

CITY OF ANN ARBOR  
INVITATION TO BID



2022 Valve Replacement Project

ITB No. 4705

Due Date: February 2, 2022 at 10:00AM (Local Time)

Public Services Area / Engineering

Issued By:

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

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- 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**

Due to restrictions in place no pre-bid conference will be held for this ITB. Please contact staff indicated within this ITB Document with general questions regarding this project/ITB

# INSTRUCTIONS TO BIDDERS

## General

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.

## 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, **January 14, 2022 at 3:00PM** and should be addressed as follows:

Specification/Scope of Work questions emailed to [ikotlyar@a2gov.org](mailto:ikotlyar@a2gov.org)  
Bid Process and Compliance questions emailed to [cspencer@a2gov.org](mailto:cspencer@a2gov.org)

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of **Igor V. Kotlyar, P.E. at [ikotlyar@a2gov.org](mailto:ikotlyar@a2gov.org)** after discovery as possible. Further, the contractor and/or service provide shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

## 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](http://www.mitn.info) and/or City of Ann Arbor web site [www.A2gov.org](http://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 **February 2, 2022 at 10:00AM (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 **one ( 1 )** Bid copies in a sealed envelope clearly marked: **ITB No. 4705 – 2022 Valve Replacement Project**.

### **Bids must be addressed and delivered to:**

City of Ann Arbor  
Procurement Unit,  
c/o Customer Services, 1<sup>st</sup> Floor  
301 East Huron Street  
Ann Arbor, MI 48104

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 accessible to the public at all hours. 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](http://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 ninety (90) 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 wage determination(s) current on the date 10 days before bids are due shall apply to this contract.** The U.S. Department of Labor (DOL) has provided explanations to assist with classification in the following resource link: [beta.SAM.gov](http://beta.SAM.gov).

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

## 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](http://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 \_\_\_\_\_ DAY OF \_\_\_\_\_, 202\_.

\_\_\_\_\_  
Bidder's Name

\_\_\_\_\_  
Authorized Signature of Bidder

\_\_\_\_\_  
Official Address

\_\_\_\_\_  
(Print Name of Signer Above)

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
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 \_\_\_\_\_, for whom \_\_\_\_\_, bearing the office title of \_\_\_\_\_, 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**

\_\_\_\_\_ **Date** \_\_\_\_\_, 202\_\_

(Print) Name \_\_\_\_\_ Title \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Phone ( ) \_\_\_\_\_ Fax ( ) \_\_\_\_\_

Email \_\_\_\_\_

BID FORM  
 Section 1 - Schedule of Prices  
 Project: ITB 4704 - 2022 Sewer Lining Project

LINE No.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT (\$)
130	Protective Fencing	LF	500	\$	-
140	Exploratory Excavation (0-10' deep), Trench Detail - Type I Modified	EA	10	\$	-
141	Exploratory Excavation (0-10' deep), Trench Detail - Type IV	EA	5	\$	-
200	General Conditions, Modified, Maximum \$100,000	LS	1	\$	-
201	Project Supervision, Modified, Maximum \$50,000	LS	1	\$	-
202	Audiovisual Tape Coverage, Modified	LS	1	\$	-
203	Minor Traffic Control, Modified, Maximum \$100,000	LS	1	\$	-
204	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	EA	20	\$	-
205	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	EA	120	\$	-
206	Channelizing Device, 42 inch, Furn	EA	30	\$	-
207	Channelizing Device, 42 inch, Oper	EA	200	\$	-
208	Lighted Arrow, Type C, Furn	EA	6	\$	-
209	Lighted Arrow, Type C, Oper	EA	24	\$	-
210	Plastic Drum, High Intensity, Lighted, Furn	EA	200	\$	-
211	Plastic Drum, High Intensity, Lighted, Oper	EA	500	\$	-
212	Sign, Type B, Temp, Prismatic, Furn	SF	650	\$	-
213	Sign, Type B, Temp, Prismatic, Oper	SF	2,500	\$	-
214	"No Parking" Sign	EA	100	\$	-
215	Traf Regulator Control	LS	1	\$	-
217	Pedestrian Type II Barricade, Temp, Furn	EA	20	\$	-
218	Pedestrian Type II Barricade, Temp, Oper	EA	100	\$	-
219	Pedestrian Type II Channelizer, Temp	LF	150	\$	-
220	Pedestrian Path, Temp	LF	200	\$	-
221	Pedestrian Ramp, Temp	EA	20	\$	-
222	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp	LF	1000	\$	-
223	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	LF	1200	\$	-
224	Pavt Mrkg Cover, Type R, Black	LF	2000	\$	-
225	Pavt Mrkg, Wet Reflective, Type R, Tape, 24 inch, Stop Bar	LF	25	\$	-
226	Pavt Mrkg, Wet Reflective, Type R, Tape, Lt Turn Arrow	EA	1	\$	-

Total This Page      \$ \_\_\_\_\_

BID FORM  
Section 1 - Schedule of Prices  
Project: ITB 4704 - 2022 Sewer Lining Project

LINE No.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT (\$)
228	Rem. Concrete Curb or Curb and Gutter, Any Type, Modified	LF	200	\$ _____	\$ _____ -
229	Rem. Concrete Sidewalk, Ramp and Drive, Any Thickness, Modified	SFT	200	\$ _____	\$ _____ -
230	Aggregate Base	TON	300	\$ _____	\$ _____ -
231	Hand Patching	TON	750	\$ _____	\$ _____ -
232	Concrete Curb or Curb & Gutter – Any Type	LF	200	\$ _____	\$ _____ -
233	4" Concrete Sidewalk, Modified	SFT	100	\$ _____	\$ _____ -
234	6" Concrete Sidewalk, Ramp, Drive Approach, Modified	SFT	50	\$ _____	\$ _____ -
235	6" Concrete Sidewalk, Ramp, Drive Approach, High Early	SFT	50	\$ _____	\$ _____ -
236	Concrete Type M Drive Opening, High Early	LF	50	\$ _____	\$ _____ -
237	Inlet Filter, Special	Each	50	\$ _____	\$ _____ -
238	PC 250, D.I. Water Main, w/ Polyethylene Wrap, 12 inch, Tr Det I, Mod	LF	50	\$ _____	\$ _____ -
239	PC 250, D.I. Water Main, w/ Polyethylene Wrap, 16 inch, Tr Det I, Mod	LF	200	\$ _____	\$ _____ -
240	PC 250, D.I. Water Main, w/ Polyethylene Wrap, 20 inch, Tr Det I, Mod	LF	200	\$ _____	\$ _____ -
241	PC 250, D.I. Water Main, w/ Polyethylene Wrap, 24 inch, Tr Det I, Mod	LF	100	\$ _____	\$ _____ -
242	Gate Valve-in-Well, 12 inch	Each	3	\$ _____	\$ _____ -
243	Gate Valve-in-Well, 12 inch	Each	10	\$ _____	\$ _____ -
244	Gate Valve-in-Well, 20 inch	Each	12	\$ _____	\$ _____ -
245	Gate Valve-in-Well, 24 inch	Each	5	\$ _____	\$ _____ -
246	12 inch Water Main, Rem	LF	50	\$ _____	\$ _____ -
247	16 inch Water Main, Rem	LF	200	\$ _____	\$ _____ -
248	20 inch Water Main, Rem	LF	200	\$ _____	\$ _____ -
249	24 inch Water Main, Rem	LF	100	\$ _____	\$ _____ -
250	12 inch Gate Valve-in-Well, Rem	Each	3	\$ _____	\$ _____ -
251	16 inch Gate Valve-in-Well, Rem	Each	10	\$ _____	\$ _____ -
252	20 inch Gate Valve-in-Well, Rem	Each	12	\$ _____	\$ _____ -
253	24 inch Gate Valve-in-Well, Rem	Each	5	\$ _____	\$ _____ -
254	Line Stop, Ductile Iron Pipe, 8 inch	Each	1	\$ _____	\$ _____ -
255	Line Stop, Ductile Iron Pipe, 12 inch	Each	2	\$ _____	\$ _____ -
256	Line Stop, Ductile Iron Pipe, 16 inch	Each	3	\$ _____	\$ _____ -
257	Line Stop, Ductile Iron Pipe, 20 inch	Each	11	\$ _____	\$ _____ -
258	Line Stop, Ductile Iron Pipe, 24 inch	Each	5	\$ _____	\$ _____ -
260	Clean-Up & Restoration, Special	LS	1	\$ _____	\$ _____ -
261	Certified Payroll Complianace and Reporting	LS	1	\$ _____	\$ _____ -
353	4" SDR 35 PVC Service Lead	LF	100	\$ _____	\$ _____ -

Total This Page      \$ \_\_\_\_\_

Total From BF-1      \$ \_\_\_\_\_ -

**Total Base Bid**      \$ \_\_\_\_\_

# 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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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 \_\_\_\_\_

# 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.

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 \_\_\_\_\_ Date \_\_\_\_\_



# 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>
---	-------------	---------------

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 \_\_\_\_\_ Date \_\_\_\_\_

# BID FORM

## Section 5 – References

Include a minimum of 3 references from similar projects completed within the past 7 years.

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

1) \_\_\_\_\_  
Project Name                                      Cost                                      Date Constructed

\_\_\_\_\_  
Contact Name                                      Phone Number

2) \_\_\_\_\_  
Project Name                                      Cost                                      Date Constructed

\_\_\_\_\_  
Contact Name                                      Phone Number

3) \_\_\_\_\_  
Project Name                                      Cost                                      Date Constructed

\_\_\_\_\_  
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: \_\_\_\_\_

Social Security or Federal Employer I.D. #: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Type of Organization (circle one below):

Individual          Partnership          Corporation          Joint Venture          Other

If "Other" please provide details on the organization:

\_\_\_\_\_

Year organization established: \_\_\_\_\_

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

\_\_\_\_\_

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

Explanation of any business name changes:

\_\_\_\_\_

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).

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

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

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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.

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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).

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.

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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).

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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.

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.

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.

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.

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

Yes

No

EMR = \_\_\_\_\_

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: \_\_\_\_\_

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.

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.

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

# SAMPLE STANDARD CONTRACT

*If a contract is awarded, the selected contractor will be required to adhere to a set of general contract provisions which will become a part of any formal agreement. These provisions are general principles which apply to all contractors of service to the City of Ann Arbor such as the following:*

**Administrative Use Only**  
Contract Date: \_\_\_\_\_

## CONTRACT

THIS CONTRACT is between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 East Huron Street, Ann Arbor, Michigan 48104 ("City") and \_\_\_\_\_ ("Contractor")

\_\_\_\_\_  
(An individual/partnership/corporation, include state of incorporation) (Address)

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 No. 4705 – 2022 Valve Replacement Project** 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)  
Vendor Conflict of Interest Form  
Prevailing Wage Declaration of Compliance Form (if applicable)  
Bid Forms  
Contract and Exhibits  
Bonds

General Conditions  
Standard Specifications  
Detailed Specifications  
Plans  
Addenda

### ARTICLE II - Definitions

**Administering Service Area/Unit** means Public Services/Engineering

**Project** means **ITB No. 4705 – 2022 Valve Replacement Project**

**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: Nicholas S. Hutchinson, PE whose job title is City Engineer. 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 \_\_\_\_\_ whose job title is \_\_\_\_\_.

**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 for this Contract shall be completed within two hundred thirty (230) consecutive calendar days.
- (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 **\$1,500** 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 Contract, the unit prices as given in the Bid Form for the estimated bid total of:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

- (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 \_\_\_\_\_  
City Administrator

By \_\_\_\_\_  
Services Area Administrator

**Approved as to form and content**

\_\_\_\_\_  
Stephen K. Postema, City Attorney

**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)

\_\_\_\_\_  
(Name of Principal)  
By \_\_\_\_\_  
(Signature)  
Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

Name and address of agent:

\_\_\_\_\_  
Stephen K. Postema, City Attorney

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 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:

\_\_\_\_\_  
Stephen K. Postema, 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 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**

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

**1 of 2**

**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 on or before **March 15, 2022**, and only upon receipt of the fully executed Contract and Notice to Proceed. Appropriate time extensions shall be granted if the Notice to Proceed is delayed beyond this date.
2. The entirety of work under this Contract, including but not limited to installation of the temporary traffic control devices, replacement of the water main valves, completing all concrete and pavement restoration, the removal of any and all traffic control devices, and the installation/maintenance of the needed temporary soil erosion and sedimentation control devices, shall be completed by the Final Completion date of **October 31, 2022**.

The Contractor is expected to be furnished with two (2) copies of the Contract, for his/her execution, on or before **February 25, 2022**. 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. The Contractor shall not begin the work before the applicable date(s) as describes herein without approval from the Project Engineer, and in no case before the receipt of the fully executed Contract. City Council approval is expected on **March 11, 2022**.

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment and work throughout all authorized hours to complete the project within the specified time/date of this Contract. Should the Contractor demonstrate that work must occur on Sundays in order to maintain the project schedule, they may do so between the hours of 9:00 a.m. and 5:00 p.m. with prior approval from the City. The Contractor will submit authorization requests for any Sunday work a minimum of three working days in advance of the day of the proposed work. There will be no additional compensation due to the Contractor for work performed on Sundays.

Prior to the start of any construction, the Contractor shall submit a detailed progress schedule of work for the Engineer's review and approval. Work shall not start until a schedule is approved in writing by the Engineer. 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.

The City's decision to delete locations, add locations, change the limits of construction limits at any locations, or, the City's contribution to a delay of the construction at any one location shall not entitle the Contractor to receive additional compensation for work on any other location(s), nor shall it relieve the Contractor of any responsibilities for completion of work on any other location(s).

DS- 1

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

**2 of 2**

The Engineer may delay or stop the work due to threatening weather conditions. The Contractor shall not be compensated for unused materials or downtime due to rain, or the threat of rain. The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the rain.

The Contractor shall not work in the dark except as approved by the Engineer and only when lighting for night work is provided as detailed elsewhere in this contract. The Engineer may stop the work or may require the Contractor to defer certain work to another day, if, in the Engineer's opinion, the work cannot be completed within the remaining daylight hours, or if inadequate daylight is present to either properly perform or inspect the work. The Contractor will not be compensated for unused materials or downtime, when delays or work stoppages are directed by the Engineer for darkness and/or inadequate remaining daylight reasons. The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which are caused as a result of working in the dark.

No work shall be performed, or lane closures permitted during the holiday periods, as defined by the Engineer.

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, **\$1,500.00** in Liquidated Damages, and not as a penalty, for delays in the completion of the work for each and every calendar day beyond any "Complete Work" date for each location, and beyond the overall project completion date 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.

If the work required by this construction contract is not completed by the specified date(s) including any extensions of time granted thereto, at the sole discretion of the City of Ann Arbor, this Contract may be terminated with no additional compensation due to the Contractor, and the Contractor may be forbidden to bid on future City of Ann Arbor projects for a period of at least three (3) years. If the Engineer elects to terminate the Contract, contract items paid for on a Lump Sum basis shall be paid up to a maximum percentage equal to the percentage of the contract work that has been completed.

DS- 2

**DETAILED SPECIFICATION  
FOR  
COORDINATION AND COOPERATION WITH OTHERS  
AND  
WORK BY OTHERS**

**1 of 1**

The Contractor is reminded as to the requirements of article 104.07 of the 2020 edition of the MDOT Standard Specifications, "Cooperation by the Contractor."

The Contractor shall directly coordinate his/her work with individual City Departments/Divisions/Units.

No additional compensation will be paid to the Contractor, and no adjustments to contract unit prices will be made, due to delays and/or the failure of others in the performance of their work, nor for delays due to the encountering of existing utilities that are, or are not, shown on the Plans.

The following Utility Owners, and others not listed specifically, may have overhead and/or underground facilities located within the Right-of-Way/Public Easements:

The City of Ann Arbor  
University of Michigan (UM)  
Michigan Department of Transportation (MDOT)  
AT&T  
Comcast  
DTE Energy - Detroit Edison Company (Edison)  
DTE Energy - Michigan Consolidated Gas Company (Michcon)  
Fiber Link Inc.  
Light Core (Century Tel)  
MCI Communications  
Windstream Communications

**On all projects:**

**"3 Working Days before you Dig - Call MISS DIG - Toll Free" Phone No. 1-800-482-7171.**

The Owners of public or private utilities which will not interfere with the completed project and which do not present a hazard to the public or an extraordinary hazard to the Contractor's operations will not be required to move their facilities on or from the street right-of-way.

During the life of this contract, other public authorities and utility companies may be performing work within or adjacent to the project limits, including, but not limited to; construction of adjacent projects, underground utility work, permanent signing and traffic signals work, traffic control improvements, street maintenance and snow removal, etc. The Contractor shall cooperate and coordinate construction activities with these agencies in accordance with Article 104.08 of the 2020 edition of the MDOT Standard Specifications for Construction.

Stoppages created solely by the operations of the utility companies which delay utility revisions on any portion of this project may be considered as a basis of claim for an extension of time for project completion.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."

DS- 3

**DETAILED SPECIFICATION  
FOR  
MAINTENANCE OF TRAFFIC**

**1 of 2**

**DESCRIPTION**

Traffic shall be maintained in accordance with the City of Ann Arbor Public Services Department Standard Specifications and as specified in Sections 104.11, 812, and 922 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, the 2011 Michigan Manual of Uniform Traffic Control Devices (MMUTCD), and as described herein.

The Contractor shall furnish, erect, maintain and, upon completion of the work, remove all traffic control devices and barricade lights as required on the project for the safety and protection of local traffic. This includes, but is not limited to, temporary advance, regulatory, and warning signs; barricades and channelizing devices at intersections and on streets where traffic is to be maintained; barricades at the ends of the project and at right-of-way lines of intersecting streets, and traffic control devices for moving construction operations.

**MATERIALS**

The materials and equipment shall meet the requirements specified in the corresponding sections of the MDOT 2012 Standard Specifications for Construction and the 2011 MMUTCD.

**Maintenance of Local Traffic**

Unless otherwise indicated on the plans, all side roads shall not be closed to through traffic except during construction operations of short duration and only upon written approval of the Engineer.

Local access shall be maintained at all times for emergency vehicles, refuse pick-up, mail delivery, school buses, and ingress/egress to public and private properties.

Contractor must accommodate the safe access to the residential buildings and businesses located within construction area.

Driveways shall not be blocked for extended periods of time unless arrangements can be made with the affected property owner(s). When it becomes necessary to temporarily block driveways, the Contractor shall notify the affected property owners in advance to coordinate the work and allow sufficient time for vehicles to vacate from properties. It may be necessary to allow for vehicles to temporarily park in the roadway at locations that do not interfere with the Contractor's work. During these periods the owners of the respective vehicles must be available to, with proper notice, move their vehicles if it becomes necessary to accommodate the work.

At times, when it becomes necessary to temporarily obstruct local traffic during the performance of the work, the Contractor shall provide traffic regulator control in conformance with Chapter 6E of the MMUTCD, Sections 6E.01 thru 6E.08. A minimum of two traffic regulators are required. The cost of traffic regulator control shall be included in the contract pay item "Minor Traffic Control, Modified, Maximum \$100,000".

A lane-closure permit shall be obtained by the Contractor from the Engineering Department, at least 48 hours in advance of any proposed lane or street closing.

DS- 4

**DETAILED SPECIFICATION  
FOR  
MAINTENANCE OF TRAFFIC**

**2 of 2**

No lane closures shall be permitted during the Independence Day and Labor Day holiday periods, as defined by the Engineer.

The hours of work on all Local streets are 7:00 a.m. to 8:00 p.m., Monday through Saturday, or as specified on the lane-closure permit. No equipment will be allowed in the street before or after these hours. Local streets may only be closed to through traffic (local access only) with written authorization of the Engineer. Work must be completed each day such that all streets are re-opened to through traffic by 8:00 p.m. unless otherwise specified, directed, or authorized in writing by the Engineer. All major changes in traffic control shall be made either between 9:30 a.m. and 3:30 p.m. or between 7:00 p.m. and 6:30 a.m. in order to minimize interference with rush-hour traffic. All traffic controls must be in-place and ready for traffic each day by 6:30 a.m. and 3:30 p.m.

The Contractor shall temporarily cover conflicting traffic and/or parking signs when directed by the Engineer.

The Contractor shall use quantities of dust palliative, maintenance aggregate, and cold patching/HMA mixtures for use as temporary base, surfacing, and dust control at utility crossings, side roads and driveways (wherever required to maintain traffic), and where directed by the Engineer to maintain local access. The cost for the use of dust palliative, maintenance aggregate, cold patch and/or hot mix asphalt 36A mixture, as required and directed by the Engineer for maintenance of traffic and local access, shall be included in contract pay item "General Conditions," and it will not be paid for separately.

The work of maintaining and relocating existing warning, regulatory and/or guide signs; and of removing, salvaging and reinstalling existing signs and supports is included in the bid price for the contract pay item "Minor Traffic Control, Modified, Maximum \$ 100,000 ”.

Mailboxes and newspaper boxes that are in the way of the construction shall be removed and reset immediately in a temporary location approved by the Engineer. Mail and paper delivery shall not be interrupted during the construction. Upon completion of the construction, all mailboxes and newspaper boxes, including their supports, shall be repositioned in their permanent locations as approved by the Engineer. This work shall be included the contract unit price for the contract pay item "General Conditions," and it will not be paid for separately.

The Contractor shall perform the work of this Contract while maintaining traffic in accordance with the Contract Documents as specified herein. No traffic shall be allowed on newly placed asphalt surfaces until rolling has been satisfactorily completed and the surface has cooled sufficiently to prevent damage from traffic. This is to be accomplished by flag persons and by relocating traffic control devices to prevent traffic from entering the work area until such time that it can be safely maintained without damaging the new construction. The Contractor shall provide traffic regulators in sufficient number to maintain traffic as described herein, and to keep traffic off sections being surfaced, and provide for safe travel at all times as directed by the Engineer.

The Contractor shall furnish, erect, maintain, and upon completion of the work, remove any and all traffic control devices utilized on the project.

Each pressure distributor, paver and roller shall be equipped with at least one approved flasher light which shall be mounted on the equipment so as to give a warning signal ahead and behind.

DS- 5

**DETAILED SPECIFICATION  
FOR  
CONSTRUCTION SEQUENCING**

**1 of 1**

The Contractor must submit a detailed progress schedule at the Pre-construction meeting which is to be approved by the Engineer. Unless an alternative sequence is requested by the Contractor and approved in writing by the Engineer, the work shall be performed in the order as shown on the schedule. This outline does not detail the full range of materials and processes needed to complete the work under this Contract. At each location the Contractor shall:

1. Install the required temporary traffic control devices in accordance with the construction plans, as detailed in the specifications, and as directed by the Engineer.
2. Install the soil erosion control measures in accordance with the plans and as directed by the Engineer.
3. Obtain approval for, set up, and shut down the flow to the valve.
4. Replace the valve-in-well in accordance with the plans and specifications.
5. Restore the flow in the water main.
6. Perform final cleanup and restoration in accordance with the Contract documents.
7. Remove temporary soil erosion and sedimentation control measures.
8. Remove all temporary traffic control devices.

DS- 6

**DETAILED SPECIFICATION  
FOR  
HOURS OF WORK**

**a. General Restrictions.- Hours** of work shall be as stated in the Ann Arbor City Code Title IX, Chapter 119, Page 9.363, Monday through Saturday, between the hours of 7:00 a.m. and 8:00 p.m.

**b. Exceptions.-** Additional work restrictions are contained in the Detailed Specifications for “Project Schedule,” “Maintenance of Traffic,” “Working Space,” “Construction Sequencing,” and elsewhere in the Contract Documents. These work restrictions shall take precedence over the General Restrictions and Exceptions listed above.

The Contractor shall only perform work at night or on Sundays as required by the Contract Documents, unless there is a special need and the work is approved by the Engineer. All requests to work during off-hours shall be included in the Contractor’s progress schedule and submitted to the Engineer for approval a minimum of 5 working days prior to beginning the work.

**c. Noise Control. -** All noise generated by construction activities shall not exceed 71 decibels (dBA) beyond the property line of the property on which the work is being conducted between 7:00 a.m. and 8:00 p.m., Monday through Saturday. The Contractor shall provide screening, noise absorption, and level II sound attenuation as required on equipment to meet the noise limitations set herein. Any “off-hour” work will require a temporary exemption from the City of Ann Arbor City Administrator. A temporary exemption may be granted in accordance with each respective entities’ code of ordinance.

**d. Method of Payment.-** The costs of night work, whether required by the Contract Documents or requested by the Contractor, shall not be paid for separately, but shall be considered included in the cost of the affected contract pay items.



**DETAILED SPECIFICATION  
FOR  
WORKING IN THE RAIN**

Portions of the work to be performed under this contract are weather sensitive. Contractor shall be responsible for coordinating and scheduling their work in anticipation of the weather.

Sewer flow control must cease during wet weather conditions. Wet weather conditions are as defined in Detailed Specification "Sewer Flow Control."

In the event of a wet weather event, Contractor shall remove plugs installed for sanitary flow diversion. Plugs shall be reinstalled upon cessation of the wet weather event and as approved by the Engineer.

The Contractor shall not be compensated for the time and/or effort spent removing the temporary flow diversion plugs and the lateral bypass pumping system or for unused materials or downtime caused as a result of a wet weather event. The Contractor is solely responsible for repairing all damage to the work and to the site, including road infrastructure, road subgrades, underground utilities, any adjacent properties, and the like, which are damaged as a result of working in the rain or working in areas that are wet from recent precipitation.

The only exception to the above is as indicated in Detailed Specification "Extension of Time, Additional Compensation."

The costs of complying with this requirement shall not be paid for separately but shall be considered included in the cost of the affected contract pay items.

**DETAILED SPECIFICATION  
FOR  
EXTENSION OF TIME, ADDITIONAL COMPENSATION**

The Contractor shall notify the Engineer of their intent to submit a claim for additional compensation or an extension of time in accordance with the requirements of Section 104.10 of the 2020 edition of the Michigan Department of Transportation (MDOT) Standard Specifications for Construction. Failure to do so may be a basis for not approving the request for additional compensation or extension of time. The notification will allow the Engineer an opportunity to influence, keep records, and monitor the work.

Extensions of time will not be authorized due to delays caused by, or stemming from, the weather for the period between November 14th and April 16th unless any of the following conditions are present:

1. Air temperature (as measured from a thermometer provided, maintained, and installed by the Contractor in a location on the worksite, as mutually agreed upon between the Contractor and the Engineer) is below 15°F for a period of time longer than 48 consecutive hours.
2. Accumulations of snow in excess of 12 inches occur in any 24 hour period.
3. Freezing rain in excess of 1/4-inch occur in any 24 hour period.
4. Wet weather event, as defined in Detailed Specification “Sewer Flow Control” requiring the temporary removal of flow diversion plugs and lateral bypass pumping system.

Should the above mentioned weather conditions occur, and the Contractor requests an extension of contract time, the time extension shall only be for the realized delay to the controlling work operation.

The above weather delays shall not be considered as a basis for additional compensation on this project. The only exception shall be that if the temporary removal of the flow diversion plugs and lateral bypass pumping system occurred after the sewers had been cleaned, televised, prepped for lining, and approved by the Engineer for lining before the sewers were lined. In such an event, the Contractor may request compensation for the re-cleaning and re-televising of the affected pipes only. The re-cleaning must first be approved by the Engineer prior to the work beginning. No compensation shall be provided for the removal and re-installation of the plugs.

In addition, if delays resulting from air temperature, snow accumulation, and/or freezing rain occur and the Contractor has their bypass pumping system in place and operational, the Contractor shall still be responsible to continuously protect and maintain in operation the complete sewer flow control system. Expenses related to maintaining the bypass pumping system shall not be considered to be additional costs or extra expenses during an authorized extension of time due to these weather-related time extensions.

The Contractor shall anticipate underground utility complications arising from the proposed utility work, unknown and/or fragile utilities, and utilities requiring investigation and or relocation. These utilities may be shown on the Drawings, correctly or incorrectly, or not at all, and may delay a controlling operation.

Additional compensation is defined as additional work, extra work, upward unit price adjustments, payments for down time, and the like.

**DETAILED SPECIFICATION  
FOR  
ITEM #200 – GENERAL CONDITIONS, MODIFIED, MAXIMUM \$100,000**

**1 of 2**

**DESCRIPTION**

This item shall include all work described and required by the Plans and Specifications for which no item of work is listed in the Bid Form, including but not limited to:

- Scheduling and organization of all work, subcontractors, suppliers, testing, inspection, surveying, and staking
- Coordination of, and cooperation with, other contractors, agencies, departments, and utilities
- Protection and maintenance of Utilities
- Placing, maintaining, and removing all soil erosion and sedimentation controls, including stone inlets filers (as shown on project plants)
- Maintaining drainage
- Maintaining driveways drive openings, sidewalks, bike paths, mail deliveries, and solid waste/recycle pick-ups. This includes the placement and maintenance of gravel in driveway openings as directed by the Engineer
- Storing all materials and equipment off lawn areas
- Temporary relocation and final replacement/re-setting of mailboxes
- Site clean-up
- Coordination efforts to furnish various HMA mixtures as directed by the Engineer
- Coordination efforts to furnish and operate various-size vehicles/equipment as directed by the Engineer
- Furnishing and operating vacuum-type street cleaning equipment a minimum of once per week or more frequently as directed by the Engineer
- Furnishing and operating vacuum-type utility structure cleaning equipment
- Furnishing and operating both vibratory plate and pneumatic-type (“pogo-stick”) compactors
- Furnishing and operating a backhoe during all work activities
- Furnishing and operating a jackhammer and air compressor during all work activities
- Noise and dust control
- Mobilization(s) and demobilization(s)
- Furnishing submittals and certifications for materials and supplies
- Disposing of excavated materials and debris - The Contractor shall dispose of, at the Contractor’s expense, all excavated material. Costs for this work will not be paid for separately.
- All miscellaneous and incidental items such as overhead, insurance, and permits.
- Meeting all requirements relating to Debarment Certification, Davis Bacon Act, and Disadvantaged Business Enterprise, and providing the necessary documentation.

Data pertaining to existing soil borings and pavement sections which are included in Appendix B, of these Contract Documents are provided to help the Engineer and Contractor determine the soil conditions existing within the construction area. The City in no way guarantees existing conditions to be the same as shown in the data. The Contractor is solely responsible for any and all conclusions he/she may draw from the data.

Quantities as given are approximate and are estimated for bidding purposes. Quantities are not guaranteed and may vary by any amount. While it is the City's intent to complete the project substantially as drawn and specified herein, quantities may be changed or reduced to zero for cost savings or other reasons. **The City reserves the right to change the quantities, and no adjustment in unit price will be made for any change in any quantity.**

**DETAILED SPECIFICATION  
FOR  
ITEM #200 – GENERAL CONDITIONS, MODIFIED, MAXIMUM \$100,000**

**2 of 2**

**MEASUREMENT AND PAYMENT**

This item of work will be paid for on a pro rata basis at the time of each progress payment. Measurement will be based on the ratio between work completed during the payment period and the total contract amount. When all of the work of this Contract has been completed, the measurement of this item shall be 1.0 Lump Sum, minus any deductions incurred for inadequate performance as described herein. This amount will not be increased for any reason, including extensions of time, extras, and/or additional work.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

**PAY ITEM**

**PAY UNIT**

General Conditions, Modified, Maximum \$100,000

Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

**DETAILED SPECIFICATION  
FOR  
ITEM #201 - PROJECT SUPERVISION, MODIFIED, MAXIMUM \$50,000**

1 of 3

**DESCRIPTION**

The Contractor shall designate a full-time Project Supervisor to act as the Contractor's agent/representative, and to be responsible for scheduling and coordination of all subcontractors, suppliers, other governmental agencies, and all public and private utility companies.

The Project Supervisor shall not be an active crew member of the Contractor, shall not be an active member or employee of any subcontractor's work force, and shall not perform general or specialized labor tasks.

**The Project Supervisor shall work exclusively on this project, and shall put forth his/her full effort into the organization and coordination of the work of this project.**

Prior to the pre-construction meeting, the Contractor shall designate a proposed Project Supervisor by name, and shall furnish the City with a current, thorough, detailed summary of the proposed Project Supervisor's work history, outlining all previous supervisory experience on projects of a similar size and nature. The detailed work history shall include personal and professional references (names and phone numbers) of persons (previous owners or agents) who can attest to the qualifications and work history of the proposed Project Supervisor. Proposed candidates for Project Supervisor shall have a demonstrated ability to work harmoniously with the City, the public, subcontractors, and all other parties typically involved with work of this nature. The Supervising Professional will have the authority to reject a proposed Project Supervisor whom he/she considers unqualified.

The Project Supervisor shall be available 24 hours-per-day to provide proper supervision, coordination and scheduling of the project for the duration of the Contract. The Contractor shall furnish the City with telephone numbers of the Project Supervisor in order to provide 24 hour-per-day access during business and non-business hours, including weekends and holidays.

The Project Supervisor shall be equipped by the Contractor with a mobile telephone to provide the City with 24 hour-per-day access to him/her during daily construction activities, during transit to and from the construction site, and during all non-business hours including weekends and holidays.

The Project Supervisor shall be equipped with assistants as necessary to provide project supervision as specified herein, and in accordance with the Contract.

**DUTIES AND RESPONSIBILITIES**

The Project Supervisor work harmoniously with the City, the public, subcontractors, and all other parties typically involved with work of this nature.

The Project Supervisor shall have a thorough, detailed understanding and working knowledge of all construction practices and methods specified elsewhere herein, as well as the handling, placement, testing and inspection of aggregates, aggregate products, HMA concrete, and Portland cement concrete materials.

The Project Supervisor shall be responsible for all of the work of all of the Contractor's, subcontractors' and suppliers' work forces.

**DETAILED SPECIFICATION  
FOR  
ITEM #201 - PROJECT SUPERVISION, MODIFIED, MAXIMUM \$50,000**

**2 of 3**

The Project Supervisor shall be responsible for proper and adequate maintenance (emissions, safety, and general operation) of all of the Contractor's, subcontractors' and suppliers' equipment and vehicles.

The Project Supervisor shall be responsible for the legal, proper and safe parking/storage of all of the Contractor's, subcontractors' and suppliers' equipment, work vehicles, and employee's vehicles.

The Project Supervisor shall schedule and coordinate the work of all parties involved in the project, including utility companies, testing agencies, governmental agencies, all City departments (such as Utilities and Transportation), and City inspectors.

The Project Supervisor shall coordinate and schedule the work of any independent survey crews that may be retained by the City to witness and reset existing and new geographic/benchmark monuments. Failure to have existing monuments witnessed and reset may result in delays to the Contractor's work. Costs for such delays will be the Contractor's sole responsibility.

The Project Supervisor shall coordinate and schedule both testing inspectors and City inspectors in a timely manner, to assure proper and timely testing and inspection of the work.

The Project Supervisor shall review the Inspector's Daily Reports (IDRs) for accuracy, and shall sign all IDRs on a daily basis as the representative of the Contractor. Items to be reviewed include descriptions, locations and measurements of quantities of work performed, workforce, equipment, and weather. The Project Supervisor shall also be responsible for its subcontractors' review and initialing of IDRs containing work items performed by each respective subcontractors.

The Project Supervisor shall submit to the Engineer, an updated, detailed schedule of the proposed work on a weekly basis, and an update of all proposed changes on a daily basis, all in accordance with the Detailed Specification for Project Schedule contained elsewhere herein.

The Project Supervisor shall schedule and chair a weekly progress meeting with the Engineer and all subcontractors to discuss the work. Upon the completion of each meeting, the Project Supervisor shall prepare and distribute, to all present, a written summary of the meeting's minutes. Those in attendance shall review the minutes and, if necessary, comment on any deficiencies or errors prior to or at the next scheduled progress meeting.

**ADDITIONAL PERFORMANCE REQUIREMENTS**

If, in the sole opinion of the Supervising Professional, the Project Supervisor is not adequately performing the duties as outlined in this Detailed Specification, the following system of notices will be given to the contractor with the associated penalties:

First Notice – A warning will be issued in writing to the contractor detailing the deficiencies in the Project Supervision. The contractor must respond within 7 calendar days in writing with a plan to correct the stated deficiencies. Failure to respond within 7 calendar days will result in the issuing of a second notice.

**DETAILED SPECIFICATION  
FOR  
ITEM #201 - PROJECT SUPERVISION, MODIFIED, MAXIMUM \$50,000**

**3 of 3**

Second Notice – A second warning will be issued in writing to the contractor further detailing the deficiencies in the Project Supervision. The contractor must respond within 7 calendar days in writing with a plan to correct the stated deficiencies. Failure to respond within 7 calendar days will result in the issuing of a third notice. A deduction of 10% will be made from the original Project Supervision contract amount. At this time, the City reserves the right to meet with personnel with the necessary authority within the Contractor’s organization to discuss the deficiencies in the Project Supervision.

Third Notice – An additional deduction of 25% will be made from the original Project Supervision contract amount, and the Project Supervisor shall be removed from the project, and replaced immediately with another individual to be approved by the Supervising Professional.

Should, in the sole opinion of the Supervising Professional, the Project Supervisor fail to perform his/her duties and responsibilities as described herein to such a degree that the successful completion of the project is put in jeopardy, the above system of notices may be foregone, and the Contractor shall immediately replace the Project Supervisor upon receipt of written notice. Failure to provide adequate project supervision, as determined by the Engineer, shall be considered basis for the Supervising Professional to suspend work without extension of contract time or additional compensation.

**MEASUREMENT AND PAYMENT**

This item of work will be paid for on a pro rata basis at the time of each progress payment. Measurement will be based on the ratio between work completed during the payment period and the total contract amount. When all of the work of this Contract has been completed, the measurement of this item shall be 1.0 Lump Sum, minus any deductions incurred for inadequate performance as described herein. This amount will not be increased for any reason, including extensions of time, extras, and/or additional work.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

<b><u>PAY ITEM</u></b>	<b><u>PAY UNIT</u></b>
Project Supervision, Maximum \$50,000	Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the City Standard Specifications and as modified by this Detailed Specification.

**DETAILED SPECIFICATION  
FOR  
ITEM #202 – AUDIO VISUAL TAPE COVERAGE, MODIFIED**

**1 of 3**

**DESCRIPTION**

This work shall include digital audiovisual record of the physical, structural, and aesthetic conditions of the construction site and adjacent areas as provided herein. This work will be performed for the entire project limits prior to the start of construction.

The audio-visual filming shall be:

1. Of professional quality, providing a clear and accurate audio and visual record of existing conditions.
2. Prepared within the four (4) week period immediately prior to the start of construction
3. Furnished to the Engineer a minimum of one (1) week prior to bringing any materials or equipment within the areas described in this Detailed Specification.
4. Carried-out under the supervision of the Engineer.

The Contractor shall furnish one (1) copy of the completed audiovisual record to the Engineer. An index of the footage shall be included, which will enable any particular area of the project to be easily found. **This includes indexing the files according to street and Station number as applicable.** The Contractor shall retain a second copy of the audiovisual record for his/her own use.

Any portion of the film determined by the Engineer to be unacceptable for the documentation of existing conditions shall be filmed again at the Contractor's sole expense prior to mobilizing onto the site.

**PRODUCTION**

The audio-visual filming shall be completed in accordance with the following minimum requirements:

1. DVD Format, No Editing - The filming shall be done in color using equipment that allows audio and visual information to be recorded. Splicing or editing of the tape shall not be allowed and the speed and electronics of the videotaping equipment and DVD shall be equal to that which is standard to the videotaping industry.
2. Perspective / Speed / Pan / Zoom - To ensure proper perspective, the distance from the ground to the camera lens shall not be less than 10 feet and the filming must proceed in the general direction of travel at a speed not to exceed 48 feet per minute. Pan and zoom rates shall be controlled sufficiently so that playback will ensure quality of the object viewed.
3. Display - The recording equipment shall have transparent time, date stamp and digital annotation capabilities. The final copies of the tape shall continuously and simultaneously display the time (hours:minutes:seconds) and the date (month/date/year) in the upper left-hand corner of the frame. Accurate project stationing, where applicable, shall be included in the lower half of the frame in standard format (i.e. 1+00). Below the stationing periodic information is to be shown, including project name, name of area shown, street address, direction of travel, viewing direction, etc. If in the event, the stationing has not been established on-site, refer to the plans and approximate the proposed stationing.



**DETAILED SPECIFICATION  
FOR  
ITEM #202 – AUDIO VISUAL TAPE COVERAGE, MODIFIED**

**2 of 3**

4. Audio Commentary / Visual Features. Locations relative to project limits and landmarks must be identified by both audio and video means at intervals no longer than 100 feet along the filming route. Additional audio commentary shall be provided as necessary during filming to describe streets, buildings, landmarks, and other details, which will enhance the record of existing conditions.
5. Visibility / Ground Cover - The filming shall be performed during a time of good visibility. Filming shall not be performed during periods of precipitation or when snow, leaves, or other natural debris obstruct the area being filmed. The Contractor shall notify the Engineer in writing in the event that the weather or snow cover is anticipated to cause a delay in filming.

**COVERAGE**

The audio-visual film coverage shall include the following:

1. General Criteria - This general criteria shall apply to all filming and shall include all areas where construction activities will take place or where construction vehicles or equipment will be operated or parked and or where materials will be stored. The filming shall extend an additional 50 feet outside of all areas. The filming shall include all significant, existing man-made and natural features such as driveways, sidewalks, utility covers, utility markers, utility poles, other utility features, traffic signal structures and features, public signs, private signs, fences, landscaping, trees, shrubs, other vegetation, and other similar or significant features.
2. Other Areas - The Contractor shall film at his sole expense other areas where, in his/her opinion, the establishment of a record of existing conditions is warranted. The Contractor shall notify the Engineer in writing of such areas.

The Engineer may direct the filming of other minor areas not specified herein at the Contractor's sole expense.

**AUDIOVISUAL FILMING SERVICES**

The following companies are known to be capable of providing the filming services required by this Detailed Specification and shall be utilized, unless the Contractor receives prior written approval from the Engineer to utilize another company of comparable or superior qualifications.

- Construction Video Media
- Midwest Company
- Topo Video, Inc.
- Video Media Corp.
- Finishing Touch Photo and Video
- Pre-Construction Media

**DETAILED SPECIFICATION  
FOR  
ITEM #202 – AUDIO VISUAL TAPE COVERAGE, MODIFIED**

**3 of 3**

**MEASUREMENT AND PAYMENT**

The completed work as measured for these items of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Items:

**PAY ITEM**

**PAY UNIT**

Audiovisual Tape Coverage, Modified

Lump Sum

Audiovisual Tape Coverage shall include all labor, equipment, and materials required to perform the filming and to provide the finished videotape the Engineer. The unit price includes filming the entire project limits, for each and every street, as described above.

**DETAILED SPECIFICATION  
FOR  
ITEM #203 – MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$100,000**

**1 of 5**

**DESCRIPTION**

The work shall include, but is not limited to the following:

- The furnishing and operating of miscellaneous signs, warning devices, traffic regulators, flags, paddles, and cones;
- The operation of additional signs furnished by the City;
- Furnishing and installing meter bags;
- Coordinating with the City to have meter heads removed and reinstalled;
- Maintaining pedestrian traffic;
- Temporarily covering traffic controls;
- Temporarily covering existing signs as directed;
- Any and all other miscellaneous and/or incidental items which are necessary to properly perform the work.

This work shall consist of protecting and maintaining vehicular and pedestrian traffic, in accordance with Sections 104.11 and 812 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction; Part 6 of the 2011 Edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD); and the City of Ann Arbor Standard Specifications for Construction, except as modified herein.

**MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS**

Materials and equipment shall meet the requirements specified in the above designated sections of the MDOT 2020 Standard Specifications for Construction.

The Contractor shall maintain two-way traffic on major streets, access for local traffic on local streets, and keep all intersections open to traffic at all times, unless specifically authorized in writing by the Engineer.

The Contractor shall maintain traffic such that no vehicle shall be required to drive into active work areas. Patch areas which extend more than halfway across the roadway shall be removed and replaced so as to provide a minimum of half the pavement width at all times for maintaining traffic.

The Contractor shall keep all driveways open at all times, unless specifically authorized in writing by the Engineer.

The Contractor shall maintain pedestrian traffic at all times. For maintaining normal pedestrian traffic while performing sidewalk and driveway repair, Plastic Drum, High Intensity, Lighted shall be placed by the Contractor as directed by the Engineer. The Contractor, when directed by the Engineer, shall place "Sidewalk Closed" and/or "Cross Here" signs and the cost shall be included in this pay item and will not be paid for separately.

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the Contractor or City.

**DETAILED SPECIFICATION  
FOR  
ITEM #203 – MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$100,000**

**2 of 5**

All existing signs, and signs erected by the City of Ann Arbor on this project shall be preserved, protected, and maintained by the Contractor. The City will repair any existing City owned signs, at the Contractor's expense, which are damaged by the Contractor during the work.

The Contractor shall obtain a Traffic Detour or Lane Closure Permit from the City's Project Management Services Unit, at least 48 hours in advance of any proposed lane or street closing.

Traffic on major streets should not be impacted between the hours of 7:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 6:00 p.m. without written permission from the Engineer or as specified on the Lane Closure Permit. All major changes in traffic control shall be made either between 9:00 a.m. and 3:30 p.m. or between 7:00 p.m. and 6:30 a.m. in order to minimize interference with rush hour traffic. All traffic controls must be in place and ready for traffic each day by 6:30 a.m. and 3:30 p.m.

The hours of work on all local streets are 7:00 a.m. to 8:00 p.m., Monday through Saturday, or as specified on the Lane Closure Permit. No equipment will be allowed in the street before or after these hours. Local streets may only be closed to through traffic (local access only) with written authorization of the Engineer. Work must be completed each day such that all streets are re-opened to through traffic by 8:00 p.m. unless otherwise specified, directed, or authorized in writing by the Engineer.

The Contractor shall temporarily cover conflicting traffic and/or parking signs when directed by the Engineer.

Parking violation citations issued to the Contractor, subcontractor, and material suppliers including each of their respective employees shall be enforced under appropriate City Code.

The Contractor shall replace missing or damaged traffic control devices as directed by the Engineer. When traffic control devices have been damaged by, or due to, the negligence of the Contractor, its subcontractors or material suppliers, the traffic control devices shall be replaced at the Contractor's expense.

The work for Minor Traffic Control, Modified shall include: furnishing and operating of miscellaneous signs and warning devices; furnishing cones; operating additional signs furnished by the City throughout the life of the Contract; furnishing and operating pedestrian traffic control devices; maintaining a safe trench during all non-working hours; maintaining access to all drives; covering conflicting existing signs and removal of these covers; and any and all other miscellaneous and/or incidental items which are necessary to properly perform the work.

Where there is metered parking, the Contractor shall either rent and install meter bags, or, with the Engineer's authorization, coordinate with the City Field Services to have meter heads removed and reinstalled.

The Contractor shall maintain vehicular and pedestrian traffic during the work by the use of traffic regulators, channelizing devices and signs as necessary, as directed by the Engineer, and in accordance with 2011 Edition of the MMUTCD. Typical applications for maintaining pedestrian traffic in accordance with the 2011 Edition of the MMUTCD are included in this detailed specification.

**DETAILED SPECIFICATION  
FOR  
ITEM #203 – MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$100,000**

**3 of 5**

In order to maintain areas of on-street parking available for residents, the Engineer may direct the contractor to cover and uncover temporary “No Parking” signs within the project limits multiple times throughout the course of the project. Such repeated covering and uncovering of signs shall be included in this item of work and shall not be paid for separately.

**MEASUREMENT AND PAYMENT**

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

Costs for transporting barricades and other temporary traffic control devices shall be included in the bid prices for the individual items of work.

Minor Traffic Control, Modified, Maximum \$25,000 will be paid for on a pro rata basis with each progress payment. Measurement will be based on the ratio between work completed during the payment period and the total contract amount. When all of the work of this Contract has been completed, the measurement of this item shall be 1.0 Lump Sum minus any deductions incurred for inadequate performance as described herein. This amount will not be increased for any reason, including extensions of time, extras, and/or additional work.

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

**PAY ITEM**

**PAY UNIT**

Minor Traffic Control, Modified, Maximum \$100,000

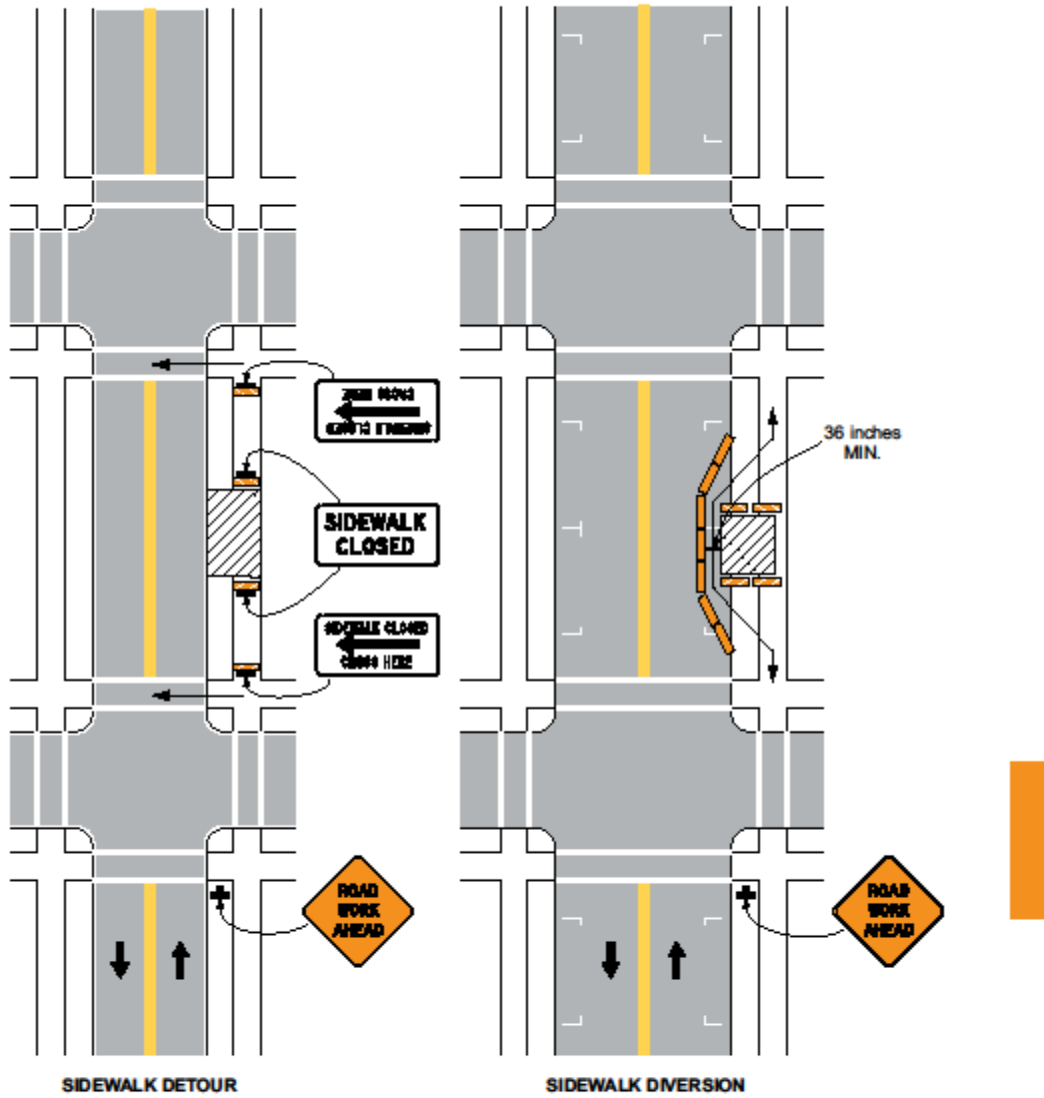
Lump Sum

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the MDOT and City Standard Specifications for Construction, and as modified by this Detailed Specification.

**DETAILED SPECIFICATION  
FOR  
ITEM #203 – MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$100,000**



**Figure 6H-28. Sidewalk Detour or Diversion (TA-28)**

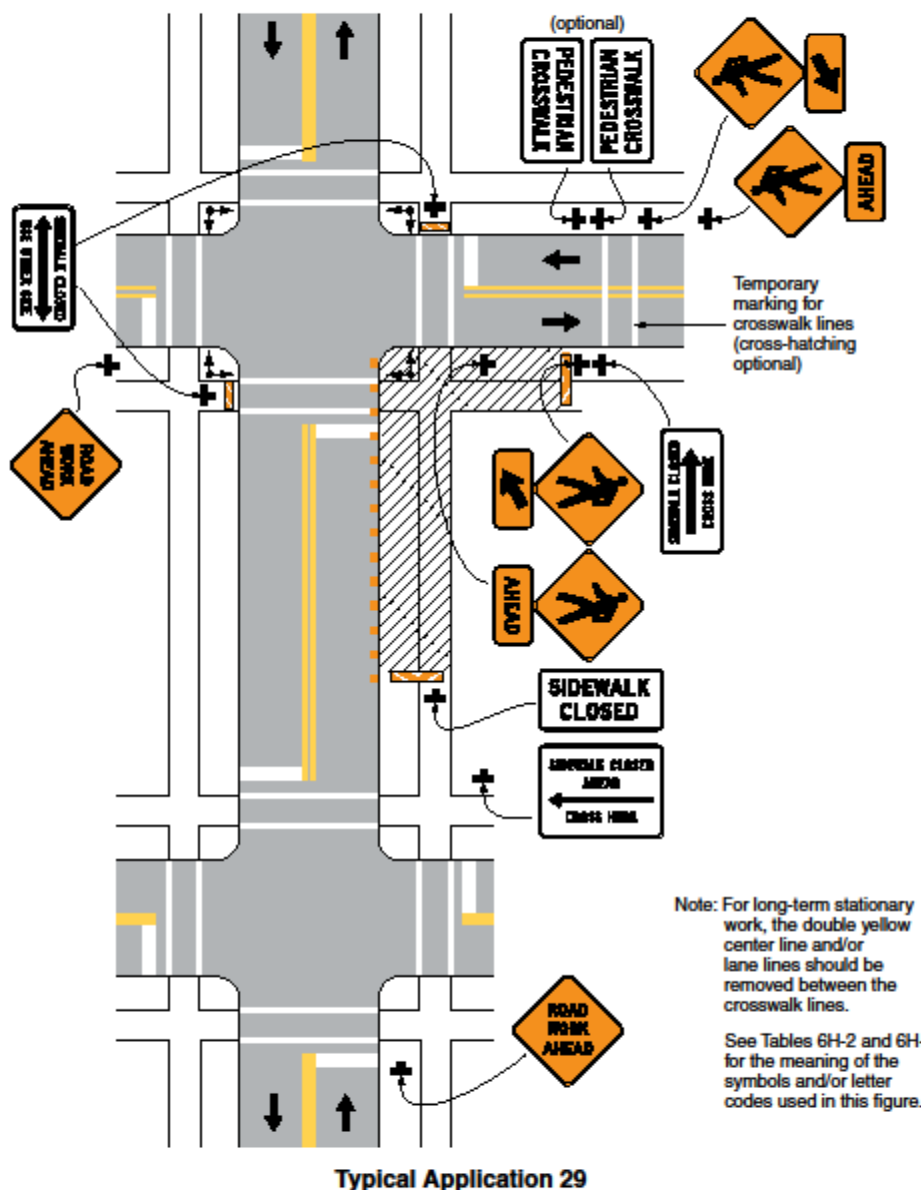


**Typical Application 28**

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

**DETAILED SPECIFICATION  
FOR  
ITEM #203 – MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$75,000**

**Figure 6H-29. Crosswalk Closures and Pedestrian Detours (TA-29)**



**DETAILED SPECIFICATION  
FOR  
ITEMS #204/205 – BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED,  
LIGHTED, FURN/OPER  
ITEMS #206/207 – CHANNELIZING DEVICE, 42 INCH, FURN/OPER  
ITEMS #208/209 – LIGHTED ARROW, TYPE C, FURN/OPER  
ITEMS #210/211 – PLASTIC DRUM, HIGH INTENSITY, LIGHTED, FURN/OPER  
ITEMS #212/213 – SIGN, TYPE B, TEMP, PRISMATIC, FURN/OPER**

1 of 3

**DESCRIPTION**

This work shall consist of protecting and maintaining vehicular and pedestrian traffic in accordance with Sections 140.11, 812, and 922 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction; Part 6 of the 2011 Edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD); and the City of Ann Arbor Standard Specifications for Construction, except as modified herein.

**MATERIALS, EQUIPMENT, AND CONSTRUCTION METHODS**

Materials and equipment shall meet the requirements specified in the above designated sections of the MDOT 2012 Standard Specifications for Construction.

The Contractor shall maintain traffic such that no vehicle shall be required to drive into active work areas. Patch areas which extend more than halfway across the roadway shall be removed and replaced so as to provide a minimum of half the pavement width at all times for maintaining traffic.

The Contractor shall maintain pedestrian traffic at all times. For maintaining normal pedestrian traffic while performing sidewalk and driveway repair, Type III Barricades and/or Plastic Drums shall be placed by the Contractor, as directed by the Engineer. "Sidewalk Closed" and/or "Cross Here" signs shall be placed, by the Contractor, when directed by the Engineer.

All temporary traffic/pedestrian control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

All existing signs, and signs erected by the City of Ann Arbor on this project shall be preserved, protected, and maintained by the Contractor. Existing City owned signs which are damaged by the Contractor during the work will be repaired by the City at the Contractor's expense.

Parking violation citations issued to the Contractor, subcontractor, and material suppliers including each of their respective employees shall be enforced under appropriate City Code.

The Contractor shall replace missing or damaged traffic control devices, as directed by the Engineer. When traffic control devices have been damaged by, or due to, the negligence of the Contractor, his subcontractors or material suppliers, the traffic control devices shall be replaced at the Contractor's expense.

**Lighted Plastic Drums, Type III Barricades, and Type B Temporary Signs**

The Contractor shall furnish and operate these items as directed by the Engineer.



**DETAILED SPECIFICATION  
FOR  
ITEMS #204/205 – BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED,  
LIGHTED, FURN/OPER  
ITEMS #206/207 – CHANNELIZING DEVICE, 42 INCH, FURN/OPER  
ITEMS #208/209 – LIGHTED ARROW, TYPE C, FURN/OPER  
ITEMS #210/211 – PLASTIC DRUM, HIGH INTENSITY, LIGHTED, FURN/OPER  
ITEMS #212/213 – SIGN, TYPE B, TEMP, PRISMATIC, FURN/OPER**

2 of 3

Type III Barricades shall have standard orange-and-white stripes on both sides of the barricade.

Sufficient signs shall be provided by the Contractor to insure the safety of the workers and the general public in accordance with the 2011 Edition of the MMUTCD.

"Construction Ahead" warning signs shall be placed, as indicated on the Plans, or as directed by the Engineer, prior to the start of work, regardless of the nature, magnitude or duration of the work.

**MEASUREMENT AND PAYMENT**

All temporary traffic control devices furnished by the Contractor shall remain the property of the Contractor. The City shall not be responsible for stolen or damaged signs, barricades, barricade lights or other traffic maintenance items. The Contractor shall replace missing traffic control devices immediately, at no additional cost to the City.

Costs for transporting barricades and other temporary traffic control devices shall be included in the bid prices for the individual items of work.

Barricade, Type III, High Intensity, Double Sided, Lighted, Furn/Oper

Payment for furnishing and operating lighted Type III barricades shall be for the maximum quantity in-place at any one time during the work of the entire project (all streets).

Channelizing Device, 42 inch, Furn/Oper

There will be a one-time payment for each street for the maximum number of channelizing devices in-place (operated) at any one time, as directed by the Engineer.

Lighted Arrow, Type C, Furn/Oper

Payment for lighted arrow shall be for the maximum quantity used on each street.

Plastic Drum, High Intensity, Lighted, Furn/Oper

There will be a one-time payment for each street for the maximum number of plastic drums in-place (operated) at any one time, as directed by the Engineer.

Sign, Type B, Temp, Prismatic, Furn/Oper

Payment for temporary signs shall be for the maximum quantity used on each street.

**DETAILED SPECIFICATION  
FOR  
ITEMS #204/205 – BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED,  
LIGHTED, FURN/OPER  
ITEMS #206/207 – CHANNELIZING DEVICE, 42 INCH, FURN/OPER  
ITEMS #208/209 – LIGHTED ARROW, TYPE C, FURN/OPER  
ITEMS #210/211 – PLASTIC DRUM, HIGH INTENSITY, LIGHTED, FURN/OPER  
ITEMS #212/213 – SIGN, TYPE B, TEMP, PRISMATIC, FURN/OPER**

**3 of 3**

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

<b><u>PAY ITEM</u></b>	<b><u>PAY UNIT</u></b>
Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Each
Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Each
Channelizing Device, 42 inch, Furn	Each
Channelizing Device, 42 inch, Oper	Each
Lighted Arrow, Type C, Furn	Square Foot
Lighted Arrow, Type C, Oper	Square Foot
Plastic Drum, High Intensity, Lighted, Furn	Each
Plastic Drum, High Intensity, Lighted, Oper	Each
Sign, Type B, Temp, Prismatic, Furn	Each
Sign, Type B, Temp, Prismatic, Oper	Each

**DETAILED SPECIFICATION  
FOR  
ITEM #214 – “NO PARKING” SIGN**

**1 of 1**

**DESCRIPTION**

This work shall consist of installing, maintaining and removing of "No Parking" signs and posts as outlined herein and as referenced on the plans. "No Parking" signs shall be installed in accordance with the Public Services Department Standard Specifications and the 2011 Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

**MATERIAL**

All materials for this work shall conform to the requirements of the Public Services Department Standard Specifications.

**CONSTRUCTION METHODS**

Prior to the commencement of any construction activity, the Contractor shall place “No Parking” signs as directed by the Engineer. The Contractor shall obtain a permit for “Temporary Permission of Reserve Parking Lane for Work Related Purposes” from the City’s Project Management Services Unit. This permit shall be obtained a minimum of 5 business days prior to the posting of “No Parking” signs.

The City will furnish "No Parking" signs to the Contractor at no cost. The Contractor shall furnish the signposts and shall securely bolt the signs to the signposts as directed by the Engineer. The Contractor shall install the signposts at least two feet deep into the ground, and there shall be a minimum of six feet and maximum of seven feet of clearance maintained between the bottom of the sign and the ground. The signs are to be placed at intervals no more than 150 feet and as necessary to eliminate parking in the construction area.

The installation of "No Parking" signs shall be in accordance with the permit. "No Parking" signs shall be installed by the Contractor, as directed by the Engineer, at least 48 hours prior to the proposed start-of-work/enforcement date. "No Parking" signs shall be covered by the Contractor, thereby allowing on-street parking, until between 48 and 24 hours prior to the start of the work. "No Parking" signs shall be covered by the Contractor whenever there is no work being performed for a period of time longer than 72 hours. "No Parking" signs shall be returned to the City upon the completion of work. The cost of unreturned signs will be back charged to the Contractor.

**MEASUREMENT AND PAYMENT**

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

**PAY ITEM**

**PAY UNIT**

“No Parking” Sign

Each

"No Parking" signs will be measured as the maximum number installed on each street at any one time. The unit price includes the removal and return of "No Parking" signs to the City upon completion of the project. The Contractor shall be back charged for the replacement costs for damaged or unreturned signs.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN TYPE II BARRICADE  
1 of 2**

**DESCRIPTION.**

This work consists of furnishing, installing, maintaining, relocating, and removing a temporary pedestrian Type II barricade section as identified in the proposal or on the plans. Use temporary pedestrian Type II barricades to close non-motorized facilities including sidewalks, bicycle paths, pedestrian paths, and shared use paths that are not part of the roadway. One pedestrian Type II barricade is defined as a barricade section at least 4 feet wide, including all supports, ballast, and hardware.

**MATERIALS.**

Provide a temporary pedestrian Type II barricade that meets the requirements of National Cooperative Highway Research Program Report 350 (NCHRP 350) or Manual for Assessing Safety Hardware (MASH), in addition to meeting the following requirements:

1. Provide barricade sections at least 4 feet wide, designed to interconnect to ensure a continuous Americans with Disabilities Act (ADA) compliant tactile barrier. Ensure the connection includes provisions to accommodate non-linear alignment as well as variations in elevation at the installation area.
2. Ensure the top surface of the barricade is designed to function as a hand-trailing edge, and has a height between 32 and 38 inches. Ensure the lower edge of the barricade is no more than 2 inches above the surface of the non-motorized facility. Ensure the top edge of the bottom rail of the barricade is a minimum of 8 inches above the surface of the non-motorized facility. The barricade may have a solid continuous face. Finally, all features on the front face of the barricade (the face in contact with pedestrians) must share a common vertical plane.
3. Equip both sides of the barricade with bands of alternating 6-inch wide orange and white vertical stripes of reflective sheeting. Two bands of sheeting 6 inches tall and a minimum of 36 inches long containing at least two orange and two white stripes each are required. One band placed near the top and one near the bottom if the barricade section has a solid face. If the barricade consists of two rails, affix one band of sheeting to each rail. Ensure the stripes of reflective sheeting are aligned vertically. Ensure this sheeting meets or exceeds the requirements of ASTM D 4956 Type IV sheeting.

**CONSTRUCTION.**

Construct the temporary pedestrian Type II barricade in accordance with the manufacturer's recommendations, Michigan Manual on Uniform Traffic Control Devices (MMUTCD), the plans, and the following requirements:

4. Install the barricade as shown on the plans and as directed by the Engineer. Interconnect all barricade sections using hinge components if necessary to ensure a continuous detectable edge for the entire installation. Ensure the barricade is ballasted according to the manufacturer's recommendations to ensure stability during wind events and contact with pedestrians.
5. When the barricade is installed near motor vehicle traffic, ensure reflective sheeting is visible to motorists.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN TYPE II BARRICADE  
2 of 2**

3. When pedestrian Type II barricades are used to close a non-motorized facility, ensure a sufficient number of barricade sections are used to block the entire width of the facility. The barricade may extend outside the edge of the non-motorized facility but must not be less than the full width of the facility.

4. If sections of multiple colored barriers are used (i.e. safety orange and white) install the sections such that the colors alternate to increase conspicuity.

5. Ensure pedestrian Type II barricades are not used to close a motor vehicle facility. Ensure these barricades are not used to guide pedestrian traffic on a motor vehicle facility in the presence of active traffic. This prohibition includes bicycle/shared use lanes or shoulders in the presence of active traffic.

**MEASUREMENT AND PAYMENT.**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**PAY ITEM**

**PAY UNIT**

Pedestrian Type II Barricade, Temp, Furn & Oper..... Each

**Pedestrian Type II Barricade, Temp, Furn & Oper** includes all labor, equipment, and materials to furnish, install, maintain, relocate, and remove one barricade section that is at least 4 feet wide. Additional payment will not be made if wider sections are provided. This includes all rails, supports, ballast, hinge points, reflective sheeting, and miscellaneous hardware needed to install and maintain a barricade section.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN TYPE II CHANNELIZER**

**1 of 2**

**DESCRIPTION.**

This work consists of furnishing, installing, maintaining, relocating, and removing temporary pedestrian channelizers as identified in the proposal or on the plans. Use temporary pedestrian channelizers to guide pedestrians along a temporary non-motorized facility, and to create separation of pedestrians from construction areas near existing facilities. Replace damaged temporary pedestrian Type II channelizers as directed by the Engineer.

**MATERIALS.**

Provide a temporary pedestrian channelizer that is crashworthy according to the National Cooperative Highway Research Program Report 350 (NCHRP 350) or Manual for Assessing Safety Hardware (MASH), in addition to meeting the following requirements:

1. Ensure the channelizer is designed to interconnect to maintain continuous delineation along the entire installation. This includes provisions to accommodate non-linear alignment as well as variations in elevation.

2. Ensure the top surface of the channelizer is designed to function as a hand-trailing edge, and have a height between 32 and 38 inches. Ensure this top surface is designed to have a 2 inch horizontal gap between the top edge and the support (if so equipped), to allow for continuous hand-trailing without obstructions. Ensure the lower edge of the channelizer is no more than 2 inches above the surface of the non-motorized facility. Ensure the top edge of the bottom rail of the channelizer is a minimum of 8 inches above the surface of the non-motorized facility or the channelizer may have a solid continuous face. Finally, all features on the front face of the channelizers (the face in contact with pedestrians) must share a common vertical plane.

3. Equip both sides of the channelizer with bands of alternating 6-inch wide orange and white vertical stripes of reflective sheeting. Two bands of sheeting 6 inches tall and a minimum of 36 inches long containing at least two orange and two white stripes each are required. One band placed near the top and one near the bottom if the channelizer section has a solid face. If the channelizer consists of two rails, affix one band of sheeting to each rail. Ensure the stripes of reflective sheeting are aligned vertically. Ensure this sheeting meets or exceeds the requirements of ASTM D 4956 Type IV sheeting.

**CONSTRUCTION.**

Deploy the temporary pedestrian Type II channelizer in accordance with the manufacturer's recommendations, the Michigan Manual on Uniform Traffic Control Devices (MMUTCD), the plans, and the following requirements:

4. Install the channelizer as shown on the plans and as directed by the Engineer. Interconnect all channelizers using hinge components if necessary to ensure a continuous detectable edge for the entire installation. Ensure the channelizers are ballasted according to the manufacturer's recommendations to ensure stability during wind events and contact with pedestrians.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN TYPE II CHANNELIZER**

**2 of 2**

2. When the channelizers are installed near motor vehicle traffic, ensure reflective sheeting is visible to motorists providing appropriate delineation for the pedestrian path.

3. If sections of multiple colored barriers are used (i.e safety orange and white), install the sections such that the colors alternate to increase conspicuity.

4. Ensure temporary pedestrian Type II channelizers are not used to guide pedestrian traffic on a motor vehicle facility in the presence of active traffic. This prohibition includes bicycle/shared use lanes or shoulders in the presence of active traffic. Ensure temporary pedestrian channelizers are not used to channelize motor vehicle traffic, or separate motor vehicle and pedestrian traffic.

**MEASUREMENT AND PAYMENT.**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**PAY ITEM**

**PAY UNIT**

Pedestrian Type II Channelizer, Temp ..... Foot

**Pedestrian Type II Channelizer, Temp** includes all labor, equipment, and materials to furnish, install, maintain, relocate and remove rails or wall sections, supports, ballast, and hinge points at the locations shown on the plans. This includes all rails or wall sections, supports, ballast, hinge points, and miscellaneous hardware needed to construct the channelizer or system of channelizers.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN PATH**

**1 of 2**

**DESCRIPTION.**

This work consists of furnishing, installing, maintaining, relocating, and removing a temporary pedestrian path as identified in the proposal or on the plans. Temporary pedestrian paths, or segments thereof, will be repaired or replaced as directed by the Engineer.

**MATERIALS.**

Provide materials to construct a temporary pedestrian path in accordance with the contract, the Public Right of Way Accessibility Guidelines (PROWAG), the Michigan Manual on Uniform Traffic Control Devices (MMUTCD), as directed by the Engineer, and the following requirements:

1. Ensure the materials used to construct the temporary pedestrian path yields a continuous hard surface that is firm, stable and skid resistant. Ensure the path does not warp, buckle or otherwise become uneven, and materials support the weight of pedestrians as well as motorized scooters and wheelchairs. Suitable materials to construct the path include asphalt materials, Oriented Strand Board (OSB), plywood, dimensional lumber, reclaimed, or other as approved by the Engineer. Compacted soils, aggregate and sand are prohibited.
2. If asphalt materials are not used to construct the path, provide an antiskid coating, or surface treatment as directed by the Engineer.

**CONSTRUCTION.**

Construct the temporary pedestrian path in accordance with PROWAG, the MMUTCD, the contract, the direction of the Engineer, and the following:

3. The useable surface of the path must be a minimum of 48 inches wide, additional width may be provided to preclude the use of Temporary Pedestrian Passing Spaces (paid for separately). A minimum width of 60 inches is required if Temporary Pedestrian Passing Spaces are not provided as part of the temporary facility. The maximum cross slope for the path is 2 percent. The path, including transitions to the adjacent surface at both ends, must be free of vertical discontinuities greater than 1/4 inch. Eliminate any vertical discontinuities greater than 1/4 inch up to 1/2 inch or bevel with a slope not steeper than 1:2. If a vertical discontinuity greater than 1/2 inch or a running slope greater than 1:20 occurs on the project, a Temporary Pedestrian Ramp (paid for separately) is required.
  - A. Ensure an anti-skid surface treatment is applied to the surface of the path, if not constructed with asphalt materials, as directed by the Engineer.
  - B. If the surface of the path is constructed from OSB, plywood, or dimensional lumber securely connect all sections with appropriate fasteners to ensure a continuous, uniform and flat surface.

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**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN PATH**

**2 of 2**

4. Ensure all debris and construction materials is cleared from the path throughout its use. Ensure snow and ice is removed; the use of an approved de-icing agent may be required.

3. Repair or replace the path, or segments thereof, if it becomes uneven, unstable, or displaces due to weather events, construction activities, or other causes as directed by the Engineer.

4. Following the use or relocation of the temporary path, the Contractor must remove all materials used to construct the path, and restore the area as directed by the Engineer.

**MEASUREMENT AND PAYMENT.**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**PAY ITEM**

**PAY UNIT**

Pedestrian Path, Temp ..... Foot

**Pedestrian Path, Temp** will be measured along the centerline of the path. Pedestrian Path, Temp includes all costs related to installation, maintenance, relocation, restoration, and removal of the path and all associated materials throughout the life of the contract.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN RAMP**

**1 of 2**

**DESCRIPTION.**

This work consists of furnishing, installing, maintaining, relocating, and removing a temporary pedestrian ramp as identified in the proposal or on the plans. Use temporary pedestrian ramps to facilitate pedestrian travel on accessible facilities over curbs or other uneven terrain features with a vertical difference of 1/2 inch or greater. Damaged pedestrian ramps will be replaced as directed by the Engineer.

**MATERIALS.**

Provide materials to construct a temporary pedestrian ramp in accordance with the Americans with Disabilities Act (ADA), the standard specifications, and the following:

1. Ensure the material used to construct the temporary pedestrian ramp is firm, stable, skid resistant, and forms a continuous hard surface. Ensure the surface does not warp, buckle or otherwise become uneven, and materials support the weight of pedestrians as well as motorized scooters and wheelchairs. Suitable materials to construct the surface of the ramp include asphalt materials, Oriented Strand Board (OSB) or plywood, dimensional lumber, certain reclaimed or other materials as approved by the Engineer. Compacted soils, aggregate and sand are prohibited.

2. Provide a handrail on both sides of the ramp if the ramp is not exposed to vehicle traffic and has a total rise greater than 6 inches, and a length greater than 72 inches. Ensure the handrail is between 1.25 and 1.5 inches wide and configured to be a “graspable” cross-section. See construction subsection 2.A for additional details. When the ramp is exposed to traffic, in lieu of handrails, use a protective edge 2.5 inches minimum height above the ramp surface or 1:10 flare on both sides of the ramp.

3. Ensure the surface of the ramp is free draining; in addition provide features that allow drainage to move past the ramp installation (i.e. along the gutter pan underneath the ramp if the ramp is installed on a curb).

4. Provide materials to construct detectable edging along open sides of the ramp if required.

5. If asphalt materials are not used to construct the surface of the ramp, provide an antiskid coating or surface treatment approved by the Engineer.

**CONSTRUCTION.**

Construct the temporary pedestrian ramp in accordance with the manufacturer’s recommendations (if applicable), ADA, the plans, and the following:

6. Ensure the useable surface of the ramp is 48 inches wide and does not deflect due to pedestrian traffic. Ensure an anti-skid surface treatment is applied to the useable area of the ramp if it is not made from asphalt materials. The maximum cross slope of the ramp is 2 percent. Ensure both ends of the ramp smoothly transitions to the adjacent surface, with 1/4 inch or less vertical difference.

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**DETAILED SPECIFICATION  
FOR  
TEMPORARY PEDESTRIAN RAMP**

**2 of 2**

Construct the ramp to maintain a longitudinal slope from 1:10 to 1:12 where possible. Otherwise, a longitudinal slope from 1:8 to 1:10 may be used for a maximum rise of 3 inches. Temporary pedestrian ramps with longitudinal slopes greater than 1:8 are prohibited.

A. Provide a handrail on both sides of the ramp if required as stated herein. Ensure the top of the handrail is between 34 and 38 inches above the surface of the ramp. Ensure a minimum width of 36 inches is maintained between the handrails, with a minimum clearance of 1.5 inches behind and 18 inches above.

Construct the handrail such that the bending stress applied by a bending moment created by a 250 pound force is less than the allowable stress for the materials and the construction of the handrail. Construct the handrail to withstand the shear stress induced by a 250 pound force. Ensure all fasteners, mounting devices and support structures are also able to withstand shear stress induced by a 250 pound force.

2. Construct a detectable edging anytime a handrail is required, and anytime the path changes direction. This includes a turn onto the ramp from the path. Detectable edging must begin a maximum of 2.5 inches above the ramp surface, and extend at least 6 inches above the ramp surface.

3. Ensure a clear space (minimum 48 inches by 48 inches) is provided above and below the ramp.

4. Avoid locating ramps in areas of drainage collection, ponding or running water, which can produce slippery or unsafe conditions. If the ramp is located over a gutter pan or other drainage structure, provide features to facilitate water movement around or under the ramp as approved by the Engineer.

5. Ensure all debris and construction material is cleared from the surface of the ramp throughout its use. Ensure snow and ice is removed; the use of an approved de-icing agent may be required. Repair or replace the ramp if it becomes uneven, unstable, or displaces due to weather events, construction activities, or other causes as directed by the Engineer.

**MEASUREMENT AND PAYMENT.**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**PAY ITEM**

**PAY UNIT**

Pedestrian Ramp, Temp ..... Each

**Pedestrian Ramp, Temp** includes all labor, equipment, and materials to furnish, install and remove a temporary pedestrian ramp at the locations shown on the plans, as well as all costs for maintaining, clearing debris, deicing, reconfiguring, and relocating the temporary pedestrian ramp throughout the life of the contract.

**DETAILED SPECIFICATION  
FOR  
PAVEMENT MARKINGS**

**1 of 2**

**DESCRIPTION.**

This work consists of providing and placing temporary and permanent pavement markings in accordance with the Michigan Manual on Uniform Traffic Control Devices. Provide markings, legends, symbols, spacing, and dimensions that conform to the plans, the City of Ann Arbor Standard Specifications, 2020 Michigan Department of Transportation Standard Specifications for Construction, and as specified herein.

**MATERIALS**

Materials for all devices used to temporarily control and maintain traffic shall meet the requirements of section 812 of the MDOT 2020 Standard Specifications for Construction, the MMUTCD, and the applicable MDOT typicals and details included herein.

Provide materials in accordance with Sections 811 and 920 of the 2020 Michigan Department of Transportation Standard Specifications for Construction. Provide the Material Safety Data Sheets to the Engineer for required materials and supplies. Dispose of unused material and containers in accordance with the Federal Resource Conservation Recovery Act (RCRA) of 1976 as amended, and 1994 PA 451, Part 111 Hazardous Waste Management. Provide samples of permanent pavement marking materials upon request.

Thermoplastic materials provided shall be in accordance with Section 920 Sprayable Thermoplastic Pavement Marking Material

**CONSTRUCTION.**

The preparation and placement of permanent pavement markings shall conform to Section 811 of the 2020 MDOT Standard Specifications for Construction, the City of Ann Arbor Standard Specifications, the plans, and as specified herein.

**MEASUREMENT AND PAYMENT.**

The measurement and payment for thermoplastic pavement markings shall be in accordance with Section 811.04 of the 2020 MDOT Standard Specifications for Construction, the City of Ann Arbor Standard Specifications, the plans, and as specified herein.

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified in the Sections 811 and 920 of the 2020 MDOT Standard Specifications and as modified by this Detailed Specification.

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**DETAILED SPECIFICATION  
FOR  
PAVEMENT MARKINGS**

**2 of 2**

The completed work as measured for these items of work will be paid for at the Contract Unit Price for the following Contract (Pay) Items:

<u>PAY ITEM</u>	<u>PAY</u>
<u>UNIT</u>	
Traf Regulator Control .....	Lump
Sum	
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White Temp .....	Ft
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow Temp .....	Ft
Pavt Mrkg, Wet Reflective, Type R, Tape, 24 inch, Stop Bar.....	Each
Pavt Mrkg, Wet Reflective, Type R, Tape, Lt Turn Arrow.....	Each
Pavt Mrkg Cover, Type R, Black.....	Each
Pavt Mrkg Hot-Applied Thermoplastic 4 inch Yellow.....	Each
Pavt Mrkg Hot-Applied Thermoplastic 6 inch White .....	Each
Pavt Mrkg Hot-Applied Thermoplastic 8 inch White .....	Each
Pavt Mrkg Overlay Cold Plastic White L Arrow.....	Each
Pavt Mrkg Overlay Cold Plastic White R Arrow .....	Each
Pavt Mrkg Overlay Cold Plastic White Thru Arrow .....	Each
Pavt Mrkg Overlay Cold Plastic, 4 inch, White.....	Feet
Pavt Mrkg Overlay Cold Plastic, 12 inch, Yellow .....	Feet
Pavt Mrkg Overlay Cold Plastic, 12 inch, Crosswalk .....	Feet
Pavt Mrkg Overlay Cold Plastic White 24 inch, Stop Bar .....	Feet

All work indicated herein shall be included in the unit prices for the above pay items and shall include all labor, materials and equipment required to complete the work.

**DETAILED SPECIFICATION  
FOR  
ITEM #224 - REMOVE CONCRETE CURB OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #225 - REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES –  
ANY THICKNESS, MODIFIED**

1 of 3

**DESCRIPTION**

This work shall consist of removing concrete curb, gutter, curb and gutter, integral curb, concrete pavement, sidewalk, sidewalk ramps, drive openings, and drive approach pavements as shown on the plans, as detailed in the Specifications, and as directed by the Engineer, in accordance with Section 204 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, except as specified herein, and as directed by the Engineer.

**CONSTRUCTION METHODS**

Curb, gutter, curb and gutter, sidewalk, sidewalk ramps, drive openings, and drives shall be replaced within 24 hours of their removal.

The Contractor shall remove concrete curb, gutter, curb & gutter, integral curb, pavement, sidewalk, sidewalk ramps, drive openings, and drives, all regardless of the type and thickness, and all as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer.

Prior to the start of removals, the Engineer and Contractor together shall field measure all removals. The Engineer shall approve of all removal limits prior to any removals being performed by the Contractor.

The Contractor shall perform full-depth saw cutting at removal limits, including those necessary to construct 2-foot wide MDOT Type M drive openings, and including those necessary to provide for the partial removal of existing drive approaches as shown on the Plans, as directed by the Engineer, and as marked for removal. The Contractor shall cut steel reinforcement bars as directed by the Engineer at all areas of removal. All saw cutting shall be performed under wet conditions to prevent excessive airborne dust. All resulting slurry and debris shall be cleaned up to the satisfaction of the Engineer.

The Contractor shall remove, salvage, and deliver to any location within the City limits, or to any City-owned property, and neatly stack/stockpile all bricks, if present, as directed by the Engineer.

The Contractor shall excavate, cut, remove stumps, remove brush, grade, and trim as needed and as directed, and shall import, furnish, fill, place, grade, and compact granular material as needed to: construct new concrete items; to repair or replace existing concrete items; to relocate existing concrete items to their new specified/directed elevations/locations, including all necessary grading at elevation changes of curb and gutter, sidewalks and ramps; and at locations where existing concrete items are to be removed and turf is to be established in its place.

**The Contractor shall coordinate with the City Forester prior to the removal of any tree roots.**

At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or adjacent areas. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, or work task deferral.

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**DETAILED SPECIFICATION  
FOR  
ITEM #228 - REMOVE CONCRETE CURB, GUTTER, OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #229 - REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES –  
ANY THICKNESS, MODIFIED**

**2 of 3**

The Contractor shall re-shape, re-grade, and re-compact the existing roadbed materials to the cross-section(s) as indicated on the Plans, as detailed in the Specifications, and as directed by the Engineer.

The Contractor shall use blade graders, maintainers, vibratory rollers, and/or other equipment as necessary, and as directed by the Engineer. The use of each specific piece of equipment is subject to the approval of the Engineer.

The Engineer may direct aggregate base materials to be either removed from or added to the job-site, to properly complete the work. Where the Engineer directs the addition of such materials, they shall be paid for as either the Item of Work: “Aggregate Base”. Where the Engineer directs such materials to be removed, they will not be paid for separately, but shall be included in the appropriate concrete removal item.

Concrete pavement removals shall be performed in accordance with the MDOT 2012 Standard Specifications, Section 603.03.B.1.b, Removing Pavement (Repair), except as modified herein. The item of work “Remove Concrete Pavement (Repair) - Any Thickness” refers to the removal of existing concrete pavement and concrete pavement base within the width of the street (i.e. edge-of-metal to edge-of-metal). Concrete removal outside the edge-of-metal shall be paid for as the appropriate item of either “Remove Concrete Curb or Curb & Gutter - Any Type, Modified”, or “Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified”.

Where existing concrete curb or curb & gutter is to be replaced on a street with a concrete (or brick) base, the Engineer may direct the Contractor to remove a 1-to-2-foot wide, full-depth section of pavement and pavement base from immediately in front of the curb & gutter. As part of this pavement/base removal, the Contractor shall perform additional (double) full-depth saw-cutting along the entire removal limits, and shall take sufficient care so as not to damage and/or disturb any adjacent pavement, pavement base, and/or any other site feature, all as directed by the Engineer. The removals shall be to a sufficient width and depth to allow for the placement and removal of the curb & gutter formwork. After the removal of the formwork, the Contractor shall replace the concrete base to its original thickness and elevation(s).

The Contractor shall remove composite pavement (HMA pavement overlaid on concrete/brick pavement or concrete/brick pavement base) of any thickness(es) as directed by the Engineer. This work shall be paid for as “Remove Concrete Pavement (Repair) - Any Thickness”. The work of removing HMA pavement overlays where concrete/brick pavement or concrete/ brick pavement base is to be removed will not be paid for separately.

Excavated/removal areas shall be adequately protected with barricades or fencing at all times.

Removed or excavated materials which are not incorporated into the work shall become the property of the Contractor and shall be immediately removed and properly disposed of off-site. Removed or excavated materials may not be stockpiled overnight on, or adjacent to, the site.

Subbase or subgrade removed without authorization by the Engineer shall be replaced and compacted by the Contractor at the Contractor's expense, with materials specified by the Engineer.

**DETAILED SPECIFICATION  
FOR  
ITEM #228 - REMOVE CONCRETE CURB, GUTTER, OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #229 - REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES –  
ANY THICKNESS, MODIFIED**

**3 of 3**

**MEASUREMENT AND PAYMENT**

Sidewalk ramp removal shall be measured and paid for as “Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified”.

Integral curb and gutter that is removed as part of “Remove Concrete Pavement (Repair)” shall be measured and paid for by the square yard, along with the pavement removal quantity.

All sawcutting required for removals shall be included in the appropriate item of work, and will not be paid for separately. Payment for saw cutting to create or modify Type M openings and to allow for the partial removal of existing drives shall be included in the price of the item of work, “Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified”, and will not be paid for separately.

Concrete removal items shall be field measured and paid for at the Contract Unit Prices for their respective Contract (Pay) Items as follows:

<b><u>PAY ITEM</u></b>	<b><u>PAY UNIT</u></b>
Remove Concrete Curb or Curb & Gutter - Any Type, Modified	Lineal Foot
Remove Concrete Sidewalk, Ramp and Drives - Any Thickness , Modified	Square Foot

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.



**DETAILED SPECIFICATION  
FOR  
ITEM #230 – AGGREGATE BASE**

**1 of 1**

**DESCRIPTION**

This work consists constructing an aggregate base course on a surface approved by the Engineer. Work will be performed in accordance with Section 302 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, and as directed by the Engineer.

**MATERIALS**

Aggregate Base material will be Dense-Graded Aggregate 21AA in accordance with that specified in Section 902 of the MDOT 2012 Standard Specifications for Construction.

**CONSTRUCTION METHODS**

Aggregate Base will be constructed in accordance with Section 302.03 of the MDOT 2012 Standard Specifications for Construction, and as directed by the Engineer.

**MEASUREMENT AND PAYMENT**

The completed work will be paid for at the contract unit price for the following contract item (pay item).

**PAY ITEM**

**PAY UNIT**

Aggregate Base

Ton

**Aggregate Base** will be measured by the unit ton in accordance with Section 302.04 of the MDOT 2020 Standard Specifications for Construction, and as directed by the Engineer, and will be paid for at the unit price per ton. The unit price for this contract item includes all labor, material, and equipment costs required to perform the work.

**DETAILED SPECIFICATION  
FOR  
ITEM #231 – HAND PATCHING**

**1 of 1**

**DESCRIPTION**

This work consists of filling holes, depressions, joints, cracks, voids, and opens cut areas in HMA pavements. Work will be performed in accordance with Section 501 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, and as directed by the Engineer.

**MATERIALS**

Materials will be in accordance with those specified in Section 501 of the MDOT 2012 Standard Specifications for Construction, and as directed by the Engineer.

**CONSTRUCTION METHODS**

Hand Patching will be constructed in accordance with Section 501 of the MDOT 2012 Standard Specifications for Construction, and as directed by the Engineer.

**MEASUREMENT AND PAYMENT**

The completed work will be paid for at the contract unit price for the following contract item (pay item).

**PAY ITEM**

**PAY UNIT**

Hand Patching

Ton

**Hand Patching** will be measured by the unit ton and will be paid for at the unit price per ton. The unit price for this contract item includes all labor, material, and equipment costs required to place the HMA, by hand or other methods, and compact the material.

**DETAILED SPECIFICATION  
FOR  
ITEM #232 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #233 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #234 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #235 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #236 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

1 of 5

**DESCRIPTION**

This work shall consist of constructing concrete items including curb, gutter, curb and gutter, sidewalks, drive approaches, and drive openings, all of any type and/or dimensions, all of either regular, fiber mesh reinforced, and/or high-early concrete, in accordance with Sections 801, 802, and 803 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, except as specified herein, as shown on the Plans, as described in this Detailed Specification, and as directed by the Engineer.

**The Contractor is responsible to construct all sidewalks, sidewalk ramps, curbs, and all other concrete items within ADAAG compliance.** All sidewalks and curb ramps must be constructed in accordance with MDOT Standard Plan R-28-H or version of standard plan/detail in place at time of the bid letting if different.

In addition, all concrete items of work shall comply with the Detailed Specifications for Concrete Durability and Concrete Placement and Protection.

**MATERIALS**

Concrete mixtures shall be as follows (or as directed by the Engineer), and concrete materials shall meet the requirements specified in the referenced sections of the MDOT Standard Specifications for Construction:

<u>Item Description</u>	<u>Concrete Mixture</u>	<u>MDOT Section</u>
Concrete Curb or Curb & Gutter – Any Type	P1, S2	601, 701
4" Concrete Sidewalk, Modified	P1, P2, S2, S3	601, 701
6" Concrete Sidewalk, Ramp, Drive Approach, Modified	P1, P2, S2, S3	601, 701
6" Concrete Sidewalk, Ramp, Drive Approach, High-Early	P-NC	601
Concrete Type M Drive Opening, High-Early	P-NC	601

**CONSTRUCTION METHODS**

General

Curb, gutter, curb and gutter, sidewalk, sidewalk ramps, drive openings, and drives shall be replaced the same day they are removed.

Concrete items, including sidewalk, non-integral curb/gutter, drives, and structure adjustments shall be completed prior to the placement of pavement.

All subgrade work shall be completed prior to placing concrete items, unless directed or approved by the Engineer.

**DETAILED SPECIFICATION  
FOR  
ITEM #232 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #233 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #234 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #235 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #236 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

**2 of 5**

The subbase shall be trimmed to final elevation before placing curb. Curb shall not be placed on a pedestal or mound.

The Contractor shall excavate, cut, remove stumps, remove brush, remove pavement, grade, and trim as needed and as directed, and shall import, furnish, fill, place, grade, and compact Class II granular material and 21AA Aggregate material as needed to: construct new concrete items; to repair or replace existing concrete items; to relocate existing concrete items to their new specified/directed elevations/locations, including all necessary grading at elevation changes of curb and gutter, sidewalks and ramps; and at locations where existing concrete items are to be removed and turf is to be established in its place.

At locations where the subgrade, subbase or base becomes either disturbed, saturated or otherwise damaged, and where directed by the Engineer, the Contractor shall remove a minimum 6-inch thick layer of the subgrade, subbase or base, and replace it with approved 21AA Aggregate material, compacted in place.

**The Contractor shall coordinate with the City Forester prior to the removal of any tree roots.**

The Contractor is responsible for any damage to concrete items, including but not limited to vandalism; vehicular, pedestrian and/or miscellaneous structural damage; surface texture damage; and rain damage.

The Contractor shall maintain on-site at all times, a sufficient quantity of adequate materials to protect concrete items. The Engineer may suspend or defer concrete placement if rain protection is not available. The Contractor shall not be entitled to any additional compensation due to work suspension or deferral resulting from a lack of adequate rain protection.

The Contractor shall perform full-depth saw cutting at removal limits, including those necessary to construct 2-foot wide Type M drive openings, and including those necessary to provide for the partial removal of existing drive approaches, as shown on the Plans, as directed by the Engineer, and as marked for removal.

The subbase and adjacent concrete shall be sufficiently wet-down with water prior to placing concrete, to prevent water loss from the new concrete, and to form a better bond between old and new concrete. If a cold-joint becomes necessary, the existing concrete surface(s) shall be cleaned with compressed air to expose the aggregate in the concrete.

Where it is necessary to remove existing pavement to provide space for concrete formwork, a sufficient amount of the existing pavement shall be removed to allow for the use of a vibratory plate compactor in front of the curb.

Where concrete items are placed in areas adjacent to existing pavement that is beyond the general resurfacing (pavement removal and/or milling) limits, the adjacent pavement area shall be backfilled and permanently patched within 48-hours of the removal of concrete formwork. The backfill material shall be

**DETAILED SPECIFICATION  
FOR  
ITEM #232 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #233 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #234 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #235 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #236 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

**3 of 5**

MDOT 21AA aggregate compacted in place to 95%, up to the elevation of the proposed bottom of pavement. The pavement patching material(s) shall be as specified and as directed by the Engineer.

Where concrete items are placed adjacent to existing pavement that is within areas scheduled for subsequent pavement removal and/or milling, the adjacent pavement area shall, within 48-hours of the removal of concrete formwork, be backfilled with MDOT 21AA aggregate compacted in place to 95% up to the elevation of the bottom of the adjacent pavement.

Prior to compacting backfill in front of curb and gutter, the back of curb shall be backfilled with approved material and compacted by mechanical means to 95%.

At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or adjacent areas. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, or work task deferral.

Restoration

The Contractor shall restore all disturbed areas to better than or equal to their original condition within two calendar days from the date of concrete placement. This includes the placement and compaction of 2.5 inches of topsoil, followed by the placement of grass seed, followed by the placement of 0.5 inches of topsoil, at all turf restoration locations, and at locations where concrete items are removed and turf is to be established. Restoration shall also include the replacement of any brickwork, decorative stone, or other adjacent materials. All restoration work and materials shall be in accordance with the City of Ann Arbor Standard Specifications for Construction.

Contraction Joints in Sidewalk

Contraction joints shall be placed at 5-foot intervals and may be tooled or sawed. The method of forming joints and spacing shall be approved by the Engineer prior to construction.

Expansion Joints in Sidewalks

$\frac{3}{4}$ -inch wide expansion joints shall be placed through concrete sidewalks in line with the extension of all property lines, at all expansion joints in the abutting curb, gutter, and combination curb and gutter, and as directed by the Engineer. Transverse expansion joints shall be placed through the sidewalks at uniform intervals of not more than 300-feet.

$\frac{1}{2}$ -inch wide expansion joints shall be placed between the sidewalk and back of abutting curb or gutter, at the juncture of two sidewalks, between the sidewalk and buildings and other rigid structures, and as directed by the Engineer.

Expansion Joints in Curb and Gutter

$\frac{3}{4}$ -inch wide expansion joints shall be placed at all street returns, at all expansion joints in an abutting pavement, at each side of all driveways (at radius points), elsewhere at 300-foot maximum intervals, and as directed by the Engineer.

**DETAILED SPECIFICATION  
FOR  
ITEM #232 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #233 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #234 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #235 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #236 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

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Expansion joint material shall extend to the full depth of the joint. After installation, the top shall not be above the concrete nor be more than ½-inch below it. No reinforcing steel shall extend through expansion joints.

Plane of Weakness Joints in Curb and Gutter

Intermediate plane of weakness joints shall be placed to divide the structure into uniform sections, normally 10-feet in length, with a minimum being 8-feet in length, and shall be placed opposite all plane of weakness joints in the abutting concrete base course.

Plane of weakness joints shall be formed by narrow divider plates, which shall extend 3-inches into the exposed surfaces of the curb or curb and gutter. Plates shall be notched, if necessary, to permit the steel reinforcement to be continuous through the joint.

**MEASUREMENT AND PAYMENT**

The work of furnishing and installing mechanical anchors and hook bolts will be measured and paid for by the number of hook bolts installed.

All concrete pavement repair, including that which is installed with integral curb and gutter, will be measured and paid for by the area actually placed in square yards (SY).

No additional compensation will be paid for the construction of concrete items adjacent to existing concrete curb, gutter, pavement, or any other pavement or surface feature(s).

No additional compensation will be paid for the removal of a 6-inch thick layer of the subgrade, subbase or base, and replacement with approved 21AA aggregate material, compacted in place.

A deduction in length for catch basins and inlet castings will be made to measurements of Curb and Gutter.

Curb, gutter, and curb and gutter shall be paid as "Concrete Curb or Curb & Gutter – Any Type, Modified".

Restoration work, including backfilling, compacting, HMA patching adjacent to concrete items, topsoiling and seeding will not be paid for separately, but shall be included in the appropriate associated items of work.

Payment for saw cutting for Type M openings and for partial removal of existing drives shall be included in the price for the item of work, "Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified", and will not be paid for separately.

**DETAILED SPECIFICATION  
FOR  
ITEM #232 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #233 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #234 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #235 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #236 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

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Payment for the removal of HMA pavement and aggregate base to provide space for concrete formwork and vibratory plate compactor shall be included in the price for the item of work, “Remove Concrete Curb or Curb and Gutter - Any Type, Modified”, and will not be paid for separately.

Completed work as measured for these items of work will be paid for at Contract Unit Prices for the following Contract (Pay) Items:

<u><b>PAY ITEMS</b></u>	<u><b>PAY UNIT</b></u>
Concrete Curb or Curb & Gutter – Any Type	Lineal Foot
4” Concrete Sidewalk, Modified	Square Foot
6” Concrete Sidewalk, Ramp, Drive Approach, Modified	Square Foot
6” Concrete Sidewalk, Ramp, Drive Approach, High Early	Square Foot
Concrete Type M Drive Opening, High Early	Lineal Foot

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

**DETAILED SPECIFICATION  
FOR  
ITEM #237 – INLET FILTER, SPECIAL**

**1 of 1**

**DESCRIPTION**

This work shall consist of properly installing curb and gutter inlet filters, at locations indicated on the plans, and as directed by the Engineer, maintaining during the entire construction period, and removing at the end of construction. The curb and gutter inlet filters shall be constructed in accordance with the detailed plans.

**MEASUREMENT AND PAYMENT**

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications, the project plans and as modified by this Detailed Specification.

Curb and gutter inlet filters will be paid for by the unit "Each". A filter will be paid for when initially installed at a particular structure. Payment will be for installing, maintaining, reinstalling, and, removing the filter at the end of construction and as directed by the Engineer.

**PAY ITEM**

Inlet Filter, Special

**PAY UNIT**

Each



**DETAILED SPECIFICATION  
FOR  
WATER MAIN AND APPURTENANCES**

**1 of 17**

**a. Description.-** The Contractor shall furnish all labor, equipment, pipe, valves, fittings, restrained-joint pipe, restrained-joint gaskets, special gaskets as detailed on the plans and in the specification, polywrap, supplemental lighting towers, and all other materials necessary to complete the work as shown on the Plans, as detailed in this Special Provision, and as directed by the Engineer.

All water main installation and testing procedures shall be performed in accordance with the plans, the requirements of this Special Provision, and as directed by the Engineer. The Contractor shall excavate all trenches and pits to the required dimensions; sheet, brace, and properly support the adjoining ground or structures where necessary to comply with MIOSHA, Section 104.07.B of the MDOT 2020 Standard Specifications for Construction, and other relevant safety standards.

The work for all items shall include, but not be limited to; pavement saw-cutting; excavation and disposal of excavated material; connections to new and existing water mains; the furnishing and installation of solid sleeves and push-on-joint plugs where needed; the furnishing, installation, and removal of sheeting and/or shoring where needed; all items necessary for the protection of the trench and all persons employed in the work during the work day and “after-hours” periods; polywrap; the furnishing, placement and compaction of approved bedding and backfill materials; thrust blocks; additional labor and equipment costs associated with any required nighttime water main work; cleaning, disinfecting, flushing, bacteriological and hydrostatic testing; and any other required items to complete the work as shown on the plans, as detailed in this Special Provision, and as directed by the Engineer.

The work of installing a gate valve-in-well shall include installation and backfill of the specified valve, furnishing and installing pre-cast concrete gate wells including the concrete base, straight pre-cast concrete sections, transition sections, and the adjustment of the structure cover. No separate payment will be made for adjusting the structure covers on new gate wells. The gate well cover shall be paid as “Dr Structure Cover.” Upon completion of the work, the Contractor shall clean the Gate Well to the approval of the Engineer.

The gate valve box shall be paid for as “Dr Structure Cover.” The cost of adjusting new gate valve-in-boxes shall be included in the unit price for Gate Valve-in-Box and shall not be paid for separately.

**b. Materials.-**

1. Submittals. Prior to beginning construction, the Contractor shall submit the following:
  - A. Product data on all ductile iron pipe, valves, fittings, asbestos concrete pipe to ductile iron pipe fittings, and hydrants.
  - B. Manufacturer’s certifications on all pipe, fittings, and precast concrete units indicating that all materials meet the minimum requirements of these specifications.
  - C. Information on equipment and methods to be used for flushing, chlorination, pressure and bacteriological testing if testing is required.
2. General Specifications.

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A. Cast Ductile Iron Pipe and Fittings:

Cast ductile iron pipe shall be Iron Grade 60-42-10 and meet the requirements of ANSI/AWWA C151/A21.51 in all respects; with standard thickness cement mortar lining and asphaltic seal coat in accordance with ANSI/AWWA C104/A21.4; and, coated outside with an asphaltic coating in accordance with ANSI/AWWA C151/A21.51. 100% of the ferrous metals used in the manufacture of cast ductile iron pipe shall be recycled from scrap and other sources.

All pipe shall be either Pressure Class 250 or 350 (Table 50.5 ANSI/AWWA C150/A21.50) as detailed on the plans, or Thickness Class 50 (Table 50.15, ANSI/AWWA C150/A21.50). Ductile iron pipe crossing under a railroad shall be thickness Class 56.

Cast ductile iron river crossing pipe shall be Clow Corp. "F-141 River Crossing Pipe", U.S. Pipe "USIFLEX Boltless Flexible Joint Pipe" or equal approved by the Engineer, and shall be thickness Class 56 minimum. The pipe shall have a boltless flexible joint of the ball and socket type, and be designed for, and rated at, a minimum interior working water pressure of 250 psi.

Restrained joint pipe, shall be boltless, factory-manufactured, by the installation of retainer weldment and ductile iron locking segments or rings. Restrained joint pipe shall be Ductile Iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21.51. Joints for restrained joint pipe shall be in accordance with ANSI/AWWA C111/A21.11. Restrained joint fittings and the restraining components shall be Ductile Iron in accordance with applicable requirements of ANSI/AWWA C110/A21.10 and/or C153/A21.53 with the exception of the manufacturer's proprietary design dimensions. Push-on joints for such fittings shall be in accordance with ANSI/AWWA C111/A21.11.

Restrained joint pipe shall be TR-Flex restrained joint pipe manufactured by U.S. Pipe; Lok-Ring pipe for pipe diameters 54" through 64" or Flex-ring pipe for pipe diameters less than 54" manufactured by American Ductile Iron Pipe; or, equal as approved by the Engineer. Bolts and nuts for "field-cut" retainer assemblies shall be stainless steel.

Cast ductile iron fittings shall be push-on joint (with the exception of solid sleeves and fire hydrants which shall be mechanical joint), meeting the requirements of ANSI/AWWA C110/A21.10 for short body cast iron fittings. Fittings shall have a cement mortar lining and asphaltic seal coat in accordance with ANSI/AWWA C104/A21.4 and ANSI/AWWA C110/A21.10. The outside of all fittings shall have an asphaltic coating in accordance with ANSI/AWWA C110/A21.10.

Solid sleeves shall be long-pattern sleeves.

B. Gate Valves and Gate Valve Boxes:

All gate valves shall be resilient seated meeting the requirements of WWA C509. All valves shall be of the push-on joint type, unless used on tapping sleeve assemblies, or noted otherwise on the plans. The valves supplied shall be:

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- a. Metroseal 250 Resilient Seated Gate Valve as manufactured by U.S. Pipe & Foundry Company
- b. U. S. Pipe and Foundry Tyton Joint, Resilient Wedge Seated Gate Valve, meeting the requirements of AWWA C 509, AWWA C550, and ASTM D 2794
- c. American Flow Control, Series 2500, Single Resilient Wedge
- d. East Jordan Iron Works FlowMaster Resilient Wedge Valve
- e. Mueller Series, 4" through 12", A-2360-38, Resilient Wedge – SL x SL
- f. Tyler Series DRS 250-22 Double Resilient Wedge

All valves shall come equipped with a two-inch square operating nut, opening right.

Valve Boxes shall be Tyler 6860 Buffalo type, Size D, screw-type, 3 piece, 5-1/4 inch shaft and a No. 6 Base for a valve 8 inches or less and a No. 8 base for 10 and 12 inch valves.

**C. Gate Valve Wells:**

Pre-cast reinforced concrete bases, bottom sections, manhole risers, grade adjustment rings, concentric cones, eccentric cones, and flat-slab tops shall conform to the requirements of ASTM C-478. Joints on precast gate wells shall meet the requirements of ASTM C-443, rubber O-ring gasket.

Flat-slab top, pre-cast, gate wells shall be designed to accommodate HL-93 Modified Live Load requirements as determined by a Professional Engineer licensed by the State of Michigan, regardless of where they are to be installed. For the purposes of design, a HL-93 Modified Live Load shall consist of 1.2 times the design truck or 1.2 times a single 60 kip load, whichever produces the greater stresses.

**D. Tapping Sleeves and Valves:**

Tapping sleeves and valves shall be manufactured of cast iron or stainless steel and designed for water service with a minimum working pressure of 150 psi. The sleeve shall be a full-bodied split sleeve design manufactured by one of the following manufacturers:

- a) Clow No. F-5205;
- b) Mueller Co. No. H-615;
- c) Waterous Series 800;
- d) East Jordan Iron Works MJ Tapping Sleeve with East Jordan FlowMaster RW Valve;
- e) Tyler/Union D.I. MJ Tapping Sleeve;
- f) Ford Meter Box Company Style FTSS;
- g) Power Seal Model No. 3490 AS;
- h) Smith Blair Model No. 622;
- i) JCM 432 All Stainless Steel Tapping Sleeve; and
- j) Price Brothers Company Tapping Sleeve for Prestressed Concrete Steel Cylinder Pipe (only to be used on concrete water mains.)

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Tapping Sleeves for Pre-stressed Concrete Steel Cylinder Pipe shall be in accordance with AWWA M-9. The sleeves shall have a separate gland which permits installation of the sleeve prior to cutting of the prestress wires. The gland shall have a fusion epoxy coated (per AWWA C-213) waterway, and a broad gasket set in a retaining groove of a pressure plate gusseted to eliminate flexing. The gland shall be equipped with load bearing set screws to protect the cylinder. Grout under saddle is needed whether saddle is epoxy coated or not. Sleeves shall be furnished with grouting seals and grout horns to facilitate filling the space between the sleeve and the pipe. Tapping sleeves shall be a Price Brothers Company Tapping Sleeve for Prestressed Concrete Steel Cylinder Pipe or approved equal.

Tapping valves shall be double-disk type of the same manufacture as the sleeve, NRS with two-inch square operating nut-opening right, with a mechanical joint outlet.

All tapping sleeves and valves must be certified by Underwriters Laboratory (UL) or the National Sanitation Foundation (NSF) for use in a potable water system.

**E. Asbestos Concrete Pipe to Ductile Iron Pipe Coupling:**

The asbestos concrete pipe to ductile iron pipe coupling shall be the “Smith-Blair 415 (23.15”—21.60”) Gaskets, Alloy bolts and Epoxy” coupling or equivalent.

**F. Joints:**

Push-on joints shall be single gasket joint meeting the requirements of ANSI/AWWA C111/A21.11.

Mechanical joints for fire hydrants and solid sleeves shall be in accordance with ANSI/AWWA C111/A21.11 and shall be the Mega Lug Series 1100 joint restraint system manufactured by EBAA Iron Sales, Inc. or the Ford Meter Box Co. Uni-flange Retainer (UFR 1400-D-x style.)

Bolts for mechanical joints shall be high strength, low alloy steel bolts, only, meeting the requirements of ANSI/AWWA C111/A21.11. All bolts, nuts, and washers if required, shall be coated with a factory-applied fluoropolymer coating meeting the following requirements:

Use Temperature: -100°F to 500°F  
Salt Spray – ASTM B117 up to 4000 hours (nuts must not become frozen)

Pencil Hardness – 5H to 6H – ASTM D3363-92A  
Kinetic Coefficient of Friction – 0.06 to 0.08  
Thickness – nominal 0.001” (1 mil)  
Impact – 160 in-lbs as measured by ASTM D2794-93  
Adhesion – 5B – ASTM D3359-95  
Di-electric Strength – 500V per mil  
Elongation – 35% to 50%

Tensile Strength – 4,000 psi  
Operating Pressure – up to 100,000 psi  
Kesternich Test – Nuts not frozen up to 30+ cycles (DIN 50018)

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Corrosion Resistance: as measured by;

ASTM D 1308	Muriatic Acid 31% HCL	24 hours	No Effect
	Sulfuric Acid 93% H <sub>2</sub> SO <sub>4</sub>	24 hours	No Effect
	Caustic Soda 100% NaOH	24 hours	No Effect
	Methy Ethyl Keytone MEK	24 hours	No Effect
ASTM B117	Salt Fog	1,000 hours	No Effect

The flouropolymer coating shall strongly adhere to surface being coated and shall not flake off or be easily removed by rubbing or brushing.

Cast ductile iron river crossing pipe joints shall be a push-on type ball and socket joint utilizing a first grade rubber gasket. The joint shall be capable of 15-degree full turning deflection without separation, leakage, or restriction of the pipe waterway. Joint restraint shall be provided by a boltless means which is locked against accidental disengagement of the restraining component. Pipe shall be furnished with the necessary gaskets, lubricant, and retainer locking accessories.

Restrained, push-on joint, pipe shall be American Pipe's "Fast-Grip" gasket system; U.S. Pipe's "Field-Lok 350" gasket system; or, Griffin Pipe "Field-Lok 350" gasket system.

The use of retainer glands and set screws shall not be acceptable.

Lubricants used in making up joints shall be supplied by the pipe manufacturer and the joints shall be coupled in accordance with the manufacturer's requirements.

**G. Pipe Wrapping:**

All Cast Ductile Iron Pipe, Fittings, and Valves (except river, railroad and highway crossing pipe) shall be fully wrapped with polyethylene per ANSI/AWWA C105/A21.5 and the details as contained on the plans.

**H. Water Main Pipe Marking:**

The following information shall be clearly marked and/or cast on each length of pipe:

- a) The pipe designation and class (e.g., D.I., Class 50).
- b) The name or trademark of the manufacturer.
- c) Country where cast.
- d) The year in which the pipe was produced.

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The following shall be distinctly cast on each fitting:

- a) The pressure rating of the fitting.
- b) Nominal diameters of openings.
- c) The name or trademark of the manufacturer.
- d) Country where cast.
- e) The number of degrees or fraction of the circle on all bends.
- f) Ductile iron fittings shall have the letters "DI" or "Ductile" cast on them.

Manufacturer's Certification:

All pipe furnished shall be accompanied by the manufacturer's certificate of test showing conformity with the Specifications. Each certificate shall identify a specific lot number, quantity of pipe, and show actual test results for the lot furnished. These certificates shall be submitted to the Inspector at the time of unloading.

All materials that will potentially be in contact with the City of Ann Arbor water supply must be certified by Underwriters Laboratory (UL) or the National Sanitation Foundation (NSF) for use in a potable water system. These materials shall include pipe coatings, pipe metals, cement linings, and joint lubricants and gaskets.

I. Inspection:

All pipe furnished shall be subject to inspection on arrival at the job site by the Engineer. The purpose of the inspection shall be to cull and reject pipe or fittings that, independent of physical tests specified under the standard specifications designated herein, fail to conform to the requirements of these Specifications.

The Contractor shall notify the Engineer sufficiently in advance so that an Inspector may be on the job during the unloading of materials. A minimum notice of 24 hours is required for such unloading and inspection. The Contractor shall also notify the Engineer when the material has arrived at the site.

All ductile iron water main pipe shall be stacked on pallets off of the existing grade, with each end plugged or bagged so as to keep the pipe interior clean until final installation.

Cast ductile iron pipe and fittings shall be subject to rejection on account of any of the following:

- a) Variation in any dimension exceeding the permissible variations given in the material specifications.
- b) Any crack or defect in the cement mortar lining which, in the opinion of the Engineer, is non-repairable, including, but not limited to, loose or "hollow" lining.
- c) Any signs of physical damage or poor manufacturing which might render the material unsuitable for its intended use.
- d) Variation of more than 1/16 inch per lineal foot in alignment of pipe intended to be straight.
- e) Damaged ends, where in the judgment of the Engineer such damage would prevent making a satisfactory joint.
- f) Improper handling during delivery, unloading, or installation.

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Rejected pipe shall be plainly marked by the Inspector and immediately removed from the site of the work by the Contractor, without cost to the City.

**J. Water Main Bedding and Backfill Materials:**

Bedding and backfill material for Trench Detail I (under roadbed), Modified, shall be Granular Material, Class II, meeting the requirements of Section 902. Bedding and backfill for Trench Detail V (outside of the 1:1 influence line of roadbed or curb and gutter), Modified, shall be Granular Material, Class II and Engineer approved native material, placed in accordance with the trench details.

**c. Water Main Installation, Bacteriologic and Hydrostatic Testing, and Acceptance Requirements.-**

Installation of proposed water mains will require work in close proximity to existing utilities. This must be taken into consideration when the contractor determines the required trench safety requirements. All excavation shall conform to all relevant MIOSHA Standards; the Contractor is solely responsible for determining all excavation and trench safety requirements.

**A. Dry Tap:**

When a connection to an existing water main is to be made in the dry, the existing main to which a connection is to be made shall be isolated by the closing of the necessary existing valves, and the water from the existing main shall then be pumped out or removed by other means so that the connection may be made in the dry. All pipe materials and appurtenances which will come into contact with potable City water after the restoration of water service following the connections shall be disinfected with a strong chlorine solution prior to installation.

The Contractor may not operate City water main valves. For valve operation, contact City of Ann Arbor Public Services Area personnel; the City of Ann Arbor personnel will direct the

operation of all valves by Contractor personnel. It is recommended that the Contractor request that the existing valves, which will need to be operated in order to perform the water main work, are checked in advance of the work to ensure that they operate properly. If the Contractor elects not to request the operation of the valves in advance of any required water main operation, then a request for extension of contract time will not be allowed.

It is possible that the valves which need to be operated to facilitate a shutdown will not close entirely, thereby allowing water to leak past the valve into the area of the shut down. The Contractor shall provide the necessary labor, material, and equipment to enable work to be completed with a poor shut down. Under no circumstances shall the Contractor be compensated for "downtime" associated with water main valve or appurtenance failure or its inability to properly operate or close fully. An extension of contract time may be allowed, if the Contractor has requested that the water main valves have been exercised in advance of the intended water main shutdown.

Due to the size and length of pipe being shut down, and the quality of shut-down attained, large amounts of water may need to be removed from the excavation. Where possible, the water shall be run directly into nearby storm sewer inlets via pumps and hose.

The Contractor shall have all pipe, fittings and appurtenances required to complete the water main connection prior to the excavation for the connection, or the work will not be allowed to commence.

The Contractor shall complete the water main work in a manner which minimizes the disruption of water service to the greatest extent possible.

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The City must notify all businesses 48 hours in advance of a water main shut-down; residences must be notified 24 hours in advance. To give the City an opportunity to provide such notification, the Contractor shall schedule the water main shut-downs at least 72 hours in advance, and preferably a full four or five days in advance, of the water main shut-down.

No water main shutdown shall take place after 12:00 p.m. (noon), unless written permission has been granted by the Engineer and that the Contractor has sufficient lighting equipment to provide a safe and efficient work area for working after dark. No water main will be shut down until the main has been exposed and cleaned, and is ready to be cut.

There shall be no gap larger than 1/4 inch left in the existing water main as a result of the tie-in. If needed, a closure piece ("thrust ring") of such size so as to meet this requirement shall be installed.

**B. Wet Tap:**

Prior to the installation of a tapping sleeve, the section of pipe to be tapped shall be cleaned of all foreign material and wire brushed to a smooth surface. The two halves of the sleeve shall be placed around the pipe with the gaskets installed per the manufacturer's instructions. The bolts shall be tightened evenly from the center toward the ends. The bolts shall be tightened to the manufacturer's specified torque.

When performing a wet tap in a prestressed concrete steel cylinder water main, grout is to be placed under the tapping saddle whether or not the saddle is epoxy coated.

All pipe materials and appurtenances which may come into contact with potable City water shall be disinfected with a strong chlorine solution prior to installation. This includes the pipe section to be tapped, the two halves of the sleeve, gaskets and the gate valve.

Prior to installation of the end gaskets, the sleeve shall be blocked with cement bricks such that the outlet is in proper position. The end gaskets shall be installed with an overlap as specified by the manufacturer.

The glands shall be assembled on the pipe. The bolts around the gland shall be tightened evenly, causing the gaskets to uniformly compress.

The valve shall be installed on the sleeve following the manufacturer's instructions.

Prior to tapping, the assembly shall be tested using the test plug tap in the sleeve with the valve closed, or by placing a tapped plug on the outlet of the valve with the valve open. The assembly shall be pressurized to 150 psi and hold the pressure fifteen minutes.

After the pressure test is complete, the pipe shall be tapped.

**C. Oversized Water Mains:**

Portions of the proposed water mains or fittings may connect with existing water mains or fittings. The possibility exists that some of the existing water mains may have been constructed using oversized, cast iron, pipe. Where tie-ins or interconnections are specified and the existing main is found to be oversized, the Contractor shall furnish and install Clow 3501B Sleeves, Tyler Dual Sleeve 5-146L, or Rockwell 441 Sleeves. These sleeves are to be present on the jobsite prior to the excavation for the water main connection, or the work will not be allowed to commence.



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D. Permissible Deflection at Joints:

Wherever it is necessary to deflect ductile iron pipe from a straight line, either in the vertical or horizontal plane, to avoid obstructions, to plumb valve stems, or where long-radius curves are permitted, the amount of deflection allowed shall not exceed that required for satisfactory making of the joint, and shall be approved by the Engineer. The deflection shall not exceed the following amounts:

Size of Pipe (Inches)	Joint Angle (Degrees)	Deflection in 18 ft. (Inches)	Approx. Radius of Curve Produced by Succession of 18 ft. Lengths (Feet)
4	5	19	205
6	5	19	205
8	5	19	205
10	5	19	205
12	5	19	205
16	3	11	340
20	3	11	340
24	3	11	340
30	3	11	340

The above joint deflection angles apply to fittings as well as pipe joints.

E. Trench Opening:

The Contractor shall fully comply with all laws and regulations governing construction methods and the furnishing and use of all safeguards, safety devices, protective equipment, and pollution controls. Where required to support the surfaces of adjacent roadways, structures, or excavations, or to protect the construction work, adjacent work, or workmen, the Contractor shall design and install sheeting, bracing, and shoring. The Engineer will not review the Contractor's design(s) or be responsible for the adequacy of the elements supporting the trench. The placing of such supports shall not release the Contractor of the responsibility for the sufficiency and integrity of the trench, trench opening, and the safety of all persons involved in the work.

Sheeting, bracing, and shoring shall not be left in place after completion of the work except as required by the Engineer. In the removing of sheeting and bracing after the construction has been completed, special care shall be taken to prevent any caving of the sides of the excavation and injury to the completed work or to adjacent property. Where the Engineer requires the sheeting, bracing, or shoring to be left in place it shall be cut off below the established surface grade as required by the Engineer.

All excavation shall be performed in such a manner as to provide adequate room for the construction and installation of the work to the lines, grades and dimensions shown on the Plans. The width of the trench shall be ample to permit the pipe to be laid and jointed properly, and the backfill to be placed and compacted as specified. For each size of pipe, the minimum trench width shall provide clearance of four inches on each side of the bell of the pipe or fitting or six inches on each side of the pipe barrel, whichever is greater. Trenches shall be of such extra width, when required, to permit the convenient placing of timber supports, sheeting and bracing, and handling of special fittings. The maximum trench width shall be in keeping with good construction practice, such that existing structures are not undermined.

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In excavating for water mains, the excavation shall at all times be finished to the required grade in advance of the pipe line, but unless otherwise permitted in writing by the Engineer, not more than 50 feet of trench shall be open at one time in advance of the pipe. At no time shall more than 200 feet of trench be opened and incompletely backfilled. At the end of each day, no more than 25 feet of trench may be left open, and access to all drives shall be restored. This opening shall be surrounded by fencing and barricades, or plated. The remainder of the trenching operation shall be available for safe vehicular and pedestrian traffic at all times.

It is essential that the discharge of the trench de-watering pumps be conducted to natural drainage channels, drains, or storm sewers. Engineer-approved soil erosion and sedimentation controls shall be installed and maintained at the point of discharge.

The length of street which may be occupied by the construction work at any one time shall be subject to the approval of the Engineer and will be based on the requirements of use of the street by the public.

**F. Laying Pipe:**

Each pipe shall be inspected for defects prior to being lowered into the trench. Inside of pipe and outside of spigot shall be cleaned of any earth or foreign matter.

Proper implements, tools, and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient prosecution of the work. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece by means of an excavator using chains, slings, or other suitable tools or equipment as recommended by the manufacturer, in such a manner as to prevent damage to them and their protective coatings and linings. Under no circumstances shall materials be dropped or dumped into the trench.

New water main construction shall not be connected into the existing system until it has been tested and accepted by the Engineer. The Contractor shall excavate for all bell holes and shall place the bell of the pipe in the excavated bell hole. Pipe shall be laid on the prepared trench bottom with the bell ends facing the direction of laying, unless otherwise directed by the Engineer.

The Contractor shall take every precaution to prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a **watertight** plug. This provision shall apply during the noon hours as well as overnight. If water is in the trench, the seal shall remain in place until the trench is pumped completely dry.

Pipe shall be jointed as specified elsewhere herein. The pipe shall be secured in place with approved backfill material tamped under it except at the bells. Pipe and fittings which do not allow a sufficient and uniform space for joints shall be removed and replaced with pipe and fittings of proper dimensions to insure such uniform space. Precautions shall be taken to prevent dirt from entering the joint space.

All pipe shall be laid at the correct line and grade as indicated by the grade stakes and offset line. Each pipe, as laid, shall be checked by the Contractor to insure that this result is obtained. The staking shall be provided by the Engineer.

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No pipe shall be laid until a cut sheet for that pipe has been approved by the Engineer. The grade as shown on the Plans is that of the top-of-pipe for water main; and, the work must conform to this profile. For water main construction, a variation from the profile grade of two inches with ductile iron pipe, and three inches with reinforced concrete pipe, will be deemed sufficient reason to cause the work to be rejected and re-laid. Water main pipe alignment shall be maintained so as not to vary more than three inches from the correct line. Any pipe found out of line shall be re-laid properly by the Contractor.

Due to conditions in the field, changes to the proposed vertical and horizontal alignment of the proposed water main may become necessary. The Contractor shall, where directed by the Engineer, excavate up to 60 feet in advance of the pipe laying operation to expose existing underground facilities thereby enabling the Engineer to make alignment decisions. The Contractor is required to realign (re-lay) the water main up to 2 feet vertically and/or horizontally as directed by the Engineer at no extra cost to the project. The excavation in advance of the pipe laying is intended to help eliminate the need for re-laying pipe.

**G. Crossing Existing Structures and Facilities:**

During the construction it may be necessary to cross under or over certain sewers, drains, culverts, water lines, gas lines, electric lines, fiber optic communication, telecommunication, and other types of underground structures or facilities, known or unknown. The Contractor shall make every effort to prevent damage to such underground structures and facilities. The Contractor shall not intentionally damage or break existing structures or facilities and repair them in order to expedite the water main installation process. Wherever such structures or facilities may inadvertently be disturbed or broken, they shall be restored to a condition that is equal to, or better than, that was encountered prior to the damage. All damaged structures and/or facilities shall be made fully acceptable to the owner and the City, at the Contractor's expense. All crossings shall be made with a minimum of twelve inches of vertical clearance between or alongside existing structures or facilities.

**Cutting Pipe:**

Cutting cast iron or ductile iron pipe for inserting valves, fittings, or closure pieces shall be performed in a neat and workmanlike manner without damage to the pipe or cement lining and so as to leave a smooth end at right angles to the longitudinal axis. Where the type of pipe joint in use is such that it employs push-on assembly to effect the joint seal, the outside of the cut end shall be tapered back 1/8 inch with a coarse file or a portable grinder at an angle of about 30 degrees. The tapering must remove all sharp and/or rough edges which might injure the gasket.

The flame cutting of pipe will not be allowed. Reinforced concrete water main pipe shall not be cut.

**I. Setting Water Main Fittings and Accessories:**

Valves, fittings, plugs, hydrants, etc. shall be set and joined to pipe in the manner specified in the Section entitled "Making Joints."

Hydrants shall be located as shown on the Plans or as directed by the Engineer in such a manner as to provide complete accessibility and minimize the possibility of damage from vehicles or injury to pedestrians.

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**J. Making Joints:**

Mechanical means shall be used for pulling home all rubber-gasket pipes regardless of trench condition where manual means will not result in pushing and holding the pipe home. When a trench box or liner is used, a cable shall be used to pull the joints home and hold them in position.

Where work is performed in wet trenches or trenches with running sand, the Contractor shall provide and use mechanical means for pulling the pipe home in making up the joint and for holding the pipe joints tight until completion of the line. Mechanical means shall consist of a cable placed inside or outside of the pipe with a suitable winch, jack, or come-along for pulling the pipe home and holding the pipe in position.

Where not required by these Specifications, manual means will be acceptable only if the joints can be pushed home and held.

Hydrants shall be set to stand plumb with their nozzles parallel to the street and the pumper nozzle facing the street. Hydrants shall be set with pumper nozzles between 18 and 24 inches above finished grade, or as directed in writing by the Engineer.

**K. Anchorage for Water Main Fittings and Accessories:**

All plugs, caps, tees, hydrants, and bends shall be provided with MDOT Grade S2 concrete meeting the requirements of Section 701 of the 2012 MDOT Standard Specifications for Construction reaction backing (thrust block) as shown on the Plans or specified herein. Valves shall be restrained from movement at adjacent sleeves by the use of a closure piece, or thrust ring (full size pipe section cut to fill the gap inside the sleeve to within 1/4") as specified herein.

Reaction backing shall be placed between unexcavated solid ground and the fitting to be anchored. The area of bearing on the pipe and on the ground in each instance shall be that shown on the details or directed by the Engineer. The reaction backing shall, unless otherwise shown or directed, be so placed that the pipe and fitting joints will be accessible for repairs. This shall include adequate protection of any bolts from direct contact with the concrete.

Metal harnesses of tie rods or clamps may not be used instead of concrete reaction backing. Mega-Lug joint restraint systems and restrained, push-on joint, pipe shall be used where connections to existing lines require immediate pressurization, as specified herein.

In the event that the Engineer determines a change in the anchorage or design is required due to unsuitable earth conditions, changes may be ordered by the Engineer.

The use of friction clamps or set-screw type retainer glands for thrust restraint will not be allowed.

**L. Abandonment or Removal of Water Main:**

The Contractor shall abandon or remove water main(s) where shown on the Plans. All work shall be performed in accordance with the Special Provision entitled "Water Main and Appurtenances, Remove or Abandon."

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**M. Water Main Testing:**

The water main shall be disinfected and tested by the Contractor in the presence of the Engineer in accordance with the requirements below. The Contractor shall furnish all piping, pumps, hoses, gauges, and other materials and equipment required to carry out the tests using water from the City's water mains. All chlorinated water shall be discharged directly to the sanitary sewer and will not be allowed to be discharged to the ground or any surrounding water course. Any hoses which are needed to direct water from blow-offs and/or hydrants during water main testing and flushing shall be supplied by the Contractor. The City shall furnish and install one inch corporation stops at all necessary locations, at the expense of the Contractor. The tapping of water mains, the installation of all corporation stops, and the operation of valves and hydrants is reserved for City personnel. The Contractor is required to assist in valve and hydrant operation, however. The Contractor shall give the City forty-eight hours prior written notice of intent and desire to test water mains.

**Bacteriological Testing Sequences:**

In the case of all water mains connected to existing facilities, flushing, chlorination and bacteriological testing must precede pressure testing. Where mains can be totally isolated from existing facilities with air gaps or double valves, pressure testing may precede chlorination and bacteriological testing. The normal sequence and time requirements for testing are:

Isolated (Gapped) Water Main	Connected Water Main
1. Fill Main	1. Flush and Swab*
2. Pressure Test	2. Chlorinate
3. Connect One End of Main	3. Wait; 24 hours
4. Flush and Swab*	4. Flush**
5. Chlorinate	5. Wait; 24 hours
6. Wait; 24 hours	6. Bacteriological Samples
7. Flush**	7. Wait; 24 hours
8. Wait; 24 hours	8. Bacteriological Samples
9. Bacteriological Samples	9. Wait; 48 hours
10. Wait; 24 hours	10. Pressure Test (If both sets of Bacteriological samples pass)
11. Bacteriological Samples	11. Flush
12. Wait; 48 hours	12. Wait; 24 hours
13. Make Final Connection(s) – Place in Service (If both sets of bacteriological samples pass)	13. Bacteriological Samples
	14. Wait; 24 hours
	15. Bacteriological Samples
	16. Wait; 48 hours
	17. Place in Service (If both sets of bacteriological samples pass)

\*Collect flush water in operable storm water retention/detention facility.

\*\*Discharge flush water into approved sanitary sewer.

The Contractor shall not connect any end of a newly constructed water main to an existing, in-service, water main, until the newly constructed water main passes the hydrostatic test, unless approved in writing by the Engineer.

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FOR  
WATER MAIN AND APPURTENANCES**

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**N. Hydrostatic (Pressure Test):**

Insofar as is practical, mains shall be pressure tested between valves. The maximum length of water main to be tested in any one test shall be 1500 feet. The section of main to be tested shall be slowly filled with potable water and the entrained air within the pipe removed or absorbed and pumped up to a pressure of 150 psi (or other pressure if specified) and the test period shall start immediately thereafter. The lines shall then be maintained under a test pressure of 145-155 psi for a continuous period of three hours by pumping chlorinated (25 ppm) water into the line at frequent intervals. The volume of water so added shall be measured and considered to represent the leakage from the line under test during the interval. Visible leaks shall be repaired regardless of test results. The leakage under the conditions of the test shall not exceed the values shown in the table below. If one side of a double disc gate valve is under test pressure, that seat shall count as four joints.

Maximum Allowable Leakage per 100 Joints at 150 psi Avg. Test Pressure

Pipe Diameter (Inches)	4	6	8	10	12	16	20	24	30	36
Leakage (gallons/hr)	0.66	0.99	1.32	1.66	1.99	2.65	3.30	3.97	4.97	5.96

In the event that the leakage exceeds the maximum allowable leakage as specified above, the joints in the line shall be carefully inspected for leaks and repaired where necessary. Any pipes or fittings found to be leaking shall be removed and replaced with new pieces by the Contractor. After this work has been performed, all tests shall be repeated.

**O. Flushing and Swabbing:**

The Contractor shall flush the water main after making a connection to the existing City water main where a valve separates the new water main from the existing main. As a result, flushing will be accomplished using flow through the full size of the new water main. If a storm water retention/detention facility is to be constructed as part of the project, this facility is to be completed, stabilized, operable, and utilized for the collection of the flushing water. All pipe, materials, and appurtenances which will come into contact with potable City water after the restoration of water service following the connection shall be disinfected with a strong chlorine solution prior to installation.

Water main shall be cleaned using a high density poly-pig, Girard Aqua Swab (2 lbs/ft<sup>3</sup> density) swab, or Engineer approved equal and flushed. The diameter of the blow-off pipes shall be at least 50% of the diameter of the pipe being flushed. Hydrants, with internal components removed, may serve as blow-offs for mains 12 inches and less. The Contractor shall provide details, for the review and approval of the Engineer, for the various required blow-offs. Blow-off pipes, discharge hoses, where needed, and associated costs shall be included in the cost of the permanent water main being installed and will not be paid for separately. If there are no branch connections to be swabbed, the poly-pig shall be inserted in the new water main at the time of connection described above. The poly-pig shall be located on the "downstream" or new side of the separation valve. The poly-pig shall then be forced through the new water main during the first flush and discharged through a construction blow-off of sufficient size to allow passage of the poly-pig. For water mains with branch connections, a launching tee or wye shall be installed as shown in the details, for launching multiple poly-pigs. The main line and each branch main shall be flushed and swabbed individually. Following the successful final bacteriological testing of the water main, the launching tee/wye shall be permanently capped at its branch.

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During the flushing and swabbing of a water main, the discharge point for the main shall be left open, with all other discharge points closed, to direct the poly-pig completely through the main being swabbed to its point of termination. Following the initial swabbing of water main, the separation valve shall be closed, and then the discharge point closed. If a branch water main is to be swabbed, the poly-pig is then to be placed in the launcher; the discharge point for the branch water main is to be opened; the poly-pig is to be inserted into the water main; the separation valve partially opened and the branch water main flushed and swabbed.

Following the swabbing of the water main(s), the water main(s) are to be flushed as required. If approved or directed by the Engineer, the water main(s) may be flushed overnight, provided that proper controls (i.e. hoses directed into storm structures, etc.) are installed to direct and control the flushing water.

**P. Chlorination:**

After the water mains to be tested have been acceptably flushed, they shall be disinfected in accordance with AWWA C651 "Disinfecting Water Mains" and these Specifications. All new mains and fittings, and any existing mains contaminated by the Contractor, shall be chlorinated to a minimum residual of fifty (50) parts per million (ppm) with commercial liquid chlorine solution (sodium hypochlorite - pool type). Other forms of chlorination and disinfection methods of water mains may be presented by the Contractor and shall receive prior approval in writing by the Engineer before being used. The minimum recommended dosage of sodium hypochlorite is as follows (based on 10% available chlorine):

Recommended Minimum Chlorine Dosage to Disinfect 100 L.F. of Pipe

<u>Pipe Diameter (inches)</u>	<u>10% Chlorine Solution (gallon)</u>
6	0.153
8	0.272
10	0.426
12	0.613
16	1.090
20	1.703
24	2.452

The chlorinated water shall remain in the mains for a minimum of 24 hours, at the end of which period the chlorinated water at all parts of the main must show free available chlorine residual of at least twenty-five (25) ppm. If less than 25 ppm residual is shown at the end of the first 24 hour period, additional chlorine shall be added until a residual of not less than 25 ppm at all parts of the system is shown after a subsequent 24 hour period. The chlorinated water shall then be removed from the mains and disposed of into an existing, approved City sanitary sewer main, or other location approved in writing by the Engineer. All chlorinated water shall be discharged directly to the sanitary sewer and will not be allowed to be discharged to the ground or any surrounding water course. The mains shall then be left full of water ready for bacteriological testing.

**Q. Bacteriological Testing:**

The City will obtain bacteriological samples of the water in the mains for analysis from testing blow-offs, corporations, or other sampling points as determined acceptable by the City. Samples will be taken after the mains have been satisfactorily chlorinated in accordance with these Specifications, the chlorinated water flushed out and removed, and the mains filled with potable water. The water

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FOR  
WATER MAIN AND APPURTENANCES**

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samples will only be bacteriologically tested at the City's Water Treatment Plant Laboratory; the use of other laboratories or testing locations shall not be allowed or deemed to provide satisfactory test results by the City of Ann Arbor under any circumstance. No samples will be deemed acceptable until they meet all city requirements. If the newly constructed water main is connected at one end to an in-service section of the City water main, and the chlorination precedes pressure testing, the City will also take samples after satisfactory pressure testing. In each case, two sets of samples shall be taken; a period of 24 hours must elapse between flushing of the main and drawing of the first samples, with the second samples being drawn 24 hours after the first samples were drawn. For each sample, a minimum of 48 hours is required to obtain test results. All samples must pass the bacteriological test.

The Contractor shall plan for these testing sequences and durations in his construction schedule. Contract time will continue during all water main testing phases, regardless of duration.

**d. Construction, General Requirements.-** The Contractor shall be responsible for coordination with the City of Ann Arbor Field Operations Unit for the installation of 1-inch corporations in the gate wells to be used for water main testing and/or filling of new main.

The Contractor must have all materials, fittings, pumps and other miscellaneous equipment, and personnel on-site before the City of Ann Arbor Public Services personnel will prepare and shutdown and existing main.

The bedding and backfill for Trench Detail I (under roadbed), Modified, shall be MDOT Granular Material, Class II compacted to 95% of its maximum dry density in maximum lifts of 12 inches. The bedding and backfill for Trench Detail V (within 1:1 influence of the roadbed or curb and gutter), Modified, to a point 12 inches above the top of pipe, shall be MDOT Class II sand compacted to 95% of its maximum dry density. The material above this point shall be Engineer-approved native material compacted to 90% of its maximum dry density.

The Contractor shall dig-up and expose all utility crossings prior to laying any water main pipe. This will allow the Engineer to adjust the grade of the water main, if possible, to avoid the existing utilities. The costs of the 'dig-ups', and all related costs, shall be included in the respective items of work in this Special Provision. Some "dig-ups" may need to occur out of Phase.

Should the water main, or other pay items in this special provision, conflict with abandoned sewers or water mains, the conflicting section of the abandoned sewer or water main shall be removed and the remaining sections shall be (re)abandoned in accordance the Special Provision for "Water Main and Appurtenances, Abandon" and the Special Provision for "Sewer, Any Size or Depth, Abandon," except that flow filling the sewer will not be required. All the work shall be included in the cost of the water main, or other pay items in this special provision.

**e. Lighting Requirements for Nighttime Water Main Work.-** Night work shall be lighted to an average intensity of 10 foot-candles minimum. Sufficient light sources shall be provided to achieve this illumination requirement. The lighting scheme shall be submitted to the Engineer for review and approval a minimum of 72 hours prior to the anticipated commencement of the nighttime work. Nighttime work will not be allowed to begin until such time as the lighting scheme has been approved by the Engineer.

The lighting shall allow the inspector to clearly see and inspect all work operations. Light sources shall be adjusted as directed by the Engineer, as many times as needed, in order to meet the requirement.



**DETAILED PECIFICATION FOR  
WATER MAIN AND APPURTENANCES**

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Lighting systems may be fixed, portable, or equipment mounted. A power source shall be supplied with sufficient capacity to operate the lighting system. The power source shall not violate any local noise ordinance requirements. The lighting system(s) shall be arranged such that they do not interfere with the vision of motorists, glare or shine in the eyes of oncoming drivers, or unnecessarily illuminate surrounding properties or residences. After initial set-up, drive through and observe the lighted area from each direction on the roadway. Adjust lighting units as many times as needed in order to comply with these requirements.

**f. Sequence of Construction.-** All water main construction shall be completed in accordance with the Special Provision entitled “Maintaining Traffic and Construction Sequencing” and as detailed herein. The Contractor shall schedule and coordinate all water main shutdowns with the Engineer. The Contractor shall submit for the Engineer’s review and approval the sequence of all water main “shut downs” and tie-ins such that disruption in service to existing properties is minimized to the greatest extent possible. Should the Engineer not accept the Contractor’s proposed construction sequence, it shall not be a basis of claim for extension of contract time or additional compensation.

**g. Measurement and Payment.-** The completed work will be paid for at the contract unit prices for the following contract items (pay items):

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
PC 250, D.I. Water Main, w/ Polyethylene Wrap, ___ inch, Tr Det I, Mod.....	Foot
PC 350, D.I. Water Main, w/ Polyethylene Wrap, ___ inch, Tr Det I, Mod.....	Foot
PC 250, D.I. Water Main, w/ Polyethylene Wrap, ___ inch, Tr Det V, Mod .....	Foot
PC 350, D.I. Water Main, w/ Polyethylene Wrap, ___ inch, Tr Det V, Mod .....	Foot
___ deg Bend, ___ inch .....	Each
Reducer, ___ inch x ___ inch .....	Each
Gate Valve-in-Box, ___ inch .....	Each
Gate Valve-in-Well, ___ inch .....	Each
Tapping Connection, ___ inch .....	Each

All work shall be paid in full at the contract unit prices which shall include all the labor, materials and equipment required including all required costs associated with night time work, supplemental lighting, and all other required elements of the work.

Fittings other than those specifically listed as separate contract items, blow-off assemblies, hoses, and restrained joint pipe and gaskets, special gaskets, and the like, shall not be paid for separately, but shall be considered included in the payment for “D.I. Water Main, w/Polyethylene Wrap, \_\_\_ inch, Tr Det \_\_\_.”

Tees, Bends, and Reducers and other fittings specifically listed as separate contract items (pay items), shall be paid for at the contract unit price for each unit installed.

Valve Box Extensions will only be paid for if they are required by the plans and they are not required due to the Contractor’s operations.

**DETAILED SPECIFICATION  
FOR  
WATER MAIN AND APPURTENANCES, REMOVE OR ABANDON**

**1 of 2**

**a. Description.-** This work shall include abandoning or removing existing water mains, valves, valve wells, valve boxes, and fire hydrant assemblies of various sizes as required by the Plans. All work shall be performed in accordance with the project plans, as detailed in this Special Provision, and as directed by the Engineer.

**b. Materials.-** All materials shall meet the requirements specified in Division 7 and 9 of the MDOT 2020 Standard Specifications for Construction as follows:

Mortar Type II	Section 702
Granular Material, Class II	Section 902
Masonry Units	Section 913

Push-on joint plugs and thrust blocks shall conform to the requirements as detailed in the Special Provision entitled “Water Main and Appurtenances.”

**c. Methods of Construction.-** The Contractor shall abandon water mains where shown on the Plans. This includes, but is not limited to, cutting the main at each end, plugging the live main at the end(s) with push-on joint plug(s) and thrust block(s), plugging the abandoned main at its end(s) with brick and mortar, concrete, or mechanical joint plug, breaking down any manholes (remove manhole ring and cover and the top 4' of manhole structure, breaking out the manhole base, and backfilling as specified herein) in the abandoned line, removing and salvaging any valves and fittings, plugging the pipe in manholes with brick and mortar, concrete, or mechanical joint plugs.

In locations as shown on the Plans or where abandoned water main, valves or valve wells are within 30 inches of the proposed subgrade, the pipe, valves or valve wells shall be removed completely. The resulting hole or trench shall be backfilled with Granular Material, Class II, in maximum lifts of 12 inches, and be compacted to 95% of its maximum dry density, if located within the public rights-of-way, railroad rights-of-way, or within the influence of paved surfaces or structures. Otherwise, backfill shall be Engineer approved native material, compacted to 90% of its maximum dry density, in lifts of 12 inches or less, unless otherwise noted on the plans.

Abandoned (salvaged) or removed valves and fire hydrant assemblies shall be neatly stacked on-site in a single location so that City of Ann Arbor forces can retrieve them at a later date. The Contractor shall assist City forces by loading them into City trucks. All costs associated with storing, stockpiling, and loading valves and hydrants into City vehicles will not be paid for separately.

This project includes abandoning asbestos concrete water main, which is located as shown on the plans along Stadium Blvd. Asbestos concrete pipes shall be kept wet at all times while cutting or crushing operations are occurring. High speed friction saws shall not be used to cut the pipe.

As shown on the plans and/or as directed by the Engineer, portions of the asbestos concrete pipe shall be abandoned by capping it on both ends and burying it in the trench. As shown on the plans, other portions of the asbestos concrete pipe shall be abandoned by crushing and burying it in the trench. At no time shall

any asbestos concrete pipe be removed from the site unless specifically directed to do so in writing by the Engineer.

**DETAILED SPECIFICATION  
FOR  
WATER MAIN AND APPURTENANCES, REMOVE OR ABANDON**

**2 of 2**

**d. Measurement and Payment.-** The completed work as measured shall be paid at the contract unit prices for the following contract items (pay items):

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
___ inch Water Main, Abandon	Foot
___ inch Gate Valve-in-Box, Abandon	Each
___ inch Gate Valve-in-Well, Abandon	Each
___ inch Water Main, Rem	Foot
___ inch Gate Valve-in-Box, Rem	Each
___ inch Gate Valve-in-Well, Rem	Each

“ \_\_\_ inch Water Main, Abandon” and “ \_\_\_ inch Water Main, Rem” shall be measured and paid for by length in lineal feet and shall include all labor, materials, and equipment necessary to abandon or remove the pipe including, but not limited to; excavation; cutting of pipe; furnishing and installing push-on joint plugs and thrust blocks; constructing brick and mortar bulkheads; the furnishing, placement, and compaction of approved granular backfill material, as required; and, the removal and proper disposal off-site of excess materials.

“ \_\_\_ inch Water Main, Abandon” and “ \_\_\_ inch Water Main, Rem” shall also include all work for complying with the appropriate environmental and worker safety laws and requirements regarding the removal/abandonment of asbestos pipe. “ \_\_\_ inch Gate Valve-in-Box, Abandon”; “ \_\_\_ inch Gate Valve-in-Well, Abandon”; “ \_\_\_ inch Gate Valve-in-Box, Rem”; “ \_\_\_ inch and Gate Valve-in-Well, Rem”; shall be paid for at the contract unit price for each unit abandoned or removed.

Payment shall include all labor, materials, and equipment necessary to completely abandon or remove the valve, including removing and salvaging the valve, valve boxes, and manhole rings and covers. Also included is the removal of the top 4 feet of valve wells; breaking out the valve well base; furnishing, placement, and compaction of approved granular backfill material, as required; stockpiling valves for future City use or removal; and, the removal and disposal of excess materials. Payment for Fire Hydrant, Rem includes payment for abandoning the companion valve.

All work associated with abandoning the asbestos concrete pipe shall be included in the above pay items.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY WATER MAIN LINE STOP**

**1 of 5**

**Description.-** The Contractor shall furnish all materials, labor and equipment to properly install and set water main line stops into the existing Ductile Iron Main(s) at the locations as shown on the plans and as directed by the Engineer. All work shall be performed in accordance with the requirements as detailed herein.

The existing mains, upstream and downstream of the proposed line stop(s) cannot be shut down or taken out of service. To ensure that the entire operation shall be accomplished without interruption of service or flow, the installation shall be accomplished by Contractor personnel skilled and experienced in the procedures specific to line stops of the required size(s).

The work shall include, but not be limited to; pavement saw-cutting; excavation and disposal of excavated material; the furnishing, installation, and removal of sheeting and/or shoring where needed; the furnishing, placement and compaction of approved bedding and backfill materials; furnishing and placing suitable, clean, gravel to create a stable working surface at the bottom of the excavation; de-watering; pipe cleaning, measuring, and performing all advance work necessary to prepare for the performance of the line stop; nighttime lighting as required; the removal of all materials and equipment associated with the work when no longer needed; and, any other items needed to complete the work as detailed on the plans and as specified herein.

**b. Materials.-** Bedding and backfill for areas contained within a segment of water main designated as Trench Detail I (under roadbed), Modified, shall be Granular Material, Class II, meeting the requirements of Section 902. For work within a segment of water main designated as Trench Detail V (outside of the 1:1 influence line of roadbed or curb and gutter), Modified, Granular Material, Class II and Engineer approved native material, placed in accordance with the trench details, shall be used.

The Contractor shall submit to the Engineer two (2) sets of drawings, furnished by manufacturers, fully and distinctly illustrated and describing the Line Stop fittings proposed to be furnished. Work shall not commence until such time as the drawings have been reviewed and accepted by the Engineer.

Line Stop Fittings shall be full encirclement, pressure retention type split tee. It shall consist of two steel weldments; an upper line stop flange saddle plate and a lower saddle plate. These two saddle plates shall be contiguous.

Line Stop Flange: The outlet of each fitting shall be machined from a 150 lb. forged steel flange (ASTM A181 or A105) or from pressure vessel quality steel plate (ASTM A285, Grade C); flat faced and drilled per ANSI B16.5). Suitable independently operated locking devices shall be provided in the periphery of the flange to secure the completion plug.

Line stop Nozzle: The nozzle, which lies between the saddle and the flange shall be fabricated from steel pipe (ASTM A234). After welding and stress relief, the nozzle shall be accurately bored as follows to accommodate the Line stop plugging head:

- a) Machine an internal circular shoulder to seal against the circumferential gasket carried on the plugging head.

Completion Plug: The completion plug shall be machined from a stress relieved carbon steel weldment. It shall contain two (2) circumferential grooves: one to receive the locking devices from the Line stop flange, and the second to contain a compressible "O" ring to seal pressure tight against the bore of the flange.

Blind Flange: Each Line stop fitting shall be closed with a blind flange. Facing and drilling of the blind flange shall be compatible with that of the Line stop flange. Minimum blind flange thickness shall be that of AWWA Spec. 207, Class D.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY WATER MAIN LINE STOP**

**2 of 5**

Saddle Alignment Marking: Each saddle-half shall be matched and marked with serial numbers, to insure proper alignment in the field.

Fasteners: All bolts, studs, and nuts used on Line stop, drain/equalization fittings, blind flange, and other elements that shall remain upon completion of the work shall be stainless steel and meet the requirements of ASTM F 593.

General: Manufacturer will exercise extreme care to insure that weldments are of adequate strength, properly shaped, securely reinforced, and free from distortion that could stress the ductile iron main during installation, pressure tapping, or Line stopping operations. All steel shall meet the requirements of ASTM A36, as a minimum. All weldments shall be braced and stress relieved.

Gaskets: Shall be molded from elastomer compounds that resist compression setting and are compatible with water in the 32 to 140 deg. F temperature range.

Upper Line stop Flange Saddle: Shall consist of a saddle plate, a Line stop flange, and a Line Stop nozzle. The interior of the saddle plate, adjacent to and concentric with the O.D. of the nozzle, shall be grooved to retain a gasket which shall seal the saddle plate to the exterior of the ductile iron main. This gasket shall constitute the only seal between the main and the fitting. The flange saddle shall also meet the following requirements:

- a) Saddle plate shall be of a minimum of 0.375" in thickness. It shall be shaped to be concentric to the outside of the ductile iron main. The smallest I.D. of the saddle and its interior rings shall exceed the O.D. of the main by a minimum of 0.250" to allow for ovality of the main;
- b) Line stop nozzle of 0.375" min. wall thickness shall be securely welded to the saddle plate;
- c) The Line Stop flange shall be securely welded to the nozzle. After welding, the assembly shall be braced, stress relieved, and bored to receive the completion plug and the circumferential gasket of the Line Stop machine plugging head; and,
- d) Bolt, nut of stud, nut, and washer assemblies shall be furnished to draw the upper and lower saddles together for sealing. Bolting brackets shall be gusseted.

Lower Saddle Plate: Saddle plate shall be of a minimum 0.375" thickness and shall be shaped to be concentric to the outside brackets shall match upper half.

- b. Equipment.-** The equipment shall consist of a cylindrical plugging head that contains a flat, expandable elastomer sealing element. The plugging head shall be advanced into and retracted from the

main by means of a linear actuator. When retracted, the plugging head and carrier are housed in an adapter, bolted pressure tight between the tapping valve and the actuator.

Sealing Element: The element shall be monolithically molded from a suitable polyurethane compound. The element shall be flat in a plane perpendicular to the flow in the main. Minimum thickness of the element shall be 4". The bottom of the element shall be semi-circular to conform to the bore of the main.

Drilling equipment: Shall be in good working condition, equipped with power drive to insure smooth cutting, and to minimize shock and vibration. Cutting equipment shall be carbide tipped and capable of being replaced without removal from the jobsite.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY WATER MAIN LINE STOP**

**3 of 5**

Plugging Head: The diameter of the cylindrical plugging head shall be slightly smaller than the bore of the Line Stop nozzle. The plugging head shall have a suitable circumferential gasket to seal against the shoulder in the Line stop nozzle. This gasket shall also seal against the sealing element to prevent bypass flow around the Line stop.

Deposits in Bore of Main: The semi-cylindrical bottom of the plugging head shall be designed to break and dislodge tuberculation and other deposits in the bore of the main which might interfere with a satisfactory Line stop.

d. Method of Construction.- **Installation of proposed line stops mains will require work in close proximity to existing utilities. This must be taken into consideration when the contractor determines the required trench safety requirements. All excavation shall conform to MIOSHA Standards; the Contractor is solely responsible for determining all excavation and trench safety requirements.**

If necessary, The City will reduce the pressure to 100 psig or less for the duration of the installations. The entire operation of installing the line stop shall be accomplished without reduction of water pressure in the main(s) below 100 psig. It shall be the responsibility of the Contractor to verify pressure prior to commencing the installation.

Preliminary Field Inspection of Water Main:

Dimensional, specification, and other data regarding the existing mains have been taken from existing records. This information may be inaccurate, out of date, and/or inadequate. The data have not been verified by field inspections. Further, the water main consists of ductile iron pipe which may contain dimensional and structural flaws. In addition, the Contractor shall anticipate that exterior main conditions, bells, service connections, or presence of adjoining utilities may require relocation of proposed line stop. Prior to proceeding with the installation of any line stop, it is necessary to know the exact main outside diameter of the water main, if it has any ovality, and the internal diameter of the pipe before line stop fittings and plugging head sealing elements can be manufactured and/or ordered.

Prior to ordering material, Contractor shall excavate at each proposed location and carefully measure the outside diameter of the water main with calipers along at least four (4) locations to determine ovality and the critical outside diameter of the water main. The Contractor shall determine main wall thickness, uniformity, and structural integrity by means of ultrasonic testing. Data shall be taken to determine extent of internal deposits, tuberculation, etc..

If the Engineer determines that Contractor's data are not adequate, the Engineer may direct Contractor to make one or more pressure taps on main to obtain test pipe coupons for the Engineer's evaluation. The minimum size of the test coupon shall be 5" diameter, drilled through a nominal 6" valve. Pressure tapping saddles and other materials used for inspection taps shall conform to the requirements of this Special Provision. The Contractor shall anticipate that heavy interior corrosion and/or tuberculation exists within the water main.

If, in Engineer's opinion, the proposed location is unsatisfactory based on measurements of the existing pipe at the locations of the proposed line stops, the Engineer will direct excavation at another site. Excavating, de-watering, inspections, backfill, and restoration will be paid for separately in accordance with the applicable contract unit prices or Section 109.05.C and 109.05.D whichever the Engineer deems most appropriate.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY WATER MAIN LINE STOP**

**4 of 5**

Because of possible internal corrosion and deposits in existing water mains, a "bottle-tight" shut down may not occur. A satisfactory shutdown which allows the work to be accomplished (i.e. valve replacement, water main tie-in, etc.) using drainage pumps to de-water excavations, with workmen wearing boots and raingear, if necessary, must be obtained. The Contractor will not be allowed to proceed with further work until an acceptable shutdown is achieved. The Contractor shall be aware that this may require the halting of work and re-scheduling of all work operations.

Contractor shall power wire brush and grind the exterior of the water main to remove any debris, corrosion deposits, or other surface irregularities that might interfere with proper seating and sealing of each line stop fitting against each main. Any structural defects in the water main, service connections, appurtenances, adjacent utilities, etc., that could interfere with the line stop installation shall be immediately reported to Engineer.

All line stop fittings and appurtenances shall be cleaned and disinfected in accordance with the current City of Ann Arbor Public Services Area Standard Specifications prior to bolting any of the line stop fittings in place or commencing any pipe cutting.

Contractor shall fit upper and lower saddle plate assemblies to main, thoroughly checking for proper fit to main. Under no circumstances shall Contractor attempt to force, reshape, or bend saddle plates by excessive tightening of saddle studs while the line stop fitting is assembled around the main. Any required retrofitting shall be accomplished with the fitting removed from the main. Any damage to fitting, accessories, or main shall be repaired at Contractor's expense to the satisfaction of Engineer.

Upper and Lower saddle halves shall be drawn together by bolt assemblies and the Saddle plates shall be bolted together in the horizontal position.

All line stop work shall be performed in accordance with the equipment manufacturers approved work procedures and installation guidelines.

Final closure of the water main shall be accomplished by insertion of a manufacturer-approved completion plug. The Contractor shall test the completion plug sealing through the use of a bleed off assembly in the machine housing.

The Contractor shall remove the temporary valve and the installation of a blind flange shall be completed.

The Contractor shall place polyethylene encasement meeting the requirements of the City of Ann Arbor Standard Specifications for Construction around the upper and lower saddle halves, the blind flange, and to a point at least 1 foot on either side of the saddle halves. All polyethylene encasement shall be securely taped to the water main such that water entry is minimized to the greatest extent possible.

Lighting Requirements for Nighttime Water Main Work:

Night work shall be lighted to an average intensity of 108 lux minimum. Sufficient light sources shall be provided to achieve this illumination requirement. The lighting scheme shall be submitted to the Engineer for review and approval. Nighttime water main work will not be allowed to begin until such time as the lighting scheme has been approved by the Engineer.

The lighting shall allow the inspector to clearly see and inspect all work operations, including pipe, fitting, and valve installations, disinfection of the pipe, pipe cleaning, and all other night work.

**DETAILED SPECIFICATION  
FOR  
TEMPORARY WATER MAIN LINE STOP**

**5 of 5**

Lighting systems may be fixed, portable, or equipment mounted. A power source shall be supplied with sufficient capacity to operate the lighting system. The lighting system(s) shall be arranged such that they do not interfere with the vision of motorists or unnecessarily illuminate surrounding properties or residences.

**e. Measurement and Payment.-** The completed work will be paid for at the contract unit prices for the following contract items (pay items):

<u><b>Contract Item (Pay Item)</b></u>	<u><b>Pay Unit</b></u>
Line Stop, Ductile Iron Pipe, ___ inch	..... Each

All work shall be paid in full at the contract unit prices which shall include all the labor, materials, and equipment required to perform the work as detailed herein. This shall also include all required costs associated with night time work, supplemental lighting, and all other required elements of the work.



**DETAILED SPECIFICATION  
FOR  
ITEM #260 – CLEAN-UP & RESTORATION, SPECIAL**

**1 of 2**

**DESCRIPTION**

This item of work shall conform to Division IX, Section II, Item No. 891, Clean-Up & Restoration of the Public Services Area Standard Specifications, except as specified herein.

This work shall include the removal of all surplus materials from the site including; but not limited to; tools, dirt, rubbish, construction debris, and excess excavated material. This work shall also include the restoration of all existing lawn areas, road surfaces, culverts, drives, and sidewalks disturbed by the work. This work includes placing topsoil, fertilizer, seeding, and furnishing and installing mulch blankets on all disturbed areas as approved by the Engineer. Mulch blankets are required on all seeded areas.

**MATERIALS**

The materials shall meet the requirements specified in the MDOT 2012 Standard Specifications as designated, as specified herein, and as approved by the Engineer:

- Seed shall be THM seed mixture as described in Table 8 16-1.
- Fertilizers shall be a Class A. The percentages by weight shall be 12- 12- 12, or as approved by the Engineer.
- Water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances.
- Mulch blankets shall be High Velocity Straw Mulch Blankets as specified in MDOT section 917.

**MAINTENANCE AND ACCEPTANCE**

It is the responsibility of the Contractor to establish a dense lawn of permanent grasses, free from mounds and depressions prior to final acceptance and payment of this project. Any portion of a seeded area that fails to show a uniform germination shall be reseeded. Such reseeding shall be at the Contractor's expense and shall continue until a dense lawn is established. The Contractor is responsible for restoring all areas disturbed by his construction.

The Contractor shall maintain all lawn areas until they have been accepted by the Engineer. Lawn maintenance shall begin immediately after the grass seed is in place and continue until final acceptance with the following requirements:

Lawns shall be protected and maintained by watering, mowing, and reseeding as necessary, until the period of time when the final acceptance and payment is made by the Engineer for the project, to establish a uniform, weed-free, stand of the specified grasses. Maintenance includes furnishing and installing additional topsoil, and reseeding all as may be required to correct all settlement and erosion until the date of final acceptance.

Damage to seeded areas resulting from erosion shall be repaired by the Contractor at the Contractor's expense. Scattered bare spots in seeded areas will not be allowed over three (3) percent of the area nor greater than 6"x 6" in size.

When the above requirements have been fulfilled, the Engineer will accept the lawn.

Cleanup and Restoration must be performed upon the completion of each sub-phase of work (as described in the Detailed Specification for Project Schedule), and not as one single operation at the completion of the entire project.

**DETAILED SPECIFICATION  
FOR  
ITEM #260 – CLEAN-UP & RESTORATION, SPECIAL**

**2 of 2**

**MEASUREMENT AND PAYMENT**

Measurement and payment for this item of work shall conform to Division IX, Section 2, Item No. 891, Clean-Up & Restoration of the Public Services Area Standard Specifications except as modified herein.

The completed work for “Clean-Up & Restoration, Special” will be paid for on a lump sum (LS) basis. 80% of said lump sum shall be paid upon completion and approval of the site by the Engineer. By May 31<sup>st</sup> of the year following the completion of the project, the Engineer will inspect the seeded turf to ensure that the end product is well established; weed free, and in a growing and vibrant condition. If the Engineer determines that the restored areas meet the project requirements, the remaining 20% of the lump sum will be paid. If the Engineer determines that the restored areas do not meet the project requirements, the Contractor will continue with any and all measures necessary to meet the project requirements. All costs associated with the remedial measures shall be borne entirely by the Contractor.

**Pay Item**

**Pay Unit**

Clean-Up & Restoration, Special

Lump Sum

**DETAILED SPECIFICATION  
FOR  
CERTIFIED PAYROLL COMPLIANCE AND REPORTING**

**1 of 2**

**DESCRIPTION**

This specification covers all administrative requirements, payroll reporting procedures to be followed by Contractors performing work on City-sponsored public improvements projects, and all other miscellaneous and incidental costs associated with complying with the applicable sections of the City of Ann Arbor Code of Ordinances with regard to payment of prevailing wages and its Prevailing Wage Compliance policy.

This specification is not intended to include the actual labor costs associated with the payment of prevailing wages as required. Those costs should be properly incorporated in all other items of work bid.

**GENERAL**

The Contractor is expected to comply with all applicable sections of Federal and State prevailing wage laws, duly promulgated regulations, the City of Ann Arbor Code of Ordinances, and its Prevailing Wage Compliance Policy as defined within the contract documents. The Contractor shall provide the required certified payrolls, city-required declarations, and reports requested elsewhere in the contract documents within the timeline(s) stipulated therein.

The Contractor shall also provide corrected copies of any submitted documents that are found to contain errors, omissions, inconsistencies, or other defects that render the report invalid. The corrected copies shall be provided when requested by the Supervising Professional.

The Contractor shall also attend any required meetings as needed to fully discuss and ensure compliance with the contract requirements regarding prevailing wage compliance. The Contractor shall require all employees engaged in on-site work to participate in, provide the requested information to the extent practicable, and cooperate in the interview process. The City of Ann Arbor will provide the needed language interpreters in order to perform wage rate interviews or other field investigations as needed.

Certified Payrolls may be submitted on City-provided forms or forms used by the Contractor, as long as the Contractor's forms contain all required payroll information. If the Contractor elects to provide their own forms, the forms shall be approved by the Supervising Professional prior to the beginning of on-site work.

**UNBALANCED BIDDING**

The City of Ann Arbor will examine the submitted cost for this item of work prior to contract award. If the City determines, in its sole discretion, that the costs bid by the Contractor for complying with the contract requirements are not reasonable, accurately reported, or may contain discrepancies, the City reserves the right to request additional documentation that fully supports and justifies the price as bid. Should the submitted information not be determined to be reasonable or justify the costs, the City reserves the right to pursue award of the contract to the second low bidder without penalty or prejudice to any other remedies that it may have or may elect to exercise with respect to the original low-bidder.

The Contract Completion date will not be extended as a result of the City's investigation of the as-bid amount for this item of work, even if the anticipated contract award date must be adjusted. The only exception will be if the Contractor adequately demonstrates that their costs were appropriate and justifiable. If so, the City will adjust the contract completion date by the number of calendar days commensurate with the length of the investigation, if the published Notice to Proceed date of the work cannot be met. The contract unit prices for all other items of work will not be adjusted regardless of an adjustment of the contract completion date being made.

**DETAILED SPECIFICATION  
FOR  
CERTIFIED PAYROLL COMPLIANCE AND REPORTING**

2 of 2

**MEASUREMENT AND PAYMENT**

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

**PAY ITEM**

**PAY UNIT**

Certified Payroll Compliance and Reporting

Lump Sum

The unit price for this item of work shall include all supervisory, accounting, administrative, and equipment costs needed to monitor and perform all work related to maintaining compliance with the tasks specified in this Detailed Specification, the City of Ann Arbor Code of Ordinances, its Prevailing Wage Compliance policy and the applicable Federal and State laws.

Payment for this work will be made with each progress payment, on a pro-rata basis, based on the percentage of construction completed. When all of the work of this contract has been completed, the measurement of this item shall be 1.0 times the Lump Sum bid amount. This amount will not be increased for any reason, including extensions of time, extra work, and/or adjustments to existing items of work.

**DETAILED SPECIFICATIONS  
FOR  
GENERAL CONSTRUCTION NOTES**

The following notes pertain to all Plan sheets issued as part of this Contract, and these notes shall be considered part of each Plan sheet or Detailed Information Sheet.

1. All work shall conform to latest revision of the City Standard Specifications.
2. The Contractor shall maintain access to all drives throughout the course of construction. Drives shall never be closed during non-working hours, unless otherwise authorized in writing by the Engineer.
3. The Contractor shall completely restore all existing site features to better than, or equal to, their existing condition.
4. The Contractor shall be aware that there are above-ground and below-ground utilities existing in and on these streets which include, but are not limited to: gas mains and service leads; water mains and service leads; storm sewer mains and service leads; sanitary sewer mains and service leads; telephone poles, wires, cables and conduits; electrical poles, wires, cables and conduits; cable television wires, cables and conduits, and other various utilities. The Contractor shall conduct all of its work so as not to damage or alter in any way, any existing utility, except where specified on the Plans or where directed by the Engineer. The City has videotaped and cleaned all sanitary and storm sewers, including storm sewer inlet leads, and has found all of these facilities to be in good condition, with the exception of those shown on the Plans for repairs or replacement.
5. The Contractor is solely responsible for any delays, damages, costs and/or charges incurred due to and/or by reason of any utility, structure, feature and/or site condition, whether shown on the Plans or not, and the Contractor shall repair and/or replace, at its sole expense, to as good or better condition, any and all utilities, structures, features and/or site conditions which are impacted by reason of the work, or injured by its operations, or injured during the operations of its subcontractors or suppliers.
6. No extra payments or adjustments to unit prices will be made for damages, delays, costs and/or charges due to existing utilities, structures, features and/or site conditions not shown or being incorrectly shown or represented on the Plans.

**DETAILED SPECIFICATION  
FOR  
DISPOSING OF EXCAVATED MATERIAL**

The Contractor shall dispose of, at the Contractor's expense, all excavated material. Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."

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**DETAILED SPECIFICATION  
FOR  
PROTECTION OF UTILITIES**

Damages to utilities by the Contractor's operations shall be repaired by the utility owner at the Contractor's expense. Delays to the work due to utility repairs are the sole responsibility of the Contractor.

The Contractor shall keep construction debris out of utilities at all times. The Contractor shall be back charged an amount of \$50.00 per day for each manhole/inlet/utility pipe that contains construction debris caused as a result of the Contractor's (including subcontractors and suppliers) work.

The Contractor is solely responsible for any damages to the utilities or abutting properties due to construction debris.

Certain sanitary and storm sewers within the influence of construction may have been cleaned and videotaped prior to construction. The City may also choose to videotape utility line(s) during or after the work of this Contract to inspect them for damages and/or construction debris. If such inspection shows damage and/or debris, then all costs of such inspection, cleaning, repairs, etc, shall be the Contractor's sole responsibility. If such inspection is negative, the City will be responsible for the costs of such inspection.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."

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**DETAILED SPECIFICATION  
FOR  
SOIL EROSION AND SEDIMENTATION CONTROL MEASURES**

The Contractor shall furnish, place, maintain and remove soil erosion and sedimentation control measures, including but not limited to, fabric filters at all drainage structures, all in accordance with all applicable City (and other governmental agencies) codes and standards, as directed by the Engineer, as detailed in the Standard Specifications, and as shown on the Plans.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."

**DETAILED SPECIFICATION  
FOR  
VACUUM TYPE STREET AND UTILITY STRUCTURE CLEANING EQUIPMENT**

The Contractor shall furnish and operate throughout the construction period, vacuum type street cleaning and utility structure cleaning equipment (Vac-All, Vactor, etc.) approved by the Engineer, as and when directed by the Engineer for dust control, for dirt/debris control, and for street cleaning immediately prior to, and for street and utility structure cleaning after any and all paving. The cleaning equipment shall be of sufficient power to remove dust, dirt, and debris from the pavement and from utility structures in and adjacent to the construction area.

Costs for this work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions."

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**DETAILED SPECIFICATION  
FOR  
MATERIALS AND SUPPLIES CERTIFICATIONS**

The following materials and supplies shall be certified by the manufacturer or supplier as having been tested for compliance with the Specifications:

- HMA materials
- Hot-poured Joint Sealants
- Cements, coatings, admixtures and curing materials
- Sands and Aggregates
- Steel and Fabricated metal
- Portland Cement Concrete Mixtures
- Reinforcing Steel for Concrete
- Reinforcing Fibers for Concrete
- Pre-cast Concrete products
- Sanitary Sewer Pipe
- Storm Sewer Pipe
- Water Main Pipe
- Corrugated Metal Pipe
- High Density Polyethylene Pipe
- Timber for retaining walls
- Modular Concrete Block for retaining walls
- Edge Drain and Underdrain Pipe
- Geotextile Filter Fabric and Stabilization Fabric/Grids

The Contractor shall submit all certifications to the Engineer for review and approval a minimum of three business days prior to any scheduled delivery, installation, and/or construction of same.

Costs for this work will not be paid for separately but shall be included in the bid price of the Contract Item "General Conditions."

# 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.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Address, City, State, Zip

\_\_\_\_\_  
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 DECLARATION OF COMPLIANCE**

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a contractor providing services to or for the City for a value greater than \$10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than \$10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than \$10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here  No. of employees\_\_*

The Contractor or Grantee agrees:

- (a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as \$14.05/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than \$15.66/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

**Check the applicable box below which applies to your workforce**

Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits

Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

- (b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- (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.
- (e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

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 or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee 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 or grant of financial assistance.

\_\_\_\_\_  
 Company Name

\_\_\_\_\_  
 Street Address

\_\_\_\_\_  
 Signature of Authorized Representative

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 City, State, Zip

\_\_\_\_\_  
 Print Name and Title

\_\_\_\_\_  
 Phone/Email address

# CITY OF ANN ARBOR LIVING WAGE ORDINANCE

**RATE EFFECTIVE APRIL 30, 2021 - ENDING APRIL 29, 2022**

**\$14.05 per hour**

If the employer provides health care benefits\*

**\$15.66 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](mailto:cspencer@a2gov.org)**



<b>Vendor Conflict of Interest Disclosure Form</b>
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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:

<b>Conflict of Interest Disclosure*</b>	
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 <hr style="border: 0; border-top: 1px solid black;"/> <input type="checkbox"/> Interest in vendor’s company <input type="checkbox"/> Other (please describe in box below)

\*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.

<b>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:</b>		
<b>Vendor Name</b>	<b>Vendor Phone Number</b>	
<b>Signature of Vendor Authorized Representative</b>	<b>Date</b>	<b>Printed Name of Vendor Authorized Representative</b>

**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.

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Company Name

---

Signature of Authorized Representative

---

Date

---

Print Name and Title

---

Address, City, State, Zip

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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](http://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](http://www.a2gov.org/humanrights). Then submit it to the Human Rights Commission by e-mail ([hrc@a2gov.org](mailto: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](mailto: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)			
			Hour Type										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
EMPLOYEE INFORMATION NAME:	WORK CLASSIFICATION									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

Date \_\_\_\_\_

I, \_\_\_\_\_ (Name of Signatory Party) \_\_\_\_\_ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the  
 \_\_\_\_\_ (Contractor or Subcontractor)  
 \_\_\_\_\_; that during the payroll period commencing on the  
 \_\_\_\_\_ (Building or Work)  
 \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and ending the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_,  
 all persons employed on said project have been paid the full weekly wages earned, that no rebates have  
 been or will be made either directly or indirectly to or on behalf of said

\_\_\_\_\_ from the full  
 \_\_\_\_\_ (Contractor or Subcontractor)  
 weekly wages earned by any person and that no deductions have been made either directly or indirectly  
 from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part  
 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,  
 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(2) That any payrolls otherwise under this contract required to be submitted for the above period are  
 correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the  
 applicable wage rates contained in any wage determination incorporated into the contract; that the  
 classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide  
 apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of  
 Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a  
 State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in  
 the above referenced payroll, payments of fringe benefits as listed in the contract  
 have been or will be made to appropriate programs for the benefit of such  
 employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid,  
 as indicated on the payroll, an amount not less than the sum of the applicable  
 basic hourly wage rate plus the amount of the required fringe benefits as listed  
 in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR  
 SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE  
 31 OF THE UNITED STATES CODE.