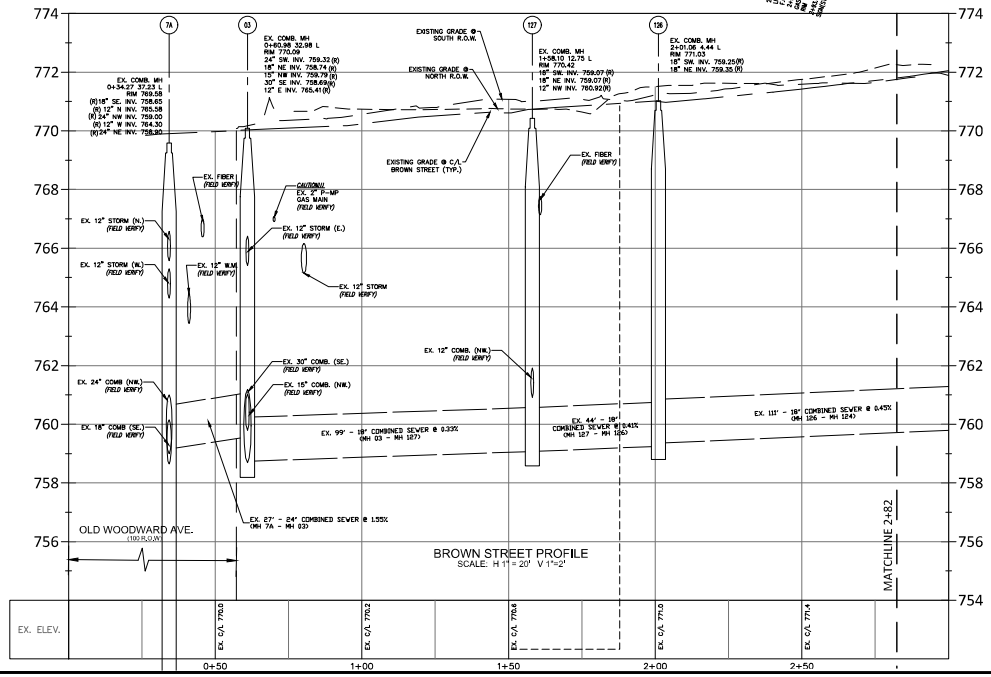
BROWN STREET PAVING PROJECT
CONTRACT #5-23(P)

APPROVED DATE

APRIL 26, 2023 ADDENDUM #1

7B





NF ENGINEERS

CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project

CLIENT
BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Topographic Survey
Sta. P.O.B. to Sta. 2+82

811
Know what's below
Call before you dig.

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER 202210190726, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON 12/08/2022. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.

LEGEND

MANHOLE	EXISTING SANITARY SEWER
HYDRANT	EXISTING SAN. CLEAN OUT
GATE VALVE	EXISTING WATER MAIN
MANHOLE CATCH BASIN	EXISTING STORM SEWER
	EX. R.Y. CATCH BASIN
	EXISTING BURIED CABLES
UTILITY POLE GUY POLE GUY WIRE	OVERHEAD LINES
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY

DRAWN BY: G. Viju

DESIGNED BY:

APPROVED BY: B. Buchholz

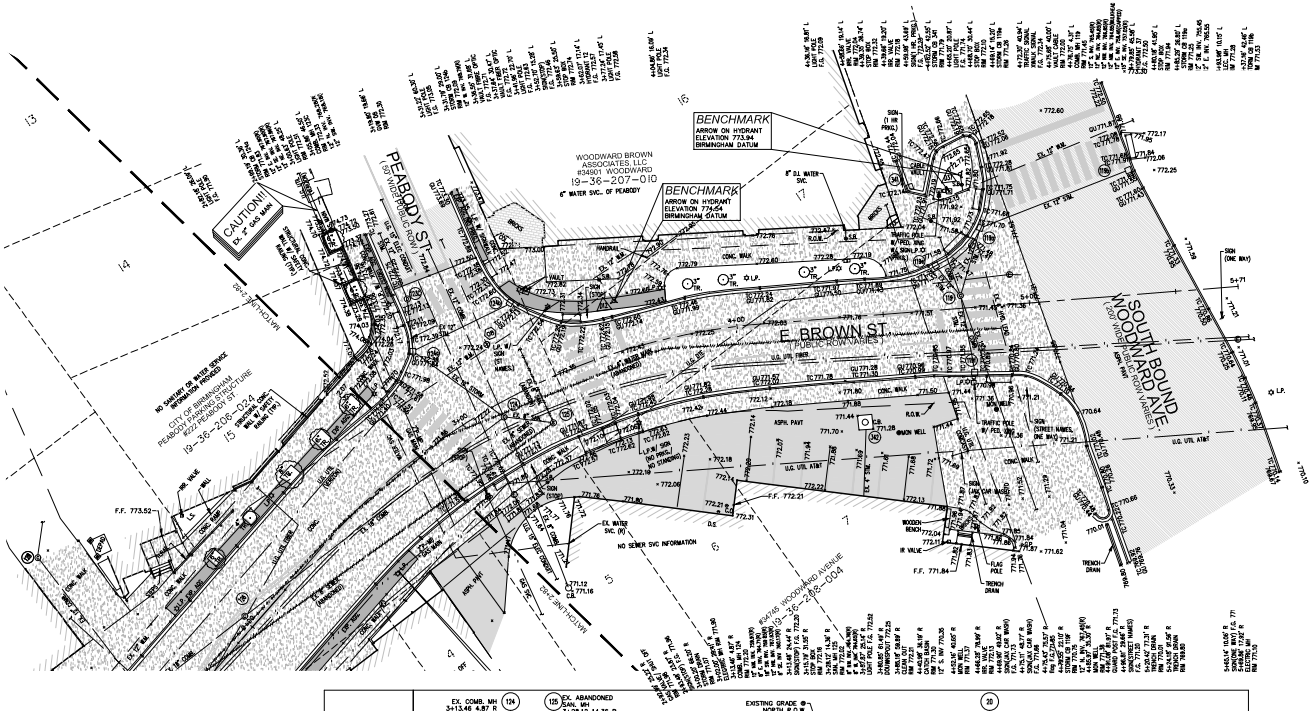
DATE: December 08, 2022

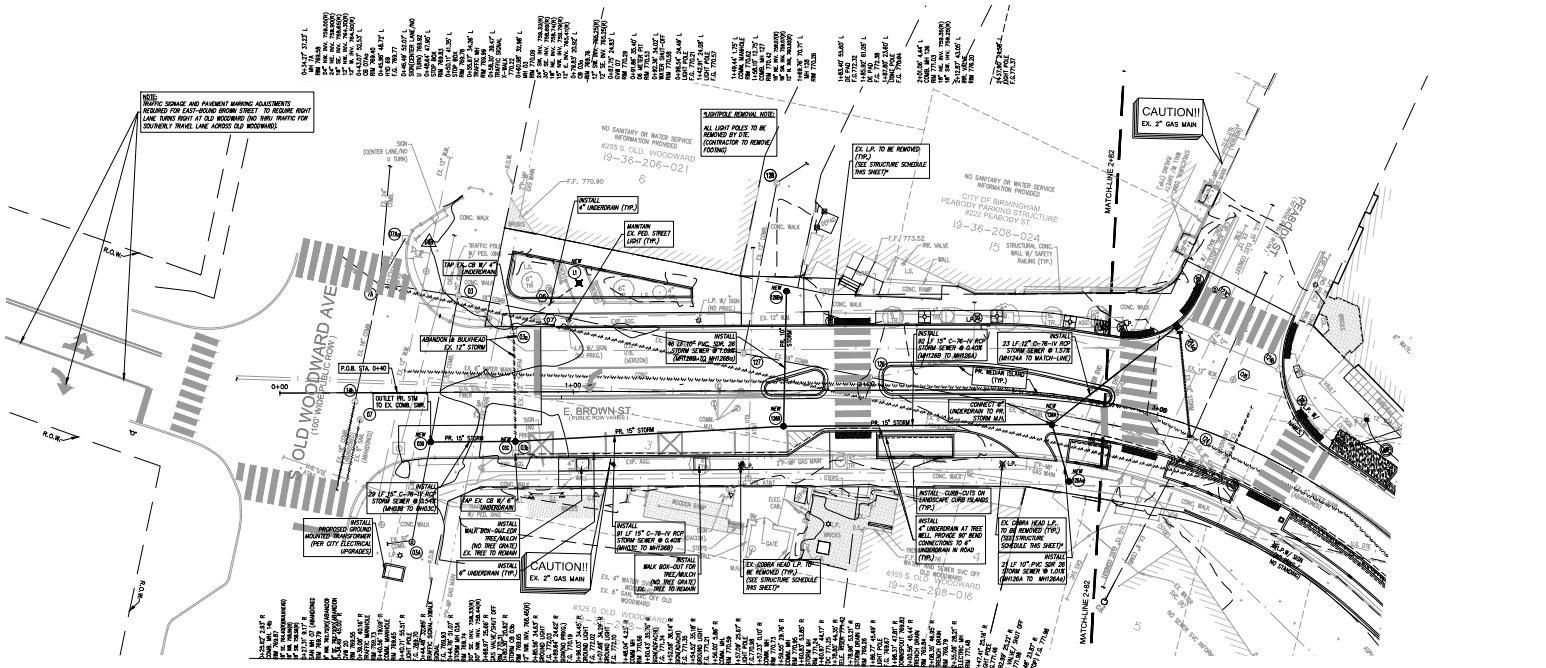
SCALE: 1" = 20'

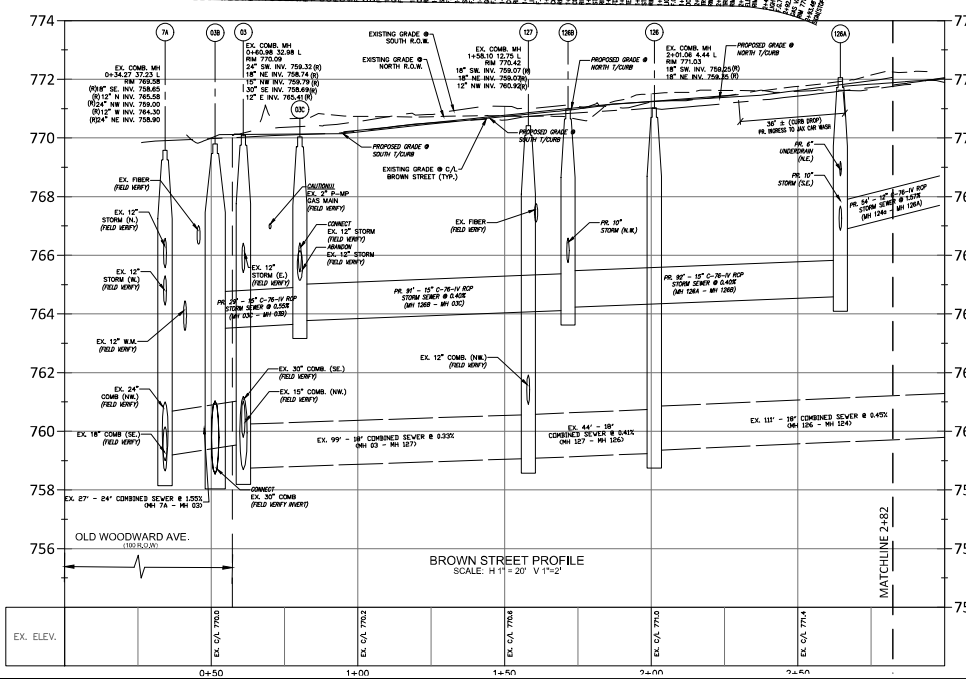
NFE JOB NO. D162-01

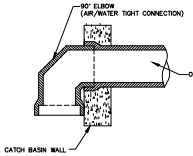
SHEET NO. T1

7B


BENCHMARK
ARROW ON HYDRANT
ELEVATION 773.94
BIRMINGHAM DATUM
BENCHMARK
ARROW ON HYDRANT
ELEVATION 774.54
BIRMINGHAM DATUM
WOODWARD BROWN ASSOCIATES, LLC.
834601 WOODWARD
19-36-207-010
PEABODY ST.
(60' AMBIGUOUS ROW WIDTH)
E. BROWN ST.
(PUBLIC ROW VARIES)
SOUTH BOUND WOODWARD AVE.
(200' WIDE ROW VARIES)
CAUTION!!
EX. 2" GAS MAIN
NO SANITARY OR WATER SERVICE INFORMATION PROVIDED
CITY OF BIRMINGHAM
PEABODY STREET
EX. 2" PEABODY ST.
19-36-206-024
EXISTING GAS METER
EX. WATER SVC. (N)
NO SEWER SVC INFORMATION
F.F. 773.52
F.F. 772.21
F.F. 771.84
MATCHLINE 2+82
19-36-206-024
19-36-208-004
EX. 8" B.I. WATER SVC.
EX. 6" WATER SVC.. OF PEABODY
EX. 1" WATER SVC.
EX. 1" WATER SVC.
EX. 1" WATER SVC.







SEWER TRAP
N.T.S.

EX. COMB. SEWER STRUCTURE SCHEDULE

03 MAINTAIN
0+60.98' 32.98' L
MH 03
RIM 770.09
24" SW. INV. 759.32(W)
30" SE. INV. 758.69(R)
18" NE. INV. 758.74(R)
15" NW. INV. 759.79(R)
12" E. INV. 765.41(R)

03A MAINTAIN
0+44.78' 51.07' R
STORM MH 03A
RIM 765.74
30" SE. INV. 756.33(R)
30" NW. INV. 756.44(R)

07A MAINTAIN
0+34.27' 37.23' L
MH 7A
RIM 769.58
24" NW. INV. 759.00(R)
24" NE. INV. 758.90(R)
18" SE. INV. 758.65(R)
12" NW. INV. 764.30(R)
12" W. INV. 764.50(R)

14b MAINTAIN
0+33.62' 2.92' R
COMB. MH. 14b
RIM 768.87
18" SE. 764.60(BULKHEAD)
18" NW. 764.60(R)
18" SW. 764.60(R)

127 ADJUST
1+58.10' 12.75' L
COMB. MH 127
RIM 770.42
PR. RIM 770.83
18" NE. INV. 759.07(R)
18" SW. INV. 759.07(R)
12" N. INV. 760.92(R)

126 ADJUST
2+01.06' 4.44' L
COMB. MH 126
RIM 771.03
PR. RIM 770.85
18" NE. INV. 759.39(R)
18" SW. INV. 759.39(R)

128 MAINTAIN
1+69.78' 70.71' L
MH 128
RIM 770.26

EX. STORM STRUCTURE SCHEDULE

MH MAINTAIN
1+60.83' 53.85' R
STORM MH
RIM 771.24

03b TAP
0+60.30' 20.82' R
STORM CB 03b
RIM 769.65
12" NW. INV. 765.45(R)
PR. 4" C. 766.15

03c TAP & BULKHEAD SE. CONNEC.
0+79.83' 20.02' L
CB 03c
RIM 769.76
12" SW. INV. 765.25(R)
12" SE. INV. 765.25(R) BULKHEAD
PR. 4" NE. 766.76

07 ADJUST
0+87.75' 24.83' R
GVR 07
RIM 770.29
PR. RIM 769.95

07A MAINTAIN
0+43.07' 52.53' L
CB 07Aa
RIM 769.40

EX. WATER MAIN SCHEDULE

06 ADJUST
0+84.96' 35.40' L
GVR 06
RIM 770.53
PR. RIM 770.43

06 MAINTAIN
0+85.06' 48.73' L
HYD 69
F.G. 769.77

20 MAINTAIN
0+34.49' 45.00' R
GVR 20
RIM 769.55

EX. STREET LIGHT REMOVAL SCHEDULE

E. BROWN STREET, P.O.B. TO 2+82

NORTH:

STATION	OFFSET	ITEM
STA. 1+37.68	23.60' N.	PEDESTRIAN STREET LIGHT
STA. 2+38.66	24.57' N.	PEDESTRIAN STREET LIGHT

SOUTH:

STATION	OFFSET	ITEM
STA. 1+57.01	25.70' S.	COBRA HEAD LIGHT POLE
STA. 2+47.40	25.16' S.	COBRA HEAD LIGHT POLE

UTILITY NOTE

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Pr. Storm Sewer Structure Schedule

Structure Name	Structure Details
#03B PR. 6' DIA MANHOLE CONSTRUCT ONLINE (RE-CONNECT EX. 30" N.W. & S.E.) (FIELD VERIFY INVERT)	PR. RIM 769.80 EX. 30" NW. INV. 758.54 PR. 15" NE. INV. 763.50 EX. 30" SE. INV. 758.54
#03C PR. 4' DIA STORM MANHOLE W/ 2' SUMP CONSTRUCT ONLINE (RECONNECT EX. 12" STORM SE INV. 765.43 - FIELD VERIFY)	PR. RIM 770.04 PR. 15" NE. INV. 763.76 PR. 15" SW. INV. 763.66 EX. 12" SE. INV. 765.43 INSTALL P.V.C. GAS TRAP ON 15" DOWNSTREAM PIPE (S.W.)
#126A PR. 4' DIA STORM MANHOLE	PR. RIM 772.05 PR. 12" N. INV. 766.85 PR. 15" SW. INV. 764.59 PR. 10" SE. INV. 766.85 PR. 6" NE. INV. 768.70
#126Aa PR. 4' DIA MANHOLE (FOR FUTURE SE CONNECTION)	PR. RIM 771.59 PR. 10" NW. INV. 767.05
#126B PR. 4' DIA STORM MANHOLE	PR. RIM 770.98 PR. 15" NE. INV. 764.22 PR. 15" SW. INV. 764.12 PR. 10" NW. INV. 765.75
#126Ba PR. 4' DIA. M.H. (FOR FUTURE NW CONNECTION)	PR. RIM 770.70 PR. 10" SE. INV. 766.25
#L1 PR. 12" DIA. LANDSCAPE DRAIN W/ CAST-IRON BEE-HIVE COVER	PR. RIM 770.66 PR. 4" S. INV. 767.50

L.P. REMOVAL LEGEND

- EX. COBRA HEAD LIGHT POLE REMOVAL
- EXISTING PEDESTRIAN STREET LIGHT REMOVAL

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- HYDRANT / GATE VALVE — EXISTING WATERMAIN
- MANHOLE / CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- EXISTING BURIED CABLES
- UTILITY POLE / GUY POLE / GUY WIRE — OVERHEAD LINES
- LIGHT POLE
- SIGN
- EXISTING GAS MAIN
- MANHOLE — PR. SANITARY SEWER
- C.O. / HYDRANT / GATE VALVE — PR. WATER MAIN
- INLET / C.B. / MANHOLE — PR. STORM SEWER
- PR. R. Y. CATCH BASIN
- PROPOSED TREE GRATE

NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Utility Plan (1of 2)
Sta. P.O.B. to 2+82

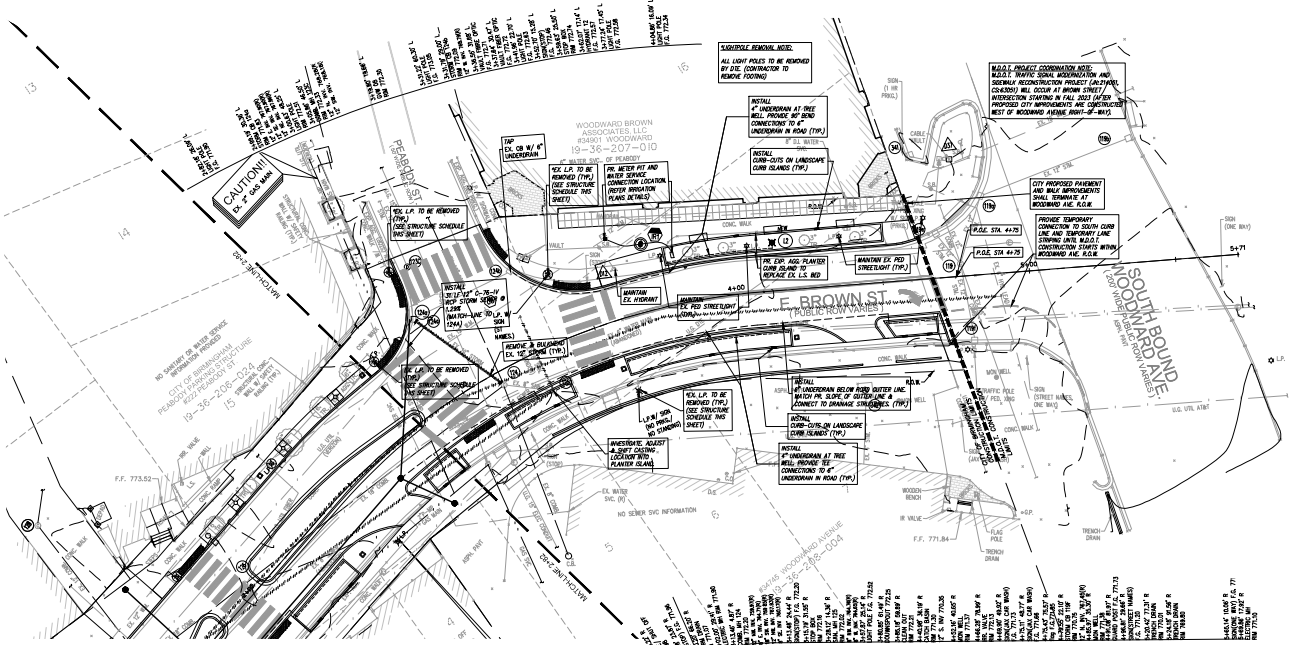
811 Know what's below Call before you dig.

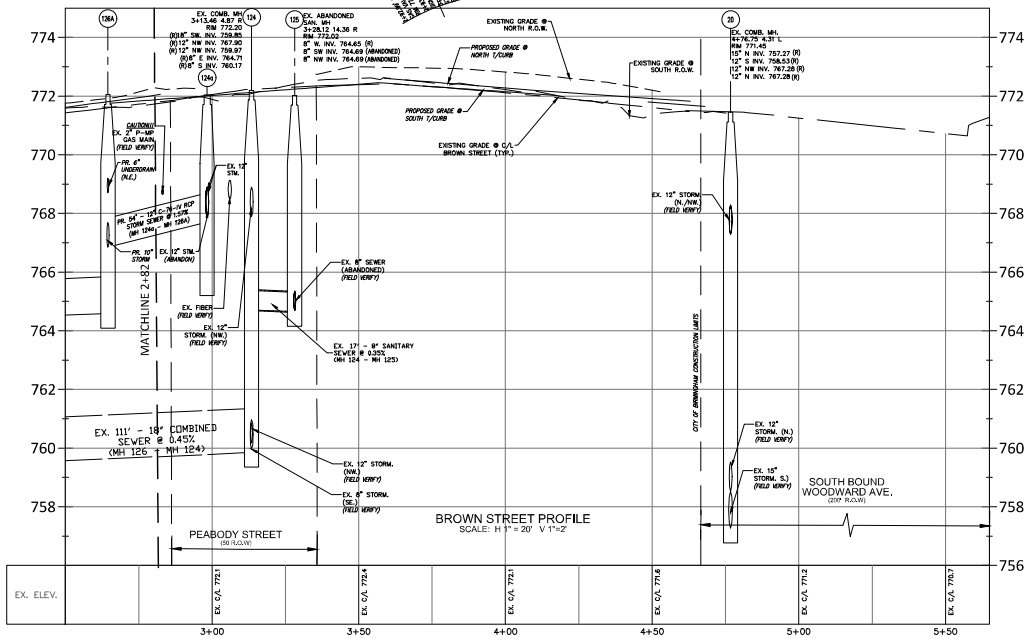
DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY
02-04-23	CONCEPT PLAN
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
04-10-23	BIDS
04-26-23	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C1

7B





EX. COMB. SEWER STRUCTURE SCHEDULE

(124) BULKHEAD @ ADJUST
3+13.46' 4.87' R
COMB. MH. 114
RIM 772.20
PR. RIM 772.16
12" SW. INV. 759.97(BULKHEAD)
12" NW. INV. 759.97(R)
12" SE. INV. 760.71(R)
12" NE. INV. 761.60(R)
6" SE. INV. 765.11(R)

(125) INVESTIGATE, ADJUST, & SHIFT CASTING LOCATION INTO PLANTER ISLAND
3+28.12' 14.36' R
SAN. MH. 125
RIM 772.02
8" NW. INV. 764.69(R)
8" N. INV. 764.69(R)

(126C) ADJUST
3+00.86' 46.50' L
COMB. MH. 123C
RIM 773.33
PR. RIM 772.50
12" N. INV. 768.28(R)
12" SW. INV. 768.10(R)

(119) MAINTAIN
4+76.75' 4.31' L
COMB. MH. 119
RIM 771.41
12" E. INV. 766.49(R)
12" W. INV. 766.60(R)
12" SE. INV. 766.80(R)
12" NW. INV. 766.80(R)(BULKHEAD)
12" E. INV. 766.45(CAPPED)
10" S. INV. 770.02(R)

EX. STORM STRUCTURE SCHEDULE

(119a) MAINTAIN
4+85.39' 26.80' L
STORM CB 119a
RIM 771.25
12" SW. INV. 755.45
12" E. INV. 765.55

(119b) MAINTAIN
5+37.16' 42.46' L
STORM CB 119b
RIM 771.53

(119c) MAINTAIN
4+69.14' 15.03' L
STORM CB 119c
RIM 771.26

(119f) MAINTAIN
4+70.55' 22.10' R
STORM CB 119F
RIM 770.75
12" S. INV. 767.45(R)

(124a) TAP, BULKHEAD INVESTIGATE, ADJUST & SHIFT CASTING INTO CURB LINE
3+99.19' 30.36' L
STORM CB 124a
RIM 771.83
12" E. INV. 767.80(BULKHEAD)
12" SE. INV. 767.80(R)
12" NE. INV. 767.80(R)
PR. 15" SW. INV. 767.70

(124b) TAP
4+31.79' 29.00' L
STORM CB 124b
RIM 772.09
PR. RIM 772.16
12" N. INV. 768.70(R)
PR. 8" E. 768.15

(CB) MAINTAIN
4+40.98' 36.19' R
CATCH BASIN
RIM 771.30
12" E. INV. 770.35

(341) MAINTAIN
4+69.52' 42.95' L
STORM CB 341
RIM 771.79

EX. WATER MAIN SCHEDULE

(06) MAINTAIN
3+19.80' 19.66' L
GVW 06
RIM 772.30

(12) MAINTAIN
3+62.07' 12.14' L
HYDRANT 12
F.G. 772.57

(WS) INSTALL
STA. 3+72.16 22.85 L
IRRIGATION METER PIT ASSEMBLY W/ 1.5" WA 970 SERVICE
(PER DETAIL AND IRRIGATION PLANS)
PR. RIM 768.16

WATER SERVICE SCHEDULE

STATION	ADDRESS/DESC.	EX. W.M.	SVC. DIA.	SVC. MATERIAL	LENGTH REQUIRED	NEW CURB BOXX
03+72.16	22.85L NEW METER PIT	12"	1.5"	COPPER	25 L.F.	N.

EX. STREET LIGHT REMOVAL SCHEDULE

E. BROWN STREET, P.O.B. TO 2+82

NORTH:

STATION	OFFSET		ITEM
STA. 2+82.19	26.08'	L.	PEDESTRIAN STREET LIGHT
STA. 3+00.63	48.24'	L.	PEDESTRIAN STREET LIGHT
STA. 3+42.07	22.67'	L.	PEDESTRIAN STREET LIGHT

SOUTH:

STATION	OFFSET		ITEM
STA. 3+57.87	25.14'	R.	COBRA HEAD LIGHT POLE

UTILITY NOTE

THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

Pr. Storm Sewer Structure Schedule

Structure Name	Structure Details
JIL2 PR. 12" DIA. LANDSCAPE DRAIN W/ CAST-IRON BEE-HIVE COVER	PR. RIM 772.36 PR. 4" S. INV. 768.01

I.P. REMOVAL LEGEND

EX. COBRA HEAD LIGHT POLE REMOVAL

EXISTING PEDESTRIAN STREET LIGHT REMOVAL

LEGEND

MANHOLE — EXISTING SANITARY SEWER
SAN. CLEAN OUT
HYDRANT — GATE VALVE — EXISTING WATERMAIN
MANHOLE — CATCH BASIN — EXISTING STORM SEWER
EX. R. Y. CATCH BASIN
EXISTING BURIED CABLES
UTILITY POLE — GUY POLE — GUY WIRE — OVERHEAD LINES
LIGHT POLE
SIGN
EXISTING GAS MAIN
MANHOLE — PR. SANITARY SEWER
C.O. — HYDRANT — GATE VALVE — PR. WATER MAIN
INLET — C.B. — MANHOLE — PR. STORM SEWER
PR. R. Y. CATCH BASIN
PROPOSED TREE GRATE

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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Utility Plan (2 of 2)
Sta. 2+82 to P.O.E.

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02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
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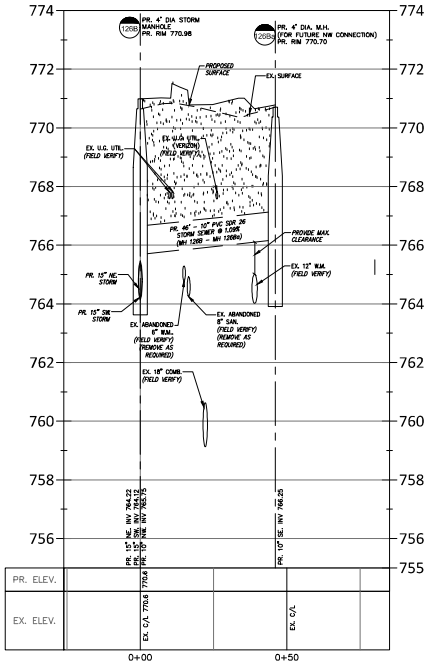
04-26-23	ADDENDUM 1

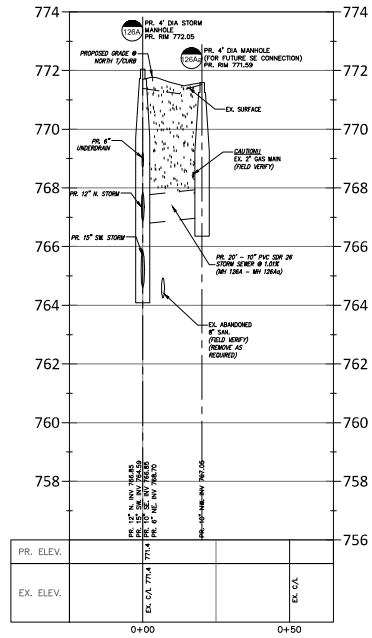
DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C2

7B



STORM PROFILE (MH 126B-MH 126Ba)



STORM PROFILE (MH 126A-MH 126Aa)

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Storm Profile Plan

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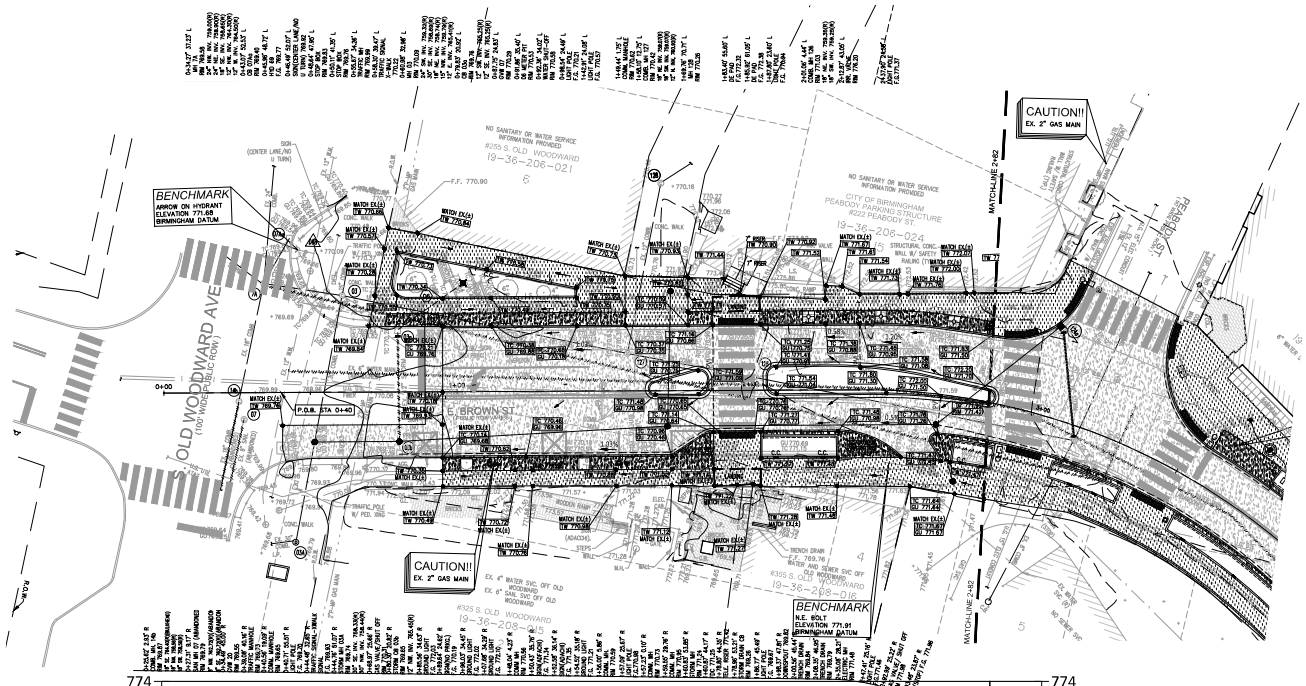
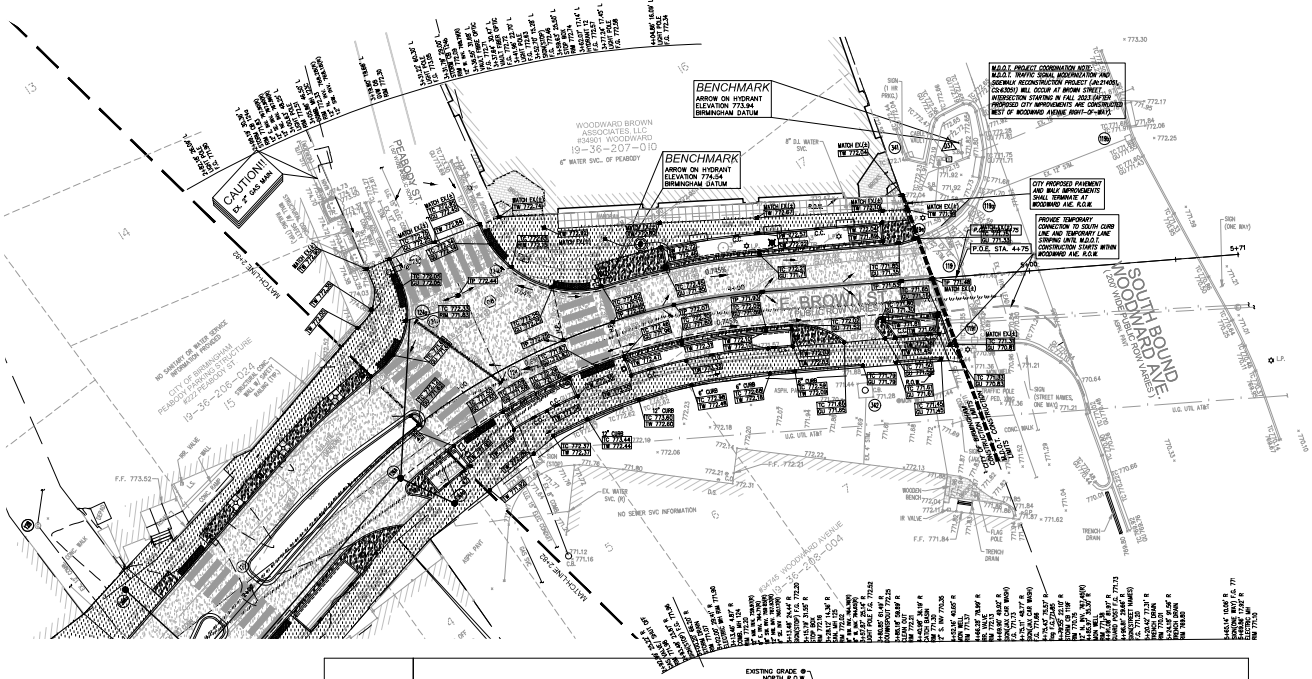
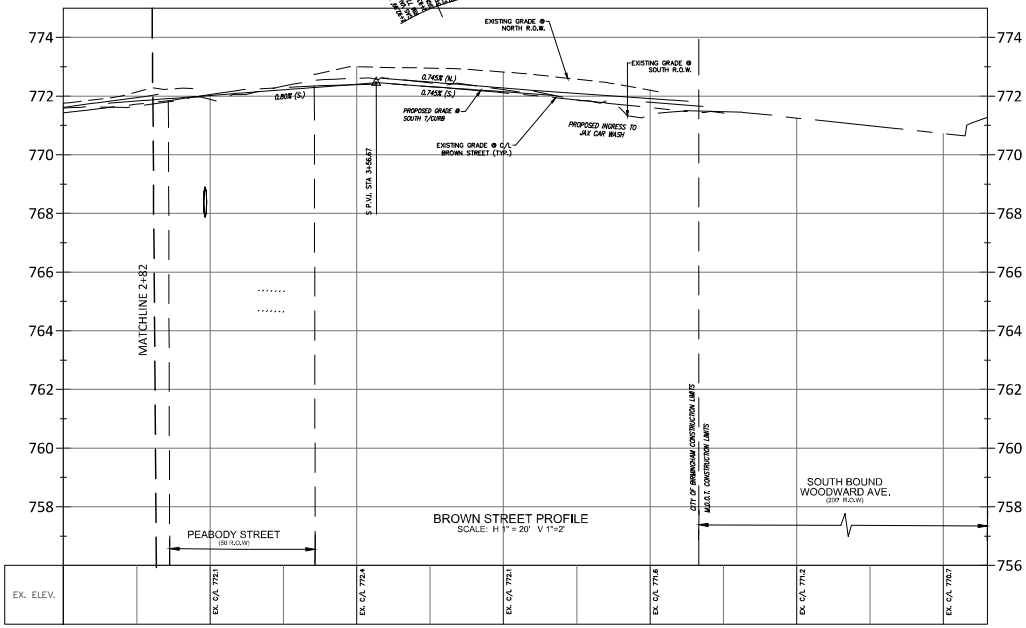
NFE JOB NO. D162-01
SHEET NO. C3


BENCHMARK
ARROW ON HYDRANT
ELEVATION 771.68
BIRMINGHAM DATUM
CAUTION!!
EX. 2" GAS MAIN
OLD WOODWARD AVE
(100' WIDE PUBLIC ROW)
E. BROWN ST
(VARIE PUBLIC ROW)
BENCHMARK
N.E. BOLT
ELEVATION 771.91
BIRMINGHAM DATUM
MATCHLINE 2+82
NO SANITARY OR WATER SERVICE INFORMATION PROVIDED
#255 S. OLD WOODWARD
19-36-206-021
CITY OF BIRMINGHAM
PEABODY PARKING STRUCTURE
#22 PEABODY ST.
19-36-206-024
#325 S. OLD WOODWARD
19-36-208-015
#335 S. OLD WOODWARD
19-36-208-016
P.O.B. STA 0+40
F.F. 770.90
F.F. 769.76
F.F. 771.59
F.F. 771.45
F.F. 771.78
F.F. 771.26
F.F. 771.36
F.F. 771.44
F.F. 771.23
F.F. 771.20
F.F. 771.22
F.F. 771.24
F.F. 771.25
F.F. 771.29
F.F. 771.30
F.F. 771.31
F.F. 771.32
F.F. 771.33
F.F. 771.34
F.F. 771.35
F.F. 771.36
F.F. 771.37
F.F. 771.38
F.F. 771.39
F.F. 771.40
F.F. 771.41
F.F. 771.42
F.F. 771.43
F.F. 771.44
F.F. 771.45
F.F. 771.46
F.F. 771.47
F.F. 771.48
F.F.





PAVING LEGEND

- PROPOSED 4" EXPOSED AGGREGATE SIDEWALK
- PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
- PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
- PROPOSED ASPHALT PAVEMENT
- PROPOSED WALK BOX-OUT FOR TREE/MULCH
- C.C. — PROPOSED CURB CUTS ON LANDSCAPE CURB ISLANDS

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- HYDRANT, GATE VALVE — EXISTING WATERMAIN
- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- EXISTING BURIED CABLES
- UTILITY POLE, GUY POLE, GUY WIRE — OVERHEAD LINES
- LIGHT POLE
- SIGN
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- PR. PEDESTRIAN LIGHT POLE
- PR. PARKING METER
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- GU 700.00 — PR. GUTTER ELEVATION
- TW 700.00 — PR. TOP OF WALK ELEV.
- TP 700.00 — PR. TOP OF PVMT. ELEV.
- RIM 700.00 — PR. RIM ELEV.

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SHEET
Grading Plan (2 of 2)

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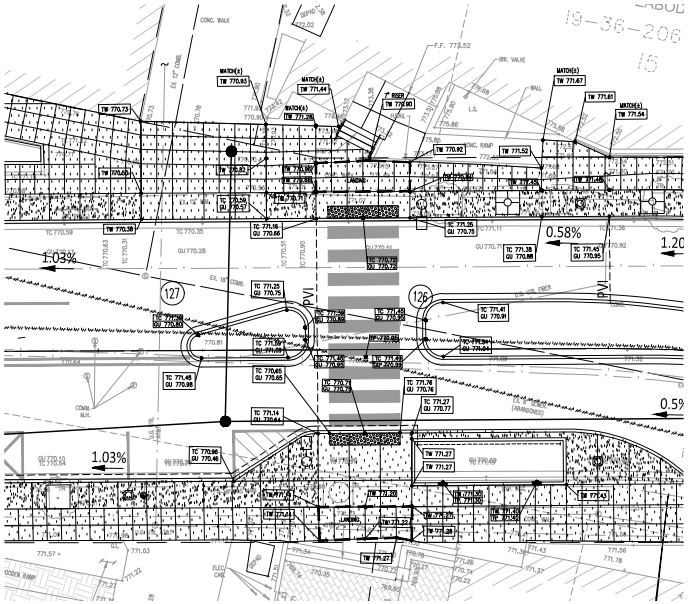
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C5



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SHEET
Intersection Grading
Detail (1 of 2)

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APPROVED BY: B. Buchholz

DATE: March 16, 2023

SCALE: 1" = 20'

NFE JOB NO. D162-01

SHEET NO. C6

PAVING LEGEND

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- PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
- PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
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- C.C. PROPOSED CURB CUTS ON LANDSCAPE CURB ISLANDS

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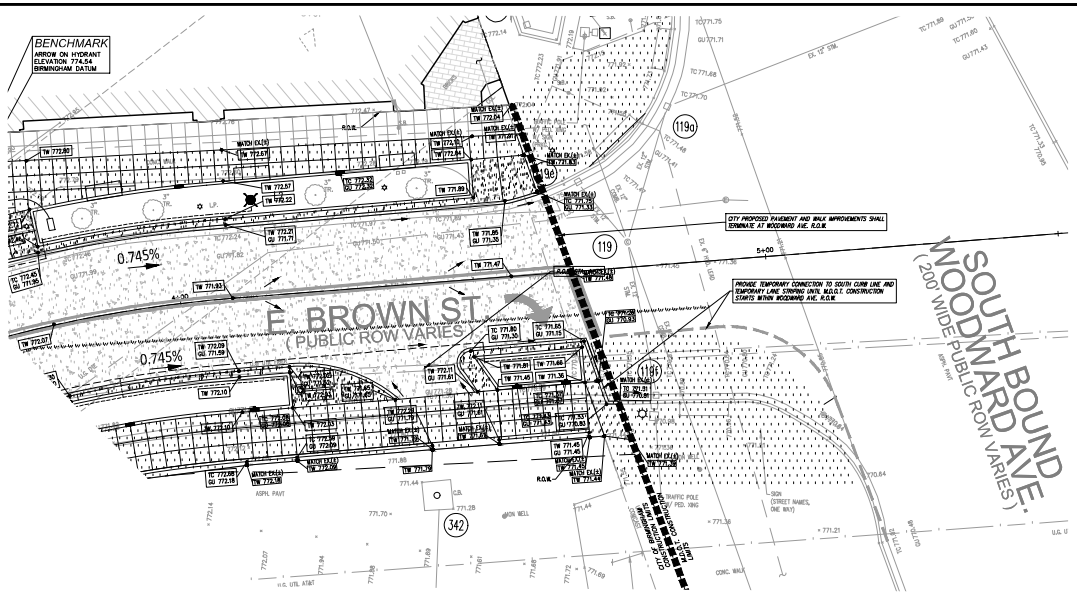
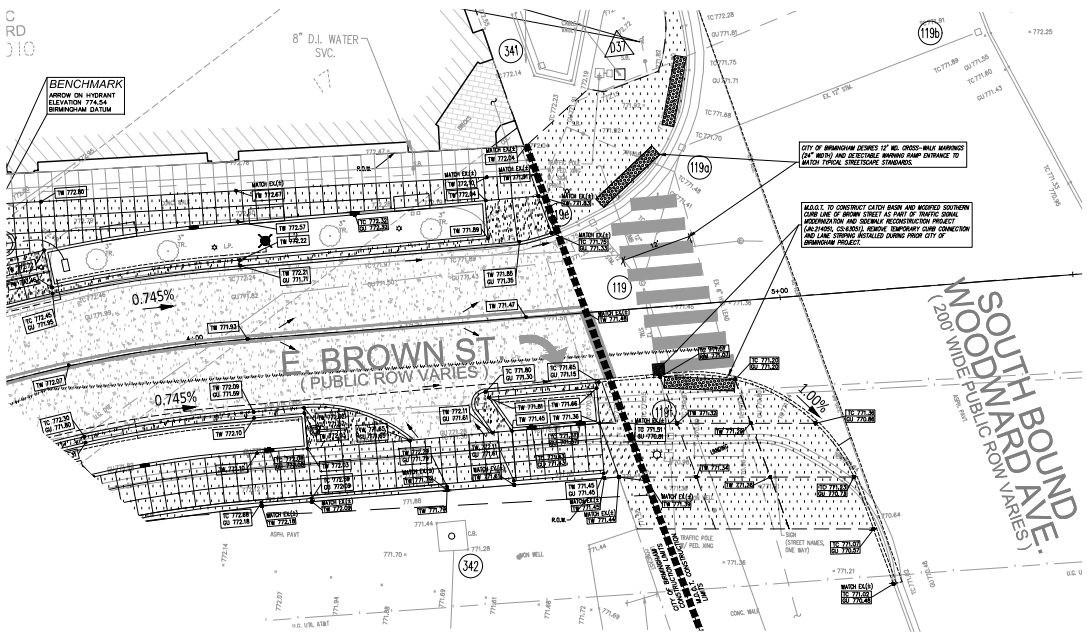
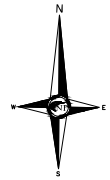
7B



BROWN STREET/ WOODWARD AVENUE(M1) INTERSECTION GRADING DETAIL
(CITY CONSTRUCTION LIMITS)



BROWN STREET/ WOODWARD AVENUE(M1) INTERSECTION GRADING DETAIL
(M.D.O.T. CONSTRUCTION LIMITS)



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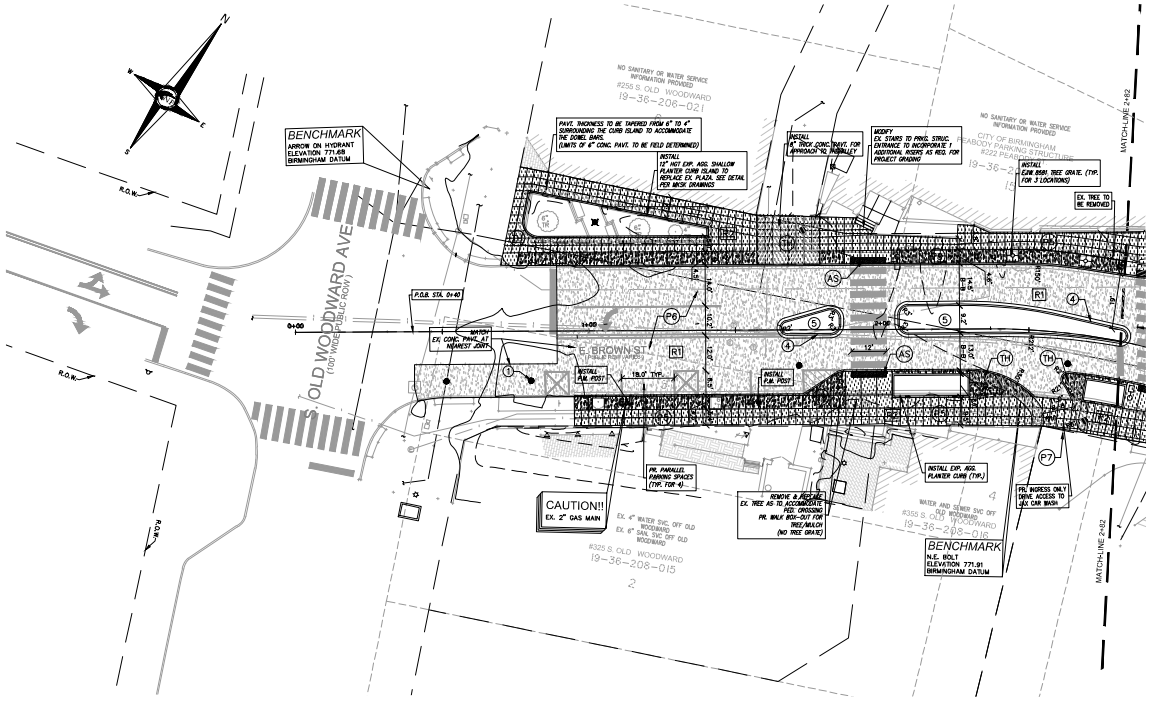
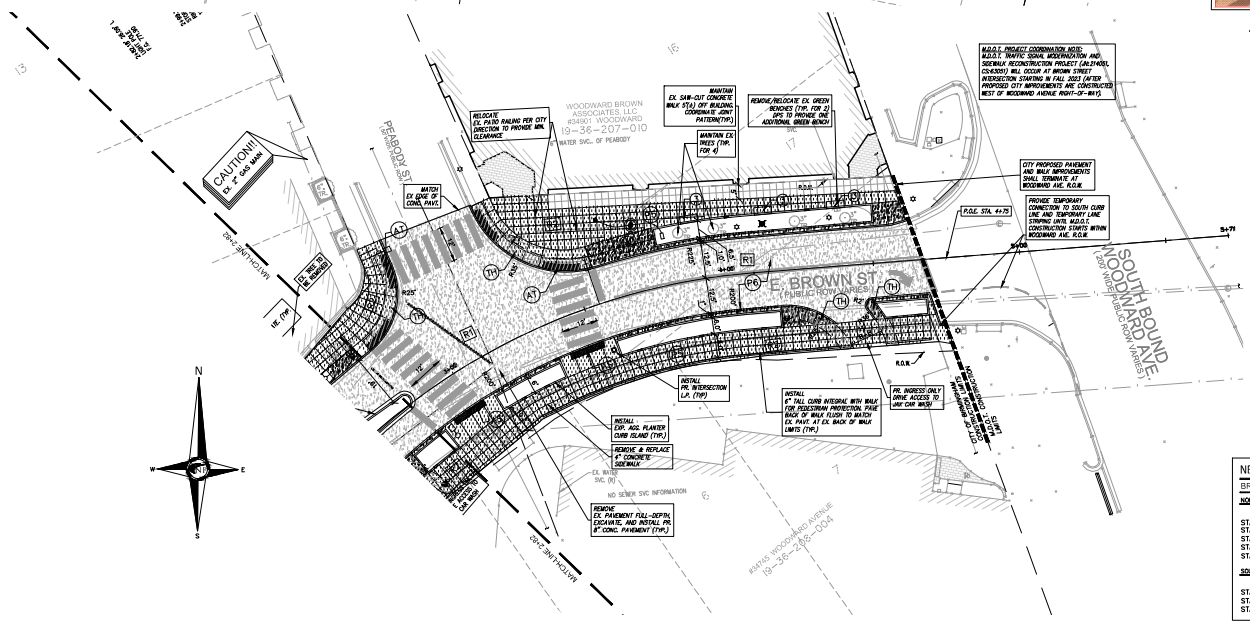




NEW PARKING METER POST & NEW STREET LIGHT SCHEDULE

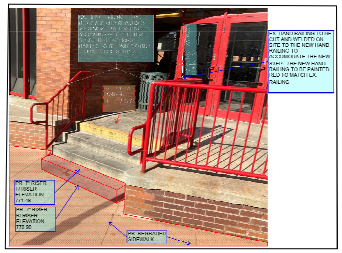
BROWN STREET P.O.E. to 2+82

NORTH WEST

STATION	OFFSET	ITEM	STATUS
STA. 00+98.54	24.48" N.W.	PED. STREET LIGHT	MAINTAIN
STA. 01+42.91	24.07" N.W.	PED. STREET LIGHT	MAINTAIN
STA. 02+04.69	24.73" N.W.	INTERSECTION LIGHT	NEW
STA. 02+32.28	24.77" N.W.	PED. STREET LIGHT	NEW
STA. 02+76.79	24.94" N.W.	PED. STREET LIGHT	NEW

SOUTH EAST

STATION	OFFSET	ITEM	STATUS
STA. 01+11.05	24.67" S.E.	PED. STREET LIGHT	NEW
STA. 01+13.55	24.52" S.E.	PARKING METER POST	NEW
STA. 01+55.05	24.58" S.E.	PED. STREET LIGHT	NEW
STA. 01+57.54	24.43" S.E.	PARKING METER POST	NEW
STA. 01+85.37	19.02" S.E.	INTERSECTION LIGHTING	NEW
STA. 02+35.03	19.21" S.E.	PED. STREET LIGHT	NEW



MODIFY STEPS & RAILING AT PEABODY PARKING STRUCTURE (LUMP SUM)

NEW PARKING METER POST & NEW STREET LIGHT SCHEDULE

BROWN STREET 2+82 to P.O.E.

NORTH WEST

STATION	OFFSET	ITEM	STATUS
STA. 03+00.63	48.24" N.	INTERSECTION LIGHT	NEW
STA. 03+55.34	16.46" N.	INTERSECTION LIGHT	NEW
STA. 03+77.23	17.45" N.	PED. STREET LIGHT	MAINTAIN
STA. 04+04.85	16.08" N.	PED. STREET LIGHT	MAINTAIN
STA. 04+36.29	17.03" N.	PED. STREET LIGHT	MAINTAIN

SOUTH EAST

STATION	OFFSET	ITEM	STATUS
STA. 02+89.00	18.18" S.	INTERSECTION LIGHT	NEW
STA. 03+77.23	17.45" S.	PED. STREET LIGHT	NEW
STA. 04+19.15	16.37" S.	PED. STREET LIGHT	NEW

REMOVAL NOTES & LEGEND

R1 — REMOVE EX. PAVEMENT FULL-DEPTH, INCLUDING CONC. CURB & GUTTER, EXCAVATE, AND INSTALL PR. PAVEMENT SECTIONS AS INDICATED (TYP.)

R2 — REMOVE EX. SIDEWALK (INCLUDING EX. BRICK PAVER WITH REINFORCED CONC. BASE AREAS) FULL-DEPTH, EXCAVATE & INSTALL PR. SIDEWALK SECTIONS AS INDICATED (TYP.)

R3 — REMOVE & REPLACE REMOVE EX. CURB & GUTTER AND INSTALL PR. 18" MD. CURB AND GUTTER PER M.D.O.T. DETAIL F2, MODIFIED (TYP.)

PAVING NOTES & LEGEND

- P5 — PR. SAWCUT 4" CONC. SIDEWALK (LIGHT BROOM FINISH)
- P6 — PR. CONC. PAVT. W/ INTEGRAL CURB (8" THICK ON BROWN)
- P7 — PR. FULL-DEPTH ASPHALT REPAIR (MATCH EX. CONDITIONS)
- P8 — PR. EXPOSED AGG. CONC. SIDEWALK
- TH — THICKEN PR. CONC. WALK (6" & 8" THICK)
- AS — PR. ADA TRUNCATED DOMES – STRAIGHT
- AR — PR. ADA TRUNCATED DOMES – RADIAL
- 1 — ALL RIMS OF STRUCTURES, SHUT-OFFS, HANDHOLES & BOXES SHALL BE FLUSH TO PROPOSED FINISHED GRADES (TYP.)
- 2 — EXISTING SIDEWALK TO REMAIN & BE PROTECTED (OUTSIDE OF SHOWN REPAIR LIMITS) (TYP.)
- 3 — PROPOSED BIRMINGHAM GREEN BENCH (TYP.)
- 4 — PROPOSED MEDIAN ISLAND CURB & GUTTER, PER M.D.O.T. DETAIL F1/F2.
- 5 — PROPOSED MEDIAN LANDSCAPE ISLAND (SEE L.S. PLAN FOR PLANTING DETAILS)

PR. CURB & GUTTER, DETAIL F1/F2
PR. FLOW LINE
PR. INTEGRAL CURB PER M.D.O.T. DETAIL F2, MOD.
PR. EXP. AGG. PLANTER CURB (SEE L.S. PLAN FOR PLANTING DETAILS)

PAVING LEGEND

- PROPOSED 4" EXPOSED AGGREGATE SIDEWALK
- PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
- PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
- PROPOSED ASPHALT PAVEMENT
- PROPOSED WALK BOX-OUT FOR TREE/MULCH

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- SAN. CLEAN OUT
- HYDRANT / GATE VALVE — EXISTING WATERMAIN
- MANHOLE / CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- EXISTING BURIED CABLES
- UTILITY POLE / GUY POLE / GUY WIRE — OVERHEAD LINES
- LIGHT POLE
- SIGN
- C.O. / MANHOLE — EXISTING GAS MAIN
- PR. SANITARY SEWER
- CHYDRANT / GATE VALVE — PR. WATER MAIN
- INLET / C.B. / MANHOLE — PR. STORM SEWER
- PR. R. Y. CATCH BASIN
- PROPOSED LIGHT POLE
- PROPOSED TREE GRATE
- PR. INTERSECTION LIGHT POLE
- PR. PEDESTRIAN LIGHT POLE
- PR. PARKING METER

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NOWAK & FRAUS ENGINEERS
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PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Brown Street Paving Plan

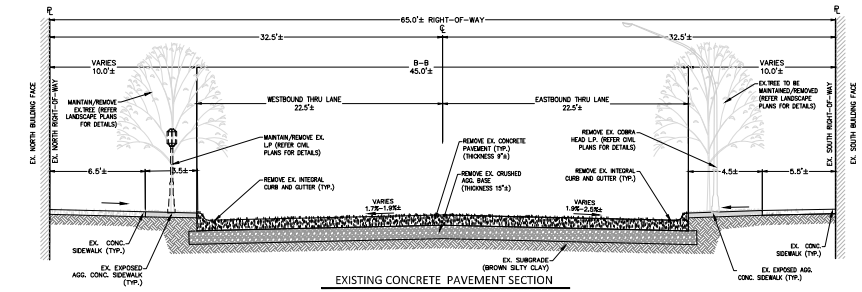
811 Know what's below Call before you dig.

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY
02-04-23	CONCEPT PLAN
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
04-10-23	BIDS
04-26-23	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C8

7B

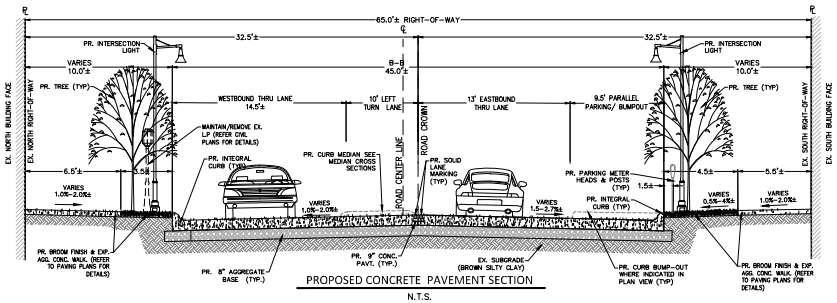


EXISTING CONCRETE PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. P.O.B. TO 3+00

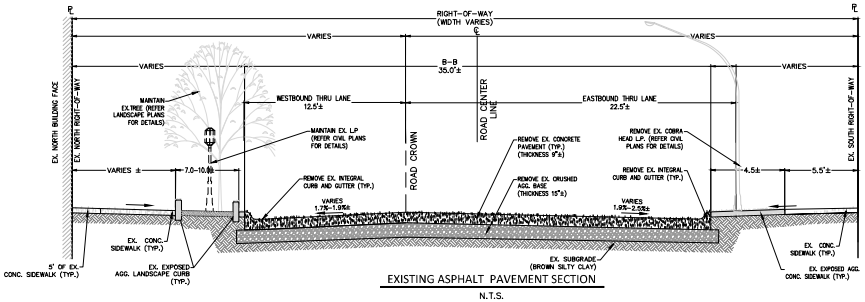


PROPOSED CONCRETE PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. P.O.B. TO 3+00

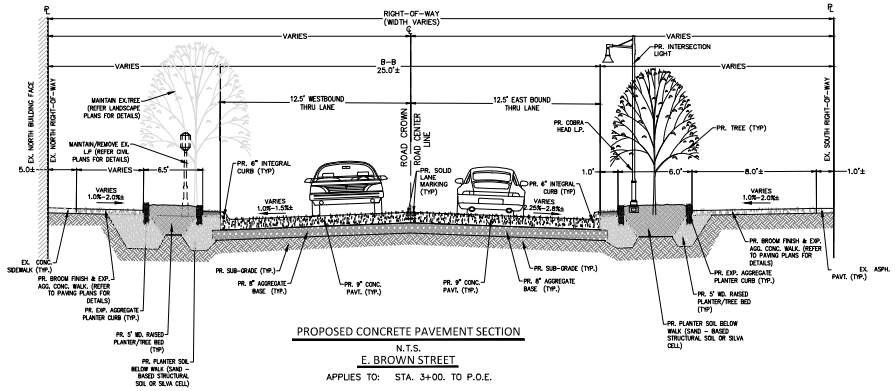


EXISTING ASPHALT PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. 3+00. TO P.O.E.



PROPOSED CONCRETE PAVEMENT SECTION

N.T.S.

E. BROWN STREET

APPLIES TO: STA. 3+00. TO P.O.E.

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SEAL

PROJECT

Brown Street Paving Project
Contract #5-23(P)

CLIENT

BIRMINGHAM
A WALKABLE CITY

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION

Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET

Exisiting & Proposed
Cross-Section

811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
03-16-2023	90% CITY REVIEW
04-10-2023	BIDS

DRAWN BY: G. Viju

DESIGNED BY: G. Viju

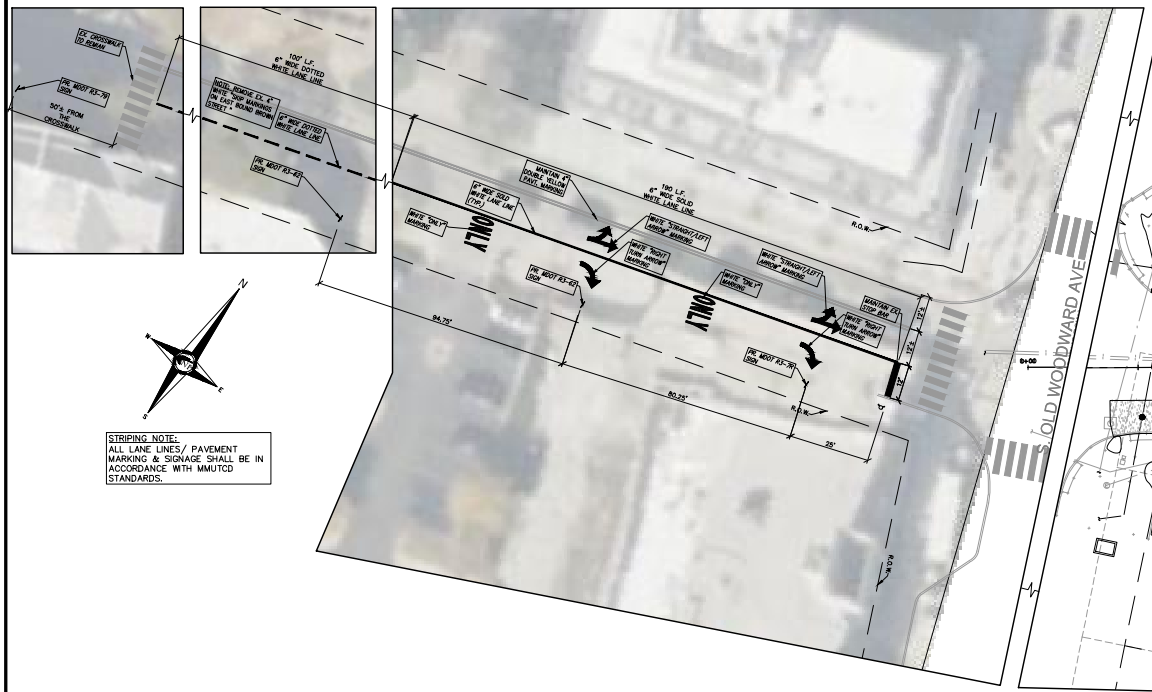
APPROVED BY: B. Buchholz

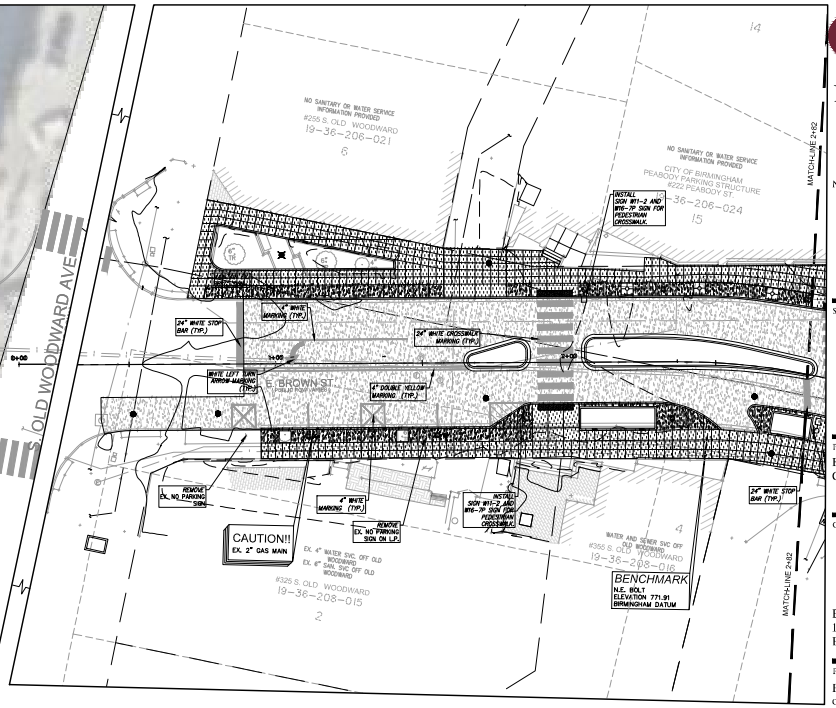
DATE: 03-16-2023

SCALE: N.T.S.

NFE JOB NO. **D162-01**

SHEET NO. **C9**





SIGN DETAIL-R3-7R
(30" x 30")

SIGN DETAIL-R3-62
(36" x 30")

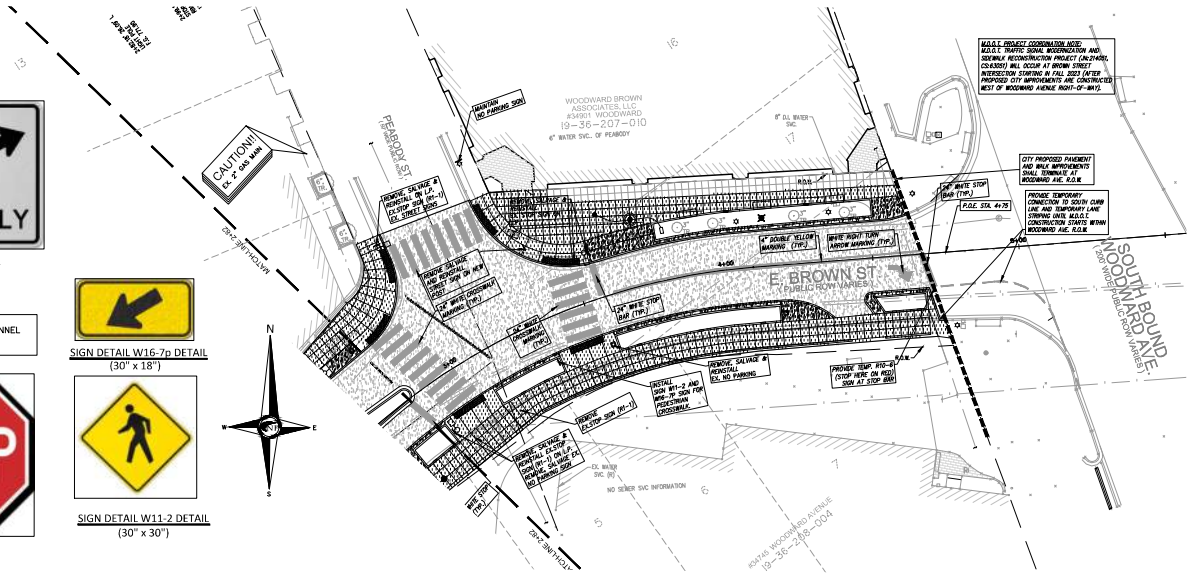
SIGN DETAIL-R10-6
(18" x 24")

NOTE:
ALL SIGN BACKS & U-CHANNEL POSTS SHALL BE PAINTED BIRMINGHAM GREEN

SIGN DETAIL-R1-1
(30" x 30")

SIGN DETAIL W16-7p DETAIL
(30" x 18")

SIGN DETAIL W11-2 DETAIL
(30" x 30")



PAVING LEGEND

- PROPOSED 4" EXPOSED AGGREGATE SIDEWALK
- PROPOSED 4" STANDARD SIDEWALK W/ SAWCUT PATTERN
- PROPOSED 8" CONCRETE PAVEMENT W/ INT. CURB
- PROPOSED ASPHALT PAVEMENT
- PROPOSED WALK BOX-OUT FOR TREE/MULCH

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- HYDRANT, GATE VALVE — SAN. CLEAN OUT
- GATE VALVE — EXISTING WATERMAIN
- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EX. R. Y. CATCH BASIN
- UTILITY POLE, GUY POLE, GUY WIRE — EXISTING BURIED CABLES
- OVERHEAD LINES
- LIGHT POLE
- SIGN
- C.O. MANHOLE — EXISTING GAS MAIN
- HYDRANT, GATE VALVE — PR. SANITARY SEWER
- PR. WATER MAIN
- INLET, C.B., MANHOLE — PR. STORM SEWER
- PR. R. Y. CATCH BASIN
- PROPOSED LIGHT POLE
- PROPOSED TREE GRATE

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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Brown Street Striping and Signage Plan

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DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY
02-04-23	CONCEPT PLAN
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
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04-26-23	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'

NFE JOB NO. D162-01
SHEET NO. C10

7B

BROWN STREET CLOSED
OLD WOODWARD TO
WOODWARD

36" x 72" ADVANCE WARNING SIGN "A"
BLACK LEGEND ON ORANGE BACKGROUND

BROWN STREET CLOSED
OLD WOODWARD TO
WOODWARD
FOLLOW DETOUR

36" x 72" ADVANCE WARNING SIGN "B"
BLACK LEGEND ON ORANGE BACKGROUND

10" x 30"
ADVANCED WARNING SIGN "C"
BLACK LEGEND ON ORANGE
BACKGROUND

WOODWARD AVE. (M1)

10" x 30"
ADVANCED WARNING SIGN "D"
BLACK LEGEND ON ORANGE
BACKGROUND

SB. WOODWARD (M1)

10" x 30"
ADVANCED WARNING SIGN "E"
BLACK LEGEND ON ORANGE
BACKGROUND

SB. OLD WOODWARD

10" x 30"
ADVANCED WARNING SIGN "F"
BLACK LEGEND ON ORANGE
BACKGROUND

NB. WOODWARD (M1)

DETOUR

30" x 24"
ADVANCED WARNING SIGN "G"
BLACK LEGEND ON ORANGE
BACKGROUND
(PER.M.D.O.T. M4-9U)
(MOUNT BELOW WARNING
SIGN "C/D/E/F" WHERE INDICATED)

DETOUR

30" x 24"
ADVANCED WARNING SIGN "H"
BLACK LEGEND ON ORANGE
BACKGROUND
(PER.M.D.O.T. M4-9L)
(MOUNT BELOW WARNING
SIGN "C/D/E/F" WHERE INDICATED)

DETOUR

30" x 24"
ADVANCED WARNING SIGN "I"
BLACK LEGEND ON ORANGE
BACKGROUND
(PER.M.D.O.T. M4-9R)
(MOUNT BELOW WARNING
SIGN "C/D/E/F" WHERE INDICATED)

END
DETOUR

24" x 18"
ADVANCED WARNING SIGN "J"
BLACK LEGEND ON ORANGE BACKGROUND

BROWN STREET CLOSED
OLD WOODWARD TO
WOODWARD
SEEK ALT ROUTE

36" x 72" ADVANCE WARNING SIGN "K"
BLACK LEGEND ON ORANGE BACKGROUND

SIDEWALK
CLOSED

18" x 30"
ADVANCE WARNING SIGN "L"
BLACK LEGEND ON ORANGE
BACKGROUND

ROAD
CLOSED
AHEAD

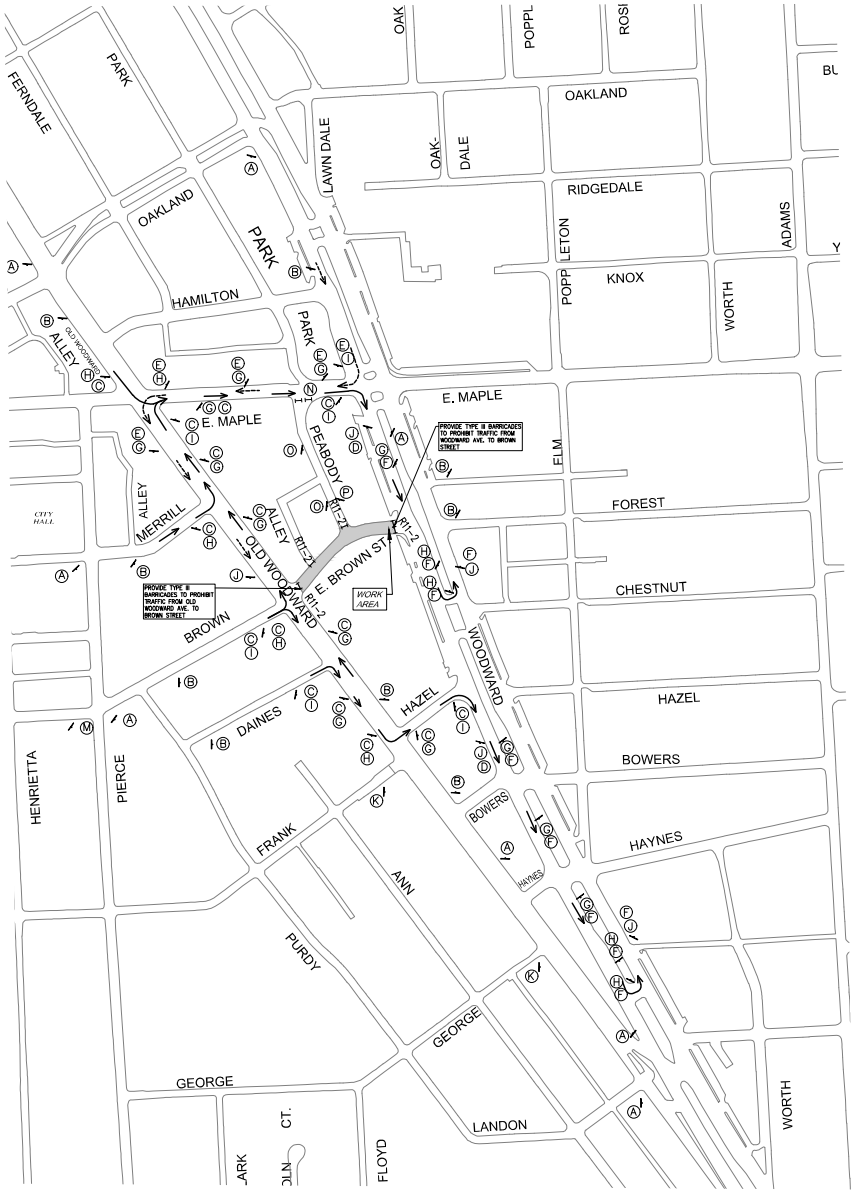
36" x 36"
ADVANCE WARNING SIGN "M"
BLACK LEGEND ON ORANGE
BACKGROUND

ADVANCED WARNING SIGN "O"
R3-1

ADVANCED WARNING SIGN "P"
R3-2

SPECIAL ADVANCED WARNING SIGN QUANTITIES

DESIGNATION	DESCRIPTION	SIZE	QUANTITY
SIGN "A"	BROWN STREET CLOSED OLD WOODWARD TO WOODWARD	36"x72"	7
SIGN "B"	BROWN STREET CLOSED OLD WOODWARD TO WOODWARD FOLLOW DETOUR	36"x72"	9
SIGN "C"	WOODWARD AVE.(M1)	10"x30"	15
SIGN "D"	S.B. WOODWARD (M1)	10"x30"	2
SIGN "E"	S.B. OLD WOODWARD	10"x30"	5
SIGN "F"	N.B. WOODWARD (M1)	10"x30"	10
SIGN "G"	DETOUR W/ UP ARROW (M.D.O.T. M4-9U)	30"x24"	13
SIGN "H"	DETOUR W/ LEFT ARROW (M.D.O.T. M4-9L)	30"x24"	8
SIGN "I"	DETOUR W/ RIGHT ARROW (M.D.O.T. M4-9R)	30"x24"	5
SIGN "J"	END DETOUR	24"x18"	5
SIGN "K"	BROWN STREET CLOSED O.W.W. TO WOODWARD SEEK ALT ROUTE	36"x72"	2
SIGN "L"	SIDEWALK CLOSED	18"x30"	6
SIGN "M"	ROAD CLOSED AHEAD	10"x30"	2
SIGN "N"	ROAD CLOSED TO THRU TRAFFIC	18"x24"	1
SIGN "O"	NO RIGHT TURN (M.D.O.T. R3-1)	30"x24"	2
SIGN "P"	NO LEFT TURN (M.D.O.T. R3-2)	30"x24"	1
OTHER ADVANCED WARNING SIGN QUANTITIES AS SHOWN			
DESIGNATION	DESCRIPTION	SIZE	QUANTITY
R11-2	ROAD CLOSED	48"x30"	9



SYMBOL KEY

- TYPE III BARRICADES
- ADVANCED WARNING SIGN
- DETOUR ROUTE (N.B./S.B. O.W.W.)
- DETOUR ROUTE (N.B./S.B. W.W.)

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SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Brown Street -Detour Plan

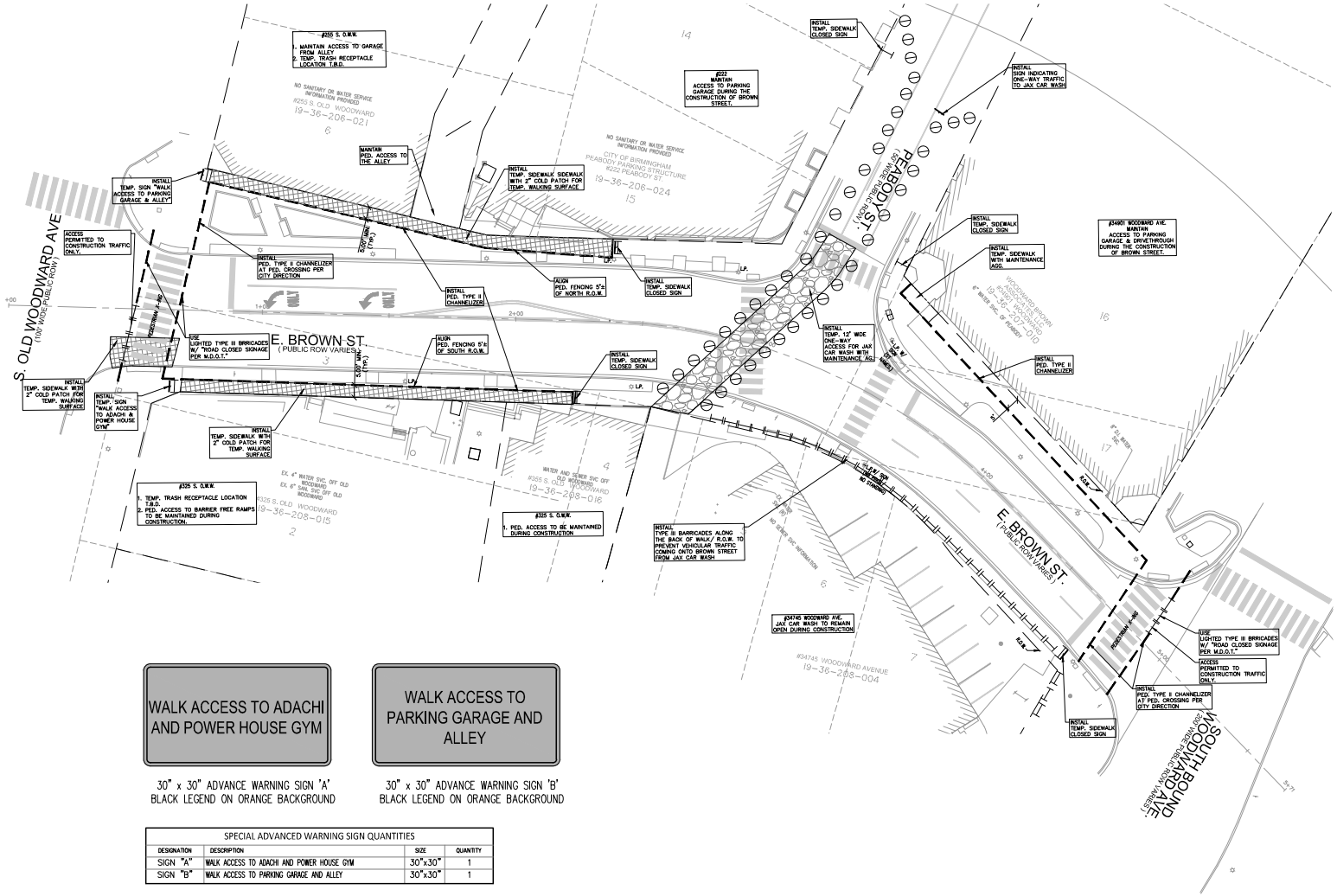
811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
03-16-2023	90% CITY REVIEW
04-10-2023	BIDS
04-26-2023	ADDENDUM 1

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: 03-16-2023
SCALE: N.T.S.

NFE JOB NO. D162-01
SHEET NO. C11

7B



WALK ACCESS TO ADACHI AND POWER HOUSE GYM

30" x 30" ADVANCE WARNING SIGN 'A'
BLACK LEGEND ON ORANGE BACKGROUND

WALK ACCESS TO PARKING GARAGE AND ALLEY

30" x 30" ADVANCE WARNING SIGN 'B'
BLACK LEGEND ON ORANGE BACKGROUND

SPECIAL ADVANCED WARNING SIGN QUANTITIES

DESIGNATION	DESCRIPTION	SIZE	QUANTITY
SIGN "A"	WALK ACCESS TO ADACHI AND POWER HOUSE GYM	30"x.30"	1
SIGN "B"	WALK ACCESS TO PARKING GARAGE AND ALLEY	30"x.30"	1

PEDESTRIAN TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL PROVIDE SUFFICIENT MANPOWER TO MAINTAIN SAFE PEDESTRIAN TRAFFIC PATTERNS AND ACCESS TO BUSINESSES, AND PREVENT PEDESTRIANS FROM ENTERING THE CONSTRUCTION AREAS THROUGHOUT THE DURATION OF THE PROJECT (PAID AS "PEDESTRIAN TRAFFIC CONTROL", LUMP SUM).
2. PEDESTRIAN TRAFFIC ROUTES SHALL BE DESIGNATED "PEDESTRIAN TYPE II CHANNELIZERS, TEMP" AS DEPICTED ON THIS PLAN, OR AS REQUIRED BY CITY.
3. PEDESTRIAN CROSSING LOCATIONS MAY BE REQUIRED TO BE SHIFTED THROUGHOUT THE PROJECT, DEPENDING ON WORK TASKS REQUIRED IN VARIOUS LOCATIONS, SCHEDULE OF OPERATIONS, ETC.
4. TEMPORARY SIGNAGE AND SUPPLEMENTARY TRAFFIC CONTROLS SHALL BE PROVIDED AS NECESSARY TO NOTIFY PEDESTRIANS OF TEMPORARY WALK CLOSURES & PEDESTRIAN DETOUR ROUTES

PED. FENCE LEGEND

- PR. TEMP. TYPE II CHANNELIZER
- PR. 2" COLD PATCH FOR TEMP. WALKING SURFACE
- PR. TEMP. SIDEWALK WITH MAINTENANCE AGG.
- PR. LIGHTED TYPE III BARRICADE
- PR. TRAFFIC BARRELS

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SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Pedestrian Access &
Traffic Maintenance Plan

811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
03-16-23	90% CITY REVIEW
04-10-23	BIDS

DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: 1" = 20'
20 10 0 10 20 30

NFE JOB NO. D162-01
SHEET NO. C12

7B

1. BRICK PAVERS IN PUBLIC S.W. AREA SHALL BE REMOVED & DISPOSED OF AS DIRECTED BY CITY. ON PRIVATE PROPERTY BRICK PAVERS SHALL BE REMOVED AND STOCKPILLED FOR REINSTALLMENT AS DIRECTED BY CITY
2. ALL PAVEMENT TO BE REMOVED SHALL BE SAWCUT FULL DEPTH.
3. ANY GRAVEL REPLACEMENT NECESSARY FOR REGRADING DRIVEWAYS SHALL BE CONSIDERED INCLUDED IN THE COST OF CONCRETE DRIVE APPROACH.
4. ALL TREES NOT INDICATED FOR REMOVAL SHALL BE PROTECTED DURING CONSTRUCTION. WHERE NECESSARY, TREE ROOTS SHALL BE CUT CLEANLY. AT NO TIME WILL RIPPING OR TEARING OF TREE ROOTS BE ACCEPTABLE.
5. ALL DRIVEWAYS (BEHIND THE SIDEWALK) SHALL BE REPAIRED WITH A CROSS SECTION WHICH MATCHES THE EXISTING IN THICKNESS, OR A MINIMUM 4.0" BITUMINOUS MIXTURE No. 13A. IF THE EXISTING DRIVEWAY IS GREATER THAN 4.0" IN DEPTH, THE THICKNESS OF THE BITUMINOUS MIXTURE No. 13A SHALL BE ADJUSTED TO MAKE UP THE DIFFERENCE.
6. UNLESS OTHERWISE SHOWN, PROPOSED GRADES IN PROFILE ARE TOP OF CURB GRADES.
7. ROCKS, OR OTHER MISC. DEBRIS WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE, UNLESS DIRECTED OTHERWISE FROM THE CITY.
8. THE PAY ITEM "ADJUST STRUCTURE COVER" APPLIES ONLY TO PRE-EXISTING STRUCTURES TO BE ADJUSTED TO PROPOSED GRADES AS PART OF CONSTRUCTION.
9. IF THE CONTRACTOR HAS MULTIPLE CREWS WORKING THAT REQUIRES MULTIPLE CITY INSPECTORS ON A GIVEN WORK DAY, THE PAY ITEM "INSPECTOR CREW DAYS" SHALL BE MULTIPLIED BY THE CORRESPONDING NUMBER OF INSPECTORS REQUIRED DURING SAID WORK DAY.

PAVING NOTES

1. PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

   CONCRETE ROAD/PARKING: BASE COURSE – 21AA CRUSHED LIMESTONE AGGREGATE (8" THICK)
   MIX – PORTLAND CEMENT TYPE IA (AIR-ENTRAINED), TO COMPLY WITH MDOT 3500HP
   REQUIREMENTS (8" THICK ROAD TRAVEL LANES, 7" THICK ROAD PARKING AREAS).

   CONCRETE FLATWORK REQUIREMENTS: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED), TO COMPLY WITH MDOT 3500

   ALL CONCRETE PAVEMENT AND FLATWORK MIXES USED ON THIS PROJECT SHALL COMPLY WITH A MINIMUM GROUND GRANULATED BLAST-FURNACE SLAG (GGBFS) SUBSTITUTION OF TWENTY-FIVE (25) PERCENT SUBJECT TO SEASONAL LIMITATIONS PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2003 EDITION, OR USE LOW ALKALI (0.6% OR LESS TOTAL CEMENT ALKALI) TYPE I OR TYPE II CEMENT.

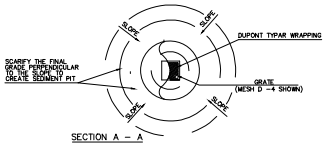
2. PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.
3. ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.
4. ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-S164.
5. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2003 EDITION.
6. ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.
7. ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.
8. CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.
9. FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.
10. EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS (INCLUDED IN PAVING WORK).
11. EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADII.
12. SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.
13. ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.
14. FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.
15. R.A.P. NOT ALLOWED IN SURFACE / TOP COURSE OF ASPHALT.

WATER MAIN NOTES

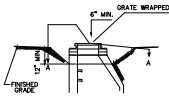
1. ALL WATER MAINS 4" AND LARGER SHALL BE DUCTILE IRON PIPE THICKNESS CLASS 54, WITH PUSH ON TYPE JOINTS AND CEMENT LINED (DOUBLE THICKNESS).
2. NEW WATER MAINS SHALL BE INSTALLED WITH A MINIMUM 5 FEET OF COVER. EXCEPTIONS WILL BE ALLOWED WHEN NECESSARY TO CONNECT TO EXISTING MAIN OR WHEN AUTHORIZED BY THE ENGINEER.
3. KNOWN WATER SERVICES BASED ON FIELD INFORMATION OR CITY RECORDS ARE SHOWN ON THE PLANS AS FOLLOWS: "C" = COPPER, "L" = LEAD AND "W.S." = WATER SERVICE TYPE UNKNOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL EXISTING SERVICES TO THE NEW MAIN AFTER IT HAS BEEN APPROVED FOR USE.
4. COAT ALL BOLTS ON MECHANICAL FITTINGS WITH TAR.
5. HYDRANT CONNECTION TO CONSIST OF 6" DUCTILE IRON PIPE, 6" GATE VALVE AND BOX, AND HYDRANT. HYDRANT SHALL BE EJIW MODEL 5BR WITH 6" MECHANICAL JOINT INLET, TWO PUMPER INLETS, ALL OPENING LEFT, 5'-6" TRENCH, PLUGGED DRAIN AND BLOCK BOLTS.
6. INSTALL GATE VALVE AS CLOSE TO HYDRANT AS PRACTICABLE.
7. GATE VALVES 4" AND LARGER MAY BE MUELLER BRAND SPECIFIED, OR APPROVED EQUIVALENT. ALL MATERIALS RELATIVE TO WATER SERVICE CONNECTIONS SHALL BE MUELLER BRAND.
8. IN ABANDONING MAINS, THE FOLLOWING SHALL BE DONE: PLUG ALL OPEN PIPE ENDS WITH MASONRY. DISCONNECT MAINS WHICH ARE TO BE ABANDONED FROM FITTINGS AT LIVE MAINS AND PLUG AND BLOCK THOSE FITTINGS. FILL MAIN TO BE ABANDONED WITH GROUT OR HYDRAULIC CEMENT.
9. WORK INDICATED BY (A) SHALL BE PERFORMED AFTER THE NEW MAINS ARE PLACED IN SERVICE.
10. THE LOCATIONS AND TYPES OF SERVICE LEADS IS BASED ON THE BEST AVAILABLE INFORMATION. THE EXACT LOCATION OF SERVICE LEADS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
11. WHERE APPLICABLE, THE APPROPRIATE SECTIONS OF EXISTING WATERMAIN SHALL BE SHUTDOWN AND DEPRESSURIZED PRIOR TO A) CUTTING AND REMOVING, B) CUTTING AND INSTALLING PROPOSED TEE CONNECTIONS, C) PERFORMING ANY AND ALL OTHER WORK AROUND/ADJACENT TO HYDRANTS AND ALL OTHER CONNECTIONS, WHILE MEETING AND/OR EXCEEDING APPLICABLE INDUSTRY SAFETY PRECAUTIONS AND MIOSHA STANDARDS.

STORM SEWER NOTES (where applicable)

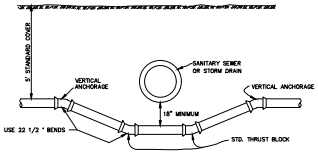
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY. THE MUNICIPALITY STANDARD NOTES, DETAILS AND SPECIFICATIONS SHALL BE INCORPORATED AS PART OF THESE PLANS.
2. ALL STORM SEWER TRENCHES UNDER OR WITHIN THREE (3) FEET OF EXISTING OR PROPOSED PAVEMENT SHALL BE BACK FILLED WITH MDOT CLASS II MATERIAL (SAND) AND BE MACHINE COMPACTED TO A MINIMUM OF 95 OF THE MATERIAL'S MAXIMUM DENSITY. PAVEMENT SHALL INCLUDE PARKING LOTS, DRIVE APPROACHES, 95 CURB & GUTTER AND ADJACENT WALKS.
3. ALL STORM SEWER PIPE SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER UNLESS OTHERWISE INCLUDED ON THE PLANS.
4. STORM SEWER SHALL BE OF THE TYPE, SIZE & CLASS DESIGNATION INDICATED ON THE PLANS AND LIKEWISE BE INSTALLED AT THE PROPOSED LINE & GRADE INDICATED.
5. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM SPECIFICATION C-76 CL IV.
6. ALL MAN HOLE, CATCH BASIN, INLET, REAR YARD DRAINAGE STRUCTURES AND COVERS SHALL BE AS INDICATED ON THE PLANS AND CONSTRUCTED IN ACCORDANCE WITH MUNICIPALITY STANDARDS.
7. INSTALL TRAPS ON THE FIRST CATCH BASIN (TYPICALLY A 4' DIAMETER STRUCTURE WITH 2' SUMP) THAT IS UPSTREAM OF ITS CONNECTION TO A MAINLINE STORM OR SEWER MANHOLE, TO CAPTURE FLOATABLES AND TO MINIMIZE ESCAPE OF ODOR.
8. THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
9. EXACT GRADES AND INVERTS OF PROPOSED STORM SEWER ARE TO BE CHECKED WITH THE FIELD ENGINEER PRIOR AND DURING INSTALLATION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY PLAN INCONSISTENCY AND/OR UTILITY CONFLICTS.
10. ALL STORM SEWER PIPE JOINTS SHALL BE "PREMIUM JOINT" MODIFIED GROOVED TONGUE (M.G.T.) WITH SYNTHETIC RUBBER GASKETS CONFORMING TO ASTM SPECIFICATION C-443 & C-361, UNLESS OTHERWISE INDICATED ON THE PLANS.
11. FACILITY MANUFACTURED PRECAST TEE SECTIONS SHALL BE FOR ROOF DRAINS AND/OR SUMP PUMP LEADS AND LATERALS WHERE INDICATED ON THE PLANS. BLIND TOP CONNECTIONS INTO STORM SEWER WILL NOT BE PERMITTED BY BREAKING PIPE WALL.
12. THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL SITE INSPECTIONS.



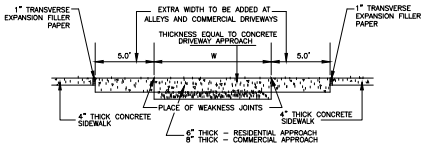
SECTION A – A



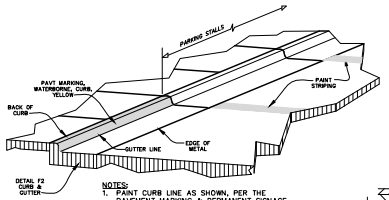
LOW POINT INLET FILTER & SEDIMENT PIT DETAIL
N.T.S.



STANDARD SEWER OR STORM CROSSING
N.T.S.

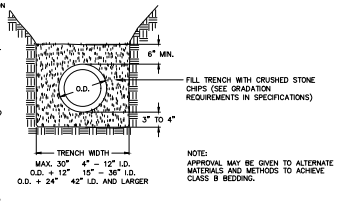


THICKENED CONCRETE SIDEWALK (PLAIN)
N.T.S.



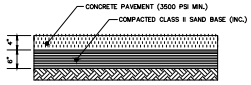
NOTES:
1. PAINT CURB LINE AS SHOWN, PER THE PAVEMENT MARKING & PERMANENT SIGNAGE PLANS, AND/OR AS DIRECTED BY THE ENGINEER
2. NO CURB PAINT SHALL BE ALLOWED WITHIN AN M.D.O.T. RIGHT-OF-WAY.

CURB PAINT DETAIL
N.T.S.

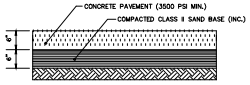


NOTE:
APPROVAL MAY BE GIVEN TO ALTERNATE MATERIALS AND METHODS TO ACHIEVE CLASS B BEDDING.

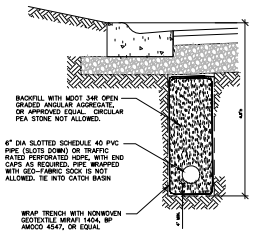
STANDARD PIPE BEDDING
N.T.S.



4" CONCRETE SIDEWALK SECTION
STANDARD SIDEWALK REPLACEMENTS/INSTALLATIONS N.T.S.

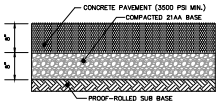


6" CONCRETE SIDEWALK SECTION
TO MATCH SPECIFIED PAVEMENT THICKNESS THROUGH DRIVE APPROACH N.T.S.

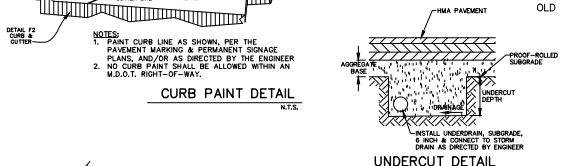


NOTE: ADJUST INVERT OF 6" PIPE ARMS TO PROVIDE POSITIVE DRAINAGE INTO THE CATCH BASIN & OUTLET PIPE INVERT.

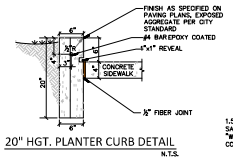
6" PERFORATED PIPE UNDERDRAIN DETAIL
N.T.S.



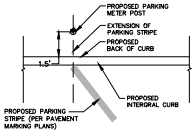
TYPICAL 8" CONCRETE SIDEWALK
FOR USE IN STANDARD SIDWALK IN WILLITS ALLEY APPROACH AND SIDEWALK RAMP / CONCRETE BASE IN N.W. & S.E. CORNERS OF MAPLE INTERSECTION. N.T.S.



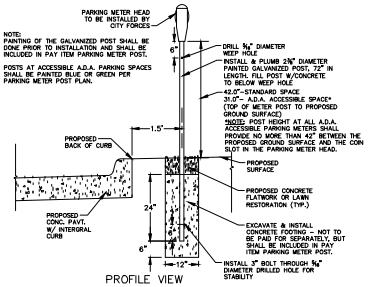
UNDERCUT DETAIL
N.T.S.



20" HGT. PLANTER CURB DETAIL
N.T.S.

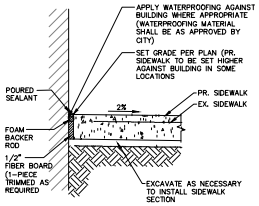


PLAN VIEW

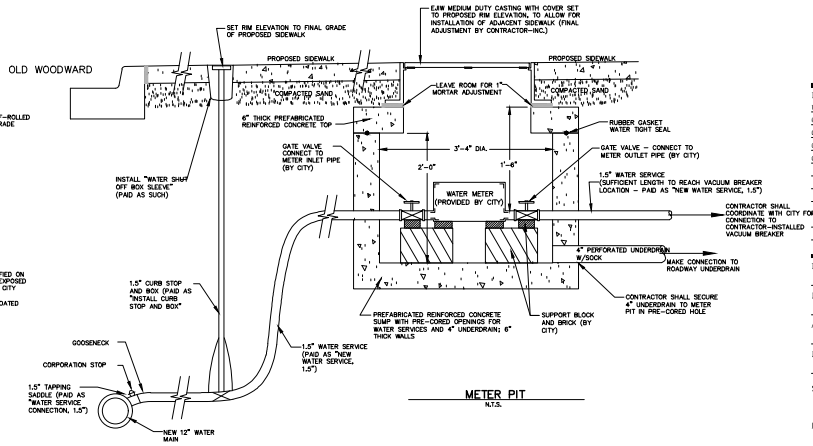


PROFILE VIEW

PARKING METER POST
N.T.S.



JOINT DETAIL AT BUILDING
N.T.S.



METER PIT
N.T.S.

NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
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NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼ of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Notes & Details (1 of 2)

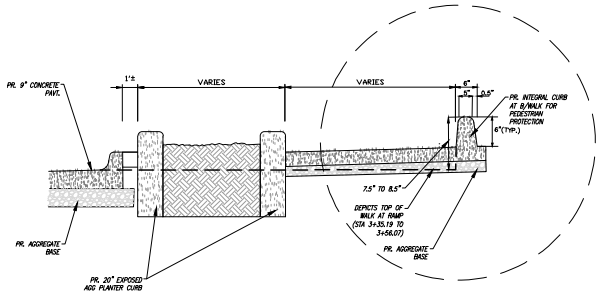
811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY
02-04-23	CONCEPT PLAN
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
04-10-23	BIDS

DRAWN BY: G. Viju
DESIGNED BY:
APPROVED BY: B. Buchholz
DATE: March 16, 2023
SCALE: N.T.S.

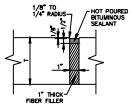
NFE JOB NO. D162-01
SHEET NO. C13

7B

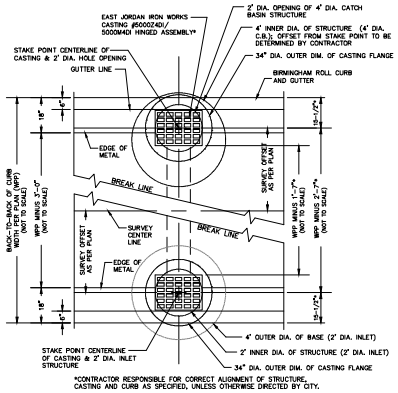


INTEGRAL CURB AT BACK OF CURB FOR PEDESTRIAN PROTECTION

N.T.S.

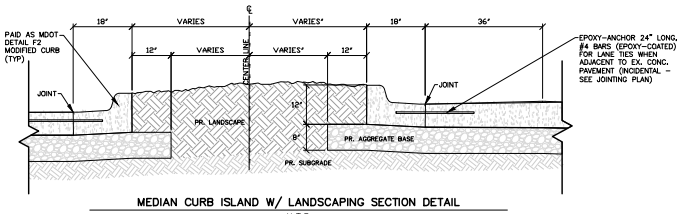


1" WIDE EXPANSION JOINT DETAIL



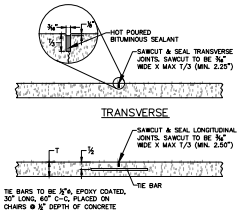
CURB, CATCH BASIN & INLET ALIGNMENT DETAIL PLAN VIEW

SCALE: 1" = 2'

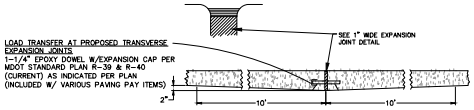


MEDIAN CURB ISLAND W/ LANDSCAPING SECTION DETAIL

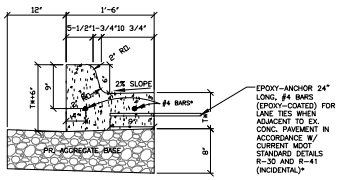
N.T.S.



6 CONTRACTION JOINT

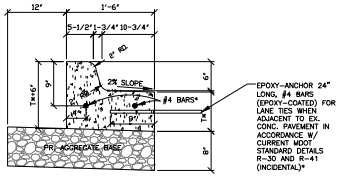


8 EXPANSION JOINT



CONCRETE CURB AND GUTTER, M.D.O.T. DETAIL F2 – MODIFIED (STANDARD PAN)

N.T.S.

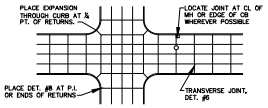


CONCRETE CURB AND GUTTER, M.D.O.T. DETAIL F2 – MODIFIED (REVERSE PAN)

N.T.S.

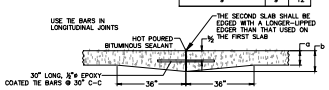
*NOTES:

1. "T" IS EQUAL TO THE THICKNESS & SLOPE IS EQUAL TO THE CROSS-SLOPE OF THE CONCRETE PAVEMENT WHEN CURB & GUTTER IS POURED INTEGRAL TO THE PAVEMENT.
2. OMIT #4 LONGITUDINAL EPOXY COATED BARS WHEN CURB & GUTTER IS POURED INTEGRAL OR TIED TO A NON-REINFORCED CONCRETE PAVEMENT.
3. PROPOSED CURB HEIGHTS INDICATED ARE TYPICAL, AND VARY WHERE INDICATED ON PLAN. CURB HEIGHTS SHALL MATCH EXISTING AT REPAIR LIMITS.
4. PROVIDE COMPACTED 21AA CRUSHED LIMESTONE AGGREGATE BASE UNDER CURB & GUTTER AND WITHIN 12" MINIMUM BEYOND BACK OF CURB; THICKNESS TO MATCH AGGREGATE BASE LAYER THICKNESS OF ADJACENT PROPOSED PAVEMENT
5. OMIT 24" LONG #4 EPOXY COATED BARS WHEN CURB & GUTTER IS POURED INTREGRAL OR TIED TO A NON-REINFORCED CONCRETE PAVEMENT.



TYPICAL JOINT LAYOUT

SLAB DESIGNATION	"a"	"b"
6"	6"	8"
7"	7"	9"
7-1/2"	7-1/2"	10"
8"	8"	11"
9"	9"	12"



5 CONSTRUCTION JOINT

NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
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SEAL

PROJECT
Brown Street Paving Project
Contract # 5-23(P)

CLIENT
BIRMINGHAM
A WALKABLE CITY
Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

SHEET
Notes & Details (2 of 2)

811 Know what's below Call before you dig.

DATE	ISSUED/REVISED
12-08-22	ISSUED SURVEY
02-04-23	CONCEPT PLAN
02-14-23	UPDATED CONCEPT PLAN
03-16-23	90% CITY REVIEW
04-10-23	BIDS

DRAWN BY: G. Viju

DESIGNED BY:

APPROVED BY: B. Buchholz

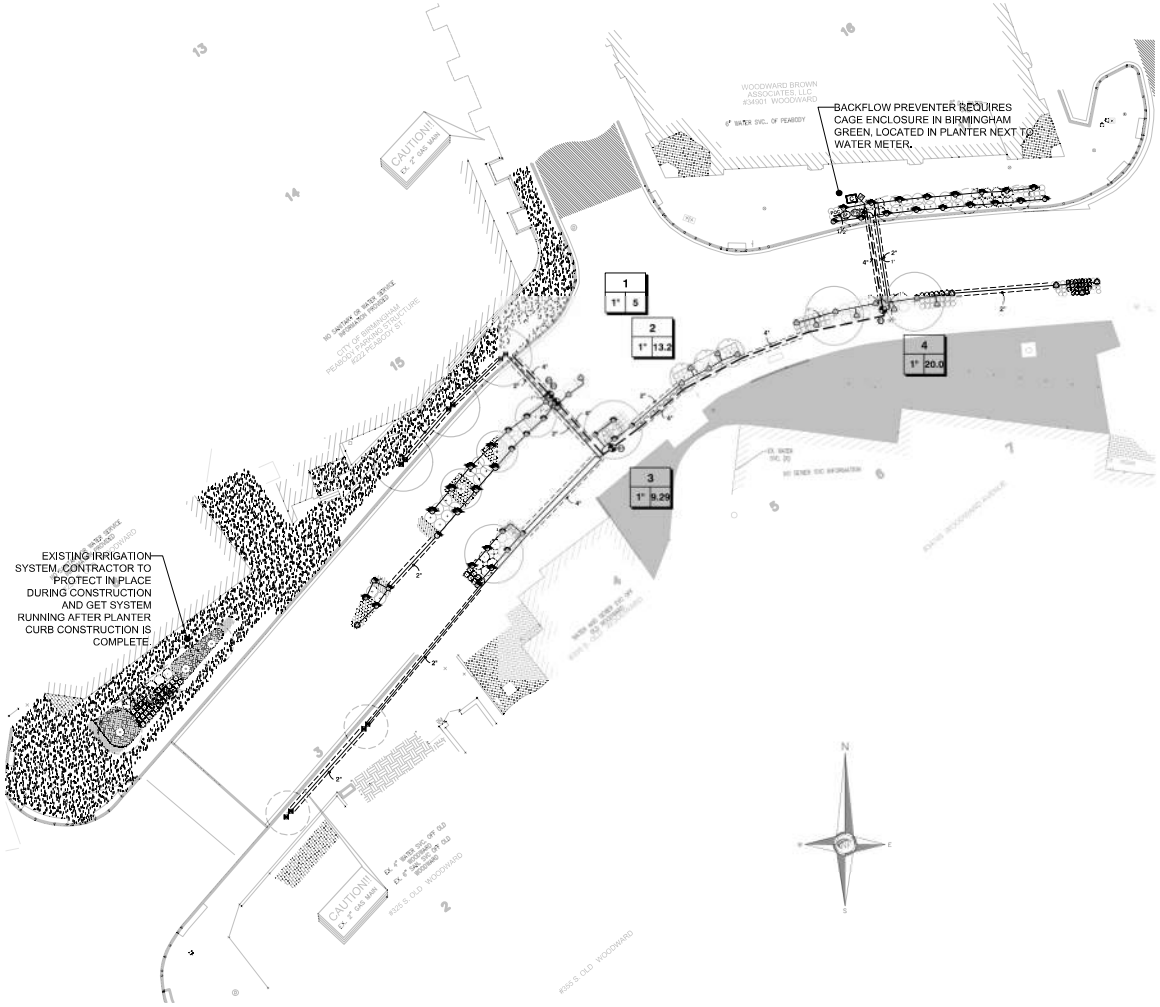
DATE: March 16, 2023

SCALE: N.T.S.

NFE JOB NO. D162-01

SHEET NO. C14

7B



SCALE: 1" = 20' - 0"

0' 10' 20' 40'

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY
EST LCS RCS CST SST	Rain Bird 1812 15 Strip Series	21
Q H F	Rain Bird 1812 8 Series MPR	38
Q H F	Rain Bird 1812 10 Series MPR	7
1804 1806 1804 1806	Rain Bird 1804-1400 Flood	10

SYMBOL	MANUFACTURER/MODEL	QTY
	Rain Bird PGA Globe 1"	4
	Hunter HQ-44RC 1"	1
BF	Febco 825Y w/Cage enclosure 1"	1
C	Rain Master EGP-TW-S	1
RS	Irritrol RS1000	1
D1	Rain Master TW-D-1	4
FS	Irritrol FS-B150	1
POC	Point of Connection 1"	1
	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1"	935.5 l.f.
	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1 1/2"	4.5 l.f.
	Irrigation Mainline: PVC Class 160 SDR 26 1 1/2"	201.7 l.f.
	Pipe Sleeve: PVC Class 160 SDR 26 2"	277.9 l.f.
	Pipe Sleeve: PVC Class 160 SDR 26 4"	144.6 l.f.

Valve Callout

Valve Number

Valve Flow

Valve Size

IRRIGATION SPECIFICATIONS

1. IRRIGATION SYSTEM DESIGN BASED ON 20 GPM AT 50 PSI.
2. IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION(POC)ONLY. THE DESIGN IS BASED ON GALLONS PER MINUTE(GPM)AND POUNDS PER SQUARE INCH(PSI)FURNISHED BY OTHERS.
3. IRRIGATION CONTRACTOR IS TO VERIFY POINT OF CONNECTION IN THE FIELD. INSTALLER IS TO CONFIRM THE MINIMUM DISCHARGE REQUIREMENTS OF THE POINT OF CONNECTION AS INDICATED ON THE LEGEND PRIOR TO INSTALLATION.
4. THE PRESSURE REQUIREMENT AT THE POINT OF CONNECTION IS BASED ON NO MORE THAN 5 FEET OF ELEVATION CHANGE IN THE AREAS OF IRRIGATION.
5. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.
6. IRRIGATION CONTRACTOR WILL ARRANGE INSPECTIONS REQUIRED BY LOCAL AGENCIES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION AS REQUIRED. ALL WIRING TO BE PER LOCAL CODE. BACKFLOW PREVENTION TO BE PER LOCAL CODE.
7. LOCATION OF IRRIGATION COMPONENTS SHOWN ON DRAWING IS APPROXIMATE. ACTUAL PLACEMENT MAY VARY SLIGHTLY AS REQUIRED TO ACHIEVE FULL, EVEN COVERAGE.
8. ALL SPRINKLER HEADS SHALL BE INSTALLED PERPENDICULAR TO FINISH GRADES. EXCEPT AS OTHERWISE INDICATED.
9. INSTALL IRRIGATION MAINS WITH A MINIMUM 18" OF COVER BASED ON FINISH GRADES. INSTALL IRRIGATION LATERALS WITH MINIMUM 12" OF COVER BASED ON FINISH GRADES.
10. PIPE LOCATIONS ARE DIAGRAMMATIC. VALVES AND MAINLINE SHOWN IN PAVED AREAS ARE FOR GRAPHIC CLARITY ONLY.
11. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH PIPE SIZES AS INDICATED.
12. ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH APPROVED WATERPROOF WIRE CONNECTIONS AND BE IN A VALVE OR SPLICE BOX.
13. ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 2-WIRE, UL APPROVED DIRECT BURY.
14. THE DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWING SUPPLIED WITH THE DESIGN CRITERIA BEING SET(AREA TO BE IRRIGATED, EQUIPMENT MANUFACTURER AND MODEL TO BE USED, WATER SOURCE INFORMATION, ELECTRICAL POWER AVAILABILITY, ETC...). SITEONE LANDSCAPE SUPPLY BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR INSTALLATION THAT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCED INFORMATION SUPPLIED TO SITEONE LANDSCAPE SUPPLY LANDSCAPES IN RELATION TO THIS PROJECT, UNLESS OTHERWISE NOTED.

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Project Services Number: 318242

BROWN STREET
BIRMINGHAM, MI 48009

Design Date:	03/03/23
Revision Date:	03/16/23, 03/24/23, 04/07/23
Drawn By:	SW
Checked By:	C. BEST

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client / owner
City of Birmingham

project name
BROWN STREET PAVING PROJECT
CONTRACT #5-23P

project address
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consultant 1
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CONSTRUCTION DOCUMENTS
Issued for Construction

revision	date	issued
1	03.16.2023	90% City Review
2	04.10.2023	BIDS
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10	XX.XX.XXXX	SET NAME

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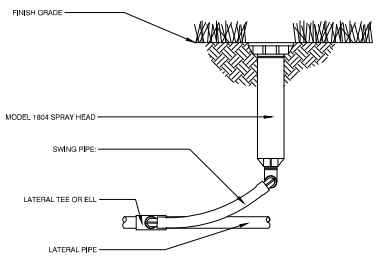
issue date
03.XX.2023

project number
dXXXXX

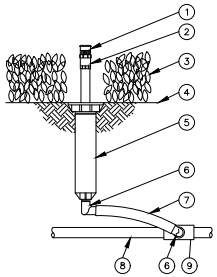
sheet name
IRRIGATION DESIGN

sheet number
IR 1.0



1 1804 SPRAY HEAD WITH SWING PIPE

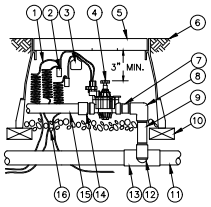
S1-SP-RAI-01



1. BUBBLER
2. PLASTIC ADAPTER
3. PLANT MATERIAL
4. FINISH GRADE/TOP OF MULCH
5. POP-UP SPRAY SPRINKLER:
6. 1/2-INCH MALE NPT x .490-INCH BARB ELBOW:
7. FLEX PIPE
8. PVC LATERAL PIPE
9. PVC SCH 40 TEE OR ELL

2 BUBBLER ON POP-UP SPARYHEAD

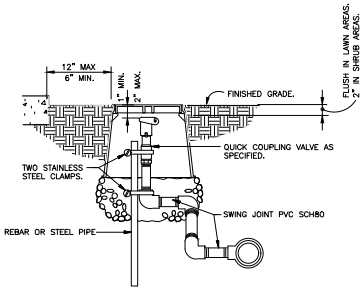
NTS



1. 30-INCH LINEAR LENGTH OF WIRE, COILED
2. WATERPROOF CONNECTION: RAIN BIRD SPLICE-1 (1 OF 2)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PGA
5. VALVE BOX WITH COVER: RAIN BIRD VB-STD
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE
12. SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. PVC SCH 40 MALE ADAPTER
15. PVC LATERAL PIPE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

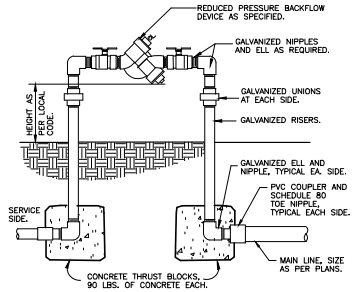
3 PGA SERIES ELECTRIC VALVE

S1-VA-RAI-02



4 QUICK COUPLING VALVE IN BOX

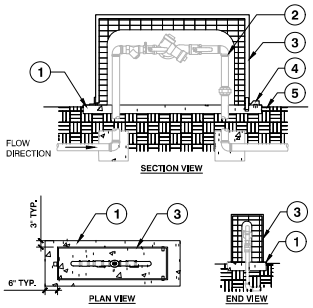
S1-QU-01



5 REDUCED PRESSURE BACKFLOW DEVICE

1" = 1'-0"

FX-IR-FX-BACK-03



1. 4" THICK CONCRETE FOOTING 1" ABOVE FINISHED GRADE
2. BACKFLOW PREVENTION DEVICE (SEE IRRIGATION PLAN FOR MAKE AND MODEL)
3. BACKFLOW CAGE (SEE IRRIGATION LEGEND FOR MAKE AND MODEL)
4. LOCK BOX
5. FINISHED GRADE

NOTES:

1. INSTALL BACKFLOW CAGE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. SEE BACKFLOW PREVENTION DEVICE DETAIL FOR REFERENCE.
3. LOCK BOX SHALL BE LOCATED ABOVE CONCRETE FOOTING
4. CONTRACTOR SHALL PROVIDE A LOCK AS APPROVED BY THE OWNER'S REPRESENTATIVE.

6 BACKFLOW CAGE

3/8" = 1'-0"

FX-IR-FX-BACK-01

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BROWN STREET
BIRMINGHAM, MI 48009

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BROWN STREET PAVING PROJECT
CONTRACT #5-23P

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issue date: 03.XX.2023

project number: dXXXXX

sheet name
IRRIGATION DETAILS

sheet number
IR 1.1

PLANTING NOTES

1. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING PLANTING.
3. ALL PLANTS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO THEIR INSTALLATION AT THE SITE.
4. CONTRACTOR SHALL STAKE ALL TREE LOCATIONS AND LAYOUT SHRUBS PLANTINGS IN THE FIELD. OBTAIN APPROVAL OF LANDSCAPE ARCHITECT BEFORE STARTING PLANTING INSTALLATION.
5. ALL EXISTING PLANT MATERIAL SHOWN ON THIS PLAN IS TO BE PRESERVED UNLESS SPECIFICALLY NOTED OTHERWISE.
6. CONTRACTOR SHALL LEAVE THE SITE CLEAN AND ORDERLY DURING THE CONSTRUCTION PROCESS. REMOVE FROM SITE ALL EXCESS MATERIALS, SOIL, DEBRIS AND EQUIPMENT. STORE MATERIALS IN AN APPROVED LOCATION.
7. SHOVEL-CUT EDGING: SEPARATE MULCHED AREAS FROM TURF AREAS WITH A 45-DEGREE, 4- TO 6-INCH-DEEP, SHOVEL-CUT EDGE, PROVIDE CONTINUOUS SMOOTH EDGE.

OVERALL PLANT LIST

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARK
DECIDUOUS TREES						
TI AM	3	TILIA AMERICANA 'MCKSENTRY'	AMERICAN SENTRY LINDEN	3.5" Cal.	B&B	MATCH FORM
UL AM	4	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3.5" Cal.	B&B	MATCH FORM
ZE SE	3	ZELKOVA SERRATA 'JFS-KW1'	CITY SPRITE ZELKOVA	3.5" Cal.	B&B	MATCH FORM
ORNAMENTAL TREES						
MA JE	3	MALUS X 'JEFSPIRE'	PURPLE SPIRE COLUMNAR CRABAP	2" Cal.	B&B	MATCH FORM
PERENNIALS						
GE RO	24	GERANIUM X 'ROZANNE'	ROZANNE GERANIUM	#1 CONT.		24" O.C.
PA TE	892	PACHYSANDRA TERMINALIS 'GREEN CARPET'	GREEN CARPET PACHYSANDRA	24/FLAT		6" O.C.
PE LI	41	PEROVSKIA 'LITTLE SPIRE'	DWARF RUSSIAN SAGE	#2 CONT.		
RU HI	35	RUDBECKIA HIRTA	LITTLE GOLDSTAR BLACK EYED SUSAN	#1 CONT.		
GRASSES						
PE AL	91	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.		
SE AU	48	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	#1 CONT.		
SHRUBS						
HY PA	31	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	#5 CONT.		
IL GL	6	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	#3 CONT.		
JU SQ	18	JUNIPERUS SQUAMATA 'BLUE STAR'	BLUE STAR JUNIPER	#3 CONT.		
PI MU	21	PINUS MUGO 'HONEYCOMB'	HONEYCOMB MUGO PINE	#3 CONT.		

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BROWN STREET
PAVING PROJECT
CONTRACT #5-23P

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project number d23106

sheet name
PLANT SCHEDULE
AND NOTES

sheet number
L0.0

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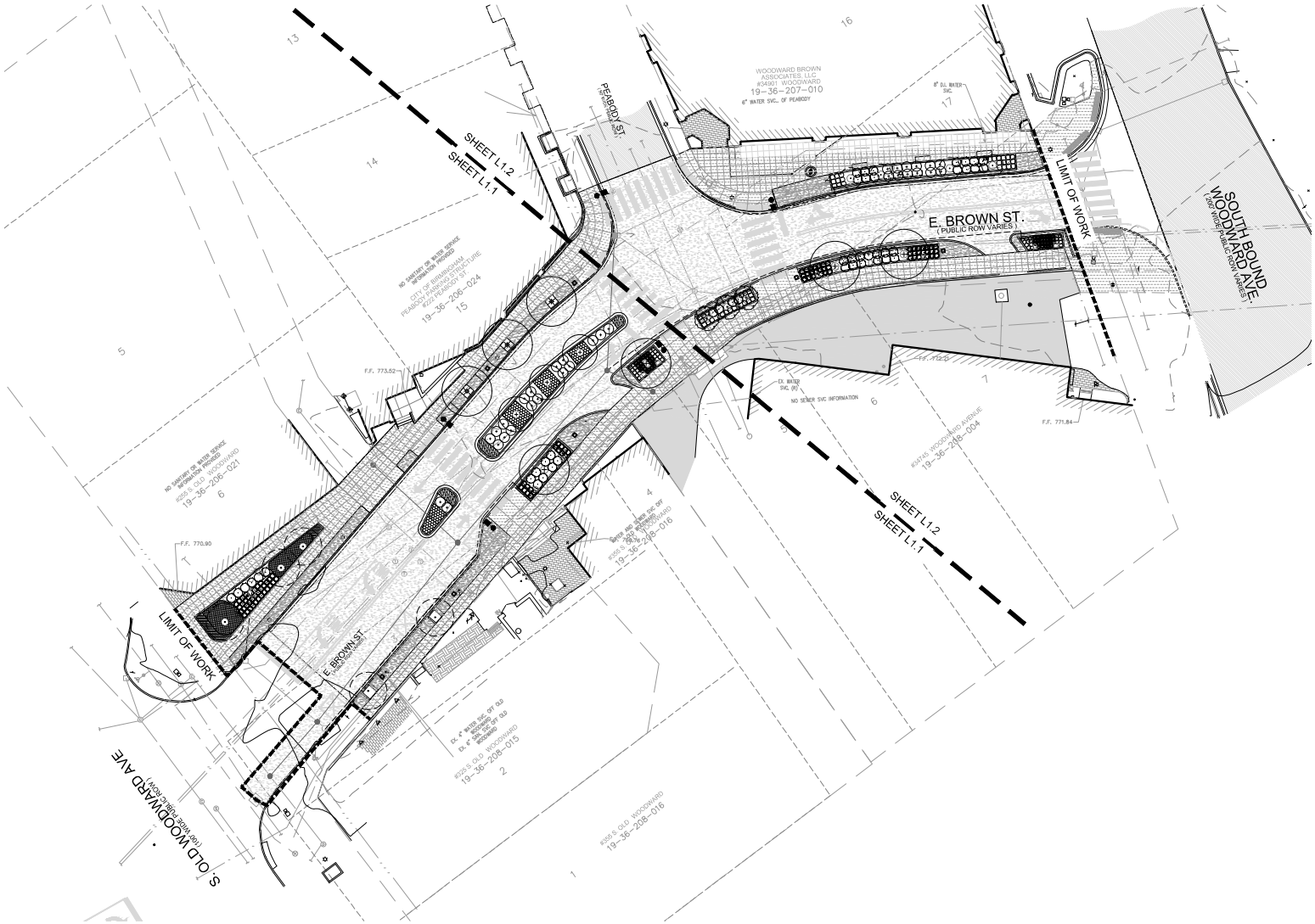

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project number d23106

sheet name
OVERALL
LANDSCAPE PLAN

sheet number
L1.0

CODED NOTES:

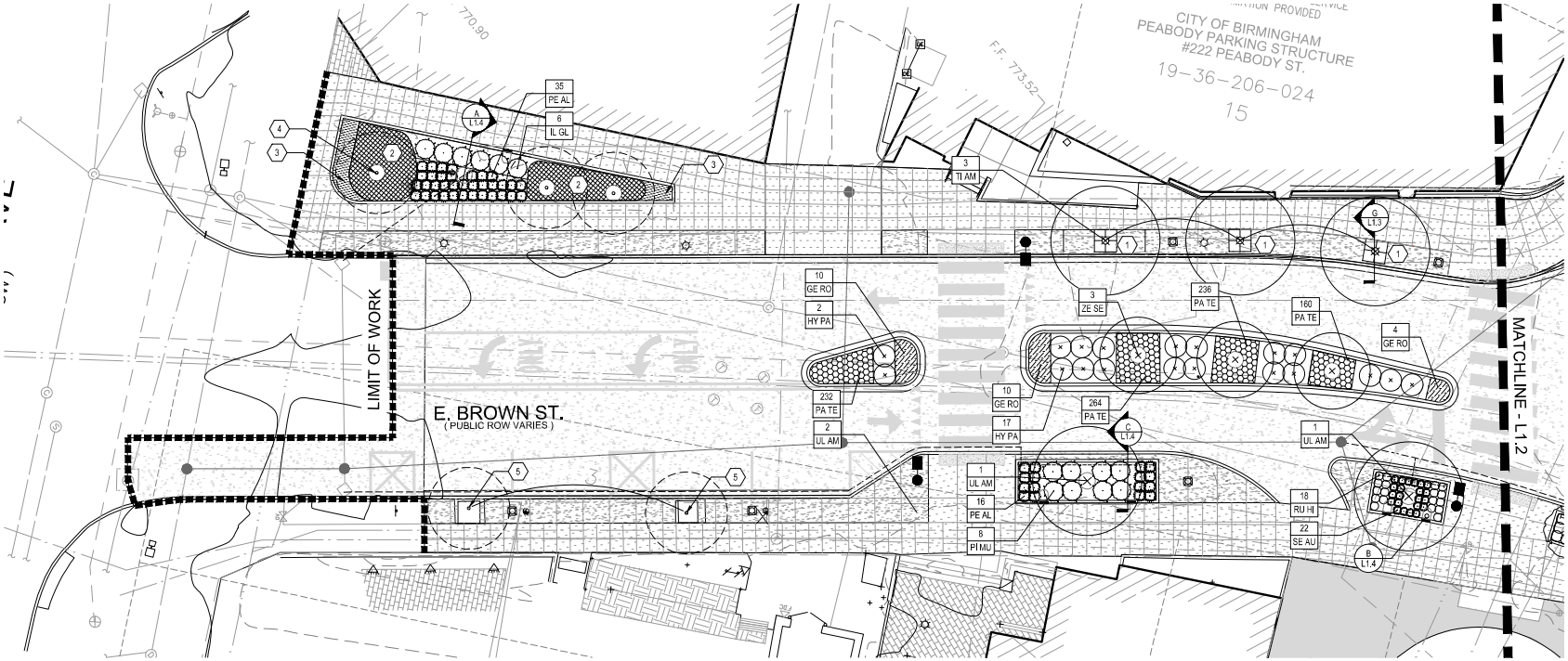
1. PROPOSED 4'X4' STEEL TREE GRATE FRAME. REFER TO CIVIL SET FOR DETAILS
2. PROTECT EXISTING BLACK-EYED SUSAN IN PLACE UNDER TREE CANOPY. LANDSCAPE ARCHITECT TO STAKE LIMITS IN FIELD.
3. ANNUAL PLANTINGS BY OWNER
4. EXISTING CRABAPPLE TREES (3) TO REMAIN
5. EXISTING TREE TO REMAIN, PROTECT IN PLACE, SEE SPECIFICATIONS FOR DETAILS. ALL DEMOLITION AND CONSTRUCTION WITHIN 15' DIA. OF TRUNK TO BE DONE BY HAND.

PLANT LIST - L1.1

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARK
DECIDUOUS TREES						
TI AM	3	TILIA AMERICANA 'MCKSENTRY'	AMERICAN SENTRY LINDEN	3.5" Cal.	B&B	MATCH FORM
UL AM	2	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3.5" Cal.	B&B	MATCH FORM
ZE SE	3	ZELKOVA SERRATA 'JFS-KW1'	CITY SPRITE ZELKOVA	3.5" Cal.	B&B	MATCH FORM
PERENNIALS						
GE RO	24	GERANIUM X 'ROZANNE'	ROZANNE GERANIUM	#1 CONT.		24" O.C.
PA TE	892	PACHYSANDRA TERMINALIS 'GREEN CARPET'	GREEN CARPET PACHYSANDRA	24/FLAT		6" O.C.
RU HI	18	RUDBECKIA HIRTA	LITTLE GOLDSTAR BLACK EYED SUSAN	#1 CONT.		
GRASSES						
PE AL	51	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.		
SE AU	22	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	#1 CONT.		
SHRUBS						
HY PA	19	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	#5 CONT.		
IL GL	6	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	#3 CONT.		
PI MU	8	PINUS MUGO 'HONEYCOMB'	HONEYCOMB MUGO PINE	#3 CONT.		

PLANTING LEGEND

- ANNUALS (BY OWNER)
- PERENNIALS (MEDIAN) SEE DETAIL D, SHEET L1.3
- EXISTING BLACK-EYED SUSAN TO REMAIN
- GROUNDCOVER



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BROWN STREET PAVING PROJECT CONTRACT #5-23P

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sheet name
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sheet number
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CODED NOTES:

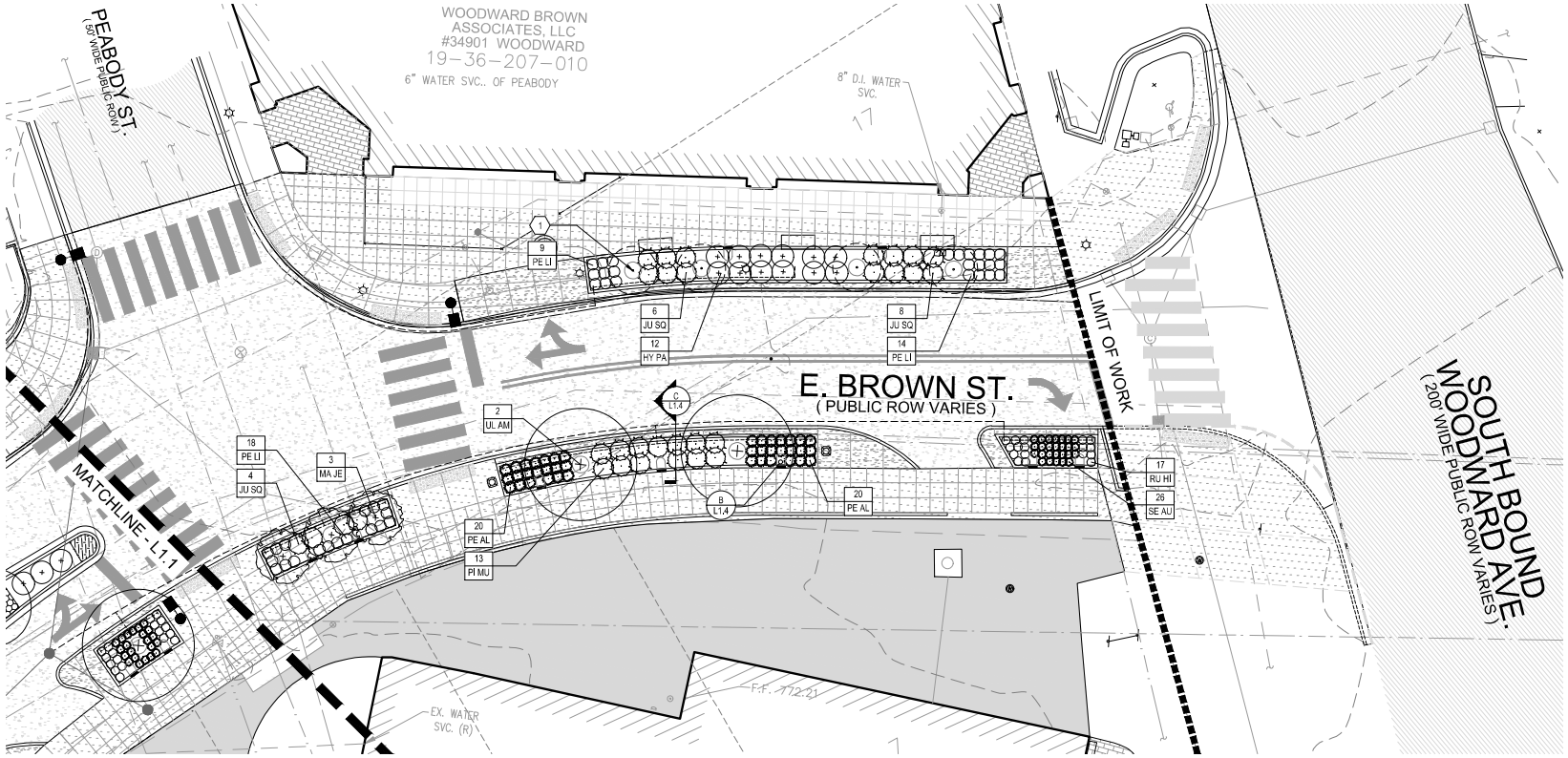
1. EXISTING GINKGO TREES TO REMAIN (4)

PLANT LIST - L1.2

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARK
DECIDUOUS TREES						
UL AM	2	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3.5" Cal.	B&B	MATCH FORM
ORNAMENTAL TREES						
MA JE	3	MALUS X 'JEFSPIRE'	PURPLE SPIRE COLUMNAR CRABAP	2" Cal.	B&B	MATCH FORM
PERENNIALS						
PE LI	41	PEROVSKIA 'LITTLE SPIRE'	DWARF RUSSIAN SAGE	#2 CONT.		
RU HI	17	RUDBECKIA HIRTA	LITTLE GOLDSTAR BLACK EYED SUSAN	#1 CONT.		
GRASSES						
PE AL	40	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#2 CONT.		
SE AU	26	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	#1 CONT.		
SHRUBS						
HY PA	12	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	#5 CONT.		
JU SQ	18	JUNIPERUS SQUAMATA 'BLUE STAR'	BLUE STAR JUNIPER	#3 CONT.		
PI MU	13	PINUS MUGO 'HONEYCOMB'	HONEYCOMB MUGO PINE	#3 CONT.		

PLANTING LEGEND

	ANNUALS (BY OWNER)
	PERENNIALS (MEDIAN) SEE DETAIL D, SHEET L1.3
	EXISTING BLACK-EYED SUSAN TO REMAIN
	GROUNDCOVER



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PAVING PROJECT
CONTRACT #5-23P

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sheet number
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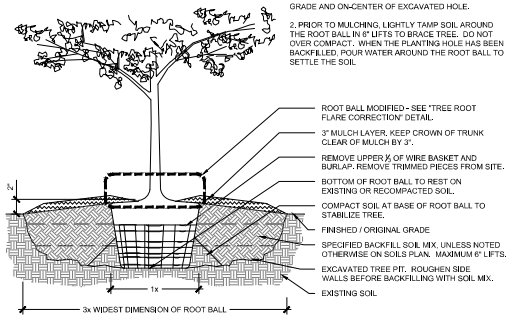
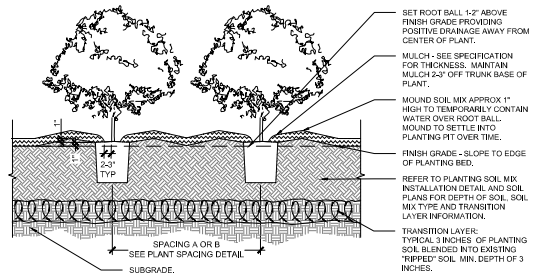
NOTE:
1. POSITION CROWN OF ROOT BALL 2" ABOVE FINISHED GRADE AND ON-CENTER OF EXCAVATED HOLE.

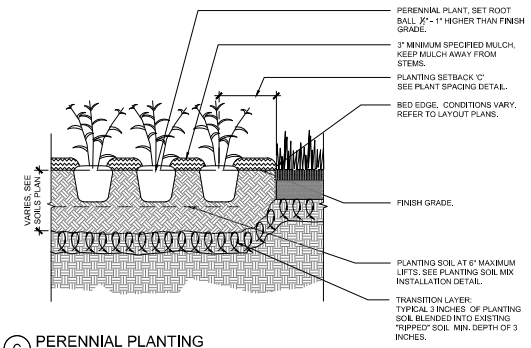
2. PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND THE ROOT BALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND THE ROOT BALL TO SETTLE THE SOIL



A TREE PLANTING DETAIL
SCALE: 3/4" = 1'-0"

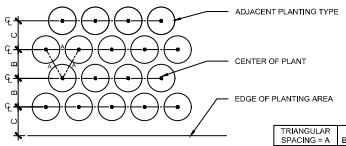


B SHRUB PLANTING DETAIL (MASS PLANTING AND HEDGES)
SCALE: 1" = 1'-0"



C PERENNIAL PLANTING
SCALE: 1" = 1'-0"

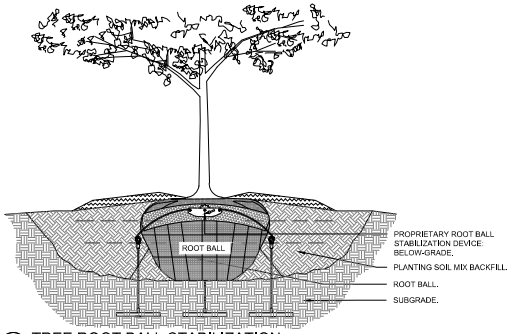
NOTE:
LAYOUT PLANTS ALONG PERIMETER OF PLANTING BED FIRST, PARALLEL TO AND UNIFORMLY OFFSET FROM EDGE OF BED. FILL OUT INTERIOR OF BED ON UNIFORM GRID AS SHOWN.



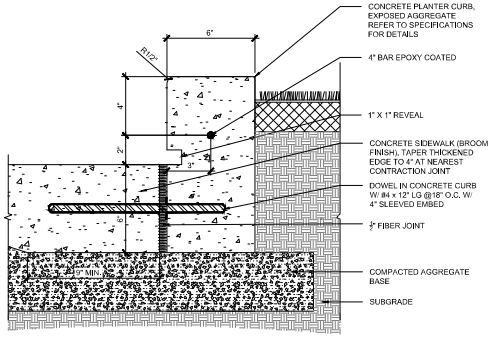
"C"= 30" SETBACK FOR SHRUBS
18" SETBACK FOR PERENNIALS
12" SETBACK FOR GROUNDCOVER

TRIANGULAR SPACING = A	DISTANCE BETWEEN ROW = B	TOTAL AREA (SF) PER PLANT
6"	5"	0.21
8"	7"	0.39
9"	8"	0.50
10"	8 1/2"	0.59
12" (1')	10 1/2"	0.88
15"	13"	1.35
18"	15 1/2"	1.94
21"	18"	2.63
24" (2')	21"	3.50
30"	26"	5.42
36" (3')	31"	7.80
48" (4')	42"	13.84

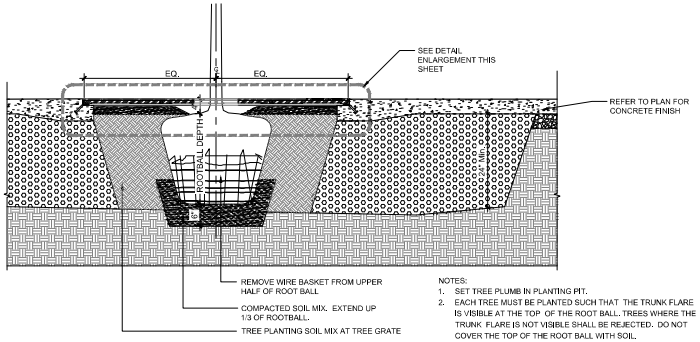
D PLANT SPACING, TYPICAL
SCALE: 1" = 1'-0"



E TREE ROOT BALL STABILIZATION
SCALE: 3/4" = 1'-0"

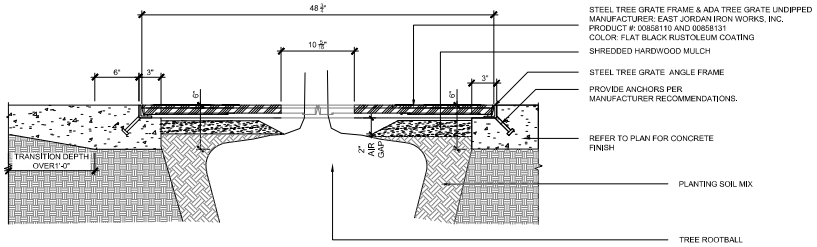


F 12" HGT. SHALLOW PLANTER CURB DETAIL
SCALE: 3" = 1'-0"



NOTES:
1. SET TREE PLUMB IN PLANTING PIT.
2. EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

G TREE PLANTING IN TREE GRATE
SCALE: 3/4" = 1'-0"



DETAIL ENLARGEMENT
SCALE: 1 ½" = 1'-0"

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client / owner
City of Birmingham

project name
BROWN STREET PAVING PROJECT CONTRACT #5-23P

project address
Birmingham, MI

consultant 1
Nowak & Frauss Engineers
46777 Woodward Ave.
Pontiac, MI 48342
p 248.332.7931

CONSTRUCTION DOCUMENTS
Issued for Construction

revision	date	issued
	04.10.2023	BIDS
	03.16.2023	90% CITY REVIEW

seal

issue date 03.16.2023
project number d23106

sheet name
LANDSCAPE DETAILS

sheet number
L1.3

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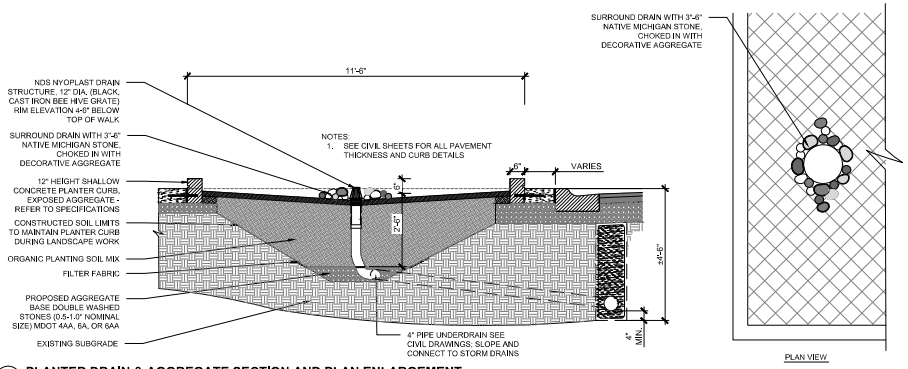
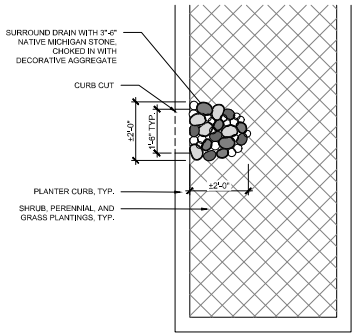
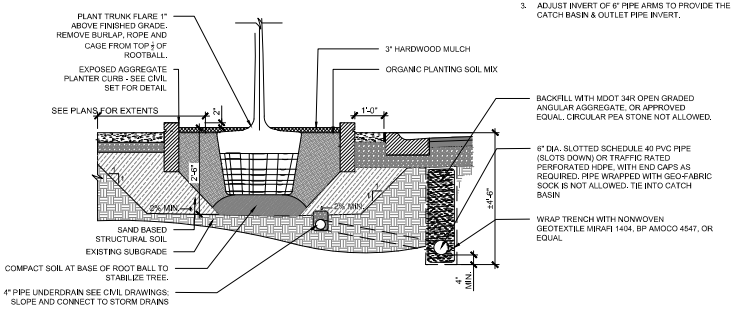


A **PLANTER DRAIN & AGGREGATE SECTION AND PLAN ENLARGEMENT**
SCALE: 1/2" = 1'-0"



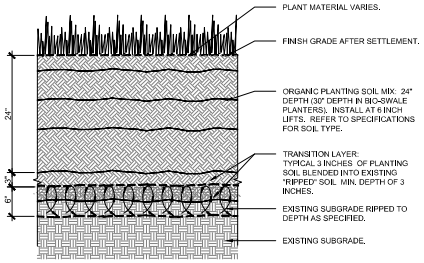
B **TYPICAL AGGREGATE - CURB CUT PLAN ENLARGEMENT**
SCALE: 1/2" = 1'-0"

NOTES:
1. FIELD VERIFY ALL EXISTING UTILITIES, STRUCTURAL SOIL DEPTHS MAY VARY DUE TO UTILITY LOCATIONS. ACTUAL LIMITS OF SAND BASED STRUCTURAL SOIL MAY VARY BASED ON FIELD CONDITIONS. CONTRACTOR SHALL MAINTAIN APPROXIMATE 1,000 CF OF SOIL VOLUME PER TREE.
2. SEE TYPICAL SECTION SHEETS FOR ALL PAVEMENT THICKNESS AND CURB DETAILS.
3. ADJUST INVERT OF 6" PIPE ARMS TO PROVIDE THE CATCH BASIN & OUTLET PIPE INVERT.



C **TREE PLANTING IN STRUCTURAL SOIL AND PLANTER DRAINAGE DETAIL**
SCALE: 1/2" = 1'-0"

TRANSITION LAYER NOTE:
DEPTH OF PLANTING SOIL MIX TYPE AND BLENDING DEPTHS OF PLANTING MIX INTO RIPPED SUBGRADE MAY VARY. REFER TO SPECIFICATIONS.



D **ORGANIC PLANTING SOIL MIX INSTALLATION**
SCALE: 1" = 1'-0"

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BROWN STREET PAVING PROJECT CONTRACT #5-23P

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CONSTRUCTION DOCUMENTS
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issue date 03.16.2023
project number d23106

sheet name
LANDSCAPE DETAILS

sheet number
L1.4

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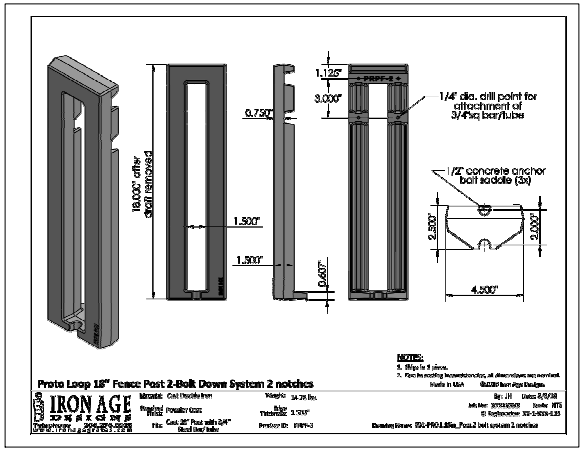
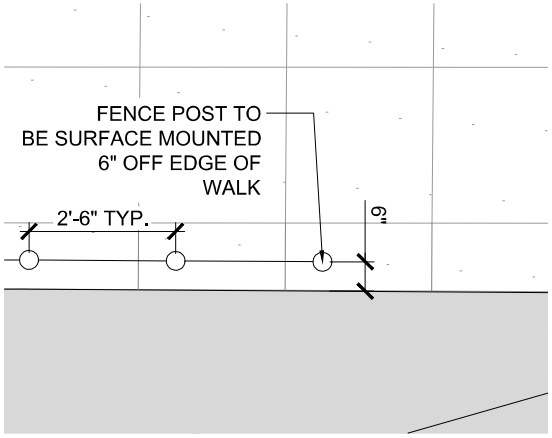
PROTO PLANTER FENCE

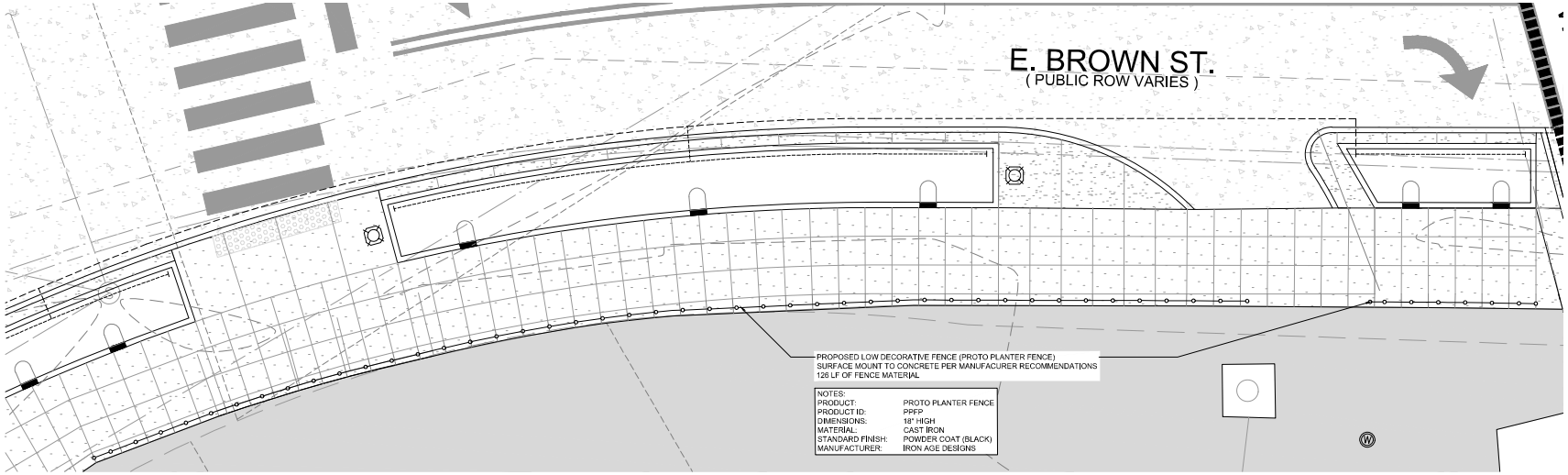


PROTO PLANTER FENCE - CUT SHEET



DECORATIVE FENCE ALTERNATE - PLAN ENLARGEMENT

0 1' 2'
SCALE IN FEET



DECORATIVE FENCE ALTERNATE

0 5' 10'
SCALE IN FEET

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project number d23106

sheet name
DECORATIVE FENCE ALTERNATE

sheet number
L1.5

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CODED NOTES:

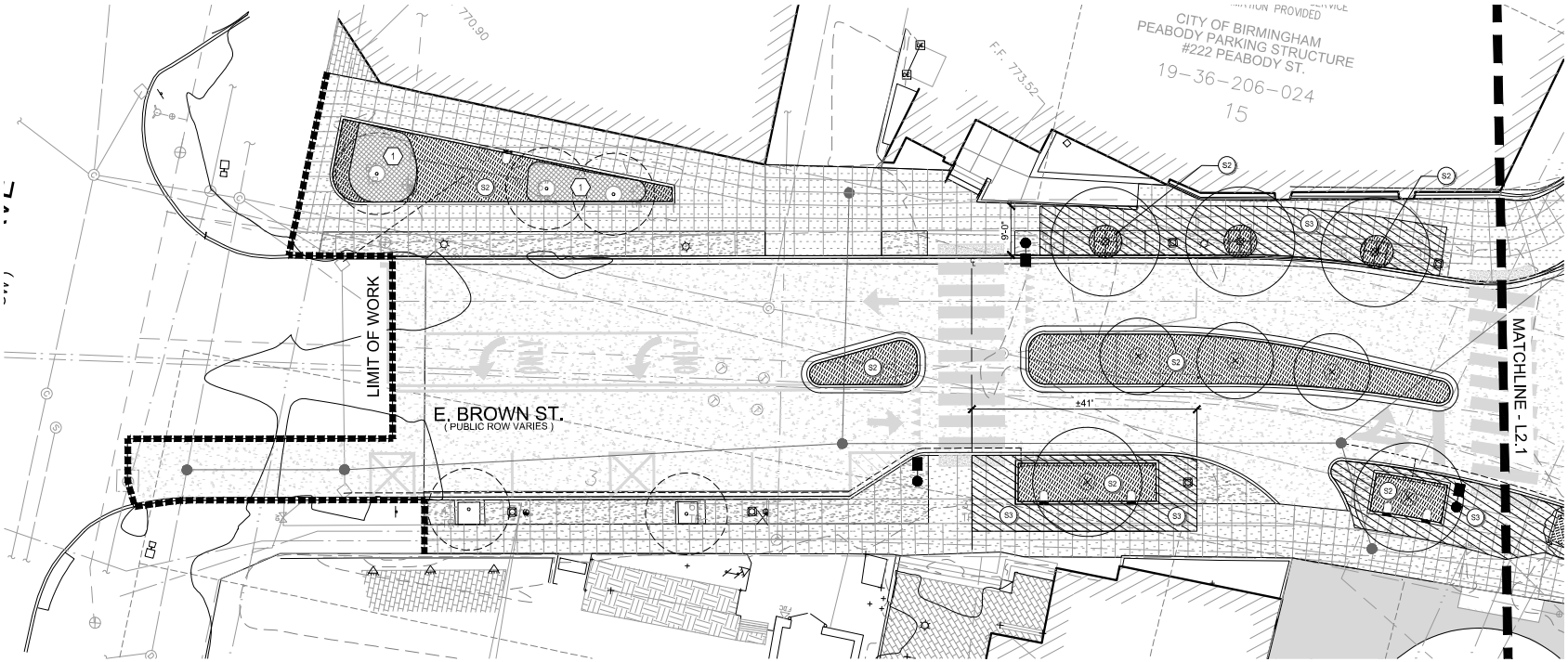
(1) NO NEW SOIL TO BE ADDED BENEATH TREE CANOPY, VERIFY LIMITS IN FIELD

SOILS NOTES

1. DO NOT EXCAVATE WITHIN SOIL PRESERVATION/TREE PROTECTION AREAS UNLESS OTHERWISE INDICATED. REFER TO DEMOLITION PLAN AND/OR TREE PROTECTION PLANS FOR ADDITIONAL INFORMATION.
2. EXISTING SITE SOILS TO BE EXCAVATED AND REMOVED FROM SITE.
3. SUBGRADE SOILS FOR PLANTING AREAS MUST BE DECOMPACTED BY RIPPING SOILS AS DESCRIBED IN EACH PLANTING SOIL MIX SPECIFICATION.
4. AREAS WITHIN GRADING LIMITS OR DISTURBED BY CONSTRUCTION ACTIVITIES SHALL HAVE EXISTING SOILS DECOMPACTED AND REPAIRED TO ORIGINAL STATE OR PROPOSED PROJECT CONDITIONS. OWNER'S REPRESENTATIVE TO REVIEW AND APPROVE SOILS AND REPAIRS PRIOR TO REPAIR WORK COMMENCING.
5. PLANTING SOIL MIX DEPTHS INDICATED ARE POST COMPACTION AND SETTLEMENT DEPTHS REPRESENTING FINAL GRADE WITHIN SPECIFIED COMPACTION AND GRADING TOLERANCES. COMPENSATE FOR SETTLING AND COMPACTION AS NECESSARY.
6. EXCAVATE AND CONFIRM PLANTING AREA SUBGRADES ARE TO THE DEPTHS NOTED ON SOIL DRAWINGS AND DETAILS. WHERE EXCAVATION IS TOO DEEP, BACKFILL WITH EXISTING SOILS AND COMPACT TO 85 - 90% PROCTOR. DO NOT START THE SOIL MIX INSTALLATION UNTIL SUB-GRADE CONDITIONS HAVE BEEN CORRECTED AND APPROVED BY THE LANDSCAPE ARCHITECT.
7. PROJECT MANUAL SPECIFICATIONS FOR PLANTING SOIL MIX AND FINISH GRADING APPLY.

SOILS LEGEND

S1	SOIL TYPE 1 - EXISTING PLANTING BEDS ORGANIC PLANTING SOIL MIX - (DEPTH VARIES, NOT ON ROOTBALL / TREE TRUNK)
S2	SOIL TYPE 2 - PERENNIALS, SHRUBS & TREES ORGANIC PLANTING SOIL MIX - 24" SEE DETAIL D, SHEET L1.4
S3	SOIL TYPE 3: SAND BASED STRUCTURAL SOIL MIX - 30" SEE DETAIL C, SHEET L1.4



0 10' 20'
SCALE IN FEET

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client / owner
City of Birmingham

project name
BROWN STREET
PAVING PROJECT
CONTRACT #5-23P

project address
Birmingham, MI

consultant 1
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46777 Woodward Ave.
Pontiac, MI 48342
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CONSTRUCTION DOCUMENTS
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	03.16.2023	90% CITY REVIEW

seal

issue date 03.16.2023
project number d23106

sheet name
SOILS PLAN

sheet number
L2.0

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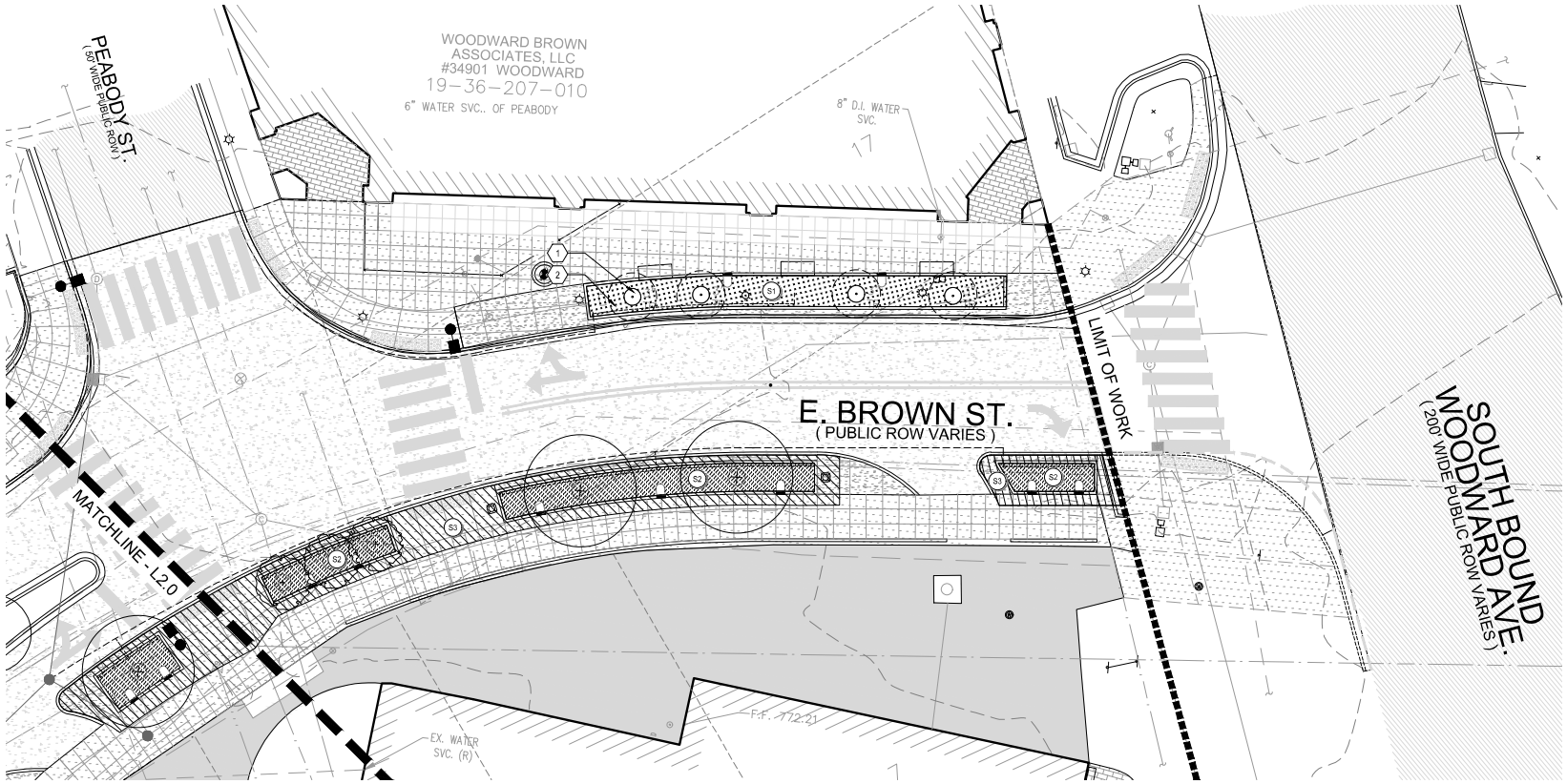
CODED NOTES:

1. NO NEW SOIL TO BE PLACED OVER ROOTBALL OF EXISTING TREES
2. BACKFILL EXCAVATED HOLES DUG FOR NEW PLANT MATERIAL WITH ORGANIC PLANT MIX AS NEEDED

SOILS LEGEND

S1	SOIL TYPE 1 - EXISTING PLANTING BEDS ORGANIC PLANTING SOIL MIX - (DEPTH VARIES, NOT ON ROOTBALL / TREE TRUNK)
S2	SOIL TYPE 2 - PERENNIALS, SHRUBS & TREES ORGANIC PLANTING SOIL MIX - 24" SEE DETAIL D, SHEET L1.4
S3	SOIL TYPE 3: SAND BASED STRUCTURAL SOIL MIX - 30" SEE DETAIL C, SHEET L1.4



0 10' 20'
SCALE IN FEET

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issue date 03.16.2023
project number d23106

sheet name
SOILS PLAN

sheet number
L2.1

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ENGINEER'S OPINION OF PROBABLE COST
BROWN STREET PAVING PROJECT (CONTRACT #5-23P)

NO.	ITEM DESCRIPTION	PAY UNIT	SHEET C1 Utility	SHEET C2 Utility	SHEET C7 Paving	SHEET C8 Striping/Signage	SITE-ONE Irrigation	MKSK Landscape	TOTAL QUANTITY
	SEWER PAY ITEMS								
1	10" Storm Sewer, CIN, CLIV, Trench A	LF	212	-					212
2	12" Storm Sewer, CIN, CLIV, Trench A	LF	23	31					54
3	18" Storm Sewer, PVC SDR 26, Trench A	LF	67	-					67
4	New 6'-0" Diameter Combined Sewer Manhole (Contract Online)	EA	1	-					1
5	New 4'-0" Diameter Storm Manhole w/ 2' Sump & 15" Dia. Gas Trap (Contract Online)	EA	1	-					1
6	New 4'-0" Diameter Storm Manhole	EA	4	-					4
7	New 12" Diameter PVC Landscape Drain w/ Metal Bee-Hive Grate	EA	1	1					2
8	6" Perforated Pipe Underdrain (w/ Trench Detail)	LF	145	220					365
9	4" Perforated Pipe Underdrain (w/ Geotextile Sock)	LF	75	145					220
10	Sewer Tap, 12"	EA	-	1					1
11	Sewer Tap, 6"	EA	1	1					2
12	Sewer Tap, 4"	EA	1	-					1
13	Reconstruct Manhole (if and where needed)	VF	-	-					15
14	Remove & Replace Structure Cover (as directed by City)	LS	-	-					025
15	Investigate, Adjust & Shift Casting Location	EA	-	2					2
16	Removal and Disposal of Contaminated Material, Type 2	CY	-	-					25
17	Removal and Disposal of Contaminated Material, Type 3	CY	-	-					25
18	Remove Ex. 12" Storm Sewer	LF	-	36					36
19	Abandon Ex. 12" Storm Sewer	LF	90	-					90
20	Bulkhead Structure, 12"	EA	1	2					3
21	Bulkhead Pipe, 12"	EA	-	-					1
22	Bulkhead Pipe, 10"	EA	-	-					1
23	Bulkhead Pipe, 6"	EA	-	-					1
24	CCTV Sewer Inspection	LS	-	-					1
	SUBTOTAL, SEWER PAY ITEMS								
	WATER MAIN PAY ITEMS								
25	New Water Service, 1.5", Trench A, Copper	LF	25	-					25
26	Water Service Connection, 1.5"	EA	1	-					1
	SUBTOTAL, WATER MAIN PAY ITEMS								
	PAVING PAY ITEMS								
27	Station Grading	STA			4.4				4.4
28	Subgrade Undercutting	CY			-				500
29	Excavation for Tree Wells	CY			-				125
30	Removing Concrete Sidewalk & Ramp (overcutting included)	SY	515	320	-				835
31	Removing Pavement Full Depth (Curb & Gutter included)	SY	1,000	910	-				1,910
32	Aggregate Base, MDOT 21AA Limestone, 8"	SY	950	760	-				1,710
33	Concrete Pavement, Non-reinforced, 8", incl. Integral Detail F2 Curb & Gutter	SY	960	725	-				1,685
34	Furnish & Install Tree Grate	EA			3				3
35	Concrete Sidewalk, 4", Scoring Treatment	SF			6445				6,445
36	Concrete Sidewalk, 6", Scoring Treatment (includes Ramps)	SF			855				855
37	Concrete Sidewalk, 8", Scoring Treatment	SF			400				400
38	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment	SF			1998				1,998
39	Concrete Sidewalk, 4", Exposed Aggregate, Scoring Treatment	SF			217				217
40	Handicap Ramp Truncated Domes (per ramp)	SF	48	144	-				192
41	Concrete Curb & Gutter, 18", MDOT Type F2, Modified	LF	230	11	-				251
42	28" High Planter Curb, Exposed Aggregate	LF	101	411	-				512
43	12" High Planter Curb, Exposed Aggregate	LF	144	-	-				144
44	Integral Curb at Back of Walk for Pedestrian Protection	LF		126	-				126
45	Remove Ex. 4" Stop Lane Markings on Brown Street (west of Old Woodward)	LF			-	90			90
46	Pavement Marking, Polyurea, 6 inch, Solid Lane Line, White	LF			-	190			190
47	Pavement Marking, Polyurea, 6 inch, Dotted Lane Line, White	LF			-	160			160
48	Pavement Marking, Polyurea, 4 inch, White	LF			-	228			228
49	Pavement Marking, Polyurea, 4 inch, Yellow	LF			-	315			315
50	Pavement Marking, Polyurea, 24 inch Stop Bar, White	LF			-	55			55
51	Pavement Marking, Polyurea, 24 inch Crosshatching, White	LF			-	384			384
52	Pavement Marking, Polyurea, R Turn Arrow, White	EA			-	3			3
53	Pavement Marking, Polyurea, U Turn Arrow, White	EA			-	1			1
54	Pavement Marking, Polyurea, Straight/Left Arrow, White	EA			-	2			2
55	Pavement Marking, Polyurea, Only, White	EA			-	2			2
56	Recessing Paint Marking, Longit	LF			-	1023			1,023
57	Recessing Paint Marking, Transv	SF			-	1450			1,450
58	Adjust Structure Cover	EA	3	5	-				8
59	Cold Patch	TON			-				25
60	Maintenance Aggregate	LS			-				1
	SUBTOTAL, PAVING PAY ITEMS								
	IRRIGATION PAY ITEMS								
61	Meter Pit	EA					1		1
62	Sprinkler Assembly	EA					76		76
63	Valve Assembly	EA					4		4
64	1-1/2 inch PVC Mainline	LF					202		202
65	1-1/2 inch Polyethylene lateral line	LF					5		5
66	1 inch Polyethylene lateral line	LF					930		930
67	Communication Cable - two wire	LF					202		202
68	Irrigation Controller	EA					1		1
69	Rain Sensor	EA					1		1
70	Two Wire Decoders	EA					4		4
71	4" PVC Sleeve	LF					145		145
72	2" PVC Sleeve	LF					278		278
	SUBTOTAL, IRRIGATION PAY ITEMS								
	LANDSCAPE PAY ITEMS								
73	Structural Soil Mix (30" depth)	CFT						5,073	5,073
74	Organic Plant Soil Mix - Plant Beds (24" depth)	CFT						3,713	3,713
75	Native Mi Stone (3"-6") choked in w/ decorative aggregate	LS						1	1
76	Shredded Hardwood Mulch (3" depth)	CY						24	24
77	TILIA AMERICANA 'MCKSENTRY' (3.0-3" CAL.)	EA						3	3
78	ULMUS AMERICANA 'PRINCETON' (3.0-3" CAL.)	EA						4	4
79	ZELKOVA SERRATA 'JFS-KIRIT' (3.0-3" CAL.)	EA						3	3
80	MALUS X 'JEFSPRIE' (2" CAL.)	EA						3	3
81	HYDRANGEA PANICULATA 'JANE' (#5)	EA						31	31
82	ILEX GLABRA 'SHAMROCK' (#3)	EA						6	6
83	JUNIPERUS SQUAMATA 'BLUE STAR' (#3)	EA						16	16
84	PRUS MUGO 'HONEYCOMB' (#3)	EA						21	21
85	GERANIUM X 'ROZANNE' (#1)	EA						24	24
86	PACHYSANDRA TERMINALIS 'GREEN CARPET' (24/FLAT)	EA						892	892
87	PEROVSKIA 'LITTLE SPIRE' (#2)	EA						41	41
88	RUDBECKIA HIRTA (#1)	EA						35	35
89	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY' (#2)	EA						91	91
90	SELGERIA AUTUMNALIS (#1)	EA						48	48
	SUBTOTAL, LANDSCAPE PAY ITEMS								
	GENERAL PAY ITEMS								
91	Critical Path Time Schedule	LS							1
92	Mobilization, (Max. 5% of Bid)	LS							1
93	Water and Sewer Allowance	LS							1
94	Street Light Conduit, 4" PVC Schedule 40, 4' deep	LF							90
95	Salvage Existing Signs	LS							1
96	New Signs	SF							64
97	Sign Post, U-Channel	LF							144
98	Modify Steps & Railing at Peabody Parking Structure	LS			1				1
99	Removing Street Light Foundation	EA	4	4					8
100	Parking Meter Pad	EA			2				2
101	Inlet Filter	EA							10
102	Road Closure Assessment: _____ Days @ $3,000/Day	DAYS							
103	Traffic Maintenance and Control _____ Days @ $300/Day (Minimum)	DAYS							-
	SUBTOTAL, GENERAL PAY ITEMS								
	ALTERNATE #1								
104	DEDUCT - Integral Curb at Back of Walk for Pedestrian Protection	LF			-126	0			-126
105	Low Ornamental Fence	LF			126	126			126

NF ENGINEERS

CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
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WWW.NFE-ENGR.COM

SEAL

PROJECT
Brown Street Paving Project
Contract #5-23(P)

CLIENT
BIRMINGHAM
A Walkable City

Engineering Department
151 Martin Street
Birmingham, MI 48012

PROJECT LOCATION
Part of the Northeast ¼
of Section 36
Town 2 North,
Range 10 East
City of Birmingham,
Oakland County, Michigan

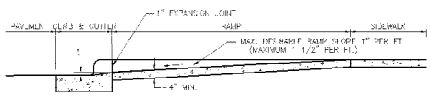
SHEET
Quantities

811
Know what's below
Call before you dig.

DATE	ISSUED/REVISED
03-16-2023	90% CITY REVIEW
04-10-2023	BIDS
04-26-2023	ADDENDUM 1

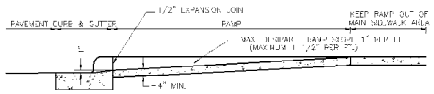
DRAWN BY: G. Viju
DESIGNED BY: G. Viju
APPROVED BY: B. Buchholz
DATE: 03-16-2023
SCALE: N.T.S.

NFE JOB NO. D162-01
SHEET NO. Q1



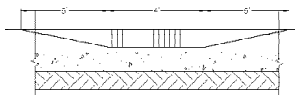
SECTION A–A

N.T.S.



SECTION O–O

N.T.S.



SECTION D–D

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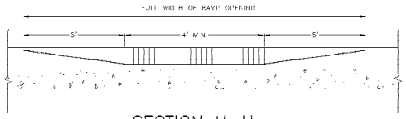

SECTION H–H

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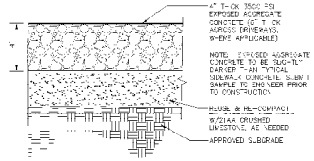
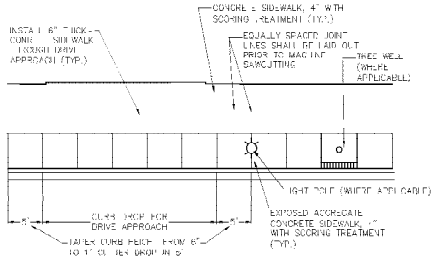


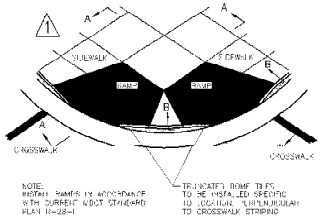
EXPOSED AGGREGATE WALK DETAIL

N.T.S.



CONCRETE DRIVE APPROACH & SIDEWALK JOINT LAYOUT

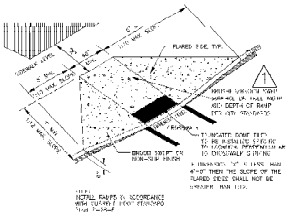
N.T.S.



SIDEWALK RAMP TYPE 1

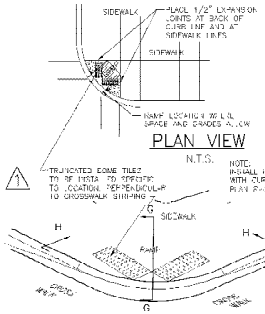
(TWO RAMPS ARE SHOWN)

N.T.S.



CURB RAMP FOR DISABLED

N.T.S.

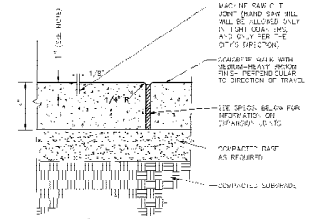


PLAN VIEW

N.T.S.

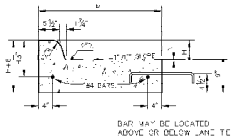
SIDEWALK RAMP TYPE 3

N.T.S.

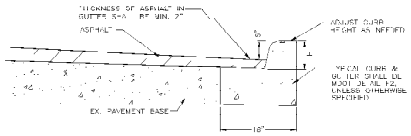


SAWCUT AND EXPANSION JOINT DETAIL FOR CONCRETE SIDEWALK

N.T.S.



DETAIL	DIMENSIONS M	DIMENSIONS N	LANE WIDTH	CONCRETE CU. YD./LIN. FT.
H1	1'-6"	7/8"	AS SHOWN	0.0484
F2	1'-6"	7/8"	OMITTED	0.0484

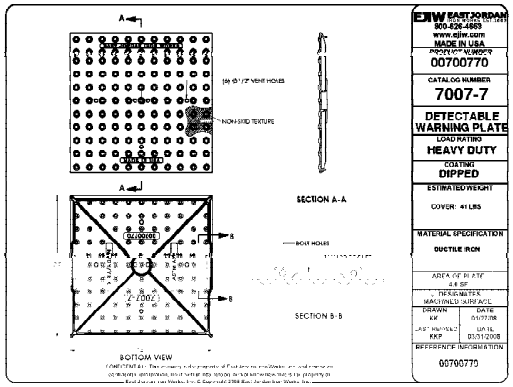


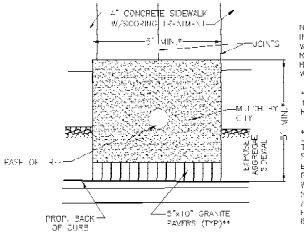
MDOT DETAIL F

(WITH ASPHALT OVERLAY)

N.T.S.

HANDICAP TRUNCATED DOMES





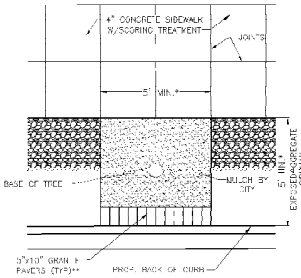
TREE WELL DETAIL #1

N.T.S.

NOTE:
INSTALL 2" PVC SLEEVES BETWEEN TREE WELLS FOR FUTURE SUBSURFACE IRRIGATION, AS REQUIRED. INSTALL AROUND PER THE CITY OF BIRMINGHAM STANDARDS. TIE TO PROPOSED WATER MAIN PIPE.

* KEY PLAN NOTE:
TREE WELL DIMENSIONS CAN BE MODIFIED BASED ON RIGHT OF WAY DIMENSIONS.

**GRANITE PAVER NOTE:
TREE WELLS ADJACENT TO PARALLEL PARKING SPACES ON A STREET. GRANITE PAVERS SHALL BE "DAMIN BLANC" (COLOR) BY COLD SPRING GRANITE COMPANY SET IN A FULL MORTAR BED WHERE INDICATED ON THE DRAWINGS. SUBMIT SAMPLES OF PAVERS FOR COLOR AND FINISH AND GROUT COLOR TO CITY OF BIRMINGHAM ENGINEERING FOR APPROVAL. ANY OTHER PAVERS IS NOT ALLOWED IN THE PLANS.



TREE WELL DETAIL #2

N.T.S.

CONCRETE SIDEWALK MIX DESIGNS:

PLAIN CONCRETE MIX:

SAND, 2NS SAND, ASTM C-33 1350 POUNDS
COARSE AGGREGATE: 6AA LIMESTONE (PREFOLE ISLE
ASTM C 33 1560 POUNDS
CEMENT TYPE I, ASTM C150 685 POUNDS
WATER: CITY TAP WATER 71.5 GALLONS
ADMIXTURE: ASTM C260, DAREX AEA
BY W.R. GRACE CO. [illegible] OZ./CU. YD

EXPOSED AGGREGATE CONCRETE MIX:

SAND, 2NS SAND, ASTM C 33 1050 POUNDS
COARSE AGGREGATE: 6AA
ASTM C-33 1480 POUNDS
CEMENT TYPE I, ASTM C150 685 POUNDS
WATER: CITY TAP WATER [illegible] GALLONS
BY W.R. GRACE CO. [illegible] OZ./CU. YD

* PEBBLE, WASHED, SUBMIT SAMPLE

NOTES:

1. SURFACE TEXTURE OF SIDEWALK RAMPS SHALL BE THAT OBTAINED BY A COURSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.

2. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON SIDEWALK RAMPS, FREE OF SAGS AND SHORT GRADE CHANGES.

3. IF POSSIBLE, DRAINAGE INLETS SHOULD NOT BE PLACED IN THE RAMPS, EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION. LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.

4. SIDEWALK RAMP 3 SHALL BE INSTALLED ONLY AT THE CITY'S DIRECTION.

5. REMOVE AND REPLACE CONCRETE CURB AND GUTTER SECTION AT CURB DROPS ON NON ASPHALT SURFACED GUTTERS. USE EXISTING JOINTS OR SAW CUT FOR JOINTS. SAW CUT AT 18" FROM BACK OF CURB (FOR CURVED SECTIONS SAW CUT AT MINIMUM OF 12" AND AT A MAXIMUM OF 24" FROM BACK OF CURB). TIE NEW CONCRETE SECTION TO EXISTING PAVEMENT

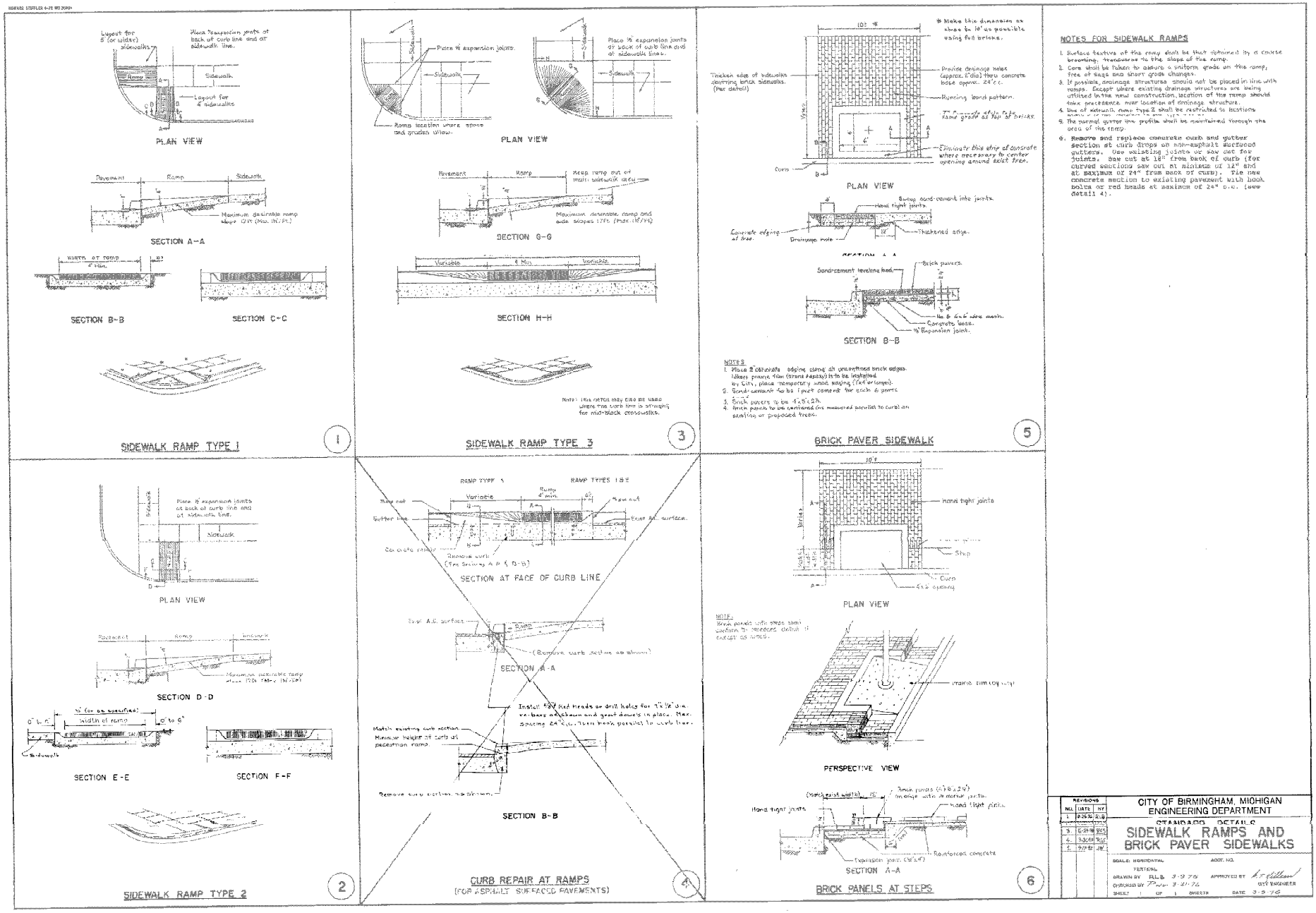
REVISIONS		DATE	BY
1	Added Truncated Dome details	07-06-07	City
2	Revised Truncated Dome details	06-26-08	City

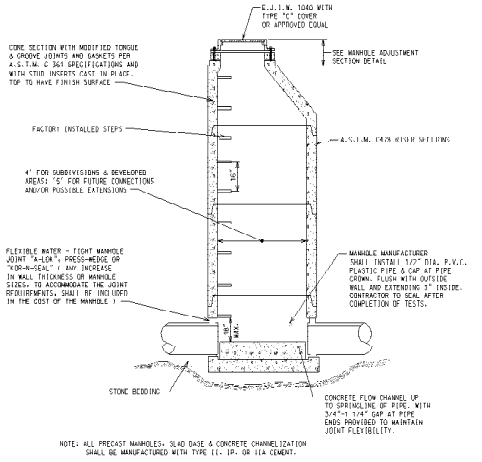
CITY OF BIRMINGHAM, MICHIGAN
ENGINEERING DEPARTMENT

CBD STREETSCAPE STANDARD DETAILS

SCALE: HORIZONTAL
VERTICAL
ACCT. NO.
DRAWN BY: NF
APPROVED BY
CHECKED BY
CITY ENGINEER
SHEET OF SHEETS
DATE: April 4, 2003

7B

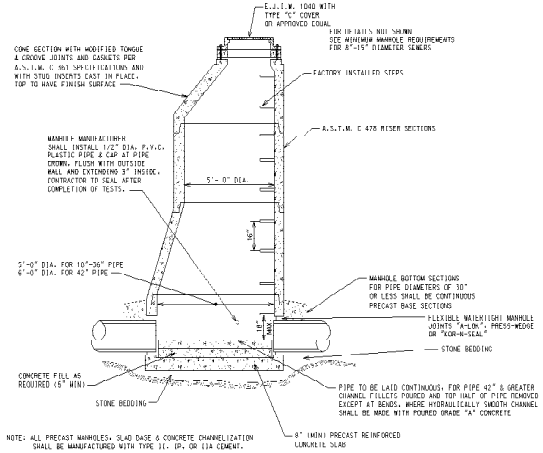

Layout for 8' (or wider) sidewalks
Place ½" expansion joints at back of curb line and at sidewalk line.
Ramp
Sidewalk
Layout for 4' sidewalks
PLAN VIEW
Pavement
Ramp
Sidewalk
Maximum desirable ramp slope 12% (Max. 16%)
SECTION A-A
Width at ramp
4' Min.
SECTION B-B
SECTION C-C
SIDEWALK RAMP TYPE 1
1
Place ½" expansion joints.
Sidewalk
Ramp location where space and grades allow.
PLAN VIEW
Place ½" expansion joints at back of curb line and at sidewalk line.
Keep ramp out of main sidewalk area.
Maximum desirable ramp and side slopes 12%. (Max. 16%)
SECTION G-G
Variable
4 Min.
SECTION H-H
Note: This detail may also be used where the curb line is straight for mid-block crosswalks.
SIDEWALK RAMP TYPE 3
3
10'-0" *
* Make this dimension as close to 10' as possible using full bricks.
Thicken edge of sidewalks abutting brick sidewalks. (See detail)
Provide drainage holes (approx. 2" dia) thru concrete base approx. 24" c.c.
Running bond pattern.
Eliminate this strip of concrete where necessary to center opening around exist. tree.
Curb
PLAN VIEW
Sweep sand-cement into joints.
Hand tight joints.
Concrete edging at tree.
Drainage hole
Thickened edge.
Sandcement leveling bed.
Brick pavers.
No. 6 6x6 wire mesh.
Concrete base.
½" Expansion joint.
SECTION B-B
NOTES
1. Place 2" concrete edging along all unconfined brick edges. Where prevent flow (frame repair) is to be installed by City, place temporary wood edging (1x4" or larger).
2. Sand-cement to be 1 part cement for each 6 parts sand.
3. Brick pavers to be 4"x8"x2¼".
4. Brick panels to be centered (as measured parallel to curb) on sanitary or proposed trees.
BRICK PAVER SIDEWALK
5
NOTES FOR SIDEWALK RAMPS
1. Surface texture of the ramp shall be that obtained by a coarse brooming, transverse to the slope of the ramp.
2. Care shall be taken to assure a uniform grade on the ramp, free of sags and sharp grade changes.
3. If possible, drainage structures should not be placed in line with ramps. Except where existing drainage structures are being utilized in the new construction, location of the ramp should take precedence over location of drainage structure.
4. Use of sidewalk ramp type 2 shall be restricted to locations
5. The normal gutter line profile shall be maintained through the area of the ramp.
6. Remove and replace concrete curb and gutter section at curb drops on non-asphalt surfaced gutters. Use existing joints or saw cut for joints. Saw cut at 18" from back of curb (for curved sections saw cut at minimum of 12" and at maximum of 24" from back of curb). Tie new concrete section to existing pavement with hook bolts or rod heads at maximum of 24" o.c. (see detail 4).
Place ½" expansion joints at back of curb line and at sidewalk line.
Sidewalk
PLAN VIEW
Pavement
Ramp
Sidewalk
Maximum desirable ramp slope 12% (Max. 16%)
SECTION D-D
4' (or as specified)
Width of ramp
0" to 6"
Sidewalk
SECTION E-E
SECTION F-F
SIDEWALK RAMP TYPE 2
2
RAMP TYPE 1
RAMP TYPES 1 & 2
Variable
Ramp 4' min.
Saw cut
Gutter line
Exist. A.C. surface
Concrete ramp
Remove curb (See Drawing A P (D-6))
SECTION AT FACE OF CURB LINE
Exist. A.C. surface
Ramp
(Remove curb section as shown)
SECTION A-A
Install ½" Rod heads or drill holes for ½" dia. rebars or anchors and grout dowels in place. Max. spacing 24" c.c. Turn hook parallel to curb line.
Match existing curb section
Minimum height of curb at pedestrian ramp
Remove curb section as shown
SECTION B-B
CURB REPAIR AT RAMPS
(FOR ASPHALT SURFACED PAVEMENTS)
4
Hand tight joints
Ramp
Curb
4'x2' opening
PLAN VIEW
NOTE:
Brick panels with steps shall conform to requires detail if except as noted.
Frame sim. to ...
PERSPECTIVE VIEW
(Match exist. width)
½"
Brick pavers (4"x8"x2¼") on edge with ½" mortar joints.
Hand tight joints.
Hand tight joints.
Reinforced concrete
(Expansion joint (½"x½"))
SECTION A-A
BRICK PANELS AT STEPS
6
REVISIONS
NO. DATE BY
1 9-26-74 R.L.B.
3 6-28-74 BES
4 3-30-68 JW
5 9-19-62 JW
CITY OF BIRMINGHAM, MICHIGAN
ENGINEERING DEPARTMENT
STANDARD DETAILS
SIDEWALK RAMPS AND BRICK PAVER SIDEWALKS
SCALE: HORIZONTAL
VERTICAL
ADDT. NO.
DRAWN BY RLB 3-9-75
CHECKED BY 3-21-75
APPROVED BY
CITY ENGINEER
SHEET 1 OF 1 SHEETS
DATE 3-9-75



NOTE: ALL PRECAST MANHOLES, SLAB BASE & CONCRETE CHANNELIZATION SHALL BE MANUFACTURED WITH TYPE II - IP, OR IIA CEMENT.

SEWER MANHOLE

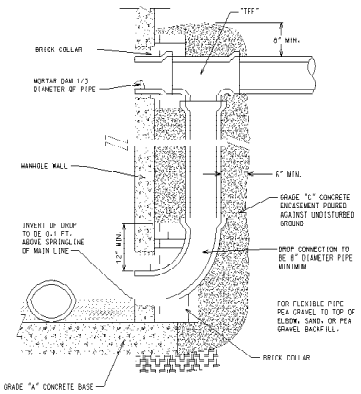
(8" THRU 15" DIA. SEWERS)



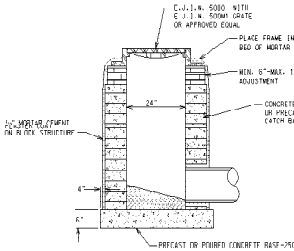
NOTE: ALL PRECAST MANHOLES, SLAB BASE & CONCRETE CHANNELIZATION SHALL BE MANUFACTURED WITH TYPE II - IP, OR IIA CEMENT.

SEWER MANHOLE

(18" THRU 42" DIA. SEWERS)

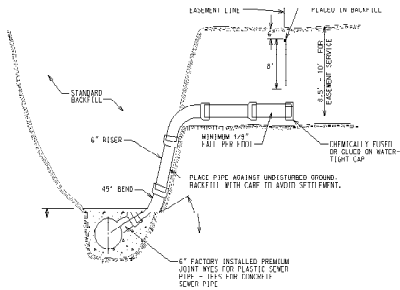


EXTERNAL DROP CONNECTION



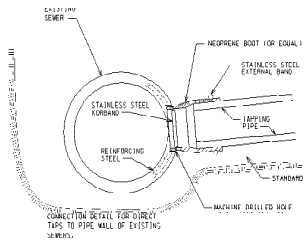
4 FT. DIAMETER INLET

NOTE:
FOR CATCH BASINS OR INLETS WITHIN YARD AREAS USE E.J.I.W. 1040 WITH TYPE "N" COVER OR APPROVED EQUAL



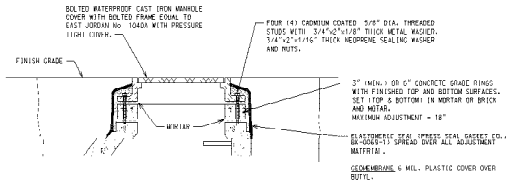
BUILDING LEAD DETAIL

0' - 15' COVER

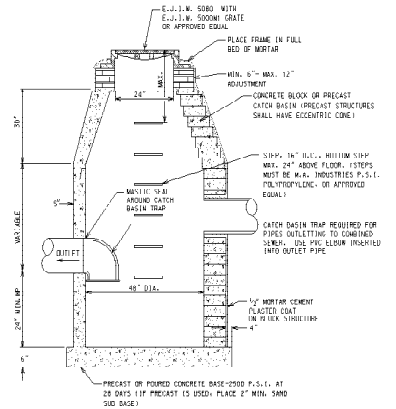


KOR-N-TEE TAP FOR CONCRETE

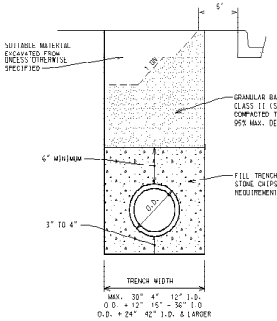
NO SCALE



SANITARY MANHOLE ADJUSTMENT SECTION DETAIL



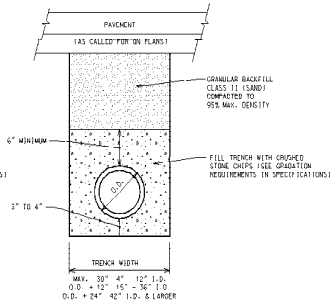
4 FT. DIAMETER CATCH BASIN



TRENCH DETAIL "A"

SEWER UNDER ROAD BED OR WITHIN THE INFLUENCE OF ROAD BED

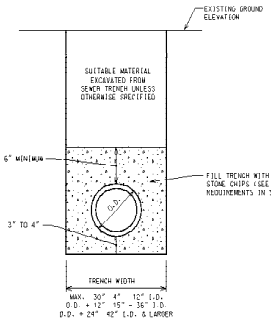
NOT TO SCALE



TRENCH DETAIL "B"

SEWER NOT UNDER ROAD BED

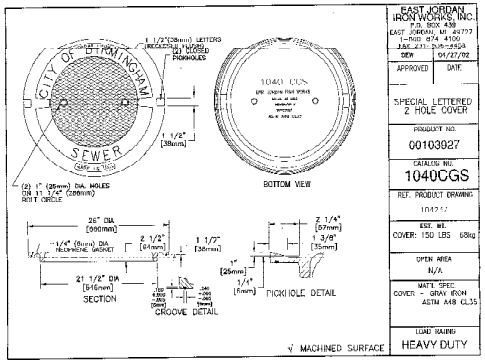
NOT TO SCALE



TRENCH DETAIL "B"

SEWER NOT UNDER ROAD BED

NOT TO SCALE

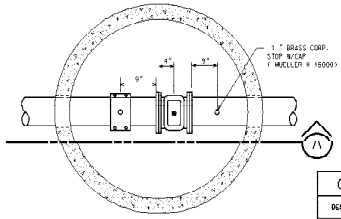


EAST JORDAN IRON WORKS, INC. P.O. BOX 439 EAST JORDAN, MI 49727 (616) 536-4100 FAX (231) 536-4624	
DRW	04/27/02
APPROVED	DATE
SPECIAL LETTERED 2 HOLE COVER	
PRODUCT NO.	00103927
CATALOG NO.	1040CGS
REF. PRODUCT DRAWING	104272
EST. WT.	COVER: 150 LBS 68kg
OPEN AREA	N/A
MATL SPEC	COVER - GRAY IRON ASTM A48 CL35
LOAD RATING	HEAVY DUTY

City of Birmingham

151 MARTIN STREET BIRMINGHAM, MICHIGAN 48107

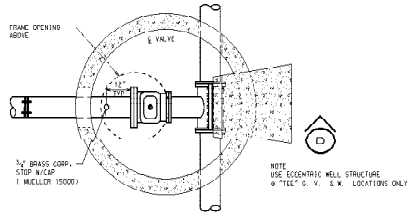
SEWER STANDARD DETAILS



GATE WELL PLAN

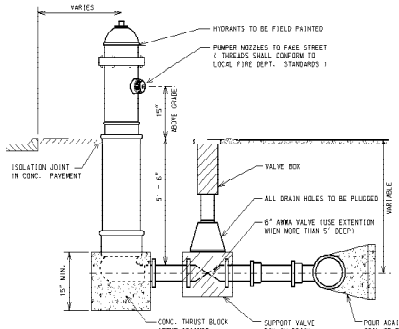
NO SCALE

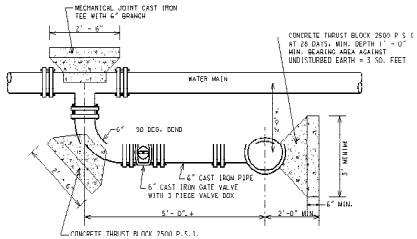
GATE WELL SCHEDULE				
		PIPE DIA.	HOPES	
DESCRIPTION	DIM.	6" & 8"	12"	16"
INSIDE DIA.	A	60"	72"	72"
WALL THICK.	B	5"	7"	7"
VALVE BLOCK THICK.	C	4"	4"	4"



TAPPING SLEEVE, VALVE & WELL PLAN

NO SCALE



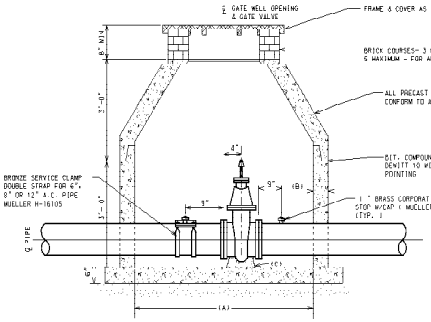


"L" HYDRANT CONNECTION

NO SCALE

W-9

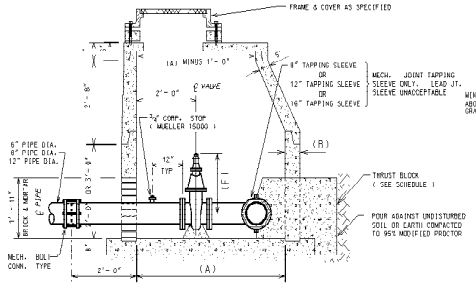
NOTE: FOR CONSTRUCTION OF NEW LEAD USE 6" TAPPING SLEEVE VALVE & BOX TO MAKE CONNECTION, AND DELETE "6" CAST IRON GATE VALVE WITH 3 PIECE VALVE " AS SHOWN ON DETAIL .



SECTION "A" GATE WELL

NO SCALE

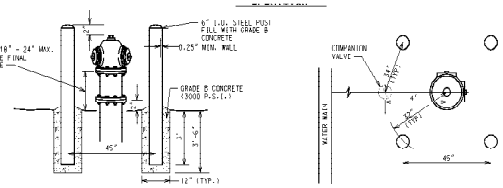
W-1 & W-3



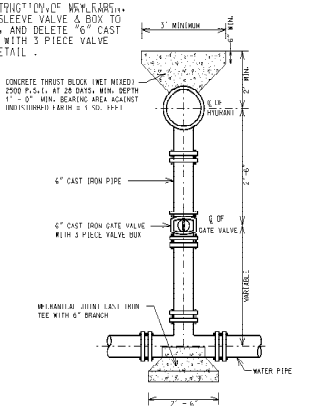
SECTION "B" TAPPING SLEEVE, VALVE & WELL

NO SCALE

W-4



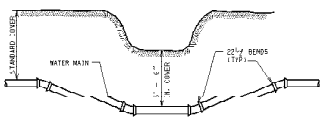
FIRE HYDRANT GUARD POSTS DETAIL



STRAIGHT HYDRANT CONNECTION

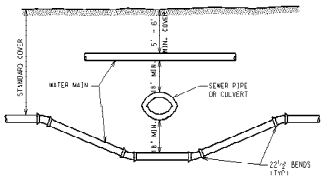
NO SCALE

W-10



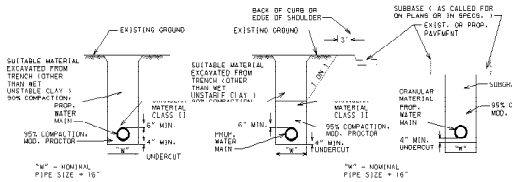
DITCH AND STREAM CROSSING

NO SCALE



SEWER OR CULVERT CROSSING

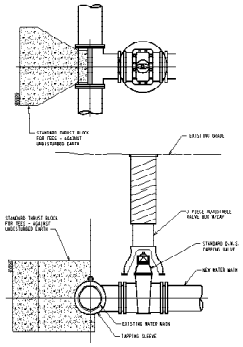
NO SCALE



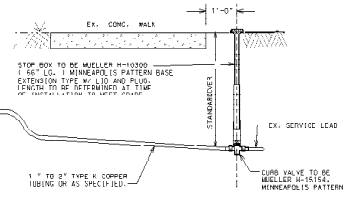
PROP. WATER MAINS NOT UNDER PAVED SURFACE

PROP. WATER MAINS UNDER PAVED SURFACE OR WITHIN INFLUENCE OF PAVED SURFACE

BEDDING DETAILS

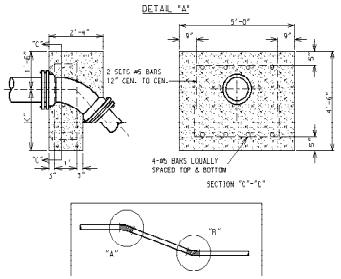


TAPPING SLEEVE & VALVE W/VALVE BOX

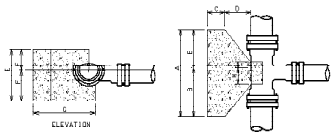


WATER SERVICE CONNECTION (TYP)

NO SCALE



VERTICAL BEND THRUST BLOCKS FOR 8"-12" MAINS



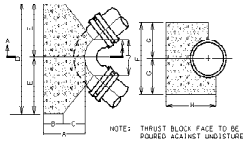
THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE FOR THRUST BLOCKS TO BE WET MIXED 2500 P.S.I.

SCHEDULE OF THRUST BLOCK DIMENSIONS			
		TEE SIZE	
CURB		8"x8" 12"x8" 16"x8" 24"x8"	12"x12" 16"x12" 24"x12"	16"x16" 24"x16"
A		3'-0"	4'-0"	5'-0"
B		1'-6"	2'-0"	2'-6"
C		0'-9"	0'-9"	1'-3"
D		1'-0"	1'-6"	2'-0"
G	8"	1'-2"		
	12"	2'-0"	2'-10"	
	16"	2'-10"	3'-1"	3'-3"
	24"	3'-1"	3'-3"	4'-3"
H	8"	0'-6"		
	12"	0'-6"	0'-10"	
	16"	0'-6"	0'-10"	1'-0"
	24"	0'-9"	0'-10"	1'-0"

CONCRETE THRUST BLOCK FOR TEES

N.T.S.



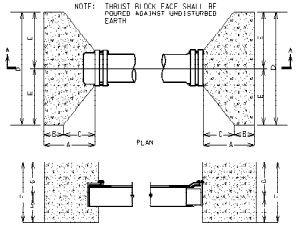
NOTE: THRUST BLOCK FACE TO BE POURED AGAINST UNDISTURBED EARTH

CONCRETE FOR THRUST BLOCKS TO BE WET MIXED 2500 P.S.I.

SIZE	ANGLE	A MIN.	B MIN.	C	D	E	F	G	H MIN.	J
6"	90°	1'-6"	0'-9"	0'-9"	2'-0"	1'-0"	2'-0"	1'-0"	1'-8"	0'-10"
8"	45°	1'-0"	0'-9"	1'-0"	2'-4"	1'-2"	2'-0"	1'-0"	1'-11"	1'-4"
8"	90°	1'-8"	0'-9"	1'-0"	3'-4"	1'-8"	2'-6"	1'-3"	1'-11"	1'-2"
12"	22-1/2°	1'-9"	0'-9"	1'-0"	2'-9"	1'-3"	2'-0"	1'-0"	2'-0"	1'-6"
12"	45°	2'-1"	0'-9"	1'-4"	3'-9"	1'-9"	2'-6"	1'-3"	2'-4"	1'-4"
12"	90°	2'-11"	0'-9"	1'-4"	5'-6"	2'-9"	3'-0"	1'-6"	2'-4"	1'-8"
16"	22-1/2°	2'-8"	1'-0"	1'-8"	3'-4"	1'-8"	2'-4"	1'-3"	3'-0"	1'-2"
16"	45°	2'-8"	1'-0"	1'-8"	6'-4"	2'-8"	3'-0"	1'-0"	3'-0"	1'-6"
16"	90°	2'-0"	1'-0"	1'-8"	6'-0"	3'-0"	5'-0"	2'-4"	3'-0"	1'-8"
24"	90°	4'-7"	1'-0"	3'-7"	10'-0"	5'-0"	7'-0"	3'-6"	5'-4"	2'-6"

CONCRETE THRUST BLOCK FOR BENDS

N.T.S.



SIZE	A MIN.	B MIN.	C	D	E	F	G
8"	1'-11"	0'-9"	1'-3"	3'-0"	1'-8"	2'-0"	1'-0"
12"	2'-1"	0'-9"	1'-4"	4'-0"	2'-0"	3'-0"	1'-6"
16"	2'-8"	1'-0"	1'-8"	5'-0"	2'-6"	4'-0"	2'-0"

CONC. THRUST BLOCKS FOR PLUGS & CAPS

City of Birmingham

151 MARTIN STREET BIRMINGHAM, MICHIGAN 48107

WATER MAIN STANDARD DETAILS

DATE: REVISION DATE: REVISION

DRAWN: CHECKED: DESIGNED:

PROJECT NO.: DATE: SCALE: NOT TO SCALE

SHEET NO. WM-1

7B

MEMORANDUM

Planning Division

DATE: May 22, 2023

TO: Thomas M. Markus, City Manager

FROM: Nicholas Dupuis, Planning Director

SUBJECT: Public Hearing – The Birmingham Plan 2040

INTRODUCTION:

The Comprehensive Master Plan

A Master Plan is a document and policy guide designed to help communities conceive a vision of what they want to look like in the future. Master Plans are written and adopted by a local Planning Commission and might also be adopted by a local legislative body, although Master Plans are not laws on their own. In Birmingham, the Planning Board is a locally organized board and is not established under the Municipal Planning Commission Act, Act No. 285 of the Public Acts of Michigan of 1931 (MCL 125.31 et seq.), as amended. Thus, the Planning Board acts as a recommending body to the City Commission, which assumes the role of a Planning Commission for the purposes of master plan adoption in the City of Birmingham.

Michigan Planning Enabling Act

The legal authority to carry out the master planning process is granted by Article III of the Michigan Planning Enabling Act (the "Act"). Within the Act, there are several legal requirements that a municipality must follow when preparing a master plan including future land use, public participation, notifying other government agencies, and adoption procedure. The City of Birmingham closely followed the requirements of the Act.

BACKGROUND:

Process Overview

The City of Birmingham embarked on a comprehensive master plan update beginning in the summer of 2018 with the creation and posting of a Request for Proposals soliciting qualified

professionals to conduct a comprehensive master plan update. In the fall of 2018, a consultant team that included DPZ CoDesign, McKenna, Gibbs Planning Group and Jacobs Engineering was selected to provide the services. The master planning process kicked off in January 2019, after which the City had numerous public input sessions including charrettes, roundtable discussions, neighborhood input sessions, surveys, drop-in clinics, and presentations. Upon receiving the first submittals of the Birmingham Plan 2040 (the "2040 Plan"), the City began to hold what would become over 40 total public reviews/discussions between the Planning Board, City Commission, and several joint meetings. A complete history of reviews related to the 2040 Plan is summarized in the following table:

DATE	REVIEW TOPIC	LINKS
MASTER PLAN RFP & CONSULTANT SELECTION		
April 9, 2018	City Commission vote to issue RFP	Agenda – Minutes
May 14, 2018	City Commission Vote to Establish Ad Hoc Master Plan Selection Committee	Agenda – Minutes
July 31, 2018	Ad Hoc Master Plan Selection Committee RFP Review	-
August 29, 2018	Ad Hoc Master Plan Selection Committee Interviews and Recommendation	-
September 17, 2018	City Commission Approves Agreement with DPZ	Agenda – Minutes
PRE-DRAFT		
May 20, 2019	Preview and Discussion of Plan Topics	Agenda – Minutes
July 8, 2019	City Commission Master Plan Update	Agenda – Minutes
July 10, 2019	Master Plan Update	Agenda – Minutes
August 28, 2019	Master Plan Discussion	Agenda – Minutes
September 23, 2019	City Commission Master Plan Update	Agenda – Minutes
October 17, 2019	Joint Meeting – 1st Draft Discussion	Agenda
October 23, 2019	Master Plan Update	Agenda – Minutes
November 13, 2019	Master Plan Update	Agenda – Minutes
December 9, 2019	City Commission resolution to approve Draft #1 Review Schedule	Agenda – Minutes
January 8, 2020	Master Plan Review Process Update	Agenda – Minutes
FIRST DRAFT		
February 12, 2020	Premises & Future City Vision	Agenda – Minutes
March 11, 2020	Neighborhood Components	Agenda – Minutes
May 13, 2020	Master Plan Review Process Discussion	Agenda – Minutes
June 10, 2020	Master Plan Review Process Discussion	Agenda – Minutes
June 15, 2020	Joint Meeting Master Plan Review Process	Agenda – Minutes
June 24, 2020	Master Plan Review Process Discussion	Agenda – Minutes
August 12, 2020	Master Plan Themes pt. 1	Agenda – Minutes

September 9, 2020	Master Plan Themes pt. 2	Agenda – Minutes
November 11, 2020	Mixed-Use Districts	Agenda – Minutes
January 13, 2021	Neighborhood & Housing Policy	Agenda – Minutes
February 10, 2021	Neighborhood Plans & Shared Elements	Agenda – Minutes
March 8, 2021	City Commission Resolution Outlining the Remaining Master Plan Review Process	Agenda – Minutes
March 10, 2021	Direction Summary from Review of 1st Draft	Agenda – Minutes
March 22, 2021	City Commission Resolution Directing Preparation of Draft #2 (Postponed)	Agenda – Minutes
April 19, 2021	City Commission Resolution Directing Preparation of Draft #2	Agenda – Minutes
SECOND DRAFT		
October 11, 2021	Joint Meeting Draft #2 Receipt Update	Agenda – Minutes
October 13, 2021	2nd Draft Receipt and Review Process	Agenda – Minutes
November 10, 2021	Introduction, Future Land Use Map, Chapter 1 (Connecting the City)	Agenda – Minutes
December 8, 2021	Chapter 2 (Embraced Managed Growth)	Agenda – Minutes
January 12, 2022	Chapter 3 (Retain Neighborhood Quality)	Agenda – Minutes
February 9, 2022	Chapter 4 (Support Mixed-Use Districts) & Chapter 5 (Advance Sustainability Practices)	Agenda – Minutes
March 9, 2022	Summary of Recommendations – Draft #2	Agenda – Minutes
April 18, 2022	City Commission Resolution Directing Preparation of Draft #3	Agenda – Minutes
THIRD DRAFT		
August 10, 2022	Draft #3 Review Process Update	Agenda – Minutes
September 14, 2022	Final Draft Receipt and Process Confirmation	Agenda – Minutes
October 3, 2022	Resolution Authorizing 63-Day Notice Period	Agenda – Minutes
January 11, 2023	Final Draft & Public Comment Review	Agenda – Minutes
February 8, 2023	Final Draft & Public Comment Review	Agenda – Minutes
March 8, 2023*	Recommendation to Adopt 2040 Master Plan	Agenda – Minutes
April 3, 2023	Set Public Hearing Date for City Commission	Agenda – Minutes
May 22, 2023*	Resolution to Formally Adopt Master Plan	-

** Public Hearing*

Throughout the review process, the consultant team has maintained a webpage (www.thebirminghamplan.com) that has provided several important services over the last 4+ years including the following:

- Provided a means for the public to submit comments directly to the consultant team.

- Acted as a repository for all documents relating to the master plan that the consultant has produced.
- Compiled and made available a history of all master plans and studies relevant to the 2040 Plan.
- Made readily available each draft of the 2040 Plan as it was updated.

Required 63-Day Public Notice Period

As noted in the table above, on October 3, 2022, the City Commission authorized the 63-day distribution period for the final draft of the 2040 Plan pursuant to the requirements of Article III, Section 125.3841 of the Michigan Planning Enabling Act, and to provide copies of the proposed master plan to all of the necessary entities pursuant to MCL 125.3841(2). The following entities were included in the distribution:

- Neighboring Municipalities:
    - Beverly Hills
    - Bloomfield Hills
    - Bloomfield Township
    - Royal Oak
    - Troy

- Regional Planning Agencies:
    - SEMCOG
    - Oakland County

- Public Transportation Agencies:
    - Regional Transit Authority
    - SMART
    - Michigan Department of Transportation – Metro Region

- Railroad Agencies:
    - Amtrak
    - Canadian National Railway

Upon the closing of the 63-day distribution period, one comment was received from Oakland County. In summation, the County determined that the Birmingham Plan 2040 was NOT INCONSISTENT with the plan of any city, village, or township that received notice of the draft plan.

Public Participation & Evolution of the 2040 Plan

Public participation is vital to the success of the 2040 Plan. The City of Birmingham has taken a meaningful and expansive approach to public participation, which started before the consultant team was even selected. In the Request for Proposals, extensive public participation was listed as an explicit requirement, which included a detailed community engagement plan that allowed for public input throughout the entire process from visioning to formal adoption of the 2040 Plan.

As noted in the process outline section above, there was substantial opportunity for public participation in the early stages in the process. This was an intentional and standard approach to the master planning process. This engagement helps capture opinions, preferences, and visions for the community's future. With the feedback received during this robust engagement period, the consultants produced a first draft. A summary of the early public engagement opportunities is provided below:

DATE(S)	PUBLIC ENGAGEMENT	LINKS
April 22-29, 2019	Neighborhood Round Tables	Advertisement – Materials
April 23-30, 2019	Young Families & Professionals Round Tables	Advertisement
May 14-21, 2019	Week Long Charrette	Schedule – Summary
July 7-9, 2019	Drop-In Clinic	Materials
May/Nov. 2019	Surveys	-
Ongoing	Newsletters	City News & Information
Ongoing	Constant Contact Email Communications	-

As reviews of the first draft and all subsequent drafts of the 2040 Plan continued, so did the opportunities for public participation. This resulted in a final draft that has been informed by the public. During the process, several high profile concepts or recommendations were altered including:

- Neighborhood Seams
- Accessory Dwelling Units
- Commercial Destinations

Importantly, public participation does not end with the adoption of the 2040 Plan. Each recommendation in the 2040 Plan will be studied, vetted, and considered in open public meetings prior to implementation.

The Future of the 2040 Plan

Once a master plan is adopted, the City is tasked with prioritizing and considering the recommendations of the plan through in-depth reviews. Some recommendations may need to be broken down into more manageable subtasks, or next steps, with responsibilities assigned accordingly. At present, the 2040 Plan contains 30 focus areas and corresponding recommendations with varying levels of complexity.

It is imperative to understand that a master plan is not a static document. An annual review of a master plan is necessary to complete the following tasks:

1. Review goals and major recommendations.
2. Review action table and progress toward completing annual priorities.
3. Review prior year's rezoning and development decisions. Discuss if there are any trends that need to be addressed.

4. Identify any potential plan amendments to work on for the upcoming year that can be prepared and adopted then incorporated at a later date when the master plan is updated.
5. Identify any Zoning Ordinance updates to undertake in the coming year.

Performing the annual review and thoroughly documenting the process and the machinations of the master plan is essential when it comes to the master plan review after 5 years of adoption as required by the Michigan Planning Enabling Act. At 5 years, it should be determined whether any amendments are needed or whether the plan is still relevant to today's conditions. Generally, the goals, objectives and future land use plan should be carefully reviewed to contrast with current development trends as well as any major changes or diversions from the plan that have taken place in order to consider whether the plan needs to be updated.

LEGAL REVIEW:
The City Attorney has reviewed the report and its attachments and is satisfied that the plans development followed the statutory requirements for the development of a master plan.

FISCAL IMPACT:
There is no fiscal impact for this agenda item.

PUBLIC COMMUNICATIONS:
Since the beginning of the comprehensive master planning process, there has been extensive public communications for the 2040 Plan including social media posts, constant contact email updates, FAQ's, and regular inclusion on public meeting agendas.

In addition, as required by the Michigan Planning Enabling Act, a legal ad was placed in a newspaper of general circulation prior to the public hearing at the Planning Board on March 8, 2023. An additional legal ad was placed in a newspaper of general circulation prior to the public hearing at the City Commission on May 22, 2023.

Finally, as required by the Michigan Planning Enabling Act, the City completed an additional notice of the public hearing that is required to be sent to each entity to which the 2040 Plan was distributed for the required 63-day notice period prior to the public hearing at the City Commission on May 22, 2023.

SUMMARY:
The Planning Division requests that the City Commission consider the recommendation of the Planning Board to adopt and approve in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map.

ATTACHMENTS:

- The Birmingham Plan 2040 Resolution of Adoption
- The Birmingham Plan 2040

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution to adopt and approve in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map, as recommended by the Planning Board.

CITY OF BIRMINGHAM, OAKLAND COUNTY, MICHIGAN
THE BIRMINGHAM PLAN 2040
RESOLUTION OF ADOPTION

WHEREAS, The Michigan Planning Enabling Act (Public Act 33 of 2008), as amended, provides for a City Planning Commission to prepare and adopt a Master Plan for the physical development of the community; and

WHEREAS, The Planning Board is a locally organized board and is not established under the Municipal Planning Commission Act, Act No. 285 of the Public Acts of Michigan of 1931 (MCL 125.31 et seq.), as amended. Thus, the Planning Board acts as a recommending body to the City Commission, which assumes the role of a Planning Commission for the purposes of master plan adoption in the City of Birmingham; and

WHEREAS, The Planning Board, in conjunction with the City Commission, has prepared such a master plan for the City's physical development in compliance with the Michigan Planning Enabling Act, including maps, plats, charts, and other related matter; and

WHEREAS, The Planning Board and City Commission have provided plentiful opportunities for public participation throughout the drafting process; and

WHEREAS, The City Commission on October 3, 2022 moved to authorize the required 63 day distribution period for the final draft of the Birmingham Plan 2040 pursuant to the requirements of Article III, Section 125.3841 of the Michigan Planning Enabling Act and to notify the secretary of the planning commission to provide copies of the proposed master plan to all of the necessary entities pursuant to MCL 125.3841(2); and

WHEREAS, The Planning Board on March 8, 2023 held a formal public hearing after the public received proper legal notice at least 15 days before the date of the public hearing, reviewed additional public comment, and moved to recommend that the City Commission adopt and approve in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map; and

WHEREAS, All public comments received during the drafting process have been carefully considered and the Planning Board and City Commission is satisfied that the Birmingham Plan 2040 is ready for adoption.

NOW, THEREFORE, BE IT RESOLVED, The Birmingham City Commission herby adopts and approves in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map.

Scott Clein, Planning Board Chairperson	Therese Longe, Mayor
Nicholas Dupuis, Planning Director	Thomas M. Markus, City Manager

I, Alexandria Bingham, City Clerk of the City of Birmingham, Michigan, do hereby certify that the foregoing is a true and correct copy of the resolution adopted by the Birmingham City Commission at its regular meeting held on May 22, 2023.

_____

Alexandria Bingham
City Clerk

The Birmingham Plan

05/09/23

7C

CITY OF BIRMINGHAM, OAKLAND COUNTY, MICHIGAN
THE BIRMINGHAM PLAN 2040 RESOLUTION OF ADOPTION

WHEREAS, The Michigan Planning Enabling Act (Public Act 33 of 2008), as amended, provides for a City Planning Commission to prepare and adopt a Master Plan for the physical development of the community; and

WHEREAS, The Planning Board is a locally organized board and is not established under the Municipal Planning Commission Act, Act No. 285 of the Public Acts of Michigan of 1931 (MCL 125.31 et seq.), as amended. Thus, the Planning Board acts as a recommending body to the City Commission, which assumes the role of a Planning Commission for the purposes of master plan adoption in the City of Birmingham; and

WHEREAS, The Planning Board, in conjunction with the City Commission, has prepared such a master plan for the City's physical development in compliance with the Michigan Planning Enabling Act, including maps, plats, charts, and other related matter; and

WHEREAS, The Planning Board and City Commission have provided plentiful opportunities for public participation throughout the drafting process; and

WHEREAS, The City Commission on October 3, 2022 moved to authorize the required 63 day distribution period for the final draft of the Birmingham Plan 2040 pursuant to the requirements of Article III, Section 125.3841 of the Michigan Planning Enabling Act and to notify the secretary of the planning commission to provide copies of the proposed master plan to all of the necessary entities pursuant to MCL 125.3841(2); and

WHEREAS, The Planning Board on March 8, 2023 held a formal public hearing after the public received proper legal notice at least 15 days before the date of the public hearing, reviewed additional public comment, and moved to recommend that the City Commission adopt and approve in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map; and

WHEREAS, All public comments received during the drafting process have been carefully considered and the Planning Board and City Commission is satisfied that the Birmingham Plan 2040 is ready for adoption.

NOW, THEREFORE, BE IT RESOLVED, The Birmingham City Commission herby adopts and approves in its entirety the Birmingham Plan 2040, inclusive of all maps, plats, charts, and other related matter, figures and the Future Land Use Map.

DRAFT

Scott Clein, Planning Board Chairperson

Therese Longe, Mayor

Nicholas Dupuis, Planning Director

Thomas M. Markus, City Manager

I, Alexandria Bingham, City Clerk of the City of Birmingham, Michigan, do hereby certify that the foregoing is a true and correct copy of the resolution adopted by the Birmingham City Commission at its regular meeting held on May 22, 2023.

Alexandria Bingham, City Clerk

Master Plan, City of Birmingham, Michigan

City Commission

Therese Longe, Mayor

Elaine McLain, Mayor Pro-Tem

Clinton Baller

Pierre Boutros

Brad Host

Andrew Haig

Katie Schafer

City Staff

Tom Markus, City Manager

Jana Ecker, Assistant City Manager

Nicholas Dupuis, Planning Director

Brooks Cowan, Senior Planner

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7C

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7C

A. Introduction

A. Introduction

Context

Context

Planning for the future of a successful city is an intriguing challenge; in a city that is looked upon fondly by residents, workers, and leaders, what is to be improved? Birmingham's structure is well defined, its parks are numerous and accessible, its downtown is active and successful, and its neighborhoods are calm, quiet, and comfortable. Despite these qualities, greater societal changes have had an impact on the city. Even among optimistic residents, a concern for deteriorating social connectivity rings clear.

While Birmingham has long supported a series of close-knit communities within its borders, the greater culture has shifted towards increasing isolation. This comes not at the fault of individuals - who remain bright, engaged, loving, and caring members of families, civic, and social groups - but due in large part to changes in the structure of our region and technology's role in bridging social gaps created by increasing physical isolation. Structurally, the fabric of daily life has been spread apart, few places as completely as Metropolitan Detroit. People have been spread further from their workplaces, social spaces, entertainment, and the staples of daily life, forced to spend an increasing amount of their time driving from place to place. Today, the resulting and relentless traffic congestion leaves little time for family or friends, and especially little time for engaging within our communities.

Birmingham is rare. It is a place historically built upon community, weaving together neighbors, schools, churches, civic clubs and institutions, and businesses. It continues to function well for its residents; far better than most surrounding communities. However, many residents express nostalgia for the city's social structures which have lost prominence. For some, the loss of strong social spheres is manifest in the changing character of homes and business districts. For others, greater societal issues are the cause. The sentiment is expressed especially strongly from the city's civic institutions which are trying to build and support community but feel that they are increasingly unknown as society has forgotten their critical role. Some feel that downtown's more recent intensity of activity has further eroded its' culture. Yet many new or younger residents express a great deal of optimism, invigorated by life in Birmingham and by the city's active downtown, life in its neighborhoods, and positive changes brought about by growth.

Birmingham is rare because it remained intact while most historic places in Metropolitan Detroit eroded their downtowns and invested in car-centric roadways and businesses. As a rare place, Birmingham is desirable. That desire results in growth pressure which continually increases property values. New residents are willing to pay for the lifestyle that Birmingham offers, many stretched thin to do so. Some residents prefer that the city become increasingly exclusive while others feel that it is antithetical to the community's history. Many residents are dismayed that the demand to live in Birmingham has resulted in a significant number of demolitions. However, other residents have purchased the new homes for the quality of life offered in the city and its neighborhoods. Some residents would like to downsize and remain in the community but can't find the apartments and condos they desire. No single group is in the majority.

Despite concerns around the edges, overall residents are optimistic for the City's future. Birmingham is doing well today and will continue to be a wonderful place to live. As a result this plan looks to improve upon what works and learn from best practices that have evolved in recent decades. The primary issue requiring radical change is the divide caused by Woodward. Remaining plan elements are either incremental improvements - such as bicycle and micro-mobility accommodations - or organizational improvements - such as analysis by Planning District and optimizing the zoning code. This plan reinforces the physical structure of Birmingham that makes it comfortable, neighborly, and successful.

A Global Pandemic

In early 2020, a global pandemic disrupted everyones' lives, work, schooling, and leisure time. We must acknowledge the tragic loss of family, friends, and colleagues. The community has experienced and continues to experience loss, and will forever be impacted.

The long-term influence of Covid-19 on the work and retail environment is uncertain. A significant amount of office work has moved from the collective office environment to working from home some or all of the time, which impacts places like Downtown Birmingham. Delivery services have also increased significantly, reducing foot traffic for local businesses, increasing competition, and requiring new models for food service. For individuals and families, it has required more physical separation and reduced interactions and sociability. However, the walkable streets, accessible parks and trails, and places to socialize in safe conditions have been invaluable for residents. The underlying structure of the City, which this plan supports and enhances, has provided a great deal of normalcy. The plan's focus on housing within mixed-use districts will help mitigate the loss of in-person office work and shopping foot traffic, as well as bolster those districts should conditions return to pre-pandemic normal. In total, the plan's support for the timeless structure, habitation, and programming of neighborhoods and mixed-use districts will enhance the community's resilience in the face of future challenges.

Planning Districts

Of the City plans following 1929, only the 1980 Plan addressed structural elements of neighborhoods and commercial districts. Interestingly, when describing neighborhoods, the plan defined them by the roads that bound them rather than by a name. The scale used for many of the neighborhoods discussed by the 1980 Plan is similar to that which this plan has defined. Yet properly defining and controlling the extent of commercial districts and their effect on residential neighborhoods is a clear goal of that plan. Through this process of defining residential areas and establishing permanent extents to commercial areas, the 1980 Plan began to identify a city structure, including recognition of the positive role that neighborhood commercial centers play.

While prior plans have dealt with issues pertinent to the success of the City and its neighborhoods, these plans have lacked the necessary descriptive language that clarifies where and why land uses should be allowed. Allocating parks is the clearest example. Today the Torry planning district, north of Lincoln, clearly lacks park space, despite its inclusion in the 1929 Plan (See Fig. 1) which identified a large park for this neighborhood that was not acquired. The purpose for locating the park in 1929 was in finding land yet to be fully platted and built upon. Today we can objectively identify the fact that the Torry planning district needs park space, which is a more actionable proposition. Similarly, the 1980 Plan makes park space recommendations based upon objective, numerical analysis. Yet acquiring land for the neighborhood's future quality of life is an emotional appeal. Identifying the Torry planning district by name, and its lack of park space, is a more powerful prospect than suggesting a general lack of parks.

This plan establishes planning districts as a tool for evaluating access to community amenities, civic institutions, and neighborhood-centric commercial areas. Planning districts are also a tool for evaluating access to facilities like bicycle facilities and improved streets. Not every deficit can be corrected, but evaluating the deficit leads to discussions of alternatives and opportunities. While there may be a few opportunities to add park space in the Torry District, the Quarton District also lacks park space but has no space to allocate. Rather in the Quarton District, the use and improvement of nearby school fields may be the most viable outcome. These districts are derived from prior plans and solidified here so they continue as a useful civic tool for the future.

Retaining Quality of Life

Birmingham's high quality of life comes from a number of relatively common neighborhood characteristics, but the city stands out in that it has retained all of these characteristics while other places have not (See Fig. 2). Just as quality of life has a positive feedback loop with resident pride and local investment, it also does with fiscal viability. The city is fiscally successful because it invests in itself, residents invest in the city, and overall that maintains a high quality of life. Elements key to that quality of life are:

1. School quality and access;
2. Park quality, access, and diversity;
3. Downtown access and success;
4. Tree canopy;
5. Narrow streets;
6. Walkability;
7. Age diversity;
8. Property maintenance; and
9. Housing diversity and quality.

Figure 1. 1929 Plan of Birmingham and Vicinity - the shaded areas indicate proposed future parkways.

A. Introduction

Retaining Quality of Life

Individually each of these elements is simple and obvious, but they work together to make places feel safe, comfortable, friendly, and relaxed - like home. While not an element above, good governance is and has been key to maintaining these individual qualities and the city's overall quality of life.

Resilience is an important quality for any community to possess. As the world changes, cities need to withstand those changes and emerge strong. Birmingham has fared well in this regard throughout its' history, despite the disastrous blows many cities have endured through the 20th Century. Resilience is derived from social, physical, environmental, and governmental systems. Each of these areas influences the other; a healthy and resilient community must understand the balance and interaction of its systems, that decisions and initiatives should be weighed by their impact in all of these areas.

Ultimately, cities are social ecosystems for people. Cities thrive where people build roots and interconnections, the physical social network. Neighborhood social networks build, support, and retain a high quality of life. Citywide social networks build, support, and retain civic services such as schools, parks, libraries and historical resources, support organizations for seniors, impoverished residents, and others, extracurricular educational, skills, health development, and community building activities. Business social networks build innovation and local economies. Each scale of physical social network needs a means for people to observe each other in the city, places for them to meet and interact, and support structures which help them develop. For instance, people who enjoy observing nature need places to do so alone and together, and an advocacy organization for ecological preservation. Similarly, business innovation needs space for creative and driven people to interact, and

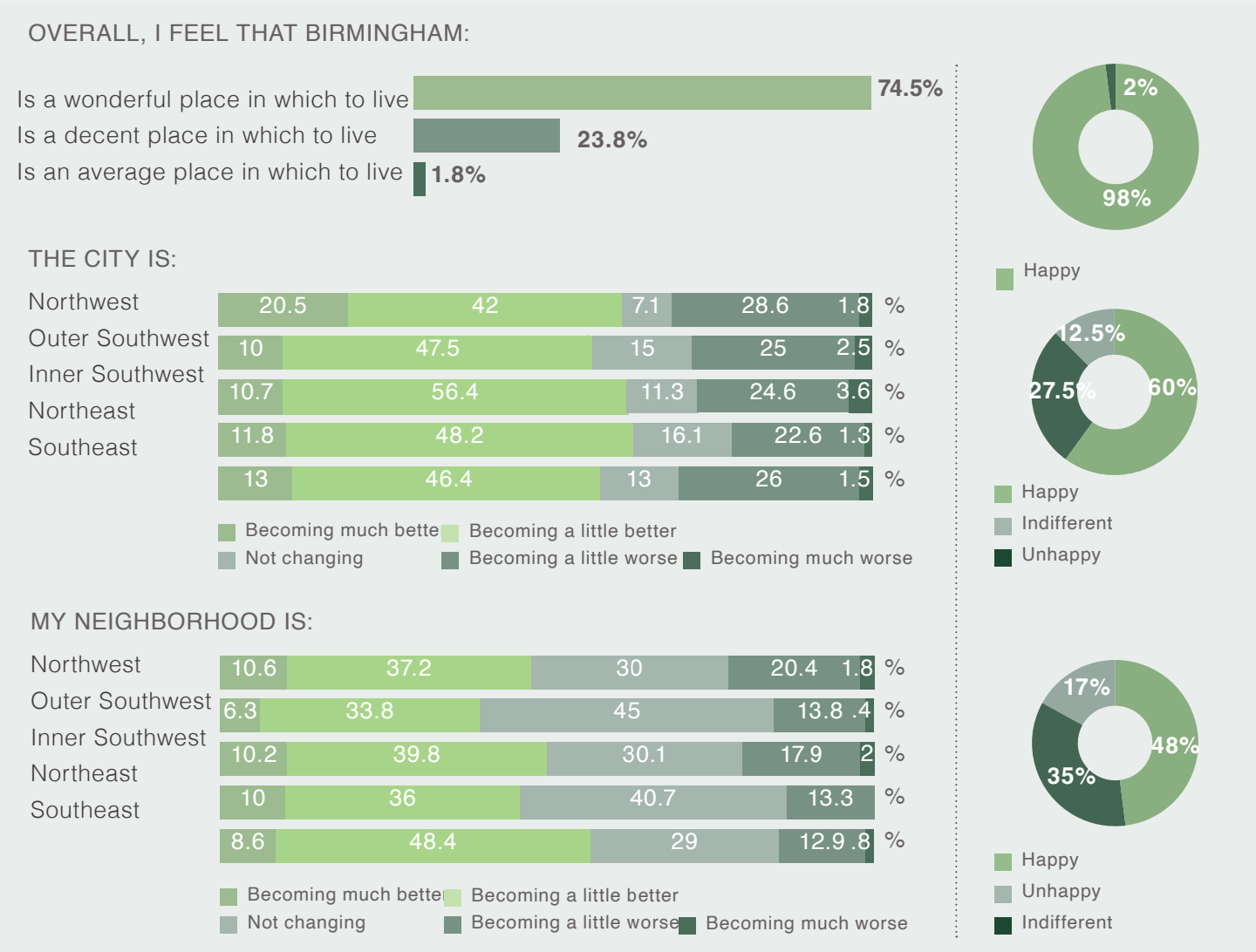

Figure 2. The Birmingham Plan initial survey results (May 2019).

buildings with inexpensive rent or shared facilities where they can incubate new ventures.

A key component of all three social realms is diversity. When cities become too narrow in their diversity of age, race, family structure, background, experience, civic institutions, and businesses, they eventually decline. Residents have discussed the needs of the older adult population extensively. Discussed less frequently are the needs of middle aged and younger populations. Focusing too much on one group over another is a distraction of the present; cities need to provide for and retain a population that is diverse in age. Similarly, businesses must be diverse in their sizes, areas of focus, and age. Cities need well established businesses along with new and innovative businesses. To achieve this, buildings are needed which differ in the size of space provided, rent, and location in the community, and zoning needs to allow for a broad and ever-changing range of business types.

As places where people exist in physical space, cities must be supportive of peoples' physical needs and abilities, and provide the spaces necessary for interpersonal networks to thrive. At a basic level, people need food, shelter, exercise, and access to nature. To exist as a broader society, people need access to a marketplace and places to gather. While food and shelter are often discussed, exercise and access to nature have only more recently been studied. The form of a city significantly influences one's likelihood of daily exercise. If much of a day's trips can occur by walking and biking, then on average people are physically healthier. When a city maintains a vibrant tree canopy, parks, and natural areas, combined with opportunities to walk, people are mentally healthier (See Fig. 3). At the broader societal level, people need a marketplace for jobs and to acquire goods. Ideally this should be near to where they live to achieve the physical and mental advantages of walking and nature. And places to gather are also key social requirements, which should be varied in type and distributed throughout the community, typically in the form of plazas, parks, and preserves, but also in the form of cafes, markets, and social clubs (See Fig. 4).

Birmingham straddles the Rouge River and has a direct relationship with the watershed. The river and watershed are important for the region and for peoples' daily life in the city. Since the industrial revolution, cities have done a poor job of caring for the natural environment upon which they are built. Eventually those natural systems react in a way that makes places less hospitable. For instance, caring for the city's soils, water quality, and street design and maintenance impacts the health and longevity of street trees, which impact mental health, clean the air of pollutants, and keep the city cool during the hot months. Beyond the immediate environment of Birmingham, choices made within the city have a broader impact. Buildings can use less energy or generate their own, driving can be reduced, recycling opportunities can be expanded, composting opportunities can be added, and choices being made concerning material use in homes, businesses, and municipal operations can cause less impact. Overall, caring for the city's local environment and lessening its impact on the broader environment will in turn support the city's future health.

Figure 3. Vibrant tree canopy in Birmingham.

Figure 4. Birmingham Hometown Parade (May 2019).

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B. Future Land Use

B. Future Land Use

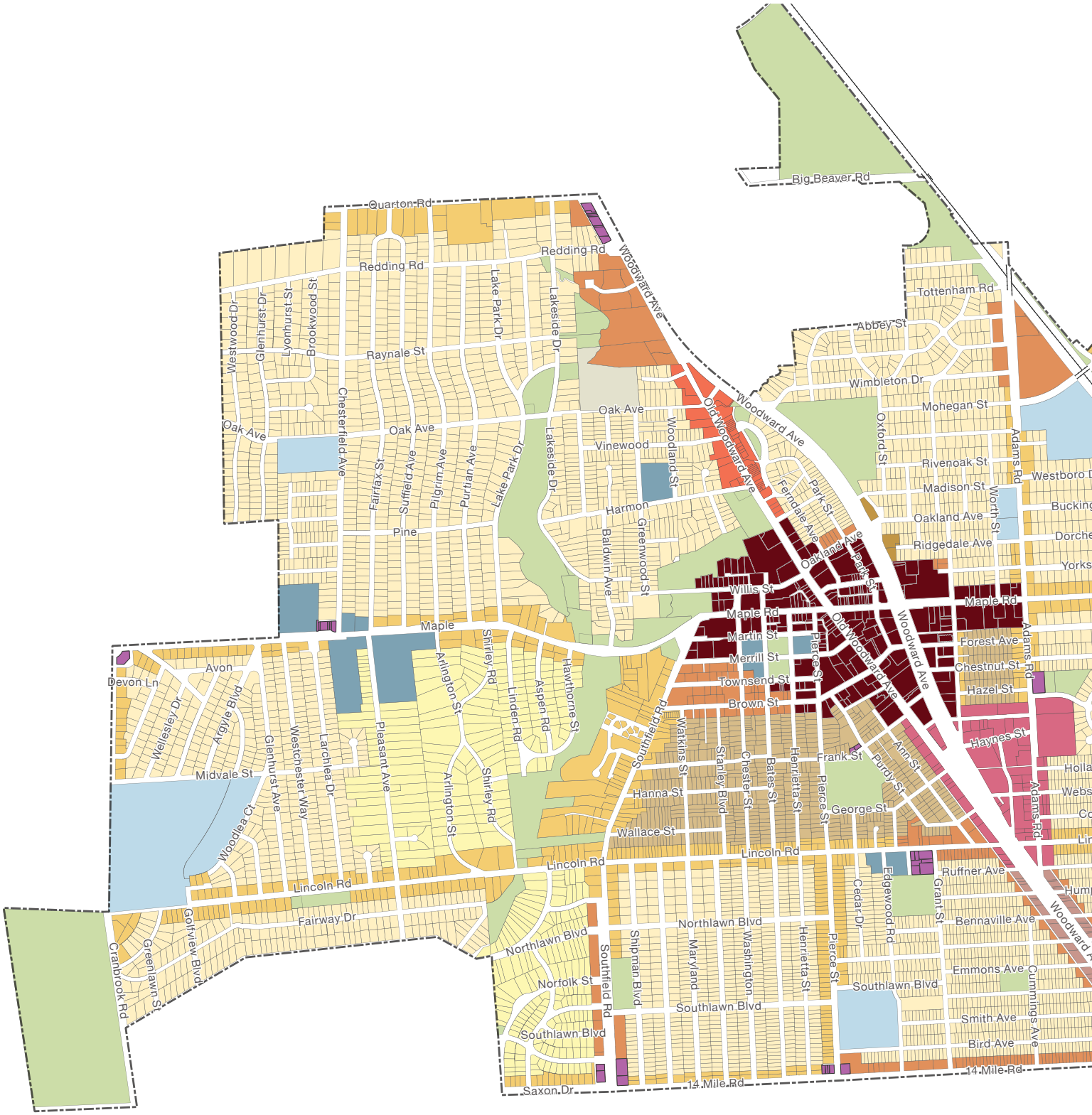
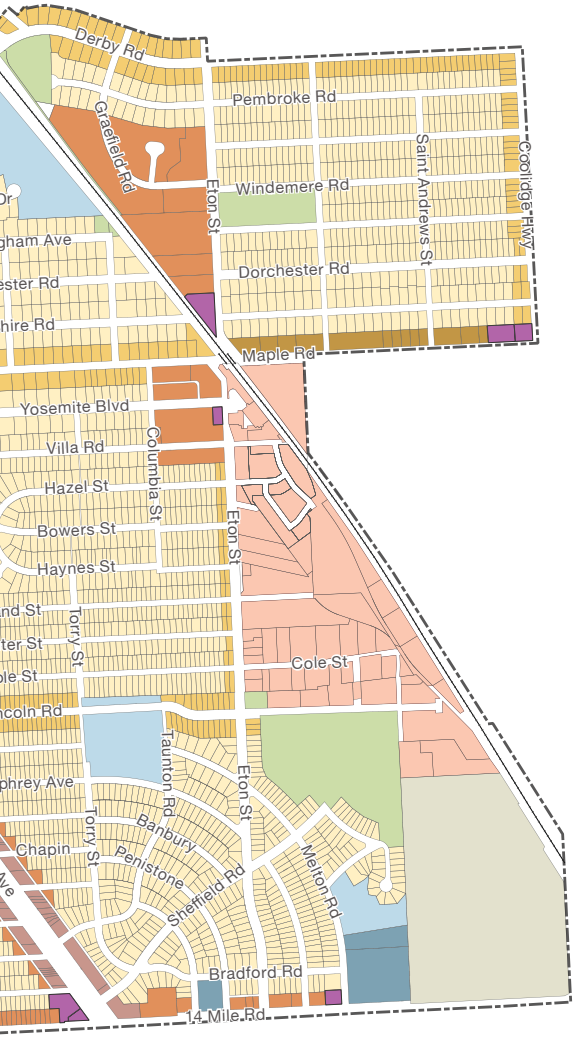


Figure 5. Future Land Use Map.

Future Land Use Map

Birmingham's future land use map is structured by Planning District boundaries within which land uses reinforce the desired future character. This map serves as the basis for zoning, specifying where different uses and intensities are appropriate throughout the City. This Future Land Use Map aims to identify, sustain, and strengthen Birmingham's neighborhoods and mixed-use districts. The following sections describe each land use in greater detail.



District Destinations

- Civic Destination: General
- Civic Destination: School
- Civic Destination: Cemetery
- Recreational Destination
- Commercial Destination

Mixed Use District Fabric

- Maple and Woodward
- Haynes Square
- Market North
- Rail District
- South Woodward

Neighborhood District Fabric

- Fine Grained
- Traditional
- Picturesque

District Seams

- Buffer
  (TZ-1, TZ-3, R3, R4, R5, R6, R7, R8, MX)
- Activity
  (TZ-1, R3, R4, R5, R6, R8)
- Access
  (R1A, R1, R2, R3)

B. Future Land Use

Zoning Plan

Zoning Plan

A zoning plan is required by the Michigan Planning Enabling Act (MPEA) and Zoning Enabling Act (MZEA). Section 33(d) of the MPEA (PA 33 of 2008), as amended, requires that the comprehensive plan shall serve as the basis for the community's zoning plan and the Michigan Zoning Enabling Act (PA 110 of 2006), as amended, requires a zoning plan to be prepared as the basis for the zoning ordinance.

Birmingham's Zoning Plan (See Fig. 6) presents a summary of the zoning districts that apply to each of the proposed future land use planning district designations. To implement the zoning plan, recommended future revisions to Birmingham's zoning ordinance are discussed throughout this plan.

Future Land Use Category	Corresponding Zoning District(s)
District Destinations	
Civic Destinations: General	Any district which permits institutional uses
Civic Destinations: School	Varies: must match the predominant district of surrounding properties
Civic Destinations: Cemetery	PP: Public Property
Recreational Destinations	Varies, predominantly PP: Public Property
Commercial Destinations	N/A: New zoning districts required to control scale
Mixed-use District Fabric	
Maple and Woodward	Downtown Overlay; Triangle Overlay; MX: Mixed Use
Haynes Square	Downtown Overlay; Triangle Overlay; MX: Mixed Use
Market North	Downtown Overlay; Triangle Overlay
Rail District	MX: Mixed Use; R7: Multiple-Family Residential
South Woodward	MX: Mixed Use; R7: Multiple-Family Residential
Neighborhood District Fabric	
Fine Grained	R2: Single-Family Residential; R3: Single-Family Residential; R4: Two-Family Residential
Traditional	R1: Single-Family Residential; R2: Single-Family Residential
Picturesque	R1A: Single-Family Residential; R1: Single-Family Residential
District Seams	
Buffer	TZ-1: Transition Zone; TZ-3: Transition Zone; R3: Single-Family Residential R4: Two-Family Residential; R5: Multiple-Family Residential R6: Multiple-Family Residential; R7: Multiple-Family Residential R8: Attached Single-Family Residential; MX: Mixed Use
Activity	TZ-1: Transition Zone; R3: Single-Family Residential R4: Two-Family Residential; R5: Multiple-Family Residential R6: Multiple-Family Residential; R8: Attached Single-Family Residential
Access	R1A: Single-Family Residential; R1: Single-Family Residential; R2: Single-Family Residential; R3: Single-Family Residential; R4: Two-Family Residential (only where abutting R3 or more intense zoning districts)

Figure 6. Zoning Plan.

Birmingham Planning Districts

Planning Districts identify segments of the city that demonstrate a consistent character, which differs from that of surrounding areas. (See Fig. 8) Those character differences may be defined by the mixture of uses, the size of properties and blocks, the trajectory of streets, or natural and man made divisions such as the Rouge River or railroad alignment. These districts were originally identified by their bounding roads in the text of the 1980 Master Plan but not reflected in Future Land Use. Adding this distinction to Future Land Use indicates that land use decisions should consider the area's unique character. In addition to land use decisions, this plan uses Planning Districts for analysis and structuring of other municipal programs such as parks and civic art.

Birmingham's Planning Districts, due in part to the era in which the city was built, closely reflect the structure of a 1920's neighborhood unit. Figure 7 illustrates that typical neighborhood unit structure, which is reflected in the Future Land Use Map. The neighborhood unit consists mostly of District Fabric, whether mixed-use or residential. Fabric describes the typical condition of an area. For residential neighborhoods, this generally consists of houses of a similar scale arranged in blocks and facing onto small, residential streets, which have street trees and sidewalks. Fabric may differ in residential neighborhoods by the way streets are laid out - straight or curved - and the average size of homes and residential properties. Similarly, mixed-use areas have a consistent type of mixed-use fabric. Mixed-use fabric generally consists of multi-story buildings with commercial ground floor uses, arranged on rectangular blocks and located close to sidewalks, along streets that accommodate significant pedestrian and vehicle traffic and often have wide sidewalks and striped and metered parking. Planning Districts also typically contain recreational space, civic institutions, and a small commercial area, which are all destinations for district residents. Most of Birmingham's Planning Districts include these elements, Barnum and Pierce most closely resembling the diagram.

Figure 7. Planning District Structure.

The edges of Planning Districts are designated District Seams. These are places where districts abut each other, natural or man made barriers, and roadways that are more significant than a neighborhood street. Seams recognize this condition which results in greater pedestrian, bicycle, and vehicular traffic along the Seam. Most Seams are low in intensity, designated Access, which reflects the character of surrounding District Fabric and recognizes the increased activity. Higher intensity Buffer and Activity Seams occur along regionally significant roadways which carry high traffic volumes and in places adjacent to Mixed-use Districts which are much higher in intensity than the surrounding District Fabric.

Five Mixed-use Districts are identified, differentiated by character. Like other Planning Districts, most Mixed-use Districts include or should include recreational space and civic institutions. Commercial destinations are not generally part of a Mixed-use District, however, because these districts include a mix of commercial uses more broadly.

Planning Districts serve as a guide for the types of land use which are appropriate across distinct segments of the city. Changes in land use should consider the neighborhood unit structure and typical distribution of uses as follows:

- District Fabric is either mixed-use or neighborhood, and is consistent across the district;
- District Seams occur along the edge of a district;
- Commercial Destinations occur along the edge of a district or adjacent to significant recreational destinations, and are limited in area;
- Civic Destinations may occur within a district or at its edge, and are few in number;
- Recreational Destinations may take many forms, but districts should include or abut at least one.

B. Future Land Use

Zoning Plan

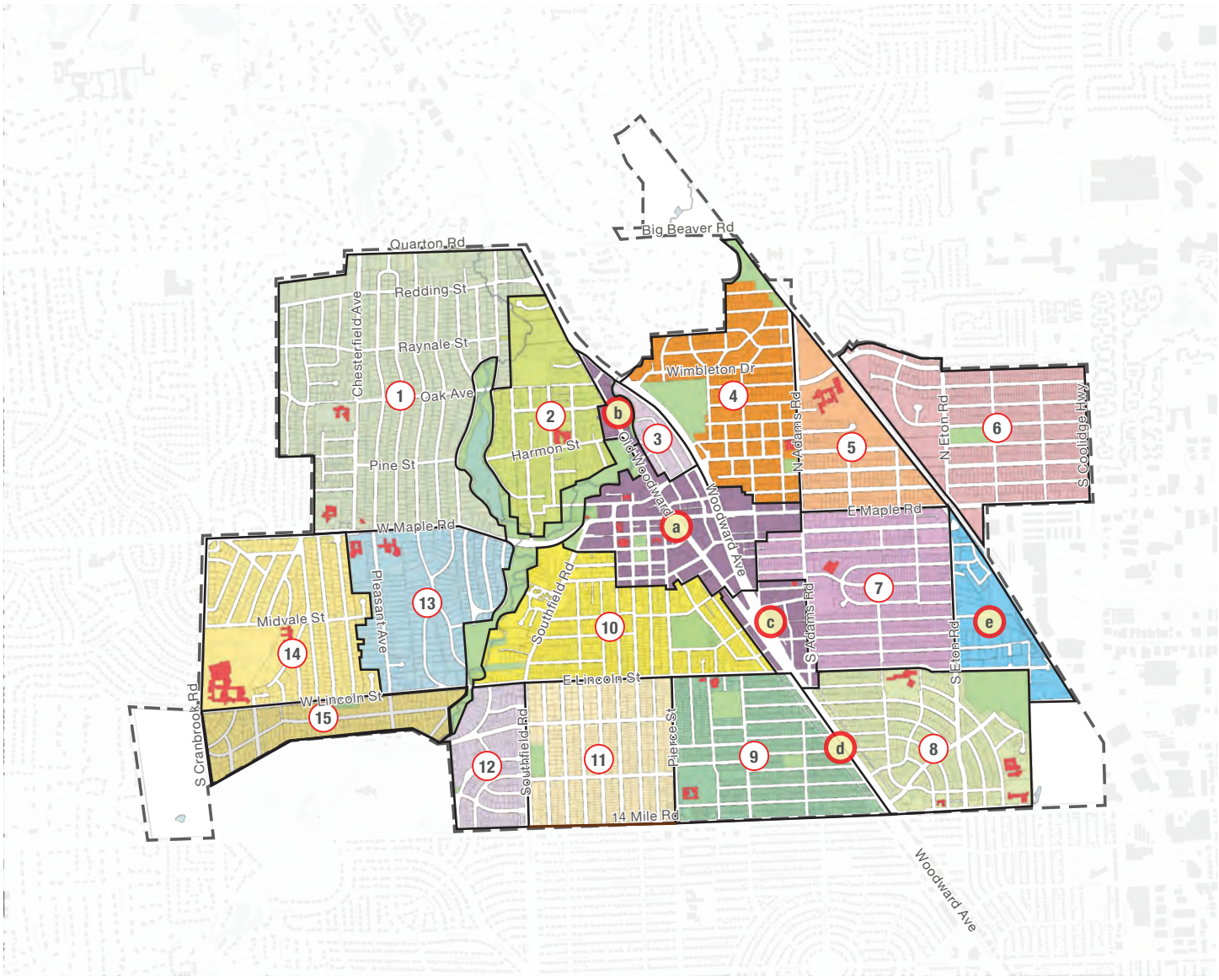


Figure 8.

BIRMINGHAM PLANNING DISTRICTS

Neighborhood Districts

1. Quarton
2. Holy Name
3. The Ravines
4. Poppleton
5. Derby
6. Pembroke
7. Torry
8. Kenning
9. Pierce
10. Barnum
11. Crestview
12. Birmingham Farms
13. Linden
14. Seaholm
15. Lincoln Hills

Mixed-use Districts

- a Maple & Woodward
- b Market North
- c Haynes Square
- d South Woodward Gateway
- e Rail District

Mixed-use District Fabric

Birmingham's Mixed-use Districts are defined principally by Mixed-use District Fabric. As the name implies, these are blocks and buildings which include a variety of uses. Between the Downtown and Triangle District Overlays, and the Eton Road Corridor Plan, each area has a clear set of rules and applicable zones. To achieve greater zoning consistency city-wide, these zones may be changed through a zoning update, but should retain the intent of prior plans for Downtown, the Triangle District, and the Eton Road Corridor. Each district is distinct in its mix of uses and location for required ground floor commercial uses. To be successful, each district must also develop moderate to high densities of housing, and provide civic and recreational space.

- Maple and Woodward is a high intensity mixed-use district which includes zones as defined in the Downtown and Triangle District Overlays. Zoning may be modified to create greater consistency between these overlay districts, but should generally retain the heights and uses as defined in those overlays. Ground floor commercial uses are required as defined by the Red Line Retail standards.
- Market North is a low intensity mixed-use district which includes zones as defined in the Downtown Overlay. Market North should consist of buildings lower in scale and intensity than the core of Downtown to the south, and of smaller scale businesses. Ground floor commercial uses are required as defined by the Red Line Retail standards.
- Haynes Square is a medium intensity mixed-use district which includes zones as defined in the Downtown and Triangle District Overlays. Similar to Maple and Woodward, zoning may be modified for greater consistency. Haynes Square should be lower in height and intensity than areas further north in the core of downtown. Ground floor commercial uses should be provided along Old Woodward, Woodward, and Haynes Street. Other streets may include other primary uses.
- The South Woodward Gateway is a specialized mixed-use district which provides a transition between the high speed, high capacity Woodward Ave and adjacent neighborhoods. This transition is both in height and use. Additional height and intensity are needed to provide a better buffer for the adjacent neighborhoods, yet height should step-down to meet the scale of adjacent residences.
- The Rail District is a low intensity mixed-use district which includes zones as defined in the Eton Road Corridor Plan.

Neighborhood District Fabric

Neighborhood District Fabric constitutes the majority of each neighborhood-based Planning District, and as a result most of the City overall. Identified as picturesque, traditional, and fine grained, neighborhood fabric consists of single-family housing within a narrow range of size and character. This housing is arranged in blocks bounded by low speed, pedestrian and bicyclist-centric roads, lined with mature street trees.

Neighborhood District Fabric is often distinguished in terms of block structure, which is its framing element. Across Birmingham, block structure varies substantially. Most of Quarton Lake Estates has long blocks, oriented north-south, with the exception of the western portion which has a variety of shorter blocks, some that change direction. Holy Name has principally square blocks. Interestingly, Crestview and Pierce have similarly sized blocks but in different orientations. Kenning and Birmingham Farms have many curvilinear blocks. The structure of a neighborhood's blocks establishes a great deal of its character. Deep blocks support deeper properties. Short blocks are more easily walkable. Curvilinear blocks deflect views. Very straight blocks give long views. No pattern is better or worse, they simply provide a structure for the neighborhood fabric.

In each neighborhood, the size of private lots varies while often occupying the same structure of blocks. For instance, Crestview has larger lots to the west and smaller lots to the east (See Fig. 9). The same is true in Pembroke, with smaller lots to the north and larger to the south. Variety of lot sizes in a neighborhood contributes to the visual interest of pedestrians, with houses of different types and sizes. This also supports a diversity of resident types in terms of family structure, age, and income. Each Planning District includes a narrow range of diversity internally, which is reflected in the narrow range of zoning districts within each type of neighborhood fabric.

- Picturesque Fabric includes R1A and R1 zoning districts.
- Traditional Fabric includes R1 and R2 zoning districts.
- Fine Grained Fabric includes R2, R3, and R4 zoning districts.

B. Future Land Use

District Seams

District Seams

District Seams are an important means of coordinating land use and transportation and significant routes of vehicular, bicycle, and pedestrian movement. Identified as access, activity, and buffer, neighborhood seams consist of a variety of single-family detached and attached housing and multi-family housing at different scales, limited according to intensity, home-based businesses, and some size-limited businesses in Buffer Seams (See Fig. 10). By definition, Seams are applied only at the edges of Planning Districts - one or two lots deep. The intensity of Neighborhood Seams is related to the Neighborhood Fabric intensity, the size and character of the adjacent roadway, or adjacency of Mixed-use Districts. Buffer Seams are very limited in application, only appropriate adjacent to mixed-use centers and the intersections of major and section line roads.

Figure 10. A hypothetical Activity Seam.

Access Seams match the intensity of the Planning District's neighborhood fabric. These Seams signal a response to adjacent transportation conditions, where streets may require wider sidewalks, bicycle accommodations, or traffic calming to lessen the impact of higher speed and volume traffic within a residential context.

Activity and Buffer Seams are located along regionally significant streets and in places where multi-family housing, attached single-family housing, and commercial uses have previously been built. The Seam designation establishes consistency, recognizing what has already been built and enabling infill development in conditions that are not conducive to single-family housing. Activity and Buffer Seams provide opportunities for building townhomes, cottage courts, and small multi-family buildings. These types are allowed within some Mixed-use Districts, however the value of land precludes their construction.

Non-residential uses within the edge of Planning Districts are designated as Commercial Destinations, not Seams, and are subject to restrictions of business size, noise, hours of operation, and other elements ensuring compatibility with surrounding housing.

- Access Seams include R1A, R1, R2, and R3, and R4 where abutted by R3 or more intense properties on all boundaries.
- Activity Seams include TZ-1, R3, R4, R5, R6, and R8 districts.
- Buffer Seams include TZ-1, TZ-3, R3, R4, R5, R6, R7, R8, and MX districts.

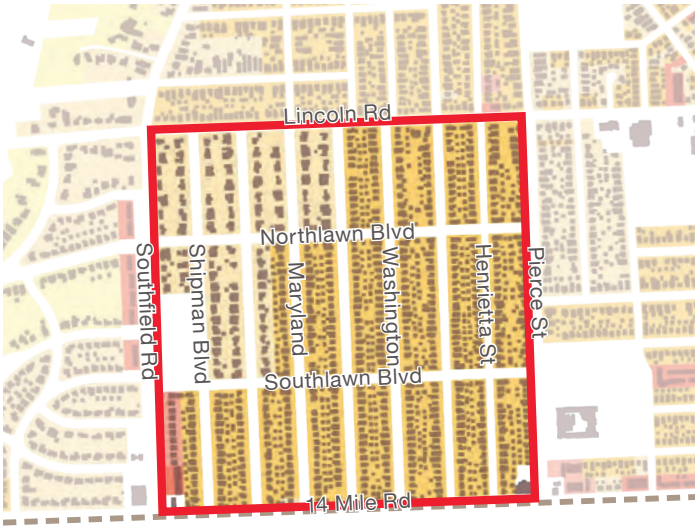


Figure 9 - Crestview neighborhood fabric.

District Destinations

Within each planning district there may be one or more special land uses which serve as destinations for residents of that district, surrounding districts, or even outside of the city. Most frequently these destinations are schools, churches, and other civic institutions, followed in frequency by open spaces. Destinations are key supportive features within the city and planning district, giving many residents the opportunity to walk to some of their daily needs, to socialize with neighbors, and for residents of all ages to build friendships. However, destinations also generate some amount of traffic and parking demand, and may have peak hours of activity that require consideration for their surroundings.

Destinations are organized in three categories: Civic Destinations, Recreational Destinations, and Commercial Destinations. Civic destinations include civic institutions and outdoor spaces in institutional uses. Schools and cemeteries are further identified within the civic category due to their importance within the city. Recreational destinations public open spaces and City parks. Commercial destinations are a special category of non-residential uses that serve a local rather than regional customer base due to their size, hours of operation, and the specific category of business. These include neighborhood-supportive services where a significant share of customers are located nearby (See Fig. 11).

- Civic Destination: Generally includes any zoning district within which the institutional use is allowed, and is restricted only to allowed institutional uses.
- Civic Destination: School should match the predominant zoning district of surrounding properties.
- Civic Destination: Cemetery includes the Public Property District.
- Recreation Destinations include the Public Property District.
- Commercial Destinations are intended for new zoning categories which limit development and operational parameters necessary to promote compatibility with surroundings.

Figure 11. Example of a Commercial Destination land use.

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C. Summary of Key Actions

C. Summary of Key Actions

Key Actions

Key Actions

This section summarizes the actions embedded in each subsequent chapter and subsection of this document. Some actions include numerous specific recommendations, listed here, as well as details and best practices, embedded in the chapter text..

Type	Title	Description	Where
Policy	1. Zoning Code Update	Update the zoning code. The following goals are provided greater detail within the chapters listed. See additional goals under “Best Practice Recommendations” in the “Update the Zoning Code” section.	
		- Focus on brevity, clarity, graphics, and aligning zones with Future Land Use categories.	Ch. 2
		- Consolidate zones and uses as much as is practical and ensure the updated document is legible, clear, and predictable.	Ch. 2
		- Extend D2 zoning to the multi-family properties along the west side of Old Woodward up to Quarton.	Ch. 4
		- Modify the MX District to enable the urban development envisioned for the Rail District.	Ch. 4
		- Develop an Overlay Zoning District for the Lower Rail District that permits the existing, but somewhat improved condition to persist for the area south of Palmer Street.	Ch. 4
		- Create a zoning district to enable neighborhood destinations.	Ch. 1
		- Create a new zoning district or modify the transition zone districts to enable infill development of small homes, townhomes, duplexes, and small multi-family buildings, limited to buffer and activity district seams.	Ch. 2
		- Reduce the amount of open space required per unit for townhomes and multi-family.	Ch. 2
		- Adjust residential zone boundaries and standards to better match existing housing. Including a study of the city’s residential architectural styles and building types, their key characteristics, position on their properties, drive-way configuration, age, and the areas where each common type is located.	Ch. 3
		- Encourage renovations to expand existing houses rather than the construction of new houses.	Ch. 3
		- Review and update site, building, and design codes to prevent increased rainwater runoff and other negative impacts from new house construction.	Ch. 3
		- Consider age-in-place-friendly building regulations, such as grab-bars, ramps, and elevators in single-family homes, with careful attention paid to the city’s architectural heritage.	Ch. 3
		- Address neighborhood lighting standards, including exterior residen-tial lighting intensity and color temperature. See the International Dark Sky Association recommended standards.	Ch. 3
		- Develop storefront design, signage, and other standards to retain the small-scale business character of Market North.	Ch. 4
		- Enable Accessory Dwelling Units (ADUs) in already compatible zones: MX, TZ1, TZ3, and R4 through R8. Study ADUs for additional locations within the city and the regulations necessary to ensure compatibility.	Ch. 2
		- Allow cafes, food trucks, carts, and kiosks in parks (currently the Public Property district).	Ch. 1

C. Summary of Key Actions

Key Actions

Type	Title	Description	Where
	1. Zoning Code Update (continued)	- Create subdivision and zoning standards to encourage redevelopment of the Adam's Square shopping center.	Ch. 1
		- Establish zoning standards to encourage redevelopment of South Woodward Gateway properties.	Ch. 4
		- Establish zoning standards to enable Neighborhood Sleeves in the South Woodward Gateway.	Ch. 4
		- Establish zoning standards to enable shared-use alleys, particularly in the South Woodward Gateway.	Ch. 4
		- Incentivize South Woodward Gateway redevelopment through increased zoning capacity, permitting housing, and reduced parking requirements.	Ch. 4
		- Adopt a policy requiring a minimum 6 foot clear path along the sidewalk throughout mixed-use districts.	Ch. 4
		- Advance building sustainability in new construction, especially within the City's mixed-use districts and for municipal buildings.	Ch. 5
Policy	2. Historic Districts Policy	Adopt a policy to proactively establish new historic districts as well as landmarks.	Ch. 3
Policy	3. Public Art Policy	Permit murals and wraps like the popcorn utility wrap to be city-initiated or by the Public Arts Board.	Ch. 1
Boards & Programs	4. Sustainability Board	Establish a Sustainability Board to oversee the recommendations of this plan section and other future sustainability initiatives.	Ch. 5
New Plans	5. Woodward Safety & Beautification Plan	Create a Woodward Safety and Beautification Plan. The following goals are provided greater detail within the chapters listed.	
		- Improve Woodward crossings following best practices for pedestrians and cyclists.	Ch. 1
		- Study lane reduction and re-striping options for Woodward.	Ch. 1
		- Pursue a speed reduction on Woodward through legislative means.	Ch. 1
		- Plant a full and consistent tree canopy along the Woodward median throughout Birmingham, beginning with the northern and southern entries.	Ch. 4
		- Adjust Elm to meet Woodward perpendicularly.	Ch. 1
		- Adjust Worth to meet Woodward perpendicularly.	Ch. 1
Policy	6. Unbundled Parking	Pilot unbundled residential parking within Downtown parking garages.	Ch. 2
Policy	7. Unimproved Streets	Adopt policy recommendations specified by the Ad-hoc Unimproved Streets Committee (AHUSC), including the following:	
		- Establish a yearly budget to remedy unimproved streets, considering the general fund plus bond strategy and repayment timelines.	Ch. 3
		- Survey the current condition of unimproved streets, categorized by the current quality such that streets in the most extreme states of disrepair can be prioritized for improvement.	Ch. 3
		- Remedy unimproved streets according to the repair priority and budget, ensuring improvements occur in multiple Planning Districts each year.	Ch. 3
New Plans	8. Mixed-use Districts Parking Plan	Create a Mixed-use Districts Parking Plan. The following goals are provided greater detail within the chapters listed.	
		- Establish unbundled residential parking policies within Downtown garages.	Ch. 2

C. Summary of Key Actions

Key Actions

Type	Title	Description	Where
	8. Mixed-use Districts Parking Plan (continued)	- Establish unbundled residential parking policies in all mixed-use districts in existing and future parking garages.	Ch. 2
		- Provide public parking as recommended in the 2007 Triangle District Plan.	1, 2, 4
		- Provide public parking in the Rail District. Consider redevelopment of the DPS building to occupy a portion of a public parking garage in its place, which services the lower Rail District.	2 & 4
		- Provide public parking for the western Haynes Square district.	Ch. 2
		- Provide way-finding and informational signage for public parking.	1 & 4
		- Study opportunities to accommodate more monthly garage permits.	Ch. 4
		- Study monthly parking pass fees to better align with prevailing rates.	Ch. 4
		- Study tiered parking pricing to encourage use of under-utilized garages.	2 & 4
		- Study tiered parking meter pricing to encourage use of under-utilized on-street parking.	Ch. 4
		- Study the potential for Public Private Partnerships to construct garages.	Ch. 1
		- Study bike parking and electric vehicle charging stations in garages.	Ch. 4
		- Study additional parking assessment districts or incremental tax districts for land purchases and financing the development of parking garages.	Ch. 1
		- Study parking garages at the Bates Street Extension and Lot 6.	Ch. 4
		- Study technological improvements to ease usage of parking garages.	Ch. 4
New Plans	9. North Old Woodward Streetscape	Develop a streetscape plan along North Old Woodward, up to Big Woodward, with a focus on adding on-street parking and pedestrian and bicycle amenities and improving safety.	Ch. 4
Studies	10. Civic Facilities Study	Study key civic facilities to continue to support Birmingham residents. The following goals are provided greater detail within chapters specified.	
		- Study the location, programming, and funding for new facilities for Next.	Ch. 1
		- Study a permanent, open-air farmers market pavilion with public restrooms on the portion of Lot 6 that is along Old Woodward.	Ch. 4
		- Establish policy to continue the tradition of constructing Birmingham's civic buildings and parks as iconic structures and landscapes to the highest standards and at a civic scale.	Ch. 1
		- Study how a Community Foundation / Fund may further Master Plan goals.	Ch. 1
Existing Plan Updates	11. Parks and Recreation Master Plan Update	Expand the 2018 Parks and Recreation Master Plan or create a new plan beyond the 2022 horizon. The following goals are provided greater detail within the chapters listed. See additional goals under headings "Parks Best Practices" in Chapter 4.	
		- Differentiate parks by type to better determine appropriate amenities, services, and best practices.	Ch. 3
		- Utilize Planning Districts to determine sufficiency of park access across the city, availability of amenities, and consideration of activities and recreation in each season.	Ch. 3
		- Formalize the public use of school and institutional open spaces for neighborhood recreation, prioritizing under-served Planning Districts.	1 & 3
		- Develop Worth Park to provide needed open space for Torry.	Ch. 3
		- Develop the contemplated linear park and trail along the Rail District.	Ch. 4

Type	Title	Description	Where
	11. Parks and Recreation Master Plan Update (continued)	- Build a cafe or provide accommodations in Booth Park as recommended in the 2016 Downtown Plan.	1 & 4
		- Increase amenities and connections in Downtown's parks and mini-parks.	Ch. 4
		- Purchase part of the Adams Square parking lot for park space, or ensure that redevelopment would require that future park space be provided near Adams and Bowers.	Ch. 3
Policy	12. Residential Street Standards	- Update the Residential Street Standards, aligning the streetscape elements with Future Land Use categories. Update the Multi-modal Plan accordingly.	Ch. 3
		- Lower the posted speed on streets throughout town as much as possible.	Ch. 3
Policy	13. Mixed-use District Streets	Adopt a policy requiring a minimum 6-foot clear path along the sidewalk be retained throughout mixed-use districts.	Ch. 4
New Plans	14. Mixed-use Streetscape Plan	- Create a streetscape improvement plan for the Triangle District and Rail District.	Ch. 1
Existing Plan Updates	15. Multi-modal Plan Update	Update the Multi-modal Plan. The following goals are provided greater detail within the chapters listed. See additional goals under headings "Multi-modal Plan Updates" and "Best Practice Recommendations for the Multi-modal Plan" in Chapters 1 and 4.	
		- Address increased pedestrian activity anticipated in mixed-use districts that will grow in residential population.	Ch. 1
		- Support increased pedestrian activity on both sides of North Old Woodward and provide streetscape amenities.	Ch. 4
		- Complete gaps in sidewalks, add accessible corner ramps where not already specified, and replace street trees which are displaced by the process.	Ch. 3
		- Address recent experiences with increased outdoor dining.	1 & 4
		- Ensure bicycle facilities are protected on all streets posted at or above 35mph.	Ch. 1
		- Study bicycle accommodation alternatives along Lincoln.	Ch. 3
		- Include mobility routes based upon bicycle boulevard practices.	Ch. 1
		- Implement additional transportation mode best practices for new mobility technology and modes such as micro EVs, golf carts, and micro-mobility.	Ch. 1
		- Improve the conditions at bus stops along more major roads.	Ch. 1
		- Add Electric Vehicle charging stations throughout the city at garages, public parking lots, and on-street in Mixed-use Districts.	Ch. 5
		- Adopt a policy regulating street lighting, including intensity, color temperature, luminaire, and pole height and frequency.	Ch. 3
		- Include a public education component.	Ch. 1
Existing Plan Updates	16. Eton Road Corridor Plan	Update the Eton Road Corridor Plan. The following goals are provided greater detail within Chapter 4.	
		- Increase connectivity for pedestrians, bikes, and cars for the area south of Hazel Street including future rail crossings.	Ch. 4
		- Provide access to the Troy Transit Center and consider the development of surrounding properties.	Ch. 4

C. Summary of Key Actions

Key Actions

Type	Title	Description	Where
New Plans	17. Mixed-use Districts Branding Plan	Create a Mixed-use Districts Branding Plan, in coordination with the Birmingham Shopping District, to brand the City's multiple mixed-use districts.	1 & 4
Policy	18. Art Murals Policy	Implement an art-mural program for large blank wall surfaces in key locations. Coordinate with the Mixed-use Districts Branding Plan.	Ch. 4
New Plans	19. Green Infrastructure	Create a Green Infrastructure Plan to address stormwater run-off and areas experiencing regular flooding.	Ch. 5
New Plans	20. Sustainability Action Plan	Create a Sustainability Action Plan. The following goals are provided greater detail within chapter 5.	
		- Reduce environmental impacts of municipal operations.	Ch. 5
		- Incentivize green building, renewable energy, and green landscaping.	Ch. 5
		- Expand recycling and composting.	Ch. 5
		- Implement green stormwater practices in streets and parks.	Ch. 5
		- Support Rouge River Natural Area improvements.	Ch. 5
		- Implement other sustainability focused recommendations of this plan.	Ch. 5
		- Create a Hazard Mitigation Plan addressing the City's future climate.	Ch. 5
		- Increase inter-governmental cooperation around sustainability initiatives.	Ch. 5
		- Study the best path towards encouraging or requiring businesses reduce plastic and Styrofoam use.	Ch. 5
New Plans	21. Rouge River Restoration Plan	Develop a plan to improve and maintain the Rouge River natural area. The following goals are provided greater detail within chapter 5.	
		- Inventory and analyze the Rouge corridor's wildlife, ecology, natural systems, and pollution sources.	Ch. 5
		- Stabilize riverbanks, remove invasive species, reintroduce native ground covers, wildflowers, under-story, and canopy tree species.	Ch. 5
		- Mitigate potential pollution or chemical sources, including the existing Springdale snow storage dumping area.	Ch. 5
		- Work with area organizations and agencies to oversee, build support, and raise funding for the park's enhancements.	Ch. 5
		- Work with other area and regional organizations and communities to improve the quality of the Rouge River watershed.	Ch. 5
New Plans	22. Rouge River Trails and Access Master Plan	Develop and implement a trails and access master plan to improve the Rouge River trails and trail heads.	
		- Install pedestrian linkages to the park's surrounding neighborhoods and commercial districts, including to Quarton Road.	Ch. 5
		- Secure easements to expand the park area and improve its walkability, for complete ecological restoration, and universal accessibility.	Ch. 5
		- Coordinate with Bloomfield and Beverly Hills to expand trail connections.	Ch. 5
		- Install an environmentally sensitive, hard-surfaced pathway for pedestrians and cyclists along the Rouge River.	Ch. 5
		- Expand the extent of the trail system, crossing the river at more locations to access large portions of the natural area currently cut off.	Ch. 5
		- Install bridges, ramps, and other enhancements to enable access by all ages and abilities.	Ch. 5

Type	Title	Description	Where
	22. Rouge River Trails and Access Master Plan (continued)	- Install other amenities such as bicycle racks, lighting, markers, seating, and signage at trail heads, and seating, markers, and interpretive features throughout the trail system.	Ch. 5
New Plans	23. Tree Canopy Improvement Plan	Create a Tree Canopy Improvement Plan. The following goals are provided greater detail within Chapter 3.	
		- Establish comprehensive policies for trees in streets and open spaces.	Ch. 3
		- Create 5-, 10-, and 15- year goals to expand tree canopy cover.	Ch. 3
		- Study the condition of neighborhood tree canopies in parks and private spaces and potential improvements.	Ch. 3
		- Require that trees removed due to construction be replaced, as well as mandatory contributions to fund new off-site trees.	Ch. 3
		- Prevent existing, healthy trees from being removed due to new construction.	Ch. 3
		- Survey areas with constrained root area and establish a plan to add additional soil volume.	Ch. 3
New Plans	24. Woodward Gateways Plan	Create a Woodward Gateways Plan to comprehensively address the three gateway areas along Woodward.	
		- Revisit and adopt plan components for the South Woodward Gateway Plan.	1 & 4
		- Create plan components for a North Woodward Gateway, including the future use of public land.	1 & 4
		- Create plan components a Downtown Gateway Plan for the Big Woodward and Maple intersection.	Ch. 1
New Plans	25. Haynes Square Plan	Create a Haynes Square Plan which provides the details, timing, and funding for implementing Haynes Square recommendations.	Ch. 1
Studies	26. Residential Districts Parking	Study citywide street on-parking restrictions and permits.	Ch. 3
Studies	27. Shared-use Streets	Study shared-use streets. The following goals are provided greater detail within the chapters listed.	
		- Study a shared-use streetscape retrofit along with a social district in the Maple & Woodward district.	1 & 4
		- Study a shared-use street section along Cole and Commerce Streets.	Ch. 4
		- Study additional opportunities in other mixed-use districts.	1 & 4
Boards & Programs	28. Civic Events	Extend the role of the Public Arts Board or other existing board, or establish a Civic Events Board, to develop regular civic events to continue engaging the community throughout the year and promote existing civic institutions.	1 & 4
		- Consider regular events in community parks.	Ch. 3
		- Consider activities and special events to attract office workers and residents to shop and dine downtown, including weekly events at Shain Park.	Ch. 4
Studies	29. Circulator	Study a public circulator to provide viable means of accessing mixed-use districts and other significant destinations without a car.	Ch. 1
Studies	30. Parking Technology	Review master plan parking recommendations in 2030-35 to evaluate new technologies and trends.	Ch. 4

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Ch 1. Connect the City

Overcome the Woodward Divide

Figure 12. The Woodward divide.

Woodward divides Birmingham physically and mentally (See Fig. 12). It is an extremely fast, high volume roadway described as a "superhighway" in the city's 1929 plan. While it provides regional connections that support Downtown activities, Woodward separates the City's neighborhoods. Particularly for older adults and children, Woodward can be an impenetrable barrier to mobility. Not only is the road unsafe to walk or bike along, there are too few crossings, and existing crossings are uncomfortable for pedestrians and cyclists.

A complete street plan for Woodward has been produced by the Woodward Avenue Action Association, and has been well supported but not yet implemented. The Michigan Department of Transportation (MDOT) indicated that their current preference for major roadways such as Woodward is to provide greater accommodation for pedestrians, cyclists, and transit, and to stitch together those communities historically divided by state routes. However, implementing those changes are currently well beyond MDOT's ability to fund directly. Funding aside, they are supportive of City-led initiatives to improve crossings and the character of Woodward. In the short term, key changes to Woodward should be targeted with a focus on pedestrian and bicyclists at crossings. In the long term, larger changes should be studied and advocated for at the county and state levels.

Short-term Action: Improve Crossings

The top priority for pedestrian and bicyclist safety is to make Woodward crossing safe. Each crossing should:

a. Provide sufficient pedestrian crossing time;
b. Provide clear and visible signage;
c. Provide highly visible crosswalk striping;
d. Provide automatic pedestrian signal activation; and
e. Provide pedestrian crossing refuges.
f. Where bike routes connect with crossings, there should additionally be highly visible bike lane striping and bicycle signal activation.

An initial set of key crossings is selected from those major Sectionline and Quartersection roads, important bike route connections, and crossings that already exist but are insufficient (See Fig. 14). These include: Sectionline crossings at 14 Mile and Maple, Quartersection crossings at Lincoln and Oak, bike route connections at Emmons and Oak (See Fig. 13), and existing crossings at Brown and Oakland. Additionally, the intersection of Old Woodward and Woodward is proposed for redevelopment (discussed in the Haynes Square section). Development of this intersection would include adding a crossing at Haynes St.

Figure 13. Prioritized Crossing at Emmons.

Short-term Action: Re-striping

Should Woodward be justifiably reduced to three lanes in each direction, reconfiguring the roadway still remains prohibitively expensive. However, as a lower cost option, the City should pursue re-striping the outside travel lane, converting it to a substantial protected bicycle lane, one-way each side, or a pair of two-way cycle tracks on each side, similar to what the City of Ferndale is pursuing. Regionally, Ferndale's Woodward bike facilities should connect north to facilities in Pleasant Ridge, Royal Oak, and Birmingham, and on to Bloomfield Hills and Pontiac.

Another consideration for re-striping is a shared bicycle and transit lane. As the Regional Transit Authority pursues improvements to bus frequency, a dedicated lane would improve bus function through Birmingham. Since buses are relatively infrequent, the transit lane could be shared with cyclists (this would require one-way cycle facilities).

Medium-term Action: Reduce Vehicle Speeds

Woodward's high travel speeds perpetuate the City's east-west disconnection, create dangerous conditions when accessing businesses along the corridor, and threaten the safety of all roadway users. While reducing vehicle speeds is a critical and immediate issue to tackle, change is not simple.

Overall the Woodward corridor varies in its speed and context along its trajectory, from a low speed urban context in downtown Detroit to a high-speed highway-like context in Bloomfield Hills, before slowing down again at Pontiac. Along its trajectory, Woodward's speed and design changes in a number of contexts. Through Ferndale, the posted speed is 35 mph and on-street parking is permitted. Birmingham presents an urban context to Woodward which should warrant lower speeds.

Unfortunately MDOT is forced by state law to use the "85th Percentile Rule" when attempting to lower speeds, which measures the typical speed actually traveled on the roadway and can result in increased posted speeds instead of reduced. The most expedient path to changing the speed along Woodward is through legislative means.

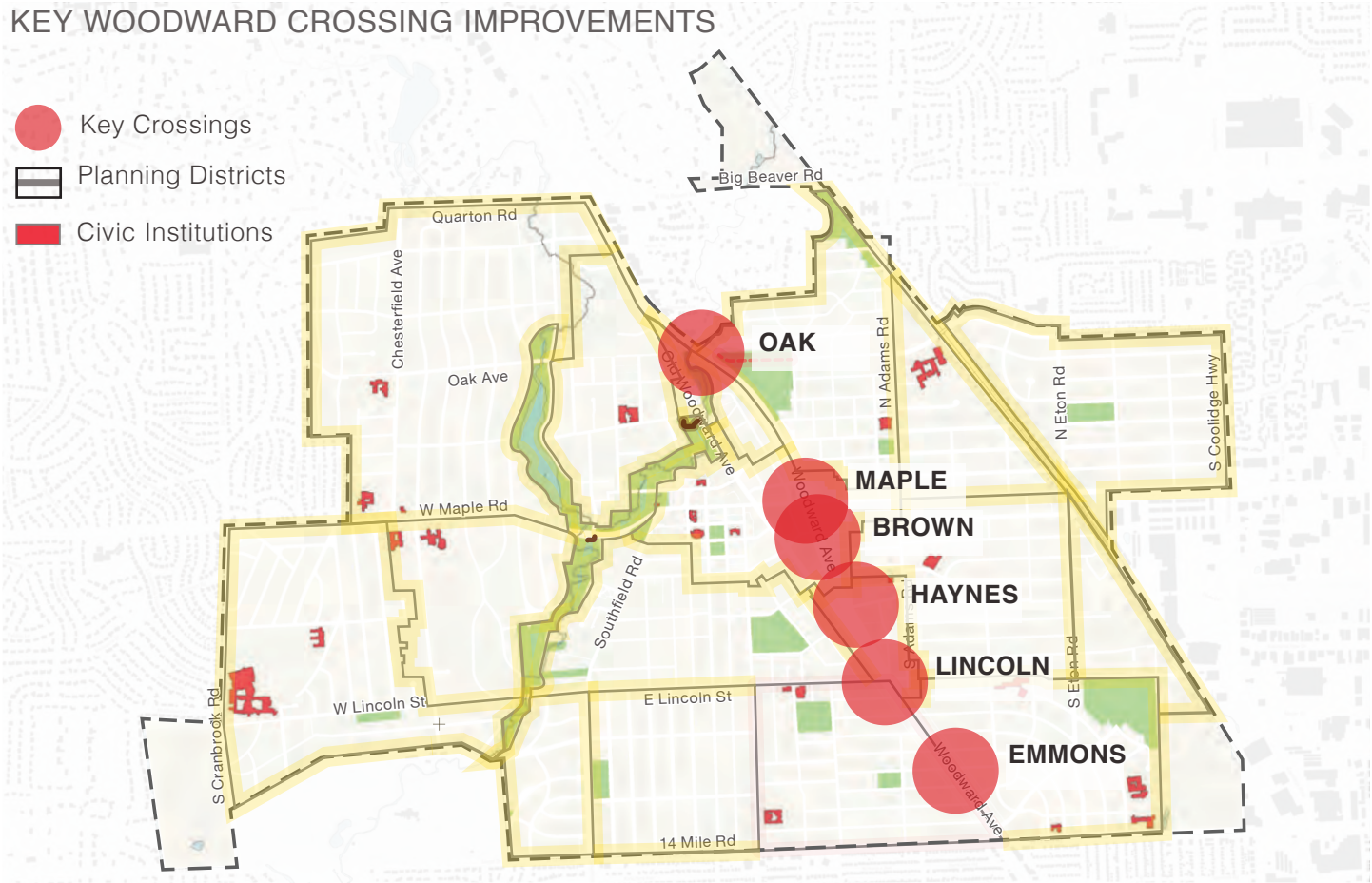
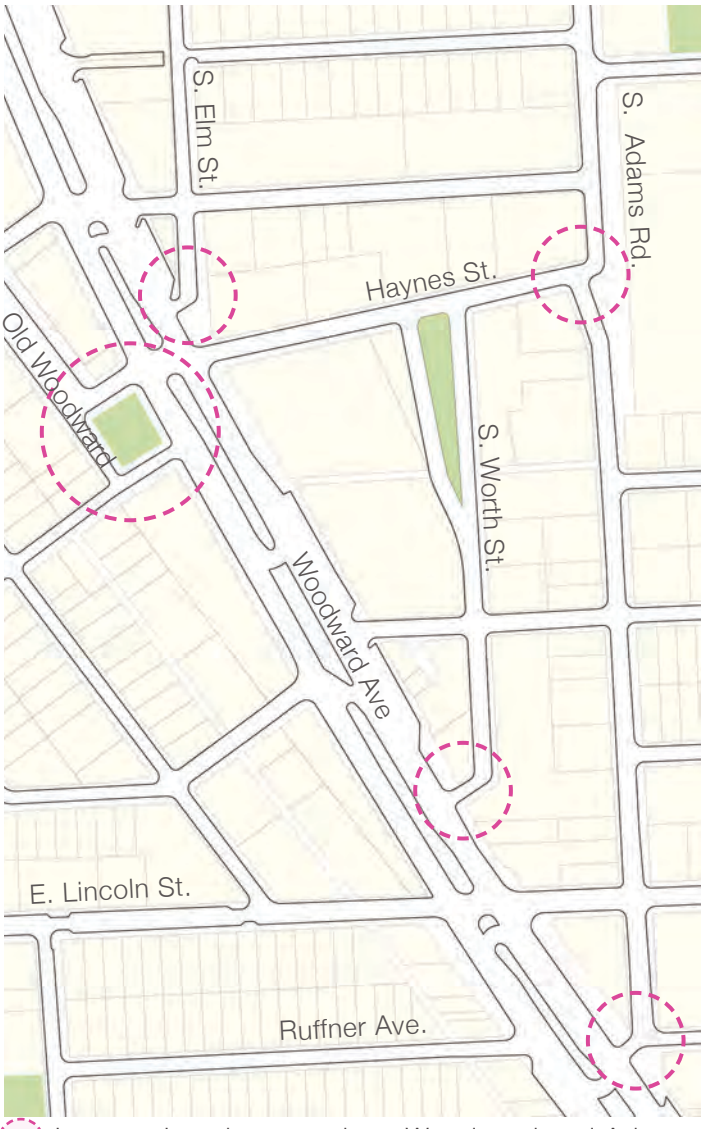


Figure 14. Key Woodward Crossing Improvements.

Ch 1. Connect the City

Overcome the Woodward Divide

The posted speed is not the only means necessary to control speed. Land use, landscaping and landscape architecture, travel lane size, lighting, and other elements in and around the roadway signal drivers to reduce speed. From the south, the large clear zone and curb separation in the South Woodward Gateway gives visual cues to drivers that Woodward is a high-speed roadway. Solving the speed issue here requires land use changes described later in this plan, along with posted speed reductions. From the north, the highway-like conditions of Woodward through Bloomfield Hills brings drivers in to Birmingham at high speeds. From this direction, drivers need a signal that they have entered a different type of environment than Bloomfield Hills and should reduce speeds. Like the South Woodward Gateway, Birmingham needs a vision for the North Woodward Gateway, from Big Beaver to Maple, with a particular focus on the Old Woodward and Oak Avenue intersections.



Intersection changes along Woodward and Adams.

Figure 15. Key Woodward intersection adjustments.

Long-term Action: Re-align Secondary Intersections

Traffic problems caused by Woodward spill into surrounding streets in a few key locations. Due to Woodward's angle, Adams, Worth, and Elm streets intersect at obtuse angles in the northbound direction allowing soft-right turns at high speeds. When streets intersect at extreme angles, pedestrian crossing distances and vehicle speeds increase, leading to safety and operational issues. Additionally, these intersections occur close to the east-west streets of Ruffner, Lincoln, and Haynes, further complicating operations. Elm and Worth should be realigned to intersect Woodward perpendicularly, as shown in the Triangle District Plan (See Fig. 15).

The intersection of Adams with Woodward is especially complicated due to its traffic volume and existing median breaks, making it particularly dangerous for pedestrians. To address this issue, when the Haynes Square intersection redevelopment occurs (discussed later in the section on Haynes Square), traffic along Adams should be rerouted to access Woodward at Haynes, which is already a near-perpendicular intersection. Additionally, the median break on Woodward at southbound Adams should be closed. The Haynes Square intersection would allow southbound Adams traffic to turn left onto Woodward at a new traffic signal. This will reduce traffic at Adams and Lincoln. At the Woodward intersection, Adams should be realigned to intersect perpendicularly, as is proposed for Elm and Worth. Where Adams meets Haynes, the street should turn to the left slightly, to intersect perpendicularly with Haynes, which may also be accomplished through signage encouraging southbound Adams traffic to use Haynes for Woodward access. Additionally, this movement will help provide momentum to future retail in the Haynes Square / Triangle District area. To accommodate this, Haynes between Woodward and Adams should receive a streetscape redevelopment similar to Maple through Downtown, which has the same width.

Long-term Action: Celebrate Downtown with a Gateway

Perhaps the greatest mental division created by Woodward is the feeling that Birmingham is to the west due to the Maple and Old Woodward intersection representing the city's heart. Rather than passing by Birmingham along Big Woodward, drivers should feel that they are passing through Birmingham, and as a result feel that they should slow and expect pedestrians, bikes, and buses (See Redefine Downtown Districts for more on this subject). The Maple and Big Woodward intersection should be redesigned as a downtown gateway, celebrating the heart of the city. This gateway should reconfigure the intersection to focus heavily on pedestrian

and bicycle safety, along with civic art. As the figurative center of the city, it should be imposing, causing cars to slow substantially, and greatly improving the comfort of crossing Big Woodward.

MASTER PLAN ACTIONS

1. Create a Woodward Safety and Beautification Plan, including:
    a. Adjust Elm to meet Woodward perpendicularly per the Triangle District plan.
    b. Adjust Worth to meet Woodward perpendicularly per the Triangle District plan.
    c. Update the Multi-modal Plan to improve Woodward crossings and conditions, see updates listed in the following section.
    d. Pursue a speed reduction on Woodward through legislative means.
    e. Study lane reduction and re-striping options for Woodward in coordination with MDOT. Recommended actions:
        i. Participate in a traffic study along Woodward, with MDOT, once I-75 reopens fully to determine whether the road can be reduced to 3-lanes in each direction.
        ii. Pending verification of potential lane reductions, fund and implement re-striping on Woodward, between 14 Mile and Oakland, potentially to Quarton, converting the outside lane to a buffered bicycle and transit lane.
        iii. Participate in regional plans to coordinate bicycle and transit infrastructure along Woodward between municipalities.
2. Create a Woodward Gateways Plan, including:
    a. Create a North Woodward Gateway Plan to address land use, gateway, and road design elements of Woodward north of Maple.
    b. Revisit and adopt a South Woodward Gateway Plan, focused on traffic calming and beautification of Woodward.
    c. Study a downtown gateway redesign of the Big Woodward and Maple intersection.
3. Create a Haynes Square Plan (addressed in a following section).

MULTI-MODAL PLAN UPDATES

a. Improve pedestrian and bicycle crossings along Woodward at 14 Mile, Emmons, Lincoln, Haynes, Brown, Maple, Oakland, and Oak.
b. Move signage at Lincoln and Woodward which obscures pedestrian countdown timers.
c. Add a signal for the Brown Street crosswalk along the northbound lanes of Woodward.
d. Install ADA-compliant ramps at intersections that are not in compliance along Woodward.
e. Review pedestrian crossing times for Manual on Uniform Traffic Control Devices (MUTCD) compliance, some may need to be lengthened.
f. Add a protected only left turn signal for northbound left turns to Old Woodward. This may be omitted if the Haynes Square street reconfiguration occurs quickly.
g. Update the plan to reflect the chosen outer lane conversion along Woodward.

CROSSING BEST PRACTICES

Each crossing of Woodward should provide a minimum set of accommodations for pedestrian safety, as well as bicyclist safety where connecting with bicycle routes. The following features are recommended:

a. Accessible ramps at all crosswalk quadrants, including all necessary ADA features.
b. Highly visible crosswalk painting such as the special emphasis type.
c. Pedestrian signal with countdown time.
d. Automatic pedestrian crossing phase (not on-demand).
e. Signal demand button for pedestrians.
f. Signal demand button for bicyclists and bicycle signal at bike route connections.
g. Highly visible painting for bicycles at bike route connections.
h. All MUTCD recommended signage.

Redefine Downtown Districts

Birmingham's mixed-use districts are defined circumstantially by their areas of historic growth and the division caused by Woodward. However, the Downtown area in particular contains multiple sub-districts which require their own character and definition to become active and competitive. Old Woodward is too long to sustain a consistent main street without sub-districts of distinct character. Most traditional main streets, and shopping malls which have modeled themselves from traditional main streets, are ¼ mile in length. This is the distance from Willits to Brown, the most active section of Old Woodward, and Bates to Park, the most active section of Maple (See Fig. 17). Beyond this distance, activity and retail quality declines. But once downtowns are successful enough, they can expand beyond this distance by establishing secondary districts.

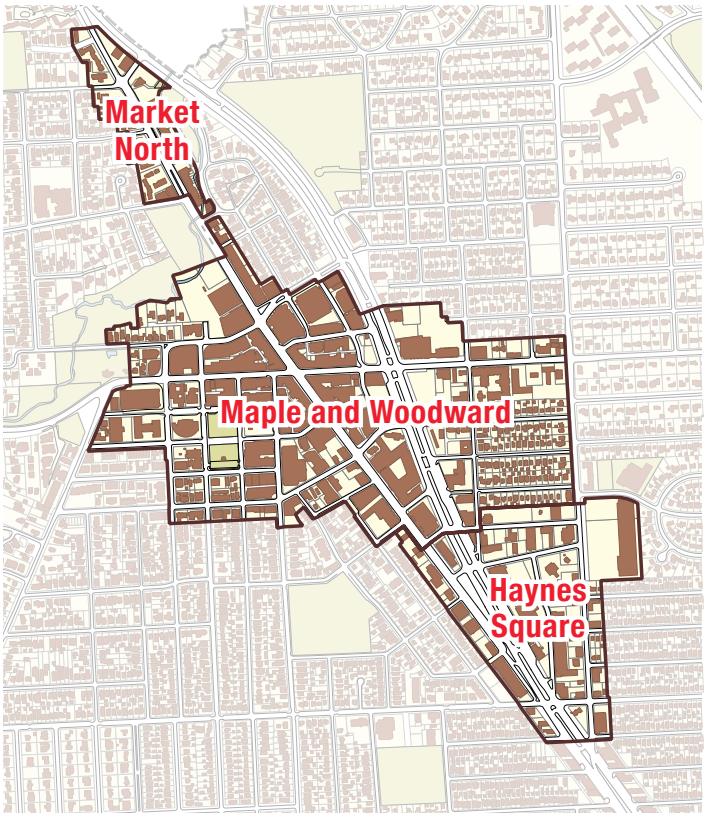


Figure 16. Three districts of downtown.

Downtown Sub-districts

Larger downtowns contain multiple districts with their own distinct character. For instance, Downtown Detroit contains Bricktown, Greektown, Hudson, Corktown, and other districts. Together they make up the greater downtown, but they each have an individual character. Similarly yet at a more relateable scale, Ann Arbor has a downtown district along Main Street and a university district along State Street. Both are distinct yet interconnected.

North to south, Downtown Birmingham includes three distinct districts. At the center, Maple and Woodward, Downtown is at its most intense and successful. To the north along Old Woodward, the topography and building scale clearly changes after Oakland, becoming distinct by Euclid. North of Euclid this area becomes a sub-district. This Market North area (See Fig. 16) is now most clearly defined by the Farmers' Market and Booth Park, as well as a scale that is less intense than Maple and Woodward. To the south along Old Woodward, the street activity clearly changes after Brown. This area is distinct and requires an identity, but the area is heavily constrained by the intersection of Woodward and Old Woodward. Each sub-district should be clearly differentiated, offering a different customer experience yet working together as the larger downtown area.

Further, Downtown Birmingham is considered to be only west of Woodward. This perpetuates the mental divide that Woodward cuts through the community (See Fig. 12). If Woodward were not a major division, Downtown would continue east on Maple. The form of more intensive buildings east of Maple reflects this condition, with the housing along Forest, Chestnut, and Hazel establishing a break between this core downtown area and the remainder of the Triangle District to the south.

Spanning Woodward mentally makes the most significant impact south of Brown where the west side is constrained just at the point that the east side, the southern Triangle District, is at its widest. This Haynes Square area, centered on Haynes Street, is cohesive when it spans Woodward (discussed in the section on Haynes Square). With its own identity, Haynes Square can be elevated to a full sub-district of downtown rather than the unsuccessful southern fringe of a successful downtown.

Identity, Signage, and Way-finding

Many Downtown visitors are unfamiliar with its business offerings, parking locations, and street layout. When establishing multiple districts, signage is especially important to orient visitors. Similarly, multiple districts can assist in way-finding

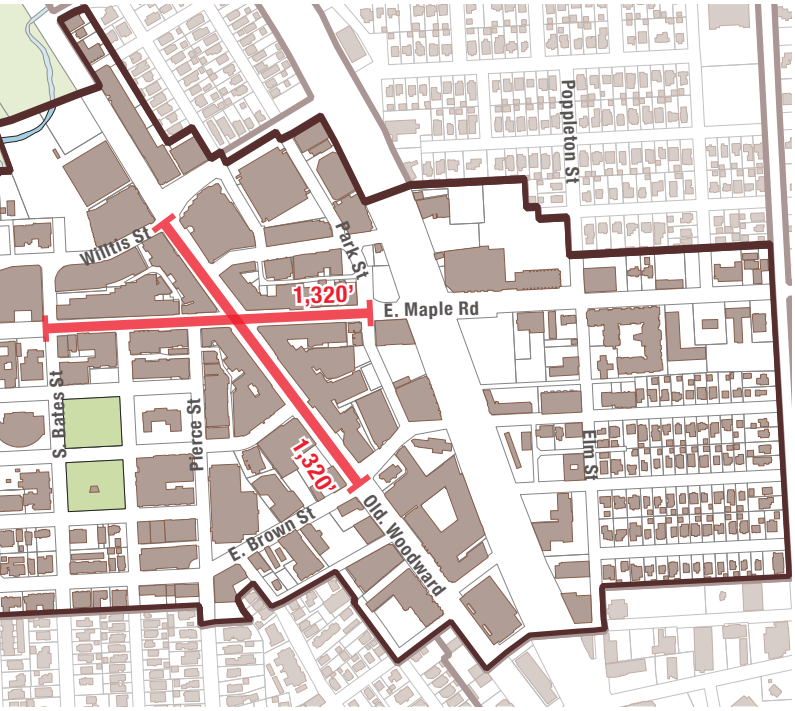


Figure 17. Typical length of main streets.

Figure 18. Way-finding signage examples.

overall if signed properly. Today, signage is lacking throughout the greater downtown area, from way-finding for parking access to civic institutions and business directories. Each district should have clear signage which is consistent in the information provided but differentiated by district. (See Fig. 18)

Parking signage is especially important as the City typically deals with extremely high occupancy of its Downtown garages. While the North Old Woodward, Park, and Peabody garages typically operated above 90%, visitors are not always aware of nearby spaces available in the Chester and Pierce garages. Technology should be employed to inform users of available capacity throughout the greater downtown. Much of this equipment is unattractive, like Ann Arbor's parking signage, yet there are minimal and elegant solutions available to direct users to the nearest available capacity. This signage should be piloted in Maple and Woodward, and spread to the City's other mixed-use districts once parking investments are made.

MASTER PLAN ACTIONS

1. Create a Mixed-use Districts Parking Plan which includes parking way-finding signage as one component, ensuring the design is simple and elegant. Signage may be piloted in Maple and Woodward in advance of the full plan.
2. Create a Mixed-use Districts Branding Plan, in coordination with the Birmingham Shopping District, to brand the City's multiple mixed-use districts. This plan should addresses, at a minimum:
   a. District way-finding (vehicular, pedestrian, and cyclist-oriented), business directory, and gateway signage;
   b. Differentiation in streetscape products like tree grates, lights, trash and recycling cans, and public art themes;
   c. A marketing plan for each of the distinct districts;
   d. A phasing plan to install business directory and way-finding signage throughout all districts.
3. Establish a policy to permit murals and wraps like the popcorn utility wrap to be city-initiated or by the Public Arts Board.

Implement Haynes Square

Connecting the city requires a change in perception about Woodward. No greater opportunity exists to change this perception than Haynes Square. South of Frank Street, the character of Downtown changes, expressed in zoning, street life, and business success. Rather than consider South Old Woodward an inferior retail district, the area can be combined with the southern Triangle District, spanning big Woodward. The Haynes Square district is bound by Bowers to the North, Adams to the East (See Fig. 16), and Lincoln to the South. Its size is similar to the active office and retail core of Maple and Woodward.

Street reconfigurations to achieve this result in a public open space at south Old Woodward and Haynes Street. This square is the new heart of a district independent from Maple and Woodward. (See Fig. 19) The square should be similar to Shain Park from a design perspective, but about half its size, with a cafe, seating, and restrooms as is recommended for other urban parks. Lined by trees along its edges, the square provides an attractive entrance to the greater Downtown area, flanked by tall, new development east along Woodward and the 555 building to its north.

This combined district represents Birmingham's greatest opportunity for the development of both extensive middle-income housing—a deficiency that should be addressed—and emerging commercial business spaces. While Maple and Woodward includes a significant presence of offices, Haynes Square should focus on residential above commercial uses, and on commercial uses that serve a different market than the core shopping district of Maple and Woodward.

To capitalize on its potential, two major investments are required: reconfiguring the intersection between Woodward and Old Woodward, and constructing a parking garage on the east side of Woodward.

Street and Property Reconfiguration

A pair of related issues make clear the need for street and property reconfiguration in this area. First, the intersection of Old Woodward and Woodward occurs at a very acute angle and requires a dangerous northbound left turn. The intersection also creates a narrow and unusable strip of land which mirrors the poor frontage condition of the South Woodward Gateway. Second, properties that are located along Old Woodward south of George Street are zoned for taller buildings, but have not seen redevelopment due in part to parking issues. The parking necessary to redevelop properties south of George Street is difficult to accommodate on shallow lots adjacent to single-family properties, and the area's exclusion from the former parking assessment district.

This plan recommends that Old Woodward be reconfigured to alleviate the awkward intersections and provide larger building sites. George Street is extended to Big Woodward, and Old Woodward removed south of George. South of George Street, properties are extended to big Woodward, providing sites that can accommodate buildings and parking. Property extensions may be traded for a public surface parking lot where buildings currently sit along Old Woodward, 70 feet

Figure 19. Haynes Square reconfiguration.

Figure 20. Creating Haynes Square at Haynes St., Old Woodward, and big Woodward.

deep measured from the alley, which leaves over 100 feet of property for development, deeper than current properties.

Through this redevelopment, Haynes Street crosses Woodward to meet Old Woodward at a new signal. On the east side of Woodward, Haynes becomes a main street, paired with Worth Street. To support the main street with additional traffic, as Maple and Woodward is supported by Maple's traffic, Adams should be slightly adjusted so that southbound traffic uses Haynes to access Woodward (See Fig. 15). This adjustment to Adams enables the improvement of the dangerous intersection of Adams and Big Woodward as well, addressed earlier in this chapter.

Public Parking

Due to the odd lot shapes in the district, significant zoned capacity, and lack of access to the former parking assessment district, private development is unlikely to take the first step to launch the Haynes Square, as has been the case for the Triangle District. To successfully launch Haynes Square, the City needs to invest in a parking garage. Unfortunately, neither of the 2007 Triangle District Plan's proposed public parking structures nor its proposed parking assessment district have been implemented. A new garage is needed, alleviating developers from the burden of parking with both commercial and residential parking permitted. With a structure in place, and mixed-use residences able to unbundle parking (See the Mixed-use Districts chapter), new housing and businesses are likely to developed quickly. Due to the district's size and low existing intensity, development will bring significant increases in tax revenue.

Other Area Improvements

At the intersection of Haynes and Worth Streets, the 2007 Triangle District Plan recommends a triangular green called Worth Park. This space provides an important focal center for the east side of Haynes Square. It also provides needed open space for the Torry neighborhood. Like other urban parks discussed in this plan, Worth Park should have ample seating, shade, and areas for children to play. Worth Street, which has few existing buildings facing onto it, should be considered for a shared-use treatment to provide interest and connect with the South Woodward Gateway alley system. Worth Park may be built in the form of a plaza - mostly paved - which is a type of civic open space Birmingham does not yet have. New buildings in the area can take advantage of the dynamic and pedestrian-centric streetscape and plaza.

Ch 1. Connect the City

Implement Haynes Square

Also in the area is the Adam's Square shopping center, which represents the greatest single redevelopment site in Birmingham. With an active Haynes Square district adjacent, redevelopment is likely to occur. To prepare for this, zoning and subdivision requirements should be considered such that Adam's Square provide open space for the Torry neighborhood and public parking in exchange for development capacity modeled upon the Triangle District Overlay.

MASTER PLAN ACTIONS

1. Create a Mixed-use Districts Parking Plan, including:
   a. Implementing the public parking deck recommendation of the 2007 Triangle District Plan.
   b. Create additional parking assessment districts (such as per the 2007 Triangle District Plan) or incremental tax district as necessary for land purchases and for financing the development of parking structures.
   c. Study the potential for Public Private Partnerships to construct parking structures (including in the Triangle District).
2. Create a Haynes Square Plan which provides the details, timing, and funding for implementing Haynes Square recommendations, including:
   a. Study the privatization of public property, or land swap, as is necessary to implement Haynes Square.
   b. Reconfigure the streets around Haynes Square to create the square and fix the acute intersection between Woodward and Old Woodward.
   c. Divert Adams traffic onto Haynes by angling NB Adams to intersect perpendicularly with Haynes.
   d. Adjust Adams to meet Woodward perpendicularly at Ruffner.
   e. Build the public square with amenities as are appropriate for that type of park. (See Fig. 34)
   f. Consider revising the design of Worth Park in the form of a plaza and other opportunities for shared streets and passageways, civic art, traffic calming, and way-finding.
   g. Detail streetscape and landscape improvements along Worth, Bowers, Haynes, and Webster.
   h. Improve pedestrian linkages to the surrounding neighborhoods, especially along Adams.
   i. Consider swapping land to install a public parking lot along the south Old Woodward alley.
   j. Create a parking district for Haynes Square which allows residences to purchase parking passes in public garages, in addition to commercial parking.
   k. Install metered, on-street parking along Adams and Lincoln Roads in the Haynes Square area.
   l. Create subdivision and zoning standards to encourage redevelopment of the Adam's Square shopping center, offering significant development capacity in exchange for a public open space and public parking.
   m. Consider streetscape improvements along Woodward and Haynes.
   n. Consider green stormwater management opportunities made possible through the area's growth and redevelopment.

Encourage Gathering Places

Neighborhood Destinations are critical neighborhood components supporting community social structures. While Birmingham is more walkable than most cities in Metro-Detroit, accessing daily destinations still requires a car for many residents. City structure and the distribution of daily destinations is the greatest determinant of the transportation mode people will choose and its impact on sociability and the environment. When destinations like parks, schools, and cafes are near homes, residents will use those amenities more frequently and often walk or bike rather than drive, all of which increases interaction among neighbors. Improving city-wide pedestrian and bike connections to mixed-use districts and larger parks will have similar results, all means of connecting the city, physically and socially.

Neighborhood Destinations fall into 3 categories: Commercial Destinations like markets and cafes, Recreational Destinations like parks and trails, and Civic Destinations like schools and religious institutions.

Commercial Destinations

Due to the regional draw of Downtown, its price point is too high to provide the neighborhood services that residents require frequent access to. Historically, Birmingham has supported civic institutions and parks within neighborhoods, and has had a number of small, neighborhood business clusters that provided goods and services aligned with the needs of nearby residents. Birmingham has retained its parks and institutions, but only a few neighborhood commercial destinations remain: Maple and Chesterfield, Maple and Eton, and 14 Mile and Southfield.

Local bakeries, specialty markets, coffee shops, cafes, dry cleaners, hair salons, and similar small businesses comprise neighborhood scaled amenities that are unique to Birmingham among surrounding communities. Easy access to these amenities, especially by walking, contribute to the City's comfortable lifestyle and high property values. Recent studies indicate house values dramatically increase when located within a ten-minute walk of a coffee shop, green grocery, micro-brewery, park, or school.

Neighborhood Commercial Destinations should be located to provide walkable access to neighborhoods, but not be so close to one another that they become a larger district. They should be encouraged in key locations and their scale and specific uses should be limited, along with operating hours and noise, to ensure limited impact on surrounding residents. (See Fig. 22) These destinations should also be allowed to provide residential uses above the ground floor. Scale and character should remain compatible with the surrounding neighborhood, reviewed by the Planning Board.

Park Cafes

Because opportunities for full commercial destinations are limited, many portions of the city are not able to be well served. Park cafes are an additional means of providing nearby social destinations, as well as support park activities. Cafes may be provided in permanent structures, or by allocating space, power, water, and wastewater connections for food trucks, mobile carts, or other temporary vendors. Cafe or vendor space and connections should be considered at many parks throughout the city (See chapter 3), and targeted for locations not otherwise well served by commercial destinations (See Fig. 22). Additionally, within mixed-use districts, cafes or accommodations should be provided within larger open spaces: Booth Park and Shain Park, and future Haynes Square and Worth Park.

MASTER PLAN ACTIONS

1. Update the Parks and Recreation Master Plan, including:
   a. Cafes and other vendor accommodations in appropriate parks.
   b. Building a cafe or vendor accommodations in Booth Park as recommended in the 2016 Downtown Plan.
2. Update the zoning code, including:
   a. Permitting of cafes, food trucks, and other vendors in parks.
   b. Create commercial destination zoning districts, considering the following recommendations:
      i. Allow by-right Commercial Destinations up to 10,000 square feet total, no more than 3,000 square feet per tenant.
      ii. Limit uses to bakeries, banks, bicycle shops, cafés, carry-out foods, coffee shops, exercise studios, florists, hardware, ice cream parlors, mail centers, personal care, medical offices, pharmacies, real estate offices, financial services, small groceries, specialty shops, and other small local service-businesses. Housing should be permitted above the ground floor.
      iii. Nationally branded chains should be permitted when designed to look local.
      iv. Limit hours, and prohibit excessive noise, and restrict early or late truck deliveries.
      v. Larger restaurants and other potentially intensive commercial uses may be permitted as special uses, with appropriate design, management, and operational conditions to minimize impact.

vi. Drive-thru windows should be prohibited.

vii. Loading docks should be limited.

viii. Require landscaped screening from adjacent single-family properties.

ix. Allowed up to three floors, provided they match the scale of a two and one-half story structure.

- For buildings with 3 stories, the upper floors must be residential.
- For buildings with 2 stories, the upper floor may be office or residential.

x. Parking should be as minimal as possible, or not required. If required, parking should not exceed 3 cars per 1,000 square feet of non-residential uses and 1 car per bedroom of residential uses.

xi. Planning Board review should ensure minimal impacts to the neighborhood.

Civic Destinations

Birmingham has a long tradition of investing in civic buildings and landscapes, which began with the construction of its first library and the build-out of its civic center in the 1920s. Outside of the City's primary civic cluster in Downtown, nearly all of Birmingham's neighborhoods include one or more civic uses, frequently schools, within a short walk for most residents. This relationship is relatively rare in postwar suburbs and contributes to Birmingham's desirable quality of life. These Civic Destinations include fire stations, meeting halls, museums, places of worship, post offices, schools, and specialized civic institutions such as Next and the YMCA. The 1929 plan proposed anchoring each of the city's neighborhoods with a civic center, a school, or a park. Largely implemented, this plan resulted in the numerous schools and parks that now exist in most of Birmingham's neighborhoods, which contribute to neighborhood cohesion and quality.

Civic buildings offer neutral, aspirational places for citizens and community leaders to exchange ideas, form community associations, or simply socialize. Located in a neighborhood setting, these institutions encourage

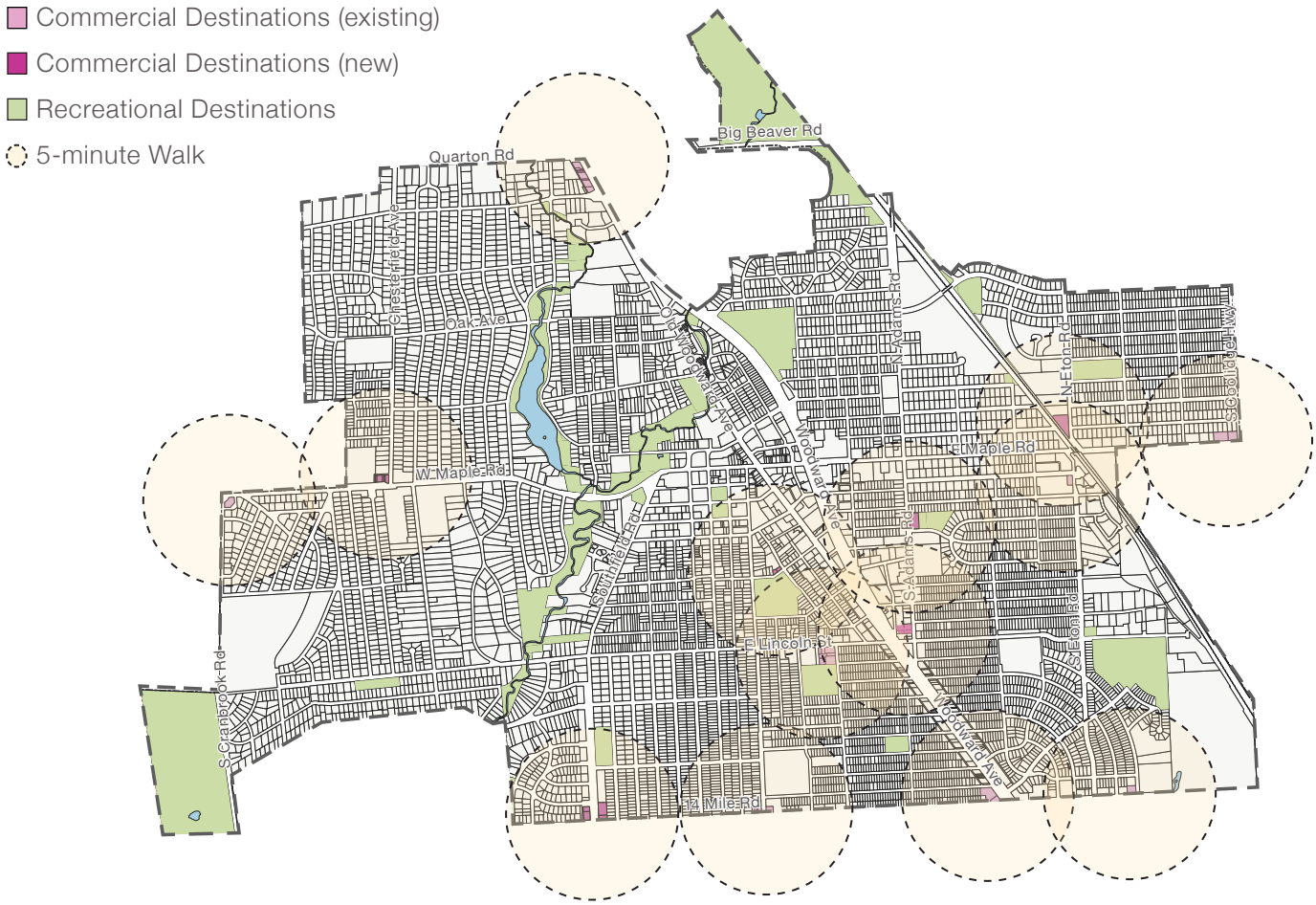


Figure 22. Proposed Neighborhood Destinations.

neighborhood interaction (See Fig. 23). They also tend to draw people from other nearby neighborhoods, cross-pollinating the City's social structures. Civic buildings and landscapes should be grand and iconic, and be distinct from residential construction to avoid confusing public and private uses. Birmingham's prewar civic buildings—the City Hall, library, post office, and train station—were built of brick and stone in an English Tudor style, with the exaggerated scale and exceptional quality befitting signature civic buildings.

Throughout the community, Civic Destinations should be maintained and supported. During the planning charrette, some of the City's civic institutions discussed their great variety of programs. We also heard that some struggle to reach residents and new generations who are not familiar with the role that civic institutions play in the community. To support these institutions, Birmingham should have a Community Foundation or fund, which the Chamber of Commerce is in the process of establishing. In addition to the fund, regular social events should be organized throughout the city. At present, a series of events occurs downtown, but additional events should be considered throughout the community. Regular events such as these are an important means of gaining visibility among community members, engaging them, and strengthening the community's social and civic structure.

Of particular interest to older residents is the lack of a sufficient senior center. While Next's programs and staff meet much of this need, their facilities are insufficient. Surrounding communities boast substantial seniors facilities. Beyond the senior focus, some younger adults use Next's facilities and Next has begun to broaden their appeal beyond the senior cohort. Improved facilities for Next would contribute to both older and younger adult populations. At present Next occupies a former school building located adjacent to Seaholm. New facilities for Next would ideally be located near the center of the city, for more convenient access to all residents. Many options exist and should be studied, including: part of a public parking facility development in Haynes Square or the Bates Street extension, replacing the surface parking in Shain Park, or other locations near the city center. In addition to programming for Next, the facility should provide space that may be reserved free of charge for meetings of resident organizations.

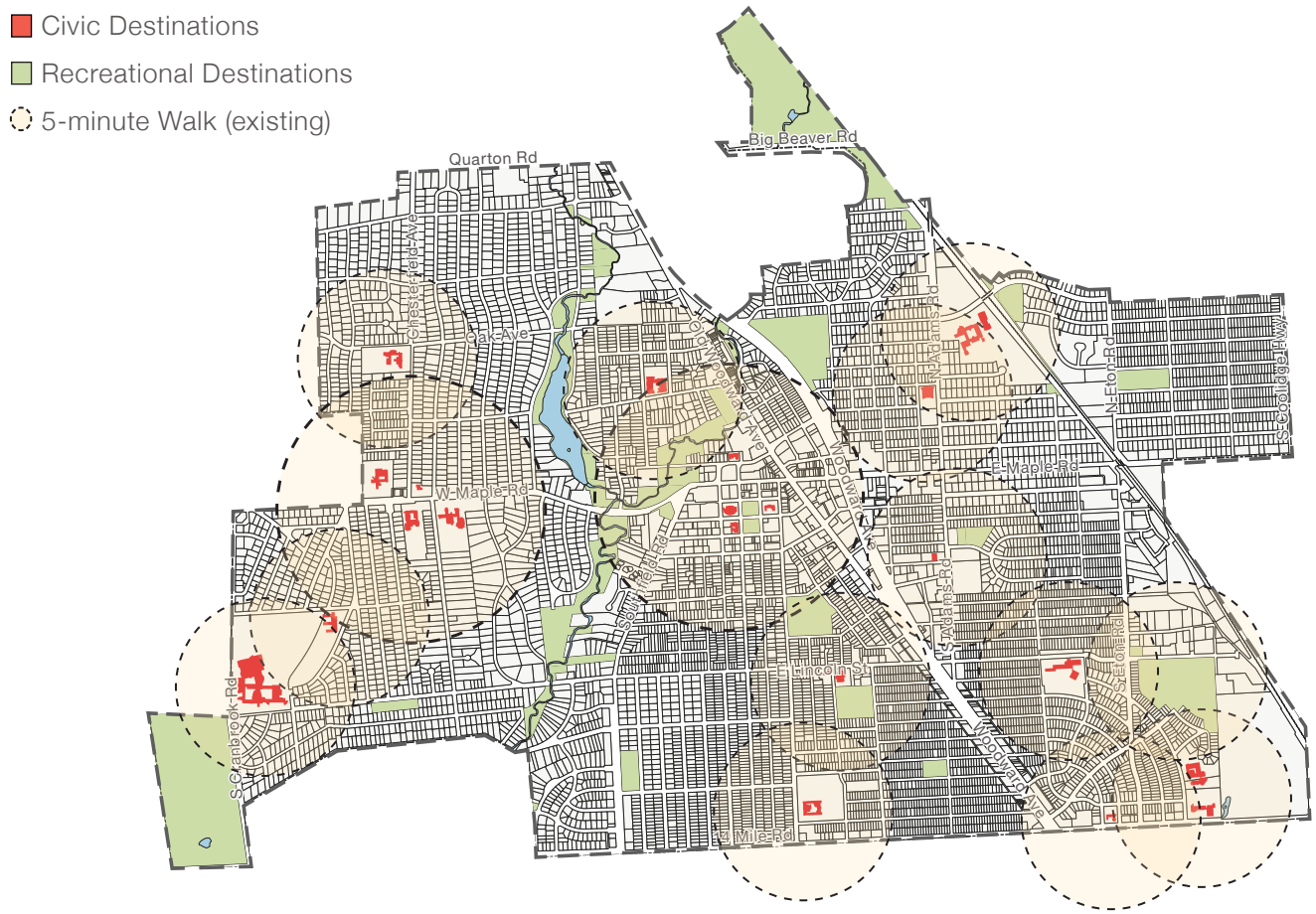


Figure 23. Civic Destinations.

MASTER PLAN ACTIONS

1. Study key civic facilities to continue to support Birmingham residents, including:
   a. Study the location, programming, and funding for new facilities for Next.
   b. Establish a policy to continue the tradition of constructing Birmingham's civic buildings and parks as iconic structures and landscapes to the highest standards and at a civic scale. This should include authentic durable materials, oversized windows, high ceilings, and Tudor design and detailing.
   c. Study how a Community Foundation / Fund may further Master Plan goals.
2. Extend the role of the Public Arts Board or other existing board, or establish a Civic Events Board to develop regular civic events to continue engaging the community throughout the year and promote existing civic institutions.
3. Update the Parks & Recreation Master Plan, including formalizing the public use of school and institutional open spaces for neighborhood recreation.

Accommodate More Modes of Movement

Much of the congestion that Birmingham experiences is due to regional issues, which the city has little opportunity to change. While fixes may address cut-through traffic and dangerous intersections, providing viable alternatives for getting around the City without a car is the most effective strategy to reduce the inconvenience caused by congestion. Across the country mobility has evolved from a focus on personal automobiles to support bicycle and pedestrian priority, and to integrate evolving technologies. Birmingham needs a strategy to integrate a wide variety of alternatives to personal vehicles.

The 2013 Multi-modal Plan increases priority for bicycles and pedestrians which is a critical improvement. Today, there remains a long way to go to achieve the goals of this plan. With emerging technologies and lessons learned in bicycle accommodations, the 2013 plan should be updated to integrate new modes as well as experiences from implementation to date.

Beyond bicycles and pedestrians, preparing for unknown future mobility devices is difficult to predict but important to allow for increased access throughout the city. To successfully integrate new technologies, strategies are required for both facilities and education.

Multi-modal Facilities

To accommodate an increasing number of mobility options, facilities for different roadway users should be considered according to the speed of user. A significant difference in speed is why cars and pedestrians don't mix well. Similarly, this is why bicycles need dedicated lanes when cars travel above 25mph; the difference in speeds causes a safety issue. This view is important when considering how to integrate micro EVs and golf carts, scooters, single wheels, and even e-bikes. Whether a street should be slow speed and shared for all users, higher speed and separated for all users, or somewhere in between intersects transportation network and urban design.

Within neighborhoods, accommodation for multiple modes is relatively easy. Most streets in Birmingham are narrow, slowing cars enough to mix modes within the street. Implementing the bicycle boulevard recommendations would also provide safe and convenient access for modes other than cars. To protect pedestrian use of sidewalks, bikes, scooters, and other small footprint vehicles should be discouraged from using sidewalks through signage and education.

Within Mixed-use Districts, accommodation for new mobility modes should be considered more carefully. On streets with larger volumes of car traffic, improved bicycle accommodations such as protected bike lanes help ensure comfort and safety for riders of all ages. These lanes can also accommodate faster moving new technology like scooters. However, many streets in Birmingham cannot accommodate both bike lanes and on-street parking yet these mixed-use districts also experience the highest parking usage rates. The most effective means of accommodating multiple modes is to slow the speed of all users.

Piloting shared-use streets where materials, signage, and the street edge are designed for all users to operate at very slow speeds and mix may provide greater access opportunities for emerging technologies as well as micro EVs and golf carts. These shared use spaces and streets are common in Europe and are increasing in use in the US. A notable example is Argyle Street in Chicago. Merrill Street is an excellent location to consider as a shared use street pilot, connecting Old Woodward with Shain Park and the Library. Worth Street in Haynes Square could pilot the form as a future main street, along with Cole Street in the Rail District. The strategy should be investigated from a network standpoint, beyond individual streets, to provide broader multi-modal network connectivity within mixed-use districts. Over time a network of shared use streets should be assembled, better accommodating changing mobility.

Mobility Routes

Presently, the city's major roads run between planning districts which is efficient for long-distance car needs, but is less convenient and safe for walkers, cyclists, and micro-mobility users. Additionally, many neighborhoods experience cut-through traffic when congestion is high on major roads along the district perimeter. To address these issues the Multi-modal Plan should be updated to add a series of "mobility routes" based upon bicycle boulevard practices. Mobility routes are connected pathways to navigate throughout the city along secondary streets which are signed and equipped to increase the safety and comfort of non-vehicle users. Examples of accommodations include diverting vehicle traffic, aligning stop signs to enable bikes and other devices to continue without stopping, widening sidewalks, enhancing street crossings, especially at major roads, providing seating and shade, and including wayfinding signage to reach destinations such as parks, schools, and the City's mixed-use districts. They should form a network and connect the city's major destinations and planning districts, as well as to bicycle routes in surrounding communities. By limiting cars, these routes may also provide an opportunity for a future internal public transportation circulator for the city, to provide options for those with limited mobility.

Mobility routes should be built on a bicycle boulevard system which also focuses on other non-vehicular means of movement, pedestrian accommodations, micro EVs and golf carts, and comfort of all users. Bicycle boulevards are routes that are designed for bicycle access while discouraging through access for cars. As such, they can serve to reduce cut-through traffic by diverting cars to provide better non-vehicular access and safety. Pedestrian accommodations should include sufficient sidewalks, marked crosswalks, shading, and benches.

Bicycle destination signage is currently lacking throughout the City. While the 2013 Multi-modal Plan recommended signage, this plan establishes a number of more clear destinations with planning district boundaries and multiple downtown districts. Bicycle signage provides significant way-finding assistance to riders who may be unsure of how to use the bike network. Pedestrian destination signage should also be considered in conjunction with bicycle signage. For other mobility devices, bicycle and pedestrian signage will assist with way-finding.

Educating Roadway Users

While new mobility options provide benefits for many travelers, addressing safety issues and a clear understanding and respect for rules is critical. Riders of bicycles, scooters, and other modes must be aware of where they are expected and allowed to ride, whether safety equipment is required, and how right-of-way is determined. In addition to awareness, the city should understand that most frequently violations occur where people feel that it is unsafe or very inconvenient to ride where directed. But equally importantly, drivers need to respect the rights of other roadway users, many of which do not. To address these issues, adequate signage, public education, and enforcement are necessary.

MASTER PLAN ACTIONS

1. Update the Multi-modal Plan, including:
    a. Ensure bicycle facilities are protected on all streets posted at or above 35mph.
    b. Include mobility routes based upon bicycle boulevard practices.
    c. Implement additional transportation mode best practices for new mobility technology and modes such as micro EVs, golf carts, and micro-mobility.
    d. Include a public education component.
2. Study shared-use streets, including:
    a. A shared-use streetscape retrofit along with a social district in the Maple & Woodward district.
    b. Study additional opportunities for shared-use streets in other mixed-use districts.

BEST PRACTICE RECOMMENDATIONS FOR THE MULTI-MODAL PLAN

a. Shift the burden of public bicycle parking in the downtown from private businesses to the city.
b. Increase proposed street-side bicycle parking.
c. Add parking areas for micro-mobility devices.
d. Add bicycle parking and repair stations like those found in Shain Park to all parks.
e. Convert bicycle lane signage to mobility lane.
f. Install signage informing micro-mobility users and cyclists of where they are permitted to ride.
g. Use bicycle and pedestrian destination signage along mobility routes.
h. Provide mobility education to all residents.
i. Locate benches along mobility routes at major roads, schools, and parks.

Improve Regional Transit Connections

Regional transit will increase in importance as long as the transit authorities invest in the system, and residents support that investment. As one of a number of cities and mixed-use centers along Woodward, Birmingham would benefit significantly from improved bus or rail along the corridor. While this has been projected for decades, there is still hope that it will occur.

To support transit, Birmingham has relatively little work to do, already having a well established downtown along Woodward. Most significantly, Birmingham needs to add residents to Downtown, which is detailed in following chapters. Residents Downtown would also be located along the regional transit corridor, more readily users of that service and able to reduce car dependency as a result. The Rail District also needs to secure a connection to the Troy Transit Center and add residents and businesses. This is also discussed in later chapters. Concerning facilities, the City needs to improve transit stops with covered seating areas and real-time information, along with nearby covered bike parking.

For Birmingham, regional transportation doesn't serve residents who are further from Downtown. An internal circulator, defined by a limited route operating exclusively within Birmingham, providing access to destinations throughout the City, would address this limitation. Different types of circulator vehicles may be applicable because circulators don't require high seating capacity. A circulator within Birmingham should be accessible within neighborhoods and include diversions to high-frequency destinations like Seaholm. This would provide greater access to residents, including those who have difficulties walking and biking, and reduce some parking demand Downtown and also at Seaholm.

MASTER PLAN ACTIONS

1. Update the Multi-modal Plan, including improving bus stops along major roads.
2. Convene a committee to study a public circulator.

BEST PRACTICE RECOMMENDATIONS FOR THE MULTI-MODAL PLAN

a. Improve bus stops by adding shelters, paving, and seating along:
   - Big Woodward;
   - Old Woodward;
   - Maple, including stops outside of Downtown;
   - Coolidge Hwy.; and
   - 14 Mile Rd.

Multi-modal Plan Updates

A number of adjustments are recommended to the 2013 Multi-modal Plan within the previous sections. Those updates that are able to be expressed on a map are included in this section for ease of comparison to the existing plan. In addition, these recommendations impact the overall network for bicyclists, pedestrians, and transit. Some of the updates identified in this section are adjustments based upon those impacts.

PEDESTRIAN FACILITIES

Pedestrian facilities are generally adjusted in order to implement recommendations in the Connect the City and accompany bicycle boulevard recommendations. These are specified in Figure 25.

BICYCLE FACILITIES

Bicycle facilities are generally adjusted in order to implement recommendations in the Connect the City, prioritize the bicycle boulevards, and Accommodate More Modes of Movement sections. These are specified in Figure 26 and include recommended adjustments to the overall bicycle network function as a result of other changes.

TRANSIT FACILITIES

Transit facilities are generally adjusted in order to implement recommendations in the Connect the City and Improve Regional Transit Connections sections. These are specified in Figure 27.

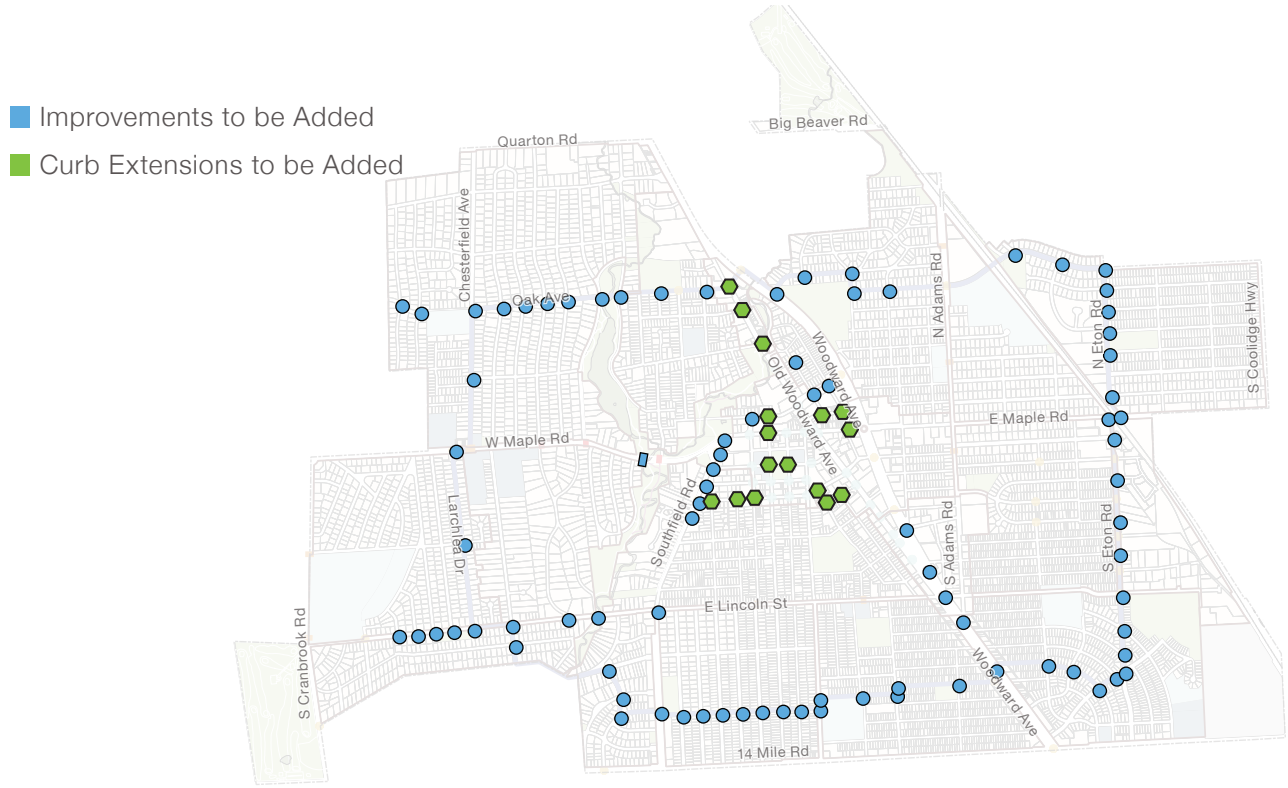


Figure 25. Pedestrian updates to the Multi-modal Plan.

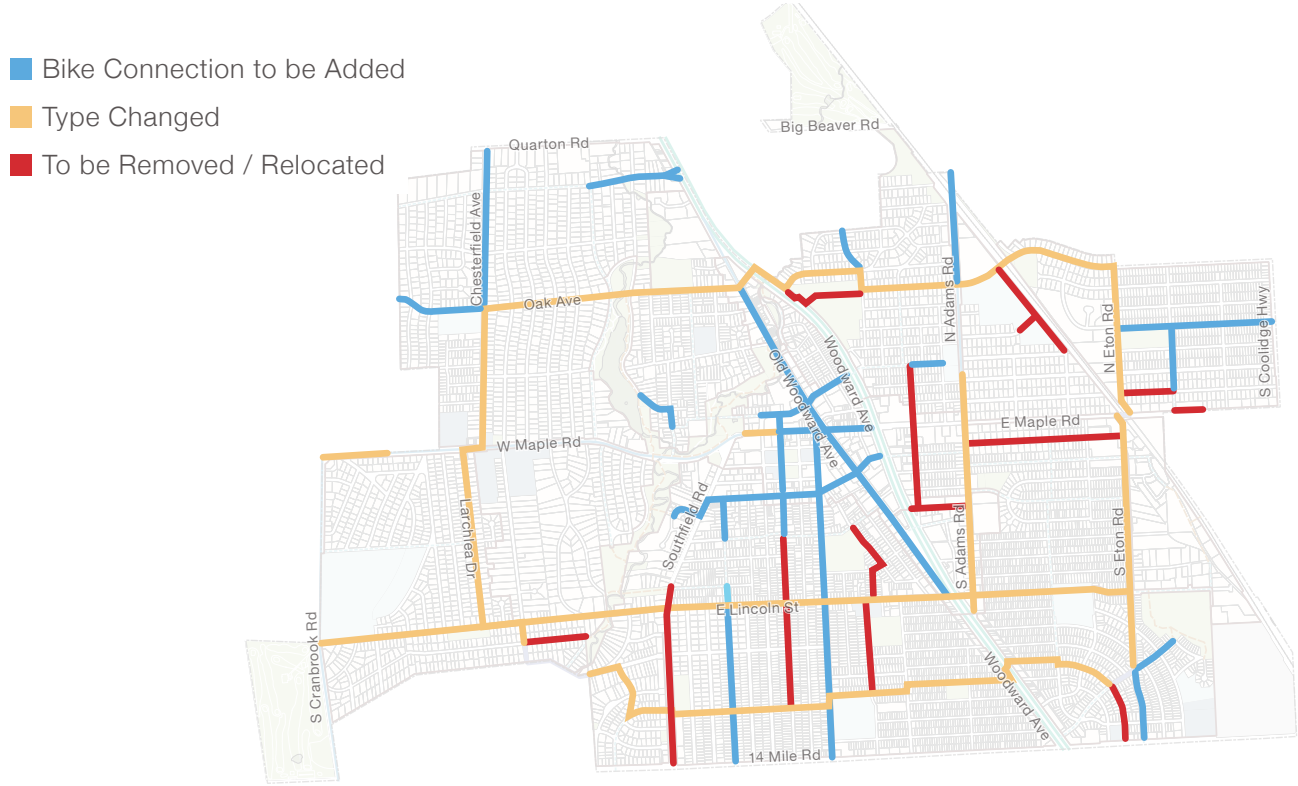


Figure 26. Bicycle facility updates to the Multi-modal Plan.

Ch 1. Connect the City

Improve Regional Transit Connections

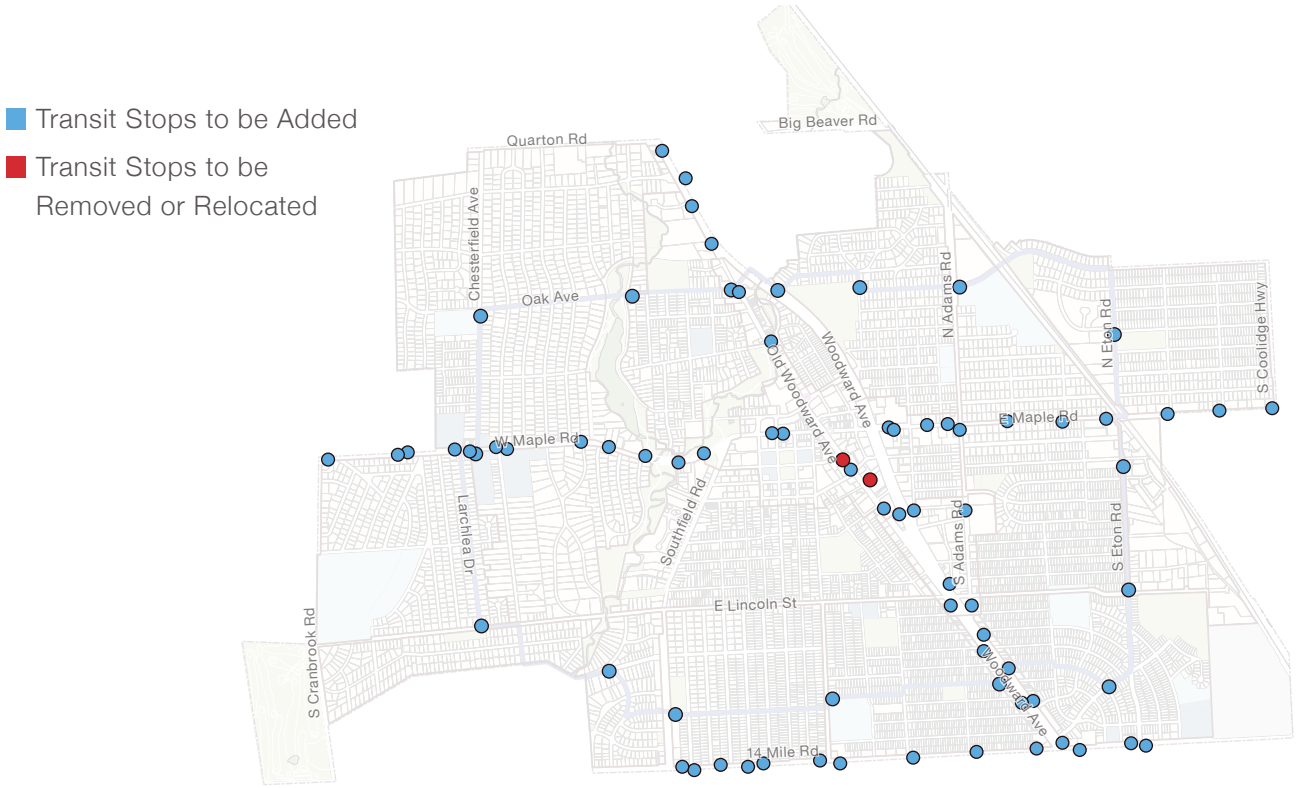


Figure 27. Transit updates to the Multi-modal Plan.

Ch 2. Embrace Managed Growth

Encourage Housing in Mixed-use Districts

Housing in Birmingham is in high demand, an indication of the city's quality of life. But that demand has brought with it a rapid increase in housing cost, difficulty for aging residents to downsize within the community, and a changing community composition that has resulted in reduced school enrollment. New housing plays an important role in stabilizing these threats, but locating growth is difficult in a built-out city. Birmingham's mixed-use districts are ideal places to accommodate new housing that is proximate to existing services, does not impact neighborhoods, increases foot traffic for businesses, and is most likely to result in attainably priced units. Each mixed-use district is below its currently zoned capacity for building, which means new housing growth can be accommodated without changing the community expectations currently stipulated in the zoning code.

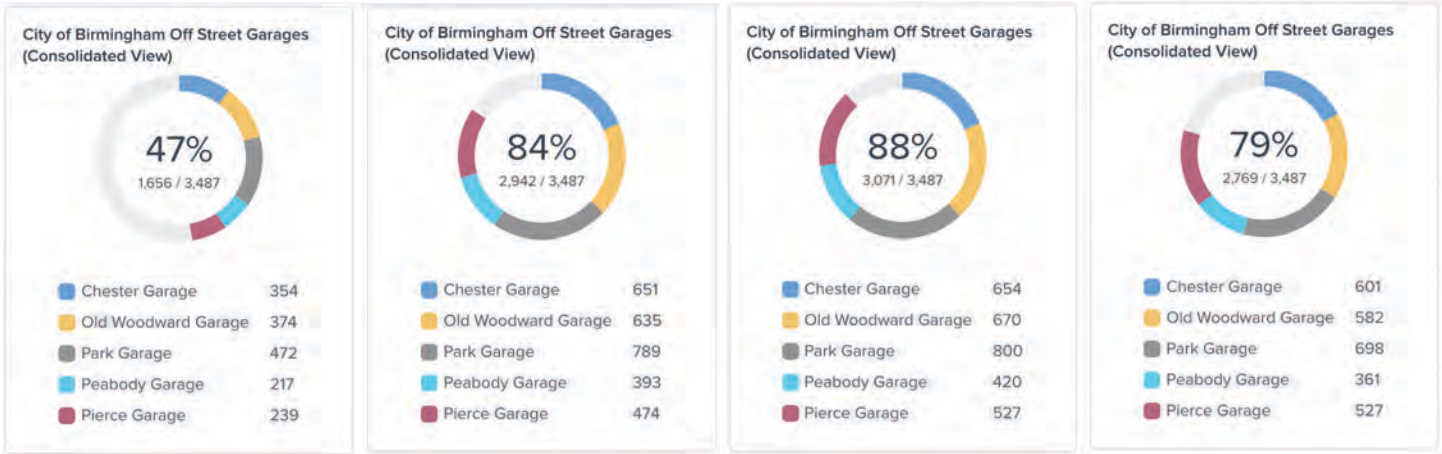
Maple and Woodward

The Maple and Woodward district (Downtown Birmingham) has an imbalance of commercial to residential development, with very few households compared to a significant amount of office and retail space. This lack of housing has been recognized since the 1980 Birmingham Plan, principally due to a policy which does not allow residences to park in the public parking decks. Each mixed-use district requires a balance of housing with offices and retail space to ensure the district is active during daytime hours and into the evening, supporting retail and restaurants and promoting greater public safety. If housing is to be provided downtown to re-balance the 24-hour downtown life-cycle, it will require access to the municipal parking supply.

Providing parking on private properties in downtown is difficult due to the small size of properties and goals for walkable streets activated by storefronts. Properties in suburban locations can more easily provide on-site parking because land is not scarce. Those areas are also not walkable. Walkable streets require small blocks and a lot of activity; there is not room for parking on every property. The current rules encourage development to add housing on upper floors to achieve a height bonus, but require some of the very valuable ground floor to be set aside for parking. This results in very large units, where provided, to fill to bonus space in a downtown that needs attainably priced housing.

Parking downtown is heavily utilized during the daytime, with most public garages over 90% of their capacity. However, that same parking is virtually empty during the evening and overnight. Weekend parking is also underutilized with around 2,000 spaces available. This parking imbalance is an ideal opportunity to accommodate housing, which requires parking at night and on weekends, and vacates parking during the day. During the Covid-19 Pandemic there has been low overall parking usage, increasing opportunities to re-use parking for housing. When initially proposing residential usage of public parking structures, concern for the time that residents would depart and office workers would arrive was raised. Parking monitoring in Birmingham has shown at least half of total parking capacity is available at 10am, providing a significant period of overlap between uses (See Fig. 28).

Presently, four and five-story buildings are allowed in most areas downtown yet most buildings are lower. Considering the difference between the height of existing buildings and the currently allowed potential, all housing growth needed in the downtown area could be accommodated within the existing zoned capacity. Some of that capacity is further limited by the historic status of many existing buildings. However, heights should not be increased, except where adjusting zone boundaries results in greater consistency. Focus should instead be on filling existing capacity.



MONDAY, 9:30AM MONDAY, 11:00AM MONDAY, 1:00PM MONDAY, 5:00PM

Figure 28. Downtown garage capacity at different times on a Monday.

New residential parking permit prices should be set attainably yet to discourage residents from parking cars that are not used regularly. Distribution of permits can also be managed through permit assignments, assigning spaces in less used garages, like Chester Street, and on upper floors. For the mostly younger and older residents who may not need a car, they benefit from the cost of parking being entirely eliminated from the cost of their housing. To address attainable housing needs, the availability of passes should be tied to a minimum threshold of attainably priced units. Lastly, the added income for the parking district can be reinvested into existing and new structures.

Haynes Square

Haynes Square, to both sides of Woodward, can accommodate a significant amount of infill development. As discussed in Chapter 1, this area should target more housing than office. Most of the available capacity is located east of Woodward in the Triangle District, which is already zoned for significant infill. However, like Downtown, housing development is restricted by parking.

To the east of Woodward, many properties are oddly shaped and relatively shallow in depth. These characteristics are inefficient for on-site parking. Non-residential development in this area has been slow for similar reasons - parking is difficult to fit due to the geometry of most properties. A public parking structure is needed east of Woodward to drive private sector development, as previously discussed.

To the west of Woodward, properties are also too shallow to provide sufficient on-site parking. In addition, because this area is near to the former parking assessment district but not within, development demand funnels to the downtown district where parking is not required for new development. One solution for the west side of Woodward is proposed in Chapter 1. The western Haynes Square district could be provided additional parking access by: adding a new parking assessment district; building a parking structure on the west side of Woodward as part of the Haynes Square street modifications; or including this area within a future Triangle District parking district.

The Rail District

Like the Triangle District, the Rail District has long been zoned for significant infill but has seen little growth, particularly in the lower Rail District. This location is ideal for housing infill with its proximity to Kenning Park and future access to the Troy Transit Center. Development has occurred in the area on properties that are large, but the many smaller properties around Cole Street remain underdeveloped, despite being zoned for high density infill. Similar to the Triangle District, development of housing is restricted by the size and shape of properties, and lack of public parking. A public parking garage should be built near the lower Rail District and future Troy Transit Station access should be added. Like the other mixed-use districts, this garage should allow for unbundled residential parking by selling residential parking passes. The garage would also help alleviate parking conflicts with the Torry neighborhood.

MASTER PLAN ACTIONS

1. Pilot unbundled residential parking within Downtown parking garages. This may be achieved by releasing 100 to 200 passes for new downtown residential units.
2. Create a Mixed-use Districts Parking Plan, including:
    a. Establish unbundled residential parking policies within Downtown parking garages, consider:
        i. Offering an initial limited supply of permits for downtown housing, eliminating on-site parking. Evaluate the supply and modify as needed over time to maximize garage usage and housing.
        ii. Tie parking passes to an average rental or sales rate of 150% of Area Median Income or less, calculated on a per-building basis.
        iii. Tier permit costs according to the number of vehicles per residence, increasing in price for each vehicle and by parking garage.
    b. Establish unbundled residential parking policies in all mixed-use districts in existing and future parking garages.
    c. Provide public parking as recommended in the 2007 Triangle District Plan.
    d. Provide public parking in the Rail District. Consider redevelopment of the DPS building to incorporate a public parking garage on site, which services the lower Rail District.
    e. Provide public parking for the western Haynes Square district.

Infill Some Activity and Buffer Seams

Increasing the housing supply in only the mixed-use districts will result in a narrow range of new housing types, almost exclusively multi-family in larger buildings. This form of infill addresses the need of some but not all demographic groups. One under-supplied group is households with young children, which are important in supporting the public school system. Few opportunities exist for new townhomes, duplexes, smaller houses, and small multi-family buildings. To accommodate these housing types, Activity and Buffer Seams should be zoned to enable this range of housing (See Fig. 29).

Most of the Activity and Buffer Seams are mapped on existing multi-family properties, which does add to the housing supply. However, there may be some additional infill capacity available in these properties by adjusting downward the minimum open space per dwelling standards, which are quite high today. Additionally, some Activity and Buffer Seams are mapped on properties that are single-family today, notably along 14 Mile Road. While there are not many properties available for infill at this scale, those areas able to accommodate infill should be zoned to encourage it.

MASTER PLAN ACTIONS

1. Update the zoning code, including:
    a. Create a new zoning district or modify the transition zone districts to enable infill development of small homes, townhomes, duplexes, and small multi-family buildings, limited to buffer and activity district seams.
    b. Reduce the amount of open space required per unit for townhomes and multi-family.

Study Accessory Dwelling Units

Accessory Dwelling Units (ADUs) are a low impact way to provide additional housing, particularly for older adults and lower income individuals. The City currently allows accessory structures but has restrictions to prohibit their use as permanent dwellings. ADUs are small homes typically located in the rear yard of a single-unit residential or attached townhouse lot, frequently over a garage but often a small secondary unit within the primary home. ADUs can provide housing sought by many young renters, single-person households, and older adults. Birmingham has had historic ADUs for decades (See Fig. 30).

Figure 29. Activity and Buffer Seams.

Figure 30. An existing ADU equivalent.

Presently, there is considerable market demand for ADUs in the City, but accessory structures are not permitted to be used as residences for people other than a relative of the primary household. For older adults looking to downsize but avoid a spike in property tax by selling, they may benefit from an at-grade ADU to live in and rent their primary home. And generally, ADUs are a means of providing additional household income while supporting a small amount of additional units, at a very low overall neighborhood impact.

Through the development of this plan, resident opinions concerning the appropriateness of ADUs within Birmingham were neatly divided, nearly 50/50. Due to potential benefits, ADUs merit further study which should consider where and in which circumstances they may be appropriate, and regulatory practices which best fit the community.

MASTER PLAN ACTIONS

1. Update the zoning code, including:
    a. Enable Accessory Dwelling Units (ADUs) in already compatible zones: MX, TZ1, TZ3, and R4 through R8. Study ADUs for additional locations within the city and the regulations necessary to ensure compatibility.

ADU BEST PRACTICES

a. Permit ADUs where the property owner lives on-site, in the primary home or ADU.
b. Prohibit two-rental structures on any single-family property.
c. Require ADUs to be designed and built to match or exceed the quality of the primary structure.
d. Require adequate landscape screening between ADUs and adjacent properties
e. Do not require parking for ADUs.
f. Increase the allowable height for accessory structures to allow 2 stories when there is a dwelling within it above a garage.
g. Exempt the area of interior staircases from the maximum area of accessory structures when there is a dwelling within it.

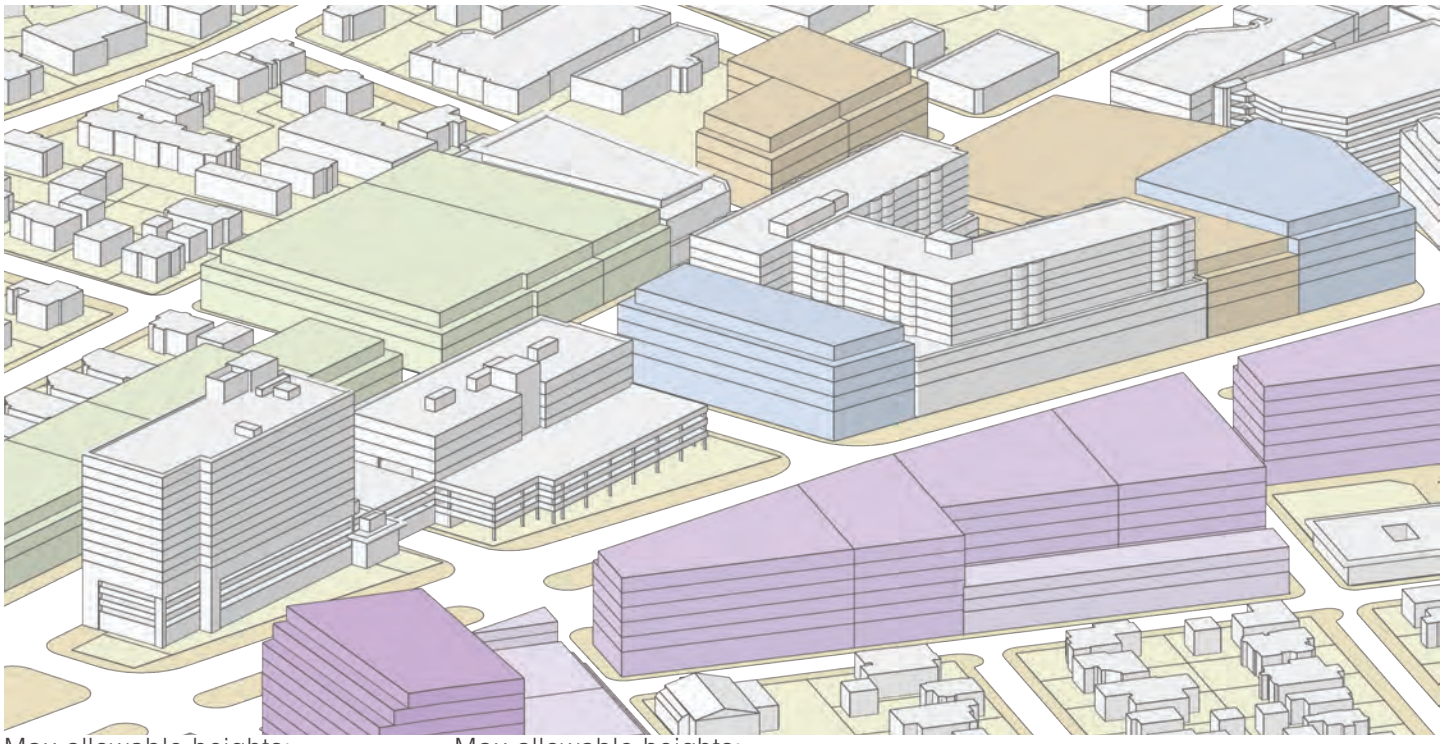
Update the Zoning Code

Birmingham's Zoning Ordinance (referred to as "zoning code") is difficult to understand, does not align with the character of many existing and historic buildings, and has been updated over the years through overlay zones, like Downtown and the Triangle District, which replace code elements that no longer function for the City's goals. Overlays of this type are a discouraged practice resulting in multiple maps for the same properties and out of date requirements. Within the city's residential districts, the zoning requirements are not well aligned with existing housing character, which has led to new buildings that residents feel are out of character with the surrounding neighborhood. Birmingham's Zoning Code is due for an overhaul.

While the zoning code is better than codes for many cities of a similar size, the code no longer aligns with best practices. Zoning codes should be legible and comprehensible for residents and professionals alike, including graphic exhibits to clarify text-based concepts. Zones should be minimized in number, combining those which may be very similar but in different parts of the city (See Fig. 31), like the Downtown Overlay, Triangle District Overlay, and the Mixed-use district established for the Rail District. Overlay zones that currently replace their outdated underlaying zoning, typically Business or Office, should be replaced with new zones that clearly direct the intent of those areas. Residential districts should be examined for their appropriateness and some collapsed, especially towards the higher end such as R6 through R8.

Perhaps most importantly, the single-family residential districts should align more closely with the existing housing stock to retain neighborhood character. The zoning update process should include a careful analysis of the city's residential districts and existing housing stock, on a neighborhood-by-neighborhood basis, and new zones crafted to reflect the clear character differences across the city.

Clarity and simplicity in zoning helps residents understand the implication of the zoning code, which is otherwise opaque. Minimizing zones and clarifying standards can also simplify the review process and make new revisions easier to implement. Use categories should also be collapsed to the broadest categories practicable. In all, the zoning code should be entirely replaced or significantly altered to align with the City's goals for neighborhoods and mixed-use districts.



Max allowable heights:

- D2 3-story development - 56'
- D3 4-story development - 68'
- D4 5-story development - 80'

Max allowable heights:

- MU-3 MFR 5-story development - 60'
- MU-5 SF 6-story development - 82'
- MU-7 9-story development - 118'

Figure 31. Existing Development Potential in Neighboring Overlays.

MASTER PLAN ACTIONS

This list consolidates zoning related actions from this and other chapters of the Master Plan for ease of applicability.

1. Update the zoning code, including:
    a. Focus on brevity, clarity, graphics, and aligning zones with Future Land Use categories.
    b. Consolidate zones and uses as much as is practical and ensure the updated document is legible, clear, and predictable for residents as well as developers.
    c. Extend D2 zoning to the multi-family properties along the west side of Old Woodward up to Quarton. (Ch.4)
    d. Modify MX to enable the urban development envisioned for the Rail District. (Ch. 4)
    e. Develop an Overlay Zoning District for the Lower Rail District that permits the existing, but somewhat improved condition to persist for the area south of Palmer Street. (Ch. 4)
    f. Create zoning districts to enable neighborhood destinations. (Ch.1)
    g. Create new zoning districts or modify the transition zone districts to encourage infill development of small homes, townhomes, duplexes, and small multi-family buildings, limited to Activity and Buffer Seams. (Ch.2)
    h. Adjust residential zone boundaries and standards to better match existing housing. This requires a study of the city's residential architectural styles and building types, their key characteristics, position on their properties, driveway configuration, age, and the areas where each common type is located. (Ch. 3)
    i. Encourage renovations to expand existing houses rather than the construction of new houses. (Ch. 3)
    j. Review and update site, building, and design codes to prevent increased rainwater runoff and other negative impacts from new house construction. (Ch. 3)
    k. Consider age-in-place-friendly building regulations, such as grab-bars, ramps, and elevators in single-family homes, with careful attention paid to the city's architectural heritage. (Ch. 3)
    l. Address neighborhood lighting standards, including exterior residential lighting intensity and color temperature. See the International Dark Sky Association recommended standards. (Ch. 3)
    m. Develop storefront design, signage, and other standards to retain the small-scale business character of Market North. (Ch. 4)
    n. Enable Accessory Dwelling Units (ADUs) in already compatible zones: MX, TZ1, TZ3, and R4 through R8. Study ADUs for additional locations within the city and the regulations necessary to ensure compatibility. (Ch. 2)
    o. Allow cafes, food trucks, kiosks, and other appropriate amenities in parks, currently the Public Property district. (See Fig. 34) (Ch. 1)
    p. Create subdivision and zoning standards to encourage redevelopment of the Adam's Square shopping center. (Ch. 1)
    q. Establish zoning standards to encourage redevelopment of South Woodward Gateway properties. (Ch. 4)
    r. Establish zoning standards to enable Neighborhood Sleeves in the South Woodward Gateway. (Ch. 4)
    s. Establish zoning standards to enable shared-use alleys, particularly in the South Woodward Gateway. (Ch. 4)
    t. Seek to advance building sustainability in new construction, such as through the use of green building standards within the City's mixed-use districts and municipal buildings and increasing energy standards for new residential construction above those of the state energy code, ideally implementing 2030 District goals (Ch. 5)

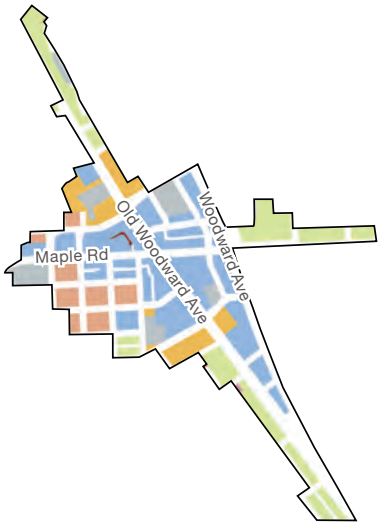
BEST PRACTICE RECOMMENDATIONS

a. Collapse uses into the broadest categories possible, with detailed use specification only provided where absolutely necessary, and in limited areas.
b. Combine the business, office, Downtown, Triangle, and mixed-use districts into a single set of mixed-use districts shared between all mixed-use areas. Low intensity mixed-use districts would only include the lower intensity mixed-use zones, and high intensity mixed-use districts the higher intensity zones.
c. Revise residential districts to reduce the number of non-conforming structures by better aligning standards with existing structures.
d. Ensure new zoning language is considered for simplicity and expediency, achieving regulatory goals in a manner clear to the general public.

Ch 2. Embrace Managed Growth

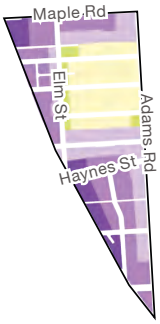
Update the Zoning Code

Downtown overlay



- C Community use
- D2 3-story development
- D3 4-story development
- D4 5-story development
- D5 Special land use
- P Parking

Triangle overlay



- ASF-3 SFR 3-story development
- R2 MFR 2-story development
- MU-3 MFR 5-story development
- MU-5 SF 6-story development
- MU-7 9-story development

- R1 Single Family Residential
- R1A Single Family Residential
- R2 Single Family Residential
- R3 Single Family Residential
- R4 Two-Family Residential
- R5 Multiple-Family Residential
- R6 Multiple-Family Residential
- R7 Multiple-Family Residential
- R8 Attached Single Family
- TZ1 Transition Zone
- TZ3 Transition Zone
- MX Mixed-Use
- B1 Neighborhood Business
- B2 General Business
- B2B General Business
- B3 Office-Residential
- B4 Business-Residential
- 02 Office Commercial
- 01 Office
- P Parking
- PP Public Property

Figure 32. Existing Zoning Districts.

Ch 3. Retain Neighborhood Quality

Equip Parks to Serve Neighborhoods

Birmingham's natural areas, parks, recreational facilities, and schoolyards are vital resources for its neighborhoods. These open space amenities are important both for public health and as places where neighbors interact. Each neighborhood should have nearby access to open space which is designed with a broad set of activities to support a range of ages and abilities. While some neighborhoods are well served with parks and open spaces, when analyzed from a Planning District basis, many lack sufficient services. A Planning District-based analysis should be completed to ensure that each neighborhood has access to diverse activities, within existing neighborhood parks or with programming at nearby community parks.

Parks and open spaces differ in their size, context, and ability to provide services. Larger, community parks provide numerous amenities, made possible by the park size. Because they are large, community parks are limited in number. As a result, each services a significant portion of the city, not only the surrounding neighborhood. Yet these parks must also provide neighborhood park amenities for nearby residents. This dual-purpose can cause conflict, where nearby neighbors attempt to limit their use and access. For instance, some residents have expressed serious frustration that dog runs have been excluded from neighborhood parks. The single run at Lincoln Hills Golf Course is insufficient for a city the size of Birmingham.

Open space amenities are a critical resource for quality of life across the city. To ensure each Planning District has sufficient access to these amenities, location, service area, and programming should be studied from this perspective. Amenities should be provided according to the size and location of each open space by type, and to ensure residents of all ages are accommodated. Best practice recommendations are provided herein for consideration in a future update to the Parks and Recreation Master Plan. Figure 34 includes examples of the types of programming elements that may be appropriate within Birmingham's parks.

While Birmingham boasts many parks and the Rouge River natural area, an open space amenity is not located within close proximity to all residents. Considering which parks are accessible by a short walk to most residents, the core portion of the city is well accommodated while edges have less access. Opportunities to add park space are limited but parks programming can be augmented to make up for missing or distant amenities.

Of all Planning Districts, Torry is most notably lacking park space. Already built-up there are few easy solutions to providing new open space. Two potential opportunities should be pursued: 1) open space may be required as a condition for redevelopment of the Adams Square shopping center, and 2) alternatively, the current post office site would accommodate a well-sized park if, within the horizon of this plan, the post office elects to vacate the property. As both options are difficult, the planned Worth Park in the Triangle District should be developed, however it would not fulfill all of the neighborhood's needs.

Quarton and Seaholm districts also lack official open park space for much of their Planning Districts. Like Torry, these areas have little opportunity for new open spaces. However, both neighborhoods utilize schoolyards as informal open spaces. The city should consider a more formal arrangement for neighborhood use of these spaces, including equipment and amenity needs to fulfill neighborhood park best practices. Officially using school fields as community and neighborhood parks requires approval from the school board and collaboration with the city concerning access, hours, liability, equipment, and maintenance. In a fully built community like Birmingham, school fields are one of the only opportunities to expand open space access and amenities. Similarly, religious and other institutions may also be engaged in formal shared amenity arrangements. Such an arrangement with Our Shepherd Lutheran School would provide needed amenities to the Torry neighborhood.

Figure 33. Kids playing in Booth Park.

	Athletics	Food & Bev.	Garden	Dogs	Exercise	Play	Splash	Seating	Walkways
Mini Parks									
1. Baldwin Well								X	
2. Derby Well			X	X	X	X		X	X
3. Pump House					X			X	X
4. Redding Well			X		X			X	X
5. Linn Smith			X		X			X	X
6. Martha Baldwin					X			X	X
7. South Well			X					X	X
Neighborhood Parks									
8. Crestview	X	X	X	X	X	X		X	X
9. Howarth	X		X	X	X	X		X	X
10. Linden	X		X	X	X	X		X	X
11. Pembroke	X		X	X	X	X		X	X
12. St. James	X		X	X	X	X		X	X
13. W. Lincoln Well Site	X		X	X	X	X		X	X
14. Adams Park	X				X	X		X	X
A. Adams Square	X			X	X	X		X	X
B. Quarton School	X			X	X	X		X	X
Community Parks									
15. Barnum	X	X	X	X	X	X	X	X	X
16. Kenning	X	X		X	X	X	X	X	X
17. Poppleton	X	X	X	X	X	X	X	X	X
C. Seaholm	X	X		X	X	X		X	X
Specialty Parks									
18. Booth		X		X	X	X	X	X	X
19. Rouge River								X	X
20. Shain		X				X	X	X	X
21. Quarton Lake			X	X	X	X	X	X	X
22. Museum								X	X
23. Manor					X	X		X	X
24. Springdale	X			X	X	X		X	X
25. Lincoln Hills	X			X	X			X	X
26. Worth Park		X						X	
26. Haynes Sq.		X			X	X	X	X	X

Figure 34. Example Park Amenities for Consideration in a Parks and Recreation Plan Update.

Ch 3. Retain Neighborhood Quality

Equip Parks to Serve Neighborhoods

MASTER PLAN ACTIONS

1. Expand the 2018 Parks and Recreation Master Plan or create a new plan beyond the 2022 horizon, including:
   a. Differentiate parks by type to better determine appropriate amenities, services, and best practices.
   b. Utilize Planning Districts to determine sufficiency of park access across the city, availability of amenities, and consideration of activities and recreation in each season. (See Fig. 34)
   c. Formalize the public use of school and institutional open spaces for neighborhood recreation, prioritizing under-served Planning Districts.
   d. Develop Worth Park to provide a portion of the needed open space for Torry.
   e. Purchase part of the Adams Square parking lot for park space, or ensure that redevelopment would require that future park space be provided near Adams and Bowers.

PARKS BEST PRACTICES

Each type of park should provide specific amenities, as their size and configuration permits. Spaces should serve residents of all ages and include public art, signage, accessible paths, trash and recycling receptacles, and shaded seating.

Plazas are the most limited type of open space due to their small size. These paved areas primarily provide passive recreation with seating along their edges. Some may also include water features and splash pads. No plazas exist today, but they are proposed by this and other plans.

Mini parks, like the well sites, are mostly limited in size, serving an area of roughly 2-to-5 minutes walking distance. These spaces provide limited active recreation with trails, where exercise opportunities should be considered. Passive recreational opportunities are provided through seating areas and may be expanded with community gardens and small dog runs. Mini parks should have some lighting, but be limited in intensity and frequency.

Neighborhood parks are of a moderate size, able to provide a variety of amenities. They serve an area of roughly 5-to-7 minutes walking distance. These should include play

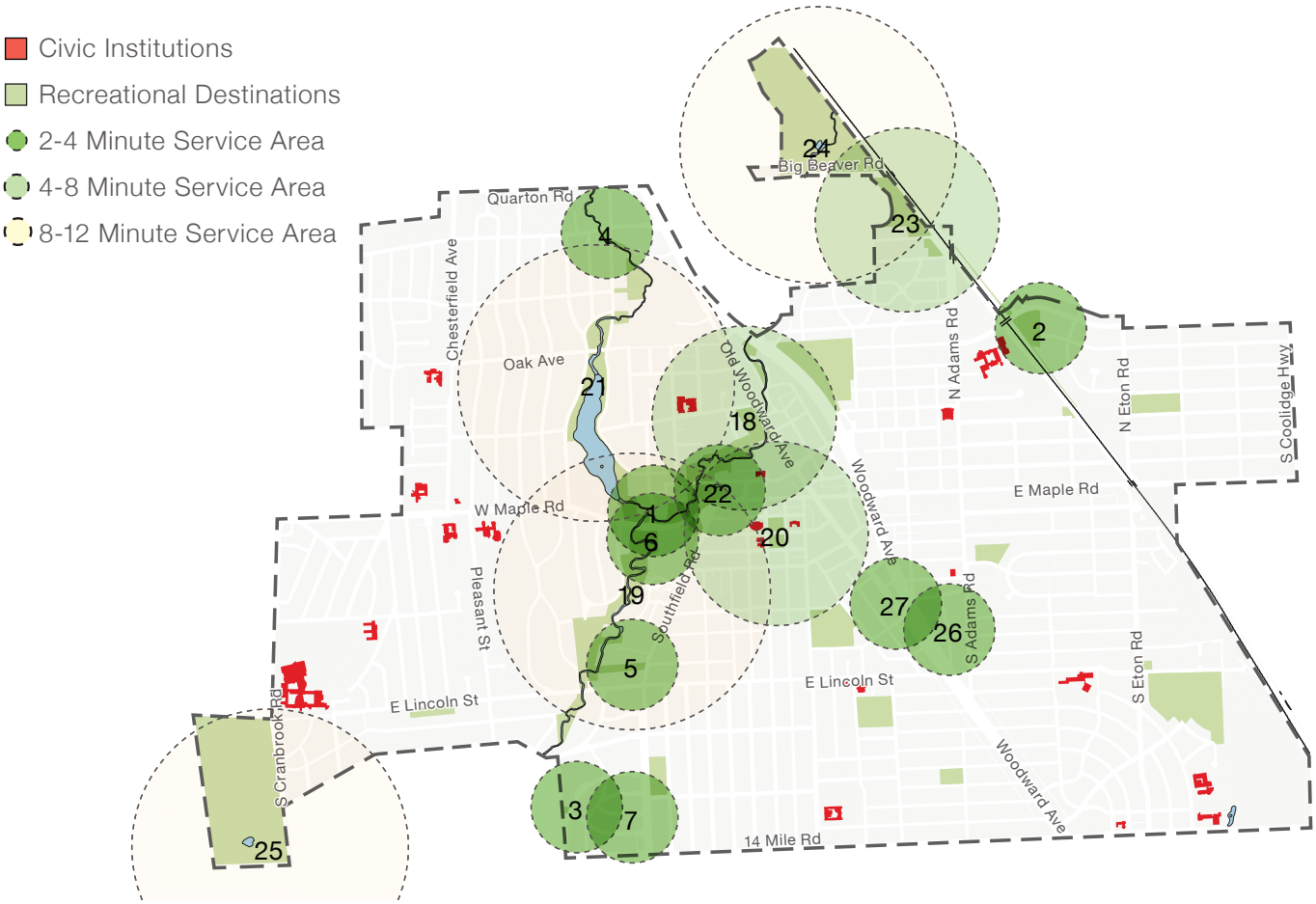


Figure 35. Birmingham Specialty Parks and Mini Parks.

equipment for children, passive seating areas, and active amenities like tennis, basketball, and limited sports fields as space allows. Neighborhood parks should also provide bicycle parking and lighting, dog runs, and green stormwater infrastructure, and may provide community garden space.

Community parks are substantial spaces that should include a significant variety of amenities. These parks serve a neighborhood park function for those within a 5-to-7 minute walk, but also serve a much more significant population beyond this distance. Community parks should provide the amenities of neighborhood parks, and include more significant active recreational offerings, restrooms, and opportunities for food and beverage service through a small cafe or accommodations for occasional food service such as food trucks or vendor booths. They should provide ample bicycle parking, lighting, and some public parking, on- or off-street.

Specialized parks serve a very specific function due to their location, and should be considered on a case-by-case basis. These include the Rouge River Natural Area, Shain Park, and other special open spaces. Worth Park and Haynes Square are included in this category and require special programming consideration due to their locations.

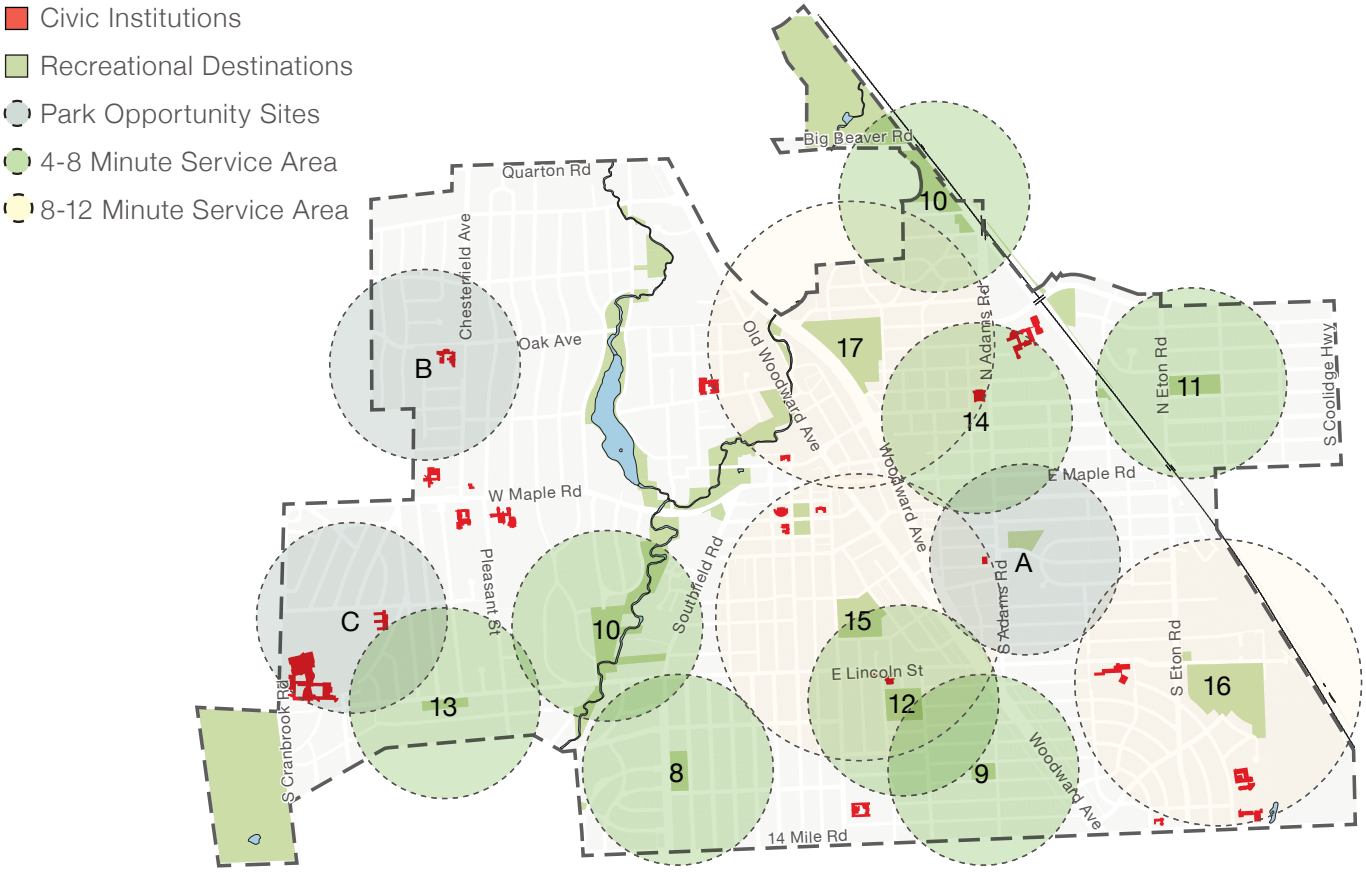


Figure 36. Neighborhood and Community Parks.

Keep Streets Pedestrian-oriented

Streets are the most pervasive public space in a city, and generally, Birmingham's streets are exceptionally beautiful and pleasant (See Fig. 37). However, moving cars is too often primary focus of street design, which results in widening to make driving easier. In most cases, widening neighborhood streets reduces their safety for pedestrians and bicyclists, reduces street tree canopy, and increases vehicle speeds. Fortunately, Birmingham has resisted calls to widen streets. As a result, the city retains a extensive tree canopy and pleasant streets to walk and bike along.

Yet today, calls for wider streets continue. If widened, cars will move more quickly and those streets become convenient ways to cut around areas of congestion. There are some streets in Birmingham that are too narrow, like Westchester Way, paved approximately 16 feet yet operating two-way with parking. Streets narrower than 20 feet paved and operating two-way with on-street parking should be considered for a change to one-way or removal of some street parking, perhaps widening. Most other streets should not.

Beyond the space to accommodate automobiles, street design must consider pedestrian comfort and safety, bicyclist comfort and safety, and street trees for public health.

Pedestrian comfort and safety is influenced by the size and location of sidewalks. Birmingham's historic neighborhood standard was a minimum 4 foot sidewalk, which is insufficient by today's standards. In most neighborhoods, sidewalks should be a minimum of 5 feet wide, and 6 feet in neighborhoods near mixed-use districts or streets with multi-unit housing. The recently passed Residential Street Design Standard specifies a 5 foot minimum, which works for most places. In areas with smaller lots and multi-unit housing, sidewalks should be at least 6 feet wide. In a mixed-use context, sidewalks should be wider, no less than 14 feet from curb to edge of right-of-way assuming a paved tree lawn with tree wells. Shared space streets are a special exception to be handled on a case-by-case basis.

Today, sidewalks are missing in numerous places, which should be surveyed and remedied. Similarly, street intersections which do not have accessible ramps to crossings should be remedied. These changes may cause trees to be removed, which should be replaced nearby to maintain the street tree canopy.

Bicyclist and micro-mobility comfort and safety is principally influenced by the speed of vehicles and availability of dedicated facilities. In most streets, narrow lanes result in slow car movement, which provide for bike and micro-mobility needs. But more so than cars, frequent stopping is extremely inconvenient. Bicycle boulevards should be considered to solve this issue, arranging intersection control to prefer bike and micro-mobility through movement and diverting cars to avoid cut through movement. Strategically located bicycle boulevards can also be used to reduce cut-through traffic, such as that between Quarton, Maple, Lincoln, and 14-Mile. Along streets with speeds above 25mph, however, dedicated facilities should be provided or other means of slowing traffic pursued.

The tree lawn is critical to street trees; sufficient root area results in greater canopy. Canopy health is very closely related with the health of residents, mental and physical, the ease of walking or biking along streets, and the success of children in school. In fact, programs exist across the country to re-establish urban tree canopies to improve the health outcomes of children. In neighborhoods, tree lawns should not be sacrificed for pavement width.

Figure 37. A pleasant, right-sized street in the Quarton district.

With these concerns in mind, the ideal roadway width will depend upon the right-of-way width and what the street should best accommodate. Lincoln is perhaps the most difficult decision point in Birmingham. It needs on-street parking but is also an important route for cyclists. Certainly Lincoln needs to sustain its tree canopy. And as a major vehicular connector, Lincoln must accommodate cars. With recent crosswalk improvements, the means of accommodating bicycles must be carefully considered. Today, Lincoln is too busy a street to feel safe for many bicyclists.

Standards were set for residential streets by the Multi-modal Transportation Board and City Commission due to recurring resident

requests for wider streets. The current policy sets a standard residential street at 26 feet from curb-to-curb where the right-of-way is 50 feet or greater and 20 feet with parking along one side where the right-of-way is less than 50 feet. The policy provides for modifications for a number of specific conditions that may legitimately require greater paving, such as school bus routes. Generally these standards align with best safety practices.

Current street roadway standards should be retained, and augmented to simplify the exception criteria, aligning it with future land use. Minor modification is also needed to accommodate wider sidewalks along district seams. The residential street standards provide a modification of roadway width from 26 feet to 28 feet where on-street parking is in more active use. Because on-street parking will be more actively used in neighborhoods with Fine Grained and Traditional Fabric, the standard here may default to 28 feet. Similarly, neighborhoods with Picturesque Fabric will have low on-street parking usage and should be less justified to allow for wider streets.

To further support pedestrian and bicycling safety, the posted speed throughout town should be lowered as much as possible. Unfortunately current legislation does not permit posting speeds below 25 mph, while across the world, including in other US states, “20 is Plenty” campaigns have reduced speeds on residential streets to 20mph or below. Today, speeds should be lowered as much as possible, and future support provided to any legislative campaigns that would permit speeds to be lowered further by municipalities.

The main remaining issue with streets is parking beyond the roadway on unimproved streets as it encourages cut-through traffic and speeding. Once streets are improved this issue will be resolved.

MASTER PLAN ACTIONS

1. Update the Residential Street Standards, aligning the following streetscape elements with Future Land Use categories. Update the Multi-modal Plan accordingly.
   a. Sidewalk width;
   b. Planter width and type;
   c. Type and extent of on-street parking;
   d. Frequency of curb cuts; and
   e. Width of roadway.
2. Update the Multi-modal Plan, including:
   a. Study bicycle accommodation alternatives along Lincoln.
   b. Complete gaps in sidewalks, add accessible corner ramps where not already specified, and replace street trees which are displaced by the process.
3. Lower the posted speed on streets throughout town as much as possible.

STREETSCAPE BEST PRACTICES BY LAND-USE CATEGORY

1. Mixed-use Center: 8 foot sidewalks or wider, excluding a paved tree lawn area; 5-to-6 foot tree lawn principally paved with tree wells; on-street parking both sides.
2. Fine Grained Fabric: 6 foot sidewalk; tree lawns 6 feet or wider, appropriate for long tree wells or continuous planters; on-street parking both sides.
3. Traditional and Picturesque Fabric: 5 foot sidewalk; tree lawns 8 feet or wider; on-street parking on one or both sides.
4. Buffer and Activity District Seam: 6-to-8 foot sidewalk; tree lawns 6 feet or wider, appropriate for long tree wells; on-street parking both sides.
5. Access District Seam: 6 foot sidewalk, tree lawns 6 feet or wider; on-street parking both sides.

Replace Unimproved Streets

Many neighborhood streets in Birmingham are in disrepair. Residents are confused about the process to improve streets, which is exacerbated by unique situations in two parts of the community.

As is readily apparent, many neighborhood streets are in very poor condition. The situation is historic, related to the standards in place as far back as each neighborhood was initially developed. It has been incumbent upon neighbors to choose to improve their streets, and pay into that improvement based upon how much lot frontage they have along the street. To date, a significant number of residents have done just that, yet it leaves nearly 26 linear miles of streets unimproved. Most unimproved streets are easily recognizable in that they do not have curbs. Yet, to confuse the matter, about half of the unimproved streets have historic curbs. And lastly, there is a section of Birmingham where sewer service is located in the rear lot, not in the street, which requires special consideration when improving streets.

The City Commission convened an Ad-hoc Unimproved Streets Committee (AHUSC) to study this issue. In late 2020, the committee issued its recommendations. A high-level summary of those recommendations includes: 1) change the process of initiating street repair to be instigated by the City; 2) use the City's general fund to pay for the non-utility improvements to streets and bonds to pay for the utility portion of improvements, reimbursed by residents through special assessment and utility rate fees; and 3) to prefer construction of concrete streets over asphalt for their longevity, with exceptions for low volume conditions.

With these well researched recommendations in place, adjustments to unimproved streets policy and the City budget are required, along with a strategy for prioritizing streets to

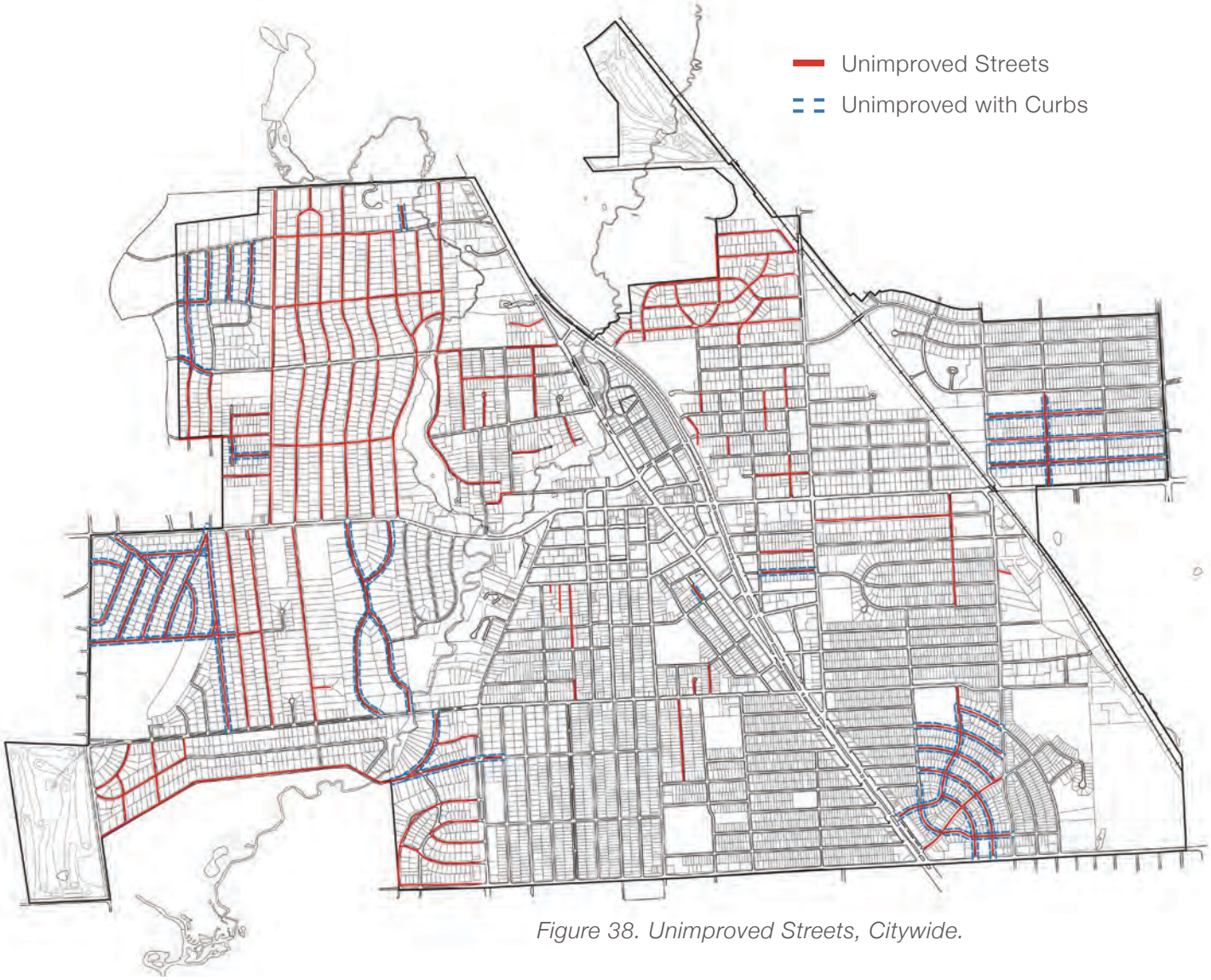


Figure 38. Unimproved Streets, Citywide.

improve. A consistent approach is recommended, ensuring funds are regularly allocated to carry on improvements. From a priority standpoint, the current condition of unimproved streets should be surveyed to categorize the state of disrepair. The stormwater condition of streets is a particularly important element to consider as streets with stormwater problems will deteriorate more quickly than others and work done to improve streets can also address some or all of the stormwater issues. To work through the list of repairs, consideration should be given to equitably distribute repairs throughout the city so that one Planning District is not prioritized over another. This can be done by ensuring that more than one Planning District receives repairs in any year. Some districts, like Quarton and Seaholm, are almost entirely unimproved and may receive a greater share of improvements than others as a result.

MASTER PLAN ACTIONS

1. Adopt policy recommendations specified by the Ad-hoc Unimproved Streets Committee (AHUSC), including the following:
    a. Establish a yearly budget to remedy unimproved streets, considering the general fund plus bond strategy and repayment timelines recommended by the AHUSC.
    b. Survey the current condition of unimproved streets, categorized by the current quality such that streets in the most extreme states of disrepair can be prioritized for improvement. Stormwater issues should receive special priority.
    c. Remedy unimproved streets according to the repair priority and budget, ensuring improvements occur in multiple Planning Districts each year.

Retain Street Tree Canopy

Birmingham's downtown and neighborhoods benefit from a rich tree canopy, increasing house values, public health, and sustainability. This street tree canopy should be protected, well maintained, and prepared for a changing climate. At present, the City works to diversify tree species, which is important in avoiding disease. Considerations should also be made to select species that will better fit the area's future climate. Much of the community is well stocked with trees but some streets, like Brown and 14 Mile, have gaps in the street tree canopy, sometimes spanning an entire block.

Most substantially, the City's commercial districts have severe street tree gaps, including entire streets without trees. Maple and Woodward have more consistent trees than elsewhere, with limited gaps such as Willits. However, streets like Merrill appear to have insufficient root area, resulting in small and ineffective trees. New plantings with the recent Woodward and Maple streetscape projects have extended the root area to support a healthier tree stock, which is necessary elsewhere. The Triangle and Rail Districts have few street trees at all and roads are in need of streetscape redesign. Plantings are especially needed in these areas to fight the urban heat island by shading sidewalks and roadways, and to provide relief for pedestrians.

MASTER PLAN ACTIONS

1. Create a Tree Canopy Improvement Plan, including:
    a. Establish comprehensive policies for trees in streets and open spaces.
        i. Select large canopy species for streets and parks, native to the region and resilient for its' future climate, retaining the character of each neighborhood's distinctive canopy.
        ii. Minimize overly-used or exotic species, such as Crab Apple, Honey Locust and Pear Trees.
    b. Create 5-, 10-, and 15- year goals to expand tree canopy cover.
    c. Study the condition of neighborhood tree canopies in parks and private spaces and potential improvements.
    d. Require that trees removed due to construction be replaced, as well as mandatory contributions to fund new off-site trees.
    e. Prevent existing, healthy trees from being removed due to new construction.
    f. Survey areas with constrained root area and establish a plan to add additional soil volume.

Revise Parking Restrictions

Parking policies within Birmingham neighborhoods confuse visitors and residents and are difficult if not impossible to enforce. Current posted requirements differ substantially throughout the City to such an extent that the Police Department can only enforce by complaint. Decades of block-by-block modifications have eroded the public nature of streets.

The source of resident requests are real problems created by parking overflow in key areas of the City, but there is a mismatch between the conditions creating problems and the number and location of solutions. Residents are understandably concerned with parking spill-over from nearby non-residential uses. City staff is concerned that removing parking exacerbates parking spill-over, the complexity of regulations is difficult to enforce, and that street parking is a public good.

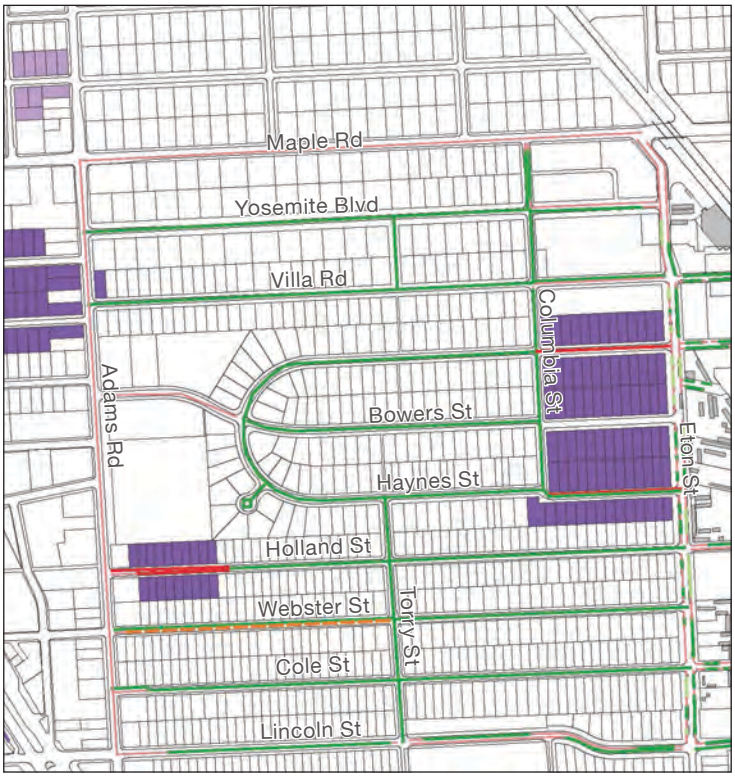
Observations in the Rail District and Seaholm area corroborate these concerns (See Fig. 39). Rail District regulations have been created to limit nighttime use of on-street parking to ensure residents have available parking, resulting in 8 different parking standards within a small area. Seaholm regulations have been created to limit daytime student parking, resulting in 12 different parking standards within a small area.

These conditions studied represent a small segment of the city which has many more areas with additional, complex requirements. Some areas have entirely removed parking, which encourages speeding - another issue of concern to residents. In many cases the perception of insufficient parking is not in step with the actual availability of parking, however, the complexity of restrictions contributes to violations.

To reduce excessive complexity that leads to enforcement difficulties, and to solve for the real issues of spill-over parking, the city should begin anew with a simplified selection of standard restrictions. There is far too much variation in existing restrictions to adjust them one-by-one. A committee should study the situation citywide and establish a limited set of options and a plan to re-assign parking restrictions. The option to have no parking restrictions at all along streets should be the default preference where there is not a clear conflict caused by adjacent mixed-use districts or institutions.

MASTER PLAN ACTIONS

1. Study citywide street parking restrictions and permits, charged with:
   a. Creating a consistent and limited set of citywide parking standards. An example of such a set follows:
      - No restriction
      - 2-hour parking from 9am to 4pm, except by permit (this addresses daytime parking issues from students and downtown workers)
      - Parking by permit only, 5pm to 10am (this addresses nighttime parking issues from food service)
      - Neighborhood Parking Benefit District, used in association with (b) or (c) above.
   b. Creating a plan to re-assign street parking restrictions citywide for greater consistency.
   c. Establishing a consistent residential permit system to service those neighborhoods that choose to use such a system which includes permit fees to cover costs, decals, and visitor rear-view mirror tags purchased separately from the residential permit. The existing permit systems may suffice to operate more broadly.



EXISTING PARKING RESTRICTIONS

TORRY AT THE RAIL DISTRICT:

- 15 Min Parking 8am-9am Except Sun. & Holidays
- 2 HR Parking 6am-4pm Except Sat, Sun., & Holidays
- 2 HR Parking 8am-6pm Except Sun. & Holidays
- 2 HR Parking 9am-6pm Except Sun. & Holidays
- 2 HR Parking Limit
- No Parking Anytime
- Parking Allowed, All Times
- Permit Parking Required at All Times

SEAHOLM AND LINCOLN HILLS:

- 2 HR Parking 9am-5pm Except Sat, sun, & Holidays
- No Parking 8am-6pm
- No Parking, 7am-9am Except Sun. & Holidays
- No Parking, 8am-6pm Except Sat., Sun. & Holidays
- No Parking, 8am-6pm Except Sun. & Holidays
- No Parking, M-F 7am-2pm
- No Parking, School Days 7am-3pm
- No Parking, School Days 8am-10am
- No Parking, Sunday 7am-1pm
- Parking Allowed, All Times
- Parking Permit 7am-4pm School Days
- Residential Permit Parking

Permit - North Woodward
Permit - Poppleton
Permit - South Central
Permit - South Woodward
Permit - Triangle District
Permit - Western District
Duration Limited Parking
No Daytime Parking
School Restricted Parking
Church Restricted Parking
Permit Required
No Parking
Unrestricted

Figure 39. Sample of Existing Parking Restrictions

Retain Housing Character

The value of properties in Birmingham has risen such that the cost of purchasing and demolishing existing homes is viable. Some parts of the City have already been significantly rebuilt and the trend is moving into other neighborhoods. Many residents feel that the scale of new homes are overwhelming and out of character with their neighborhoods, the result of both trends in building larger homes and a lack of coordination between the existing housing character and zoning standards. While the City has implemented progressive design standards for garage placement and overall construction management, many of the new houses are, in fact, oversized for their lots and often negatively impact surrounding households. Except in historic districts, new houses are not evaluated for the appropriateness of their architectural design or building materials by a review board or committee. New house plans are only reviewed for compliance with building codes and required site engineering regulations.

House design and consumer preferences have changed since Birmingham's neighborhoods were first developed. The original prewar houses were usually modestly designed and downplayed the home-owners wealth or lack thereof. Large houses and manors were broken up into a series of smaller volumes which effectively disguised their overall volume and, with commensurate architectural details, gave them the appearance of matching the scale of neighboring houses. Most of Birmingham's original houses were constructed with quality craftsmanship and designed with architectural massing and details intended to blend into the neighborhood rather than command attention. Following trends in today's housing market, many new homes are designed to stand out and be noticed, rather than harmonize with and complement neighboring houses.

Additions to existing homes should be encouraged as a way to accommodate changes that the market desires without eroding neighborhood character. Often the driver of new construction is market demand for additional bathrooms, a master suite, closet space, larger kitchens, and larger garages, which tend to be lacking in older homes. While it is often easier to tear down an existing home and build a new one, this is a destructive process that creates significant waste and impacts neighborhood character. Renovation and addition could be encouraged through a number of policies such as: a fast-tracked approval process (requiring a slowing down of new construction approvals), waived fees for review and inspection, and increased lot coverage allowances at the ground level (not second story). While additions and renovation cannot be required, they may be encouraged.

Leveraging historic districts is another means of controlling the pace of demolitions, providing review of the scale and character of new housing, and encouraging renovation. Expanding existing historic districts and landmarks, and establishing new districts would provide oversight of new construction and renovation in many areas of the city. The Historic District Commission (HDC) should actively study and establish new historic districts and landmarks throughout the city. Additionally, HDC review authority should be strengthened in consideration of demolitions and renovations.

Lastly, light intensity and color is an often overlooked quality of Birmingham's neighborhood streets. Some new homes have been built with lighting that is too intense, degrading the calm character of Birmingham's neighborhood fabric. Lighting should be subdued generally, avoid spillover onto neighboring properties, and be oriented downward not outward. Luminaires should be shielded to eliminate glare and limited in individual intensity. Multiple bulbs of lower intensity can provide the same light coverage without glare or hot spots. Color temperature is also keenly important. Light that is towards the blue end of the spectrum, higher color temperature, disrupts natural human cycles when used at nighttime. Color temperature should not exceed 3500 Kelvin after dusk. Currently the Zoning Ordinance uses Illuminating Engineering Society of North America (IESNA) standards

Figure 40. Historic home with a sign marketing demolition for a larger home.

Figures 41 & 42. Infill housing on two sides of one street, older homes (left) and new homes (right).

as a baseline, IESNA Zone E4 for everything R4 and above. Neighborhood illumination is not regulated, which is clearly in need. The International Dark Sky Association model standards are recommended in place of IESNA standards. These standards should be evaluated for use in neighborhoods as well as for adjustment or replacement of existing zoning requirements concerning lighting in R4 and above.

Similarly, the color temperature and intensity of streetlights requires study to avoid issues similar to residential exterior lighting. Across the country many cities have switched to LED streetlights. This is a recommended practice for maintenance and energy usage but the fixtures and luminaires must be carefully selected. LED streetlights produce more glare and hotspots than prior technologies. The earliest models, still available, are set to color temperatures that are too blue. As the city contemplates a change in technology, common pitfalls should be avoided, ensuring: luminaires are shielded with globes or similar devices that scatter light; luminaires have a color temperature no greater than 3500K; and that poles be installed more frequently, at a lower height, to achieve the desired light level while avoiding glare, excessive intensity, and hot spots.

Figure 43. High quality contemporary infill, in scale with neighborhood fabric.

Ch 3. Retain Neighborhood Quality

Retain Housing Character

MASTER PLAN ACTIONS

1. As part of a zoning code update:
    a. Adjust residential zone boundaries and standards to better match existing housing. This requires a study of the city's residential architectural styles and building types, their key characteristics, position on their properties, driveway configuration, age, and the areas where each common type is located.
    b. Encourage renovations to expand existing houses rather than the construction of new houses.
    c. Review and update site, building, and design codes to prevent increased rainwater runoff and other negative impacts from new house construction.
    d. Consider age-in-place-friendly building regulations, such as grab-bars, ramps, and elevators in single-family homes, with careful attention paid to the city's architectural heritage.
    e. Address neighborhood lighting standards, including exterior residential lighting intensity and color temperature. See the International Dark Sky Association recommended standards.
2. Adopt a policy to proactively establish new historic districts as well as landmarks.
3. As part of a Multi-modal Plan update, adopt a policy regulating street lighting, including intensity, color temperature, luminaire, and pole height and frequency.

BEST PRACTICE RECOMMENDATIONS FOR RESIDENTIAL LIGHTING

a. Residential lighting standards should address:
    a. Maximum luminaire intensity,
    b. Color temperature range,
    c. Shielding and directionality, and
    d. Spillover.
b. Street lighting standards should address:
    a. Maximum luminaire intensity,
    b. Color temperature range,
    c. Shielding and directionality,
    d. Lamp design, and
    e. Pole height and spacing.
c. Consider the International Dark Sky Association model standards.
d. Consider aligning lighting intensity restrictions with the Future Land Use categories for neighborhood fabric intensity where Fine Grained Fabric justifies higher lighting intensity and Picturesque Fabric justifies lower lighting intensity. Dark Sky LZ1 may be appropriate in Picturesque and Traditional Fabric areas, LZ2 in Fine Grained Fabric areas, and LZ3 in the city's mixed-use districts.

Ch 4. Support Mixed-use Districts

Continue Improving the Maple & Woodward District

Maple and Woodward (Downtown Birmingham) is a vibrant urban center that is the envy of many other communities. Although its population is only 21,000, Birmingham has a commercial core the size of a city of 200,000. The city's assortment of shops, restaurants, parks, offices, civic buildings, and entertainment venues offers an exciting, safe, and walkable lifestyle to its residents. It also draws people from throughout the region. Like any dynamic urban center, downtown continues to address challenges such as affordability, conflicting commercial and residential interests, rapid growth, adequate parking, and effective traffic management.

Active Sidewalks

Given Downtown's walkability and scale of commercial presence, it has only a moderate amount of weekday pedestrian traffic. During the weekends Birmingham's downtown pedestrian traffic has noticeably fewer visitors than Downtown Royal Oak and Detroit. Combining offices, services, and housing means that a district can be busy day and night, which provides a more robust customer base during most hours of the day. Increasing housing in downtown can shift the balance, further bolstered by increasing events, improving streetscapes, and activating Downtown's open spaces.

Old Woodward, between Hamilton and Merrill Streets, West Maple, and Pierce Streets carry the most pedestrian traffic. This is the core of the Maple and Woodward district. Due to their size and volume of traffic, both Maple and Woodward perform poorly for restaurants compared to smaller streets with intimate outdoor dining experiences, as is found along Merrill and Pierce. Similarly, Hamilton boasts a collection of smaller businesses in a vibrant environment, but is negatively impacted by the bank on the corner, deadening 350 feet of Hamilton at the most critical retail intersection.

To expand active use of street spaces, shared space streets should be considered, which reduce, but does not eliminate, cars, optimizing for dining areas, public seating, and community events extending into the street. Shared space streets would require repaving to be similar to the paving found within Shain Park, and designed to accommodate clusters of public seating, public art, and bike racks. Merrill between Old Woodward and Shain Park, and Pierce between Maple and Merrill are both viable options. Shared space streets require active businesses along the edges, ideally with a strong mix of food service to occupy street space with seating. Community events may close shared space streets on a regular basis. Along with the street design itself, social districts should be considered, which allow for barrier-free alcohol consumption over a defined area. These would allow dining and seating areas to integrate into the space without walls or other barriers that restrict movement.

The seasonal dining decks proposed in the Downtown Birmingham 2016 plan have successfully expanded the afternoon and early evening street life. The popularity of these decks has increased the demand for downtown parking at the same time that their implementation has decreased the number of parking spaces available to both diners and shoppers. Yet the pandemic has made outdoor dining necessary, a trend likely to continue in good weather. As a result, two solutions should be pursued in parallel: the use of technology to make parking easier to access and locating other opportunities for outdoor dining that do not displace parking. Technology may relieve some amount of the street parking problem in Downtown by making garages easier to access and adjusting the supply of on-street parking through pricing cues.

Outdoor dining next to the curb or building facade should be encouraged, with special attention to ensure that fencing does not limit the mobility of pedestrians on the sidewalk. Today a few instances of fenced outdoor seating significantly restrict sidewalk width; a minimum 6 foot clear path should be required along the sidewalk even if the sidewalk is not 6 feet wide. Where streetscape projects make curb changes, space at corner and mid-block bulb-outs may be used for dining. And alleys and passageways should be

Figure 44. Old Woodward following the recent streetscape redevelopment.

considered where dining in those locations is convenient for an adjacent business.

Old Woodward, being the largest and most trafficked roadway, requires the greatest consistency and quality of storefronts, with more transparency than the smaller streets. The new streetscape is an improvement for pedestrians, but at present it lacks adequate public seating. In fact, throughout the Maple and Woodward area, and in other mixed-use districts, public seating is lacking. New seating installed with the recent streetscape project is out of character with Birmingham and should be replaced by benches like those found in Shain Park.

Bike parking and micro-mobility corrals are also lacking throughout the district. As micro-mobility has yet to become a concern locally, addressing bike parking should come first, but micro-mobility will arrive soon. Bike racks are most easily accommodated in bulb-outs at intersections where they can be installed perpendicular to the curb, accommodating 3 or 4 U-racks.

Public Space

Downtown boasts a wide variety of parks from its' collection of pocket parks, to the formal square of Shain Park, and Booth Park and the Rouge Trail. Shain Park is active on a daily basis, due to its variety of amenities and its visibility. Other park spaces in Downtown could be improved with additional amenities and better visibility and connections.

Signage and trail connections would make existing park spaces more accessible from Downtown. Directional signage throughout Downtown should direct people to the area's parks and trails, in addition to key landmarks and institutions. To access these destinations, a few key connections should be added. From Maple and Woodward, Booth Park feels separated, more a part of Market North. The Bates Street Extension recommended in the 1996 plan should be pursued, particularly with a focus on connecting Maple and Woodward to Booth Park and the Rouge River trails. Where the Willits Trail meets Maple at the Birmingham Museum, the museum's entry with seating and the bell should more clearly connect down the slope and into the trail system.

Seating at both Shain and Booth Parks does not accommodate visitors during peak hours. Shain Park's movable seating has been a good addition which should be expanded. More regular park benches should also be installed around the central loop. In major cities, the central loop would be entirely lined with benches, which is too much for Birmingham's character, but the supply should be greatly increased. Booth Park has a well used set of play structures but very few additional accommodations. The entry is underwhelming, an ideal location to get information, a beverage, and to have seating opportunities either in a plaza space towards the entry corner or a more naturalistic setting further into the park and along the Rouge River trail. Shain and Booth Park's lack of food and beverage offerings could be rectified by opening a small café or coffee shop, or providing connections and allowances for mobile vendors, either of which would enhance park-goers' experiences and draw more people to the parks during the daytime.

Downtown's pocket parks, however, are underutilized at all times. The Old Woodward-Oakland pocket park's size is limited and its use is inhibited by the vehicular turn lane along its southern edge. The 1996 Downtown Plan recommended removing this south vehicular lane and expanding the park, which would improve the park's appeal, the walkability along Old Woodward, and the pedestrian linkage between the Market District and downtown. Each of Downtown's pocket parks would benefit from additional seating and public art. The Pierce-Merrill space has sufficient public art but no seating, and Pierce-Brown also has no seating. The plaza at the Library's entrance also lacks seating and other amenities, which will be provided through the Baldwin Public Library Long-Range Building Vision Plan.

Figure 45. The Pierce-Merrill pocket park.

Ch 4. Support Mixed-use Districts

Continue Improving the Maple & Woodward District

Parking

Many parking issues in the Maple and Woodward District are common to all mixed-use districts where there is an imbalance between housing and commercial uses. Municipal parking downtown operates at around 90% occupancy (2019) and the district is growing. During its busiest periods, valet services are employed to fully utilize rooftop capacity which is otherwise not preferred by drivers. While the roughly 5-10% available capacity seems right-sized for the district, monthly passes for Downtown workers had a significant waiting list and parking frequently spilled-over into adjacent neighborhoods prior to the Covid-19 pandemic. While parking occupancy decreased significantly at the height of the Covid-19 pandemic, the future growth and intensification of the district will likely continue to strain the parking supply.

Continued growth and success Downtown is important for the continued success of Birmingham. In each of the City's major plans, post-1929, increasing parking capacity has been recommended. The City's current insufficient supply is a result of not following those recommendations in a timely manner. The Bates Street Extension (recommended in the 1996 Downtown Plan) was recently pursued but a bond measure failed to garner support. Parking in this location should be studied once more, along with the parking study recommended for Lot 6 in Market North.

The City has considered resident requests to add secure bicycle parking to garages and spaces for electric vehicle charging. Both of these proposals should be pursued. However, there is not capacity to remove many regular vehicle spaces. Some recent trends are likely to reduce future parking demand, like the rise of Transportation Network Companies, re-balancing housing and commercial in the Downtown, and reduced rates of teen driving. Autonomous vehicles (AVs) are also a future consideration, however, at this point in time AVs are still in development and are not likely to see widespread usage until the end of this plan's horizon. At present it remains unclear whether AVs will reduce traffic and parking demand or increase it. To address this timing issue, another set of parking analysis will likely be needed in 10 years. In the meantime, more parking is needed and will continue to be needed for at least the next 15 years. The best short-term strategy is to invest in parking, but construct garages that may be converted to other uses in the future.

While parking across Woodward in Haynes Square / Triangle District is somewhat remote, the area is in need of parking investment and may be able to accommodate some Downtown / Maple and Woodward workers. A parking deck here should be pursued immediately in order to jump-start development and provide some alleviation for parking demand Downtown (as discussed in the sections addressing Haynes Square).

In addition to capacity, the downtown parking system is pursuing a number of technological solutions. In the broader mixed-use district discussion in Chapter 1, smart signage is recommended to direct users towards garages with capacity and away from those at or near capacity. Metered parking has recently been equipped for monitoring and demand or tiered pricing, which allows prices to be adjusted electronically. These systems are used to balance where people park by manipulating meter rates on a per-block basis. This should be pursued and monitored, but rates should not be changed too frequently. Together these technologies will help the existing parking supply feel less constrained.

During the master plan design charrette, numerous attendees stated that the monthly parking pass rates are extremely low in Birmingham, recommending that they be raised. Fees should be set to be competitive with other jurisdictions. The additional funding created by increased fees should be reinvested in building new parking capacity, technological improvements, safety, lighting, and aesthetic improvements.

Figure 46. The Library's entrance plaza.

MASTER PLAN ACTIONS

1. Adopt a policy requiring a minimum 6 foot clear path along the sidewalk throughout mixed-use districts.
2. Extend the role of the Public Arts Board or other existing board, or establish a Civic Events Board, tasked with expanding activities and events to attract office workers and residents to shop and dine downtown, including weekly events at Shain Park.
3. Update the Multi-modal Plan to address micro-mobility, increased pedestrian activity due to new downtown housing, and recent experiences with increased outdoor dining. See Multi-modal Plan update recommendations.
4. Update the Parks & Recreation Master Plan, including increased amenities and connections in Downtown's parks. See parks and recreation plan updates for specific recommendations.
5. Create a Mixed-use Districts Parking Plan, including:
    a. Provide way-finding and informational signage for public parking.
    b. Provide public parking as recommended in the 2007 Triangle District Plan.
    c. Study monthly parking pass fees.
    d. Study tiered parking rates for different garages.
    e. Study tiered parking meter pricing in Downtown. A best practice goal is to achieve an average maximum 85% occupancy all streets.
    f. Study secure bike parking and electric vehicle charging stations within parking garages.
    g. Study the Bates Street Extension along with Lot 6 in Market North.
    h. Study technological improvements to ease usage of parking garages, such as parking space occupancy indicators (green and red lights above spaces) to more easily direct users through the garages.
6. Implement an art-mural program for large blank wall surfaces in key locations. Coordinate with the Mixed-use Districts Branding Plan.
7. Study shared-use streets, including a shared-use streetscape retrofit along with a social district in the Maple & Woodward district.
8. Review master plan parking recommendations in 2030-35 to evaluate new technologies and trends.

MULTI-MODAL PLAN UPDATES

a. Install benches throughout the Downtown area.
b. Increase bike parking within the public streetscape throughout Downtown, especially at corner and mid-block bulb-outs which support multiple racks.
c. Reserve space for micro-mobility storage at corner and mid-block bulb-outs along with bike parking.
d. Expand the distance of corner curb extensions at street intersections and mid-block to accommodate public seating. Permit outdoor dining in these seating areas for abutting businesses.

PARKS AND RECREATION PLAN UPDATES

a. Increase the amount of seating in Shain, Booth, and the City's pocket parks with benches.
b. Expand café-style seating in Shain and Booth Parks and on all widened sidewalks.
c. Open cafés in Shain and Booth Parks with public restrooms and limited food and beverage offerings.
d. Expand the Oakland – Old Woodward pocket park by removing the south vehicular lane, per the 1996 Downtown Plan recommendations.
e. Add paths and seating to the Pierce-Brown pocket park.
f. Integrate the Birmingham Museum into the Rouge River trail and park system, including more connections and signage Downtown.
g. Add green stormwater infrastructure to parks and pocket parks.

Establish Market North as a Distinct District

Historically, the 1/3rd mile-long Market North – Old Woodward retail district has been identified with a clearly different character from the core Downtown. It has now become a dining and shopping destination of its own. North Old Woodward has transitioned from a collection of fine art galleries into a busy dining district. The district requires its own identity, branding, and focus on its specific needs independent of other districts. Because it hosts a popular seasonal farmer's market, and following the aptly named Market North End restaurant, it is recommended that the area be called Market North. The future of Market North is bright but it should retain its character of small shops and restaurants, and a street life distinct from Maple and Woodward.

Active Sidewalks

The implementation of the 1996 Downtown Plan's traffic-calming design for Old Woodward, which reduced the number of lanes and inserted a landscaped island, has significantly slowed vehicular speeds and improved the area's walkability. But problems still exist such as the pedestrian crossing at Harmon and Old Woodward, which can be dangerous at times. Further north along Old Woodward, traffic increases in speed and pedestrian crossing opportunities are non-existent, clearly missing at Vinewood Ave. North of Harmon St, Old Woodward needs to be redesigned to slow traffic and focus on increasing street parking and pedestrian crossings, especially in anticipation of increasing redevelopment.

Market North's district character should be reinforced at the connection between the sidewalk and building facades. Currently some storefronts and signage are unattractive and incongruous with Birmingham's upscale character and image. This district is distinct from Maple and Woodward in storefront design, featuring less glazing and more small-scale business facades (See Fig. 47). Streetscape elements like benches, trash cans, and signage should also be unique.

Figure 47. Character of small scale businesses.

Figure 48. Small scale outdoor dining.

Unlike Maple and Woodward where restaurants have large seating areas in dining decks, Market North maintains a character of smaller cafes and even ice cream stores with limited outdoor seating. This treatment should be encouraged in new buildings, with intimate cafe spaces and some outdoor dining along the building and the furnishing zone (See Fig. 48).

Public Space

Market North is anchored by Booth Park and the farmers market. Booth Park provides direct access to the Rouge River trail system, and occupies nearly 500 feet of Old Woodward frontage which creates a clear distinction between Maple and Woodward and Market North. As discussed previously, the park lacks adequate seating for its users at peak hours. Additionally the entry corner at Harmon and Old Woodward is too informal for its' setting (See Fig. 51). Proposed in the Downtown 2016 plan, Booth Park should have a cafe and restrooms within an iconic park building near this entrance in a paved plaza.

The farmers market gives the district its name, but has little presence on non-market days. Rather than an afterthought, the district's identity should be reinforced with a permanent, open-air market pavilion. The pavilion could be located where the market currently takes place, in the portion of municipal parking lot 6 that is open to Old Woodward. Designed appropriately, cars could continue to park under the pavilion awnings on non-market days. (See Figure 49).

Housing

The district's existing housing is mainly multi-family buildings along its northwestern edge which have large spaces between buildings. Redevelopment has begun with new mixed-use buildings on the east side of Old Woodward and development interest beginning on the west. Many of the

Figure 49. Proposed open air market pavilion.

district's buildings along Old Woodard are prime opportunities for redevelopment as mixed use structures. While some may be nostalgic for the area's garden apartments, their form and deep setbacks from Old Woodward signal that drivers can speed through the area, especially coming from the high speed portions of big Woodward just to the north. Better definition at the streetscape with new buildings will slow cars and reinforce walkability. To support this, the D2 zoning should be extended to the west side of Old Woodward (See Fig. 50) and streetscape improvements are needed along Old Woodward particularly north of Harmon.

Parking

As the Market North district is seeing redevelopment interest, it has too little parking to support its potential. As in Maple and Woodward, daytime parking is full in Lot 6 while it is empty at night. The Downtown 2016 plan recommended that a parking deck be built on Lot 6. This recommendation should be pursued along with the permanent market pavilion, located behind the existing buildings. To avoid disturbance to neighbors along Brookside, care should be taken to eliminate any light spill over, to present a pleasant facade to the west, and care to limit impacts on the Rouge River.

MASTER PLAN ACTIONS

1. Update the zoning code, including extending D2 zoning to the multi-family properties along the west side of Old Woodward up to Quarton.
2. Install way-finding signage throughout the district. (Addressed previously)
3. Update the Multi-modal Plan to support increased pedestrian activity on both sides of North Old Woodward and install streetscape amenities. See the section on Multi-modal Plan updates recommendations.
4. Update the Parks and Recreation Plan, including

Figure 50. Extension of D2 zoning in Market North.

amenities and a cafe to Booth Park. See the section on Parks and Recreation Plan updates.

5. Create a Mixed-use Districts Branding Plan, including branding, special signage, seating, and streetscape elements unique to the Market North district.
6. Create a Mixed-use Districts Parking Plan, including studying a parking garage in the Lot 6 parking lot along with the Bates Street Extension.
7. Study a permanent, open-air farmers market pavilion with public restrooms on the portion of Lot 6 that is along Old Woodward.
8. Develop storefront design, signage, and other standards to retain the small-scale business character of Market North.
9. Develop a North Old Woodward Streetscape Plan, with a focus on adding on-street parking and pedestrian and bicycle amenities and improving safety.

MULTI-MODAL PLAN UPDATES

j. Expand pedestrian safety and traffic-calming measures along North Old Woodward.
k. Install additional pedestrian seating throughout the Market North district.
l. Install new Market North branded streetscape fixtures throughout the district.

PARKS AND RECREATION PLAN UPDATES

m. Install ample benches in Booth Park.
n. Install a small café and public restrooms in Booth Park or services for mobile vendors, along with movable tables and chairs.
o. Create a paved plaza, ideally pervious, at the entrance to Booth Park with signage and seating.

Figure 51. Booth Park's underwhelming entrance.

Figure 52. Typical character of the gateway.

Implement Haynes Square

The Haynes Square plan corrects a dangerous Woodward intersection, activates and elevates the South Old Woodward commercial district, and connects the Triangle District across Woodward to take part in the overall downtown. Details are addressed in the Chapter 1. That content will not be repeated here; this is a reminder of its' goal to support the South Old Woodward and Triangle District areas.

Adopt a South Woodward Gateway Plan

The South Woodward Gateway, located along Woodward from 14 Mile to Lincoln, is the most unsophisticated stretch of retail in the City. The southern portion of Woodward presents a sloppy and tired image of the community, which is otherwise active and successful. Woodward's growth and decades of mis-focused transportation policy has divided Birmingham and eroded the quality of the pedestrian and business environments (See Fig. 52). This Gateway district is Birmingham's first impression to those traveling from the south. However, the area provides lower cost retail space with excellent exposure to traffic, housing most of the national chain merchants in the City. The Gateway is valuable for Birmingham, it just needs a new and sophisticated image.

Woodward's conversion to an attractive and grand avenue is now supported by the Department of Transportation, however that future remains distant. In the interim, changes can be made on the side of private development to make this area more attractive and functional, paired with near-term improvements to Woodward itself, detailed in Chapter 1. Today, communities to the south are well on their

Figure 53. Shared-use alley space concept.

way to improving Woodward's streetscape but have not yet addressed adjacent building form. While streetscape improvements are needed, and Birmingham should improve median plantings right away, the character of buildings along Woodward establish the area's image.

The low quality of the Gateway is well recognized; in 2013 The Southern Gateway Urban Design Plan was developed. Never adopted, the plan should be revisited, updated, and adopted. With fresh eyes, the Gateway needs a more radical transformation than previously proposed, which focused heavily on public sector improvements. With the right incentives, the area's aged buildings can be redeveloped in a manner that truly changes the Gateway's character.

From a neighborhood perspective, the Gateway provides some neighborhood retail services but it continues to encroach into neighborhoods with parking, increases neighborhood cut-through traffic, and is incredibly inconvenient for pedestrians. Many businesses have replaced adjacent houses with surface parking. This condition is most prevalent on the west side, but exists on both sides of Woodward. In many cases, this results in houses that remain facing onto open parking lots, and many more sharing a side or rear lot with them. As is recognized in the 2013 plan, the triangular parking lots are incredibly inefficient, erode the neighborhood, and are better served by efficient mid-block parking.

The 2013 Southern Gateway Urban Design Plan recommends that alley pavement be improved and made consistent and shared-use to accommodate pedestrians, shoppers, and service vehicles. In addition to the surface treatment of alleys, they require active uses along their edges to be safe and pleasant. Currently businesses face onto Woodward and use alleys for parking and service. For transformational change, businesses should also face onto alleys, creating true shared-use streets. This dual-sided condition is becoming common in the local area, found at Kroger along Maple, along Big Beaver in Troy, and elsewhere throughout the region. In the alley, businesses should be encouraged to extend outdoor seating and outdoor retail displays into the shared-use alley space (See Fig. 53).

Full alley activation requires that both sides of the alley engage to define its character. With parking addressed more efficiently, the triangular parking lots should revert to residential use in order to reduce noise spill over into the neighborhood. Most of the triangular properties can retain yard space, with shallow townhouses lining the alley and side streets.

Neighborhood Sleeves

To create a better interface between Gateway retail and surrounding neighborhoods, buildings should provide active facades along side streets. In an ideal condition, the redevelopment of an entire block face would consolidate parking in the mid-block and face buildings towards side streets (See Fig. 55). Doing so simplifies parking access, provides more parking spaces, and creates a more pleasant retail experience. Presently, facing buildings onto Woodward creates an awkward parking condition, poor pedestrian experience, and dangerous parking access from Woodward.

Each residential street in the Kenning and Pierce neighborhoods terminates on Woodward. Currently, the last 150 feet or more of each residential street is presented with surface parking, an unattractive alley, and typically a long blank wall along the side of buildings that face Woodward. For the neighborhood this is a poor experience by car, and especially walking. Potential exists to face storefronts onto side streets rather than Woodward, like the condition depicted along Benneville (See Fig. 54). If this building were a cafe, it could have a pleasant outdoor patio nearby neighbors might frequent.

Figure 54. Building with potential for sleeve activation.

Ch 4. Support Mixed-use Districts

Adopt a South Woodward Gateway Plan

Figure 55. Neighborhood Sleeve configuration which creates small neighborhood-focused nodes along side streets.

If most buildings faced businesses onto the neighborhood streets rather than Woodward, the end of each street would become a small neighborhood main street with a handful of shops. These Neighborhood Sleeves would benefit neighborhood residents and provide a superior pedestrian experience over Woodward. Limited in size, each Neighborhood Sleeve would create minimal traffic, and further they would encourage neighborhood residents to walk or bike.

The 2013 Southern Gateway Urban Design Plan includes two recommendations for reducing traffic speed into neighborhoods. These options - angled parking with bump-outs entering the neighborhood, or parallel parking with chicanes entering the neighborhood - perfectly support Neighborhood Sleeves and pedestrianized alleys.

In a full redevelopment scenario, new buildings could accommodate housing above. Due to the street geometries, buildings could also include a mix of larger and smaller spaces. Should development demand be sufficient, a single parking deck would fit mid-block, allowing for two stories of housing above shops. Where full redevelopment does not occur, corner properties along the side streets should face onto those streets with active storefronts. Each piece of the Gateway concept - alleys, alley housing, parking consolidation, and sleeves - could develop independently.

MASTER PLAN ACTIONS

1. Create a Woodward Gateways Plan to comprehensively address the three gateway areas along Woodward, including revisiting and adopting plan components for the South Woodward Gateway Plan and consideration for Neighborhood Sleeves, shared-use alleys, and redevelopment of the triangular parking lots.
2. Update the zoning code, including:
   a. Incentivize South Woodward Gateway redevelopment through increased zoning capacity, permitting housing, and reduced parking requirements.
   b. Establish zoning standards to enable Neighborhood Sleeves. This may be done by requiring storefronts along neighborhood streets and other strategies.
   c. Establish zoning standards to enable shared-use alleys. This may be done by requiring storefronts at entries along the alley and permitting redevelopment of the triangular parking lots.

Create a North Woodward Gateway Plan

Both the North and South Woodward Gateways are important opportunities to showcase Birmingham's character, and play an important role in calming traffic entering the city. It is especially important to address southbound traffic speeds, which are influenced by the highway-like conditions north of Birmingham. The North Woodward Gateway provides a significant opportunity to improve safety, reduce noise, and change the perception of entering Birmingham.

Key to this transformation is the northern intersection with Old Woodward. The triangular green provides a perfect terminated and deflected vista for southbound drivers. Today, drivers are greeted by a gas station. This should be a grand entry to Birmingham with impressive and tall civic art or a signature gateway building. In fact the entire, privately owned, triangular property from Oak Ave to the point should be the most impressive structure in the City. Short of transformation, every effort should be made to announce Birmingham's character and the entry to its' Downtown at this location.

Leading to the Old Woodward intersection, streetscape improvements, traffic calming, and frontage improvements should be studied. With consideration for lane reduction, such as in the South Gateway, a multi-way boulevard section could come to life between Quarton and Old Woodward. Significant transformation is possible by continuing the slip lane along Colonial Court Terraces to Quarton and Old Woodward, removing the outer travel lane for further landscaping, and accommodating bicycles and parking within the slip lane. The opposite side, however, is complicated by a mixed jurisdiction, with Birmingham controlling only half of the road's edge.

Certainly other opportunities exist to improve the entrance character and slow traffic. Like the South Woodward Gateway, the North Woodward Gateway needs an urban design plan and a study of public property along North Old Woodward. Ahead of a full gateway plan, additional canopy trees should be added to the Woodward median throughout the city.

MASTER PLAN ACTIONS

1. Create a Woodward Safety and Beautification Plan, including a full and consistent tree canopy along the Woodward median throughout Birmingham.
2. Create a Woodward Gateways Plan to comprehensively address the three gateway areas along Woodward, including a North Woodward Gateway Urban Design Plan to improve safety, reduce noise, improve the appearance of the northern approach, slow traffic entering the city, and improve the Old Woodward entrance as a gateway to Birmingham.

Keep it Loose in the Rail District

The Rail District is divided between what has been envisioned for its future and the utility that it currently provides. This is a place of experimentation for Birmingham businesses, and has been for some time. Traces of former rail spurs from the Grand Trunk Railroad are evident in odd property divisions, fence lines, and paths of unkempt foliage.

The district's northern edge, at the top of South Eton Rd., has been capped by an upscale restaurant housed in the City's former passenger rail station, now closed. From nearby parking lots, the City's Whole Foods and large scale commercial in Troy is visible just over the tracks, yet inaccessible. Just below this, the District Lofts illustrate a future vision that is formal and neat (See Fig. 56). Along with the adjacent Iron Gate to the south, the area includes some of the City's most contemporary multi-family offerings. Just east of Iron Gate, also part of the 1999 Eton Road Corridor Plan, is an experiment in live-work units that create a tight urban street grid open for future connections to neighboring properties. The Griffin Claw brewery is next southbound on Eton, a substantial micro brewery with an informal brewpub and outdoor beer garden, especially popular with young families. Next to this, tucked far back from Eton is the Robot Garage, a wonderland of toys and classes for creativity in making, from legos to art to robotics. Auto service, a lumber yard, and the City's Public Services Department follow old lines of rail spurs.

The Lower Rail District, south of Palmer Street (See Fig. 58), consists of small, mostly single-story warehouse buildings occupied with varied businesses including yoga, co-working, dog daycare, art, dance, auto body shops, and more. These are arranged haphazardly among small parking areas, charming in a way that is certainly not suburban. Only the degraded character of the street and lack of trees detract from the area's charm. The southern end of the district is capped by Kenning Park with the City's Ice Rink and skate park, along with a new and quite urban senior retirement development.

The Rail District has no single character but overall it has an intimate charm. Other parts of the City are increasing their refinement, and many lament the loss of the City's artistic and entrepreneurial roots. Yet this is alive in the Rail District.

Plans and zoning for the Rail District point to a heavily urbanized future. A 2017 Ad-hoc Committee report for the Rail District estimated the zoned potential that could be built on properties likely to redevelop in the near future could increase intensity 10-fold, albeit unlikely. Due to the significant disparity between the district's long-term future and the functional and desirable near-term conditions, policies and improvements should permit the district's current condition and success to continue in the near-term.

Ch 4. Support Mixed-use Districts

Keep it Loose in the Rail District

Near-term Conditions

Many existing buildings within the Lower Rail District are legally non-conforming, dis-incentivizing investment in existing buildings and continuation of the present condition, yet they provide incubator space for businesses at a much lower cost than Downtown (See Fig. 57). The current code applies standards that are appropriate to create pedestrian-oriented streets but are burdensome to existing uses. In the near-term, the Lower Rail District should remain informal and somewhat experimental. This character should be encouraged through zoning, development review, and in the public realm.

Figure 56. The District Lofts preview the Rail District's urban future.

Zoning need only be slightly adjusted. These adjustments are the type appropriate for an overlay district which applies only to the Lower Rail District. The overlay should consider allowing the following when existing buildings are improved or expanded, or when new single-story buildings are built:

- Parking may remain between buildings and front lot lines if it already exists.
- Buildings may retain their present setback when renovated, expanded, or reconstructed.
- Parking lots of 70 feet wide or less may be exempted from required trees and landscaping.
- Screening may not be required except along lot lines facing Eton Street.

Development review should allow the unique nature of the district to continue when single story structures are improved or expanded, or when new single-story buildings are built, including wall cladding, murals, awnings and canopies, adaptive reuse of paved areas, and a shared-use street.

To support the district's current character and prepare for the future, streetscape improvements should be pursued which work for both near and long-term. While mentioned in a number of existing contexts in other districts, shared-use streets are ideal for implementation along Cole and Commerce Streets, and Lincoln to the East of Eton. For the current condition, shared-use formalizes the situation that has occurred organically over time, and provides greater importance to pedestrians and cyclists. In the long-term condition, it helps to retain the character of the district, with greater use of shared-use streets than other places in the City.

Figure 57. Current conditions in the Lower Rail District.

Figure 58. The Lower Rail District.

Long-term Conditions

Many of the City's district-specific plans have become long-range, with investment remaining focused Downtown. Beyond the clear draw of Downtown's reputation, building there removes a $50,000 per car obligation from developers. Both the Triangle and Rail Districts suffer from lot patterns that are generally small and include a number of oddly shaped properties. Redeveloping these properties at a high capacity doesn't work when parking must be accommodated. Like the Triangle District, the Rail District needs public parking capacity and the ability to use that capacity in lieu of providing parking in mixed-use development projects. Conveniently, the City already owns property in the rail district. Most notably, the Public Services Department site is well located to provide parking access to Cole Street. Uses on site are necessary for maintenance of the City, and there are few places to relocate those uses. Even remaining on site, the DPS building is approximately the size of a parking structure, and may be part of a redevelopment plan to accommodate both. Additionally, the School District's underutilized bus lot can easily accommodate structured parking. These are options to be weighed in service of unlocking the area's development potential.

Before the district begins to see more intense development, its standards should be revisited. There are a number of ways that the MX standards differ from the Downtown Overlay standard, despite having similar desired physical outcomes. As discussed previously, zoning districts across the City that are similar in their desired outcome should be consolidated. If not consolidated with Downtown and Triangle District zones, the MX zone should be carefully analyzed. A quick reading of zone standards passes muster, however some details have potential negative consequences. For instance, the zone has tree requirements tied to the number of residential units; because this doesn't account for potentially high lot coverage on these small properties, this is a barrier to development, dis-incentivizing new housing.

Connectivity is the most significant limitation to the Rail District. The Grand Trunk Railroad limits all modes of connectivity, with crossings only at Maple and 14 Mile, of which the Maple crossing is in poor condition. Additional rail crossings should be studied, mainly for pedestrian and bicycle movement. A vehicular bridge would be logical at Lincoln, like the Derby bridge, though difficult to achieve due to existing buildings. In the further future, with significant development in the Rail District, further connections will be necessary. Every effort should be made to avoid increased car trips from new development, providing extensive pedestrian, bicycle,

and transit infrastructure instead. Today, right-of-way and access should be reserved to connect Lincoln with Lewis Street, also connecting to Cole and Holland. Additionally the contemplated greenway along the railroad should be pursued for bicycle and pedestrian connectivity.

Over Birmingham's long history, the railroad connection to Detroit has been an important asset. In recent decades, disinvestment in rail and investment in automobiles has reduced the role of rail travel. However, this trend is slowly changing across the country. Into the future, rail's comeback is projected to continue. Looking forward a few decades, rail access in the Rail District can be a significant economic driver. The City needs to secure a long-term connection to the Troy Transit Center and consider the redevelopment potential this may bring to the district in the future.

MASTER PLAN ACTIONS

1. Update the zoning code, including:
    a. Develop an Overlay Zoning District for the Lower Rail District that permits the existing, but somewhat improved condition to persist for the area south of Palmer Street.
    b. Modify the MX District to enable the urban development envisioned for the Rail District, consider the following:
        i. Exempt LA-01 (E) and (F), as is true in Downtown, or at a minimum that plantings in the MX District are only required within the streetscape and within open areas of the property, not based on a minimum number of trees per residential unit.
        ii. MX District zoning should be carefully analyzed in the future zoning code update due to a potential mismatch between the MX District standards and the characteristics of existing sites, small and large, with and without on-site parking.
2. Update the 1999 Eton Road Corridor Plan, including:
    a. Increase connectivity for pedestrians, bikes, and cars for the area south of Hazel Street, including future rail crossings.
    b. Provide access to the Troy Transit Center and consider the development of surrounding properties, including the School District bus parking lot and the DPS facility.
3. Study shared-use streets, including a shared-use street section along Cole and Commerce Streets.
4. Create a Mixed-use Districts Parking Plan, including study of DPW building redevelopment to include a public parking facility on site.
5. Update the Parks & Recreation Master Plan, including constructing the contemplated linear park and trail along the railroad.

Ch 5. Advance Sustainability Practices

Create a Sustainability and Climate Action Plan

To focus on sustainability and the future climate of Birmingham, the city should create a Sustainability and Climate Action Plan. Many actions are embedded in land use and mobility aspects of this plan, inherent in the historic pattern of the city, and in the contents of this chapter, however a targeted plan solidifies the City's commitment to sustainability and helps drive future decision making. Addressing present and future sustainability also requires consistent and ongoing focus. In order to address not only an action plan, but ongoing evaluation of climate conditions and emerging practices and technologies, a Sustainability Board should be established. This board should be tasked with leading the action plan, keeping the City accountable for its' implementation, and making regular updates to the plan and other policies as conditions change, improvements are made, and new approaches and technologies emerge. Birmingham will not be the first in the region to adopt such a plan, Royal Oak adopted theirs in 2022. However, Birmingham can help expand regional cooperation in climate action among surrounding communities and the Southeast Michigan Council of Governments (SEMCOG). Like the regional transportation issues that impact Birmingham, climate issues are interrelated throughout the region. The Sustainability Board should interface with neighboring communities and SEMCOG, support regional programs, and provide a model for other municipalities to emulate.

MASTER PLAN ACTIONS

1. Establish a Sustainability Board to oversee the sustainability-related recommendations of this plan and other future sustainability initiatives.
2. Create a Sustainability and Climate Action Plan, including:
    a. Reducing environmental impacts of municipal operations.
    b. Incentivizing green building standards, renewable energy, and green landscaping.
    c. Expanding recycling and composting.
    d. Implementing green stormwater practices in streets and parks.
    e. Supporting Rouge River Natural Area improvements.
    f. Implementing other sustainability focused recommendations of this plan.
    g. Creating a Hazard Mitigation Plan.
    h. Increasing inter-governmental cooperation around sustainability initiatives.

Reduce the Impacts of Municipal Operations

Concerning sustainability, the City should lead by example. Municipal buildings and operational choices should align with environmental goals. New buildings should meet green building standards, as addressed in the following section. Recycling should be a focus within and around municipal properties. Plastic and Styrofoam bottles and containers should not be purchased by the City. Municipal fleet fuel efficiency standards should be increased and the fleet converted to Electric Vehicles. Staff may be incentivized to commute to work by bike, public transit, or carpooling. And the City may require its contractors to adopt similar policies. These actions, and the identification of other sustainability goals, should be the focus of a sustainability action plan.

MASTER PLAN ACTIONS

1. Create a Sustainability and Climate Action Plan, including:
    a. Establish policies for the sourcing of office supplies and materials, and supplies used in meetings and other public events.
    b. Study sustainability opportunities in Parks and Recreation, such as pollinator gardens, solar panel pavilions, plant species, tree canopy, landscape maintenance processes, and environmental regulations.
    c. Migrate the city's vehicle fleet to electric vehicles.
    d. Locate Electric Vehicle charging stations at public garages, public parking lots, and on-street in Mixed-use Districts.
    e. Establish policies for municipal buildings, following the green buildings discussion in the next section.

Advance Building Sustainability in New Construction

Elsewhere in the country, building energy use and production is moving slowly towards carbon neutrality, with some states far ahead of others. Michigan has residential and commercial energy codes which comply with federal mandates, yet leave room for improvement. Detroit and Grand Rapids have adopted 2030 Districts with goals of reaching net zero energy usage by 2050. With a significant amount of new construction in Birmingham, there is room to incentivize movement towards net zero and use green building standards.

MASTER PLAN ACTIONS

1. Create a Sustainability and Climate Action Plan, including:
   a. Advance building sustainability in new construction, such as through the use of green building standards within the City's mixed-use districts and municipal buildings and increasing energy standards for new residential construction above those of the state energy code, ideally implementing 2030 District goals.

Expand Recycling and Composting

Recycling and composting have been targets of recent policies across the country, aimed at reducing the use of plastics and Styrofoam, and reduce the volume of compostable waste in landfills. For residences, recycling programs have been available for some time, but municipal compost has not. Currently yard waste compost is collected in the fall, which may be able to expand to food scraps, especially important for restaurant and grocery store waste. Composting potential should be investigated. Concerning normal recycling, commercial standards should be considered along with a greater number of recycling bins in City parks and public spaces. Many area businesses use plastic utensils and Styrofoam carryout, along with plastic bags. All of these could be reduced or eliminated either through ordinance or through a Birmingham Shopping District program.

MASTER PLAN ACTIONS

1. Create a Sustainability and Climate Action Plan, including:
   a. Study food waste compost service for homes and businesses.
   b. Increase the availability of recycling bins in public spaces like parks, public buildings, and along streets with high pedestrian traffic.
   c. Study reduced plastics and Styrofoam policies for Birmingham businesses.

Install Green Stormwater Infrastructure in Neighborhood Streets and Parks

Water quality management has undergone significant improvements in recent years. Birmingham regularly experiences flooding and is situated along a sensitive natural river system. Untreated runoff threatens the Rouge River natural system and damages private properties. Streetside landscape areas, City parks, and other City properties are clear opportunities to provide stormwater solutions, and are plentiful. To address this issue, a new plan should be created which evaluates the issues and problem areas, emerging best practices, and establishes a strategy to implement green infrastructure across the city. In 2008, the Southeast Michigan Council of Governments (SEMCOG) developed a Low Impact Development Best Practices manual for metro-Detroit communities. This comprehensive manual should act as an important resource for Birmingham's own green infrastructure development moving forward.

MASTER PLAN ACTIONS

1. Create a Green Infrastructure Plan establishing strategies, design standards, and locations in streets, parks, and other City properties with locating streetside areas where stormwater can be cleaned and retained through bioswales and other means, particularly in areas experiencing flooding.

Figure 60. A segment of the Rouge trail.

Improve the Rouge River Natural Area

The Rouge River natural area has been recognized as an important amenity by the city and Oakland County since the 1920s, part of a planned but not fully executed regional park system. The park area is an unique asset including diverse wildlife habitats and ecosystems, wooded uplands, prairies, and wetlands. The Rouge borders eight neighborhoods as well as Downtown. Approximately 48% of Birmingham's residents and over 11,000 employees are within a five-minute walk of the Rouge. A midday walk in the summertime along the Rouge trail includes workers, joggers, families, and diverse wildlife. Many people use the park, and recent studies have shown that access to trees, wildlife, and naturalistic settings is important for mental health.

However, the Rouge River natural areas require better management, maintenance, and accommodations for the diverse set of users who value it. The park's natural ecosystem is challenged by invasive plant species, minimal forest management, degraded bank conditions, landscape chemical runoff, and roadway storm-water runoff. Active management of the area is needed, along with stormwater management interventions to clean water before it enters the Rouge.

The Rouge's relatively flat topography is ideal for pedestrians and cyclists of all ability levels (See Fig. 60 & 61). However the condition of trails and access severely limit its use. The wood chip and crushed-stone hiking trails are unstable surfaces and sections of the existing Rouge trail traverse steep grades or waterlogged soils. In fact, the Rouge hiking trail is often entirely unusable during heavy rain or freezing conditions. Where the river comes close to property lines, the trail often becomes steep and difficult to traverse. A properly designed, paved walkway could provide an easy alternative to West Maple's steep hill between Baldwin and Southfield Road, as well as link Linden, Seaholm, Quarton and Beverly Hills residents directly to Booth Park. And due to the trail's trajectory, much of the park is completely inaccessible. Additionally, many of the trail heads are unmarked and hidden. The river trail is of both community-wide and regional importance. Access and accommodations are necessary for the health of all Birmingham residents.

Many sections of the Rouge trail and trail heads lack benches, bicycle racks, lighting, way-finding maps, educational placards, and other basic amenities. Benches are convenient for the enjoyment of the natural area, but also for many older adults who need places to rest along long walks. Lighting and forest management are important for security. Regular surveillance of the trail is difficult for the police and public due to insufficient access, and emergency response vehicles have limited or no access to many segments of the trial.

The needs of pedestrians and cyclists are often aligned, but in the natural areas, multiple facilities are merited. By adding trails along with pedestrian and bike bridges at key locations, much more of the natural area would become accessible, and the trail system would be able to avoid steep areas if it crossed the river more frequently. Opening up access to the far side of the river would allow for a paved pedestrian and bicycle trail, along with a smaller pedestrian walkway that may be more naturalistic in design and access the river more intimately. Care is needed in designing upgraded trails. The design of trails should endeavor to remain as narrow as practical for the effective use of the facility, in order to minimize the visual and actual impact on the natural area.

Figure 61. A segment of the Rouge trail.

Along with amenities and trails, the natural area requires active management and targeted improvements. In many instances, the banks and slopes have been stabilized in a way that intrudes upon the ecosystem, clearing segments of plants and interrupting wildlife access. In others, the banks are not stabilized at all. Along with the edge conditions, plant species and tree health need monitoring and management. Natural areas at the urban interface cannot simply be left to chance.

MASTER PLAN ACTIONS

1. Develop and implement a trails and access master plan to improve the Rouge River trails and trail heads. The plan should consider:
   a. Installing pedestrian linkages to the park's surrounding neighborhoods and commercial districts, including to Quarton Road.
   b. Securing easements of additional key properties to expand the park area and improve its walkability, for complete ecological restoration, and universal accessibility.
   c. Coordinating with Bloomfield and Beverly Hills to expand trail access and connections.
   d. Installing an environmentally sensitive, hard-surfaced pathway for pedestrians and cyclists along the Rouge River.
   e. Expanding the extent of the trail system, crossing the river at more locations to access large portions of the natural area currently cut off.
   f. Installing bridges, ramps, and other enhancements to enable access by all ages and abilities.
   g. Installing other amenities such as bicycle racks, lighting, markers, seating, and signage at trail heads, and seating, markers, and interpretive features throughout the trail system.
2. Develop and implement a restoration master plan to restore the Rouge River ecosystem to its natural and sustainable conditions. The plan should consider:
   a. Retaining environmental scientists to inventory and analyze the Rouge corridor's wildlife, ecology, natural systems, and pollution sources.
   b. Establishing a phased enhancement time frame to stabilize riverbanks, remove invasive species, reintroduce native ground covers, wildflowers, under-story, and canopy tree species.
   c. Identifying and mitigating potential pollution or chemical sources, including the existing Springdale snow storage dumping area.
3. Work with area organizations and agencies to oversee, build support, and raise funding for the park's enhancements. Consider securing corporate or philanthropic funding in exchange for special recognition.
4. Work with other area and regional organizations and communities to improve the quality of the Rouge River watershed.
5. As part of a zoning code overlay, implement policy to ensure that private property construction is compatible with the park's ecology, its restoration master plan, and overall public welfare.

Implement Plan Actions Supporting Sustainability

Many of the plan goals and actions addressed in previous chapters implement public health and environmental sustainability goals. They specifically advance sustainability practices in Birmingham and should be implemented with sustainability in mind. These elements may be included within the Sustainability and Climate Action Plan, or otherwise overseen by the Sustainability Board to ensure the city continues in to implement upon their climate goals.

Other sustainability actions include:

- Preserving, enhancing, and diversifying the city's tree canopy in streets and open spaces.
- Infill housing in Mixed-use Districts result in households which on average drive less, use less overall energy in heating and cooling, and use practically no water and fertilizer in landscape maintenance.
- Neighborhood destinations reduce vehicle trips by providing destinations near homes.
- Bicycle and pedestrian multi-modal improvements, and support for neighborhood destinations encourage exercise and more trips taken by foot or bike rather than by car, including public transit improvements.
- Support for the Farmer's Market increases connections to food growing, healthy consumption, and food education.
- Connecting to the Troy Transit Center provides future alternatives to driving.

B

Clerk's Office
City of Birmingham, MI

MAY 15 2023

RECEIVED

May 15, 2023

Birmingham City Commission

RE: 2040 Plan and Oakland Street

Dear Commission Members,

I am writing today to ask your consideration in maintaining the current zoning for Oakland Street.

My neighbors and I have for decades opposed any rezoning of Oakland, and our neighborhood relies on you for protection from any commercialization. We steadfastly believe Oakland Street has been a natural buffer for our neighborhood.

We believe intensifying our density is unwanted, imprudent, and unwarranted. Historically, Little San Francisco has been a single-family community within a well-defined perimeter imparting a very cohesive neighborhood. I have attached an outstanding paragraph from our 1980 Birmingham Plan which explains our proximity to the Downtown, the constant pressure from commercial developers, and the fact we rely on you for protection of our neighborhood property values.

I respectfully ask that no further discussion of rezoning Oakland Street be considered.

Thank you for your service to our city.

Respectfully,

Kathryn Gaines

343 Ferndale

Birmingham, Mi. 48009

Attachment-1980 Birmingham Plan

Clerk's Office
City of Birmingham, MI

MAY 15 2023

RECEIVED

and the school board administration building. Parking on Henrietta Street between Brown and Frank requires a resident permit to keep cars of Continuing Education Center students off the street.

Hunter-Oakland-Woodward Residential Area

The residential area between Hunter Boulevard and Woodward Avenue north of Oakland contains many fine old homes. The charm of the area is enhanced by curving streets and topographic changes. The rear yards of about one-third of the area's homes abut Hunter Boulevard. Numerous trees and sloping topography provide a natural buffer from the heavy traffic on Hunter. Many residential rear yards lie adjacent to commercial structures on North Woodward Avenue. Strict site design and landscaping requirements are needed to protect these homes from unsightly views. A permit parking sticker system has been designed and implemented to keep customer and employee parking off of residential streets in the area. The system was initiated in 1977 at the request of area residents. Since then, it has worked quite effectively. Enforcement is achieved mainly through voluntary compliance. The area receives periodic police patrol. Additional enforcement occurs in response to resident complaints. Most of the homes in the area are within a ten-minute walk of Birmingham's central business district. Because of its proximity to the downtown area and the fact that it is surrounded by Hunter Boulevard and Woodward Avenue, the neighborhood may be under repeated pressure for piecemeal rezoning to non-residential use. Such rezoning could destroy the area's sound residential character and result in a deterioration of property values for remaining homes.

Poppleton Residential Area

The Poppleton residential area lies north of Maple Road between Adams Road and Poppleton Park. The homes in the area are very well maintained. The area experiences some extraneous cut-through traffic generated by business uses along Maple Road and Hunter Boulevard. This cut-through traffic should be controlled to the maximum extent possible by traffic regulations. Many of the homes abut or look onto

7C

BIRMINGHAM
A WALKABLE CITY

Christina Woods <cwoods@bhamgov.org>

2040 Master Plan Public Hearing May 22 Letter with Zoning Maps & Photos

1 message

larry bertollini <lbertollini@att.net> Tue, May 16, 2023 at 1:25 PM
To: Nick Birmingham City Planner Nicholas <ndupuis@bhamgov.org>, clerksoffice@bhamgov.org

05-16-2023

Dear Mayor & Commissioners,

2040 Birmingham final draft adds many new uses to the east side of Adams between Lincoln & Bowers. in a sense this would brings the triangle district over to the East side of Adams. What do you think? More traffic, congestion, noise? traditionally, the city has zoned business parcels that are contiguous with residential property in a different manner. It's not uncommon to see zoning labeled transitional or business type use that has more restrictions then the ones across the street that do not abut single family zoning. When you see the new apartment building being constructed across from adams Square and its impact on the surrounding area, one realizes that this is why taller & some building uses are better across the street. The Adams Square buildings is 2 story & was approved years ago under a consent judgement. The development was sensitive to the single family residential zones and provides plenty of off street parking. I would prefer not to have the east side of adams connected in a sense with the same business district uses as the west side of Adams. Please review the 2040 plan for its proposed future use plan and how it ties Adams Square (currently B2 general business 3 story buildings, however it it currently small scale), and the other businesses on the east side of Adams Road buildings (O2 -Office Commercial), with the west side of Adams. The new concept is Haynes Square Mixed Use District. All business properties become B-3 uses, 5 story buildings permitted.

Please have this section of the proposed 2040 Master revised before adopting it.

Thank you.

Larry Bertollini

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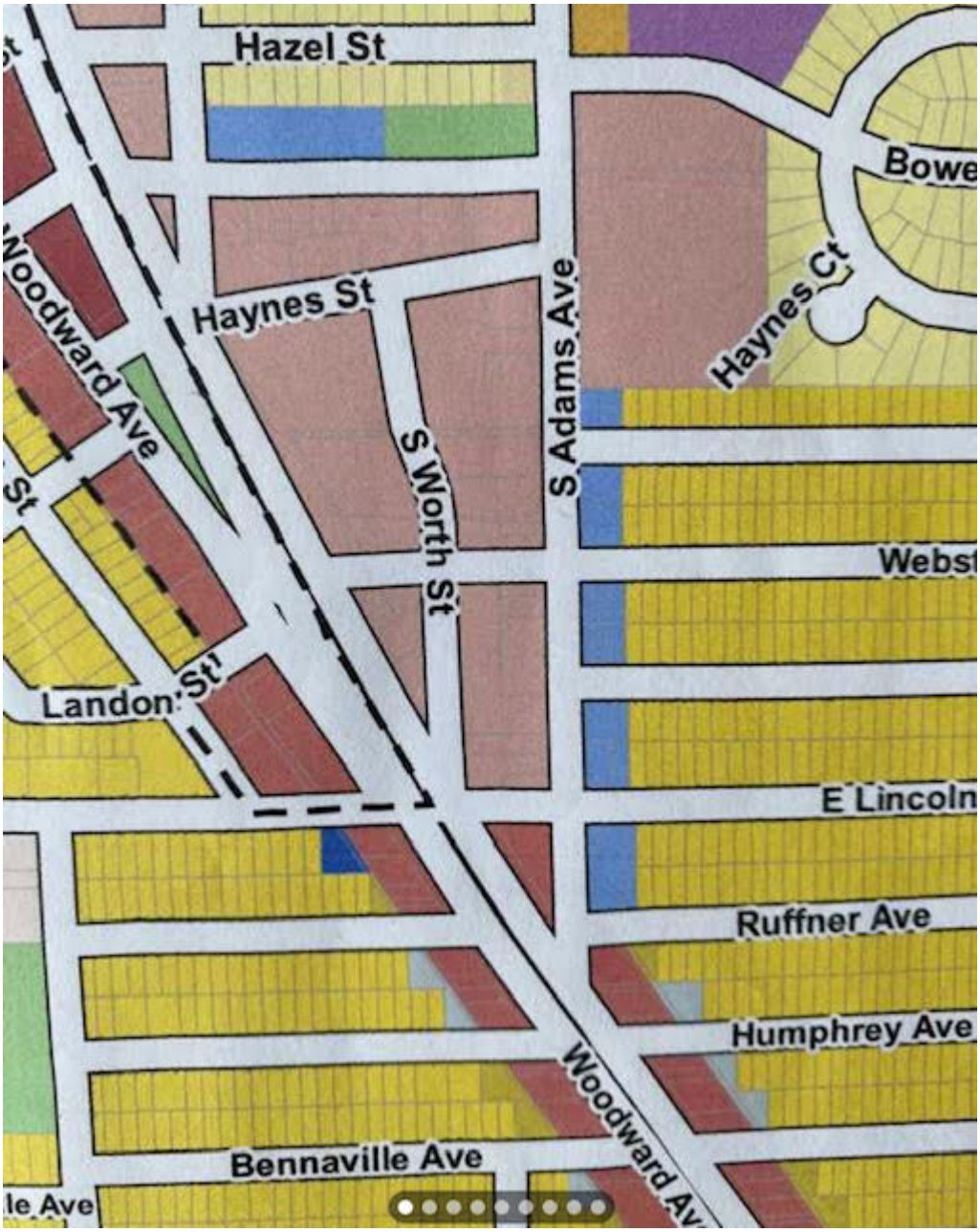
Hazel St
Bowe
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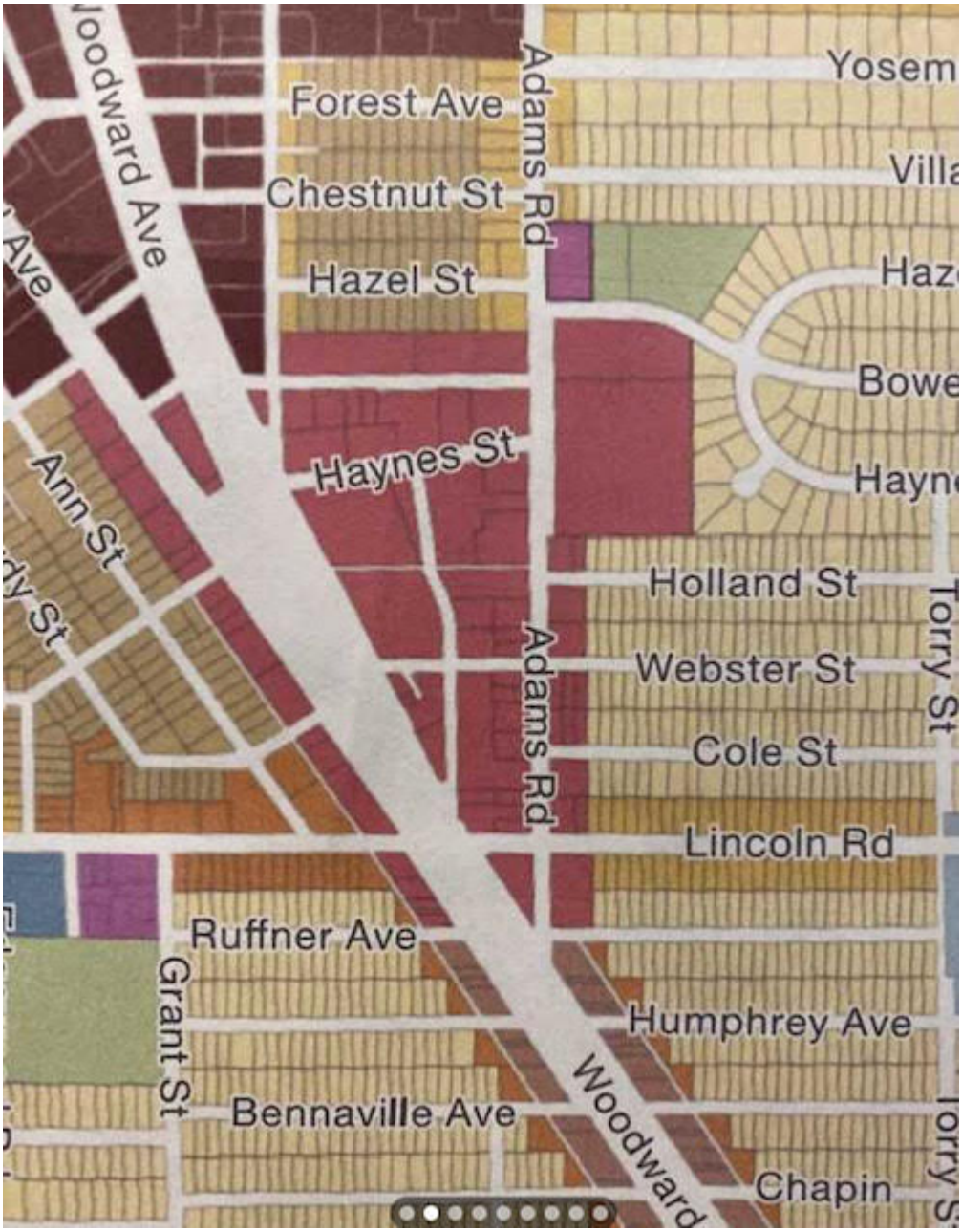
Landon St
E Lincoln
Ruffner Ave
Humphrey Ave
Woodward Av
Bennaville Ave


Woodward Ave
Forest Ave
Chestnut St
Hazel St
Haynes St
Ann St
Adams Rd
Yosem
Villa
Haz
Bowe
Hayn
Holland St
Webster St
Cole St
Lincoln Rd
Torry St
Ruffner Ave
Grant St
Humphrey Ave
Bennaville Ave
Woodward
Chapin

BIRMINGHAM
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Alex Bingham <abingham@bhamgov.org>

2040 Master Plan Public Hearing May 22

1 message

larry bertollini <lbertollini@att.net> Wed, May 17, 2023 at 11:31 AM
To: Nick Birmingham City Planner Nicholas <ndupuis@bhamgov.org>, clerksoffice@bhamgov.org

Dear Mayor & Commissioners,

Under the summary of key actions of the 2040 Birmingham master plan, it states on the first page number one zoning code update, Enable accessory dwelling units in already comparable zones MX,TZ1,TZ3,R4-R8. Several duplexes on Haynes, which are R4, would be eligible for an ADU (accessible dwelling unit) in the detached garages. These duplexes abut single-family zoning behind them. I my opinion when a ADU abuts the single family zoning there are concerns such as proximity to the single family's rear yard open space. The single family neighbor to the back will have another living unit & neighbor which is not what was expected when purchasing the home. This is considered a breach in a property owner's rights. Existing distances between ADU unit & the garage structures of a single family unit which also creates increased chances of fire spread should one occur. This change would also most likely increase street parking on Haynes street. Please remove this section or revise it accordingly. Thank you.

Larry Bertollini

Sent from my iPhone

7C

BIRMINGHAM
A WALKABLE CITY

Alex Bingham <abingham@bhamgov.org>

2040 Plan

'Diane Smith' via City Commission <city-commission@bhamgov.org> Wed, May 17, 2023 at 4:18 PM
Reply-To: Diane Smith <dianesmith5912@yahoo.com>
To: city-commission@bhamgov.org, tmarkus@bhamgov.org

I am asking that this e-mail attachment be a part of public record.

--
You received this message because you are subscribed to the Google Groups "City Commission" group.
To unsubscribe from this group and stop receiving emails from it, send an email to city-commission+unsubscribe@bhamgov.org.
To view this discussion on the web visit https://groups.google.com/a/bhamgov.org/d/msgid/city-commission/36A5378E-0FA4-4075-91B5-953B4BCF833C%40yahoo.com.

CityLetterMay17th:23.docx
14K

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Dear City and City Commission,

I know the 2040 Plan will pass. I was hoping some of the suggestions that residents voiced they did not want were taken out of the plan. One was the Parcel at the NE corner of Eton and Lincoln. It was marked recreational destination. Thank you for that change.

I would urge the City and Commission to think seriously about the Seam Concept. The infill concept and the concept of increasing density by eliminating single family homes. This concept I feel will cause more issues than the proposed tax base increase.

Single family home ownership usually comes with community involvement and property maintenance pride as well as consistant tax revenue. We already have many empty rental spaces around the city do we really need any more empty buildings.

I did not see anything in the 2040 plan to support the infrastructure for all of the proposed over building.

Our Sewers are old our electrical grid cannot even take a slight wind some days. Our current neighborhood roads are in terrible shape. Birmingham is not a walkable, bicycle safe and or traffic safe city right now. I cannot even begin to calculate how the proposed zoning updates of more density will have on the City and these issues.

I have heard the city this plan is not about Zoning yet on almost every page there is Verbiage "Update the Zoning Code".

Under Managed Growth I do not agree with g. on page 49

Create new zoning districts or modify the transition zone districts to encourage infill development of small homes, townhomes, duplexes, and small multi-family buildings, limited to Activity and Buffer Seams.

O. Allow Cafes, food trucks, kiosks, and other appropriate amenities in parks, currently Public Property district.

Page 48
The last Paragraph
Use categories should also be collapsed to the broadest categories practicable. In all, the zoning code should be entirely replaced or significantly altered to align with the City's goals for neighborhoods and mixed -use districts.

This last paragraph basically says it all Birmingham wants to scrap the existing Zoning and start all over with an emphasis on Increased Density and over growth without even considering the impact on the neighborhoods. This is very sad and I feel this plan is irresponsible to the Tax paying residents.

Birmingham Citizens for Responsible Government
2d ·

Birmingham Neighbors Need to Know:

Recommendations in Birmingham's 2040 Master Plan Puts Excessive Pressure On Our Community

Monday, May 22, the City Commission is scheduled to vote on Birmingham's 2040 Master Plan. This will be your last chance to express concerns and request revisions to a blueprint for growth that will have a profound impact on the character of our neighborhoods and quality of our lives for years to come.
While public input has helped make the Plan, in development since 2019, generally responsive to residents' preferences and priorities, there's still work to be done. Before any vote is taken, two problematic recommendations remaining in the final draft must be revised or removed:

REZONING: The fundamental character of four single-family-home neighborhoods adjacent to what the Plan calls "seams" is pressured by a recommendation to rezone them to "enable infill development of small homes, townhouses, duplexes, and small multi-family buildings." If you're living in one of these areas designated for transition – St. James- North, St. James -South, Little San Francisco and Poppleton – you're in the bullseye of the Plan's push to "Embrace Managed Growth."

ADDED DENSITY: The proliferation of "Accessary Dwelling Units" – backyard rentals – is encouraged with a recommendation to "study ADU's for additional locations within the city and the regulations necessary to ensure compatibility." We are strong proponents of multi-generational living arrangements within families. But ADUs as defined by the Plan – separate structures typically allowed to be built on residential properties by cities desperate for more density (something Birmingham doesn't need) – will hurt our property values wherever permitted.

Act Now to Protect Our Future
The City Commission must not vote on the 2040 Master Plan until the negative consequences of these recommendations are addressed.
Read the 2040 Master Plan online https://tinyurl.com/tuc64anb (you'll find the discussion of "seams" on page 46 and encouragement of ADUs on pages 46-47). Let us know what you think. And please consider attending the Commission meeting on May 22 in person or online at 7:30 p.m. in the Municipal Building.
https://www.birminghamcitizens.com/Birmingham

Citizens for Responsible Government (BCRG) is a Political Action Committee (PAC) founded by Birmingham residents in 2014. Our mission is to inform citizens in our community about issues of importance to Birmingham homeowners.

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A WALKABLE CITY

Nicholas Dupuis <ndupuis@bhamgov.org>

2040 Master Plan Public Hearing May 22 Letter with Zoning Maps & Photos

2 messages

larry bertollini <lbertollini@att.net> Tue, May 16, 2023 at 1:25 PM
To: Nick Birmingham City Planner Nicholas <ndupuis@bhamgov.org>, clerksoffice@bhamgov.org

05-16-2023

Dear Mayor & Commissioners,

2040 Birmingham final draft adds many new uses to the east side of Adams between Lincoln & Bowers. in a sense this would brings the triangle district over to the East side of Adams. What do you think? More traffic, congestion, noise? traditionally, the city has zoned business parcels that are contiguous with residential property in a different manner. It's not uncommon to see zoning labeled transitional or business type use that has more restrictions then the ones across the street that do not abut single family zoning. When you see the new apartment building being constructed across from adams Square and its impact on the surrounding area, one realizes that this is why taller & some building uses are better across the street. The Adams Square buildings is 2 story & was approved years ago under a consent judgement. The development was sensitive to the single family residential zones and provides plenty of off street parking. I would prefer not to have the east side of adams connected in a sense with the same business district uses as the west side of Adams. Please review the 2040 plan for its proposed future use plan and how it ties Adams Square (currently B2 general business 3 story buildings, however it it currently small scale), and the other businesses on the east side of Adams Road buildings (O2 -Office Commercial), with the west side of Adams. The new concept is Haynes Square Mixed Use District. All business properties become B-3 uses, 5 story buildings permitted.

Please have this section of the proposed 2040 Master revised before adopting it.

Thank you.

Larry Bertollini

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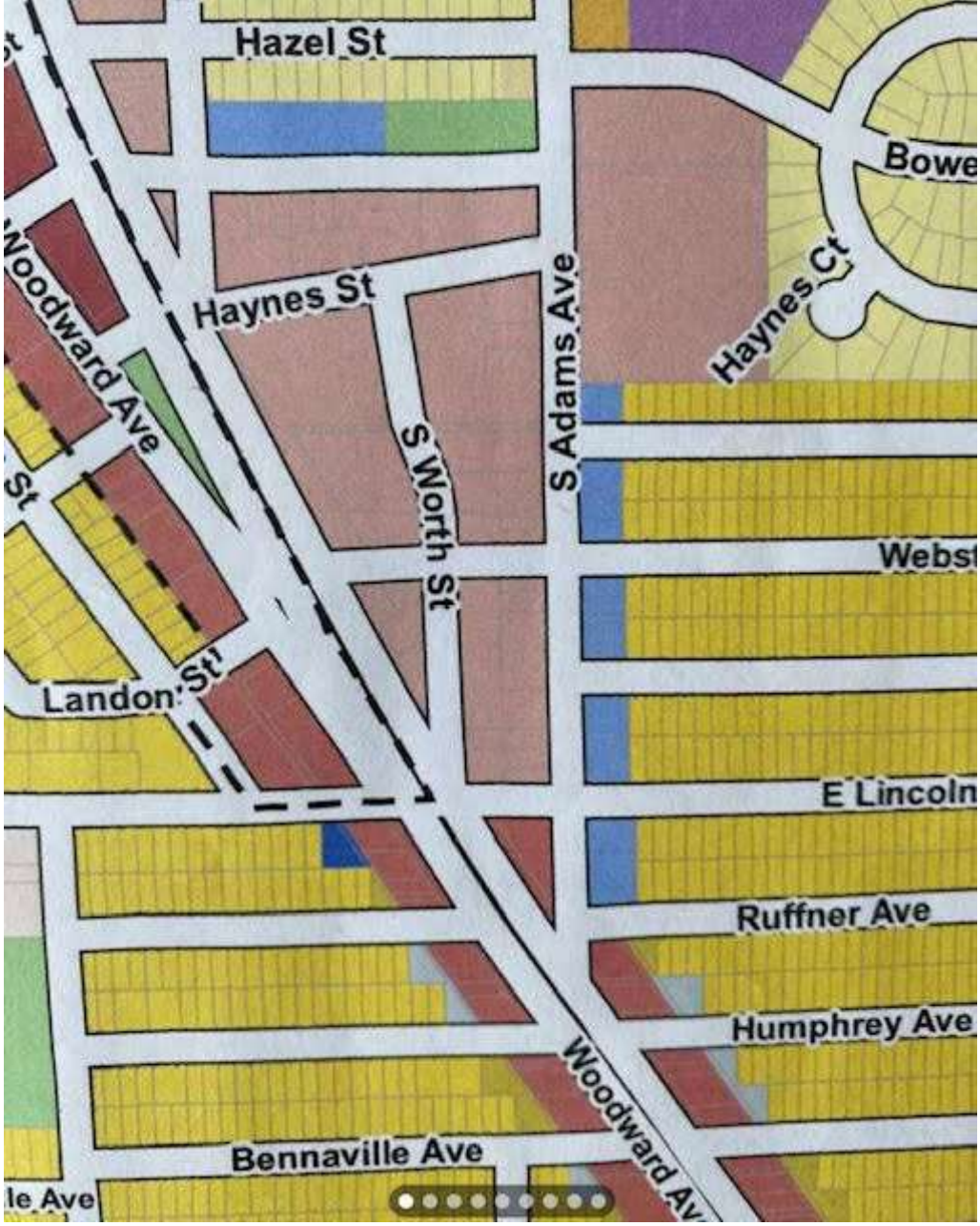
Hazel St
Bowe
Haynes Ct
Haynes St
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Woodward Ave
S Worth St
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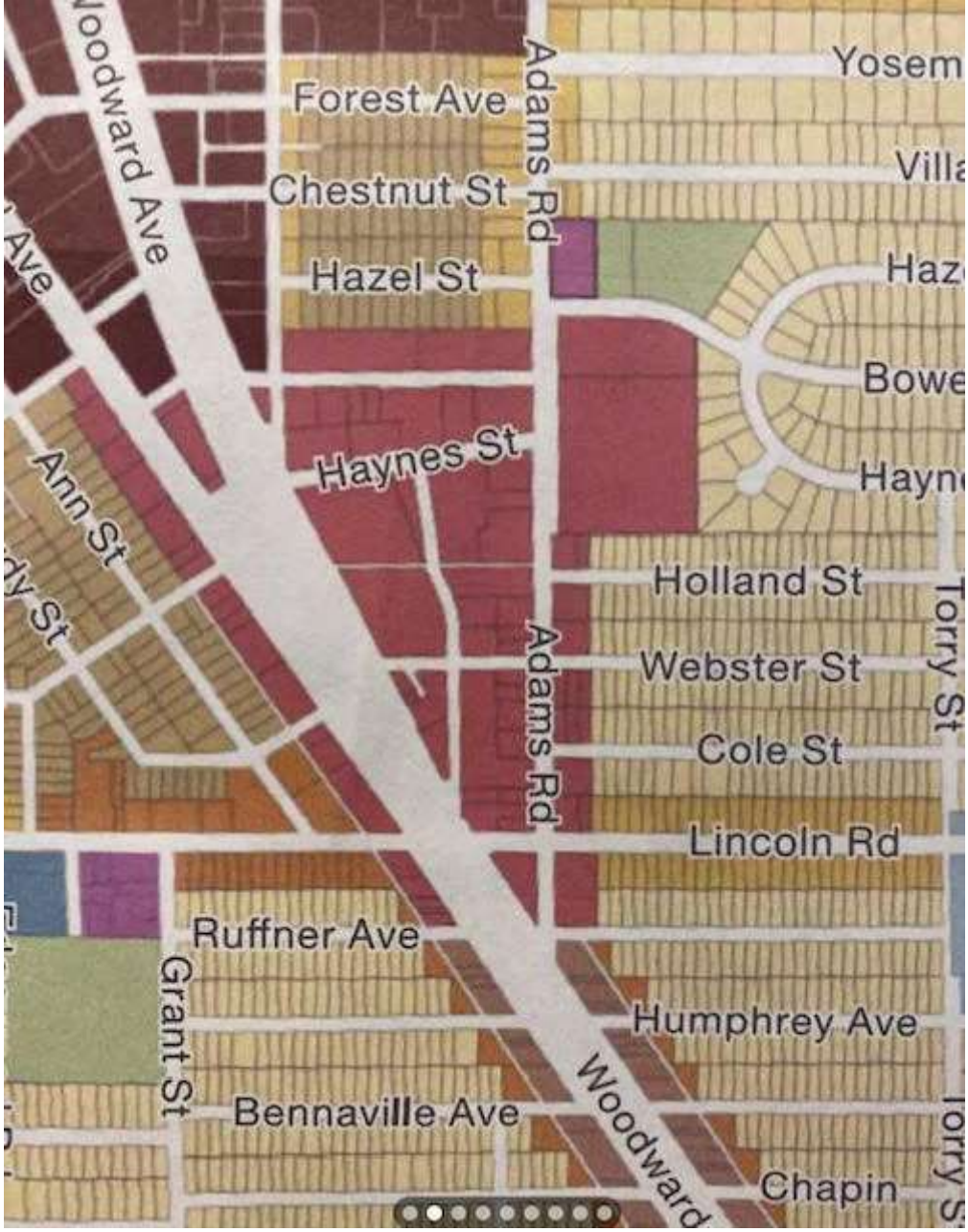
Landon St
E Lincoln
Ruffner Ave
Humphrey Ave
Woodward Av
Bennaville Ave
le Ave



Clerks Office <clerksoffice@bhamgov.org> Tue, May 16, 2023 at 2:12 PM
To: Nicholas Dupuis <ndupuis@bhamgov.org>, Clerks Office <ClerksOffice@bhamgov.org>

I placed this in the pending folder to include in communications.

Christina Woods
Deputy City Clerk
City of Birmingham
151 Martin Street
Birmingham, MI 48009
(248) 530-1803 www.bhamgov.org
[Quoted text hidden]

BIRMINGHAM
A WALKABLE CITY

Nicholas Dupuis <ndupuis@bhamgov.org>

2040 Master Plan Public Hearing May 22

1 message

larry bertollini <lbertollini@att.net> Wed, May 17, 2023 at 11:31 AM
To: Nick Birmingham City Planner Nicholas <ndupuis@bhamgov.org>, clerksoffice@bhamgov.org

Dear Mayor & Commissioners,

Under the summary of key actions of the 2040 Birmingham master plan, it states on the first page number one zoning code update, Enable accessory dwelling units in already comparable zones MX,TZ1,TZ3,R4-R8. Several duplexes on Haynes, which are R4, would be eligible for an ADU (accessible dwelling unit) in the detached garages. These duplexes abut single-family zoning behind them. I my opinion when a ADU abuts the single family zoning there are concerns such as proximity to the single family's rear yard open space. The single family neighbor to the back will have another living unit & neighbor which is not what was expected when purchasing the home. This is considered a breach in a property owner's rights. Existing distances between ADU unit & the garage structures of a single family unit which also creates increased chances of fire spread should one occur. This change would also most likely increase street parking on Haynes street. Please remove this section or revise it accordingly. Thank you.

Larry Bertollini

Sent from my iPhone

BIRMINGHAM
A WALKABLE CITY

Nicholas Dupuis <ndupuis@bhamgov.org>

Public Hearing for 2040 Master Plan May 22, 2023

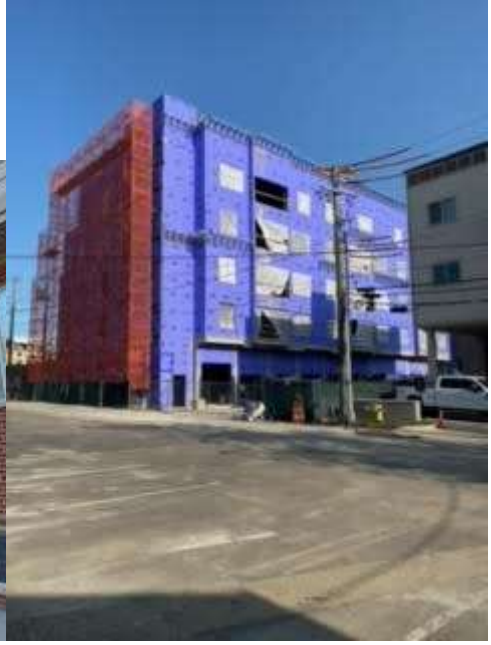
1 message

larry bertollini <lbertollini@att.net> Tue, May 16, 2023 at 1:04 PM
To: Nick Birmingham City Planner Nicholas <ndupuis@bhamgov.org>, L Broski <lbroski@bhamgov.org>

05-16-2023
Dear Mayor & City Commissioners,

The proposed 2040 Birmingham master plan includes rezoning the east side of adams from Lincoln St., North, including Adams Square, to B3 which will allow five story multi- family buildings. In my opinion, this is out of scale with the adjacent & abutting single family residential zoning. B3 zoning also introduces higher intensity and additional uses permitted on the east side of Adams from what B2 & O3 zoning currently allows. The master plan as it's proposed is packaged as managing growth, however, these type of changes appear to overcrowd & overshadow the neighborhood. The last photo is a 3 story building on the east side of Adams which currently is non-conforming under the present zoning-this change to B3 at the east side of Adams is dramatic to say the least with the permitted 5 story buildings. I'm not opposed to new developments, however, please respect the context of the adjacent & abutting single family zoning & demonstrate the proposed 2040 masterplan treats these areas differently. Thank you.

Larry Bertollini



Sent from my iPhone

BIRMINGHAM
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Nicholas Dupuis <ndupuis@bhamgov.org>

East Adams Development

1 message

Jim Fisher <james.d.fisher@outlook.com> Tue, May 16, 2023 at 9:36 AM
To: ndupuis@bhamgov.org

Dear Sir,

I am writing in response to Mr Bertolinnis letter regarding the development of Adams. I would suggest that any more development that will use Adams road be shelved, or at least postponed until the monstrosity behind the Plant Station is finished.

Adams road is becoming unusable due to the traffic now as noted from the increase in traffic on Eton and cutting through Cole, Webster and Holland.
Haven't you driven Adams and noticed this?

I am a long time resident on Webster and I have seen many changes to this area over the years. Most have negatively affected our neighborhood. I am sure that this proposal will greatly impact my neighborhood and by the time the problems arise FHS and city planners will all feign ignorance.

Perhaps a decision on this can be delayed until the completion of the Plant Station property. Then ask residents how they would like more? What do you think that answer would be? Then ask yourself "who are you serving?"
The residents of these neighborhoods?

Thank you

Jim Fisher

BIRMINGHAM
A WALKABLE CITY

Nicholas Dupuis <ndupuis@bhamgov.org>

Dear Mr. Du

1 message

MARGARET PETERSON <peggy.p@comcast.net> Tue, May 16, 2023 at 12:52 PM
To: "ndupuis@bhamgov.org" <ndupuis@bhamgov.org>

Dear Mr. Dupuis,

I am a homeowner on Hazel St., near Haynes St. and am already concerned about the mass development across from Adams Square. I understand that there are attempts to rezone part of this area to allow for more development. Let me start out by saying that residents east of Woodward have a history of being treated as 2nd class Birmingham residents. Who else has a body shop in their residential neighborhood? Certainly not those west of Woodward! Wouldn't happen.

The town has already allowed a massive gray parking structure on Adams Rd. near Haynes to be constructed along with a new high-rise multi-use building that is under construction. Will the facade of this structure be covered in brick or must we live with this ugly gray behemoth as part of our vista? Already, before the new construction has been completed, there are daily bumper-to-bumper traffic jams on Adams from Hayes to Lincoln. What is this going to be like with all of this continued development - only more congested, more polluted.

Do you realize there is not ONE tree in the Adams Square parking lot? Just a huge black-top parking lot - bad for the environment and bad for the residents. Please show the same respect to the residents on the east side of woodward as you do to the west side - with their special zoning, traffic controls, and street plantings.

We, too, are voting, tax-paying residents who care about the quality of our neighborhood.

Sincerely,

Peggy Peterson
1543 Hazel St.

BIRMINGHAM
A WALKABLE CITY

Nicholas Dupuis <ndupuis@bhamgov.org>

2040 Master Plan

1 message

William A. Roy <roy@rsmv.com> Mon, May 15, 2023 at 11:04 PM
To: ndupuis@bhamgov.org

Mr. Dupuis,

I am informed that the 2040 Birmingham master plan includes rezoning the east side of Adams from Lincoln St., North, including Adams Square to B3, which will allow five story multi family buildings. I have resided at 1601 Sheffield since 1974, and as you can see, my office is at 1185B South Adams. I consider this to be within my home neighborhood.

In my opinion this B3 zoning on the east side of Adams is out of scale with the adjacent & abutting single family residential zoning. It also introduces higher intensity and additional uses permitted on the east side of Adams from what is currently allowed. One only has to look at the "prison" that is going up on the west side of Adams to envision what Adams would look like if this this B3 zoning is enacted. Our neighborhood is slowly turning into a warren of vinyl sided McMansions with very little green space. Traffic is a problem. B3 zoning in this area would make it worse.

I object to B3 zoning east of Adams from Lincoln St. North.

William A. Roy

Roy, Shecter & Vocht, P.C.

Attorneys and Counselors

1185-B S. Adams Rd.

Birmingham, MI 48009

(248)540-7660

BIRMINGHAM
A WALKABLE CITY

Alex Bingham <abingham@bhamgov.org>

Fwd: Fw: Proposed Master Plan

1 message

Tom Markus <tmarkus@bhamgov.org> Thu, May 18, 2023 at 3:14 PM
To: Alex Bingham <abingham@bhamgov.org>
Cc: Nicholas Dupuis <ndupuis@bhamgov.org>, Jana Ecker <Jecker@bhamgov.org>, Mary Kucharek <Mkucharek@bhlaw.us.com>, Melissa Fairbairn <mfairbairn@bhamgov.org>

Alex distribute to commission

---------- Forwarded message ---------
From: **Marianne Gamboa** <MGamboa@bhamgov.org>
Date: Thu, May 18, 2023 at 1:59 PM
Subject: Fwd: Fw: Proposed Master Plan
To: Tom Markus <tmarkus@bhamgov.org>, Nick Dupuis <ndupuis@bhamgov.org>, Ecker, Jana <Jecker@bhamgov.org>, Melissa Fairbairn <mfairbairn@bhamgov.org>

---------- Forwarded message ---------
From: **Chuck Tholen** <cet262@sbcglobal.net>
Date: Thu, May 18, 2023 at 1:55 PM
Subject: Fw: Proposed Master Plan
To: website@bhamgov.org <website@bhamgov.org>

----- Forwarded Message -----
From: Chuck Tholen <cet262@sbcglobal.net>
To: "cirtycommission@bhamgov.org" <cirtycommission@bhamgov.org>
Sent: Thursday, May 18, 2023 at 01:52:21 PM EDT
Subject: Proposed Master Plan

Commissioners,

On May 22, a hearing is scheduled on the proposed Master Plan.

This Plan contemplates significant changes to future development of Birmingham and there may not have been sufficient input from the residents to determine their level of support. As you are aware, attendance at previous neighborhood meetings was very limited.

In the past, it has been the practice of City Commissions to make every effort to hear from their citizens on important issues.

Given the change in direction from the previous Master Plan, it is suggested that an advisory referendum be held to provide our citizens with an opportunity to express their opinions.

We have already devoted almost three years to this effort. A few more months delay should be worth it to determine the level of support for the proposed Master Plan.

Thank you for your consideration of this suggestion.

Chuck Tholen

--

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Marianne Gamboa
Communications Director
City of Birmingham
151 Martin Street
Birmingham, Michigan 48009
Phone 248.530.1812
Fax 248.530.1072

Connect with the City of Birmingham:

www.bhamgov.org

Let's connect! Receive the city newsletter and alerts about YOUR neighborhood at www.bhamgov.org/enews.

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BIRMINGHAM
A WALKABLE CITY

MEMORANDUM
Finance Department

DATE: **May 11, 2023**

TO: **Thomas M. Markus, City Manager**

FROM: **Mark Gerber, Finance Director/Treasurer**

SUBJECT: **Water/Sewer Rate Changes for 2023-2024**

INTRODUCTION:
Every year the City Commission sets water and sewer rates for the new fiscal year based on the approved Water and Sewage Disposal Fund budgets.

BACKGROUND:
On April 29, 2023, the City Commission held a public hearing on the recommended budget for fiscal year 2023-2024. During this hearing, the City Commission reviewed the Water and Sewer Fund budgets proposed for 2023-2024 along with recommended changes to the water and sewer rates. These proposed rates were based on estimated costs.

Since that time, the City has received updated sanitary and storm water costs from the Oakland County Water Resources Commissioner. Based on the updated information, the sanitary sewage disposal rate and the storm water fees will need to change from what was proposed.

LEGAL REVIEW:
No legal review necessary.

FISCAL IMPACT:
<u>Water Rates</u>
Water rates for 2023-2024 are recommended to increase $.46 from $5.67 to $6.13/1,000 gallons of water used, or 8.1%. The increase would raise the annual cost to the average homeowner using 90 units of water by $41.40. This is the same increase as presented in the recommended budget document and is largely due to funding more infrastructure improvements from fees rather than property taxes. Other factors for the increase include an increase in the cost of water purchased, lower City-wide water consumption, and an increase in City maintenance costs.

<u>Sewer Rates</u>
Sewer rates are recommended to increase $.49 from $9.30 to $9.79/1,000 gallons of water used, or 5.3%. The increase would raise the annual cost to the average homeowner using 90 units of water by $44.10. This recommended rate is higher than what was in the recommended budget

document by $.14. As discussed at the budget hearing, the rate in the recommended budget document assumed an increase in sanitary sewage disposal costs of 4%. The increase in sanitary sewage disposal will actually be 5.7%. A majority of the increase in the rates is the result of the increase in sewage disposal costs. Other factors increasing the rate include a decrease in City-wide water consumption and an increase in funds needed for sewer capital improvement projects.

Storm Water Rates

Storm water rates are recommended to increase from $248 to $282, or $34 per ESWU (Equivalent Storm Water Unit) for the Evergreen-Farmington Sewage Disposal District and from $273 to $293, or $20 per ESWU for Southeast Oakland Sewage Disposal District, annually. The recommended Evergreen-Farmington Sewage Disposal District and George W. Kuhn Drainage District storm water rates are higher than what was in the proposed budget document as a result of higher than estimated costs. We did not have the revised storm water costs for the Evergreen-Farmington Sewage Disposal District at the time the budget was approved, so a budget amendment will be necessary.

Industrial Surcharge and Industrial Waste Control Charge (IWC)

The charges for Industrial Surcharge and Industrial Waste Control Charge are determined by Great Lakes Water Authority (GLWA). These charges are collected by the City and remitted to GLWA. The City does not keep any of the money it collects for these fees. The Industrial Waste Control Charge is scheduled to increase approximately 1.7%. Currently, there is one Birmingham customer charged an Industrial Surcharge.

The new rates will take affect for all billings where the read date is on or after July 1, 2023.

Below are the recommended fee changes:

FEES, CHARGES, BONDS AND INSURANCE AMENDMENT

DEPARTMENT OF PUBLIC SERVICE

Section	Existing Fee	Proposed Fee	Change Code
Water			
Additional charge for water used:			
For each 1,000 gallons or part thereof	$ 5.67	$ 6.13	B

FINANCE

Section	Existing Fee	Proposed Fee	Change Code
Sewer Service Rates (Chapter 114)			
For each 1,000 gallons or part thereof	$ 9.30	$ 9.79	B
Storm Water Utility Fee (Chapter 114)			
Evergreen-Farmington Sewage Disposal District			
For each Equivalent Storm Water Unit (ESWU)			
Quarterly Fee	$ 62.00	$ 70.50	B
Monthly Fee	$ 20.67	$ 23.50	B

Southeast Oakland County Sewage Disposal District

For each Equivalent Storm Water Unit (ESWU)

Quarterly Fee	$ 68.25	$ 73.25	B
Monthly Fee	$ 22.75	$ 24.42	B

Industrial Surcharge (Chapter 114)

An industrial surcharge shall be levied against industrial and commercial customers contributing sewage to the system with concentrations of pollutants exceeding the levels described as follows:

Amounts of Industrial Surcharge - Total Charge per pound of excess pollutants

Biochemical oxygen demand (BOD), over 275 mg/l	$ 0.351	$ 0.361	C
Total suspended solids (TSS), over 350 mg/l	$ 0.482	$ 0.496	C
Phosphorus (P), over 12 mg/l	$ 6.448	$ 6.629	C
Fats, oils, grease (FOG) over 100 mg/l	$ 0.112	$ 0.115	C

Industrial Waste Control IWC (Chapter 114)

An industrial waste control charge shall be levied against all non-residential properties, in accordance with rates established by resolution.

Meter Size - Quarterly Charge

5/8"	$ 10.74	$ 10.92	C
3/4"	$ 16.11	$ 16.38	C
1"	$ 26.85	$ 27.30	C
1 1/2"	$ 59.07	$ 60.06	C
2"	$ 85.92	$ 87.36	C
3"	$ 155.73	$ 158.34	C
4"	$ 214.80	$ 218.40	C
6"	$ 322.20	$ 327.60	C
8"	$ 537.00	$ 546.00	C
10"	$ 751.80	$ 764.40	C
12"	$ 859.20	$ 873.60	C
14"	$1,074.00	$1,092.00	C
16"	$1,288.80	$1,310.40	C
18"	$1,503.60	$1,528.80	C
20"	$1,718.40	$1,747.20	C
24"	$1,933.20	$1,965.60	C
30"	$2,148.00	$2,184.00	C

36"	$2,362.80	$2,402.40	C
48"	$2,577.60	$2,620.80	C

CHANGE CODES

A. Fee has remained the same for many years
B. Proposed fee covers current costs
C. Pass through costs that reflects actual cost of service
D. Fee consistent with neighboring communities
E. New fee
F. Increase to cover normal inflationary increase
G. No longer provide this service
H. Other – Explain

PUBLIC COMMUNICATIONS:
Water and sewer rates were discussed at the public hearing for the recommended budget on April 29, 2023.

SUMMARY:
It is recommended that the City Commission amend the Schedule of Fees, Charges, Bonds and Insurance for changes in water, sewer, storm water, industrial surcharge, and industrial waste control charge rates effective for bills with read dates on or after July 1, 2023 as recommended above and approve a budget amendment to the 2023-2024 Sewage Disposal Fund for the increase in the Evergreen-Farmington Sewage Disposal storm water costs.

ATTACHMENTS:
None.

SUGGESTED COMMISSION ACTION:
Make a motion adopting a resolution to amend the Schedule of Fees, Charges, Bonds and Insurance for changes in water, sewer, storm water, industrial surcharge, and industrial waste control charge rates effective for bills with read dates on or after July 1, 2023 as recommended in this report and approve the appropriation and amendment to the 2023-2024 Sewage Disposal Fund as follows:

Revenues:

590.0-000.000-642.0003	Charges for Services-Storm Water	$174,740

Expenses:

590.0-537.000-927.0100	Public Works-Acacia RTB	$ 24,940
590.0-537.000-927.0200	Public Works-Birmingham RTB	45,440
590.0-537.000-927.0300	Public Works-Bloomfield RTB	104,360
Total Expenses		$174,740

BIRMINGHAM
A WALKABLE CITY

MEMORANDUM

Legal Department

DATE: May 16, 2023

TO: Thomas M. Markus, City Manager and City Commission

FROM: Mary M. Kucharek

SUBJECT: Request for Closed Session Under MCL § 15.268 Sec. 8(d) of the Open Meetings Act

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INTRODUCTION:

- This matter concerns the potential purchase of real property, which can be discussed in closed session.

LEGAL REVIEW:

- We are requesting closed session on May 22, 2023 pursuant to MCL § 15.268 Sec. 8(d) to discuss the potential purchase of real property.

FISCAL IMPACT:

- To be discussed in closed session.

PUBLIC COMMUNICATIONS:

- None.

ATTACHMENTS:

- Open Meetings Act (Excerpt) Act 267 of 1976, MCL § 15.268 Closed sessions; permissible purposes, Sec. 8(d).

SUGGESTED COMMISSION ACTION:

- To make a motion adopting a resolution to meet in closed session to discuss the potential purchase of real property pursuant to MCL § 15.268 Sec. 8(d) of the Open Meetings Act.

OPEN MEETINGS ACT (EXCERPT)
Act 267 of 1976

15.268 Closed sessions; permissible purposes; applicability to independent citizens redistricting commission.

Sec. 8. (1) Except as otherwise provided in subsection (2), a public body may meet in a closed session only for the following purposes:

(a) To consider the dismissal, suspension, or disciplining of, or to hear complaints or charges brought against, or to consider a periodic personnel evaluation of, a public officer, employee, staff member, or individual agent, if the named individual requests a closed hearing. An individual requesting a closed hearing may rescind the request at any time, in which case the matter at issue must be considered after the rescission only in open sessions.

(b) To consider the dismissal, suspension, or disciplining of a student if the public body is part of the school district, intermediate school district, or institution of higher education that the student is attending, and if the student or the student's parent or guardian requests a closed hearing.

(c) For strategy and negotiation sessions connected with the negotiation of a collective bargaining agreement if either negotiating party requests a closed hearing.

(d) To consider the purchase or lease of real property up to the time an option to purchase or lease that real property is obtained.

(e) To consult with its attorney regarding trial or settlement strategy in connection with specific pending litigation, but only if an open meeting would have a detrimental financial effect on the litigating or settlement position of the public body.

(f) To review and consider the contents of an application for employment or appointment to a public office if the candidate requests that the application remain confidential. However, except as otherwise provided in this subdivision, all interviews by a public body for employment or appointment to a public office must be held in an open meeting pursuant to this act. This subdivision does not apply to a public office described in subdivision (j).

(g) Partisan caucuses of members of the state legislature.

(h) To consider material exempt from discussion or disclosure by state or federal statute.

(i) For a compliance conference conducted under section 16231 of the public health code, 1978 PA 368, MCL 333.16231, before a complaint is issued.

(j) In the process of searching for and selecting a president of an institution of higher education established under section 4, 5, or 6 of article VIII of the state constitution of 1963, to review the specific contents of an application, to conduct an interview with a candidate, or to discuss the specific qualifications of a candidate if the particular process of searching for and selecting a president of an institution of higher education meets all of the following requirements:

(*i*) The search committee in the process, appointed by the governing board, consists of at least 1 student of the institution, 1 faculty member of the institution, 1 administrator of the institution, 1 alumnus of the institution, and 1 representative of the general public. The search committee also may include 1 or more members of the governing board of the institution, but the number does not constitute a quorum of the governing board. However, the search committee must not be constituted in such a way that any 1 of the groups described in this subparagraph constitutes a majority of the search committee.

(*ii*) After the search committee recommends the 5 final candidates, the governing board does not take a vote on a final selection for the president until at least 30 days after the 5 final candidates have been publicly identified by the search committee.

(*iii*) The deliberations and vote of the governing board of the institution on selecting the president take place in an open session of the governing board.

(k) For a school board to consider security planning to address existing threats or prevent potential threats to the safety of the students and staff. As used in this subdivision, "school board" means any of the following:

(*i*) That term as defined in section 3 of the revised school code, 1976 PA 451, MCL 380.3.

(*ii*) An intermediate school board as that term is defined in section 4 of the revised school code, 1976 PA 451, MCL 380.4.

(*iii*) A board of directors of a public school academy as described in section 502 of the revised school code, 1976 PA 451, MCL 380.502.

(*iv*) The local governing board of a public community or junior college as described in section 7 of article VIII of the state constitution of 1963.

(*l*) For a county veteran services committee to interview a veteran or a veteran's spouse or dependent regarding that individual's application for benefits or financial assistance and discuss that individual's

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application for benefits or financial assistance, if the applicant requests a closed hearing. This subdivision does not apply to a county veteran services committee voting on whether to grant or deny an individual's application for benefits or financial assistance. As used in this subdivision, "county veteran services committee" means a committee created by a county board of commissioners under section 1 of 1953 PA 192, MCL 35.621, or a soldiers' relief commission created under section 2 of 1899 PA 214, MCL 35.22.

(2) This act does not permit the independent citizens redistricting commission to meet in closed session for any purpose. As used in this subsection, "independent citizens redistricting commission" means the independent citizens redistricting commission for state legislative and congressional districts created in section 6 of article IV of the state constitution of 1963.

History: 1976, Act 267, Eff. Mar. 31, 1977;—Am. 1984, Act 202, Imd. Eff. July 3, 1984;—Am. 1993, Act 81, Eff. Apr. 1, 1994;—Am. 1996, Act 464, Imd. Eff. Dec. 26, 1996;—Am. 2018, Act 467, Eff. Mar. 27, 2019;—Am. 2021, Act 31, Imd. Eff. June 24, 2021;—Am. 2021, Act 166, Imd. Eff. Dec. 27, 2021.

Compiler's note: Enacting section 1 of Act 166 of 2021 provides:

"Enacting section 1. This amendatory act is intended to clarify that the independent citizens redistricting commission for state legislative and congressional districts, since its establishment under section 6 of article IV of the state constitution of 1963, has been required to conduct all of its business at open meetings, without exception and in a manner that invites wide public participation throughout this state, as provided in section 6(10) of article IV of the state constitution of 1963, and that the commission continues to be subject to this unqualified open meetings requirement."

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BIRMINGHAM
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NOTICE OF INTENTION TO APPOINT TO RETIRMENT BOARD

At the regular meeting of Monday, June 26, 2023, the Birmingham City Commission intends to appoint one member to serve a three-year term to expire July 1, 2026.

The retirement board shall consist of seven voting trustees as follows:

(1) The mayor.

(2) A city commissioner to be selected by the city commission and to serve at the pleasure of the city commission.

(3) The city manager.

(4) A citizen, who is an elector of the city, and who is not eligible to participate in the retirement system as a member or retired member, to be appointed by the mayor by and with the consent of the city commission.

(5) A police member to be elected by the police members.

(6) A fire member to be elected by the fire members.

(7) A general member to be elected by the general members.

In addition, there shall be one nonvoting ex officio retired member/beneficiary member to be elected by the retired members and beneficiaries currently receiving benefits from the system.

RETIREMENT BOARD DUTIES

The retirement board consists of seven members who serve three-year terms without compensation. The retirement board shall hold meetings regularly, at least one in each quarter year. The retirement board shall have the power to administer, manage, and properly operate the retirement system, and to make effective the applicable provisions of the City Code.

Interested citizens may submit an application available at the city clerk's office or online at www.bhamgov.org/boardopportunites. Applications must be submitted to the city clerk's office on or before noon on Wednesday, June 21, 2023. These applications will appear in the public agenda for the regular meeting at which time the City Commission will discuss recommendations, and may make nominations and vote on the appointments.

Criteria/Qualifications of Open Position	**Date Applications Due** **(by noon)**	**Date of Interview**
Elector of the city who is not eligible to participate in the retirement system as a member or retired member.	June 21, 2023	June 26, 2023

NOTE: All members of boards and commissions are subject to the provisions of City of Birmingham City Code Chapter 2, Article IX, Ethics and the filing of the Affidavit and Disclosure Statement.

RETIREMENT BOARD

Chapter 2 – Section 2-207 – Eight members for three-year terms:
Mayor, city commissioner, city manager, citizen who is elector and is not eligible to participate in the retirement system, police member, fire member, general city member and non-voting retiree/beneficiary member.

Last Name Home Address	First Name	Home Business Fax E-Mail	Appointed	Term Expires
Bartalino 572 S. Adams	**Matthew**	(248) 530-1900 *mbartalino@bhamgov.org*	8/3/2015 Fire Dept. Member - Elected by Fire Dept.	7/1/2021
Conti 759 Greenwood	**Christopher**	248-594-1568 (313) 418-1673 *conti8@comcast.net*	9/26/2005 Citizen Member - Appointed by the Commission	7/1/2023
Johnson 151 Martin	**Bruce**	(248) 530-1842 *bjohnson@bhamgov.org*	2/28/2020 General Member	7/1/2023
Longe 1253 Yosemite	**Therese**	(248) 310-2535 *tlonge@bhamgov.org*	11/11/2019 Mayor	11/1/2023
Markus 151 Martin	**Thomas**	(248)530-1808 *tmarkus@bhamgov.org*	City Manager	

Last Name Home Address	First Name	Home Business Fax E-Mail	Appointed	Term Expires
McLain 1400 Haynes	**Elaine**	(248)225-9903 *emclain@bhamgov.org*	11/14/2022 Mayor Pro Tem	11/1/2023
VanGorder 1800 E. Lincoln	**John**	(248) 563-7915	11/11/2020 Non voting Retiree member - elected by retirees	7/1/2025
Whipple 151 Martin	**Jeff**	(248) 530-1870 *jwhipple@bhamgov.org*	7/16/2007 Police Member - Elected by Police Dept	7/1/2025

CITY MANAGER'S REPORT

May 2023

Baldwin Public Library

Holiday Closures

The Library will be closed for Memorial Day weekend from Saturday, May 27 through Monday, May 29. It will reopen on Tuesday, May 30 at 9:00 a.m.

The Library will be closed on Monday, June 19 in observance of the Juneteenth holiday.

Library Board Update

The Library Board met on May 15, 2023 for its regular meeting. The board approved updates to several policies, including the Library Card Policy, Fines and Fees Policy, Electronic Device, Network, and Internet Use Policy, Collection Development Policy, Fund Balance Policy, Credit Card Policy, Financial Policy, Trust Investment Policy, and Staff Development Policy.

Phase 3 Construction Project of the Library's Front Entrance

The project will start on or shortly after Wednesday, July 5, 2023. MCD and PCI Dailey have completed all construction pre-bid meetings. PCI Dailey is currently preparing the AIA contract for Construction Management services. The GMP for the project is currently set at $3,688,896. Board President Wheeler, Director Craft, and City Manager Markus will sign this contract once it is approved by the City Attorney.

The City of Birmingham's Fire Marshal and Building Official have reviewed the site plan for the project. The Children's Terrace door will be the temporary entrance to the library for the duration of the project (July 2023 – March 2024). A construction fence will be placed along Bates Street and Merrill Street and signs will be placed on the fencing directing visitors to the north entrance. A temporary Knox Box will be placed outside the Terrace Door so that Birmingham Fire Department personnel can access the building in case of an emergency. The loading dock door will be a second means of egress. As such, the loading dock steps are currently being repaired so that they will be operational by July 5. The full loading dock will be resurfaced and repaired in FY23-24, per the City's maintenance plan.

A temporary ramp will be placed on the north side of the building to make the Youth Terrace door fully ADA-accessible. As you walk into the new temporary entrance, two circulation workstations will be set up inside the door. The first station will face the door. The second station will be located next to the existing Youth self-check machine.

The curbside drop box will be temporarily moved to the north side of the building at the southwest corner of Martin and Bates street. One diagonal parking spot will be blocked off for drop box access. DPS will relocate the box for the library at no charge.

During the project, the Rotary half of the Rotary/Donor room will be closed off for construction staging and installation of the new HVAC system and elevator. Because of this, we are reducing some of our large scale programs for adults and children throughout the duration of the project due to lack of meeting space. Beginning in July or August, all library board meetings will be held in the Board Room. BCTV will broadcast the recording of the meeting on local television.

Library Tour

If you'd like to learn even more about the library, join Library Director Rebekah Craft for a Behind the Scenes Tour. You'll visit staff areas, learn how items are added to the collection, and hear about new programs and services. The next tour will meet in the Library's vestibule on Thursday, June 15 at 4:00 p.m.

Learn.Connect.Discover Newsletter

Baldwin's quarterly Learn.Connect.Discover newsletter has been mailed to all homes in Birmingham and includes information about upcoming programs this summer. Register for these upcoming programs and more at baldwinlib.org/calendar.

College Info Series: How to Write a Great College Essay

Wednesday, May 24 — 7:00 p.m. to 8:00 p.m.

The college essay is an important part of the application where you can really differentiate yourself. What do you want the admissions committee to know about you? What story do you want to tell? We'll talk about tips and tricks for writing a successful Personal Statement. Teens and parents are welcome. You may attend these sessions in-person or on Zoom. Registration required.

Boblo Boats: A Detroit Ferry Tale

Sunday, June 4 — 2:00 p.m. to 4:00 p.m.

When Ste. Claire and SS Columbia sounded their whistles, every Detroit kid knew it heralded the coming of summer and the magic of ferrying over to nearby Boblo Island Amusement Park. After 85 years of operation, these two sister steamships – the oldest in America - awaken from a deep slumber to find a devoted team of enthusiasts have set out to rescue them from their deteriorating state. SS Columbia has been whisked away to New York while Claire's fate rests in the hands of an unlikely band of heroes: a doctor, a psychic, and an amusement park fanatic. Martha Reeves, the Motown legend, narrates this revelatory fable-doc that's full of heart and hard truths about a challenging restoration. Join us for a showing of this local documentary and a Q&A session with the filmmaker Aaron Schillinger. This is an in person event.

Summer Reading Kickoff!

Friday, June 9 — 1:00 p.m. to 4:00 p.m.

Join us as we kick off "All Together Now" Summer Reading 2023 at the library, and enjoy crafts, games, an ice cream truck and more. There are summer reading challenges for adults, teens and children - sign up and track your progress at baldwinlib.beanstack.org, from June 9 to August 4.

The Birmingham Museum

Juneteenth became a federal holiday in 2021 after the passage of Senate Bill 465 following decades of effort by Opal Lee, a retired teacher and African American activist. Juneteenth commemorates the emancipation of enslaved African Americans, and is a contraction of "June" and "nineteenth," in reference

to the June 19, 1865 proclamation of freedom for enslaved people in Texas. Since that time, Juneteenth has been broadly observed as a celebration of African American culture in many parts of the U.S.

In honor of Juneteenth, the Birmingham Museum will display a special exhibit banner during June at the Municipal Building. It will feature Birmingham's connection to the Underground Railroad and the stories of formerly enslaved **George and Eliza Taylor** and abolitionist **Elijah Fish**. The Taylors and Fish are buried in Greenwood Cemetery, and their burial sites are now listed on the National Park Service's Underground Railroad Network to Freedom and the Michigan Freedom Trail. This retractable banner is the first of several planned by the museum to create portable exhibits that can be displayed throughout the city. The banners will focus on varying themes of Birmingham history as an expansion of our community outreach programs, and will be available as loans to schools and civic organizations.

Birmingham Shopping District (BSD)

Strategic Planning

The Birmingham Shopping District (BSD) approved its Strategic Plan at the April 19, 2023 Board meeting. The BSD Board started this process by holding a Strategic Planning meeting on Feb 6, 2023, with Board and committee members, as well as local businesses and City staff, to brainstorm and chart the next three-to-five-year strategy for Downtown Birmingham. The strategic plan is informed not only by those in attendance at the meeting, but also from a survey sent out prior to the meeting and individual conversations with key stakeholders. The Board and Committee members then met on April 4, 2023, in a work session to finalize the attached draft plan.

The plan includes a prioritization of internal and external goals, as well as key performance indicators. During this overall process, the Board further refined its vision and mission statements which are included in the plan.

The BSD's focus is to grow the economy by broadening the appeal of Downtown Birmingham that attracts and retains businesses and residents. It will do this through business recruitment and retention, marketing and promotion of the district, and maintaining and enhancing the downtown environment. For the next 3-5 years, the BSD will focus on the following goals:

- Increasing Local Frequency
- Expanding Regional Attraction
- Balancing the Business Mix
- Improving Ease of Access
- Sustaining Services & Appeal
- Increasing the BSD Value

Decisions by the Board on what and how it will achieve these goals will be based on the fundamental beliefs and driving forces of the BSD, including:

- Acting for the Collective Interest
- Engaging its Stakeholders
- Being Sustainable
- Bringing a Return on Investment

View the full Strategic Plan here.

Notable Recognition

The BSD Board recently acknowledged a few long-standing businesses in the district for their years in business, including Tiffany Florist for 50 years, and The Community House and Village Players for 100 years each. The BSD also recognized Melinda Comerford, BSD Office Specialist, for 30 years of service. Executive Director Cristina Sheppard-Decius was recognized at the Main Street Oakland County Main Event for her 23 years of service in downtown management in Michigan.

Business Mix Analysis and Recommendations

The BSD Business Development Committee presented its business mix analysis and recommendations to the BSD Board at its May 4, 2023 meeting. Highlights of the analysis included:

- 71% of businesses are local entrepreneurs, which is a high average in comparison to the benchmark communities of Birmingham. Therefore, the BSD has the ability to attract a few national retailers without jeopardizing the local feel; and
- There is an opportunity to fine tune the business mix in the BSD, such as meeting the lunchtime needs of office workers with fast casual options, and there is room for growth in the apparel, books/entertainment, toys/hobbies, children's, eyewear, health, and electronics/technology categories.

The Business Development Committee will be focusing its efforts on increasing local frequency of consumers and regional attraction by:

- Recruiting businesses that will appeal to office workers and residents to drive daily foot traffic; and
- identify and help recruit regional small businesses with incentives and resources to fill gaps in product segments and maintain the local feel; and
- Influence higher-end, sophisticated and experiential national retailers, especially in apparel categories, by developing retail attraction assets and building landlord/broker relationships.

The Board suggested a few minor additions to the report, therefore, the final full report will be made available next month. The BSD has also updated its Retail Market Profile for business attraction efforts.

New Restaurant Promotion

The BSD is launching a new restaurant promotion, the Birmingham Rosé Soirée, June 5-11, offering featured dishes paired with rose wines, cocktails and mocktails at participating restaurants. A portion of each purchase will go to Cap & Conquer, a local charity that breaks down financial and educational barriers for reducing hair loss during chemotherapy. Each time you dine or purchase a pink drink, you can also enter for a chance to win a $1,000 Birmingham Bucks E-gift card shopping spree. For details and the growing list of participating businesses, go to https://www.allinbirmingham.com/visitors/rose.

BSD Summer Calendar of Events

Birmingham Farmers Market	Every Sunday now until Oct. 29 at Lot 6
Movie Nights	June 9, July 14, August 11 and September 8 at Booth Park
Birmingham Rosé Soiŕee	June 5-11
Super Farmer Day @ Farmers Market	June 25
Day on the Town	July 29
Corn Festival @ Farmers Market	August 6
Birmingham Cruise Event	August 19
Harvest Festival @ Farmers Market	September 10

BSD Bylaws & New Committee Members
The BSD adopted bylaws at its April 19, 2023, Board meeting. The bylaws set forth rules for attendance, committee structure, responsibilities and reinforces the State statute and local ordinance that created the BSD. A copy of the bylaws will be available online shortly.

A slate of Committee members, including some new community members, were also appointed on May 4, 2023, including Carlie Quezada of Supernatural Lingerie, Angela Thomas of Aeres Real Estate, Daniel C. Gilbert of Bank of Ann Arbor and Richard Lilley, resident and Dream Cruise aficionado.

Annual Corporate Sponsor Packet
The BSD has created an annual corporate sponsorship package to showcase all of the opportunities available throughout the year, and the marketing success statistics with our events and programs. Much of the events and programs of the BSD wouldn't be possible without the help of our partners like Chevy, Bank of Ann Arbor, Wells Fargo, SMART, Mercedes-Benz of Bloomfield Hills, and many more!

2023 Dashboard Metrics
Retail Occupancy Rate - 96% (out of 1.5 million sq.ft.)
Office Occupancy - 89% (out of 2 million sq.ft.)
9 New Business Openings in 2023 (9 more in process)
Commercial, Mixed-Use & Residential Development Projects In Construction/Planning - 12 projects totaling 827,727 sq. ft.

Building Department

Ed Rosett to Serve as Reciprocal Electrical Council of Michigan Board President
Electrical Inspector Ed Rosett was elected by his peers to serve as President on the board of the Reciprocal Electrical Council of Michigan for the next two years. This is Ed's second time in this role. He first served as president from 2012 -2014. The mission of the organization is to educate and train both electrical inspectors and contractors to promote uniform application of the code and industry professionalism.

Staff Update
Two of the department's four front line permit technicians recently left employment with the City. One retired after 23 years and the other went to another community. We are in process of replacing these positions and ask for your patience while we welcome and train new individuals for these roles. Our permit processing times will increase a little during this period.

Monthly Report
The Building Department's monthly report provides an update on the following construction activity: building permits issued, building inspections conducted, trades permits issued and trades inspections conducted. In April, we processed 346 online permit applications bringing this year's total to 1,239.

City Clerk's Office

Celebrate Birmingham Parade and Party in Shain Park
The highly anticipated Celebrate Birmingham Hometown Parade and Party took place on May 21, 2023 in Downtown Birmingham and Shain Park. The event was well attended and had something for everybody

to enjoy. The Clerk's office extends its heartfelt gratitude to the entire community and all those who joined the parade or participated in the activities at Shain Park.

Many thanks to our sponsors!

- Parade Presenting Sponsor: Bank of Ann Arbor - Birmingham
- Party in Shain Park Presenting Sponsor: Bloom Pediatrics
- Parade Master Beier Howlett, PC
- Parade Supporter Piety Hill DAR
- Parade Friends Birmingham Bloomfield Area Democratic Club and Goldfish Swim Club

Thank you to our parade participants:

Baldwin Public Library, Birmingham Bloomfield Area Democratic Club, Birmingham Martial Arts, Birmingham Next, Bloom Pediatrics, Bloomfield Village Fire Department, Disabled American Veterans South Oakland County Chapter 19, Dream Arts Company, Distinguished Gentleman's Ride Motorcycle group, Harlan Elementary Girl Scouts, Goldfish Swim School, Hunter House Hamburgers, Kate DeGood School of Dance, Oakland County Sheriff, Pierce Elementary Girl Scout Daisies, Piety Hill Chapter of the Daughters of the American Revolution, Redford Township Unicycle Club Inc, Seaholm Marching Band, Veterans of the Senior Men's Club of Birmingham.

Thank you to all the organizations which made this a success:

Birmingham City Commission, Birmingham Communications team, Birmingham Clerk's Office, Birmingham Police Department, Birmingham Fire Department, Birmingham Department of Public Services, Birmingham Golf Course, Birmingham Area Cable Board, Oakland County Parks and Recreation, and Arts and Scraps.

General Election on November 7, 2023

Birmingham will hold a general election on Tuesday, November 7, 2023. At this time, the ballot will include four Birmingham Commissioner seats and three Birmingham Library Board positions, all for four-year terms. Filing deadline for petitions and candidates is 4:00 p.m. on July 25, 2023.

City Commission and Library Board Candidate and Petition Information

City Commission and Library Board candidates must be registered voters and residents for at least one year before the November 7, 2023 election. Petition packets containing all the information needed to run for these positions are available at the City Clerk's Office during regular business hours. Candidates must complete the petition packet's required paperwork and collect more than 25 but not more than 50 signatures from Birmingham registered voters. Signers must print their names with their current address and date. A signer may only sign one petition for each available seat; in this election that means a single voter can sign no more than four City Commission petitions and three Library Board petitions. The Clerk's Office must receive all candidates' paperwork no later than July 25, 2023 at 4:00 p.m., after which the Clerk's Office will review to ensure all petition requirements are met. The clerk cannot extend the filing deadline for any reason. For more information regarding petition and candidate filing please visit www.bhamgov.org/elections.

Absentee Voter Information

Voters who wish to vote absentee will need to fill out an Absentee Ballot Application. This application will be mailed out to anyone on the Permanent Absentee Application List in late August for the November 7, 2023 election. An application will need to be completed and returned to the

Birmingham Clerk's office in order to receive the absentee ballot. If you are not on the Permanent list, you can request an Absentee Ballot application by going to www.michigan.gov/vote after August 24, 2023.

Absentee ballots will be mailed not earlier than September 28, 2023 to voters who submitted an application. Absentee ballots can be returned in person to the Clerk's office, in the dropbox located behind City Hall, or mailed to City Clerk, P.O. Box 3001, Birmingham, MI 48012.

New Military and Overseas Voter Changes

The governor signed legislation on May 3, 2023 to allow additional time to receive absentee voter ballots from military and overseas voters. This change comes after Michiganders approved Ballot Proposal 22-2 to amend the state's Constitution last year. The new law states that absentee ballots from military and overseas voters will be counted if the ballot return envelope was postmarked on or before Election Day and received within six days following the election. Voters who are in the military or will be overseas during the November 7, 2023 election must apply for a MOVE ballot at https://www.fvap.gov/michigan.

Greenwood Cemetery Advisory Board

The next meeting for the Greenwood Cemetery Advisory Board will be Friday, June 2nd, 2023 at 8:30 am. The board will be discussing future grave release recommendations and participating in strategic planning.

Ethics Board

The Board of Ethics met on Tuesday, May 15, 2023, at 2 p.m. to review the draft advisory opinion 2023-01 Requested by the City Manager Thomas M. Markus regarding City Commissioner Brad Host.

Detroit Board of Ethics Conference

Mayor Pro Tem McLain, Ethics Board Chairperson James D. Robb, and City Clerk Bingham attended the first Detroit Board of Ethics Conference on May 16, 2023. Chairperson Robb sat on a panel regarding strengthening Ethics Ordinances and Enforcement. Other topics of the conference included rules of debate, improving the deliberation process, and Open Meetings Act laws.

Board Appointments

The City of Birmingham is looking for dedicated individuals who want to give back to their community by serving on one of our many boards or commissions. Birmingham's different boards and commissions make recommendations that shape the city's future. Serving on a board or commission is a great way to get involved in your community, meet new people and make a positive impact. Visit www.bhamgov.org/boardopportunities to view all the available openings and apply to make a difference.

Board	**Openings**	**Application Due by Noon**	**Interview/ Appointment at City Commission meeting 7:30 pm**
Ad Hoc Aging in Place Committee	6 Members	6/21/23	6/26/23
Advisory Parking Committee	1 resident shopper term ending 9/1/2025 1 large retail member term ending	Until Filled	

	9/1/2025		
Architectural Review Committee	1 regular member term ending 4/11/2026 1 regular member term ending 4/11/2025	Until Filled	
Birmingham Shopping District	1 business representative term ending 11/16/2026	Until Filled	
Birmingham Area Cable Board	1 regular member term ending 3/30/2026 1 regular member term ending 3/30/2024 1 alternate member term ending 3/30/2025	Until Filled	
Board of Review	2 alternate members term ending 12/31/2025	Until Filled	
Board of Zoning Appeals	1 alternate members term ending 2/18/2026	Until Filled	
Brownfield Redevelopment Authority	1 regular member term ending 5/23/2026 1 regular member term ending 5/23/2024	Until Filled	
Ethics Board	2 alternate members term ending 6/30/2026 1 regular member term ending 6/30/2026	ALT: 5/17/2023 REG: 6/21/2023	ALT: 5/22/2023 REG: 6/28/2023
Greenwood Cemetery Advisory Board	1 regular member term expiring 7/6/2024 2 regular members terms expiring 7/6/2026	5/31/23	6/5/23

City Manager's Office

Update on 48th District Court

In 2021, Bloomfield Hills withdrew from the funding agreement for the 48th District Court that had been in place since 1985 between the cities of Bloomfield Hills and Birmingham, and Bloomfield Township and

W. Bloomfield Township. As a result, the remaining three funding units negotiated a new agreement, which allows any funding unit to opt out of the agreement at the end of January in each year, with all obligations under the agreement then ceasing at the end of the calendar year in which the notice is given. In January 2022, the City of Birmingham considered providing notice to the other funding units to opt out of the agreement at the end of 2022. The City Commission ultimately decided not to do so, and directed the City Manager to negotiate a more equitable funding agreement by January 2023 to avoid the City providing notice to opt out of the agreement.

On November 30, 2022, representatives from all seven jurisdictions that make up the 48th District Court met at the courthouse. Mr. Dunn, Judge D'Agostini and Judge Barron presented the details of the court's budget request for the upcoming year. There was much discussion regarding the expenditures proposed, cost increases, sources of funding and related issues. Representatives from the seven jurisdictions questioned court staff on the proposed expenditures, and once again the issue came up regarding the long term funding of the 48th District Court. After approximately one and a half hours of heated discussion, a verbal agreement was reached, in concept only. The conceptual agreement was that the four political subdivisions of Bloomfield Hills, Keego Harbor, Orchard Lake Village, and Sylvan Lake would agree to contribute their statutory revenues to the funding of the court in years where the court's expenditures exceed revenues, to offset the additional costs to the current funding units of Birmingham, Bloomfield Township and W. Bloomfield Township. Given that the meeting was attended by the management staff and some elected officials for many of the jurisdictions, it was agreed in concept that Birmingham would prepare a draft memorandum of understanding for consideration by the four non-funding political subdivisions based on the conceptual agreement. It was then discussed that this could be executed by the political subdivisions and attached as an exhibit to an updated funding agreement between Birmingham, Bloomfield Township and W. Bloomfield Township, to ensure funding for the court would remain in place without the need for costly litigation.

City staff prepared draft language consistent with the verbal agreement reached on November 30, 2022, and distributed to representatives for all seven jurisdictions in December 2022 in order to obtain conceptual agreement from all jurisdictions. The understanding was that once all four political subdivisions respond that this is, in concept at least, what the jurisdictions coalesced around in November, Birmingham would prepare a complete draft of the agreement for legal review and potential approval from the elected bodies of Bloomfield Hills, Keego Harbor, Orchard Lake and Sylvan Lake.

Based on the positive response received from representatives of Bloomfield Hills, Keego Harbor and Orchard Lake, the attached draft Political Subdivision Distribution / Funding agreement was prepared and distributed to representatives from all 7 jurisdictions of the 48th District Court. Sylvan Lake had outlined several concerns in response to the draft agreement. City staff conducted a lengthy telephone conference with the City Manager of Sylvan Lake, and ultimately came to an understanding on January 13, 2023.

Accordingly, a revised draft of the Political Subdivision / Funding agreement was distributed for review and approval. In years when the 48th District Court's total expenditures exceed total revenues, the proposed agreement establishes that the four political subdivisions agree to contribute their statutory revenues to the funding of the court to offset the additional costs that will be allocated to the three funding units. This will thus reduce the amount the City pays to the court in years when the court's total expenditures exceed total revenues.

In January, all four political subdivisions committed to conduct a legal review of the revised draft of the Political Subdivision Distribution / Funding agreement, and to have their respective elected body consider approval of the agreement.

Since that time, the City of Orchard Lake Village has conducted a legal review and placed the 48th District Court agreement on their council agendas as a standing item. The City Commission for the City of Bloomfield Hills has reviewed the draft agreement and authorized the city to work with the other political subdivisions to finalize the agreement. Keego Harbor has completed their legal review of the revised draft of the agreement. However, all three municipalities are waiting on word from Sylvan Lake that they are in agreement with the revised draft of the Political Subdivision Distribution / Funding agreement distributed in January in response to concerns raised by Sylvan Lake. All are hesitant to have the revised draft of the agreement approved by their elected bodies until Sylvan Lake has signed off on the changes they requested. The City Manager for Sylvan Lake indicated that the city has been overburdened with other time-sensitive issues, and will complete the approval process with their council shortly. Once the City Council for Sylvan Lake has approved the agreement, Keego Harbor, the City of Orchard Lake Village and the City of Bloomfield Hills will bring the final draft of the agreement to their elected bodies for approval. The executed Political Subdivision Distribution / Funding agreement will then be attached as an Addendum to the existing funding agreement for the 48th District Court with Bloomfield and W. Bloomfield Townships.

2022 Case Load Breakdown by Jurisdiction

At the November 14, 2022 City Commission workshop, commissioners requested a breakdown of court usage based on the percentage of caseloads for each of the 7 communities. The breakdown was provided at that time using actual case counts for 2018 and 2019, as well as the draft 2021 case counts, to calculate a 3 year average (excluding 2020 due to the pandemic). Actual case load percentages have now come in for 2022, and are reported below. These are the case load percentages that will be used to estimate each funding units share of payments to the court in 2023. As noted in the chart below, Birmingham's share of case load has increased over the previous years.

Jurisdiction	Average % of Case Load (last 3 years, excluding 2020, draft 2021)	2022 Actual Case Load
Birmingham	24%	31.6%
Bloomfield Hills	10%	7.11%
Bloomfield Township	34%	25.19%
Keego Harbor	3.5%	1.76%
Orchard Lake	6%	6.21%
Sylvan Lake	2%	1.47%
W. Bloomfield	20.5%	25.07%

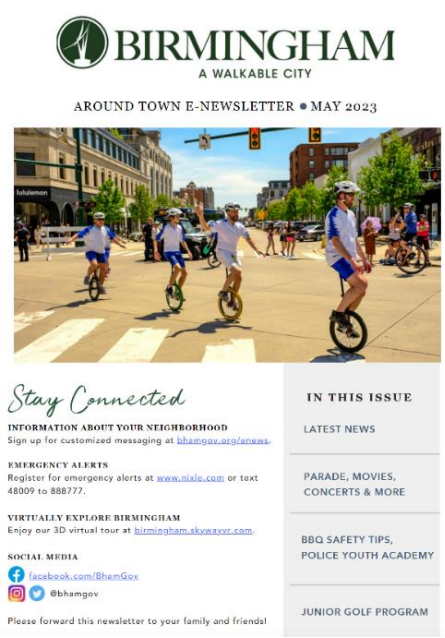
Pat Andrews Tribute Update

During a recent City Commission meeting, Commissioner Host stated the area intended for the tribute to Pat Andrews was too close to the intersection and should be moved further back onto the open Fire Station property. Follow this link to read correspondence between Fire Chief Paul Wells and City Manager Markus regarding the location of the tribute.

Communications

Around Town e-Newsletter

The communications team is working on the June edition of the Around Town e-Newsletter, which will include the Consumers Annual Report on Water Quality and information about summer events, Parks & Recreation bond projects, the inaugural Police Department Open House event, new businesses and more. Follow this link to view the May edition of the Around Town e-Newsletter.


BIRMINGHAM
A WALKABLE CITY

AROUND TOWN E-NEWSLETTER • MAY 2023

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IN THIS ISSUE
LATEST NEWS
PARADE, MOVIES, CONCERTS & MORE
BBQ SAFETY TIPS, POLICE YOUTH ACADEMY
JUNIOR GOLF PROGRAM

Summer Birmingham Beat Newsletter

Residents will receive the summer edition of The Birmingham Beat newsletter around July 1, 2023. The communications team is working on the publication, which will feature information about the Ad Hoc Environmental Sustainability Committee, Day On The Town, Birmingham Cruise Event, barbeque safety tips and more.

BIRMINGHAM CITY COMMISSION - UPCOMING AGENDA ITEMS

Topics brought up by the Commission

Meeting	Topic	Commissioner	Staff Follow Up	Dates Addressed	Status (resolved/ongoing)
In Progress					
5/8/23	Parking Operations	Baller	CM to direct staff	5/8 Request to discuss parking operations at a workshop meeting	In progress
5/8/23	Woodward Noise	Host	Baller & Host	5/8 - Request to discuss noise on Woodward as an agenda item	In progress
2/27/23	Bench and Little Library for Pat Andrews	Host	Host	3/13 - commission to discuss further - staff working on plans and cost estimate 5/8 - Estimated costs provided, item referred to B. Host for fundraising	In progress
12/5/22	Mayor/Mayor Pro Tem Selection	McLain	CM to direct staff	12/19 - Motion to make a workshop. Workshop Scheduled 5/8 5/8- CC direct CM to have staff prepare language in the Commission Rules of Procedure to hold a workshop before the first meeting in Nov for purposes of selecting Mayor and Mayor Pro Tem	In progress
11/14/22	Renters Rights	M: Host	Mary	11/28 CC Discussion Scheduled - Voted to make a	In progress

				formal agenda item at the next available meeting 1/23/23 Tabled 4/24 Tabled, will bring back	
1/10/22	Leaf Blowers	M:Baller S:Host	Nick Dupuis	1/24/22 - make formal item 10/3/22 Workshop - staff given direction to return with recommendation 4/3 Baller brought up issue again, commission consensus that it is a topic for sustainability board 5/8- Host recommends leaf blowers as a CC agenda item.	In Progress
1/10/22	Commissioner Conduct	No vote	Commission Workshop	2/14/22 - Workshop 2/28/22 Directed CM to prepare Code of Conduct for future agenda 7/11/22 - Initial presentation to Commission by CA 2/13/23 - City Commission reviewed draft Code and will provide feedback to CM for future workshop 4/24 Memo June 5 - Workshop Scheduled .	In progress
Resolved					
4/11/22	BBCC - Mental Health Workshop - More time to talk	M: Baller S: Haig	Marianne Gamboa	4/25/22 - clarify commissioners intent 5/9/22 - added time on the agenda to discuss Tom directed staff to add mental health info in city publications	Resolved
5/9/22	Pickleball	Baller, no vote	DPS	Agenda item 5/23/22	Installed on 6-3-22
1/24/22	Social Districts	M: Schafer S: Boutros	Nick Dupuis/Jana Ecker	2/14/22 - make formal item 3/9/22 - Workshop 3/14/22 - Informally brought up by Host 6/20/22 Commission and Planning Board Discussed	No formal action taken by the Commission
5/23/22	Commission Meeting Start Time	Baller	Mary Kucharek	On agenda for 6/27/22 - Mary to draft generic ordinance language and discuss in july On agenda for 7/11/22 - Commission decided not to proceed	No changes for now
8/15/22	Birmingham Country Club	M: Host S: Haig	Fairbairn, Dupuis, Clerk's Office	8/29 - CC Discussion Possibly plan to write a letter, invite bham cc and twp to meeting to collaborate	Resolved, letter sent

				*Draft a letter	
8/15/22	Speed Bumps	M: Haig S: Host	Grewe/Brooks	8/29 - Staff report *Further study by MMTB *Report/Resolved in March Mgr Report 2023	Resolved
9/12/22	Banner	M: Baller S: Host	TBD	11/14 CC discussion scheduled	Completed
12/5/22	Lighting to sustainability board	Haig	Nick Dupuis	12/19 - Direction for staff to prepare list for Sustainability Board	To be explored by Sustainability Board
6/13/22	Sustainability Board	M: Schafer S: Host	Nick Dupuis	On agenda for 6/27/22 - direction for staff to draft requirements to establish board, coming back at next available meeting 10/3/22 Workshop - staff given direction to return with recommendation 1/23/23 - ad hoc board established	Resolved
1/10/22	Food Trucks	M: Host S: Schafer	Nick Dupuis/Jana Ecker	1/24/22 - CC req. more info 3/9/22 - Workshop 3/14/22 - Informally brought up by Host 6/20/22 Commission and Planning Board Discussed 6/27/22 - City Manager Directed to encourage food trucks at all city sponsored events, BSD events, and direct the BSD to organize a rotation of food truck events	Staff monitoring
4/25/22	Improvements in Information Provision and Methodology	M: Haig S: Baller	TBD	1/9/23 M: Haig, S: Host To continue discussion -Addressed in Jan 2023 CM report	Resolved
3/13	Community foundation (review former letter from Kucharek)	Baller	CM/Atty	4/3 - see prior advice from atty Commission voted to not pursue	Resolved
3/28/22	City Manager Selection Process	M: Host S: Boutros	Managers Office & HR	4/25/22 - direct to formal agenda item 5/9/22 - New Business Item 5/23/22 CM report 10/3/22 - motion for CM to conduct formal recruitment 10/25/22 - CM recruitment portfolio posted 1/9/23 - Scheduling Interviews	Resolved

				2/8&2/9 First round interviews 2/15 Meet & Greet March - Final Interviews & Direction from CC, contract negotiation March 13 - Ecker Appointed March 27 - Commission approved contract with Ecker	
1/9/23	Ad Hoc Senior Services Committee	M: Baller S: Longe	CM	2/13 Commission to discuss further - no action at this time, 3/13 Commission gave direction via resolution to discuss establishing an AHSSC 4/3 - Vote to formulate ad hoc board specs and bring back at next reasonable meeting	Resolved

Topics Failed

4/25/22	On Street Parking Study	M:Haig S: Host
4/11/22	Downtown Parking	M: Host S: Haig
3/28/22	Parking Matters	M: Host S: Haig
6/13/22	479 SOW (Doraid) PAD	M: Boutros

Topics With No Vote - Resolved

1/10/22	Unimproved Streets	Discussed during the Long Range Planning meeting.
2/28/22	Solidarity with Ukraine	City Manager arranged for exterior lighting at City Hall.

Topics With No Vote

5/9/22	-PAD ordinance/cleanup	Baller, no vote	No vote
5/9/22	-Policy for granting public space ODD/Valet	Baller, no vote	No vote

Department of Public Services

Spring Tree Purchase and Plant Project

The awarded contractor, KLM Landscape, began the Spring Tree Purchase and Planting project this month. One-hundred and forty-four (144) trees will be planted in total in the city's rights of way and parks. The project will be complete by mid-June.

Pickleball

The Crestview Pickleball court project is currently underway. The project will result in six (6) new Pickleball courts. Posted signage will be displayed onsite and includes designated time periods for open play along with rules explaining open play, the ability for residents to make reservations and instructions on how to do so, and rules of conduct for players. We anticipate the courts being available for play by Memorial Day, weather permitting.

Trail Improvements Update

As reported in the November 2022 City Manager Report, MCSA Group prepared a preliminary concept design for trail improvements including the Booth Park corner feature, which was undergoing review, comment and feedback by various boards and the public.

This preliminary concept plan has been in front of the Multimodal Transportation Board, the Museum Board, the Martha Baldwin Park Board, the Parks and Recreation Board, sustainability liaisons from the

Planning Department and city departments. All feedback is currently being reviewed by staff and the architect. Appropriate modifications to the plan will be made in the short term and the concept plan will return to the Parks and Recreation Board at an upcoming meeting.

We are re-applying for round two of the MI Spark Grants, as we were not awarded funding for round one. We have applied for a pre-development grant through the 2023 Oakland County Parks and Recreation Community Park and Trail Grant program as well.

Engineering Department

2023 Construction Update

The following construction projects are underway:

- Westwood, Oak, and Raynale Project: Water main replacement and extended storm sewer are almost complete, and the cape-seal roadway starting afterward. Construction is anticipated to be completed in June.
- Parking Lot No. 5 Slope Repair: Fence installation occurred, and plant installation will occur at the end of the summer.
- 2021 Asphalt Resurfacing Program – Parking Lot No. 5: Construction Paving will start the week of May 15th, weather permitting
- Lincoln Hills Golf Course Tee No. 1 Tee-Box and Cart Path Improvements: The lower wall is completed with installation occurring on the second wall.
- 2022-2023 Cape Seal Program (Southeast corner of the City): Sidewalk installation occurred with the cape seal treatment starting after Memorial Day.
- Water Tower Maintenance and Coating:
    - Derby Tank: Overcoat painting is occurring with the upcoming new logo installation.
    - Hunter Tank: Repairs will start at the end of May with overcoat painting occurring in June with new logo installation.
- 2022 Concrete Sidewalk Program: The contractor is working on miscellaneous sidewalk repairs throughout the city, and the Ann Street sidewalk located on the west side of Ann Street between Landon Street to Lincoln Street.

The following construction projects are scheduled for the rest of the construction season:

- Cranbrook Road Non-Motorized Pathway Improvement Program: Construction is starting on June 12, 2023, for this project. A new 10-foot-wide shared path will be installed on the west side of Cranbrook Road from 14 Mile to Midvale, and a new sidewalk along:
    - East side of Cranbrook Road from Northlawn Blvd. to Midvale Street
    - South side of Lincoln Street from Cranbrook Road to Arden Lane
    - 14 Mile from west City limits to Cranbrook Road
- 2023 Concrete Sidewalk Program: The contractor will start work at the beginning of July on the following items: residential area 6: Quarton Road to Maple Road, and western City limits to Lakeside Drive, downtown area 1A: Chester Road to N. Old Woodward, and Rouge River to Maple Road, ADA Ramps within the Downtown Area, miscellaneous repairs throughout the City, miscellaneous sidewalk repairs in Shain Park, installation of bicycle pads and racks in various locations throughout the City.
- Pierce Street Paving Project (14 Mile Road to Lincoln): Construction will start on the water main replacement in July.
- 2023 Asphalt Resurfacing Program: Construction will start on resurfacing in July on the following streets:
    - Birmingham Blvd: Northlawn to Lincoln
    - Smith Street: Cummings to Woodward Ave

    - Grant Street: Bennaville Ave to Humphrey Ave
    - Holland Street: Adams Road to Torry Street
    - S. Old Woodward: Landon Street to Lincoln Street
- Redding Road (Lakepark Drive to Woodward Ave): Work includes water main replacement, sewer system improvements including new storm sewer outfalls, pavement replacement, and minor structural repairs to the bridge with streambank stabilization. The project is anticipated to start in the summer with completion in the fall.

Affected property owners will receive information about these projects. For more information please contact the Engineering Department at 248-530-1840.

Water Service Verification Program

As a reminder, the "In-Home/Business" water service line material needs to be determined as part of this program and included in the City's reporting for the State of Michigan. Property owners can schedule an inspection by an authorized City Representative at 248-303-2292 or determine the in-home/business material themselves with the steps provided in the property owner letter.

Fire Department

Chief Wells becomes Vice President of Southeast Michigan Association of Fire Chiefs

On Thursday, May 11, 2023 Chief Paul Wells was sworn in as the Vice President of the Southeastern Michigan Association of Fire Chiefs (SMAFC). Southeastern Michigan Association of Fire Chiefs has made it their goal to promote the advancement and education of the fire service. This is Chief Wells' third year on the executive board which covers the largest region in Michigan. The region covers all of Michigan east of Lansing and south of Midland. Chief Wells' goal is to continue to work with local fire chiefs and State officials on fire safety codes, and funding for training, recruitment, and retention of firefighters.

Cost Recovery Funds

The fire department received $22,776.40 in cost recovery for the extended mutual aid use of Ladder 1 at the Oakland Hills Country club fire last year. These funds were deposited into the fire department vehicle replacement fund for future use.

Planning Department

The Birmingham Plan 2040

On March 8, 2023, the Planning Board completed its review of the Birmingham Plan 2040 ("2040 Plan") and provided a recommendation to the City Commission at a public hearing to adopt and approve in its entirety the Birmingham Plan 2040, inclusive of all maps, plans, charts, and other related matter, figures and the Future Land Use Map.

On April 3, 2023, the City Commission moved to set a public hearing date of May 22, 2023 to being the final review and approval process of the 2040 Plan per the requirements of the Michigan Planning Enabling Act.

On May 22, 2023, the City Commission will review the 2040 Plan at a public hearing, and any further happenings as it relates to the status of the 2040 Plan will be advertised accordingly.

All of the documents related to the 2040 Plan remain available on www.thebirminghamplan.com. You can also watch a recording of past meetings on the City of Birmingham website.

Planning Board

A tentative Planning Board list of scheduled items is provided below:

1. B1 Zoning District Commercial Permitted Uses – Public Hearing (6-14-23)
2. 33866 Woodward – Polestar – Final Site Plan & Design Review (6-14-23)

Multi-Modal Transportation Board

The Multi-Modal Transportation Board will be reviewing final concepts and begin to finalize a recommendation for S. Eton Road at their June 1, 2023 meeting.

Public Arts Board

Piano in the Park Painting was held Saturday, May 13, 2023. Final preparations for tuning and weather coating will be completed before the piano is placed in the park. Two new sculptures by Stanley Hank Marx were installed in Martha Baldwin Park. Flowers will be planted around the sculptures which will bloom in spring of 2024.

Sustainability

The Ad Hoc Environmental Sustainability Committee (ESC) held their first meeting on Monday May 15, 2023. At the meeting, the Planning Division set the stage for a busy 16 months of work ahead. As a reminder, the defined role of the ESC is to perform a greenhouse gas emissions study, and to draft a sustainability and climate action plan. In the meantime, the Planning Division has been busy attending trainings, webinars, and holding regular Green Group meetings to help ramp up sustainability practices in Birmingham and locate opportunities for available funding and support.

Police Department

Co-Re Program

The Birmingham Police Department's CoRe (co-response) program, which is a multi-agency interlocal agreement that pairs a certified social worker with officers, has been a very successful program. Our CoRe program has received significant praise locally and throughout the state. As a result, we have received several requests to present the CoRe program to promote the use of the interlocal agreements that have resulted in a highly successful program. On June 1, 2023, we will be presenting to the Michigan Association of Campus Law Enforcement Agencies (MACLEA). In August, our CoRe team will be presenting at the CIT (Crisis Intervention Team) International Conference which is being held in Detroit this year. Also, the Michigan Association of Chiefs of Police (MACP) has requested our CoRe program present at the annual winter chief's conference which will be held in Grand Rapids in early 2024.

Staff Update

The Birmingham Police Department would like to introduce two new police officers, Officer Megan Bade and Officer Andrew Howaniec, who have joined our department filling vacancies created by the resignation of an officer and the retirement of former Chief Mark Clemence.

Officer Bade was sponsored by our department while attending the Mott Community College Police Academy and graduated on May 4th. Officer Andrew Howaniec was previously a certified officer with the City of Waterford and started with our department on May 3rd.

Parking Systems Update

Financial

Beginning July 1, 2023 the rate for monthly parking at all five City garages will increase. The last time rates were increased was five years ago. The increase will help offset the cost of essential repairs and improvements, such as upgraded parking equipment, concrete repairs, ADA compliance upgrades, installation of LED lights, EV charging compatibility and more. The daily rates are not increasing and the two-hour free parking will still remain in effect. The table below shows the upcoming rate increase:

Location	Current Rate	New Rate
Chester Garage	$50.00	$70.00
Old Woodward	$70.00	$90.00
Park Garage	$70.00	$90.00
Peabody Garage	$70.00	$90.00
Pierce Garage	$70.00	$100.00

Construction

Repairs are expected to resume at the N. Old Woodard Garage starting in June. Included in the repairs will be continued concrete restoration, repairs to the handrails, painting of ceilings, walls and stairwell walls, and the installation of LED lights.

The entrance lane, exit lane, and island to the Woodward side of the N. Old Woodward Garage was removed and replaced. The old concrete had deteriorated causing issues with safety and resulting in significant pot holes. The new island will improve the customer experience significantly along with the installation of an overhead LED to make the alley where the island is located much brighter.

The Engineering Department plans to repave all of Lot 5 in early June.

Occupancy

APRIL AVG CAPACITY	
Chester Garage (880)	68.00%
Old Woodward (745)	68.00%
Park Garage (811)	66.00%
Peabody Garage (437)	66.00%
Pierce Garage (706)	74.00%

Future Agenda Items

Download a summary of future agenda items.

Future Workshop Items

Download a summary of future workshop items.

Beier Howlett
ATTORNEYS AND COUNSELORS

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May 16, 2023

Birmingham City Commission
151 Martin Street
Birmingham, MI 48009

Re: Board of Ethics Advisory Opinion Concerning Commissioner Host

Dear Commissioners:

Before you is an Opinion drafted by the Board of Ethics wherein they received a request for an Advisory Opinion to determine whether Commissioner Host's conduct as a Birmingham City Commissioner conformed with the Ethics Ordinance in Chapter 2, Article IX., of the Birmingham City Ordinances.

The City Commission has appointed the Board of Ethics, consisting of three (3) members for the purpose of interpreting the Code of Ethics. The functions of the Board of Ethics is to either hear a complaint as to whether a person has violated the Code of Ethics or to issue an Advisory Opinion which will communicate to an individual, the City Commission and the public as to how people should conduct their activities in order to be in conformity with the Code of Ethics. After the Board has conducted an Ethics Board meeting, has heard and gathered information, facts and exhibits, they render an Opinion.

In this case, the Board of Ethics have met on three (3) occasions as a result of a request for an Advisory Opinion regarding Commissioner Host; one time to hear testimony and evidence regarding behaviors and conduct of Commissioner Host, and then secondly, two (2) meetings to discuss their opinion and to draft a written Opinion as to how Commissioner Host and others should conduct themselves in the future in order to properly follow the Code of Ethics. As you see, the Board of Ethics in their Advisory Opinion, has found "The Board finds that some of Commissioner Host's conduct fell short of what the Code of Ethics requires." However, they did not find he violated the Code of Ethics.

Attached please find a copy of the majority opinion and dissenting appendix. No further action by the City Commission is necessary pursuant to the Ethics Ordinance.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

BEIER HOWLETT, P.C.

Mary M. Kucharek

MMK/jc

BIRMINGHAM BOARD OF ETHICS

ADVISORY OPINION

2023-01

INTRODUCTION

Birmingham City Manager Thomas Markus asked the Birmingham Board of Ethics for an advisory opinion as to whether certain conduct or anticipated conduct of Birmingham City Commissioner Brad Host conforms to the Birmingham Code of Ethics. Commissioner Host, through counsel, responded in writing. The parties then appeared in person and presented their positions at a Board hearing on March 7, 2023. This advisory opinion presents the Board's decision.

SUMMARY OF DECISION

The city manager's written Request for Advisory Opinion (hereafter, "Request") focuses on Commissioner Host's actions concerning *Birmingham Plan 2040*, a proposed master plan for the physical development of the community. His actions particularly included written and video social media posts and correspondence to constituents. As one of seven elected members of the Birmingham City Commission, Commissioner Host will vote for or against the plan. Core to the city manager's Request is the concern that Commissioner Host's comments ahead of that vote reflect bias, interfere with the proper function of government, and could result in a conflict of interest.

The Board finds that some of Commissioner's Host's conduct fell short of what the Code of Ethics requires. Some of his communications about the 2040 Plan contained misstatements of fact, and all of them failed to identify whether he was speaking in his official or private capacity. The Board also finds, however, that Commissioner Host later corrected or withdrew most of the communications containing those misstatements. Through this opinion, the Board offers advice to Commissioner Host and other city commissioners on more closely conforming to the Code of Ethics—both as to how they not only must conform to the Code's minimum requirements, but how they can exceed those minimum requirements and fulfill the hope expressed in the Code that the conduct of public officials meet the highest ethical standards.

MOTION TO DISMISS: DENIED

By written response and oral argument of his counsel at the hearing, Commissioner Host moved to dismiss the matter, contending that the Request failed to present each question upon which an opinion is desired, did not include all facts

giving rise to each question presented, and did not include all relevant authorities, as required on the city's advisory opinion request form.[1] Commissioner Host also moved for a summary decision on the basis that the Request is barred by other disposition of the matter or for a summary opinion on the basis that there is no genuine issue of any material fact.[2]

The Board denied the motions, ruling that the Request provides sufficient basis for it to proceed with the matter. The Board found that the issues, facts, and legal standards were stated sufficiently for it to render advice to Mr. Host and the city. Indeed, the Request presented those matters with particularity. The Board further ruled that there has been no prior disposition of the matter, and there exists a genuine issue of material fact.

DECISION

FINDINGS OF FACT

Birmingham Plan 2040

The Michigan Planning Enabling Act provides for the City of Birmingham to adopt a master plan for its future. The statute says that the general purpose of a master plan is to "guide and accomplish" local development that satisfies specified criteria. The plan needs to be "coordinated, adjusted, harmonious, efficient, and economical." It must consider "the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development." And it must be designed in accordance with present and future needs to "best promote public health, safety, morals, order, convenience, prosperity, and general welfare." (MCL § 125.3807 (2) (a)-(c)).

A key element of Birmingham's current planning is its proposed *Birmingham Plan 2040*, a comprehensive master plan that is nearing completion after a four-year process. That process has involved countless hours of citizen input, drafting, and review by city staff and consultants, and consideration by the Birmingham Planning Board and the Birmingham City Commission. To support that effort, the city provided a social media platform to post drafts and reviews of the plan and to solicit and receive comments from citizens. (*See* https://www.thebirminghamplan.com).

As contemplated by the statute, the 2040 Plan, as it has become known, is intended to guide the city's land-use decisions for years to come. It does not set

[1] Birmingham Board of Ethics Rule 201 requires an advisory opinion to be in writing and filed with the Birmingham City Clerk on a form prescribed by the clerk, who will present it to the Board for consideration. Rule 202(a) allows the clerk to administratively dismiss a request for advisory opinion that fails to comply with Rule 201.

[2] Rule 204 allows the Board to issue a summary decision without hearing if the request is barred by other disposition of the matter. Rule 205 allows for a summary opinion if there is no genuine issue of material fact.

specific requirements for that use; those requirements must by law be established through the city's zoning activities that involve several city boards or commissions and, ultimately, the city commission. Rather, it presents a vision for the future by expressing long-range goals and objectives to inform the city's future planning and zoning decisions. The plan does not direct those decisions.

Among other techniques, the 2040 Plan employs a land-use planning concept called "seams." Seams are areas of land that serve as connectors across planning districts and as buffers between districts and other types of neighborhoods. For example, sometimes multi-family dwellings are permitted in a seam as a buffer between single-family dwellings and larger, active roadways.

Commissioner Host's Stated Opposition to the 2040 Plan

Over the years, Commissioner Host has established a reputation of favoring single-family homes over large-scale and multi-family development within Birmingham. As work on the 2040 Plan nears completion, Commissioner Host has acted against it. Across the fall of 2022, he published on social media a series of video clips containing the following statements (the Board has highlighted particular factual assertions):

> Video # 1 (date uncertain): "Hey, here we are at Grant and Lincoln. And **in the 2040 Plan as proposed, they're going to rezone to multiples all of the south side of Lincoln** between here and Woodward. If you are in the St. James or Pierce neighborhood, what do you think about that? **Do you want this rezoning**? We have attached a link so you can tell the Planning Board and the master planners what you think."
>
> Video # 2 (October 31, 2022): "Here I am on Oakland Street between the Woodwards, looking at the Little San Francisco area. And this is full of gorgeous homes and they're right here. **And these five homes as well as the two lots over near Woodward are going to be rezoned to multiple. How long do you think these gorgeous homes are going to last after they're rezoned.** What do you think? There's a link attached. Write the master planners as well as the Planning Board. **You've got 45 days to get your opinion in because then it's going to be history after that**."
>
> Video # 3 (October 29, 2022): "Quarton Lake Waterfall area. And you know, I just was reading the **2040 Plan and it calls for kiosks, cafes, food trucks, commercial endeavors here.** Why? I attached the link. Let the city planners and the Planning Board know what you think."
>
> Video # 4 (September 27, 2022): "Hi. I'm here at Abbey and Wimbleton in the fabulous Poppleton Park neighborhood. And I just want to show you what some of the construction is doing to the ambience of this neighborhood. We have four houses in a row being built that all comply with our zoning

ordinances. But I think the ordinances are more friendly to the developers because they're **building lot line to lot line**. And what we need are building ordinances which are more friendly to the neighbors and the neighborhood. What do you think?"

Video # 5 (date uncertain): "Hi. I'm in the beautiful Poppleton Park neighborhood. And **in the proposed 2024 Plan, they're going to rezone these two houses on Poppleton and turn them into multiples**. What do you think? There's a link attached. Give us your opinion. You have time to tell the master planners and the Planning Board **what you think about this rezoning proposal.** Please do."

(Request, at 2 (emphasis supplied)).[3] In none of these videos did Commissioner Host identify himself by name. Nor did he indicate whether he was acting in his official or personal capacity.

At the Board's hearing on this case, Commissioner Host declined to identify who video-recorded the statements, instead calling that person "a friend." He said his friend shared his opinion about the 2040 Plan. When asked how it came to be that he, rather than his friend, would appear on camera, Commissioner Host acknowledged that his role as a city commissioner was determinative. He wanted to show his constituents that he was standing up for them. As Commissioner Host said, "I happen to know everybody." According to testimony, Commissioner Host received the largest number of votes amongst multiple candidates when he was elected to the city commission.

Commissioner Host's Knowledge That the Plan Does Not Rezone Property

Commissioner Host has known since early 2021 that "a master plan does not rezone property. It is a framework setting the course for what the City may or may not do in the future." (See the city's press release of February 11, 2021, Request, Attachment 2, at 2). A city FAQ published on February 10, 2021, and again on October 13, 2021, elaborated on the point that the 2040 Plan does not rezone properties:

> Is the Master Plan rezoning the City?
>
> No. The Master Plan will include a Future Land Use map, but not a new zoning map. The Master Plan recommends that the City study and revise its current zoning code, but does not establish any updated zoning. The Master Plan recommends that zoning be updated for two primary purposes: 1) to simplify but not substantively change zoning in the Downtown and Triangle District, and 2) to better align neighborhood zoning with existing character to avoid new houses that are out of character. Other zoning changes are recommended for

[3] These statements are found in links provided in the Request.

further study by the City.

(*Id.*).

Commissioner Host was reminded of these elements of the plan during Birmingham City Commission meetings on October 3, 2022, and November 28, 2022. During the latter meeting, the city manager's report called out some of Commissioner Host's videos and ensuing conversation surrounding it. The city manager noted the "continued assertion or idea that the 2040 Plan will be rezoning single-family homes to build multifamily, and that somehow the City of Birmingham is ignoring its residents in favor of developers and profit." (*Id.* at 1). The city manager's report, in a section titled "Setting the Record Straight," reiterated to Commissioner Host that "comprehensive master plans do **not** rezone property once adopted." (*Id.* at 2 (emphasis in original)).

Shortly after the November 28, 2022, city commission meeting, Commissioner Host deleted four of the five videos but mistakenly left Video # 1 up. When the city manager reported at the December 19, 2022, city commission meeting that the video remained on line, Commissioner Host responded that "I found this out today . . . that that video was up, and I took it down, and I'm very sorry." (Request, at 3 (link to city commission meeting of December 19, 2022, beginning at 2:28.50).

Following the November 28, 2022, city commission meeting, Commissioner Host published four more video statements critical of the 2024 Plan.

> Video # 6: (December 8, 2022): "Hi, I'm Brad Host and I'm here at Grant and Lincoln. And the 2040 Plan **proposes to take all the single family houses between here and Woodward and encourages them to be zoned multiples**. I wonder what the St. James and the Pierce neighborhoods think about that. **You got until January 11th to let the planners and the Planning Board know what you think.** I've attached a link below and I hope you use it."
>
> Video # 7 (December 11, 2022): "I'm Brad Host. I'm at Grant and 14 Mile. And on **page 46 of the Master Plan it proposes to take these over 45 single family houses between Grant and Woodward and wants to have them zoned to encourage infill. Well, infill is townhouses, duplexes, multi-family buildings.** What do the Pierce and the St. James neighborhood think about having this happen? **You have until January 11th to let the planner as well as the Planning Board know what you think.** See the link below."
>
> Video # 8 (December 12, 2022): "Here's two gorgeous houses a hundred years old, at the south end of Poppleton in the fabulous Poppleton Park neighborhood. **The 2040 Master Plan, Chpt 2, asks us to embrace managed growth and encourages these two lots to be townhouses, duplexes, or multi-family buildings.** I wonder if the neighborhood and the neighbors of Poppleton Park truly can embrace this type of managed growth. **You have until January 11th to get your opinion in to the city planner and the Planning Board.** I've attached a link below. Let 'em know what you think."

> Video # 9 (December 16, 2022): "Learning from the Master Plan, page 35 says **it calls for updating the zoning code to permit a café in Booth Park. Café, a term subject to broad interpretation. Does it mean that this could be a Starbucks or a small building in Booth Park? This plan enables broad interpretation. What the neighbors think matters. Get your opinion in by January 11th to the city planner and the Planning Board.** Use the link below."

(Request, at 3 (emphasis supplied)). In none of these videos except Video # 6 did Commissioner Host identify himself by name. Nor did he indicate in any of them whether he was acting in his official or personal capacity.

Leading up to the city commission's December 19, 2022, meeting, Commissioner Host made a social media post about the 2040 Plan, saying, "The city needs your voice" and referred readers to the city's comment channel at https://www.thebirminghamplan.com/comment. (Request, Attachment 5). A reader, Linda Orlans, posted:

> Thanks **Brad Host**. Looks like the Planning group has gone Rogue again. What is happening to our family friendly Birmingham! So disappointing.

Commissioner Host replied:

> **Linda Orlans** agree!

The City Manager's Renewed Attempts to Correct the Record

At the next city commission meeting on December 19, City Manager Markus took issue with Commissioner Host's response to Ms. Orlans' "gone rogue" comment. Both then and in an e-mail the next day, he pointed out that the comment creates the view that Commissioner Host thinks the planning board is operating improperly. "If that was not your intent, I would suggest that you publicly acknowledge that you did not intend to disparage the Plan Board." (*Id.*).

Commissioner Host replied:

> Couldn't conceive agreeing with a "rogue" comment. My intention was agreeing with a less friendly local environment ONLY. Have stated same to Linda. Would you want me to address this retraction with the Planning Board?"

(*Id.*).

At the Board hearing, Commissioner Host testified that he clarified his statement with Ms. Orlans, calling her to say that he did not believe the planning board had gone rogue. He did not, however, make a public retraction or apologize to the planning board.

Shortly after the last four video posts were published, the city manager again reiterated to Commissioner Host that the "2040 Master Plan Does Not Rezone Property." (Report to the city commission on December 19, 2022, Attachment 3 to the Request, at 1). The city manager recounted inaccuracies in Commissioner Host's communications and pointed out that the city has repeatedly corrected those inaccuracies. (*Id.*). The city manager wrote:

> Despite the continued corrections issued on the matter, yet another video has been circulating on social media in which Commissioner Host stands near the corner of Lincoln and Grant, and states that "The 2040 Plan as proposed is going to rezone to multiples (sic) all of the south side of Lincoln between here (Grant Street) and Woodward". Once again, there is a need to reiterate that comprehensive master plans do **not** rezone property once adopted.

(*Id.* at 2.) The city manager's report went on to detail his concerns:

> As discussed last month in both the City Manager's Report and at the city commission meeting on November 28, 2022, it is very important that City staff, board members and city commissioners are factually accurate when discussing important issues with the public. The continued assertion by Commissioner Host that the Draft 2040 Plan will rezone single-family properties to multi-family zoning, despite repeated attempts by City staff to set the record straight as to the fact that master plans **do not** in fact rezone properties once adopted disregards the facts and staff's attempts to advise him of his inaccuracies. Such communication undermines the confidence of the public in city government, and adversely affects the integrity of city government. Public office is a public trust. For government to operate properly, each city official, employee, or advisor must earn and honor the public trust through integrity and conduct.

(*Id.* (emphasis in original)). The city manager again pointed out the inaccuracies in Commissioner Host's post (Video # 3) about how the 2040 Plan "'proposes kiosks, cafes, food trucks, commercial endeavors here,' referencing the waterfall at the south end of Quarton Lake at the dam." (*Id.*). Specifically, the city manager pointed out that the Plan expressly does not contemplate food or beverage services in that area.

The city manager then commented on Commissioner Host's December 12, 2022, post (Video # 8):

> During the past week, yet another video was posted on social media by Commissioner Host regarding the Poppleton neighborhood, wherein Commissioner Host states that "the 2040 master plan asks us to embrace managed growth and encourages

> these 2 lots to be townhouses, duplexes or multi-family buildings". The change in terminology utilized in this video seems to demonstrate that perhaps Commissioner Host may be attempting to self-correct his previous misstatements as to rezoning in earlier videos.
>
> As noted above, it is very important that City staff, board members and city commissioners are factually accurate when discussing important issues with the public, and thus city commissioners and board members should contact City staff to verify the accuracy of all public communications.
>
> The City goes to great lengths to accurately describe the purpose of our public meetings. Having elected officials encouraging public attendance is fine. Misrepresenting what the purpose of a hearing is or the topics that are to be discussed is inappropriate and only causes conflict and needless emotional distress. As I have stated before, "Let the process work". The city commission has appointed citizens to the Planning Board to review the master plan drafts and the board members have shown their willingness to be completely transparent and open to considering public comments which may differ from what the draft master plan calls for. The professional staff and consultants are paid to provide their professional advice, however, they recognize that their recommendations must stand the test of the public process, and are likely to be questioned, challenged and altered through the very public and transparent review process. What the public does not need is a public official misstating the proposals contained within the draft 2040 Plan or encouraging a public position for or against the various recommendations contained in the evolving drafts of the proposed master plan.

(*Id.* at 5-6).

In addition to his written report during the December 19, 2022, city commission meeting, the city manager orally informed the commissioners that "I'm getting plan board members who are really concerned about how this is agitating the public and how that is going to play out at their public hearings, to the point where they're asking for law enforcement to be there." (Request, at 3 (link to city commission meeting of December 19, 2022, beginning at 2:33.00)).

Following that city commission meeting, Commissioner Host distributed to homes a letter dated December 31, 2022. (Request, at 1, 2, 4, and 7, and Attachment 7). In that letter, he recited that the Birmingham Planning Board will be meeting on January 11, 2023 to hear public comments in person about the 2040 Plan. He wrote that the plan says that certain properties available for infill should be rezoned to encourage development of small homes, townhouses, duplexes, and small multi-

family buildings. The letter identifies him by name but does not give his title as a city commissioner. It does not say whether he is acting in his personal or official capacity.

CONCLUSIONS OF LAW: THE BIRMINGHAM CODE OF ETHICS

As a foundational matter, there is no question that the Code of Ethics, which is a City of Birmingham ordinance, applies to a city commissioner such as Commissioner Host. (Birmingham Code of Ethics, § 2-322).[4]

To enhance public trust, the city must provide its officials with adequate guidelines for separating their roles as private citizens from their roles as public servants. (*Id.*, § 2-320). The city does that in several ways, among them educational programs for city officials, communications from the Birmingham City Manager, and the Birmingham Board of Ethics advisory opinion process. The Code is intended to be preventative and not punitive. (*Id.*, § 2-323).

The Code sets minimum standards of ethical conduct for all city officials and employees, whether elected or appointed, paid or unpaid. It proscribes actions incompatible with the public interest and directs disclosure of private financial or other interests in matters affecting the city. (*Id.*, § 2-320). The Code promotes the city commission's declaration that "[p]ublic office and employment are public trusts. For government to operate properly, each city official, employee, or advisor must earn and honor the public trust by integrity and conduct." (*Id.*).

The Code centers around three key aspects of governmental conduct, as declared by the city commission when it adopted the ordinance:

> [A]ll city officials and employees must avoid conflicts between their private interests and the public interest. Public officials and employees must:
>
> (1) Be independent, impartial and responsible to the people;
>
> (2) Make governmental decisions and policy in the proper governmental channels;
>
> (3) Not use public office for personal gain.

(*Id.*, § 2-320 (1)-(3).

The Code sets forth a high standard of conduct by requiring that city officials:

- uphold the Constitution of the United States and the Constitution of the State and carry out impartially and comply with the laws of the nation, state, and the city.
- not exceed their authority or breach the law or ask others to do so.

[4] *City official* or *employee* means a person elected, appointed or otherwise serving in any capacity with the city in any position established by the Birmingham City Charter or by city ordinance which involves the exercise of a public power, trust or duty. (Birmingham Code of Ethics, § 2-322).

- observe in their official acts the highest standards of ethical conduct and to discharge the duties of their offices faithfully, regardless of personal consideration, recognizing that their official conduct should be above reproach.
- safeguard public confidence by being honest, fair and respectful of all persons and property with whom they have contact, by maintaining non-partisanship in all official acts, and by avoiding official conduct which may tend to undermine respect for city officials and employees and for the city as an institution.

(*Id.*, § 2-321).

Through the Code, the city specifically intends that its officials *avoid any action*, whether or not specifically prohibited by section 2-324, *which might result in, or create the appearance of*:

> (1) Using public employment or office for private gain;
>
> (2) Giving or accepting preferential treatment, including the use of city property or information, to or from any organization or person;
>
> (3) Losing complete independence or impartiality of action;
>
> (4) Making a city decision outside official channels; or
>
> (5) Affecting adversely the confidence of the public or the integrity of the city government.

(*Id.* § 2-323 (1)-(5)).

Furthermore, the Code's conflict of interest section prohibits certain specific conduct and defines conflicts of interest:

> (2) No official or employee of the city shall represent his or her personal opinion as that of the city.
>
> (3) Every official or employee of the city shall use personnel resources, property and funds under his or her official care and control solely in accordance with prescribed constitutional, statutory and regulatory procedures and not for personal gain or benefit.
>
> . . . .
>
> (5) No official or employee of the city shall engage in a business transaction in which he or she may profit because of his or her official position or authority or benefit financially from confidential information which he or she has obtained or may obtain by reason of such position or authority.
>
> . . . .

(8) No official or employee of the city shall use, or attempt to use, his or her official position to secure, request or grant unreasonably any special consideration, privilege, exemption, advantage, contract or preferential treatment for himself, herself, or others, beyond that which is available to every other citizen.

, , , ,

(10) Determination of conflict of interest. A conflict of interest exists if:

a. The city official or employee has any financial or personal interest, beyond ownership of his or her place of residence, in the outcome of a matter currently before that city official or employee, or is associated as owner, member, partner, officer, employee, broker or stockholder in an enterprise that will be affected by the outcome of such matter, and such interest is or may be adverse to the public interest in the proper performance of said official's or employee's governmental duties, or;

b. The city official or employee has reason to believe or expect that he or she will derive a direct monetary gain or suffer a direct monetary loss, as the case may be, by reason of his or her official activity . . . .

(*Id.* § 2-324 (a) (2)-(3), (5), (8), (10).

DISCUSSION AND ADVICE REGARDING COMMISSIONER HOST'S CONDUCT

It is important to note both what this matter is and what it is not. The Board of Ethics is responding to a request for an advisory opinion and is offering an opinion on whether Commissioner Host's conduct or anticipated conduct conforms to the high standards to which the Code of Ethics aspires and, where that conduct falls short, what he might have done or hereafter do to meet those high standards. (Birmingham Board of Ethics Rules Chapter 2 and Rule 215). The Code is intended to be preventative and not punitive. (Birmingham Code of Ethics, § 2-323). The Board thus issues this opinion in the spirit of educating Commissioner Host and all city officials about the consequences of their official conduct.

By contrast, this matter is not a determination based on a complaint filed against Commissioner Host by a citizen. Were that the case, the Board would determine whether his conduct is in breach of the Code of Ethics and thus is a violation of law. (Birmingham Board of Ethics Rules Chapter 3 and Rule 319). Our review of Commissioner Host's conduct is not made in the context of a hearing on a complaint where additional or different issues, and rights, might be relevant.

In light of the record and governing Code of Ethics provisions, the Board of Ethics advises Commissioner Host that some of his conduct in this matter falls short of the public's expectations and the public interest as expressed in the Code. The

Board has four main areas of concern. It encourages him to observe these comments in his future conduct.

1. **Commissioner Host's Misstatements of Fact**

The Board finds Commissioner Host made misstatements of fact in some of his published communications. His oft-repeated statements that "they're going to rezone to multiples" certain homes and areas throughout the city are untrue and misleading. First, Commissioner Host has known since as early as 2021 that the 2040 Plan is not a zoning ordinance. Although the 2040 Plan certainly will inform future zoning decisions and identify areas where changes in land use might be made, he knows it is not, and does not purport to be, a zoning ordinance.

In stressing that an undefined group of people—*they*—are going to rezone properties, Commissioner Host misleads the public about who will do any rezoning and when that might occur. A reasonable person could fairly interpret his statements to mean that the planning board will rezone. More accurately, of course, the *they* is the Birmingham City Commission on which he sits.

His oft-repeated exhortations to act promptly, such as "45 days to get your opinion in because then it's going to be history after that" or "you got until January 11th to let the planner as well as the Planning Board know what you think," tend to mislead people into thinking that city properties will be rezoned by that deadline. He knows his proclaimed urgency is not the case. Only the city commission can rezone, and only then after a substantial public process. And although the planning board will adopt a recommendation for the plan, he also knows that the city commission is free to accept that recommendation, reject and refer it back for consideration, or adopt a modified plan. He will have a say and a vote in whatever the city commission decides.

Through these actions, Commissioner Host is not being fully honest and fair in safeguarding of the public confidence under section 2-321. He is not being fully responsible to the people under section 2-320 (1).

To be sure, some of Commissioner Host's statements are hyperbole (*e.g.*, developers are "building lot line to lot line"). Some are grounded in the truth that the Plan can encourage zoning in appropriate areas. But the Board finds that many of his communications were careless and improvident.

The Board notes that after City Manager Markus several times corrected Commissioner Host during city commission meetings, he removed his earlier video posts (though imperfectly as one remained for three more weeks), and changed some of his communications to read, not that the 2040 Plan would rezone properties, but that it "encourages" that rezoning. The Board commends Commissioner Host on making his communications more accurate. He continued, however, his misleading suggestion that the January 11 meeting of the planning board would result in adoption of an ordinance when he knew that not to be so.

The Board thus advises Commissioner Host to be aware that his knowing misstatements of fact could suggest he is not impartial and fair, make him appear not

able to safeguard public confidence or the integrity of city government, and call his judgment into question.

During his remarks at the November 28, 2022, city commission meeting, Commissioner Host seemed to recognize the importance of the Code's requirement that Birmingham officials safeguard public confidence by being honest, fair, and respectful of all persons. In reporting on his recent attendance at the annual Michigan Municipal League conference, Commissioner Host said the following:

> I went to a session that was titled *Working Together for the Good of the Community.* And that can be challenging. The biggest problem is trust. **And what I learned at that session is that politicians tend to lie, so it's hard to trust them, and that is one of the hurdles that prohibit better behavior.**"

(Request, at 3 (at 45:35) (emphasis added)).

The Board urges Commissioner Host to heed the lesson he says he learned.

2. Commissioner Host's Advocacy Against the 2040 Plan

A related concern the Board has is the fact that Commissioner Host is actively advocating against the 2040 Plan, which he will be called upon to review, consider, and act on as a city commissioner. During the Board's hearing, he testified that "I was not trying to influence people; I was just trying to get them engaged." The Board sees his actions differently and warns Commissioner Host that his actions may be perceived as improperly influencing the work of the city staff, consultants, and the planning board, all of whom themselves owe the same duties of loyalty to the city that he does. While Commissioner Host's advocacy can be perceived by some as crossing the line into improper attempts to interfere with the decision-making process, the Board does not find on this record that it did. But Commissioner Host should be mindful that his actions have consequences and that some citizens could draw conclusions from his actions that he did not intend. He should recognize that possibility and be certain that he is encouraging respectful civic dialogue.

The Code of Ethics is clear that Commissioner Host—and the planning board members, too—must be independent, impartial, and responsible to the people; he and they must make governmental decisions and policy in the proper governmental channels. (Birmingham Code of Ethics § 2-320 (1)-(2)). Commissioner Host is required to avoid *any* action *which might result in, or create the appearance of,* losing complete independence or impartiality of action, of making a decision outside official channels, or affecting adversely the confidence of the public or the integrity of the city government. (*Id.*, § 2-323(3)-(5)). Neither may he represent his personal opinion as that of the city. (*Id.*, § 2-324(a)(8)).

Because public office is a public trust (*id.*, § 2-320), Commissioner Host owes a fiduciary duty to the city, a high legal duty. He must carry out impartially the law and discharge his duties faithfully regardless of personal consideration. (*Id.*, § 2-321).

Based upon that dictate, the public is entitled to confidence in Commissioner Host, to trust that he is employing judgment in his official decision making. By actively advocating against a plan that will be coming to him for official decision, while premising that action on statements that he knows to be inaccurate, Commissioner Host suggests to the public he might not be impartial, might not be independent, might not be fair and open minded in his debates with his fellow city commissioners. His actions tend to call into question whether he can carry out his official duties faithfully regardless of personal consideration.

As is every city official, Commissioner Host is entitled to his personal opinion. And as a city commissioner, he is entitled and expected to vote based on his judgment of the merits of the proposal at issue. The Code is never intended to preclude a city official from expressing his or her opinions on matters that come before his or her respective body. It encourages city officials to act independently. If they cannot express opinions, debate the merits of those opinions, and vote their consciences, the quality of our city's democracy would be significantly impaired. (Advisory Opinion 2022-01, at 6, *citing* Advisory Opinion 2007-02).[5] Commissioner Host is also entitled to learn the views of the citizens so he can better represent them.

But what is telling in this case is that Commissioner Host is not exhorting the citizens to give their views *to him* or to his fellow city commissioners who will decide on the 2040 Plan. He is not asking for their perspective to help him fashion *his* official position. Rather, there is a danger that his actions could be perceived as improperly influencing the work of the planning board and city staff, an influence resulting in so much agitation that planning board members were communicating the need to request police presence at the public meeting.

That kind of influence would be improper because those individuals are, like Commissioner Host, bound by the Code of Ethics to work with independence, impartiality, faithfulness, integrity, and responsibility to the people. His actions could be interpreted—or misinterpreted—as interference with their responsibilities, thus an attempt to develop policy and decisions outside of regular governmental channels, which the Code forbids. At the planning board stage of the process, the work is informational, technical, and advisory, but not political. Once the 2040 Plan comes to the city commission for formal consideration, the matter rightly becomes political. Commissioner Host thus is advised to let the city planners and the planning board do their work.[6]

The Board recognizes the strength of the city's scheme of government that takes advantage of the expertise of its citizenry. (*See* Advisory Opinion 2015-06, at 2). In electing Commissioner Host to office, the voters sought his participation on the

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[5] The Board declines to reach free-speech considerations raised by Commissioner Host because they are not necessary for this decision.

[6] This is one of the reasons why Commissioner Host should abide the city attorney's published guidance on the law and not attend meetings of the planning board or other appointive city body over which the city commission has direct oversight. (*See, e.g.*, Attachment 8 to the Request). Though the Request raised his attendance as a possible non-conformity with the Code, the record shows that Commissioner Host refrained from attending such meetings after he received guidance from the city attorney. The Board thus declines to address this issue.

city's top elective body. They are entitled to the benefit of his experience, expertise, and judgment, the resources he brings to the city, and to his vote on matters that come to the city commission. The Board counsels Commissioner Host to ensure that his actions do not call into question his impartiality or lead to a disqualifying conflict of interest.

3. Potential for the Public to Confuse Commissioner Host's Personal Opinion with the City's Position

In only one of the nine videos, the letter, or other social media posts in the record of this hearing did Commissioner Host identify himself by name. In none of them did he identify himself as a city commissioner. Yet, as he said at the hearing, "I happen to know everybody." The record shows that he was the top vote-getter in the city commission election. The Board finds that Commissioner Host could understand that the people watching his videos know who he is and that he holds public office.

No city official may represent his or her personal opinion as that of the city. Nor may a city official use, or attempt to use, his or her official position to secure, request or grant unreasonably any special consideration or preferential treatment beyond that which is available to every other citizen. (Birmingham Code of Ethics §2-324 (2), (8)). To do so places the city official in a potential conflict of interest.

In a 2009 advisory opinion, this Board held that the Code prohibited a city official, in that case Mr. David Wisz, a then-member of the Birmingham Traffic and Safety Board, from using his position on that board or his title associated with it to advocate a personal position unrelated to that board. Such conduct would be permissible, but only if it were germane to his role as a city official and if he stated that he is giving his personal opinion and not that of the traffic and safety board or the city. (Advisory Opinion 2009-02, at 2).

The record shows that Commissioner Host's communications were germane to his role as a city official. As a commissioner, he will vote on whether to adopt the 2040 Plan. But he never stated that he was giving his personal opinion and not that of the city itself. The Board finds that his communications may tend to confuse the recipients as to whether he was advocating on behalf of himself or in his role as city commissioner. When making a personal statement that identifies the speaker as a city official, that official must include a conspicuous disclaimer that the opinions expressed are his or her personal opinions, and not the opinions of the city or any other city official. (Advisory Opinion 2022-01).

The Board thus advises that, going forward, Commissioner Host use care to differentiate his personal views from the city's official position when communicating on matters of city business.

4. Commissioner Host's Possible Disparagement of the Planning Board

A member of the citizenry, Linda Orlans, posted a public comment about the contemplated 2040 Plan, saying "Looks like the Planning group has gone Rogue again. What is happening to our family friendly Birmingham! So disappointing."

In response, Commissioner Host posted, "agree!" (Request, Attachment 5).

The Code of Ethics requires public officials to safeguard public confidence by being honest, fair, and respectful. They must avoid conduct that may tend to undermine respect for city officials and employees and for the city as an institution. (Code of Ethics § 2-321). They must avoid any action which might result in, or create the appearance of, affecting adversely the confidence of the public or the integrity of the city government. (*Id.* § 2-323 (5)).

The Board finds that Commissioner Host's agreement with the "rogue" post could reasonably be read to cast the planning board in disrepute and to undermine respect for that body and the valuable work performed by the staff and officials serving on it—many of whom are volunteers. His agreement could be interpreted as tending to undermine the public confidence and the integrity of the city government that the Code requires him to safeguard.

When challenged by the city manager about the meaning and intent of his statement, Commissioner Host reported he had clarified the statement with Ms. Orlans. He also wrote the manager that he "couldn't conceive agreeing with a 'rogue' comment." Rather, he wrote, his intention was to agree only with the "less friendly local environment" portion of Ms. Orlans' statement.

The Board accepts Commissioner Host's explanation that he did not intend to suggest that the planning board had gone rogue; instead, that he was agreeing only with the more limited part of Ms. Orlans post.[7] That explanation is consistent with his published views that Birmingham currently presents a less friendly local environment in certain respects.

But Commissioner Host's intent is not strictly relevant. The Code looks to how the public would tend to view his statements. It requires him to avoid conduct that *may tend* to undermine respect for city officials or *might result in*, or *create the appearance of*, affecting adversely the confidence of the public. Notably here, he did not publicly retract or even clarify his statement, except to Ms. Orlans. Nor did he apologize to the planning board as the city manager suggested he do. He may have failed to consider how others would view what he wrote. This Board has previously held that "[p]ublic officials are obligated to be aware that their words could be misinterpreted or misread." (Advisory Opinion 2002-01, at 6.) His statement was, again, careless and improvident.

CONCLUSION

The Board of Ethics thanks both City Manager Markus and Commissioner Host for participating in this advisory process. Both showed good faith in presenting reasoned, in-depth positions with vigor. We encourage them to work together to improve city government in service to our citizens.

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[7] If Commissioner Host believes that the planning board has gone "rogue," he might have a duty to raise his concerns with the city commission.

The Board advises Commissioner Host, his fellow city commissioners, and all city officials and employees as follows.

You have an obligation to be truthful in your statements and dealings. To do otherwise greatly risks harming the public's confidence in our government. It subjects you to personal criticism, thereby diminishing your ability to serve your public role.

You must be careful in trying not to achieve an outcome outside of proper governmental channels. Doing so undermines the public's confidence in the government and in processes. It interferes with and diminishes the ability of those rightfully assigned to a task to perform their duties in furtherance of the city's objectives. Advocacy outside of proper governmental channels may result in or create the appearance that you have lost impartiality or independence of action. It also puts you personally at risk of a conflict of interest that could disqualify you from making a decision that you were elected or appointed to make.

When publishing a personal statement about a city matter in which you are identified or widely recognized as a city official, you must use care to differentiate your personal views from those of the city by communicating that the views expressed are your personal views and not those of the city or another city official.

You have an obligation to be aware of how your public statements could be understood, and how they could be misread, misconstrued, or viewed as misleading. When you do not fully consider the impact of those statements, you risk undermining respect for city officials and employees, limiting their ability to fulfill their responsibilities, and subjecting yourself to diminished respect and ability to perform your own official duties.

James D. Robb, Chairperson

Sophie Fierro-Share

John J. Schrot, Jr.

BIRMINGHAM BOARD OF ETHICS

SEPARATE OPINION

2023-01

I agree with most ofthe Advisory Opinion. I write separately because there is one important item in the Advisory Opinion with which I do not agree and I want to expand upon an item that I believe the Advisory Opinion does not give enough attention to.

I.

The Advisory Opinion finds fault with Commissioner Host encouraging residents to make their opinions known to the Planning Board rather than to him or to the other commissioners. (Page 14). I see nothing wrong with that. As far as I know, every public meeting in Birmingham, even ours, has an opportunity for public comment. One of Birmingham's strengths is that citizen involvement is available at all levels of government. The Advisory Opinion quotes the City Manager's statement that "Having elected officials encouraging public attendance is fine". (Page 8) The City's web page for the 2040 Plan, https://bhamgov.org/about_birmingham/city_departments/planning_department/citywide_master_plan.php, encourages direct communication from citizens. It says: "The site includes relevant data, surveys and documents and an email communication option that allows residents to send comments directly to the planning team. Please make sure your voice is heard." The Planning Board is not immune from public comment. They want public comment on the 2040 Plan. Limiting Commissioners to encouraging people to give their opinions only to a Commissioner would interfere with the people's right to communicate directly with the Planning Board and for the Planning Board to hear directly from the people, since Commissioners cannot attend Board meetings, even to summarize the public feedback they have received. (Footnote 6).

I accept Commissioner Host's testimony that he was not trying to influence anybody; he was merely trying to get the public engaged. Of course, there are acceptable and unacceptable ways to encourage public comment. It would violate the Ethics Ordinance to urge members of the public to be disrespectful or to resist the adoption of a particular policy violently or through intimidation or "by any means necessary." We were not presented with any statement by Mr. Host that in my opinion could reasonably be interpreted as inciting improper activity. The

evidence does not even suggest that Commissioner Host encouraged people to give their opinion in person. Eight of his nine videos had a link to submit opinions electronically; the ninth simply asked "what do you think?" Commissioner Host was not unethical in telling residents to "let the Planning Board know what you think." I think the advice in the Advisory Opinion is too restrictive on this point.

II.

The Advisory Opinion properly recognizes a distinction between advisory opinions and complaints. It notes that additional or different rights or issues might be relevant if this were a complaint. I think it is important to say a few words about what some of those issues might be.

The very first section of the Ethics Ordinance announces that it sets "minimum standards of ethical conduct". 2-320. Before listing specific acts that City officials must abide by, the ordinance states that City officials must adhere to the "highest standards of ethical conduct" (2-321), that their official conduct "*should be above reproach*" (original emphasis, 2-321), and must avoid any action, "which might result in, or create the appearance of....affecting adversely the confidence of the public or the integrity of the City government" (2-323). While we all hope that our public officials will always meet the highest ethical standards, does the Ethics Ordinance really mean that the City Manager or the City Commission can sanction a City official, as they have the power to do under 2-325 (b)(3), if they act ethically, but not at the "highest" ethical standard? If so, how can the Board of Ethics decide whether conduct falls short of the highest standards of ethical conduct or is above reproach or might result in diminished confidence in the City?

I see two separate problems with Sections 2-320 and 2-321 and parts of 3-323 being standards that can lead to a violation even if there is no violation of the specific prohibitions of the Ethics Ordinance. First: Not everything that causes a loss of confidence in the City is an ethical issue. The City Commission adopts numerous policies each year. Some portion of the public, large or small, may disapprove of some of them and lose confidence in the City as a result. Commissioners who voted for the policy can't possibly be found to violate the ethics ordinance through that official conduct. Yet the Ethics Ordinance can be understood, if read literally, to prohibit any official action which "may tend to undermine respect" for the City or might "create the appearance of" adversely affecting public confidence in the City.

Second: If a matter is clearly ethical in nature, can the Board of Ethics fairly decide whether it violates the Ethics Ordinance if it is not specifically prohibited in 2-324? What is the "highest" form of ethical conduct? What is "above reproach"? Does it only take one person whose confidence in the City government is diminished (and to what degree) to trigger a violation? A majority of people, or some other standard? How does the Board of Ethics determine when conduct "tends" to undermine respect for the City or when an inappropriate "appearance" exists? Does the Board of Ethics simply decide in each case based on the subjective opinion of a majority of the members at the time? I think it is too easy for Sections 2-320, 2-321 and parts of 2-323 to become catchalls for finding fault when the Board doesn't approve of conduct, but that conduct doesn't violate any objective standard in the Ethics Ordinance. If Board of Ethics members have that kind of power, City officials who find themselves on the wrong side of a complaint could be in an impossible situation; with no way to know in advance what is required of them and without any effective way to defend themselves. I don't want that kind of power or responsibility myself and I don't think the City Commission should want to give the Board of Ethics that kind of power or responsibility.

It doesn't solve the problem to say that the City Commission or the City Manager don't have to impose sanctions if they don't agree with the Board of Ethics' judgment. There is damage from the finding. Who among us wants to be publicly found to have violated an ethics ordinance?

When I first began serving on this Board, we were called upon to determine whether conduct was acceptable under the specific standards of 2-324. Recently, we have been asked to determine if conduct violates the vaguer standards of 2-320 2-321, or 2-323 even if it does not violate the specific standards of 2-324. I am concerned this trend will continue. I recommend the City Commission to revise the Ethics Ordinance to clearly and unequivocally state that Sections 2-320, 2-321 and parts of 2-323 express the hoped-for result when City officials act in accordance with the specific standards of Section 2-324 and it is only Section 2-324 which sets the minimum standard that City officials must meet to avoid sanctions. The Commission may want to add specific prohibitions to Section 2-324. This way City officials will know exactly what is expected of them and the Board of Ethics will have a set of workable standards to apply.

Sophie Fierro-Share

Suzanne R. Coffey, P.E.
Chief Executive Officer
735 Randolph Street, Suite 1900
Detroit, Michigan 48226
Phone: 313-964-9501

May 4, 2023

City Clerk
City of Birmingham
151 Martin Street
Birmingham, Michigan 48009

RE: Immediately Available Funding for Water & Wastewater Services

Dear Sir or Madam,

As leaders in Southeast Michigan, we know that need knows no zip code.

I want to share an important opportunity that directly benefits your municipality's utility and your residents. There is funding available to assist your residents who are behind on their water and/or wastewater bills. Payments are made directly to your utility via local Community Action Agencies on behalf of your residents. To provide information on how to take advantage of this funding opportunity, as well as GLWA's Water Residential Assistance Program (WRAP) new Income Based Plan, I've included the following attachments:

1. Low-Income Household Water Assistance Program (LIHWAP) Overview
2. WRAP Frequently Asked Questions

GLWA can help your community take advantage of this opportunity! Connect with Madison Merzlyakov, GLWA's Affordability & Assistance Manager, at (313) 580-3358 or Madison.Merzlyakov@glwater.org to learn more.

Sincerely,

Suzanne R. Coffey

Suzanne R. Coffey, P.E.
Chief Executive Officer
Great Lakes Water Authority

Information Only

Low-Income Household Water Assistance Program (LIHWAP)

The Great Lakes Water Authority (GLWA) wants to make sure that Member Partners are aware that funding may be available to your community through the State of Michigan's Low-Income Household Water Assistance Program. Over $27 million is available until September 30, 2023, to help your residents with past due balances.

LIHWAP directly benefits utilities by providing payments on behalf of their customers who are behind on their water or wastewater bills.

Currently, half of the communities served by GLWA have not opted into the LIHWAP. If your community is not currently taking advantage of this program, we encourage you to learn more. Below is information on the program and how to participate. Member Partner communities that have signed up for LIHWAP have found it be a straightforward process.

LIHWAP Overview:

LIHWAP is a temporary emergency program to help low-income households pay overdue water and wastewater bills. Michigan received emergency funding from Congress to administer this program. This program is available to low-income homeowners and renters. Funding is administered through Michigan Department of Health and Human Services (MDHHS) to community action agencies statewide until September 30, 2023, unless depleted prior to that date. Michigan was allocated 36 million dollars in funding, and less than 10 million dollars has been spent.

Communities must complete a LIHWAP Participation Agreement before receiving payments on behalf of eligible customers. The agreement is valid for the duration of the program. Once signed, your community can begin receiving payments on behalf of eligible customers. A LIHWAP payment shall guarantee service for at least 90 days after receipt of payment. Participation is voluntary for water and wastewater providers. Community action agencies will work with water and wastewater providers to implement the program and engage in outreach to residents.

Contact your Community Action Agency to participate!

- **Macomb Community Action**
  - Direct Contact: Mary Frontiero, mary.frontiero@macombgov.org or (586) 469-5912
- **Oakland Livingston Human Services Agency**
  - Direct Contact: Barbara Jackson, barbaraj@olhsa.org or (248) 409-1611
- **Wayne Metropolitan Community Action Agency**
  - Direct Contact: Shama Mounzer, smounzer@waynemetro.org or (313) 324-7980

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GLWA
Great Lakes Water Authority

WRAP
Water Residential Assistance Program

Water Residential Assistance Program (WRAP)
Frequently Asked Questions

As of 02.13.2023

What is WRAP?

WRAP provides water and sewer bill assistance and conservation measures to qualifying low-income households within the Great Lakes Water Authority (GLWA) service area, which includes drinking water services for nearly 40 percent, and efficient and effective wastewater services to nearly 30 percent, of Michigan's population.

The conservation measures offered through WRAP focus on creating a healthy home, rather than just reducing water usage. Communities are requested to not conduct shutoffs if the household is enrolled in WRAP.

Why was WRAP created?

As part of its commitment to affordability, GLWA offers WRAP to assist low-income households in its service area.

The goal of WRAP is to set participants up for success. Since 2016, the program has been continuously reviewed and a broad range of adjustments have been made to ensure its adaptability and flexibility to best meet the needs of member partner communities and their residents.

The program was envisioned when GLWA was founded by an agreement between the Mayor of the City of Detroit, the County Executives of Macomb, Oakland and Wayne County and the Governor for the state of Michigan to institute a program that is the first of its kind in Michigan.

What are the benefits of WRAP?

WRAP is a two-year program that provides assistance to households through water and sewer bill credits, arrearage assistance, and conservation measures such as minor plumbing repairs. Households with a senior citizen or person with permanent disabilities are eligible to receive bill credits indefinitely.

Bill Credits – Income Based Plan

The new WRAP Income Based Plan provides bill payment assistance based on the annual household water and sewer bill as a percentage of household income. Bill credit amounts are unique to each household and are determined based on annual household income and water and sewer bills. The goal is for the expected household payment amount toward their water and sewer bill to be three percent of the household income after bill credits are applied.

Arrearage Assistance

Households with a past due balance may receive up to $1,200 in arrearage assistance toward past-due bills or back payments upon enrollment, and up to an additional $1,200 in year two of WRAP.

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Conservation Measures & Minor Plumbing Repairs
Households are eligible to receive up to $2,000 in conservations measures, such as a home water audit, minor plumbing repairs and educational water usage information. With an emphasis on creating a healthy home, WRAP provides repairs on leaking or nonfunctioning plumbing and other water fixtures to create a safe and livable home.

Other Benefits
Case management empowers WRAP service delivery partners to work directly with households to review their progress in making payments. Service delivery partners can also provide the household with access to additional services.

How is someone eligible for WRAP?

Households are eligible for WRAP if they meet the following criteria:

- Reside within the GLWA service area;
- Demonstrate household income at or below 200 percent of the federal poverty level;
- Establish they are responsible for the water or sewer bill;
- Reside in the home they own or rent.

How does a household apply for WRAP?

GLWA engages with service delivery partners who have direct oversight of the program in their service areas, allowing for more tailored outreach efforts and support. Partners include Macomb Community Action, United Way for Southeastern Michigan and Wayne Metropolitan Community Action Agency. The table below indicates which service delivery partners administer the program throughout the GLWA service area.

Service Area	Service Delivery Partner	Phone	Online
City of Flint	Wayne Metropolitan Community Action Agency	(810) 510-9727	www.waynemetro.org/wrap
Lapeer County	Macomb Community Action	(586) 469-6464	mca.macombgov.org/mca-wrap
Macomb County	Macomb Community Action	(586) 469-6464	mca.macombgov.org/mca-wrap
Monroe County	Wayne Metropolitan Community Action Agency	(313) 386-9727	www.waynemetro.org/wrap
Oakland County	United Way for Southeastern Michigan	(248) 983-5656	uwsem.smapply.org/prog/utilities
St. Clair County	Macomb Community Action	(586) 469-6464	mca.macombgov.org/mca-wrap
Washtenaw County	Wayne Metropolitan Community Action Agency	(313) 386-9727	www.waynemetro.org/wrap
Wayne County	Wayne Metropolitan Community Action Agency	(313) 386-9727	www.waynemetro.org/wrap
City of Detroit Lifeline Plan*	Wayne Metropolitan Community Action Agency	(313) 386-9727	www.waynemetro.org/dwsdlifeline

** It should be noted that residents within the City of Detroit are eligible for the Detroit Water & Sewerage Department's Lifeline Plan which is partially funded by WRAP and other resources.*

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Does a household need a past due balance or shut-off notice to enroll?

No, households are encouraged to apply to for assistance if they meet eligibility criteria before they have a past due bill or a shutoff notice. Households do not need to be in past due or shut-off status to participate.

What is expected of participants?

Households enrolled in WRAP are expected to make on-time payments toward their remaining portion of the bill not covered by the WRAP bill credit. If the household is unable to pay their portion of the water or sewer bill, they should contact their service delivery partner (Wayne Metro, Macomb Community Action or United Way) as soon as possible.

What role do the communities play in the program?

GLWA member partner communities play a key role in ensuring the success of WRAP. Each community is unique and requires a tailored approach to best meet the needs of eligible households. Communities can support WRAP by partnering with service delivery partners and GLWA to help raise awareness of WRAP through targeted outreach and community engagement, such as customer assistance days, townhall events and sharing WRAP content on community websites and social media. Additionally, communities can regularly provide a list of delinquent accounts to their service delivery partner to help focus their efforts. GLWA requests that communities not apply penalties or late fees and do not conduct water shut offs or tax rollovers for households enrolled in WRAP.

How to learn more about WRAP?

To learn more, connect with GLWA's Affordability & Assistance Team at WRAP@glwater.org or visit www.glwater.org/assistance.

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WRAP Income Based Plan Communities:

Allen Park
Almont
Ash Township
Auburn Hills
Augusta Township
Belleville
Berkley
Berlin Township
Beverly Hills
Bingham Farms
Birmingham
Bloomfield Hills
Bloomfield Township
Brownstown Township
Bruce Township
Burtchville Township
Canton Township
Center Line
Chesterfield Township
Clawson
Clinton Township
Commerce Township
Dearborn
Dearborn Heights
Eastpointe
Ecorse
Farmington
Farmington Hills
Ferndale
Flat Rock
Flint
Fraser
Garden City
Gibraltar
Grosse Ile Township
Grosse Pointe
Grosse Pointe Farms
Grosse Pointe Park
Grosse Pointe Shores
Grosse Pointe Woods
Hamtramck
Harper Woods
Harrison Township
Hazel Park
Huntington Woods
Huron Charter Township
Imlay City
Inkster
Keego Harbor
Lake Orion
Lapeer
Lathrup Village
Lenox Township
Lincoln Park
Livonia
Macomb Township
Madison Heights
Mayfield Township
Melvindale
New Haven
Northville Township
Northville, City of
Novi
Oak Park
Orchard Lake
Orion Township
Pittsfield Township
Pleasant Ridge
Plymouth Township
Plymouth, City of
Pontiac
Redford Township
River Rouge
Riverview
Rochester
Rochester Hills
Rockwood
Romeo
Romulus
Roseville
Royal Oak Township
Royal Oak, City of
Shelby Township
South Rockwood
Southfield Township
Southfield, City of
Southgate
St. Clair Shores
Sterling Heights
Sumpter Township
Superior Township
Sylvan Lake
Taylor
Trenton
Troy
Utica
Van Buren Township
Walled Lake
Warren
Washington Township
Waterford Township
Wayne, City of
West Bloomfield Township
Westland
Wixom
Woodhaven
Ypsilanti Township
Ypsilanti, City of

City of Detroit – Lifeline Plan

City of Detroit Residents may be eligible for the DWSD Lifeline Plan. Call **313-386-9727** or visit ***www.WayneMetro.org/DWSDLifeline***

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Great Lakes Water Authority

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The Detroit News
SERVING MICHIGAN SINCE 1873

POLITICS

Michigan's infrastructure gets a 'mediocre' grade in new report card

Sarah Rahal
The Detroit News

Published 10:07 p.m. ET May 8, 2023 | **Updated 9:52 a.m. ET May 9, 2023**

America's top civil engineers gave Michigan's overall infrastructure a C- letter grade in a new state-by-state report card, warning that the state's roads, bridges, dams and underground pipelines require attention or could be at risk of failing.

The state's bridges, drinking water, energy infrastructure, roads and stormwater systems received D grades from the American Society of Civil Engineers (ASCE). The report, issued every five years, was especially critical of the resiliency of Michigan's electric grid following a spate of extended power outages for customers of DTE Energy and Consumers Energy across the southern Lower Peninsula.

Airports, inland waterways, public parks, railroads, solid waste and wastewater facilities all received C grades in the ASCE report. Dams, schools and public transit received C- grades, according to the report.

"A cumulative C- means our infrastructure is in mediocre condition and requires attention," said Brad Ewart, president of the Michigan chapter of the American Society of Civil Engineers, adding it's an improvement from the D+ Michigan received in the 2018 report card. "We're seeing similar results across the country."

Compared with the ASCE report card five years ago, Michigan's grades for drinking water, rail, roads, schools and stormwater improved while the two grades for bridges and energy infrastructure got worse.

Of the 14 categories, seven had grades higher than the national average; however, some categories have not reached targeted goals, said Ron Brenke, executive director of the

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American Council of Engineering Companies of Michigan. For example, bridges have received increased state funding in recent years, but 11% of bridges in Michigan are rated in poor condition, more than the 7% national average.

Energy infrastructure dropped from a C- in 2018 to a D in 2023. Brenke attributed Michigan's energy grid's reliability issues to severe weather.

"We experienced slightly more interruptions to power services than the national average. It takes roughly 37% longer for our services to be restored after an outage," Brenke said. "The transmission and distribution network for our grid is aging beyond its designed life and will need to be addressed to prevent worsening outages, particularly as increasingly frequent severe weather events hit the region."

DTE and Consumers, the state's two largest utilities, have repeatedly said they're investing more money in tree-trimming to "harden" the state's electricity grid, increase reliability and prevent future outages. Executives at both utility companies also have blamed repeat outages on an increased number of storms with fierce winds.

Detroit-based DTE Energy said Monday that customers experienced 21% fewer electricity interruptions in 2022 than in 2021 and the average outage duration time was down nearly 40%.

“While we’ve only had the opportunity to review the report overview at this point, we do know that our recent investments in the electric grid, including more than $1 billion in 2022, has helped increase reliability for our customers," DTE Energy spokeswoman Jill Wilmot said in a statement.

Jackson-based Consumers Energy said its crews cleared tree branches from 7,100 miles of power lines last year and replaced 10,000 power line poles to withstand higher wind speeds, utility spokeswoman Katie Carey said Monday.

"We know that trimming trees translates to better reliability for customers," Carey said in a statement. "Consumers Energy is committed to doubling the speed of our line clearing activities from a 14-year effective cycle to a seven-year effective cycle."

The American Society of Civil Engineers report released Monday highlights that Michigan is set to receive $11 billion over the next five years from the 2021 bipartisan federal infrastructure law for some much-needed improvements assessed by the report card.

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The report card for Michigan's infrastructure also spotlighted broadband, but there was not enough data to issue a grade.

"Decision-makers should pursue more comprehensive reporting requirements from telecommunications companies leveraging public dollars and facilitate creative models of deployment in low-access areas which include digital literacy, such as the Detroit Community Technology Project," engineers recommended in the report on broadband.

Progress has been made over the past five years, engineers noted, thanks to spending including $3.5 billion in bond funding from Gov.Gretchen Whitmer's one-time bond financing, accelerating major highway projects in the "Rebuilding Michigan Program" and $4.7 billion from the "Building Michigan Together" plan, a state-level investment into water infrastructure, housing, internet access and parks.

Road construction projects benefiting from Whitmer's bond debt include the ongoing reconstruction of Interstate 275 in western Wayne County and the reconstruction of I-96 in western Oakland County.

"To sustain recent improvements to Michigan’s infrastructure, close investment gaps, and expand system services, decision-makers must implement sustainable, dedicated, long-term funding solutions, address workforce challenges, and prioritize resilience and reliability," the ASCE report said.

To raise Michigan's infrastructure grades, the engineers recommended enhancing, expanding and dedicating funding for infrastructure at the state and local levels.

"In the last five years, the condition of Michigan roads has improved, airports have held steady or sought new capacity, schools have increased facility spending, and water systems have started chiseling away their project queues. These infrastructure systems cannot sustain progress or seriously reduce investment gaps without greater predictable funding," according to the report.

Engineers also recommended focusing planning and design on resilience and reliability.

"Michigan’s energy grid was unreliable in recent storm events and stormwater infrastructure is not sufficient to endure increasingly unpredictable and high-magnitude threats," according to the report. "Decision makers should advance upgrades to infrastructure systems

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to help them stay operational during adverse events, using redundancy, updated codes and standards, and other strategies."

Nationally, the American Society of Civil Engineers has given U.S. infrastructure a C- grade.

"Michigan's infrastructure has been underinvested for many, many, years. It's been well documented that other states are putting up more per capita into their infrastructure than Michigan is," Brenke said. "It took us a long time to get to where we are, and it's going to take a while to higher the grades. But it's really going to take the will of the legislature and leaders of Michigan to prioritize this and invest the money that is needed.

Brad Wieferich, acting director of the Michigan Department of Transportation, said the state is building on its more successful projects, including the third flex lane on U.S. 23 between Ann Arbor and Brighton that opens up during periods of traffic congestion. Meanwhile, officials are seeing concerning trends emerging as the pandemic wanes.

"We've seen excessive speeds, more drunk driving, and we've actually seen the seatbelt use go down throughout the pandemic," Wieferich said.

Lance Binoniemi, vice president of government affairs of Michigan Infrastructure and Transportation Association, said the C- grade is no surprise.

"Lawmakers in Lansing for decades have underinvested in our infrastructure and here are the results," Binoniemi said. "We are in a significant hole that we're working on our way to climb out of just on our roads. The latest reports show that the state needs an additional $3.9 billion annually for the road and bridge network."

Roads and bridges

The ASCE report graded Michigan's bridges as a D+ and roads just slightly worse with a D letter grade.

Annually, $1.25 trillion in goods are shipped throughout Michigan, 78% of which are carried by trucks. Of Michigan’s 120,000 miles of paved federal-aid-eligible roads, 25% are in good condition, up from 20% in 2017 but still far less than the national average of 42%. According to the Transportation Road Information Program, poor road conditions cost each Michigan household $1,093 per year in additional vehicle operating expenses, such as flat tires or front-end alignments.

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Approximately 11% of Michigan bridges are in poor condition, which is the same percentage reflected in the 2018 report and well above the national average of 7%. Good condition bridges dropped to 35% of the total in 2022 from 40% in 2018, meaning the percentage of bridges in fair condition rose from 50% in 2018 to 54% in 2022.

The Bipartisan Infrastructure Law will provide Michigan highways and bridges approximately $7.9 billion between 2022-2026 in federal formula funding and $3.1 billion has been announced for these projects in the state.

The $7.9 billion, though, includes previous annual funding. It amounts to an increase of $336 million more per year through 2026, according to the Michigan Department of Transportation.

Grading water infrastructure

The group of civil engineers gave Michigan's drinking water systems a D+ grade. Stormwater got a D grade, rising slightly from a D- in 2018. The C grade that wastewater infrastructure got five years ago did not change.

Michigan faces potential problems with drinking water systems that are more than 50 years old and some approaching 100 years old, yet less than 1% of pipes are being replaced annually, according to the report. The state also faces a massive funding gap due to decades of deferred maintenance. Michigan’s water investments are falling short by anywhere from $410 million to $710 million per year. These estimates do not include addressing emerging contaminants such as PFAS forever chemicals or lead service line replacements, according to the report.

The Michigan Department of Environment, Great Lakes and Energy estimates $2.71 billion is needed for Michigan’s aging wastewater treatment systems. Michigan has combined sewer areas that are designed to collect everything from domestic sewage to rainwater runoff to industrial wastewater in the same pipe, which leads to combined sewer overflows when excess rainwater overwhelms the system and allows untreated wastewater to discharge into nearby bodies of water.

Untreated combined sewer overflow discharges have been reduced from over 10 billion gallons annually between 2016-18 to less than four billion gallons per year in 2019-20. Michigan’s clean water initiative provided $500 million in spending to address large

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infrastructure issues such as PFAS, undersized sewers, failing septic systems, and the elimination of combined sewer overflows, although long-term funding mechanisms are still needed, according to the ASCE report.

More power outages

Energy had one of the lowest grades in the report. Michigan averages 1.5 interruptions per customer per year, which is higher than the national average of 1.3, and is 37% above average in the number of minutes taken to restore non-momentary electric interruptions. Michigan has the highest propane consumption for residential use of any of the 50 states, according to the report.

Michigan's aging fossil fuel-based fleet is slowly converting to other sources, backstopped by dispatchable natural gas and nuclear sources, with an emphasis on reducing or eliminating carbon dioxide emissions and ensuring that increasing the state's renewable energy portfolio does not destabilize the transmission and distribution network.

The ASCE report also warned of the dangers of Enbridge Energy's continued operation of twin underwater pipelines in the Straits of Mackinac. Enbridge's pipeline carries 540,000 barrels per day of light crude oil and natural gas liquids, which are refined into propane.

Enbridge is in the midst of a years-long effort to build a tunnel through the bedrock of Lake Michigan to house a new pipeline amid efforts by environmentalists and Attorney General Dana Nessel to shut down the 70-year-old pipeline.

"A life-cycle driven solution is needed for existing energy infrastructure. Any petroleum or (natural gas liquids) spill poses a significant risk to the Great Lakes, inland ecosystems, and public health," the group of civil engineers said. "Where fossil fuel energy resources are used, resilient infrastructure is needed."

The report card can be reviewed in detail at www.infrastructurereportcard.org/michigan.

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Cannabis

Pontiac has long been gearing up for recreational marijuana. A referendum push is upending that.

By Dustin Walsh

Recreational marijuana has been upended, again, in Pontiac.

The city's recreational marijuana industry was set to begin in July with the opening of its license application process. But a group backed by some of the city's medical marijuana license holders, who are likely to be shut out of the recreational licensing, has halted that process with a ballot referendum.

Sensible Cannabis Reform for Pontiac submitted two petitions earlier this month with the necessary signatures to put a measure on that ballot that voters could vote to repeal the city's current recreational marijuana ordinance and repeal its related zoning ordinance.

The financial backers of the petition drive are East Lansing-based Pleasantrees, Royal Oak-based Pontiac Ops Inc., Oak Park-based GreenHouse Farms Pontiac LLC and real estate

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investor Dennis Jaboro, according to reporting by the Oakland Press. It's unclear what Jaboro's link is to the Pontiac market.

Lisa Dawdy, spokesperson for Sensible Cannabis, told Crain's the group wants the city's recreational ordinance scrapped and reworked because it effectively eliminates some of those dispensaries approved for medical sales to be up for consideration for recreational sales.

Dawdy runs her own consulting firm Mitten Cannasulting as well as works full-time for Troy-based Jars Cannabis. Dawdy said Jars, which is owned by the owners of controversial short-term auto insurer L.A. Insurance, is not related to the referendum push.

She took over the group this month. The previous head was lobbyist Vincent Brown, who was indicted by the U.S. Department of Justice and plead guilty to conspiracy to commit bribery. Brown was linked to a scheme operated by former House Speaker Rick Johnson, who accepted bribes for allegedly fast-tracking licenses through the since-disbanded Michigan Medical Marihuana Licensing Board.

It's common belief that medical marijuana sales will continue to decline in sales as recreational overtakes more of the market.

Medical marijuana sales have plummeted nearly 71 percent to a total of $7.84 million in April from $27 million during the same month last year. Meanwhile, recreational sales have increased nearly 42 percent to $283.2 million in April from $168 million in April 2022.

The entire marijuana licensing regime in Pontiac has been under scrutiny for years. Nearly five years after Pontiac voters authorized 20 medical marijuana facilities in the city limits, not one has opened. Several lawsuits are playing out over that ordinance.

The recreational ordinance is also gaining detractors. The recreational ordinance, created under a different mayor and city council than the medical ordinance, uses a similar structure to the medical ordinance in that it creates three specific overlay districts where dispensaries may be located, but also includes a fourth district that houses five medical license holder properties that received at-large licenses outside the overlays during the medical licensing processes.

Meaning several current medical marijuana license holders aren't eligible for a recreational license unless they receive authorization on another property, one located in the recreational overlay zones.

Pleasantrees and the other financial backers of Sensible Cannabis are those license holders.

The city, however, believes it has no obligation to the medical license holders.

"We're not in any way interfering or preventing them from opening a medical dispensary, which is what they were initially approved for," Pontiac Mayor Tim Greimel told Crain's in a sit-down interview this week. "And the medical marijuana zoning ordinance remains in place. That is not being altered. We are making land use and zoning decisions about where recreational dispensaries should be located. Just because a previous city council made a decision regarding medical dispensaries doesn't mean that the current city council is obligated to mirror those decisions ..."

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Sensible Cannabis is meeting Wednesday to discuss whether it can submit new recreational ordinance language for the election ballot in November.

As Greimel understands it, the referendum will force the city council to either scrap the current ordinance or allow the referendum to go to voters, who will simply vote whether the city should keep the current ordinance or not.

Greimel said the city would like to see a quick resolution to what he believes is a "fair and reasonable" recreational ordinance, but isn't spending a lot of time pining about it as marijuana is just a small slice of potential tax revenue for the city.

"The vast majority of people I've spoken with don't believe the city can sustain 20-plus dispensaries," Greimel said. "I think it's fair to say that all of the medical dispensaries are not going to survive as recreational dispensaries. Given that market reality and given the fact that all of those conditionally approved as medical facilities have the opportunity to apply for those same locations for recreational dispensaries, the process and the outcome have been very fair … I don't think marijuana is the economic salvation for Pontiac. So while we would like to see this brought to a conclusion, while we would love to see some stores open, it's not a decisive moment for Pontiac."

By Dustin Walsh
Dustin Walsh is a senior reporter for Crain's Detroit Business, covering health care with a focus on industry change and operations, as well as the state's emerging cannabis industry. He is also a regular columnist on all things health, labor, economics and more.

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