

ADDENDUM #2 TO THE BID & SPECIFICATIONS

February 03, 2023

This Addendum forms a part of the Contract Documents and modifies the original specifications and drawings, as advertised on January 05, 2023. This Addendum consists of these 2 pages including this cover page with two (2) attachments. This addendum is a total of twenty-four (24) pages.

The Bid Date of February 16, 2023 has not been changed.

**** Please sign, date and return e-mail this sheet to Buchart Horn, Inc. (e-mail: dvesely.com). Failure to acknowledge this addendum ON THE BID FORM may subject Bidder to disqualification.**

I have received all 24 pages in Addendum #2.

Name

Company

Date

LIST OF ATTACHMENTS (Referenced below)

1. Bid Schedule – 2 pages
2. Section 01650 Measurement and Payment – 20 pages

CHANGES TO SPECIFICATIONS

Section BS – Bid Schedule. Replace the Bid Schedule with this modified bid schedule dated February 3, 2023. (Attachment 1)

Section 01650 Measurement and Payment. Replace this section in its entirety with the attached Section 01650. (Attachment 2) dated February 3, 2023. This updated section:

1. Adds a lump sum bid item for Perimeter EPSC Measures
2. Adds a lump sum bid item for clearing and grubbing for the entire project.
3. Eliminates clearing and grubbing and perimeter EPSC measures from various other bid items.

CHANGES TO DRAWINGS

Sheet C-001 and C-002

Add note 8 as follows: “Refer to detail 4 on Sheet C-503 for Temporary Access Road”

Sheet C-503

Modify the title of Detail 4 to read “Temporary Access Road and Driveway Typ. Section Detail”

Sheet SWPPP-1

Modify Note 3.4 which currently reads,

“As work proceeds from downslope to upslope, limit advance clearing and grubbing to a distance equal to two times the length of pipe installation that be completed in one day. Do not clear and grub existing vegetation more than 7 days prior to excavation or earth moving.”

To read (new text is shown as bold text):

“As work proceeds from downslope to upslope, limit advance clearing and grubbing to a distance equal to two times the length of pipe installation that be completed in one day. Do not clear and grub existing vegetation more than 7 days prior to excavation or earth moving **unless the cleared area is stabilized by seeding and mulch within 7 days of clearing and grubbing activities. All areas of clearing and grubbing and perimeter EPSC measures shall immediately fall under the SWPPP monitoring, maintenance, watering, and upkeep requirements as specified in the Construction General Permit and the SWPPP document. In no instance will clearing and grubbing extend beyond the work that may be performed within 6 months of clearing and grubbing.**

END OF ADDENDUM 2

BID SCHEDULE
CLEAR CREEK INTERCEPTOR - SANITARY SEWER PHASE A

BID DATE: _____

COMPANY NAME: _____

ADDRESS: _____

Contractor shall furnish and install items as shown on the Drawings or called for in the Specifications. All costs not included in the schedule that are necessary to provide a complete, functional project as depicted in the Drawings and Specifications are to be considered incidental and merged with costs of other related bid items.

LS = Lump Sum R&R = Remove and Replace LF = Linear Feet F&I = Furnish and Install LS = Lump Sum
SY = Square Yard CY = Cubic Yard EA = Each Ton = Ton LB = Pounds VF = Vertical Feet w/ = with

Schedule A

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
A	Mobilization and Demobilization	1	LS	\$	\$
B	Perimeter IPSC Measures	1	LS	\$	\$
C	Clearing and Grubbing	1	LS	\$	\$
1	Creekside Manor Lift Station Demolition and Wet Well Conversion	1	LS	\$	\$
2	Oakwood Grove Lift Station Demolition and Wet Well Conversion	1	LS	\$	\$
3	Wellhouse Demolition and Well Abandonment	1	LS	\$	\$
4	Scott's Creek WWTP Influent Wet Well & ancillary work, complete in place, w/ testing	1	LS	\$	\$
5	Remove and Replace 15" CPP, complete in place, including testing	29	LF	\$	\$
6	Remove and Replace 18" RCP, complete in place, including testing	38	LF	\$	\$
7	Remove and Replace 36" RCP, complete in place, including testing	30	LF	\$	\$
8	10" SDR 26 PVC Gravity Sewer(8-10' Deep), complete in place, w/testing	1,038	LF	\$	\$
9	10" SDR 26 PVC Gravity Sewer(10'-12' Deep), complete in place, w/testing	223	LF	\$	\$
10	10" SDR 21 PVC Gravity Sewer(16-18' Deep), complete in place, w/testing	250	LF	\$	\$
11	18" SDR 26 PVC Gravity Sewer(14-16' Deep), complete in place, w/testing	290	LF	\$	\$
12	18" SDR 26 PVC Gravity Sewer(14-16' Deep), in paving complete in place, w/testing	787	LF	\$	\$
13	18" DR 21 C900 PVC Gravity Sewer(16'-18' Deep), in paving complete in place, w/testing	150	LF	\$	\$
14	18" DR 21 C900 PVC Gravity Sewer(18-20' Deep), in paving complete in place, w/testing	861	LF	\$	\$
15	18" DR 21 C 900 PVC Gravity Sewer(20-22' Deep), in paving complete in place, w/testing	933	LF	\$	\$
16	18" DR 21 C900 PVC Gravity Sewer(22-24' Deep), in paving complete in place, w/testing	411	LF	\$	\$
17	24" SN 42 GRP Gravity Sewer (12-14' Deep), complete in place, w/testing.	103	LF	\$	\$
18	42" SN 42 GRP Gravity Sewer (10-12' Deep), complete in place, w/testing	806	LF	\$	\$
19	42" SN 42 GRP Gravity Sewer (12-14' Deep), complete in place, w/testing	2,981	LF	\$	\$
19A	42" SN 72 GRP Gravity Sewer (12-14' Deep), complete in place, w/testing	435	LF	\$	\$
20	42" SN 72 GRP Gravity Sewer (12-14' Deep), extra bedding width, complete in place, w/testing	1,486	LF	\$	\$
21	42" SN 42 GRP Gravity Sewer (14-16' Deep), complete in place, w/testing	3,816	LF	\$	\$
22	42" SN 72 GRP Gravity Sewer (14-16' Deep), extra bedding width, complete in place, w/testing	1,105	LF	\$	\$
23	42" DIP Gravity Sewer (14-16' Deep), complete in place, w/testing	40	LF	\$	\$
24	42" SN 72 GRP Gravity Sewer (16-18' Deep), complete in place, w/testing	1,489	LF	\$	\$
25	42" SN 72 GRP Gravity Sewer (18-20' Deep), complete in place, w/testing	1,519	LF	\$	\$
26	42" DIP Gravity Sewer (18-20' Deep),complete in place, w/testing	330	LF	\$	\$
27	42" SN 72 GRP Gravity Sewer(20-22' Deep), complete in place, w/testing	360	LF	\$	\$
28	42" SN 72 GRP Gravity Sewer (20-22' Deep), in paving complete in place, w/testing	20	LF	\$	\$
29	42" DIP Gravity Sewer (20-22' Deep), complete in place, w/testing	90	LF	\$	\$
30	42" SN 72 GRP Gravity Sewer (22-24' Deep), complete in place, w/testing	309	LF	\$	\$
31	42" DIP Gravity Sewer (22-24' Deep), complete in place, w/testing	75	LF	\$	\$
32	42" SN 72 GRP Gravity Sewer(24-26' Deep), complete in place, w/testing	33	LF	\$	\$
33	42" SN 72 GRP Gravity Sewer (24-26' Deep), in paving complete in place, w/testing	67	LF	\$	\$
34	42" DIP Gravity Sewer (24-26' Deep), complete in place, w/testing	119	LF	\$	\$
35	6" PVC Gravity Lateral (14-16' Deep) incl. connect to 18" sewer, in paving, complete in place w/testing	340	LF	\$	\$

Clear Creek Interceptor Sanitary Sewer Phase A - Shedule A continued

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
36	6" PVC Gravity Lateral (8-10' deep) incl. connect to MH in paving complete in place w/ testing	40	LF	\$	\$
37	6" PVC Gravity Lateral (10-12' deep) incl. connect to MH in paving complete in place w/ testing	359	LF	\$	\$
38	6" PVC Gravity Lateral (12-14' deep) incl. connect to MH in paving complete in place w/ testing	45	LF	\$	\$
39	6" PVC Deep Lateral Connection incl concrete	12	VF	\$	\$
40	MH, 48" Dia., 0-6' Deep, complete in place	11	EA	\$	\$
41	MH, 48", Extra Depth, Over 6' Deep, complete in place.	103	LF	\$	\$
42	MH, 60" Dia., 0-6' Deep, complete in place, including frame, cover, vent, and testing	37	37	\$	\$
43	MH, 60", Extra Depth, Over 6' Deep, complete in place	430	LF	\$	\$
44	MH, 72" Dia, 0-6' Deep, complete in place	15	EA	\$	\$
45	MH, 72", Extra Depth, Over 6' Deep, complete in place.	212	VF	\$	\$
46	MH, 84" Dia, 0-6' Deep, complete in place	5	EA	\$	\$
47	MH, 84", Extra Depth, Over 6' Deep, complete in place.	48	EA	\$	\$
48	Internal Manhole Drop Connection MH CC-025	10	VF	\$	\$
49	Manhole Removal and Replacement MH CC 016.1	15.3	VF	\$	\$
50	Hand Excav. Within 5 ft. & Support Gas Pipe Lines > 12", per location	6	EA	\$	\$
51	Benched Excavation MH CC-045 to CC-044	435	LF	\$	\$
52	Paving Temporary Restoration, complete in place.	6,671	SY	\$	\$
53	Temporary Gravel Road including 18" culvert	4,533	SY	\$	\$
53A	Sodding of Temporary Gravel Road Area	45,333	SY	\$	\$
54	Paving Permanent Restoration, complete in place.	9,115	SY	\$	\$
55	Access Driveway off of US Hwy 70 including 24" culvert	193	SY	\$	\$
56	Bore with 54" Steel Casing, complete in place, including restrained GRP SN 72 pipe w/testing	300	LF	\$	\$
57	Hwy Xing #1, complete in place. Bore w/54" Steel Casing, incl. restrained GRP SN 72 pipe w/testing	123	LF	\$	\$
58	RR Xing #1, complete in place, Bore w/60" Steel Casing, incl. restrained DIP Class 53 pipe w/testing	120	LF	\$	\$
59	WWC1 Suspended Pipe Diversion complete in place, excluding pipe	20	LF	\$	\$
60	Stream Crossing #1, complete in place, including 42" SN 72 GRP conc. encased w/ testing	75	LF	\$	\$
61	Stream Crossing #1.1, complete in place, including 24" SN 72 GRP conc. encased w/ testing	100	LF	\$	\$
62	Stream Crossing #2, complete in place, including 42" SN 72 GRP conc. encased w/ testing	125	LF	\$	\$
63	Memphis Arlington Road and Stream Crossing #3, complete in place, incl. 42" SN 72 GRP conc. encased w/testing	149	LF	\$	\$
64	Stream Crossing #4, complete in place, including 42" SN 72 GRP conc. encased w/ testing	120	LF	\$	\$
65	Stream Crossing #4.1, complete in place, including 18" DR 21 C900 conc. encased w/ testing	100	LF	\$	\$
66	Trench plugs	78	CY	\$	\$
67	Dewatering	19,440	LF	\$	\$
68	Overexcavation if required as directed by the City	9,000	CY	\$	\$
69	Flowable Fill, if required, as directed by the City	1,000	CY	\$	\$
70	Stone AASHTO 57 if required, as directed by the City	3,000	CY	\$	\$
71	Stone TDOT 303.01, if required, as directed by the City	3,000	CY	\$	\$
72	Stone AASHTO #8, if required, as directed by the City	3,000	CY	\$	\$
73	Suitable Backfill, if required, as directed by the City	3,500	CY	\$	\$
74	Sand, if required, as directed by the City	100	Ton	\$	\$
75	Post construction sewer televising	1	LS	\$	\$
76	Temporary construction exit	8	EA	\$	\$
77	ALLOWANCE FOR 3RD PARTY TESTING	1	LS		\$250,000.00
TOTAL BID SCHEDULE A INCLUDING PROJECT ALLOWANCE: \$					

Total Base Bid including Project Allowance: _____

_____ Dollars (\$ _____).

SECTION 01650

MEASUREMENT AND PAYMENT PROCEDURES

PART 1 – Description.

All work completed under this Contract will be measured by the Engineer according to the bid items and to the construction drawings. Units of measurement and dimensions will be shown in these specifications.

1.01 Payment

A. Progress payments will be processed in accordance with the following schedule.

Cut-Off Date
**

Date of Submittal
**

Submit pay requests to the City by the dates of submittal listed above.

**Dates will be established at the Preconstruction Conference.

- B. Owner will make progress payments as defined in Article 5 of the Agreement, on the forms provided by the Engineer.
- C. If the Contractor elects to enter into a joint account agreement, two (2) pay requests and vouchers must be submitted. One pay request and voucher for the appropriate progress payment amount, the other for the retained amount.
- D. Payment will be made for the work completed and stored materials less retained amounts in accordance with provisions of the contract documents.
- E. Payment amounts will be based on the scheduled values and mutually agreed upon percentage of completion for each item.
- F. Work completed under this Contract will be measured by the Engineer according to the bid items and construction drawings. The cost of all material and labor required to complete this project as specified and shown on the drawings, but not specifically included as a pay item shall be included in the bid prices of its related bid item(s). No extra pay shall be granted for items that are reasonably foreseen as necessary for the proper installation of an items.
- G. The Contractor will receive and accept compensation provided for in the Contract as full payment for furnishing all materials, labor, tools, and equipment and for performing all Work under the Contract in a complete and acceptable manner and for all risk, loss,

damage, or expense of whatever character arising out of the nature of the Work or the execution thereof, subject to the provisions of the General Conditions.

- H. If any unit price in the Bid Schedule requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Specifications.

1.02 Measurement of Quantities

Quantities shown on the bid schedule are estimated and are to be considered approximate. Actual constructed quantities will vary. The Contractor will be compensated only for those items and materials actually installed and approved as part of the project. No additional pay will be granted for items or materials not installed.

- A. Work completed under the Contract shall be measured by the Engineer according to the standards of weights and measures recognized by the U.S. Bureau of Standards.
- B. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the Contract will be those methods generally recognized as conforming to good engineering practice.
- C. Unless otherwise specified, measurements for area computations will be made on the surface. Pay measurements for area computations will not exceed the neat dimensions shown on the Contract Drawings, unless otherwise ordered in writing by the Engineer.
- D. Structures will be measured according to neat lines shown on the Contract Drawings or as altered to fit field conditions. No payment will be made for length, width, or depth, in excess of that shown on the Contract Drawings or specified in the Specifications for any construction, unless otherwise approved by the Engineer in writing.
- E. Items which are measured by the linear foot, such as pipe, will be measured parallel to the base or foundation upon which such items are placed, unless otherwise shown on the Contract Drawings or specified.
- F. In computing volumes of excavation, the average end area method based on horizontal measurements, or other acceptable methods, will be used.
- G. The term "each", when used as an item of payment, will mean complete payment for the Work described in the Contract.
- H. The term "lump sum", when used as an item of payment, will mean complete payment for the Work described in the Contract, including all necessary fittings and accessories.

- I. The term "complete in place", means the completion of the Contract item or portions thereof as determined by the Engineer including the furnishing of all materials, equipment, tools, labor, and work incident thereto, unless otherwise specified.
- J. The term "complete in place", means the completion of the Contract item or portions thereof as determined by the Engineer including the furnishing of all materials, equipment, tools, labor, and work incident thereto, unless otherwise specified.

1.03 Bid Item Descriptions

The cost of all material and labor required to complete this project as specified and shown on the drawings but not specifically included as a pay item, shall be included in the bid price of its related item. No extra pay shall be granted for items that are reasonably foreseen as necessary for the proper installation of an item.

No additional payment shall be made for the following activities or items. All costs associated with these activities or items shall be included in the unit prices bid.

MOBILIZATION AND DEMOBILIZATION – N/A - ADDED TO BID ITEMS

DUST CONTROL INCLUDING PROVISION OF WATER

- A. No measurement will be made.
- B. No additional payment will be made. All costs for dust control including the provision of water to achieve dust control shall be included in the unit price(s) bid.

NON-PERIMETER EROSION AND SEDIMENT CONTROL (EPSC) MEASURES

- A. No measurement will be made.
- B. No additional payment will be made. All costs for non-perimeter sediment and erosion control measures as shown on the drawings shall be included in the unit bid price(s) for items requiring these control measures. This includes all activities associated with the Stormwater Pollution Prevention Plan and those necessary to remain compliant with applicable permits.

Temporary Construction Exits (Bid Item 76) and perimeter EPSC measures (Bid Item B) will be paid under the designated bid item.

TRAFFIC CONTROL

- A. No measurement will be made.

- B. No additional payment will be made. All costs for traffic control shall be included in the appropriate unit price(s) bid.

CLEARING AND GRUBBING – N/A ADDED TO BID ITEMS

EXCAVATION FOR STRUCTURES OR SEWERS

- A. No measurement will be made.
- B. No additional payment will be made. All costs for excavation for structures will be included in the bid price for items requiring excavation.

PIPE BEDDING

- A. No measurement will be made.
- B. No additional payment will be made. All costs for pipe bedding shall be included in the unit price bid for gravity sewer and lateral pipelines.

FINISH GRADING AND SEEDING

- A. No measurement will be made.
- B. No additional payment will be made. All costs for finish grading, seeding and shall be included in the unit price(s) bid for items requiring finish grading and seeding.

SODDING

- B. No measurement will be made with the exception of the provision of sodding along Chapel Hill Road and Chambers Chapel Road.
- C. No additional payment will be made for Sodding with the exception of the provision of sodding along Chapel Hill Road and Chambers Chapel Road. All other costs for sodding shall be included in the unit price bid categories requiring sodding including stream crossings (Bid Items 60 through 65) and the access driveway (Bid Item 55).

PRE- AND POST-CONSTRUCTION VIDEO TAPE DOCUMENTATION

- A. No measurement will be made.
- B. All costs related to pre-and post-construction video tape documentation shall be included in the mobilization / demobilization bid.

FENCING AND GATE REPLACEMENT

- A. No measurement will be made.

- B. All costs related to removing, disposal, and replacing in kind fencing along the sewer alignment shall be included in the unit price(s) bid for gravity sewer pipelines. And for the work at the WWTP.

PROVISION OF GEOTECHNICAL ENGINEER

- A. No measurement will be made.
- B. All costs related to the provision of a Geotechnical Engineer shall be included in the unit prices for work requiring observation by the Geotechnical Engineer.

PART 3 Execution

3.01 Measurement and Payment of Bid Items

MOBILIZATION AND DEMOBILIZATION (BID ITEM A)

- A. No measurement will be made
- B. Payment for mobilization/ demobilization will be made at the lump sum price and includes start-up costs, mobilization of equipment to the project site and pre- and post-construction videos. It also includes removal of all equipment from the project site and final clean-up. The project also includes the provision, installation, relocation, and maintenance of project signs.

The cost for mobilization shall not exceed 5% of the Total Base Bid.

The Owner will pay 40% of the mobilization cost with the Contractor's first partial payment request. The Owner will pay the remaining mobilization cost after the Contractor mobilizes equipment to the site and the pre-construction video has been accepted.

PERIMETER EPSC MEASURES (BID ITEM B)

- A. Measurement will be made along the centerline of the sewer alignment to determine the percent complete of Perimeter EPSC measures.

The length of sewer will exclude sewer in paving and will include all sewer spurs. The total length to determine percent complete will be established during construction.

- B. Payment for perimeter EPSC measures will be paid at the lump sum price for Perimeter EPSC measures that have been installed along the sewer alignment. Perimeter EPSC measures on both sides of the sewer alignment must be installed and approved prior to

measurement or payment and include high visibility fence, silt fence, silt fence with backing, and outfalls.

The work includes maintenance of all Perimeter EPSC measures including placing additional rock, cleaning, replacing damaged materials, and complying with SWPPP requirements until measures are approved for removal.

The work includes removal of perimeter EPSC measures.

Once the percent of perimeter EPSC measures installed has been determined, 70% of that amount will be paid. The remaining 30% of perimeter EPSC measures installed will be paid upon completion of final grading and seeding.

Additional EPSC measures as may be required during the construction of the project will be paid under other bid items requiring additional EPSC measures.

CLEARING AND GRUBBING (BID ITEM B)

- A. Measurement will be made along the centerline of the sewer alignment to determine the percent complete of clearing and grubbing.

The length of sewer will exclude sewer in paving and will include all sewer spurs. The total length to determine percent complete will be established during construction.

- B. Payment for clearing and grubbing will be paid at the lump sum price for the percent of the area that has been cleared and grubbed and has been satisfactorily stabilized in advance of sewer construction.

Clearing and grubbing may not proceed until perimeter EPSC measures are installed. Payment for installation and maintenance of perimeter EPSC measures is not included in this item.

Payment includes maintaining stabilized areas including but not limited to watering and placement of additional mulch and seed to ensure a stabilized site.

Payment includes removal and disposal of remaining mulch materials within the area of trench excavation prior to commencing trench excavation.

PUMP STATION DEMOLITION AND WET WELL CONVERSION (Bid Items 1 and 2)

- A. No measurement will be made.
- B. Payment for the pump station demolition and wet well conversion will be made at the lump sum price bid for the designated pump station site, complete in place, as specified

and indicated on the Contract Drawings. The lump sum price bid will be full payment for the removal of the lift station and appurtenances and site work including, but not limited to, removal and disposal and/or salvage of existing equipment, fence, storm pipe and headwalls, non-perimeter EPSC measures, driveway removal, filling openings, coating and conversion of the wet well into a manhole, bypass pumping, excavation, dewatering, backfill, site restoration, finish grading and seeding of pump station site and access driveway.

WELLHOUSE REMOVAL AND WELL ABANDONMENT (Bid Item 3)

- A. No measurement will be made.
- B. Payment for well house removal and disposal and well abandonment by a licensed water well Contractor in accordance with State Standards will be made at the lump sum price bid. Payment will include removing and disposing of well house structure, slab, and well appurtenances, filling open bore hole with grout, removing well casing, backfill, surface restoration and all incidental work to make the job complete.

Work includes securing and/or supporting bore hole at the bottom of excavation during construction and installation of gravity sewer.

SCOTT'S CREEK WASTEWATER TREATMENT PLANT (WWTP) INFLUENT WET WELL CONSTRUCTION AND ANCILLARY WORK AT WWTP SITE (Bid Item 4)

- A. No measurement will be made
- B. Payment for the construction of the new connection to the influent wet well at the Scott's Creek WWTP will be made at the lump sum price bid for the new connection complete in place as specified and indicated on the Contract Drawings. The Lump sum price bid will be full payment for the completed work including, but not limited to work in the WWTP wet well through and including installation of pipe between MH CC-001 and wet well and MH CC-001, reroute of plant internal flow piping, bypass pumping for incoming flows and for station flows, excavation, excavation support, dewatering, wet well wall thickening, core drill opening, backfill, utility support, hand excavation at electrical conduits, pipe removal and disposal, compaction and site restoration, finish grading and seeding.

The work also includes pipe installation from the influent wet well to MH CC-001 complete in place includes pipe, excavation, trench support, geotextile fabric, stone bedding, backfill, detectable marking tape, compaction, deflection testing, leakage testing, restoration of unpaved surfaces.

The work includes installation of MH CC-001, complete in place including, excavation, excavation support, manhole sections, joint connections, manhole lining, encapsulation, exterior coating, anti-floatation collar, crushed stone subbase, geotextile, backfill,

compaction, pipe connections, including internal drop connection, frame, cover, steps, and vacuum testing.

The work includes installation and maintenance, and removal of non-perimeter EPSC measures at the WWTP.

The work also includes the provision and installation of duckbill valve in MH CC-002.

The work includes the maintenance of access to the WWTP during all construction at the WWTP site (extending through installation of MH CC-003).

The work includes removal and reinstallation of fencing and rolling gate at WWTP and provision of temporary fencing.

The work also includes the provision and installation of chain link fence and swing gate at the WWTP east property line.

No additional payment will be made for dewatering during work from the influent wet well to and including MH-CC-001.

The work excludes installation of gravity sewer and manholes upstream of MH C-001 which will be paid under other bid items.

The work excludes remove and replace existing storm pipe between MH CC-002 and CC-003.

Payment will not be made until completion of testing and acceptance by the Engineer.

REMOVE AND REPLACE STORM PIPES (Bid Items 5, 6, and 7)

- A. Measurement for payment of removal and replacement of storm pipelines of each size and type indicated will be made end of pipeline to end of pipeline horizontal lengths indicated on the approved grade sheets will be the only basis for payment.
- B. Payment for removal and replacement of storm pipelines will be made at the unit price bid per linear foot for each size and depth complete in place, including removal, disposal, installation, maintenance, and removal of additional non-perimeter EPSC measures, pipe, headwalls, excavation, trench support, stone bedding, backfill - either native material or stone (as indicated on the drawings), compaction, and restoration of unpaved surfaces.

GRAVITY SEWER PIPELINES (Bid Items 8-34)

- B. Measurement for payment of gravity sewer pipelines of each size and type and at the depths indicated will be made from center to center of manholes. Horizontal lengths indicated on the approved grade sheets will be the only basis for payment.

The measurement will not include carrier (gravity sewer pipeline) pipes within casing pipes and the length of casing pipe will be deducted from the length between manholes.

The measurement will not include gravity sewer pipelines designated for concrete encasement and will be deducted from the length between manholes.

- B. Payment for gravity pipelines will be made at the unit price bid per linear foot for each size and depth complete in place, including pipe, installation, maintenance, and removal of non-perimeter EPSC measures, excavation, trench support, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, compaction, deflection testing, leakage testing, restoration of unpaved surfaces including finish grading and seeding.

Payment depth will be from existing grade to pipe invert as shown on the approved grade sheets. No additional payment will be made when the Contractor excavates by error or intent beyond the required depth.

Payment will not be made until deflection and/or robotic laser testing and leakage testing has been completed and accepted by the Engineer and until compaction tests are completed and accepted.

If service laterals and mainline are not tested simultaneously for payment, the Contractor will be required to perform an additional leakage test after the service laterals are installed at no additional cost.

Where pipeline installation is specified to be in paving, work under this pay item includes traffic control during installation.

Where pipeline is installed in wetland areas, the work includes removing and staging topsoil, placing staged topsoil after construction and finish grading and seeding with wetland seed mix.

SANITARY SEWER SERVICE LATERALS & CONNECTION TO 18" MAIN (Bid Item 35)

- A. Measurement for payment of sanitary sewer laterals that connect to the gravity sewer pipeline of each size and type and at the depths indicated will be made from center of the property cleanout to the centerline of the sewer main at the wye connection along the path of the gravity lateral.

Depth will be determined based on the invert of the lateral where the lateral connects to the sewer main. If a deep lateral connection is made, depth will be determined based on the invert of the lateral where it connects to the riser pipe.

- B. Payment will be made for sanitary sewer service laterals at the unit price for each size and depth including pipe, fittings, wye connections, cleanout, installation, maintenance, and removal of non-perimeter EPSC measures, excavation, trench support, geotextile fabric, stone bedding, backfill either native material or stone (as indicated on the drawings), detectable marking tape, deflection, compaction, leakage testing, and restoration of unpaved surfaces including finish grading seeding.

Where connection to a deep lateral is made, payment is in addition to the deep lateral riser.

Payment will not be made until deflection and leakage testing has been completed and accepted by the Engineer and until compaction tests are completed and accepted.

Work under this item includes traffic control as required.

SANITARY SEWER SERVICE LATERALS AND CONNECTION TO SANITARY MANHOLE (Bid Items 36-38)

- A. Measurement for payment of sanitary sewer laterals that connect to a manhole of each size and type and at the depths indicated will be made from center of the property cleanout to the centerline of the sewer manhole along the path of the gravity lateral.
- B. Payment will be made for sanitary sewer service laterals at the unit price for each size and depth including pipe, fittings, wye connections, cleanout, manhole to pipe connection, drop bowl, pipe, and fittings, installation, maintenance, and removal of non-perimeter EPSC measures, excavation, trench support, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, deflection, compaction, leakage testing, and restoration of unpaved surfaces including finish grading and seeding.

Payment will not be made until leakage testing has been completed and accepted by the Engineer and until compaction tests are completed and accepted.

Work under this item includes traffic control where required.

6" PVC DEEP LATERAL RISER PIPE CONNECTION (Bid Item 39)

- A. Measurement for deep lateral riser pipe connection will be from the invert of the wye connection to the riser pipe to the invert of the sewer main at the point of connection.
- B. Payment for deep lateral riser pipe connection is in addition to sanitary sewer laterals and connection to 18" main and will be at the unit price bid for each vertical foot of depth complete in place in accordance with the details including pipe, fittings, wye connections, cleanout, concrete, sonotube, excavation, trench support, geotextile fabric, stone bedding, stone backfill, deflection, compaction, and leakage testing.

Work under this item includes traffic control where required.

The work excludes connection to the 18" main and restoration of surfaces which is paid under other bid items.

Payment will not be made until completion of testing and acceptance of the entire service lateral by the Engineer

MANHOLES (MH) (Bid Items 40-47)

- A. Measurement for manholes will be from the elevation of the manhole invert at the lowest point in the channel to the elevation of the existing ground at the centerline of the manhole previous to the start of the work, unless a higher elevation is indicated on the Contract Drawings.
- B. Payment for manholes of the various types and diameters will be at the unit price bid, each and as described on the details. Unit price bid will be full payment for complete manholes including, excavation, excavation support, manholes sections, lining where specified, encapsulation, exterior coating, anti-floatation collar, crushed stone subbase, geotextile, backfill, compaction, pipe connections (excluding drop connections), frame, cover, steps, and vacuum testing, and is in addition to payment for pipeline.

Payment for manholes will include any installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding required that extends beyond what is required for pipeline installation.

Payment includes pipe to MH connection of different pipe diameters where the crown elevation is matched at the manhole.

Payment will not be made until completion of testing and acceptance by the Engineer.

Payment for manholes 6-feet deep and under, and the first 6 feet of manholes over 6-feet deep will be at the unit price bid, each, complete in place.

Payment for depth over 6 feet shall be at the unit price bid per vertical foot, complete in place. Payment will be in addition to the payment granted for the first 6 feet of manhole.

INTERNAL MANHOLE DROP CONNECTION MH CC-025 (Bid Item 48)

- A. Measurement for internal manhole drop connections will be based on the vertical distance from the manhole invert at the centerline to the invert of the upper pipe as shown on the approved grade sheets.

- B. Payment for manhole drop connections shall be at the unit price bid per vertical foot for drop connection. The unit price bid shall be complete payment for drop connections regardless of size and type including pipe, drop bowl fittings and anchoring.

Payment for drop connections is in addition to the amount paid for manholes.

No payment will be made for internal drop connection of service laterals into manholes. Internal drop connection of service laterals into manholes is included with the unit bid prices for service laterals.

MANHOLE REMOVAL AND REPLACEMENT MH CC-016.1 (Bid Item 49)

- A. Measurement for the removal and replacement of MH CC-016.1 shall be based on the elevation of the manhole invert at the lowest point in the channel to the elevation at the top of the manhole cover at the centerline of the manhole previous to the start of the work.
- B. Payment for the removal and replacement of MH CC-016.01 shall be at the unit price bid per vertical foot, complete in place. Unit price bid will be full payment for complete manhole replacement including, removal, disposal, excavation, excavation support, manhole sections, manhole joints, anti-floatation collar, geotextile crushed stone subbase, backfill, compaction, pipe connections (including external drop connections), lining, encapsulation, exterior coating, frame, cover, steps, and vacuum testing, and is in addition to payment for pipeline.

Payment also includes bypass pumping of existing wastewater flows, connection of 18" diameter and 15" diameter sewers, jet cleaning of 18" diameter sewer for 1 manhole length and duckbill valve in 18" pipe.

Payment for manhole removal and replacement will include any installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding required that extends beyond what is required for pipeline installation.

Payment will not be made until completion of testing and acceptance by the Engineer.

HAND EXCAVATION WITHIN 5 LF AND SUPPORT GAS PIPELINES GREATER THAN 12 INCH DIAMETER (Bid Item 50)

- A. No measurement will be made
- B. Payment will be made in accordance with the unit price bid per location where hand excavation within 5 foot proximity of natural gas utility pipeline that is greater than 12 inches in diameter is required by the utility. Payment includes probing and locating utility pipeline, hand excavation to fully expose entire utility and support and protection of utility

pipeline as required during excavation, installation of sanitary sewer pipeline, backfill, and compaction.

Payment for exposure, support, and/or protection of other utilities and natural gas lines less than 12 inches in diameter will not be made and all costs will be included in the unit price bid for gravity sewer pipelines and laterals.

BENCHED EXCAVATION MH CC-045 TO CC-044 (Bid Item 51)

- A. Benched excavation between MH CC-045 and CC-044 shall be measured by the horizontal length along the horizontal alignment of the sanitary sewer from manhole to manhole.
- B. Payment for benched excavation where necessary between MH CC-045 and MH CC-044 shall be made in accordance with the unit price bid per LF complete in place and shall include, excavation, excavation support, backfill, compaction and restoration of surface.

Payment for benched excavation will include any installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding required that extends beyond what is required for pipeline installation.

TEMPORARY PAVING RESTORATION (Bid Item 52)

- A. Measurement for temporary paving over pipe trenches shall be the number of square yards in place and approved. Measurement shall be made on the surface of the finished paving taken from the lines formed at the junction of the old and new asphalt.
- B. Payment for temporary paving will be made at the unit bid price per square yard, complete in place, including saw cutting, removal of existing asphalt pavement, installation of base material, grading, compaction, and re-pavement of the surface and maintenance until permanent paving is placed.

Work under this item includes traffic control as required.

TEMPORARY GRAVEL ROAD AND CULVERTS (Bid Item 53)

- A. Measurement for temporary gravel road shall be the number of square yards in place and approved. Measurement shall be made on the level surface of the finished temporary gravel road where the full depth of stone is in place.
- B. Payment for temporary gravel road shall be made at the unit price per square yard complete in place including site preparation, installation of temporary culverts (including 36" culvert and 18" culvert were indicated), placement of stone, compaction, grading to create a level driving surface, road maintenance including placement of additional gravel and culvert replacement as required or directed by the Engineer, removal and disposal of gravel and culverts, and site restoration including driveway repairs and swale restoration.

The work also includes the placement and removal of jersey barriers with reflectors, marking fire hydrants with lighted barriers and the relocation or provision of temporary mailboxes and final restoration of mailboxes and installation of new brick mailboxes.

Work under this item includes traffic control as required.

Work under this time includes any additional installation, maintenance, and removal of non-perimeter EPSC measures.

SODDING OF TEMPORARY GRAVEL ROAD AREA (Bid Item 53A)

- A. Measurement for sodding shall be the number of square yards placed after removal of temporary gravel road and culverts (Bid Item 53)

Measurement will be same as square yards measured for temporary gravel road and culverts. (Bid Item 53).

- B. Payment for sod placed will be made at the unit price per square yard complete in place including site preparation, placement of topsoil, installation, watering, and maintenance.

Payment will be made after the installation is approved by the Owner.

Payment includes watering and maintenance of sod through final completion of the project.

No additional payment will be made for sod placed as a result of areas damaged by vehicles or other equipment operating beyond the limits of the designated gravel driveway.

PERMANENT PAVEMENT RESTORATION AND OVERLAY (Item 54)

- A. Measurement for pavement restoration over pipe trenches shall be the number of square yards in place and approved. Measurement shall be made on the surface of the finished paving taken from the lines formed at the junction of the old and new asphalt or where a full width overlay is specified, the width of road.
- B. Payment for permanent paving will be made at the unit bid price per square yard, complete in place, including removal of temporary or existing asphalt pavement, installation of base material, grading, compaction, and re-pavement of the surface.

Work under this item includes traffic control as required.

ACCESS DRIVEWAY OFF OF US HIGHWAY 70 (Bid Item 55)

- A. Measurement for access driveway off of US Highway 70 shall be the number of square yards of driveway placed.
- B. Payment for access driveway off of US Highway 70 shall be made at the unit price per square yard complete in place including site preparation, installation of base material, grading and compaction and surface paving.

Payment also includes provision and installation of pipe culvert and side drains, new gate, traffic control, installation, maintenance, and removal of non-perimeter EPSC measures, and site restoration including finish grading and seeding, placement and maintenance of sod 3 feet beyond all paved surfaces.

BORING/JACKING – HIGHWAY CROSSINGS, RAILROAD CROSSINGS, OTHER BORED CROSSINGS (Bid Items 56, 57, and 58)

- A. Measurement of bored highway crossings, railroad crossings, and other bored crossings will be along the centerline of the pipeline for the length between the ends of the casing pipe as shown on the Contract Drawings.
- B. Payment for bored highway crossings, railroad crossings, or other bored crossings will be made at the unit price bid per linear foot for each crossing, complete in place. Payment shall include boring pits, dewatering, restrained carrier pipe, casing pipe, excavation, backfill, grouting voids, filling annular space, sealing pipe ends, and all other work incidental to the bored crossing.

Payment includes coordination with and payment of Railroad flaggers and traffic control as required.

Payment includes track settlement monitoring for Railroad crossings.

Payment for the manholes on either side of the crossing will be paid separately at the unit price for Manholes.

Payment for the pipe extending beyond the casing pipe between manholes will be paid separately at the unit price for gravity sewer pipelines.

- C. If it becomes impossible to complete the boring, the Contractor will discontinue the boring and obtain approval from the Engineer for an alternate method of accomplishing the crossing. Payment will be made for work already completed at the unit price bid per linear foot. This payment will be in addition to payment granted for the alternate method selected to complete the crossing.

WET WEATHER CONVEYANCE CROSSING #1 (Bid Item 59)

- A. Measurement of wet weather conveyance crossing #1 will be the horizontal projection along the centerline of the pipe from top of bank to top of bank as shown on the Contract Drawings.
- B. Payment for wet weather conveyance (WWC) crossing #1 will be made at the lump sum price for the crossing, complete in place. Payment will include excavation, backfill, suspended pipe diversion, site stabilization and restoration.

Payment will not be made for WWC crossings other than WWC#1.

Payment for gravity sewer installation will be paid separately at the unit price for gravity sewer pipelines.

The work includes installation, maintenance, and removal of non-perimeter EPSC measures, and finish grading and seeding.

STREAM CROSSINGS STR-1, STR-1.1, STR-2, STR-4, AND STR-4.1 (Bid Items 60, 61, 62, 64, and 65)

- A. Measurement of stream crossings will be the length of the concrete encasement at the horizontal projection along the centerline of the pipe.
- B. Payment for stream crossings will be made at the unit price per linear foot for each crossing, complete in place. Payment will include pipe, excavation, trench support, concrete encasement, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, compaction, deflection and leakage testing, stream diversion or suspended pipe, temporary or permanent culvert crossing, as required, stabilization restoration of surfaces including finish grading, seeding and sodding site.

The work includes installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding and sodding.

Payment for gravity pipelines for the length of the concrete encasement is included in this pay item.

Payment for trench plugs as required will be paid under the pay item for trench plugs

Payment for manholes will be paid separately at the unit price for manholes.

MEMPHIS ARLINGTON ROAD AND STREAM CROSSING 3 (Bid Items 63)

- A. Measurement of Memphis Arlington Road and Stream Crossing 3 will be at the length of the horizontal projection along the centerline of the pipe between MH CC-043 and CC-044.
- B. Payment will be made at the unit price per linear foot for the crossing, complete in place. Payment for both road and stream crossing includes: pipe, excavation, trench support, concrete encasement, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, compaction, deflection and leakage testing, suspended pipe diversion, temporary, stabilization restoration of surfaces including finish grading, seeding and sodding site.

The work includes installation, maintenance, and removal of non-perimeter EPSC measures, and finish grading and seeding and sodding.

Payment for gravity pipelines for the length of the concrete encasement is included in this pay item.

Where pipeline installation is specified to be in paving, work under this pay item includes traffic control during installation.

Payment for trench plugs as required will be paid under the pay item for trench plugs

Payment for manholes will be paid separately at the unit price for manholes.

Payment for paving, as required, will be paid under the pay items for temporary and permanent paving.

TRENCH PLUGS (Bid Item 66)

- A. Measurement will be based on the cubic yard of material placed.
- B. Payment for trench plugs will be at the unit price bid for each cubic yard placed where indicated on the drawings and as shown on the detail.

DEWATERING (Bid Item 67)

- A. Measurement for payment of dewatering shall be made along the length of gravity sewer from center to center of manholes. Horizontal lengths indicated on the approved grade sheets will be the only basis for payment regardless of the duration that dewatering

activities needed to occur or point of groundwater discharge. No additional payment will be made for dewatering of manholes.

Where dewatering is required at the manhole only, the measurement shall be the diameter of the manhole anti-floatation collar.

- B. Payment for dewatering will be made at the unit price bid per linear foot for each length of sewer where dewatering is necessary to maintain groundwater a minimum of 1 foot below the bottom of the excavation only in the active work area regardless of size and depth of trench complete in place, including monitoring wells, pumps, piping, appurtenances, discharge filters, stone outfall, removal of system and well abandonment.
- C. The work includes installation, maintenance, and removal of non-perimeter EPSC measures and restoration of discharge surfaces including finish grading and seeding.

OVEREXCAVATION - UNSUITABLE BEARING REMOVAL (Bid Item 68)

- A. Unsuitable bearing removal when directed by the Engineer will be measured by the three-dimensional method. No measurement will be made for bedding material placed as a result of native material becoming unsuitable due to acts of the Contractor.
- B. Payment will be in accordance with the unit price bid per cubic yard for unsuitable bearing removal. Payment will include excavation, removal, and disposal of unsuitable material, placement of geotextile and labor and material used in replacement with specified backfill material.

Specified backfill material will be paid at the unit price for the specified backfill material.

No payment will be made for material placed as a result of native material becoming unsuitable due to acts of the Contractor.

FLOWABLE FILL (Item 69)

- A. Measurement will be based on the cubic yard of material placed.
- B. Payment will be in accordance with the unit price bid per cubic yard for flowable fill as required as a result of over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for flowable fill placed as a result of native material becoming unsuitable due to acts of the Contractor.

SELECT MATERIAL STONE (Bid Items 70, 71, and 72)

- A. Measurement will be based on the cubic yard of material placed.
- B. Payment will be in accordance with the unit price bid per cubic yard for select material stone backfill required as a result of directed over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for select material stone backfill placed as a result of native material becoming unsuitable due to acts of the Contractor.

SUITABLE SOIL BACKFILL (Bid Item 73)

- A. Measurement will be based on the cubic yard of material placed.
- B. Payment will be in accordance with the unit price bid per cubic yard for suitable soil backfill required to be trucked in as a result of over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for suitable soil backfill placed as a result of native material becoming unsuitable due to acts of the Contractor.

SAND (Bid Item 74)

- A. Measurement will be based on the ton of material placed.
- B. Payment will be in accordance with the unit price bid per cubic yard for sand required to be trucked in as a result of over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for suitable soil backfill placed as a result of native material becoming unsuitable due to acts of the Contractor.

POST CONSTRUCTION SEWER TELEVISIONING (Bid Item 75)

- A. No measurement will be made.
- B. Payment will be in the lump sum bid price for post construction sewer televising of entire alignment including service laterals. Payment includes all costs associated with sewer televising, including mobilization, demobilization, televising on CD Rom with audio commentary and locator notation for each manhole segment and sewer lateral and written field report.

TEMPORARY CONSTRUCTION EXIT (Bid Item 76)

- A. No measurement will be made
- B. Payment will be made in the per each unit price and includes site preparation, geotextile, gravel, culvert and sediment trap in accordance with City of Lakeland Standard Detail. 50% payment will be made once the entrance is installed, and the remaining payment will be made once the temporary construction exit has been removed and site has been finished graded and seeded. Additional construction exits as required for the Contractor's haul routes will not be paid.

Payment includes maintenance of drive including replacement of gravel and installation, maintenance, and removal of EPSC measure including sediment control device.

THIRD PARTY TESTING ALLOWANCE (Bid Item 77)

- A. No measurement will be made.
- B. Payment will be made in the exact invoice amount of the third-party testing agency for testing required by the Contract Documents.

END OF SECTION