

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Methods of Measurement
- B. Description of Bid Items

1.02 METHODS OF MEASUREMENT

- A. Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the method stipulated in the particular sections involved. In determining quantities, all measurements shall be made in a horizontal plane unless otherwise specified.
- B. Measurements shall be in accordance with U.S. Standard Measures. A pound is an avoirdupois pound. A ton is 2,000 pounds' avoirdupois. The unit of liquid measure is the U.S. gallon. The unit of length is feet. The unit of volume is cubic yards.
- C. Material not used from a transporting vehicle shall be determined by the ENGINEER and deducted from the certified tag.
- D. When material is to be measured and paid for on a volume basis and it would be impractical to determine the volume, or when requested by the CONTRACTOR in writing and approved by the ENGINEER in writing, the material will be weighed and converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the ENGINEER and shall be agreed to by the CONTRACTOR before such method of measurement of pay quantities will be adopted.
- E. Full compensation for all expense involved in conforming to the above requirements for measuring and weighing materials shall be considered as included in the unit prices paid for the materials being measured or weighed and no additional allowances will be made therefore.
- F. Quantities of material wasted or disposed of in a manner not called for under the Contract; or rejected loads of material, including material rejected after it has been placed by reason of failure of the CONTRACTOR to conform to the provisions of the Contract; or material not unloaded from the transporting vehicle; or material placed outside the lines indicated on the plans or given by the ENGINEER; or material remaining on hand after completion of the Contract, will not be paid for and such quantities will not be included in the final total quantities. No compensation will be allowed for hauling rejected material.

- G. Bid items include all work necessary to complete the specific item described and not otherwise included in other bid items. The CONTRACTOR shall include in each bid item all costs required to construct the work in accordance with the Contract Documents and as identified below.

1.03 DESCRIPTION OF BID ITEMS

A. Bid Item 1: Mobilization, Site Clean-up, Demobilization

- 1. The lump sum bid price for this item shall constitute full compensation for mobilization, site cleanup, and demobilization including but not limited to equipment shipping and delivery, equipment set up, materials shipping and delivery, utility coordination, permitting including any required Santa Cruz County Construction Permitting, removal of equipment, removal of debris, disposal of debris, and project closeout. This bid item shall not be in excess of five percent (5%) of the total bid schedule. Twenty-five percent (25%) of the total Mobilization/Demobilization bid price shall be considered the cost of Demobilization and will not be paid until completion of the work.

B. Bid Item 2: Material Transportation and Staging

- 1. The lump sum bid price for this item shall include all costs associated with any required rental of storage or staging areas, security of materials and equipment, transportation of materials and/or equipment from the contractor's facility to/from staging areas, and transportation of materials or equipment to/from work sites.

C. Bid Item 3: Geotechnical Testing

- 1. The lump sum price for this bid item shall include all required Geotechnical analysis of work sites, including but not limited to compaction testing.

D. Bid Item 4: 4" Ductile Iron Water Main.

- 1. The unit price per linear foot shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide 4-inch ductile iron water main. Price shall include, but is not limited to, pipe, fittings, thrust restraints, temporary caps or plugs, disinfection, pressure testing, final connection to system, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- 2. Price shall include tee fittings for fire hydrant laterals.
- 3. Price shall not include hydrant laterals or hydrant gate valves. Those are included in the hydrant bid item.
- 4. Measurement shall be along the final installed alignment, as measured in the field.

E. Bid Item 5: 6" Ductile Iron Water Main.

- 1. The unit price per linear foot shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide 6-inch ductile iron water main. Price shall include, but is not limited to, pipe, fittings, thrust restraints, temporary caps or plugs, disinfection, pressure testing, final connection to system, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- 2. Price shall include tee fittings for fire hydrant laterals.
- 3. Price shall not include hydrant laterals or hydrant gate valves. Those are included in the hydrant bid item.
- 4. Measurement shall be along the final installed alignment, as measured in the field.

- F. Bid Item 6: 8” Ductile Iron Water Main.
1. The unit price per linear foot shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide 8-inch ductile iron water main. Price shall include, but is not limited to, pipe, fittings, thrust restraints, temporary caps or plugs, disinfection, pressure testing, final connection to system, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
 2. Price shall include tee fittings for fire hydrant laterals.
 3. Price shall not include hydrant laterals or hydrant gate valves. Those are included in the hydrant bid item.
 4. Measurement shall be along the final installed alignment, as measured in the field.
- G. Bid Item 7: 8” High Density Polyethylene Tank Drain.
1. The unit price per linear foot shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide 8-inch HDPE tank drainage piping. Price shall include, but is not limited to, pipe, fittings, thrust restraints, connection to existing drainage, temporary caps or plugs, disinfection, pressure testing, final connection to system, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
 2. Price shall include tee fittings for fire hydrant laterals.
 3. Price shall not include hydrant laterals or hydrant gate valves. Those are included in the hydrant bid item.
 4. Measurement shall be along the final installed alignment, as measured in the field.
- H. Bid Item 8: Blow Offs
1. The unit bid price per blow off valve shall constitute full compensation for all material, labor, equipment, tools, and services necessary to properly install new blow off valves. Price shall include, but is not limited to, tee or tapping saddle, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- I. Bid Item 9: Thrust and Anchor Blocks.
1. The lump sum bid price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide concrete anchor blocks as shown on the Drawings and required in the Specifications. Price shall include, but not be limited to, concrete, reinforcing steel, placement, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work required for a complete installation.
- J. Bid Item 10: 8” Gate Valve.
1. The unit price per valve shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide an 8-inch line valve on the new water main. Price shall include, but is not limited to, gate valve, valve can, excavation, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- K. Bid Item 11: 6” Gate Valve.
1. The unit price per valve shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a 6-inch line valve on the new water

main. Price shall include, but is not limited to, gate valve, valve can, excavation, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.

L. Bid Item 12: 4" Gate Valve.

1. The unit price per valve shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a 4-inch line valve on the new water main. Price shall include, but is not limited to, gate valve, valve can, excavation, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.

M. Bid Item 13: 2" Gate Valve.

1. The unit price per valve shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a 2-inch line valve on the new water main. Price shall include, but is not limited to, gate valve, valve can, excavation, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.

N. Bid Item 14: Air Release Valve.

1. The unit price per valve shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a combination air-relief and vacuum breaker valve as shown on the Drawings. Price shall include, but not be limited to, tapping saddle, corporation stop, piping, concrete pedestal, valves, enclosure, excavation, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.

O. Bid Item 15: Fire Hydrant.

1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a new or replacement fire hydrant. Price shall include, but is not limited to, tee or tapping saddle, gate valve, valve can, bury, hydrant, riser, breakaway check valve, excavation, sheeting, shoring, bracing, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.

P. Bid Item 15A, Reconnect to Existing 6-inch Hydrant Lateral

1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to reconnect an existing hydrant lateral to the new main line. Price shall include, but is not limited to, tee or tapping saddle, gate valve, valve can, other fitting or appurtenances required, excavation, sheeting, shoring, bracing, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.

Q. Bid Item 16: Points of Connection to Existing System (Main Line).

1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a cut in tee or hot tap of an existing 6-inch water main. Price shall include, but is not limited to, tee or tapping saddle, gate valve, valve can, other fitting or appurtenances required, excavation, sheeting, shoring, bracing, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for

a complete installation.

- R. Bid Item 16A: Points of Connection to Existing 8-Inch Main Line.
1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a cut in tee or hot tap of an existing 8-inch water main. Price shall include, but is not limited to, tee or tapping saddle, gate valve, valve can, other fitting or appurtenances required, excavation, sheeting, shoring, bracing, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- S. Bid Item 17: Points of Connection to Existing System (1-inch Services).
1. The unit bid price per service shall constitute full compensation for all material, labor, equipment, tools, and services necessary to replace existing water service laterals and meters. price shall include, but is not limited to, tapping saddle, corporation stop, PE water service lateral, meter setter or angle stop, meter box, excavation, sheeting, shoring, bracing, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
 2. Item includes customer notifications with signage and door hangers.
 3. Owner shall furnish replacement water meters, if needed.
- T. Bid Item 17A: Points of Connection to Existing 2-Inch Main Line.
1. The unit bid price per service shall constitute full compensation for all material, labor, equipment, tools, and services necessary to reconnect an existing 2-inch main line to the new 8-inch main line. price shall include, but is not limited to, tee or tapping saddle, gate valve, valve can, other fitting or appurtenances required, excavation, sheeting, shoring, bracing, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- U. Bid Item 17B: Points of Connection to Existing 4-Inch Main Line.
1. The unit bid price per service shall constitute full compensation for all material, labor, equipment, tools, and services necessary to reconnect an existing 4-inch main line to the new 8-inch main line. price shall include, but is not limited to, tee or tapping saddle, gate valve, valve can, other fitting or appurtenances required, excavation, sheeting, shoring, bracing, thrust restraint, backfill, compaction, repaving and all other work or appurtenances required for a complete installation.
- V. Bid Item 18: Pipeline Staking Layout.
1. The lump sum price for this bid item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide construction staking of all pipeline alignments, tank site, and/or other areas requiring survey or staking to ensure placement of new facilities in conformance with the Plans and Specifications.
- W. Bid Item 19: Street Sweeping and Erosion Control (All Sites).
1. The lump sum price for this bid item shall include full compensation for provision and installation of all erosion control measures required as shown in the Plans and Specification, and for regular (weekly at a minimum) mechanical sweeping of all areas within the project limits.
- X. Bid Item 20: Sawcut
1. The unit price shall constitute full compensation for all material, labor, equipment,

tools, and services necessary to provide sawcutting of asphalt and/or concrete as shown on the plans and in conformance with the Specifications.

Y. Bid Item 21: 2" AC Overlay

1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to place 2-inches of asphalt paving in all areas where required. Price shall include, but is not limited to, clean existing asphalt surface, provide and place tack coat, provide and place new AC, compact AC, and dispose of waste.
2. Driveways and pullouts adjacent to newly paved areas shall be feathered in.
3. Measurement shall be actual square yards of AC placed, as measured in the field.

Z. Bid Item 22: Slurry Seal.

1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide a Type II Slurry Seal in conformance with Santa Cruz County requirements as identified in Standard Details EP-1 and EP-2 as shown on the Plans.

AA. Bid Item 23: AC Pavement Replacement (Including Basecourse) - Igo Way

1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to place 3-inches of asphalt paving over 9-inches of Class 2 Base Rock in all areas where required. Price shall include, but is not limited to, scarify and compact sub-base areas, provide, place, and compact Base Rock, provide and place new AC, compact AC, and dispose of waste.
2. Driveways and pullouts adjacent to newly paved areas shall be feathered in.
3. Measurement shall be actual square yards of AC placed, as measured in the field.

BB. Bid Item 24: Traffic Control & Road Closure

1. The lump sum bid price for this item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide traffic control for the Work as required in the Contract Documents, Santa Cruz County Encroachment Permit, and Caltrans Encroachment Permit. Price shall include, but is not limited to, signage, flagmen, lights and barricades.

CC. Bid Item 25: Redwood Tank Demo and Removal.

1. The lump sum price for this bid item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to demolish the existing redwood tank and footing, and includes but is not limited to, draining of tank, demolishing of tank, piping, fencing and other site improvements, and disposal of waste.

DD. Bid Item 26: Tank Pad Preparation & Grading.

1. The lump sum price for this bid item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to grade and otherwise prepare the tank pad in conformance with the Plans and Specifications. Price shall include, but is not limited to, layout, grub & clear, grading and shaping, of the site.
2. Price shall include import of suitable soil as required. Import shall conform to the requirements of the Geotechnical Report
3. Price shall include offhaul and disposal of waste soil.

EE. Bid Item 27: Tree and Brush Removal.

1. The lump sum price for this bid item shall constitute full compensation for all material, labor, equipment, tools, and services necessary for removal all trees and/or brush indicated on the Plans for replacement of the Blue Ridge Tank. Price shall include general clearing of the site, removal of all specifically identified trees, and removal of all brush within the improvement area as needed for tank site preparation.
- FF. Bid Item 28: Temporary Tank(s) and piping (20,000-gal).
1. The lump sum price for this bid item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide and install 20,000-gallons of temporary potable water storage for the duration of the project. Price shall include, but not be limited to, provision of temporary poly tanks, provision of all necessary piping and fittings, and coordination with District Staff to install and operate temporary storage.
 2. Price shall include demolition of the temporary tank installation at the conclusion of the project, to include but not be limited to demolition and removal of all piping and appurtenances, site cleanup, and transportation of temporary tanks to a District yard. District shall retain poly tanks used in this work.
- GG. Bid Item 29: Demo & Removal of ex Electric and SCADA.
1. The lump sum price for this bid item shall constitute full compensation for all material, labor, equipment, tools, and services necessary to demolish and remove for the tank site all electrical equipment and SCADA system components. District to determine at time of demolition which components to retain, if any.
- HH. Bid Item 30: New 160,000 Gallon Bolted Steel Tank
1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide and install a properly engineered 160,000-gallon bolted steel tank. Price shall include, but not be limited to, tank, gaskets, hatches, access components, ladders, stairs, fall protection, venting, cathodic protection system components, level indicator, SCADA components, other components and/or systems required for a complete tank installation, installation of all elements, cleanup at completion of installation, and disposal of all debris or waste.
 2. Tank design shall be sealed and signed by a Registered Engineer qualified to design potable water storage systems in the State of California.
 3. Tank shall provide 160,000-gallons of total volume; 120,000-gallons of effective storage.
- II. Bid Item 31: New Tank Foundation.
1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide and install a properly engineered ring foundation or footing for the new Tank. Price shall include, but not be limited to, provision of concrete, reinforcing steel, and placement and finishing of concrete and reinforcing steel.
 2. Price shall include installation, stripping, and removal of forms for all concrete work.
 3. Foundation shall be designed, sealed, and signed by a Registered Engineer qualified to design foundation systems in the State of California.
 4. Price shall include cleanup and disposal of all debris.
- JJ. Bid Item 32: 2" PVC Comms Conduit.
1. The unit price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide and install 2-inch schedule 80 conduit for new communications.
- KK. Bid Item 33: New Electric Control Panel and Pedestal.

1. The lump sum price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to provide and install new electrical controls. Price shall include provision of a new panel, a new pedestal, new controls, runs, wiring, boxes, and other appurtenances required for a complete installation of new electrical controls.
- LL. Bid Item 34: Reconfigure SCADA equipment.
1. The lump sum price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to reconfigure any re-used SCADA equipment and to configure all new SCADA components.
 2. Price shall include coordination with District personnel to determine requirements.
- MM. Bid Item 35: Tank Disinfect and Tie-in to existing System.
1. The lump sum price shall constitute full compensation for all material, labor, equipment, tools, and services necessary to clean and disinfect the new bolted steel tank including, but not limited to, provision of chlorine and dechlorination.
 2. Price shall include initial cleaning of completed tank.
 3. Price shall include dechlorination of chlorine/water solution prior to disposal and disposal of dechlorinated water.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 00901

ADDENDUM NO. 4

GENERAL

Scope

This addendum modifies the Contract Documents dated June 13, 2022, for the San Lorenzo Valley Water District CIP Pipeline Project, and the work shall be accomplished in accordance with such modifications. This Addendum includes one (1) page and one (1) attachment.

Acknowledgment

Bidders must acknowledge this addendum as part of the bid submission by completing bidder's acknowledgment of addenda (Section 00300). Failure to acknowledge the addendum may constitute grounds for rejection of the bid.

CONTINGENCY

The Bid Schedule of Values found in Section 00301 of Volume II of the RFP includes a line item for a Contingency, with no specified value. All bidders shall include a Contingency value equal to ten percent (10%) of the total cost of the project as determined by the Bid Items one through thirty-five.

DESCRIPTION OF BID ITEMS

Section 01 20 00 Measurement and Payment of Volume I of the RFP for the subject project is replaced in its entirety by the attached Section 01025 Measurement and Payment.

END OF SECTION 00901