

CITY OF ANN ARBOR
INVITATION TO BID



BICENTENNIAL PARK IMPROVEMENTS – PHASE II

ITB No. 4755

Due Date: Thursday, October 10, 2024 11:00AM (Local Time)

City of Ann Arbor
Community Services Area / Parks and Recreation Services

Issued By:

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104

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Wage Determination #MI20240001 (Construction Type – Highway) (last modified August 23, 2024)

ATTACHMENTS

City of Ann Arbor Prevailing Wage Declaration Form
City of Ann Arbor Living Wage Forms
City of Ann Arbor Vendor Conflict of Interest Disclosure Form
City of Ann Arbor Non-Discrimination Ordinance Declaration Form and Notice

NOTICE OF PRE-BID CONFERENCE

No pre-proposal meeting will be held for this RFP. Please contact staff indicated above with general questions regarding the RFP.

INSTRUCTIONS TO BIDDERS

General

The purpose of this Invitation to Bid (ITB) is to select a firm to provide construction services for Phase II of the Bicentennial Park Improvements Project. Work for this phase of the project involves the paving of two existing parking lots, paving of the existing park drive, and repaving of existing asphalt sidewalks throughout the park, as described in the plans and specifications.

Work to be done under this Contract is generally described through the detailed specifications and must be completed fully in accordance with the contract documents. All work to be done under this Contract is located in or near the City of Ann Arbor.

Any Bid which does not conform fully to these instructions may be rejected.

American Rescue Plan Act (ARPA) Funding

The City of Ann Arbor has received funds from the United States Department of the Treasury (the "Treasury") pursuant to the Coronavirus State and Local Fiscal Recovery Fund under CFDA 21.027 ("ARPA Funds"), under Section 602 and 603 of Title VI the Social Security Act, as amended by Section 9901 of the American Rescue Plan Act of 2021 ("ARPA"); and the City has allocated ARPA Funds to provide funding for appropriate and qualifying expenditures as allowed under the Treasury Guidance Interim Final Rule "Coronavirus State and Local Fiscal Recovery Funds" (86 Fed. Reg. 267878). ARPA Funds will be used, in whole or in part, for services contracted pursuant to this ITB. The contract awarded will include the City of Ann Arbor American Rescue Plan Act (ARPA) Contract Addendum which contains additional terms and conditions required by ARPA in addition to those outlined in the sample contract attached hereto. Contractor will be expected to comply with all applicable federal, state, and local regulations. If a contract is awarded, the selected contractor will be required to register in SAM.gov and provide a Unique Entity ID number to the City prior to starting any work. Additionally, this project is not subject to the federal Davis-Bacon Act but is subject to compliance with the City of Ann Arbor's prevailing wage policy.

Bidders are encouraged to closely review the sample contract and City of Ann Arbor American Rescue Plan Act (ARPA) Contract Addendum attached hereto.

Preparation of Bids

Bids should be prepared providing a straight-forward, concise description of the Bidder's ability to meet the requirements of the ITB. Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bids must be submitted on the "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid. No alternative bid will be considered unless alternative bids are specifically requested. If alternatives are requested, any deviation from the specification must be fully described, in detail on the "Alternate" section of Bid form.

Each person signing the Bid certifies that he/she is the person in the Bidder's firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not

participated in any action contrary to the terms of this provision.

Questions or Clarifications / Designated City Contacts

All questions regarding this ITB shall be submitted via email. Emailed questions and inquires will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before **Tuesday, October 1, 2024 12:00pm** and should be addressed as follows:

Scope of Work/ITB Content questions shall be e-mailed to Chris Elenbaas, OHM Advisors; **chris.elenbaas@ohm-advisors.com** and Hillary Hanzel, City of Ann Arbor; **hhanzel@a2gov.org**.

Bid Process and Compliance questions shall be e-mailed to Colin Spencer, Buyer - **CSpencer@a2gov.org**.

Should any prospective bidder be in doubt as to the true meaning of any portion of this ITB, or should the prospective bidder find any ambiguity, inconsistency, or omission therein, the prospective bidder shall make a written request for an official interpretation or correction by the due date for questions above.

Addenda

If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) www.mitn.info and/or City of Ann Arbor web site www.A2gov.org for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received; but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

Bid Submission

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before **Thursday, October 10, 2024 11:00am (local time)**. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each Bidder must submit one (1) original Bid and **two (2)** Bid copies in a sealed envelope clearly marked: **ITB No. 4755 Bicentennial Park Improvements – Phase II**.

Bids must be addressed and delivered to:

City of Ann Arbor
Procurement Unit,
c/o Customer Services, 1st Floor
301 East Huron Street

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

The following forms provided within this ITB Document should be included in submitted bids.

- **City of Ann Arbor Prevailing Wage Declaration of Compliance**
- **City of Ann Arbor Living Wage Ordinance Declaration of Compliance**
- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

Bids that fail to provide these forms listed above upon bid opening may be rejected as non-responsive and may not be considered for award.

Hand delivered bids may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is open to the public Monday through Friday from 8am to 5pm (except holidays). The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time for submission of bids past the stated due date and time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines in its sole discretion that circumstances warrant it.

Award

The City intends to award a Contract(s) to the lowest responsible Bidder(s). On multi-divisional contracts, separate divisions may be awarded to separate Bidders. The City may also utilize alternatives offered in the Bid Forms, if any, to determine the lowest responsible Bidder on each division, and award multiple divisions to a single Bidder, so that the lowest total cost is achieved for the City. For unit price bids, the Contract will be awarded based upon the unit prices and the lump sum prices stated by the bidder for the work items specified in the bid documents, with consideration given to any alternates selected by the City. If the City determines that the unit price for any item is materially different for the work item bid than either other bidders or the general market, the City, in its sole discretion, in addition to any other right it may have, may reject the bid as not responsible or non-conforming.

The acceptability of major subcontractors will be considered in determining if a Bidder is responsible. In comparing Bids, the City will give consideration to alternate Bids for items listed in the bid forms. All key staff and subcontractors are subject to the approval by the City.

Official Documents

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained from any other source are not Official copies. Addenda and other bid information will only be posted to these official distribution sites. If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on www.MITN.info and obtain an official Bid. Bidders do not need to be shown on the plan holders list provided by MITN to be considered an official plan holder.

Bid Security

Each bid must be accompanied by a certified check, or Bid Bond by a surety licensed and authorized to do business within the State of Michigan, in the amount of 5% of the total of the bid price.

Withdrawal of Bids

After the time of opening, no Bid may be withdrawn for the period of one hundred and eighty (180) days

Contract Time

Time is of the essence in the performance of the work under this Contract. The available time for work under this Contract is indicated on page C-2, Article III of the Contract. If these time requirements can not be met, the Bidder must stipulate on Bid Form Section 3 - Time Alternate its schedule for performance of the work. Consideration will be given to time in evaluating bids.

Liquidated Damages

A liquidated damages clause, as given on page C-2, Article III of the Contract, provides that the Contractor shall pay the City as liquidated damages, and not as a penalty, a sum certain per day for each and every day that the Contractor may be in default of completion of the specified work, within the time(s) stated in the Contract, or written extensions.

Liquidated damages clauses, as given in the General Conditions, provide further that the City shall be entitled to impose and recover liquidated damages for breach of the obligations under Chapter 112 of the City Code.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

Human Rights Information

All contractors proposing to do business with the City shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Section 5, beginning at page GC-2 shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

Wage Requirements

Section 4, beginning at page GC-1, outlines the requirements for payment of prevailing wages and for payment of a "living wage" to employees providing service to the City under this contract. The successful bidder and its subcontractors must comply with all applicable requirements and provide proof of compliance.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. Use of the Sample Certified Payroll form provided in the Appendix section or a City-approved equivalent will be required along with wage rate interviews.

For laborers whose wage level are subject to federal, state and/or local prevailing wage law the appropriate Davis-Bacon wage rate classification is identified based upon the work including within this contract. The U.S. Department of Labor (DOL) has provided explanations to assist with classification in the following resource link: beta.SAM.gov.

For the purposes of this ITB the Construction Type of Heavy will apply.

The wage determination applicable to this contract is # MI20240001 (Construction Type – Highway) (last modified August 23, 2024) attached to this ITB as an appendix

Conflict Of Interest Disclosure

The City of Ann Arbor Purchasing Policy requires that prospective Vendors complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected Vendor unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Vendor Conflict of Interest Disclosure Form is attached.

Major Subcontractors

The Bidder shall identify on Bid Form Section 4 each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over \$50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor. The Bidder shall not change or replace a subcontractor without approval by the City.

Debarment

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

Disclosures

After bids are opened, all information in a submitter's bid is subjected to disclosure under the provisions of Michigan Public Act No. 442 of 1976, as amended (MCL 15.231 et seq.) known as the "Freedom of Information Act." The Freedom of Information Act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted.

Bid Protest

All Bid protests must be in writing and filed with the Purchasing Agent within five (5) business days of the award action. The bidder must clearly state the reasons for the protest. If a bidder contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the bidder to the Purchasing Agent. The Purchasing Agent will provide the bidder with

the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee whose decision shall be final.

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by any prospective bidder to initiate contact with anyone other than the Designated City Contacts provided herein that the bidder believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

Cost Liability

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the Bidder prior to the execution of a contract with the City. By submitting a bid, a bidder agrees to bear all costs incurred or related to the preparation, submission and selection process for the bid.

Reservation of Rights

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

Idlefree Ordinance

The City of Ann Arbor adopted an idling reduction Ordinance that went into effect July 1, 2017. The full text of the ordinance (including exemptions) can be found at: www.a2gov.org/idlefree.

Under the ordinance, No Operator of a Commercial Vehicle shall cause or permit the Commercial Vehicle to Idle:

- (a) For any period of time while the Commercial Vehicle is unoccupied; or
- (b) For more than 5 minutes in any 60-minute period while the Commercial Vehicle is occupied.

In addition, generators and other internal combustion engines are covered

(1) Excluding Motor Vehicle engines, no internal combustion engine shall be operated except when it is providing power or electrical energy to equipment or a tool that is actively in use.

Environmental Commitment

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote, and encourage the City's commitment to the environment.

The City encourages potential vendors to bring forward emerging and progressive products and services that are best suited to the City's environmental principles.

INVITATION TO BID

City of Ann Arbor
Guy C. Larcom Municipal Building
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including City Nondiscrimination requirements and Declaration of Compliance Form, Living Wage requirements and Declaration of Compliance Form, Prevailing Wage requirements and Declaration of Compliance Form, Vendor Conflict of Interest Form, Notice of Pre-Bid Conference, Instructions to Bidders, Bid, Bid Forms, Contract, Bond Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and the Plans (if applicable) and understands them. The Bidder declares that it conducted a full investigation at the site and of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance. The Bidder also declares that it has extensive experience in successfully completing projects similar to this one.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

The undersigned proposes to perform all work shown on the plans or described in the bid documents, including any addenda issued, and to furnish all necessary machinery, tools, apparatus, and other means of construction to do all the work, furnish all the materials, and complete the work in strict accordance with all terms of the Contract of which this Bid is one part.

In accordance with these bid documents, and Addenda numbered _____, the undersigned, as Bidder, proposes to perform at the sites in and/or around Ann Arbor, Michigan, all the work included herein for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:320 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services to the City under this Contract, with the wage and reporting requirements stated in the City Code provisions cited. Bidder certifies that the statements contained in the City Prevailing Wage and Living Wage Declaration of Compliance Forms are true and correct. Bidder further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

The Bidder encloses a certified check or Bid Bond in the amount of 5% of the total of the Bid Price. The Bidder agrees both to contract for the work and to furnish the necessary Bonds and insurance documentation within 10 days after being notified of the acceptance of the Bid.

If this Bid is accepted by the City and the Bidder fails to contract and furnish the required Bonds and insurance documentation within 10 days after being notified of the acceptance of this Bid, then the Bidder shall be considered to have abandoned the Contract and the certified check or Bid Bond accompanying this Bid shall become due and payable to the City.

If the Bidder enters into the Contract in accordance with this Bid, or if this Bid is rejected, then the accompanying check or Bid Bond shall be returned to the Bidder.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS 10th DAY OF October, 2024

TJM ASPHALT PAVING
Bidder's Name

Rick Gordon
Authorized Signature of Bidder

4755 Old Plank Rd.
Official Address Milford, MI 48381

Rick Gordon
(Print Name of Signer Above)

248/684-2300
Telephone Number

rgordon@tjmasphalt.com
Email Address for Award Notice

LEGAL STATUS OF BIDDER

(The Bidder shall fill out the appropriate form and strike out the other three.)

Bidder declares that it is:

* A corporation organized and doing business under the laws of the State of Michigan, for whom Rick Gordon, bearing the office title of Estimator, whose signature is affixed to this Bid, is authorized to execute contracts.

NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority

• A limited liability company doing business under the laws of the State of _____, whom _____ bearing the title of _____ whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.

* A partnership, organized under the laws of the state of _____ and filed in the county of _____, whose members are (list all members and the street and mailing address of each) (attach separate sheet if necessary):

* An individual, whose signature with address, is affixed to this Bid: _____ (initial here)

Authorized Official

Rick Gordon Date 10/10, 2024

(Print) Name Rick Gordon Title Estimator / PM

Company: TAM ASPHALT PAVING

Address: 4755 Old Plank Rd. Milford MI 48381

Contact Phone 248 684-2300 Fax 248 685-0580

Email rgordon@tmasphalt.com

BID FORM

Section 1 – Schedule of Prices

Company: T & M ASPHALT PAVING

Project: **ITB #4755 Bicentennial Park Improvements – Phase II**

Unit Price Bid –

Item	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Subbase, CIP, 6 inch	3,600	Syd	\$ <u>7.82</u>	\$ <u>28152.00</u>
2	Aggregate Base, 8 inch	3,500	Syd	\$ <u>15.48</u>	\$ <u>54180.00</u>
3	Sidewalk, Conc, 6 inch	830	Sft	\$ <u>13.10</u>	\$ <u>10873.00</u>
4	Pavement Markings	1	LSUM	\$ <u>1565.00</u>	\$ <u>1565.00</u>
5	Permanent Traffic Signs	1	LSUM	\$ <u>3300.00</u>	\$ <u>3300.00</u>
6	Pavt, Rem	4,150	Syd	\$ <u>5.10</u>	\$ <u>21165.00</u>
7	Traffic Speed Bump	2	Ea	\$ <u>2125.00</u>	\$ <u>4250.00</u>
8	Curb and Gutter, Conc, Replacement	600	Ft	\$ <u>32.25</u>	\$ <u>19350.00</u>
9	Detectable Warning Surface	65	Ft	\$ <u>31.00</u>	\$ <u>2015.00</u>
10	Erosion Control, Gravel Access Approach	1	Ea	\$ <u>1200.00</u>	\$ <u>1200.00</u>
11	Erosion Control, Inlet Protection, Fabric Drop	2	Ea	\$ <u>200.00</u>	\$ <u>400.00</u>
12	Dr Structure, Rem	1	Ea	\$ <u>1350.00</u>	\$ <u>1350.00</u>
13	Dr Structure, 48 inch dia	1	Ea	\$ <u>6650.00</u>	\$ <u>6650.00</u>
14	Dr Structure Cover, Adj, Case 2	1	Ea	\$ <u>1150.00</u>	\$ <u>1150.00</u>
15	Earthwork	1	LSUM	\$ <u>25300.00</u>	\$ <u>25300.00</u>
16	Subgrade Undercutting, Type II	50	CYD	\$ <u>80.00</u>	\$ <u>4000.00</u>
17	Maintaining Traffic	1	LSUM	\$ <u>1000.00</u>	\$ <u>1000.00</u>
18	HMA, 13A	850	Ton	\$ <u>140.65</u>	\$ <u>119552.50</u>
19	Construction Staking	1	LSUM	\$ <u>1500.50</u>	\$ <u>1500.50</u>
20	Mobilization	1	LSUM	\$ <u>20400.00</u>	\$ <u>20400.00</u>

Phase II - Base Bid Total

\$ 327,353.00

See next page for additional bid items

Phase II – Alternate 1

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Price</u>
1	Subbase, CIP, 6 inch	4,700	Syd	\$ <u>7.70</u>	\$ <u>36190.00</u>
2	Aggregate Base, 8 inch	4,600	Syd	\$ <u>15.49</u>	\$ <u>71254.00</u>
3	Pavement Markings	1	LSUM	\$ <u>1030.00</u>	\$ <u>1030.00</u>
4	Permanent Traffic Signs	1	LSUM	\$ <u>500.00</u>	\$ <u>500.00</u>
5	Metal Posts and Gate, Rem	1	LSUM	\$ <u>1500.00</u>	\$ <u>1500.00</u>
6	Traffic Speed Bump	5	Ea	\$ <u>1620.00</u>	\$ <u>8100.00</u>
7	Curb and Gutter, Conc, Replacement	500	Ft	\$ <u>47.90</u>	\$ <u>23950.00</u>
8	Curb and Gutter, Conc	550	Ft	\$ <u>32.90</u>	\$ <u>18095.00</u>
9	Erosion Control, Inlet Protection, Fabric Drop	7	Ea	\$ <u>175.00</u>	\$ <u>1225.00</u>
10	Erosion Control, Silt Fence	300	Ft	\$ <u>2.00</u>	\$ <u>600.00</u>
11	Dr Structure, Rem	1	Ea	\$ <u>1050.00</u>	\$ <u>1050.00</u>
12	Dr Structure, 48 inch dia	4	Ea	\$ <u>5150.00</u>	\$ <u>20600.00</u>
13	Dr Structure Cover, Adj, Case 2	2	Ea	\$ <u>920.00</u>	\$ <u>1840.00</u>
14	Storm Sewer, RCP CI III, 12 inch, Tr Det A	160	Ft	\$ <u>78.00</u>	\$ <u>12480.00</u>
15	Storm Sewer, RCP CI III, 12 inch, Tr Det B	137	Ft	\$ <u>89.00</u>	\$ <u>12193.00</u>
16	Earthwork	1	LSUM	\$ <u>29000.00</u>	\$ <u>29000.00</u>
17	Subgrade Undercutting, Type II	50	CYD	\$ <u>80.00</u>	\$ <u>4000.00</u>
18	Turf Establishment	1	LSUM	\$ <u>3750.00</u>	\$ <u>3750.00</u>
19	Maintaining Traffic	1	LSUM	\$ <u>1000.00</u>	\$ <u>1000.00</u>
20	HMA, 13M	1,200	Ton	\$ <u>136.00</u>	\$ <u>163200.00</u>
21	Construction Staking	1	LSUM	\$ <u>2500.00</u>	\$ <u>2500.00</u>
22	Mobilization	1	LSUM	\$ <u>20150.00</u>	\$ <u>20150.00</u>

Phase II - Alternate 1 Subtotal

\$ 434,207.00

See next page for additional bid items

Phase II – Alternate 2

Item	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Sidewalk, Conc, 6 inch	1,170	Sft	\$ <u>11.90</u>	\$ <u>13923.00</u>
2	Pavt, Rem	2,350	Syd	\$ <u>7.80</u>	\$ <u>18330.00</u>
3	Fence, Rem	40	Ft	\$ <u>50.00</u>	\$ <u>2000.00</u>
4	Collapsible Bollard	1	Ea	\$ <u>2000.00</u>	\$ <u>2000.00</u>
5	Detectable Warning Surface	45	Ft	\$ <u>35.00</u>	\$ <u>1575.00</u>
6	Erosion Control, Inlet Protection, Fabric Drop	4	Ea	\$ <u>175.00</u>	\$ <u>700.00</u>
7	Erosion Control, Silt Fence	2,900	Ft	\$ <u>2.00</u>	\$ <u>5800.00</u>
8	Earthwork	1	LSUM	\$ <u>54500.00</u>	\$ <u>54500.00</u>
9	Turf Establishment	1	LSUM	\$ <u>16000.00</u>	\$ <u>16000.00</u>
10	HMA, 13A	450	Ton	\$ <u>169.00</u>	\$ <u>76050.00</u>
11	Construction Staking	1	LSUM	\$ <u>1500.00</u>	\$ <u>1500.00</u>
12	Mobilization	1	LSUM	\$ <u>12700.00</u>	\$ <u>12700.00</u>

Phase II - Alternate 2 Subtotal

\$ 205,078.00

BID FORM

Section 2 – Material, Equipment and Environmental Alternates

The Base Bid proposal price shall include materials and equipment selected from the designated items and manufacturers listed in the bidding documents. This is done to establish uniformity in bidding and to establish standards of quality for the items named.

If the Contractor wishes to quote alternate items for consideration by the City, it may do so under this Section. A complete description of the item and the proposed price differential must be provided. Unless approved at the time of award, substitutions where items are specifically named will be considered only as a negotiated change in Contract Sum.

If an environmental alternative is bid the City strongly encourages bidders to provide recent examples of product testing and previous successful use for the City to properly evaluate the environmental alternative. Testing data from independent accredited organizations are strongly preferred.

<u>Item Number</u>	<u>Description</u>	<u>Add/Deduct Amount</u>
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NONE

If the Bidder does not suggest any material or equipment alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any material or equipment alternate under the Contract.

Signature of Authorized Representative of Bidder



Date 10/10/24

BID FORM

Section 3 - Time Alternate

If the Bidder takes exception to the time stipulated in Article III of the Contract, Time of Completion, page C-2, it is requested to stipulate below its proposed time for performance of the work. Consideration will be given to time in evaluating bids.

NONE

If the Bidder does not suggest any time alternate, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT propose any time alternate under the Contract.

Signature of Authorized Representative of Bidder

Rich Gordon

Date

10/10/24

BID FORM

Section 4 - Major Subcontractors

For purposes of this Contract, a Subcontractor is anyone (other than the Contractor) who performs work (other than or in addition to the furnishing of materials, plans or equipment) at or about the construction site, directly or indirectly for or on behalf of the Contractor (and whether or not in privity of Contract with the Contractor), but shall not include any individual who furnishes merely the individual's own personal labor or services.

Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision to Section 4 of the General Conditions covering subcontractor's employees who perform work on this contract.

For the work outlined in these documents the Bidder expects to engage the following major subcontractors to perform the work identified:

<u>Subcontractor (Name and Address)</u>	<u>Work</u>	<u>Amount</u>
Nicola's Excavating - Milford	Drainage Structure work	\$ 9150.00
IC stripe & Signs - New Hudson	stripe/signs/Speed humps	\$ 7590.00

If the Bidder does not expect to engage any major subcontractor, the Bidder **MUST** complete the following statement:

For the work outlined in this request for bid, the bidder does NOT expect to engage any major subcontractor to perform work under the Contract.

Signature of Authorized Representative of Bidder Rick Gordon Date 10/10/24

BID FORM

Section 5 – References

Include a minimum of five (5) references from similar projects completed within the past five (5) years.

[Refer also to Instructions to Bidders for additional requirements, if any]

1) Lyon Oaks \$2,117,438 2023/2024
Project Name Cost Date Constructed

Andy Kromwiede 248/858-0511
Contact Name Phone Number

2) Novi Pickleball \$550,923.00 2024
Project Name Cost Date Constructed

Ted Meadows 248/844-5400
Contact Name Phone Number

3) Drake Sports Park \$977,810.00 2022
Project Name Cost Date Constructed

Joe Ketchum 248/640-2749
Contact Name Phone Number

4) Genoa WWTP \$288,750.00 2020
Project Name Cost Date Constructed

Barb Schultz 517/322-3800
Contact Name Phone Number

5) Creekside Park Paths \$ 261,815.00 2023
Project Name Cost Date Constructed

Brandon Guest 248/284-5524
Contact Name Phone Number

BID FORM

Section 6 – Contractor Information and Responsible Contractor Criteria

Backup documentation may be requested at the sole discretion of the City to validate all of the responses provided herein by bidders. False statements by bidders to any of the criteria provided herein will result in the bid being considered non-responsive and will not be considered for award.

Failure to provide responses to all questions may result in being deemed non-responsive.

Attach additional pages as needed if space below is insufficient.

Pursuant to Sec 1:312(20) of the City Code which sets forth requirements of a responsible bidder, Bidder is required to submit the following:

1. Organization Name: T&M ASPHALT PAVING

Social Security or Federal Employer I.D. #: 38-1957131

Address: 4755 Old Plank Rd.

City: Milford State: MI Zip: 48381

Type of Organization (circle one below):

Individual Partnership Corporation Joint Venture Other

If "Other" please provide details on the organization:

Year organization established: 1969

2. Current owners/principals/members/managing members/partners of the organization:

Darryl Fegan (President) Vince Van Poppelan (Vice President)

3. Assumed Names, "doing business as" d/b/a, and/or former organization names(s), if applicable: NA

Explanation of any business name changes:

N/A

4. If applicable, please provide a list of all bidder's litigation and arbitrations currently pending and within the past five years, including an explanation of each (parties, court/forum, legal claims, damages sought, and resolution).

N/A

5. Qualifications of management and supervisory personnel to be assigned by the bidder:

Don Geiermann Safety officer

6. List the state and local licenses and license numbers held by the bidder:

COMPANY BUILDERS LICENSE # A10246204

7. Will all subcontractors, employees and other individuals working on the construction project maintain current applicable licenses required by law for all licensed occupations and professions?

Yes

No

8. Will contractors, subcontractors, employees, and other individuals working on the construction project be misclassified by bidder as independent contractors in violation of state or federal law?

Yes

No

9. Submit a statement as to what percentage of your work force resides within the City of Ann Arbor, and what percentage resides in Washtenaw County, Michigan, and the same information for any major subcontractors.

TBD

10. Submit documentation as to bidder's employee pay rates (e.g., certified payroll without SSN or personal identifying information, or chart of job titles and pay rates, or other evidence). *to be supplied if awarded*

11. State whether bidder provides health insurance, pension or other retirement benefits, paid leave (vacation, personal time, sick leave, etc), or other benefits to its employees, and if so, state whether each benefit is provided directly to employees, by payments or contributions to a third-party administered plan, in cash (e.g., fringe benefit portion of prevailing wages), or other manner.

FULL UNION WORKFORCE.

12. State whether bidder is an equal opportunity employer and does not discriminate in its hiring on the basis of race, sex, pregnancy, age, religion, national origin, marital status, sexual orientation or gender identity, height, weight, or disability.

Yes

No

13. State whether bidder has Equal Employment Opportunity Programs for minorities, women, veterans, returning citizens, and small businesses, and if so, submit supporting documentation or other evidence of such program(s).

See attached

14. Has bidder had any violations of state, federal, or local laws or regulations, including OSHA or MIOSHA violations, state or federal prevailing wage laws, wage and hour laws, worker's compensation or unemployment compensation laws, rules or regulations, issued to or against the bidder within the past five years?

Yes

No

If you answered "yes" to the question above, for each violation provide an explanation of the nature of the violation, the agency involved, a violation or reference number, any other individual(s) or party(ies) involved, and the status or outcome and resolution.

15. Does bidder have an existing Fitness for Duty Program (drugs and alcohol testing) of each employee working on the proposed jobsite?

Yes

No

If you answered "Yes", please submit documentation of the Fitness for Duty Program and what it entails.

Handbook / Must Safety Program

16. Submit documents or evidence of any debarment by any federal, state or local governmental unit and/or findings of non-responsibility or non-compliance with respect to any public or private construction project performed by the bidder. *N/A*

17. Proof of insurance, including certificates of insurance, confirming existence and amount of coverage for liability, property damage, workers compensation, and any other insurances required by the proposed contract documents.

See attached

18. Does bidder have an on-going MIOSHA-approved safety-training program for employees to be used on the proposed job site?

Yes

No

If bidder answered "yes" to the question above, submit documentation of your safety-training program.

MUST Safety Program

19. Does bidder have evidence of worker's compensation Experience Modification Rating ("EMR")?

Yes

No

EMR = .70

20. Will bidder use masters, journeypersons and apprentices on the project?

Yes

No

If bidder answered "yes" to the question above, provide the ratio of masters and journeypersons to apprentices for this project.

Ratio: 100% MASTERS & JOURNEYPEOPLE

If bidder answered "no" to the question above, submit documentation regarding the qualifications of each worker who may or will be assigned on the project.

If, yes, Ratio = _____

21. Can bidder provide documentation that it participates in a Registered Apprenticeship Program (RAP) that is registered with the United States Department of Labor Office of Apprenticeship or by a State Apprenticeship Agency recognized by the Office of Apprenticeship?

Yes

No

If bidder answered "yes" to the question above, please submit a copy of the program document(s) and evidence of its registration.

If bidder answered "no" to the question above, please provide details on how you assess the skills and qualifications of any employees who do not have master or journeyperson certification or status, or are not participants in a Registered Apprenticeship Program.

Union

22. Will bidder comply with all applicable state and federal laws and visa requirements regarding the hiring of non-US citizens, and disclosure of any work visas sought or obtained by the bidder, any of the bidder's subcontractors, or any of the bidder's employees or independent contractors, in order to perform any portion of the project?

Yes

No

23. Submit evidence that bidder has financial resources to start up and follow through on the project and to respond to damages in case of default as shown by written verification of bonding capacity equal to or exceeding the amount of the bidders scope of work on the project. The written verification must be submitted by a licensed surety company rated B+ or better in the current A.M. Best Guide and qualified to do business within the State of Michigan, and the same audited financial information for any subcontractor estimated to be paid more than \$100,000 related to any portion of the project.

Bid Bond attached

24. Submit evidence of a quality assurance program used by the bidder and the results of same on the bidder's previous projects.

CONTRACT

THIS CONTRACT is between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 East Huron Street, Ann Arbor, Michigan 48104 (“City”) and T & M Asphalt Paving (“Contractor”) a corporation organized and doing business under the laws of the State of Michigan at 4755 Old Plank Road, Milford, Michigan 48381.

Based upon the mutual promises below, the Contractor and the City agree as follows:

ARTICLE I - Scope of Work

The Contractor agrees to furnish all of the materials, equipment and labor necessary; and to abide by all the duties and responsibilities applicable to it for the project titled **ITB# 4755 Bicentennial Park Improvements – Phase II** in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, all of which are incorporated as part of this Contract:

Non-discrimination and Living Wage Declaration of Compliance Forms (if applicable)	General Conditions
Vendor Conflict of Interest Form	Standard Specifications
Prevailing Wage Declaration of Compliance Form (if applicable)	Detailed Specifications
Bid Forms	Plans
Contract and Exhibits	Addenda
Bonds	ARPA Contract Addendum

ARTICLE II - Definitions

Administering Service Area/Unit means **Community Services Area / Parks and Recreation Services**

Project means **ITB# 4755 Bicentennial Park Improvements – Phase II**

Supervising Professional means the person acting under the authorization of the manager of the Administering Service Area/Unit. At the time this Contract is executed, the Supervising Professional is: **Adam Fercho** whose job title is **Landscape Architect IV**. If there is any question concerning who the Supervising Professional is, Contractor shall confirm with the manager of the Administering Service Area/Unit.

Contractor’s Representative means **Rick Gordon** whose job title is **Estimator**.

ARTICLE III - Time of Completion

- (A) The work to be completed under this Contract shall begin immediately on the date specified in the Notice to Proceed issued by the City.

- (B) The entire work within this Contract shall be completed by May 25, 2026.
- (C) Failure to complete all the work within the time specified above, including any extension granted in writing by the Supervising Professional, shall obligate the Contractor to pay the City, as liquidated damages and not as a penalty, an amount equal to \$500 for each calendar day of delay in the completion of all the work. If any liquidated damages are unpaid by the Contractor, the City shall be entitled to deduct these unpaid liquidated damages from the monies due the Contractor.

The liquidated damages are for the non-quantifiable aspects of any of the previously identified events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

ARTICLE IV - The Contract Sum

- (A) The City shall pay to the Contractor for the performance of the Base Bid and Alternate II of the Contract, the unit prices as given in the Bid Form for the estimated bid total of:

Five Hundred Thirty-Two Thousand, Four Hundred Thirty-One and 00/100 Dollars
(\$532,431.00)

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the Contract Documents. Increases or decreases shall be determined only by written agreement between the City and Contractor.

ARTICLE V - Assignment

This Contract may not be assigned or subcontracted any portion of any right or obligation under this contract without the written consent of the City. Notwithstanding any consent by the City to any assignment, Contractor shall at all times remain bound to all warranties, certifications, indemnifications, promises and performances, however described, as are required of it under this contract unless specifically released from the requirement, in writing, by the City.

ARTICLE VI - Choice of Law

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this Contract, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract. The parties stipulate that the venue referenced in this Contract is for convenience and waive any claim of non-convenience.

Whenever possible, each provision of the Contract will be interpreted in a manner as to be effective and valid under applicable law. The prohibition or invalidity, under applicable law, of any provision will not invalidate the remainder of the Contract.

ARTICLE VII - Relationship of the Parties

The parties of the Contract agree that it is not a Contract of employment but is a Contract to accomplish a specific result. Contractor is an independent Contractor performing services for the City. Nothing contained in this Contract shall be deemed to constitute any other relationship between the City and the Contractor.

Contractor certifies that it has no personal or financial interest in the project other than the compensation it is to receive under the Contract. Contractor certifies that it is not, and shall not become, overdue or in default to the City for any Contract, debt, or any other obligation to the City including real or personal property taxes. City shall have the right to set off any such debt against compensation awarded for services under this Contract.

ARTICLE VIII - Notice

All notices given under this Contract shall be in writing, and shall be by personal delivery or by certified mail with return receipt requested to the parties at their respective addresses as specified in the Contract Documents or other address the Contractor may specify in writing. Notice will be deemed given on the date when one of the following first occur: (1) the date of actual receipt; or (2) three days after mailing certified U.S. mail.

ARTICLE IX - Indemnification

To the fullest extent permitted by law, Contractor shall indemnify, defend and hold the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result, in whole or in part, from any act or omission, which is in any way connected or associated with this Contract, by the Contractor or anyone acting on the Contractor's behalf under this Contract. Contractor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence. The provisions of this Article shall survive the expiration or earlier termination of this contract for any reason.

ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations, negotiations, agreements, or understandings whether written or oral. Neither party has relied on any prior representations in entering into this Contract. No terms or conditions of either party's invoice, purchase order or other administrative document shall modify the terms and conditions of this Contract, regardless of the other party's failure to object to such form. This Contract shall be binding on and shall inure to the benefit of the parties to this Contract and their permitted successors and permitted assigns and nothing in this Contract, express or implied, is intended to or shall confer on any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

ARTICLE XI – Electronic Transactions

The City and Contractor agree that signatures on this Contract may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this Contract. This Contract may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

FOR CONTRACTOR

By _____

Its: _____

FOR THE CITY OF ANN ARBOR

By _____
Christopher Taylor, Mayor

By _____
Jacqueline Beaudry, City Clerk

Approved as to substance

By _____
Milton Dohoney Jr, City Administrator

By _____
Derek Delacourt, Community
Services Area Administrator

Approved as to form and content

Atleen Kaur, City Attorney

CITY OF ANN ARBOR
AMERICAN RESCUE PLAN ACT (ARPA) CONTRACT ADDENDUM

Notice: The contract or purchase order to which this addendum is attached is made using federal assistance provided to the City of Ann Arbor by the U.S. Department of Treasury under the American Rescue Plan Act (“ARPA” and “ARPA Funds”), Sections 602(b) and 603(b) of the Social Security Act, Pub. L. No. 117-2 (March 11, 2021). In using such funds, the City must comply with the terms of ARPA, regulations issued by the U.S. Department of the Treasury (“Treasury”) governing the expenditure of monies distributed from the ARPA Funds (including, without limitation, the Interim Final Rule (86 Fed. Reg. 26,786 (May 17, 2021) and Final Rule (87 Fed. Reg. 4,338 (Jan. 27, 2022))), the Award Terms and Conditions applicable to the ARPA Funds, and such other guidance as Treasury has issued or may issue governing the expenditure of monies distributed from the ARPA Funds (collectively, the “Regulatory Requirements”). Additionally, pursuant to the Regulatory Requirements, the City must comply with the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200 other than such provisions as Treasury has determined or may determine are inapplicable to the ARPA Funds and pursuant to 2 C.F.R. §200.327 the City must include within any contract applicable provisions described in Appendix II to 2 C.F.R. Part 200, each of which is contained in this Addendum.

The following terms and conditions apply to you, the contractor or vendor, as a contractor of the City of Ann Arbor, according to the City’s Award Terms and Conditions; by ARPA and its implementing regulations; and as established by the Treasury Department.

1. **ARPA Requirements.** Contractor agrees to comply with the requirements of Section 603 of ARPA, the Treasury’s regulations implementing that section, and guidance issued by Treasury regarding the foregoing. Contractor also agrees to comply with all other applicable federal laws, regulations, and executive orders, and Contractor shall provide for such compliance by other parties in any agreements it enters into with other parties relating to this Contract.
2. **Termination for Cause and for Convenience.** The City reserves the right to immediately terminate this Contract in the event of a breach or default of the Contract by Contractor in the event Contractor fails to: 1) meet schedules, deadlines, and/or delivery dates within the time specified in the Contract; 2) make any payments owed; or 3) otherwise perform in accordance with the Contract. The City also reserves the right to terminate this Contract immediately, with written notice to Contractor, for convenience, if the City believes, in its sole discretion that it is in the best interest of the City to do so. Contractor will be compensated for work performed and accepted and goods accepted by the City as of the termination date if the Contract is terminated for convenience of the City.
3. **Equal Employment Opportunity**
 - A. Contractor shall comply with Executive Order 11246, “Equal Employment Opportunity,” as amended by EO 11375, “Amending Executive Order 11246 Relating to Equal Employment

Opportunity,” and as supplemented by regulations at 41 CRF part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

- B. If this contract is a Federally Assisted Construction Contract exceeding \$10,000, during the performance of this Contract, Contractor agrees as follows:
- i. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - ii. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - iii. Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with Contractor's legal duty to furnish information.
 - iv. Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - v. Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - vi. Contractor will furnish to the Administering Agency and the Secretary of Labor all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Administering Agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- vii. In the event of Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended, in whole or in part, and Contractor may be declared ineligible for further Government contracts or Federally Assisted Construction Contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965. Such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- viii. Contractor will include the provisions of paragraphs B(i) through (vii) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Subcontractor or vendor. Contractor will take such action with respect to any Subcontract or purchase order as the Administering Agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Provided, however, that in the event Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Administering Agency, Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The City further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work. Provided, that if the City so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality, or subdivision of such government which does not participate in work on or under the Contract.

- ix. The City agrees that it will assist and cooperate actively with the Administering Agency and the Secretary of Labor in obtaining the compliance of Contractor and any Subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor; that it will furnish the Administering Agency and the Secretary of Labor such information as they may require for the supervision of such compliance; and that it will otherwise assist the Administering Agency in the discharge of the agency's primary responsibility for securing compliance.
- x. The City further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and Federally Assisted Construction Contracts pursuant to the Executive Order and that it will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Contractor and any Subcontractors by the Administering Agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the City agrees that if it fails or refuses to comply with these undertakings, the Administering Agency may take any or all of the following actions: cancel, terminate, or suspend, in whole or in part, this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from

such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

C. If this Contract is not a Federally Assisted Construction Contract exceeding \$10,000, the provisions of this section shall not apply.

4. **Copeland “Anti-Kickback” Act.** Contractor and any subcontractors performing work under the Contract shall comply with all applicable provisions of the Copeland “Anti-Kickback” Act (18 U.S.C. § 874; 40 U.S.C. §3145) as supplemented by Department of Labor regulations (29 C.F.R. Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The City shall report all suspected or reported violations to Treasury.
5. **Contract Work Hours and Safety Standards Act.** If this Contract is for an amount in excess of \$100,000 and involves the employment of mechanics or laborers, Contractor must comply with 40 U.S.C. §§3702 and 3704, as supplemented by Department of Labor regulations (29 C.F.R. Part 5). Under 40 U.S.C. §3702 of the Act, Contractor must compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. §3704 are applicable to construction work and provide that no laborer or mechanic must be required work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.
6. **Rights to Inventions Made Under a Contract or Agreement.** Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 C.F.R. part 401, “Rights to Inventions Made by Non-profit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements,” and any applicable implementing regulations.
7. **Clean Air Act and Federal Water Pollution Control Act**
 - A. *Clean Air Act.* Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§7401 *et seq.* Contractor agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to Treasury and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed, in whole or in part, with federal assistance provided by Treasury.
 - B. *Federal Water Pollution Control Act.* Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251 *et seq.* Contractor agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to assure notification to Treasury and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each

Subcontract exceeding \$150,000 financed, in whole or in part, with federal assistance provided by Treasury.

8. Debarment and Suspension

- A. This Contract is a covered transaction for purposes of 2 CFR §180.210 and 31 CFR §19.210. Therefore, this Contract is a lower-tier covered transaction for purposes of 2 C.F.R. Part 180 and 31 C.F.R. Part 19 if (1) the amount of this Contract is greater than or equal to \$25,000 (2 C.F.R. §180.220(b)(1); 31 C.F.R. §19.220(b)(1)); (2) the Contract requires the consent of an official of the Department of the Treasury (2 C.F.R. §180.220(b)(2); 31 C.F.R. §19.220(b)(2)); or (3) this Contract is for federally required audit services (2 C.F.R. §180.220(b)(3); 31 C.F.R. §19.220(b)(3)).
- B. As a covered transaction, Contractor is required to verify that its principals (defined at 2 CFR §180.995) or its affiliates (defined at 2 CFR §180.905) of both Contractor and its principals are not excluded (defined at 2 CFR §180.935) and are not disqualified (defined at 2 CFR §180.935). Contractor represents and warrants that, as of the execution of this Contract, neither Contractor and its principals nor any subcontractor or sub-consultant performing work under this Contract (at any tier) is included on the federally debarred bidder's list listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. §180 that implement Executive Orders 12549 (3 C.F.R. part 1986 Comp., p. 189) and 12689 (3 C.F.R. part 1986 Comp., p. 235), "Debarment and Suspension." Additionally, Contractor's completed Certification Regarding Debarment, Suspension and Other Responsibility Matters is attached hereto (Attachment 2) and incorporated herein. This certification is a material representation of fact relied upon by the City and all liability arising from an erroneous representation shall be borne solely by Contractor.
- C. If at any point during the Contract term, Contractor or its principals or any subcontractor or sub-consultant performing work at any tier is included on the federally debarred bidder's list, Contractor shall notify the City immediately.
- D. If any of the foregoing persons are excluded or disqualified and the Secretary of the Treasury has not granted an exception pursuant to 31 C.F.R. §19.120(a) (a) this Contract shall be void; (b) City shall not make any payments of federal financial assistance to Contractor; and (c) City shall have no obligations to Contractor under this Contract.
- E. Contractor must comply with 2 CFR pt. 180, subpart C and 31 CFR pt. 19, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- F. If it is later determined that Contractor did not comply with 2 CFR pt. 180, subpart C and 31 CFR pt. 19, in addition to remedies available to the City, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

- 9. Byrd Anti-Lobbying Amendment.** Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee

of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352. Contractor shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

Purchases over \$100,000 - Contractors must sign the certification included as Attachment 1 and shall cause any subcontractors with a subcontract (at any tier) exceeding \$100,000 to file with the tier above it the same certification

10. Procurement of Recovered Materials

- A. This section shall apply if (1) this Contract involves the purchase of an item designated by the Environmental Protection Agency (“EPA”) in 40 C.F.R. Part 247 that exceeds \$10,000 or (2) the total value of such designated items acquired during The City’s preceding fiscal year exceeded \$10,000.
- B. In the performance of the Contract, Contractor shall make maximum use of products containing recovered materials that are EPA-designated items, unless the product cannot (1) be acquired competitively within a timeframe providing for compliance with the Contract performance schedule, (2) meet Contract performance requirements, or (3) be acquired at a reasonable price.
- C. Information about this requirement, along with the list of EPA-designated items, is available on EPA’s website. Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

11. Prohibition on Contracting for Covered Telecommunications and Video Surveillance Services or Equipment.

Contractor shall not use funds under this Contract to purchase, or enter into subcontracts to purchase, any equipment, services, or systems that use telecommunications equipment or services as a substantial or essential component of a system that is subject to 2 CFR § 200.216 (generally, video surveillance or telecommunications equipment produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company, their subsidiaries or affiliates, or any entity that the Secretary of Defense reasonably believes to be an entity owned or controlled by the government of a foreign country). In the event Contractor identifies covered telecommunications equipment or services that constitute a substantial or essential component of any system, or as critical technology as part of any system that is subject to 2 CFR § 200.216, during Contract performance, Contractor shall alert the City as soon as possible and shall provide information on any measures taken to prevent recurrence.

12. Buy USA - Domestic Preferences for Certain Procurements Using Federal Funds.

Contractor should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section “Produced in the United States” means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of

coatings, occurred in the United States and “Manufactured products” means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

13. Solicitation of Minority and Women-Owned Business Enterprises. Contractor hereby agrees to comply with the following when applicable: The requirements of Executive Orders 11625 and 12432 (concerning Minority Business Enterprise), and 12138 (concerning Women's Business Enterprise), when applicable. Accordingly, the contractor hereby agrees to take affirmative steps to assure that women and minority businesses are utilized when possible as sources of supplies, equipment, construction and services. Affirmative steps shall include the following:

- A. Including qualified women’s business enterprises and small and minority businesses on solicitation lists;
- B. Assuring that women’s enterprises and small and minority businesses are solicited whenever they are potential sources;
- C. When economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum participation by small and minority business, and women’s business enterprises;
- D. Where the requirement permits, establishing delivery schedules which will encourage participation by women’s business enterprises and small and minority business; and
- E. Using the services and assistance of the Small Business Administration, and the U.S. Office of Minority Business Development Agency of the Department of Commerce; and the North Carolina Office for Historically Underutilized Businesses.

For the purposes of these requirements, a Minority Business Enterprise (MBE) is defined as an enterprise that is at least 51 percent owned and controlled in its daily operation by members of the following groups: Black, Hispanic, Asian or Pacific Islander, American Indian, or Alaskan Natives. A Women Business Enterprise (WBE) is defined as an enterprise that is at least 51 percent owned and controlled in its daily operation by women.

14. Access to Records; Record Retention

- A. Contractor agrees to provide the City, the Department of the Treasury, the Treasury Office of Inspector General, the Government Accountability Office, and the Comptroller General of the United States, or any authorized representatives of these entities, access to any records (electronic and otherwise) of Contractor which are directly pertinent to this Contract to conduct audits or any other investigations. Contractor agrees to permit any of

the foregoing parties to reproduce such records by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

- B. Contractor agrees to provide the Treasury Department or authorized representatives access to construction or other work sites pertaining to the work being completed under the Contract.
- C. No language in this Contract is intended to prohibit audits or internal reviews by the Treasury Department or the Comptroller General of the United States.
- D. Contractor agrees to retain all records covered by this section through December 31, 2031, or such longer period as is necessary for the resolution of any litigation, claim, negotiation, audit, or other inquiry involving the Contract.

15. Assurances of Compliance with Title VI of the Civil Rights Act of 1964. Contractor and any subcontractor, or the successor, transferee, or assignee of Contractor or any subcontractor, shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. §§2000d *et seq.*), as implemented by the Department of the Treasury's Title VI regulations, 31 C.F.R. Part 22, which are herein incorporated by reference and made a part of this Contract. Title VI also provides protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. §§2000d *et seq.*, as implemented by Treasury's Title VI regulations, 31 C.F.R. Part 22, and herein incorporated by reference and made a part of this Contract.

16. Other Non-Discrimination Statutes. Contractor acknowledges that the City is bound by and agrees, to the extent applicable to Contractor, to abide by the provisions contained in the federal statutes enumerated below and any other federal statutes and regulations that may be applicable to the expenditure of ARPA Funds:

- A. The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 *et seq.*), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability;
- B. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;
- C. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101 *et seq.*), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and
- D. Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§12101 *et seq.*), which prohibits discrimination on the basis of disability in programs, activities, and

services provided or made available by state and local governments or instrumentalities or agencies thereto.

17. Other Applicable Statutes and Regulations

A. Prohibition on Providing Funds to the Enemy (2 CFR 183)

- i. The Contractor must exercise due diligence to ensure that none of the funds, including supplies and services, received under this Contract are provided directly or indirectly (including through subcontracts) to a person or entity who is actively opposing the United States or coalition forces involved in a contingency operation in which members of the Armed Forces are actively engaged in hostilities. The Contractor must terminate or void in whole or part any subcontract with a person or entity listed in the System Award Management Exclusions (SAM) as a prohibited or restricted sources pursuant to subtitle E of Title VIII of the NDAA for FY 2015, unless the Federal awarding agency provides written approval to continue the subcontract.
- ii. The Federal awarding agency has the authority to terminate or void this Contract, in whole or in part, if the Federal awarding agency becomes aware that the Contractor failed to exercise due diligence as required by paragraph (i) of this clause or if the Federal awarding agency becomes aware that any funds received under this Contract have been provided directly or indirectly to a person or entity who is actively opposing coalition forces involved in a contingency operation in which members of the Armed Forces are actively engaged in hostilities.
- iii. In addition to any other existing examination-of-records authority, the Federal Government is authorized to examine any records of the Contractor and its Subcontracts to the extent necessary to ensure that funds, including supplies and services, available under this Contract are not provided, directly or indirectly, to a person or entity that is actively engaged in hostilities.
- iv. The Contract must include the substance of this clause, including paragraph, in subcontracting agreements that have an estimated value over \$50,000 and will be performed outside the United States, including its outlying areas.

B. Contractor agrees to comply with the Regulatory Requirements applicable to this Contract, which include, without limitation, the following:

- i. 2 C.F.R. Part 200 Appendix II requirements;
- ii. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, as applicable;
- iii. Universal Identifier and System for Award Management (SAM), 2 C.F.R. Part 25, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 25;
- iv. OMB (Office of Management and Budget) Guidelines to Agencies on Government-wide Debarment and Suspension (Non-procurement), 2 C.F.R. Part 180, including the requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 C.F.R. Part 180, subpart B) that the

award is subject to 2 C.F.R. Part 180 and Treasury's implementing regulation at 31 C.F.R. Part 19;

- v. Recipient Integrity and Performance Matters, pursuant to which the award term set forth in 2 C.F.R. Part 200, Appendix XII to Part;
- vi. Government-wide Requirements for Drug-Free Workplace, 31 C.F.R. Part 20; and
- vii. Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limits certain political activities of federal employees, as well as certain other employees who work in connection with federally funded programs.

18. Conflicts of Interest; Gifts and Favors

- A. Contractor understands that (1) the City will use ARPA Funds to pay for the cost of this Contract and (2) the expenditure of ARPA Funds is governed by the City's Conflict of Interest Policy and the Regulatory Requirements (including, without limitation, 2 C.F.R. §200.318(c)(1)).
- B. Contractor certifies to the City that as of the date hereof, to the best of its knowledge after reasonable inquiry, no employee, officer, or agent of the City involved in the selection, award, or administration of this Contract (each a "Covered Individual"); no member of a Covered Individual's immediate family; no partner of a Covered Individual; and no organization (including Contractor) which employs or is about to employ a Covered Individual has a financial or other interest in, or has received a tangible personal benefit from, Contractor. Should Contractor obtain knowledge of any such interest or any tangible personal benefit described in the preceding sentence after the date hereof, Contractor shall promptly disclose the same to the City in writing.
- C. Contractor certifies to the City that it has not provided, nor offered to provide, any gratuities, favors, or anything of value to an officer, employee, or agent of the City. Should Contractor obtain knowledge of the provision, or offer of any provision, of any gratuity, favor, or anything of value to an officer, employee, or agent described in the preceding sentence after the date hereof, Contractor shall promptly disclose the same to the City in writing.

19. Publications. Any publications produced with funds from this award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of recipient] by the U.S. Department of Treasury."

20. Miscellaneous

- A. *Increasing Seat Belt Use in the United States.* Pursuant to Executive Order 13043, 62 Fed. Reg. 19,216 (Apr. 18, 1997), the City encourages Contractor to adopt and enforce

on-the-job seat belt policies and programs for its employees when operating company-owned, rented, or personally owned vehicles.

B. *Reducing Text Messaging While Driving.* Pursuant to Executive Order 13513, 74 Fed. Reg. 51,225 (Oct. 6, 2009), the City encourages Contractor to adopt and enforce policies that ban text messaging while driving.

21. Conflicts and Interpretation. To the extent that any portion of this Addendum conflicts with any term or condition of this Contract expressed outside of this Addendum, the terms of this Addendum shall govern.

- (This form is required only for purchases of more than \$100,000) -

**ATTACHMENT 1
CITY OF ANN ARBOR AMERICAN RESCUE PLAN ACT (ARPA) CONTRACT ADDENDUM**

**31 C.F.R. PART 21 – New Restrictions On Lobbying
CERTIFICATION REGARDING LOBBYING**

The undersigned certifies, to the best of the undersigned's knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, or the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31 of the U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____, certifies and affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

**ATTACHMENT 2
CITY OF ANN ARBOR AMERICAN RESCUE PLAN ACT (ARPA) CONTRACT ADDENDUM
CERTIFICATION REGARDING DEBARMENT,
SUSPENSION AND OTHER RESPONSIBILITY MATTERS**

The undersigned bidder, proposer, contractor, or subcontractor, as appropriate, certifies to the best of its knowledge and belief that neither it nor any of its officers, directors, or managers who will be working under the Contract, or persons or entities holding a greater than 10% equity interest in it (collectively "Principals"):

1. Are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency in the United States;
2. Have within a three-year period preceding this proposal, bid, or agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state anti-trust or procurement statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are presently indicted for or otherwise criminally or civilly charged by a government entity, (federal, state or local) with commission of any of the offenses enumerated in paragraph 2 of this certification; and
4. Have within a three-year period preceding this application/proposal had one or more public transactions (federal, state or local) terminated for cause or default.

The undersigned bidder, proposer, contractor, or subcontractor, as appropriate, certifies that they are "Actively" registered with SAM (System for Award Management) and have been assigned the following Unique Entity Identifier (UEI): _____. The undersigned further certifies that it shall not knowingly enter any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

I understand that a false statement on this certification may be grounds for rejection of this proposal or bid, or termination of the award or, in some instances, criminal prosecution. The Contractor, _____, certifies as stated above:

Signature Date

Print Title and Name of authorized representative

I am unable to certify to one or more the above statements. Attached is my explanation.

Signature Date

Print Title and Name of authorized representative

ATTACHMENT 3
CITY OF ANN ARBOR AMERICAN RESCUE PLAN ACT (ARPA) CONTRACT ADDENDUM
System for Award Management (SAM) record search for business name and business principal
– (*Screenshot of Results*)

PERFORMANCE BOND

- (1) _____ of _____ (referred to as "Principal"), and _____, a corporation duly authorized to do business in the State of Michigan (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for \$ _____, the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City entitled _____, for ITB No. _____ and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963, as amended, being MCL 129.201 *et seq.*
- (3) Whenever the Principal is declared by the City to be in default under the Contract, the Surety may promptly remedy the default or shall promptly:
- (a) complete the Contract in accordance with its terms and conditions; or
 - (b) obtain a bid or bids for submission to the City for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, arrange for a Contract between such bidder and the City, and make available, as work progresses, sufficient funds to pay the cost of completion less the balance of the Contract price; but not exceeding, including other costs and damages for which Surety may be liable hereunder, the amount set forth in paragraph 1.
- (4) Surety shall have no obligation to the City if the Principal fully and promptly performs under the Contract.
- (5) Surety agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder, or the specifications accompanying it shall in any way affect its obligations on this bond, and waives 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.
- (6) Principal, Surety, and the City agree that signatures on this bond may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this bond. This bond may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

SIGNED AND SEALED this _____ day of _____, 202_.

(Name of Surety Company)
By _____
(Signature)

Its _____
(Title of Office)

Approved as to form:

Atleen Kaur, City Attorney

(Name of Principal)
By _____
(Signature)

Its _____
(Title of Office)

Name and address of agent:

LABOR AND MATERIAL BOND

- (1) _____
of _____ (referred to as "Principal"), and _____, a corporation duly authorized to do business in the State of Michigan, (referred to as "Surety"), are bound to the City of Ann Arbor, Michigan (referred to as "City"), for the use and benefit of claimants as defined in Act 213 of Michigan Public Acts of 1963, as amended, being MCL 129.201 et seq., in the amount of \$ _____, for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by this bond.
- (2) The Principal has entered a written Contract with the City entitled _____

_____, for ITB No. _____; and this bond is given for that Contract in compliance with Act No. 213 of the Michigan Public Acts of 1963 as amended;
- (3) If the Principal fails to promptly and fully repay claimants for labor and material reasonably required under the Contract, the Surety shall pay those claimants.
- (4) Surety's obligations shall not exceed the amount stated in paragraph 1, and Surety shall have no obligation if the Principal promptly and fully pays the claimants.
- (5) Principal, Surety, and the City agree that signatures on this bond may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this bond. This bond may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

SIGNED AND SEALED this _____ day of _____, 202__

(Name of Surety Company)
By _____
(Signature)
Its _____
(Title of Office)

Approved as to form:

Atleen Kaur, City Attorney

(Name of Principal)
By _____
(Signature)
Its _____
(Title of Office)

Name and address of agent:

GENERAL CONDITIONS

Section 1 - Execution, Correlation and Intent of Documents

The contract documents shall be signed in 2 copies by the City and the Contractor.

The contract documents are complementary and what is called for by any one shall be binding. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. Materials or work described in words which so applied have a well-known technical or trade meaning have the meaning of those recognized standards.

In case of a conflict among the contract documents listed below in any requirement(s), the requirement(s) of the document listed first shall prevail over any conflicting requirement(s) of a document listed later.

(1) Addenda in reverse chronological order; (2) Detailed Specifications; (3) Standard Specifications; (4) Plans; (5) General Conditions; (6) Contract; (7) Bid Forms; (8) Bond Forms; (9) Bid.

Section 2 - Order of Completion

The Contractor shall submit with each invoice, and at other times reasonably requested by the Supervising Professional, schedules showing the order in which the Contractor proposes to carry on the work. They shall include the dates at which the Contractor will start the several parts of the work, the estimated dates of completion of the several parts, and important milestones within the several parts.

Section 3 - Familiarity with Work

The Bidder or its representative shall make personal investigations of the site of the work and of existing structures and shall determine to its own satisfaction the conditions to be encountered, the nature of the ground, the difficulties involved, and all other factors affecting the work proposed under this Contract. The Bidder to whom this Contract is awarded will not be entitled to any additional compensation unless conditions are clearly different from those which could reasonably have been anticipated by a person making diligent and thorough investigation of the site.

The Bidder shall immediately notify the City upon discovery, and in every case prior to submitting its Bid, of every error or omission in the bidding documents that would be identified by a reasonably competent, diligent Bidder. In no case will a Bidder be allowed the benefit of extra compensation or time to complete the work under this Contract for extra expenses or time spent as a result of the error or omission.

Section 4 - Wage Requirements

Under this Contract, the Contractor shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended; which in part states "...that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of

subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. At the request of the City, any contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. A sample Prevailing Wage Form is provided in the Appendix herein for reference as to what will be expected from contractors. Use of the Prevailing Wage Form provided in the Appendix section or a City-approved equivalent will be required along with wage rate interviews.

Where the Contract and the Ann Arbor City Ordinance are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used.

If the Contractor is a "covered employer" as defined in Chapter 23 of the Ann Arbor City Code, the Contractor agrees to comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code. The Contractor agrees to pay those employees providing Services to the City under this Contract a "living wage," as defined in Section 1:815 of the Ann Arbor City Code, as adjusted in accordance with Section 1:815(3); to post a notice approved by the City of the applicability of Chapter 23 in every location in which regular or contract employees providing services under this Contract are working; to maintain records of compliance; if requested by the City, to provide documentation to verify compliance; to take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee or person contracted for employment in order to pay the living wage required by Section 1:815; and otherwise to comply with the requirements of Chapter 23.

Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision covering subcontractor's employees who perform work on this contract.

Section 5 - Non-Discrimination

The Contractor agrees to comply, and to require its subcontractor(s) to comply, with the nondiscrimination provisions of MCL 37.2209. The Contractor further agrees to comply with the provisions of Section 9:158 of Chapter 112 of Title IX of the Ann Arbor City Code, and to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity.

Section 6 - Materials, Appliances, Employees

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary or used for the execution and completion of the work. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and materials shall be of the highest quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among its employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work

assigned.

Adequate sanitary facilities shall be provided by the Contractor.

Section 7 - Qualifications for Employment

The Contractor shall employ competent laborers and mechanics for the work under this Contract. For work performed under this Contract, employment preference shall be given to qualified local residents.

Section 8 - Royalties and Patents

The Contractor shall pay all royalties and license fees. It shall defend all suits or claims for infringements of any patent rights and shall hold the City harmless from loss on account of infringement except that the City shall be responsible for all infringement loss when a particular process or the product of a particular manufacturer or manufacturers is specified, unless the City has notified the Contractor prior to the signing of the Contract that the particular process or product is patented or is believed to be patented.

Section 9 - Permits and Regulations

The Contractor must secure and pay for all permits, permit or plan review fees and licenses necessary for the prosecution of the work. These include but are not limited to City building permits, right-of-way permits, lane closure permits, right-of-way occupancy permits, and the like. The City shall secure and pay for easements shown on the plans unless otherwise specified.

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the contract documents are at variance with those requirements, it shall promptly notify the Supervising Professional in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work.

Section 10 - Protection of the Public and of Work and Property

The Contractor is responsible for the means, methods, sequences, techniques and procedures of construction and safety programs associated with the work contemplated by this contract. The Contractor, its agents or sub-contractors, shall comply with the "General Rules and Regulations for the Construction Industry" as published by the Construction Safety Commission of the State of Michigan and to all other local, State and National laws, ordinances, rules and regulations pertaining to safety of persons and property.

The Contractor shall take all necessary and reasonable precautions to protect the safety of the public. It shall continuously maintain adequate protection of all work from damage, and shall take all necessary and reasonable precautions to adequately protect all public and private property from injury or loss arising in connection with this Contract. It shall make good any damage, injury or loss to its work and to public and private property resulting from lack of reasonable protective precautions, except as may be due to errors in the contract documents, or caused by agents or employees of the City. The Contractor shall obtain and maintain sufficient insurance to cover damage to any City property at the site by any cause.

In an emergency affecting the safety of life, or the work, or of adjoining property, the Contractor is, without special instructions or authorization from the Supervising Professional, permitted to act at its discretion to prevent the threatened loss or injury. It shall also so act, without appeal, if authorized or instructed by the Supervising Professional.

Any compensation claimed by the Contractor for emergency work shall be determined by agreement or in accordance with the terms of Claims for Extra Cost - Section 15.

Section 11 - Inspection of Work

The City shall provide sufficient competent personnel for the inspection of the work.

The Supervising Professional shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for access and for inspection.

If the specifications, the Supervising Professional's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, the Contractor shall give the Supervising Professional timely notice of its readiness for inspection, and if the inspection is by an authority other than the Supervising Professional, of the date fixed for the inspection. Inspections by the Supervising Professional shall be made promptly, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Supervising Professional, it must, if required by the Supervising Professional, be uncovered for examination and properly restored at the Contractor's expense.

Re-examination of any work may be ordered by the Supervising Professional, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to be in accordance with the contract documents, the City shall pay the cost of re-examination and replacement. If the work is not in accordance with the contract documents, the Contractor shall pay the cost.

Section 12 - Superintendence

The Contractor shall keep on the work site, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Supervising Professional. The superintendent will be responsible to perform all on-site project management for the Contractor. The superintendent shall be experienced in the work required for this Contract. The superintendent shall represent the Contractor and all direction given to the superintendent shall be binding as if given to the Contractor. Important directions shall immediately be confirmed in writing to the Contractor. Other directions will be confirmed on written request. The Contractor shall give efficient superintendence to the work, using its best skill and attention.

Section 13 - Changes in the Work

The City may make changes to the quantities of work within the general scope of the Contract at any time by a written order and without notice to the sureties. If the changes add to or deduct from the extent of the work, the Contract Sum shall be adjusted accordingly. All the changes shall be executed under the conditions of the original Contract except that any claim for extension of time caused by the change shall be adjusted at the time of ordering the change.

In giving instructions, the Supervising Professional shall have authority to make minor changes in

the work not involving extra cost and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Supervising Professional, and no claim for an addition to the Contract Sum shall be valid unless the additional work was ordered in writing.

The Contractor shall proceed with the work as changed and the value of the work shall be determined as provided in Claims for Extra Cost - Section 15.

Section 14 - Extension of Time

Extension of time stipulated in the Contract for completion of the work will be made if and as the Supervising Professional may deem proper under any of the following circumstances:

- (1) When work under an extra work order is added to the work under this Contract;
- (2) When the work is suspended as provided in Section 20;
- (3) When the work of the Contractor is delayed on account of conditions which could not have been foreseen, or which were beyond the control of the Contractor, and which were not the result of its fault or negligence;
- (4) Delays in the progress of the work caused by any act or neglect of the City or of its employees or by other Contractors employed by the City;
- (5) Delay due to an act of Government;
- (6) Delay by the Supervising Professional in the furnishing of plans and necessary information;
- (7) Other cause which in the opinion of the Supervising Professional entitles the Contractor to an extension of time.

The Contractor shall notify the Supervising Professional within 7 days of an occurrence or conditions which, in the Contractor's opinion, entitle it to an extension of time. The notice shall be in writing and submitted in ample time to permit full investigation and evaluation of the Contractor's claim. The Supervising Professional shall acknowledge receipt of the Contractor's notice within 7 days of its receipt. Failure to timely provide the written notice shall constitute a waiver by the Contractor of any claim.

In situations where an extension of time in contract completion is appropriate under this or any other section of the contract, the Contractor understands and agrees that the only available adjustment for events that cause any delays in contract completion shall be extension of the required time for contract completion and that there shall be no adjustments in the money due the Contractor on account of the delay.

Section 15 - Claims for Extra Cost

If the Contractor claims that any instructions by drawings or other media issued after the date of the Contract involved extra cost under this Contract, it shall give the Supervising Professional written notice within 7 days after the receipt of the instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property. The procedure shall then be as provided for Changes in the Work-Section 13. No claim shall be valid unless so made.

If the Supervising Professional orders, in writing, the performance of any work not covered by the contract documents, and for which no item of work is provided in the Contract, and for which no unit price or lump sum basis can be agreed upon, then the extra work shall be done on a Cost-Plus-Percentage basis of payment as follows:

- (1) The Contractor shall be reimbursed for all reasonable costs incurred in doing the work, and shall receive an additional payment of 15% of all the reasonable costs to cover both its indirect overhead costs and profit;
- (2) The term "Cost" shall cover all payroll charges for employees and supervision required under the specific order, together with all worker's compensation, Social Security, pension and retirement allowances and social insurance, or other regular payroll charges on same; the cost of all material and supplies required of either temporary or permanent character; rental of all power-driven equipment at agreed upon rates, together with cost of fuel and supply charges for the equipment; and any costs incurred by the Contractor as a direct result of executing the order, if approved by the Supervising Professional;
- (3) If the extra is performed under subcontract, the subcontractor shall be allowed to compute its charges as described above. The Contractor shall be permitted to add an additional charge of 5% percent to that of the subcontractor for the Contractor's supervision and contractual responsibility;
- (4) The quantities and items of work done each day shall be submitted to the Supervising Professional in a satisfactory form on the succeeding day, and shall be approved by the Supervising Professional and the Contractor or adjusted at once;
- (5) Payments of all charges for work under this Section in any one month shall be made along with normal progress payments. Retainage shall be in accordance with Progress Payments-Section 16.

No additional compensation will be provided for additional equipment, materials, personnel, overtime or special charges required to perform the work within the time requirements of the Contract.

When extra work is required and no suitable price for machinery and equipment can be determined in accordance with this Section, the hourly rate paid shall be 1/40 of the basic weekly rate listed in the Rental Rate Blue Book published by Dataquest Incorporated and applicable to the time period the equipment was first used for the extra work. The hourly rate will be deemed to include all costs of operation such as bucket or blade, fuel, maintenance, "regional factors", insurance, taxes, and the like, but not the costs of the operator.

Section 16 - Progress Payments

The Contractor shall submit each month, or at longer intervals, if it so desires, an invoice covering work performed for which it believes payment, under the Contract terms, is due. The submission shall be to the City's Finance Department - Accounting Division. The Supervising Professional will, within 10 days following submission of the invoice, prepare a certificate for payment for the work in an amount to be determined by the Supervising Professional as fairly representing the acceptable work performed during the period covered by the Contractor's invoice. To insure the proper performance of this Contract, the City will retain a percentage of the estimate in accordance with Act 524, Public Acts of 1980. The City will then, following the receipt of the Supervising Professional's Certificate, make payment to the Contractor as soon as feasible, which is anticipated will be within 15 days.

An allowance may be made in progress payments if substantial quantities of permanent material have been delivered to the site but not incorporated in the completed work if the Contractor, in the opinion of the Supervising Professional, is diligently pursuing the work under this Contract. Such materials shall be properly stored and adequately protected. Allowance in the estimate shall be at the invoice price value of the items. Notwithstanding any payment of any allowance, all risk of loss due to vandalism or any damages to the stored materials remains with the Contractor.

In the case of Contracts which include only the Furnishing and Delivering of Equipment, the payments shall be; 60% of the Contract Sum upon the delivery of all equipment to be furnished, or in the case of delivery of a usable portion of the equipment in advance of the total equipment delivery, 60% of the estimated value of the portion of the equipment may be paid upon its delivery in advance of the time of the remainder of the equipment to be furnished; 30% of the Contract Sum upon completion of erection of all equipment furnished, but not later than 60 days after the date of delivery of all of the equipment to be furnished; and payment of the final 10% on final completion of erection, testing and acceptance of all the equipment to be furnished; but not later than 180 days after the date of delivery of all of the equipment to be furnished, unless testing has been completed and shows the equipment to be unacceptable.

With each invoice for periodic payment, the Contractor shall enclose a Contractor's Declaration - Section 43, and an updated project schedule per Order of Completion - Section 2.

Section 17 - Deductions for Uncorrected Work

If the Supervising Professional decides it is inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made.

Section 18 - Correction of Work Before Final Payment

The Contractor shall promptly remove from the premises all materials condemned by the Supervising Professional as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute the work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by the removal or replacement.

If the Contractor does not remove the condemned work and materials within 10 days after written notice, the City may remove them and, if the removed material has value, may store the material

at the expense of the Contractor. If the Contractor does not pay the expense of the removal within 10 days thereafter, the City may, upon 10 days written notice, sell the removed materials at auction or private sale and shall pay to the Contractor the net proceeds, after deducting all costs and expenses that should have been borne by the Contractor. If the removed material has no value, the Contractor must pay the City the expenses for disposal within 10 days of invoice for the disposal costs.

The inspection or lack of inspection of any material or work pertaining to this Contract shall not relieve the Contractor of its obligation to fulfill this Contract and defective work shall be made good. Unsuitable materials may be rejected by the Supervising Professional notwithstanding that the work and materials have been previously overlooked by the Supervising Professional and accepted or estimated for payment or paid for. If the work or any part shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good the defect in a manner satisfactory to the Supervising Professional. The judgment and the decision of the Supervising Professional as to whether the materials supplied and the work done under this Contract comply with the requirements of the Contract shall be conclusive and final.

Section 19 - Acceptance and Final Payment

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Supervising Professional will promptly make the inspection. When the Supervising Professional finds the work acceptable under the Contract and the Contract fully performed, the Supervising Professional will promptly sign and issue a final certificate stating that the work required by this Contract has been completed and is accepted by the City under the terms and conditions of the Contract. The entire balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor by the City within 30 days after the date of the final certificate.

Before issuance of final certificates, the Contractor shall file with the City:

- (1) The consent of the surety to payment of the final estimate;
- (2) The Contractor's Affidavit in the form required by Section 44.

In case the Affidavit or consent is not furnished, the City may retain out of any amount due the Contractor, sums sufficient to cover all lienable claims.

The making and acceptance of the final payment shall constitute a waiver of all claims by the City except those arising from:

- (1) unsettled liens;
- (2) faulty work appearing within 12 months after final payment;
- (3) hidden defects in meeting the requirements of the plans and specifications;
- (4) manufacturer's guarantees.

It shall also constitute a waiver of all claims by the Contractor, except those previously made and still unsettled.

Section 20 - Suspension of Work

The City may at any time suspend the work, or any part by giving 5 days notice to the Contractor in writing. The work shall be resumed by the Contractor within 10 days after the date fixed in the

written notice from the City to the Contractor to do so. The City shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this Contract as a result of the suspension.

If the work, or any part, shall be stopped by the notice in writing, and if the City does not give notice in writing to the Contractor to resume work at a date within 90 days of the date fixed in the written notice to suspend, then the Contractor may abandon that portion of the work suspended and will be entitled to the estimates and payments for all work done on the portions abandoned, if any, plus 10% of the value of the work abandoned, to compensate for loss of overhead, plant expense, and anticipated profit.

Section 21 - Delays and the City's Right to Terminate Contract

If the Contractor refuses or fails to prosecute the work, or any separate part of it, with the diligence required to insure completion, ready for operation, within the allowable number of consecutive calendar days specified plus extensions, or fails to complete the work within the required time, the City may, by written notice to the Contractor, terminate its right to proceed with the work or any part of the work as to which there has been delay. After providing the notice the City may take over the work and prosecute it to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any excess cost to the City. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the work, any materials, appliances and plant as may be on the site of the work and useful for completing the work. The right of the Contractor to proceed shall not be terminated or the Contractor charged with liquidated damages where an extension of time is granted under Extension of Time - Section 14.

If the Contractor is adjudged a bankrupt, or if it makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of its insolvency, or if it persistently or repeatedly refuses or fails except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials, or if it fails to make prompt payments to subcontractors or for material or labor, or persistently disregards laws, ordinances or the instructions of the Supervising Professional, or otherwise is guilty of a substantial violation of any provision of the Contract, then the City, upon the certificate of the Supervising Professional that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor 3 days written notice, terminate this Contract. The City may then take possession of the premises and of all materials, tools and appliances thereon and without prejudice to any other remedy it may have, make good the deficiencies or finish the work by whatever method it may deem expedient, and deduct the cost from the payment due the Contractor. The Contractor shall not be entitled to receive any further payment until the work is finished. If the expense of finishing the work, including compensation for additional managerial and administrative services exceeds the unpaid balance of the Contract Sum, the Contractor and its surety are liable to the City for any excess cost incurred. The expense incurred by the City, and the damage incurred through the Contractor's default, shall be certified by the Supervising Professional.

Section 22 - Contractor's Right to Terminate Contract

If the work should be stopped under an order of any court, or other public authority, for a period of 3 months, through no act or fault of the Contractor or of anyone employed by it, then the Contractor may, upon 7 days written notice to the City, terminate this Contract and recover from the City payment for all acceptable work executed plus reasonable profit.

Section 23 - City's Right To Do Work

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the City, 3 days after giving written notice to the Contractor and its surety may, without prejudice to any other remedy the City may have, make good the deficiencies and may deduct the cost from the payment due to the Contractor.

Section 24 - Removal of Equipment and Supplies

In case of termination of this Contract before completion, from any or no cause, the Contractor, if notified to do so by the City, shall promptly remove any part or all of its equipment and supplies from the property of the City, failing which the City shall have the right to remove the equipment and supplies at the expense of the Contractor.

The removed equipment and supplies may be stored by the City and, if all costs of removal and storage are not paid by the Contractor within 10 days of invoicing, the City upon 10 days written notice may sell the equipment and supplies at auction or private sale, and shall pay the Contractor the net proceeds after deducting all costs and expenses that should have been borne by the Contractor and after deducting all amounts claimed due by any lien holder of the equipment or supplies.

Section 25 - Responsibility for Work and Warranties

The Contractor assumes full responsibility for any and all materials and equipment used in the construction of the work and may not make claims against the City for damages to materials and equipment from any cause except negligence or willful act of the City. Until its final acceptance, the Contractor shall be responsible for damage to or destruction of the project (except for any part covered by Partial Completion and Acceptance - Section 26). The Contractor shall make good all work damaged or destroyed before acceptance. All risk of loss remains with the Contractor until final acceptance of the work (Section 19) or partial acceptance (Section 26). The Contractor is advised to investigate obtaining its own builders risk insurance.

The Contractor shall guarantee the quality of the work for a period of one year. The Contractor shall also unconditionally guarantee the quality of all equipment and materials that are furnished and installed under the contract for a period of one year. At the end of one year after the Contractor's receipt of final payment, the complete work, including equipment and materials furnished and installed under the contract, shall be inspected by the Contractor and the Supervising Professional. Any defects shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. Any defects that are identified prior to the end of one year shall also be inspected by the Contractor and the Supervising Professional and shall be corrected by the Contractor at its expense as soon as practicable but in all cases within 60 days. The Contractor shall assign all manufacturer or material supplier warranties to the City prior to final payment. The assignment shall not relieve the Contractor of its obligations under this paragraph to correct defects.

Section 26 - Partial Completion and Acceptance

If at any time prior to the issuance of the final certificate referred to in Acceptance and Final Payment - Section 19, any portion of the permanent construction has been satisfactorily completed, and if the Supervising Professional determines that portion of the permanent construction is not required for the operations of the Contractor but is needed by the City, the Supervising Professional shall issue to the Contractor a certificate of partial completion, and immediately the City may take over and use the portion of the permanent construction described in the certificate, and exclude the Contractor from that portion.

The issuance of a certificate of partial completion shall not constitute an extension of the Contractor's time to complete the portion of the permanent construction to which it relates if the Contractor has failed to complete it in accordance with the terms of this Contract. The issuance of the certificate shall not release the Contractor or its sureties from any obligations under this Contract including bonds.

If prior use increases the cost of, or delays the work, the Contractor shall be entitled to extra compensation, or extension of time, or both, as the Supervising Professional may determine.

Section 27 - Payments Withheld Prior to Final Acceptance of Work

The City may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to the extent reasonably appropriate to protect the City from loss on account of:

- (1) Defective work not remedied;
- (2) Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor;
- (3) Failure of the Contractor to make payments properly to subcontractors or for material or labor;
- (4) Damage to another Contractor.

When the above grounds are removed or the Contractor provides a Surety Bond satisfactory to the City which will protect the City in the amount withheld, payment shall be made for amounts withheld under this section.

Section 28 - Contractor's Insurance

- (1) The Contractor shall procure and maintain during the life of this Contract, including the guarantee period and during any warranty work, such insurance policies, including those set forth below, as will protect itself and the City from all claims for bodily injuries, death or property damage that may arise under this Contract; whether the act(s) or omission(s) giving rise to the claim were made by the Contractor, any subcontractor, or anyone employed by them directly or indirectly. Prior to commencement of any work under this contract, Contractor shall provide to the City documentation satisfactory to the City, through City-approved means (currently myCOI), demonstrating it has obtained the required policies and endorsements. The certificates of insurance endorsements and/or copies of

policy language shall document that the Contractor satisfies the following minimum requirements. Contractor shall add registration@mycoitracking.com to its safe sender's list so that it will receive necessary communication from myCOI. When requested, Contractor shall provide the same documentation for its subcontractor(s) (if any).

Required insurance policies include:

- (a) Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

- Bodily Injury by Accident - \$500,000 each accident
 - Bodily Injury by Disease - \$500,000 each employee
 - Bodily Injury by Disease - \$500,000 each policy limit

- (b) Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 04 13 or current equivalent. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements specifically for the following coverages: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further there shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. The following minimum limits of liability are required:

- \$1,000,000 Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined.
 - \$2,000,000 Per Project General Aggregate
 - \$1,000,000 Personal and Advertising Injury
 - \$2,000,000 Products and Completed Operations Aggregate, which, notwithstanding anything to the contrary herein, shall be maintained for three years from the date the Project is completed.

- (c) Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 10 13 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

- (d) Umbrella/Excess Liability Insurance shall be provided to apply excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each occurrence and for aggregate in the amount of \$1,000,000.

- (2) Insurance required under subsection (1)(b) and (1)(c) above shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its

insurer against the City for any insurance listed herein.

- (3) Insurance companies and policy forms are subject to approval of the City Attorney, which approval shall not be unreasonably withheld. Documentation must provide and demonstrate an unconditional and un-qualified 30-day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number(s); name of insurance company(s); name and address of the agent(s) or authorized representative(s); name(s), email address(es), and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which may be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified Contractor shall furnish the City with satisfactory certificates of insurance and endorsements prior to commencement of any work. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) and all required endorsements to the City. If any of the above coverages expire by their terms during the term of this Contract, the Contractor shall deliver proof of renewal and/or new policies and endorsements to the Administering Service Area/Unit at least ten days prior to the expiration date.
- (4) Any Insurance provider of Contractor shall be authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company's Key Rating Guide of "A-" Overall and a minimum Financial Size Category of "V". Insurance policies and certificates issued by non-authorized insurance companies are not acceptable unless approved in writing by the City.
- (5) City reserves the right to require additional coverage and/or coverage amounts as may be included from time to time in the Detailed Specifications for the Project.
- (6) The provisions of General Condition 28 shall survive the expiration or earlier termination of this contract for any reason.

Section 29 - Surety Bonds

Bonds will be required from the successful bidder as follows:

- (1) A Performance Bond to the City of Ann Arbor for the amount of the bid(s) accepted;
- (2) A Labor and Material Bond to the City of Ann Arbor for the amount of the bid(s) accepted.

Bonds shall be executed on forms supplied by the City in a manner and by a Surety Company authorized to transact business in Michigan and satisfactory to the City Attorney.

Section 30 - Damage Claims

The Contractor shall be held responsible for all damages to property of the City or others, caused by or resulting from the negligence of the Contractor, its employees, or agents during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. The Contractor must restore all property injured including sidewalks, curbing, sodding, pipes, conduit, sewers or other public or private property to not less than its original condition with new work.

Section 31 - Refusal to Obey Instructions

If the Contractor refuses to obey the instructions of the Supervising Professional, the Supervising Professional shall withdraw inspection from the work, and no payments will be made for work performed thereafter nor may work be performed thereafter until the Supervising Professional shall have again authorized the work to proceed.

Section 32 - Assignment

Neither party to the Contract shall assign the Contract without the written consent of the other. The Contractor may assign any monies due to it to a third party acceptable to the City.

Section 33 - Rights of Various Interests

Whenever work being done by the City's forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Supervising Professional, to secure the completion of the various portions of the work in general harmony.

The Contractor is responsible to coordinate all aspects of the work, including coordination of, and with, utility companies and other contractors whose work impacts this project.

Section 34 - Subcontracts

The Contractor shall not award any work to any subcontractor without prior written approval of the City. The approval will not be given until the Contractor submits to the City a written statement concerning the proposed award to the subcontractor. The statement shall contain all information the City may require.

The Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and all other contract documents applicable to the work of the subcontractors and to give the Contractor the same power to terminate any subcontract that the City may exercise over the Contractor under any provision of the contract documents.

Nothing contained in the contract documents shall create any contractual relation between any subcontractor and the City.

Section 35 - Supervising Professional's Status

The Supervising Professional has the right to inspect any or all work. The Supervising Professional has authority to stop the work whenever stoppage may be appropriate to insure the proper execution of the Contract. The Supervising Professional has the authority to reject all work and materials which do not conform to the Contract and to decide questions which arise in the execution of the work.

The Supervising Professional shall make all measurements and determinations of quantities. Those measurements and determinations are final and conclusive between the parties.

Section 36 - Supervising Professional's Decisions

The Supervising Professional shall, within a reasonable time after their presentation to the Supervising Professional, make decisions in writing on all claims of the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents.

Section 37 - Storing Materials and Supplies

Materials and supplies may be stored at the site of the work at locations agreeable to the City unless specific exception is listed elsewhere in these documents. Ample way for foot traffic and drainage must be provided, and gutters must, at all times, be kept free from obstruction. Traffic on streets shall be interfered with as little as possible. The Contractor may not enter or occupy with agents, employees, tools, or material any private property without first obtaining written permission from its owner. A copy of the permission shall be furnished to the Supervising Professional.

Section 38 - Lands for Work

The Contractor shall provide, at its own expense and without liability to the City, any additional land and access that may be required for temporary construction facilities or for storage of materials.

Section 39 - Cleaning Up

The Contractor shall, as directed by the Supervising Professional, remove at its own expense from the City's property and from all public and private property all temporary structures, rubbish and waste materials resulting from its operations unless otherwise specifically approved, in writing, by the Supervising Professional.

Section 40 - Salvage

The Supervising Professional may designate for salvage any materials from existing structures or underground services. Materials so designated remain City property and shall be transported or stored at a location as the Supervising Professional may direct.

Section 41 - Night, Saturday or Sunday Work

No night or Sunday work (without prior written City approval) will be permitted except in the case of an emergency and then only to the extent absolutely necessary. The City may allow night work which, in the opinion of the Supervising Professional, can be satisfactorily performed at night. Night work is any work between 8:00 p.m. and 7:00 a.m. No Saturday work will be permitted unless the Contractor gives the Supervising Professional at least 48 hours but not more than 5 days notice of the Contractor's intention to work the upcoming Saturday.

Section 42 - Sales Taxes

Under State law the City is exempt from the assessment of State Sales Tax on its direct purchases. Contractors who acquire materials, equipment, supplies, etc. for incorporation in City projects are not likewise exempt. State Law shall prevail. The Bidder shall familiarize itself with the State Law and prepare its Bid accordingly. No extra payment will be allowed under this Contract for failure of the Contractor to make proper allowance in this bid for taxes it must pay.

Section 43

CONTRACTOR'S DECLARATION

I hereby declare that I have not, during the period _____, 20___, to _____, 20___, performed any work, furnished any materials, sustained any loss, damage or delay, or otherwise done anything in addition to the regular items (or executed change orders) set forth in the Contract titled _____, for which I shall ask, demand, sue for, or claim compensation or extension of time from the City, except as I hereby make claim for additional compensation or extension of time as set forth on the attached itemized statement. I further declare that I have paid all payroll obligations related to this Contract that have become due during the above period and that all invoices related to this Contract received more than 30 days prior to this declaration have been paid in full except as listed below.

There is/is not (Contractor please circle one and strike one as appropriate) an itemized statement attached regarding a request for additional compensation or extension of time.

Contractor

Date

By _____
(Signature)

Its _____
(Title of Office)

Past due invoices, if any, are listed below.

Section 44

CONTRACTOR'S AFFIDAVIT

The undersigned Contractor, _____, represents that on _____, 20____, it was awarded a contract by the City of Ann Arbor, Michigan to _____ under the terms and conditions of a Contract titled _____. The Contractor represents that all work has now been accomplished and the Contract is complete.

The Contractor warrants and certifies that all of its indebtedness arising by reason of the Contract has been fully paid or satisfactorily secured; and that all claims from subcontractors and others for labor and material used in accomplishing the project, as well as all other claims arising from the performance of the Contract, have been fully paid or satisfactorily settled. The Contractor agrees that, if any claim should hereafter arise, it shall assume responsibility for it immediately upon request to do so by the City of Ann Arbor.

The Contractor, for valuable consideration received, does further waive, release and relinquish any and all claims or right of lien which the Contractor now has or may acquire upon the subject premises for labor and material used in the project owned by the City of Ann Arbor.

This affidavit is freely and voluntarily given with full knowledge of the facts.

Contractor

Date

By _____
(Signature)

Its _____
(Title of Office)

Subscribed and sworn to before me, on this _____ day of _____, 20____
_____, _____ County, Michigan

Notary Public

_____ County, MI

My commission expires on:

STANDARD SPECIFICATIONS

All work under this contract shall be performed in accordance with the Public Services Department Standard Specifications in effect at the date of availability of the contract documents stipulated in the Bid. All work under this Contract which is not included in these Standard Specifications, or which is performed using modifications to these Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents.

Standard Specifications are available online:

<http://www.a2gov.org/departments/engineering/Pages/Engineering-and-Contractor-Resources.aspx>

DETAILED SPECIFICATIONS

SECTION 01 25 00
MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 Work Included

Unless specifically indicated otherwise on the plans or in the contract documents, all materials and equipment shall be new and undamaged.

A. Materials and Equipment

1. Materials and equipment incorporated into the work shall conform to applicable specifications and standards. Materials and equipment shall comply with size, make, type, and quality specified or as specifically approved by the Engineer.
2. Manufactured and fabricated products shall be designed, fabricated, and assembled in accordance with the best engineering and shop practices. Like parts of duplicate units are to be manufactured to standard sizes and gauges to be interchangeable. Two or more items of the same kind shall be identical and manufactured by the same manufacturer. Products shall be suitable for the service conditions. Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing. Materials or equipment shall not be used for any purpose other than that for which it is designed or specified.

1.02 Substitutions

- A. Where specific materials and equipment items are identified in the specifications by manufacturer's name or model number, bids shall be based on the products of one of the manufacturers so named or added thereto by addendum during the bidding period.
- B. During the bidding period, all requests for substitutions will be given full consideration by the Engineer; and if approved, an addendum will be issued to incorporate the approved material or equipment into the contract documents.
- C. Requests for substitutions must be received by the Engineer in ample time, not later than ten days before the bid due date, so that any necessary addendum will be received by all prospective bidders before submission of the bids.
- D. After award of the contract, requests for substitutions will be considered only for one of the following reasons:
 1. Increased value to the Owner
 2. Decreased cost to the Owner
 3. Specified items not procurable
- E. Requests for substitutions after award of the contract shall be accompanied by manufacturer's data or other detailed descriptions of the proposed material or equipment.
- F. A request for a substitution constitutes a representation that the Contractor has investigated and determined the proposed product is equal to or superior in all respects to that specified.

- G. The Contractor shall coordinate the installation of an accepted substitution into the project to provide a complete and operable system. Modifications or re-work of other parts of the project resulting because of substitutes will be at the Contractor's expense.
- H. The Engineer shall be the judge of the acceptability of the proposed substitutions.

1.03 Manufacturer's Instructions

- A. When contract documents require that installation of work shall comply with the manufacturer's printed instructions, the Contractor shall obtain and distribute copies of such instructions to the parties involved in the installation, including two sets to the Engineer. The instructions shall be provided in advance of installation. The Contractor shall notify the Engineer in the event job conditions or the requirements of the plans or specifications conflict with the manufacturer's instructions.
- B. The Contractor shall handle, install, connect, clean, condition, and adjust products in accordance with such instructions and in conformity with the specified requirements.
- C. The Contractor shall perform work in accordance with manufacturer's instructions. No preparatory step or installation procedures shall be omitted unless specifically modified or exempted by contract documents.

PART 2 - PRODUCTS

2.01 Purchase Delivery and Installation

- A. The following will be purchased and installed by the Contractor per plans, details, and manufacturer recommendations. Submit color samples and shop drawings for approval by Engineer prior to fabrication:
 - 1. Collapsible Bollard, by Belson Outdoors, hinged traffic bollard, Model BCB-30 with zinc coated anchor kit installed per mft recommendations, or approved equal. (800) 323-5664.
 - 2. Traffic Speed Bump, is a recycled rubber traffic speed control device, 3"x12"x72" model MM2092 with metal anchor hardware as mft by Section 800.243-6624, or approved equal.

PART 3 - EXECUTION

3.01 Transportation and Handling

- A. The Contractor shall arrange deliveries of products in accordance with construction schedules and coordinate them to avoid conflict with work and conditions at the site.
 - 1. Products shall be delivered in undamaged condition, in the manufacturer's original containers or packaging with identifying labels intact and legible.
 - 2. Immediately upon delivery, the Contractor shall inspect shipments to assure compliance with requirements of contract documents and approved submittals and that products are properly protected and undamaged.
- B. The Contractor shall provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

3.02 Storage and Protection

- A. Products shall be stored in accordance with the manufacturer's instructions, with seals and labels intact and legible.
 - 1. Products subject to damage by the elements shall be stored in weather tight enclosures.
 - 2. Temperature and humidity shall be maintained within the ranges required by manufacturer's instructions.
- B. The Contractor shall arrange storage in a manner to provide easy access for inspection and make periodic inspections to assure that products are maintained under specified conditions and free from damage or deterioration.
- C. For products specified by naming one or more products or manufacturers and "or equal", the Contractor must submit a request for substitutions for any product or manufacturer not specifically named.

3.03 Installation

- A. The Contractor shall install the following items as purchased by others. Storage will be coordinated by the Contactor; freight and delivery will be paid by others.
 - 1. Splash Pad shall be a complete recirculating system including powder coated steel multi-station interactive features with interchangeable/removable above grade elements represented in the detailed plans as manufactured by Aquatics (810-229-6245). All pressurized lines to be schedule 80 pvc, drain lines can be schedule 40 pvc. A pre-manufactured punched metal Mech 2.0 control and tank unit will be provided by Aquatics for installation by the Contractor including booster pump, rain diverter, and custom advertising panels.
 - 2. Storage Building shall be a materials storage structure matching the Mech2.0 unit. This will be installed on a 4-inch concrete slab.
 - 3. Play Structure and Swings: The pre-manufactured units by Landscape Structures will be installed with concrete footings.
 - 4. Safety Surface: Forever Lawn artificial turf will be installed by the Contractor; coordination with material provider who will provide the stone base preparation; final grading will be required by the site Contractor.
 - 5. Site Furnishings, as indicated on the plans, will be installed by the site Contractor using epoxy anchor bolts on concrete surface or direct bury as indicated.
 - 6. Shade Sails will be installed on concrete footings per plans and details, by the site Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The following items will be paid for at the contract unit price for the actual quantity of the following pay item(s) provided and installed.

<u>Pay Item</u>	<u>Pay Unit</u>
Collapsible Bollard	Each
Speed Bump	Each

The pay item(s) include installation of the item (as noted) and installation, appurtenant items as well as temporary storage if necessary.

4.02 Measurement

Items will be measured by the pay limits as shown on the plans.

END OF SECTION

SECTION 01 32 14
SCHEDULE REQUIREMENTS

PART 1 - GENERAL

1.01 Work Included

The Contractor shall develop a detailed schedule, identifying various phases or divisions of work, indicating a start date and duration required for each. The schedule shall be presented to the Engineer or Owner in sufficient detail, as may be required by the Engineer or Owner, for their approval.

Periodically through the life of the project and as required by the Engineer or Owner, the Contractor shall update the schedule and provide copies to the Engineer and Owner.

1.02 Requirements

The Contractor shall schedule work to be performed during normal business hours, unless otherwise directed on the plans or approved by the Engineer.

Once work has begun on the project, the Contractor shall work continuously and expeditiously to complete all work provided for by the contract.

Project shall be substantially completed in accordance with the date specified in the agreement. Substantial completion is the stage of completion where the project is fit for occupancy and use without hindrance for its intended purpose.

Project shall be fully completed and ready for final payment in accordance with the date specified in the agreement.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

Not Applicable

END OF SECTION

CITY OF ANN ARBOR
SPECIAL PROVISION
FOR
PROJECT SCHEDULE AND PAYMENT

AA:AF

9/19/24

Description

Examination of Plans, Specifications, and Work Site

Bidders shall carefully examine the Bid Form, plans, specifications, and the work site until the Bidder is satisfied as to all local conditions affecting the contract and the detailed requirements of construction. The submission of the bid shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and all requirements of the Contract.

The entire work under this Contract shall be completed in accordance with, and subject to, the scheduling requirements as outlined below, and all other requirements of the Contract Documents.

1. The Contractor shall begin the work of this project after **September 1, 2025 (Labor Day)**, and only upon receipt of the fully executed Contract and Notice to Proceed. This is due to timing and completion of Phase I of Bicentennial Park Improvements.
2. This work within this Contract shall be substantially complete by **May 25, 2026 (Memorial Day)**.
3. No work shall be performed during Holiday periods as follows, unless approved by the City of Ann Arbor:
 - Thanksgiving, from 3:00 p.m. Wednesday November 26, 2025 through 7:00 am Monday December 1, 2025.
 - Christmas, from 3:00 pm Wednesday December 24, 2025 through 7:00 a.m. Friday December 26, 2025.
 - New Year's, from 3:00 p.m. Wednesday December 31, 2024 through 7:00 a.m. Friday January 2, 2026.

City Council approval is expected on or before **November 18, 2024**. The Contractor shall not begin the work without approval from the Project Engineer, and in no case before the receipt of the Notice to Proceed.

Contractor will be furnished with two (2) copies of the Contract, for his/her execution, before the aforementioned City Council meeting. The Contractor shall properly execute both copies of the Contract and return them, with the required Bonds and Insurance Certificate, to the City within **ten (10) days**.

Prior to the start of any construction, the Contractor shall submit a detailed schedule of work for the Engineer's review and approval. Work shall not be started until a schedule is approved in writing by the Engineer. The proposed schedule must fully comply with the scheduling requirements contained in this Detailed Specification. The Contractor shall update the approved work schedule upon request by the Engineer and present it to the Engineer within seven days of said request.

Liquidated Damages

CITY OF ANN ARBOR
SPECIAL PROVISION
FOR
PROJECT SCHEDULE AND PAYMENT

AA:AF

9/19/24

Failure to complete all work as specified herein within the times specified herein, including time extensions granted thereto as determined by the Engineer, shall entitle the City to deduct from the payments due the Contractor, **\$500.00** in Liquidated Damages, and not as a penalty, for delays in the completion of the work for each and every calendar day beyond the times for each sub-phase, as required by this Detailed Specification.

Liquidated Damages will be assessed until the required work is completed in the current construction season. If, with the Engineer's approval, work is extended beyond seasonal limitations, the assessment of Liquidated Damages will be discontinued until the work is resumed in the following construction season.

SECTION 01 41 26
PERMIT REQUIREMENTS

PART 1 - GENERAL

1.01 Work Included

The Contractor shall complete work in accordance with all applicable regulations, laws, and ordinances. Work shall be completed in accordance with permits issued by regulatory agencies.

The Contractor shall obtain permits, including the paying of fees, posting bonds, and providing insurance coverage, to secure permits which have not been obtained by the Owner.

Where permits have been obtained by the Owner, the Contractor shall conduct work and operations consistent with the requirements of the permits.

Where changed conditions or other issues arise such that the conditions of a permit which has been issued cannot be met, the Contractor shall promptly notify the Owner and the permitting agency. The Contractor shall provide such additional information as may be necessary to secure a modification to the original permit to allow the planned work to continue.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 Permits to be Obtained by Contractor

A. Permit Applications Completed by the Owner

The Owner has submitted information and reviewed the proposed work with the following agencies. Final permits have not yet been issued. The Contractor is required to obtain the permits for the proposed project including the paying of fees, posting bonds, and providing insurance coverage to secure permits.

Permit Agency	Permit Type	Requirements
Washtenaw County Drain Commission	Storm water discharge	Permits secured through a separate project
Washtenaw County Drain Commission	Soil Erosion and Sediment Control	Permits secured through a separate project
City of Ann Arbor	Right of Way	Execute permit initiated by parks department, no fees

B. Other Permits to be Obtained by the Contractor

The Contractor is responsible to obtain all permits necessary to complete the proposed work, which have not been obtained by the Owner.

PART 4 - MEASUREMENT AND PAYMENT

Obtaining permits, including the paying of fees, posting bonds, and providing insurance coverage to secure permits, is considered included in other items of work and will not be paid for separately.

END OF SECTION

SECTION 01 45 16.01
CONCRETE TESTING

PART 1 - GENERAL

1.01 Work Included

This work includes requirements for concrete, concrete submittals, and testing.

1.02 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. ACI PRC-211.1 – Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
- B. ASTM C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field
- C. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- D. ASTM C138 – Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- E. ASTM C143 – Standard Test Method for Slump of Hydraulic-Cement Concrete
- F. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete
- G. ASTM C231 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
- H. ASTM C595 – Standard Specification for Blended Hydraulic Cements
- I. ASTM C1064 – Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
- J. ASTM C1260 – Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
- K. ASTM C1293 – Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction
- L. ASTM C1567 – Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
- M. ASTM E29 – Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- N. Michigan Department of Transportation 2020 Standard Specifications for Construction
- O. Michigan Test Methods (MTM)
- P. Michigan Department of Transportation Qualified Products List

1.03 Related Work

- A. Section 32 13 00 – Concrete Curb and Gutter, Sidewalk, and Miscellaneous Pavement

1.04 Submittals

- A. Prior to beginning construction, the Contractor shall submit the name and plant location of the proposed NRMCA certified concrete supplier for the project.
- B. Prior to beginning construction, the Contractor shall submit mix designs for the proposed concrete mixtures proposed for use on the project for the Engineer to review.
- C. The Contractor shall submit a Quality Control Testing plan to be approved by the Engineer.

1.05 Quality Assurance and Quality Control

- A. The Contractor will be responsible for Quality Control Testing and the Owner will be responsible for Quality Assurance Testing.
- B. Concrete Testing
 - 1. The temperature of concrete will be determined in accordance with ASTM C1064.
 - 2. Samples of concrete for testing will be obtained in accordance with ASTM C172.
 - 3. The slump of concrete will be determined in accordance with ASTM C143.
 - 4. The air content of concrete will be measured in accordance with ASTM C231.
 - 5. Concrete cylinders for compressive testing will be made in accordance with ASTM C31. The Engineer and Contractor shall use the same size cylinder for test specimens. Four-inch cylinders are preferred, as allowed by ASTM C31.
 - 6. The compressive strength of concrete will be determined in accordance with ASTM C39.

PART 2 - PRODUCTS

2.01 Mix Design and Documentation

Design concrete mixtures shall meet the requirements specified in Table 1. The Contractor shall provide the grade of concrete for the section number reference application specified in Table 1, or as specified in the contract. The Contractor shall submit a request variance, in writing, when proposing a mix design that exhibits temperature, slump, or air content other than those specified. This submittal shall include the proposed mix design, Job Mix Formula (JMF), and associated trial batch verification test data. Do not use a grade of concrete with a lower specification limit (LSL) 28-day compressive strength less than what is designated for the application.

Blended cement meeting the requirements of ASTM C595 Type II is permitted.

Secure prior approval from the Engineer to use concrete intended for early opening to traffic to facilitate driveway gaps or other features necessary for required local access.

Unless otherwise specified in the contract, set accelerating admixtures are prohibited.

Unless otherwise specified in the contract, do not exceed 40 percent replacement of the Portland cement in the concrete mixture with slag cement (Grade 100 minimum) or fly ash. Do not exceed 40 percent total replacement of the Portland cement if both slag cement and fly ash are used in the concrete mixture.

Use the combined weight of all cementitious materials to determine compliance with the maximum water-cementitious ratio and cementitious material content requirements specified in Table 1.

Table 1: Minimum Mix Design Requirements for Concrete					
		Concrete Grade			
		3,000	3,500	4,000	4,500
Compressive strength (psi)	7-day	2,200	2,600	3,000	3,200
	28-day	3,000	3,500	4,000	4,500
	70%	2,100	2,450	2,800	3,150
Flexural Strength (psi)	7-day	500	550	600	625
	28-day	600	650	700	750
	70%	420	455	490	525
Slump (inch)		(c)-(f)	(c)-(k)	(l)-(n)	(d)-(f)
Cementitious material content (lb/cyd)		489-517	517-611 (o)	517-611	517-658
Class of coarse aggregate		(p)-(r)			
Maximum w/cm ratio		0.45			
Air content range		5.5-8.5%			

- a. Reserved for future use.
- b. Reserved for future use.
- c. 0- to 3-inch slump for mixtures for pavements.
- d. 0- to 3-inch slump without admixtures or with Type A or D admixture.
- e. 0- to 6-inch slump after the addition of Type MR admixture.
- f. 0- to 7-inch slump after the addition of Type F or G admixture.
- g. 3- to 7-inch slump for tremie applications without admixture or with Type A or D admixture.
- h. 3- to 7-inch slump for tremie applications after the addition of Type MR admixture.
- i. 3- to 8-inch slump for tremie applications after the addition of Type F or G admixture.
- j. 6- to 8-inch slump for dry placed drilled shafts.
- k. 7- to 9-inch slump for wet placed drilled shafts.
- l. 3- to 5-inch slump without admixtures or with Type A or D admixture.
- m. 3- to 6-inch slump after the addition of Type MR admixture.
- n. 3- to 7-inch slump after the addition of Type F or G admixture.
- o. For concrete pavement repair mixtures, use 658 lb/cyd of cement when the weather is forecast to be above 50 degrees Fahrenheit or 752 lb/cyd when the weather is forecast to be 50 degrees Fahrenheit or below.
- p. Use aggregates only from geologically natural sources for pavement, shoulder, miscellaneous pavement (including ramps), concrete pavement overlay, bridge approach slab, structural concrete, drilled shaft, bridge railing, and bridge sidewalk applications.

- q. Unless otherwise required, use Coarse Aggregate 6AA or 17A for exposed structural concrete in bridges, retaining walls, and pump stations.
- r. The flexural and compressive strengths are not part of the specifications but are listed for informational purposes only and are the minimum strengths anticipated for the mix proportions specified for the various grades of concrete when cured under standard conditions.

A. Alkali-Silica Reactivity

Provide documentation to the Engineer that the concrete mixture does not present the potential for excessive expansion caused by alkali-silica reactivity (ASR). Provide current ASR test results (valid for two 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, 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. Use the Rounding Method described in ASTM E29 when determining significant digits for reporting expansion test results.

1. Method 1 – ASTM C1260 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.

2. Method 2 – ASTM C1293 Concrete Prism Test

- a. 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 concrete without the need for ASR mitigation.
- b. If the expansion of concrete prisms is greater than 0.040 percent, but not exceeding 0.120 percent (rounded to the nearest 0.001 percent) after 1 year, the fine aggregate is considered moderately deleterious to ASR and mitigation is required, as follows. A low-alkali cement with Na_2O equivalent alkalis ($\text{Na}_2\text{O} + 0.658 \times \text{percent K}_2\text{O}$) not exceeding 0.60 percent must be used in the concrete mixture to mitigate the potential for ASR. Slag cement or fly ash may be used in conjunction with the low-alkali cement. The total alkali content for the cementitious materials combination must not exceed 3 pounds per cubic yard of Na_2O equivalent.

3. Method 3 – ASTM C1567 Accelerated Mortar Bar Test

If no previous test data are available for the fine aggregate that shows it is resistant to ASR using either Method 1 or 2 above, replace 25 percent to 40 percent of the Portland cement in the concrete mixture with slag cement (Grade 100 minimum) or fly ash. A blended cement meeting the requirements of ASTM C595 containing Portland cement and slag cement or fly ash may also be used.

Demonstrate the ability of the fly ash or slag cement to control the deleterious expansion caused by ASR by molding and testing mortar bars according to the standard test method described in ASTM C1567, 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 3 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.

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.

B. Mix Documentation

Provide mix design and accompanying JMFs using the methods of verification included in this specification. Include sufficient information on constituent materials and admixtures, along with trial batch verified physical properties of the fresh concrete, mix proportions per cubic yard for all constituents, and compressive strength test results necessary to allow the Engineer to fully evaluate the expected performance of the concrete mixture.

Submit mix design and JMF; include accompanying documentation. List the source of materials, bulk density (unit weight) of coarse aggregate (rodding procedure or shoveling procedure), absorption of aggregates, relative density (specific gravity) of aggregates, aggregate correction factors, batch weights, and project specific or historical laboratory test data. Include the recorded air content of fresh concrete using the same admixture and cementitious material sources to be used in the production of the concrete for the project. A JMF will be approved only if all of the minimum mix design requirements specified in the contract have been met. Use of the MDOT Job Mix Formula Concrete Field Communication Form (MDOT Form Number 1976) is encouraged.

1. Job Mix Formula

Select proportions for concrete mixtures according to ACI Standard 211.1. The volume (oven-dry-rodded) of coarse aggregate per unit volume of concrete must be 65 percent, minimum.

Four methods of verification of proposed JMF are acceptable.

a. Method 1 – Trial Batches

Verification of JMF is based on trial batches with the same materials and proportions proposed for use on the project. Prepare at least one trial batch for each mix design in sufficient time before starting concrete placement to allow for review, according to subsection 2.01.A of this specification. Provide the results of temperature, slump, density (unit weight), air content of fresh concrete, 28-day compressive strength, and age of concrete at the time of strength testing, for a minimum of 3 independent samples. All samples may be taken from a single trial batch for a mix design, provided the trial batch is at least 4 cubic yards in volume. For JMF trial batch verification purposes only, 7-day compressive strength test results which report at least 70 percent of the specified 28-day lower specification limit will be sufficient documentation, in lieu of 28-day compressive strengths. The average of at least two strength test specimens represents one compressive strength sample test result for

each independent sample. Provide the necessary ASR documentation as described in subsection 2.01.A of this specification.

b. Method 2 – Same Mix

Verification of JMF is based on experience with the same mix design, JMF, and the same materials. Provide the results of temperature, slump, density (unit weight), air content of fresh concrete, 28-day compressive strength, and age of concrete at the time of strength testing, for a minimum of 3 independent samples produced within the previous 12 months. The average of at least two strength test specimens represents one compressive strength sample test result for each independent sample. Do not substitute material types or sources, including admixtures or cementitious materials, nor change mix proportions in the JMF. Provide the necessary ASR documentation as described in subsection 2.01.A of this specification.

c. Method 3 – Similar Mix

Verification of JMF is based on requirements described in Method 2 above. Substitution of coarse aggregate source is permitted if the new source is of the same geologic type as the original aggregate, and conforms to the specification requirements for the application. Substitution of fine aggregate is permitted only if the new source has been tested for ASR. Provide the necessary ASR documentation as described in subsection 2.01.A of this specification.

Provide the supporting laboratory trial batch documentation and accompanying calculations showing how the mix proportions in the JMF were adjusted, based on the documented differences in relative density (specific gravity), bulk density (unit weight), and absorption of the substituted aggregate sources, to produce a theoretical yield of 100 percent and the required fresh concrete properties.

d. Method 4 – Annual Verification

At the Engineer's option, verification may be accepted annually for a concrete plant rather than on a project basis provided the sources and proportions of the constituent materials, including cementitious materials and source and types admixtures, do not change. If the project is the continuation of work in progress during the previous construction season and written certification is submitted to the Engineer that materials from the same source and with the same mixture properties are to be used, the Engineer may waive the requirement for annual renewal verification of the JMF for the project. Provide the necessary ASR documentation as described in subsection 2.01.A of this specification.

C. Concrete Testing and Break Results

The Contractor shall submit a sample form that will be used to document concrete testing and break results, prior to start of construction, to be approved by the Engineer. The Contractor shall submit the approved form documenting results within three days of concrete testing.

PART 3 - EXECUTION

3.01 Sampling and Testing

The Engineer shall verify the Contractor's daily startup sampling and testing of temperature, slump, and air content of fresh concrete on the first load; conduct QA sampling and testing; monitor Contractor adherence to the QC plan; and inspect field placed materials in such a manner as to ensure that all concrete for the project is represented at a rate determined by the Engineer/Owner.

A. The following ASTM test methods will apply.

1. C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field
2. C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
3. C138 – Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
4. C143 – Standard Test Method for Slump of Hydraulic-Cement Concrete
5. C172 – Standard Practice for Sampling Freshly Mixed Concrete
6. C231 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

B. Sampling

Sampling and testing shall be conducted by the Contractor during placement of the concrete. The Contractor shall take a random sample at a rate of approximately once per 50 cubic yards, based on the anticipated total quantity of concrete to be placed and site conditions, with a minimum of 1 sampling for each day of production per mix design. The sampling rate may be increased by the Engineer if project conditions warrant increased testing. A minimum of 3 cylinders shall be taken for each test (one 7-day break and two 28-day breaks).

The Contractor may elect to provide early concrete cylinder breaks. The Contractor is responsible for all additional costs and materials for providing early concrete cylinder breaks. Results for early cylinder breaks shall be submitted to and approved by the Engineer prior to beginning next related work item.

The Engineer shall perform Quality Assurance testing, on an as-needed basis, at a rate determined by the Engineer/Owner.

Samples will be taken from the concrete at the location as close to its final placement into the forms or on the grade as practical. If sampling from the discharge of the haul unit, the sample will be taken from approximately the middle $\frac{1}{3}$ of the load.

Samples for acceptance will not be taken at the concrete production facility (batch plant), nor prior to discharge from a concrete pump (excluding tremie seal placement applications).

C. Small Incidental Quantities

1. Reduced Quality Control (QC) for Small Incidental Quantities.

Reduced levels of on-site QC testing for concrete may be considered for small incidental quantities. Unless approved by the Engineer, multiple small incidental quantities, including ones that are placed consecutively throughout the project on the same day, are not eligible for reduced QC consideration if the total plan quantity of concrete for the item exceeds 100 cubic yards. Include details for reduced QC testing and oversight in the approved QC plan in accordance with following:

- a. The small incidental quantity of concrete will be limited to a single day’s concrete placement of a maximum 20 cubic yards;
- b. The small incidental quantity of concrete is not an integral part of a structural load-bearing element;
- c. The Engineer has received written certification from the Contractor that the concrete supplier has a current QC plan in place and available for review upon request by the Engineer;
- d. The concrete supplier employs an MCA-certified Michigan Concrete Technician Level II available at the plant or on call during concrete placement to validate and authorize modifications to the concrete JMF;
- e. The Engineer verifies that the temperature, slump, and air content conform to specification requirements at the start of the day’s concreting operation associated with the small incidental quantity; and
- f. The Engineer is notified a minimum of 24 hours prior to concrete placement.

2. Reduced Quality Assurance (QA) for Small Incidental Quantities.

At the discretion of the Engineer, daily 28-day compressive strength QA test cylinders for small incidental quantities of concrete may not be required provided QA test cylinders representing the same JMF were sampled and molded at least once during the same week.

3.02 Suspension Limits

If during the pour the concrete is found to be out of the specifications in Table 2, then the pour shall be stopped until concrete can be provided that meets the project specifications. The Engineer will not pay for items placed with concrete that does not meet the following specifications.

Table 2	
Quality Characteristic	Suspension Limits
Air Content (percent)	<5.0 or >9.0
Air Content Loss (percent)	Greater than 1.5
Concrete Temperature (degrees Fahrenheit)	<45 or >90 at time of placement
Slump	See Table 1

3.03 Acceptance

Concrete items will be accepted based on the criteria in the items specification; concrete was placed within the limits of Table 2 and the average of the corresponding 28-day test cylinders being above the design strength.

PART 4 - MEASUREMENT AND PAYMENT

The work of onsite concrete testing and submitting concrete mix designs and accompanying documentation is considered included in other items of work and will not be paid for separately.

END OF SECTION

SECTION 01 45 16.02
DENSITY AND AGGREGATE TESTING

PART 1 - GENERAL

1.01 Work Included

This work includes material testing of soil, aggregates, stabilized mixtures, and pulverized pavement mixtures.

1.02 References

- A. Michigan Department of Transportation 2020 Standard Specifications for Construction
- B. Michigan Department of Transportation Density Testing and Inspection Manual
- C. Michigan Department of Transportation Procedures for Aggregate Inspection
- D. Michigan Test Methods (MTM)

1.03 Related Work

- A. Section 31 23 01 – Excavating, Filling, and Grading
- B. Section 32 11 23 – Aggregate Base
- C. Section 32 12 16 – HMA Paving
- D. Section 32 13 00 – Concrete Curb and Gutter, Sidewalk, and Miscellaneous Pavement
- E. Section 33 44 00 – Storm Sewers

1.04 Quality Assurance and Quality Control

A. Soil and Aggregate Density Testing

- 1. The Contractor is responsible for all quality control density testing on this project. The Engineer will complete quality assurance density testing at a random rate.

B. Sand and Aggregate Gradation

The Contractor is to supply sand and aggregates in the Michigan Department of Transportation gradations, as specified by the project specifications.

Contractors are encouraged to use “prequalified” Michigan Department of Transportation aggregate sources. If the Contractor elects to use a non-prequalified source, then the Contractor shall be responsible for supplying the Engineer with Sieve Analysis (MTM109) and Loss by Washing (MTM108) at the following rates:

Coarse Aggregates	1 per 1,000 tons
Dense-Graded Aggregates	1 per 1,000 tons
Open-Graded Aggregates	1 per 1,000 tons
Granular Material Class I	1 per 1,000 tons
Granular Material Class II and IIA	1 per 3,000 cubic yards

Granular Material Class III
Fine Aggregate

1 per 10,000 cubic yards
1 per 1,000 tons

All Sieve Analysis and Loss by Washing reports shall be signed and sealed by a Professional Engineer.

1.05 Job Conditions

A. Access for Testing

The Contractor shall provide the Engineer safe access for testing technicians to complete any required testing. Reasonable time for testing shall be allowed by the Contractor.

B. Safety

The Contractor is responsible for conducting operations in a safe and orderly manner and in conformance with MIOSHA P.A. 154.

PART 2 - PRODUCTS

2.01 Submittals

The Contractor shall submit a Quality Control Testing plan to be approved by the Engineer. The Quality Control Testing plan shall include, at a minimum, the company performing the testing, certifications, equipment calibration reports, frequency of testing, procedure for notifying the Engineer if tests fail to meet specifications, corrective action plan, and sample form that will be used to document material testing results. The Contractor shall submit the approved form documenting results within three days of material testing.

PART 3 - EXECUTION

3.01 Minimum Percent of Compaction for Aggregates

The following are a minimum percent compaction for typical items of work. Note: Higher percent compaction may be required for specific items of work, see specifications for those items.

A. Original Ground

Road Embankment Areas	90 percent
Bridges – within the limits as shown on the plans	95 percent

B. Cut Areas

Cuts requiring Sand Subbase	95 percent
Cuts not requiring Sand Subbase	95 percent
Subgrade for HMA Base, Aggregate Base, and Concrete Widening	95 percent
Trenches for under HMA Shoulders	98 percent*

C. Embankments and Backfill

Regular	95 percent*
	(within top 3 feet)
Abutments with Piling	95 percent
Abutments without Piling	100 percent

Foundation Undercut Backfill	100 percent
Backfill for Bridges, Culverts, Utilities, Manholes, Catch Basins, Edge Drains, and Subgrade Undercuts	95 percent
Foundations and Miscellaneous Structures	95 percent

D. Pavement Structure

Subbase	95 percent*
Subbase for Slope Paving	90 percent
Aggregate Base under Concrete Pavement	95 percent*
Aggregate Base under HMA Pavement	98 percent*
Pulverized HMA Aggregate Base	98 percent
Recycled Concrete Aggregate Base – under Concrete Pavement	95 percent
Recycled Concrete Aggregate Base – under HMA Pavement	98 percent
Aggregate Base – Sleeper Slab and Bridge Approach	98 percent
Shoulders – Class I	98 percent*
Shoulders – Class II, III, and IV	95 percent*
OGDC – used under Concrete and HMA Pavement	95 percent*
OGDC – used under Concrete and HMA Pavement (recycled material)	98 percent*

* May NOT exceed optimum moisture

3.02 HMA Density

The density control target, “Theoretical Maximum Density” (TMD) for HMA shall be calculated using the Gmm from the Contractors approved HMA mix design. $TMD = Gmm \times 62.4$.

HMA Base Course	92 percent to 98 percent
HMA Leveling Course	92 percent to 98 percent
HMA Top Course	92 percent to 98 percent

The HMA layer must meet the required density target before the succeeding lift or traffic is placed on the pavement.

3.03 Testing Frequency

Each layer must be tested and meet compaction requirements before the succeeding layer is placed. The Engineer will test at a rate that is warranted for field conditions and Contractor means and methods. The list of frequencies below are minimums.

Subgrade	1 test per 500 feet per width of 24 feet or less
Embankment	1 test per 1,000 cubic yards of material and every lift
Subbase	1 test per 500 feet per width of 24 feet or less
Backfill	1 test per 300 cubic yards of material
Aggregate Base Course	1 test per 500 feet per width of 24 feet or less
HMA Mixtures	1 test per 500 feet per width of 24 feet or less
Shoulders	1 test per 1,000 feet each side
Sleeper Slab	1 test per bridge approach per stage

Foundations and Miscellaneous Structures 1 test per 1-foot lift or per 300 cubic yards
Trenching 1 test per 1,000 feet each side

3.04 Compaction Efforts

The Contractor shall continue to make compaction efforts to obtain the minimum standards given within this specification upon notification of a failing test. A passing test is required at every location of a failing test prior to starting the next related item of work.

PART 4 - MEASUREMENT AND PAYMENT

The work of density and aggregate testing is included in the pay item(s) which are specifically listed on the proposal and will not be paid for separately.

END OF SECTION

SECTION 01 50 00
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 Work Included

This work includes providing temporary facilities and controls during the construction of the project.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 Electricity

Electricity for use by the Contractor during the construction of the project shall be provided by the Owner. The Contractor shall provide such temporary systems necessary to convey the electricity to the work area from the point of supply.

Temporary power supply systems shall comply with all applicable codes.

3.02 Lighting

The Contractor shall provide lighting for construction activities. The Contractor shall provide fixtures, switches, conductors, and other equipment for a complete system. The lighting system shall meet the requirements of all applicable codes.

Electricity for lighting will be paid for as described in Section 3.01.

3.03 Heat, Ventilation

The Contractor shall provide heat and ventilation, as required, to maintain specified conditions for construction operations and to protect materials, equipment, and finishes from damage due to temperature or humidity.

The Contractor shall provide ventilation of enclosed areas to cure materials, to disperse humidity, and to prevent accumulations of dust, fumes, vapors, or gases.

The Contractor shall provide ventilation of enclosed areas, as necessary, to maintain safe working areas as required by applicable codes.

3.04 Water

The Owner will provide water for construction activities, at the location of existing water lines, faucets, and hydrants. The Contractor shall provide such piping extensions, as necessary, to deliver the water to the location(s) required for construction activities.

3.05 Barriers

The Contractor shall provide barriers to prevent entry to construction areas or hazardous areas.

3.06 Enclosures

The Contractor shall provide temporary weather tight enclosures of openings in exterior surfaces to provide acceptable working conditions, protection of materials from the elements, and to prevent entry of unauthorized persons.

3.07 Protection of Installed Work

The Contractor shall control vehicle and pedestrian traffic and/or provide temporary protective coverings, as required, to protect installed or uncompleted work from damage.

3.08 Water Control

The Contractor shall grade the site to drain. Excavations shall be kept free of water. The Contractor shall provide pumps as required.

Water shall not be run to detrimentally affect adjacent buildings or properties.

3.09 Cleaning

The Contractor shall maintain the construction area free of debris and waste material. Debris and waste material resulting from construction operations shall be properly disposed of by the Contractor.

The Contractor shall clean areas, as required, for proper execution of the project work.

3.10 Drinking Water

The Contractor shall furnish drinking water for their workers.

3.11 Sanitary Facilities

The Contractor shall provide sanitary facilities for their workers as required by laws and regulations. The Contractor shall service and clean the facilities as needed or as directed by the Engineer.

PART 4 - MEASUREMENT AND PAYMENT

The work of construction facilities and temporary controls is included in the pay item(s) which are specifically listed as pay items on the proposal and will not be paid for separately.

END OF SECTION

SECTION 01 55 26
MAINTAINING TRAFFIC

PART 1 - GENERAL

1.01 Work Included

The Contractor shall execute the work in a manner such that traffic is maintained and access is provided throughout the park unless specific operations limit public access; in that case prior approval with the Owner will be required.

1.02 References

- A. Michigan Department of Transportation 2020 Standard Specifications for Construction
- B. Michigan Manual on Uniform Traffic Control Devices

PART 2 - PRODUCTS

2.01 Signing

Signing and barricading shall be provided by the Contractor in accordance with the details on the plans, the Michigan Manual on Uniform Traffic Control Devices, the Michigan Department of Transportation Maintaining Traffic Typical, and the requirements of the road agency. Barricades left in place after dark shall be lighted.

The Contractor shall submit a plan of the proposed traffic control to the Engineer for review.

PART 3 - EXECUTION

3.01 Maintain Access Throughout the Park

It shall be the Contractor's responsibility to notify residents or occupants of property along the project of temporary closures of driveways or roads, in writing, a minimum of 24 hours in advance of closure. Contractor shall submit draft notice to Engineer for review and approval two work days prior to issuing it. Sufficient advance warning shall be provided to allow notification of all affected parties. A copy of the written notification shall be provided to the Engineer.

The duration of any closure shall be limited to the minimum length of time necessary to complete the particular task requiring the closure. In no case shall a closure extend overnight, unless approved by the Engineer or Owner.

Upon completion of pipe installation or other work requiring a closure of a driveway, road, or sidewalk, the area shall be backfilled and regraded to meet adjacent grades. A temporary gravel surface shall be provided and maintained by the Contractor. The gravel shall meet the requirements of 23A series aggregate, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction. Recycled HMA may also be utilized after approval of material by the Engineer. The gravel shall be placed to a depth of at least 8 inches.

3.02 Protection of Hazardous Areas

Excavation and hazardous areas shall be protected by barricades or snow fence. Barricades left in place at night shall be lighted.

3.03 Corrective Action

If in the Engineer's or Owner's opinion inadequate protection or maintenance of traffic is provided, the Engineer or Owner will attempt to contact the Contractor and notify them of the deficiency. If the Contractor cannot be notified or fails to make prompt corrections, the Owner or Engineer may authorize that said deficiencies be corrected by others. The cost of making such corrections will be charged to the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

The work of maintaining traffic is included in the pay item(s) which are specifically listed on the proposal and will not be paid for separately.

END OF SECTION

SECTION 01 71 13
MOBILIZATION

PART 1 - GENERAL

1.01 Work Included

Mobilization consists of preparatory work and operations, including but not limited to the following:

- A. The movement of people, equipment, and materials to the project site;
- B. The establishment of the Contractor's facilities to work on the project (offices, storage yards, borrow and disposal sites, etc.);
- C. Expenses incurred prior to beginning work on specific contract pay items;
- D. Pre-construction costs (not bidding costs) which are direct costs to the project, rather than direct costs to specific pay items.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 Mobilization

Following Notice of Award, the Contractor shall expeditiously prosecute such work necessary for execution of the contract.

Following Notice to Proceed, the Contractor shall commence such work necessary to prepare for the beginning work on the project.

<u>Pay Item</u>	<u>Pay Unit</u>
Mobilization	Lump Sum

Unless otherwise provided, the contract amount for Mobilization shall not exceed 10 percent of the total project amount.

If the amount bid for Mobilization exceeds the maximum amount established, the Contractor's bid price for Mobilization will be adjusted to the maximum amount, and the total bid price and contract amount will be based upon the revised price. The failure of a bidder to accept this adjustment will result in the forfeiture of their bid bond, if the bidder is selected by the Owner for award of a contract.

The total amount paid for Mobilization will not exceed the contract amount for Mobilization, regardless of whether the Contractor shuts down the work before its completion, hauls away equipment and materials, and returns equipment to the project site. The amount of Mobilization will not be adjusted if additional work is added to the project.

Mobilization will be paid for by partial payments of the contract lump sum amount, in accordance with the following:

Percent of Original Contract Earned	Percent of Contract Price for Mobilization Allowed
5	50
10	75
25	100

END OF SECTION

SECTION 01 71 23.16
CONSTRUCTION STAKING BY CONTRACTOR

PART 1 - GENERAL

1.01 Work Included

The Contractor is responsible to provide all staking and layout necessary for construction of the project.

1.02 Notifications

In the event that it appears there is an error or contradiction between plan grades, construction stakes, and/or actual conditions, the Contractor shall notify the Owner or Engineer immediately.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 Requirements

The Contractor is responsible to provide such layout and control work as may be required for construction of the proposed improvements.

The Contractor shall provide workers competent in the layout and control work necessary. The Contractor shall provide the equipment and materials necessary for establishing the necessary control and layout.

Pipelines, 8 inches or larger that are to be laid at a uniform grade, shall be laid using a laser for alignment control.

3.02 Plan Grades and Alignment

The horizontal alignment of manholes and drainage structures will be from the center of casting, unless otherwise noted.

Final casting elevation for drainage structures and manholes shall be determined by the Engineer after grading is completed.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The work of Construction Staking will be paid for at the contract unit price for the following pay item(s).

Pay Item
Construction Staking

Pay Unit
Lump Sum

4.02 Measurement

The work of Construction Staking includes furnishing all labor, equipment, supervision, and materials to provide staking and layout for construction of the proposed work. The lump sum amount will be paid proportionally to the work completed on the project, as a percentage of the total contract amount.

END OF SECTION

SECTION 02 21 14
COLOR AUDIO-VIDEO SURVEY
OF CONSTRUCTION AREAS

PART 1 - GENERAL

1.01 Work Included

The Contractor shall perform an audio-video survey of the project area to document the “pre-construction” conditions of the project and adjacent areas. The recording shall be in digital format, delivered to the Engineer on a flash drive or via a downloadable link.

1.02 Qualifications

The pre-construction video documentation shall be completed by an established commercial firm known to be skilled and regularly engaged in the business of color audio-video construction documentation. The firm shall furnish such information as the Engineer deems necessary to demonstrate the ability to perform the work in accordance with contract specifications. This information may include a history of construction work experience.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 General

The Contractor shall provide all labor, materials, equipment, and services and perform all operations necessary to furnish to the Owner a complete color audio-video recording of the surface features within the proposed construction zone of influence. The audio-video survey shall be recorded in digital format with each file labeled to indicate the project name, date, and time and the specific locations included in the file. The purpose of this coverage shall be to accurately document the pre-construction condition of these surface features.

A. Coverage

The recordings shall include coverage of all surface features located within the construction zone of influence. The construction zone of influence includes: (1) the area within and adjacent to the permanent and temporary easements and areas adjacent to these easements, which may be affected by routine construction operations; (2) road right-of-way and areas within 25 feet; (3) staging areas for equipment and materials out of the construction zone on either public or private land; (4) where directed by the Engineer. The surface features within the construction zone of influence shall include, but not be limited to, all roadways, pavements, curbs, driveways, sidewalks, culverts, headwalls, retaining walls, buildings, landscaping, trees, shrubbery, and fences. Any faults, fractures, or defects shall be identified, verbally described, and magnified to clearly show the nature and extent of the damage.

Houses and buildings shall be identified visually by house or building number, when possible, in such a manner that the progress of the taping and proposed construction areas may be located by reference to the house and buildings.

B. Recording Operation

The operator in charge must have experience on at least 25 miles of pre-construction work and/or other similar construction work. Apprentice operators must be continuously supervised by an experienced operator.

C. Recording Schedule

The recording shall be performed prior to the placement of any construction materials or equipment on the proposed construction site. The Contractor shall notify the Engineer at least two working days prior to performing the work.

D. Video Delivery

The Contractor shall deliver the audio-video recordings and log to the Owner upon their completion. Upon acceptance by the Owner, the materials become the property of the Owner.

E. Unacceptable Documentation

The Owner may reject all or any portion of the documentation not conforming to specifications. Those rejected portions shall be re-done at no additional cost to the Owner.

F. Documentation Additions and Omissions

The Owner may designate areas to be added to or omitted from the survey.

G. Specification Deviations

Any deviation from these specifications must have the written approval of the Owner/Engineer.

3.02 Production Requirements

The following procedures shall be implemented in the production of pre-construction color audio-video documentation.

A. Recording

The coverage shall consist of a single, continuous, unedited recording which begins at one end of a particular construction area and continues to the other end of that construction area. However, where coverage is required in areas not accessible by conventional wheeled vehicles and smooth transport of the recording system is not possible, the recording shall consist of an organized, logical sequence corresponding to the plans.

B. Vehicle Rate of Travel

The vehicle rate of travel shall be indirectly proportional to the number, size, and value of the surface features within that construction area's zone of influence. The following table should be used as a guide to establish approximate limits on actual average rates of travel:

Area Rate Maximum	Rate Of Travel Typically Characterized By	Average
a. High Density (e.g. developed subdivision)	Hard surface streets, curbs, drives & sidewalks; 50-foot lots; very few empty lots	30 ft/min.
b. Med. Density (e.g. partially developed subdivision)	Gravel roads, hard & soft surface drives, no sidewalks culverts and headwalls, 100-foot lots, few empty lots	60 ft/min.
c. Low Density (e.g. Suburban fringe)	Gravel roads, small fields or woods, occasional houses	90 ft/min.
d. Extra Low Density (e.g. rural)	Gravel roads, large fields, sparse number of houses	120 ft/min.

C. Visibility

All recording shall be performed during times of good visibility. No recording shall be done during periods of significant precipitation, mist, or fog. The recording shall only be done when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp video recordings of those subjects.

No recording shall be performed when there is any snow cover, unless otherwise authorized by the Owner.

3.03 Technical Requirements

The total audio-video recording system and the procedures used shall produce a finished product that will meet the technical requirements of the project and provide a high quality audio and video production. The video portion of the recording shall reproduce bright, sharp, clear pictures with accurate colors and shall be free from distortion, tearing, rolls, or any other form of picture imperfection. The audio portion of the recording shall reproduce the commentary of the camera operator with proper volume, clarity, and be free from distortion, interference, or background noise.

A. Recording System

1. Digital File

The recorded audio-video digital file shall be compatible for playback with any standard media player.

2. Recorder

The recorder shall record the color signal with a minimum horizontal resolution of 240 lines.

All video recordings must, by electronic means, display continuously and simultaneously generated transparent digital information to include the date and time of recording, the engineering stationing corresponding to the stationing on the plans or as directed by the Engineer, the name of the street, easement, or building being documented, and the project and time to appear in the upper left hand corner of the picture.

Example: N on First Street W/E
84+20

3. Audio Record

There shall be a corresponding and simultaneously recorded audio recording, containing the commentary of the camera operator. The audio recording shall assist the viewer orientation and in any needed identification, differentiation, clarification, or objective description of the structures being shown in the video portion of the recording.

The audio recording shall be free of any other voice communication.

At the start of production and the beginning of a new street, an identification summary shall be read into the record while at the same time a wide angle view with numeric displays is provided for fiscal record. Summary to include: name of job, location of job, positional location at start of job date, time, weather, and other notable conditions.

4. Camera

The color video camera used in the recording system shall have a horizontal resolution of 300 lines at center, a luminance signal to noise ratio of 45 decibels, and a minimum illumination requirement of 25-foot candles.

The camera shall be adjusted to provide optimum contrast. White balance pedestal, level, and synchronization shall be adjusted for optimum performance under environmental conditions.

a. Camera Height and Stability

When conventional wheeled vehicles are used as conveyances for the recording system, the distance between the camera lens and the ground shall be not less than 12 feet. The camera shall be firmly mounted, such that transport of the camera during the recording process will maintain a steady picture.

b. Camera Control

Camera pan, tilt, zoom-in, and zoom-out rates shall be sufficiently controlled such that recorded objects will be clearly viewed during playback. In addition, all other camera and recording system controls, such as lens focus and aperture, video level, pedestal, chrome, white balance, and electrical focus, shall be properly controlled or adjusted to maximize recorded picture quality.

- i. A wide angle of area will be shown first, then a series of pans, zooms, and tilts as may be necessary to accomplish a comprehensive view. Close-ups shall be utilized, as necessary, to ensure sufficient detail of items of interest. Progress shall continue linearly along the field of view; for example, one side of roadway must be completed before commencing recording of the opposite side.
- ii. Camera pans and tilts shall be no faster than 90 degrees of arc in a 5-second interval, or slower, so as to assure maximum clarity of scene detail.
- iii. Camera zoom shall be no faster than a doubling of focal distance within a half-second interval, or slower.

iv. Each item of interest shall be clearly indicated in the video record for sufficient time to permit audio discussion and viewer comprehension.

5. Video Tape Indexing

a. Video Identification

All video files shall be properly identified by index number, project title, and general project location.

b. Flash Drives

Displayed on the flash drive or storage case of each flash drive shall be the project name. A log of the flash drive contents shall be provided along with the flash drive. The log shall describe the segments of coverage contained on the video, in terms of the names and sides of the streets or easements, coverage beginning, direction, and endpoints with corresponding video counter numbers.

c. Cumulative Index

A cumulative alphabetical index of all the individual segments of coverage, indicating the corresponding video file, shall be supplied to the Owner.

All equipment, accessories, and materials to perform this service shall be furnished by the Contractor, except the plans of the proposed area to be televised, which are furnished by the Engineer.

PART 4 - MEASUREMENT AND PAYMENT

The work of color audio-video survey of construction areas is included in the pay item(s) specifically listed on the proposal and will not be paid for separately.

END OF SECTION

SECTION 02 41 13.13
PAVEMENT REMOVAL

PART 1 - GENERAL

1.01 Work Included

This work includes removal of an existing pavement, including streets, driveways, sidewalks, curb and/or gutter, and parking areas. For purposes of the work "pavement removal", pavement material may include HMA, concrete, brick, or any combination thereof, including any reinforcement materials.

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 Limits of Removal

Pavement shall be removed to the limits shown on the plans, or as directed by the Engineer in the field. Where pavement is to be removed to allow for the construction of utilities or other improvements, pavement shall be removed to the limits required for their construction.

3.02 Pavement Removal (Including Curb and Gutter Removal)

Pavement shall be removed to an existing joint or to a sawed joint. An existing crack is not suitable for the limit of removal. Sawed joints for pavement removal are to be either parallel or perpendicular to the longitudinal centerline. Sawed joints shall extend substantially through the full thickness of the pavement so that a "clean break" is made and that the adjacent pavement or structures that are to remain are not damaged. If adjacent pavement or structures that are to remain are damaged as a result of the Contractor's removal operations, they shall be replaced to the Owner's satisfaction at the Contractor's expense.

Curb and gutter removal shall be as directed by the Engineer. The Contractor shall sawcut existing curb and/or gutter perpendicular to and completely through the existing concrete.

Broken concrete, HMA, brick, and other debris resulting from pavement removal operations shall become the Contractor's property and disposed of properly.

Where pavements are encountered that are composed of more than one material or multiple courses of the same material, the pavement shall be removed in its entirety and all components shall be considered part of the same pavement area.

The Contractor shall provide sufficient barricades and fences to protect pedestrians and vehicles from hazardous areas.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The work of pavement removal will be paid for at the contract unit price for the actual quantities of the following pay item(s) which are completed.

<u>Pay Item</u>	<u>Pay Unit</u>
Curb and Gutter, Rem	Foot
Pavt, Rem	Square Yard
Sidewalk, Rem	Square Yard

The work of removing pavement, curb and gutter, or sidewalk includes sawcutting, hauling and disposal, barricading, and all labor and equipment required.

Where pavement and an adjacent curb or curb and gutter are to be removed, both will be paid for as pavement removal. Curb and gutter removal will be paid for separately only when the adjacent pavement (both sides to remain, if existing pavement is on both sides) is to remain.

Removing pavement includes removal of pavement of any material or thickness encountered. Multiple pavement courses or pavement materials will not be paid for separately. Reinforced pavement will be included as pavement removal.

Removing sidewalk includes the removal of sidewalk designated for removal, regardless of the thickness. There will be no adjustment in price if the existing concrete sidewalk is reinforced.

HMA curbs and HMA sidewalks, paths, or trailways will not be paid for separately.

4.02 Measurement

Pavement removal and sidewalk removal will be measured by horizontal surface area in units of square yards.

Curb and gutter removal will be measured linearly along the base of the curb face or along the flowline of the gutter, when the adjacent pavement is not to be removed.

END OF SECTION

SECTION 31 23 01
EXCAVATING, FILLING, AND GRADING

PART 1 - GENERAL

1.01 Work Included

The work of excavating, filling, and grading includes, but is not necessarily limited to:

- A. Excavating for footings and foundations;
- B. Filling and backfilling to attain indicated grades;
- C. Trenching and trench backfilling;
- D. Rough and finish grading of the site; and
- E. Furnishing and installing granular cushion under concrete slabs on grade.

1.02 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- B. Michigan Department of Transportation 2020 Standard Specifications for Construction

1.03 Related Work

- A. Section 01 41 26 – Permit Requirements
- B. Section 01 45 16.02 – Density and Aggregate Testing
- C. Section 02 41 13.13 – Pavement Removal
- D. Section 31 25 00 – Soil Erosion and Sedimentation Control

1.04 Job Conditions

A. Dust Control

Dust caused by the Contractor's operations during performance of the work, or resulting from the condition in which the Contractor leaves the site, shall be controlled by the Contractor. The Contractor shall use all means necessary to control dust on and near the work zone and all off-site borrow areas.

All surfaces shall be thoroughly moistened, as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of other work on the site.

B. Protection

The Contractor shall use all means necessary to protect all materials before, during, and after installation and to protect all objects designated to remain.

In the event of damage, the Contractor shall immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

C. Safety

The Contractor is responsible for conducting operations in a safe and orderly manner and in conformance with MIOSHA P.A. 154.

D. Permits

Unless otherwise provided, the Contractor is responsible to obtain and comply with permits required under Parts 31 and 91 of Michigan PA 451 of 1994 (Natural Resources and Environmental Protection Act) and any local ordinances.

PART 2 - PRODUCTS

2.01 Fill Material – General

All fill material shall be subject to the approval of the Engineer.

For approval of fill material, notify the Engineer at least four working days in advance of intention to import material, designate the proposed borrow area, and permit the Engineer to sample, as necessary, from the borrow area for the purpose of making acceptance tests to prove the quality of the material.

2.02 Fill, Trench, and Structural Backfill Material

Fill material, unless specified otherwise, shall be soil or soil-rock mixture that is free from organic matter and other deleterious substance. It shall contain no rocks or lumps over 6 inches in greatest dimension and not more than 15 percent of the rocks or lumps shall be larger than 2½ inches in greatest dimension.

Fill material obtained from offsite sources shall meet the requirements of the preceding paragraph and additionally, shall be predominantly granular with a maximum particle size of 2 inches and a plasticity index of 12 or less.

Fill material placed within 2 feet horizontally of the base of building foundations and/or slabs shall have a plasticity index of 15 or less.

2.03 Sand

Sand shall meet the requirements of Granular Material Class II, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

2.04 Granular Cushion

Granular cushion under slabs shall meet the requirements of Granular Material Class II, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

2.05 Sand for Backfill

Sand shall meet the requirements of Granular Material Class II, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

2.06 Stone for Pipe Bedding

Stone shall meet the requirements of Series 6AA aggregate, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

2.07 Stone for Backfill

Stone shall meet the requirements of 21AA crushed aggregate or 4G open-graded aggregate, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

2.08 Flowable Fill

Flowable fill shall be a mixture of Portland cement, fly ash, sand, and water in the following proportions.

Flowable Fill Mixture Ratios		
Material	Type	Quantity
Portland Cement	Type I or IA	50 lb/cyd
Fly Ash	ASTM C618, Class C or F	500 lb/cyd
Sand	MDOT 2NS	2,850 lb/cyd
Water		Approx. 376 lb/cyd (sufficient to produce desired flowability)

Flowable fill shall be produced and delivered at a minimum temperature of 50 degrees Fahrenheit. Mixtures shall be transported to the point of placement in a revolving drum mixer or agitator.

2.09 Geotextile

Geosynthetics must be composed of long-chain synthetic fiber of at least 85 percent, by weight, polyolefins or polyesters. Geosynthetics must be capable of resisting degradation from chemicals, mildew, rot, and ultraviolet (UV) light.

Geotextile used to prevent intermixing of soft subgrade and subbase materials shall meet the requirements per the Michigan Department of Transportation 2020 Standard Specifications for Construction, as shown in Table 910-1 for geotextile stabilization and separator.

2.10 Other Materials

All other materials not specifically described, but required for a complete and proper installation, shall be as selected by the Contractor and subject to the approval of the Engineer.

PART 3 - EXECUTION

3.01 General

Prior to all work of this section, the Contractor shall become thoroughly familiar with the site, the site conditions, and all portions of the work falling within this section. The Contractor shall not allow or cause any of the work performed or installed to be covered up or enclosed by work of this section prior to all required inspections, tests, and approvals. Should any of the work be enclosed or covered up before it has been approved, the Contractor shall uncover all such work at no additional cost to the Owner. After the work has been completely tested, inspected, and approved, the Contractor shall make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the Owner.

The Contractor shall excavate ahead of the proposed utility installation to expose any existing buried utilities. If existing utility grades conflict with the proposed utility grade, the proposed utility grade may be adjusted by the Engineer, if necessary, to miss the existing utility grade at no additional expense to the contract.

3.02 Geotextile Stabilization and Geotextile Separator

Deliver and store geosynthetics in packaging capable of resisting UV radiation, contaminants, and moisture. Label each unit of material with product information, including supplier and lot identification. Do not expose geosynthetics to direct sunlight for prolonged periods. Repair or replace damaged geosynthetics at no additional cost to the project.

A. Geotextile Placement

Place or install geotextile products in accordance with the manufacturer's installation guidelines and this subsection.

Do not operate equipment required to place backfill directly on geotextile products. Eliminate wrinkles or waves that develop during placement. Place the products in direct contact with the soil below before placing backfill on the geotextile products.

Shingle-lap longitudinal and transverse joints at least 2 feet, or seam the joints in accordance with the manufacturer's recommendations. Ensure field or factory seams meet the minimum grab tensile strength for the product application. Place seams facing upward for inspection purposes.

Repair tears or damage to the geotextile in accordance with the manufacturer's recommendations.

B. Aggregate or Granular Material Placement

Spread and grade the first layer of aggregate or granular material after placing geotextile to create a stable work platform before compaction. Place additional aggregate or granular material, as required, and compact. Fill ruts with additional aggregate or granular material and compact before placing each subsequent layer. The cost of aggregate or granular material, including additional quantities required to fill ruts, is included in the unit prices for related pay item(s).

3.03 Excavating

Where depressions result from, or have resulted from, the removal of surface or subsurface obstructions, the Contractor shall open the depression and remove all debris and soft material as directed by the Engineer.

The Contractor shall excavate to the grades shown on the drawings. Where excavation grades are not shown on the drawings, excavation shall be completed, as required, to accommodate the installation.

All over-excavated areas shall be backfilled and compacted at no additional cost to the Owner.

3.04 Preparation of Subgrade

After the site has been cleared, stripped, and excavated to within 6 inches of the specified depths for recompaction, the exposed surface shall be scarified to a minimum depth of 6 inches, thoroughly moisture-conditioned, and compacted to the requirements specified below for fill.

All ruts, hummocks, and other uneven surfaces shall be removed by surface grading prior to placement of fill.

3.05 Subgrade Undercutting

Subgrade undercutting shall be performed to replace material susceptible to frost heaving, differential frost action, or unstable soil conditions, as determined by the Engineer.

After the subgrade has been excavated to the approximate grade, the Engineer will inspect the grade to determine if subgrade undercutting is required and to determine the limits of such undercutting. The Contractor shall provide suitable equipment for proof rolling the grade. The inspection, proof rolling, and subgrade undercutting shall be completed prior to placing any embankment, road base, or pavement.

The Contractor shall undercut the subgrade within the limits defined by the Engineer. All excavated material resulting from the undercutting shall become the Contractor's property disposed of outside the project limits, unless otherwise directed. The volume of earth removed by subgrade undercutting shall be replaced by suitable soils as follows:

- A. Type I Subgrade Undercutting - backfill with selected clay or similar material approved by the Engineer.
- B. Type II Subgrade Undercutting - backfill with sand.

C. Type III Subgrade Undercutting

Backfill with the material excavated from subgrade undercut areas after mixing the excavated material to break up the undesirable strata of soils or with other Engineer-approved backfill material.

D. Type IV Subgrade Undercutting

Backfill with 21AA crushed aggregate or 4G open-graded aggregate. Encapsulate 4G aggregate with geotextile separator.

Backfill material shall be compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

3.06 Excess Water Control

Fill material shall not be placed, spread, or rolled during unfavorable weather conditions. Operations shall not resume until moisture content and fill density are satisfactory to the Engineer. Berms or channels shall be provided to prevent flooding of subgrade. All water collecting in depressions shall be promptly removed.

Where soil has been softened or eroded by flooding or placement during unfavorable weather, all damaged areas shall be removed and compacted as specified below for fill and compaction.

The Contractor shall provide suitable means and equipment to maintain excavations and other parts of the work free from water.

Dewatering means and methods shall provide dry excavations and the preservation of the final lines and grades of bottoms of excavations.

3.07 Fill and Compaction

After subgrade compaction has been approved by the Engineer, the Contractor shall place approved fill material in layers not exceeding 8 inches in uncompacted thickness.

The fill material shall be watered or aerated, as necessary, and thoroughly mixed to obtain a moisture content that will permit proper compaction.

Each soil layer shall be compacted to at least the specified minimum degree. The filling and compaction process shall be repeated until plan grade is attained.

A. Compaction Requirements

Unless otherwise specified on the drawings or in other sections of the specifications, fill and backfill shall be placed in 8-inch lifts and each lift shall be compacted to not less than the percentages of the maximum density stated in Section 01 45 16.02 – Density and Aggregate Testing.

Compaction by jetting will not be permitted unless specifically authorized by the Engineer.

3.08 Grading

Except as otherwise directed by the Engineer, the Contractor shall perform all rough and finish grading required to attain the elevations shown on the drawings.

Tolerances For Grading			
Rough Grade		Finish Grade	
Building, roads, and parking areas	Plus or minus 0.1 feet	Granular cushion under concrete slabs	Plus or minus 0.05 feet
Landscaped areas	Plus or minus 0.25 feet	Parking areas	Plus or minus 0.03 feet
		Landscaped areas	Plus or minus 0.1 feet

After grading is completed and has been accepted by the Engineer, the Contractor shall permit no further excavating, filling, or grading.

The Contractor shall use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

3.09 Excavating for Footings

Earth surfaces, upon which footings will be placed, shall be compacted in accordance with the compaction requirements established in this section of these specifications.

The Contractor shall verify that all compaction is complete and approved prior to excavating for footings.

The Contractor shall excavate to the required lines and grades. The bottom of trenches shall be cut level and all loose soil shall be removed. Where soft spots are encountered, unsuitable materials shall be removed and replaced with flowable fill at no additional cost to the Owner.

3.10 Placing Granular Cushion

The Contractor shall carefully place the specified granular cushion in areas to receive concrete slabs on grade, uniformly attaining the thickness indicated on the drawings, and providing all required transition planes.

3.11 Trenching

The Contractor shall perform all trenching required for the installation of items where the trenching is not specifically described in other sections of these specifications.

All trenches shall be open construction, with sufficient width to provide free working space at both sides of the trench and around the installed item as required for pipelaying, backfilling, and compacting.

Trenching shall be completed, as required, to provide the elevations shown on the drawings.

Where elevations are not shown on the drawings, trench to sufficient depth to give a minimum of 18 inches of fill above the top of the pipe, measured from the adjacent finished grade.

Where trench excavation is inadvertently carried below proper elevations, the over-excavated area shall be backfilled with material approved by the Engineer, and then compacted to provide a firm and unyielding subgrade and/or foundation to the approval of the Engineer and at no additional cost to the Owner.

The Contractor shall properly support all trenches in accordance with all applicable rules and regulations.

The Contractor shall brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind, whether on public or private property, will be fully protected from damage.

In the event of damage to such improvements, the Contractor shall immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

Bracing, sheeting, and shoring shall be constructed so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength. The Contractor shall exercise care in the drawing and removal of sheeting, shoring, bracing, and timbering to prevent collapse and caving of the excavation faces being supported.

Trenched material shall be stockpiled in a manner to prevent water running into the excavations. Surface drainage shall not be obstructed. A means shall be provided whereby storm and wastewaters are diverted into existing gutters, other surface drains, or temporary drains.

3.12 Foundation for Pipes

Trench bottoms shall be graded to provide a smooth, firm, and stable foundation free from rock points throughout the length of the pipe.

A minimum of 4 inches of sand or stone bedding shall be placed in the bottom of the trench.

In areas where soft, unstable materials are encountered at the surface where the bedding is to be placed, the unstable material shall be removed and replaced with material approved by the Engineer. The area shall be undercut to a sufficient depth to develop a firm foundation for the item being installed. Over excavation and replacement of material shall be the responsibility of the Contractor and shall be completed at no additional cost to the Owner.

At each joint in pipe, the bottom of the trench shall be recessed, as required, to relieve the bell of the pipe of all load and to ensure continuous bearing of the pipe barrel on the firm foundation.

The pipe subgrade shall be shaped to fit the bottom of the trench to the pipe shape.

3.13 Bedding for Pipes

Pipe bedding shall be in accordance with the details in the construction plans.

The pipe bedding shall be shaped to match the bottom $\frac{1}{4}$ of the pipe's shape. The bedding shall be excavated to accommodate the pipe bells. The completed bedding shall provide uniform support of the entire length of pipe.

The bedding material shall be compacted after placing along both sides of the pipe.

3.14 Backfill for Pipes

Unless otherwise directed, all trenches and excavation shall be backfilled as the pipe is laid. No pipes shall be backfilled until the sewer elevations, gradient, alignment, and the pipe joints have been observed by the Engineer.

The trench shall be backfilled to the proposed final elevations with suitable materials. Unless other compaction methods are demonstrated and approved by the Engineer, backfill shall be placed in 8-inch lifts and compacted to the required density as stated in Section 01 45 16.02 – Density and Aggregate Testing.

In areas which are not to be restored with a pavement or aggregate surface, the backfill shall be graded to a height slightly above the adjacent surface. When final restoration of the area is completed by the Contractor, the backfill surface shall be excavated (or filled if settlement has occurred), trimmed, or graded, as necessary, to provide for the required depth of topsoil and its transition to adjacent, undisturbed areas.

The Contractor shall correct any areas where the trench backfill settles by adding fill, topsoil, and re-seeding.

3.15 Miscellaneous Pipe Repair

When an existing sewer pipe, drain pipe, field tile, or other existing pipe is damaged as a result of construction activities and is not designated for removal or abandonment on the plans or by the Engineer, it shall be repaired by the Contractor.

The section of damaged pipe shall be removed to existing joints or to sawed joints where the existing pipe is sound and undamaged. A length of new pipe of the same size as the original pipe shall be furnished and installed to replace the section of pipe removed. The new pipe may be any one of the following materials:

- A. Same material, class or thicknesses, as the original pipe
- B. PVC Schedule 40, for pipes 8 inches or less in diameter
- C. PVC SDR 26, for pipes 8 inches or greater in diameter
- D. Other pipe material approved by the Engineer

Each end of the new section of pipe shall be connected to the remaining sections of existing pipe using a rubber gasketed sleeve, suitable for the pipe materials and sizes being joined, to provide a watertight connection. The repaired section of pipe shall be firmly bedded in sand or stone, compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The work of excavating, filling, and grading will be paid for at the contract unit price for the following pay item(s).

<u>Pay Item</u>	<u>Pay Unit</u>
Earthwork	Lump Sum
Subgrade Undercutting, Type II	Cubic Yard

4.02 Measurement

The work of miscellaneous pipe repair will not be paid for separately.

The work of Dewatering will be considered a lump sum pay item. The lump sum price for Dewatering will be paid in partial payments, proportional to the amount of utility which has been constructed and accepted. Dewatering will be paid for as a separate pay item when it has been included as a pay item on the proposal. Otherwise, Dewatering is considered to be included in the work of the other pay item(s) and will not be paid for separately.

The work of Earthwork will be considered a lump sum pay item.

In areas where embankment is required, Subgrade Undercutting, Type ___ will be measured only to the level of the original ground surface, less topsoil depth. In areas of excavation, Subgrade Undercutting, Type __ will be measure to the level of plan subgrade.

4.03 Work Included

The work of miscellaneous pipe repair includes all work necessary to repair existing sewer pipes, drain pipes, field tiles, or other existing pipes encountered and damaged by construction activities because their location was not identified or the existing pipes were not in sound condition. Payment for this work includes all labor, materials, and equipment necessary to complete the appropriate repair, including lost production time for performing other work. There will be no adjustment in the unit price for differing types of pipes, materials, classes or thicknesses, or diameters. Existing utilities and pipes, which are either shown on the drawings or located in the field by MISS DIG or the utility agency, are to be located and protected by the Contractor and, if damaged, will not be eligible for payment unless the Engineer determines that the original pipe was not in sound condition before construction.

If included as a pay item, Dewatering will be paid for at the lump sum price bid for providing, installing, maintaining, and removing any wells, pumps, generators, piping, or equipment necessary to control and remove groundwater to provide for the proper construction of the

proposed work. The cost of providing power, permits, alternative water supplies, and temporary right-of-way is included in the work of Dewatering.

The work of excavating, filling, and grading includes performing all Earthwork (that is not specifically described elsewhere) necessary to complete the project and includes the following:

- Providing sand or stone aggregate, where required, for bedding, cushion, or fill.
- Disposing of excess excavated material or unsuitable excavated material.
- Providing suitable soil for fill material, when additional soil is necessary to attain the required grades.
- Dust control.
- Compaction of soil and aggregate, including moisture control.

Subgrade undercutting will be paid for only where one of the following conditions occurs.

- A. An embankment is to be constructed on native soils (after topsoil has been removed) that are determined to be unsuitable by the Engineer.
- B. Native soils are unsuitable, as determined by the Engineer, at the plan subgrade elevation in areas where excavation was performed to reach the plan elevation.

Subgrade undercutting includes excavation of the unsuitable soil to the depth, width, and length authorized by the Engineer; proper disposal of the unsuitable material; and furnishing, placement, and compaction of the specified backfill material.

In areas where soils would normally be suitable for use in the subgrade, but during the earthwork activities they become unstable because of precipitation or runoff, the Contractor shall remove and replace or dry the soils at their cost. This work will not be considered subgrade undercutting.

Where the drawings provide a summary of estimated Earthwork quantities, the estimates are provided for information only. The Contractor shall verify the Engineer's estimates during the bidding process, and determine the contract price based on their determination of the quantities and the Contractor's planned approach for performing the work.

END OF SECTION

SECTION 31 25 00
SOIL EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 Work Included

The Contractor shall provide permanent and/or temporary erosion and sedimentation control as called for on the plans and as required by the county soil erosion agent and permit.

1.02 Definitions

A. Major rainfall event – ¼-inch or more precipitation over a period, delineated by dry periods of at least 24 hours.

1.03 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. ASTM D3786 – Standard Test Method for Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method
- B. ASTM D4355 – Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus
- C. ASTM D4491 – Standard Test Method for Water Permeability of Geotextiles by Permittivity
- D. ASTM D4533 – Standard Test Method for Trapezoid Tearing Strength of Geotextiles
- E. ASTM D4632 – Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- F. ASTM D4751 – Standard Test Method for Determining Apparent Opening Size of a Geotextile
- G. ASTM D4833 – Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
- H. Michigan Department of Transportation 2020 Standard Specifications for Construction

1.04 Related Work

- A. Section 01 41 26 – Permit Requirements
- B. Section 32 92 00 – Turf Establishment

1.05 Permit

The Contractor shall apply for and obtain an Act 451 permit from the local Soil Erosion and Sedimentation Control Enforcing Agent. The Contractor shall pay all permit fees and provide any required bonds or insurance.

1.06 Scheduling

- A. Control measures shall be constructed by the Contractor prior to the time construction starts uphill or upstream from the control measure location.
- B. The Contractor shall inspect all temporary erosion control measures weekly and within 18 hours of major rainfall events.
- C. Maintenance and replacement of erosion control measures shall be completed by the Contractor when necessary, or as directed by the soil erosion control agent or the Engineer.
- D. Removal and cleanup of temporary control structures shall be provided by the Contractor within one week after the control measure is no longer needed.

1.07 General Soil Erosion and Sedimentation Content Procedures

- A. Keep disturbed areas small.
- B. Stabilize and protect disturbed areas as soon as possible.
- C. Keep storm water runoff velocities low.
- D. Protect disturbed areas from runoff.
- E. Retain sediment within the construction area.

PART 2 - PRODUCTS

2.01 Materials

A. Geotextiles

Geotextiles for filters shall be non-woven, meeting the requirements of the table below.

Silt fence geotextiles shall meet the requirements of the following table and shall be designed to collect eroded sediment transported in storm water runoff. The fabric shall have at least 70 percent minimum retained strength after 500 hours of U.V. exposure when tested according to ASTM D4355.

Geotextile Category	Property/Test Method					
	Grab Tensile Strength (min) ASTM D4632 lbs	Trapezoid Tear Strength (min) ASTM D4533 lbs	Puncture Strength (min) ASTM D4833 lbs	Mullen burst strength (min) ASTM D3786 psi (a)	Permittivity ASTM D4491 Per second	Apparent Opening Size (max) ASTM D4751 (b) Millimeters
Filters	90	45	45	140	0.5	0.21
Silt Fence	100(c)	45	--	--	0.1	0.60

(a) ASTM D3786. The fluid displacement rate for the Mullen burst test equipment must be 170± 5 ml/minute. Subtract tare strength from the ultimate burst strength as specified by ASTM.

(b) Filtration opening size (FOS, Canadian General Standards Board, method 148.1 No. 10) is permitted as an alternate test method to ASTM D4751 for non-woven geotextiles.

(c) Elongation at the specified grab tensile strength not to exceed 40 percent for silt fence.

B. Stone

Unless otherwise directed, stone shall meet the requirements of Series 6AA as specified in Michigan Department of Transportation 2020 Standard Specifications for Construction.

2.02 Mixtures

A. Seed

Seed shall meet the requirements of Section 32 92 00 – Turf Establishment.

2.03 Fabricated Items

A. Silt Fence

Geotextile for silt fences shall meet the requirements of Section 2.01. The geotextile shall be attached to machine pointed No. 2 common grade hardwood posts, using at least 5 staples through wood lath a minimum of $\frac{3}{8}$ -inch thick and 2 feet long. Post spacing shall not exceed $6\frac{1}{2}$ feet. Posts must be of sufficient length and cross-section to support the installed silt fence under full sediment load; however, posts shall have cross-sectional area of at least $2\frac{1}{4}$ square inches and shall be a minimum of 36 inches in length. Silt fence fabric must be a minimum height of $2\frac{1}{2}$ feet. Silt fence shall have at least two permanent markings or affixed labels per assembled roll which positively identifies the fabricator.

B. Mulch Blankets

Mulch blankets shall meet the requirements of Section 32 92 00 – Turf Establishment.

C. Filter Sacks

All materials shall adhere to the requirements of the Michigan Department of Transportation 2020 Standard Specifications for Construction, except fabric drop, which shall consist of a geotextile filter sack inserted into the drainage structure under the cover.

Filter sack shall be as manufactured by “Siltsack”, “Catch-All”, “Ultra-Urban Filter”, “Flogard + Plus”, or approved equal. The filter sacks shall be installed and maintained in accordance with the manufacturer’s specifications.

PART 3 - EXECUTION

3.01 General Requirements

The Contractor shall perform work on the project in a manner which prevents or reduces erosion and controls sedimentation. The Contractor shall provide controls which keep sedimentation from the project area, within the limits of the project area, and out of any lake, river, stream, wetland, or storm drain.

The Contractor shall install appropriate controls or measures to control or prevent erosion or sedimentation from the project area before beginning any earth disturbance operations. Temporary erosion and sedimentation control measures shall be maintained by the Contractor, until such times as disturbed areas have become permanently stabilized.

During the life of the project, the Contractor shall provide any additional soil erosion or sedimentation control measures necessary to address specific problems which develop in and adjacent to the project area.

3.02 Time Limitations

Grading operations shall be completed as soon as practical. Permanent soil erosion controls for disturbed areas shall be completed within 5 calendar days of the completion of grading, except that permanent measures shall be completed within 24 hours when the disturbed area is within 150 feet of a lake, stream, river, or wetland area.

Temporary soil erosion measures shall be implemented when it is not practical to complete the permanent measures.

3.03 Area Limitations

For linear projects (roads, sewers, water main, etc.), the length of the disturbed area shall be limited to ½-mile, unless otherwise approved by the Engineer.

Areas outside the project right-of-way or outside the grading limits shown on the drawings shall not be disturbed, unless otherwise approved by the Engineer.

3.04 Construction of Erosion and Sedimentation Controls

The Contractor shall provide all permanent and temporary erosion and sedimentation controls shown on the drawings, required by the permitting agency, or necessary to appropriately control erosion and sedimentation from the project area.

A. Check Dams

Check dams shall be installed and maintained across ditches and watercourses, which might convey surface runoff from disturbed areas within the project area, or where shown on the drawings or required by the Engineer or permitting agency.

B. Silt Fence

The Contractor shall furnish, erect, and maintain silt fence around the perimeter of the project area where earth will be disturbed and sediment from the disturbed area could be conveyed.

C. Filters

Fabric or stone filters shall be installed in waterways or in advance of inlets to drainage courses or storm sewers.

D. Sediment Traps and Basins

Sediment traps shall be excavated upstream of check dams and where shown on the drawings or directed by the Engineer or permitting agency. Check dams shall be installed downstream of the sediment traps and basins prior to the sediment traps and basins being excavated.

E. Seeding

Earth areas shall be stabilized with turf immediately following the completion of earthwork and grading activities. Where permanent seeding cannot be completed, earth areas shall be

stabilized with temporary seeding. Areas which are properly seeded temporarily for stabilization shall be permanently seeded, as shown, as the work can be appropriately completed.

F. Mulch Blankets

Areas susceptible to erosion from moving water, which are not to be paved, shall be seeded and protected with high velocity mulch blankets.

3.05 Maintenance and Erosion and Sedimentation Control

The Contractor shall maintain all temporary erosion and sedimentation controls until such time as the permanent measures have been completed and established.

The Contractor shall inspect all erosion and sedimentation controls weekly and within 18 hours of a major rain event.

Damaged controls or measures shall be replaced or repaired. Sediment shall be cleaned from traps, sumps, basins, filters, and fences periodically. Sediment shall be removed to prevent the accumulation of sediment from exceeding half of the volume of traps, sumps, and basins. Sediment or debris along silt fences shall be removed before the accumulation reaches half the height of the fence.

Sediment and debris removed from soil erosion and sedimentation control devices shall be disposed of properly by the Contractor. Sediment shall not be used for fill or backfill in the project area, except when an area is specifically designated on the plans or by the Engineer.

Drainage filters shall be cleaned when an accumulation of silt might reduce flow and result in flooding.

Any sediment from the construction area which enters storm sewers or drainage ditches shall be removed by the Contractor. Since sediment can be carried great distances within storm sewers, it may be necessary for many segments of downstream storm sewer segments to be televised, jetted, and vacuumed. If the Engineer believes that the Contractor has allowed or provided the potential for sediment to enter storm sewers or drainage courses, the Contractor will be responsible for the costs of inspection and removing sediment from downstream drains, whether it can be conclusively proven that the sediment was the result of the Contractor's actions (or inaction).

3.06 Removal of Erosion and Sedimentation Control Devices

Temporary soil erosion and sedimentation control devices shall be removed or obliterated by the Contractor when the permanent measures are in place and established. Any areas damaged by the removal of the temporary devices shall be corrected by the Contractor.

Mulch used for temporary erosion control may either be removed or worked into the soil before the permanent topsoil and seeding is completed.

PART 4 - MEASUREMENT AND PAYMENT

The work of erosion control will be paid for at the contract unit price for the actual quantity of the following pay item(s), which are shown on the drawings or authorized by the Engineer and are specifically listed as pay item(s) on the proposal.

<u>Pay Item</u>	<u>Pay Unit</u>
Erosion Control, Gravel Access Approach	Each
Erosion Control, Inlet Protection, Fabric Drop	Each
Erosion Control, Silt Fence	Foot

Work not specifically listed as a pay item is considered included in the pay item(s) specifically listed on the proposal and will not be paid for separately. This work includes providing and maintaining all erosion and sedimentation control measures shown on the plans, required by the permitting agency, or necessary to minimize erosion and sedimentation from the project area. This work also includes removal of temporary controls once the permanent measures have become established.

END OF SECTION

SECTION 32 11 23
AGGREGATE BASE

PART 1 - GENERAL

1.01 Work Included

This specification describes the requirements for constructing an aggregate base under a proposed pavement surface.

1.02 References

A. Michigan Department of Transportation 2020 Standard Specifications for Construction

1.03 Related Work

A. Section 01 45 16.02 – Density and Aggregate Testing

PART 2 - PRODUCTS

2.01 Materials

A. Aggregate shall meet the requirements of Series 21AA aggregate, as described in the Michigan Department of Transportation 2020 Standard Specifications for Construction, unless otherwise noted on the plans, proposal, or specifications.

PART 3 - EXECUTION

3.01 Subgrade Preparation

Aggregate shall not be placed until the subgrade is properly prepared. The subgrade shall be graded to the required elevations and shape for placement of the specified aggregate thickness. The subgrade shall be compacted according to Section 01 45 16.02 – Density and Aggregate Testing. Soft or yielding spots shall be excavated and replaced with sound material.

3.02 Placement

Aggregate shall be placed in a manner that provides a uniform cross section of the specified thickness and the required surface grades. The edges of the area of aggregate surface shall be straight and uniform.

Aggregate shall be placed in lifts not exceeding 8 inches (loose measure) and compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

Aggregate base will be paid for at the contract unit price for the actual quantity of the following pay item(s) constructed.

Pay Item
Aggregate Base, ___ inch

Pay Unit
Square Yard

The pay item(s) include furnishing the material, preparing the subgrade, and placing, compacting, and grading the aggregate base.

4.02 Measurement

Aggregate base will be measured by surface area to the pay limits as shown on the plans. Aggregate base placed outside of pay limits shall not be eligible for payment. Areas where the compacted depth of aggregate is less than the depth specified will not be paid for. The Contractor shall provide the Engineer with weight tickets at the time of delivery to the project site.

END OF SECTION

SECTION 32 12 16
HMA PAVING

PART 1 - GENERAL

1.01 Work Included

This work includes preparation for and construction of one or more courses of plant mixed Hot Mix Asphalt (HMA).

1.02 References

- A. Michigan Department of Transportation 2020 Standard Specifications for Construction
- B. Michigan Testing Methods (MTM)
- C. Michigan Department of Transportation HMA Production Manual

1.03 Related Work

- A. Section 01 45 16.02 – Density and Aggregate Testing
- B. Section 32 11 23 – Aggregate Base

1.04 Quality Assurance and Quality Control

- A. The Engineer will take 20,000 gram samples of the HMA mixture using the mini-stockpile method. The rate of sampling will be determined by the Engineer.

PART 2 - PRODUCTS

2.01 Submittals

The Contractor shall submit material source and mix designs to the Engineer for approval prior to the start of construction.

2.02 Mixtures

Materials shall meet the requirements of Section 501.02 of the Michigan Department of Transportation 2020 Standard Specifications for Construction. If milling, the mix design to initially cover the milled surface must be approved prior to milling operations.

Furnish HMA mixture, designed using Marshall Mixture Design Methods, in accordance with Section 501 of the Michigan Department of Transportation 2020 Standard Specification for Construction, except as modified by this specification.

Submit the mix design for evaluation in accordance with the Michigan Department of Transportation HMA Product Manual.

Use a 50 blow Marshall hammer when compacting mixtures for developing Marshall mix designs.

Substituting Reclaimed Asphalt Pavement (RAP) for a portion of the new material required to produce HMA mixture is allowed, provided that the mixture is designed and produced to meet all criteria specified herein, unless otherwise prohibited. RAP materials must be in accordance with the standard specifications.

The Mix Design Criteria and Volumetric Properties table provides the mix design criteria and volumetric properties. The Aggregate Properties table provides the required aggregate properties. Use aggregates of the highest quality available to meet the minimum specifications. Use the mixture designation number shown in the contract item name when determining mix design properties from the Mix Design Criteria and Volumetric Properties and Aggregate Properties tables below.

Mix Design Criteria and Volumetric Properties					
	Mixture No.				
	2C	3C	4C	13A	36A
Target Air Void, % (a)	3	4	4	4	4
VMA (min) (b)	11	13	14	14	15
VFA	65-78	65-78	65-78	65-78	65-78
Fines to Binder Ratio (max) (c)	1.2	1.2	1.2	1.2	1.2
Flow (0.01 inch)	8-16	8-16	8-16	8-16	8-16
Stability (min), lbs	1,200	1,200	1,200	900	900
(a) Lower target air voids by 1 percent if used in a separate shoulder paving operation. Consider reducing air void targets to 3 percent for lower traffic volume roadways when designing 13A and 36A mixtures for local agency use.					
(b) VMA calculated using Gsb of the combined aggregates.					
(c) Ratio of the weight of aggregate passing the No. 200 sieve to total asphalt binder content by weight; including fines and binder contributed by RAP.					

Aggregate Properties					
	Mixture No.				
	2C	3C	4C	13A	36A
Percent Passing Indicated Sieve or Property Limit					
1½ inch	100				
1 inch	91-100	100			
¾ inch	90 max.	91-100	100	100	
½ inch	78 max.	90 max.	91-100	75-95	100
⅜ inch	70 max.	77 max.	90 max.	60-90	92-100
No. 4	52 max.	57 max.	67 max.	45-80	65-90
No. 8	15-40	15-45	15-52	30-65	55-75
No. 16	30 max.	33 max.	37 max.	20-50	
No. 30	22 max.	25 max.	27 max.	15-40	25-45
No. 50	17 max.	19 max.	20 max.	10-25	
No. 100	15 max.	15 max.	15 max.	5-15	
No. 200	3-6	3-6	3-6	3-6	3-10
Crushed (min). % (MTM 117)	90	90	90	25	60

Aggregate Properties					
	Mixture No.				
	2C	3C	4C	13A	36A
Soft Particle (max), % (a)	12	12	8	8	8
Angularity Index (min) (b)	4	4	4	2½	3
L. A. Abrasion (max), % loss (c)	40	40	40	40	40
Sand Ratio (max) (d)	-	-	-	50	50
<p>(a) The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 8 percent for aggregates used in top course. The sum of the shale, siltstone, structurally weak, and clay-ironstone particles must not exceed 12 percent for aggregates used in base and leveling courses.</p> <p>(b) The fine aggregate angularity of blended aggregates, determined by MTM 118, must meet the minimum requirement. In mixtures containing RAP, the required minimum fine aggregate angularity must be met by the virgin material. NAA fine aggregate angularity must be reported for information only and must include the fine material contributed by RAP if present in the mixture.</p> <p>(c) Los Angeles abrasion maximum loss must be met for the composite mixture, however, each individual aggregate must be less than 50.</p> <p>(d) Sand ratio for 13A and 36A no more than 50 percent of the material passing the No. 4 sieve is allowed to pass the No. 30 Sieve.</p>					

HMA mixtures and application rates shall be as shown on the plans.

Reclaimed Asphalt Pavement (RAP) shall be limited to 0 percent to 17 percent RAP by weight of the total binder in the mixture. No binder grade adjustment is made to compensate for the stiffness of the asphalt binder in the RAP.

Reclaimed Asphalt Shingles (RAS) will not be allowed in the mixture.

Oil bottoms/recycled motor oil will not be allowed in the mixture.

PART 3 - EXECUTION

3.01 Equipment

Equipment shall meet the requirements of Section 501.03 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

3.02 HMA Sampling and Testing

The Contractor shall submit to the Engineer for approval the rate at which the HMA will be sampled. Samples will be obtained using the “Mini-stockpile” method in accordance with MTM 324.

Quantitative Extraction of Bitumen from HMA Paving Mixtures (MTM 325) will be used to determine the asphalt content of the HMA mixture.

The Contractor is responsible for HMA testing.

The Contactor shall submit test results to the Engineer within seven days of HMA placement.

At the Engineer's discretion, original samples of asphalt binder will be taken by the Contractor and delivered to the Engineer prior to incorporation into the mixture. The frequency of sampling will be determined by the Engineer. The cost of obtaining and delivering the samples to the Engineer will be included in the HMA pay item(s). The Contractor must certify, in writing, that the materials used in the HMA mixture are from the same source as the materials used in developing the HMA mixture design and the bond coat is from an approved supplier, as stated in the Material Quality Assurance Procedures Manual.

3.03 Preparation

A. Aggregate Base (for Pavements Constructed on an Aggregate Base)

See Section 32 11 23 – Aggregate Base.

B. Existing Pavement (for Overlays)

Existing castings (drainage structures, manholes, monument boxes, water shutoffs, etc.) shall be temporarily lowered.

The existing pavement surface shall be thoroughly cleaned of all dirt and debris. Loose material shall be removed from all joints and cracks using compressed air, or other suitable means that does not damage the existing pavement.

The existing pavement surface shall be observed by the Engineer prior to placement of a bond coat or HMA.

C. Removal of Existing Pavement Surface

1. Butt Joints

When a butt joint is to be provided, the existing HMA surface shall be removed to a thickness equal to the thickness of the proposed overlay, for the full width of the butt joint, where the overlay is to meet the existing pavement surface. The depth of pavement removal shall be uniformly tapered from the full depth of the overlay at the butt joint to zero, at a rate of 1-inch per 10 feet.

2. Edge Trimming

Where the edge of an existing HMA pavement is required, the HMA pavement shall be cut its full depth in a manner that provides a vertical, straight edge.

3. Cold Milling

Cold milling shall be performed only when the Contractor is prepared to commence subsequent operations, such as pavement repair and HMA placement, and completes these subsequent operations expeditiously.

The HMA surface shall be removed to the required depth, width, grade, and cross section. The surface shall be removed to the limits shown on the plans, or as directed by the Engineer.

Where the HMA surface is removed below the limits specified, the Contractor shall fill and compact the area removed so that the remaining surface is at the proper level. The work to restore the pavement to the required level will be at the Contractor's expense.

After cold milling, and before placement of a new surface, the pavement shall be thoroughly cleaned.

D. Joint and Crack Repair

Joints and cracks in an existing pavement shall be repaired where shown on the drawings, or directed by the Engineer. Joints and cracks shall be repaired in accordance with the details shown on the drawings, or as directed by the Engineer.

All loose, broken, and unsound pavement along or adjacent to an existing joint or crack designated for repair shall be removed.

E. Hand Patching

When hand patching is called for on the plans or directed by the Engineer, the Contractor shall fill holes, depressions, joints and cracks, and areas to be repaired in an existing pavement. HMA material used for hand patching may be any HMA material approved for use as a top course. A bond coat shall be applied to the exposed pavement surfaces within the area to be patched. The HMA material shall be placed in lifts to the level of the surface of the adjacent existing pavement surface. Each lift shall be within the minimum and maximum thickness range allowed for the mix design, and shall be compacted using a mechanical vibrator or an approved roller.

F. Bond Coat

Bond coat shall be applied to existing pavement surfaces, only when they are clean and dry. Bond coats shall be uniformly applied to the pavement surface with a pressure applicator. Bond coat shall be placed in advance of HMA placement to provide for its curing prior to HMA placement.

Bond coat shall not be allowed to pool on the surface; pooling shall be removed. The adjacent pavement surfaces which are not to be overlaid shall not be sprayed with bond coat.

Bond coat shall be applied to each layer of the HMA pavement and to the vertical edges of the adjacent pavements before placing subsequent courses.

G. Transportation of HMA

HMA shall be transported to the project site in accordance with the requirements of Section 501.03.E of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

Each load of HMA delivered to the project site shall be weighed on an approved scale with automatic print out system. Weights shall be measured to the nearest 20 pounds. Scales and print out systems shall meet the requirements of Section 109 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

H. Placement of HMA

HMA shall be placed in accordance with the requirements of Section 501.03.F of the Michigan Department of Transportation 2020 Standard Specifications for Construction and at the rate shown in the HMA Application Rate table in the project plans.

I. Rolling

HMA shall be rolled in accordance with the requirements of Section 501.03.G of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

J. Smoothness requirements as per the requirements of Section 501.03.H of the Michigan Department of Transportation 2020 Standard Specifications for Construction shall be adhered to.

K. Weather and Seasonal Limitations

1. The Contractor shall not place bond coat or HMA when precipitation is imminent or when there is moisture on the existing surface to be overlaid.
2. HMA shall not be placed when the underlying base is frozen, and the surface being paved is at least 35 degrees Fahrenheit.
3. Unless otherwise approved by the Engineer in writing, HMA shall not be placed before May 15 or after November 15.

L. Protection

The Contractor shall protect surfaces, structures, signs, poles, vehicles, and other items adjacent to the area to be paved from being discolored or damaged. Damaged items shall be corrected at the Contractor's expense. The Contractor shall protect the newly placed HMA surface from damage by traffic and construction activities.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The work of HMA paving will be paid for at the contract price for the following pay item(s), which are specifically included on the proposal.

<u>Pay Item</u>	<u>Pay Unit</u>
HMA, (type)	Ton

Work not listed specifically as a pay item on the proposal are considered included in the pay item(s) which are listed and will not be paid for separately.

4.02 Measurement and Work Included

A. HMA

HMA, of the type and course called for on the proposal or plans, will be paid for at the contract unit price in units of tons for the quantity actually constructed, except as follows. Where the actual thickness of HMA placed exceeds the quantity shown on the plans or authorized by the Engineer by more than 15 percent, the thickness over 15 percent will not be paid for.

The work of preparing the subgrade, cleaning, and preparing the existing pavement, prime, tack, and bond coats are included in the work HMA and will not be paid for separately.

The work of constructing HMA approaches for road intersections is included in this work and will not be paid for separately.

END OF SECTION

SECTION 32 13 00
CONCRETE CURB AND GUTTER, SIDEWALK,
AND MISCELLANEOUS PAVEMENT

PART 1 - GENERAL

1.01 Work Included

This work includes all preparation, forming, concrete production and placement, finishing, jointing, reinforcing, curing, protection, and restoration for the construction of concrete curb and gutter, sidewalk, and miscellaneous pavement.

1.02 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. ASTM A1064 – Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
- B. ASTM C94 – Standard Specification for Ready-Mixed Concrete
- C. ASTM C150 – Standard Specification for Portland Cement
- D. ASTM C309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
- E. ASTM A706, ASTM A615, or ASTM A996 (Type R or Type A only) for Grade 60 steel bars
- F. ASTM A775 for epoxy coated steel reinforcement
- G. ASTM D1751 – Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
- H. Michigan Department of Transportation 2020 Standard Specifications for Construction
- I. Michigan Department of Transportation Standard Plan

1.03 Related Work

- A. Section 01 45 16.01 – Concrete Testing
- B. Section 01 45 16.02 – Density and Aggregate Testing
- C. Section 02 41 13.13 – Pavement Removal

PART 2 - PRODUCTS

2.01 Materials

- A. Portland cement shall meet the requirements of ASTM C150.

- B. Coarse aggregate shall meet the requirements of Class 6AA aggregate, as described in the Michigan Department of Transportation 2020 Standard Specifications for Construction.
- C. Intermediate aggregate shall meet the requirements of Class 26A aggregate, as described in the Michigan Department of Transportation 2020 Standard Specifications for Construction.
- D. Fine aggregate shall meet the requirements of Class 2NS, 2SS, or 2MS aggregate, as described in the Michigan Department of Transportation 2020 Standard Specifications for Construction.
- E. Reinforcing steel fabric shall meet the requirements of ASTM A1064.
- F. Deformed bars must meet the requirements of ASTM A706, ASTM A615, or ASTM A996 (Type R or Type A only) for Grade 60 steel bars, unless otherwise required. All deformed bars shall be epoxy coated.
- G. Epoxy coated steel reinforcement must be coated in accordance with ASTM A775.
- H. White membrane curing compound shall conform to ASTM C309, Type 2. Curing compound shall be agitated to provide a uniform consistency prior to transfer between containers or before application.
- I. Fiber joint filler shall meet the requirements of ASTM D1751.
- J. Sand for base shall meet the requirements of Granular Material Class II, as described in the Michigan Department of Transportation 2020 Standard Specifications for Construction.
- K. The detectable warning surface shall contrast visually with adjacent walking surfaces. The Contractor shall submit the detectable warning product information to the Engineer for approval.

2.02 Mixtures

Concrete shall be transit mixed 3,500 psi concrete in accordance with ASTM C94 and Section 01 45 16.01 – Concrete Testing.

Air content, slump, and compressive strength shall be according to Section 01 45 16.01 – Concrete Testing. Concrete shall contain at least six sacks of cement per cubic yard of concrete. Modifications and the use of admixtures may be submitted and shall be approved by the Engineer.

2.03 Submittals

- A. Prior to beginning construction, the Contractor shall submit the name and plant location of the proposed concrete supplier for the project.
- B. Prior to beginning construction, the Contractor shall submit mix designs for the proposed concrete mixtures proposed for use on the project for the Engineer to review.

2.04 Cross Sections

- A. Sidewalk
Unless indicated otherwise on the plans, sidewalk shall have a minimum thickness of 4 inches. Sidewalk through residential driveways shall have a minimum thickness of 6 inches. Sidewalk

through commercial driveways shall have a minimum thickness of 8 inches. Sidewalk through driveways shall be reinforced with #10 by 6 inches by 6 inches welded wire fabric.

B. Pavement

Concrete pavement section shall be as indicated on the plans.

C. Concrete Curbs and Concrete Curb and Gutter

Unless shown otherwise on the plans, concrete curb and concrete curb and gutters shall be in accordance with Michigan Department of Transportation Standard Road Plan R-30 Series.

D. Spillways

Unless shown otherwise in the plans, spillways shall be constructed in accordance with Michigan Department of Transportation Standard Plan R-35-series.

PART 3 - EXECUTION

3.01 Coordination of Traffic

Hazardous areas shall be barricaded to protect pedestrian and vehicular traffic.

Work shall be scheduled so that access is maintained to driveways and entrances through the project area to the extent possible. Where a driveway or entrance must be closed for a period, the property owner or occupant shall be notified in advance of the closing.

3.02 Removal of Existing Sidewalk, Curb and Gutter, and Pavement

Where an existing sidewalk, curb and gutter, and/or pavement are to be removed and replaced, the existing structure shall be removed in accordance with Section 02 41 13.13 – Pavement Removal.

3.03 Preparation

The base shall be excavated, filled, and shaped, as required, to construct pavement of the required thickness at the proposed grades and alignment. The base shall be compacted according to Section 01 45 16.02 – Density and Aggregate Testing. Soft and yielding soils shall be excavated and replaced with suitable soils.

Where existing curb and gutter has been removed and prior to constructing new curb and gutter, the Contractor shall install 2 dowels, 1/2-inch in diameter, into existing curb and gutter at each end. Cost of dowels are included in the payment for curb and gutter.

Concrete may be placed by slipforming, unless indicated otherwise.

Where forms are used, the forms shall extend the full depth of the concrete. Forms shall be of sufficient strength and staked to prevent springing or yielding after placement of concrete. Flexible forms capable of making a smooth arc shall be used for curved sections. Face forms for the exposed face of curb are not required.

Where steel reinforcement is used, it shall be spliced and held in place in a manner approved by the Engineer. Splices shall be overlapped by 10 inches.

3.04 Required Grades

- A. Driveways shall be constructed with a maximum slope of 10 percent.
- B. Sidewalks shall be constructed with a maximum transverse slope of 2 percent. Transverse slopes shall be at least 1 percent, unless longitudinal drainage is provided. The longitudinal slope of sidewalk shall not exceed the general grade established for the adjacent street or highway. Where adjacent street or highway general grades are less than 5 percent, the longitudinal slope of sidewalk may exceed the general road grade to a maximum of 5 percent.
- C. Gutter grades shall not be constructed flatter than 0.4 percent, or less than the grades shown on the plans, whichever is less.

3.05 ADA Requirements

- A. Sidewalks and sidewalk ramps shall meet ADA requirements and shall follow the Michigan Department of Transportation Standard Road Plan R-28-series.
- B. ADA sidewalk ramps shall include polymer, cast in, detectable warning surfaces, red in color. ADA ramps shall be constructed per Michigan Department of Transportation and ADA specifications.
- C. Concrete ramp thickness shall be 6 inches within the first 5 feet behind the back of curb and 4 inches thick beyond the first 5 feet, with a minimum of 4 inches of Michigan Department of Transportation Class II granular material base compacted in place.

3.06 Driveway Openings

Concrete driveway openings shall be constructed in accordance with the Michigan Department of Transportation Standard Road Plan R-29 Series.

3.07 Placement of Concrete

Concrete shall not be placed until the forms (or grade, if the concrete will be slipformed) have been inspected by the Engineer. The Contractor shall notify the Engineer a minimum of 24 hours prior to scheduling a concrete pour.

The base shall be moistened just prior to placement of the concrete.

Concrete shall have a temperature between 45 degrees Fahrenheit and 90 degrees Fahrenheit at the time of placement.

Concrete shall be deposited to the proper depth and spaded or vibrated to ensure proper consolidation. Concrete shall be placed and finished in a continuous operation.

Any material required to fill low spots shall be obtained from the mixture used in the work. Exposed surfaces of the concrete slab shall be finished smooth and even by means of a moistened wood float. Sidewalk and pavement slabs shall be lightly brushed perpendicular to the normal

direction of traffic. Water shall not be added to the concrete surface as an aid to finishing. The top edges of the slab and all transverse joints shall be rounded with a finishing tool having a radius of ¼-inch. Surfaces shall not vary more than 3/8-inch from the alignment and typical cross section.

Joints shall be constructed in accordance with the Michigan Department of Transportation Standard Road Plan R-29 and R-30 Series.

Expansion joint filler shall extend the full depth of the concrete, with the top of the filler material just below the finished concrete surface.

Exposed concrete surfaces shall be cured using white membrane curing compound, applied uniformly at a rate of 200 square feet per gallon. Curing compound shall be applied regardless of temperature or humidity conditions.

3.08 Protection

Concrete shall not be placed if the air temperature is not at least 25 degrees Fahrenheit and rising, or more than 90 degrees Fahrenheit. Concrete shall be protected from damage caused by freezing or rain.

The Contractor shall provide protection for existing surfaces (building faces, light poles etc.) from splattering of concrete. Any damage to building faces, light poles, etc. from concrete splatter shall be repaired or replaced at the Contractor's expense.

The Contractor shall provide sufficient barricading and security to protect fresh concrete from accidental damage or vandalism. Damaged concrete shall be removed to a joint and replaced at the Contractor's expense.

3.09 Cleanup

After the concrete has attained sufficient strength, the forms shall be removed.

Where adjacent areas are turf, the area next to the pavement shall be backfilled with sound earth and topsoil, and graded so the surface is about 1-inch below the pavement or as necessary to provide proper drainage.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The work of constructing concrete curb and gutter, sidewalks, and miscellaneous pavement will be paid for at the contract unit price for the actual quantity of the following pay item(s), which are specifically included on the proposal.

<u>Pay Item</u>	<u>Pay Unit</u>
Curb and Gutter, Conc, Replacement	Foot
Sidewalk Ramp, Conc, __ inch	Square Foot

Sidewalk, Conc, __ inch
Detectable Warning Surface

Square Foot
Foot

Items not specifically listed on the proposal as pay item(s) are considered to be included in the work of the items which are listed and will not be paid for separately.

4.02 Measurement

Concrete curb and gutter replacement, if included as a pay item on the proposal, will be measured along the joint of the curbing with the pavement in units of feet. There will be no distinction between curbs of different cross sections.

Sidewalk will be measured by surface area in units of square feet.

If ramps are listed as a separate pay item on the proposal, ramps will be measured by surface area in units of square feet. There will be no distinction between ramps of different types.

Detectable Warning Surface will be measured in units of feet.

4.03 Work Included

Excavation; grading; filling; replacing unstable soils; furnishing, placing, and compacting a sand base (where required); forming; furnishing and placing reinforcement (where required); placing and finishing concrete; joint construction; form removal; backfilling; protection of uncured concrete; and barricading are all included in the pay items listed.

If concrete becomes damaged by vandalism, accident, or weather, it shall be replaced at the Contractor's expense.

Where curb and gutter replacement is specifically listed as a pay item on the proposal, it includes the work of removing the existing curb and replacing it to a cross section matching the original section, regardless of the type or size. Removal of the existing curb and gutter are included in the work and will not be paid for separately.

The unit price for Sidewalk Ramp, Conc, __ inch includes the cost of landings, monolithic rolled curbs or side flares along the longitudinal edges of the ramp or landing, and transitions to existing sidewalk.

END OF SECTION

SECTION 32 17 23
PAVEMENT MARKINGS

PART 1 - GENERAL

1.01 Work Included

This work includes furnishing and applying pavement markings at locations shown on the plans, in the proposal, or as directed by the Engineer, in accordance with the Michigan Manual on Uniform Traffic Control Devices and as specified herein.

The Contractor is responsible for all layout work necessary for the location and placement of pavement markings, as shown on the plans or in the proposal or as directed by the Engineer.

All markings, shapes, and dimensions shall conform to the Michigan Department of Transportation Pavement Marking Standards or other details provided.

1.02 References

- A. Michigan Department of Transportation 2020 Standard Specifications for Construction
- B. Michigan Manual on Uniform Traffic Control Devices
- C. Michigan Department of Transportation's Qualified Products List

1.03 Submittals

The Contractor shall submit a list of all proposed materials and suppliers for pavement marking materials for review prior to performing the work.

1.04 Quality Assurance and Quality Control

The Contractor shall maintain and provide the Engineer with records of application of pavement marking materials, including paint and beads. The records shall include descriptions of the materials used (manufacturer, batch, date of manufacture, etc.) and quantities of each (gallons of paint or binder, pounds of beads).

PART 2 - PRODUCTS

2.01 Materials

A. General Requirements

All pavement markings must be lead-free and selected from the Michigan Department of Transportation's Qualified Products List. Pavement marking materials must be manufactured in the calendar year in which they are to be applied.

B. Packaging and Labeling

Materials shall be furnished in containers or packages plainly marked showing the manufacturer, description of materials, product identification number, batch number, date of manufacture, contents weight, and contents volume.

Thermoplastic material shall be packaged in a manner to prevent it to adhere during storage or shipment. The label on the material shall include the manufacturer's recommendations for the application temperature.

Glass beads shall be packaged in moisture resistant bags.

C. Glass Beads

Glass beads shall meet the requirements of Section 920.02 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

PART 3 - EXECUTION

3.01 Applying Pavement Markings

Prior to the application of pavement markings, the pavement surfaces shall be clean, dry, and free of foreign materials. The Contractor shall be responsible for removal of foreign material, which can be removed by air-blasting. The Contractor shall also be responsible for removing occasional debris or dead animals from the line track. When shown on the plans or in the proposal, or when directed by the Engineer, curing compound on new concrete shall be removed by light sandblasting.

All materials and glass beads shall be placed according to the manufacturer's requirement.

Pavement markings shall be applied uniformly to the surface and so that they adhere adequately, following manufacturer's recommendations. All materials shall be thoroughly mixed at all times during application. Thinning of liquid materials will not be permitted.

Pavement markings shall be of the width called for on the plans, details, or pay item(s). The markings shall be of the color(s) and configuration as shown on the plans, in the proposal, or as directed by the Engineer. A solid line of the color and width specified shall have no gaps or spaces of unapplied material.

Improperly located markings shall be removed at the Contractor's expense, in accordance with Section 811 of the Michigan Department of Transportation 2020 Standard Specifications for Construction and shall be reapplied in the correct locations at no cost to the Owner.

Applied markings shall be sharp and well-defined. The markings shall be free of uneven edges, overspray, or other readily visible defects which, in the opinion of the Engineer, detract from the appearance or function of the pavement markings. Appropriate care shall be taken to prevent motorists and adjacent properties from being sprayed. Shields or other devices may be used for this purpose.

Pavement marking lines shall be straight or of uniform curvature and shall conform with the tangents, curves, and transitions, as specified in the pavement marking plans and/or directed by the Engineer. The lateral deviation of the finished lines shall not exceed ½-inch from the proposed location alignment, as specified in the plans and/or directed by the Engineer.

Any deviation of the pavement marking lines greater than that specified herein, or shown on the pavement marking plans, shall be sufficient cause for requiring the Contractor to remove and correct such pavement markings at no additional expense to the Owner.

Pavement markings shall be protected from damage by the Contractor during the cure period. Pavement markings damaged by traffic, that were not applied and/or suitably protected, shall be traced at the Contractor's expense as directed by the Engineer. Tracked lines shall be removed at the Contractor's expense when ordered by the Engineer.

Application, temperature, protection, and seasonal restrictions shall be in accordance with Section 811 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

PART 4 - MEASUREMENT AND PAYMENT

The completed work of constructing Pavement Markings will be paid for at the contract lump sum price for the following pay item(s).

<u>Pay Item</u>	<u>Pay Unit</u>
Pavement Markings	Lump Sum

Payment shall be full compensation for all materials, labor, traffic control, and equipment necessary for placement of the pavement marking material.

Markings which are not applied at the required rates, are applied on unsuitable surfaces, are not placed at the proper location(s), or are damaged by traffic or vandalism will not be accepted for payment and cost of such will be deducted from the lump sum payment. The Engineer will determine which markings are to be included for payment.

Payment shall be full compensation for all materials, labor, traffic control, and equipment necessary for placement of the pavement marking material. Removal and replacement of damaged markings or retracement of deficient markings is included and will not be paid for separately.

END OF SECTION

SECTION 32 92 00
TURF ESTABLISHMENT

PART 1 - GENERAL

1.01 Work Included

This work includes soil preparation, seeding, fertilizing, and mulching on those areas designated for turf establishment.

1.02 References

A. Michigan Department of Transportation Qualified Products List

1.03 Related Work

A. Section 31 25 00 – Soil Erosion and Sedimentation Control

1.04 Performance Requirements for Guaranteed Growth and Smooth Ground Surface

The Contractor is responsible to provide turf, substantially free of bare spots and free of weeds. The ground in turf areas shall be smooth, graded to provide positive drainage, and graded to provide a smooth transition to adjacent areas. The Engineer will determine when the requirements of guaranteed growth and smooth ground surface have been met.

Materials, requirements, and methods described in this specification are provided to establish minimum levels. Where the Contractor believes that other materials or methods are appropriate for the specific site conditions or better suited to the Contractor's schedule, the Contractor shall submit details of the alternative materials and/or methods to the Engineer for approval.

The Contractor shall provide re-seeding, watering, and herbicides, as necessary, to achieve the desired results.

There will be no adjustment in project cost for re-seeding, watering, application of herbicides, or using alternative methods of turf establishment.

1.05 Areas Designated for Turf Establishment

All areas disturbed by the Contractor's activities or as a result of the project, which are not to be restored with a pavement or aggregate surface, are to be restored with turf, unless specifically directed otherwise.

Turf shall be established on borrow areas and areas where excess soil is stockpiled.

When shown on the drawings or directed by the Engineer, the Contractor shall establish turf in other areas.

PART 2 - PRODUCTS

2.01 Materials

A. Topsoil

Topsoil shall be a humus-bearing, natural mineral soil of loam, sandy loam, silty loam, or clay loam classification. Topsoil shall neither be excessively acidic or alkaline.

Topsoil shall be screened and free of stones, roots, debris, and other foreign matter. Topsoil which is stripped from the project area shall be removed, transported, and stockpiled in a manner which prevents it from becoming mixed with sub-soils.

B. Fertilizer

Fertilizers shall be standard, commercial packaged or bulk products in granular or liquid form. Each container of packaged fertilizer shall be marked by the manufacturer with the following information: manufacturer name; lot number; date; analysis of contents, including the minimum percentages of total nitrogen, available phosphoric acid, and soluble potash; and the net weight. Bulk fertilizer shall be accompanied with an invoice indicating the manufacturer name; lot number; date; analysis of contents, including the minimum percentages of total nitrogen, available phosphoric acid, and soluble potash; and the net weight or volume.

Fertilizer for seeding and sodding shall be comprised of both a water insoluble component and a water soluble component. The water insoluble nitrogen must be from ureaformaldehydes and/or coarse grade isobutylidene diurea.

Fertilizer shall provide 33 pounds of actual water insoluble nitrogen per acre. The water soluble component of the fertilizer shall provide 65 pounds of actual nitrogen, phosphorus, and potassium nutrient per acre, in equal proportions. The water soluble component of the fertilizer shall include urea, diammonium phosphate, and potassium chloride.

C. Mulch

1. Loose Mulch

Mulch shall be straw or marsh hay, in an air-dried condition. Mulch material must be clean, undamaged, and rot-free. It must be substantially free of weed seed and other objectionable foreign matter.

2. Turf Mulch Blankets

Mulch blankets shall be manufactured by a company currently listed on the Michigan Department of Transportation's Qualified Products List.

Mulch blankets shall have a net covering on both sides of the blanket and shall be manufactured from either excelsior or straw. Excelsior blankets shall be manufactured from a uniform layer of interlocking excelsior fibers cut from sound, green timber, with an average dry weight of 12 ounces per square yard. Straw blankets shall be made of a uniform layer of clean wheat straw, free of weeds and weed seed, with the straw and net covering securely stitched together to form a uniform mat having an average dry weight of 8 ounces per square yard.

3. Mulch Anchoring

Mulching anchoring shall be manufactured by a company currently listed on the Michigan Department of Transportation’s Qualified Products List.

Latex-based anchoring shall have a composition, by weight, of 48 percent styrene, 50 percent butadiene, and 2 percent additive, 42 percent to 46 percent solids, and a pH of 8.5 to 10.

Recycled newsprint mulch shall be comprised of specifically prepared, biodegradable, shredded newspaper particles consisting of recycled newsprint fibers. The recycled newsprint must contain a wetting agent, defoaming agent, and nontoxic dyestuff that will impart a bright green or blue color. The dyestuff must adhere tightly to the fiber. Recycled newsprint shall meet the following minimum requirements:

Moisture content (total weight)	12 percent maximum
Shredded high-grade newsprint (oven dry)	96 percent minimum
Tackifier, by weight	1½ percent to 3 percent
Water holding capacity (water per 3½ ounces of fiber)	32 ounces minimum

Wood fiber shall be specially prepared, biodegradable, air-dried virgin wood fibers manufactured from 100 percent whole wood chips. The wood fiber must be manufactured with a tackifier. Recycled materials are not acceptable. The fibers must be dyed with a green or blue biodegradable dye to aid in visual metering during construction. The process and materials must not contain growth or germination inhibiting materials. The wood fiber must conform to the following specifications:

Moisture content (total weight)	12 percent maximum
Organic wood fiber (oven dry)	95 percent minimum
Tackifier, by weight	3 percent to 5 percent
Water holding capacity (water per 3½ ounces of fiber)	35 ounces minimum

Guar gum tackifiers shall contain a minimum of 95 percent guar gum by weight. The remaining components shall be dispersing and crosslinking additives.

Other tackifiers may include water soluble natural vegetable gums, or guar gums blended with gelling and hardening agents, or a water soluble blend of hydrophilic polymers, viscosifiers, sticking aids, and other gums.

D. Weed Control

Herbicides must be approved for use by the Michigan Department of Agriculture and the U.S. Environmental Protection Agency.

2.02 Seeding Mixtures

Seed shall be furnished in durable bags, each with a tag indicating the seed supplier, lot number, date, mixture proportions, purity, germination, and net weight.

Seed mixtures shall meet the requirements of one or more of the following mixtures, or other mixtures that are approved in advance by the Engineer. Where the Contractor believes that another mixture is appropriate for areas within the limit of the project, the Contractor shall request that the Engineer review and approve the substituted mixture(s). Requests for substitutions shall include the name of the seed supplier, the mixture proportions, the purity, and the germination.

Species	Purity, Minimum (percent)	Germination (percent)	Seed Mixture						
			Mixture Proportions (percent by weight)						
			TDS	THV	TUF	TGM	THM	CR	TSM
Kentucky Blue Grass	98	85	5	15	10	10	30		
Perennial Ryegrass	96	85	25	30	20	20	20		50
Hard Fescue	97	85	25		20	30			
Creeping Red Fescue	97	85	45	45	40	40	50		
Fults Salt Grass	98	85		10	10				
Cereal Rye	85	85						100	
Spring Oats	85	85							50

PART 3 - EXECUTION

3.01 Preparation for Turf Establishment

A. Topsoil Stripping

Prior to performing any excavation, filling, grading, or other earthwork, the Contractor shall strip and stockpile topsoil for later use on the project. Excess topsoil shall not be removed from the project site unless specifically provided elsewhere in the contract documents.

B. Finish Grading

The areas that are to be seeded shall be properly graded, sloped, and shaped with an allowance for the thickness of the topsoil layer. The earth bed upon which topsoil will be placed shall be friable to a depth of at least 4 inches. Earth beds not in a friable condition shall be harrowed with a disk, spring tooth drag, or similar equipment.

C. Placement and Preparation of Topsoil

Topsoil shall be spread on the prepared areas to a depth of 3 inches (in place, after rolling or compaction), unless otherwise shown on the plans or proposal. After spreading, any large clods or lumps shall be broken and all stones larger than 1-inch diameter, rocks, roots, litter, and other foreign debris shall be raked up and disposed of by the Contractor. After spreading and raking, the topsoil surface shall be in a friable condition and the surface shall be reasonably close to the proposed grades and cross section.

The topsoil surface shall be shaped to provide proper drainage. Where proposed grades are not shown on the plans, the topsoil surface shall be graded to provide a smooth transition between the new construction and the existing, adjacent ground.

Excess topsoil shall be stockpiled in a location acceptable to the Owner and neatly trimmed to present a neat appearance.

3.02 Turf Establishment

A. Permanent Seeding and Fertilizing

Disturbed areas shall be seeded upon completion of earthwork and grading operations. Disturbed areas shall be stabilized with temporary seeding if permanent seeding cannot be completed.

Seed mixtures for permanent seeding shall be appropriate for the soil type and location, as indicated in the following table. The Contractor may propose and submit alternative mixtures to the Engineer for review and approval. It is the Contractor's responsibility to provide turf areas which are substantially free of bare spots and generally weed-free.

Mixture Designation	Soil Type	Location
TDS	Dry Sandy to Sand Loam	Rural or Urban
THV	Heavy	Rural
TUF	All Types	City Streets
TGM	Medium to Heavy	All
THM	Loamy to Heavy	Residential / Commercial

Fertilizer and seed shall be applied uniformly on areas prepared for seeding. Seed shall be applied at a rate of 220 pounds per acre. Seed and fertilizer may be applied by drilling, broadcasting, or hydraulically. Seed and fertilizer shall be applied before applying mulch. Seed and fertilizer shall be lightly raked or rolled into the prepared topsoil surface.

Neither broadcast seeding nor hydraulic seeding shall be performed during windy weather.

There shall be provisions for mixing or agitating the seed – fertilizer mixture used for hydraulic seeding to keep it evenly distributed in suspension. Mixtures shall be applied within an hour of mixing the seed with water; unused portions shall be discarded.

B. Sodding

Areas to be sodded shall be prepared by grading the area to the desired elevations and contours, less the depth of the topsoil surface and thickness of the sod. Three inches of screened topsoil shall be provided. The topsoil shall be conditioned by harrowing prior to laying the sod. In sloped areas, the harrowing shall be perpendicular to the slope.

The earth bed shall be thoroughly watered just before laying the sod. Sod shall be laid within 24 hours after cutting and shall be properly protected until it is placed. Sod that has been allowed to dry out will not be accepted. Sod shall not be placed on frozen soil, nor shall sod be frozen.

Sod strips shall be placed parallel with the flow of water on slopes and in ditches. The short ends of strips shall be staggered. Strips shall be placed with tight joints. Sod shall be laid starting at the base of the slope and progress upward. The edges of sodded areas shall transition by turning the edges of the sod into the ground and covering the edge with earth (or aggregate if adjacent to a road or pavement) and compacting the covering so that runoff is directed onto the sod. Sod placed adjacent to paved surfaces shall be firmly butted against and level with them.

Sod shall be firmly compacted by tamping it immediately after its placement to provide a surface even, smooth, and free of bumps and depressions. The Contractor shall thoroughly water sod following its placement, and periodically until it has become established.

C. Temporary Seeding

Temporary seeding shall be completed when the permanent seeding cannot be completed because of seasonal conditions. Temporary seeding shall be applied at a rate of 100 pounds per acre, and shall be of the following designation.

Mixture Designation	Soil Type	Location
CR	All Types	Temporary, less than 6 months
TSM	All Types	Temporary, more than 6 months

Before completion of the contract, the Contractor shall complete permanent seeding of all areas which are temporary seeded.

D. Dormant Seeding

Dormant seeding should be used only when necessary to complete a project when seasonal conditions are not conducive to permanent seeding. Dormant seeding shall not be completed on frozen ground. Dormant seeding shall be completed, as required, for permanent seeding.

The Contractor is responsible to establish turf which is substantially free of bare spots and generally free of weeds.

3.03 Mulching

A. Mulch Placement

Immediately after the seed has been set into the topsoil surface by light raking or rolling, the Contractor shall spread mulch and anchor it as appropriate. Mulching shall not be performed during windy conditions.

Loose mulch shall be placed thick enough to shade the ground, conserve moisture, and resist erosion, but open enough to allow sunlight to penetrate and air to circulate.

The Contractor shall maintain mulched areas and repair any areas where damage from erosion, wind, traffic, fire, or other causes occur.

Mulch shall be applied at a uniform rate of 2 tons per acre, except that a rate of 3 tons per acre is required with dormant seeding.

B. Mulch Anchoring

Mulch anchoring (tackifiers) shall be sprayed immediately after the mulch is placed. Spraying shall not be performed when wind might prevent the proper placement of the adhesive. The Contractor shall provide protection measures, as necessary, to protect traffic, signs, structures, and other objects from being marked or disfigured by tackifier materials.

Latex based adhesive shall be mixed at a rate of at least 15 gallons of adhesive with a minimum of 250 pounds of recycled newsprint and 375 gallons of water.

Recycled newsprint shall be mixed at a minimum rate of 750 pounds of newsprint with 1,500 gallons of water.

Wood fiber shall be mixed at a minimum rate of 750 pounds of wood fiber with 1,500 gallons of water.

Guar gum shall be mixed at a minimum rate of 100 pounds of dry adhesive and a minimum of 250 pounds of recycled newsprint and 1,300 gallons of water.

Other tackifiers shall be mixed at a minimum rate of 100 pounds of dry adhesive with a minimum of 250 pounds of recycled newsprint with 1,300 gallons of water.

C. Mulching Netting

When netting is used to secure mulch, it shall be secured with anchors, staples, or pins. The net shall be spread over the mulch so that a worker can walk between adjacent widths of the net. The edges of adjacent widths of net shall be pulled together and held in place with net anchors. Net anchors shall be spaced not more than 30 inches apart along the edges, joints, and centerline. The net shall not be installed in direct contact with the ground. If the Contractor elects to use mulch netting or blankets, the Contractor will be required to remove the netting fabric once the turf is established.

D. Mulch Blankets

Mulch blankets shall be installed within one day of seeding. The side edges of blankets shall be overlapped by 2 inches. Blanket ends shall be shingle lapped 6 inches. Non-metallic staples or pegs shall be placed along all joint edges and along blanket centerlines at a maximum spacing of 2 feet. Blankets in waterways shall be shingle lapped 12 inches on the downslope edge. If the Contractor elects to use mulch netting or blankets, the Contractor will be required to remove the netting fabric once the turf is established.

High velocity blankets shall be installed on slopes of 1:2, or steeper, on ditch bottoms, on ditch side slopes (to an elevation 1 foot above the ditch bottom), and where specifically shown on the drawings or directed by the Engineer.

3.04 Weed Control

Weed control shall be provided by the Contractor, as necessary, to develop turf areas which are relatively free of weeds. Herbicides shall be applied in accordance with federal, state, and local regulations. Herbicides shall be applied in accordance with manufacturer's instructions. Herbicides shall be applied by commercial applicators, licensed in the State of Michigan and certified by the Michigan Department of Agriculture in the appropriate category(ies).

Target weeds shall be sprayed in the newly seeded turf when the new turf grass is sufficiently established to withstand the application of herbicide. Herbicide application shall be repeated if the first application failed to control target weeds.

The Contractor shall take appropriate measures to preserve and protect adjacent property from damages resulting from the application of herbicides. Herbicides shall not be applied when wind may carry it to adjacent areas.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

When Turf Establishment is specifically listed as a pay item on the proposal, payment will be at the contract unit price for the following pay item(s).

<u>Pay Item</u>	<u>Pay Unit</u>
Turf Establishment	Lump Sum

4.02 Measurement

Payment for the work of Turf Establishment will be based on the actual cost for performing the work, as determined by the Engineer.

After bidding, the Contractor shall provide the Engineer with a breakdown of how the Contractor's bid price for Turf Establishment was determined, including the cost for individual tasks such as topsoiling, seeding, fertilizer, mulching, watering, re-seeding, and weed control. An estimated quantity of each task shall be included.

The Engineer will review the Contractor's breakdown to determine its reasonableness for the anticipated work of Turf Establishment. If the Contractor's price for Turf Establishment is believed by the Engineer to be too low for the work required, the Engineer will develop an estimate of the cost of Turf Establishment. If the Engineer's estimate is greater than the Contractor's bid price, additional retainage (from other work completed by the Contractor) will be held to make up the difference. Payment for Turf Establishment will be based on either the contract price or the Engineer's estimate, whichever is greater.

The Contractor will be paid for the work of Turf Establishment proportionally to the progress on completing the work in accordance with the contract requirements, except that at least 25 percent of the cost will be held as retainage until the turf has become established and meets the performance requirements established.

When Sod is called for on the plans or required by the Engineer, payment will be at the contract unit price for the quantity installed, measured by surface area in units of square yards.

4.03 Work Included

The lump sum price will not be adjusted for re-seeding or re-working areas where turf does not become suitably established. The cost of watering, mowing, and weed control (if necessary) is included in the contract price for Turf Establishment and will not be paid for separately.

There will be no adjustment in the price for Turf Establishment based on variations in the area actually established with turf.

The work of Turf Establishment includes furnishing, placing, and preparing a topsoil surface. Where the existing topsoil from the project area is of inadequate quantity or quality to provide the required topsoil surface for Turf Establishment, the cost of furnishing topsoil from offsite is included in the contract price for Turf Establishment and will not be paid for separately.

Temporary seeding required for erosion control or because of seasonal limitations is included in the contract price for Turf Establishment and will not be paid for separately.

END OF SECTION

SECTION 33 44 00
STORM SEWERS

PART 1 - GENERAL

1.01 Work Included

This work includes construction of storm sewers, drainage structures, and appurtenances. Drainage structures include catch basins, inlets, manholes, and manhole tees.

1.02 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. AASHTO M36 – Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains
- B. AASHTO M170 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- C. AASHTO M294 – Standard Specification for Corrugated Polyethylene Pipe, 300-mm to 1,500-mm (12-in. to 60-in.) Diameter
- D. ASTM A48 – Standard Specification for Gray Iron Castings
- E. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- F. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
- G. ASTM C478 – Standard Specifications for Circular Precast Reinforced Concrete Manhole Sections
- H. ASTM D1056 – Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber
- I. ASTM D4101 – Standard Specifications for Polypropylene Injection and Extrusion Materials
- J. Michigan Department of Transportation 2020 Standard Specifications for Construction
- K. Michigan Department of Transportation Standard Plans

1.03 Related Work

- A. Section 01 45 16.02 – Density and Aggregate Testing
- B. Section 01 55 26 – Maintaining Traffic
- C. Section 01 71 23.16 – Construction Staking by Contractor
- D. Section 02 21 14 – Color Audio-Video Survey of Construction Areas

- E. Section 31 23 01 – Excavating, Filling, and Grading
- F. Section 31 25 00 – Soil Erosion and Sedimentation Control
- G. Section 32 92 00 – Turf Establishment

1.04 Quality Assurance and Quality Control

A. Grade and Alignment

Grade and alignment shall be maintained using a laser. The Contractor shall verify that the sewer is constructed at the proper alignment by checking grades and offsets at each manhole, at 50 feet upstream from manholes, and at 100-foot intervals. The Contractor shall report as-constructed measurements to the Engineer.

B. Acceptance Tests

The completed sewer(s) shall be subjected to the following tests, prior to acceptance by the Owner. Acceptance tests shall be completed by the Contractor, in the presence of the Engineer (or Owner's representative).

1. Physical Inspection

The physical inspection shall be completed in accordance with Section 3.08.A.

PART 2 - PRODUCTS

2.01 Materials

A. Pipe

Unless a specific type, class or thickness is called for on the plans or in the proposal, material class shall meet the requirements of Pipe Alternates for Storm Sewer Classes, as described in Section 402 of the Michigan Department of Transportation 2020 Standard Specifications for Construction. Corrugated steel pipe may be used only where shown on the drawings.

1. Reinforced Concrete Pipe

Pipe shall meet ASTM C76. Where no class is shown on the drawings or on the proposal, Class III or better shall be provided.

Joints shall be rubber gaskets in accordance with ASTM C443.

Reinforced concrete pipe to be installed by jacking shall be Class V and shall be provided with full circular reinforcement. Pipe joints shall be butt type.

2. Smooth-Lined Corrugated Plastic Pipe

Where storm sewers from 12-inch to 24-inch diameter are called for on the plans, with at least 3 feet of cover over the pipe, and when a particular kind of sewer pipe is not specified, the Contractor may furnish smooth-lined corrugated plastic pipe (SLCPP).

SLCPP shall be corrugated polyethylene pipe meeting the requirements of AASHTO M294, Type S. Any fittings required shall also meet the requirements of AASHTO M294. Only fittings supplied or recommended by the pipe manufacturer shall be used. When gaskets are used in couplings to provide watertight or silt-tight joints, gaskets shall be a band of

expanded rubber meeting the requirements of ASTM D1056 for Type 2 closed cell rubber, or O-rings meeting the requirements of ASTM C443.

3. PVC Pipe

All PVC pipe shall be ASTM D3034 gasketed sewer pipe with a SDR of 26 or lower. PVC pipe conforming to ASTM D1785 Schedule 40 and ASTM D2665 is acceptable for 6-inch service leads.

4. Corrugated Galvanized Steel Pipe

Pipe with circular cross section and reformed pipe with pipe arch shape shall conform to AASHTO M36. The Contractor shall furnish the Owner with two copies of a certification of compliance, with the chemical requirements of the base metal, as specified in AASHTO M36.

Corrugated metal pipe shall be a minimum of 8-gauge or wall thickness of 0.168 inches.

For pipe arch shapes, minimum thickness shall be based on the next larger size if the actual span dimension is not listed.

B. End Sections

End sections shall be flared and beveled to conform with ditch slopes.

Metal end sections shall conform with AASHTO M36, where applicable. The metallic coating on the end sections shall be the same as on the pipe. End sections shall be furnished complete with coupling bands or hardware necessary for connecting them to the end of the pipe culvert.

Concrete end sections shall be constructed of precast concrete and reinforcement conforming to the requirements of AASHTO M170 (ASTM C76) Class III or as shown on the drawings. Connection of end section to concrete pipe shall be made by tongue and groove joints.

C. Drainage Structures

Drainage structures shall be precast concrete units meeting the requirements of ASTM C478 with rubber gaskets conforming to ASTM C443. Drainage structures shall be 4 feet in diameter, unless shown otherwise on the plans or in the proposal. Precast concrete grade rings meeting ASTM C478 shall be used to adjust the top of the structure to the final grade. At least 6 inches, but not more than 18 inches, of vertical adjustment shall be provided with grade rings. Manhole lifting holes shall not be permitted in the manhole sections. Lifting lugs shall be cast into the manhole for lifting.

Manhole steps shall be copolymer polypropylene plastic steps with a steel reinforcement bar, with a minimum diameter of ½-inch, a minimum width of 10 inches center to center of wall anchor, and complete with anti-skid side plates conforming to ASTM D4101. Steps shall be manufactured with the manhole wall and spaced at a maximum of 16 inches on center. Gray iron castings shall be heavy duty classification and shall conform to ASTM A48 Class 35B coated with asphalt coating.

D. Castings

Castings shall meet the requirements of the Michigan Department of Transportation 2020

PART 3 - EXECUTION

3.01 Excavation

Excavation shall be completed in accordance with Section 31 23 01 – Excavating, Filling, and Grading

3.02 Pipelaying

Sections of sewer pipe shall be carefully laid in the prepared trench, bell ends upgrade, with the spigot end fully entered in the adjacent bell. Each section shall have firm bearing throughout its length and shall be substantially true to the line and grade required. The use of blocks to bring sections to grade will not be permitted.

Circular concrete pipe with lift holes shall be installed with the lift holes on top of the pipe. Holes shall be plugged with suitable concrete plugs before backfilling.

Existing live sewers that are to remain shall be carefully protected during construction of the new sewers. If they are damaged in any way, they shall be immediately repaired or replaced, as directed by the Engineer.

All junctions with house or building leads shall be made in a manner acceptable to the Engineer.

Flexible watertight joints shall be installed in accordance with the manufacturer's recommendations.

Connections to sewers owned by other agencies shall be done in accordance with their requirements.

Connections to existing sewers having a plug or bulkhead shall be made with a watertight joint. The plug or bulkhead shall be removed without damage to the sewer, and the plug material shall be removed from the sewer and properly disposed of.

If there are no openings in the existing pipe or structures at the point of connection, an opening shall be cut in the pipe or the structure sufficiently large enough to permit 3 inches of mortar to be packed around the entering pipe and the mortar pointed up smooth and flush with the inner wall. Pipe passing through pipe or structure walls shall be cut at the end to conform with the shape of the inside of the wall and to be flush therewith. On the outside of the pipe or structure, the entering pipe shall be encased with sufficient mortar to provide bearing under the pipe. Any existing pipe broken or cracked while making the connection shall be replaced at the Contractor's expense.

When replacing an existing sewer, connections to the original sewer or drain that are encountered shall be reconnected to the new sewer.

Sewers and drainage structures shall be reasonably free of accumulation of silt debris and other foreign matter at the time of final acceptance.

3.03 Backfill

Backfill shall meet the requirements of Section 31 23 01 – Excavating, Filling, and Grading.

3.04 Additional Requirements of Construction for SLCPP Sewers

SLCPP shall be installed in accordance with Section 3.01. and the additional requirements provided here.

Joints in SLCPP shall be wrapped with a 2-foot wide strip of non-woven geotextile filter fabric with a 1-foot lap at the fabric joint.

The installed pipe shall not be deformed such that any diameter is reduced by 5 percent or more. Deformed pipe shall be removed and replaced at the Contractor's expense. The completed pipeline shall be tested for deformation by the Contractor under the Engineer's supervision. The Contractor shall furnish a 9-point mandrel having a diameter equal to at least 95 percent of the original uninstalled inside diameter of the pipe. The mandrel shall meet the Engineer's approval. Mandrel testing shall be performed no less than thirty calendar days after installation.

3.05 Additional Requirements for Construction of Corrugated Steel Pipe Sewers

A. Repair of Damaged Galvanized Surfaces

The Contractor shall take special care when removing, salvaging, storing, handling, or placing new culverts or culverts that are to be relaid so that they are not dented, scraped, or the galvanized coating is otherwise damaged.

Large diameter or long culverts shall be provided with shop attached lift rings to facilitate handling. Lift holes shall not be cut in corrugated steel pipe.

Saw cut ends of corrugated steel pipe shall be reasonably free from excessive jagged burrs or sharp spurs.

Surfaces on which the spelter coating has been damaged, whether by transporting, handling, or installation, shall be thoroughly cleaned by wire brushing and then painted with two (2) coats of zinc rich paint conforming to federal specification: Paint shall be High Zinc Dust Content, Galvanizing Repair (Ready Mixed Type) MIL-P-21035.

B. Laying and Jointing Pipe

All pipe shall be laid true to the lines and grades given. Each length shall have full, firm bearing throughout its length.

Separate sections of corrugated pipe shall be securely joined together with standard corrugated metal bands. The bands may be up to 2 standard thicknesses lighter than the culvert, but shall not be less than 0.64 inches (16-gauge). Bands for culverts shall not be less than the following widths:

Pipe Diameter	Band Minimum Width
up to & including 18 inches	7 inches
21 inches through 60 inches	12 inches
over 60 inches	24 inches

The corrugations of the band shall match those of the pipes being joined. The band shall be secured with bolts and angles. Couplings may be either one piece or two pieces. Smooth coupling bands, dimpled bands, and helical-rod and lug bands will not be considered acceptable.

3.06 End Sections

End sections shall be attached to the ends of pipe, where directed. Metal end sections shall be used on metal pipe and on smooth lined plastic pipe. Concrete end sections shall be used on concrete pipe.

End sections shall be installed on firm ground. The slope adjacent to the end section shall be graded and shaped to meet the geometry of the end section.

3.07 Drainage Structures

Precast concrete units shall be placed on a 6-inch sand base, leveled, and thoroughly compacted. Joints shall be sealed with mortar. Joints shall be thoroughly wetted prior to sealing. The joints inside the structure shall be flush with the walls. Joints shall be completely filled with mortar.

Pipe or tile connections to concrete drainage structures shall extend through the structure wall and be cut flush with the inside surface. The opening around the pipe shall be neatly filled with mortar to prevent leakage.

Drainage structure covers shall be new and adjusted to the finish elevation using precast concrete grade rings. Covers shall be of the type called for on the plans. Covers and grade rings shall be set in full mortar beds.

Cover elevations given on the plans are for information only. The final elevation will be determined in the field, based on as-constructed conditions.

Drainage structures shall be maintained reasonably free of accumulations of silt, debris, and other foreign matter at the time of final acceptance.

3.08 Acceptance Tests - Storm Sewers

The methods of testing shall be approved by the Engineer. The Contractor shall provide the necessary equipment and labor for making the tests, and the cost of testing and repair shall be included in the unit price bid for completed storm sewer. The Engineer shall determine when grouting or relaying of faulty pipe is required.

A. Physical Inspection

Upon completion of all work, the Contractor shall open all manholes in the presence of the Engineer to demonstrate that the manholes are complete and free of debris.

PART 4 - MEASUREMENT AND PAYMENT

4.01 Pay Items

The work of constructing storm sewers will be paid for at the contract unit price for the following pay item(s), which are specifically listed on the proposal. Work not specifically listed as a pay item on the proposal is considered included in the work listed and will not be paid for separately.

<u>Pay Item</u>	<u>Pay Unit</u>
Storm Sewer, CI __, __ inch, Tr Det __	Foot
Storm Sewer, RCP CI __, __ inch, Tr Det __	Foot
Dr Structure, __ inch dia	Each
Dr Structure, Tap, __ inch	Each

4.02 Measurement and Work Included

A. Storm Sewer, CI __, __ inch, Tr Det __

Where the plans do not specifically indicate that the storm sewer pipe shall be reinforced concrete pipe (RCP), the completed storm sewer of the size and trench detail shown on the drawings will be measured along the completed pipeline. There will be no deduction in the linear measurement for the diameter or width of new drainage structures. The linear measurement will not include the diameter or width of drainage structures at either the beginning or end of a section of new storm sewer. There will be no adjustment in the measurement or the unit price for variations in the depth of the sewer.

The work of constructing storm sewers includes all work necessary to construct the sewers, including all necessary excavation, bedding, and backfilling. Dewatering, if necessary to maintain dry and stable excavation, is included in the unit price for storm sewer, unless it is specifically listed as a pay item on the proposal.

The work of constructing storm sewers includes furnishing and installing curved or radius pipe, where included.

B. Storm Sewer, RCP CI __, __ inch, Tr Det __

Reinforced concrete pipe storm sewer (RCP), of the size, class, and trench detail shown on the drawings, will be measured in units of feet along the completed pipeline, when reinforced concrete pipe storm sewer is specifically called for on the drawings or on the proposal. There will be no deduction in the linear measurement for the diameter or width of new drainage structures. The linear measurement will not include the diameter or width of drainage structures at either the beginning or end of a section of new storm sewer. There will be no adjustment in the measurement or the unit price for variations in the depth of the sewer.

The work of constructing storm sewers includes all work necessary to construct the sewers, including all necessary excavation, bedding, and backfilling. Dewatering, if necessary to

maintain dry and stable excavation, is included in the unit price for storm sewer unless it is specifically listed as a pay item on the proposal.

The work of constructing storm sewers includes furnishing and installing curved or radius pipe, where included.

C. Dr Structure, __ inch dia

Drainage structures will be measured in units of each and paid for at the contract unit price for each, which is shown on the plans or authorized by the Engineer and has been completed by the Contractor. There will be no adjustment in the measurement or unit price for variations in the depths of structures.

The work of drainage structures includes furnishing and installing a casting of the type designated, providing grade rings for adjustment, and adjusting the casting to the proper elevation. The work also includes making all required pipe connections.

D. Dr Structure, Tap, __ inch

Pipe connections to existing structures will be paid at the contract unit price for Dr Structure Tap, __ inch when included as a pay item on the proposal. Drainage structure taps will be measured in units of each based on the size of the connecting pipe, with no adjustment made for differing structure depths or construction materials. The work of coring a hole, furnishing a flexible boot, and reworking the manhole channel are included in the work and will not be paid for separately.

END OF SECTION

SECTION 34 41 15
PERMANENT TRAFFIC SIGNS

PART 1 - GENERAL

1.01 Work Included

This work includes furnishing and installing permanent signs at locations shown on the plans, in the proposal, or as directed by the Engineer in accordance with the Michigan Department of Transportation 2020 Standard Specifications for Construction, the Michigan Manual on Uniform Traffic Control Devices, and as specified herein.

All sign shapes and dimensions shall conform to the Michigan Manual on Uniform Traffic Control Devices.

1.02 References

- A. Michigan Department of Transportation 2020 Standard Specifications for Construction
- B. Michigan Manual on Uniform Traffic Control Devices

1.03 Submittals

The Contractor shall submit shop drawings, catalog cuts, or manufacturer's specifications to show the proposed signs, supports, and hardware.

1.04 Notifications

The Contractor shall contact MISS DIG (800-482-7171) to locate underground utilities in advance of excavating or driving sign posts or foundations. The Contractor shall notify utility agencies which may have underground utilities within the project area to arrange their location.

PART 2 - PRODUCTS

2.01 Materials

Materials for signs and supports shall meet the requirements of Section 919 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

PART 3 - EXECUTION

3.01 Sign Schedule

Signage shall be provided as called for on the plans or in the proposal.

3.02 Installation

Signs shall be installed in accordance with Section 810.03 of the Michigan Department of Transportation 2020 Standard Specifications for Construction.

PART 4 - MEASUREMENT AND PAYMENT

The work of Permanent Traffic Signs will be paid for at the contract lump sum price for the following pay item(s).

<u>Pay Item</u>	<u>Pay Unit</u>
Permanent Traffic Signs	Lump Sum

Payment shall be full compensation for all materials, labor, traffic control, and equipment necessary for the installations of permanent signs.

4.01 Work Included

Payment for posts includes the cost of providing and installing post sign supports in a sleeve in concrete. Providing and installing the sleeve and concrete is included in the pay item for posts and shall not be paid for separately.

Hardware for mounting the signs to the posts is included in the work and will not be paid for separately.

Signs designated for removal include removing supports, sign bands, concrete glare screen connections, or concrete median barrier connections, attaching or fastening hardware, and removing signs from supports.

Signs designated for salvaging and replacing, which are damaged as a result of the Contractor's activities, shall be replaced at the Contractor's expense.

END OF SECTION

APPENDIX

**CITY OF ANN ARBOR
PREVAILING WAGE DECLARATION OF COMPLIANCE**

The "wage and employment requirements" of Section 1:320 of Chapter 14 of Title I of the Ann Arbor City Code mandates that the city not enter any contract, understanding or other arrangement for a public improvement for or on behalf of the city unless the contract provides that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. Where the contract and the Ann Arbor City Code are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used. Further, to the extent that any employees of the contractor providing services under this contract are not part of the class of craftsmen, mechanics and laborers who receive a prevailing wage in conformance with section 1:320 of Chapter 14 of Title I of the Code of the City of Ann Arbor, employees shall be paid a prescribed minimum level of compensation (i.e. Living Wage) for the time those employees perform work on the contract in conformance with section 1:815 of Chapter 23 of Title I of the Code of the City of Ann Arbor.

At the request of the city, any contractor or subcontractor shall provide satisfactory proof of compliance with this provision.

The Contractor agrees:

- (a) To pay each of its employees whose wage level is required to comply with federal, state or local prevailing wage law, for work covered or funded by this contract with the City,
- (b) To require each subcontractor performing work covered or funded by this contract with the City to pay each of its employees the applicable prescribed wage level under the conditions stated in subsection (a) or (b) above.
- (c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.
- (d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the wage and employment provisions of the Chapter 14 of the Ann Arbor City Code. The undersigned certifies that he/she has read and is familiar with the terms of Section 1:320 of Chapter 14 of the Ann Arbor City Code and by executing this Declaration of Compliance obligates his/her employer and any subcontractor employed by it to perform work on the contract to the wage and employment requirements stated herein. The undersigned further acknowledges and agrees that if it is found to be in violation of the wage and employment requirements of Section 1:320 of the Chapter 14 of the Ann Arbor City Code it shall have been deemed a material breach of the terms of the contract and grounds for termination of same by the City.

TEM ASPHALT PAVING
Company Name
Rick Gordon 10/10/17
Signature of Authorized Representative Date
Rick Gordon Estimator
Print Name and Title
4755 Old Bank Rd Milford MI 48351
Address, City, State, Zip
2481054-2300 r.gordon@temasphalt.com
Phone/Email address

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500

**CITY OF ANN ARBOR
LIVING WAGE ORDINANCE**

RATE EFFECTIVE APRIL 30, 2024 - ENDING APRIL 29, 2025

\$16.43 per hour

If the employer provides health care benefits*

\$18.32 per hour

If the employer does **NOT** provide health care benefits*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.

ENFORCEMENT

The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

* Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.

The Law Requires Employers to Display This Poster Where Employees Can Readily See It.

**For Additional Information or to File a Complaint contact
Colin Spencer at 734/794-6500 or cspencer@a2gov.org**



Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Conflict of Interest Disclosure*	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	<input type="checkbox"/> Relationship to employee <input type="checkbox"/> Interest in vendor's company <input type="checkbox"/> Other (please describe in box below)
None	

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:		
Vendor Name	Vendor Phone Number	
	10/10/14	Rick Gordon
Signature of Vendor Authorized Representative	Date	Printed Name of Vendor Authorized Representative

**CITY OF ANN ARBOR
DECLARATION OF COMPLIANCE**

Non-Discrimination Ordinance

The “non discrimination by city contractors” provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor’s Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.
- (b) To post the City of Ann Arbor’s Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

T&M ASPHALT PAVING
Company Name

Rick Gordon 10/10/24
Signature of Authorized Representative Date

Rick Gordon Estimator
Print Name and Title

4755 Old Plank Rd Milford MI 48381
Address, City, State, Zip

248/684-2300 rgordon@tmasphalt.com
Phone/Email Address

Questions about the Notice or the City Administrative Policy, Please contact:
Procurement Office of the City of Ann Arbor
(734) 794-6500

CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.
You can review the entire ordinance at www.a2gov.org/humanrights.

Intent: It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

Discriminatory Employment Practices: No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

Discriminatory Effects: No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

Nondiscrimination by City Contractors: All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an 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 any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

Complaint Procedure: If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at www.a2gov.org/humanrights. Then submit it to the Human Rights Commission by e-mail (hrc@a2gov.org), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at hrc@a2gov.org.

Private Actions For Damages or Injunctive Relief: To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

THIS IS AN OFFICIAL GOVERNMENT NOTICE AND
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.

**MICHIGAN DEPARTMENT OF TRANSPORTATION
CERTIFIED PAYROLL
COMPLETION OF CERTIFIED PAYROLL FORM FULFILLS THE MINIMUM MDOT PREVAILING WAGE REQUIREMENTS**

(1) NAME OF CONTRACTOR / SUBCONTRACTOR (CIRCLE ONE) (2) ADDRESS

(3) PAYROLL NO. (4) FOR WEEK ENDING (5) PROJECT AND LOCATION (6) CONTRACT ID

(a)	(b)	(c)	(d) DAY AND DATE							(e)	(f)	(g)	(h)	(i)	(j) DEDUCTIONS					(k)	
EMPLOYEE INFORMATION	WORK CLASSIFICATION	Hour Type	HOURS WORKED ON PROJECT							TOTAL HOURS ON PROJECT	PROJECT RATE OF PAY	PROJECT RATE OF FRINGE PAY	GROSS PROJECT EARNED GROSS WEEKLY EARNED	TOTAL WEEKLY HOURS WORKED ALL JOBS	FICA	FEDERAL	STATE	OTHER	TOTAL DEDUCT	TOTAL WEEKLY WAGES PAID FOR ALL JOBS	
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00
ETH#GEN: ID #: GROUP/CLASS #:		S								0			\$0.00							\$0.00	\$0.00
NAME:										0			\$0.00							\$0.00	\$0.00

"General Decision Number: MI20240001 08/23/2024

Superseded General Decision Number: MI20230001

State: Michigan

Construction Types: Highway (Highway, Airport & Bridge xxxxx and Sewer/Incid. to Hwy.)

Counties: Michigan Statewide.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
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If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a

conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	02/23/2024
2	04/05/2024
3	04/19/2024
4	04/26/2024
5	05/03/2024
6	05/17/2024
7	05/24/2024
8	06/07/2024
9	06/14/2024
10	06/28/2024
11	07/12/2024
12	07/26/2024
13	08/02/2024
14	08/23/2024

CARP0004-004 06/01/2019

REMAINDER OF STATE

	Rates	Fringes
CARPENTER (Piledriver).....	\$ 27.62	20.59

CARP0004-005 06/01/2018

LIVINGSTON (Townships of Brighton, Deerfield, Genoa, Hartland, Oceola & Tyrone), MACOMB, MONROE, OAKLAND, SANILAC, ST. CLAIR AND WAYNE COUNTIES

	Rates	Fringes
CARPENTER (Piledriver).....	\$ 30.50	27.28

ELEC0017-005 06/01/2024

STATEWIDE

	Rates	Fringes
Line Construction		
Groundman/Driver.....	\$ 32.00	33%+7.31
Journeyman Signal Tech, Communications Tech, Tower Tech & Fiber Optic Splicers.	\$ 47.35	33%+7.31

Journeyman Specialist.....\$ 54.45 33%+7.31
 Operator A.....\$ 40.09 33%+7.31
 Operator B.....\$ 37.46 33%+7.31

Classifications

Journeyman Specialist: Refers to a crew of only one person working alone.

Operator A: Shall be proficient in operating all power equipment including: Backhoe, Excavator, Directional Bore and Boom/Digger truck.

Operator B: Shall be proficient in operating any 2 of the above mentioned pieces of equipment listed under Operator A.

 ENGI0324-003 06/01/2024

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LENAWEЕ, LIVINGSTON, MACOMB, MIDLAND, MONROE, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLAIR, SANILAC, SHIAWASSEE, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

Rates Fringes

OPERATOR: Power Equipment
 (Steel Erection)

GROUP 1.....	\$ 55.42	25.25
GROUP 2.....	\$ 56.42	25.25
GROUP 3.....	\$ 53.92	25.25
GROUP 4.....	\$ 54.92	25.25
GROUP 5.....	\$ 52.42	25.25
GROUP 6.....	\$ 53.42	25.25
GROUP 7.....	\$ 52.15	25.25
GROUP 8.....	\$ 53.15	25.25
GROUP 9.....	\$ 51.70	25.25
GROUP 10.....	\$ 52.70	25.25
GROUP 11.....	\$ 50.97	25.25
GROUP 12.....	\$ 51.97	25.25
GROUP 13.....	\$ 50.61	25.25
GROUP 14.....	\$ 51.61	25.25
GROUP 15.....	\$ 49.97	25.25
GROUP 16.....	\$ 46.77	25.25
GROUP 17.....	\$ 32.29	12.40
GROUP 18.....	\$ 35.78	25.25

FOOTNOTE:

Paid Holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Engineer when operating combination of boom and jib 400' or longer

GROUP 2: Engineer when operating combination of boom and jib 400' or longer on a crane that requires an oiler

GROUP 3: Engineer when operating combination of boom and jib 300' or longer

GROUP 4: Engineer when operating combination of boom and jib 300' or longer on a crane that requires an oiler

GROUP 5: Engineer when operating combination of boom and jib 220' or longer

GROUP 6: Engineer when operating combination of boom and jib 220' or longer on a crane that requires an oiler

GROUP 7: Engineer when operating combination of boom and jib 140' or longer

GROUP 8: Engineer when operating combination of boom and jib 140' or longer on a crane that requires an oiler

GROUP 9: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level)

GROUP 10: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level) on a crane that requires an oiler

GROUP 11: Engineer when operating combination of boom and jib 120' or longer

GROUP 12: Engineer when operating combination of boom and jib 120' or longer on a crane that requires an oiler

GROUP 13: Crane operator; job mechanic and 3 drum hoist and excavator

GROUP 14: Crane operator on a crane that requires an oiler

GROUP 15: Hoisting operator; 2 drum hoist and rubber tired backhoe

GROUP 16: Forklift and 1 drum hoist

GROUP 17: Compressor or welder operator

GROUP 18: Oiler

AREA 1: ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, EATON, HILLSDALE, IONIA, KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN

AREA 2: ANTRIM, BENZIE, CHARLEVOIX, EMMET, GRAND TRAVERSE, KALKASKA, LEELANAU, MISSAUKEE AND WEXFORD COUNTIES:

Rates Fringes

OPERATOR: Power Equipment (Steel Erection)

AREA 1

GROUP 1.....	\$ 55.02	25.25
GROUP 2.....	\$ 52.15	25.25
GROUP 3.....	\$ 50.61	25.25
GROUP 4.....	\$ 46.77	25.25
GROUP 5.....	\$ 32.29	12.40
GROUP 6.....	\$ 35.78	25.25

AREA 2

GROUP 1.....	\$ 55.02	25.25
GROUP 2.....	\$ 52.15	24.25
GROUP 3.....	\$ 50.61	25.25
GROUP 4.....	\$ 46.77	25.25
GROUP 5.....	\$ 32.29	12.40
GROUP 6.....	\$ 35.78	25.25

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: \$1.50 additional to the group 1 rate. Crane operator with main boom and jib 400' or longer: \$3.00 additional to the group 1 rate.

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Crane Operator with main boom & jib 400', 300', or 220' or longer.

GROUP 2: Crane Operator with main boom & jib 140' or longer, Tower Crane; Gantry Crane; Whirley Derrick.

GROUP 3: Regular Equipment Operator, Crane, Dozer, Loader, Hoist, Straddle Wagon, Mechanic, Grader and Hydro Excavator.

GROUP 4: Air Tugger (single drum), Material Hoist Pump 6''' or over, Elevators, Brokk Concrete Breaker.

GROUP 5: Air Compressor, Welder, Generators, Conveyors

GROUP 6: Oiler and fire tender

ENGI0324-005 09/01/2023

AREA 1: GENESEE, LAPEER, LIVINGSTON, MACOMB, MONROE, OAKLAND,
ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALCONA, ALLEGAN, ALGER, ALPENA, ANTRIM, ARENAC, BARAGA,
BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS,
CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD,
DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND
TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA,
IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT,
KWEENAW, LAKE, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE,
MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE,
MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW,
ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE,
ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST.
JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

Rates Fringes

OPERATOR: Power Equipment
(Underground construction
(including sewer))

AREA 1:

GROUP 1.....	\$ 41.08	25.25
GROUP 2.....	\$ 36.25	25.25
GROUP 3.....	\$ 35.52	25.25
GROUP 4.....	\$ 34.95	25.25
GROUP 5.....	\$ 25.35	12.10

AREA 2:

GROUP 1.....	\$ 39.27	25.25
GROUP 2.....	\$ 34.38	25.25
GROUP 3.....	\$ 33.88	25.25
GROUP 4.....	\$ 33.60	25.25
GROUP 5.....	\$ 25.35	12.10

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backfiller tamper; Backhoe; Batch plant operator
(concrete); Clamshell; Concrete paver (2 drums or larger);
Conveyor loader (Euclid type); Crane (crawler, truck type
or pile driving); Dozer; Dragline; Elevating grader;
Endloader; Gradall (and similar type machine); Grader;
Mechanic; Power shovel; Roller (asphalt); Scraper
(self-propelled or tractor drawn); Side boom tractor (type
D-4 or equivalent and larger); Slip form paver; Slope
paver; Trencher (over 8 ft. digging capacity); Well
drilling rig; Concrete pump with boom operator; Hydro
Excavator

GROUP 2: Boom truck (power swing type boom); Crusher; Hoist; Pump (1 or more - 6-in. discharge or larger - gas or diesel- powered or powered by generator of 300 amperes or more - inclusive of generator); Side boom tractor (smaller than type D-4 or equivalent); Tractor (pneu-tired, other than backhoe or front end loader); Trencher (8-ft. digging capacity and smaller); Vac Truck and End dump operator;

GROUP 3: Air compressors (600 cfm or larger); Air compressors (2 or more-less than 600 cfm); Boom truck (non-swinging, non- powered type boom); Concrete breaker (self-propelled or truck mounted - includes compressor); Concrete paver (1 drum-1/2 yd. or larger); Elevator (other than passenger); Maintenance person; Pump (2 or more-4-in. up to 6-in. discharge-gas or diesel powered - excluding submersible pumps); Pumpcrete machine (and similar equipment); Wagon drill (multiple); Welding machine or generator (2 or more-300 amp. or larger - gas or diesel powered)

GROUP 4: Boiler; Concrete saw (40 hp or over); Curing machine (self-propelled); Farm tractor (with attachment); Finishing machine (concrete); Hydraulic pipe pushing machine; Mulching equipment; Pumps (2 or more up to 4-in. discharge, if used 3 hours or more a day, gas or diesel powered - excluding submersible pumps); Roller (other than asphalt); Stump remover; Trencher (service); Vibrating compaction equipment, self-propelled (6 ft. wide or over); Sweeper (Wayne type); Water wagon and Extend-a boom forklift

Group 5: Fire Person, Oiler

* ENGI0324-006 06/01/2024

GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW, WAYNE, ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

Rates Fringes

Power equipment operators:
(AIRPORT, BRIDGE & HIGHWAY

CONSTRUCTION)

GROUP 1.....	\$ 43.71	25.25
GROUP 2.....	\$ 42.56	25.25
GROUP 3.....	\$ 35.83	25.55
GROUP 4.....	\$ 35.27	25.25

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Paver Operator (5 bags or more); Slip Form Paver; Asphalt Paver (self propelled); Shovel (Excavator) installing utilities over 20 feet in depth.

Group 2: Asphalt plant operator; crane operator (does not include work on bridge construction projects when the crane operator is erecting structural components); Dragline operator; Shovel (Excavator) operator; Locomotive operator; Elevating grader operator; Pile driving operator; Roller operator (asphalt); Blade grader operator; Trenching machine operator (ladder or wheel type); Auto-grader; Self-propelled or tractor-drawn scraper; Conveyor loader operator (Euclid type); Bulldozer; Hoisting engineer; Tractor operator; Finishing machine operator (asphalt); Mechanic; Pump operator (6-in. discharge or over, gas, diesel powered or generator of 300 amp. or larger); Shouldering or gravel distributing machine operator (self-propelled); Backhoe (with over 3/8 yd. bucket); Side boom tractor (type D-4 or equivalent or larger); Tube finisher (slip form paving); Gradall (and similar type machine); Asphalt planner (self-propelled); Batch plant (concrete-central mix); Slurry machine (asphalt); Concrete pump (3 in. and over); Roto-mill; Swinging boom truck (over 12 ton capacity); Hydro demolisher (water blaster); Farm-type tractor with attached pan; Vacuum truck operator; Batch Plant (concrete dry batch); Concrete Saw Operator (40h.p. or over; Tractor Operator (farm type); Finishing Machine Operator (concrete); Grader Operator (self-propelled fine grade or form (concrete); tractor operator (farm type with attachment); Wagon Drill operator; Boom or winch hoist truck operator.

GROUP 3: Screening plant operator; Washing plant operator; Crusher operator; Backhoe (with 3/8 yd. bucket or less); Side boom tractor (smaller than D-4 type or equivalent); Sweeper (Wayne type and similar equipment); Greese Truck; Air Compressor Operator (600 cu.ft. per min or more); Air Compressor Operator (two or more, less than 600 cfm); End Loader operator (1 yard Capacity and over); Side boom tractor (type D or equivalent or larger; Endloader operator *under 1 yard capacity; Trencher (service).

GROUP 4: Boiler fire tender; Concrete Breaker; Oiler; Fire tender; Trencher (service); Flexplane operator; Cleftplane operator; Roller operator (other than asphalt); Curing equipment operator (self-propelled); Power bin operator;

Plant drier operator (asphalt); Vibratory compaction equipment operator (6 ft. wide or over); Guard post driver operator (power driven); All mulching equipment; Stump remover; Concrete pump (under 3-in.); Mesh installer (self-propelled); End dump; Skid steer.

 ENGI0324-007 05/01/2024

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

Rates Fringes

OPERATOR: Power Equipment
 (Steel Erection)

Compressor, welder and forklift.....	\$ 40.90	25.00
Crane operator, main boom & jib 120' or longer.....	\$ 47.37	25.00
Crane operator, main boom & jib 140' or longer.....	\$ 47.37	24.60
Crane operator, main boom & jib 220' or longer.....	\$ 48.26	25.00
Mechanic with truck and tools.....	\$ 46.50	25.00
Oiler and fireman.....	\$ 39.96	25.00
Regular operator.....	\$ 44.72	25.00

 ENGI0324-008 10/01/2023

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

Rates Fringes

OPERATOR: Power Equipment
 (Sewer Relining)

GROUP 1.....	\$ 37.37	15.44
GROUP 2.....	\$ 35.33	15.44

SEWER RELINING CLASSIFICATIONS

GROUP 1: Operation of audio-visual closed circuit TV system, including remote in-ground cutter and other equipment used in connection with the CCTV system

GROUP 2: Operation of hot water heaters and circulation systems, water jettors and vacuum and mechanical debris removal systems

ENGI0325-012 05/01/2024

Rates Fringes

Power equipment operators -
gas distribution and duct
installation work:

GROUP 1.....	\$ 37.98	25.25
GROUP 2.....	\$ 34.75	25.25

SCOPE OF WORK: The construction, installation, treating and reconditioning of pipelines transporting gas vapors within cities, towns, subdivisions, suburban areas, or within private property boundaries, up to and including private meter settings of private industrial, governmental or other premises, more commonly referred to as ""distribution work,"" starting from the first metering station, connection, similar or related facility, of the main or cross country pipeline and including duct installation.

Group 1: Backhoe, crane, grader, mechanic, dozer (D-6 equivalent or larger), side boom (D-4 equivalent or larger), trencher(except service), endloader (2 yd. capacity or greater).

GROUP 2: Dozer (less than D-6 equivalent), endloader (under 2 yd. capacity), side boom (under D-4 capacity), backfiller, pumps (1 or 2 of 6-inch discharge or greater), boom truck (with powered boom), tractor (wheel type other than backhoe or front endloader). Tamper (self-propelled), boom truck (with non-powered boom), concrete saw (20 hp or larger), pumps (2 to 4 under 6-inch discharge), compressor (2 or more or when one is used continuously into the second day) and trencher(service). Oiler, hydraulic pipe pushing machine, grease person and hydrostatic testing operator.

IRON0008-007 06/01/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

Rates Fringes

Ironworker - pre-engineered metal building erector.....\$ 23.70 6.95

IRONWORKER

General contracts \$10,000,000 or greater.....\$ 38.14 28.70

General contracts less than \$10,000,000.....\$ 38.14 28.70

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0025-002 06/01/2024

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

Rates Fringes

Ironworker - pre-engineered metal building erector

ALLEGAN, ANTRIM, BARRY, BENZIE, BRANCH, CALHOUN, CHARLEVOIX, EATON, EMMET, GRAND TRAVERSE, HILLSDALE, IONIA, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN AND WEXFORD COUNTIES:..\$ 35.55 33.14

Bay, Genesee, Lapeer, Livingston (east of Burkhardt Road), Macomb, Midland, Oakland, Saginaw, St. Clair, The University of Michigan, Washtenaw (east of U.S. 23) & Wayne...\$ 25.81 26.43

IRONWORKER

Ornamental and Structural...\$ 34.50 38.44 Reinforcing.....\$ 33.43 37.15

IRON0055-005 07/01/2022

LENAWEE AND MONROE COUNTIES:

Rates Fringes

IRONWORKER

Pre-engineered metal buildings.....	\$ 23.59	19.35
All other work.....	\$ 33.00	27.20

IRON0292-003 06/01/2020

BERRIEN AND CASS COUNTIES:

Rates Fringes

IRONWORKER (Including pre-engineered metal building erector).....

\$ 31.75	22.84
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* LABO0005-006 10/01/2022

Rates Fringes

Laborers - hazardous waste abatement: (ALCONA, ALPENA, ANTRIM, BENZIE, CHARLEVOIX, CHEBOYGAN, CRAWFORD, EMMET, GRAND TRAVERSE, IOSCO, KALKASKA, LEELANAU, MISSAUKEE, MONTMORENCY, OSCODA, OTSEGO, PRESQUE ISLE AND WEXFORD COUNTIES - Zone 10)

Levels A, B or C.....	\$ 17.45	12.75
class b.....	\$ 18.64	12.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment; Also, Level D.....	\$ 16.45 **	12.75
class a.....	\$ 17.64	12.90

Zone 10

Laborers - hazardous waste abatement: (ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES - Zone 11)

Levels A, B or C.....	\$ 25.18	12.90
Work performed in		

conjunction with site
preparation not requiring
the use of personal
protective equipment;

Also, Level D.....\$ 22.58 12.90

Laborers - hazardous waste
abatement: (ALLEGAN, BARRY,
BERRIEN, BRANCH, CALHOUN,
CASS, IONIA COUNTY (except
the city of Portland);
KALAMAZOO, KENT, LAKE,
MANISTEE, MASON, MECOSTA,
MONTCALM, MUSKEGON, NEWAYGO,
OCEANA, OSCEOLA, OTTAWA, ST.
JOSEPH AND VAN BUREN COUNTIES

- Zone 9)

Levels A, B or C.....\$ 21.88 13.26

Work performed in
conjunction with site
preparation not requiring
the use of personal
protective equipment;

Also, Level D.....\$ 20.80 12.90

Laborers - hazardous waste
abatement: (ARENAC, BAY,
CLARE, GLADWIN, GRATIOT,
HURON, ISABELLA, MIDLAND,
OGEMAW, ROSCOMMON, SAGINAW
AND TUSCOLA COUNTIES - Zone 8)

Levels A, B or C.....\$ 23.74 12.95

Work performed in
conjunction with site
preparation not requiring
the use of personal
protective equipment;

Also, Level D.....\$ 20.80 12.90

Laborers - hazardous waste
abatement: (CLINTON, EATON
AND INGHAM COUNTIES; IONIA
COUNTY (City of Portland);
LIVINGSTON COUNTY (west of
Oak Grove Rd., including the
City of Howell) - Zone 6)

Levels A, B or C.....\$ 26.33 12.95

Work performed in
conjunction with site
preparation not requiring
the use of personal
protective equipment;

Also, Level D.....\$ 24.64 12.90

Laborers - hazardous waste
abatement: (GENESEE, LAPEER
AND SHIAWASSEE COUNTIES -
Zone 7)

Levels A, B or C.....\$ 24.20	13.80
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 23.20	13.80
Laborers - hazardous waste abatement: (HILLSDALE, JACKSON AND LENAWEЕ COUNTIES - Zone 4)	
Levels A, B or C.....\$ 27.13	14.95
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 24.17	12.90
Laborers - hazardous waste abatement: (LIVINGSTON COUNTY (east of Oak Grove Rd. and south of M-59, excluding the city of Howell); AND WASHTENAW COUNTY - Zone 3)	
Levels A, B or C.....\$ 29.93	14.20
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 28.93	14.20
Laborers - hazardous waste abatement: (MACOMB AND WAYNE COUNTIES - Zone 1)	
Levels A, B or C.....\$ 29.93	16.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 28.93	16.90
Laborers - hazardous waste abatement: (MONROE COUNTY - Zone 4)	
Levels A, B or C.....\$ 31.75	14.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 31.75	14.90
Laborers - hazardous waste abatement: (OAKLAND COUNTY and the Northeast portion of	

LIVINGSTON COUNTY bordered by
 Oak Grove Road on the West
 and M-59 on the South - Zone

2)

Level A, B, C.....\$ 29.93	16.90
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 28.93	16.90

Laborers - hazardous waste abatement: (SANILAC AND ST. CLAIR COUNTIES - Zone 5)

Levels A, B or C.....\$ 26.21	16.62
Work performed in conjunction with site preparation not requiring the use of personal protective equipment;	
Also, Level D.....\$ 24.75	16.35

 LABO0259-001 09/01/2023

AREA 1: MACOMB, OAKLAND AND WAYNE COUNTIES
 AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONROE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW AND WEXFORD COUNTIES

Rates Fringes

Laborers - tunnel, shaft and caisson:

AREA 1	
GROUP 1.....\$ 23.62	16.93
GROUP 2.....\$ 23.73	16.93
GROUP 3.....\$ 23.79	16.93
GROUP 4.....\$ 23.97	16.93
GROUP 5.....\$ 24.22	16.93
GROUP 6.....\$ 24.55	16.93
GROUP 7.....\$ 17.83	16.93
AREA 2	
GROUP 1.....\$ 27.57	16.93

GROUP 2.....	\$ 25.24	16.93
GROUP 3.....	\$ 25.34	16.93
GROUP 4.....	\$ 29.57	16.93
GROUP 5.....	\$ 25.76	16.93
GROUP 6.....	\$ 26.07	16.93
GROUP 7.....	\$ 25.57	16.93

SCOPE OF WORK: Tunnel, shaft and caisson work of every type and description and all operations incidental thereto, including, but not limited to, shafts and tunnels for sewers, water, subways, transportation, diversion, sewerage, caverns, shelters, aquifers, reservoirs, missile silos and steel sheeting for underground construction.

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Tunnel, shaft and caisson laborer, dump, shanty, hog house tender, testing (on gas) and watchman

GROUP 2: Manhole, headwall, catch basin builder, bricklayer tender, mortar machine and material mixer

GROUP 3: Air tool operator (jackhammer, bush hammer and grinder), first bottom, second bottom, cage tender, car pusher, carrier, concrete, concrete form, concrete repair, cement invert laborer, cement finisher, concrete shoveler, conveyor, floor, gasoline and electric tool operator, gunite, grout operator, welder, heading dinky person, inside lock tender, pea gravel operator, pump, outside lock tender, scaffold, top signal person, switch person, track, tigger, utility person, vibrator, winch operator, pipe jacking, wagon drill and air track operator and concrete saw operator (under 40 h.p.)

GROUP 4: Tunnel, shaft and caisson mucker, bracer, liner plate, long haul dinky driver and well point

GROUP 5: Tunnel, shaft and caisson miner, drill runner, key board operator, power knife operator, reinforced steel or mesh (e.g. wire mesh, steel mats, dowel bars, etc.)

GROUP 6: Dynamite and powder

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

LABO0334-001 09/01/2023

Rates Fringes

Laborers - open cut:

ZONE 1 - MACOMB, OAKLAND
AND WAYNE COUNTIES:

GROUP 1.....	\$ 29.87	16.95
GROUP 2.....	\$ 31.87	16.95
GROUP 3.....	\$ 28.03	16.95
GROUP 4.....	\$ 23.71	16.72
GROUP 5.....	\$ 24.17	16.72
GROUP 6.....	\$ 22.00	16.72
GROUP 7.....	\$ 17.84	16.72

ZONE 2 - LIVINGSTON COUNTY
(east of M-151 (Oak Grove
Rd.)); MONROE AND

WASHTENAW COUNTIES:

GROUP 1.....	\$ 30.70	13.45
GROUP 2.....	\$ 32.70	13.45
GROUP 3.....	\$ 26.89	13.45
GROUP 4.....	\$ 25.10	16.72
GROUP 5.....	\$ 25.25	16.72
GROUP 6.....	\$ 22.55	16.72
GROUP 7.....	\$ 22.11	16.72

ZONE 3 - CLINTON, EATON,
GENESEE, HILLSDALE AND
INGHAM COUNTIES; IONIA
COUNTY (City of Portland);
JACKSON, LAPEER AND
LENAWEE COUNTIES;
LIVINGSTON COUNTY (west of
M-151 Oak Grove Rd.);

SANILAC, ST. CLAIR AND
SHIAWASSEE COUNTIES:

GROUP 1.....	\$ 28.89	13.45
GROUP 2.....	\$ 30.89	13.45
GROUP 3.....	\$ 26.89	13.45
GROUP 4.....	\$ 23.30	16.72
GROUP 5.....	\$ 23.44	16.72
GROUP 6.....	\$ 20.74	16.72
GROUP 7.....	\$ 22.23	16.72

ZONE 4 - ALCONA, ALLEGAN,
ALPENA, ANTRIM, ARENAC,
BARRY, BAY, BENZIE,
BERRIEN, BRANCH,
CALHOUN, CASS, CHARLEVOIX,
CHEBOYGAN, CLARE,
CRAWFORD, EMMET,
GLADWIN, GRAND TRAVERSE,
GRATIOT AND HURON
COUNTIES; IONIA COUNTY
(EXCEPT THE CITY OF
PORTLAND); IOSCO,
ISABELLA, KALAMAZOO,
KALKASKA, KENT,
LAKE,LEELANAU, MANISTEE,
MASON, MECOSTA, MIDLAND,
MISSAUKEE, MONTCALM,

MONTMORENCY, MUSKEGON,
 NEWAYGO, OCEANA, OGEMAW,
 OSCEOLA, OSCODA, OTSEGO,
 OTTAWA, PRESQUE ISLE,
 ROSCOMMON, SAGINAW, ST.
 JOSEPH, TUSCOLA, VAN BUREN
 AND WEXFORD COUNTIES:

GROUP 1.....	\$ 27.87	13.45
GROUP 2.....	\$ 29.87	13.45
GROUP 3.....	\$ 25.87	13.45
GROUP 4.....	\$ 22.33	16.72
GROUP 5.....	\$ 22.45	16.72
GROUP 6.....	\$ 19.67	16.72
GROUP 7.....	\$ 22.30	16.72

ZONE 5 - ALGER, BARAGA,
 CHIPPEWA, DELTA,
 DICKINSON, GOGEBIC,
 HOUGHTON, IRON,
 KEWEENAW, LUCE, MACKINAC,
 MARQUETTE, MENOMINEE,
 ONTONAGON AND SCHOOLCRAFT
 COUNTIES:

GROUP 1.....	\$ 28.09	13.45
GROUP 2.....	\$ 30.09	13.45
GROUP 3.....	\$ 26.09	13.45
GROUP 4.....	\$ 22.56	16.72
GROUP 5.....	\$ 22.64	16.72
GROUP 6.....	\$ 19.99	16.72
GROUP 7.....	\$ 22.45	16.72

SCOPE OF WORK:

Open cut construction work shall be construed to mean work which requires the excavation of earth including industrial, commercial and residential building site excavation and preparation, land balancing, demolition and removal of concrete and underground appurtenances, grading, paving, sewers, utilities and improvements; retention, oxidation, flocculation and irrigation facilities, and also including but not limited to underground piping, conduits, steel sheeting for underground construction, and all work incidental thereto, and general excavation. For all areas except the Upper Peninsula, open cut construction work shall also be construed to mean waterfront work, piers, docks, seawalls, breakwalls, marinas and all incidental work. Open cut construction work shall not include any structural modifications, alterations, additions and repairs to buildings, or highway work, including roads, streets, bridge construction and parking lots or steel erection work and excavation for the building itself and back filling inside of and within 5 ft. of the building and foundations, footings and piers for the building. Open cut construction work shall not include any work covered under Tunnel, Shaft and Caisson work.

OPEN CUT LABORER CLASSIFICATIONS

GROUP 1: Construction laborer

GROUP 2: Mortar and material mixer, concrete form person, signal person, well point person, manhole, headwall and catch basin builder, headwall, seawall, breakwall and dock builder

GROUP 3: Air, gasoline and electric tool operator, vibrator operator, driller, pump person, tar kettle operator, bracer, rodder, reinforced steel or mesh person (e.g., wire mesh, steel mats, dowel bars, etc.), welder, pipe jacking and boring person, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger person and directional boring person

GROUP 4: Trench or excavating grade person

GROUP 5: Pipe layer (including crock, metal pipe, multi-plate or other conduits)

GROUP 6: Grouting man, audio-visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation and repair of water service pipe and appurtenances

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

LABO0465-001 06/01/2024

LABORER: Highway, Bridge and Airport Construction

AREA 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALLEGAN, BARRY, BAY, BERRIEN, BRANCH, CALHOUN, CASS, CLINTON, EATON, GRATIOT, HILLSDALE, HURON, INGHAM, JACKSON, KALAMAZOO, LAPEER, LENAWEЕ, LIVINGSTON, MIDLAND, MUSKEGON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA AND VAN BUREN COUNTIES

AREA 3: ALCONA, ALPENA, ANTRIM, ARENAC, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, IONIA, IOSCO, ISABELLA, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MONTMORENCY, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON AND WEXFORD COUNTIES

AREA 4: ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC,
HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE,
ONTONAGON AND SCHOOLCRAFT COUNTIES

Rates Fringes

LABORER (AREA 1)

GROUP 1.....	\$ 34.01	14.45
GROUP 2.....	\$ 34.14	14.45
GROUP 3.....	\$ 34.32	14.45
GROUP 4.....	\$ 34.40	14.45
GROUP 5.....	\$ 34.61	14.45
GROUP 6.....	\$ 34.91	14.45

LABORER (AREA 2)

GROUP 1.....	\$ 31.87	14.45
GROUP 2.....	\$ 32.07	14.45
GROUP 3.....	\$ 32.31	14.45
GROUP 4.....	\$ 32.66	14.45
GROUP 5.....	\$ 32.53	14.45
GROUP 6.....	\$ 32.87	14.45

LABORER (AREA 3)

GROUP 1.....	\$ 31.12	14.45
GROUP 2.....	\$ 31.33	14.45
GROUP 3.....	\$ 31.62	14.45
GROUP 4.....	\$ 32.06	14.45
GROUP 5.....	\$ 31.68	14.45
GROUP 6.....	\$ 32.11	14.45

LABORER (AREA 4)

GROUP 1.....	\$ 32.02	14.45
GROUP 2.....	\$ 31.73	14.45
GROUP 3.....	\$ 32.52	14.45
GROUP 4.....	\$ 32.96	14.45
GROUP 5.....	\$ 32.58	14.45
GROUP 6.....	\$ 33.01	14.45

LABORER CLASSIFICATIONS

GROUP 1: Asphalt shoveler or loader; asphalt plant misc.; burlap person; yard person; dumper (wagon, truck, etc.); joint filling laborer; miscellaneous laborer; unskilled laborer; sprinkler laborer; form setting laborer; form stripper; pavement reinforcing; handling and placing (e.g., wire mesh, steel mats, dowel bars); mason's tender or bricklayer's tender on manholes; manhole builder; headwalls, etc.; waterproofing,(other than buildings) seal coating and slurry mix, shoring, underpinning; pressure grouting; bridge pin and hanger removal; material recycling laborer; horizontal paver laborer (brick, concrete, clay, stone and asphalt); ground stabilization and modification laborer; grouting; waterblasting; top person; railroad track and trestle laborer; carpenters' tender; guard rail builders' tender; earth retention barrier and wall and

M.S.E. wall installer's tender; highway and median installer's tender(including sound, retaining, and crash barriers); fence erector's tender; asphalt raker tender; sign installer; remote control operated equipment.

GROUP 2: Mixer operator (less than 5 sacks); air or electric tool operator (jackhammer, etc.); spreader; boxperson (asphalt, stone, gravel); concrete paddler; power chain saw operator; paving batch truck dumper; tunnel mucker (highway work only); concrete saw (under 40 h.p.) and dry pack machine; roto-mill grounds person.

GROUP 3: Tunnel miner (highway work only); finishers tenders; guard rail builders; highway and median barrier installer; earth retention barrier and wall and M.S.E. wall installer's (including sound, retaining and crash barriers); fence erector; bottom person; powder person; wagon drill and air track operator; diamond and core drills; grade checker; certified welders; curb and side rail setter's tender.

GROUP 4: Asphalt raker

GROUP 5: Pipe layers, oxy-gun

GROUP 6: Line-form setter for curb or pavement; asphalt screed checker/screw man on asphalt paving machines.

LABO1076-005 04/01/2024

MICHIGAN STATEWIDE

Rates Fringes

LABORER (DISTRIBUTION WORK)

Zone 1.....	\$ 27.16	13.45
Zone 2.....	\$ 25.42	13.45
Zone 3.....	\$ 23.55	13.45
Zone 4.....	\$ 22.92	13.45
Zone 5.....	\$ 22.95	13.45

DISTRIBUTION WORK - The construction, installation, treating and reconditioning of distribution pipelines transporting coal, oil, gas or other similar materials, vapors or liquids, including pipelines within private property boundaries, up to and including the meter settings on residential, commercial, industrial, institutional, private and public structures. All work covering pumping stations and tank farms not covered by the Building Trades Agreement. Other distribution lines with the exception of sewer, water and cable television are included.

Underground Duct Layer Pay: \$.40 per hour above the base pay

rate.

Zone 1 - Macomb, Oakland and Wayne

Zone 2 - Monroe and Washtenaw

Zone 3 - Bay, Genesee, Lapeer, Midland, Saginaw, Sanilac, Shiawassee and St. Clair

Zone 4 - Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft

Zone 5 - Remaining Counties in Michigan

PAIN0022-002 07/01/2008

HILLSDALE, JACKSON AND LENAWEЕ COUNTIES; LIVINGSTON COUNTY (east of the eastern city limits of Howell, not including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES:

Rates Fringes

PAINTER.....\$ 25.06 14.75

FOOTNOTES: For all spray work and journeyman rigging for spray work, also blowing off, \$0.80 per hour additional (applies only to workers doing rigging for spray work on off the floor work. Does not include setting up or moving rigging on floor surfaces, nor does it apply to workers engaged in covering up or tending spray equipment. For all sandblasting and spray work performed on highway bridges, overpasses, tanks or steel, \$0.80 per hour additional. For all brushing, cleaning and other preparatory work (other than spraying or steeplejack work) at scaffold heights of fifty (50) feet from the ground or higher, \$0.50 per hour additional. For all preparatorial work and painting performed on open steel under forty (40) feet when no scaffolding is involved, \$0.50 per hour additional. For all swing stage work-window jacks and window belts-exterior and interior, \$0.50 per hour additional. For all spray work and sandblaster work to a scaffold height of forty (40) feet above the floor level, \$0.80 per hour additional. For all preparatorial work and painting on all highway bridges or overpasses up to forty (40) feet in height, \$0.50 per hour additional. For all steeplejack work performed where the elevation is forty (40) feet or more, \$1.25 per hour additional.

PAIN0312-001 06/01/2018

EXCLUDES: ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel,

Salem, Saugatuck and Wayland); INCLUDES: Barry, Berrien, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph, Van Buren

Rates Fringes

PAINTER

Brush and roller.....	\$ 23.74	13.35
Spray, Sandblast, Sign Painting.....	\$ 24.94	13.35

PAIN0845-003 05/10/2018

CLINTON COUNTY; EATON COUNTY (does not include the townships of Bellevue and Olivet); INGHAM COUNTY; IONIA COUNTY (east of Hwy. M 66); LIVINGSTON COUNTY (west of the eastern city limits of Howell, including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); AND SHIAWASSEE COUNTY (Townships of Bennington, Laingsbury and Perry):

Rates Fringes

PAINTER.....	\$ 25.49	13.74
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PAIN0845-015 05/10/2018

MUSKEGON COUNTY; NEWAYGO COUNTY (except the Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OCEANA COUNTY; OTTAWA COUNTY (except the townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

Rates Fringes

PAINTER.....	\$ 25.49	13.74
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PAIN0845-018 05/10/2018

ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); IONIA COUNTY (west of Hwy. M-66); KENT, MECOSTA AND MONTCALM COUNTIES; NEWAYGO COUNTY (Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OSCEOLA COUNTY (south of Hwy. #10); OTTAWA COUNTY (Townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

Rates Fringes

PAINTER.....\$ 25.49 13.74

FOOTNOTES: Lead abatement work: \$1.00 per hour additional.

PAIN1011-003 06/02/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON,
IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON
AND SCHOOLCRAFT COUNTIES:

Rates Fringes

PAINTER.....\$ 24.66 14.99

FOOTNOTES: High pay (bridges, overpasses, watertower): 30 to
80 ft.: \$.65 per hour additional. 80 ft. and over: \$1.30
per hour additional.

PAIN1474-002 06/01/2010

HURON COUNTY; LAPEER COUNTY (east of Hwy. M-53); ST. CLAIR,
SANILAC AND TUSCOLA COUNTIES:

Rates Fringes

PAINTER.....\$ 23.79 12.02

FOOTNOTES: Lead abatement work: \$1.00 per hour additional.
Work with any hazardous material: \$1.00 per hour
additional. Sandblasting, steam cleaning and acid cleaning:
\$1.00 per hour additional. Ladder work at or above 40 ft.,
scaffold work at or above 40 ft., swing stage, boatswain
chair, window jacks and all work performed over a falling
height of 40 ft.: \$1.00 per hour additional. Spray gun
work, pick pullers and those handling needles, blowing off
by air pressure, and any person rigging (setting up and
moving off the ground): \$1.00 per hour additional.
Steeplejack, tanks, gas holders, stacks, flag poles, radio
towers and beacons, power line towers, bridges, etc.: \$1.00
per hour additional, paid from the ground up.

PAIN1803-003 06/01/2024

ALCONA, ALPENA, ANTRIM, ARENAC, BAY, BENZIE, CHARLEVOIX,
CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE,
GRATIOT, IOSCO, ISABELLA, KALKASKA, LAKE, LEELANAU, MANISTEE,
MASON, MIDLAND, MISSAUKEE, MONTMORENCY AND OGEMAW COUNTIES;
OSCEOLA COUNTY (north of Hwy. #10); OSCODA, OTSEGO, PRESQUE

ISLE, ROSCOMMON, SAGINAW AND WEXFORD COUNTIES:

Rates Fringes

PAINTER

Work performed on water, bridges over water or moving traffic, radio and powerline towers, elevated tanks, steeples, smoke stacks over 40 ft. of falling heights, recovery of lead-based paints and any work associated with industrial plants, except maintenance of industrial plants.....	\$ 29.35	19.05
All other work, including maintenance of industrial plant.....	\$ 29.35	19.05

FOOTNOTES: Spray painting, sandblasting, blowdown associated with spraying and blasting, water blasting and work involving a swing stage, boatswain chair or spider: \$1.00 per hour additional. All work performed inside tanks, vessels, tank trailers, railroad cars, sewers, smoke stacks, boilers or other spaces having limited egress not including buildings, opentop tanks, pits, etc.: \$1.25 per hour additional.

PLAS0514-001 06/01/2023

ZONE 1: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, SAGINAW, WASHTENAW AND WAYNE COUNTIES

ZONE 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER

ZONE 1.....	\$ 33.00	18.51
ZONE 2.....	\$ 31.50	18.51

 PLUM0190-003 05/01/2015

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY,
 BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX,
 CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA,
 DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND
 TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA,
 IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT,
 KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEЕ, LIVINGSTON, LUCE,
 MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA,
 MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE,
 MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA,
 OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST.
 CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA,
 VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

Rates	Fringes
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Plumber/Pipefitter - gas
 distribution pipeline:

Welding in conjunction with gas distribution pipeline work.....	\$ 33.03	20.19
All other work:.....	\$ 24.19	12.28

 * TEAM0007-004 06/01/2024

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA,
 BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX,
 CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA,
 DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE,
 GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO,
 IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW,
 LAKE, LAPEER, LEELANAU, LENAWEЕ, LUCE, MACKINAC, MANISTEE,
 MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE,
 MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW,
 ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE,
 ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST.
 CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW
 AND WAYNE COUNTIES

Rates	Fringes
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TRUCK DRIVER

AREA 1 Euclids, double bottoms and lowboys.....	\$ 32.55	.75 + a+b
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Trucks under 8 cu. yds.....\$ 32.30 .75 + a+b
 Trucks, 8 cu. yds. and
 over.....\$ 32.40 .75 + a+b
 AREA 2
 Euclids, double bottoms
 and lowboys.....\$ 32.65 .75 + a+b
 Trucks under 8 cu. yds.....\$ 32.40 .75 + a+b
 Trucks, 8 cu. yds. and
 over.....\$ 32.50 .75 + a+b

Footnote:

- a. \$470.70 per week
- b. \$68.70 daily

 TEAM0247-004 04/01/2013

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASSEE, SAGINAW, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

Rates Fringes

Sign Installer

AREA 1		
GROUP 1.....	\$ 21.78	11.83
GROUP 2.....	\$ 25.27	11.8375
AREA 2		
GROUP 1.....	\$ 22.03	11.83
GROUP 2.....	\$ 25.02	11.8375

FOOTNOTE:

- a. \$132.70 per week, plus \$17.80 per day.

SIGN INSTALLER CLASSIFICATIONS:

GROUP 1: performs all necessary labor and uses all tools required to construct and set concrete forms required in the installation of highway and street signs

GROUP 2: performs all miscellaneous labor, uses all hand and power tools, and operates all other equipment, mobile or otherwise, required for the installation of highway and street signs

TEAM0247-010 04/01/2018

AREA 1: LAPEER AND SHIAWASSEE COUNTIES

AREA 2: GENESEE, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

Rates Fringes

TRUCK DRIVER (Underground construction)

AREA 1

GROUP 1.....	\$ 23.82	19.04
GROUP 2.....	\$ 23.91	19.04
GROUP 3.....	\$ 24.12	19.04

AREA 2

GROUP 1.....	\$ 24.12	19.04
GROUP 2.....	\$ 24.26	19.04
GROUP 3.....	\$ 24.45	19.04

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

SCOPE OF WORK: Excavation, site preparation, land balancing, grading, sewers, utilities and improvements; also including but not limited to, tunnels, underground piping, retention, oxidation, flocculation facilities, conduits, general excavation and steel sheeting for underground construction. Underground construction work shall not include any structural modifications, alterations, additions and repairs to buildings or highway work, including roads, streets, bridge construction and parking lots or steel erection.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Truck driver on all trucks (EXCEPT dump trucks of 8 cubic yards capacity or over, pole trailers, semis, low boys, Euclid, double bottom and fuel trucks)

GROUP 2: Truck driver on dump trucks of 8 cubic yards capacity or over, pole trailers, semis and fuel trucks

GROUP 3: Truck driver on low boy, Euclid and double bottom

* SUMI2002-001 05/01/2002

	Rates	Fringes
FLAG PERSON.....	\$ 10.10 **	0.00

LINE PROTECTOR (ZONE 1:
GENESEE, MACOMB, MONROE,
OAKLAND, WASHTENAW AND WAYNE)....\$ 22.89 13.45

LINE PROTECTOR (ZONE 2:
STATEWIDE (EXCLUDING GENESEE,
MACOMB, MONROE, OAKLAND,
WASHTENAW AND WAYNE).....\$ 20.19 13.45

Pavement Marking Machine
(ZONE 1: GENESEE, MACOMB,
MONROE, OAKLAND, WASHTENAW
AND WAYNE COUNTIES)
Group 1.....\$ 30.52 13.45

Pavement Marking Machine
(ZONE 1: GENESEE, MACOMB,
MONROE, OAKLAND, WASHTENAW
AND WAYNE)
Group 2.....\$ 27.47 13.45

Pavement Marking Machine
(ZONE 2: STATEWIDE (EXCLUDING
GENESEE, MACOMB, MONROE,
OAKLAND, WASHTENAW AND WAYNE
COUNTIES)
Group 1.....\$ 26.92 13.45

Pavement Marking Machine
(ZONE 2: STATEWIDE (EXCLUDING
GENESEE, MACOMB, MONROE,
OAKLAND, WASHTENAW AND WAYNE)
Group 2.....\$ 24.23 13.45

WORK CLASSIFICATIONS:

PAVEMENT MARKER GROUP 1: Drives or operates a truck mounted striper, grinder, blaster, groover, or thermoplastic melter for the placement or removal of temporary or permanent pavement markings or markers.

PAVEMENT MARKER GROUP 2: Performs all functions involved for the placement or removal of temporary or permanent pavement markings or markers not covered by the classification of Pavement Marker Group 1 or Line Protector.

LINE PROTECTOR: Performs all operations for the protection or removal of temporary or permanent pavement markings or markers in a moving convoy operation not performed by the

classification of Pavement Marker Group 1. A moving convoy operation is comprised of only Pavement Markers Group 1 and Line Protectors.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local),

a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the "SA" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R. § 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"