

**CONTRACT DOCUMENTS  
FOR  
2014 SEWER LINING PROJECT**



JUNE 2014

FILE NO. 2013-019  
ITB NO. 4322

PROJECT MANAGEMENT SERVICES UNIT  
PUBLIC SERVICES AREA  
CITY OF ANN ARBOR  
301 E. Huron Street  
Ann Arbor, MI 48104

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ADVERTISEMENT FOR  
2014 SEWER LINING PROJECT  
CITY OF ANN ARBOR, MICHIGAN

ITB No. 4322

Sealed Bids will be received by the City of Ann Arbor Customer Service Desk, First (1<sup>st</sup>) Floor, Guy Larcom City Hall, on or before Friday, April 25, 2014, by 10:00 AM for construction of the 2014 Sewer Lining Project. Bids will be publicly opened and read aloud at this time.

Work to be done includes the installation of approximately 17,925 feet of sewer lining at various locations throughout the City of Ann Arbor, and all related work.

Bid documents, specifications, plans and addenda shall be downloaded by vendors at either of the following web sites, Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) or City of Ann Arbor web site [www.a2gov.org](http://www.a2gov.org). It is the bidder's responsibility to verify they have obtained all information before submitting a bid.

Each Bid shall be accompanied by a certified check, or Bid Bond by a recognized surety, in the amount of 5% of the total of the bid price. A Bid, once submitted, becomes the property of the City. In the sole discretion of the City, the City reserves the right to allow a bidder to reclaim submitted documents provided the documents are requested and retrieved no later than 48 hours prior to the scheduled bid opening.

The successful Bidder will be required to furnish satisfactory performance and labor and material bonds in the amount of 100% of the bid price and satisfactory insurance coverage.

Precondition for entering into a contract with the City of Ann Arbor: (i) compliance with Chapter 112 of Title IX of the Code of the City of Ann Arbor. (ii) compliance with applicable prevailing wage and living wage requirements of Chapter 23 of Title I of the Code of the City of Ann Arbor. Further information is outlined in the contract documents.

After the time of opening, no Bid may be withdrawn for a period of 90 days. The City reserves the right 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.

Any further information may be obtained from the Ann Arbor Procurement Office,  
(734) 794-6500

CITY OF ANN ARBOR, MICHIGAN

## **NOTICE OF PRE-BID CONFERENCE**

A pre-bid conference for this project will be held on Tuesday, April 15, 2014 at 2:00 PM in the Sixth (6<sup>th</sup>) Floor Conference Room, Guy C. Larcom (City Hall) Building, 301 East Huron Street, P.O. Box 8647, Ann Arbor, MI 48107

Attendance at this conference is optional, but highly recommended. Administrative and technical questions regarding this project will be answered at this time. If any questions arise whose answers constitute modifications to the bid documents, an addendum will be issued.

## **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.

The City shall make available to all prospective Bidders, prior to receipt of the Bids, access to the area in which the work is to be performed. Advance notice should be given to the Administering Service Area/Unit in cases where access to the site must be arranged by the City.

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.

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 Clarification on ITB Specifications**

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 are due on or before April 21, 2014, by 10:00 am and should be addressed as follows:

Specification/Scope of Work questions emailed to: [ddykman@a2gov.org](mailto:ddykman@a2gov.org)

Bid Process and HR Compliance questions emailed to: [mberryman@a2gov.org](mailto:mberryman@a2gov.org)

### **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 Customer Service Desk on or Friday, April 25, 2014, by 10:00 am. 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 copy in a sealed envelope clearly marked: **ITB 4322 – 2014 Sewer Lining Project**.

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

City of Ann Arbor  
Customer Service Desk  
First (1<sup>st</sup>) Floor, Guy C. Larcom (City Hall) Building  
301 East Huron Street  
P.O. Box 8647  
Ann Arbor, MI 48107

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

Hand delivered bids will be date/time stamped/signed at the address above in order to be considered. Normal business hours are 8:00 a.m. to 4:00 p.m. Monday through Friday. 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 will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines 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.

## **Official Documents**

The City of Ann Arbor shall accept no alternates to the bid documents made by the Bidder unless those alternatives are set forth in the "Alternate" section of Bid form.

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.

## **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 90 days, as specified in the Advertisement.

## **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-1, 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**

Section 5, beginning at page GC-3, outlines the requirements for fair employment practices under City of Ann Arbor Contracts. To establish compliance with this Ordinance, the Bidder must complete and return with its bid completed copies of the Human Rights Division Contract Compliance Forms (Appendix A and B) or an acceptable equivalent.

In the event the Human Rights forms are not submitted with the bid, the bidder will have 24 hours to submit upon notice from the City.

## **Wage Requirements**

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

## **Major Subcontractors**

The Bidder shall identify 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 and the approximate dollar value of each subcontract.

## **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 bidder’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.

## **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.

## 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 Advertisement, Human Rights Division Contract Compliance Forms, 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 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 1, 2, 3, 4, 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 1:319 (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 further agrees

that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

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 2nd DAY OF May, 2014.

Lanzo Lining Services, Inc.-Michigan  
d/b/a Lanzo Trenchless Technologies North

Bidder's Name

28137 Groesbeck Highway  
Roseville, MI 48066

Official Address

586-775-5819

Telephone Number



Authorized Signature of Bidder

Kevin Pawlowski, Assistant Secretary

(Print Name of Signer Above)

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
130	Protective Fencing	LF	280.000	\$ 2.00	\$ 560.00
140	Exploratory Excavation (0-10' deep), Trench Detail - Type I Modified	Each	5.000	\$ 5,000.00	\$ 25,000.00
141	Exploratory Excavation (0-10' deep), Trench Detail - Type IV	Each	5.000	\$ 7,000.00	\$ 35,000.00
142	Exploratory Excavation (0-10' deep), Trench Detail - Type VI Modified	Each	5.000	\$ 10,000.00	\$ 50,000.00
200	General Conditions, Modified, Maximum \$75,000	LS	1.000	\$ 75,000.00	\$ 75,000.00
201	Project Supervision, Modified, Maximum \$30,000	LS	1.000	\$ 30,000.00	\$ 30,000.00
202	Audiovisual Tape Coverage, Modified	LS	1.000	\$ 8,000.00	\$ 8,000.00
203	Minor Traffic Control, Modified, Maximum \$20,000	LS	1.000	\$ 20,000.00	\$ 20,000.00
204	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Each	45.000	\$ 4.00	\$ 180.00
205	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Each	45.000	\$ 4.00	\$ 180.00
206	Channelizing Device, 42 inch, Furn	Each	50.000	\$ 3.00	\$ 150.00
207	Channelizing Device, 42 inch, Oper	Each	50.000	\$ 5.00	\$ 250.00
208	Lighted Arrow, Type C, Furn	Each	2.000	\$ 55.00	\$ 110.00
209	Lighted Arrow, Type C, Oper	Each	2.000	\$ 125.00	\$ 250.00
210	Plastic Drum, High Intensity, Lighted, Furn	Each	200.000	\$ 4.00	\$ 800.00
211	Plastic Drum, High Intensity, Lighted, Oper	Each	200.000	\$ 4.00	\$ 800.00
212	Sign, Type B, Temp, Prismatic, Furn	SF	3670.000	\$ 2.00	\$ 7,340.00
213	Sign, Type B, Temp, Prismatic, Oper	SF	3670.000	\$ 3.00	\$ 11,010.00
TOTAL THIS PAGE				\$ 264,630.00	

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
214	"No Parking" Sign	Each	55.000	\$ <u>100.00</u>	\$ <u>5,500.00</u>
215	8 inch Diameter CIPP Sewer Lining	LF	11675.000	\$ <u>25.00</u>	\$ <u>291,875.00</u>
216	10 inch Diameter CIPP Sewer Lining	LF	3101.000	\$ <u>27.00</u>	\$ <u>83,727.00</u>
217	12 inch Diameter CIPP Sewer Lining	LF	1875.000	\$ <u>33.00</u>	\$ <u>61,875.00</u>
218	15 inch Diameter CIPP Sewer Lining	LF	1081.000	\$ <u>49.00</u>	\$ <u>52,969.00</u>
219	18 inch Diameter CIPP Sewer Lining	LF	647.000	\$ <u>55.00</u>	\$ <u>35,585.00</u>
220	20 inch Diameter CIPP Sewer Lining	LF	271.000	\$ <u>90.00</u>	\$ <u>24,390.00</u>
220A	21 inch Diameter CIPP Sewer Lining	LF	50.000	\$ <u>275.00</u>	\$ <u>13,750.00</u>
221	24 inch Diameter CIPP Sewer Lining	LF	344.000	\$ <u>110.00</u>	\$ <u>37,840.00</u>
222	36 inch Diameter CIPP Sewer Lining	LF	1926.000	\$ <u>150.00</u>	\$ <u>288,900.00</u>
223	Dr Structure, 24 inch dia	Each	1.000	\$ <u>10,000.00</u>	\$ <u>10,000.00</u>
224	Remove Concrete Curb or Curb & Gutter - Any Type, Modified	LF	200.000	\$ <u>5.00</u>	\$ <u>1,000.00</u>
225	Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified	SF	100.000	\$ <u>25.00</u>	\$ <u>2,500.00</u>
226	Aggregate Base	Ton	40.000	\$ <u>8.00</u>	\$ <u>320.00</u>
227	Hand Patching, Local Street (HMA, 13A)	Ton	50.000	\$ <u>150.00</u>	\$ <u>7,500.00</u>
227A	Hand Patching, Minor Street (HMA, 4E3)	Ton	50.000	\$ <u>150.00</u>	\$ <u>7,500.00</u>
227B	Hand Patching, Major Street (HMA, 4E10)	Ton	50.000	\$ <u>150.00</u>	\$ <u>7,500.00</u>
228	Concrete Curb or Curb & Gutter - Any Type	LF	200.000	\$ <u>225.00</u>	\$ <u>45,000.00</u>
TOTAL THIS PAGE				\$ <u>977,731.00</u>	

ADD-4-6  
BF-2

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
229	4" Concrete Sidewalk, Modified	SF	50.000	\$ 27.00	\$ 1,350.00
230	6" Concrete Sidewalk, Ramp, Drive Approach, Modified	SF	50.000	\$ 55.00	\$ 2,750.00
231	6" Concrete Sidewalk, Ramp, Drive Approach, High Early	SF	50.000	\$ 76.00	\$ 3,800.00
232	Concrete Type M Drive Opening, High Early	LF	75.000	\$ 125.00	\$ 9,375.00
233	Adjust Structure Cover, Modified	Each	4.000	\$ 500.00	\$ 2,000.00
234	Inlet Filter, Special	Each	5.000	\$ 225.00	\$ 1,125.00
235	6' Construction Fence	LF	300.000	\$ 55.00	\$ 16,500.00
236	Clean-Up & Restoration, Special	LS	1.000	\$ 10,000.00	\$ 10,000.00
305-1	8" SDR 26 PVC Sewer, Trench Detail - Type I Modified	LF	100.000	\$ 80.00	\$ 8,000.00
305-2	10" SDR 26 PVC Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 145.00	\$ 2,900.00
305-3	20" SDR 26 PVC Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 190.00	\$ 3,800.00
307-1	8" SDR 26 PVC Sewer, Trench Detail - Type VI Modified	LF	50.000	\$ 175.00	\$ 8,750.00
307-2	10" SDR 26 PVC Sewer, Trench Detail - Type VI Modified	LF	75.000	\$ 200.00	\$ 15,000.00
315-1	12" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 800.00	\$ 16,000.00
315-2	15" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 800.00	\$ 16,000.00
315-3	18" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 800.00	\$ 16,000.00
315-3A	21" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 500.00	\$ 10,000.00
315-4	24" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ 800.00	\$ 16,000.00
TOTAL THIS PAGE				\$	<u>159,350.00</u>

ADD-4-7  
BF-3

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
317-1	12" HDP Sewer, Trench Detail - Type VI Modified	LF	20.000	\$ 900.00	\$ 18,000.00
317-2	15" HDP Sewer, Trench Detail - Type VI Modified	LF	20.000	\$ 900.00	\$ 18,000.00
317-5	36" HDP Sewer, Trench Detail - Type VI Modified	LF	20.000	\$ 900.00	\$ 18,000.00
353	4" SDR 35 PVC Service Lead	LF	20.000	\$ 800.00	\$ 16,000.00
360	Type I Manhole (0-10' deep)	Each	2.000	\$ 10,000.00	\$ 20,000.00
361	Type I Manhole (Add'l depth)	VF	5.000	\$ 600.00	\$ 3,000.00
362	Type II, 5' dia, Manhole (0-10' deep)	Each	1.000	\$ 10,000.00	\$ 10,000.00
363	Type II, 5' dia, Manhole (Add'l depth)	VF	2.000	\$ 1,200.00	\$ 2,400.00
364	Type III, 4' dia, Manhole	Each	2.000	\$ 7,000.00	\$ 14,000.00
563	Structure Covers	LBS	1600.000	\$ 15.00	\$ 24,000.00
564	Reconstruct Structure	Each	10.000	\$ 1,800.00	\$ 18,000.00
703	Silt Fence	LF	430.000	\$ 7.00	\$ 3,010.00
TOTAL THIS PAGE				\$	164,410.00
TOTAL FROM PAGE BF-1				\$	264,630.00
TOTAL FROM PAGE BF-2				\$	977,731.00
TOTAL FROM PAGE BF-3				\$	159,350.00
<b>TOTAL BASE BID</b>				\$	<b>1,566,121.00</b>

ADD-4-8  
BF-4



BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
564	Reconstruct Structure	Each	10.000	\$ _____	\$ _____
703	Silt Fence	LF	430.000	\$ _____	\$ _____
TOTAL THIS PAGE				\$ _____	_____
TOTAL FROM PAGE BF-1				\$ _____	_____
TOTAL FROM PAGE BF-2				\$ _____	_____
TOTAL FROM PAGE BF-3				\$ _____	_____
TOTAL FROM PAGE BF-4				\$ _____	_____
<b>TOTAL BASE BID</b>				\$ _____	_____

THIS PAGE WAS DELETED AND DOES NOT APPLY

BID FORM

Section 2 - Material and Equipment Alternates

The Base Bid 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.

<u>Item Number</u>	<u>Description</u>	<u>Add/Deduct Amount</u>
--------------------	--------------------	--------------------------

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



Kevin Pawlowski, Assistant Secretary

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-1, 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



Kevin Pawlowski, Assistant Secretary

BF-7

BID FORM

Section 4 - 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.

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>
---	-------------	---------------

None at this time.

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



---

Kevin Pawlowski, Assistant Secretary

BF-8

# THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

## Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we

**Lanzo Lining Services Inc. - Michigan d/b/a Lanzo Trenchless Technologies - North**  
3800 Woodward Avenue, Suite 410, Detroit, MI 48201

as Principal, hereinafter called Principal, and

**Liberty Mutual Insurance Company**  
5600 New King Street, Suite 360, Troy, MI 48098

a corporation duly organized under the laws of the State of **Massachusetts**  
as Surety, hereinafter called Surety, are held and firmly bound unto

**City of Ann Arbor**  
301 E. Huron, Ann Arbor, MI 48104

as Obligee, hereinafter called Obligee, in the sum of **Five Percent of Accompanying Bid**

**Dollars (5% of Bid)**  
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for (Here insert full name, address and description of project)

**2014 Sewer Lining Project**

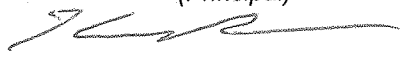
NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 25th day of April, 2014.


**Lanzo Lining Services Inc. - Michigan d/b/a Lanzo Trenchless Technologies - North**

  
(Witness)

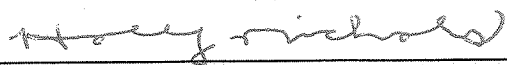
(Principal) (Seal)

  
(Title) *Assistant Secretary*

**Liberty Mutual Insurance Company**

  
(Witness)

(Surety) (Seal)

  
(Title)  
**Holly Nichols**, Attorney in Fact

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6339940

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

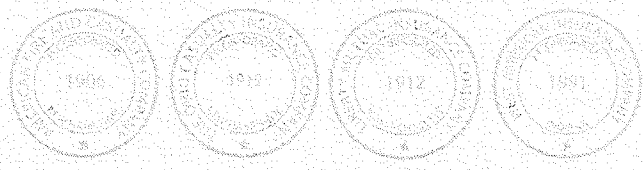
Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Anne Barick; Holly Nichols; Michael D. Lechner; Michelle Buechel; Paul M. Hurley; Richard S. McGregor; Robert D. Heuer; T. R. Guy

all of the city of Troy, state of MI each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 5th day of November, 2013.



American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss  
COUNTY OF KING

On this 5th day of November, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings.** Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 25th day of April, 2014



By: David M. Carey  
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

## CONTRACT

THIS AGREEMENT is made on the 16th day of June, 2014, between the CITY OF ANN ARBOR, a Michigan Municipal Corporation, 301 E. Huron Street, Ann Arbor, Michigan 48104 (“City”) and Lanzo Lining Services, Inc. - Michigan d/b/a Lanzo Trenchless Technologies North (“Contractor”) a Florida Corporation at 125 S.E. 5<sup>th</sup> Court, Deerfield Beach, FL, 33441.

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 “2014 Sewer Lining Project” in accordance with the requirements and provisions of the following documents, including all written modifications incorporated into any of the documents, which are incorporated as part of this Contract:

Human Rights Division Contract	General Conditions
Compliance Forms	Standard Specifications
Living Wage Declaration of	Detailed Specifications
Compliance Forms	Plans
(if applicable)	Addenda
Bid Forms	
Contract and Exhibits	
Bonds	

### ARTICLE II - Definitions

Administering Service Area/Unit means Project Management Services Unit

Supervising Professional means Project Management Services Unit Manager acting personally or through any assistants authorized by the Administrator/Manager of the Administering Service Area/Unit.

Project means 2014 Sewer Lining Project; ITB No. 4322

### 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 scheduling requirements as specified in the Detailed Specifications.
- (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 specified in Detailed Specification for Project Schedule and Payment

shown on page DS-2. 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.

As an independent requirement, where the Detailed Specifications identify certain portions of the work to be completed within a shorter period of time and the Contractor fails to complete each portion within the shorter period specified for each portion, including any extension granted in writing by the Project Supervisor, the City is entitled to deduct from the monies due the Contractor, as liquidated damages and not as a penalty, the amount identified in the Detailed Specifications for each portion of the work not timely completed for each calendar day of delay in completion of each portion of the work.

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.

Liquidated damages under this section are in addition to any liquidated damages due under Section 5 of the General Conditions.

#### 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 Forms for the estimated total of:

One Million Five Hundred Sixty-Six Thousand One Hundred Twenty One and 00/100 Dollars (\$1,566,121.00)

- (B) The amount paid shall be equitably adjusted to cover changes in the work ordered by the Supervising Professional but not required by the contract documents.

#### ARTICLE V - Assignment

This Contract may not be assigned or subcontracted without the written consent of 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 agreement, 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 agreement.

## 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.

## ARTICLE IX - Indemnification

To the fullest extent permitted by law, Contractor shall indemnify, defend and hold harmless 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.

## ARTICLE X - Entire Agreement

This Contract represents the entire understanding between the City and the Contractor and it supersedes all prior representations or agreements whether written or oral. Neither party has relied on any prior representations in entering into this Contract. This Contract may be altered, amended or modified only by written amendment signed by the City and the Contractor.

**FOR CONTRACTOR**

By \_\_\_\_\_

Its: \_\_\_\_\_

**FOR THE CITY OF ANN ARBOR**

By \_\_\_\_\_  
John Hieftje, Mayor

By \_\_\_\_\_  
Jacqueline Beaudry, City Clerk

**Approved as to substance**

By \_\_\_\_\_  
Steven D. Powers, City Administrator

By \_\_\_\_\_  
Craig Hupy, Public Services Area  
Administrator

**Approved as to form and content**

By \_\_\_\_\_  
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 dated \_\_\_\_\_, 20\_\_, for: 2014 Sewer Lining Project 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.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Name of Surety Company)

\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(Signature)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

Name and address of agent:

By \_\_\_\_\_  
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, exec-  
utors, administrators, successors and assigns, jointly and severally, by this bond.

(2) The Principal has entered a written contract with the City, dated \_\_\_\_\_, 20\_\_, for  
2014 Sewer Lining Project; 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.

**SIGNED AND SEALED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Name of Surety Company)

\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(Signature)

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Its \_\_\_\_\_  
(Title of Office)

Approved as to form:

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

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."

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.

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 1:319 of Chapter 14 of Title I of the Code of the City of Ann Arbor, the Contractor agrees to conform to Chapter 23 of Title I of the Code of the City of Ann Arbor, as amended, which in part states:

### **1:814. Applicability.**

- (1) This Chapter shall apply to any person that is a contractor/vendor or grantee as defined in Section 1:813 that employs or contracts with five (5) or more individuals; provided, however, that this Chapter shall not apply to a non-profit contractor/vendor or non-profit grantee unless it employs or contracts with ten (10) or more individuals.
- (2) This Chapter shall apply to any grant, contract, or subcontract or other form of financial assistance awarded to or entered into with a contractor/vendor or grantee after the effective date of this Chapter and to the extension or renewal after the effective date of this Chapter of any grant, contract, or subcontract or other form of financial assistance with a contractor/vendor or grantee.

### **1:815. Living Wages Required.**

- (1) Every contractor/vendor or grantee, as defined in Section 1:813, shall pay its covered employees a living wage as established in this Section.
  - (a) For a covered employer that provides employee health care to its employees, the living wage shall be \$9.42 an hour, or the adjusted amount hereafter established under Section 1:815(3).
  - (b) For a covered employer that does not provide health care to its employees, the living wage shall be \$10.91 a hour, or the adjusted amount hereafter established under Section 1:815(3).
- (2) In order to qualify to pay the living wage rate for covered employers providing employee health care under subsection 1:815(1)(a), a covered employer shall furnish proof of said health care coverage and payment therefor to the City Administrator or his/her designee.

- (3) The amount of the living wage established in this Section shall be adjusted upward no later than April 30, 2002, and every year thereafter by a percentage equal to the percentage increase, if any, in the federal poverty guidelines as published by the United States Department of Health and Human Services for the years 2001 and 2002. Subsequent annual adjustments shall be based upon the percentage increase, if any, in the United States Department of Health and Human Services poverty guidelines when comparing the prior calendar year's poverty guidelines to the present calendar year's guidelines. The applicable percentage amount will be converted to an amount in cents by multiplying the existing wage under Section 1.815(1)(b) by said percentage, rounding upward to the next cent, and adding this amount of cents to the existing living wage levels established under Sections 1:815(1)(a) and 1:815(1)(b). Prior to April 1 of each calendar year, the City will notify any covered employer of this adjustment by posting a written notice in a prominent place in City Hall, and, in the case of a covered employer that has provided an address of record to the City, by a written letter to each such covered employer.

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 Section 209 of the Elliot-Larsen Civil Rights Act (MCL 37.2209). The Contractor further agrees to the nondiscrimination provisions of Chapter 112 of the Ann Arbor City Code and to take affirmative action to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment. The Contractor agrees to comply with the provisions of Section 9:161 of Chapter 112 of the Ann Arbor City Code and in particular the following excerpts:

#### 9:161 NONDISCRIMINATION BY CITY CONTRACTORS

- (1) All contractors proposing to do business with the City of Ann Arbor shall satisfy the nondiscrimination administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All contractors shall receive approval from the Director prior to entering into a contract with the City, unless specifically exempted by administrative policy. All City contractors shall take affirmative action to insure 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 race, national origin or sex.
- (2) Each prospective contractor shall submit to the City data showing current total employment by occupational category, sex and minority group. If, after verifying this data, the Director concludes that it indicates total minority and female employment commensurate with their availability within the contractor's labor recruitment area, i.e., the area from which the contractor can reasonably be expected to recruit, said contractor shall be accepted by the Director as having fulfilled affirmative action requirements for a period of one year at which time the Director shall conduct another review. Other contractors shall develop an affirmative action program in conjunction with the Director. Said program shall include specific goals and timetables for the hiring and promotion of

minorities and females. Said

goals shall reflect the availability of minorities and females within the contractor's labor recruitment area. In the case of construction contractors, the Director shall use for employment verification the labor recruitment area of the Ann Arbor-Ypsilanti standard metropolitan statistical area. Construction contractors determined to be in compliance shall be accepted by the Director as having fulfilled affirmative action requirements for a period of six (6) months at which time the Director shall conduct another review.

- (3) In hiring for construction projects, contractors shall make good faith efforts to employ local persons, so as to enhance the local economy.
- (4) All contracts shall include provisions through which the contractor agrees, in addition to any other applicable Federal or State labor laws:
  - (a) To set goals, in conference with the Human Resources Director, for each job category or division of the work force used in the completion of the City work;
  - (b) To provide periodic reports concerning the progress the contractor has made in meeting the affirmative action goals it has agreed to;
  - (c) To permit the Director access to all books, records and accounts pertaining to its employment practices for the purpose of determining compliance with the affirmative action requirements.
- (5) The Director shall monitor the compliance of each contractor with the nondiscrimination provisions of each contract. The Director shall develop procedures and regulations consistent with the administrative policy adopted by the City Administrator for notice and enforcement of non-compliance. Such procedures and regulations shall include a provision for the posting of contractors not in compliance.
- (6) All City contracts shall provide further that breach of the obligation not to discriminate shall be a material breach of the contract for which the City shall be entitled, at its option, to do any or all of the following:
  - (a) To cancel, terminate, or suspend the contract in whole or part and/or refuse to make any required periodic payments under the contract;
  - (b) Declare the contractor ineligible for the award of any future contracts with the City for a specified length of time;
  - (c) To recover liquidated damages of a specified sum, said sum to be that percentage of the labor expenditure for the time period involved which would have accrued to minority group members had the affirmative action not been breached;



(d) Impose for each day of non-compliance, liquidated damages of a specified sum, based upon the following schedule:

<u>Contract Amount</u>	<u>Assessed Damages Per Day of Non-Compliance</u>
\$ 10,000 - 24,999	\$ 25.00
25,000 - 99,999	50.00
100,000 - 199,999	100.00
200,000 - 499,999	150.00
500,000 - 1,499,999	200.00
1,500,000 - 2,999,999	250.00
3,000,000 - 4,999,999	300.00
5,000,000 - and above	500.00

(e) In addition the contractor shall be liable for any costs or expenses incurred by the City of Ann Arbor in obtaining from other sources the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under this contract.

#### 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

- A. 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 from all claims for bodily injuries, death or property damage which may arise under this Contract; whether the acts were made by the Contractor or by any subcontractor or anyone employed by them directly or indirectly. The following insurance policies are required:
1. 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
  2. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements including, but not limited to: Products and Completed Operations, Explosion, Collapse and Underground coverage or Pollution. Further, 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 Job General Aggregate  
  
\$1,000,000 Personal and Advertising Injury  
  
\$2,000,000 Products and Completed Operations Aggregate
  3. Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97. The City of Ann Arbor shall be named as an additional insured. There shall be no added exclusions or limiting endorsements. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. 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.
  4. 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.
- B. Insurance required under Section A.2 and A.3 of this Contract 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.

- C. In the case of all Contracts involving on-site work, the Contractor shall provide to the City before the commencement of any work under this Contract documentation demonstrating it has obtained the above mentioned policies. Documentation must provide and demonstrate an unconditional 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; name of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions which shall be approved by the City, in its sole discretion; (c) that the policy conforms to the requirements specified. An original certificate of insurance may be provided as an initial indication of the required insurance, provided that no later than 21 calendar days after commencement of any work the Contractor supplies a copy of the endorsements required on the policies. Upon request, the Contractor shall provide within 30 days a copy of the policy(ies) 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 to the Administering Service Area/Unit at least ten days prior to the expiration date.
- D. Any Insurance provider of Contractor shall be admitted and 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-admitted insurance companies are not acceptable unless approved in writing by the City.

#### 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 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.

**CONTRACTOR'S DECLARATION**

I hereby declare that I have not, during the period \_\_\_\_\_, 20\_\_\_, to \_\_\_\_\_, 20\_\_\_, performed any work, furnished any materials, sustained any loss, damage or delay, or otherwise done anything in addition to the regular items (or executed change orders) set forth in the Contract titled 2014 Sewer Lining Project, for which I shall ask, demand, sue for, or claim compensation or extension of time from the City, except as I hereby make claim for additional compensation or extension of time as set forth on the attached itemized statement. I further declare that I have paid all payroll obligations related to this Contract that have become due during the above period and that all invoices related to this Contract received more than 30 days prior to this declaration have been paid in full except as listed below.

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

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

By \_\_\_\_\_  
(Signature)

Its \_\_\_\_\_  
(Title of Office)

Past due invoices, if any, are listed below.

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

**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 2014 Sewer Lining Project.

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 Advertisement. 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.

A copy of the Public Services Department Standard Specifications may be purchased from the Project Management Services Unit, (Fourth Floor, City Hall, Ann Arbor, Michigan), for \$35.00 per copy. In addition, a copy of these Standard Specifications is available for public viewing at the Project Management Services Unit office Monday through Friday between the hours of 8:30 a.m. and 4:00 p.m.

Copies of the Standard Specifications can also be downloaded from the web link:

[http://www.a2gov.org/government/publicservices/project\\_management/privatedev/pages/standardspecificationsbook.aspx](http://www.a2gov.org/government/publicservices/project_management/privatedev/pages/standardspecificationsbook.aspx).



**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

1 of 4

**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 **June 16, 2014**, 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 the sewer lining installations, stabilization of all disturbed areas, permanent placement of hot mix asphalt or concrete as needed, and the removal of any and all traffic control devices shall be completed by **November 15, 2014**.

The Contractor is expected to be furnished with two (2) copies of the Contract, for his/her execution, on or before June 3, 2014. 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 June 2, 2014.

The Contractor shall organize, coordinate, and diligently execute the work as shown on the following Location & Schedule table, which identifies the limits and “Begin Work”, “Complete Work”, and “Restricted Date” requirements for certain locations. For the purpose of this Contract, “Begin Work” is defined as the date on or after traffic control devices are to be installed. “Complete Work” is defined as the date on or before the work is to be completed as specified herein and as directed by the Engineer including, but not limited to: surface restoration, clean-up, street cleaning, and the removal of all temporary traffic control devices and parking meter bags.

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.

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**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

**2 of 4**

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 proposed schedule must fully comply with the scheduling requirements contained on the Location & Schedule table and all others in this Detailed Specification. The Contractor shall update the approved work schedule upon request by the Engineer and present it to the Engineer within seven days of said request.

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).

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 Independence Day and Labor Day 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, **\$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.

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**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

3 of 4

**LOCATION & SCHEDULE**

Index No.	Street / Location	From	To	Begin Work	Complete Work	Restricted Dates*
<b>Sanitary Sewers</b>						
1	Appleway Cross Lots	MH 71-69812	MH 71-69904			ID/LD
2	Butternut Street	McComb St MH 71-69709	Cardinal Ave MH 71-69719		7/26/2014	ID
3	Nordman Road	Sharon Dr MH 71-69708	Packard Rd MH 71-62178		7/26/2014	ID
4	Springbrook Avenue	Sharon Dr MH 71-69700	Packard Rd MH 71-62719		7/26/2014	ID
5	Audobon Cross Lots	MH 71-63554	MH 71-63160			ID/LD
6	Southside Interceptor	MH 71-70049	MH 71-69893			ID/LD
7	West Madison Street	S Seventh St MH 71-70722	S Main St MH 71-71403			AF, SB, ID/LD
8	Geddes Avenue	Obervatory St MH 71-70352	Onondaga St MH 71-69845		8/22/2014	AF, SM, FBS, ID
9	Pepper Pike Cross Lots	MH 71-69812	MH-71-69904			ID/LD
10	South State Street Cross Lots	MH 71-63907	S State St MH 71-64901			AF, SM, FBS, ID/LD
11	Miller Avenue	MH 71-67701	MH 71-6799			ID/LD
12	Pineview Ct Cross Lots	MH 71-69918	MH			ID/LD
<b>Storm Sewers</b>						
13	Hiscock Street	Miner St MH 92-60410	Gott St MH 92-60409			ID/LD
14	North University Avenue	Fletcher St MH 92-60919	Thayer St MH 92-60913	7/11/2014	8/24/2014	AF, WE
15	West Huron Street	S Seventh St MH 92-60027	E of Chapin St MH 92-60034			AF, SM, FBS, MDOT, ID/LD
16	Burns Park Cross Lots	Ferdon Rd MH 92-58316	Baldwin Rd MH 92-58323			ID/LD

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

4 of 4

**LOCATION & SCHEDULE**

Notes:

- 1) Begin Work is defined as work beginning on or after the the date described on page DS-1 of this specification unless shown otherwise in the above "Location & Schedule" table. Complete Work is defined as work being complete on or before the the date described on page DS-1 of this specification unless shown otherwise in the above "Location & Schedule" table. Liquidated damages apply - see contract documents.
- 2) University of Michigan Arboretum staff memeber Jeff Walters (Building/Grounds Associate Supervisor) must be contacted 48 hours prior to beginning any work on the Southside Interceptor, or any other sewer location in the University of Michigan Nichols Arboretum/Arboretum Nature Area. Arboretum staff will open the locked gate for entry. Contractor must coordinate with Arboretum staff about timing and limits of all project work. Contact infomration: jnw@umich.edu, 734-647-8083.

\*Refer to following key:

- AF - No traffic disruption permitted 7/16 through 7/19 due to Ann Arbor Street Art Fairs
- SM - No traffic disruption during University of Michigan Student Move-In (August 25 - September 5, 2014)
- FBS - No traffic disruption on University of Michigan home football game days
- MDOT - Storm lining on Huron St. must be cordinated with MDOT.
- SB - Work must be complete before the Ann Arbor Public Schools begin September 2, 2014.
- WE - Work must be completed during a weekend starting at 9:00 am on Friday and ending by 5:00 pm on Sunday
- ID/LD - Indepence Day (ID) & Labor Day (LD) holiday periods; no work or lane closures permitted

**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 2012 edition of the MDOT Standard Specifications, "Cooperation by the Contractor."

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

The Contractor is hereby notified that the City of Ann Arbor Field Services Unit may be installing traffic control conduits, traffic signal sensors, and the like, at various locations.

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.

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."

**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) 2012 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 \$ \_\_\_\_".

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

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**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 \$ \_\_\_\_".

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.

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**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 activate by-pass pumping.
4. Clean & videotape sewer to be lined.
5. Construct the proposed sewer lining. The new sewer shall be tested in accordance with the plans and specifications.
6. After all the new sewer has passed the required testing, the contractor shall open all service leads. Service leads shall not be out of service for more than 12 hours.
7. Deactivate and breakdown by-pass pumping equipment.
8. Perform final cleanup and restoration in accordance with the Contract documents.
9. Remove temporary soil erosion and sedimentation control measures.
10. Remove all temporary traffic control devices.

Reference the plans for additional construction sequencing requirements.



**DETAILED SPECIFICATION  
FOR  
ITEM #200 – GENERAL CONDITIONS, MODIFIED, MAXIMUM \$75,000**

**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.**

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**DETAILED SPECIFICATION  
FOR  
ITEM #200 – GENERAL CONDITIONS, MODIFIED, MAXIMUM \$75,000**

**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 \$75,000

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 \$30,000**

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 \$30,000**

**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 \$30,000**

**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:

**PAY ITEM**

**PAY UNIT**

Project Supervision, Maximum \$30,000

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.

**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 \$25,000**

**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) 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 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.

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**DETAILED SPECIFICATION  
FOR  
ITEM #203 – MINOR TRAFFIC CONTROL, MODIFIED, MAXIMUM \$25,000**

**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 \$25,000**

**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 \$25,000

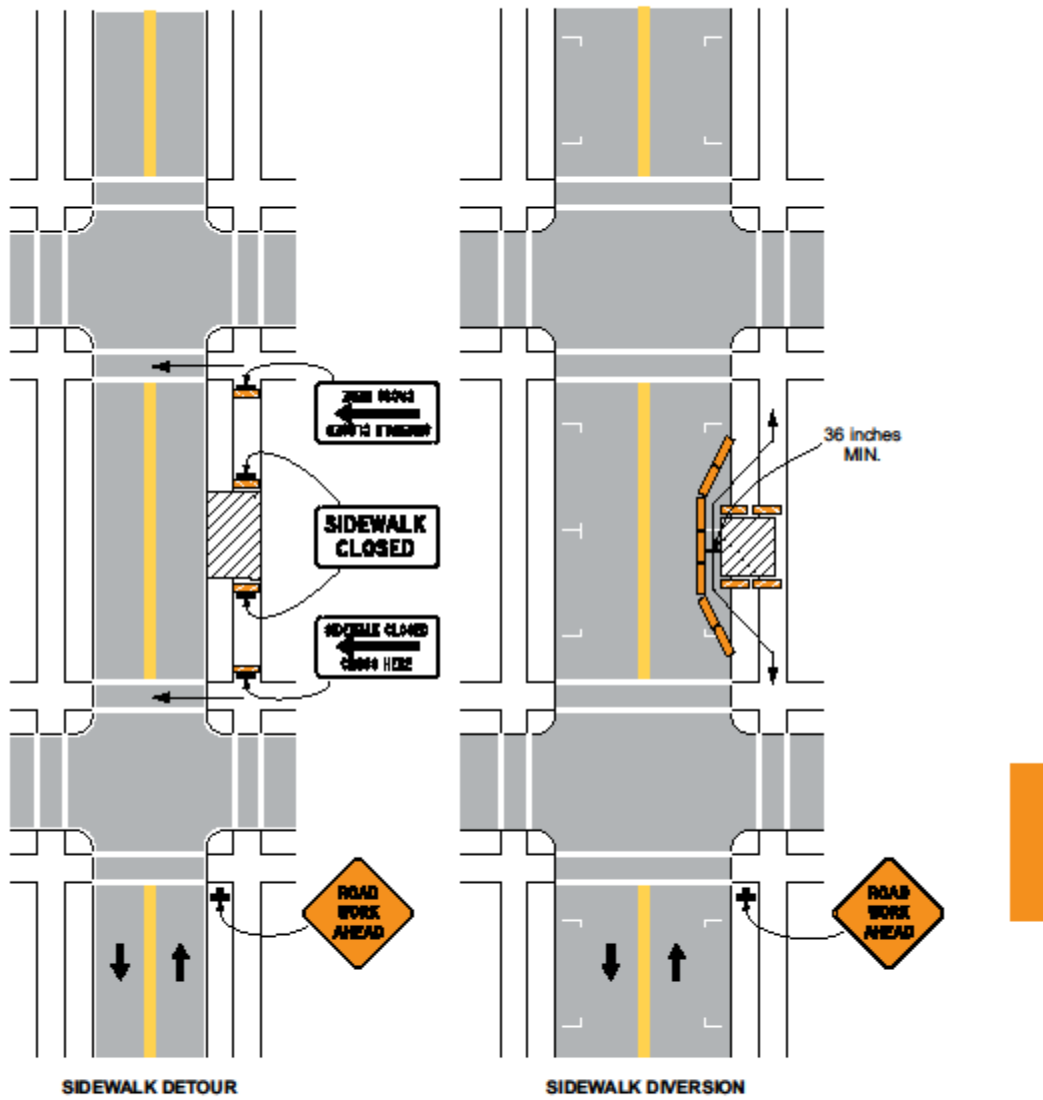
Lump Sum

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 \$25,000**



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

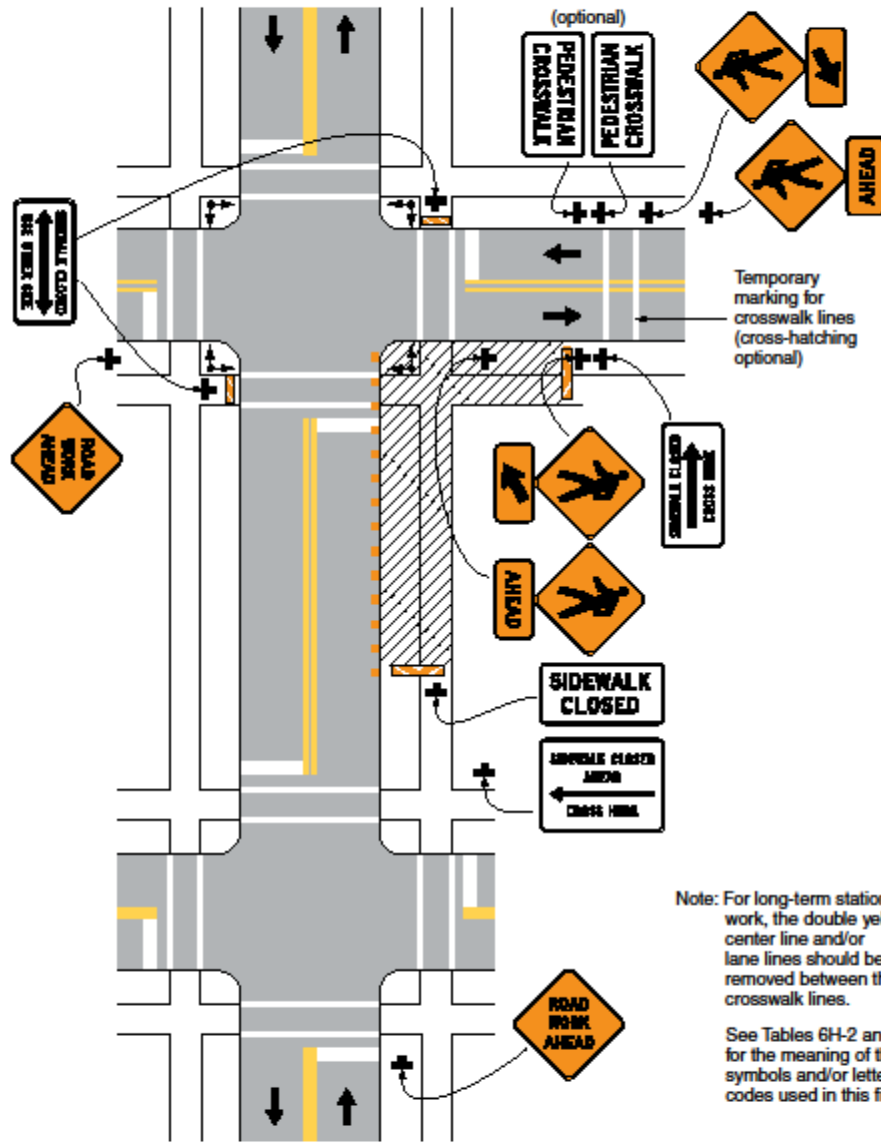


**Typical Application 28**

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 \$25,000**

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



**Typical Application 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.

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**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 #206 – “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  
ITEMS #215 TO #222 - CIPP SEWER LINING**

**1 of 8**

**DESCRIPTION**

This work shall consist of rehabilitating pipelines by the insertion of a resin impregnated flexible lining and cured in place to form a pipe. The cured in place pipe (CIPP) shall be saturated with a thermosetting resin and inserted into the existing pipeline. Curing shall be accomplished by circulating hot water, heated air, or ambient cure, to harden the resin into a hard impermeable pipe. When cured, the hardened CIPP shall be a tight fitting watertight pipe within a pipe. When full length liners are specified, the CIPP shall be continuous from manhole to manhole with no circumferential joints or seams. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor Public Services Area Standard Specifications, and as directed by the Engineer.

For a CIPP system to be considered acceptable, the CIPP system must have at least two million linear feet of successful, documented installations, a minimum of 250,000 linear feet of which shall have been in the state in which the work is located.

When requested by the Owner, the Contractor shall submit test results from previous field installations of the same resin system and tube materials as proposed for this installation. The test results must verify that the CIPP physical properties specified in this Section have been achieved in the field.

The Installer shall have at least 100,000 linear feet and five (5) years documented experience in CIPP liners of all types specified for use in this Project with a minimum of 500 separate installs. Installations must have been in northern states or Canada.

The Contractor is responsible for videotaping and cleaning the pipe before lining, and videotaping after lining. If videotape reveals conditions in the sewer are such that spot repairs will be required, the Contractor shall submit in writing a request for authorization to perform spot repairs along with sufficient proof that these repairs are indeed necessary. Such requests shall include method of spot repair, type and manufacturer of repair pipe, method of connection, etc., and shall be submitted prior to commencement of the rehabilitation process. Required items for spot repair will be paid on a per item basis as submitted in the bid form.

The Contractor shall notify the Owner and all sewer users affected by the work a minimum of seven days prior to beginning work. Notification shall be by means of a written notice on Owner letterhead, delivered to each user and shall advise user as to when service will be interrupted and to minimize water usage during this period. The Owner will supply the notices. The Contractor shall ensure that every user is so notified. Notification shall include telephone number(s) for contacting the Contractor at any time, day or night.

A second notice to the sewer users affected shall be provided one working day prior to the installation work affecting those users.

The Contractor shall also provide a completion notice to each user within 12 hours of completion of the CIPP installation and restoring of service connections.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

2 of 8

**DESIGN CONSIDERATIONS**

The finished liner shall be designed per ASTM F 1216 Appendix X1; per the requirements of this specification, for the following condition:

Condition:	Fully deteriorated gravity pipe
Safety Factor:	2
Soil Density:	130 lbs/cft
Soil Modulus:	700 psi for pipe inverts up to and including 15 feet deep, 1,000 psi for pipe inverts greater than 15 feet deep
Surcharge Loading:	HS-20 (Highway) when any part of the sewer is under any major street, county road, or state highway; E-80 (Railroad) when under any railroad.

The acceptable resin system values to be incorporated into the formula for liner thickness shall not be greater than the following.

	<u>Polyester</u>	<u>Enhanced Polyester</u>	<u>Vinyl Ester</u>	<u>Epoxy</u>
Short Term Flexural Modulus	300,000	400,000	250,000	300,000
Long Term Flexural Modulus	150,000	200,000	125,000	150,000
Creep Retention Factor	50%	50%	50%	50%
Flexural Strength	4,500	4,500	4,500	5,000

Where the requirements of this specification conflict with ASTM F 1216 or ASTM D 5813 this specification shall govern.

The CONTRACTOR shall determine the liner thickness and resin quantity for this Project per ASTM F 1216, Appendix X1. Liner thickness, resin and resin quantity shall be furnished to Engineer for review and approval prior to beginning work.

**MATERIAL**

**Felt Liner Tube**

The Tube shall consist of one or more layers of flexible, needled felt or an equivalent non-woven material. The material shall be capable of carrying the specified resin, be able to withstand installation pressures and curing temperatures, and be compatible with the resin used.

The outer Tube coating shall consist of a translucent elastomer that allows for visual inspection and verification of proper resin impregnation. The plastic coating shall hold the resin inside the Tube without leakage, accommodate installation, and stretch to the size and shape of the existing sewer, and shall not delaminate before, during, or after curing.

The Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the design thickness. The thickness of the Tube shall be calculated based upon the resin system values given in this detailed specification.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

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The CIPP wall thickness shall be calculated from the equation in ASTM F 1216, Appendix X1, based upon the parameters given in this Section. The minimum CIPP wall thickness shall be not less than the value calculated by that equation. Any layers of tube that are not saturated with resin and totally cured shall not be included in the CIPP wall thickness.

The Tube shall be fabricated to a size that when installed will tightly fit the internal circumference of the conduit to be lined as specified by the Engineer. Allowance for circumferential stretching of the pipe during insertion shall be made as per manufacturer's recommendations.

The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident. The tube shall be constructed to withstand installation pressures and have sufficient strength to bridge missing pipe while meeting or exceeding the design wall thickness at all pipe location during installation conditions and pressures.

The wall color of the interior pipe surface of the CIPP after installation shall be a light reflective color so that a clear detail examination with closed circuit television inspection equipment may be made.

Seams in the Tube shall be stronger than the unseamed felt. Where the length requires joining along the circumference of the Tube, the sewn joint shall not be perpendicular to the long axis but spirally formed and sewn.

The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed five (5) feet. Such markings shall include the manufacturers name or identifying symbol.

The length of the Tube shall be that deemed necessary by the Contractor to effectively carry out the insertion and seal the pipe at the inlet and outlet points. The Contractor shall verify the lengths in the field before cutting the Tube to length. Lengths of sewer can be lined over one or more access points as determined in the field by the Contractor and approved by the Engineer.

**Resin**

Resin shall be polyester, enhanced polyester, vinyl ester, or epoxy. Resin selected shall be resistant to the chemical composition of the sewage.

Resin with higher than minimum physical properties may be required for Contractor to meet minimum field cured physical properties of the completed liner.

The resin shall be thermosetting resin that is compatible with the lining process and shall meet the requirements of ASTM F 1216 except as otherwise specified in this section. The resin shall be able to cure in water with an initiation temperature for cure of not less than 120°F. The cured resin/felt system shall be suitable for the expected conditions within the existing sanitary sewer.

**Field Cured Liner**

The completed liner as installed and fully cured in place shall meet the minimum physical properties for short term flexural modulus and flexural strength given above.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

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The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occurs during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

**CONSTRUCTION METHODS**

The Contractor shall carry out his operations in strict accordance with all OSHA, MIOSHA, and manufacturer's safety requirements.

**Cleaning of Pipelines**

Prior to rehabilitation of any sewer, it shall be the responsibility of the Contractor to remove all internal deposits from the pipeline. This shall include dirt, debris, mud, bricks, mineral deposits, roots, pieces of broken pipe, etc. Cleaning of sewers shall be in accordance with the City of Ann Arbor Public Services Area Standard Specifications, and as directed by the Engineer.

The sewers shall be cleaned by using a high pressure water cleaning machine. A high pressure hose with a jet nozzle shall be introduced into the sewer so that a spray shall scour and clean the sewer line without applying internal pressure and damaging the pipe. The hose shall be self propelled by a minimum water pressure of 1,000 psi. The jet nozzle hose, upon withdrawal, will scour the pipe, flushing light materials down the line and depositing heavy materials in the downstream manhole for removal. All debris shall be completely removed from the sewer and disposed of by the Contractor at his expense.

The Contractor shall furnish suitable power machinery which shall be used to remove tree roots, and deposits remaining after jet cleaning. All sewer lines shall be cleaned and root material and deposits removed prior to insertion of the cured in place pipe liner.

Waste material removed from the sanitary sewer system shall be disposed of by the Contractor at his expense.

All water necessary for the cleaning and lining operations shall be furnished by the Owner at agreed fire hydrant locations. Contact the Wheeler Center: 4251 Stone School Road at 734-994-1760 for procedures and fees for the hydrant meter, backflow preventer, and hydrant meter cage. Fees shall be paid by Contractor. Hydrants used by the Contractor shall be pumped down by the Contractor to prevent freezing. Frozen hydrants that were used by the Contractor and not properly closed or pumped down shall be repaired by the Contractor at no additional cost.

**Pre-Rehabilitation Inspection of Pipelines**

Inspection of pipelines shall be performed after the pipe has been cleaned, by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television. Television inspection of sewers shall be in accordance with the City of Ann Arbor Public Services Area Standard Specifications, and as directed by the Engineer. The interior of the pipeline shall be carefully inspected to determine the location and extent of any structural failures. The location of any conditions which may prevent proper installation of lining materials into the pipelines shall be noted so that these conditions can be corrected as specified in this Detailed Specification. A color video tape and suitable log with voice and/or computer generated description shall be made by the Contractor and kept for later reference by the Owner/Engineer.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

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**Bypassing Flow**

The Contractor shall provide for the transfer of main line flow around the section or sections of pipe that are to be rehabilitated. The work shall consist of pumping and bypassing flow in the existing sewers.

The Contractor shall maintain flow in existing sewers at all times by pumping, bypassing, or fluming as necessary. During wet weather events, the flow in the sewer will rise rapidly and may become surcharged. The Contractor shall maintain flow in such a manner as the existing flow can be adequately transported including wet weather flow. The Contractor shall furnish, install, operate, and maintain temporary pumping facilities to service the upstream area including piping, temporary channels, pumps, sumps, controls, temporary plugs, and bulkheads.

For sanitary sewerage, by-pass piping shall be PVC Schedule 80, ABS truss pipe, or equivalent with solvent welded joints; HDPE with butt fused joints; or completely watertight Flexible hoses.

All by-passed flow shall be discharged to a sanitary sewer of acceptable size to handle the bypassed and existing flows. The Contractor shall plan his operation such that there will be no backups, leaks, or discharges of pollutants. The Contractor shall be completely responsible for any leaks, spills, or discharges of effluent or other pollutants.

The Contractor shall also furnish and have available on-site, redundant pumping facilities in case of any failure of the pumping system including pumps, piping, electrical, connections, etc. Redundant pumping facilities also include having a backup power generator in case the primary power source fails. The Contractor shall provide an adequate labor force to oversee the by-pass pumping including providing labor to maintain 24 hour per day operation and emergency backup service. The Contractor will not be allowed to obstruct flows in any sewer unless the primary and redundant pumping and by-passing equipment is on site and in an operable condition.

All costs for pumping and by-passing flow shall be included in the unit price bid for CIPP Sewer Lining.

The Contractor shall submit a by-pass pumping/diversion scheme to the Engineer for approval not less than 15 days prior to any anticipated by-pass pumping/diversion. By-pass plan shall include pumping capacity and expected flow rates. The Contractor will not be allowed to by-pass any flows until the by-pass pumping plan has been reviewed and accepted by the Engineer. Contract time shall continue while the by-pass plan is being reviewed and during the time requested revisions are being made. Delays encountered due to Engineer requested revisions shall not be considered for an extension of contract time.

Construction of bypasses shall be made by diversion of the main line flow at an existing upstream access point or manhole and pumping the flow into a downstream access point or manhole or by any other method approved by the Owner which will not cause a sewer backup. The pump and bypass lines shall be of adequate capacity and size to handle wet weather flow.

**Line Obstructions**

It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, dropped joints, protruding branch connections or broken pipe that will prevent proper insertion of the liner. If the pre-design video inspection reveals an obstruction that cannot be removed by conventional cleaning equipment, then the obstruction shall be removed by equipment operating within the pipeline.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

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Services which protrude more than 3/4 inch into the sewer lines shall be ground down as flush as possible with the wall of the sanitary sewer. Grinding shall be done with equipment operating inside of the sewer and shall not cause damage to the sewer or the service being ground.

If the protruding service is in such condition that grinding is not possible or if the condition of the sewer is such that repairs cannot be performed from inside the sewer then the Contractor shall make a spot repair excavation, to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Engineer prior to the commencement of the work.

If the pre-design video inspection reveals areas that require excavation, removal, spot repair, or grinding, then these excavations, removals, spot repairs, and grinding shall be included in the Contractor's bid. Such excavations, removals, spot repairs, and grinding shall only be paid for separately when the condition of the sanitary sewer has deteriorated to the point of making an excavation, removal, repair, and grinding necessary, since the pre-design video inspection.

**Installation of Resin Impregnated Tube**

The Contractor shall designate a location where the uncured resin in the original containers and the unimpregnated liner will be resin impregnated prior to installation. The Contractor shall allow the Engineer to inspect the materials and procedure. A resin and catalyst system compatible with the requirement of this section shall be used. The quantities of the liquid thermosetting materials shall be provided in accordance with manufacturer's standards to provide the cured liner properties specified. Sufficient resin shall be used to fill the volume of air voids in the liner with additional allowance for polymerization, shrinkage and loss of resin through cracks and irregularities in host pipe wall. The Contractor shall ensure that the proper amount of resin is uniformly distributed throughout the entire length of the Tube.

The wetting out, installation, and curing of the resin impregnated Tube shall be in accordance with ASTM F 1216. The Tube shall be inserted through an existing manhole or other approved access by means of an inversion process, the application of a hydrostatic head sufficient to fully extend the liner to the next designated access point, or any other means approved by the Engineer.

The process will be adjusted as necessary to ensure a complete lining without over stressing or tearing the lining; and with sufficient pressure to hold the liner snug to the pipe wall and to produce dimples at side connections and flared ends at the entrance and exit access points. The use of a lubricant is recommended and if used, such lubricant shall be compatible with the rehabilitation process.

The manufacturer's standards shall be closely followed during the elevated curing temperature so as not to over stress the felt fiber and cause damage or failure of the liner prior to cure.

**Curing**

Hot water or heat cured liners are required for full length liners. Ambient cure liners may be used for spot repair liners. After installation of the resin impregnated liner is completed the Contractor shall supply a suitable heat source and water recirculation equipment when necessary to cure the liner. The equipment shall be capable of delivering hot water to the far end of the liner through a hose, which has been perforated per manufacturer's recommendations, to uniformly raise the water temperature in the entire pipe above the temperature required to affect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed.

**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

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The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing circulating water/air. Thermocouples shall be placed between the Tube and existing pipe at the access points to determine the temperature of the cure. Temperature in the line during the cure period shall be not less than 150°F or more than 200°F as measured at the heat exchanger return line.

Initial cure shall be deemed to be completed when inspection of the exposed portions of the liner appears to be hard and sound and the thermocouples indicate that an exotherm has occurred. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the lining process, during which time the recirculation of the water/air and cycling of the heat exchanger to maintain the temperature in the liner continues.

**Cool-Down**

The Contractor shall cool the CIPP to a temperature below 100°F before relieving the static head in the liner. Cool-down may be accomplished by the introduction of cool water into the liner to replace water being drained from the downstream end. Care shall be taken in the release of the static head such that a vacuum will not be developed that could damage the newly installed liner.

**Finish**

The cured liner shall be continuous over the entire length of an insertion run and be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, pinholes and delamination. The lining shall be impervious and free of any leakage.

Any defects which will affect the integrity of the liner, or any deficiencies in required strengths or thicknesses, shall be repaired or removed and replaced at the Contractor's expense, in a manner acceptable to the Engineer.

**Sealing Liner at the Ends**

If due to broken or misaligned pipe at the access point, the lining fails to make a tight seal, the Contractor shall apply a seal at that point. The seal shall be of a resin mixture compatible with the installed liner.

**Branch or Service Connections**

After the liner has been cured, the Contractor shall reconnect the existing service connections. This shall generally be done without excavation and in the case of non-man entry pipes, from the interior of the pipeline by means of a television camera and a cutting device that re-establishes them to operational capacity.

Reconnection of services shall begin immediately after curing of the CIPP has been completed. No service shall be interrupted for more than 12 hours unless otherwise approved by the Engineer.

**Post Rehabilitation Television Inspection**

The completed sewer shall be television inspected and color video taped, by the Contractor, with a suitable log and voice description, after completion of the service connections. Video shall be in DVD format and shall be submitted to the Owner.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

**8 of 8**

The Contractor shall prepare samples of the liner for each section of sewer lined in accordance with Section 8 of ASTM F 1216. Samples shall be labeled for date, diameter, section of sewer, and delivered to the Owner for future testing. When tested, each sample shall meet the physical properties for flexural modulus and flexural strength used in the design calculations.

Air testing on isolated sections of sewer (2 - 3 feet in length) shall be required if post-rehabilitation inspection indicates leaks in the liner. Such testing shall be paid for by the Contractor. The Contractor shall remove and replace or repair any defects in the installed liner to the satisfaction of the Owner at no additional costs.

**Clean-Up**

Upon completion of the installation work and after required testing indicates the linings are acceptable, the Contractor shall restore the project area affected by his operation.

**Traffic Control**

During the entire rehabilitation process, the Contractor shall provide all necessary barricades, signs, flag men, minor traffic devices, etc., to maintain both vehicular and pedestrian traffic in accordance with the Michigan Manual of Uniform Traffic Control Devices.

**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 item:

**Pay Item**

\_\_\_\_ inch Diameter CIPP Sewer Lining

**Pay Unit**

Liner Foot

Rehabilitation of sanitary sewer will be paid for at the Contract Unit Price per lump sum. Price paid shall be payment in full for all labor, material, and equipment required for rehabilitation of existing sanitary sewer by insertion of a cured in place liner and shall include, but is not limited to, all television inspection, cleaning; removal of roots, mineral deposits, mud, and debris; furnishing and installing liner; reconnection of service leads; dewatering; connections to existing sewer or leads; gaining access to work site; removal and replacement of site improvements; and all other items necessary to complete the job, whether specifically mentioned or implied.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #223 – DR STRUCTURE, 24 INCH DIA**

**1 of 2**

**DESCRIPTION**

Work required to construct Dr Structure, 24 inch dia shall be performed in accordance with Section 403 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, as shown on the Plans, as specified in applicable City of Ann Arbor Standard Specifications for Construction, and as directed by the Engineer.

Work shall consist of:

- Constructing the drainage structure;
- Furnishing, installing, and adjusting metal castings to their approximate final location;
- Furnishing and installing castings/covers;
- Removing existing structures;
- Temporarily patching adjacent sections of curb as required;
- Excavating and backfilling as necessary, including the furnishing and placing MDOT Class II or flowable fill material.

**MATERIALS**

The materials shall meet the requirements as referenced for this work in Section 403 of the MDOT 2012 Standard Specifications for Construction and in applicable City of Ann Arbor Standard Specifications for Construction.

**CONSTRUCTION METHODS**

Construction shall be in accordance with Section 403 of the MDOT 2012 Standard Specifications for Construction, applicable City of Ann Arbor Standard Specifications for Construction, this detailed specification, the plans, and as directed by the Engineer.

This work shall include the removal of existing structures/drop inlets at structure relocations, and as needed to construct new structures. This work shall also include the furnishing, placement, and compaction of MDOT Class II sand backfill or flowable fill at removed structures and at connections between new structures and new and/or existing storm sewer leads. This work shall also include the proper disposal off-site of all excavated/removed materials and debris, and the salvaging and transporting of castings and/or covers to the City of Ann Arbor Field Operations Services Unit, all as directed by the Engineer.

Upon completing the installation of a drainage structure, the Contractor shall temporarily patch the curb adjacent to the drainage structure with either HMA or a cold patch bituminous mixture.

All structures, inlets, and manholes shall be maintained free of accumulations of silt, debris, and other foreign matter throughout construction, until the time of final acceptance.

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**DETAILED SPECIFICATION  
FOR  
ITEMS #223 – DR STRUCTURE, 24 INCH DIA**

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**MEASUREMENT AND PAYMENT**

Furnishing and installing castings and covers will not be paid separately, but shall be included in the bid price for this item of work.

Furnishing and placing flowable fill as backfill for this item will not be paid separately, but shall be included in the bid price for this item of work.

Removing and replacing curb and gutter adjacent to a new structure will be for separately as Concrete Barrier Curb & Gutter, Modified.

Replacing HMA pavement adjacent to a new structure will be paid for separately as HMA Patching.

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**

Dr Structure, 24 inch dia

Each

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 #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 #224 - REMOVE CONCRETE CURB, GUTTER, OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #225 - 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 #224 - REMOVE CONCRETE CURB, GUTTER, OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #225 - 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 #226 – 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) 2012 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 2012 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 #227 – 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) 2012 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**

Hand Patching

**PAY UNIT**

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 #228 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #229 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #230 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #231 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #232 - 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, fibermesh reinforced, and/or high-early concrete, in accordance with Sections 801, 802, and 803 of the Michigan Department of Transportation (MDOT) 2012 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 #228 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #229 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #230 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #231 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #232 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

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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

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**DETAILED SPECIFICATION  
FOR  
ITEM #228 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #229 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #230 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #231 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #232 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

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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

¾-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.

½-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

¾-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 #228 – CONCRETE CURB OR CURB & GUTTER - ANY TYPE  
ITEM #229 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #230 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #231 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #232 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

**4 of 5**

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.

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**DETAILED SPECIFICATION  
FOR  
ITEM #228 – CONCRETE CURB OR CURB & GUTTER – ANY TYPE  
ITEM #229 – 4” INCH CONCRETE SIDEWALK, MODIFIED  
ITEM #230 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, MODIFIED  
ITEM #231 – 6” CONCRETE SIDEWALK, RAMP OR DRIVE APPROACH, HIGH-EARLY  
ITEM #232 - CONCRETE TYPE M DRIVE OPENING, HIGH-EARLY**

**5 of 5**

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:

<b><u>PAY ITEMS</u></b>	<b><u>PAY UNIT</u></b>
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 #233 – ADJUST STRUCTURE COVER, MODIFIED**

**1 of 2**

**DESCRIPTION**

This work shall consist of the final adjustment of existing public utility structure covers, including monument boxes, in accordance with Section 403 of the 2003 Michigan Department of Transportation Standard Specifications for Construction, as herein specified, and as directed by the Engineer.

**MATERIALS**

The concrete used for encasing the final adjustment of all structure covers shall meet the requirements for HE concrete (790 lb/cyd) as specified in Section 601 of the 2003 Michigan Department of Transportation Standard Specifications for Construction.

**CONSTRUCTION METHODS**

Manhole covers, water valve boxes and all other public utility underground access or control point covers shall be adjusted to conform to the finished surface section and elevation. The adjusting of castings in areas of concrete pavement or lawn shall be performed in a one-step process. The adjusting of castings in a bituminous pavement area shall be done in two steps: step one is the lowering of the structure cover to below the subgrade elevation and plating of the structure; step two is the final adjustment to finish grade made prior to placing the bituminous wearing surface.

All structures final adjustment are to be to the elevation, which results in their top surface being flush with the finished grade. The work is to be accomplished and checked by using a 10-foot straight edge parallel with the pavement centerline. Failure to meet these conditions will result in the readjustment of the structure and finish patching of the area, as directed by the Engineer, at the Contractor's expense.

All private utility manhole and valve covers (Edison, Gas, Ameritech, etc.) will be adjusted during this project by the Utility. It is the responsibility of the Contractor to coordinate with these private utilities by giving adequate notice and arranging for any adjustment of structures or valves by these utilities.

The transporting of replacement castings from and/or salvaged castings to the City of Ann Arbor Utilities Yard, at the W.R. Wheeler Service Center at 4251 Stone School Road, Ann Arbor, MI 48108, shall be considered included in the items of work "Drainage Structure Covers, Adjust, Modified". All salvaged covers and castings (of any type) shall be returned by the Contractor, at his expense, to the City's Yard at 2000 South Industrial Highway within two days from the date of their removal.

All drainage structures covers, utility covers, monuments, and gate valve boxes shall be backfilled with Grade HE concrete from the depth of excavation necessary for adjustment to an elevation 2" below the top flange or adjusted casting. This material shall be included in this item of work and will not be paid for separately.

The Contractor shall replace covers and/or castings, as directed by the Engineer.

There is a possibility that the Contractor may find hidden utility structures during the work. It is the Contractor's responsibility to inform the respective utility owner(s) of the findings. In such instances, the City may direct the Contractor to adjust the structure(s) to grade. This work will be paid as Adjust Structure Cover, Modified.

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**DETAILED SPECIFICATION  
FOR  
ITEM #233 – ADJUST STRUCTURE COVER, MODIFIED**

**2 of 2**

**MEASUREMENT AND PAYMENT**

The completed work as measured for Adjust Structure Cover, Modified will be paid for at the contract unit price for the following contract item:

**PAY ITEM**

**PAY UNIT**

Adjust Structure Cover, Modified

Each

Adjust Structure Cover, Modified will be measured and paid for at the contract unit price for each structure that is adjusted, which price shall be payment in full for all labor, equipment and material needed to accomplish this work.

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**DETAILED SPECIFICATION  
FOR  
ITEM #234 – 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  
ITEM #235 – 6’ CONSTRUCTION FENCE**

**1 of 1**

**DESCRIPTION**

This work shall consist of all work required to supply, install, maintain, and remove a temporary construction fence surrounding the construction site of the sewer relocation project.

**MATERIALS**

Portable Chain-Link Fencing: New or used, minimum 2-inch, 0.148-inch thick, galvanized-steel, chain-link fabric fencing; minimum 72 inches (6 feet) high with galvanized-steel pipe posts; minimum 2-3/8-inch OD line posts and 2-7/8-inch OD corner and pull posts, with 1-5/8-inch OD top and bottom rails. Provide concrete or galvanized-steel bases for supporting posts. Provide lockable gates at construction entries.

Submit product data for the fencing and gates to the Engineer for approval prior to delivery to the site.

**CONSTRUCTION METHODS**

Install fencing and gates to secure the project site in the locations shown on the plans. Do not drill holes for fence posts; instead use concrete or galvanized-steel bases to support the fence. Ensure the fence and gates are vertical and securely assembled, and maintain the fence for the duration of construction. Keep the gates locked and the site secure when work is not proceeding on-site.

After construction is complete, disassemble the fencing and gates remove them from the site.

**MEASUREMENT AND PAYMENT**

The completed work shall be paid for respectively at the contract unit prices for the following contract item (pay item).

**PAY ITEM**

6’ Construction Fence

**PAY UNIT**

Lineal Foot

**6’ Construction Fence** shall be measured by the unit lineal foot and will be paid for upon completion of installation at the unit price per lineal foot. The unit price for this contract item shall include all labor, material, and equipment costs required to perform all of the work as specified.

Costs for maintaining the fence shall be included in the unit price bid for **General Conditions**.

Costs for removing the fence shall be included in the unit price bid for **Clean-Up & Restoration**.

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**DETAILED SPECIFICATION  
FOR  
ITEM #237 – 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 reseeded 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 reseeded 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 reseeded 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.

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**DETAILED SPECIFICATION  
FOR  
ITEM #237 – CLEAN-UP & RESTORATION, SPECIAL**

**2 of 2**

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.

**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 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."

**DETAILED SPECIFICATION  
FOR  
CONCRETE DURABILITY**

**1 of 6**

**DESCRIPTION**

The Contractor shall furnish a Portland cement concrete mixture for this project that has been tested under this specification and shown to be resistant to excessive expansion caused by alkali-silica reactivity (ASR) and provides adequate air entrainment for freeze thaw durability. The Contractor shall construct the project with practices outlined in this specification.

**MATERIALS**

The materials provided for use on this project shall conform to the following requirements:

Portland cement	ASTM C 150
Fine Aggregate	ASTM C 33*
Coarse Aggregate	ASTM C 33*
Fly Ash, Class F	ASTM C 618
Slag Cement, Grade 100, 120	ASTM C 989
Silica Fume	ASTM C 1240
Blended Cements	ASTM C-595
Air Entraining Admixtures	ASTM C-260
Chemical Admixtures	ASTM C-494
White Membrane Cure	ASTM C-309 Type 2

\* Fine and coarse aggregates shall consist of natural aggregates as defined in the Michigan Department of Transportation 2012 Standard Specifications for Construction Section 902.02.A.1.

The Contractor shall provide documentation that all materials to be incorporated into proposed mixed designs meet the requirements of this section.

**Alkali-Silica Reactivity**

The Contractor shall supply to the Engineer preliminary concrete mix designs including a list and location of all suppliers of concrete materials. The Contractor shall evaluate the mixtures for the potential for excessive expansion caused by ASR and provide documentation to the Engineer. The Contractor's evaluation shall include a review of any previous testing of the material sources intended to be used for both the fine and coarse aggregates for the concrete mixtures. The previous testing may be from other projects or records provided by the material suppliers.

Aggregates shall be tested under ASTM C-1260. If the expansion of the mortar bars is less than 0.10%, at 14 days, the aggregates shall be considered innocuous and there are no restrictions for ASR mitigation required with this material.

Previous aggregate test data may be used. If no previous test data is available, for the concrete mix, that shows that it is resistant to ASR, a concrete mixture that will mitigate the potential for ASR must be designed using either method 1 or 2 as described below.

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**DETAILED SPECIFICATION  
FOR  
CONCRETE DURABILITY**

**2 of 6**

**Method 1.** Substitution of a portion of the cement with Class F Fly Ash, Slag Cement Grade 100 or 120 or a ternary mix (blended cement) containing a blend of Portland cement and slag cement, or Class F fly ash, or silica fume.

The maximum substitution of cement with the fly ash permitted shall be 25% by weight of total cementitious material (cement plus fly ash). Additional requirements for the Fly Ash, Class F are that the Calcium Oxide (CaO) percent shall be less than 10 % and the available alkalis shall not exceed a maximum of 1.5%. A copy of the most recent mill test report shall be submitted to verify. Note: a Class C fly ash with a minimum total oxides ( $\text{SiO}_2 + \text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3$ ) of 66% and a minimum  $\text{SiO}_2$  of 38% may be used in lieu of Type F fly ash.

The maximum substitution of cement with the Slag Cement permitted shall be 40% by weight of total cementitious material (cement plus Slag Cement). The minimum replacement rate with Slag Cement shall be 25%.

For a ternary blend the total replacement of supplementary cementitious materials is 40% with a blend consisting of a maximum of 15% type F fly ash, and/or 8% silica fume and/or slag cement.

For method 1, the effectiveness of the proposed mix combination to resist the potential for excessive expansion caused by ASR shall be demonstrated using current or historic data. To demonstrate the effectiveness of the proposed mix the Contractor shall construct and test mortar bars per ASTM C1567 (14 day test) using both the fine and coarse aggregate along with the proposed cementitious material for the concrete mixture. If a mortar bar constructed of these materials produces an expansion of less than 0.10%, concrete mixture will be considered to be resistant to excessive expansion due to ASR.

If a mortar bar constructed produces an expansion of 0.10% or greater, concrete mixtures containing these materials shall not be considered resistant to the potential for excessive expansion due to ASR and shall be rejected. Additional testing, including alternate proportions or different materials will be required.

**Method 2.** Use low alkali cement and maintain the total alkali content from the cementitious at no more than 3.0 lbs/cyd ( $\text{Na}_2\text{O}_{\text{eq}}$ ). The total alkali contribution is calculated by the quantity contained in the Portland cement only.

Requirements for Low Alkali Cement are that the alkali content does not exceed 0.60% expressed as  $\text{Na}_2\text{O}$  equivalent. Equivalent sodium oxide is calculated as: (percent  $\text{Na}_2\text{O}$  + 0.658 x percent  $\text{K}_2\text{O}$ ).

For either method 1 or 2, if the Contractor intends to change any component material supplied after the mix design has been approved all concrete work will be suspended with no cost to the project or extensions of time, unless approved, until evaluation of the new mixtures and testing of the new materials demonstrates that it is resistant to excessive expansion due to ASR.

The Engineer and Contractor shall monitor the concrete that is delivered to the project site so as to insure that the approved mix design is being followed. The supplier shall include on the delivery ticket for each batch of concrete delivered to the job, the identification and proportions of each material batched.

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**DETAILED SPECIFICATION  
FOR  
CONCRETE DURABILITY**

**3 of 6**

When concrete is placed during cold weather, defined for the purposes of this Detailed Specification to be, air temperatures below 40° F, the use of accelerators, heated aggregates, silica fume and/or additional forms of cold weather protection will be required. Cold weather will not eliminate the requirement for furnishing and placing a concrete mix that is considered resistant to ASR attack.

Prior to cool weather placement, defined for the purposes of this detailed specification to be, air temperatures between 40° and 60° F, the set time of the proposed mix shall be verified under anticipated field conditions. This information shall be used when scheduling pours and saw crews.

Air Entrainment

Air entrainment shall be accomplished by addition of an approved air entraining agent. Air content as determined by ASTM C 231 or ASTM C 173, shall be determined on each day of production as early and as frequently as necessary until the air content is consistently acceptable. If during the period of time while adjustments are being made to the concrete to create a mixture that is consistently acceptable, concrete is produced that does not meet the requirements of this Detailed Specification, the Engineer may reject the material and direct it to be removed from the jobsite. Any rejected material shall be removed from the jobsite at the Contractor's sole expense. Quality Control testing performed by the Contractor to ensure compliance with the project specifications shall be performed on the grade ahead of the placement operation.

**Paver placement:** During production, the plastic concrete material shall be tested for acceptance at a point ahead of the paver. The air content of the concrete mixture that the Contractor shall provide shall be known as the Acceptance Air Content (AAC). The Contractor shall also provide additional entrained air in the concrete mixture to account for the air loss which occurs in the concrete mixture experienced during transportation, consolidation and placement of the concrete. The "air loss" shall be added to the air content of the concrete mixture as established on the approved concrete mix design. The AAC for the project will be 6.0% plus an amount equal to the air loss.

For up to the first four loads, the air content measured on-site prior to placement shall be at least 8.0% and no more than 12.0%. To establish the initial AAC on the first day of paving, the air content of the first load shall be tested at the plant. After initial testing at the plant the Contractor shall provide at least two sample sets to determine the actual air loss during placement. A sample set shall consist of two samples of concrete from the same batch, one taken at the point of discharge and the other from the in-place concrete behind the paver. The air loss from the two sample sets shall be averaged and added to 6.0% to establish the AAC (rounded to the next higher 0.5%). After the testing and adjustment procedure(s) have been completed, the project acceptance air tests shall be taken prior to placement. The Contractor shall provide concrete to the jobsite that has an air content of plus 2.0%, or minus 1.0%, of the AAC.

After the AAC has been established, it shall be verified and/or adjusted through daily checks of the air loss through the paver. The Contractor shall check the air loss through the paver a minimum of two times a day. A Revised AAC shall be required to be established by the Contractor if the average air loss from two consecutive tests deviates by more than 0.5% from the current accepted air loss. The testing operations performed by the Contractor to establish a revised AAC shall be performed to the satisfaction of the Engineer. The Contractor shall be solely responsible for any delays and/or costs that occur to the project while establishing revised AACs.

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**DETAILED SPECIFICATION  
FOR  
CONCRETE DURABILITY**

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**CONSTRUCTION METHODS**

**Aggregate Control**

**Gradation control** – The supplier shall provide a detailed stockpile management plan, describing their process control procedure for shipping, handling, and stockpiling of each aggregate including workforce training.

**Moisture control** – All aggregate materials must be conditioned to a moisture content of not less than saturated surface dry (SSD) prior to batching. A watering process using an effective sprinkler system designed and operated by the Contractor shall be required on all coarse aggregate material stockpiles.

The Contractor shall provide verification that these processes have been performed by the supplier. The Engineer reserves the right to independently verify that the supplier has complied with these standards.

**Mixing**

**Central mix plants** - The total volume of the batch shall not exceed the designated size of the mixer or the rated capacity as shown on the manufacturer's rating plate.

Drum Mix Plants: After all solid materials are assembled in the mixer drum; the mixing time shall be a minimum of 60 seconds and a maximum of 5 minutes. The mixing time may be decreased if the ASTM C-94 11.3.3 mixer efficiency tests show that the concrete mixing is satisfactory. The Engineer may require an increase in the minimum mix time if the mixer efficiency test determines that the concrete is not being mixed satisfactorily. The minimum mixing time shall start after the mixer is fully charged. Mixers shall be operated at the speed recommended by the manufacturer as mixing speed. The mixer shall be charged so that a uniform blend of materials reached the mixer through out the charging cycle. Any additional slump water required shall be added to the mixing chamber by the end of the first 25% of the specified mixing time. Mixers shall not be used if the drum is not clean or if the mixing blades are damaged or badly worn

Ribbon mixers: After all solid materials are assembled in the mixer; the mixing time shall be a minimum of 30 seconds and a maximum of 2.5 minutes. The mixing time may be decreased if the ASTM C-94 11.3.3 mixer efficiency tests show that the concrete mixing is satisfactory. The Engineer may require an increase in the minimum mix time if the mixer efficiency test determines that the concrete is not being mixed satisfactorily. The minimum mixing time shall be indicated by an accurate timing device which is automatically started when the mixer is fully charged. Mixers shall be operated at the speed recommended by the manufacturer as mixing speed. The mixer shall be charged so that a uniform blend of materials reached the mixer through out the charging cycle. After any additional slump water is added to the mixing chamber the mixing shall continue for a minimum of 10 seconds. Mixers shall not be used if the mixer is not clean or if the mixing blades are damaged or badly worn.

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**DETAILED SPECIFICATION  
FOR  
CONCRETE DURABILITY**

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**Truck Mixers** -The capacities and mixing capabilities shall be as defined in ASTM C 94, and each unit shall have an attached plate containing the information described therein. The plate may be issued by the Truck Mixer Manufacturer. The mixer capacity shall not be exceeded, and the mixing speeds shall be within the designated limits. Truck mixers shall be equipped with a reliable reset revolution counter. If truck mixers are used for mixing while in transit, the revolution counter shall register the number of revolutions at mixing speed.

An authorized representative of the concrete producer shall certify that the interior of the mixer drum is clean and reasonably free of hardened concrete, that the fins or paddles are not broken or worn excessively, that the other parts are in proper working order, and that the unit has been checked by the representative within the previous 30 calendar day period to substantiate this certification. The current, signed certification shall be with the unit at all times.

The required mixing shall be between 70 and 90 revolutions. The mixing shall be at the rate designated by the manufacturer and shall produce uniform, thoroughly mixed concrete.

The Engineer may inspect mixer units at any time to assure compliance with certification requirements, and removal of inspection ports may be required. Should the Engineer question the quality of mixing, the Engineer may check the slump variation within the batch. Should the slump variation between two samples taken, one after approximately 20% discharge and one after approximately 90% discharge of the batch, show a variation greater than 3/4 inch (20 mm) or 25% of the average of the two, whichever is greater, the Engineer may require the mixing to be increased, the batch size reduced, the charging procedure be modified or the unit removed from the work.

The practice of adding water on the site shall be discouraged. After the slump of the concrete in the first round of trucks has been adjusted on-site, the amount of water added at the plant shall be adjusted accordingly for that day's work. All additions of water on site shall be approved by the Engineer.

**CURING**

Apply liquid curing compound in a fine atomized spray to form a continuous, uniform film on the horizontal surface, vertical edges, curbs and back of curbs immediately after the surface moisture has disappeared, but no later than 30 minutes after concrete placement. With approval of the Engineer, the timing of cure application may be adjusted due to varying weather conditions and concrete mix properties.

The cure system shall be on site and tested prior to concrete placement.

Apply a curing compound at a rate of application not less than 2 gallons per 25 square yards. The Contractor shall keep the material thoroughly mixed per the Manufacturer's recommendations. The curing compound shall not be diluted.

The finished product shall appear as a uniformly painted solid white surface. Areas exhibiting a blotchy or spotty appearance shall be recoated immediately.

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**DETAILED SPECIFICATION  
FOR  
CONCRETE DURABILITY**

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**COMPLIANCE WITH STANDARDS**

The Engineer will review and approve all material test reports and mix designs supplied by the Contractor before any placement of concrete. The Engineer will visually inspect the placed concrete and review the concrete test reports prior to final acceptance.

Acceptance sampling and testing will be performed using the sampling method and testing option selected by the Engineer. Acceptance testing will be performed at the frequency specified by the Engineer. Quality control measures to insure job control are the responsibility of the Contractor. The Engineer's testing and/or test results will not relieve the Contractor from his/her responsibilities to produce, deliver, and place concrete that meets all project requirements. The Engineer's test results are for acceptance purposes only.

If the results of the testing are not in compliance with the project specifications, the Engineer shall determine appropriate corrective action(s). Time extensions will not be granted to the Contractor during the time that the Engineer is determining the necessary corrective actions.

If, in the Engineer's judgment, the rejected material must be replaced, the material in question will be removed and replaced at the Contractor's sole expense. The removal costs will be deemed to include all relevant and associated costs including, but not limited to; re-mobilization, traffic control, re-grading the aggregate base course, if required, placement of material meeting the project specifications, and all other expenses. Time extensions will not be granted to the Contractor for any required repair work to meet the requirements of this specification.

If the Engineer decides that the material in question can remain in place, an adjustment to the contract unit price(s) may be made of up to 100% of the bid price(s) for the affected items of work.

**MEASUREMENT AND PAYMENT**

The cost associated with complying with the requirements as described herein, including any required remedial action(s), shall be included in the cost of other items of work and shall not be paid for separately.

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**ADDENDUM NO. 1  
TO THE REQUEST FOR ITB 4322  
2014 SEWER LINING PROJECT  
FOR THE CITY OF ANN ARBOR, MICHIGAN**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the Street Repair Program-various Locations , for the City of Ann Arbor, Michigan, ITB No. ITB – 4332

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. **This Addendum includes the removal of Attachment 5- Living Wage Ordinance Declaration of Compliance and replacing it with the attached document titled Attachment 5- Living Wage Ordinance Declaration of Compliance (rev.0). This addendum also includes the removal of the page titled City of Ann Arbor Living Wage ordinance Rate Effective April 30, 2014-Ending April 29, 2014 and replacing it with the attached document titled City of Ann arbor Living Wage Ordinance effective April 30, 2014- Ending April 29, 2015 (rev.0).**

**CITY OF ANN ARBOR  
LIVING WAGE ORDINANCE**

**RATE EFFECTIVE APRIL 30, 2014 - ENDING APRIL 29, 2015**

**\$12.70** per hour

If the employer provides health  
care benefits\*

**\$14.18** 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  
Mark Berryman at 734/794-6500 or [mberryman@a2gov.org](mailto:mberryman@a2gov.org)**

**ATTACHMENT C  
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 employers providing services to the City or recipients of grants for financial assistance (in amounts greater than \$10,000 in a twelve-month period of time) pay their employees who are working on the City project or grant, a minimum level of compensation known as the **Living Wage**. This wage must be paid to the employees for the length of the contract/project.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from the Ordinance. If this exemption applies to your firm, please check below:*

- \_\_\_\_\_ This **company** is exempt due to the fact that we employ or contract with fewer than 5 individuals.  
\_\_\_\_\_ This **non-profit agency** is exempt due to the fact that we employ or contract with fewer than 10 employees.

The Ordinance requires that all contractors/vendors and/or grantees agree to the following terms:

- a) To pay each of its employees performing work on any covered contract or grant with the City, no less than the living wage, which is defined as \$12.70/hour when health care is provided, or no less than \$14.18/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include any adjustment for 2014.
- b) Please check the boxes below which apply to your workforce:
- Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage without health benefits Yes\_\_\_\_\_ No\_\_\_\_\_
- OR**
- Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage with health benefits Yes\_\_\_\_\_ No\_\_\_\_\_
- c) To post a notice approved by the City regarding the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- d) To provide the City payroll records or other documentation as requested; and,
- e) To permit access to work sites to City representatives for the purposes of monitoring compliance, investigating complaints or non-compliance.

The undersigned authorized representative hereby obligates the contractor/vendor or grantee to the above stated conditions under penalty of perjury and violation of the Ordinance.

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

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

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

\_\_\_\_\_  
Phone (area code)

\_\_\_\_\_  
Type or Print Name and Title

\_\_\_\_\_  
Email address

\_\_\_\_\_  
Date signed

**Questions about this form? Please contact:**  
Procurement Office City of Ann Arbor  
Phone: 734/794-6500

April 21, 2014

**ADDENDUM NO. 2  
TO  
BID DOCUMENTS FOR  
2014 SEWER LINING PROJECT  
FOR THE  
CITY OF ANN ARBOR, MICHIGAN**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the 2014 Sewer Lining Project, for the City of Ann Arbor, Michigan, Bid No. ITB-4322.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. **This Addendum includes 2 page(s).**

**The Contractor is to acknowledge receipt of this Addendum No. 2 on page P-1 of the Bid Documents prior to submitting its Proposal.**

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here.

- Item #1: Minutes and Attendance Record from April 15, 2014 Pre-Bid Conference; pages (ADD-2-2 thru ADD-2-6).
- Item #2: Contract Documents, Cover Sheet, no page number; replace this page with the attached page (ADD-2-7).
- Item #3: Contract Documents, Advertisement, page AD-1; replace this page with the attached pages (ADD-2-8).
- Item #4: Contract Documents, Instructions to Bidders, page IB-2; replace this page with the attached pages (ADD-2-9).



# **ITB No. 4322 - 2014 Sewer Lining Project**

## **Pre-Bid Conference Minutes**

**April 15, 2014, 2:00 pm**  
6<sup>th</sup> Floor Conference Room  
Guy C. Larcom Building/City Hall  
301 East Huron Street  
Ann Arbor, Michigan

### **I. Introductions**

### **II. Addendum Items**

- a. Addendum #1: Living Wage Ordinance
- b. Addendum #2: To be issued later this week with Pre-Bid Conference minutes  
*It was noted that Addendum #1 was previously issued, and that Addendum #2 will be issued as indicated above. Addendum #2 may also contain revisions to other contract documents as noted herein, or those revisions may be issued on a separate addendum. Other addenda may be issued as required.*

### **III. General**

- a. Project Overview  
*Project was described as including 16 different locations involving lining of both sanitary and storm sewers. The work impacts both major and local streets together with several cross lot sewers within utility easements on private properties. It was noted that the City will be making initial contact with any affected property owners prior to the work occurring, particularly the University of Michigan related to the South Side Interceptor as close coordination will be required to facilitate this work. It was also noted that bids are due on Friday, April 25, 2014, and that the bid date may be extended as a result of delays in issuing addenda documents related to the proposed work.*
- b. Standard Specifications and Detailed Specifications
  - i. Project Schedule
    - 1. Start Date (expected) – June 16, 2014
    - 2. Completion Dates:
      - a. Several with site specific dates  
*It was noted that the “Location & Schedule” table contained within the Detailed Specification for Project Schedule identifies several work locations contained within the project requiring specific start/completion dates, and also identifies dates/events when work is restricted.*
      - b. Entire project – November 15, 2014
    - 3. Hours of work: 7:00 a.m. to 8:00 p.m. Monday thru Saturday (unless noted otherwise Sundays and alternate hours may be permitted with approval)
  - ii. Project Supervision  
*Attention was made to this Detailed Specification, and its requirements were reiterated.*

iii. Maintenance of Traffic

*Attention was made to the hours for operating traffic control as identified in this Detailed Specification, and the necessary written authorization from the Engineer to deviate from the specified maintenance of traffic requirements.*

iv. CIPP Sewer Lining

*This Detailed Specification will be revised to allow for stream curing of the liner, and also to no longer require documented installations specific to northern states or Canada.*

v. Others

*A question arose concerning how pavement removal will be paid in relation to the removal of concrete curb/curb and gutter, driveway detail "M" opening, sidewalk/sidewalk ramp, driveway approach and/or if required to open cut a street to repair a pipe or perform an exploratory excavation. It was explained that the intention was for pavement removal to be included in these items of work as required in conjunction with their necessary removal. The City will review the bid documents related to this question, revise them as required, and issue the revision(s) as part of an Addendum.*

c. Plans

*It was noted that separate plan sheets are being prepared using the City's GIS information that identify each work location. These sheets will accompany the plan/profile sheets presently contained in the project plan set for each location. In addition, Maintenance of Traffic plan sheets are being developed to include typical traffic control details and to associate each with specific project locations. These revisions will be issued as part of an Addendum.*

IV. Construction

a. Construction phasing or sequencing

*It was noted that the Contractor will be required to submit a phasing plan for the overall project for approval by the Engineer as part of the detailed progress schedule. In addition, prior to beginning work at any location the Contractor is required to submit a detailed work plan for approval by the Engineer.*

b. Coordination of work with other contractor's on site

*It was noted that the Madison Street, West Huron Street, Butternut Street, Nordman Road, and Springbrook Avenue locations could potentially have contractors working at the same time the sewer lining work is proposed to occur, and that the lining work must be coordinated with any/all other work occurring at each of these locations.*

c. Maintenance of Traffic

*It was noted that the Contractor will be required to submit a traffic control plan for approval by the Engineer prior to beginning work at any location.*

V. Other Items/Questions

*Attention was made to the permits required of the project shown on page 2 of the plans, and that there will be no cost to the Contractor associated with these permits.*

*A question arose concerning payment for the excavation and partial removal of structure(s) as may be required to perform the sewer lining work. It was explained that the intent is to include payment for this work in the respective unit prices bid for the contract pay items “\_\_ inch Diameter CIPP Sewer Lining”. The City will review the bid documents related to this question, revise them as required, and issue the revision(s) as part of an Addendum.*

Contact Information:

David Dykman, Project Manager

Phone: (734) 794-6410 ext. 43685

Fax: (734) 994-1744

E-mail: [ddykman@a2gov.org](mailto:ddykman@a2gov.org)

**PRE-BID CONFERENCE SIGN-IN SHEET**

**ITB No. 4322 - 2014 Sewer Lining Project**

Date: 4/15/2014

PLEASE PRINT

NAME	REPRESENTING	MAILING ADDRESS	TELEPHONE/FACSIMILE INFORMATION	E-MAIL ADDRESS
David Dykman Project Manager	City of Ann Arbor - Project Management Services Unit	Address: <u>301 E. Huron Street, P.O. Box 8647</u> City, State: <u>Ann Arbor, MI</u> Zip: <u>48107-8647</u>	Office: (734) <u>794-6410, x43685</u> Mobile: (734) <u>645-6560</u> Fax: (734) <u>994-1744</u>	<u>ddykman@a2gov.org</u>
Igor Kotlyar Project Engineer	City of Ann Arbor - Project Management Services Unit	Address: <u>301 E. Huron Street, P.O. Box 8647</u> City, State: <u>Ann Arbor, MI</u> Zip: <u>48107-8647</u>	Office: (734) <u>794-6410, x43634</u> Mobile: (734) <u>323-7198</u> Fax: (734) <u>994-1744</u>	<u>ikotlyar@a2gov.org</u>
Chris Rachwal Civil Engineering Specialist	City of Ann Arbor - Project Management Services Unit	Address: <u>301 E. Huron Street, P.O. Box 8647</u> City, State: <u>Ann Arbor, MI</u> Zip: <u>48107-8647</u>	Office: (734) <u>794-6410, x43648</u> Mobile: (734) <u>812-7932</u> Fax: (734) <u>994-1744</u>	<u>crachwal@a2gov.org</u>
<i>Jason Everaert</i>	<i>Liquiforce Services</i>	Address: <u>28529 Gaddard Rd. suite 106</u> City, State: <u>Romulus, MI</u> Zip: <u>48174</u>	Office: (734) <u>955-2508</u> Mobile: (519) <u>965-0133</u> Fax No. (734) <u>955-2504</u>	<i>jeveraert@liquiforce.com</i>
<i>Duane Ginderske</i>	<i>Insituform</i>	Address: <u>1058 Victory Drive</u> City, State: <u>Howell mi.</u> Zip: <u>48843</u>	Office: (517) <u>546-4207</u> Mobile: (484) <u>277-5860</u> Fax No. (517) <u>546-4282</u>	<i>dginderske@insituform.com</i>
ERIC EVANS	E.T. MACKENZIE COMPANY	Address: <u>6400 JACKSON RD</u> City, State: <u>ANN ARBOR, MI</u> Zip: <u>48103</u>	Office: (734) <u>761-5050</u> Mobile: (734) <u>216-0838</u> Fax No. (734) <u>761-5383</u>	<i>eevans@mackenzieco.com</i>
JIGNESH MADHANI	IWPC	Address: <u>4086 MICHIGAN AVE</u> City, State: <u>DETROIT</u> Zip: <u>48210</u>	Office: (313) <u>899-3014</u> Mobile: (313) <u>468-0686</u> Fax No. (313) <u>899-3011</u>	<i>jmadhani@teamipr.com</i>
Paul Jorgensen	Utility Services Associates LLC	Address: <u>6001 SCHONER</u> City, State: <u>BELLEVILLE MI</u> Zip: <u>48111</u>	Office: (734) <u>481-0872</u> Mobile: (810) <u>459-5464</u> Fax No. (734) <u>482-1505</u>	<i>pjorgensen@usallc.net</i>
David Lusky	Pipeline Management	Address: <u>2670 E. Maple Road</u> City, State: <u>Milford, MI</u> Zip: <u>48381</u>	Office: (248) <u>685-1500</u> Mobile: (810) <u>923-9478</u> Fax No. (248) <u>685-1560</u>	<i>dlusky@pipeline.us.com</i>

**PRE-BID CONFERENCE SIGN-IN SHEET**

**ITB No. 4322 - 2014 Sewer Lining Project**

Date: 4/15/2014

PLEASE PRINT

NAME	REPRESENTING	MAILING ADDRESS	TELEPHONE/FACSIMILE INFORMATION	E-MAIL ADDRESS
Tom McDonough	The Water Associates	Address: <u>E. High St.</u> City, State: <u>JACKSON</u> Zip: <u>39203</u>	Office: <u>(517) 787-9016</u> Mobile: ( ) _____ Fax No. ( ) _____	tmcDonough@mba-twa.com
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) _____ Mobile: ( ) _____ Fax No. ( ) _____	

# INVITATION TO BID

ITB No. 4322

2014 Sewer Lining Project



Wednesday, April 30, 2014 by 10:00 AM

Issued By:

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

ADVERTISEMENT FOR  
2014 SEWER LINING PROJECT  
CITY OF ANN ARBOR, MICHIGAN

ITB No. 4322

Sealed Bids will be received by the City of Ann Arbor Customer Service Desk, First (1<sup>st</sup>) Floor, Guy Larcom City Hall, on or before Wednesday, April 30, 2014, by 10:00 AM for construction of the 2014 Sewer Lining Project. Bids will be publicly opened and read aloud at this time.

Work to be done includes the installation of approximately 17,925 feet of sewer lining at various locations throughout the City of Ann Arbor, and all related work.

Bid documents, specifications, plans and addenda shall be downloaded by vendors at either of the following web sites, Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) or City of Ann Arbor web site [www.a2gov.org](http://www.a2gov.org). It is the bidder's responsibility to verify they have obtained all information before submitting a bid.

Each Bid shall be accompanied by a certified check, or Bid Bond by a recognized surety, in the amount of 5% of the total of the bid price. A Bid, once submitted, becomes the property of the City. In the sole discretion of the City, the City reserves the right to allow a bidder to reclaim submitted documents provided the documents are requested and retrieved no later than 48 hours prior to the scheduled bid opening.

The successful Bidder will be required to furnish satisfactory performance and labor and material bonds in the amount of 100% of the bid price and satisfactory insurance coverage.

Precondition for entering into a contract with the City of Ann Arbor: (i) compliance with Chapter 112 of Title IX of the Code of the City of Ann Arbor. (ii) compliance with applicable prevailing wage and living wage requirements of Chapter 23 of Title I of the Code of the City of Ann Arbor. Further information is outlined in the contract documents.

After the time of opening, no Bid may be withdrawn for a period of 90 days. The City reserves the right 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.

Any further information may be obtained from the Ann Arbor Procurement Office,  
(734) 794-6500

CITY OF ANN ARBOR, MICHIGAN

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 Customer Service Desk on or before Wednesday, April 30, 2014, by 10:00 am. 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 copy in a sealed envelope clearly marked: **ITB 4322 – 2014 Sewer Lining Project**.

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

City of Ann Arbor  
Customer Service Desk  
First (1<sup>st</sup>) Floor, Guy C. Larcom (City Hall) Building  
301 East Huron Street  
P.O. Box 8647  
Ann Arbor, MI 48107

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

Hand delivered bids will be date/time stamped/signed at the address above in order to be considered. Normal business hours are 8:00 a.m. to 4:00 p.m. Monday through Friday. 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 will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines 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.



April 23, 2014

**ADDENDUM NO. 3  
TO  
BID DOCUMENTS FOR  
2014 SEWER LINING PROJECT  
FOR THE  
CITY OF ANN ARBOR, MICHIGAN**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the 2014 Sewer Lining Project, for the City of Ann Arbor, Michigan, Bid No. ITB-4322.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. **This Addendum includes 4 page(s).**

**The Contractor is to acknowledge receipt of this Addendum No. 3 on page P-1 of the Bid Documents prior to submitting its Proposal.**

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here.

- Item #1: Contract Documents, Cover Sheet, ADD-2-7; replace this page with the attached page (ADD-3-2).
- Item #2: Contract Documents, Advertisement, page AD-1/ADD-2-8; replace this page with the attached page (ADD-3-3).
- Item #3: Contract Documents, Instructions to Bidders, page IB-2/ADD-2-9; replace this page with the attached page (ADD-3-4).

# INVITATION TO BID

ITB No. 4322

2014 Sewer Lining Project



Friday, May 2, 2014 by 10:00 AM

Issued By:

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

ADVERTISEMENT FOR  
2014 SEWER LINING PROJECT  
CITY OF ANN ARBOR, MICHIGAN

ITB No. 4322

Sealed Bids will be received by the City of Ann Arbor Customer Service Desk, First (1<sup>st</sup>) Floor, Guy Larcom City Hall, on or before Friday, May 2, 2014, by 10:00 AM for construction of the 2014 Sewer Lining Project. Bids will be publicly opened and read aloud at this time.

Work to be done includes the installation of approximately 17,925 feet of sewer lining at various locations throughout the City of Ann Arbor, and all related work.

Bid documents, specifications, plans and addenda shall be downloaded by vendors at either of the following web sites, Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) or City of Ann Arbor web site [www.a2gov.org](http://www.a2gov.org). It is the bidder's responsibility to verify they have obtained all information before submitting a bid.

Each Bid shall be accompanied by a certified check, or Bid Bond by a recognized surety, in the amount of 5% of the total of the bid price. A Bid, once submitted, becomes the property of the City. In the sole discretion of the City, the City reserves the right to allow a bidder to reclaim submitted documents provided the documents are requested and retrieved no later than 48 hours prior to the scheduled bid opening.

The successful Bidder will be required to furnish satisfactory performance and labor and material bonds in the amount of 100% of the bid price and satisfactory insurance coverage.

Precondition for entering into a contract with the City of Ann Arbor: (i) compliance with Chapter 112 of Title IX of the Code of the City of Ann Arbor. (ii) compliance with applicable prevailing wage and living wage requirements of Chapter 23 of Title I of the Code of the City of Ann Arbor. Further information is outlined in the contract documents.

After the time of opening, no Bid may be withdrawn for a period of 90 days. The City reserves the right 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.

Any further information may be obtained from the Ann Arbor Procurement Office,  
(734) 794-6500

CITY OF ANN ARBOR, MICHIGAN

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 Customer Service Desk on or before Friday, May 2, 2014, by 10:00 am. 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 copy in a sealed envelope clearly marked: **ITB 4322 – 2014 Sewer Lining Project**.

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

City of Ann Arbor  
Customer Service Desk  
First (1<sup>st</sup>) Floor, Guy C. Larcom (City Hall) Building  
301 East Huron Street  
P.O. Box 8647  
Ann Arbor, MI 48107

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

Hand delivered bids will be date/time stamped/signed at the address above in order to be considered. Normal business hours are 8:00 a.m. to 4:00 p.m. Monday through Friday. 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 will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines 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.

**ADDENDUM NO. 4  
TO  
BID DOCUMENTS FOR  
2014 SEWER LINING PROJECT  
FOR THE  
CITY OF ANN ARBOR, MICHIGAN**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the 2014 Sewer Lining Project, for the City of Ann Arbor, Michigan, Bid No. ITB-4322.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto. **This Addendum includes 22 page(s) and 51 drawing(s).**

**The Contractor is to acknowledge receipt of this Addendum No. 4 on page P-1 of the Bid Documents prior to submitting its Proposal.**

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here.

- Item #1: Contract Documents, Cover Sheet, ADD-3-2; replace this page with the attached page ADD-4-3.
- Item #2: Contract Documents, Advertisement, page AD-1/ADD-3-3; replace this page with the attached page ADD-4-4
- Item #3: Contract Documents, Instructions to Bidders, page IB-2/ADD-3-4; replace this page with the attached page ADD-4-5.
- Item #4: Contract Documents, Bid Form, pages BF-2, BF-3 and BF-4; replace these pages with the attached pages ADD-4-6, ADD-4-7 and ADD-4-8.
- Item #5: Detailed Specification for Project Schedule, pages DS-1, DS-2, DS-3 and DS-4; replace these pages with the attached pages ADD-4-9, ADD-4-10, ADD-4-11, and ADD-4-12.
- Item #6: Detailed Specification for Construction Sequencing, page DS-8; replace this page with the attached page ADD-4-13.
- Item #7: Detailed Specification for Items #215 to #222 - CIPP Sewer Lining, page DS-26; replace this page with the attached page ADD-4-14.
- Item #8: Detailed Specification for Item #223 - Dr Structure, 24 inch dia, pages DS-34 and DS-35; replace these pages with the attached pages ADD-4-15 and ADD-4-16.

Item #9: Detailed Specification for Item #224 - Remove Concrete Curb, Gutter, or Curb & Gutter - Any Type, Modified and Item #225 - Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified, pages DS-36, DS-37, and DS-38; replace these pages with the attached pages ADD-4-17, ADD-4-18, and ADD-4-19.

Item #10: Detailed Specification for Item #227 - Hand Patching, page DS-40; replace this page with the attached page ADD-4-20.

Item #11: Detailed Specification for Item #233 – Adjust Structure Cover, Modified, pages DS-46 and DS-47; replace these pages with the attached pages ADD-4-21 and ADD-4-22.

Item #12: Contract Plan Set; replace all plan sheets with those included in the following files.

- Addendum 4\_2014 Sewer Lining Plans - Part 1.pdf
- Addendum 4\_2014 Sewer Lining Plans - Part 2.pdf
- Addendum 4\_2014 Sewer Lining Plans - Part 3.pdf

Changes include addition of plan sheets 3A, 4A, 7A, 13A, 15A, 16A, 18A, 19A, 21A, 24A, 28A, 30A, 34A, 35A, and 36A. Plan revisions include sheet re-numbering and re-naming, additional “General Notes”, added tables identifying traffic control measures and miscellaneous quantities, added City of Ann Arbor standard details and MDOT maintaining traffic typicals, deleted profile text boxes identifying location/footage of CIPP lining (this information is now shown on new plan sheets), and structure number corrections on numerous sheets.

# INVITATION TO BID

ITB No. 4322

2014 Sewer Lining Project



Friday, May 9, 2014 by 10:00 AM

Issued By:

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

ADVERTISEMENT FOR  
2014 SEWER LINING PROJECT  
CITY OF ANN ARBOR, MICHIGAN

ITB No. 4322

Sealed Bids will be received by the City of Ann Arbor Customer Service Desk, First (1<sup>st</sup>) Floor, Guy Larcom City Hall, on or before Friday, May 9, 2014, by 10:00 AM for construction of the 2014 Sewer Lining Project. Bids will be publicly opened and read aloud at this time.

Work to be done includes the installation of approximately 17,925 feet of sewer lining at various locations throughout the City of Ann Arbor, and all related work.

Bid documents, specifications, plans and addenda shall be downloaded by vendors at either of the following web sites, Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) or City of Ann Arbor web site [www.a2gov.org](http://www.a2gov.org). It is the bidder's responsibility to verify they have obtained all information before submitting a bid.

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CITY OF ANN ARBOR, MICHIGAN



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 Customer Service Desk on or before Friday, May 9, 2014, by 10:00 am. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

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Customer Service Desk  
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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.

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
214	"No Parking" Sign	Each	55.000	\$ _____	\$ _____
215	8 inch Diameter CIPP Sewer Lining	LF	11675.000	\$ _____	\$ _____
216	10 inch Diameter CIPP Sewer Lining	LF	3101.000	\$ _____	\$ _____
217	12 inch Diameter CIPP Sewer Lining	LF	1875.000	\$ _____	\$ _____
218	15 inch Diameter CIPP Sewer Lining	LF	1081.000	\$ _____	\$ _____
219	18 inch Diameter CIPP Sewer Lining	LF	647.000	\$ _____	\$ _____
220	20 inch Diameter CIPP Sewer Lining	LF	271.000	\$ _____	\$ _____
220A	21 inch Diameter CIPP Sewer Lining	LF	50.000	\$ _____	\$ _____
221	24 inch Diameter CIPP Sewer Lining	LF	344.000	\$ _____	\$ _____
222	36 inch Diameter CIPP Sewer Lining	LF	1926.000	\$ _____	\$ _____
223	Dr Structure, 24 inch dia	Each	1.000	\$ _____	\$ _____
224	Remove Concrete Curb or Curb & Gutter - Any Type, Modified	LF	200.000	\$ _____	\$ _____
225	Remove Concrete Sidewalk, Ramp and Drives - Any Thickness, Modified	SF	100.000	\$ _____	\$ _____
226	Aggregate Base	Ton	40.000	\$ _____	\$ _____
227	Hand Patching, Local Street (HMA, 13A)	Ton	50.000	\$ _____	\$ _____
227A	Hand Patching, Minor Street (HMA, 4E3)	Ton	50.000	\$ _____	\$ _____
227B	Hand Patching, Major Street (HMA, 4E10)	Ton	50.000	\$ _____	\$ _____
228	Concrete Curb or Curb & Gutter - Any Type	LF	200.000	\$ _____	\$ _____
TOTAL THIS PAGE				\$ _____	_____

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
229	4" Concrete Sidewalk, Modified	SF	50.000	\$ _____	\$ _____
230	6" Concrete Sidewalk, Ramp, Drive Approach, Modified	SF	50.000	\$ _____	\$ _____
231	6" Concrete Sidewalk, Ramp, Drive Approach, High Early	SF	50.000	\$ _____	\$ _____
232	Concrete Type M Drive Opening, High Early	LF	75.000	\$ _____	\$ _____
233	Adjust Structure Cover, Modified	Each	4.000	\$ _____	\$ _____
234	Inlet Filter, Special	Each	5.000	\$ _____	\$ _____
235	6' Construction Fence	LF	300.000	\$ _____	\$ _____
236	Clean-Up & Restoration, Special	LS	1.000	\$ _____	\$ _____
305-1	8" SDR 26 PVC Sewer, Trench Detail - Type I Modified	LF	100.000	\$ _____	\$ _____
305-2	10" SDR 26 PVC Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
305-3	20" SDR 26 PVC Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
307-1	8" SDR 26 PVC Sewer, Trench Detail - Type VI Modified	LF	50.000	\$ _____	\$ _____
307-2	10" SDR 26 PVC Sewer, Trench Detail - Type VI Modified	LF	75.000	\$ _____	\$ _____
315-1	12" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
315-2	15" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
315-3	18" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
315-3A	21" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
315-4	24" HDP Sewer, Trench Detail - Type I Modified	LF	20.000	\$ _____	\$ _____
TOTAL THIS PAGE				\$ _____	_____

ADD-4-7  
BF-3

BID FORM  
Section 1 - Schedule of Prices

2014 Sewer Lining Project  
File No. 2013-019  
Bid No. 4322

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Total Price</u>
317-1	12" HDP Sewer, Trench Detail - Type VI Modified	LF	20.000	\$ _____	\$ _____
317-2	15" HDP Sewer, Trench Detail - Type VI Modified	LF	20.000	\$ _____	\$ _____
317-5	36" HDP Sewer, Trench Detail - Type VI Modified	LF	20.000	\$ _____	\$ _____
353	4" SDR 35 PVC Service Lead	LF	20.000	\$ _____	\$ _____
360	Type I Manhole (0-10' deep)	Each	2.000	\$ _____	\$ _____
361	Type I Manhole (Add'l depth)	VF	5.000	\$ _____	\$ _____
362	Type II, 5' dia, Manhole (0-10' deep)	Each	1.000	\$ _____	\$ _____
363	Type II, 5' dia, Manhole (Add'l depth)	VF	2.000	\$ _____	\$ _____
364	Type III, 4' dia, Manhole	Each	2.000	\$ _____	\$ _____
563	Structure Covers	LBS	1600.000	\$ _____	\$ _____
564	Reconstruct Structure	Each	10.000	\$ _____	\$ _____
703	Silt Fence	LF	430.000	\$ _____	\$ _____
TOTAL THIS PAGE				\$ _____	_____
TOTAL FROM PAGE BF-1				\$ _____	_____
TOTAL FROM PAGE BF-2				\$ _____	_____
TOTAL FROM PAGE BF-3				\$ _____	_____
<b>TOTAL BASE BID</b>				<b>\$ _____</b>	<b>_____</b>

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

**1 of 4**

**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 **June 30, 2014**, 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 the sewer lining installations, stabilization of all disturbed areas, permanent placement of hot mix asphalt or concrete as needed, and the removal of any and all traffic control devices shall be completed by **November 15, 2014**.

The Contractor is expected to be furnished with two (2) copies of the Contract, for his/her execution, on or before June 17, 2014. 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 June 16, 2014.

The Contractor shall organize, coordinate, and diligently execute the work as shown on the following Location & Schedule table, which identifies the limits and “Begin Work”, “Complete Work”, and “Restricted Date” requirements for certain locations. For the purpose of this Contract, “Begin Work” is defined as the date on or after traffic control devices are to be installed. “Complete Work” is defined as the date on or before the work is to be completed as specified herein and as directed by the Engineer including, but not limited to: surface restoration, clean-up, street cleaning, and the removal of all temporary traffic control devices and parking meter bags.

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.

ADD-4-9  
DS- 1

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

**2 of 4**

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 proposed schedule must fully comply with the scheduling requirements contained on the Location & Schedule table and all others in this Detailed Specification. The Contractor shall update the approved work schedule upon request by the Engineer and present it to the Engineer within seven days of said request.

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).

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 Independence Day and Labor Day 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, **\$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.

ADD-4-10  
DS- 2

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

3 of 4

**LOCATION & SCHEDULE**

Index No.	Street / Location	From	To	Begin Work	Complete Work	Restricted Dates*
<b>Sanitary Sewers</b>						
1	Appleway Cross Lots	Appleway MH 71-69812	MH 71-69904			ID/LD
2	Springwater Subdivision (Butternut Street)	McComb St MH 71-69709	Cardinal Ave MH 71-69719		7/26/2014	ID
3	Springwater Subdivision (Nordman Road)	Sharon Dr MH 71-69708	Packard Rd MH 71-62178		7/26/2014	ID
4	Springwater Subdivision (Springbrook Avenue)	Sharon Dr MH 71-69700	Packard Rd MH 71-62719		7/26/2014	ID
5	Audubon Drive Cross Lots	Audubon Dr MH 71-63554	Ascot Rd MH 71-63160			ID/LD
6	Southside Interceptor	MH 71-68806	MH 71-69893			ID/LD
7	West Madison Street	S Seventh St MH 71-70722	S Main St MH 71-71403			AF, SB, ID/LD
8	Geddes Avenue	Obervatory St MH 71-70352	Onondaga St MH 71-69842		8/22/2014	AF, SM, FBS, ID
9	Pepper Pike Road Cross Lots	Pepper Pike Rd MH 71-65039	Pepper Pike Rd MH-71-65083			ID/LD
10	South State Street Cross Lots	MH 71-63907	S State St MH 71-64901			AF, SM, FBS, ID/LD
11	Miller Avenue	MH 71-67701	MH 71-67699			ID/LD
12	Pineview Court Cross Lots	MH 71-69916	MH 71-70071			ID/LD
<b>Storm Sewers</b>						
13	Hiscock Street	Miner St MH 92-60410	Gott St MH 92-60408			ID/LD
14	North University Avenue	Fletcher St MH 92-60916	Thayer St MH 92-60913	7/11/2014	8/24/2014	AF, WE
15	West Huron Street	S Seventh St MH 92-60027	E of Chapin St MH 92-60034			AF, SM, FBS, MDOT, ID/LD
16	Burns Park Cross Lots	Ferdon Rd MH 92-58316	Baldwin Rd MH 92-58323			ID/LD

ADD-4-11  
DS- 3

**DETAILED SPECIFICATION  
FOR  
PROJECT SCHEDULE**

4 of 4

**LOCATION & SCHEDULE**

Notes:

- 1) Begin Work is defined as work beginning on or after the date described on page DS-1 of this specification unless shown otherwise in the above "Location & Schedule" table. Complete Work is defined as work being complete on or before the date described on page DS-1 of this specification unless shown otherwise in the above "Location & Schedule" table. Liquidated damages apply - see contract documents.
- 2) University of Michigan Arboretum staff member Jeff Walters (Building/Grounds Associate Supervisor) must be contacted 48 hours prior to beginning any work on the Southside Interceptor, or any other sewer location in the University of Michigan Nichols Arboretum/Arboretum Nature Area. Arboretum staff will open the locked gate for entry. Contractor must coordinate with Arboretum staff about timing and limits of all project work. Contact information: jnw@umich.edu, 734-647-8083.

\*Refer to following key:

- AF - No traffic disruption permitted 7/16 through 7/19 due to Ann Arbor Street Art Fairs
- SM - No traffic disruption during University of Michigan Student Move-In (August 25 - September 5, 2014)
- FBS - No traffic disruption on University of Michigan home football game days
- MDOT - Storm lining on Huron St. must be coordinated with MDOT.
- SB - Work must be complete before the Ann Arbor Public Schools begin September 2, 2014.
- WE - Work must be completed during a weekend starting at 9:00 am on Friday and ending by 5:00 pm on Sunday
- ID/LD - Independence Day (ID) & Labor Day (LD) holiday periods; no work or lane closures permitted

ADD-4-12  
DS- 4



**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. Submit for approval a detailed temporary traffic control plan in accordance with the construction plans, as detailed in the specifications, and as directed by the Engineer.
2. Install the required temporary traffic control devices in accordance with the approved temporary traffic control plan.
3. Install the soil erosion control measures in accordance with the plans and as directed by the Engineer.
4. Submit for approval a detailed work plan for the site specific location where work is to be performed. Include access plan, bypass pumping plan, expected work activities and duration of work.
5. Set up and activate by-pass pumping.
6. Clean & videotape sewer to be lined.
7. Construct the proposed sewer lining. The new sewer shall be tested in accordance with the plans and specifications.
8. After all the new sewer has passed the required testing, the contractor shall open all service leads. Service leads shall not be out of service for more than 12 hours.
9. Deactivate and breakdown by-pass pumping equipment.
10. Perform final cleanup and restoration in accordance with the Contract documents.
11. Remove temporary soil erosion and sedimentation control measures.
12. Remove all temporary traffic control devices.

Reference the plans for additional construction sequencing requirements.

ADD-4-13  
DS- 8

**DETAILED SPECIFICATION  
FOR  
ITEMS #215 TO #222 - CIPP SEWER LINING**

**1 of 8**

**DESCRIPTION**

This work shall consist of rehabilitating pipelines by the insertion of a resin impregnated flexible lining and cured in place to form a pipe. The cured in place pipe (CIPP) shall be saturated with a thermosetting resin and inserted into the existing pipeline. Curing shall be accomplished by circulating hot water, heated air, steam, or ambient cure, to harden the resin into a hard impermeable pipe. When cured, the hardened CIPP shall be a tight fitting watertight pipe within a pipe. When full length liners are specified, the CIPP shall be continuous from manhole to manhole with no circumferential joints or seams. Except as otherwise specified herein, all work shall be performed in accordance with the City of Ann Arbor Public Services Area Standard Specifications, and as directed by the Engineer.

For a CIPP system to be considered acceptable, the CIPP system must have at least two million linear feet of successful, documented installations, a minimum of 250,000 linear feet of which shall have been in the state in which the work is located.

When requested by the Owner, the Contractor shall submit test results from previous field installations of the same resin system and tube materials as proposed for this installation. The test results must verify that the CIPP physical properties specified in this Section have been achieved in the field.

The Installer shall have at least 100,000 linear feet and five (5) years documented experience in CIPP liners of all types specified for use in this Project with a minimum of 500 separate installs.

The Contractor is responsible for videotaping and cleaning the pipe before lining, and videotaping after lining. If videotape reveals conditions in the sewer are such that spot repairs will be required, the Contractor shall submit in writing a request for authorization to perform spot repairs along with sufficient proof that these repairs are indeed necessary. Such requests shall include method of spot repair, type and manufacturer of repair pipe, method of connection, etc., and shall be submitted prior to commencement of the rehabilitation process. Required items for spot repair will be paid on a per item basis as submitted in the bid form.

The Contractor shall notify the Owner and all sewer users affected by the work a minimum of seven days prior to beginning work. Notification shall be by means of a written notice on Owner letterhead, delivered to each user and shall advise user as to when service will be interrupted and to minimize water usage during this period. The Owner will supply the notices. The Contractor shall ensure that every user is so notified. Notification shall include telephone number(s) for contacting the Contractor at any time, day or night.

A second notice to the sewer users affected shall be provided one working day prior to the installation work affecting those users.

The Contractor shall also provide a completion notice to each user within 12 hours of completion of the CIPP installation and restoring of service connections.

ADD-4-14  
DS- 26

**DETAILED SPECIFICATION  
FOR  
ITEM #223 – DR STRUCTURE, 24 INCH DIA**

**1 of 2**

**DESCRIPTION**

Work required to construct Dr Structure, 24 inch dia shall be performed in accordance with Section 403 of the Michigan Department of Transportation (MDOT) 2012 Standard Specifications for Construction, as shown on the Plans, as specified in applicable City of Ann Arbor Standard Specifications for Construction, and as directed by the Engineer.

Work shall consist of:

- Constructing the drainage structure;
- Furnishing, installing, and adjusting metal castings to their approximate final location;
- Furnishing and installing castings/covers;
- Removing existing structures;
- Temporarily patching adjacent sections of curb as required;
- Excavating and backfilling as necessary, including the furnishing and placing MDOT Class II or flowable fill material.

**MATERIALS**

The materials shall meet the requirements as referenced for this work in Section 403 of the MDOT 2012 Standard Specifications for Construction and in applicable City of Ann Arbor Standard Specifications for Construction.

**CONSTRUCTION METHODS**

Construction shall be in accordance with Section 403 of the MDOT 2012 Standard Specifications for Construction, applicable City of Ann Arbor Standard Specifications for Construction, this detailed specification, the plans, and as directed by the Engineer.

This work shall include the removal of existing structures/drop inlets at structure relocations, and as needed to construct new structures. This work shall also include the furnishing, placement, and compaction of MDOT Class II sand backfill or flowable fill at removed structures and at connections between new structures and new and/or existing storm sewer leads. This work shall also include the proper disposal off-site of all excavated/removed materials and debris, and the salvaging and transporting of castings and/or covers to the City of Ann Arbor Field Operations Services Unit, all as directed by the Engineer.

Upon completing the installation of a drainage structure, the Contractor shall temporarily patch the curb adjacent to the drainage structure with either HMA or a cold patch bituminous mixture.

All structures, inlets, and manholes shall be maintained free of accumulations of silt, debris, and other foreign matter throughout construction, until the time of final acceptance.

ADD-4-15  
DS- 34

**DETAILED SPECIFICATION  
FOR  
ITEM #223 – DR STRUCTURE, 24 INCH DIA**

**2 of 2**

**MEASUREMENT AND PAYMENT**

Furnishing and installing castings and covers will not be paid separately, but shall be included in the bid price for this item of work.

Furnishing and placing flowable fill as backfill for this item will not be paid separately, but shall be included in the bid price for this item of work.

Removing and replacing curb and gutter adjacent to a new structure will be for separately as Concrete Curb or Curb & Gutter - Any Type.

Replacing HMA pavement adjacent to a new structure will be paid for separately as Hand Patching.

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**

Dr Structure, 24 inch dia

Each

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.

ADD-4-16  
DS- 35

**DETAILED SPECIFICATION  
FOR  
ITEM #224 - REMOVE CONCRETE CURB, GUTTER, 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.

ADD-4-17  
DS-36

**DETAILED SPECIFICATION  
FOR  
ITEM #224 - REMOVE CONCRETE CURB, GUTTER, OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #225 - 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 HMA pavement and aggregate base materials to be either removed from the job-site to properly complete the work. 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.

Where the Engineer directs the addition of aggregate base or HMA pavement materials, they shall be paid for respectively using the items of work “Aggregate Base” and “Hand Patching”.

Concrete removal outside the edge-of-metal shall be paid for as the appropriate item of either “Remove Concrete Curb, Gutter, 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 as directed by the Engineer. 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, but shall be included in the appropriate concrete removal item.

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.

ADD-4-18  
DS-37

**DETAILED SPECIFICATION  
FOR  
ITEM #224 - REMOVE CONCRETE CURB, GUTTER, OR CURB & GUTTER –  
ANY TYPE, MODIFIED  
ITEM #225 - 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”.

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, Gutter, 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.

ADD-4-19  
DS-38

**DETAILED SPECIFICATION  
FOR  
ITEM #227 – 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) 2012 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. Mixes shall consist of HMA, 13A (PG 58-28) or an approved equivalent for local streets, HMA, 4E3 (PG 64-28) or an approved equivalent for minor streets and HMA, 4E10 (PG 64-28) or an approved equivalent for major streets.

**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).

<b><u>PAY ITEM</u></b>	<b><u>PAY UNIT</u></b>
Hand Patching, Local Street (HMA, 13A)	Ton
Hand Patching, Minor Street (HMA, 4E3)	Ton
Hand Patching, Major Street (HMA, 4E10)	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.

ADD-4-20  
DS- 40



**DETAILED SPECIFICATION  
FOR  
ITEM #233 – ADJUST STRUCTURE COVER, MODIFIED**

**1 of 2**

**DESCRIPTION**

This work shall consist of the final adjustment of existing public utility structure covers, including monument boxes, in accordance with Section 403 of the 2012 Michigan Department of Transportation Standard Specifications for Construction, as herein specified, and as directed by the Engineer.

**MATERIALS**

The concrete used for encasing the final adjustment of all structure covers shall meet the requirements for concrete mixture P-NC as specified in Section 601 of the 2012 Michigan Department of Transportation Standard Specifications for Construction.

**CONSTRUCTION METHODS**

Manhole covers, water valve boxes and all other public utility underground access or control point covers shall be adjusted to conform to the finished surface section and elevation. The adjusting of castings in areas of concrete pavement or lawn shall be performed in a one-step process. The adjusting of castings in a bituminous pavement area shall be done in two steps: step one is the lowering of the structure cover to below the subgrade elevation and plating of the structure; step two is the final adjustment to finish grade made prior to placing the bituminous wearing surface.

All structure final adjustments are to be to the elevation, which results in their top surface being flush with the finished grade. The work is to be accomplished and checked by using a 10-foot straight edge parallel with the pavement centerline. Failure to meet these conditions will result in the readjustment of the structure and finish patching of the area, as directed by the Engineer, at the Contractor's expense.

All private utility manhole and valve covers (electric, gas, telecommunication, etc.) will be adjusted during this project by the Utility. It is the responsibility of the Contractor to coordinate with these private utilities by giving adequate notice and arranging for any adjustment of structures or valves by these utilities.

The transporting of replacement castings from and/or salvaged castings to the City of Ann Arbor Utilities Yard, at the W.R. Wheeler Service Center at 4251 Stone School Road, Ann Arbor, MI 48108, shall be considered included in the items of work "Drainage Structure Covers, Adjust, Modified". All salvaged covers and castings (of any type) shall be returned by the Contractor, at his expense, to the City's Yard at 2000 South Industrial Highway within two days from the date of their removal.

All drainage structures covers, utility covers, monuments, and gate valve boxes shall be backfilled with concrete mixture P-NC from the depth of excavation necessary for adjustment to an elevation 2" below the top flange or adjusted casting. This material shall be included in this item of work and will not be paid for separately.

The Contractor shall replace covers and/or castings, as directed by the Engineer.

ADD-4-21  
DS-46

**DETAILED SPECIFICATION  
FOR  
ITEM #233 – ADJUST STRUCTURE COVER, MODIFIED**

**2 of 2**

There is a possibility that the Contractor may find hidden utility structures during the work. It is the Contractor's responsibility to inform the respective utility owner(s) of the findings. In such instances, the City may direct the Contractor to adjust the structure(s) to grade. This work will be paid as Adjust Structure Cover, Modified.

**MEASUREMENT AND PAYMENT**

The completed work as measured for Adjust Structure Cover, Modified will be paid for at the contract unit price for the following contract item:

**PAY ITEM**

**PAY UNIT**

Adjust Structure Cover, Modified

Each

Adjust Structure Cover, Modified will be measured and paid for at the contract unit price for each structure that is adjusted, which price shall be payment in full for all labor, equipment and material needed to accomplish this work.

ADD-4-22  
DS-47

## **ATTACHMENTS**

- 1) Instructions for Contractors for Completing Contract Compliance Form
- 2) Human Rights Contract Compliance Form – Entire Organization
- 3) Human Rights Contract Compliance Form – Local Office
- 4) Living Wage Ordinance – Declaration of Compliance Form
- 5) Living Wage Ordinance Poster
- 6) Vendor Conflict of Interest Disclosure Form
- 7) Legal Status of Bidder

## City of Ann Arbor Procurement Office

### INSTRUCTIONS FOR CONTRACTORS FOR COMPLETING CONTRACT COMPLIANCE FORM

#### City Policy

The “non discrimination in contracts” provision of the City Code, (Chapter 112, Section 9:161) requires contractors/vendors/grantees doing business with the City not to discriminate on the basis of actual or perceived race, color, religion, national origin, sex, age, condition of pregnancy, marital status, physical or mental limitations, source of income, family responsibilities, educational association, sexual orientation, gender identity or HIV status against any of their employees, any City employee working with them, or any applicant for employment. It also requires that the contractors/vendors/grantees include a similar provision in all subcontracts that they execute for City work or programs.

This Ordinance further requires that each prospective contractor/vendor submit employment data to the City showing current total employee breakdown by occupation, race and gender. This allows the Human Rights Office to determine whether or not the contractor/vendor has a workforce that is reflective of the availability of women and under-represented minorities within the contractor’s labor recruitment area (the area where they can reasonably be expected to recruit employees). ***This data is provided to the City on the Human Rights Contract Compliance Forms (attached).***

#### To complete the form:

- 1) **If a company has more than one location, then that company must complete 2 versions of the form.**
  - **Form #1** should contain the employment data for the **entire corporation**.
  - **Form #2** should contain the employment data for those employees:
    - who will be working on-site;
    - in the office responsible for completing the contract; or,
    - in the case of non-profit grantees, those employees working on the project funded by the City grant(s).
- 2) If the company has only one location, fill out Form #1 only.
- 3) Complete all data in the upper section of the form including the name of the person who completes the form and the name of the company/organization’s president.
- 4) Complete the Employment Data in the remainder of the form. Please be sure to complete all columns including the Total Columns on the far right side of the form, and the Total row and Previous Year Total row at the bottom of the form.
- 5) Return the completed form(s) to your contact in the City Department for whom you will be conducting the work.

#### **For assistance in completing the form, contact:**

Procurement Office of the City of Ann Arbor  
734/794-6500

If a contractor is determined to be out of compliance, the Procurement Office will work with them to assist them in coming into compliance.

**CITY OF ANN ARBOR PROCUREMENT OFFICE  
HUMAN RIGHTS CONTRACT COMPLIANCE FORM**  
*Entire Organization (Totals for All Locations where applicable)*

Form #1

Name of Company/Organization Lanzo Trenchless Technologies Date Form Completed 4/30/14  
 Name and Title of Person Completing this Form Casey Gore, Payroll Admin Name of President Giuseppe D'Alessandro  
 Address 125 SE 5th Court Deerfield Beach FL 33441 County Broward Phone # (954) 973-9700  
(Street address) (City) (State) (Zip) (Area Code)  
 Fax# (954) 974-3894 Email Address estimating@lanzo.org  
(Area Code)

**EMPLOYMENT DATA**

Job Categories	Number of Employees (Report employees in only one category)												TOTAL COLUMNS A-L
	Male						Female						
	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaskan Native	
A	B	C	D	E	F	G	H	I	J	K	L		
Exec/Sr. Level Officials	8						1						9
Supervisors	6			3									9
Professionals	4												4
Technicians	3			1						1			5
Sales													
Admin. Support	3	1					1	1					6
Craftspeople													
Operatives													
Service Workers	9	8		17									34
Laborers/Helper													
Apprentices													
Other													
<b>TOTAL</b>	31	9		21			2	1		1			67
PREVIOUS YEAR TOTAL													

**CITY OF ANN ARBOR PROCUREMENT OFFICE  
HUMAN RIGHTS CONTRACT COMPLIANCE FORM**  
Local Office (Only those employees that will do local or on-site work, if applicable)

Form #2

Name of Company/Organization Lanzo Lining Services, Inc.-Michigan d/b/a Lanzo Trenchless Technologies North Date Form Completed 4/30/14  
 Name and Title of Person Completing this Form Casey Gore, Payroll Admin Name of President Giuseppe D'Alessandro  
 Address 28137 Groesbeck Hwy Roseville MI 48066 County Macomb Phone # (586) 775-5819  
(Street address) (City) (State) (Zip) (Area Code)  
 Fax# (586) 775-8924 Email Address estimating@lanzo.org  
(Area Code)

**EMPLOYMENT DATA**

Job Categories	Number of Employees (Report employees in only one category)												TOTAL COLUMNS A-L
	Male						Female						
	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaskan Native	
A	B	C	D	E	F	G	H	I	J	K	L		
Exec/Sr. Level Officials	8												8
Supervisors	2			3									5
Professionals	4												4
Technicians	2							1					3
Sales													
Admin. Support							1						1
Craftspeople													
Operatives													
Service Workers	6	3		8									17
Laborers/Helper													
Apprentices													
Other													
<b>TOTAL</b>													38
<b>PREVIOUS YEAR TOTAL</b>													

**CITY OF ANN ARBOR  
LIVING WAGE ORDINANCE**

**RATE EFFECTIVE APRIL 30, 2014 - ENDING APRIL 29, 2015**

**\$12.70 per hour**

If the employer provides health care benefits\*

**\$14.18 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  
Mark Berryman at 734/794-6500 or [mberryman@a2gov.org](mailto:mberryman@a2gov.org)**

**ATTACHMENT C  
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 employers providing services to the City or recipients of grants for financial assistance (in amounts greater than \$10,000 in a twelve-month period of time) pay their employees who are working on the City project or grant, a minimum level of compensation known as the **Living Wage**. This wage must be paid to the employees for the length of the contract/project.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from the Ordinance. If this exemption applies to your firm, please check below:*

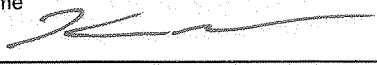
- This company is exempt due to the fact that we employ or contract with fewer than 5 individuals.
- This non-profit agency is exempt due to the fact that we employ or contract with fewer than 10 employees.

The Ordinance requires that all contractors/vendors and/or grantees agree to the following terms:

- a) To pay each of its employees performing work on any covered contract or grant with the City, no less than the living wage, which is defined as \$12.70/hour when health care is provided, or no less than \$14.18/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include any adjustment for 2014.
- b) Please check the boxes below which apply to your workforce:
- Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage without health benefits Yes  No
- OR**
- Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage with health benefits Yes  No
- c) To post a notice approved by the City regarding the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- d) To provide the City payroll records or other documentation as requested; and,
- e) To permit access to work sites to City representatives for the purposes of monitoring compliance, investigating complaints or non-compliance.

The undersigned authorized representative hereby obligates the contractor/vendor or grantee to the above stated conditions under penalty of perjury and violation of the Ordinance.

Lanzo Lining Services, Inc.-Michigan  
d/b/a Lanzo Trenchless Technologies North  
Company Name

  
Signature of Authorized Representative

Kevin Pawlowski, Assistant Secretary  
Type or Print Name and Title

5/2/14  
Date signed

28137 Groesbeck Highway  
Roseville, MI 48066

Address, City, State, Zip

5846-775-5819

Phone (area code)

estimating@lanzo.org

Email address

**Questions about this form? Please contact:**  
Procurement Office City of Ann Arbor  
Phone: 734/794-6500





## Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict 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.

**Certification:** I hereby certify that to my knowledge, there is no conflict of interest involving the vendor named 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:

Vendor Name	Vendor Phone Number
Lanzo Lining Services, Inc.-Michigan d/b/a Lanzo Trenchless Technologies North	586-775-5819
Conflict of Interest Disclosure *	
Name of City of Ann Arbor employees, elected officials, or immediate family members with whom there maybe a potential conflict of interest.	<input type="checkbox"/> Relationship to employee <input type="checkbox"/> Interest in vendor's company _____ <input type="checkbox"/> Other _____
N/A	N/A

\*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that the information provided is true and correct by my signature below:

<hr style="width: 80%; margin: 0 auto;"/>	<u>5/2/14</u> Date	<u>Kevin Pawlowski, Assistant Secretary</u> Printed Name of Vendor Authorized Representative
Signature of Vendor Authorized Representative		

**PROCUREMENT USE ONLY**

- Yes, named employee was involved in Bid / Proposal process.
- No, named employee was not involved in procurement process or decision.

## LEGAL STATUS OF BIDDER

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

Bidder declares that it is:

\* A Corporation organized and doing business under the laws of the state of Michigan, for whom Kevin Pawlowski, bearing the office title of Assistant Secretary, whose signature is affixed to this Bid, is authorized to execute contracts.

~~\* A partnership, list all members and the street and mailing address of each:~~

~~Also identify the County and State where partnership papers are filed:~~

~~County of \_\_\_\_\_, State of \_\_\_\_\_.~~

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