

City of Hoboken
Hudson Street (4th Street to 10th Street) Water Main Replacement
City Bid No. 21-06

Addendum No. 2

TO: All Bidders of Record

Date Issued: June 21, 2021

This addendum shall be part of the Contract Documents as provided in the Agreement for the above-referenced project. **Acknowledge the receipt of this addendum on Page 00400-5 of the Bid Documents for the project. Failure to do so may subject the bidder to disqualification.**

CLARIFICATIONS

None.

QUESTIONS AND ANSWERS

None.

CHANGES TO SPECIFICATIONS

Section 00301 – Bid Form

Bid Item W-2B: Change estimated quantity amount to 2,850 LF of Furnish and Install 12-inch Diameter Class 54 Ductile Iron Pipe.

Bid Item R-1: Change estimated quantity amount to 920 TON of Furnish and Install Hot Mix Asphalt, 19M64.

A revised complete Bid Form is attached. Changed and/or new bid items are denoted with an “*” in the revised bid form.

Section 01025 – Measurement and Payment

Replace Part 3 Execution, Item 3.29 in its entirety with following:

“3.29 HOT MIX ASPHALT 19M64 (ITEM R-1)

A. Measurement

1. Measurement for Hot Mix Asphalt 19M64 Base Course will be on a per ton basis and shall include all labor to properly place and transport hot mix asphalt. Measurement for pavement repair for which payment will be made will be the actual pavement area affected by the trench within the repair limits shown on the standard details, as measured in tons.

B. Payment

1. Payment for the bituminous concrete base course (Hot Mix Asphalt Base Course) will be

made for the quantity of pavement in tons as measured above at the unit price bid for each thickness class in the Bid Form. These prices shall be considered compensation for all labor, materials and equipment used to pave all streets disturbed during construction, in accordance with the plans, specifications, and details. Included in these prices shall be all costs for leveling courses, cleaning and broom sweeping, tack coats, adjustments of manhole castings and other structures, removal of core samples, replacement of pavement stripes and markings and all else necessary and incidental to the work described herein. The Engineer will use yield calculations to verify in place pavement thickness, and the Contractor will be paid accordingly.”

CHANGES TO DRAWINGS

Sheet CD-3

Detail A – HMA Base Course, 19M64, shall be 12” thick and shall be provided to the existing pavement surface.

Sheet CD-4

Detail F – 2” of Hot Mix Asphalt 9.5M64 Surface Course has been deleted. HMA Base Course, 19M64, shall be 12” thick and shall be provided to the existing pavement surface.

ATTACHMENTS

1. Revised Section 00301 – Bid Form
2. Revised 01025 – Measurement and Payment
3. Revised Sheet CD-3
4. Revised Sheet CD-4

SECTION 00301

City of Hoboken
Hudson Street (4th Street to 10th Street) Water Main Replacement

BID FORM

PROPOSAL OF: _____
Print or Type Name of Bidder

The undersigned declares that the only persons or parties interested in this Bid as principals are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that he/she has carefully examined all the Contract Documents as prepared by CDM Smith Inc., 110 Fieldcrest Avenue, #8, 6th Floor, Edison, New Jersey, 08837 and dated June 2021 have been carefully examined; that the undersigned is fully informed in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. The prices set forth in this bid form shall cover all expenses incurred in performing the Work required under the Contract Documents, of which this Bid Form is a part.

If a Notice of Award accompanied by at least four (4) unsigned copies of the Agreement and all other applicable Procurement Documents is delivered to the undersigned within sixty (60) calendar days, after the actual date of the opening of the Bids, the undersigned will within ten (10) calendar days, excluding Saturdays, Sundays, and legal holidays, after the date of receipt of such notification, execute and return all copies of the Agreement and all other applicable Procurement Documents to OWNER. The premiums for all Bonds required shall be paid by CONTRACTOR and shall be included in the Contract Price. The undersigned further agrees that the Bid Security accompanying this Bid shall become the property of OWNER if the Bidder fails to execute the Agreement as stated above.

The undersigned hereby agrees that the Contract Time shall commence on the date indicated in the Notice to Proceed and **the work shall be completed by October 29, 2021** unless otherwise discussed and approved with the Owner and Engineer in accordance with the terms as stated in the Agreement and Section 01014 - Construction Constraints and Sequence.

In accordance with the above understanding, the undersigned offers and agrees, if this Bid is accepted, to enter into an Agreement with Owner to perform the Work, furnish all materials and complete the Work in its entirety in accordance with the Contract Documents, for the prices listed as follows:

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-1	NA	Not Used		
W-2	DUCTILE IRON PIPE			
W-2A	60 LF	Furnish and Install 16-inch Diameter Class 54 Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
*W-2B	2,850 LF	<i>Furnish and Install 12-inch Diameter Class 54 Ductile Iron Pipe for the Unit Price of:</i> _____ Dollars and _____ Cents	\$ _____	\$ _____
W-2C	40 LF	Furnish and Install 8-inch Diameter Class 54 Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-2D	720 LF	Furnish and Install 6-inch Diameter Class 54 Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-2E	280 LF	Furnish and Install 4-inch Diameter Class 54 Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-2F	60 LF	Furnish and Install 3-inch Diameter Class 54 Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3	DUCTILE IRON FITTINGS			
W-3A	2 EA	Furnish and Install 16-inch Diameter Couplings for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3B	4 EA	Furnish and Install 12-inch Diameter Couplings for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3C	9 EA	Furnish and Install 8-inch Diameter Couplings for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3D	8 EA	Furnish and Install 6-inch Diameter Couplings for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-3E	17 EA	Furnish and Install 6-inch Diameter Caps for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3F	4 EA	Furnish and Install 12-inch by 8-inch Diameter Tee for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3G	15 EA	Furnish and Install 12-inch by 6-inch Diameter Tee for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3H	15 EA	Furnish and Install 12-inch by 4-inch Diameter Tee for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3I	1 EA	Furnish and Install 16-inch by 12-inch Diameter Cross for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-3J	1 EA	Furnish and Install 12-inch by 12-inch Diameter Cross for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3K	2 EA	Furnish and Install 12-inch by 6-inch Diameter Cross for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3L	1 EA	Furnish and Install 12-inch by 8-inch Diameter Reducer for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3M	4 EA	Furnish and Install 4-inch by 3-inch Diameter Reducer for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3N	4 EA	Furnish and Install 16-inch Diameter 45-degree Bend Main Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-3O	2 EA	Furnish and Install 12-inch Diameter 45-degree Bend Main Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3P	4 EA	Furnish and Install 12-inch Diameter 22½-degree Bend Main Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3Q	4 EA	Furnish and Install 12-inch Diameter 11¼ - degree Bend Main Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3R	2 EA	Furnish and Install 8-inch Diameter 11¼-degree Bend Main Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-3S	6 EA	Furnish and Install 6-inch Diameter 45-degree Bend Main Ductile Iron Pipe for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-4	VALVES, BOXES, AND APPURTENANCES			
W-4A	2 EA	Furnish and Install 16-inch Diameter Gate Valve and Box for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-4B	23 EA	Furnish and Install 12-inch Diameter Gate Valve and Box for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-4C	4 EA	Furnish and Install 8-inch Diameter Gate Valve and Box for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-4D	10 EA	Furnish and Install 6-inch Diameter Gate Valve and Box for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-4E	30 EA	Furnish and Install 4-inch Diameter Gate Valve and Box for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-6 HYDRANTS, HYDRANT VALVES, AND APPURTENANCES				
W-6A	11 EA	Furnish and Install Fire Hydrant for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-6B	10 EA	Remove Existing Fire Hydrant for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7 SERVICES, CORPORATION STOPS, AND CURB VALVES				
W-7A	130 EA	Furnish and Install 1" Corporation Stop for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7B	10 EA	Furnish and Install 1 ½" Corporation Stop for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7C	15 EA	Furnish and Install 2" Corporation Stop for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-7D	130 EA	Furnish and Install 1” Curb Valve for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7E	10 EA	Furnish and Install 1 1/2” Curb Valve for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7F	15 EA	Furnish and Install 2” Curb Valve for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7G	2,300 LF	Furnish and Install 1-inch Diameter Type-K Copper for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-7H	200 LF	Furnish and Install 1 ½”-inch Diameter Type-K Copper for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-7I	300 LF	Furnish and Install 2”-inch Diameter Type-K Copper for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-8	60 CY	Excavate Utility Test Pits for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-9	100 CY	Grout and Abandon Existing Mains for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-10	5,950 LF	Dewater Excavated Trench Areas for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-11	50 CY	Perform Additional Excavation for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-12	4,000 CY	Transport and Place ¾-inch Quarry Processed Stone for the Unit Price: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-13	4,000 CY	Remove and Dispose of Unsuitable Fill for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-14	10 CY	Excavate Rocks and Boulders for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-15A	20 LF	Furnish and Install 12-inch Steel Casing for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-15B	100 LF	Furnish and Install 24-inch Steel Casing for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-16	65 CY	Furnish and Install Miscellaneous Concrete for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-17	1 LS	Perform Soil Erosion and Sediment Control for the Lump Sum Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-18	1 LS	Perform Environmental Restoration for the Lump Sum Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-19	1 LS	Maintain and Protect Traffic for the Lump Sum Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-20	Allowance	Allowance – Provide an allowance for Fuel Price Adjustment in the amount of \$5,000 Dollars and no Cents	\$5,000.00	\$5,000.00
W-21	Allowance	Allowance – Provide an allowance for Asphalt Price Adjustment in the amount of \$7,000 Dollars and no Cents	\$7,000.00	\$7,000.00
W-22	Allowance	Allowance – Provide an allowance for Police Traffic Directors in the amount of \$190,000 Dollars and no Cents	\$190,000.00	\$190,000.00
W-23	Allowance	Allowance – Provide an allowance for Concrete, Asphalt, and Soil Testing in the amount of \$40,000 Dollars and no Cents	\$40,000.00	\$40,000.00

HUDSON STREET (4th STREET TO 10th STREET) – WATER MAIN				
Item No.	Estimated Quantity	Brief Description of Items with Unit Bid Price in Words	Unit Bid Price in Figures	Amount in Figures
W-24	Allowance	Allowance – Provide an allowance for Utility Relocation in the amount of \$25,000 Dollars and no Cents	\$25,000.00	\$25,000.00
W-25	Allowance	Contingency Allowance - Provide a contingency allowance in the amount of \$50,000 Dollars and no Cents to be used only as directed by the Engineer for the Owner’s purposes	\$50,000.00	\$50,000.00
W-26	325 CY	Remove Existing Thickened Pavement for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-27	16 Each	Provide Monitoring for Fire Service Switchovers for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-28	6 EA	Sample and Waste Classify Soils for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
W-29	Allowance	Allowance – Provide an allowance for Loading, Hauling, and Disposing Regulated Material in the amount of \$250,000 Dollars and no Cents	\$250,000	\$250,000
W-30	Allowance	Allowance – Provide an allowance for Loading, Hauling, and Disposing Regulated Material (Hazardous) in the amount of \$10,000 Dollars and no Cents	\$10,000	\$10,000

HUDSON STREET (4 th STREET TO 10 th STREET) - RESTORATION				
*R-1	920 TON	Furnish and Install Hot Mix Asphalt, 19M64 for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
R-2	400 SY	Form, Furnish, and Install Concrete Sidewalk, 4-inches Thick with Reinforcement for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
R-3	192 SF	Reset Brick Paver Sidewalks for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
R-4	672 SF	Reset Slate Sidewalks for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____
R-5	925 LF	Form, Furnish, and Install Concrete Curb, 9- inches by 18-inches for the Unit Price of: _____ Dollars and _____ Cents	\$ _____	\$ _____

Note: All work shall be completed by October 29, 2021 unless otherwise discussed and approved with the Owner and Engineer in accordance with the terms as stated in the Agreement and Section 01014 - Construction Constraints and Sequence.

Total Bid Price (Water Main and Restoration) in Words

Total Bid Price (Water Main and Restoration) in Figures

\$ _____

The undersigned also agrees that extra work, if any, will be performed in accordance with Article 10 of the Conditions of the Contract and will be paid for in accordance with Article 11 of the Conditions of the Contract.

Amounts shall be shown in both words and figures, where indicated. In case of discrepancy, the amount shown in words will govern.

The above prices shall include, but is not limited to; all labor, materials, bailing, shoring, removal, overhead, profit, insurance and incidentals required to complete the Work.

BIDDER PRINCIPALS:

The first and last names in full and addresses of all persons and parties interested in the foregoing Bid as principals are as follows:

(Give first and last names in full. In the case of a corporation, see Article 8.3 of the Instructions to Bidders, in the case of a limited liability company [LLC], see Article 8.4 of the Instructions to Bidders, in the case of a partnership, see Article 8.5 of the Instructions to Bidders.)

The all documents listed in Section 00200 – Bid Document Submission Checklist are attached to and made a condition of this Bid.

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work. The undersigned hereby certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this section, the word "person" shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity. (Bidder shall sign this Bid Form in accordance with the Instructions to Bidders, Sections 8.3, 8.4 or 8.5 as applicable. Corporate Bidders must provide a certified copy of a Corporate Resolution authorizing the execution and submission of the Bid)

The undersigned is (circle one):

(an Individual)
(a Partnership)
(a Corporation)

Bidder's Name: _____
(Please print or type your name)

Bidder's Address: _____
(Please print or type address)

Signature: _____

Title: _____

Date: _____, 20__

Social Security Number
or Federal Identification
Number:

Corporate Seal:
(if corporation)

Notice of acceptance should be mailed, telegraphed, or delivered to the undersigned Bidder at the following address:

(Name)

(Title)

(Address)

(City, State and Zip Code)

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE

- A. This Section includes specification for the measurement and payment of the various elements of the Work; with provisions applicable to lump sum prices, unit prices, and allowances, if applicable.
- B. In the case of conflict between this Section and the measurement methods specified in the individual technical Sections, the measurement methods in the technical specifications shall govern.
- C. The Contractor shall receive no payment for any portion of the work until it is installed. The only exception to this is payment for stored materials on site if the Contract provides for the payment of stored materials. Partial payment may be requested for items partially installed.

1.02 RELATED WORK

- A. Schedule of Values is included in Section 01370.
- B. Application for Payment are included in Section 01026.
- C. Bid Form is included in Section 00301.

1.03 LUMP SUM ITEMS

- A. Lump Sum measurement will be for the entire item, unit of work, structure, or combination thereof, as specified and as indicated in the Bid Form. Measurement and payment for all bid items indicated as Lump Sum shall include the cost of all labor, materials and equipment necessary to furnish, install, clean, test, and place each bid item into operation; including permitting, general conditions, overhead and profit.
- B. Progress payments will be based on the Schedule of Values prepared by the Contractor and approved by the Engineer and Owner before acceptance of the first Application for Payment.
- C. In order for the Contractor to request progress payments against Lump Sum items, Contractor shall provide a disaggregation or breakdown in sufficient measurable detail that is acceptable to the Engineer.
- D. Measurement
 - 1. Measurement shall be based on the estimated percent complete of each item of the Schedule of Values, as determined by the Engineer.
- E. Payment
 - 1. Payment will be made at the price proportional to the completion percentages approved by the Engineer.

1.04 ALLOWANCES

- A. Allowances, if any, specified in the Contract Documents and indicated in the Bid Form, are considered provisional amounts to be used only if needed. Allowances are exclusive of work indicated in the Contract Documents for which payment is included under other items in the Bid Form. No work may be performed under an allowance without prior written approval of the Owner.
- B. Any unused balance of the allowances shall revert to the Owner upon completion of the project. Prior to final payment, the original amount provided for allowances shall be adjusted to actual costs by deductive Change Order, adjusting the contract price, accordingly.
- C. The Contractor shall make no claim, nor receive any compensation, for anticipated profits, loss of profit, damages, or any extra payment due to any unexpended portion of the allowances.
- D. The Contractor is to include time for allowance work in the construction schedule. No adjustment of Contract Time shall be allowed for any work performed under allowance items.
- E. Allowance items shall be included in the Schedule of Values.
- F. Unless otherwise indicated in the specific measurement and payment provisions under allowance items, the measurable and allowable costs for work performed under an Allowance item shall be limited to the actual, demonstrable, and direct costs associated with that Allowance item. Shipping and sales taxes are **not** allowable costs.
 - 1. No mark-up for overhead or profit shall be included for payment under an Allowance account item. Overhead and profit shall be included in the contract bid or allocated across other bid items.

1.05 UNIT PRICE ITEMS

- A. Quantity and measurement estimates stated in the Bid Form are estimates for bidding purposes only. Actual payments shall be based on actual quantities installed, in-place, as measured and/or verified by the Engineer.
- B. Unless otherwise provided in the General Conditions, the bid unit prices shall be in effect throughout the contract duration, regardless of variances between the estimated quantities and the actual installed quantities.
- C. The Contractor shall make no claim, nor receive any compensation, for anticipated profits, loss of profit, damages, or any extra payment due to any difference between the amounts of work actually completed, or materials or equipment furnished, and the estimated quantities.
- D. Unless otherwise approved by the Owner, any unit quantities exceeded may not be invoiced until the estimated quantity is increased by contract change order.
- E. Contractor shall assist Engineer by providing necessary equipment, workers, and survey personnel as required to measure quantities.

F. Measurement

1. Measurement of quantities expressed as volume shall be based upon a neat plan line projection to the work limits as determined by survey record drawings for each item with no additional allowances for shrinkage, swelling or creep.

- G. Measurement of quantities expressed as area shall be based upon a horizontal, planimetric projection to the work limits as determined by survey record drawings for each item with no additional allowances for slopes.

- H. Measurement of linear items such as piping will be for quantities actually field installed to the specified work limits, based upon surveyed stations recorded along the straight or curved centerline of each respective item.

- I. Stipulated Sum/Price Measurement: Items shall be measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

- J. Measurement for progress payment shall be made by, or approved by, the Engineer based on the estimated effective quantity installed. The effective quantity installed represents the actual units or quantities installed, adjusted for incomplete elements or components.

1. Unless otherwise provided for in the Bid Form unit price items are all-inclusive of all related work, direct and indirect, to provide a complete and functional item. For example, underground pipe installation would include trenching, shoring, dewatering, bedding, installation, backfill, testing, flushing, disinfection, and commissioning; including all labor, materials and equipment necessary to furnish, install, clean, test, and place into operation; including permitting, general conditions, overhead and profit.
2. The final measurement shall be based on actual quantities, jointly measured by Contractor and Engineer, complete, fully, tested and placed into service.

K. Payment

1. Progress payments shall be in accordance with the contract documents based on estimated effective quantities installed, paid at the bid unit price.
2. The final payment for Work governed by unit prices shall be based on actual quantities, fully installed, tested and accepted by the Engineer multiplied by the unit sum/price for the Work, paid at the bid unit price.
3. Upon installation, the unit cost for the item will be paid less any prior payments for stored material. Upon installation, an adjustment will be made in payment to account for the quantity of materials actually installed in the work. Final payment will be subject to the acceptance of the unit item following approval of final testing, if applicable. No payment will be made for material in excess of what is actually installed in the work.
4. Payment for unit price items will be made monthly until completion of each unit price item based on quantity estimated by Contractor, and verified by the Engineer. Final payment will be based on the actual quantity installed and as calculated from As-Built Drawings.

1.06 ALTERNATES

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Contract Documents that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems or installation methods described in the Contract Documents.
- B. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.
- C. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into the Project. Include as part of each alternate, miscellaneous devices, accessory options, and similar items incidental to or required for a complete installation whether or not indicated as part of the alternate.
- D. Execute accepted alternates under the same conditions as other work of the Contract.
- E. The Schedule of Alternates is included at the end of this Section.

1.07 PAYMENT

- A. Payment for each lump sum and unit price stated in the itemized bid shall constitute full compensation for all required labor, products, tools, equipment, material, plant, transportation, services and incidentals; erection, application or installation of an item of the Work required to complete all work specified under that particular item including cleanup, and all costs for doing related work as set forth in these Specifications and /or on the Contract Drawings or implied in carrying out their intent.
- B. The price bid for each lump sum and unit price item stated in the itemized bid shall be deemed to include overhead and profit.
- C. Relevant specification section references are provided to facilitate pricing. However, Contractor shall, using his own judgment, determine which sections are relevant to each pay item prior to submitting a comprehensive price that covers all Work identified in the Contract Documents.
- D. Requests for payment shall be in accordance with the General Conditions.
- E. Payment will be made to the limits as specified in the Contract Documents. If the constructed limits are less than the specified limit, payment will be made at the prices given in the Schedule of Prices to the actual limits of construction as shown on the As-built Drawings. Payment for quantities that exceed the specified contract limits will only be made with the approval of the Engineer and shall be at the unit rates given in the Schedule of Prices. Payment for quantities that exceed the contract quantities will be made through an approved Change Order in accordance with the General Conditions of the Contract.
- F. The Contractor shall receive no payment for any portion of the work until it is installed. The only exception to this is payment for stored materials on site if the Contract provides for the payment of materials adequately stored and protected until installation. Partial payment may be requested for items partially installed.

G. Materials will be paid for as specified in the General Conditions. All such requests must have material quantities verified by the Engineer prior to payment.

1. Qualification for partial payment for materials delivered shall be in accordance with the General Conditions.

1.08 VARIATIONS IN ESTIMATED QUANTITIES

- A. The quantities given in the Contract Documents are approximate only, and are given as a basis for the uniform comparison of bids, and Owner does not expressly or by implication warrant that the actual amount of work will correspond therewith.
- B. The Contractor must provide, for Unit Price Work, a proposed contract price determined on the basis of estimated quantities required for each item. The estimated quantities of items are not guaranteed and are solely for the purpose of comparing bids. Each such unit price will be deemed to include an amount for overhead, profit and indirect costs for each separately defined item.
- C. An increase or decrease in the quantity for any unit price item shall not be regarded as sufficient grounds for an increase or decrease in the price of the items except as provided in the General Conditions.
- D. If the actual Work requires more or fewer quantities than those indicated in the Bid Form, provide the required quantities at the unit sum/prices given in the Schedule of Prices and in accordance with the General Conditions of the Contract.

1.09 DEFECT ASSESSMENT

- A. Replace defective Work, or portions of defective Work, not conforming to specified requirements.
- B. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Engineer will direct a remedy in accordance with the requirements of Article 13 of the General Conditions.

1.10 AUTHORITY

- A. Measurement methods delineated in the individual specification sections are intended to complement the criteria of this section. In the case of conflict between this Section and the measurement methods specified in the individual technical Sections, the measurement methods in the technical specifications shall govern.
- B. The Contractor shall take all measurements and compute quantities. The Engineer will verify measurements and quantities.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 MOBILIZATION – NOT USED

3.02 DUCTILE IRON WATER MAIN PIPE (ITEM W-2)

A. Measurement

1. Ductile iron water main of the size specified on the bid form will be measured in place on a linear foot basis. Measurement for length will be along the horizontal centerline of the pipe, with deductions for valves or fittings. Measurement will be to the nearest tenth of a foot. Measurement for payment does not signify that the water main is accepted.
2. The Contractor shall assist the Engineer with making measurements.

B. Payment

1. Payment for furnishing new ductile iron pipe of the class and size specified will be made for the respective quantities as above determined, at the applicable contract price per linear foot bid under Items W-2A through W-2F in the Bid Form.
2. Payment for furnishing and installing ductile iron pipe will be made for the quantity as above determined at the contract price per each bid in the Bid Form. Such price and payment shall be full compensation for furnishing all labor, site preparation, equipment, and materials for measurement for trench excavation (excluding rock and boulder excavation) including furnishing, installing and removing sheeting and steel decking, where required; removal and disposal of existing pavement including top, binder, base, and subbase courses, thrust block furnishment and installation; concrete piers; cleaning and grubbing; maintenance and protection of traffic supporting existing utilities within the excavation; transporting and installing new ductile iron pipe; laying and jointing the pipe, including specified joint restraints; insulation where required; bedding; backfilling; compaction; polywrapping the pipe; temporary pavement; restoring the trench surface to grade; driveway restoration (gravel, stone pavers, earthen, asphalt, or concrete); removal and replacement of all concrete headwalls, curb, gutter, sidewalk and vegetated (non-paved) surfaces disturbed by the excavation; inlet protection and other erosion and sediment control measures; cleaning, disinfection and testing of the pipe; furnishing and installing any geotextile filter fabric; daily pavement marking restoration and all else in connection therewith and incidental thereto for which separate payment is not provided under other Items in the Bid Form.
3. Payment for furnishing and installing ductile iron pipe shall also include payment for disinfection and testing of the newly-installed pipe. Payment shall fully reimburse the Contractor for all labor, materials, equipment, and incidentals required for sampling; cleaning; flushing; pressure testing; disinfection; de-chlorination and disposal of all water; testing of chlorine levels in discharge water; and all else in connection therewith and incidental thereto for which separate payment is not provided under other Items. Cleaning, disinfection, and testing shall be for the entire transmission main and appurtenances installed.

4. Payment for rock and boulder excavation shall be included in W-14.

3.03 DUCTILE IRON FITTINGS (ITEM W-3)

A. Measurement

1. Ductile iron fittings (tees, bends, reducers, solid sleeves, end caps, etc.) will be measured for payment as the number of each at sizes actually furnished and installed in the completed project and accepted by the Engineer.

B. Payment

1. Payment for installing new ductile iron fittings of the class and size specified will be made for the respective quantities quantity as above determined at the applicable contract price each under Items W-3A through W-3Z in the Bid Form.
2. Payment for furnishing and installing ductile iron fittings will be made for the quantity as above determined at the contract price per each bid in the Bid Form. Such price and payment shall be full compensation for furnishing all labor, site preparation, equipment, and materials for measurement for excavation (excluding rock and boulder excavation) including furnishing, installing and removing sheeting and steel decking, where required; furnishing and installing thrust blocks; removing and disposing of excess and unacceptable excavation material; dewatering and drainage; transporting and installing the fitting, furnishing and installing sufficient restraint for the fitting; insulation where required; bedding; polywrapping the fittings; backfilling; compaction; temporary pavement; driveway restoration (gravel, stone pavers, earthen, asphalt, or concrete); replacement of all concrete curb, gutter, sidewalk and vegetated surfaces disturbed by the excavation; cleaning, disinfection and testing of the fittings; and all else in connection therewith and incidental thereto for which separate payment is not provided under other Items.
3. Payment for rock and boulder excavation will be made under W-14.

3.04 VALVES, BOXES, AND APPURTENANCES (ITEM W-4)

A. Measurement

1. Valves, boxes, and appurtenances shall be measured as the number of each at sizes actually installed in the completed project and accepted by the Engineer in accordance with the Plans and Specifications or as directed by the Engineer.

B. Payment

1. Payment shall include furnishing and installing buried gate valves and insertion valves, with boxes with lids, and extension stems to the size listed in the Bid Form.
2. Payment for furnishing and installing buried gate valves shall include transporting and installing buried valves, boxes, covers and valve extension stems. Such price and payment shall be full compensation for furnishing all labor, site preparation, equipment, and materials for excavation (excluding rock and boulder excavation) including furnishing, installing and removing sheeting and steel decking, where required; furnishing and installing thrust blocks; removing and disposing of excess and unacceptable excavation

material; dewatering and drainage; supporting existing utilities within the excavation; transporting and installing valve, valve box, and extension stem material; and furnishing and installing fittings with necessary joint restraints; insulation where required; including furnishing and placing screened gravel where required, setting, jointing, furnishing and installing concrete support blocks; backfilling, providing concrete pad (where box is located off road), temporary pavement, driveway restoration (gravel, stone pavers, earthen, asphalt, or concrete), thrust blocks, cleaning, chlorinating, testing, and all work required for or incidental to the satisfactory completion of the Items for which separate payment is not provided under other items in the Bid Form.

3. Payment for rock and boulder excavation will be made under W-14.

3.05 TAPPING SLEEVES AND VALVES (ITEM W-5) - NOT USED

3.06 HYDRANTS, HYDRANT VALVES, AND ASSEMBLIES (ITEM W-6)

A. Measurement

1. New fire hydrants, hydrant valves, and assemblies shall be measured as the number of each actually installed in the completed project and accepted by the Engineer.
2. New hydrant laterals will be measured for payment on a linear foot basis under Item W-2.

B. Payment

1. Payment for shall furnishing and installing fire hydrants, complete with hydrant valves and boxes with lids, and valve extension stems as determined at the contract price in the Bid Form. Such price and payment shall be full compensation for furnishing all labor, site preparation, equipment, and materials for measurement for saw cutting of existing concrete and bituminous pavement, excavation (excluding rock and boulder excavation) including furnishing, installing and removing sheeting and steel decking, where required; removing and disposing of excess and unacceptable excavation material; dewatering and drainage; supporting existing utilities within the excavation; transporting and installin the new hydrant; transporting and installing valve, valve box, and extension stem material; furnishing and installing thrust blocks; and furnishing and installing fittings with necessary joint restraints; insulation where required; including furnishing and placing screened gravel where required, setting, jointing, furnishing and installing concrete support blocks; backfilling, providing concrete pad (where box is located off road), temporary pavement, driveway restoration (gravel, stone pavers, earthen, asphalt, or concrete), cleaning, chlorinating, testing, and all work required for or incidental to the satisfactory completion of the Items for which separate payment is not provided under other items in the Bid Form.
2. This item includes removal, transport, and delivery of the existing hydrant to the Owner's facility.
3. New hydrant laterals will be paid for under Item W-2.
3. Payment for rock and boulder excavation will be made under W-14.

3.07 SERVICES, CORPORATION STOPS, AND CURB VALVES (ITEM W-7)

A. Measurement

1. Copper tubing for water service connections installed will be measured as the actual number of linear feet of each size of tubing installed in the completed project as measured from the corporation stop at the water main connection to the end of the new service line installed at the curb stop.
2. Curb stops will be measured as the actual number of each size of curb stops with boxes installed in the completed project and accepted by the Engineer.
3. Corporation stops will be measured as the actual number of each size of corporation stop installed in the completed project and accepted by the Engineer.

B. Payment

1. Payment for furnishing and installing copper tubing service connections of the required size will be made for the respective quantities as determined above at the applicable price in the Bid Form. Such price and payment shall be full compensation for furnishing all labor, site preparation, equipment, and materials for measurement for saw cutting of existing concrete and bituminous pavement, sidewalk, and curbing, excavation (excluding rock and boulder excavation) including furnishing, installing and removing sheeting and steel decking, where required; removing and disposing of excess and unacceptable excavation material; dewatering and drainage; supporting existing utilities within the excavation; and furnishing and installing fittings with necessary joint restraints; insulation where required; including furnishing and placing screened gravel where required, setting, jointing, furnishing and installing concrete support blocks; backfilling, temporary pavement, driveway, curb, and sidewalk restoration (gravel, stone pavers, earthen, asphalt, or concrete), cleaning, chlorinating, testing, and all work required for or incidental to the satisfactory completion of the Items for which separate payment is not provided under other items in the Bid Form.
2. Payment for furnishing and installing curb stops of the required size will be made for at the respective quantities as determined above at the applicable unit price bid in the Bid Form. Price and payment shall be full compensation for all work of furnishing and installing the curb stops with boxes, all excavation (excluding rock and boulder excavation), backfilling, setting boxes and all else incidental thereto for which payment is not provided under other items in the Bid Form.
3. Payment for furnishing and installing corporation stops of the required size will be made for the respective quantities as determined above at the applicable unit price bid in the Bid Form. Price and payment shall be full compensation for all work of furnishing and installing the corporation stops and appurtenances, excavation (excluding rock and boulder excavation), backfilling and all else incidental thereto for which payment is not provided under other items in the Bid Form.
4. Payment for rock and boulder excavation will be made under W-14.

3.08 UTILITY TEST PITS (W-8)

A. Measurement and Payment

1. Test pits for the purpose of locating underground utilities are specified under Section 02 41 00. Test pits shall be made where shown on the Drawings and as directed by the Engineer. The measured quantity of excavation for test pits will be the actual number of cubic yards removed, as determined by the Engineer. Test pits shall be paid at the unit price bid in the Bid Form for the above determined quantity and shall be full compensation for furnishing all labor, equipment and materials for saw cutting of existing bituminous and concrete surfaces, excavation (excluding rock and boulder excavation) including furnishing, installing and removing sheeting and steel decking, where required; removing and disposing of excess and unacceptable excavation material; dewatering and drainage; recording the materials, size, depth and planimetric location of the existing water main and adjacent utilities, particularly gas utilities relative to three surrounding benchmarks (i.e. face of curb, utility pole, etc.) and providing this information immediately to the Engineer; backfilling with appropriate material; compaction; replacement of all curb, gutter, sidewalk and vegetated surfaces disturbed by the excavation unless otherwise directed by the Engineer; and all else in connection therewith and incidental thereto for which separate payment is not provided under other Items.

3.09 ABANDONMENT (ITEM W-9)

A. Measurement and Payment

1. Measurement shall be made for Item W-9 per cubic yard of water main void to be filled with flowable fill. Payment under Item W-9 shall fully reimburse the Contractor for all labor, materials, equipment, and incidentals required to abandon the existing water main within the area of work to the cut and cap, including the flowable fill and capping of both ends (including the end caps); and all else in connection therewith and incidental thereto for which separate payment is not provided under other Items.

3.10 DEWATERING EXCAVATED TRENCH AREAS (ITEMS W-10)

A. Measurement

1. Dewatering for excavated water main trench areas shall be measured as the number of linear feet of trench as shown on the drawing or as directed by the Engineer.
2. Dewatering for excavated gray infrastructure area shall be measured as the number of square feet of excavated area as shown on the drawing or as directed by the Engineer.

B. Payment

1. Payment for dewatering excavated trench/gray infrastructure areas, will be made for the quantity determined above at the appropriate unit price bid in the Bid Form. Price and payment shall be full compensation for all labor, materials, equipment, and incidentals required for dewatering, including pumps, hoses, disposal, permitting, and all else incidental thereto for which payment is not provided under other items in the Bid Form.

3.11 ADDITIONAL EXCAVATION (ITEMS W-11)

A. Measurement

1. Additional Excavation shall be measured as the number of cubic yards ordered by the Engineer to be excavated which are not included under other items of this Contract.

B. Payment

1. Payment for Additional Excavation, will be made for the quantity determined above at the appropriate unit price bid in the Bid Form. Price and payment shall be full compensation for clearing and grubbing, excavation of all materials, sheeting and bracing, backfilling, compaction, maintenance of traffic, and all else incidental thereto for which payment is not provided under other items in the Bid Form.

3.12 3/4"-INCH QUARRY PROCESSED STONE (ITEMS W-12)

A. Measurement

1. 3/4"-inch Quarry Processed Stone shall be measured as the number of cubic yards of 3/4"-inch Quarry Processed Stone material placed within the trench as measured installed, as shown in the drawings or as directed by the Engineer.

B. Payment

1. Payment for 3/4"-inch Quarry Processed Stone, will be made for the quantity determined above at the appropriate unit price bid in the Bid Form. Price and payment shall be full compensation for furnishing and installing 3/4"-inch Quarry Processed Stone, excavation of all materials, compaction, disposal of materials which have been removed, and all else incidental thereto for which payment is not provided under other items in the Bid Form.

3.13 REMOVAL AND DISPOSAL OF UNSUITABLE FILL (ITEMS W-13)

A. Measurement

1. Removal and disposal of unsuitable fill shall be measured as the number of cubic yards of unsuitable fill to be removed within the limits as directed by the Engineer.

B. Payment

1. Payment for removal of unsuitable fill, will be made for the quantity determined above at the appropriate unit price bid in the Bid Form. Price and payment shall be full compensation for excavation, transportation, proper disposal, and disposal fees of material which have been removed and all else incidental thereto for which payment is not provided under other items in the Bid Form.

3.14 ROCK AND BOULDER EXCAVATION (ITEMS W-14)

A. Measurement

1. When rock is encountered, the material shall be uncovered and the Engineer notified. The Engineer will take cross sections of the rock surface. If the Contractor fails to uncover the rock and notify the Engineer to allow ample time for cross-sectioning the undisturbed material, the Contractor shall have no right-of-claim to any classification other than that allowed by the Engineer. Removal of old concrete foundations, structures, or headwalls, if

any, shall be classified as rock.

2. Measurements of rock excavation will extend 8-inches below the bottom of the pipe or structure. Trench widths will be as indicated in the Contract Documents.
3. Boulders of more than 2 cubic yards in volume when encountered in earth or trench excavation will be measured for payment.
4. The quantity of rock and boulder excavation to be paid for will be the number of cubic yards of rock or boulders measured in place, as directed by the Engineer, within the limits herein specified.

B. Payment

1. Payment for rock and boulder excavation will be made for the quantities as above determined, measured in cubic yards, at the unit price bid in the Bid Form, which price and payment will be full compensation for excavation or otherwise breaking and disposing of rock, backfilling and providing screened gravel, for any deficiency of trench backfill and all work incidental thereto, for which payment is not provided under other items. No payment will be made for refill material to replace any deficiency of backfill material.

3.15 STEEL CASING PIPE (ITEM W-15)

A. Measurement

1. Steel casing pipe of the sizes specified on the Bid Form shall be measured in place on a linear foot basis. Measurement for length will be along the horizontal centerline of the pipe. Measurement will be to the nearest tenth of a foot. Measurement for payment does not signify that the casing pipe is accepted.
 - a. The Contractor shall assist the Engineer with making measurements.

B. Payment

1. Payment for steel casing pipe will be measured as the actual length and diameter installed. sleeves shall be paid at the unit price in the Bid Form for the above determined quantity and shall be full compensation for furnishing all labor, equipment, materials for installing and strapping the encasement, casing chocks, end caps, and all else in connection therewith and incidental thereto for which separate payment is not provided under other Items.

3.16 MISCELLANEOUS CONCRETE (ITEM W-16)

A. Measurement

1. Miscellaneous concrete shall be measured in place in the completed work by average dimensions in each of three planes. Slip measurement shall not be allowed.

B. Payment

1. Payment for concrete used for miscellaneous purposes, approved by the Engineer, shall be made for the quantity measured in place (cubic yards) at the unit price bid in the Bid Form

and shall be full compensation for all work required for, or incidental to the satisfactory completion of the Item for which separate payment is not provided under other items in the Bid Form.

3.17 SOIL EROSION AND SEDIMENT CONTROL (ITEMS W-17)

A. Measurement

1. Soil erosion and sediment control at the locations shown on the Drawings, as specified and as required by permits, shall be measured as a single item.

B. Payment:

1. Payment for soil erosion and sediment control shall be made at the contract lump sum price and shall include all labor, materials, equipment, erosion control devices, maintenance, removal of all erosion control devices, restoration, and all other items incidental to the performance of this work.

3.18 ENVIRONMENTAL RESTORATION (ITEMS W-18)

A. Measurement

1. Environmental restoration as specified in Section 01110, shall be measured as a single item.

B. Payment

1. Payment of the lump sum established in the Schedule of Prices shall be full compensation for all labor, materials, and equipment required to do all the work specified in Section 01110 and as shown on the Drawings, including the planting of any new trees. Payment shall fully reimburse the Contractor for cooperating with and meeting all the requirements of the Governing Regulatory Agencies relative to construction as shown on the Drawings and as specified and as may be required or necessary to complete the Work.

3.19 MAINTENANCE AND PROTECTION OF TRAFFIC (ITEMS W-19)

- A. Payment for maintenance and protection of traffic shall be made at the lump sum price bid in the Proposal. This price shall include the fixed signs and traffic control devices for day and night work, Traffic Control Coordinator, and all labor, equipment, and materials necessary for erecting and maintaining the signs and traffic control devices, relocating traffic control devices, protection or replacement of traffic signalization equipment, and all else necessary therefore and incidental thereto.

3.20 FUEL AND ASPHALT PRICE ADJUSTMENT – ALLOWANCE (ITEMS W-20 AND W-21)

- A. The Owner will measure and make payment for Fuel and Asphalt Price Adjustment on a lump sum basis.
- B. With the adjustments:

1. The Owner has provided in the proposal a maximum lump sum allowance for the price adjustment that the owner has found to be reasonable and has funds available to pay.
2. The maximum increased payment the Owner will make due to a net increase in costs of items subject to price adjustment is the lump sum amount established in the proposal.
3. The maximum reduction in payment that the Owner will make due to a net decrease in costs of items subject to price adjustment is not constrained by the Lump Sum amount established in the proposal.
4. Final payment for the price adjustment items in the Proposal will be an additional amount equal to the lesser of the actual net increase in costs or the Proposal Lump Sum amount or, if there is a net decrease in costs, will be a reduction (credit) equal to the net decrease in costs.
5. Adjustments due to decreases in costs will always be made; however, no adjustment due to increases in cost will be made for the portion of work items completed after the contract completion date set forth in the Agreement unless an extension time is approved.
6. Prior to each progress payment, the Contractor will provide, in form acceptable and for review and approval by the Engineer, a proposed calculation of required price adjustments for the items constructed during the period.
7. NO FUEL ADJUSTMENT WILL BE MADE IN ANY MONTH WHERE THE FUEL PRICE INDEX HAS CHANGED LESS THAN 5% FROM THE BASIC FUEL PRICE.

3.21 POLICE TRAFFIC DIRECTORS - ALLOWANCE (ITEM W-22)

- A. Measurement for police traffic directors shall be the direct payment of costs related to police traffic directors on site for traffic duties. The Contractor will be required to submit copies of invoices showing the hours and pay rates for each officer. The Contractor cannot add profit, administrative, overhead or any other fees to the hourly rate billed by the municipality. The payment for police traffic directors will be made from the allowance.

3.22 CONCRETE, ASPHALT AND SOIL TESTING - ALLOWANCE (ITEM W-23)

- A. Measurement for concrete, asphalt, and soil testing shall be the direct payment of costs related to concrete, asphalt, and soil testing in accordance with Section 01400. The Contractor will be required to submit copies of invoices showing a breakdown of the tests performed including description of test, material and parameters tested, number of tests, unit prices, location(s) of test, and any other pertinent information . The Contractor cannot add profit, administrative, overhead or any other fees, and payment will be made from the allowance.

3.23 UTILITY RELOCATION - ALLOWANCE (ITEM W-24)

- A. Measurement for utility relocation shall be the direct payment of costs related to the relocation of existing active utilities if necessary. The Contractor will be required to submit copies of invoices showing the charges from the utility. The Contractor cannot add profit, administrative, overhead or any other fees. The payment for utility relocation will be made from the allowance.

3.24 CONTINGENCY ALLOWANCE (ITEM W-25)

- A. Work for Bid Item W-25 shall be as directed by the Engineer for the Owner's purposes. The Allowance amount shall be as indicated on the Bid Form. Payment will be made in accordance with the Contract provisions for this item and shall be full compensation to the Contractor for providing all labor, materials, equipment, and incidentals required as directed by the Engineer.

3.25 EXISTING THICKENED PAVEMENT REMOVAL (ITEM W-26)

A. Measurement

1. When thickened pavement is encountered, the material shall be uncovered and the Engineer notified. The Engineer will take cross sections of the rock surface. If the Contractor fails to uncover the thickened pavement and notify the Engineer to allow ample time for cross-sectioning the undisturbed material, the Contractor shall have no right-of-claim to any classification other than that allowed by the Engineer.
2. Thickened pavement, in the form of layered, mixed materials consisting of approximately 20 inches of hot mix asphalt, 8 inches cobble pavement, and other miscellaneous materials including rail ties, is anticipated at the following locations:
3. Trench widths will be as indicated in the Contract Documents.
4. The quantity of thickened pavement removal to be paid for will be the number of cubic yards of rock or boulders measured in place, as directed by the Engineer, within the limits herein specified.

B. Payment

1. Payment for thickened pavement removal will be made for the quantities as above determined, measured in cubic yards, at the unit price bid in the Bid Form, which price and payment will be full compensation for excavation or otherwise breaking and disposing of thickened pavement, backfilling and providing screened gravel, for any deficiency of trench backfill and all work incidental thereto, for which payment is not provided under other items. No payment will be made under Items 6 and 7 for refill material to replace any deficiency of backfill material.
2. Payment for this item will only be made over and above typical existing pavement sections in the City, which is 12 inches thick and includes top course, binder course, base course, and subbase, and shall be paid for under Item W-2.

3.26 MONITORING FOR FIRE SERVICE SWITCHOVERS (ITEM W-27)

A. Measurement

1. Monitoring for fire service switchovers (from the old main to the new main) shall be measured as the actual number of fire services switched over as accepted by the Engineer. Monitoring shall be required throughout the duration of each service tie-over from existing to new services for properties with fire suppression systems.

B. Payment

1. Payment for monitoring for fire service switchovers shall all labor, materials, equipment, professional services, and incidentals including, but not limited to, coordination with the Owner and Engineer, proper notification of the property owner, onsite monitoring of tie-over, and temporary standby pump installation to ensure the properties with existing fire suppression systems are continually protected.

3.27 SAMPLE AND WASTE CLASSIFY SOILS (ITEM W-28)

A. Measurement and Payment

1. materials per NJDEP requirements. The sample shall be acquired at the depth required This item will be paid on a per location basis. This item includes but is not limited to necessary sampling, testing, classification, and disposal of all excavated material, field sampling and laboratory analysis, and submittal of NJDEP forms, preparation and obtaining permits and paying fees for classifying excavated in the field. The sample shall be tested for all the parameters required by the Contractor's selected disposal site. Any additional sampling required by the disposal facility will be at the contractor's expense."

3.28 LOADING, HAULING, AND DISPOSING OF REGULATED MATERIAL (ITEM 29) &
LOADING, HAULING, AND DISPOSING OF REGULATED MATERIAL (ITEM W-30)

A. Measurement and Payment

1. Payment for quantities for these bid items shall be made under the allowance provided in the Bid Form. The Contractor shall provide a unit price per ton after completion of the sampling, testing, and classification of the excavated material. The price shall include labor, equipment, material, excavation, staging, hauling, disposal at a proper disposal facility, all else necessary and incidental thereto the work of soil disposal. The unit price shall be based on the actual direct cost for the work indicated. A breakdown of the cost shall be provided to the Engineer for review and approval.

3.29 HOT MIX ASPHALT 19M64 (ITEM R-1)

A. Measurement

1. Measurement for Hot Mix Asphalt 19M64 Base Course will be on a per ton basis, and shall include all labor to properly place and transport hot mix asphalt. Measurement for pavement repair for which payment will be made will be the actual pavement area affected by the trench within the repair limits shown on the standard details, as measured in tons.

B. Payment

1. Payment for the bituminous concrete base course (Hot Mix Asphalt Base Course) will be made for the quantity of pavement in tons as measured above at the unit price bid for each thickness class in the Bid Form. These prices shall be considered compensation for all labor, materials and equipment used to pave all streets disturbed during construction, in accordance with the plans, specifications, and details. Included in these prices shall be all costs for leveling courses, cleaning and broom sweeping, tack coats, adjustments of manhole castings

and other structures, removal of core samples, replacement of pavement stripes and markings and all else necessary and incidental to the work described herein. The Engineer will use yield calculations to verify in place pavement thickness, and the Contractor will be paid accordingly.

3.30 SIDEWALK, 4-INCHES THICK WITH STEEL REINFORCING (ITEM R-2)

A. Measurement

1. The quantity of sidewalk for which payment will be made will be the square yardage of actual concrete slab formed, furnish, completed and approved in accordance with the Plans or as directed by the Engineer.

B. Payment

1. Payment for the quantity shall be made for the square yardage as measured at the unit price as listed in the Bid Form. These prices shall be considered compensation for all labor, materials, and equipment used to form, transport, place, and cure concrete sidewalk in accordance with the plans, specifications, and details. Included in this price shall be leveling, forming, placing and tying steel reinforcing, finishing, testing, curing, and all else necessary and incidental to the work described herein.

3.31 RESET BRICK PAVERS (ITEM R-3)

A. Measurement

1. The quantity of pavers to be reset, for which payment will be made, shall be the square footage of pavers reset per the details on the Drawings, and in the specifications.

B. Payment

1. Payment for resetting pavers shall be any work completed in place and approved by the Engineer, will be made for the quantity determined above at the appropriate unit price bid in the Bid Form. Price and payment shall be full compensation for resetting and leveling pavers, including labor, materials, and all else incidental thereto for which payment is not provided under other items in the Bid Form.

3.32 RESET SLATE SIDEWALKS (ITEM R-4)

B. Measurement

1. The quantity of slate sidewalk to be reset, for which payment will be made, shall be the square footage of slate reset per the details on the Drawings, and in the specifications.

B. Payment

2. Payment for resetting slate sidewalks shall be any work completed in place and approved by the Engineer, will be made for the quantity determined above at the appropriate unit price bid in the Bid Form. Price and payment shall be full compensation for resetting and leveling slate, including labor, materials, and all else incidental thereto for which payment is not

provided under other items in the Bid Form.

3.33 CONCRETE CURBING, 9-INCH BY 18-INCH (ITEM R-5)

A. Measurement

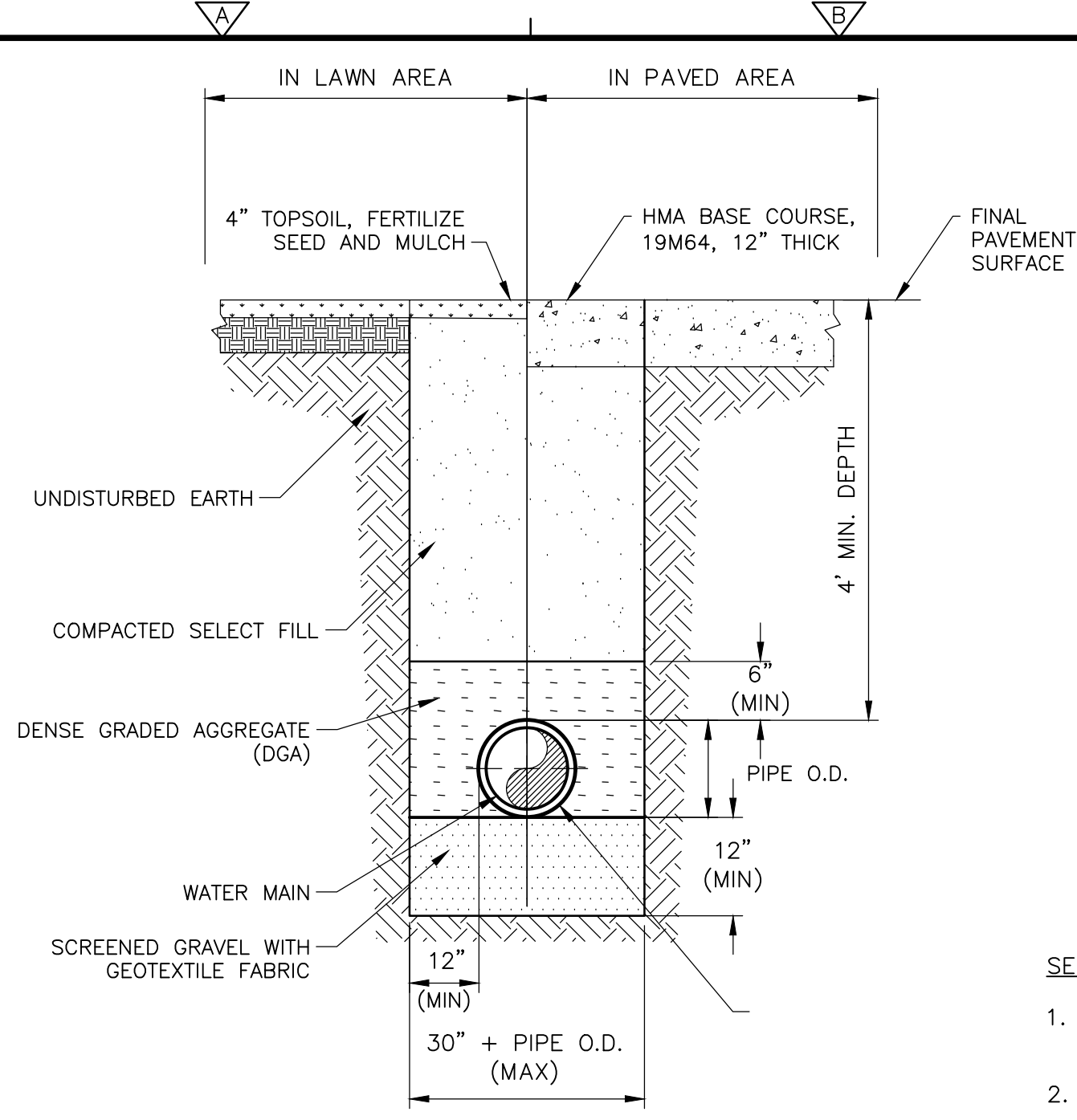
1. The quantity of curbing for which payment will be made will be the linear footage of complete curb-line actually installed in accordance with the Plans or as directed by the Engineer.

B. Payment

1. No additional payment will be made for installing in areas where hand forming may be necessary or when depressed curb forming is required.

END OF SECTION

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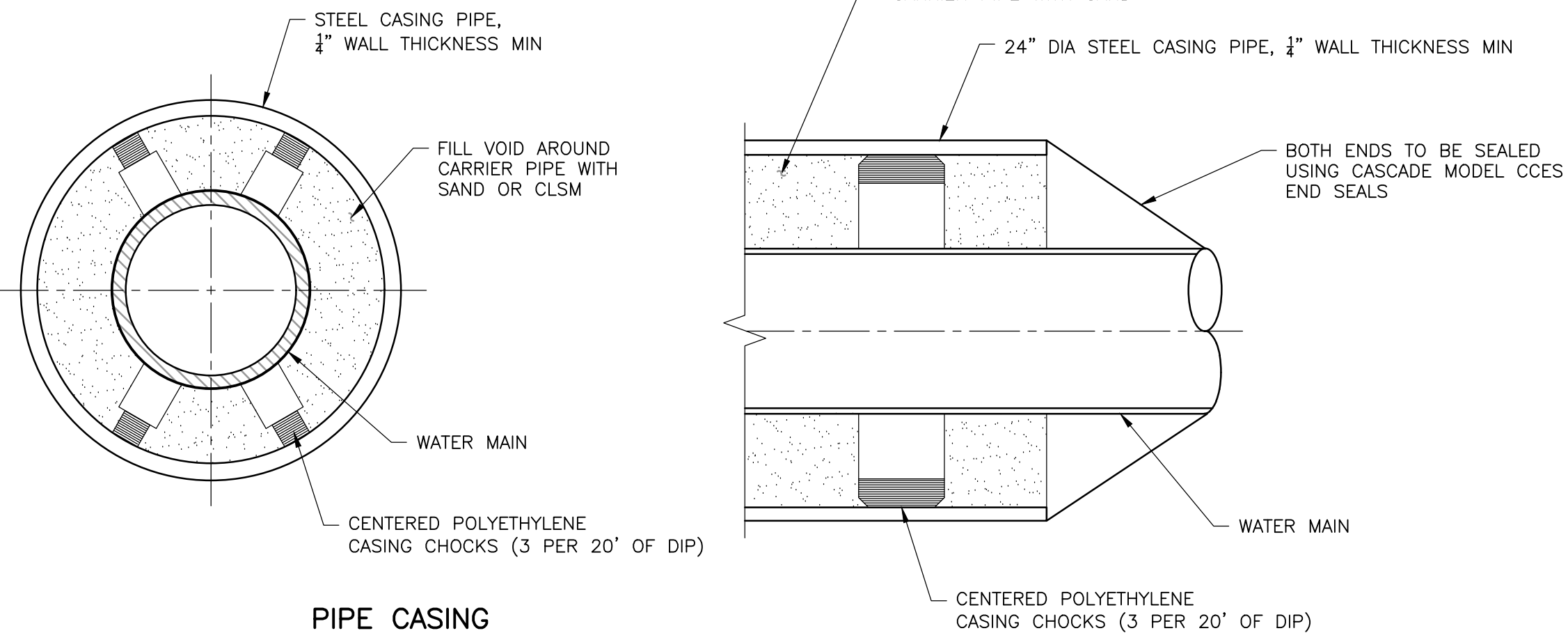


- PIPE TRENCH EXCAVATION AND BACKFILL NOTES:**
- DGA SHALL BE WELL-GRADED IN SIZE FROM 3/8" TO 3/4".
 - DGA SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY.
 - FOR UNIMPROVED AREAS, RESTORE SURFACE WITH 8" MINIMUM OF COMPACTED CRUSHED GRAVEL.
 - TOPSOIL SHALL BE SEEDED TO MATCH EXISTING GRASS TYPE.
 - COMPACTION REQUIREMENTS: MIN. 12" LIFTS WITH JUMPING JACK-TYPE. MIN. 24" LIFTS WITH RAMEX TRENCH COMPACTOR-TYPE. REQUIREMENTS MAY VARY BASED ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER.
 - WRAP SCREENED GRAVEL WITH GEOTEXTILE FABRIC MIRAFI 140N OR EQUAL

PIPE TRENCH EXCAVATION AND BACKFILL

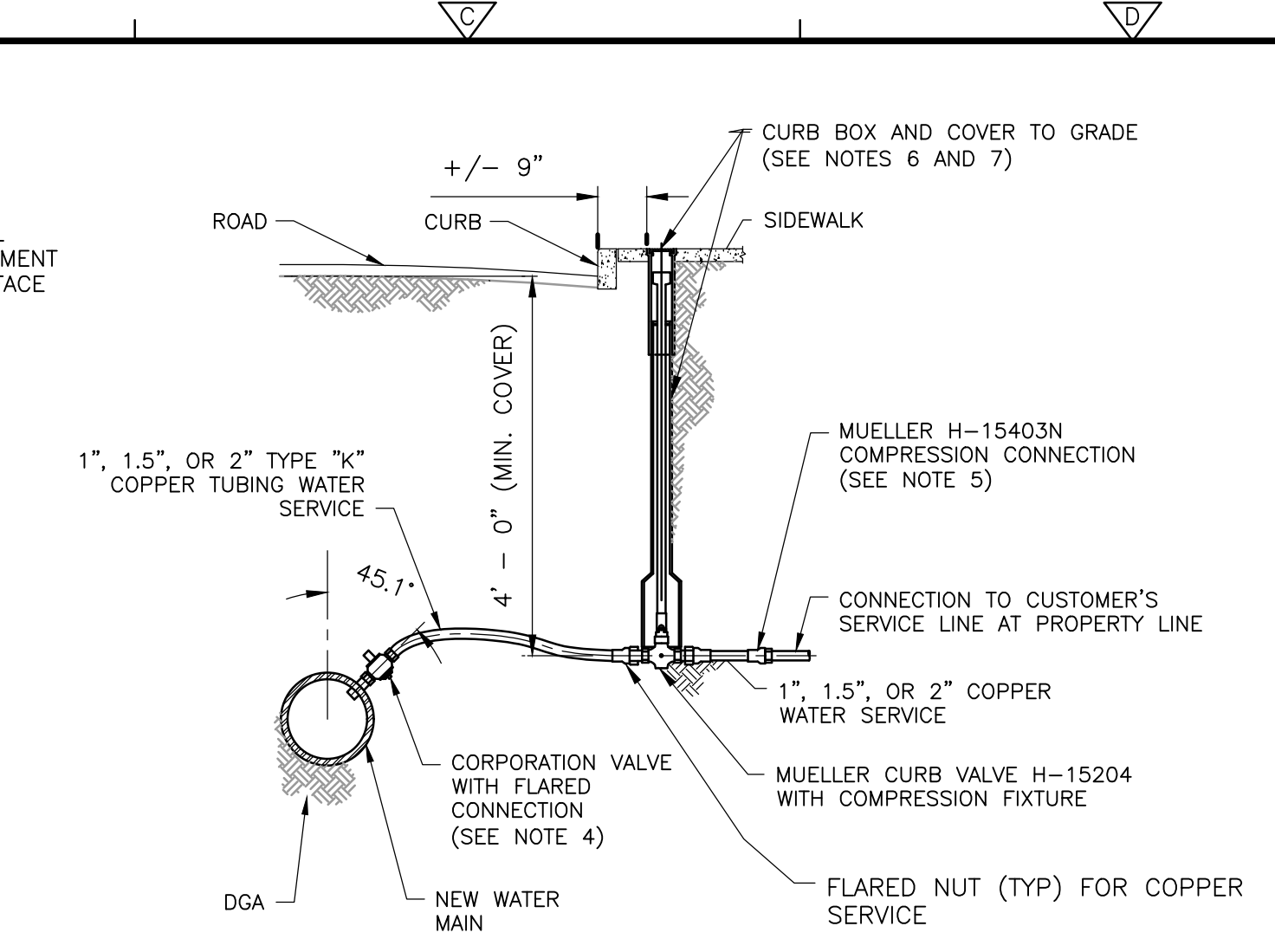
DETAIL A
NTS

WATER MAIN DIA.	CASING DIA.
6"	12"
8"	16"
12"	24"
16"	32"



DETAIL F
NTS

- NOTES:**
- THE STEEL CASING PIPE SHALL BE CENTERED ON THE UNDERLYING EXISTING STORM DRAINING OR SANITARY SEWER.

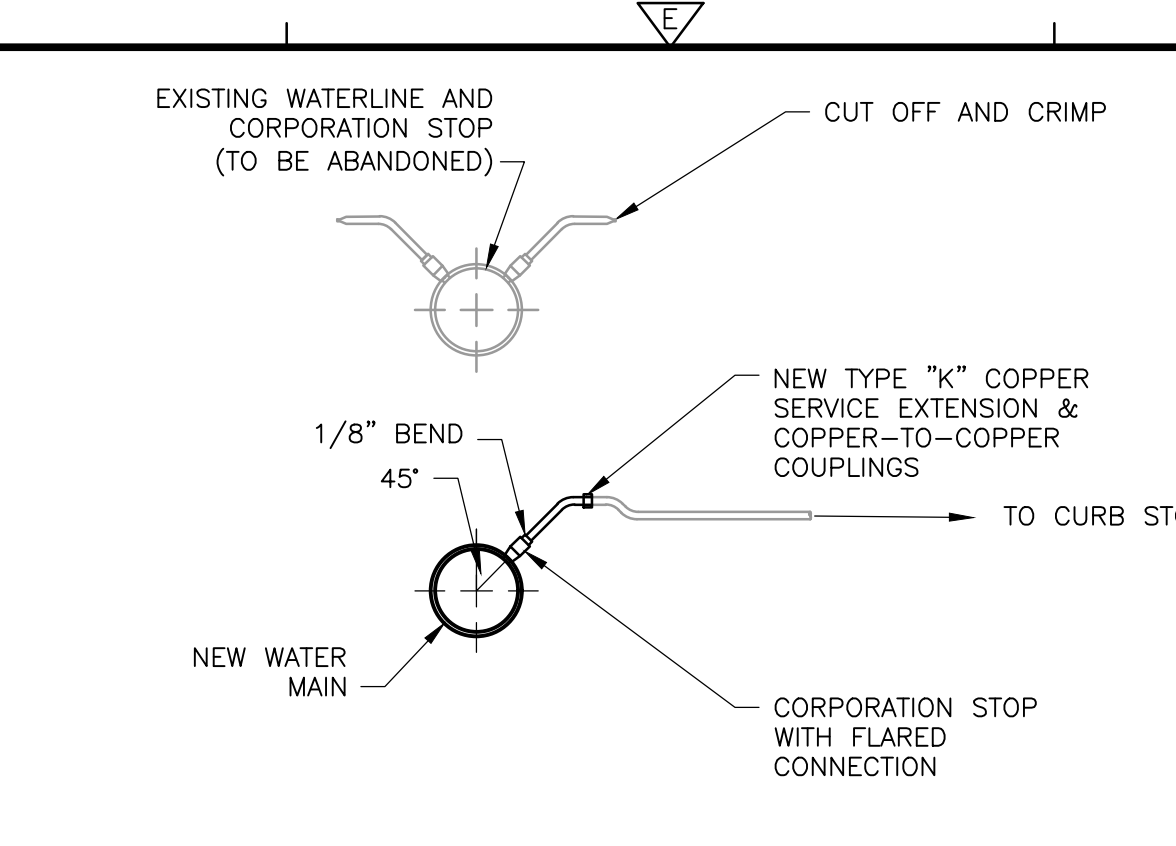


SERVICE REPLACEMENT NOTES:

- SADDLES SHALL BE PROVIDED FOR CORPORATION TAPS ON MAIN 16" DIAMETER AND GREATER.
- SERVICE TIE-OVERS TO BE COMPLETE WHERE THE EXISTING MAIN IS COPPER. ALL ELSE, AND WHERE THE EXISTING SERVICE IS WORN, EXISTING MATERIAL SHALL BE REPLACED WITH COPPER TUBING TO THE CURB STOP.
- ALL SERVICES UNDER 1" DIAMETER SHALL BE REPLACED WITH 1" COPPER.
- CORPORATION VALVE SHALL BE MUELLER H-15028 FOR 1" SERVICES AND H-15023 FOR 1.5 AND 2" SERVICES.
- CONTRACTOR SHALL USE MUELLER UNION WITH COMPRESSION CONNECTION, MODEL H-15403N, TO CONNECT THE NEW SERVICE AT THE CUSTOMER'S SERVICE. WHERE EXISTING SERVICE IS 3/4", CONTRACTOR SHALL USE THE 1" X 3/4" FITTING TO TIE IN NEW 1" SERVICE TO CUSTOMER'S 3/4" SERVICE.
- CURB SERVICE BOX SHALL BE GENUINE BUFFALO STYLE CAST IRON, FIG. NO. 4901 SIZE NO. 93-D, EXTENSION RANGE 33-48" FOR 1" SERVICES. SHALL CONSIST OF TOP SECTION AND COVER MARKED "WATER", BOTTOM SECTION AND ROD, RING, AND PIN BY BINGHAM & TAYLOR OR EQUAL.
- VALVE BOXES SHALL BE GENUINE BUFFALO STYLE CAST IRON, 5-1/4" SHAFT 3-PIECE VALVE BOXES, FIG. NO. 4906 SCREW TYPE SIZE NO. B, EXTENSION RANGE 36-48", FOR SERVICES 1.5" AND GREATER. SHALL CONSIST OF NO. 55 TOP SECTION AND COVER MARKED "WATER", NO. 62 MIDDLE SECTION, AND NO. 6 BASE BY BINGHAM & TAYLOR OR EQUAL.
- CONTRACTOR SHALL INSTALL SERVICES BELOW EXISTING SANITARY (2 1/2" SERVICES AND SMALLER) AND STORM STRUCTURES, AND GAS SERVICES WHERE THEY MUST CROSS.

SERVICE REPLACEMENT

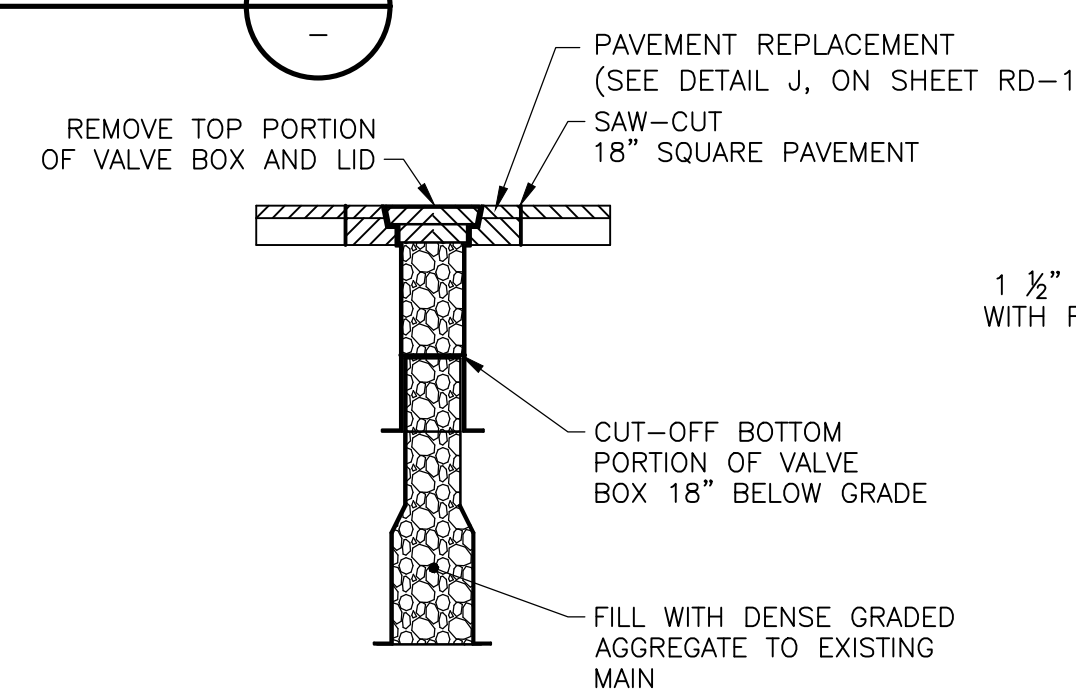
DETAIL B
NTS



SERVICE TIE-OVER (2 1/2" SERVICES AND SMALLER)

- SERVICE TIE-OVER NOTES:**
- SADDLES SHALL BE PROVIDED FOR CORPORATION TAPS ON MAIN 16" DIAMETER AND GREATER.
 - SERVICE TIE-OVERS TO BE COMPLETE WHERE THE EXISTING SERVICE IS COPPER. ALL ELSE, AND WHERE THE EXISTING SERVICE IS WORN, EXISTING MATERIAL SHALL BE REPLACED WITH COPPER TUBING TO THE CURB STOP.
 - ALL SERVICES UNDER 1" DIAMETER SHALL BE REPLACED WITH 1" COPPER.

DETAIL C
NTS

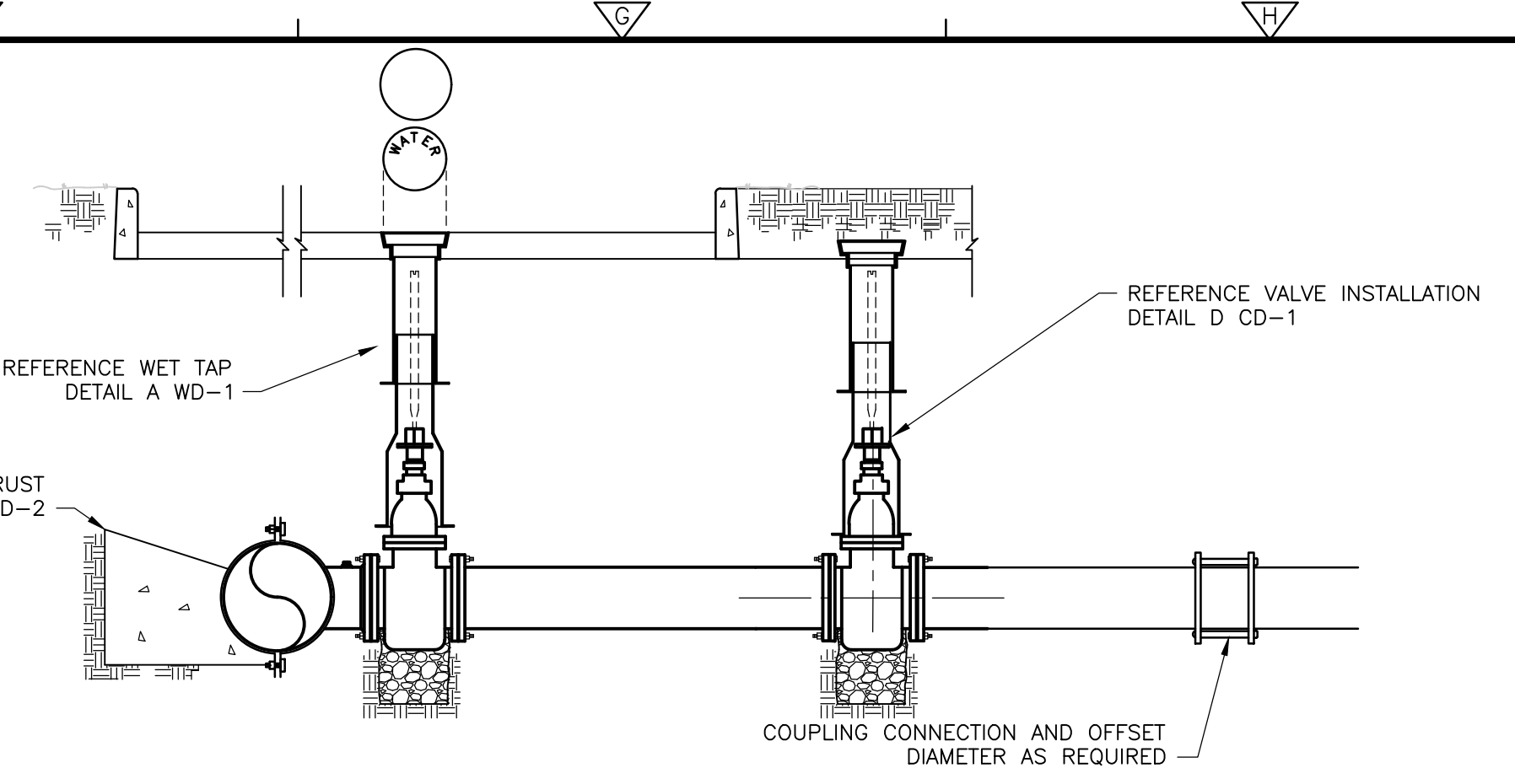


EXIST. VALVE BOX REMOVAL NOTE:

- THIS DETAIL IS FOR VALVES TO BE PERMANENTLY CLOSED.
- PROVIDE BACKFILL AND PAVEMENT REPLACEMENT IN ACCORDANCE WITH APPLICABLE TRENCH AND PAVEMENT RESTORATION DETAILS.

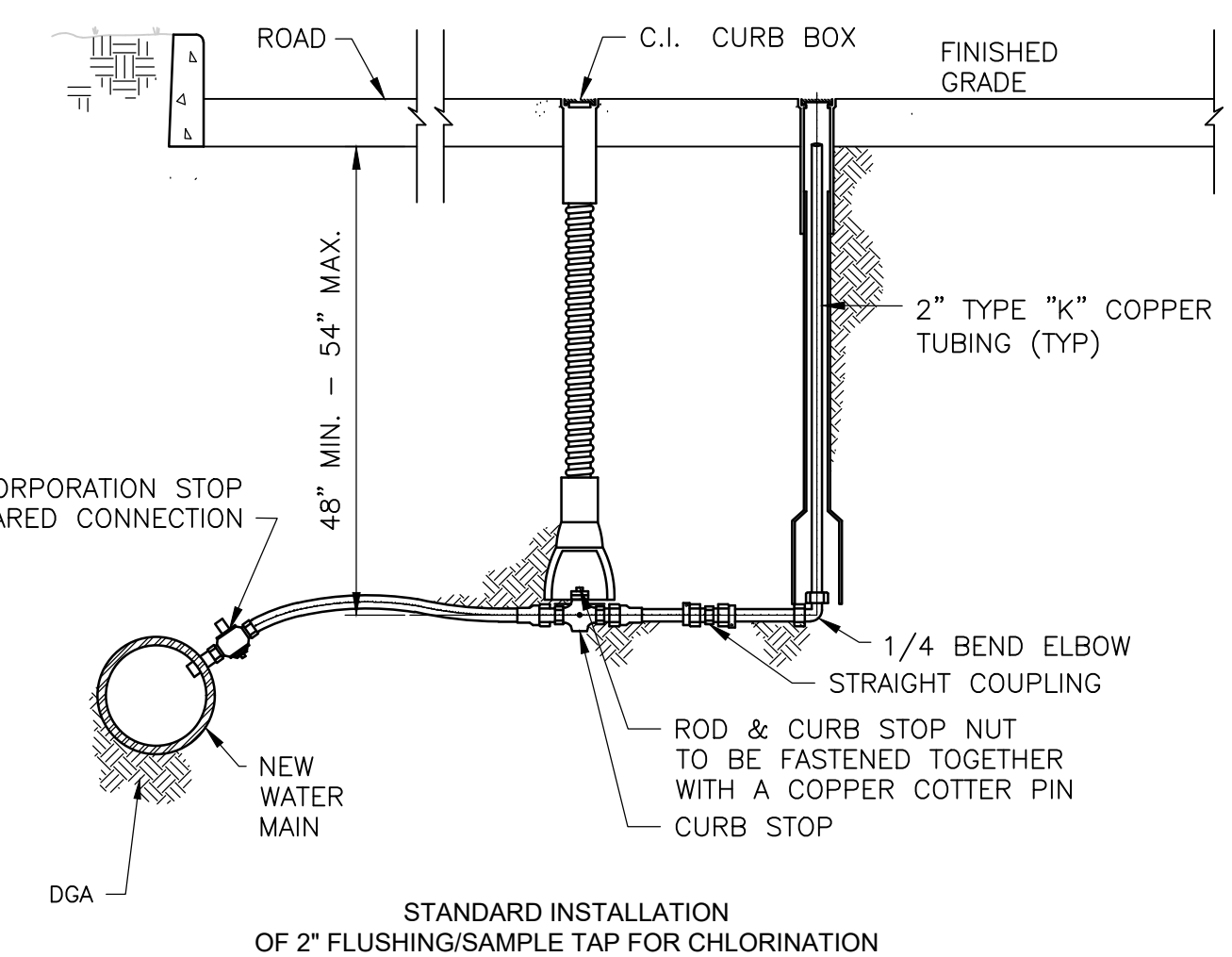
EXISTING VALVE BOX REMOVAL

DETAIL D
NTS

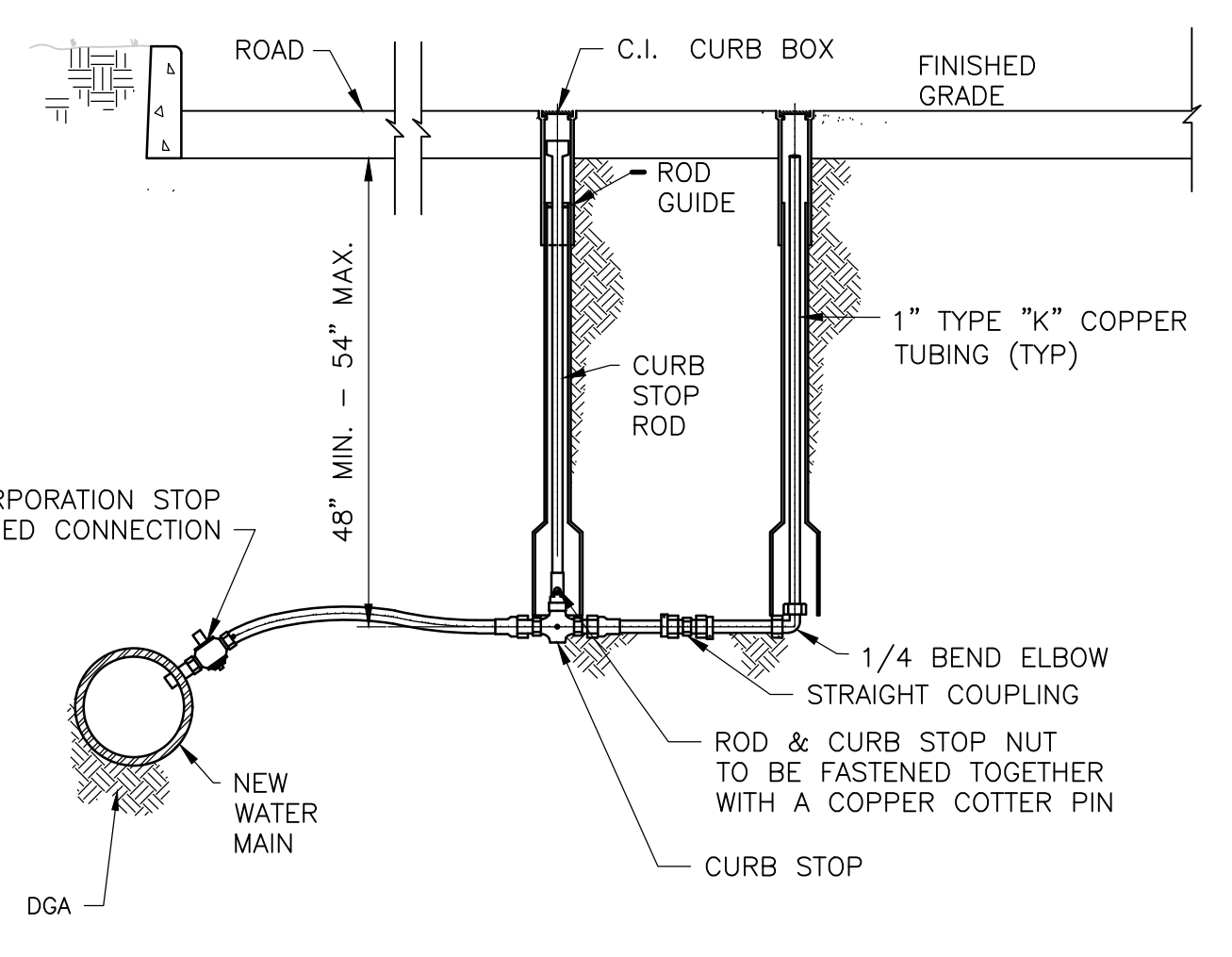


SERVICE REPLACEMENT 3" AND LARGER

DETAIL E
NTS



STANDARD INSTALLATION OF 2" FLUSHING/SAMPLE TAP FOR CHLORINATION



STANDARD INSTALLATION OF 1" TAP FOR CHLORINATION

CHLORINATION/FLUSHING/SAMPLE TAP CONNECTION NOTES:

- CONTRACTOR SHALL INSTALL SAMPLE TAPS ON MAINS WHERE NO HYDRANT IS AVAILABLE TO FLUSH AND SAMPLE FOR CHLORINATION.

CHLORINATION/FLUSHING/SAMPLE TAP CONNECTION

DETAIL H
NTS

DAVID J. TANZI
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE43193

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. BOEHME
DRAWN BY: M. KEANE
SHEET CHK'D BY: A. PERMENTER
CROSS CHK'D BY: G. STUART
APPROVED BY: D. TANZI
DATE: JUNE 7, 2021

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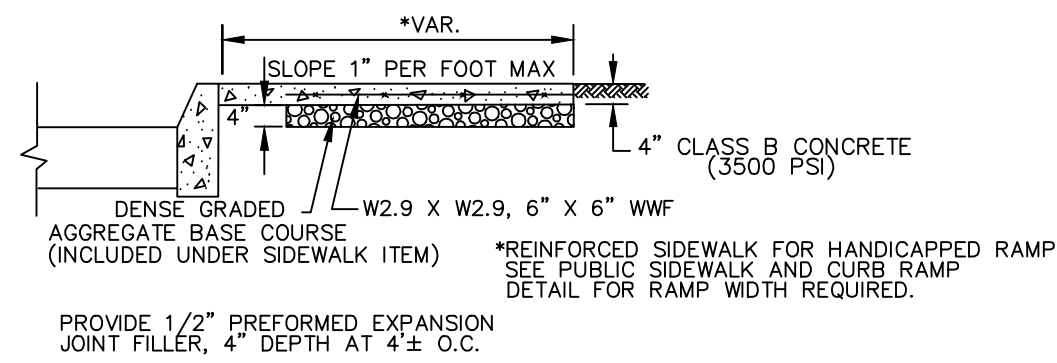
ENGENUITY
INFRASTRUCTURE

CITY OF HOBOKEN, NEW JERSEY
HUDSON STREET (4TH STREET TO 10TH STREET)
WATER MAIN REPLACEMENT

CIVIL DETAILS III

PROJ. NO. HOBK-00150
CDMS PROJ.NO. 250543-259545
FILE NAME: CD03STDT
SHEET NO.
CD-3

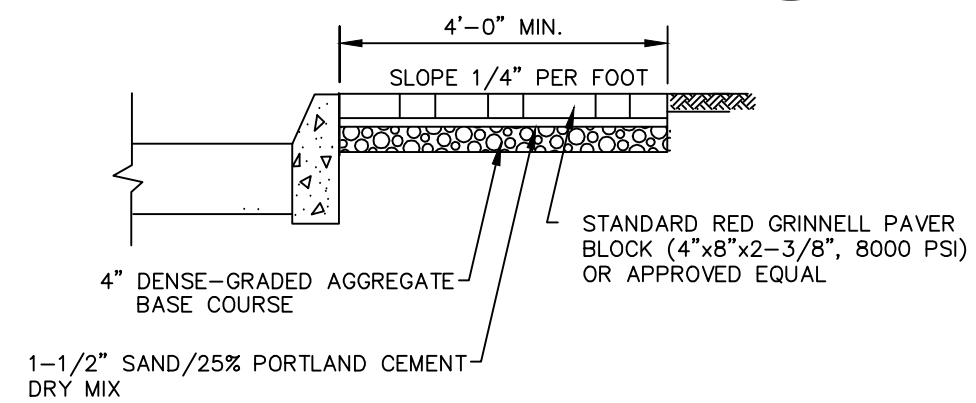
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CONCRETE SIDEWALK, REINFORCED, 4" THICK

DETAIL A

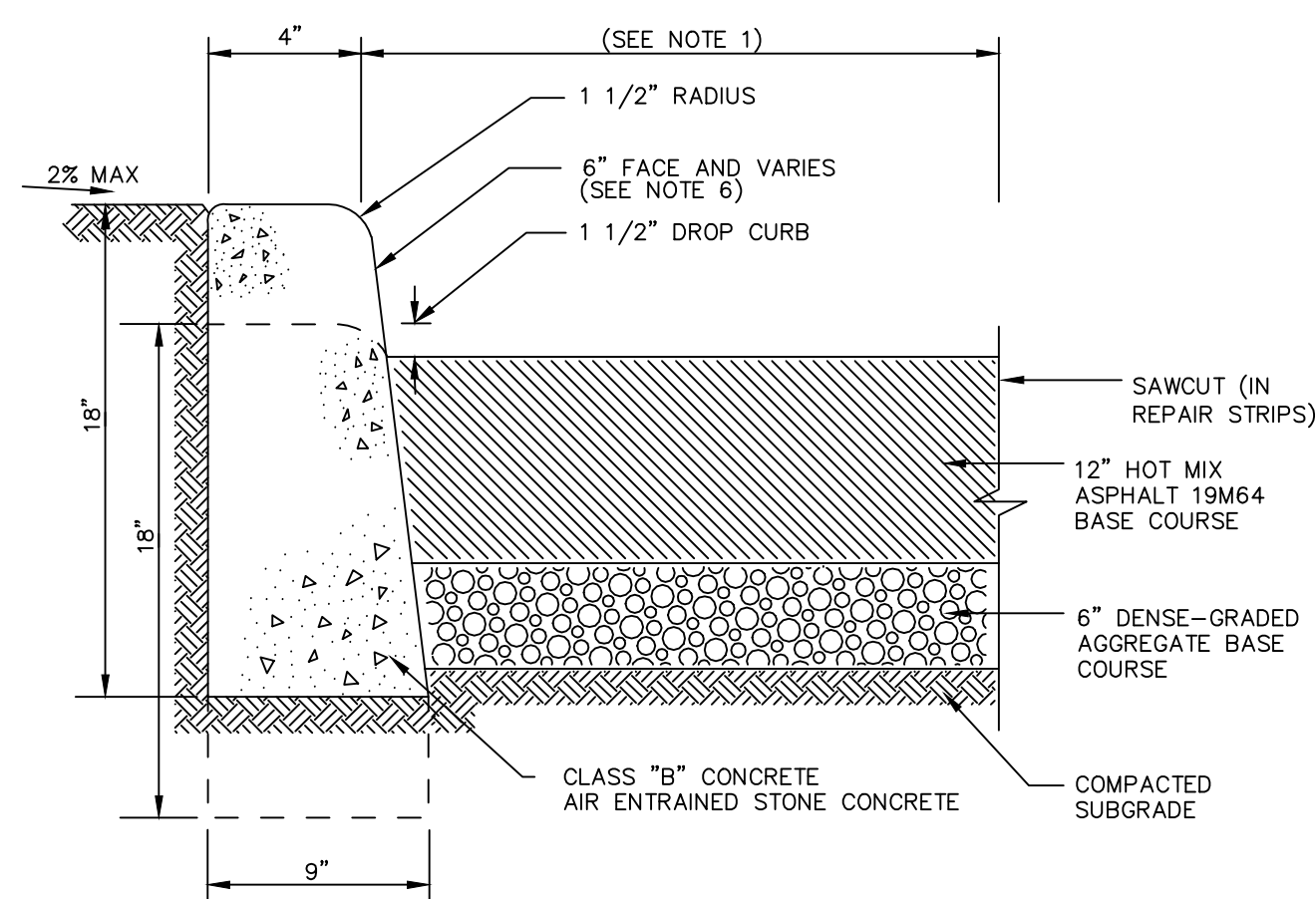
NTS



BRICK PAVER SIDEWALK

DETAIL C

NTS

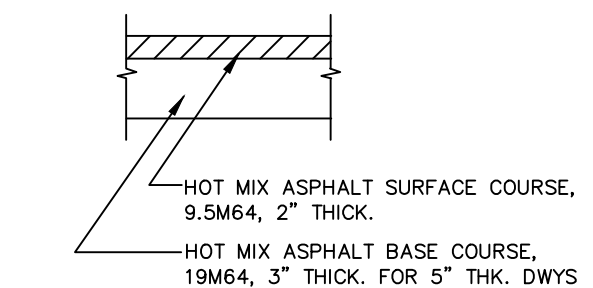


9" x 18" CONCRETE VERTICAL CURB

DETAIL F

NTS

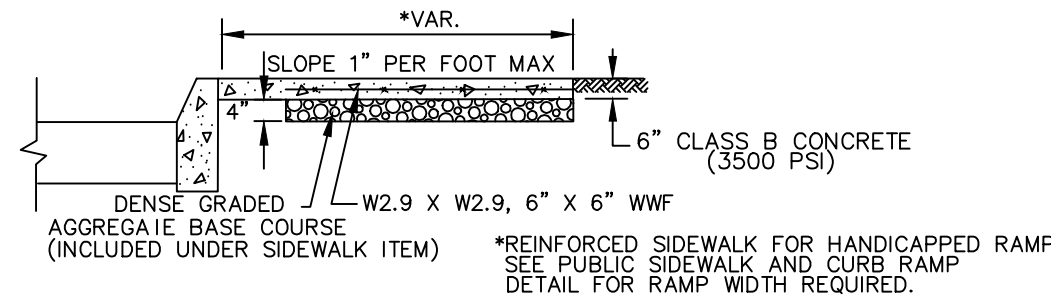
- NOTE: 1) IN AREAS WHERE EXISTING PAVEMENT IS TO REMAIN, A 2' WIDE PAVEMENT REPAIR STRIP SHALL BE CONSTRUCTED ALONG PROPOSED CURB. THE FOLLOWING ITEMS OF WORK WITHIN THE REPAIR STRIP ARE INCLUDED UNDER 9" x 18" CONCRETE VERTICAL CURB:
- SAWCUT
 - CONCRETE CURING AND SEALING COMPOUND
 - EXCAVATION, UNCLASSIFIED
 - BACKFILL MATERIAL
 - COMPACTED SUBGRADE
 - DENSE-GRADED AGGREGATE BASE COURSE
 - HOT MIX ASPHALT 19M64 BASE COURSE - REMOVAL OF MONOLITHIC CONCRETE CURB AND GUTTER (IF REQUIRED)
- 2) SPRINKLER HEADS TO BE RESET AND/OR RELOCATED, IF REQUIRED. COST TO BE INCLUDED IN THE CURB ITEM. IF TOPSOILING, 4" THICK, FERTILIZING AND SEEDING, TYPE A-3 AND STRAW MULCHING ARE SEPARATE PAY ITEMS, THEY SHALL BE PAID FOR SEPARATELY. OTHERWISE THEY SHALL BE INCLUDED IN THE CURB ITEM.
- 3) FOR 8" CURB FACE, CURB DEPTH SHALL BE INCREASED TO 20".
- 4) FULL CURB DEPTH SHALL BE MAINTAINED AT DROP CURBS.
- 5) 4" THICK, COARSE AGGREGATE SIZE NO. 57 SHALL BE CONSTRUCTED UNDERNEATH PROPOSED CURB IN WET FIELD CONDITIONS AS DIRECTED BY ENGINEER.
- 6) TOP OF CURB SHALL NOT BE SET HIGHER THAN ADJACENT EXISTING OR PROPOSED SIDEWALK UNDER ANY CONDITION.
- 7) ALL CONCRETE SURFACES SHALL BE TREATED WITH A CONCRETE CURING AND SEALING COMPOUND.



HOT MIX ASPHALT DRIVEWAY

DETAIL B

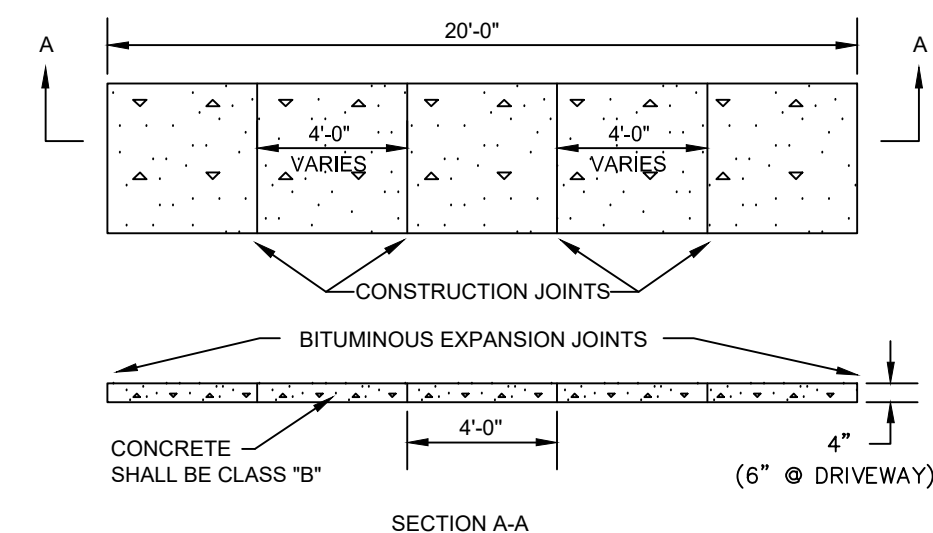
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CONCRETE SIDEWALK, REINFORCED, 6" THICK

DETAIL D

NTS



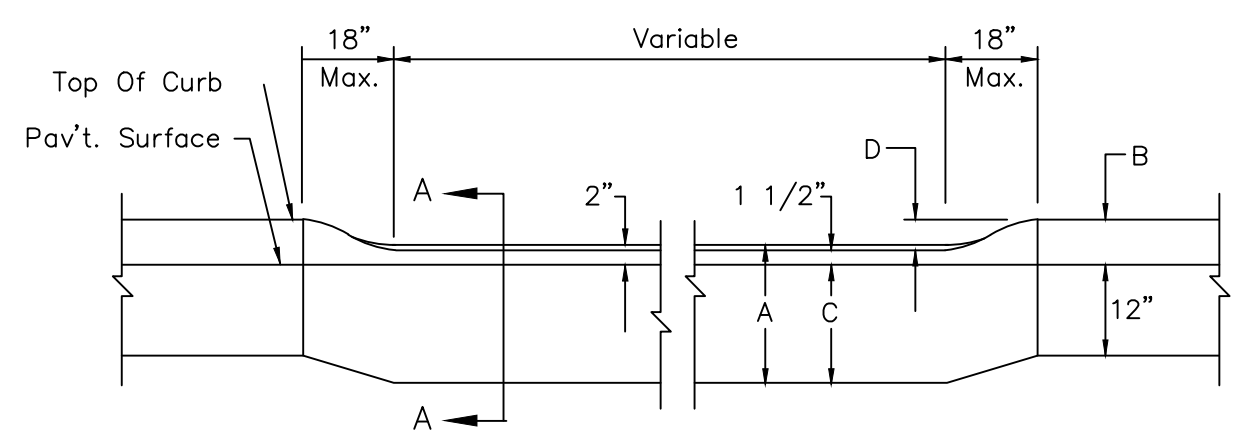
SIDEWALK JOINT

DETAIL E

NTS

CONSTRUCTION NOTES:

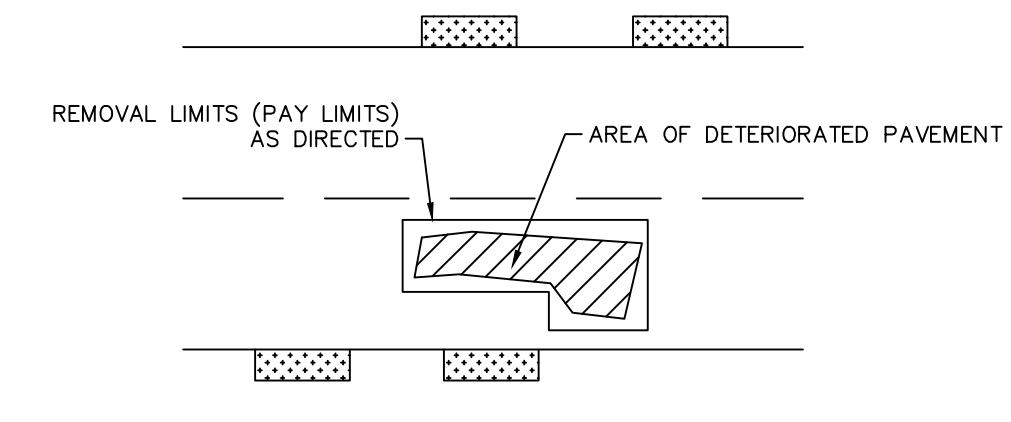
1. A PREFORMED, BITUMINOUS EXPANSION JOINT 1/2" THICK, 4" WIDE, AND EXTENDING THE FULL WIDTH OF THE WALK, UNBROKEN, SHALL BE INSTALLED EVERY TWENTY (20) FEET.
2. CONSTRUCTION JOINTS SHALL BE INSTALLED EVERY FOUR (4) FEET AND VARIES THE FULL WALK WIDTH.
3. THERE SHALL BE A BROOM FINISH WITH THE EDGES FINISHED WITH A SUITABLE TOOL.



METHOD OF DEPRESSING CURB AT DRIVEWAYS

DETAIL I

NTS



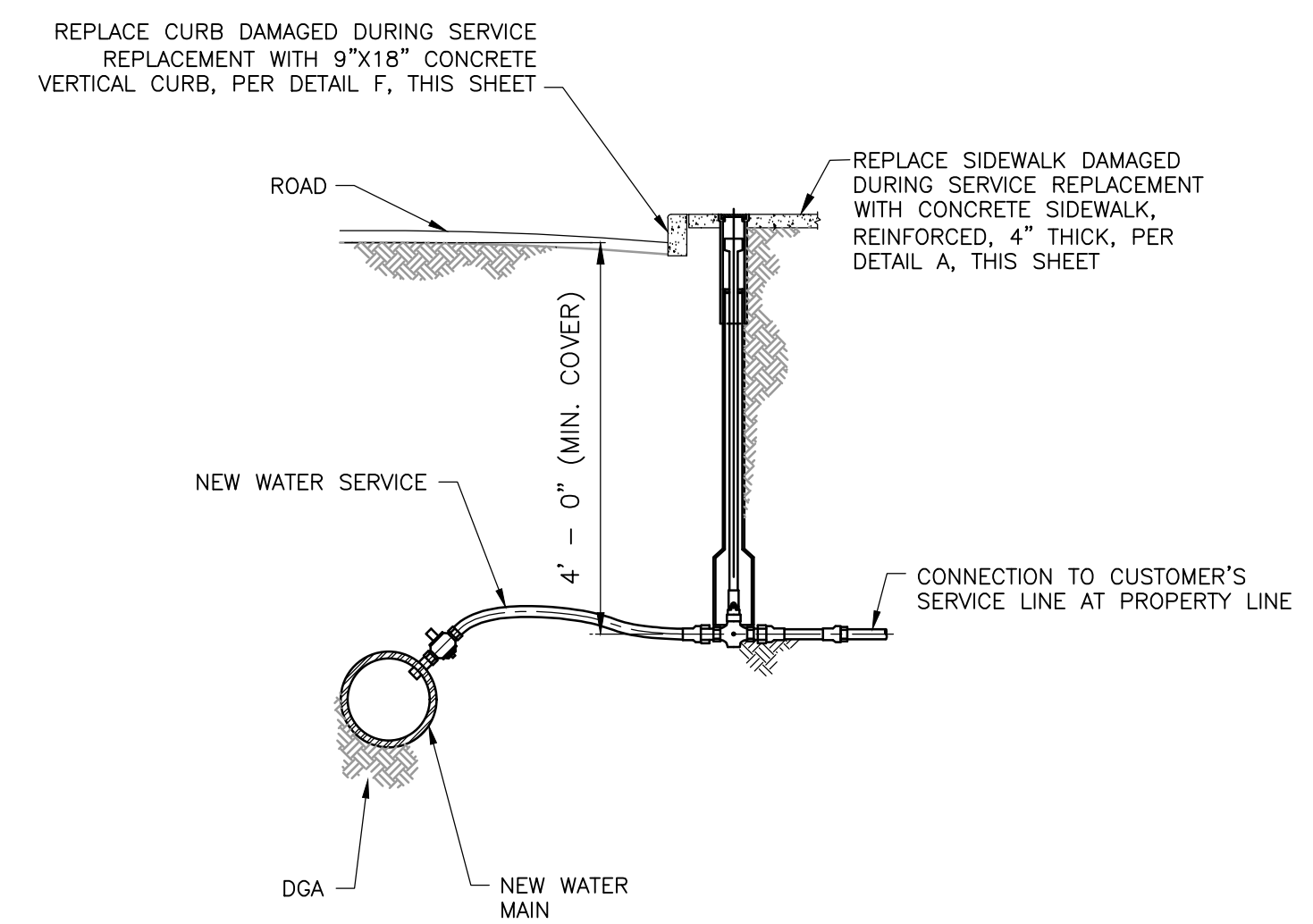
HOT MIX ASPHALT BASE REPAIR

DETAIL G

NTS

NOTES:

1. REPAIR AREAS SHALL BE FILLED AND COMPACTED SUCH THAT THE FINISHED REPAIR SURFACE IS 1/8" TO 1/4" HIGHER THAN SURROUNDING PAVEMENT SURFACES.
2. ADEQUATE MEASURES SHALL BE PROVIDED TO MAINTAIN ASPHALT MATERIALS AT TEMPERATURES AS REQUIRED IN THE TECHNICAL SPECIFICATIONS MANUAL.
3. ALL LOOSE DEBRIS SHALL BE REMOVED FROM EXCAVATED AREAS PRIOR TO APPLICATION OF THE TACK COAT.
4. EDGES SHALL BE SMOOTH AND VERTICAL OR SLOPED SLIGHTLY INWARD TOWARD THE FINISHED SURFACE.
5. LIMITS OF REPAIR SHALL BE SAWCUT OR MILLED IN A RECTILINEAR FASHION.
6. UNSUITABLE SUBGRADE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH DENSE GRADED AGGREGATE, AS DIRECTED BY THE DESIGNATED MUNICIPAL REPRESENTATIVE AT THE TIME OF CONSTRUCTION.
7. NO SEPARATE PAYMENT WILL BE MADE FOR HOT MIX ASPHALT REPAIR. THE COST IS INCLUDED IN THE HOT MIX ASPHALT ITEMS.



SERVICE REPLACEMENT RESTORATION DETAIL

DETAIL H

NTS

DAVID J. TANZI
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE43193

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. BOEHME
DRAWN BY: M. KEANE
SHEET CHK'D BY: A. PERMENTER
CROSS CHK'D BY: G. STUART
APPROVED BY: D. TANZI
DATE: JUNE 7, 2021

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ENGENUITY
INFRASTRUCTURE

CITY OF HOBOKEN, NEW JERSEY
HUDSON STREET (4TH STREET TO 10TH STREET)
WATER MAIN REPLACEMENT

CIVIL DETAILS IV

PROJ. NO. HOBK-00150
CDMS PROJ.NO. 250543-259545
FILE NAME: CD03STDT

SHEET NO.
CD-4