

Addendum No. 1

Owner: City of Unalaska

Project: **CAPTAINS BAY ROAD WATERLINE (WA22B)**
DPW Project No. 22402

Date: May 14, 2024

Please acknowledge receipt of this Addendum No. 1 in the appropriate blanks on the bid form.

The following corrections, changes, additions, deletions, revisions, and/or clarifications are hereby made a part of the contract documents for the subject project. In case of conflicts between this Addendum and previously issued documents, this Addendum shall take precedence.

Item 1: PROJECT MANUAL, Section 00300 BID FORM, Page 00300-8;

Change the quantity of Bid Item 18, Furnish and Install Anode, From "41" to "4".

Anodes will be required on existing pipe near connection points of the newly installed pipe and/or as directed by the Engineer.

Item 2: PROJECT MANUAL, Technical Specifications, Specification 02668 WATER SYSTEMS, Section 02668.02 FURNISH AND INSTALL PIPE;

Narrative: In lieu of installing anodes on each joint of pipe, galvanized pipe will be required. Anodes will still be required to be installed on existing pipes near connection points of the newly installed pipe.

Article 2.3 Material, Item A Ductile Iron Pipe, *Add the following:*

"Ductile Iron Pipe is to be Zinc Coated ductile iron pipe meeting above requirements with a metallic zinc coat and a bituminous finish layer in accordance with ISO 8179-1, with the minimum mass of zinc being 150 grams per square meter and a mean mas of 200 grams per square meter of 99.99% pure metallic zinc."

Item 3: PROJECT MANUAL, Technical Specifications, Specification 02668 WATER SYSTEMS, Section 02668.02 FURNISH AND INSTALL PIPE, Article 2.4 Construction;

Item E Installation, *Delete the second and third paragraphs in their entirety and replace them with the following:*

"Deflection at pipe-to-pipe joints is limited to 50% of the maximum deflection angle (Allowable Limits) recommended by the pipe manufacturer for ductile iron pipe or for PVC pipe connected to a ductile iron fitting. The maximum deflection angle for 16" DIP is 3-degrees, so all DIP-PVC or DIP-DIP connections are limited to 1.5-degrees. Deflection at pipe-to-pipe joints for PVC pipe is limited to zero-degrees. PVC-PVC connections shall be horizontally and vertically straight without deflection between ductile iron fittings. If the alignment requires deflection in excess of the above limitations or in areas

where no fittings are included in the design, the Contractor shall furnish and install ductile iron bends or sleeves to provide angular deflections within the Allowable Limits. This includes locations at vertical grade breaks where no other ductile iron fittings exists.”

Item H Jointing of PVC Pipe, *change the last sentence from:*

“Bell protection over insertion collars shall be installed on all male PVC pipe ends prior to insertion into PVC pipe bells.”

To:

“Bell protection over-insertion collars OR Bi-directional restraint systems shall be installed at all PVC-PVC joints to prevent over-insertion of the pipe.”

Item 4: PLAN SHEET G2, GENERAL NOTES;

Note 5, change the second to the last sentence from:

“BELL PROTECTION OVER-INSERTION PREVENTION COLLARS SHALL BE PROVIDED ON ALL MALE PVC PIPE ENDS PRIOR TO INSERTION INTO THE PVC BELLS.”

To:

“BELL PROTECTION OVER-INSERTION COLLARS OR BI-DIRECTIONAL RESTRAINT SYSTEMS SHALL BE INSTALLED AT ALL PVC-PVC JOINTS TO PREVENT OVER-INSERTION OF THE PIPE.”

Note 6, delete in its entirety and replace it with the following:

“THE PVC PIPE ALIGNMENT WAS DESIGNED STRAIGHT WITH ZERO (0) DEFLECTION AT PIPE JOINTS BETWEEN BENDS OR FITTINGS. ADJUSTMENTS TO GRADE OR ALIGNMENT SHALL ONLY BE MADE AT DUCTILE IRON FITTINGS. IF GRADE OR ALIGNMENT CHANGES ARE REQUIRED WHERE NO FITTINGS ARE INCLUDED IN THE DESIGN, THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL BENDS OR SLEEVES TO PROVIDE ANGULAR DEFLECTIONS WITHIN THE ALLOWABLE LIMITS. FOR 16” DIAMETER DUCTILE IRON PIPE OR 16” PVC CONNECTED TO DUCTILE IRON FITTINGS, ALLOWABLE DEFLECTION ANGLES AT EACH JOINT ARE LIMITED TO 1-1/2 DEGREES.”

Delete table at bottom left of sheet with accumulated offset distances for PVC Pipe. PVC-PVC joint deflection is not allowed.

Item 5: PLAN SHEET G4, QUANTITY TABLE;

Bid Item 18 Furnish and Install Anode, delete quantities for all sheets, add quantity of “4” to Plan Sheet PP1.

End of Addendum No. 1

BID PROPOSAL
CAPTAINS BAY ROAD WATERLINE
Phase 1 - WSI to OSI

| Item No. | Unit | Est. Qty | Description (Write Unit Bid Price in Words) | Unit Price | Total Price |
|----------------------|-------------|----------|---|------------|-------------|
| 17 | Each | 1 | Furnish and Install (2") Water Service Line _____. _____ per each | | |
| 18 | Each | 4 | Furnish and Install Anode _____. _____ per each | | |
| 19 | Each | 5 | Furnish and Install Air/Vac Relief Vault _____. _____ per each | | |
| 20 | Linear Foot | 862 | Furnish and Install Board Insulation _____. _____ per linear foot | | |
| 21 | Lump Sum | 1 | Construct 16" Blow-Off _____. _____ per lump sum | | |
| 22 | Lump Sum | 1 | Construct Bridge Crossing _____. _____ per lump sum | | |
| 23 | Lump Sum | 1 | Traffic Control _____. _____ per lump sum | | |
| TOTAL PHASE 1 | | | | | |

TOTAL PHASE 1(Numerical) _____.

TOTAL PHASE 1(Written Text) _____.

BID AUTHORIZATION

The undersigned represents (check appropriate boxes) that he/she operates as an () Individual, () Joint Venture, () Partnership, or () Corporation, Incorporated in the State of _____.

BIDDER: _____

Bidding Company: _____

Name (Printed): _____

Signature and Date: _____

Contractor's Lic No; Business Lic No: _____

Corporate Seal (If Corporation): _____

Addendum 1 Item 1

SECTION 02668.02 FURNISH AND INSTALL PIPE**Article 2.1 General**

The Work under this Section consists of performing all Work required for furnishing and installing an operational piping system in a workman like manner meeting applicable standards. The Contractor shall install piping systems as specified within these Contract Documents, the manufacturer's recommendations, the American Water Works Association (AWWA) standards, and in conformity with the details, lines and grades as shown on the Drawings. The Contractor shall adhere to the conditions stipulated in the ADEC permit obtained for modifications to a public water system. Where the previously stated requirements are in conflict, the more stringent requirement is to govern.

Article 2.2 Submittals

Submittals are to be provided to the Engineer for review and acceptance as stated in the General Conditions. The Contractor is to clearly demarcate items to be incorporated into the Work. Submittals for pipe and fittings should at least contain the following items:

- Pipe, Including Arctic Pipe
- Fittings
- Detectable underground warning tape
- Trace and continuity wire
- Polyethylene baggies and sheeting
- Coatings
- Flushing and testing plan
- NSF Certification
- Build America Buy America Certification

Article 2.3 Material

- A. Ductile Iron Pipe is to be cement mortar lined, conform to the requirements of AWWA C151, and have a minimum pipe wall thickness meeting Class 52 requirements. The cement mortar lining is to conform to the requirements of AWWA C104/ANSI A24.1. At least 10% of the pipe delivered is to be gauged full length of the pipe and marked as such.

Ductile Iron Pipe is to be Zinc Coated ductile iron pipe meeting above requirements with a metallic zinc coat and a bituminous finish layer in accordance with ISO 8179-1, with the minimum mass of zinc being 150 grams per square meter and a mean mas of 200 grams per square meter of 99.99% pure metallic zinc." **Addendum 1 Item 2**

- B. Polyvinyl Chloride (PVC) Pipe: Sixteen inch (16") Polyvinyl Chloride Pipe must conform to the requirements of AWWA C900-16, have a DR of 18. All PVC pipe is to be blue in color. PVC water main and piping must be installed with an over insertion prevention device equal to EBAA Iron Mega Stop or the Cert-Lok bi-directionally restraint system.
- C. Coated Copper Pipe must be soft-drawn Type K, seamless, annealed copper pipe suitable for use as underground service water connections for general plumbing purposes and ASTM B88 compliant with an approved coating system. Approved coatings include factory applied minimum twenty-six (26) mil thick polyethylene or a field applied coating.

or lining. Before, after and during installation the engineer is to be provided an opportunity to examine the pipe and appurtenances for damage and defects. Damaged or defective pipe may be rejected. Rejected pipe must be removed from the project and replaced with acceptable material at no additional cost.

The pipe is not to be strung out along the shoulders of the road for long distances if it causes inconvenience to the public. The amount of pipe strung at the job site is at the discretion of the Engineer.

Rubber gaskets are to be protected from extended exposure to direct sunlight. Non-integrated gaskets are to be installed into the piping when the gasket and pipe are above freezing temperature and the gasket is pliable.

D. Connection to water lines

Mainline taps are to be done by the Contractor. The mainline tap must be accomplished with a drilling machine approved for use on the pipe material being tapped, capable of drilling through the tapping saddle and corporation stop and pipe wall.

Tapping saddles are to be used for all taps.

Taps are to be made at sufficient distances from each other, tees, bells, joints, and other critical areas to prevent compromising the structural integrity of the pipe being tapped. Taps are not to be made any closer than three feet (3') to each other or to a bell.

The Contractor shall provide all trench excavation, shoring, bracing, backfill and compaction necessary to complete a successful tap connection. The trench shall be long enough and of sufficient width at the bottom to allow installation of the valve.

The Contractor shall bear the expenses incurred if a water main or other utilities within and directly adjacent to the project site should be damaged during construction.

Where the Drawings require the connection to an existing valve, the Contractor may choose to use the valve at their risk or replace it at their expense.

E. Installation

Installation is to follow the requirements of the drawings, AWWA C600, C605, M23, M41 and M55, these specifications, special provisions, and the plan details. The City of Unalaska will have final say when deciding on which requirement the Contractor is to meet where these documents conflict at no additional cost to the Owner.

Deflection at pipe-to-pipe joints is to be limited to 50% of the maximum deflection angle (Allowable Limits) recommend by the pipe manufacturer for ductile iron pipe or for PVC pipe connected to a ductile iron fitting. The maximum deflection angle for 16" DIP is 3-degrees, so all DIP-PVC or DIP-DIP connections are limited to 1.5-degrees. Deflection of pipe-to-pipe joints for PVC pipe is limited to zero-degrees. PVC-PVC connections shall be horizontally and vertically straight without deflection between ductile iron fittings. If the alignment requires deflection in excess of the above limitations or in areas where no fittings are included in the design, the Contractor shall furnish and install ductile iron bends or sleeves to provide angular deflections within the Allowable Limits. This includes locations at vertical grade breaks where no other ductile iron fittings exists.

F. Alignment and Grade

All adjustments to line and grade are to be done by scraping away or filling the earth under the body of the pipe and not by blocking or wedging up.

The Contractor shall continually survey line, grade and location of the pipe and appurtenances with the use of transits and levels during pipe laying operations. Survey is to be completed by qualified personnel to transfer line, grade and record required information. The Engineer will determine qualifications based on submittal of work examples and notes being made in the field. The Contractor is to replace any personnel the Engineer deems to be less than qualified based on work examples provided or work being performed.

Each piece of pipe is to be laid to within three-one hundredths (0.03) of a foot horizontally and from the design alignment. Regardless of the limits applied to full length individual pieces of pipe, the accumulated variance of pipe alignment and grade must not be greater than two-inches (2"). The Contractor must re-lay the water line when alignment and grade requirements are not met. Elevations and locations for each piece of pipe and appurtenances are to be recorded in a field book. The Contractor will furnish to the Engineer a copy of the surveyor's notes and redlined drawings for transfer to record drawings. The Contractor is to make any clarifications, corrections or fill in missing data in the survey notes and redlines when requested.

The practice of placing backfill over a section of pipe to provide a platform for instruments is to be subject to the approval of the Engineer and be accomplished in accordance with the trench excavation and backfill requirements

G. Jointing of Ferrous Metal Pipe

Mechanical joints with restraining glands are required wherever restrained joints are required to be used. All joints are to conform to the requirements of ANSI/AWWA C600.

Metallic pipe is to have two (2) electrical continuity straps installed on each side of every joint for all pipe diameters. Straps are to be welded to a clean, dry surface. Each exothermic wire weld connection is to be protected with one (1) field applied Royston Handy Cap IP or equal. Uncoated surfaces are to be coated with coal tar pitch to the satisfaction of the Engineer.

H. Jointing of PVC Pipe

All joints are to conform to the requirements of AWWA C605. PVC pipe shall be connected to ductile iron mechanical joint fittings using Megalug style retainer glands as shown on the drawings. PVC push-on joints shall have integrated restraining gaskets or a restraint harness. Bell protection over insertions collars OR Bi-directional restraint systems shall be installed at all PVC-PVC joints to prevent over-insertion of the pipe. **Addendum 1 Item 3**

I. Jointing of Copper pipe

Copper pipe may be joined with the use of silver brazing copper couplers, flared fittings and by swedging and silver brazing. Solder must be lead free silver solder. All joints are to be outside of the rights-of-ways and/or City of Unalaska easements, unless given prior approval by the City of Unalaska.

GENERAL NOTES:

- THIS PROJECT IS FOR CONSTRUCTION OF A NEW 16" DIP AND PVC WATER MAIN EXTENSION ALONG CAPTAINS BAY ROAD FROM WESTWARD SEAFOODS, INC. (WSI) TO THE TRIDENT SEAFOODS DEVELOPMENT SITE (FORMALLY BERING SHALE ROCK AND GRAVEL). WSI TO OFFSHORE SYSTEMS, INC. (OSI), WHICH IS DESIGNED AS PHASE 1. THE WATERLINE FROM OSI TO TRIDENT SEAFOODS IS PHASE 2.
- WORK INCLUDES THE WATER MAIN, VALVES, HYDRANTS, COMBINATION AIR VACUUM/RELIEF MANHOLES, SERVICES, BLOW-OFFS, BRIDGE CROSSING, CATHODIC PROTECTION SYSTEM, THRUST BLOCKS, AND APPURTENANT ITEMS AS SHOWN, SPECIFIED AND DETAILED.
- THE WATER MAIN IN THIS AREA IS NORMALLY SERVED FROM THE CHLORINE CONTACT TANK LOCATED IN PYRAMID VALLEY. THE STATIC WATER PRESSURE IN THE MAIN ALONG CAPTAINS BAY ROAD IS APPROXIMATELY 135 PSI.
- SEE SHEET G4 FOR A KEY MAP DEPICTING LOCATIONS OF PLAN AND PROFILE DESIGN DRAWINGS.
- THE PVC PIPE WILL BE DR18 MEETING THE REQUIREMENTS OF ANSI/AWWA C905-16. ALL LATERALS AND FITTINGS WILL BE DUCTILE IRON C153 MECHANICAL JOINT (MJ) COMPACT FITTINGS WITH A 350 PSI PRESSURE RATING. ALL PIPE JOINTS SHALL BE RESTRAINED. ALL DUCTILE IRON MJ FITTINGS SHALL BE RESTRAINED WITH AN EBBA IRON SERIES 2000PV MEGALUG RETAINER GLAND FOR PVC PIPE OR AN EBBA IRON SERIES 1100 MEGALUG FOR DUCTILE IRON PIPE. ALL PVC PIPE JOINTS SHALL HAVE INTEGRATED RESTRAINING GASKETS OR A RESTRAINT HARNESS. ~~BELL PROTECTION OVER-INSERTION PREVENTION COLLARS SHALL BE INSTALLED ON ALL MALE PVC PIPE ENDS PRIOR TO INSERTION INTO THE PVC BELLS. CONCRETE THRUST BLOCKS SHALL BE PROVIDED IN ADDITION TO THE RESTRAINT SYSTEMS DESCRIBED ABOVE.~~
- ~~THE 16" PVC PIPE ALIGNMENT WAS DESIGNED STRAIGHT WITH ZERO HORIZONTAL DEFLECTION AT PIPE JOINTS BETWEEN BENDS. THERE IS A MAXIMUM ALLOWABLE DEFLECTION OF 0.5 DEGREES AT EACH PVC JOINT (2.1" FOR A 20' SECTION OF PIPE) AND 2 DEGREES AT EACH DUCTILE IRON JOINT USED WITH PVC PIPE (0" FOR A 20' SECTION OF PIPE). THE ALLOWABLE PVC TO PVC PIPE DEFLECTION SHALL BE RESERVED FOR ADJUSTMENTS TO THE VERTICAL ALIGNMENT OR GRADE. ADJUSTMENTS TO THE HORIZONTAL ALIGNMENT CAN BE ACCOMPLISHED AT THE DUCTILE IRON PIPE JOINTS. SEE TABLE THIS SHEET FOR ACCUMULATED OFFSET DISTANCES USING 0.5° DEFLECTION PER 20' PIPE SECTION.~~
- THE WATER MAIN IS DESIGNED TO BE LEVEL AND/OR WITH CONSTANT UPHILL/DOWNHILL GRADES TO SPECIFIC LOCATIONS SO ANY AIR IN THE SYSTEM CAN MIGRATE TO THE HIGH POINTS FOR VENTING TO ATMOSPHERE. THE CONTRACTOR SHALL INSTALL THE PIPE SECTIONS AND VENT SYSTEMS TO PROVIDE RELIEF AND PREVENT ENTRAPMENT OF AIR. VENTING WILL BE ACCOMPLISHED WITH HYDRANTS AND/OR COMBINATION AIR/VACUUM RELIEF VALVES AS SHOWN AND DETAILED.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 18" VERTICALLY BETWEEN THE PROPOSED WATER MAIN AND STORM DRAIN SYSTEMS OR SANITARY SEWER LINES. PROVIDE A MINIMUM OF 10' CLEAR HORIZONTAL SEPARATION BETWEEN THE WATER MAIN AND SANITARY OR STORM SEWER LINES. NEW WATERLINE PIPE JOINTS SHALL BE STAGGERED SO THEY ARE NO CLOSER THAN 9- FEET FROM THE CROSSING POINTS. ANY WATER PIPE OR SEWER PIPE JOINTS CLOSER THAN 9- FEET FROM ANY CROSSING POINTS SHALL BE SEALED PER DETAIL 2/D4.
- ALL UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL OBTAIN UTILITY LOCATES AND VERIFY THE BEST KNOWN LOCATION OF UTILITIES PRIOR TO ANY EXCAVATION.
- SOME AREAS WITH PROPOSED IMPROVEMENTS HAVE UTILITIES OWNED BY PRIVATE COMPANIES. THESE INCLUDE BURIED WATER, SEWER, ELECTRICAL, FUEL, COMMUNICATION, HEATING PIPES, AND OTHER UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH OWNER(S) OF UTILITIES TO OBTAIN UTILITY LOCATES PRIOR TO THE START OF EXCAVATION.
- THE CONTRACTOR IS RESPONSIBLE TO REPAIR AND/OR REPLACE ANY UTILITIES AND SURVEY MARKERS SHOWN OR FIELD LOCATED THAT ARE DAMAGED DURING CONSTRUCTION.
- AT A SUFFICIENT DISTANCE PRIOR TO ENCOUNTERING A KNOWN OBSTACLE OR TIE INTO AN EXISTING PIPE, THE CONTRACTOR SHALL EXPOSE AND VERIFY THE EXACT LOCATION OF THE OBSTACLE OR PIPE SO THAT ALIGNMENT AND/OR GRADE MAY BE DETERMINED BEFORE THE PIPE SECTIONS ARE LAID IN THE TRENCH AND BACKFILLED. AS-BUILT INFORMATION IS LIMITED AND SOME LOCATIONS OF EXISTING UTILITIES ARE UNKNOWN. VERTICAL LOCATIONS FOR ELECTRICAL, COMMUNICATIONS, TELEPHONE, AND WATER UTILITIES ARE GENERALLY NOT VERIFIED. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE EXCAVATE EXISTING UTILITIES ALONG THE PROPOSED PIPE ALIGNMENT TO VERIFY EXACT UTILITY LOCATIONS SO ADJUSTMENTS TO THE GRADES CAN BE MADE PRIOR TO ANY PIPE BEING INSTALLED. NO EXTRA PAYMENT WILL BE MADE FOR REWORK OF NEWLY INSTALLED UTILITIES REQUIRED BY FAILURE TO EXPOSE EXISTING UTILITIES.
- SOILS INFORMATION BETWEEN WSI TO OSI WAS PROVIDED BY HDL ENGINEERING AS PART OF THE FUTURE PAVING DESIGN. ~~SOILS BETWEEN OSI AND TRIDENT ARE KNOWN TO BE UNCLASSIFIED FILL AND/OR IN-SITU MATERIALS, INCLUDING BEDROCK.~~
- THE CONTRACTOR SHALL MAKE HIS OWN DEDUCTIONS AND CONCLUSIONS AS TO THE NATURE OF MATERIALS TO BE EXCAVATED, THE DIFFICULTIES OF MAKING AND MAINTAINING THE REQUIRED EXCAVATIONS, THE DIFFICULTIES THAT MAY ARISE FROM SUBSURFACE CONDITIONS, AND ANY OTHER WORK AFFECTED BY THE SUBSURFACE CONDITIONS, AND SHALL ACCEPT FULL RESPONSIBILITY THEREOF. EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE ELEVATIONS INDICATED, REGARDLESS OF THE CHARACTER OR TYPE OF MATERIALS ENCOUNTERED. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND WHATEVER SUBSTANCE ENCOUNTERED, INCLUDING BEDROCK. NO EXTRA PAYMENT WILL BE MADE FOR EXCAVATION THROUGH VARYING MATERIALS, INCLUDING BEDROCK.
- THE CONTRACTOR IS RESPONSIBLE TO PROPERLY DISPOSE OF ALL DEMOLISHED MATERIALS AND WASTE ITEMS GENERATED BY CONSTRUCTION, INCLUDING PAYMENT OF APPLICABLE DISPOSAL FEES.
- ALL REMOVED SOILS BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE OFF SITE STOCKPILE SITE(S) AND OTHERWISE BE RESPONSIBLE FOR PROPER DISPOSAL. EARTHEN MATERIAL DISPOSAL IS CONSIDERED INCIDENTAL TO TRENCH EXCAVATION AND BACKFILL, AND NO SEPARATE PAYMENT WILL BE MADE. THE CITY WILL MAKE THE LAYDOWN AREA ABOVE THE PYRAMID VALLEY WATER TREATMENT PLANT AVAILABLE FOR EXCESS OR UNSUITABLE EARTHEN MATERIAL DISPOSAL THAT CAN BE USED AT THE CONTRACTORS OPTION.

ADDENDUM 1 ITEM 4, SHEET G2 NOTE 5, CHANGE THE SECOND TO LAST SENTENCE TO:

BELL PROTECTION OVER-INSERTION COLLARS OR BI-DIRECTIONAL RESTRAINT SYSTEMS SHALL BE INSTALLED AT ALL PVC-PVC JOINTS TO PREVENT OVER-INSERTION OF THE PIPE.

ADDENDUM 1 ITEM 4, SHEET G2 NOTE 6, DELETE IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

THE PVC PIPE ALIGNMENT WAS DESIGNED STRAIGHT WITH ZERO (0) DEFLECTION AT PIPE JOINTS BETWEEN BENDS OR FITTINGS. ADJUSTMENTS TO GRADE OR ALIGNMENT SHALL ONLY BE MADE AT DUCTILE IRON FITTINGS. IF GRADE OR ALIGNMENT CHANGES ARE REQUIRED WHERE NO FITTINGS ARE INCLUDED IN THE DESIGN, THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL BENDS OR SLEEVES TO PROVIDE ANGULAR DEFLECTIONS WITHIN THE ALLOWABLE LIMITS. FOR 16" DIAMETER DUCTILE IRON PIPE OR 16" PVC CONNECTED TO DUCTILE IRON FITTINGS, ALLOWABLE DEFLECTION ANGLES AT EACH JOINT ARE LIMITED TO 1-1/2 DEGREES."

ADDENDUM 1 ITEM 4, DELETE TABLE. PVC-PVC JOINT DEFLECTION IS NOT ALLOWED.

| PIPE SECTION | ACCUMULATED LENGTH | DEFLECTION AMT (FT) | DEFLECTION AMT (IN) |
|--------------|--------------------|---------------------|---------------------|
| 20' JOINT | 20' | 0.175' | 2.1" |
| 20' JOINT | 40' | 0.524' | 6.3" |
| 20' JOINT | 60' | 1.047' | 12.6" |
| 20' JOINT | 80' | 1.745' | 20.9" |
| 20' JOINT | 100' | 2.618' | 31.4" |

SHEET INDEX

| | | |
|----|-----------------------|---|
| G1 | COVER | 1 |
| G2 | SHEET INDEX, NOTES | 1 |
| G3 | LEGEND, ABBREVIATIONS | 1 |
| G4 | QUANTITY TABLES | 1 |
| G5 | SURVEY CONTROL | 1 |
| G6 | KEY MAP | 1 |

PHASE 1 – WSI TO OSI

PP1 to PP-9 PLAN & PROFILE, STA 0+00 TO STA 75+53 9

PP9.1 PLAN & PROFILE – BLOW-OFF PIPE STA 75+18± 1

PHASE 2 – OSI TO TRIDENT (NIC)

~~PP10 to PP18 PLAN & PROFILE, STA 0+00B TO STA 42+00B 9~~

~~PP18.1 PLAN & PROFILE – BLOW-OFF PIPE STA 41+85± 4~~

B1 & B2 PYRAMID CREEK BRIDGE – UTILITY CROSSING 2

D1 to D6 MISCELLANEOUS DETAILS 6

D7 TRAFFIC CONTROL PLAN 1

TOTAL 25

FOR BID 04/22/24



| | | |
|-----|----------|-------------------|
| 1 | 05/14/24 | ADDENDUM 1 ITEM 4 |
| 0 | 04/22/24 | FOR BID |
| REV | DATE | DESCRIPTION |



REGAN ENGINEERING, P.C.

PROJECT: CITY OF UNALASKA
CAPTAINS BAY ROAD
WATER MAIN EXTENSION

TITLE: SHEET INDEX, NOTES

DESIGNED BY: TR DATE: 04/22/24 SHEET NO: G2 OF 25
CHECKED BY: TR DPW PROJECT NO: 22402

| Sheet | Station | PHASE 1 | | | | | | | | | | | PHASE 1 TOTALS | PHASE 2 (NIC) | | | | | | | | | | PHASE 2 TOTALS |
|----------|--|--------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|----------------|----------------|----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|-----|----------------|
| | | PP1 | PP2 | PP3 | PP4 | PP5 | PP6 | PP7 | PP8 | PP9 | PP9.1 | PP10 | | PP11 | PP12 | PP13 | PP14 | PP15 | PP16 | PP17 | PP18 | PP18.1 | | |
| | | 0+00 to 4+65 | 4+65 to 10+00 | 10+00 to 24+50 | 24+50 to 39+50 | 39+50 to 45+30 | 45+30 to 51+00 | 51+00 to 56+80 | 56+80 TO 62+50 | 62+50 to 75+53 | | 0+00B to 5+00B | | 5+00B to 8+00B | 8+00B to 13+00B | 13+00B to 18+00B | 18+00B to 23+20B | 23+20B to 26+00B | 26+00B to 31+00B | 31+00B to 36+50B | 36+50B to 42+00B | | | |
| Bid Item | Description | Unit | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Bedding Material (Class B) | Ton | 355 | 369 | 1646 | 1691 | 613 | 611 | 712 | 673 | 1491 | 33 | 8,192 | 567 | 330 | 584 | 567 | 616 | 325 | 618 | 639 | 622 | 110 | 4,978 |
| 5 | Surfacing Material | Ton | 226 | 235 | 1047 | 1076 | 390 | 389 | 453 | 428 | 949 | 21 | 5,213 | 364 | 210 | 378 | 364 | 392 | 210 | 406 | 413 | 399 | 70 | 3,206 |
| 6 | Furnish and Install 16" PVC Pipe | Linear Foot | | 315 | 1456 | 1517 | 537 | 495 | 577 | 572 | 1315 | | 6,784 | 500 | 300 | 500 | 500 | 520 | 280 | 500 | 550 | 550 | | 4,200 |
| 7 | Furnish and Install 16" Ductile Iron Pipe | Linear Foot | 283 | | | | | | | | | 30 | 313 | | | | | | | | | 100 | 100 | |
| 8 | Furnish and Install 8" Ductile Iron Pipe | Linear Foot | | | | | | | 50 | | | | 50 | | | | | 40 | | | | | 40 | |
| 9 | Connect to Existing Water Line (16") | Each | 2 | 1 | | | | | | | | | 3 | 1 | | | | | | | | | 1 | |
| 10 | Furnish and Install 8" Gate Valve | Each | | | | | | | 2 | | | | 2 | | | | | 2 | | | | | 2 | |
| 11 | Furnish and Install 16" Butterfly Valve | Each | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 7 | | | | | 1 | | | 1 | 1 | 3 | |
| 12 | Furnish and Install Valve Box | Each | 1 | | | | | | | | | | 1 | | | | | | | | | | 0 | |
| 13 | Remove and Replace Valve Box | Each | 1 | | | | | | | | | | 1 | | | | | | | | | | 0 | |
| 14 | Furnish and Install Fire Hydrant Assembly (Single Pumper) | Each | | | 1 | | 1 | | | | 1 | | 3 | | | | | | | | | | 0 | |
| 15 | Furnish and Install Fire Hydrant Assembly (Double Pumper) | Each | 1 | 1 | | | | 2 | 1 | 1 | | | 6 | 1 | | 1 | 1 | | 1 | 1 | | 1 | 6 | |
| 16 | Furnish and Install 1" Water Service Line | Each | | | | | | | | | | | 0 | | | | | | 2 | 2 | | | 4 | |
| 17 | Furnish and Install 2" Water Service Line | Each | | | | | 1 | | | | | | 1 | | | | | | | | | | 0 | |
| 18 | Furnish and Install Anode | Each | 4 | 2 | 2 | 0 | 3 | 4 | 6 | 2 | 3 | 3 | 41 | 5 | 6 | 4 | 6 | 10 | 5 | 5 | 5 | 5 | 6 | 57 |
| 19 | Furnish and Install Air/Vac Relief Vault | Each | | | 1 | 1 | | 1 | | 1 | 1 | | 5 | | 1 | | | | 1 | | | | 2 | |
| 20 | Furnish and Install Rigid Board Insulation | Linear Foot | | 184 | 32 | 16 | 24 | 326 | | 248 | 32 | | 862 | 438 | | | | 438 | 30 | | | 16 | 922 | |
| 23 | Construct 16" Blow-Off | All | | | | | | | | | | 1 | 1 | | | | | | | | | 1 | 1 | |
| 24 | Construct Bridge Crossing | All | | | | | | | 1 | | | | 1 | | | | | | | | | | 0 | |
| 25 | Furnish and Install (3) Spare 6" Conduits Sta 19+00B to Sta 23+00B | All | | | | | | | | | | | 0 | | | | | 1 | | | | | 1 | |

ADDENDUM 1 ITEM 5

FOR BID 04/22/24



| | | |
|-----|----------|-------------------|
| 1 | 05/14/24 | ADDENDUM 1 ITEM 5 |
| 0 | 04/22/24 | FOR BID |
| REV | DATE | DESCRIPTION |



REGAN ENGINEERING, P.C.

PROJECT: CITY OF UNALASKA
CAPTAINS BAY ROAD
WATER MAIN EXTENSION

TITLE: QUANTITY TABLE

DESIGNED BY: TR DATE: 04/22/24 SHEET NO: G4 of 25
CHECKED BY: TR DPW PROJECT NO: 22402