

**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.

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 9, 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.

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