

CITY OF WORCESTER, MASSACHUSETTS

Various Streets 2022 Sanitary, Surface, and Combined Sewer Rehabilitation Project

Contract S23-2

Bid No. 7870-W3

ADDENDUM NO. 2

.....

To be considered as part of the contract drawings and specifications for the Various Streets 2022 Sanitary, Surface, and Combined Sewer Rehabilitation Project, dated August 2022:

GENERAL

1. Refer to revision included in GENERAL DOCUMENTS of this Addendum No. 2 for extension of bid date to September 7, 2022.

SPECIFICATIONS

TABLE OF CONTENTS

1. DELETE TABLE OF CONTENTS in its entirety and REPLACE with TABLE OF CONTENTS attached. See Attachment A of this amendment.

GENERAL DOCUMENTS - FORM – 30, 39M (Construction)

1. Page 1, DELETE the following:
“DATE: August 31, 2022”

And REPLACE with:

“DATE: September 7, 2022”

PROPOSAL - BID ITEM SHEET

1. DELETE PROPOSAL - BID ITEM SHEET in its entirety and REPLACE with PROPOSAL - BID ITEM SHEET attached. See Attachment B of this amendment.

TIME OF COMPLETION AND LIQUIDATED DAMAGES

1. Page A-1, DELETE the following paragraph:
“The bidder shall complete the work of this contract, exclusive of re-test inspection, within 90 consecutive calendar days (Saturdays, Sundays, and Holidays included) from the date of the signing of the contract if the is awarded the contract.”

And REPLACE with:

“The bidder shall complete the work of this contract, exclusive of re-test inspection, within 180 consecutive calendar days (Saturdays, Sundays, and Holidays included) from the date of the signing of the contract if he is awarded the contract.”

GENERAL SPECIFICATIONS

1. Page F-1, SECTION I – LOCATION AND WORK TO BE DONE, DELETE the following bullet:
“1,679 linear feet of 12-inch structural cured-in-place pipe
245 linear feet of 18-inch structural cured-in-place pipe
274 linear feet of 12-inch x 18-inch structural cured-in-place pipe
176 vertical feet of epoxy lining and exterior sealing of manholes”

And REPLACE with:

“1,689 linear feet of 12-inch structural cured-in-place pipe
456 linear feet of 18-inch structural cured-in-place pipe
300 linear feet of 12-inch x 18-inch structural cured-in-place pipe
260 linear feet of 20-inch x 30-inch structural cured-in-place pipe
1,234 linear feet of 26-inch x 39-inch structural cured-in-place pipe
254 vertical feet of epoxy lining and exterior sealing of manholes
Epoxy lining and exterior sealing of 1 sewer structure”

SUPPLEMENT TO STANDARD SPECIFICATIONS

1. DELETE TABLE OF CONTENTS: SUPPLEMENT TO SPECIFICATIONS (Page G-1 to G-2) in its entirety and REPLACE with TABLE OF CONTENTS: SUPPLEMENT TO SPECIFICATIONS (Page G-1R to G-2R) attached. See Attachment C of this amendment.
2. DELETE SUPPLEMENT TO SPECIAL PROVISIONS (Page G-3 to G-23) in its entirety and REPLACE with SUPPLEMENT TO SPECIAL PROVISIONS (Page G-3R to G-23R) attached. See Attachment D of this amendment.

SECTION 01014 – SCOPE AND SEQUENCE OF WORK

1. Section 01014 – SCOPE AND SEQUENCE OF WORK, DELETE:
“epoxy lining of 176 vf of manholes...installation of 11,059 lf of structure cured-in-place pipe”

And REPLACE with:

“epoxy lining and exterior sealing of 254 vf of manholes...installation of 12,854 lf of structural cured-in-place pipe...epoxy lining and exterior sealing of 1 sewer structure”

SECTION 01311 - CONSTRUCTION MEETINGS

1. ADD Section 01311 – CONSTRUCTION MEETINGS in its entirety to the SUPPLEMENT TO STANDARD SPECIFICATIONS. See Attachment E of this amendment.

PLANS**SHEET C102 – PLANS AND TABLES III**

1. REMOVE pipe SM12450 and manhole SS12582 from plans.
2. STRUCTURAL CURED-IN-PLACE PIPE table, REPLACE Asset ID SM12450 with Asset ID SM08575.
3. EPOXY LINING AND EXTERIOR SEALING OF SEWER MANHOLES table, REMOVE manhole SS12582 from table.
4. See Attachment C – SK-1 for a sketch of the above revisions.
5. See Attachment F – SK-2 for a sketch of pipes, manholes, and structure added to Contract.
6. See Attachment G for the record drawing of the sewer regulator structure shown on SK-2

QUESTIONS

- Q1. Are there any pump stations present upstream of the work being performed?
A1. **There are no pump stations immediately upstream of work areas. For informational purposes, the nearest pump stations upstream of work areas are as follows:**
- **Pump station (6-inch force main) upstream of Darrow Street (C101) owned by the Town of West Boylston.**
 - **Pump station (4-inch force main) upstream of Stafford Street (C102) located on James Street.**
- Q2. Would the City be able to provide flow data?
A2. **No flow data is available.**
- Q3. Is there a staging area available for the project?
A3. **In accordance with the contract documents, the Contractor is responsible to provide a staging area.**
- Q4. Do rural roads or low traffic streets require a police detail?
A4. **In accordance with the contract documents, uniformed officers for traffic control will be required as deemed necessary by the Chief of Police.**

- Q5. On Park Ave, there seems to be two parallel lines. One seems bigger than 24-inch x 36-inch and the other looks to be smaller in size. Can you confirm which pipe is the correct one? The bigger one would need a complex bypass.
- A5. **The plans incorrectly show the 48-inch x 72-inch sewer (SM12450) as being called out for structural cured-in-place pipe. Manhole SS12582 is also incorrectly called out for epoxy lining and exterior sealing. These items have been removed from the scope of work and plans and specifications have been updated.**
- Q6. One of the manholes on Stafford Street has a smaller opening above the pipe that is to be lined. Will the City be responsible for providing larger access?
- A6. **Manholes SS14073 and SS14071 on Stafford Street are twin manholes. The Contractor shall be responsible for removing the plate system and re-installing the plate system upon completion of work. See Appendix B of the specifications for Twin Manhole Protocol. The City will not be responsible for providing larger access.**
- Q7. Does the City have a dump site available for the debris from the cleaning of the pipes and what will be the cost for dumping?
- A7. **In accordance with the contract documents, the Contractor is responsible for disposal of debris from cleaning operations.**
- Q8. Please confirm that the apprentice training provision is currently suspended and will not be required for the bid.
- A8. **In accordance with the contract documents, compliance with the apprentice training provision is currently suspended as of 7/24/2014.**

END OF ADDENDUM

ATTACHMENTS

Attachment A – Specification “Table of Contents”

Attachment B – Specification “Proposal - Bid Item Sheet”

Attachment C – TABLE OF CONTENTS: SUPPLEMENT TO SPECIFICATIONS
(Page G-1R to G-2R)

Attachment D – SUPPLEMENT TO SPECIAL PROVISIONS (Page G-3R to G-23R)

Attachment E – Section 01311 – CONSTRUCTION MEETINGS

Attachment F – SK-1 (REVISIONS TO SHEET C102 – PLANS AND TABLES III)

Attachment G – SK-2 (PIPES, MANHOLES, AND STRUCTURE ADDED TO
CONTRACT

Attachment H – RECORD DRAWING OF SEWER REGULATOR STRUCTURE
SHOWN ON SK-2

Attachment A
Table of Contents

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BID PREPARED BY: WESTON & SAMPSON ENGINEERS, INC.
427 Main Street, Suite 400
Worcester, MA 01608

BID REVIEWED BY: _____
WILLIAM A. COYLE, P.E.
Deputy Commissioner of Public Works & Parks

APPROVED BY: _____
JAY J. FINK, P.E.
Commissioner of Public Works & Parks

BID ADMINISTERED BY: _____
CHRISTOPHER J. GAGLIASTRO, MCPPO
Purchasing Director

Attachment B
Proposal – Bid Item Sheet

PROPOSAL

**ADDENDUM #1
BID ITEMS
for
Bid No. 7870-W3
Contract No. S23-2**

ITEM NUMBER	DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED TOTALS
------------------------	--------------------	---------------------------------------	----------------------------

THE BIDDER MUST FILL IN THESE UNIT OR LUMP SUM PRICES. The BIDDER should also carry out all extensions and fill in "Computed Totals"

(In case of error or discrepancies, UNIT OR LUMP SUM PRICES govern and written words take precedence over figures)

**BASE BID
(ITEMS 220.08, 220.10, 224, 270, 700 THROUGH 725, and Item 900)**

TRENCH PIPE WORK

Item 220.08	Trench Excavation and Backfill, Furnish and Install 8-inch PVC sewer, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	25 LF	\$
	(\$)		
Item 220.10	Trench Excavation and Backfill, Furnish and Install 10-inch PVC sewer, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	66 LF	\$
	(\$)		
Item 224	Furnish and install building connections complete in place, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	20 LF	\$
	(\$)		

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Item 270	Rodent Control, lump sum		
	<div>Dollars</div>		
	and <div>Cents</div>	1 LS	\$
	(\$)		

STRUCTURAL CURED-IN-PLACE PIPE

Item 700	Structural Cured-in-Place Pipe for 8-inch Sanitary, Surface, and Combined Sewers, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	3,019 LF	\$
	(\$)		

Item 701	Structural Cured-in-Place Pipe for 10-inch Sanitary, Surface, and Combined Sewers, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	2,807 LF	\$
	(\$)		

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Item 702	Structural Cured-in-Place Pipe for 12-inch Sanitary, Surface, and Combined Sewers, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	1,689 LF	\$
	<div>(\$)</div>		

Item 703	Structural Cured-in-Place Pipe for 15-inch Sanitary, Surface, and Combined Sewers, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	681 LF	\$
	<div>(\$)</div>		

Item 704	Structural Cured-in-Place Pipe for 18-inch Sanitary, Surface, and Combined Sewers, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	456 LF	\$
	<div>(\$)</div>		

PROPOSAL

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Contract No. S23-2**

ITEM NUMBER	DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED TOTALS
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Item 705	Structural Cured-in-Place Pipe for 18-inch Sanitary, Surface, and Combined Sewers Using Pull-In-Place Methods, per linear foot		
		Dollars	
		and Cents	209 LF \$
		(\$)	
Item 706	Structural Cured-in-Place Pipe for tapered 18-inch to 12-inch x 18-inch Sanitary, Surface, and Combined Sewers Using Pull-In-Place Methods, per linear foot		
		Dollars	
		and Cents	221 LF \$
		(\$)	
Item 707	Structural Cured-in-Place Pipe for 12-inch x 18-inch Sanitary, Surface, and Combined Sewers, per linear foot		
		Dollars	
		and Cents	300 LF \$
		(\$)	

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Item 708	Structural Cured-in-Place Pipe for 24-inch Sanitary, Surface, Combined Sewers, per linear foot		
	<div style="text-align: right;">Dollars</div> <hr/>		
	and <div style="text-align: right;">Cents</div> <hr/>	496 LF	\$ <hr/>
	<div style="text-align: right;">(\$ <hr/>)</div>		

Item 709	Structural Cured-in-Place Pipe for 20-inch x 30-inch for Sanitary, Surface, and Combined Sewers, per linear foot		
	<div style="text-align: right;">Dollars</div> <hr/>		
	and <div style="text-align: right;">Cents</div> <hr/>	260 LF	\$ <hr/>
	<div style="text-align: right;">(\$ <hr/>)</div>		

Item 710	Structural Cured-in-Place Pipe for 24-inch x 36-inch for Sanitary, Surface, and Combined Sewers, per linear foot		
	<div style="text-align: right;">Dollars</div> <hr/>		
	and <div style="text-align: right;">Cents</div> <hr/>	1,482 LF	\$ <hr/>
	<div style="text-align: right;">(\$ <hr/>)</div>		

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Item 711	Structural Cured-in-Place Pipe for 26-inch x 39-inch for Sanitary, Surface, and Combined Sewers, per linear foot		
	<div>Dollars</div>		
	<div>and</div>		
	<div>Cents</div>	1,234 LF	\$
	<div>(\$)</div>		
Item 712	Grout reinstated service connections in 12-inch x 18- inch structural cured-in-place pipe, per service		
	<div>Dollars</div>		
	<div>and</div>		
	<div>Cents</div>	7 services	\$
	<div>(\$)</div>		
Item 713	Grout reinstated service connections in 20-inch x 30- inch structural cured-in-place pipe, per service		
	<div>Dollars</div>		
	<div>and</div>		
	<div>Cents</div>	3 services	\$
	<div>(\$)</div>		

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THE BIDDER MUST FILL IN THESE UNIT OR LUMP SUM PRICES. The BIDDER should also carry out all extensions and fill in "Computed Totals"

Item	Grout reinstated service connections in 24-inch x 36-
714	inch structural cured-in-place pipe, per service

Item	Grout reinstated service connections in 26-inch x 39-
715	inch structural cured-in-place pipe, per service

STRUCTURAL CURED-IN-PLACE SHORT LINER

	Dollars		
and	Cents	22 LF	\$
(\$)		

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ITEM NUMBER	DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED TOTALS
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CURED-IN-PLACE LATERAL LINER

Item 717	Cleaning and Inspection of Laterals from 8-inch to 12-inch diameter Mainline, per lateral		
		Dollars	
	and	Cents	8 laterals
	(\$)		\$
Item 718	Cured-in-Place Lateral Liner in 8-inch to 12-inch diameter mainline, up to 5 feet, per lateral		
		Dollars	
	and	Cents	8 laterals
	(\$)		\$
Item 719	Cured-in-Place Lateral Liner in 8-inch to 12-inch Diameter Mainline, Additional Footage Beyond 5 feet, per linear foot		
		Dollars	
	and	Cents	10 LF
	(\$)		\$

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**SANITARY SEWER MAINLINE CHEMICAL ROOT
TREATMENT**

Item 720 Mainline Chemical Root Treatment for 8-inch Sanitary Sewers, per linear foot

	Dollars		
and	Cents	1,025 LF	\$
(\$)		

Item 721 Mainline Chemical Root Treatment for 15-inch Sanitary Sewers, per linear foot

	Dollars		
and	Cents	170 LF	\$
(\$)		

Item 722 Mainline Chemical Root Treatment for 12-inch x 18-inch Sanitary Sewers, per linear foot

	Dollars		
and	Cents	96 LF	\$
(\$)		

PROPOSAL

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ITEM NUMBER	DESCRIPTION	ESTIMATE OF QUANTITIES	COMPUTED TOTALS
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SERVICE CONNECTION REHABILITATION

Item 723	Test and Grout Service Connection in 8-inch diameter mainline, per service		
	<div>Dollars</div>		
	and <div>Cents</div>	2 services	\$
	(\$)		

Item 724	Cut Protruding Service Connection, per service		
	<div>Dollars</div>		
	and <div>Cents</div>	3 services	\$
	(\$)		

**MAINLINE CLEANING, INSPECTION, TESTING,
AND SEALING**

Item 725	Cleaning and inspection of 8-inch Sanitary Sewers, per linear foot		
	<div>Dollars</div>		
	and <div>Cents</div>	516 LF	\$
	(\$)		

PROPOSAL

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Item 726	Testing of 8-inch joints, per joint		
		Dollars	
	and	Cents	142 joints \$
	(\$)		

Item 727	Sealing of 8-inch joints, per joint		
		Dollars	
	and	Cents	71 joints \$
	(\$)		

MANHOLE REHABILITATION

Item 728	Cementitious Lining and Exterior Sealing of Sanitary, Surface, and Combined Sewer Manholes, per vertical foot		
		Dollars	
	and	Cents	782 VF \$
	(\$)		

**ADDENDUM #1
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Item 729	Epoxy Lining and Exterior Sealing of Sanitary, Surface, and Combined Sewer Manholes, per vertical foot
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Item	Epoxy Lining and Exterior Sealing of Sewer Structure,
730	each

MOBILIZATION

Item 731	Mobilization, lump sum (not more than 5% of total of items 220.08, 220.10, 224, 270, and 700 through 730)
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P-12R

PROPOSAL

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CITY USE

Item 900	Lump Sum Reserved for City Use, lump sum		
	Two Hundred Thousand	Dollars	
	and	Zero	
		Cents	1 LS
	(\$	200,000)
			<u>\$ 200,000</u>

TOTAL BID PRICE FOR WORK INCLUDING CONTINGENCY

The computed contract price for all Items 220.08, 220.10, 224, 270, 700 through 731, and Item 900 inclusive is:

_____ DOLLARS
(AMOUNT IN WORDS)

AND _____ CENTS \$ _____
(AMOUNT IN FIGURES)

NUMBER OF CALENDAR DAYS TO COMPLETE PROJECT _____ 180

THIS PROPOSAL IS BASED ON PROVISIONS OF THE FOLLOWING ADDENDA:

No. _____ No. _____

No. _____ No. _____

Attachment C

Table of Contents: Supplemental to Specifications (Page G-1R to G-2R)

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SUPPLEMENT TO STANDARD SPECIFICATIONS	(00331 - 03302)

<u>DIVISION 0 and 1 – GENERAL REQUIREMENTS</u>	<u>Section Number</u>
TV Inspection Logs	00331
Permits	00890
Scope and Sequence of Work	01014
Price Adjustments	01250
Construction Meetings	01311
Submittals	01330
Documentation	01331
Health and Safety Plan	01380
Signage (Traffic Control)	01550
Construction Zone Safety Plan	01552
Uniformed Officers for Temporary Traffic Control	01553
Dust Control	01562
Existing Fences	01564
Environmental Protection	01570
Handling Existing Flows	01575
Cleaning Up	01740

<u>DIVISION 2 – SITE WORK</u>	
Polyvinyl Chloride Gravity Pipe And Fittings (SDR-35)	02085
Dewatering	02240
Support of Excavation	02252
Earthwork	02300
Cured-in-Place Pipe	02428
Cured-in-Place Short Liner	02429
Manhole Rehabilitation	02435
Cured-in-Place Lateral Liner	02436
Sewer Line and Manhole Chemical Root Treatment	02437
Sewer Cleaning, Inspection, Testing and Sealing	02440
Point Repair of Gravity Sanitary, Surface, and Combined Sewers	02442
Service Connection Rehabilitation	02443
Tracer Tape	02518
Building Connections and Drop Connections (PVC Pipe)	02530
Connection to Existing Structures	02533
Building Manhole Inverts	02630
Reinforced Concrete Pipe	02633

DIVISION 3 – CONCRETE

Field Concrete

03302

APPENDICES

Appendix A – Television Inspection Logs*

Appendix B – Twin Manhole Protocol

Appendix C – State of Massachusetts Covid-19 Guidelines And Procedures For All Construction Sites And Workers At All Public Work

***NOTE: Logs and Reports are not included and shall be furnished upon request.**

Attachment D

Supplemental to Specifications (Page G-3R to G-23R)

SUPPLEMENT TO SPECIAL PROVISIONS (ON PAGES E1 TO E3)

SPECIAL PROVISIONS

In addition to Special Provisions located on pages E1 through E3, the Specifications shall be amended and supplemented by the following:

1. Hauling, Handling and Storage of Materials

- A. The Contractor shall, at its own expense, handle and haul all materials furnished by it and shall remove any of its surplus materials at the completion of the work.
- B. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by it that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft, breakage, or otherwise.
- C. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such location as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.
- D. The Contractor shall be responsible for all damages to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.

2. Easements

- A. As indicated on the drawings, a portion of the work is located in easements obtained by the Owner. The Contractor has no rights outside of the easements unless they are obtained from the property owner.
- B. Contractor shall schedule work so that it will cause minimum inconvenience and nuisance to abutting property owners, over the shortest possible time.
- C. Easements shall be kept clean; no rubbish or discarded construction materials shall be allowed to accumulate. Storage of excess construction materials, including soil, ledge, equipment, or machinery on easements will not be allowed.
- D. Restoration of fences, shrubs, trees and grass, both natural and artificial, shall be completed promptly following completion of the work in an easement, to minimize disruption and inconvenience to property owners.
- E. Unless approved by the Engineer, the use of easements for ease of access to and egress from other areas of the project will not be permitted.

3. Open Excavations

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe means for completely covering all open excavations and for accommodating travel when work is not in progress.
- B. Bridges provided for access to private property during construction shall be removed when no longer required.
- C. The length of open trench will be controlled by the particular surrounding conditions but shall always be confined to the limits prescribed by the Engineer.
- D. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, then special construction procedures shall be taken, such as limiting the length of trench and prohibiting stocking excavated material in the street.
- E. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.

4. Maintenance of Traffic

- A. Unless permission to close the street is received in writing from the proper authority, all excavated materials and equipment shall be placed so that vehicular and pedestrian traffic may be safely maintained at all times.
- B. Should the Chief of Police deem it necessary, uniformed officers will be assigned to direct traffic. The Contractor shall make all arrangements in obtaining uniformed officers required.
- C. The Contractor shall at its own expense, as directed by the Police Traffic Control/Safety Officer, provide and erect acceptable barricades, barrier fences, traffic signs, and all other traffic devices not specifically covered in a bid item, to protect the work from traffic, pedestrians, and animals. The Contractor shall provide sufficient temporary lighting such as lanterns/flashers (electric battery operated) or other approved illuminated traffic signs and devices to afford adequate protection to the traveling public, at no additional cost to the Owner. See Section 01552 CONSTRUCTION ZONE SAFETY PLAN.
- D. The Contractor shall furnish all construction signs that are deemed necessary by and in accordance with Part VI of the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation. In addition, the Contractor may be required to furnish up to 128 square feet of additional special construction warning signs. Size and exact wording of signs shall be determined by the Engineer during construction.

- E. The intent of policing is to ensure public safety by direction of traffic. Police officers are not to serve as watchmen to protect the Contractor's equipment and materials.
- F. Nothing contained herein shall be construed as relieving the Contractor of any of its responsibilities for protection of persons and property under the terms of the Contract.

5. Care, Protection, and Security of Property

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer.
- B. The Contract shall provide security for the private property with temporary by-pass pumping during the entire duration of the temporary by-pass. Once the temporary by-pass pumping is not required, the Contractor shall notify the owner and/or contact person of the private property. The private property shall be secured and left in the original condition prior to the temporary by-pass. If any damages or trespassing occurs at the private property during the temporary by-pass, the Engineer is to be notified immediately. The Contractor is responsible for all property damage encountered during the temporary by-pass.

6. Protection and Relocation of Existing Structures and Utilities

- A. All existing buildings, utilities, pipes, poles, wires fences, curbing, property line markers and other structures which the Engineer decides must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from damage by the contractor. Should such property be damaged, it shall be restored by the Contractor, at no additional cost to the Owner.
- B. The Contractor shall determine the location of all underground structures and utilities (including existing water services, drain lines, electrical lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by Contractor.
- C. When fences interfere with the Contractor's operations, the Contractor shall remove and (unless otherwise specified) promptly restore them in accordance with Section 01564 EXISTING FENCES.
- D. On paved surfaces the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with treads or wheels which are shaped so as to cut or otherwise damage such surfaces.

- E. All property damaged by the Contractor's operations shall be restored to a condition at least equal to that in which it was found immediately before work was begun. Suitable materials and methods shall be used for such restoration.
- F. Restoration of existing property and structures shall be carried out as promptly as practicable and shall not be left until the end of the construction period.

7. Maintenance of Flow

- A. The Contractor shall, at his own cost, provide for the flow of sewers and drains interrupted during the progress of the work and shall immediately cart away and dispose of all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.
- B. All existing drainage facilities including, but not limited to; brooks, streams, canals, channels, ditches, culverts, catch basins and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas in any manner whatsoever. If the Contractor damages or impairs any of the aforesaid drainage facilities, he shall repair the same within the same day.
- C. At the conclusion of the work, the Contractor shall remove all silt in drainage structures caused by his operations as described in Section 01740, CLEANING UP.

8. Rejected Materials and Defective Work

- A. Materials furnished by the Contractor and condemned by the Engineer as unsuitable or not in conformity with the specifications shall forthwith be removed from the work by the Contractor, and shall not be made use of elsewhere in the work.
- B. Any errors, defects or omissions in the execution of the work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Engineer.
- C. The Contractor shall reimburse the Owner for any expense, losses or damages incurred in consequence of any defect, error, omission or act of the Contractor or his employees, as determined by the Engineer, occurring previous to the final payment.

9. Sanitary Regulations

Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committing of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the Engineer. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.

10. Safety and Health Regulations

This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations (454 CMR 10.0 et. seq.)." Contractors shall be familiar with the requirements of these regulations.

11. Site Investigation

The Contractor acknowledges that he has satisfied himself as to the conditions existing at the site of the work, the type of equipment required to perform this work, the quality and quantity of the materials furnished insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the drawings and specifications made a part of this contract. Any failure of the Contractor to acquaint himself with available information will not relieve him from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner.

12. Weather Protection

In conformance with Sections 44F and 44G of Chapter 149 of the General Laws of Massachusetts, the General Contractor shall install weather protection and shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the Director of Building Construction in the Executive Office for Administration and Finance.

13. Electric Service

- A. The Contractor shall make all necessary applications and arrangements and pay for all fees and charges for electrical energy for power and light necessary for the proper completion of this contract during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, and meters.

- B. There shall be sufficient electric lighting so that all work may be done in a workmanlike manner where there is not sufficient daylight.

14. Hazardous Waste

Should the Contractor, while performing work under this contract, uncover hazardous materials, as defined in Massachusetts Hazardous Waste Regulations 310 CMR 30.00, he shall immediately notify the Engineer. The Contractor is not, and has no authority to act as, a handler, generator, operator or disposer of hazardous or toxic substances found or identified at the site, and the Owner shall undertake all such functions.

15. Sewer Service Connections

- A. All sewer service connections shall be identified and located prior to each segment replacement to expedite reconnection.
- B. The Contractor shall affix a written notice to the door of each home that has sewer service on the segment to be replaced 48-hours prior to disconnection of the service and again the day of disconnection.
- C. Services on the segments of mainline scheduled to be pipe burst, shall be disconnected from the existing main and connected to the temporary bypass pumping system prior to bursting.
- D. Flow from the existing sewer services shall be bypass pumped as specified in Section 01575 HANDLING EXISTING FLOWS.

16. Twin Manholes

- A. The City of Worcester has a combination of sanitary manholes, storm drain manholes, and “twin manholes”. The Contractor is advised that some manholes in this project proposed for work may be twin manholes.
- B. A twin manhole is defined as a manhole that is shared by both the sanitary and storm drain systems. The manhole typically has two inverts. In a twin manhole, the majority of the sanitary inverts have been sealed with an aluminum plate and restraint. The plating system was installed to prevent storm water from entering the sanitary system. It is crucial that this system be in place to prevent surcharging of the sanitary system.

17. Pipe Location

Pipe shall be located substantially as indicated on drawings. The Owner reserves the right, acting through the Engineer, to make such modifications as may be deemed desirable to avoid interference with existing structures or for other reasons.

18. Dimensions of Existing Structures

Where the dimensions and locations of existing structures are of critical importance in the installation or connections of new work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

19. Occupying Private Property

The Contractor shall not enter upon nor occupy with men, equipment or materials any property outside of the public roadways or Owner's easements, except with the written consent of the property owner or property owner's agent.

20. Existing Utility Locations - Contractor's Responsibility

- A. The location of existing underground services and utilities shown on the drawings is based on available records. It is not warranted that all existing utilities and services are shown, nor that shown locations are correct. The Contractor shall be responsible for having the utility companies locate their respective utilities on the ground prior to excavating.
- B. To satisfy the requirements of Massachusetts law, Chapter 82, Section 40, the Contractor shall, at least 72 hours, exclusive of Saturdays, Sundays and holidays, prior to excavation in the proximity of telephone, gas, cable television and electric utilities, notify the utilities concerned by calling "DIG SAFE" at telephone number: 1-888-344-7233 or 811.
- C. The Contractor shall coordinate all work involving utilities and shall satisfy himself as to the existing conditions of the areas in which he is to perform his work. He shall conduct and arrange his work so as not to impede or interfere with the work of other contractors working in the same or adjacent areas.

21. Coordination of Work

The General Contractor shall be responsible for coordinating his own work as well as that of any subcontractors. He shall be responsible for notification of the Engineer when each phase of work is expected to begin and the approximate completion date.

22. Access Points for Cured-in-Place Pipe Inversions

A schedule listing the access point locations, area of excavation, depth of excavation, and dates of access with work hours shall be submitted to the Engineer prior to the cured-in-place pipe rehabilitation work beginning. Once the access point is not required, the Contractor shall notify the Engineer.

23. Maintenance of Trench Surface

After backfilling and compacting the trench, the Contractor shall be responsible for keeping the ground surface dry and passable at all times until the surface has been restored to original conditions.

24. Compliance with Permits

The Contractor shall perform all work in conformance with requirements of the Permits, which appear in Section 00890 - PERMITS.

25. Cutting, Fitting and Patching

- A. The Contractor shall do all cutting, fitting, or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other Contractors, as shown upon or reasonably implied by the drawings and the specifications for the completed structure, including all existing work.
- B. The Contractor shall not endanger any work by cutting, digging, or otherwise and shall not cut or alter the work of any other Contractor, save with the consent of the Engineer.
- C. All holes or openings required to be made in new or existing work, particularly at pipe, conduit, or other penetrations not covered by escutcheons or plates shall be neatly patched. All such holes shall be made completely watertight as approved by the Engineer.
- D. Size and locations of holes required in steel, concrete, or other structural or finish materials for piping, wiring, ducts, etc., which have not been located and detailed on the drawings shall be approved by the Engineer prior to layout and cutting thereof. All holes shall be suitably reinforced as required by the Engineer.
- E. Workmanship and materials of patching and repair work shall match the adjacent similar work and shall conform to the applicable sections of the specification. Patches and joints with existing work shall provide, as applicable in each case, visual, structural, and waterproofing continuity.

26. Contractor's Representative

Contractor shall designate a representative who will be available to respond to emergency calls by the Owner at any time day and night and on weekends and holidays should such a situation arise.

27. Construction Crews

The Contractor shall not increase the number of construction crews assigned to the work without providing one week advance notice to the Engineer.

28. Massachusetts Data Security Regulations

The Contractor is required to comply with data security regulations contained in 201 CMR 17.00 that have been established to safeguard personal information of Massachusetts residents contained in paper or electronic records. The Contractor shall not submit to the Engineer or Owner documents in paper or electronic form that contain personal information (person's name combined with one or more of the following – Social Security Number, driver's license number or state-issued identification card number, financial institution account number, or credit or debit card number). Any document submitted to the Engineer that violates this provision shall be returned to the Contractor and the Contractor shall remove personal information from the document prior to resubmitting it to the Engineer. The Contractor shall require each Subcontractor to also comply with the MA data security regulations insofar as they involve submittal of personal information to the Engineer and Owner.

29. Bidder Certification – OSHA Training

- A. As of July 1, 2006, all employees who work on Massachusetts public works construction sites, on projects estimated to cost more than \$10,000, must have no less than ten (10) hours of OSHA-approved safety and health training.
- B. This law will apply to any bid submitted on or after July 1, 2006 and to any contract awarded on or after July 1, 2006. This law directs the Massachusetts Attorney General to restrain award of the construction contracts to any contractor who is in violation of this requirement and to restrain the performance of these contracts by non-complying contractors.
- C. Noncompliance with this law will disqualify contractors from bidding on public contracts.

30. Winter Work

- A. The Owner will allow the Contractor to work within the public ways on this Project during the winter months.
- B. The Contractor will be required to backfill all excavations at the end of each work day, or place Jersey barriers around open excavations.
- C. The Owner has agreed to provide snow removal services on all public ways affected by this Project. The Owner will not remove snow from the Contractor's work area that the public will not be using for either driving or pedestrian activity.
- D. The Contractor will provide snow removal services on any public way affected by his work that has been authorized by the Owner to be closed to through traffic. Snow will be plowed in accordance with the Owner's normal plowing schedule for the closed public ways.

- E. In no event will the Owner remove snow on any private way affected by the Contractor's work on this Project. The Contractor may coordinate snow removal activities with whoever provides these services for the owners of the private way(s).

31. Nighttime/Weekend Work

- A. Construction activity shall be restricted to a normal 8-hour day, 5-day week between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, except when required due to high traffic areas or vicinity to schools or other sensitive buildings. Continuous work for CIPP lining may extend beyond work hours; however, no new work shall be started after 4:00 p.m. unless authorized by the Owner and approved by the Engineer in advance.
- B. No construction work shall be allowed on Saturdays, Sundays or Holidays without written authorization from the Owner and approval of the Engineer. The compensation of detail officers and the Engineer for work approved outside of the limitations aforementioned shall be the responsibility of the Contractor and shall be at no additional cost to the Owner.

MEASUREMENT AND PAYMENT

Delete all references to “Measurement and Payment” in the City of Worcester’s Standard Specifications & Details Section.

Measurement and Payment shall be as specified in this section:

1.01 GENERAL:

1. All work performed as described in these contract documents will be paid for under one or more of the items listed in the BID ITEM SHEET. All other activities required in connection with performance of the work, including all work required under this Contract, 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 BID ITEM SHEET, but will be considered incidental to performance of the overall project.
2. Each unit or lump-sum price stated in the BID ITEM SHEET shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications.
3. The payment items listed herein and in the BID ITEM SHEET 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.
4. 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.

1.02 TRENCH PIPE WORK (OPEN CUT POINT REPAIR):

1. The work for this item shall be measured at the contract unit price bid per linear foot of replaced pipe.
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, furnishing and installing pipe and fittings, detectable tracer tape, end plug, oak marker, making connections to the existing sewer, removing and resetting water mains and drains, and excavation, backfill, bedding, select material, clearing, crushed stone, grubbing, testing, restoration of the ground surface, including gravel sub-base and pavement, loaming and seeding, surface restoration, removal and replacement of sidewalks and curbing, temporary and permanent pavement replacement, pavement markings, rock excavation, and all work incidental thereto and not specifically included for payment under other items, as described in Section 02442, POINT REPAIR OF GRAVITY SANITARY, SURFACE, AND COMBINED SEWERS.

3. Replacement of wyes and tees shall include 6-inch PVC sewer service within the replaced main sewer trench, which shall be considered incidental to the work and shall not be measured separately for payment.
4. Pre-television inspection of existing sewers to verify location of the repair and quantity and location of sewer services shall be considered incidental to the work and shall not be measured separately for payment.
5. Post-television inspection of completed sewers shall be considered incidental to the work and shall not be measured separately for payment.
6. No payment shall be allowed for additional liner foot of replaced pipe, if different than indicated on the drawings, without prior approval of the Engineer.
7. The work shall be paid for at the contract unit bid price under Items 220.08 and 220.10.

1.03 TRENCH PIPE WORK (FURNISH AND INSTALL BUILDING CONNECTIONS):

1. The work for this item shall be measured at the contract unit price bid per linear foot and based upon measurements of completed connections taken along center lines. Measurement and payment shall be from center of mainline to edge of curb.
2. The unit prices under the appropriate subdivisions of this item shall constitute full compensation for constructing the wye and building connection, complete in place, as indicated on the drawings and as specified, including removal and disposal of existing sewers, furnishing and installing pipe and fittings, detectable tracer tape, end plug, oak marker, making connections to the existing sewer, removing and resetting water mains and drains, and excavation, backfill, bedding, select material, clearing, crushed stone, grubbing, testing, restoration of the ground surface, including gravel sub-base and pavement, loaming and seeding, surface restoration, removal and replacement of sidewalks and curbing, temporary and permanent pavement replacement, pavement markings, rock excavation, and all work incidental thereto and not specifically included for payment under other items, as described in Section 02530, BUILDING CONNECTIONS AND DROP CONNECTIONS.
3. The work shall be paid for at the contract unit bid price under Items 224.

1.04 RODENT CONTROL

1. The work for this item shall constitute full compensation to the Contractor for rodent control and be measured as lump sum.
2. The work shall be paid for at the contract unit bid price under Item 270.

1.05 STRUCTURAL CURED-IN-PLACE PIPE:

1. The work of this item shall be measured at the contract unit price bid per linear foot of structural cured-in-place pipe installed from edge of manhole to edge of manhole.
2. Measurement, including all material, labor, tools and equipment shall be based on the actual length of pipes lined as determined by the Engineer. Structural Cured-In-Place Pipe shall be installed as specified in Section 02428, CURED-IN-PLACE PIPE.
3. 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.
4. Repairing the pipe invert in accordance with specification Section 02428, CURED-IN-PLACE PIPE shall be considered incidental to the work and shall not be measured separately for payment.
5. Reinstatement of active service connections shall be considered incidental to the work and shall not be measured separately for payment.
6. Inspecting, testing and grouting of service connections shall be considered incidental to the work and shall not be measured separately for payment, except for work associated with Items 712, 713, 714, and 715. Inspecting, testing, and grouting of service connections in 12-inch x 18-inch, 20-inch x 30-inch, 24-inch x 36-inch, and 26-inch x 39-inch structural cured-in-place pipe shall be paid for at the contract unit price under Items 712, 713, 714, and 715, respectively.
7. Television inspection and cleaning (pre and post inspection) of sewer lines associated with the installation of structural cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment. This includes, but is not limited to, heavy cleaning to remove grease, roots, tuberculation, or any other obstructions that could prevent the installation of structural cured-in-place pipe.
8. Flushing/dyed water testing for active/inactive service connections in conjunction with the television inspection of sewer lines associated with the installation of structural cured-in-place pipe shall be considered incidental to the work and shall not be measured separately for payment.
9. Excavation of an access point and restoring it to its original condition after the installation of the cured-in-place liner shall be considered incidental to the work and shall not be measured separately for payment. If the access point is at a manhole, the manhole shall be replaced as specified in the Worcester Standard Specifications. Manhole replacement at an access point shall be considered incidental to the work and shall not be measured separately for payment.

10. The work shall be paid for at the contract unit bid price under Items 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, and 715.
11. Ten percent of the payment for the Items 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, and 711 "Structural Cured-in-Place Pipe" shall be withheld until the pipeline rehabilitation's have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02428, CURED-IN-PLACE PIPE.

1.06 STRUCTURAL CURED-IN-PLACE SHORT LINER:

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. Reinstatement of active service connections shall be considered incidental to the work and shall not be measured separately for payment.
4. Inspecting, testing, and grouting of service connections shall be considered incidental to the work and shall not be measured separately for payment.
5. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the work and shall not be measured separately for payment.
6. Television inspection and cleaning (pre and post inspection) of sewer lines associated with the installation of structural cured-in-place short liners shall be considered incidental to the work and shall not be measured separately for payment. This includes, but is not limited to, heavy cleaning to remove grease, roots, tuberculation, or any other obstructions that could prevent the installation of structural cured-in-place short liners.
7. The work under this section shall be paid at the contract unit price under Items 716.
8. Ten percent of the payment for the Item 716 shall be withheld until the pipeline rehabilitation's have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02429, CURED-IN-PLACE SHORT LINER.

1.07 CURED-IN-PLACE LATERAL LINER:

A. Cleaning and Inspection of Laterals in 8-inch to 12-inch Diameter Mainline:

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. The work shall be paid for at the contract unit price under Item 717.

B. Cured-in-Place Lateral Liner in 8-inch to 12-inch Diameter Mainline (Initial 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 12-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 Cleaning and inspection of the lateral shall be paid for at the contract unit price under Item 717. 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 Item 718.

C. Cured-in-Place Lateral Liner in 8-inch to 12-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 Cleaning and inspection of the lateral shall be paid for at the contract unit price under Item 717. 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 Item 719.
- D. 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.

1.08 SANITARY SEWER LINE CHEMICAL ROOT TREATMENT:

1. Chemical root treatment shall be measured at the contract unit bid price per linear foot of pipe treated.
2. Measurement shall be based on the actual length of treated sewer from end of pipe to end of pipe. Sewers shall be chemically treated for root control as specified in Section 02437, SEWER LINE AND MANHOLE CHEMICAL ROOT TREATMENT.
3. The work under this section shall be paid at the contract unit bid price under Items 720, 721, and 722.

1.09 SERVICE CONNECTION REHABILITATION:

A. Test and Grout Service Connection:

1. The work of this item shall be measured per service grouted. Work of this item is not associated with Items 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, or 715.
2. The contract unit price per service grouted to be paid shall constitute full compensation for supplying all material, labor, tools, and equipment required to grout services as specified in Section 02443, SERVICE CONNECTION REHABILITATION.
3. The work shall be paid for at the contract unit bid price under Item 723.

3. 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 Item 724.

1.10 CLEANING, INSPECTION, TESTING, AND SEALING OF SEWERS:

A. 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.
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, INSPECTION, TESTING AND SEALING. Verification of adequate cleaning shall be made by television inspection.
3. The television inspection work, external hard drives, by-pass pumping, plugging or blocking of sewer flow, and the storage, testing and disposal of any material retrieved from sewer cleaning shall be considered incidental to the work and shall not be considered for payment.
4. The work under this section shall be paid at the contract unit price under Item 725.

B. Testing of Joints:

1. The work under this item shall be measured at the unit price bid per joint or circular crack tested.
2. Measurement shall be based on the actual number of joints and circular cracks tested as determined by the Engineer. Joints and circular cracks shall be tested as specified in Section 02440, SEWER CLEANING, INSPECTION, TESTING

AND 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 Item 726.

C. Sealing Joints:

1. The work under this item shall be measured at the unit price bid per joint or circular crack sealed.
2. Measurement, including all materials, shall be based on the actual number of joints and circular cracks sealed as determined by the Engineer. Joints and circular cracks shall be sealed as specified in Section 02440, SEWER CLEANING, INSPECTION, TESTING AND 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 Item 727.

- D. Ten percent of the payment for the subdivisions of the item "Cleaning, Inspection, Testing and Sealing" shall be withheld until the pipeline rehabilitations have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02440, SEWER CLEANING, INSPECTION, TESTING AND SEALING.

1.11 MANHOLE REHABILITATION:

A. Cementitious and Epoxy Lining of Manholes

1. The work of this item shall be measured at the contract unit price bid per vertical foot of manhole lined.
2. Measurement shall be based on the actual vertical footage of manhole lined and 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. No additional payment shall be made for material sprayed in the manhole invert or manhole frame.
3. Cleaning and plugging or sealing of active leaks in the manhole structure prior to lining, invert sealing, and exterior sealing shall be considered incidental to the work and will not be measured separately for payment.

4. The work under this section shall be paid at the contract unit bid price under Items 728 and 729.

B. Epoxy Lining of Structure

1. The work of this item shall be measured at the contract unit price bid per structure lined.
2. Measurement shall be based on the per structure lined and shall constitute full compensation for supplying all material, labor, tools, and equipment required to line the structure as specified in Section 02435, SEWER MANHOLE REHABILITATION. No additional payment shall be made for material sprayed in the invert or frame.
3. Cleaning and plugging or sealing of active leaks in the structure prior to lining, invert sealing, and exterior sealing shall be considered incidental to the work and will not be measured separately for payment.
4. The work under this section shall be paid at the contract unit bid price under Items 730.

C. Sealing of Manhole Inverts:

The work of this item shall be incidental and shall include all necessary materials, labor, tools, and equipment required to seal the manhole inverts as specified in Section 02435, SEWER MANHOLE REHABILITATION.

D. Manholes Exterior Sealing:

The work of this item shall be incidental and shall include all necessary materials, labor, tools, and equipment required to seal the manhole exterior as specified in Section 02435, SEWER MANHOLE REHABILITATION.

- E. Ten percent of the payment for the subdivision of the item "Manhole Rehabilitation" shall be withheld until the manhole rehabilitations have satisfactorily completed and passed field testing/inspection(s) as specified in Section 02435, SEWER MANHOLE REHABILITATION.

1.12 MOBILIZATION:

The lump sum for this item shall constitute full compensation to the Contractor for the general mobilization necessary to make the contract operational, exclusive of the cost of materials. The total for mobilization to be paid at the lump sum price under Item 731 shall not exceed 5 percent of the total of items 220.08, 220.10, 224, 270, and 700 through 730.

1.13 HANDLING EXISTING FLOWS:

Handling existing sewage flows (temporary bypass pumping) in accordance with Section 01575, HANDLING EXISTING FLOWS, including providing, installing, bypass piping trenching, including excavation, backfill, bedding, select material, clearing, crushed stone, grubbing, testing, and removing all required equipment, piping, pumping, restoration of the ground surface, including gravel sub-base, temporary and permanent pavement replacement, and all work incidental thereto and not specifically included for payment under other items as required shall not be separately measured for payment, but shall be considered incidental to the project.

1.14 ENVIRONMENTAL PROTECTION:

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

1.15 SIGNAGE:

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

1.16 REMOVAL AND RESETTING OF EXISTING FENCES:

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

1.17 RESTORATION OF LAWNS AND CROSS-COUNTRY AREAS:

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

1.18 DOCUMENTATION:

All documentation, as described in Specification Section 01331 – DOCUMENTATION, to be provided to the Owner shall not be separately measured for payment but shall be considered incidental to the project.

1.19 WARRANTY INSPECTION:

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

1.20 DEWATERING:

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

1.21 SUPPORT OF EXCAVATION:

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

1.22 ELECTRICAL:

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

1.23 CONSTRUCTION ZONE SAFETY PLAN:

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

1.24 CONNECTIONS TO EXISTING STRUCTURES:

Connections to existing structures shall be considered incidental to the work and shall not be measured separately for payment.

1.25 DUST CONTROL:

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

1.26 PAVEMENT REPLACEMENT:

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

1.27 PRICE ADJUSTMENTS MANDATED BY MGL CHAPTER 30, SECTION 38A:

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

Attachment E

Section 01311 – Construction Meetings

SECTION 01311

CONSTRUCTION MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This Section specifies requirements for project meetings including but not limited to Pre-Construction Conference and Progress Meetings.
- B. It shall be the responsibility of the Contractor to coordinate work between all subcontractors, sections, and trades required for the proper completion of the Work.

1.02 PRE-CONSTRUCTION CONFERENCE:

- A. After the bids have been opened but prior to the start of the construction there will be a pre-construction conference to discuss the phasing and scheduling of the Project. The specific time and place of the conference shall be arranged by the Engineer after the Contract has been awarded.
- B. This pre-construction conference is intended to establish lines of communication between the parties involved, review responsibilities and personnel assignments, establish project schedules, discuss proposed performance methods, and coordinate Work to be performed by subcontractors.
- C. Authorized representatives of the Owner, Engineer and their consultants, the Contractor, its Superintendent and Site Foreman, and all others invited by the Contractor, shall attend the pre-construction conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
- D. Discuss items of significance at the pre-construction conference that could affect progress including at least the following:
 - 1. Tentative construction schedule
 - 2. Critical Work sequencing
 - 3. Designation of responsible personnel
 - 4. Procedures for processing field decisions and Change Orders
 - 5. Procedures for processing Applications for Payment
 - 6. Distribution of Contract Documents
 - 7. Submittal of Shop Drawings, Product Data and Samples

8. Preparation of record documents
9. Use of the premises
10. Office, work and storage, and laydown areas
11. Equipment deliveries
12. Construction safety procedures
13. Environmental health and safety procedures
14. First aid
15. Security
16. Housekeeping
17. Working hours
18. Traffic Control
19. Emergency Vehicle Access to and around work site
20. Environmental protection measures for construction site

1.03 PROGRESS MEETINGS:

- A. During the course of the Project, the Contractor shall attend weekly progress meetings as scheduled by the Owner. The Owner, based on work progress and activities, may adjust the progress meetings to biweekly or other. The attendance of subcontractors may be required during the progress of the Work. The Contractor's delegate to the meeting shall be prepared and authorized to discuss the following items:
1. Progress of Work/Critical Work Sequencing in relation to Contract Schedule.
 2. Proposed Work activities for forthcoming period.
 3. Resources committed to Contract.
 4. Coordination of Work with others.
 5. Status of procurement of equipment and materials.
 6. Status of Submittals.
 7. Outstanding actions, decisions, or approvals that affect Work activities.
 8. Site access and/or security issues
 9. Hazards and risks
 10. Housekeeping
 11. Quality issues
 12. Potential Claims
 13. Change Orders
 14. Costs, budget, and payment requests
- B. The Contractor shall revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized and the revised schedule shall be submitted to the Engineer and Owner.

PART 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

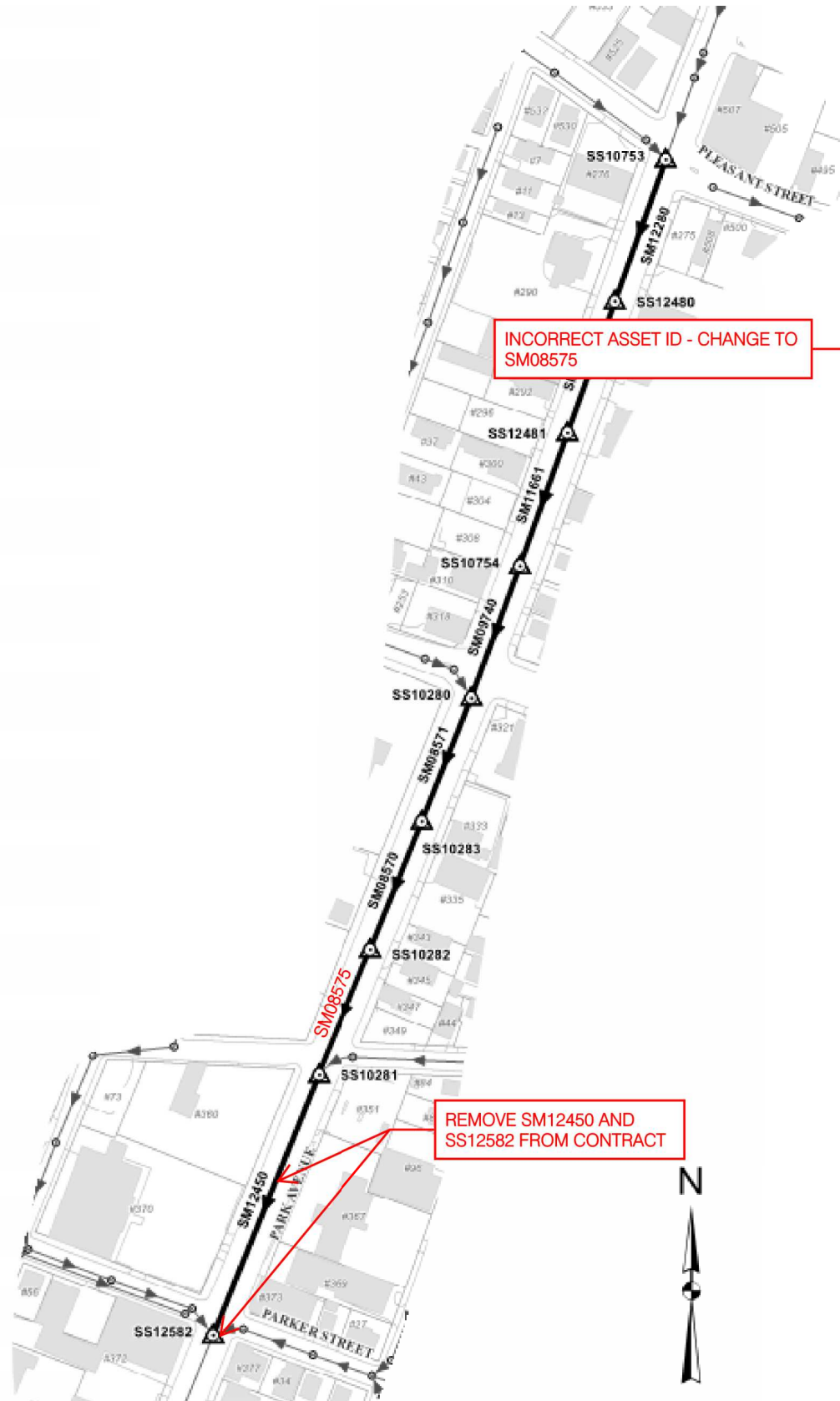
END OF SECTION

\\\\wse03.local\\WSE\\Projects\\MA\\Worcester MA\\2211342 Various Streets 2022 Rehab Design\\Bidding\\Addendum\\Addendum No. 1\\01311 - Construction Meetings.docx

Attachment F

SK-1 (Revisions to Sheet C102 – Plans and Tables III)

C:\WSECAD\Drawing Formats\Addendum01_AutoCAD\2019\WS_ADD_17x11_2019.dwg



STRUCTURAL CURED-IN-PLACE PIPE							APPROX. MH TO MH LENGTH (LF)	REINSTATE SERVICE(S) (APPROX. STA)
ASSET ID	MH	TO MH	STREET/LOCATION	PIPE TYPE	PIPE DIA. (IN)	MATERIAL		
SM01533	SS01161	SS01162	NASHUA STREET	SANITARY	12x18	RCP	130	0+60
SM03132	SS01580	SS00470	NASHUA STREET	SANITARY	15	RCP	170	0+31, 0+55, 0+68, 0+95, 1+36, 1+67
SM03690	SS00469	SS00477	NASHUA STREET ³	SANITARY	12x18	RCP	96	-
SM20548	SS20548	SS01161	NASHUA STREET	SANITARY	12x18	RCP	48	0+33, 0+38
SM01532	SS00477	SS00073	NASHUA STREET ^{1,2}	SANITARY	18	RCP	179	-
SM07375	SS00073	SS20548	NASHUA STREET ^{1,2}	SANITARY	18	RCP	30	-
SM03131	SS00470	SS00469	NASHUA STREET ³	SANITARY	18 to 12x18	RCP	125	0+78
SM08570	SS10283	SS10282	PARK AVENUE	SANITARY	24x36	BRICK	211	0+39, 1+17, 1+20, 1+72, 1+74
SM08571	SS10280	SS10283	PARK AVENUE	SANITARY	24x36	BRICK	207	0+38, 1+91, 1+95
SM09740	SS10754	SS10280	PARK AVENUE	SANITARY	24x36	BRICK	218	0+34, 0+50, 0+89, 1+06, 1+32, 1+46, 1+63
SM11661	SS12481	SS10754	PARK AVENUE	SANITARY	24x36	BRICK	214	0+09, 0+42, 0+43, 0+50, 0+67, 1+20, 1+34, 1+84, 1+93
SM12280	SS10753	SS12480	PARK AVENUE	SANITARY	24x36	BRICK	217	0+45, 0+58, 1+18, 1+65, 2+11
SM12412	SS12480	SS12481	PARK AVENUE	SANITARY	24x36	BRICK	213	0+26, 0+53, 0+99, 1+17, 1+22, 1+53, 1+75
SM12450	SS10282	SS10281	PARK AVENUE	SANITARY	24x36	BRICK	202	0+06, 0+10, 0+56, 0+60, 1+41, 1+46
SM01309	SS08766	SS10626	STAFFORD STREET	SANITARY	15	VCP	163	0+56, 0+74
SM01310	SS10626	SS10625	STAFFORD STREET	SANITARY	15	VCP	172	1+38
SM01311	SS10625	SS08765	STAFFORD STREET	SANITARY	15	VCP	176	1+38
SM11947	SS08765	SS14073	STAFFORD STREET	SANITARY	18	VCP	70	-
SM13410	SS14073	SS14071	STAFFORD STREET	SANITARY	18	VCP	175	1+00

APPROX. TOTAL (LF) = 3,016
APPROX. SUBTOTAL 15-INCH (LF) = 681
APPROX. SUBTOTAL 18-INCH (LF) = 454
APPROX. SUBTOTAL 18-INCH to 12x18-INCH (LF) = 125
APPROX. SUBTOTAL 12x18-INCH (LF) = 274
APPROX. SUBTOTAL 24x36-INCH (LF) = 1,482

NOTES:

- PIPE MATERIAL IS COATED RCP.
- MANHOLE SS00073 ON NASHUA STREET IS BURIED AND CANNOT BE ACCESSED. CONTRACTOR SHALL INSTALL CURED-IN-PLACE LINER FROM MANHOLE SS00477 TO SS20548 USING PULL-IN-PLACE INSTALLATION METHODS. CONTRACTOR SHALL REINSTATE INVERT IN SS00073 USING CRAWLER MOUNTED CUTTER.
- ASSET ID SM03131 ON NASHUA STREET TRANSITIONS FROM 18-INCH DIAMETER TO 12X18-INCH. MANHOLE SS00469 CANNOT BE ACCESSED. CONTRACTOR SHALL PREMEASURE PIPE AND INSTALL A TAPERED CURED-IN-PLACE LINER FROM SS00470 TO SS00477 USING PULL-IN-PLACE INSTALLATION METHODS.

EPOXY LINING AND EXTERIOR SEALING OF SEWER MANHOLES

MH	STREET/LOCATION	MH TYPE	MATERIAL	APPROX. MH DEPTH (VF)
SS10280	PARK AVENUE	SANITARY	BRICK	22.5
SS10281	PARK AVENUE	SANITARY	BRICK	15
SS10282	PARK AVENUE	SANITARY	BRICK	17.5
SS10283	PARK AVENUE	SANITARY	BRICK	20
SS10753	PARK AVENUE	SANITARY	BRICK	20
SS10754	PARK AVENUE	SANITARY	BRICK	23.5
SS12480	PARK AVENUE	SANITARY	BRICK	22
SS12481	PARK AVENUE	SANITARY	BRICK	23
SS12582	PARK AVENUE	SANITARY	BRICK	12

APPROX. TOTAL (VF) = ~~175.5~~
163.5

REMOVE SS12582 FROM CONTRACT

Weston & SampsonSM

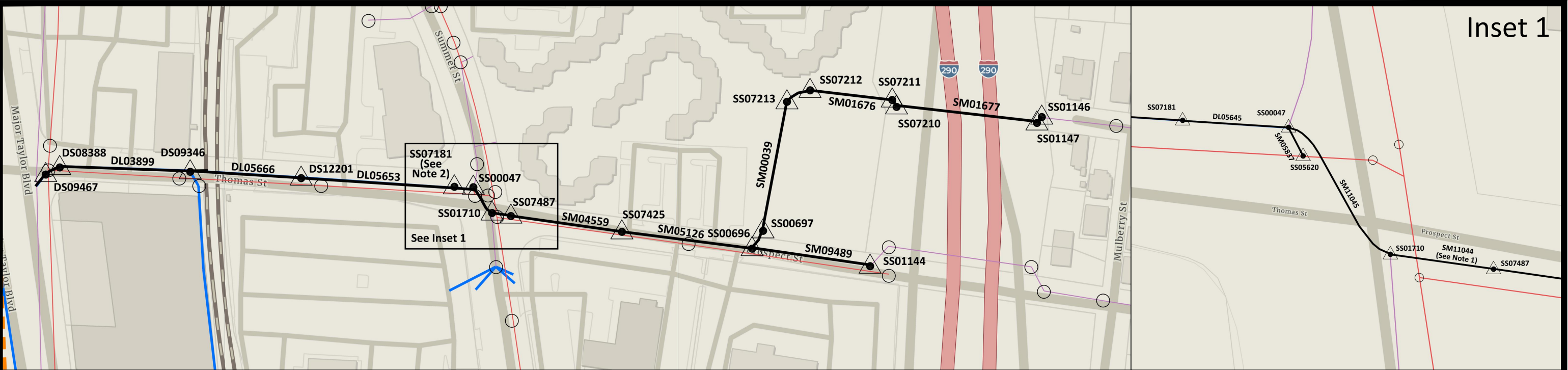
Sheet Number:

SK-1

Attachment G

SK-2 (Pipes, Manholes and Structure Added to Contract)

P:\MAW\Worcester MA\2211342 Various Streets 2022 Rehab Design\Bidding\Addendum No. 1\Prospect and Thomas Street\CAD\Addendum No. 1.dwg



STRUCTURAL CURED-IN-PLACE PIPE								
ASSET ID	MH	TO MH	STREET/LOCATION	PIPE TYPE	PIPE DIA. (IN)	MATERIAL	APPROX. MH TO MH LENGTH (LF)	REINSTATE SERVICE(S) (APPROX. STA)
SM01679	SS01146	SS01147	SHELBY STREET ROW	COMBINED	18	VCP	19	-
SM01677	SS01147	SS07210	PROSPECT STREET ROW	COMBINED	18	CAS	174	-
SM01678	SS07210	SS07211	PROSPECT STREET ROW	COMBINED	18	VCP	18	-
SM01676	SS07211	SS07212	PROSPECT STREET ROW	COMBINED	12x18	CONCRETE	122	0+41, 0+70, 0+90
SM10573	SS07212	SS07213	PROSPECT STREET ROW	COMBINED	20x30	BRICK	38	-
SM00039	SS07213	SS00697	PROSPECT STREET ROW	COMBINED	20x30	BRICK	193	0+34, 0+72, 0+73
SM10572	SS00697	SS00696	PROSPECT STREET ROW	COMBINED	20x30	BRICK	29	-
SM09489	SS01144	SS00696	PROSPECT STREET	COMBINED	26x39	BRICK	177	0+20, 0+33, 0+72, 0+79, 1+48
SM05126	SS00696	SS07425	PROSPECT STREET	COMBINED	26x39	BRICK	179	0+25, 0+80, 1+19, 1+41
SM04559	SS07425	SS07487	PROSPECT STREET	COMBINED	26x39	BRICK	159	0+70
SM11044 ⁽¹⁾	SS07487	SS01710	PROSPECT STREET	COMBINED	26x39	BRICK	28	-
SM11045	SS01710	SS00047	PROSPECT STREET	COMBINED	26x39	BRICK	43	-
DL05654	SS00047	SS07181	THOMAS STREET	COMBINED	26x39	BRICK	16	ESTIMATED NUMBER OF SVC(S) = 1
SM05837	SS00047	SS05620	THOMAS STREET	COMBINED	12	VCP	10	-
DL05653	SS07181	DS12201	THOMAS STREET	COMBINED	26x39	BRICK	204	ESTIMATED NUMBER OF SVC(S) = 2
DL05666	DS12201	DS09346	THOMAS STREET	COMBINED	26x39	BRICK	159	ESTIMATED NUMBER OF SVC(S) = 2
DL03899	DS09346	DS08388	THOMAS STREET	COMBINED	26x39	BRICK	214	ESTIMATED NUMBER OF SVC(S) = 2
DL09902	DS08388	DS09467	THOMAS STREET	COMBINED	26x39	BRICK	19	-
DL02960	DS09467	SN032	THOMAS STREET	COMBINED	26x39	BRICK	36	-

APPROX. TOTAL (LF) = 1,837
APPROX. SUBTOTAL 12-INCH (LF) = 10
APPROX. SUBTOTAL 18-INCH (LF) = 211
APPROX. SUBTOTAL 12x18-INCH (LF) = 122
APPROX. SUBTOTAL 20x30-INCH (LF) = 260
APPROX. SUBTOTAL 26x39-INCH (LF) = 1,234

EPOXY LINING AND EXTERIOR SEALING OF SEWER MANHOLES				
MH	STREET/LOCATION	MH TYPE	MATERIAL	APPROX. MH DEPTH (VF)
SS01146	SHELBY STREET ROW	COMBINED	BRICK	8
SS01147	SHELBY STREET ROW	COMBINED	BRICK	8
SS07210	PROSPECT STREET ROW	COMBINED	BRICK	8
SS07211	PROSPECT STREET ROW	COMBINED	BRICK	8
SS07212	PROSPECT STREET ROW	COMBINED	BRICK	25
SS07213	PROSPECT STREET ROW	COMBINED	BRICK	25
SS00697	PROSPECT STREET ROW	COMBINED	BRICK	9.5
SS00696	PROSPECT STREET	COMBINED	BRICK	13
SS07425	PROSPECT STREET	COMBINED	BRICK	12
SS07487	PROSPECT STREET	COMBINED	BRICK	11.7
SS01710	PROSPECT STREET	COMBINED	BRICK	12
SS00047	THOMAS STREET	COMBINED	BRICK	13.5
DS12201	THOMAS STREET	COMBINED	BRICK	13.2
DS09346	THOMAS STREET	COMBINED	BRICK	10.3
DS08388	THOMAS STREET	COMBINED	BRICK	8.25
DS09467	THOMAS STREET	COMBINED	BRICK	9.5

APPROX. TOTAL (VF) = 90.4

EPOXY LINING AND EXTERIOR SEALING OF SEWER STRUCTURE ⁽²⁾				
MH	STREET/LOCATION	TYPE	MATERIAL	APPROX. STRUCTURE DIMENSION (FT)
SS07181	THOMAS STREET	COMBINED	BRICK	14' H X 18.5' W

TOTAL (EA) = 1

NOTES:
2. RECORD DRAWING OF THE STRUCTURE IS ATTACHED, SEE ATTACHMENT H.

NOTES:

1. SM11044 TRANSITIONS TO A 36-INCH DI PIPE AT STA 0+05 AND 36-INCH PVC PIPE AT STA 0+12 FROM US MH SS07487

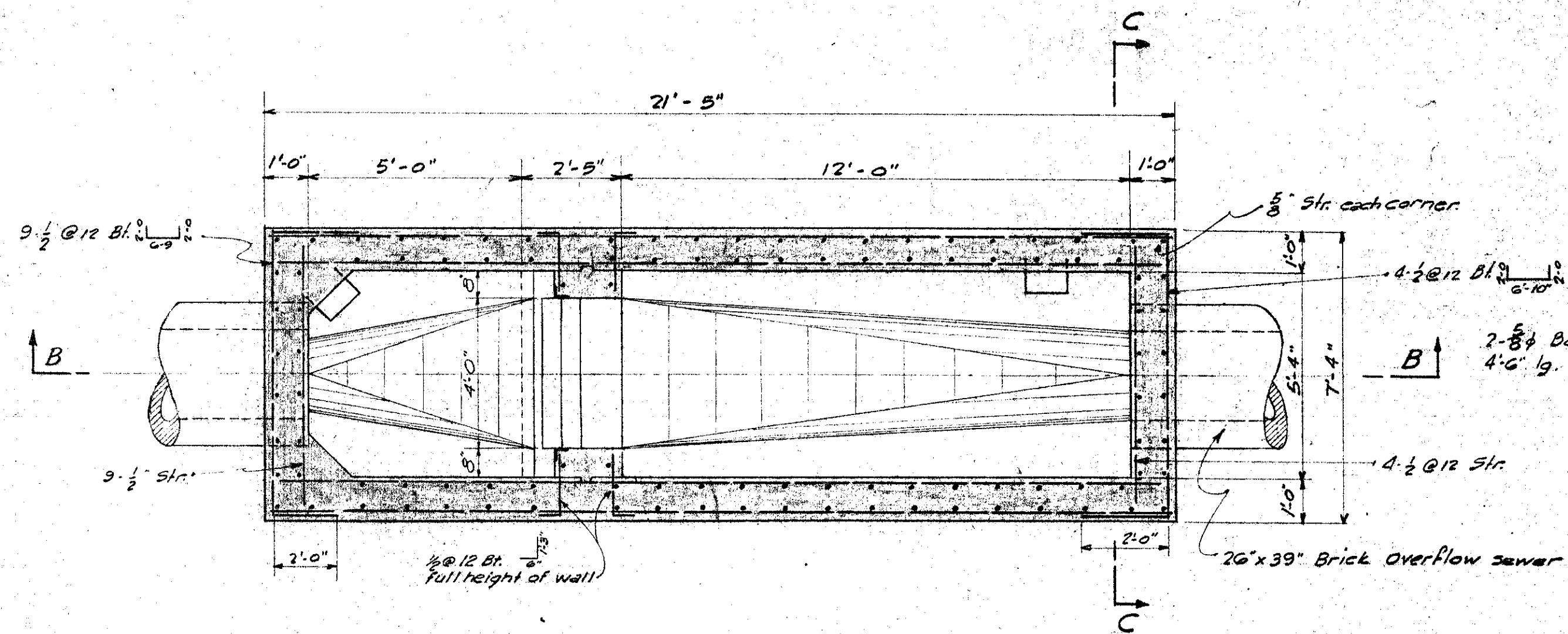


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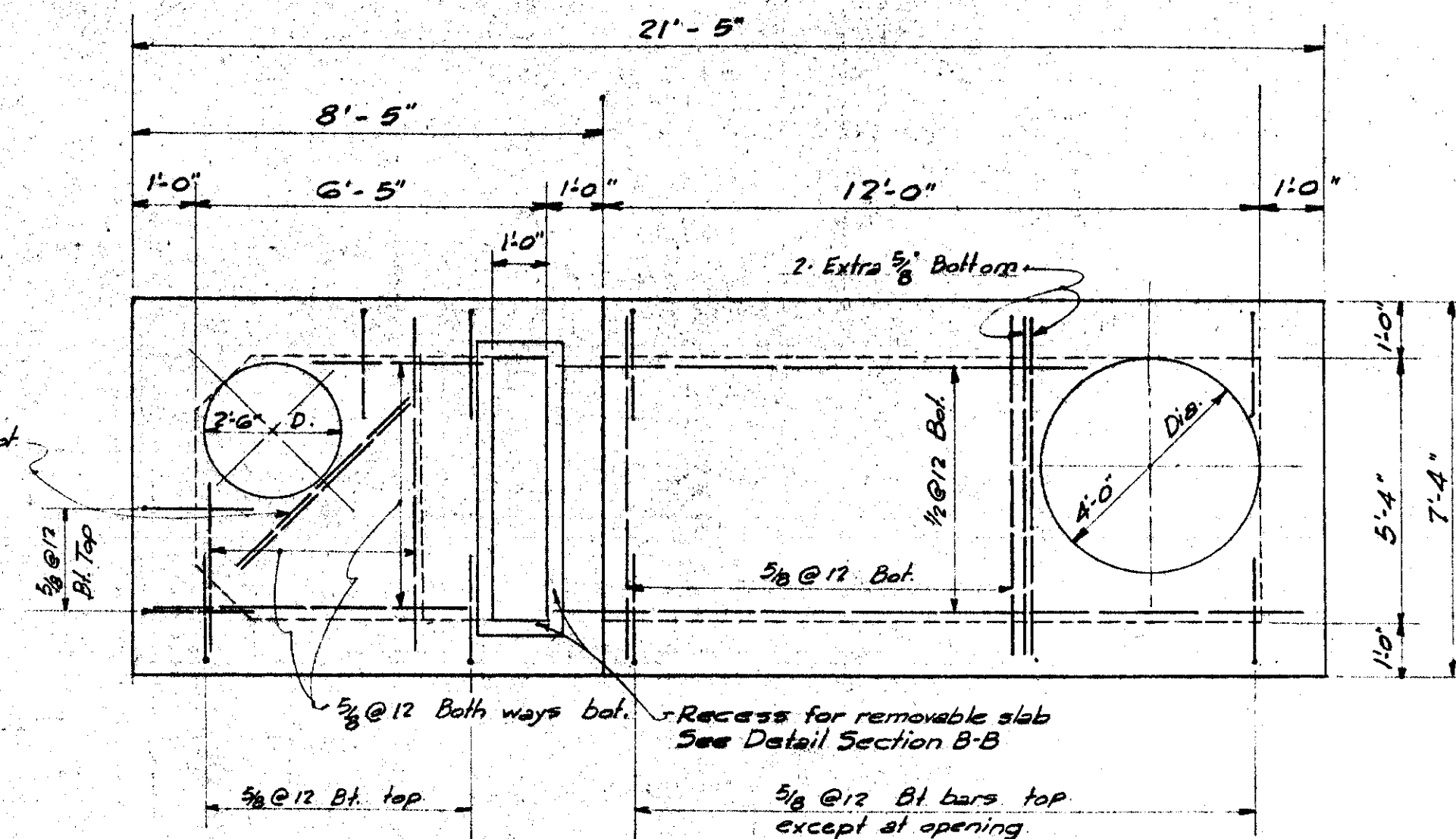
SK-2

Attachment H

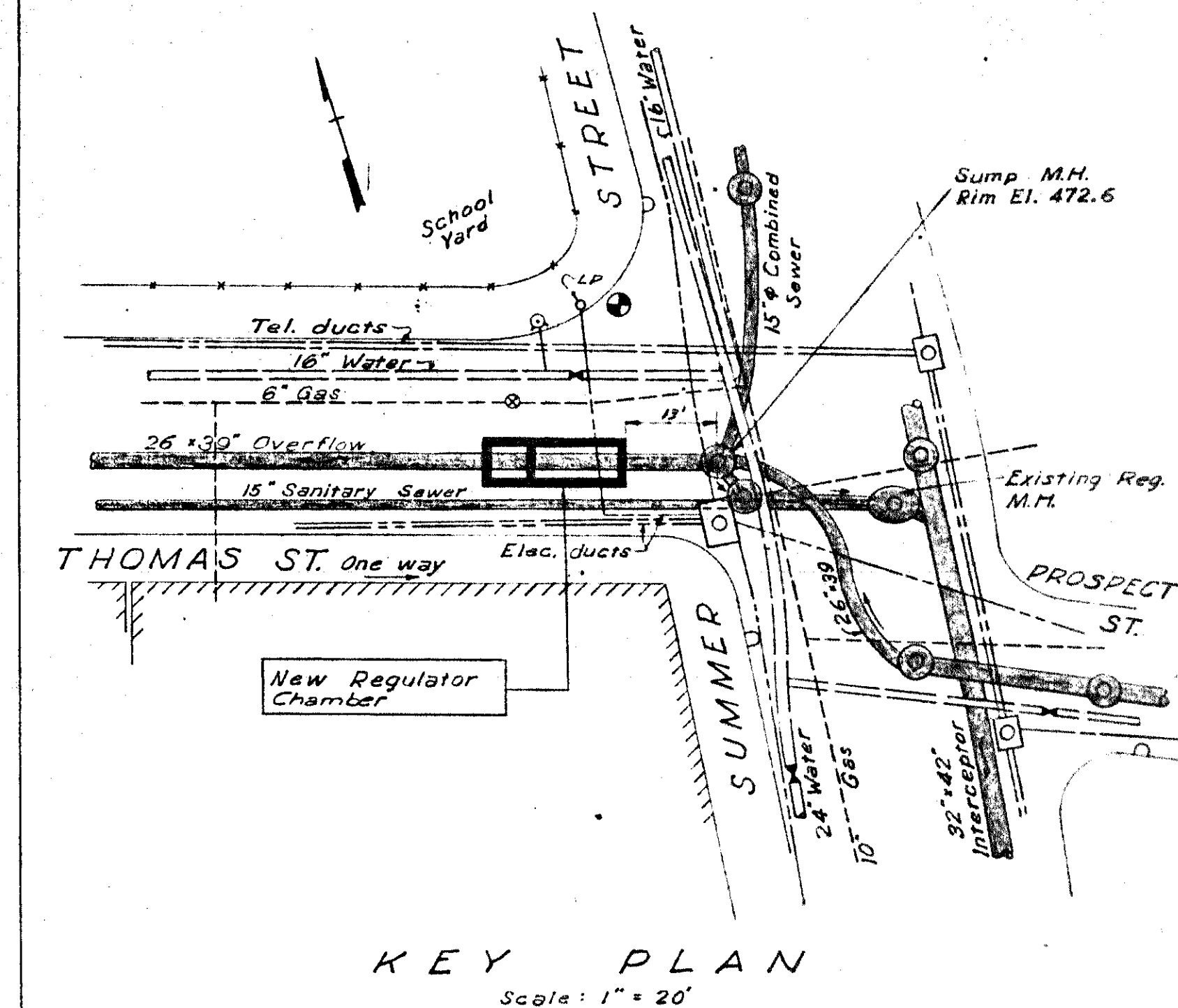
Record Drawing of Sewer Regulator Structure Shown on SK-2



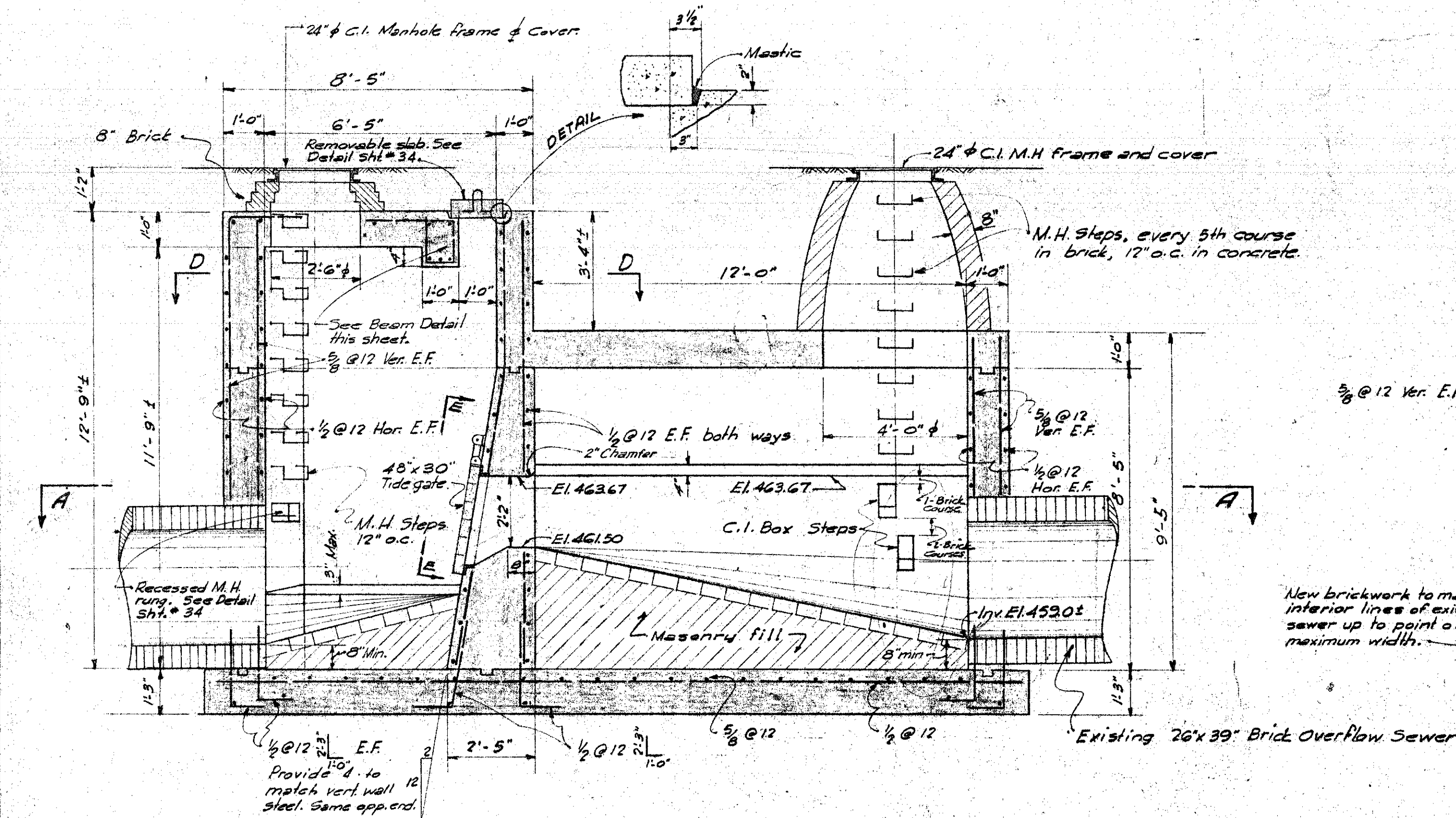
SECTIONAL PLAN A-A



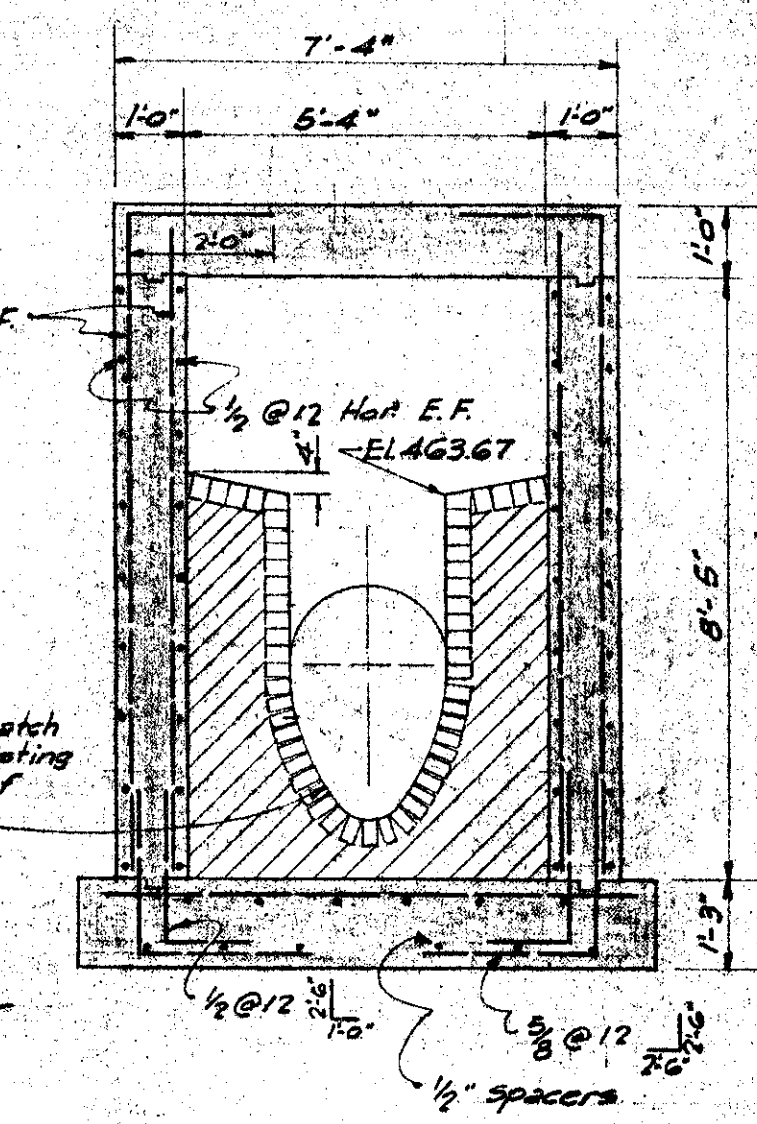
PLAN OF TOP SLAB



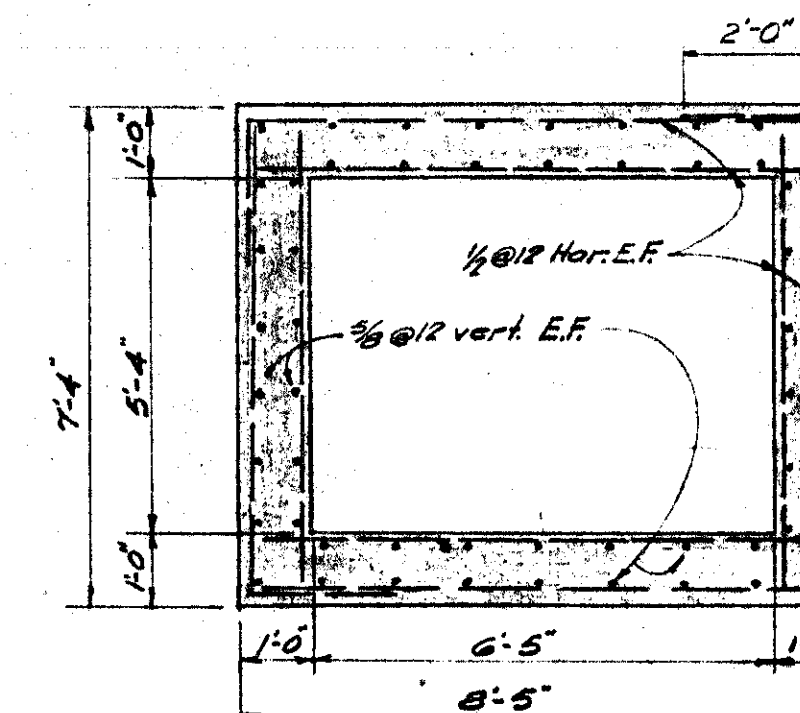
KEY PLAN
Scale: 1" = 20'



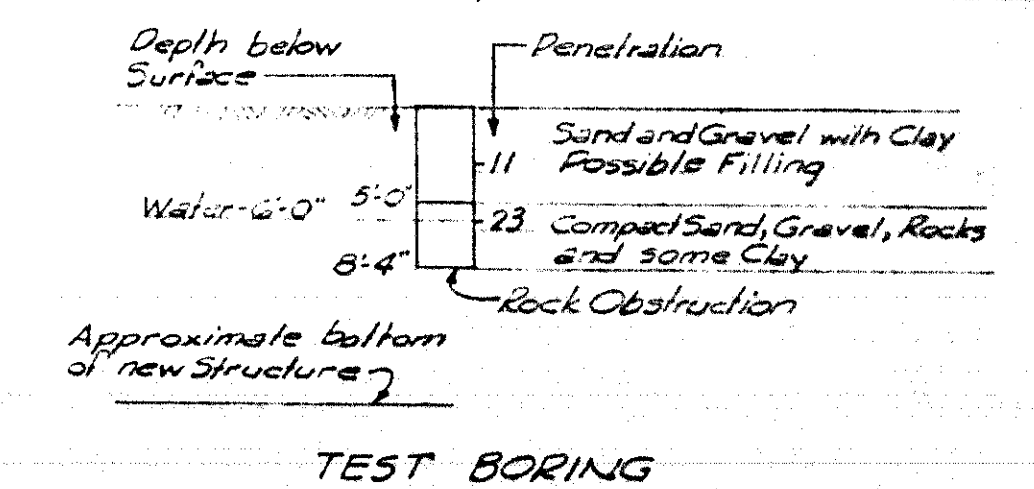
SECTION B-B



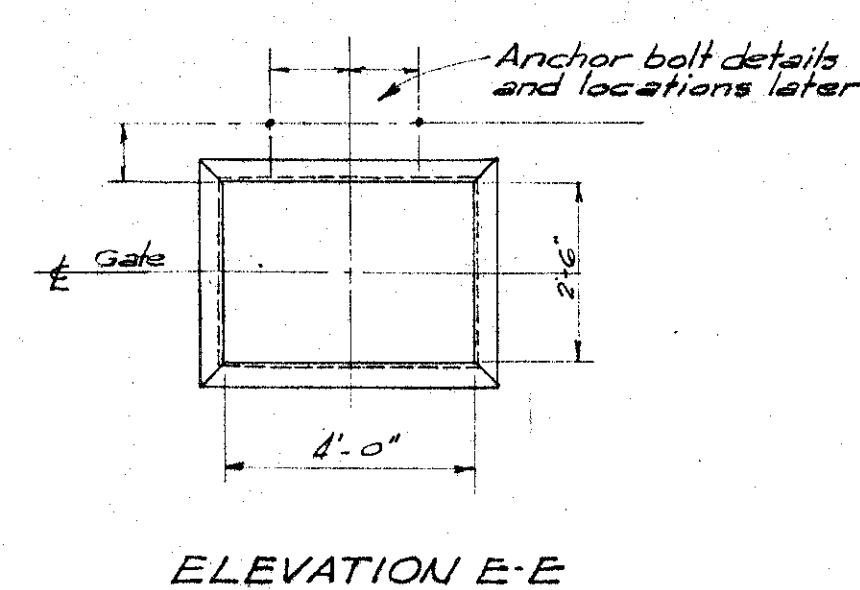
SECTION C-C



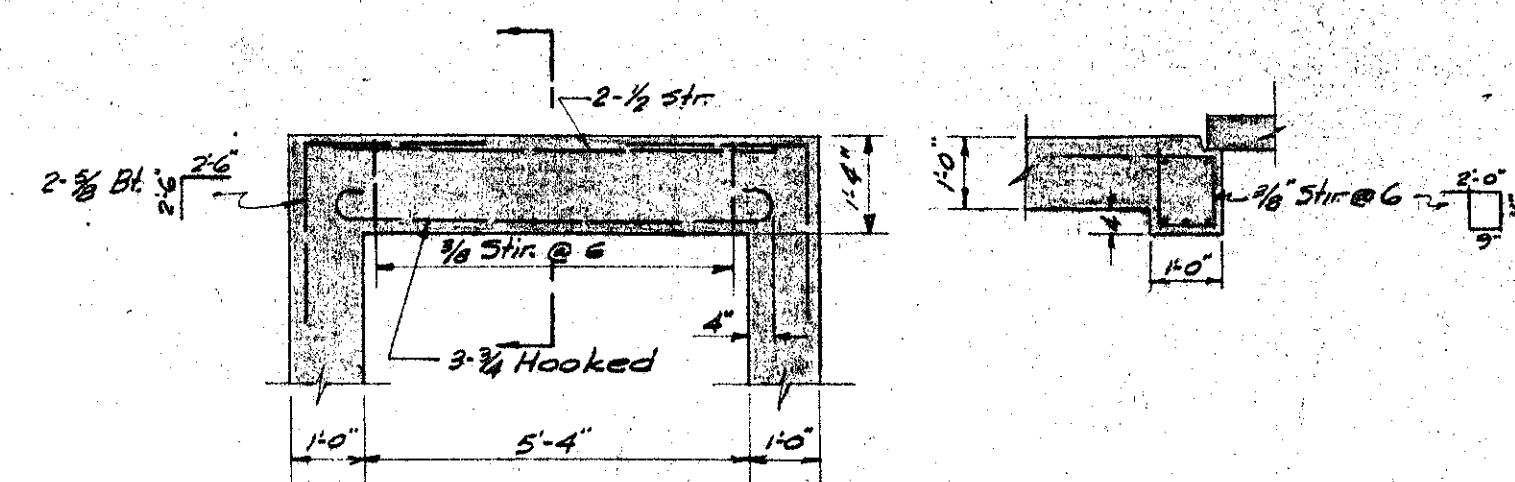
SECTION D-D



TEST BORING



ELEVATION E-E



BEAM DETAIL

RECORD DRAWING

CITY OF WORCESTER MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

SEWAGE WORKS IMPROVEMENTS

SEWAGE OVERFLOW REGULATORS

THOMAS ST. at SUMMER ST.

Drawn by: Ch. J. J. J.
FS RSB
Approved: NRB
Date: July 31 1953
Scale: 1/8" = 1'-0" unless noted

Camp, Dresser & McKee
Civil Engineers
Boston, Mass.

SHEET NO.

7

60,265

11063 5-3 198-1507