

Addendum No. 1 to IFB#20-32



CITY OF SOMERVILLE, MASSACHUSETTS
Department of Purchasing
JOSEPH A. CURTATONE
MAYOR

To: All Parties on Record with the City of Somerville as Holding IFB#20-32
Title: CIP Project 2 Rehabilitation

From: Prajkta Waditwar

Date: 11/14/2019

- Re:
1. Appends pre-bid conference attendance sheet and meeting agenda
 2. Answers questions asked during the pre-bid conference
 3. Updates the General Bid – Unit Price Form
 4. Updates Section 01270: Measurement and Payment

Addendum No. 1 to IFB#20-32

Please acknowledge receipt of this Addendum by signing below and including this form in your proposal package. Failure to do so may subject the proposer to disqualification.

NAME OF COMPANY / INDIVIDUAL: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

TELEPHONE/FAX/EMAIL: _____

SIGNATURE OF AUTHORIZED INDIVIDUAL: _____

ACKNOWLEDGEMENT OF ADDENDA:

Addendum #1 _____ **#2** _____ **#3** _____ **#4** _____



CITY OF SOMERVILLE, MASSACHUSETTS
 Department of Purchasing
 JOSEPH A. CURTATONE
 MAYOR

BID #IFB#20-32

DATE: 11/7/2019

TIME: 10:00AM EST

The following individuals were in attendance for a pre-bid meeting for: **CIP Project 2 Rehabilitation**

Name	Company	Email Address	Phone Number
Paul N. Umbraco	Umbrato Sons Const	Paul Umbrato@yahoo.com	617-719-1484
Nelson Leite	Insituform	NLeite@insituform.com	714-564-1987
Paul A. Umbrato	Umbrato & Sons Construction Corp	PaulUmbrato@construction.com	857-492-7260
Paul Grecco-Daiguer	Western & Simpson	grecco@western.com	978-532-1700 x2314
TAREK RADWAN	National Water Main Clean	tradwan@Nwmc-Bos.com	617-908-1826
Michael Crowin	InstitutEarth	MCrowin@aeqion.com	413 205 9581

Under the penalties of perjury, the above list represents the names of all bidders in attendance at the pre-bid meeting and I declare that said list is a complete and accurate list of attendees.

NAME: Prajita Wadiwar
 TITLE: Construction Procurement Manager

Witness

CITY OF SOMERVILLE, MASSACHUSETTS
CIP PROJECT 2 REHABILITATIONS

PRE-BID CONFERENCE

DAY/TIME: November 7, 2019, 10:00 AM

LOCATION: Somerville City Hall - Committee Room

AGENDA

Attendees: See attached sign-in sheet

1. Introductions
 - a. Owner – City of Somerville, Infrastructure and Asset Management
 - b. Engineer – Weston & Sampson
2. Bid Opening
 - a. Bid Opening: Wednesday, November 20, 2019
 - b. Location: City of Somerville Purchasing Department, 93 Highland Avenue, Somerville, MA 02143
 - c. All questions must be submitted in writing by: Thursday, November 7, 2019 at 12:00 PM
3. Scope of Work
 - a. Project Description
 - b. Alternate No. 1
 - c. Alternate No. 2
 - d. Project Schedule
 1. Anticipated Contract Award Date: January 1, 2020
 2. Anticipated NTP Date: April 1, 2020
 3. Substantial Completion Date: December 31, 2020
 4. Final Completion Date: December 31, 2021
4. Special Provisions (Section 01140)
 - a. Hours of Operation
 1. 7:00 AM to 5:00 PM (M-F)
 2. 9:00 AM to 3:00 PM (M-F); Alewife Brook Parkway, Broadway, Holland street, Highland Avenue, Elm Street, College Avenue, Powder House Boulevard, and Cameron Avenue
 - b. Staging Area
5. Permits (Section 00890)
 - a. City of Somerville Permits
 - b. MWRA Permits
 - c. DCR Permit
6. Construction Zone Safety Plan (Section 01552)
 - a. Temporary Traffic Control Devices
 - b. Traffic Management Plans
 - c. No Parking Signs
 - d. Weekly Right of Way Occupancy Request Form and Construction Coordination Meeting
7. Invoicing
 - a. Certified Payrolls to be submitted weekly
8. Contractor Questions

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- 1. Work hour restrictions, 9:00 AM to 3:00 PM, included in Specification Section 01140, Special Provisions, Section 3.12 (A), shall be removed from the specifications. All work shall be performed between the hours of 7:00 AM and 5:00 PM, Monday through Friday. Work hours will be extended for cured-in-place lining operations as required.**
- 2. Contractor is reminded that in accordance with the Sheet G002, Abbreviations, Notes and Legend, “30. The City of Somerville does not have space available for equipment or material storage. The Contractor is responsible for obtaining a staging area, if necessary.”**
- 3. Contractor is reminded that certified payrolls are required to be submitted weekly. Payment Applications will not be processed until certified payrolls have been submitted.**
- 4. Specification Section 01014 – Scope and Sequence of Work; ADD the following paragraph after Section 3.01 (C):
“Dye testing (including confirmation by television inspection) is required to confirm active sewer services and shall be performed as indicated on the drawings prior to start of excavation work for replacement of existing services.”**
- 5. Form for General Bid; DELETE the “Form for General Bid” and REPLACE with the attached “Form for General Bid”.**
- 6. Specification Section 01270 – Measurement and Payment; DELETE the “Section 01270, Measurement and Payment” and REPLACE with the attached “Section 01270, Measurement and Payment”.**
- 7. Answers to the questions asked during pre-bid site visit:**

Question 1. Who will responsible for the debris disposal? What is the debris disposal location?

Answer: Currently, Somerville does not have a dump site or available staging area. It is the Contractor’s responsibility to dispose of all material resulting from the cleaning operation, including storage, testing, transportation, and legal disposal of all debris.

Question 2. Does a Contractor need to notify the residents for any work in the residential area?

Answer: The Contractor is not responsible for notifying the residents for work in the project area, except for where required by the specifications (see 02428 – Cured-in-Place Pipe; 02436 – Cured-in-Place Lateral Liner; 02530 – Building Connections.) In accordance with Section 01552, Construction Zone

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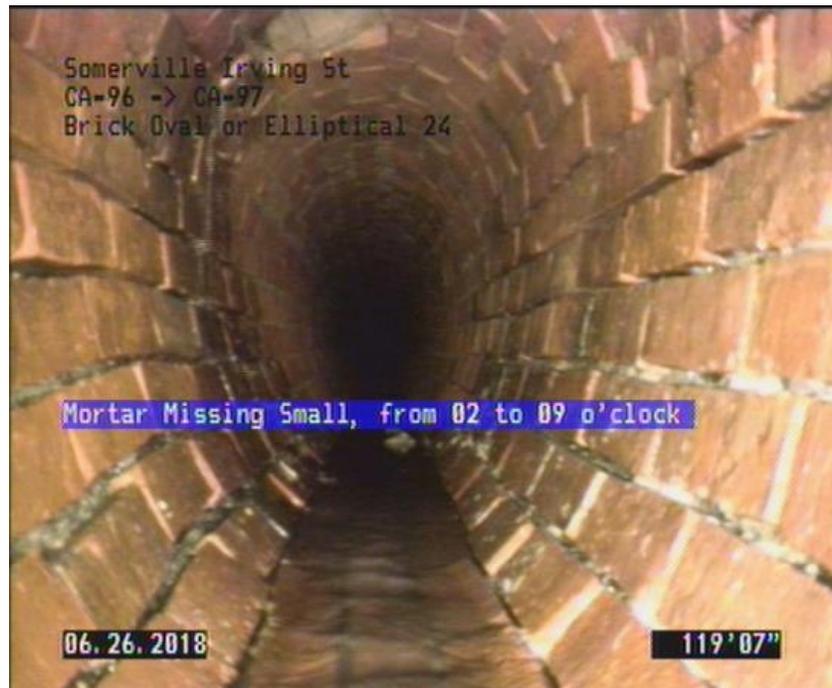
Safety Plan, Contractor shall notify the City of Somerville of proposed work locations through the weekly Right of Wy Occupancy Request Form.

Question 3. Is a contractor allowed to bag a parking meter in order to give more space for vehicles?

Answer: Bagging of meters needs to be requested through the Parking Department. Contractor has to pay \$35 per day fee for bagging a meter.

Question 4. What is the pipe shape of 24" x 17" and 27" x 18" sewers?

Answer: Egg shaped. See television inspection logs included in Appendix A. The following is a photo (included on television inspection log) of cross section from pipe segment CA-96 to CA-97 (Irving Street):



Question 5. What is process for towing cars which are parked within the No Parking Restrictions?

Answer: The Contractor is required to install No Parking signs in accordance with the Department of Parking's Temporary Parking Restrictions Permit Sign Posting Policies. If a car is parked within the parking restriction limits, the Contractor shall notify the Police Detail. The Police Detail will verify with City of Somerville 311 that the signs were posted in accordance with the Policies. Once the Police verify that the signs were legally posted, a tow truck will be called to remove the illegally parked vehicle. If no

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Police Detail is present, the Contractor shall contact the Police Department, who will send a Police Officer to the site.

Question 6. How should the Contractor proceed if Police Details are not filled?

Answer: The Contractor shall proceed with the work in accordance with the approved Traffic Management Plan.

Question 7. Can Traffic Management Plans be submitted to the City of Somerville for review between the Anticipated Contract Award Date (January 1, 2020) and the Estimated Contract Commencement Date (April 1, 2020).

Answer: Yes.

Question 8: Will the City of Somerville extend the work hours for the large diameter CIPP lining work which may extend past the allowable work hours. Will an extension of work hours be allowed?

Answer: Yes.

Question 9: Will the grouting of laterals in non-circular mainlines or in mainlines 24-inch and greater be required?

Answer: Grouting of laterals in non-circular mainlines and mainlines 24-inch and greater will be required.

The Form for General Bid has been adjusted to include items for grouting of reinstated service connections in circular sewers (up to 30-inch diameter), 36-inch diameter sewers, and non-circular pipe. The revised Form for General Bid is included in Addendum No. 1.

Question 10: Will the City consider moving lateral liner items for non-circular pipe and pipes greater than 14-inch in diameter to Alternate Bid No. 2?

Answer: The related scope of work has been evaluated and no changes to the bid documents are required.

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Question 11: How many protruding services will be removed as part of Heavy Cleaning and Television Inspection and how will they be paid for?

Answer: The total number of protruding service connections in pipe segments to be heavy cleaned and television inspected is unknown. Protruding service connections identified during heavy cleaning shall be removed as required by the Engineer. Cutting of Protruding Service Connections shall be paid for under Item 14a.

Question 12: Is mainline chemical root treatment required prior to hydraulic cutting of roots as part of Heavy Cleaning and Television Inspection?

Answer: Hydraulic cutting of roots does not require mainline chemical root treatment to be performed prior to heavy cleaning.

Question 13: How will removal of settled concrete as part of Heavy Cleaning and Television Inspection be performed and how is it paid for?

Answer: Heavy cleaning, including removal of all material and settled concrete, shall be performed in accordance with Section 02440, Sewer Cleaning and Inspection. Heavy Cleaning and Television Inspection shall be paid measured and paid for per linear foot under Item 17b – Heavy cleaning and television inspection of 12-inch to 15-inch diameter sewers.

IFB#20-32 CIP Project 2 Rehabilitation : Unit Price Form

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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BASE BID (Items 1 to 20)

1		Sewers Complete in Place	
1a	45 l.f.	8-inch PVC sewers, where excavation length is less than or equal to 20 linear feet, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
1b	12 l.f.	10-inch PVC sewers, where excavation length is less than or equal to 20 linear feet, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
1c	38 l.f.	10-inch PVC sewers, where excavation length is greater than 20 linear feet, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
1d	10 l.f.	8-inch PVC drains, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
1e	50 l.f.	12-inch PVC drains, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
1f	10 l.f.	15-inch PVC drains, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
2		Building Connection Systems	
2a	4 wyes or tees	8x6 inch wye or tee branches for PVC pipe, each	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
2b	5 wyes or tees	10x6 inch wye or tee branches for PVC pipe, each	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
2c	1 wyes or tees	12x6 inch wye or tee branches for PVC pipe, each	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
2d	5 wyes or tees	15x6 inch wye or tee branches for PVC pipe, each	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
2e	1 wyes or tees	36x6 inch wye or tee branches for PVC pipe, each	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
2f	5 v.f.	6-inch sewer chimneys, per vertical foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
2g	393 l.f.	6-inch PVC building connections, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
2h	16 dye tests	Dye testing of existing building connections, per dye test	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
3		Underdrains Complete in Place	
3a	12 l.f.	6-inch PVC underdrains, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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4 Sewer Manholes and Appurtenances

4a	1 manhole	Precast concrete manhole base with standard frame and cover, 4.0 ft. diameter, per manhole	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

4b	7 v.f.	Precast concrete manhole walls and cones, 4.0 ft. diameter, per vertical foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

5 Additional Earthwork

5a	100 c.y.	Earth excavation and backfill below normal grade, per cubic yard	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
5b	725 c.y.	Earth excavation and backfill above normal grade, per cubic yard	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
5c	300 tons	Removal and disposal of Group A contaminated materials, per ton	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
5d	150 tons	Removal and disposal of Group B contaminated materials, per ton	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
5e	100 c.y.	Test pits, per cubic yard	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
5f	100 c.y.**	Rock excavation and disposal, per cubic yard (minimum)	<u>\$6,000.00</u>
		Sixty _____ and _____ (dollars)	
		Zero _____ (cents)	
		(\$ 60.00 _____)	
5g	100 c.y.**	Rock excavation and disposal, per cubic yard (additional)	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
6		Pavement Replacement	
6a	155 l.f.	Binder course trench width pavement (4-inches thick), per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
6b	155 l.f.	Permanent top course trench width pavement (2-inches thick) including cold planing, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
6c	100 tons	Additional pavement, per ton	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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7 Water and Drain Reconstruction

7a	5	Water and drain reconstruction within sewer trench limits, per reconstruction	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

8 Sewer Line Chemical Root Treatment

8a	1,156 l.f.	Chemical root treatment of 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

8b	948 l.f.	Chemical root treatment of 10-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
8c	501 l.f.	Chemical root treatment of 12-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
9		Cured-in-Place Short Liners	
9a	4 l.f.	Cured-in-place short liner for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
10		Structural Cured-in-Place Short Liners	
10a	7 l.f.	Structural cured-in-place short liner for 6-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
11		Cured-in-Place Pipe	
11a	2,234 l.f.	Cured-in-place pipe for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11b	1,627 l.f.	Cured-in-place pipe for 10-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11c	847 l.f.	Cured-in-place pipe for 12-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
11d	362 l.f.	Cured-in-place pipe for 15-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11e	422 l.f.	Cured-in-place pipe for 24-inch by 17-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11f	278 l.f.	Cured-in-place pipe for 28-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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11g	471 l.f.	Cured-in-place pipe for 30-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11h	251 l.f.	Cured-in-place pipe for 36-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11i	166 services	Grout reinstated service connections in 8-inch to 30-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
11j	7 services	Grout reinstated service connections in 36-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
11k	22 services	Grout reinstated service connections in non-circular sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
12		Structural Cured-in-Place Pipe	
12a	1,336 l.f.	Structural cured-in-place pipe for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
12b	738 l.f.	Structural cured-in-place pipe for 10-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
12c	1,435 l.f.	Structural cured-in-place pipe for 15-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
12d	535 l.f.	Structural cured-in-place pipe for 24-inch by 17-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
12e	124 services	Grout reinstated service connections in 8-inch to 15-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
12f	17 services	Grout reinstated service connections in non-circular sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
13		Cured-in-Place Lateral Liners	
13a	9 laterals	Cleaning and inspection of laterals in 8-inch to 15-inch diameter mainline, where lateral liners cannot be installed, per lateral	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
13b	27 laterals	Cured-in-place lateral liner in 8-inch to 15-inch diameter mainline, up to 5 feet, per lateral	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
13c	497 l.f.	Cured-in-place lateral liner in 8-inch to 15-inch diameter mainline, additional linear footage beyond 5-feet, per linear foot	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
13d	2 laterals	Cleaning and inspection of laterals in greater than 15-inch diameter mainline, where lateral liners cannot be installed,	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
13e	7 laterals	Cured-in-place lateral liner in greater than 15-inch diameter mainline, up to 5 feet, per lateral	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
13f	128 l.f.	Cured-in-place lateral liner in greater than 15-inch diameter mainline, additional linear footage beyond 5-feet, per linear	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
14		Service Connection Rehabilitation	
14a	19 services	Cutting of protruding service connections, per service	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

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Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
15		Sewer Manhole Rehabilitation	
15a	422 v.f.	Cementitious lining of manholes, per vertical foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
15b	3 frames and covers	Locate, raise, and replace manhole frame and cover, per manhole	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
16		Sealing of Underdrain Pipe Connections	
16a	1 connection	Plug underdrain pipe connection at manhole 31-5004, per connection	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
17		Heavy Cleaning and Inspection of Sewers	
17a	2,241 l.f.	Heavy cleaning and television inspection of 6-inch to 10-inch diameter sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
17b	3,388 l.f.	Heavy cleaning and television inspection of 12-inch to 15-inch diameter sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
17c	1,956 l.f.	Heavy cleaning and television inspection of 24-inch to 36-inch diameter sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
17d	3,237 l.f.	Heavy cleaning and television inspection of greater than 36-inch to 48-inch diameter sewers, per linear foot	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
17e	424 l.f.	Heavy cleaning and television inspection of greater than 48-inch diameter sewers, per linear foot	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
17f	254 tons	Debris disposal, per ton	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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18 Post Construction Flow Isolation

18a	3,290 l.f.	Post construction flow isolation of sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

19 Construction Zone Safety Plan

19a	1 l.s.	Construction Zone Safety Plan, lump sum	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
20		Mobilization	
20a	1 l.s.	Mobilization, lump sum (not more than 5% of Items 1 to 19)	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

The Total Amount of BASE BID (Items 1 to 20, inclusive) is:

_____ Dollars
(In Words)

and _____ Cents (\$ _____)
(In Words) (In Figures)

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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ALTERNATE BID NO 1 (Items 21 to 30)

21 Cured-in-Place Short Liners

21a	4 l.f.	Cured-in-place short liner for 8-inch sewers, per linear foot	\$ _____
-----	--------	---------------------------------------------------------------	----------

_____	and	_____	(dollars)	_____
_____		_____	(cents)	_____
(\$ _____		_____)	_____

21b	4 l.f.	Cured-in-place short liner for 10-inch sewers, per linear foot	\$ _____
-----	--------	----------------------------------------------------------------	----------

_____	and	_____	(dollars)	_____
_____		_____	(cents)	_____
(\$ _____		_____)	_____

21c	16 l.f.	Cured-in-place short liner for 12-inch sewers, per linear foot	\$ _____
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_____	and	_____	(dollars)	_____
_____		_____	(cents)	_____
(\$ _____		_____)	_____

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
22		Structural Cured-in-Place Short Liners	
22a	4 l.f.	Structural cured-in-place short liner for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
23		Cured-in-Place Pipe	
23a	276 l.f.	Cured-in-place pipe for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
23b	387 l.f.	Cured-in-place pipe for 12-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
23c	212 l.f.	Cured-in-place pipe for 24-inch by 16-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
23d	21 services	Grout reinstated service connections in 8-inch to 12-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
23e	5 services	Grout reinstated service connections in non-circular sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
24		Structural Cured-in-Place Pipe	
24a	1,065 l.f.	Structural cured-in-place pipe for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
24b	641 l.f.	Structural cured-in-place pipe for 24-inch by 16-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
24c	29 services	Grout reinstated service connections in 8-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
24d	18 services	Grout reinstated service connections in non-circular sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
25		Cured-in-Place Lateral Liners	
25a	3 laterals	Cleaning and inspection of laterals in 8-inch to 15-inch diameter mainline, where lateral liners cannot be installed, per lateral	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
25b	9 laterals	Cured-in-place lateral liner in 8-inch to 15-inch diameter mainline, up to 5 feet, per lateral	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
25c	155 l.f.	Cured-in-place lateral liner in 8-inch to 15-inch diameter mainline, additional linear footage beyond 5-feet, per linear foot	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
25d	1 laterals	Cleaning and inspection of laterals in greater than 15-inch diameter mainline, where lateral liners cannot be installed,	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
25e	2 laterals	Cured-in-place lateral liner in greater than 15-inch diameter mainline, up to 5 feet, per lateral	\$ _____
		and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
25f	50 l.f.	Cured-in-place lateral liner in greater than 15-inch diameter mainline, additional linear footage beyond 5-feet, per linear	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
26		Service Connection Rehabilitation	
26a	2 services	Cutting of protruding service connections, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
27		Sewer Manhole Rehabilitation	
27a	110 v.f.	Cementitious lining of manholes, per vertical foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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28 Post Construction Flow Isolation

28a	1,728 l.f.	Post construction flow isolation of sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

29 Construction Zone Safety Plan

29a	1 l.s.	Construction Zone Safety Plan, lump sum	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
30		Mobilization	
30a	1 l.s.	Mobilization, lump sum (not more than 5% of Items 21 to 29)	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

The Total Amount of ALTERNATE BID NO 1 (Items 21 to 30, inclusive) is:

_____ Dollars
(In Words)

and _____ Cents (\$ _____)
(In Words) (In Figures)

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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ALTERNATE BID NO 2 (Items 31 to 40)

31 Sewer Line Chemical Root Treatment

31a	807 l.f.	Chemical root treatment of 8-inch sewers, per linear foot	\$ _____
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_____	and	_____	(dollars)	_____
			(cents)	
(\$	_____)		

31b	224 l.f.	Chemical root treatment of 10-inch sewers, per linear foot	\$ _____
-----	----------	------------------------------------------------------------	----------

_____	and	_____	(dollars)	_____
			(cents)	
(\$	_____)		

31c	676 l.f.	Chemical root treatment of 12-inch sewers, per linear foot	\$ _____
-----	----------	------------------------------------------------------------	----------

_____	and	_____	(dollars)	_____
			(cents)	
(\$	_____)		

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
31d	317 l.f.	Chemical root treatment of 15-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
31e	80 l.f.	Chemical root treatment of 24-inch by 17-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
32		Cured-in-Place Short Liners	
32a	4 l.f.	Cured-in-place short liner for 10-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
33		Cured-in-Place Pipe	
33a	953 l.f.	Cured-in-place pipe for 8-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
33b	159 l.f.	Cured-in-place pipe for 10-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
33c	1,146 l.f.	Cured-in-place pipe for 12-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
33d	705 l.f.	Cured-in-place pipe for 15-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
33e	254 l.f.	Cured-in-place pipe for 24-inch by 17-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
33f	375 l.f.	Cured-in-place pipe for 27-inch by 18-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
33g	76 services	Grout reinstated service connections in 8-inch to 15-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
33h	19 services	Grout reinstated service connections in non-circular sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
34		Structural Cured-in-Place Pipe	
34a	815 l.f.	Structural cured-in-place pipe for 12-inch sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
34b	12 services	Grout reinstated service connections in 12-inch diameter sewers, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
35		Cured-in-Place Lateral Liners	
35a	2 laterals	Cleaning and inspection of laterals in 8-inch to 15-inch diameter mainline, where lateral liners cannot be installed, per lateral	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
35b	2 laterals	Cured-in-place lateral liner in 8-inch to 15-inch diameter mainline, up to 5 feet, per lateral	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
35c	48 l.f.	Cured-in-place lateral liner in 8-inch to 15-inch diameter mainline, additional linear footage beyond 5-feet, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
36		Service Connection Rehabilitation	
36a	4 services	Cutting of protruding service connections, per service	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	
37		Sewer Manhole Rehabilitation	
37a	211 v.f.	Cementitious lining of manholes, per vertical foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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38 Post Construction Flow Isolation

38a	2,217 l.f.	Post construction flow isolation of sewers, per linear foot	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

39 Construction Zone Safety Plan

39a	1 l.s.	Construction Zone Safety Plan, lump sum	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
40		Mobilization	
40a	1 l.s.	Mobilization, lump sum (not more than 5% of Items 31 to 39)	\$ _____
		_____ and _____ (dollars)	
		_____ (cents)	
		(\$ _____)	

The Total Amount of ALTERNATE BID NO 2 (Items 31 to 40, inclusive) is:

_____ Dollars
(In Words)

and _____ Cents (\$ _____)
(In Words) (In Figures)

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

Item No.	Estimated Quantity*	Bid Description Unit or Lump Sum Price Bid in Both Words and Figures	Total in Figure
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TOTAL AMOUNT OF BASE BID (Items 1 to 20)

\$ _____ (\$ _____)
(In Words) (In Figures)

TOTAL AMOUNT OF BASE BID PLUS ALTERNATE BID NO. 1 (Items 1 to 30)

\$ _____ (\$ _____)
(In Words) (In Figures)

TOTAL AMOUNT OF BASE BID PLUS ALTERNATE BID NO. 1 PLUS ALTERNATE BID NO. 2 (Items 1 to 40)

\$ _____ (\$ _____)
(In Words) (In Figures)

*Quantity assumed for comparison of bids.

**The unit price in Item 5f is the minimum allowed for rock excavation and disposal. The bidder may add to the minimum in Item 5g.

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 - DESCRIPTION

1.01 GENERAL:

- A. The following subsections describe the measurement of and payment for the work to be done under the items listed in the FORM FOR GENERAL BID.
- B. All work performed as described in these contract documents will be paid for under one or more of the items listed in the FORM FOR GENERAL BID. All other activities required in connection with performance of the work, including all work required under Division 1, GENERAL REQUIREMENTS, whether described in the contract documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the FORM FOR GENERAL BID, but will be considered incidental to performance of the overall project.
- C. Each unit or lump-sum price stated in the FORM FOR GENERAL BID shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications.
- D. The payment items listed herein and in the FORM FOR GENERAL BID are intended to provide full payment for the work shown on the drawings and specified herein. Any work called for or implied in the documents but not listed as a payment item shall be considered incidental to the overall project.
- E. Unless otherwise noted, each item shall be furnished and installed in accordance with the technical section whether a specific applicable payment item exists or not.
- F. Unless otherwise noted, all earthwork shall be included under any item requiring excavation. The prices for those items that involve excavation shall include compensation for disposal of surplus excavated material, and installation of all necessary sheeting and bracing.
- G. In all items involving excavation, the price shall be based on doing the entire excavation in earth. Where rock is excavated, the price therefor shall be in addition to the cost of excavating earth and no deduction shall be made in the amount for earth excavation.
- H. The price for all pipe items for sewers, wyes, tees, building connections, chimneys, pressure sewers, force mains, fittings, valves, service connections, and other pipelines shall constitute full compensation for furnishing, laying, jointing, and testing pipe; earth excavation and backfill; crushed stone bedding; and cleaning up.

1.02 SEWERS COMPLETE IN PLACE:

A. PVC SEWERS:

1. The length of sewers to be paid for under the appropriate subdivisions of this item shall be measured by the linear foot along the completed sewers, including wyes and tees, of actual sewers installed. In locations where a sewer service is being replaced and the mainline sewer is not specifically called out for replacement, replacement of mainline sewer, as described in specification Section 02442; 3.03, 2, shall be considered incidental to the work and shall not be measured separately for payment.
2. The unit prices under the appropriate subdivisions of this item shall constitute full compensation for constructing the sewers, complete in place, as indicated on the drawings and as specified, including removal and disposal of existing sewers where necessary, furnishing and installing pipe and fittings, making connections to the existing sewer, excavation, backfill, bedding, select material, clearing, grubbing, testing, removal and replacement of sidewalks and curbing, transportation and disposal of Non-Impacted material, and all work incidental thereto and not specifically included for payment under other items, as described in Section 02442, POINT REPAIR OF GRAVITY SEWERS.
3. Payment for 8-inch diameter PVC sewers, where excavation length is less than or equal to 20 linear feet, shall be paid at the contract unit price under Item 1a.
4. Payment for 10-inch diameter PVC sewers, where excavation length is less than or equal to 20 linear feet, shall be paid at the contract unit price under Item 1b.
5. Payment for 10-inch diameter PVC sewers, where excavation length is greater than 20 linear feet, shall be paid at the contract unit price under Item 1c.

B. PVC DRAINS

1. The length of drains to be paid for under the appropriate subdivisions of this item shall be measured by the linear foot along the completed drains, including wyes and tees, of actual drains installed.
2. The unit prices under the appropriate subdivisions of this item shall constitute full compensation for constructing the drains, complete in place, as indicated on the drawings and as specified, including removal and disposal of existing drains where necessary, furnishing and installing pipe and fittings, making connections to the existing drain, excavation, backfill, bedding, select material, clearing, grubbing, testing, removal and replacement of sidewalks and curbing, transportation and

disposal of Non-Impacted material, and all work incidental thereto and not specifically included for payments under other items.

3. The work under this item shall be paid at the unit price under Items 1d, 1e, and 1f.

1.03 BUILDING CONNECTIONS SYSTEMS:

A. WYES AND TEES:

1. The unit price to be paid for under the appropriate subdivisions of this item shall be measured for payment per wye or tee installed within the main sewer.
2. The contract unit price under the appropriate subdivisions of this item shall constitute full compensation for furnishing and installing wyes or tees in the main sewer, complete, as indicated on the drawings and/or specified, removal and disposal of existing wyes or tees where necessary, pavement replacement, infrared paving methods where indicated on plans, transportation and disposal of Non-Impacted material, and all work incidental thereto and not specifically included for payment under other items.
3. The work under this item shall be paid at the contract unit price under Items 2a, 2b, 2c, 2d, and 2e.

B. CHIMNEYS:

1. The unit price to be paid for under the appropriate subdivisions of this item shall be measured for payment per vertical foot of chimney completed in place. Measurement shall be based on the distance from the crown of the sewer to the top of the completed chimney.
2. The contract unit price under the appropriate subdivisions of this item shall constitute full compensation for constructing the chimney, including removal and disposal of existing chimney where necessary, excavation and backfill, pavement replacement, the vertical pipe and encasement, and the additional incremental cost of the transition pipe and fittings needed at the top of the chimney, as shown on the drawings and/or as specified, including all work incidental thereto and not specifically included for payment under other items.
3. The work under this item shall be paid at the contract unit price under Item 2f.

C. BUILDING CONNECTIONS:

1. The length of building connections to be paid for under the appropriate subdivisions of this item shall be measured per linear foot along the horizontal projection of the centerline of the completed building connection, from the centerline of the main sewer to the end of the building connection.

2. Building connections shall be paid at the contract unit price under the Item "6-inch PVC Building Connections." The unit price under this Item shall include removal and disposal of existing building connection where necessary, excavation, backfill, crushed stone and select backfill; "push" camera television inspection of the existing sewer service lateral from the property line to the building, connection of building connection to existing sewer service lateral at the property line, furnishing and installing pipe, fittings, detectable tracer tape, restoration of the ground surface, loaming and seeding, sidewalk and curb replacement, pavement replacement, transportation and disposal of Non-Impacted material, and incidentals necessary to construct the building connections as shown on the drawings and/or as specified.
3. The work under this item shall be paid at the contract unit price under Item 2g.

D. DYE TESTING OF EXISTING BUILDING CONNECTIONS:

1. The unit price to be paid under this item shall be measured for payment per sewer service connection dye tested.
2. The unit price for this item shall constitute full compensation for all labor, equipment, and materials required to perform dye testing of existing sewer service connections as shown on the drawings and/or as specified, including any television inspection required to confirm the dye source, to determine whether the service is active or abandoned.
3. The work under this item shall be paid at the contract unit price under Item 2h.

1.04 UNDERDRAINS COMPLETE IN PLACE:

A. PVC UNDERDRAINS:

1. The length of underdrains to be paid for under the appropriate subdivisions of this item shall be measured per linear foot along the centerline of the completed underdrains, including wyes and tees, of actual underdrains installed.
2. The unit prices under the appropriate subdivision of this item shall constitute full compensation for constructing the underdrains, complete in place, as indicated on the drawings and/or as specified, including removal and disposal of existing underdrains where necessary, furnishing and installing pipe and fittings, excavation, backfill, bedding, select material, clearing, grubbing, testing, removal and replacement of sidewalks and curbing, transportation and disposal of Non-Impacted material, and all work incidental thereto and not specifically included for payment under other items.
3. Payment for 6-inch diameter PVC underdrains shall be paid at the contract unit price under Item 3a.

1.05 SEWER MANHOLES AND APPURTENANCES:

A. MANHOLE BASES, FRAMES and COVERS:

1. Bases, frames and covers shall be measured per set installed in place.
2. The unit price for this item shall include removal and disposal of existing manhole or lamphole where necessary, excavation, crushed stone bedding, and backfill; furnishing and installing base, invert channels, steps, gaskets, sealants, connections and couplings; pavement replacement, transportation and disposal of Non-Impacted material; and all incidental work necessary to complete the precast concrete base as shown on the drawings and as specified herein.
3. The unit price for this item shall also include furnishing and installing the frame and cover, and grouting the frame to the brick courses.
4. The work under this item shall be paid at the contract unit price under Item 4a.

B. MANHOLE WALLS AND CONES:

1. Precast concrete manhole walls and cones shall be measured per vertical foot installed in place. Measurement shall be based on the vertical distance from the invert of the pipeline to the top of the completed frame at finished grade.
2. Walls and cones shall be paid at the contract unit prices under the item "Precast Concrete Walls and Cones." The unit price for this item shall include excavation and backfill; furnishing and installing walls, cones, gaskets, seals, steps, bricks and grout to grade, and pavement replacement, transportation and disposal of Non-Impacted material; and all incidentals necessary to complete the precast concrete walls and cones as shown on the drawings and specified herein.
3. The work under this item shall be paid at the contract unit price under Item 4b.

C. CONNECTIONS TO EXISTING STRUCTURES:

Connections to existing structures shall be considered incidental to the work and shall not be measured separately for payment. Replacing a minimum of three (3) feet of each incoming and outgoing pipe, connected to each manhole being installed, shall also be considered incidental to the work and shall not be measured separately for payment.

1.06 EARTHWORK:

Earthwork shall be considered incidental to the work and shall not be measured separately for payment.

1.07 CONCRETE ENCASEMENT:

Concrete encasement, when required per technical specifications, shall be considered incidental to the work and shall not be measured separately for payment.

1.08 SHEETING LEFT IN PLACE:

1. Unless designated otherwise, the work as specified in Section 02252 – SUPPORT OF EXCAVATION shall not be measured separately for payment, but shall be considered incidental to the pipeline or structure for which it is required.
2. No payment will be made for trench boxes, sheeting, or steel plates used at the Contractor's option in the course of the work.

1.09 ADDITIONAL EARTHWORK:

A. EARTH EXCAVATION AND BACKFILL BELOW NORMAL GRADE:

1. If, in the opinion of the Engineer, the material at or below normal grade for the bottom of trench excavation is unsuitable for foundation, it shall be removed to such depths and widths within the limits of payment as he may order. Normal grade is defined as the elevation of the proposed sewer trench bottom, as shown on the drawings.
2. The quantity of earth excavation below normal grade (limit of normal excavation) to be included for payment under this item shall be the number of cubic yards of unsuitable material excavated, measured to the depths and lengths ordered, and to the width between payment limits for normal excavation as indicated on the drawings.
3. The unit price for this item shall constitute full compensation for excavation below normal grade, disposal of unsuitable material and furnishing, installing and compacting gravel borrow as indicated on the drawings.
4. The Contractor will not be reimbursed for over-excavation that has not been ordered by the Engineer. The Contractor shall backfill any such overexcavated areas in accordance with the specifications, at no additional cost to the Owner.
5. Rock excavation and disposal required below normal grade shall be considered incidental to Earth Excavation and Backfill Below Normal Grade and shall not be measured separately for payment.
6. The work under this section shall be paid at the contract unit price under Item 5a.

B. EXCAVATION AND BACKFILL OF UNSUITABLE MATERIAL ABOVE NORMAL GRADE:

1. If, in the opinion of the Engineer, the material at or above normal grade is unsuitable for use as backfill, it shall be removed and disposed of to such depths and widths within the limits of payment as he may order. Normal grade is defined as the elevation of the trench bottom, as shown on the drawings.
2. The quantity of earth excavation and backfill above normal grade to be included for payment shall be the number of cubic yards of material ordered to be removed and measured by the Engineer within the normal trench limits shown on the contract drawings.
3. Removal of topsoil, paving materials, frozen material or rock excavation above the normal grade of the trench excavation will not be considered for payment.
4. The unit price for this item shall constitute full compensation for excavation of unsuitable material above normal grade, disposal of unsuitable material and furnishing, installing and compacting approved backfill materials.
5. The Contractor will not be reimbursed for excavation of unsuitable material above normal grade, which has not been ordered by the Engineer.
6. The work under this section shall be paid at the contract unit price under Item 5b.

C. REMOVAL AND DISPOSAL OF GROUP A CONTAMINATED MATERIAL:

1. The quantity of Group A contaminated material (as defined in Section 02130, TRANSPORTATION AND DISPOSAL OF CONTAMINATED MATERIAL) for removal and disposal to be paid for under this Item shall be the number of tons of contaminated Group A material removed and disposed. Transportation and disposal of Non-Impacted material shall not be measured for payment.
2. The unit price for this item constitutes full compensation to provide removal of Group A contaminated material, complete, as described in and required by the Contract Documents including, but not limited to; furnishing all labor, material, tools, and equipment required to handle, stockpile, characterize for disposal, load and legally haul by licensed common carrier, and dispose of excavated Group A material. Contract price shall also include moving and storing contaminated soils on site. The work shall include disposal at a licensed disposal site.
3. The work under this section shall be paid at the contract unit price under Item 5c.

D. REMOVAL AND OFF-SITE TREATMENT/RECYCLING OF GROUP B CONTAMINATED MATERIAL:

1. The quantity of Group B contaminated material (as defined in Section 02130, TRANSPORTATION AND DISPOSAL OF CONTAMINATED MATERIAL) for removal and disposal to be paid for under this Item shall be the number of tons of contaminated Group B material removed for off-site treatment/recycling. Transportation and disposal of Non-Impacted material shall not be measured for payment.
2. The unit price for this item constitutes full compensation to provide removal of Group B contaminated material, complete, as described in and required by the Contract Documents including, but not limited to; furnishing all labor, material, tools, and equipment required to handle, stockpile, characterize for disposal, load and legally haul by licensed common carrier for off-site treatment/recycling of excavated Group B material. Contract price shall also include moving and storing contaminated soils on site. The work shall include recycling at a licensed treatment/recycling facility.
3. The work under this section shall be paid at the contract unit price under Item 5d.

E. TEST PITS:

1. Test pits as ordered by the Engineer and not incidental to construction shall be measured per cubic yard excavated and backfilled under the Item "Test Pits."
2. Test pits shall be paid at the contract unit price under the item "Test Pits." The unit price under this item shall constitute full compensation for all excavation, backfill, pavement repair, surface restoration, or other work incidental to excavation or restoration of test pits.
3. The work under this item shall be paid at the contract unit price under Item 5e.

F. ROCK EXCAVATION AND DISPOSAL:

1. The cost of pre-blast surveys, vibration air blast monitoring, blasting records and post-blast inspection shall be considered incidental to the cost of rock excavation and disposal and will not be separately paid.
2. Rock excavated and disposed of off-site by the Contractor shall be measured by the cubic yard, within the limits of excavation as defined in Paragraph 4 below. The unit price established by the Engineer under Item 5f is the minimum unit price to be used for rock excavation. The unit price to be inserted by the Contractor in his bid under Item 5g is intended to reflect the Contractor's additional costs for performing the rock excavation, should he decide that the minimum unit price in Item 5f is insufficient compensation.

3. Where rock is encountered, it shall be uncovered but not excavated until measurements have been made by the Engineer, unless in the opinion of the Engineer, satisfactory measurements can be made in some other manner.
4. Payment for this item includes rock excavation and disposal, furnishing and installing gravel borrow in its place, and providing all required documentation.
5. The bidder should include in his bid for items involving excavation, the cost of doing the entire excavation as earth, the price for the Item "Rock Excavation and Disposal" being intended to cover the difference between the cost of rock excavation and the cost of earth excavation. The price for this item shall be paid in addition to any payment made for earth excavation.
6. For all manholes and structures, measurement will be to one foot outside the widest dimension of the structure or shall be the maximum connecting trench width, whichever is greater. No allowance will be made for overbreakage.

1.10 PAVEMENT REPLACEMENT:

A. BITUMINOUS PAVEMENT:

1. Bituminous pavement shall be measured per linear foot or ton of work completed and shall be paid at the contract unit prices under the subdivisions of the item "Pavement Replacement" as further described below.
2. Pavement disturbed by the Contractor's operations outside of payment limits shall not be paid for under these items, but shall be repaired to its original condition by the Contractor at no additional cost to the Owner.
3. Pavement replacement for sewer services shall be considered incidental to the work and shall not be measured separately for payment.
4. Pavement replacement for manholes shall be considered incidental to the work and shall not be measured separately for payment.
5. Items measured per linear foot shall be measured along the centerline of the completed mainline pipeline trench. In locations where a sewer service is being replaced and the mainline sewer is not specifically called out for replacement, pavement replacement shall be considered incidental to the work and shall not be measured separately for payment.
6. Temporary Pavement (Trench Width):

Temporary trench pavement shall be measured per mainline linear foot and shall include furnishing, preparation and installation of temporary trench pavement as specified. Maintenance and repair of temporary trench pavement shall also be included.

7. Permanent Pavement Binder Course (Trench Width):

Permanent trench pavement binder course shall be measured per mainline linear foot and shall include removal of temporary paving, furnishing, preparation and installation of 12-inch depth of compacted gravel borrow subbase and trench pavement binder course as shown on the drawings and as specified.

8. Permanent Pavement Top Course (Trench Width):

Permanent trench pavement top course shall be measured per mainline linear foot and shall include cold planing, furnishing, infrared paving methods, preparation and installation of permanent pavement top course as shown on the drawings and as specified.

9. Additional Pavement:

a. Additional pavement beyond the payment limits of the trench shall be measured per ton for payment at the unit price, where ordered by the Engineer and not included for payment under other items.

b. Payment for additional pavement shall include furnishing, preparation and installation of the additional pavement ordered by the Engineer, outside of the normal trench limits.

10. Raising and adjusting of new and existing castings shall be incidental to pavement replacement and not included separately for payment. Castings belonging to private utilities shall be raised by their own forces at their expense.

11. Except as otherwise indicated, repainting of traffic markings shall be included in the payment for this item. Provision of stop bars, traffic arrows, printed words and lane striping dividers shall also be included in payment for this item.

12. Pavement replacement shall be paid at the contract unit price under Items 6a, 6b, and 6c.

1.11 CURBING REPLACEMENT:

Curbing shall be considered incidental to the work and shall not be measured separately for payment.

1.12 WATER AND DRAIN RECONSTRUCTION:

A. Reconstruction of water mains and drains shall be measured per water main or drain reconstructed and shall be paid at the contract unit price under item 7a.

- B. Only pipe which is not shown on the drawings or located for the Contractor in the field shall be considered for payment.
- C. Pipes damaged by the Contractor which pass below the proposed pipeline or are outside the specified trench limits shall be repaired by the Contractor at no cost to the Owner.

1.13 SEWER LINE CHEMICAL ROOT TREATMENT

- A. Chemical root treatment shall be measured at the unit price bid per linear foot of sewer treated.
- B. Measurement shall be based on the actual length of treated sewer from center line of manhole to center line of manhole. Sewers shall be chemically treated for root control as specified in Section 02437, SEWER LINE CHEMICAL ROOT TREATMENT.
- C. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
- D. The work under this section shall be paid at the contract unit price under Items 8a, 8b, 8c, 31a, 31b, 31c, 31d, and 31e.

1.14 CURED-IN-PLACE SHORT LINER:

- A. General:
 - 1. The work of this item shall be measured at the unit price bid per linear foot of short liner installed.
 - 2. Measurement, including all material, labor, tools and equipment shall be based on the actual length of installed short liners in sewer lines as determined by the Engineer. Short liners shall be installed as specified in Section 02429, CURED-IN-PLACE SHORT LINER.
 - 3. Reinstating and grouting of service connections shall be considered incidental to the work and shall not be measured separately for payment.
 - 4. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
 - 5. Television inspection of sewer lines with short liners shall be considered incidental to the work and shall not be measured separately for payment.
 - 6. The work shall be paid for at the contract unit price under Items 9a, 21a, 21b, 21c, and 32a.

- B. Ten percent of the payment for the subdivisions of the item “Cured-in-Place Short Liner” shall be withheld until the pipeline rehabilitations have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02429, CURED-IN-PLACE SHORT LINER.

1.15 STRUCTURAL CURED-IN-PLACE SHORT LINER:

A. General:

1. The work of this item shall be measured at the unit price bid per linear foot of structural short liner installed.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual length of installed structural short liners in sewer lines as determined by the Engineer. Structural short liners shall be installed as specified in Section 02429, CURED-IN-PLACE SHORT LINER.
3. Reinstating and grouting of service connections shall be considered incidental to the work and shall not be measured separately for payment.
4. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
5. Television inspection of sewer lines with structural short liners shall be considered incidental to the work and shall not be measured separately for payment.
6. The work shall be paid for at the contract unit price under Items 10a and 22a.
7. The structural short liner in CA-3042 to CA-602 shall be paid under Item 10a.

- B. Ten percent of the payment for the subdivisions of the item “Structural Cured-in-Place Short Liner” shall be withheld until the pipeline rehabilitations have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02429, CURED-IN-PLACE SHORT LINER.

1.16 CURED-IN-PLACE PIPE:

A. General:

1. The work of this item shall be measured at the unit price bid per linear foot of lined pipe.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual length of pipes lined as determined by the Engineer. Pipes shall be lined as specified in Section 02428, CURED-IN-PLACE PIPE.

3. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
4. Reinstatement of service connections shall be considered incidental to the work and shall not be measured for payment.
5. Television inspection and cleaning (pre-inspection and post-inspection of pipes associated with the installation of cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
6. Removal and disposal of all material resulting from the cleaning operation associated with the installation of cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
7. Locating active and inactive service connections and television inspection in conjunction with investigation shall be considered incidental to the work and shall not be measured separately for payment.
8. Notification, as required per Specification Section 02428, 3.04, shall be considered incidental to the work and shall not be measured separately for payment.
9. Grouting of any infiltration sources required to install the liner shall be considered incidental to the work and shall not be measured separately for payment.
10. Pipe diameter transitions in the cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
11. The work shall be paid for at the contract unit price under Items 11a, 11b, 11c, 11d, 11e, 11f, 11g, 11h, 23a, 23b, 23c, 33a, 33b, 33c, 33d, 33e, and 33f.

B. Grout reinstated Service Connections:

1. The work for this item shall be measured per service connection inspected and grouted.
2. The contract unit price per service to be paid shall constitute full compensation for supplying all material, labor, tools, and equipment required to TV inspect and grout the service connection as specified in Section 02443, SERVICE CONNECTION REHABILITATION.
3. The work shall be paid for at the contract unit price under Items 11i, 11j, 11k, 23d, 23e, 33g, and 33h.

C. Ten percent of the payment for the subdivisions of the item "Cured-in-Place Pipe" shall be withheld until the pipeline rehabilitations have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02428, CURED-IN-PLACE PIPE.

1.17 STRUCTURAL CURED-IN-PLACE PIPE:

A. General:

1. The work of this item shall be measured at the unit price bid per linear foot of lined pipe.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual length of pipes lined as determined by the Engineer. Pipes shall be lined as specified in Section 02428, CURED-IN-PLACE PIPE.
3. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
4. Reinstatement of service connections shall be considered incidental to the work and shall not be measured for payment.
5. Television inspection and cleaning (pre-inspection and post-inspection) of pipes associated with the installation of cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
6. Removal and disposal of all material resulting from the cleaning operation associated with the installation of cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
7. Locating active and inactive service connections and television inspection in conjunction with investigation shall be considered incidental to the work and shall not be measured separately for payment.
8. Notification, as required per Specification Section 02428, 3.04, shall be considered incidental to the work and shall not be measured separately for payment.
9. Grouting of any infiltration sources required to install the liner shall be considered incidental to the work and shall not be measured separately for payment.
10. Pipe diameter transitions in the structural cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
11. The work shall be paid for at the contract unit price under Items 12a, 12b, 12c, 12d, 24a, 24b, and 34a.

B. Grout Reinstated Service Connections:

1. The work for this item shall be measured per service connection inspected and grouted.
2. The contract unit price per service to be paid shall constitute full compensation for supplying all material, labor, tools, and equipment required to TV inspect and grout

the service connection as specified in Section 02443, SERVICE CONNECTION REHABILITATION.

3. The work shall be paid for at the contract unit price under Item 12e, 12f, 24c, 24d, and 34b.

- C. Ten percent of the payment for the subdivisions of the item “Structural Cured-in-Place Structural Pipe” shall be withheld until the pipeline rehabilitations have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02428, CURED-IN-PLACE PIPE.

1.18 CURED-IN-PLACE LATERAL LINER:

- A. Cleaning and Inspection of Laterals in 8-inch to 15-inch Diameter Mainline (Where Lateral Liners Cannot Be Installed):

1. The work of this item shall be measured at the unit price bid per 4-inch diameter lateral, 5-inch diameter lateral, or 6-inch diameter lateral cleaned and inspected from the mainline or manhole to the property line.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual number of laterals cleaned and television inspected as determined by the Engineer. Laterals shall be cleaned and inspected as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.
3. This item shall only be utilized for payment where a lateral liner cannot be installed. All efforts shall be made to install laterals liners where indicated on the Drawings.
4. The work shall be paid for at the contract unit price under Items 13a, 25a, and 35a.

- B. Cured-in-Place Lateral Liner in 8-inch to 15-inch Diameter Mainline (Up to Five (5) Linear Feet from Mainline):

1. The work of this item shall be measured at the unit price bid per 4-inch diameter cured-in-place lateral liner, 5-inch diameter cured-in-place lateral liner, or 6-inch diameter cured-in-place lateral liner from the mainline to five (5) linear feet up the lateral. Cured-in-place lateral liners in 8-inch to 15-inch diameter mainline pipes shall include a full wrap at the mainline.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual number of laterals lined as determined by the Engineer. Cured-in-place lateral liners shall be installed as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.
3. The Contractor is responsible for measuring the length of liner to be installed. Measurement of the liner to be installed shall be considered incidental to the work and shall not be measured separately for payment.

4. Pre and post cleaning and inspection of the lateral shall be considered incidental to the work and shall not be measured separately for payment.
 5. The work shall be paid for at the contract unit price under Items 13b, 25b, and 35b.
- C. Cured-in-Place Lateral Liner in 8-inch to 15-inch Diameter Mainline (Additional Linear Footage Beyond Five (5) Feet):
1. The work of this item shall be measured at the linear foot price bid per 4-inch diameter cured-in-place lateral liner, 5-inch diameter cured-in-place lateral liner, or 6-inch diameter cured-in-place lateral liner beyond the first (5) linear feet of the lateral.
 2. Measurement, including all material, labor, tools and equipment shall be based on the actual footage of cured-in-place lateral liner installed beyond the first five (5) feet as determined by the Engineer. Cured-in-place lateral liners shall be installed as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.
 3. The Contractor is responsible for measuring the length of liner to be installed. Measurement of the liner length to be installed shall be considered incidental to the work and shall not be measured separately for payment.
 4. Pre and post cleaning and inspection of the lateral shall be considered incidental to the work and shall not be measured separately for payment.
 5. The work shall be paid for at the contract unit price under Items 13c, 25c, and 35c.
- D. Cleaning and Inspection of Laterals in greater than 15-inch Diameter Mainline (Where Lateral Liners Cannot Be Installed):
1. The work of this item shall be measured at the unit price bid per 4-inch diameter lateral, 5-inch diameter lateral, or 6-inch diameter lateral cleaned and inspected from the mainline or manhole to the property line.
 3. Measurement, including all material, labor, tools and equipment shall be based on the actual number of laterals cleaned and television inspected as determined by the Engineer. Laterals shall be cleaned and inspected as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.
 3. This item shall only be utilized for payment where a lateral liner cannot be installed. All efforts shall be made to install laterals liners where indicated on the Drawings.
 4. The work shall be paid for at the contract unit price under Items 13d and 25d.

E. Cured-in-Place Lateral Liner in greater than 15-inch Diameter Mainline (Up to Five (5) Linear Feet from Mainline):

1. The work of this item shall be measured at the unit price bid per 4-inch diameter cured-in-place lateral liner, 5-inch diameter cured-in-place lateral liner, or 6-inch diameter cured-in-place lateral liner from the mainline to five (5) linear feet up the lateral.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual number of laterals lined as determined by the Engineer. Cured-in-place lateral liners shall be installed as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.
3. The Contractor is responsible for measuring the length of liner to be installed. Measurement of the liner to be installed shall be considered incidental to the work and shall not be measured separately for payment.
4. Pre and post cleaning and inspection of the lateral shall be considered incidental to the work and shall not be measured separately for payment.
5. The work shall be paid for at the contract unit price under Items 13e and 25e.

F. Cured-in-Place Lateral Liner in greater than 15-inch Diameter Mainline (Additional Linear Footage Beyond Five (5) Feet):

1. The work of this item shall be measured at the linear foot price bid per 4-inch diameter cured-in-place lateral liner, 5-inch diameter cured-in-place lateral liner, or 6-inch diameter cured-in-place lateral liner beyond the first (5) linear feet of the lateral.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual footage of cured-in-place lateral liner installed beyond the first five (5) feet as determined by the Engineer. Cured-in-place lateral liners shall be installed as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.
3. The Contractor is responsible for measuring the length of liner to be installed. Measurement of the liner length to be installed shall be considered incidental to the work and shall not be measured separately for payment.
4. Pre and post cleaning and inspection of the lateral shall be considered incidental to the work and shall not be measured separately for payment.
5. The work shall be paid for at the contract unit price under Items 13f and 25f.

- G. Ten percent of the payment for the subdivisions of the item “Cured-in-Place Lateral Liner” shall be withheld until the lateral liners have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02436, CURED-IN-PLACE LATERAL LINER.

1.19 SERVICE CONNECTION REHABILITATION:

A. CUTTING PROTRUDING SERVICE CONNECTIONS:

1. The work of this item shall be measured per protruding service connection cut.
2. The contract unit price per service to be paid shall constitute full compensation for supplying all material, labor, tools, and equipment required to cut the protruding service connection as specified in Section 02443, SERVICE CONNECTION REHABILITATION.
3. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
4. Television inspection of cut service connections shall be considered incidental to the work and shall not be measured separately for payment.
5. The work shall be paid for at the contract unit price under Items 14a, 26a, and 36a.

1.20 SEWER MANHOLE REHABILITATION:

A. CEMENTITIOUS LINING OF MANHOLES:

1. The work of this item shall be measured at the unit price bid per vertical foot of manhole actually lined, which shall be measured from top of manhole bench to bottom of manhole frame.
2. The contract unit price per vertical foot of manhole to be paid shall constitute full compensation for supplying all material, labor, tools, and equipment required to line the manhole as specified in Section 02435, SEWER MANHOLE REHABILITATION. Cementitious lining includes invert sealing, exterior chemical grouting, and interior sealing.
3. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
4. The work under this section shall be paid at the contract unit price under Items 15a, 27a, and 37a.

5. Ten percent of the payment for this item shall be withheld until the manhole rehabilitations have been satisfactorily completed and passed field testing/inspection(s) as specified in Section 02435, SEWER MANHOLE REHABILITATION.

B. LOCATE, RAISE, AND REPLACE MANHOLE FRAME AND COVER:

1. The work of this item shall be measured per manhole frame and cover set furnished and installed and raised to grade.
2. The contract unit price to be paid per manhole frame and cover located, raised, and replaced shall constitute full compensation for supplying all material, labor, tools, and equipment required to locate existing frame and cover below paved or unpaved surfaces, replace manhole frame and cover, and raise manhole frame and cover to grade, including; removal and disposal of existing frame and cover; removal and disposal of existing asphalt, paving, grading and compacting, and replacement of pavement markings; and site restoration in unpaved surfaces; as described in Section 02435, SEWER MANHOLE REHABILITATION.
3. Test pits performed to locate manhole frame and cover, including pavement restoration, shall be considered incidental to this item.
4. The work under this section shall be paid at the contract unit price under item 15b.

1.21 SEALING OF UNDERDRAIN PIPE CONNECTIONS:

A. PLUG UNDERDRAIN PIPE CONNECTION:

1. The lump sum for this item shall constitute full compensation for supplying all material, labor, tools, and equipment required to install mechanical plugs in underdrain pipe connections to create watertight seal, as specified in Section 02770, SEALING OF UNDERDRAIN PIPE CONNECTIONS.
2. Bypass pumping and plugging or blocking of drain, sewer, combined sewer, and/or underdrain flow shall be considered incidental to the work and shall not be measured separately for payment.
3. The work under this section shall be paid at the contract unit price under Item 16a.

1.22 HEAVY CLEANING AND INSPECTION OF SEWERS

A. HEAVY CLEANING AND INSPECTION OF SEWERS:

1. The work under this item shall be measured at the unit price bid per linear foot cleaned and inspected. Diameter of the pipe shall be taken as the greater of the dimensions in oval and rectangular pipe.

2. Measurement shall be based on the actual length of sewer cleaned and inspected from center line of manhole to center line of manhole. Sewers shall be cleaned and inspected as specified in Section 02440, SEWER CLEANING AND INSPECTION. Verification of adequate cleaning shall be made by television inspection.
3. Hydraulic cutting of roots and removal of settled concrete in locations indicated on the plans shall be considered incidental to the work.
4. Protruding service connections identified during heavy cleaning shall be removed as required by the Engineer and shall be paid for at the contract unit price under Item 14a.
5. The television inspection work, external hard drives, by-pass pumping, plugging or blocking of sewer flow, and cleaning of sewers shall be considered incidental to the work and shall not be considered for payment. External hard drives, as described in Section 01331, DOCUMENTATION shall be given to the Owner upon completion of the project.
6. The work under this section shall be paid at the contract unit price under Items 17a, 17b, 17c, 17d, and 17e.

B. DEBRIS DISPOSAL:

1. The work under this item shall be measured at the unit price bid per ton of debris removed, tested, and disposed of.
2. The contract unit price to be paid for debris disposal shall constitute full compensation for supplying all materials, tools, labor, and equipment required to dispose of all material resulting from the heavy cleaning operation, including storage, testing, transportation, and legal disposal of all debris, as described in Section 02440, SEWER CLEANING AND INSPECTION.
3. The work under this section shall be paid at the contract unit price under Item 17f.

1.23 POST CONSTRUCTION FLOW ISOLATION

A. POST CONSTRUCTION FLOW ISOLATION:

1. The work of this item shall be measured at the unit price per linear foot of 8-inch diameter to 14-inch diameter sewer flow isolated.
2. Measurement shall be based on the actual length of sewer flow isolated from the centerline of manhole to centerline of manhole. Sewer lines shall be flow isolated as specified in Section 02427, POST CONSTRUCTION FLOW ISOLATION.
3. Plugging of sewer flow shall be considered incidental to the work and shall not be

measured separately for payment.

4. The work under this section shall be paid at the contract unit price under Items 18a, 28a, and 38a.

1.24 CONSTRUCTION ZONE SAFETY PLAN:

The lump sum for items 19a, 29a, and 39a shall constitute full compensation to the Contractor for furnishing all signage; traffic control devices; obtaining, installing, and removing "No Parking" signs at each work location; submitting site specific traffic management plans for each work location, as required by the Somerville Traffic and Parking Department; submitting weekly Right of Way Occupancy Request; attending weekly Construction Coordination Meeting as specified in Section 01550, SIGNAGE and Section 01552, CONSTRUCTION ZONE SAFETY PLAN.

1.25 MOBILIZATION:

The lump sum for Items 20a, 30a, and 40a shall constitute full compensation to the Contractor for the general mobilization necessary to make the contract operational, exclusive of the cost of materials but including furnishing and maintaining the temporary facilities. The total for mobilization for BASE BID shall not exceed five (5) percent of the total of Items 1 to 19; the total for mobilization for ALTERNATE BID NO. 1 shall not exceed five (5) percent of the total of Items 21 to 29; the total for mobilization for ALTERNATE BID NO. 2 shall not exceed five (5) percent of the total of Items 31 to 39.

1.26 PERMITS:

The work of this section shall not be measured separately for payment, but shall be considered incidental to the project.

1.27 LATERAL EQUIPMENT TESTING:

The work of this section shall not be measured separately for payment, but shall be considered incidental to the project.

1.28 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

Unless otherwise indicated, protection or temporary removal and replacement of existing utilities and structures as described in Section 01110, CONTROL OF WORK AND MATERIALS, shall not be measured separately for payment, but shall be considered incidental to the project.

1.29 DEBRIS DISPOSAL

Disposal of debris from cleaning operations, except as described in 1.22, HEAVY CLEANING AND INSPECTION OF SEWERS, shall be considered incidental to the project.

1.30 HANDLING EXISTING FLOWS:

Handling existing sewage flows in accordance with the specifications, including providing, installing, and removing all required equipment, piping, and pumping as required shall not be measured separately for payment but shall be considered incidental to the project.

1.31 DEWATERING:

The work of this section shall not be measured separately for payment, but shall be considered incidental to the project.

1.32 SURFACE RESTORATION:

1. The work for surface restoration shall include loaming and seeding and all incidentals thereto for all disturbed areas. This work shall not be separately measured for payment, but shall be considered incidental to the project.
2. Any existing fences which are required to be removed and reset shall not be separately measured for payment, but shall be considered incidental to the project.

1.33 ENVIRONMENTAL PROTECTION:

The work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.34 FIELD CONCRETE:

Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.35 LOAMING AND SEEDING:

The work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.36 LANDSCAPING:

Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.37 SIDEWALKS:

All sidewalk restoration and related work shall not be separately measured for payment but shall be considered incidental to the project.

1.38 SUPPORT OF EXCAVATION:

The work of this section shall not be measured separately for payment, but shall be considered incidental to the project.

1.39 TRACER TAPE:

The work of this section shall not be measured separately for payment, but shall be considered incidental to the project.

1.40 DOCUMENTATION:

The work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.41 WARRANTY INSPECTION:

All warranty inspections and related work shall not be separately measured for payment but shall be considered incidental to the project.

1.42 UNIFORMED OFFICERS FOR TRAFFIC CONTROL:

Uniformed officers for traffic control shall be paid directly by the Owner.

1.43 PRICE ADJUSTMENTS MANDATED BY MGL CHAPTER 30, SECTION 38A

Price adjustments for certain payment items shall be as described in Section 01250, PRICE ADJUSTMENTS. Payment shall be made at the unit prices included in the Form For General Bid or, if no such items are contained in Form For General Bid, by change order.

END OF SECTION