

ADDENDUM NO. 1
to the
CONTRACT DOCUMENTS for
South Sewer Interceptor CIPP Project
South Valley Water Reclamation Facility

April 27, 2021

1. CONTRACT DOCUMENTS – SECTION 00 41 00 – BID FORM

Remove Section 00 41 00 – Bid Form in its entirety and replace it with the attached Section 00 41 00 – Bid Form (Addendum No. 1).

Clarification: *Schedule B has been updated.*

2. CONTRACT DOCUMENTS – SECTION 01 20 00 – MEASUREMENT AND PAYMENT

Remove Section 01 20 00 – Measurement and Payment in its entirety and replace it with the attached Section 01 20 00 – Measurement and Payment (Addendum No. 1).

Clarification: *Non-styrene CIPP liners' Bid Item Nos. have been updated per attached Bid Form (Addendum No. 1).*

3. CONTRACT DOCUMENTS – SECTION 33 01 30.72 – Cured-in-Place Pipe Lining

Remove paragraph 3.4.M.2 in its entirety and replace with the following:

2. Raw wastewater at the SVWRF or from the Headworks Structure (C-09). This location is what will be used to determine if the styrene concentration is within the specified threshold.

Clarification: *Sampling will take place at SVWRF's Headworks Structure, not from the North Confluence Structure.*

THIS ADDENDUM IS HEREBY ATTACHED TO AND MADE A PART OF THE CONTRACT DOCUMENTS. EACH BIDDER SHALL ACKNOWLEDGE RECEIPT AND ACCEPTANCE OF ALL CONDITIONS CONTAINED HEREIN BY ENTERING THE ADDENDUM NUMBER AND DATE IN THE SPACE PROVIDED ON PAGE 00 41 00-1 (BID FORM) (ADDENDUM NO. 1) OF THE BIDDING DOCUMENTS.

Brent Packer, P.E.
Bowen Collins & Associates



SECTION 00 41 00
BID FORM (ADDENDUM NO. 1)

Copyright © 2013 (EJCDC® C-410) National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SOUTH SEWER INTERCEPTOR CIPP PROJECT
MARCH 2021

TABLE OF CONTENTS

	Page
ARTICLE 1 – Bid Recipient.....	2
ARTICLE 2 – Bidder’s Acknowledgements	2
ARTICLE 3 – Bidder’s Representations	2
ARTICLE 4 – Bidder’s Certification	3
ARTICLE 5 – Basis of Bid	4
ARTICLE 6 – Time of Completion.....	6
ARTICLE 7 – Attachments to this Bid.....	6
ARTICLE 8 – Defined Terms.....	7
ARTICLE 9 – Bid Submittal	7

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

South Valley Water Reclamation Facility

Taigon Worthen, PE

Facility Engineer

7495 South 1300 West

West Jordan, UT 84084

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental

Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices

at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

SCHEDULE A - BASE BID

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
A1	Mobilization/Demobilization (5%)	Lump Sum (LS)	1	\$	\$
A2	Sewer Bypass Pumping	LS	1	\$	\$
A3	Additional Hydraulic Cleaning*	Linear Foot (LF)	2,000	\$	\$
A4	Heavy Cleaning*	Hour (HR)	8	\$	\$
A5	Pre-Liner (48-inch)*	LF	1,000	\$	\$
A6	Pre-Liner (54-inch)*	LF	1,000	\$	\$
A7	Pre-Liner (60-inch)*	LF	1,000	\$	\$
A8	Internal Joint Seal (48-inch)*	Each (EA)	5	\$	\$
A9	Internal Joint Seal (54-inch)*	EA	5	\$	\$
A10	Internal Joint Seal (60-inch)*	EA	5	\$	\$
A11	Styrene Emitting Cured-in-Place Lining (48-inch)	LF	9,030	\$	\$
A12	Styrene Emitting Cured-in-Place Lining (54-inch)	LF	8,630	\$	\$
A13	Styrene Emitting Cured-in-Place Lining (60-inch)	LF	2,120	\$	\$
A14	Manhole Dismantling/Repair for CIPP Installation	EA	35	\$	\$
A15	Cleaning, Blasting, Surface Preparation, Debris Removal	Square Feet (SF)	3,600	\$	\$
A16	Removal/Disposal of Grit Material from Confluence Structures and 90-inch Influent Pipe	Cubic Yard (CY)	5	\$	\$

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
A17	Thin Repair (Up to 1.5 inches in Depth) Avg. 1-inch Depth	SF	1,430	\$	\$
A18	Moderate Repair (1.5 inches to 3 inches in Depth) Avg. 2.5 Inches	SF	1,100	\$	\$
A19	Anti-Corrosion Rebar Coating for Exposed Rebar	LF	1,100	\$	\$
A20	Leaking Crack – Waterproof Injection Grout	LF	150	\$	\$
A21	Polymeric Rehab (90-inch Influent Pipe)	SF	4,700	\$	\$
A22	Polymeric Rehab of Concrete Walls, Bench, and Flow Channels	SF	5,235	\$	\$
A23	Polymeric Rehab of Overhead Concrete	SF	1,000	\$	\$
A24	Polymeric Rehab (60-inch Square Manholes – Type A)	Vertical Feet (VF)	80	\$	\$
A25	Polymeric Rehab (60-inch Round Manholes – Types B and C)	VF	435	\$	\$
A26	Remove and Replace Pipe (48-inch)	LF	60	\$	\$
A27	Remove and Replace Pipe (60-inch)	LF	40	\$	\$
A28	8-foot Polymer Concrete Sewer Manhole	EA	1	\$	\$
A29	10-foot Polymer Concrete Sewer Manhole	EA	1	\$	\$
A30	Jordan River Trail Restoration	LS	1	\$	\$
A31	Unimproved Surface Restoration	LS	1	\$	\$
A32	Dirt Road Restoration	LS	1	\$	\$
A33	Gravel Road Restoration	LS	1	\$	\$
A34	Asphalt Restoration	LS	1	\$	\$
A35	Landscape Restoration	LS	1	\$	\$
A36	Corn Field Restoration	LS	1	\$	\$
A37	Alfalfa Field Restoration	LS	1	\$	\$
A38	Temporary Haul Road	LS	1	\$	\$
Schedule A Total					\$

The Contractor shall provide bid additive alternate costs to supply and install non-styrene emitting cured-in-place liners. These bid items are outlined in the following Schedule B. The Owner reserves the right to select the successful bidder based on the total bid price of Bid Schedule A only or the total bid price of Bid Schedule A plus Bid Schedule B.

SCHEDULE B – ADDITIVE ALTERNATE BID

Note: Bid Schedule B items may be used based on cure water sample test results performed by the Owner as described in Section 33 01 30.72 – CIPP Lining, paragraphs 3.4.L, 3.4.M, and 3.4.N.

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
B1	Mobilization/Demobilization (Non-Styrene Emitting CIPP) (max \$100,000)*	LS	1	\$	\$
B11	Non-Styrene Emitting Cured-in-Place Lining (48-inch)*	LF	2,660	\$	\$
Deduct A11	Deduct Styrene Emitting Cured-in-Place Lining (48-inch)*	LF	2,660	(\$)	(\$)
B12	Non-Styrene Emitting Cured-in-Place Lining (54-inch)*	LF	565	\$	\$
Deduct A12	Deduct Styrene Emitting Cured-in-Place Lining (54-inch)*	LF	565	(\$)	(\$)
B13	Non-Styrene Emitting Cured-in-Place Lining (60-inch)*	LF	2,120	\$	\$
Deduct A13	Deduct Styrene Emitting Cured-in-Place Lining (60-inch)*	LF	2,120	(\$)	(\$)
Schedule B Total					\$

Schedule A + Schedule B Total	\$
--------------------------------------	----

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, (3) items listed with one asterisk "*" require Engineer/Owner approval prior to installation or use, and (4) final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Section 00 41 00 – Bid Form
- B. Section 00 43 13 – Bid Bond
- C. Section 00 43 50 – Project Organization Description
- D. Section 00 43 70 – Proposed Subcontractors and Major Materials Suppliers

- E. Section 00 43 83 – Preliminary Construction Schedule
- F. Section 00 45 10 – Contractor’s Current Business License Information
- G. Section 00 45 13 – Bidder’s Qualifications
- H. Section 00 45 15 – Resumes of Key Personnel

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *(Indicate correct name of bidding entity)*

By:

[Signature] _____

[Printed name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

(where applicable)

THIS PAGE INTENTIONALLY BLANK

SECTION 01 20 00
MEASUREMENT AND PAYMENT (ADDENDUM NO. 1)

1.1 DESCRIPTION

- A. This Section defines the manner in which the Lump Sum Prices, Unit Prices, and the Allowances listed in the Bid Schedule will be used to determine measurement and payment for all Work and describes the required procedures for monthly progress payments to the Contractor.
- B. Make selections below based on the type of construction schedule being used. The Bar Chart Schedule is defined in Section 01 32 20 and the CPM Schedule is defined in Section 01 32 21.
- C. Bid amounts will include all plant, equipment, tools materials, labor, service, and all other items required to complete the Work included in the Agreement unless specifically excluded by this section. Work required for which no separate Bid item is identified will be considered as a subsidiary obligation of the Contractor, and the cost therefore shall be included in the most applicable Bid item. Refer to Section 01 32 20 - Bar Chart Schedule for resource loading and progress payments. Compensation for partial completion of the Work will be determined by use of the Construction Schedule. Bid amounts for each item will be the basis for development of budget values for activities included in the Construction Schedule and in the Schedule of Values. Adjustments to Allowance Bid Item amounts will be applied to the Contract Price when Work is completed, and actual Allowance item amounts are known.
- D. Payment for all items in the Bid Schedule will include full compensation for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of the Work in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including but not limited to all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- E. All costs shall be included in the prices named in the Bid Schedule for the various items of Work. Except as otherwise provided herein, no separate payment will be made for any item that is not specifically set forth in the Bid Schedule.
- F. When included, all estimated quantities stipulated in the Bid or other Contract Documents are approximate and are to be used only as a basis for estimating the probable cost of the Work and for the purpose of comparing the Bids submitted for the Work. The actual amounts of Work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. Contractor agrees that it will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts thereof.
- G. The unit or lump sum item of work, which involves excavation or trenching shall include all costs for such work. No direct payment will be made for excavation or trenching. All excavation and trenching will be unclassified as to materials which may be encountered; in

addition, trenches will be unclassified as to depth. No additional payment will be made for rock or caliche excavation, nor for blasting which the Contractor determines is required for rock or caliche excavations.

- H. Monthly pay requests are due on the 30th of each month, and while pay requests will be accepted prior to this date, pay request processing will not begin until this date for purposes of meeting the Owner's pay request processing obligations. Failure to submit a pay request by this day may be cause for the rejection of the pay request. If rejected, Contractor may have to resubmit the pay request the next month. Should the submittal date fall on a holiday or weekend day during the month, then consider the next working day as the due date.
- I. Note that the information provided in this Section is intended for use as a general description of the breakdown of work to be included in the Bid Schedule. The following descriptions are NOT intended to represent a complete listing of all Work required by the Contract Documents. It is the Bidder's responsibility to make sure that costs for all Work required in the plans and specifications is accounted for in the appropriate Bid Items, whether or not specifically described in this Measurement and Payment section. The Owner is not responsible for Contractor's failure to properly coordinate with Subcontractors and Suppliers regarding the breakdown of Work in these Contract Documents.

1.2 MEASUREMENT AND PAYMENT

- A. The actual Bid Items to be included in the Contract are to be enumerated here. Add and delete paragraphs for Allowance Bid Items, Lump Sum Bid Items, and Unit Price Bid Items in the paragraphs below in accordance with the Bid Schedule for the Project.
- B. Lump Sum Bid Items
 - A. All Work Required by the Contract Documents
 - a. Payment for Work under this Bid item will be based on the breakdown of costs for each scheduled activity in the Construction Schedule and the percentage of completion for each activity in accordance with the Contract Documents.
- C. Enumerate Unit Price Bid items by adding paragraphs as needed below. If there are none, delete the paragraph.
- D. Unit Price Bid Items
 - A. All Work Required by the Contract Documents Unit Price Items
 - a. Measurement and calculation of quantities for payment to be as indicated in this section.
 - b. Unit prices or lump sum amounts to include full compensation for furnishing all labor, materials, products, tools, equipment, transportation, services, and incidentals; erection, application or installation of an item of the Work; overhead and profit, and doing all work shown on the Drawings, defined in the Specifications, and/or stipulated herein.

- c. Payment covers the cost of incidental work, including but not limited to: Construction Quality Control program; Quality Assurance Testing, safety procedure plan; all equipment, labor, and materials required to safely complete the work per all local, state and federal requirements; maintaining construction schedule; submittals; permits and associated fees, bonds and others costs; traffic control; silt fencing; stabilized construction entrances; irrigation, surface water and drainage management; temporary access and deliveries to local businesses affected by work; coordination with property owners, businesses, contractors, and government agencies; protection and support of existing surface and subsurface features except as identified as bid items; providing assistance to other utility companies in locating and relocating service laterals and mains, as needed; protection, restoration and replacement of asphalt and/or gravel surfaces per the requirements of the property owner or municipal agency; restoration of existing manholes used to facilitate the work; restoration of work area to pre-construction conditions or better; seeding; wetland, upland and creek protection and restoration; replacement and restoration of existing utilities (mains and services) and other items damaged by the CONTRACTOR's operations; removal and replacement of landscape materials and irrigation systems equal to or better than existing if damaged by the CONTRACTOR's operations; removal and replacement of landscape materials and irrigation systems equal to or better than existing if damaged by the CONTRACTOR's operations; and all other necessary work, to install the Work complete in place.

E. Bid Schedule to be as follows:

1. MOBILIZATION / DEMOBILIZATION (BID ITEM NO. A1)

- A. Description: This item includes all materials, equipment, and labor necessary to mobilize and demobilize during the installation of the Cured-in-place and manhole liners.
- B. Measurement and Basis of Payment: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall not exceed five percent (5%) of the total base bid price. Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Mobilization
 - 2) Demobilization
 - 3) Videotaping site conditions pre- and post-construction in accordance with Section 01 71 30 – Site Conditions Surveys of the Contract Documents
 - 4) Temporary facilities
 - 5) Obtaining bonds, insurance and permits per the Contract Documents
 - 6) Snow and ice removal

- 7) Coordination with SVWRF regarding project impact on the treatment facility
- 8) Providing lighting during evening work
- 9) Clean-up work
- 10) Complying with all SWPPP requirements
- 11) Resetting any disturbed property corners or street monuments
- 12) Administrative items
- 13) Potholing ahead of construction and restoration of all potholes per contract requirements.
- 14) Project signs
- 15) Surface grading and restoration of staging area(s) and ditches to preconstruction conditions.
- 16) Silt fencing in accordance with the Contract Documents
- 17) All other appurtenances and work required to mobilize and demobilize.
- 18) Coordination with the Owner's Public Relations firm
- 19) Obtaining and submitting property restoration release forms
- 20) All other appurtenances and work required to mobilize and to demobilize

2. MOBILIZATION/DEMobilIZATION (NON-STYRENE EMITTING CIPP) (BID ITEM NO. B1)

- A. Description: This item includes all materials, equipment, and labor necessary to mobilize and demobilize during the installation of the Non-styrene emitting Cured-in-place liner.
- B. Measurement and Basis of Payment: Measured and paid for based on lump sum.
- C. Authorization of Payment: Payment for Bid Item No. A1 will only be made if the non-styrene emitting CIPP lining option is authorized by the Owner. At which point, the Contractor will receive an additional 31 calendar days of contract time and additional lump sum payment for the use of the non-styrene emitting CIPP lining execution.
- D. Payment Covers: Payment shall not exceed \$100,000. Payment shall be compensation for all delays, coordination, travel, canceled orders, reshelving fees, labor, tools, materials, and equipment required to complete this item, including, but not limited to all the items in Bid Item No.1.

3. SEWER BYPASS PUMPING (BID ITEM NO. A2)

- A. Description: This item includes all materials, equipment, and labor necessary to maintain existing wastewater flows during the rehabilitation of the sewer segments and manholes identified in the Drawings. The Contractor shall prepare and submit a sewer bypass plan to Engineer for approval by SVWRF prior to beginning construction.

- B. Materials and Construction Requirements – All work under this item shall conform to the Construction Plans.
- C. Measurement and Basis of Payment: Measured and paid for based on lump sum. Progress payments shall be made equal to the percentage of completion of lining for the segments of sewer identified in the Drawings.
- D. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Preparation of an acceptable sewer bypass plan.
 - 2) Maintaining wastewater flows, including temporary routing or pumping of sewage at multiple locations as necessary to maintain uninterrupted sanitary sewer service during the construction of the sewer trunk line and connecting piping, removal or abandonment of the existing system.
 - 3) Furnish pumps, piping, sewer plugs, and hoses.
 - 4) Furnish gasoline/diesel fuel.
 - 5) Furnish ramps, bridges, jersey barriers, sign notifications, traffic lights, and/or reflective barricades as needed.
 - 6) Providing 24/7 personnel observing and maintaining any sewer bypass pumping system used during construction.
 - 7) Providing protection to bypass pumping lines used during construction including traffic maintenance, signs, and barriers
 - 8) Removal and disposal of the temporary service after completion of the work.
 - 9) All other appurtenances and work required to provide temporary sewer bypass service to the sewer segments and manholes being rehabilitated.

4. ADDITIONAL HYDRAULIC CLEANING (BID ITEM NO. A3)

- A. Description: This item includes all materials, equipment, and labor necessary to perform additional hydraulic cleaning of the sanitary sewer.
- B. Measurement and Basis of Payment: Measured and paid for based on linear foot.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item. Payment will only be made if the light cleaning was insufficient as described in Section 33 01 30.51.

5. HEAVY CLEANING (BID ITEM NO. A4)

- A. Description: This item includes all materials, equipment, and labor necessary to perform heavy cleaning of the sanitary sewer.

- B. Measurement and Basis of Payment: Measured and paid for based on hours needed to clean the pipe.
 - C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item. Payment will only be made if the light and additional cleaning was insufficient as described in Section 33 01 30.51 and shall be pre-approved by the Engineer.
6. PRE-LINER (BID ITEM NOS. A5, A6, AND A7)
- A. Description: This item includes all materials, equipment, and labor necessary to install a pre-liner.
 - B. Measurement and Basis of Payment: Measured and paid based on linear foot, regardless of depth.
 - C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item. Payment will only be made if a pre-liner for infiltration control is approved by the Engineer.
7. INTERNAL JOINT SEAL (BID ITEM NOS. A8, A9, AND A10)
- A. Description: This item includes all materials, equipment, and labor necessary to install an internal joint seal.
 - B. Measurement and Basis of Payment: Measured and paid based on each internal joint seal satisfactorily installed.
 - C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item. Payment will only be made if a joint seal for infiltration control is approved by the Engineer.
8. STYRENE EMITTING CURED-IN-PLACE LINING (BID ITEM NOS. A11, A12, AND A13)
- A. Description: This item includes all materials, equipment, and labor necessary to furnish and install the CIPP lining of indicated length and diameter and the cost of incidental work.
 - B. Measurement and Basis of Payment: Measured and paid based on linear foot, regardless of depth.
 - C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Pre- and post-CCTV
 - 2) Light sewer cleaning
 - 3) Blocking or plugging of incoming lines,
 - 4) Bypass Pumping

- 5) Traffic control
- 6) Coordination with the Owner's Public Relations firm
- 7) Install and curing the CIPP liner
- 8) End seals
- 9) Providing cured CIPP samples for testing
- 10) Coordination with SVWRF regarding project impact on the treatment facility
- 11) Restoring existing utilities impacted by sewer construction including, but not limited to: water lines, gas lines, irrigation pipe, storm drains, storm drain manholes and catch basins, power lines, secondary water lines, fiber optic lines, telephone lines, cable TV, etc.
- 12) Restoring surface improvements impacted by sewer construction including but not limited to: pavement, wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
- 13) All other appurtenances and work required to install the CIPP liners.

D. Full Payment for CIPP lining is based on furnishing a liner with a 50-year service life with a factor of safety of 2.0 as calculated by the submitted calculations. When post-installation thickness measurements and/or physical property testing is performed, installed liners which both meet and exceed, and do not meet the calculated thicknesses or physical properties used in said calculations, acceptance and payment will be made in the following manner:

- a. Full Payment: If the thickness, flexural modulus of elasticity, and flexural strength of installed liner are all equal to or greater than the assumed and calculated values, full payment will be made.

Example Scenario:

- *Average Measured Flexural Strength = 120% of assumed value*
- *Average Measured Flexural Modulus = 120% of assumed value*
- *Average Measured Thickness = 100% of calculated thickness*
- *Full Payment would be made.*

- b. Full Payment: If any of the thickness, flexural modulus of elasticity, or flexural strength of installed liner are less than the calculated values, but other measured parameters still provide a 50-year service life with a factor of safety of 2.0, full payment will be made.

Example Scenario:

- *Average Measured Flexural Strength = 120% of assumed value*
- *Average Measured Flexural Modulus = 120% of assumed value*
- *Average Measured Thickness = 95% of calculated thickness*
- *Contractor resubmits P.E. stamped calculations showing that with the higher measured flexural modulus and strength, a 50-year service life with a factor of safety above 2.0 is still provided even with the lower measured thickness.*
- *Full Payment would be made.*

- c. Rejected: If any point of the thickness is less than 87.5% of calculated values, or if the average thickness is less than 85% of the calculated values, or the average flexural strength or flexural modulus is less than 85% of the assumed values, or the revised calculated factor of

safety is less than 1.5, no payment will be made.

Example Scenario:

- *Average Measured Flexural Strength = 120% of assumed value*
 - *Average Measured Flexural Modulus = 84% of assumed value, or*
 - *Thickness Measurement No. 3 out of 8 = 86% of calculated thickness,*
 - *No Payment would be made.*
- d. Reduced Payment: If any of the thickness, flexural modulus of elasticity, or flexural strength of installed liner are less than the assumed or calculated values but still above the minimum percentages listed above, and the installed liner still can provide a 50-year service life with a factor of safety above 1.5, reduced payment will be made as follows:
- *Factor of Safety = 1.9 – 1.99, Payment would be 90% of Full Payment*
 - *Factor of Safety = 1.8 – 1.89, Payment would be 80% of Full Payment*
 - *Factor of Safety = 1.7 – 1.79, Payment would be 70% of Full Payment*
 - *Factor of Safety = 1.6 – 1.69, Payment would be 60% of Full Payment*
 - *Factor of Safety = 1.5 – 1.59, Payment would be 50% of Full Payment*
 - *Factor of Safety < 1.5, No Payment would be made.*
 - *If Contractor does not wish to resubmit the P.E. stamped calculations of the factor of safety, Payment would be 50% of Full Payment.*

Example Scenario:

- *Average Measured Flexural Modulus = 105% of assumed value*
- *Average Measured Thickness = 90% of calculated thickness*
- *Contractor resubmits P.E. stamped calculations showing that with the higher measured flexural modulus and strength, a 50-year service life with a recalculated factor of safety of 1.86 is provided with the lower measured thickness.*
- *80% of Full Payment would be made.*

9. NON-STYRENE EMITTING CURED-IN-PLACE LINING (BID ITEM NOS. B11, B12, AND B13)
- A. Description: This item includes all materials, equipment, and labor necessary to furnish and install the CIPP lining of indicated length and diameter and the cost of incidental work.
- B. Measurement and Basis of Payment: Measured and paid based on linear foot, regardless of depth.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
- 1) Pre- and post-CCTV
 - 2) Light sewer cleaning
 - 3) Blocking or plugging of incoming lines,

- 4) Bypass Pumping
- 5) Traffic control
- 6) Coordination with the Owner's Public Relations firm
- 7) Install and curing the CIPP liner
- 8) End seals
- 9) Providing cured CIPP samples for testing
- 10) Coordination with SVWRF regarding project impact on the treatment facility
- 11) Restoring existing utilities impacted by sewer construction including, but not limited to: water lines, gas lines, irrigation pipe, storm drains, storm drain manholes and catch basins, power lines, secondary water lines, fiber optic lines, telephone lines, cable TV, etc.
- 12) Restoring surface improvements impacted by sewer construction including but not limited to: pavement, wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
- 13) All other appurtenances and work required to install the CIPP liners.

D. Full Payment for CIPP lining is based on furnishing a liner with a 50-year service life with a factor of safety of 2.0 as calculated by the submitted calculations. When post-installation thickness measurements and/or physical property testing is performed, installed liners which both meet and exceed, and do not meet the calculated thicknesses or physical properties used in said calculations, acceptance and payment will be made in the following manner:

- a. Full Payment: If the thickness, flexural modulus of elasticity, and flexural strength of installed liner are all equal to or greater than the assumed and calculated values, full payment will be made.

Example Scenario:

- *Average Measured Flexural Strength = 120% of assumed value*
 - *Average Measured Flexural Modulus = 120% of assumed value*
 - *Average Measured Thickness = 100% of calculated thickness*
 - *Full Payment would be made.*
- b. Full Payment: If any of the thickness, flexural modulus of elasticity, or flexural strength of installed liner are less than the calculated values, but other measured parameters still provide a 50-year service life with a factor of safety of 2.0, full payment will be made.

Example Scenario:

- *Average Measured Flexural Strength = 120% of assumed value*
 - *Average Measured Flexural Modulus = 120% of assumed value*
 - *Average Measured Thickness = 95% of calculated thickness*
 - *Contractor resubmits P.E. stamped calculations showing that with the higher measured flexural modulus and strength, a 50-year service life with a factor of safety above 2.0 is still provided even with the lower measured thickness.*
 - *Full Payment would be made.*
- c. Rejected: If any point of the thickness is less than 87.5% of calculated values, or if the average thickness is less than 85% of the calculated values, or the average flexural strength or flexural modulus is less

than 85% of the assumed values, or the revised calculated factor of safety is less than 1.5, no payment will be made.

Example Scenario:

- *Average Measured Flexural Strength = 120% of assumed value*
 - *Average Measured Flexural Modulus = 84% of assumed value, or*
 - *Thickness Measurement No. 3 out of 8 = 86% of calculated thickness,*
 - *No Payment would be made.*
- d. Reduced Payment: If any of the thickness, flexural modulus of elasticity, or flexural strength of installed liner are less than the assumed or calculated values but still above the minimum percentages listed above, and the installed liner still can provide a 50-year service life with a factor of safety above 1.5, reduced payment will be made as follows:
- *Factor of Safety = 1.9 – 1.99, Payment would be 90% of Full Payment*
 - *Factor of Safety = 1.8 – 1.89, Payment would be 80% of Full Payment*
 - *Factor of Safety = 1.7 – 1.79, Payment would be 70% of Full Payment*
 - *Factor of Safety = 1.6 – 1.69, Payment would be 60% of Full Payment*
 - *Factor of Safety = 1.5 – 1.59, Payment would be 50% of Full Payment*
 - *Factor of Safety < 1.5, No Payment would be made.*
 - *If Contractor does not wish to resubmit the P.E. stamped calculations of the factor of safety, Payment would be 50% of Full Payment.*

Example Scenario:

- *Average Measured Flexural Modulus = 105% of assumed value*
- *Average Measured Thickness = 90% of calculated thickness*
- *Contractor resubmits P.E. stamped calculations showing that with the higher measured flexural modulus and strength, a 50-year service life with a recalculated factor of safety of 1.86 is provided with the lower measured thickness.*
- *80% of Full Payment would be made.*

D. Payment will only be made if these items are approved by the Engineer.

10. MANHOLE DISMANTLING/REPAIR FOR CIPP INSTALLATION (BID ITEM NO. A14)

- A. Description: This item includes all materials, equipment, and labor necessary to dismantle and subsequently repair manholes in order to install the CIPP liner.
- B. Measurement and Basis of Payment: Measured and paid based on each manhole satisfactorily dismantled and then repaired.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
- 1) Excavation, removal of cone, chimney, and metal castings,

- 2) Confined space entry,
- 3) Removal of pipe material such that CIPP lining can be completed,
- 4) Blocking or plugging of incoming lines,
- 5) Bypass Pumping
- 6) Traffic control
- 7) Reconstruction of the manhole cone, chimney, and metal castings,
- 8) Restoring existing utilities impacted by sewer construction including, but not limited to: water lines, gas lines, irrigation pipe, storm drains, storm drain manholes and catch basins, power lines, secondary water lines, fiber optic lines, telephone lines, cable TV, etc.
- 9) Restoring surface improvements impacted by sewer construction including but not limited to: pavement, wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.

11. CLEANING, BLASTING, SURFACE PREPARATION, DEBRIS REMOVAL (BID ITEM NO. A15)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary for cleaning, blasting, surface preparation, and debris removal at the North and South Confluent Structures as it relates to thin concrete surface repair, moderate concrete repair and polymeric rehab as indicated on the Construction Plans.
- B. Measurement and Basis for Payment: Measured and paid on a square foot basis regardless of depth. Measurement of the actual quantity of surface preparation area shall be made by Owner. Contractor may, at his/her expense, verify quantities.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item.

12. REMOVAL/DISPOSAL OF GRIT MATERIAL FROM CONFLUENCE STRUCTURES AND 90-INCH INFLUENT PIPE (BID ITEM NO. A16)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary for removal and disposal of grit material from the confluent structures and 90-inch influent pipe.
- B. Measurement and Basis of Payment: Measured and paid on a cubic yard basis. Measurement of the actual quantity of removal and disposal of grit material shall be made by Owner. Contractor may, at his/her expense, verify quantities.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item.

13. THIN REPAIR (UP TO 1.5 INCHES IN DEPTH) AVG. 1-INCH DEPTH (BID ITEM NO. A17)
- A. Description: This item includes all materials, equipment, labor, and incidentals relating to thin concrete surface repair (up to 1.5" in depth) to the interior of the North and South Confluent Structures as indicated on the Construction Plans.
 - B. Measurement and Basis of Payment: Measured and paid on a square foot basis. Measurement of the actual quantity of repair shall be made by Owner. Contractor may, at his/her expense, verify quantities.
 - C. Payment Covers: The unit price per square foot of thin concrete repair will be full compensation for providing all concrete surface repairs up to 1.5 inches thick as ordered and not specifically included under other items or contracts. This includes, but not limited to:
 - 1) Repairing surface spalls and delaminated areas by removing deteriorated concrete,
 - 2) Cleaning and preparing the substrate,
 - 3) Placing new repair mortar as specified.
14. MODERATE REPAIR (1.5 INCHES TO 3 INCHES IN DEPTH) AVG. 2.5 INCHES (BID ITEM NO. A18)
- A. Description: This item includes all materials, equipment, labor, and incidentals relating to moderate concrete repair (1.5" to 3" in depth) to the interior of the North and South Confluent Structures as indicated on the Construction Plans.
 - B. Measurement and Basis of Payment: Measured and paid on a square foot basis. Measurement of the actual quantity of repair shall be made by Owner. Contractor may, at his/her expense, verify quantities.
 - C. Payment Covers: The unit price per square foot of moderate concrete repair will be full compensation for providing all concrete surface repairs 1.5 inches up to and including 3 inches thick as ordered and not specifically included under other items or contracts. This includes, but not limited to:
 - 1. Repairing surface spalls and delaminated areas by removing deteriorated concrete,
 - 2. Cleaning and preparing the substrate,
 - 3. Placing new repair mortar as specified.
15. ANTI-CORROSION REBAR COATING FOR EXPOSED REBAR (BID ITEM NO. A19)
- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install anti-corrosion rebar coating for

exposed rebar on the interior of the North and South Confluent Structures based on surface preparation for moderate concrete repair.

- B. Measurement and Basis of Payment: Measured and paid based on linear foot. Measurement of the actual quantity of coating shall be made by Owner. Contractor may, at his/her expense, verify quantities.
- C. Payment Covers: The unit price per linear foot of anti-corrosion rebar coating will be full compensation for providing the cleaning and coating of existing rebar exposed following surface preparation work as ordered and not specifically included under other items or contracts.

16. LEAKING CRACK – WATERPROOF INJECTION GROUT (BID ITEM NO. A20)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install waterproof injection grout. Repair leaking cracks by cleaning and pressure-injecting waterproof injection grout into the prepared cracks, as specified for all existing, leaking cracks 1/2-inch wide and smaller. See Structural Repair Details sheet GS-01.
- B. Measurement and Basis of Payment: Measured and paid based on linear foot, regardless of depth. Measurement of the actual quantity of leaking cracks shall be made by Owner. Contractor may, at his/her expense, verify quantities.
- C. Payment Covers: The unit price per linear foot for leaking cracks will be full compensation for providing all leaking crack repairs as ordered and not specifically included under other items or contracts.

17. POLYMERIC REHAB (90-INCH INFLUENT PIPE) (BID ITEM NO. A21)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install the polymeric manhole rehabilitation liner as indicated at the locations shown on the Construction Plans.
- B. Measurement and Basis of Payment: Measured and paid on a square foot basis regardless of depth.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Permit Required Confined Space Entry,
 - 2) Traffic control,
 - 3) Surface preparation,
 - 4) Patching of holes or voids,
 - 5) Infiltration control (chemical grouting),
 - 6) Installation of the polymer concrete rehabilitation product,

- 7) Adhesion and spark testing and subsequent repairs,
- 8) Restoring surface improvements impacted by construction including but not limited to: wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
- 9) All other appurtenances and work required to rehabilitate the concrete surfaces.

18. POLYMERIC REHAB OF CONCRETE WALLS, BENCH, AND FLOW CHANNELS (BID ITEM NO. A22)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install the polymeric manhole rehabilitation liner as indicated at the locations shown on the Construction Plans.
- B. Measurement and Basis of Payment: Measured and paid on a square foot basis regardless of depth.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Permit Required Confined Space Entry,
 - 2) Traffic control,
 - 3) Surface preparation,
 - 4) Patching of holes or voids,
 - 5) Infiltration control (chemical grouting),
 - 6) Installation of the polymer concrete rehabilitation product,
 - 7) Adhesion and spark testing and subsequent repairs,
 - 8) Restoring surface improvements impacted by construction including but not limited to: wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
 - 9) All other appurtenances and work required to rehabilitate the concrete surfaces.

19. POLYMERIC REHAB OF OVERHEAD CONCRETE (BID ITEM NO. A23)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install the polymeric manhole rehabilitation liner as indicated at the locations shown on the Construction Plans.
- B. Measurement and Basis of Payment: Measured and paid on a square foot basis regardless of depth.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:

- 1) Permit Required Confined Space Entry,
- 2) Traffic control,
- 3) Surface preparation,
- 4) Patching of holes or voids,
- 5) Infiltration control (chemical grouting),
- 6) Installation of the polymer concrete rehabilitation product,
- 7) Adhesion and spark testing and subsequent repairs,
- 8) Restoring surface improvements impacted by construction including but not limited to: wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
- 9) All other appurtenances and work required to rehabilitate the concrete surfaces.

20. POLYMERIC REHAB (60-INCH SQUARE MANHOLES – TYPE A) (BID ITEM NO. A24)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install the polymeric manhole rehabilitation liner as indicated at the locations shown on the Construction Plans.
- B. Measurement and Basis of Payment: Measured and paid on a vertical foot basis regardless of depth.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Permit Required Confined Space Entry,
 - 2) Traffic control,
 - 3) Surface preparation,
 - 4) Patching of holes or voids,
 - 5) Infiltration control (chemical grouting),
 - 6) Installation of the polymer concrete rehabilitation product,
 - 7) Adhesion and spark testing and subsequent repairs,
 - 8) Restoring surface improvements impacted by construction including but not limited to: wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
 - 9) All other appurtenances and work required to rehabilitate the concrete surfaces.

21. POLYMERIC REHAB (60-INCH ROUND MANHOLES – TYPES B AND C) (BID ITEM NO. A25)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to furnish and install the polymeric manhole rehabilitation liner as indicated at the locations shown on the Construction Plans.

- B. Measurement and Basis of Payment: Measured and paid on a vertical foot basis regardless of depth.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Permit Required Confined Space Entry,
 - 2) Traffic control,
 - 3) Surface preparation,
 - 4) Patching of holes or voids,
 - 5) Infiltration control (chemical grouting),
 - 6) Installation of the polymer concrete rehabilitation product,
 - 7) Adhesion and spark testing and subsequent repairs,
 - 8) Restoring surface improvements impacted by construction including but not limited to: wetlands, uplands, concrete curb and gutter, sidewalks, landscaping, trees, fences, signs, etc.
 - 9) All other appurtenances and work required to rehabilitate the concrete surfaces.

22. REMOVE AND REPLACE PIPE (BID ITEM NOS. A26 AND A27)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to remove existing pipe and to furnish and install new pipe as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on the actual length of pipe installed. Measurement will be made along the centerline of the pipe, in place, prior to covering or backfilling.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Excavation
 - 2) Dewatering
 - 3) Disposal of native material not suitable for trench backfill
 - 4) Removal and disposal of existing pipe
 - 5) Furnish and install filter fabric
 - 6) Furnish, place, and compact imported pipe bedding and zone materials
 - 7) Furnish and install utility warning tape
 - 8) Furnish, install, test, and inspect new pipe and fittings
 - 9) Connection to confluence structure including collar and grout
 - 10) Furnish, place, and compact trench backfill (imported trench backfill)
 - 11) Sewer pipe repair or replacement if damaged by Contractor
 - 12) Restore existing utilities impacted by sewer construction including, but not limited to water lines, gas lines, irrigation pipe, storm drains,

- French drains, storm drain manholes and catch basins, power lines, secondary water lines, fiber optic lines, telephone lines, cable TV, etc.
- 13) And all other appurtenances and work required to install new pipe.

23. POLYMER CONCRETE SEWER MANHOLE (BID ITEM NOS. A28 AND A29)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to install new polymer concrete sewer manholes as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on the size and actual number of manholes installed.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
- 1) Excavation
 - 2) Dewatering
 - 3) Removal and disposal of existing sewer manhole
 - 4) Disposal of native material not suitable for backfill
 - 5) Furnish and install polymer manhole base, extended slab, flow channels, boot connectors, pre-cast manhole sections, cast iron frame, cover, and concrete collars
 - 6) Internal piping, fittings, and pipe supports
 - 7) Connect exterior piping including couplings, etc.
 - 8) Furnish, place, and compact trench backfill (imported trench backfill)
 - 9) Furnish and install filter fabric
 - 10) Inspect and test manhole
 - 11) Restore existing utilities impacted by construction including, but not limited to: water lines, gas lines, irrigation pipe, storm drains, storm drain manholes and catch basins, power poles, power lines, secondary water lines, fiber optic lines, telephone lines, cable TV, etc.
 - 12) And all other appurtenances and work required to install new manhole.

24. JORDAN RIVER TRAIL RESTORATION (BID ITEM NO. A30)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to restore the Jordan River Trail as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
- 1) Coordination with City

- 2) Asphalt cutting, removal, and disposal
- 3) Excavation
- 4) Furnish and install biobarrier as needed
- 5) Furnish and place vegetation killer
- 6) Furnish, place, grade, and compact imported road base and granular borrow materials
- 7) Furnish, place, grade, and compact asphalt
- 8) And all other appurtenances and work required to restore trail.

25. UNIMPROVED SURFACE RESTORATION (BID ITEM NO. A31)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to restore unimproved surfaces as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Coordinate with property owners.
 - 2) Strip, remove, stockpile, import and replace topsoil in accordance with specifications and details.
 - 3) Grade and restore ground surface to match original or better conditions.
 - 4) Restore unimproved surface areas, including but not limited to, Topsoil, seed, grass, bushes, trees, fences, sprinklers, landscape rocks, vegetation, culverts, etc. in accordance with specifications and details.
 - 5) Weed control, fertilizer, and other maintenance in accordance with specifications.
 - 6) Irrigate unimproved surface areas in accordance with specifications.
 - 7) All other appurtenances and work required to restore unimproved surfaces.

26. DIRT ROAD RESTORATION (BID ITEM NO. A32)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to restore dirt roads as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Coordinate with property owners.
 - 2) Prepare subbase in accordance with the Contract Documents

- 3) Furnish, place, and compact suitable material for dirt road as determined by the property owner.
- 4) All other appurtenances and work required to restore dirt road

27. GRAVEL ROAD RESTORATION (BID ITEM NO. A33)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to restore gravel roads as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Coordinate with property owners.
 - 2) Prepare subbase in accordance with the Contract Documents
 - 3) Furnish, place, and compact road base.
 - 4) Furnish and place gravel.
 - 5) All other appurtenances and work required to restore gravel road

28. ASPHALT RESTORATION (BID ITEM NO. A34)

- A. Description: This item includes all materials, equipment, labor, and incidentals necessary to restore asphalt roads as indicated at the locations shown on the Construction Plans.
- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Coordination with property owner
 - 2) Saw-cutting
 - 3) Prepare subbase in accordance with the Contract Documents
 - 4) Furnish, place, compact, and test of aggregate base course (untreated road base) and asphalt
 - 5) Furnish and install tack coat in accordance with Contract Documents.
 - 6) Adjust all existing and new utility rims to match new asphalt elevation
 - 7) Replace paint striping matching or exceeding original conditions
 - 8) Replace survey monuments in accordance with County requirements
 - 9) All other appurtenances and work required to restore asphalt and road base.

29. LANDSCAPE RESTORATION (BID ITEM NO. A35)

- A. Description: This item includes all materials, equipment, and labor necessary to restore existing landscape areas at the locations shown on the Construction Plans and the cost of incidental work.
- B. Measurement and Basis of Payment: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Coordination with property owners.
 - 2) Strip, remove, stockpile, and replace existing topsoil and other excavated materials with imported topsoil and backfill materials in accordance with the Contract Documents.
 - 3) Grade and restore ground surface to match original or better conditions.
 - 4) Restore landscaping areas, including but not limited to topsoil, grass, concrete curbing, gravel, trees, fences, sprinklers, landscape rocks, bark, vegetation, etc. in accordance with the Contract Documents.
 - 5) Weed control, fertilizer, and other maintenance in accordance with Contract Documents.
 - 6) Irrigate landscaping areas in accordance with the Contract Documents.
 - 7) All other appurtenances and work required to restore landscaping areas.

30. FIELD RESTORATION (BID ITEM NO. A36)

- A. Description: This item includes all materials, equipment, and labor necessary to restore existing field areas at the locations shown on the Construction Plans and the cost of incidental work.
- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Coordination with property owners.
 - 2) Strip, remove, stockpile, and replace existing topsoil and other excavated materials.
 - 3) Grade and restore ground surface to match original or better conditions including fences, ditches, etc.
 - 4) All other appurtenances and work required to restore field areas.

31. TEMPORARY HAUL ROAD (BID ITEM NO. A38)

- A. Description: This item includes all materials, equipment, and labor necessary

to install and remove temporary haul road(s) at the locations determined by the Contractor and the cost of incidental work.

- B. Measurement: Measured and paid for based on lump sum.
- C. Payment Covers: Payment shall be complete compensation for all labor, tools, materials, and equipment required to complete this item, including, but not limited to:
 - 1) Clear, grub, excavate, and dewater.
 - 2) Prepare subbase in accordance with the Contract Documents.
 - 3) Furnish and install geogrid and geotextile fabric as needed.
 - 4) Furnish, place and compact untreated road base and/or crushed rock as needed.
 - 5) Remove and dispose of temporary haul road(s) after project is complete.
 - 6) Restore surface impacted by the temporary haul road to original or better conditions, including vegetation, fencing, etc.
 - 7) All other appurtenances and work required to construct and remove temporary haul road(s).

1.3 GENERAL PROGRESS PAYMENT REQUIREMENTS

- A. A Payment for Work performed shall be in accordance with installed quantities as assessed in comparison to the Schedule of Values and the Construction Schedule. The Engineer will verify measurements and quantities. Each activity necessary to manage and complete the Work is identified on the Contract schedules. Each activity will be assigned its respective value, a portion of the Contract Price, as shown on the Schedule of Values (Roll-up), and detailed cost loaded activity schedule.
- B. Payment for all lump sum costs and services incurred on this Agreement shall be based on the earned value of Work accomplished during the reporting period. Earned value is determined by the completion percentage of each activity as determined by the Schedule of Values and the Construction Schedule applied to the total value of the activity. No construction activity shall be deemed 100 percent complete until the Contractor has completed the physical check out and inspection of the completed Work and has submitted the signed inspection form to the Engineer.
- C. Earned value is derived from the current status of the Contractor Construction Schedule as determined by the monthly schedule status submittals. Each schedule status submittal is reviewed and approved by the Engineer prior to the Contractor obtaining approval for the Summary of Earned Values or quantities installed and the Application for Payment.

1.4 APPLICATION FOR PAYMENT

- A. Submit application for payment on the Owner's form and be certified by signature of an Authorized Officer of the Contractor.

- B. The Application for Payment shall contain all necessary references and attachments that substantiate the invoice for progress payment (e.g., certified payrolls, labor reports, progress schedule data, and Summary of Earned Values). It shall substantiate the invoice for progress payment and shall be preceded or accompanied by the schedule and status data as a condition of payment, in accordance with the Construction Schedule and the Schedule of Values.

1.5 REVIEWS/APPLICATION FOR PAYMENT

- A. Review meetings between the Contractor and the Engineer will be held weekly and within 7 Days prior to the payment application date designated by the Engineer. Three Days prior to the last review meeting of the month, submit an updated schedule and a signed application for payment showing a Summary of Earned Values for the reporting and payment period so that the Engineer can compare earned values to available status data. Make any adjustments to the Master Record Documents, updated schedule, and payment applications required by the Engineer. Upon completion of the adjustments, the Engineer will sign the payment request and forward it to the Owner. The Engineer will determine payment amounts if agreement with the Contractor is not reached.

1.6 PAYMENT FOR SUPPLIES AND MATERIALS

- A. Payment based on the actual cost of supplies, materials and equipment on hand shall be made by the Owner with or without a paid invoice. "Actual cost" of materials shall be the invoice amount, whether paid or not, and shall not include any costs associated with installation, testing, etc. The Contractor shall be entitled to payment of the actual cost of supplies, materials, and equipment only if it (1) presents an invoice to the Owner with the application for payment and (2) states in the application for payment that the materials have been delivered and stored in the time and manner specified in the contract between the Contractor and his Supplier or Subcontractor. If Contractor fails to comply with those conditions, the Owner may withhold payment in accordance with the provisions. The Owner expressly reserves the right to withhold retention until Contractor presents to the Owner a paid invoice, or some other proof of payment satisfactory to the Owner, for the Owner's use in verifying the accuracy of the actual cost of the supplies, materials or equipment. If the amount paid does not match the actual cost, the Owner will adjust the amount of retention accordingly. Payment for supplies, materials or equipment on hand does not alter the responsibility of the Contractor for all supplies, materials, and equipment until Final Acceptance of the Work.

END OF SECTION