

CLAYTON COUNTY WATER AUTHORITY

Request for Bid

ANNUAL CONTRACT FOR CURED-IN-PLACE PIPE REHABILITATION

Bid Opening: Tuesday, April 5, 2016 at 2:00 p.m. (local time)
1600 Battle Creek Road, Morrow, Georgia 30260

**Non-Mandatory
Pre-Bid Meeting:** Thursday, March 17, 2016 at 2:00 p.m. (local time)
1600 Battle Creek Road, Morrow, Georgia 30260

A D D E N D U M # 2

Dated: March 25, 2016

<i>Acknowledgment of receipt of this addendum MUST BE SIGNED AND INCLUDED IN YOUR RESPONSE TO THE RFB.</i>

REVISIONS:

1. Replace Revised Bid Form provided with Addendum #1 with “**Bid Form – Revision #2**” included with this Addendum on pages 2-4.1R-2 through 2-4.20R-2. Revision includes additional lines for “Traffic Control County Road”, and “Traffic Control State Road”. For your convenience, this form has been provided on a pdf fillable version via email.
2. Replace existing Division 4, Section 1 – Work Assignment and Measurement with the revised version provided with this addendum on pages 4-1.1R through 4-1.19R. Revision includes description for added lines for “Traffic Control County Road”, and “Traffic Control State Road”.

QUESTIONS:

1. **Is there a list of certified SLBE companies within Clayton County, if so, will you send a link or the list? Reason for this request would be to reach out to companies that would want to work as a sub on the above referenced bid.**

Answer: The list of CCWA’s certified Small Local Business Enterprises is available through www.ccwa.us, under the tab for “**Procurement**”, section for “Small Local Business Program”.

2. **Work Item 1 (from original documents). Typical CCTV work order will be +/- \$5,000.00, which would make the mobilization rate @ 2% be +/- \$100.00, would CCWA consider a minimum charge for this work item?**

Answer: CCWA will not consider a minimum charge for this work item.

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3. **Work Items 5 -6 (from original documents). During the inversion process or unloading of a liner, if the contractor needs to shut a lane down for a few hours with 2 flaggers, will the contractor be allowed to bill under this item?**

Answer: Work Items and descriptions for Traffic Control Work Items (County and State Roads) have been revised.

4. **Work Items 5-6 (from original documents). During the inversion process or unloading of a liner, if the contractor needs to set up traffic control in a decal lane with 2 flaggers, will the contractor be allowed to bill under this item?**

Answer: Work Items and descriptions for Traffic Control Work Items (County and State Roads) have been revised.

5. **Work Items 7-8 (from original documents). MUTCD guidelines require arrow boards when closing a lane, decal, or turning lanes. The traffic control measures on a state road require additional time and measures to implement; will CCWA reconsider this pay item to include turn and accel/decel lanes?**

Answer: Work Items and descriptions for Traffic Control Work Items (County and State Roads) have been revised.

6. **Work Items 7-8 (from original documents). During the inversion process or unloading of a liner, which can take several hours when a tractor/trailer is used, will CCWA reconsider this pay item for the offloading of the liner?**

Answer: Work Items and descriptions for Traffic Control Work Items (County and State Roads) have been revised.

7. **Work Items 29-30 (from original documents). Since light cleaning is included in the CCTV scope for SS and light cleaning of a 48" is far different than light cleaning of a 8", will CCWA consider adding pipe diameters to the bid tab? Will CCWA consider removing light cleaning from this work item?**

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Answer: Pipe diameters will not be added to the bid tab. Should cleaning as described in the CCTV (Sanitary Sewer Pipe) Work Item not be sufficient, then the Heavy Cleaning (Sanitary Sewer Pipe) Work Item can be used.

8. **Work Items 29-30 (from original documents). Does CCWA have a dump site for the materials removed from the cleaning process that the contractor can use to dump?**

Answer: CCWA does not have a dump site for Contractor use.

9. **Work Items 31-32 (from original documents). Some of the catch basin tops are cracked/fragile, if the contractor cracks or breaks the catch basin top during the removal/replacement; will the contractor be required to replace the lid at no cost to CCWA?**

Answer: CCWA will review with the Contractor prior to the start of work on a case by case basis.

10. **Work Items 34-39 (from original documents). If heavy cleaning is required in just a portion of the pipe, will the contractor be paid for just the section of heavy cleaning or the length the contractor pulled the debris in the pipe? Example – Pipe section is 300LF, but heavy cleaning is needed in the first 40LF, but the contractor had to pull the debris 300LF to remove the item. Will the contractor be paid for 300LF or 40LF?**

Answer: 300 LF, work will be performed under “Heavy Cleaning (Sanitary Sewer Pipe)” work items.

11. **Work Items 40-54 (from original documents). During the CCTV or cleaning of storm drain lines the structure is buried, will the contractor be required to locate/expose the top? If so, will the contractor be required to rebury and restore the area? Are these items considered incidental and not a billable item?**

Answer: Exposing buried structures will be performed under “General Excavation” work items.

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12. **Work Items 40-54 (from original documents). Solid tops i.e. catch basin tops that are fragile or not in good shape, if the contractor cracks or breaks the top during cleaning operations, does the contractor have to replace the top at their expense?**

Answer: CCWA will review with the Contractor prior to the start of work on a case by case basis.

13. **Work Items 77-122 (from original documents). Item b) – Buried structures that are part of a CIPP project – Is the contractor responsible for locating/exposing the top, if so, is this work considered incidental? Item c) Protruding pipes into the bench area of the structure, if the contractor has to remove/cut the protruding pipe in order to invert the liner, is this considered incidental?**

Answer: Exposing buried structures will be performed under “General Excavation” work items. Cutting and removing protruding pipes within a structure is included under “Cured-In-Place Pipe” work items.

14. **Work items that are considered non-CIPP, i.e. tree removal, brush removal, and other ancillary work that is part of the CIPP work order, will CCWA perform these items under this contract or utilize other contracts to complete?**

Answer: Other work that is part of the CIPP work order is intended to be performed under this contract. However, CCWA reserves the right to procure any such services from other sources as well.

15. **Work Items 135-138 (from original documents). Tail ditches that have negative grade and prevent cleaning of storm water pipes, would the contractor bill under these items for that work? Also, if bypass is required to keep cleaning water off of the pipe during cleaning and/or during CIPP installation (due to reverse grade downstream or inability to dig tail ditch far enough to drain) will CCWA pay according to (original) Work Items 9-28?**

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Answer: Excavation of a tail ditch would be performed under “General Excavation” work items. Pumping will be paid by CCWA as required to complete the work.

16. Will CCWA publish the sign-in sheet from the pre-bid?

Answer: See page 21 of this Addendum.

17. What is the anticipated budget for this annual contract?

Answer: \$3,000,000. However, work to be performed under this contract will be assigned on an “as needed when needed” basis, as determined by the CCWA.

18. Will CCWA consider adding hourly items for Project Manager, Administrative Assistant, and Engineer?

Answer: CCWA will not include additional hourly items.

19. Work Item 77a (from original documents): Are third party PE stamps required for all segments to be CIPP’d? If not, when would this be required?

Answer: Third party PE stamps will be required on a case by case basis at CCWA’s discretion. Work will be performed under “PE Stamped Design Calculations” work item.

20. Are manhole/structure cones considered ‘at grade’ with regard to Work Items 29-57 (from original documents)?

Answer: Yes.

21. Is geotextile fabric required under rip rap and other stone placement in accordance with The Manual for Erosion and Sediment Control in Georgia requirements?

Answer: No. Geotextile fabric will be installed at the discretion of CCWA.

22. Must saw cut be utilized for Work Items 168-173 (from original documents)?

Answer: Saw cutting may be used at the discretion of the Contractor.

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- 23. Work Items 441-455 (from original documents): If the top 2VF of a manhole must be removed/replaced, will item 441 (EA) or 443 (VF) be used for payment?**

Answer: Removal and replacement of buried structures will be performed under "General Excavation" and "General Fill / Backfill" work items.

- 24. Is the volume (empty space) inside the manhole/structure to be deducted from CF total for General Excavation Work Items 135-138 (from original documents)?**

Answer: No. Volumes will be determined by measuring outside dimensions.

- 25. With regard to structures that are too small to accommodate CIPP installation: The rule of thumb used is typically 1.5xpipe diameter is the length needed in the structure to invert and cut ends, etc. (for example a 48" pipe must dump into a 6' box minimum, otherwise expect wrinkles or inability to install). Will the contractor be expected to replace the structure if the box size doesn't meet this requirement?**

Answer: Structure replacement is not included in "Cured-In-Place Pipe" work items. Structure replacement would be performed through other work items.

- 26. Regarding billings: Will CCTV Only pay applications (separate from CIPP pay applications) continue to be required or will one pay application per work order suffice?**

Answer: See Division 3, Section 1 "Agreement Form", Item 2.

- 27. Does CCWA have work orders in place for this contract or will the contractor do the CCTV investigative to generate work orders?**

Answer: Work to be performed under this contract will be assigned on an "as needed when needed" basis, as determined by the CCWA.

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28. Would CCWA consider adding an item for man-entry into pipes (for removal of rocks, debris, etc.)?

Answer: CCWA will not add an item for man-entry into pipes.

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Department: STORMWATER

Bid Title: ANNUAL CONTRACT FOR CURED-IN-PLACE PIPE REHABILITATION

Bid Date and Time: Tuesday, April 5, 2016 at 2:00 P.M. (local time)

Page 1 of 1

COMPANY NAME	REPRESENTATIVE	PHONE NUMBER	EMAIL ADDRESS
The Renee Group	Arnon Jefferson	470-383-2851	AJefferson@TheReneeGroup.com
Layne Inc.	Carl Smith	404 379 6800	Carl.Smith@Layne.Com
IPR Southeast LLC	Allison Jones	404.623.4564	ajones@teamipr.com
Fall Circle Communications	Michael Donger	225.205.8426	mike@fc360.com
CARYLON VIS BNS	GLEN A. HILL	803-553-9234	G.Hill@CARYLONMG.COM

SIGNATURE

COMPANY NAME

DATE

Division 2

Bid Requirements

Section 4: Bid Form – Revision #2

Bid of _____
(Hereinafter "Bidder"), organized and existing under the laws of the State of _____,

doing business as _____ (insert "a corporation," "a partnership," or "an individual" or such other business entity designation as is applicable).

To the Clayton County Water Authority (hereinafter "Owner").

In compliance with the Request for Bids, Bidder hereby proposes to perform all Work for **Annual Contract for Cured-In-Place Pipe Rehabilitation** in strict accordance with the Contract Documents as enumerated in the Request for Bids, within the time set forth therein, and at the prices stated below.

By submission of this bid, Bidder certifies, and in the case of joint bid each party thereto certifies as to the party's own organization that this bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor. Bidder also certifies compliance with the Instructions to Bidders.

In submitting this bid, Bidder certifies Bidder is qualified to do business in the state of Georgia as required by laws, rules, and regulations or, if allowed by statute, covenants to obtain such qualification prior to contract award.

CONTRACT EXECUTION:

The undersigned Bidder agrees, if this bid is accepted, to enter into an Agreement with OWNER on the form included in the Documents to perform and furnish Work as specified or indicated in the Documents for the Contract Price derived from the bid and within the times indicated herein and in accordance with the other terms and conditions of the Documents.

Bidder accepts the terms and conditions of the Documents.

INSURANCE:

Bidder further agrees that bid amount(s) stated herein includes specific consideration for the specified insurance coverages.

Division 2

Bid Requirements

Section 4: Bid Form – Revision #2

BID:

The undersigned proposes to complete, in all respects, sound, complete and conformable with this Contract Document the following work for the following amounts.

CCWA guarantees no minimum or maximum quantities, and additionally reserves the right to purchase more or less at the unit price, based on actual need.

ADDENDA:

Bidder acknowledges receipt of the following Addenda:

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Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
1	Mobilization	N/A	2%	N/A
2	Emergency Mobilization	N/A	EA	
3	Performance and Payment Bonds	N/A	EA	
4	PE Stamped Design Calculations	N/A	EA	
5	Traffic Control County Road	Lane Closures - Up to 4 hours / per day	EA	
6		Lane Closures - Greater than 4 hours / per day	EA	
7		Road Closure - Up to 4 hours / per day	EA	
8		Road Closure - Greater than 4 hours / per day	EA	
9	Traffic Control State Road	Lane Closures - Up to 4 hours / per day	EA	
10		Lane Closures - Greater than 4 hours / per day	EA	
11		Road Closure - Up to 4 hours / per day	EA	
12		Road Closure - Greater than 4 hours / per day	EA	
13	Pumping 4-inch Pump	Single Pump System Up to 8 Hours	EA	
14		Redundant Pump System Up to 8 Hours	EA	
15		Single Pump System Greater than 8 to 24 Hours	EA	
16		Redundant Pump System Greater than 8 to 24 Hours	EA	
17	Pumping 6-inch Pump	Single Pump System Up to 8 Hours	EA	
18		Redundant Pump System Up to 8 Hours	EA	
19		Single Pump System Greater than 8 to 24 Hours	EA	
20		Redundant Pump System Greater than 8 to 24 Hours	EA	
21	Pumping 8-inch Pump	Single Pump System Up to 8 Hours	EA	
22		Redundant Pump System Up to 8 Hours	EA	
23		Single Pump System Greater than 8 to 24 Hours	EA	
24		Redundant Pump System Greater than 8 to 24 Hours	EA	
25	Pumping 10-inch Pump	Single Pump System Up to 8 Hours	EA	
26		Redundant Pump System Up to 8 Hours	EA	
27		Single Pump System Greater than 8 to 24 Hours	EA	
28		Redundant Pump System Greater than 8 to 24 Hours	EA	

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Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
29	Pumping 12-inch Pump	Single Pump System Up to 8 Hours	EA	
30		Redundant Pump System Up to 8 Hours	EA	
31		Single Pump System Greater than 8 to 24 Hours	EA	
32		Redundant Pump System Greater than 8 to 24 Hours	EA	
33	CCTV (Sanitary Sewer Pipe)	With PACP Assessment	LF	
34		Without PACP Assessment	LF	
35	CCTV (Stormwater Pipe)	With PACP Assessment	LF	
36		Without PACP Assessment	LF	
37	CCTV (Standby)	N/A	HR	
38	Heavy Cleaning (Sanitary Sewer Pipe) Up to 12-in Diameter	N/A	LF	
39	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 12-in to 18-in Diameter	N/A	LF	
40	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 18-in to 24-in Diameter	N/A	LF	
41	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 24-in to 36-in Diameter	N/A	LF	
42	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 36-in to 48-in Diameter	N/A	LF	
43	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 48-in to 60-in Diameter	N/A	LF	
44	Cleaning (Stormwater Pipe) Up to 12-in Diameter	Up to 25% of Diameter	LF	
45		More than 25% to 50% of Diameter	LF	
46		More than 50% of Diameter	LF	
47	Cleaning (Stormwater Pipe) Larger than 12-in to 18-in Diameter	Up to 25% of Diameter	LF	
48		More than 25% to 50% of Diameter	LF	
49		More than 50% of Diameter	LF	
50	Cleaning (Stormwater Pipe) Larger than 18-in to 24-in Diameter	Up to 25% of Diameter	LF	
51		More than 25% to 50% of Diameter	LF	
52		More than 50% of Diameter	LF	
53	Cleaning (Stormwater Pipe) Larger than 24-in to 36-in Diameter	Up to 25% of Diameter	LF	
54		More than 25% to 50% of Diameter	LF	
55		More than 50% of Diameter	LF	
56	Cleaning (Stormwater Pipe) Larger than 36-in to 48-in Diameter	Up to 25% of Diameter	LF	
57		More than 25% to 50% of Diameter	LF	
58		More than 50% of Diameter	LF	

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Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
59	Cleaning (Stormwater Pipe) Larger than 48-in Diameter	N/A	HR	
60	Cleaning Structure	Up to 10 Foot Depth to Invert	CF	
61		Greater than 10 Foot Depth to Invert	CF	
62	Pre-Liner Up to 12-in Diameter	N/A	LF	
63	Pre-Liner Greater than 12-in to 18-in Diameter	N/A	LF	
64	Pre-Liner Greater than 18-in to 24-in Diameter	N/A	LF	
65	Pre-Liner Greater than 24-in to 36-in Diameter	N/A	LF	
66	Pre-Liner Greater than 36-in to 48-in Diameter	N/A	LF	
67	Pre-Liner Greater than 48-in to 60-in Diameter	N/A	LF	
68	Pre-Liner 66-in Diameter	N/A	LF	
69	Pre-Liner 72-in Diameter	N/A	LF	
70	Pre-Liner 78-in Diameter	N/A	LF	
71	Pre-Liner 84-in Diameter	N/A	LF	
72	Pre-Liner 90-in Diameter	N/A	LF	
73	Pre-Liner 96-in Diameter	N/A	LF	
74	Pre-Liner 102-in Diameter	N/A	LF	
75	Pre-Liner 108-in Diameter	N/A	LF	
76	Reinstatement of Existing Services	N/A	EA	
77	CIPP Service Lateral	connection at main and first 6 LF	EA	
78	4-in Diameter	in addition to the first 6 LF	LF	
79	CIPP Service Lateral	connection at main and first 6 LF	EA	
80	6-in Diameter	in addition to the first 6 LF	LF	
81	CIPP 8-in Diameter	6.0 mm base thickness	LF	
82		Cost change for each 1.5mm from base thickness	LF	
83	CIPP 10-in Diameter	6.0 mm base thickness	LF	
84		Cost change for each 1.5mm from base thickness	LF	
85	CIPP 12-in Diameter	7.5 mm base thickness	LF	
86		Cost change for each 1.5mm from base thickness	LF	

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No.	Work Item	Detail	Unit	Unit Cost
87	CIPP 15-in Diameter	9.0 mm base thickness	LF	
88		Cost change for each 1.5mm from base thickness	LF	
89	CIPP 16-in Diameter	9.0 mm base thickness	LF	
90		Cost change for each 1.5mm from base thickness	LF	
91	CIPP 18-in Diameter	9.0 mm base thickness	LF	
92		Cost change for each 1.5mm from base thickness	LF	
93	CIPP 21-in Diameter	10.5 mm base thickness	LF	
94		Cost change for each 1.5mm from base thickness	LF	
95	CIPP 24-in Diameter	12.0 mm base thickness	LF	
96		Cost change for each 1.5mm from base thickness	LF	
97	CIPP 27-in Diameter	12.0 mm base thickness	LF	
98		Cost change for each 1.5mm from base thickness	LF	
99	CIPP 30-in Diameter	15.0 mm base thickness	LF	
100		Cost change for each 1.5mm from base thickness	LF	
101	CIPP 36-in Diameter	15.0 mm base thickness	LF	
102		Cost change for each 1.5mm from base thickness	LF	
103	CIPP 42-in Diameter	18.0 mm base thickness	LF	
104		Cost change for each 1.5mm from base thickness	LF	
105	CIPP 48-in Diameter	21.0 mm base thickness	LF	
106		Cost change for each 1.5mm from base thickness	LF	
107	CIPP 54-in Diameter	24.0 mm base thickness	LF	
108		Cost change for each 1.5mm from base thickness	LF	
109	CIPP 60-in Diameter	28.0 mm base thickness	LF	
110		Cost change for each 1.5mm from base thickness	LF	
111	CIPP 66-in Diameter	30.0 mm base thickness	LF	
112		Cost change for each 1.5mm from base thickness	LF	
113	CIPP 72-in Diameter	32.5 mm base thickness	LF	
114		Cost change for each 1.5mm from base thickness	LF	

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No.	Work Item	Detail	Unit	Unit Cost
115	CIPP 78-in Diameter	33.0 mm base thickness	LF	
116		Cost change for each 1.5mm from base thickness	LF	
117	CIPP 84-in Diameter	33.5 mm base thickness	LF	
118		Cost change for each 1.5mm from base thickness	LF	
119	CIPP 90-in Diameter	38.0 mm base thickness	LF	
120		Cost change for each 1.5mm from base thickness	LF	
121	CIPP 96-in Diameter	40.5 mm base thickness	LF	
122		Cost change for each 1.5mm from base thickness	LF	
123	CIPP 102-in Diameter	43.0 mm base thickness	LF	
124		Cost change for each 1.5mm from base thickness	LF	
125	CIPP 108-in Diameter	46.0 mm base thickness	LF	
126		Cost change for each 1.5mm from base thickness	LF	
127	Sampling and Testing	Up to 15-in diameter	EA	
128		Greater than 15-in diameter	EA	
129		Core Sampling	EA	
130	Brush Removal	N/A	SF	
131	Tree Removal	4 inch to 6 inch diameter	EA	
132		Greater than 6 inch to 12 inch diameter	EA	
133		Greater than 12 inch to 24 inch diameter	EA	
134		Greater than 24 inch to 36 inch diameter	EA	
135	Fence Work	Chain-Link / Wire Removal	LF	
136		Chain-Link / Wire Reinstall	LF	
137		Wood Removal	LF	
138		Wood Reinstall	LF	
139	General Excavation	Up to 6 feet deep	CF	
140		Greater than 6 feet to 10 feet deep	CF	
141		Greater than 10 feet to 14 feet deep	CF	
142		Greater than 14 feet to 18 feet deep	CF	

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No.	Work Item	Detail	Unit	Unit Cost
143	General Fill / Backfill	Fill Dirt	CF	
144		Sand	CF	
145		#3, #4, #34, #5, #57 and #89 Stone	CF	
146		Surge Stone	CF	
147		Type 3 Rip Rap	CF	
148	Stone Placement	4 inch thick layer	SF	
149	Crushed Stone/Graded Aggregate Base	2 inch thick layer increment	SF	
150	Stone Placement #3, #4, #34, #5, #57 and #89	4 inch thick layer	SF	
151		2 inch thick layer increment	SF	
152	Stone Placement Surge Stone	6 inch thick layer	SF	
153		6 inch thick layer increment	SF	
154	Stone Placement Type 3 Rip Rap	12 inch thick layer	SF	
155		12 inch thick layer increment	SF	
156	Stone Placement Type 1 Rip Rap	Single Layer	SF	
157	Geotextile Fabric Installation	N/A	SF	
158	Sediment Barrier	Silt Fence Type NS	LF	
159		Silt Fence Type S	LF	
160		Hay Bale	LF	
161	Sediment Barrier Removal	N/A	LF	
162	Soil Stabilization	Straw Mulching	SF	
163		Seed and Straw	SF	
164		Seed and matt Blanket	SF	
165		Sod, < 500 SF	SF	
166		Sod, 500 SF and greater	SF	
167	Remove Asphalt Pavement	Up to 4 inch thick layer	SF	
168		Greater than 4 inch to 6 inch thick layer	SF	
169		Greater than 6 inch to 8 inch thick layer	SF	
170		Greater than 8 inch to 10 inch thick layer	SF	
171		Greater than 10 inch to 12 inch thick layer	SF	

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No.	Work Item	Detail	Unit	Unit Cost
172	Remove Concrete Flat Work	Up to 4 inch thick layer	SF	
173		Greater than 4 inch to 6 inch thick layer	SF	
174		Greater than 6 inch to 8 inch thick layer	SF	
175		Greater than 8 inch to 10 inch thick layer	SF	
176		Greater than 10 inch to 12 inch thick layer	SF	
177		Curb and Gutter	LF	
178	Pavement Striping	Line Stripe Up to 6 inch wide	LF	
179	Pavement Marking	Handicap Symbol	EA	
180	Pavement Pressure Washing	N/A	SF	
181	Remove Concrete Structure	Wall Construction	SF	
182		Box / Manhole Construction	CF	
183	Remove Brick Structure	Wall Construction	SF	
184		Box / Manhole Construction	CF	
185	Steel Plate Installation	Up to 40 square foot plate	DY	
186		Greater than 40 square foot to 96 square foot plate	DY	
187		Greater than 96 square foot to 160 square foot plate	DY	
188	Asphalt Patching	3 inch thick layer	SF	
189		1 inch thick layer increment	SF	
190	Asphalt Paving	3 inch thick layer	SF	
191		1 inch thick layer increment	SF	
192	Concrete Curb and Gutter	Up to 24 inch width, square back	LF	
193		Up to 24 inch width, roll back	LF	
194	Concrete Slab-On-Grade	Up to 4 inch thick layer	SF	
195		Greater than 4 inch to 6 inch thick layer	SF	
196		Greater than 6 inch to 8 inch thick layer	SF	
197		Greater than 8 inch to 10 inch thick layer	SF	
198		Greater than 10 inch to 12 inch thick layer	SF	
199		Wire Mesh	SF	
200		Steel Reinforcement - No. 4 Steel Reinforcement	SF	
201		Steel Reinforcement - No. 5 Steel Reinforcement	SF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
202	Pipe Installation - Open Cut PVC, HDPE, CM Up to 8-in Diameter	Point Repair, up to 6 feet deep	EA	
203		Point Repair, greater than 6 feet to 10 feet deep	EA	
204		Point Repair, greater than 10 feet to 14 feet deep	EA	
205		Point Repair, greater than 14 feet to 18 feet deep	EA	
206		Additional Footage, up to 6 feet deep	LF	
207		Additional Footage, greater than 6 feet to 10 feet deep	LF	
208		Additional Footage, greater than 10 feet to 14 feet deep	LF	
209		Additional Footage, greater than 14 feet to 18 feet deep	LF	
210	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 8-in to 16-in Diameter	Point Repair, up to 6 feet deep	EA	
211		Point Repair, greater than 6 feet to 10 feet deep	EA	
212		Point Repair, greater than 10 feet to 14 feet deep	EA	
213		Point Repair, greater than 14 feet to 18 feet deep	EA	
214		Additional Footage, up to 6 feet deep	LF	
215		Additional Footage, greater than 6 feet to 10 feet deep	LF	
216		Additional Footage, greater than 10 feet to 14 feet deep	LF	
217		Additional Footage, greater than 14 feet to 18 feet deep	LF	
218	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 16-in to 24-in Diameter	Point Repair, up to 6 feet deep	EA	
219		Point Repair, greater than 6 feet to 10 feet deep	EA	
220		Point Repair, greater than 10 feet to 14 feet deep	EA	
221		Point Repair, greater than 14 feet to 18 feet deep	EA	
222		Additional Footage, up to 6 feet deep	LF	
223		Additional Footage, greater than 6 feet to 10 feet deep	LF	
224		Additional Footage, greater than 10 feet to 14 feet deep	LF	
225		Additional Footage, greater than 14 feet to 18 feet deep	LF	
226	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 24-in to 36-in Diameter	Point Repair, up to 6 feet deep	EA	
227		Point Repair, greater than 6 feet to 10 feet deep	EA	
228		Point Repair, greater than 10 feet to 14 feet deep	EA	
229		Point Repair, greater than 14 feet to 18 feet deep	EA	
230		Additional Footage, up to 6 feet deep	LF	
231		Additional Footage, greater than 6 feet to 10 feet deep	LF	
232		Additional Footage, greater than 10 feet to 14 feet deep	LF	
233		Additional Footage, greater than 14 feet to 18 feet deep	LF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
234	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 36-in to 48-in Diameter	Point Repair, up to 6 feet deep	EA	
235		Point Repair, greater than 6 feet to 10 feet deep	EA	
236		Point Repair, greater than 10 feet to 14 feet deep	EA	
237		Point Repair, greater than 14 feet to 18 feet deep	EA	
238		Additional Footage, up to 6 feet deep	LF	
239		Additional Footage, greater than 6 feet to 10 feet deep	LF	
240		Additional Footage, greater than 10 feet to 14 feet deep	LF	
241		Additional Footage, greater than 14 feet to 18 feet deep	LF	
242	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 48-in to 60-in Diameter	Point Repair, up to 6 feet deep	EA	
243		Point Repair, greater than 6 feet to 10 feet deep	EA	
244		Point Repair, greater than 10 feet to 14 feet deep	EA	
245		Point Repair, greater than 14 feet to 18 feet deep	EA	
246		Additional Footage, up to 6 feet deep	LF	
247		Additional Footage, greater than 6 feet to 10 feet deep	LF	
248		Additional Footage, greater than 10 feet to 14 feet deep	LF	
249		Additional Footage, greater than 14 feet to 18 feet deep	LF	
250	Pipe Installation - Open Cut CM 66-in Diameter	Point Repair, up to 6 feet deep	EA	
251		Point Repair, greater than 6 feet to 10 feet deep	EA	
252		Point Repair, greater than 10 feet to 14 feet deep	EA	
253		Point Repair, greater than 14 feet to 18 feet deep	EA	
254		Additional Footage, up to 6 feet deep	LF	
255		Additional Footage, greater than 6 feet to 10 feet deep	LF	
256		Additional Footage, greater than 10 feet to 14 feet deep	LF	
257		Additional Footage, greater than 14 feet to 18 feet deep	LF	
258	Pipe Installation - Open Cut CM 72-in Diameter	Point Repair, up to 6 feet deep	EA	
259		Point Repair, greater than 6 feet to 10 feet deep	EA	
260		Point Repair, greater than 10 feet to 14 feet deep	EA	
261		Point Repair, greater than 14 feet to 18 feet deep	EA	
262		Additional Footage, up to 6 feet deep	LF	
263		Additional Footage, greater than 6 feet to 10 feet deep	LF	
264		Additional Footage, greater than 10 feet to 14 feet deep	LF	
265		Additional Footage, greater than 14 feet to 18 feet deep	LF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
266	Pipe Installation - Open Cut CM 78-in Diameter	Point Repair, up to 6 feet deep	EA	
267		Point Repair, greater than 6 feet to 10 feet deep	EA	
268		Point Repair, greater than 10 feet to 14 feet deep	EA	
269		Point Repair, greater than 14 feet to 18 feet deep	EA	
270		Additional Footage, up to 6 feet deep	LF	
271		Additional Footage, greater than 6 feet to 10 feet deep	LF	
272		Additional Footage, greater than 10 feet to 14 feet deep	LF	
273		Additional Footage, greater than 14 feet to 18 feet deep	LF	
274	Pipe Installation - Open Cut CM 84-in Diameter	Point Repair, up to 6 feet deep	EA	
275		Point Repair, greater than 6 feet to 10 feet deep	EA	
276		Point Repair, greater than 10 feet to 14 feet deep	EA	
277		Point Repair, greater than 14 feet to 18 feet deep	EA	
278		Additional Footage, up to 6 feet deep	LF	
279		Additional Footage, greater than 6 feet to 10 feet deep	LF	
280		Additional Footage, greater than 10 feet to 14 feet deep	LF	
281		Additional Footage, greater than 14 feet to 18 feet deep	LF	
282	Pipe Installation - Open Cut CM 90-in Diameter	Point Repair, up to 6 feet deep	EA	
283		Point Repair, greater than 6 feet to 10 feet deep	EA	
284		Point Repair, greater than 10 feet to 14 feet deep	EA	
285		Point Repair, greater than 14 feet to 18 feet deep	EA	
286		Additional Footage, up to 6 feet deep	LF	
287		Additional Footage, greater than 6 feet to 10 feet deep	LF	
288		Additional Footage, greater than 10 feet to 14 feet deep	LF	
289		Additional Footage, greater than 14 feet to 18 feet deep	LF	
290	Pipe Installation - Open Cut CM 96-in Diameter	Point Repair, up to 6 feet deep	EA	
291		Point Repair, greater than 6 feet to 10 feet deep	EA	
292		Point Repair, greater than 10 feet to 14 feet deep	EA	
293		Point Repair, greater than 14 feet to 18 feet deep	EA	
294		Additional Footage, up to 6 feet deep	LF	
295		Additional Footage, greater than 6 feet to 10 feet deep	LF	
296		Additional Footage, greater than 10 feet to 14 feet deep	LF	
297		Additional Footage, greater than 14 feet to 18 feet deep	LF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
298	Pipe Installation - Open Cut CM 102-in Diameter	Point Repair, up to 6 feet deep	EA	
299		Point Repair, greater than 6 feet to 10 feet deep	EA	
300		Point Repair, greater than 10 feet to 14 feet deep	EA	
301		Point Repair, greater than 14 feet to 18 feet deep	EA	
302		Additional Footage, up to 6 feet deep	LF	
303		Additional Footage, greater than 6 feet to 10 feet deep	LF	
304		Additional Footage, greater than 10 feet to 14 feet deep	LF	
305		Additional Footage, greater than 14 feet to 18 feet deep	LF	
306	Pipe Installation - Open Cut CM 108-in Diameter	Point Repair, up to 6 feet deep	EA	
307		Point Repair, greater than 6 feet to 10 feet deep	EA	
308		Point Repair, greater than 10 feet to 14 feet deep	EA	
309		Point Repair, greater than 14 feet to 18 feet deep	EA	
310		Additional Footage, up to 6 feet deep	LF	
311		Additional Footage, greater than 6 feet to 10 feet deep	LF	
312		Additional Footage, greater than 10 feet to 14 feet deep	LF	
313		Additional Footage, greater than 14 feet to 18 feet deep	LF	
314	Pipe Installation - Open Cut DI, RC, VC Up to 8-in Diameter	Point Repair, up to 6 feet deep	EA	
315		Point Repair, greater than 6 feet to 10 feet deep	EA	
316		Point Repair, greater than 10 feet to 14 feet deep	EA	
317		Point Repair, greater than 14 feet to 18 feet deep	EA	
318		Additional Footage, up to 6 feet deep	LF	
319		Additional Footage, greater than 6 feet to 10 feet deep	LF	
320		Additional Footage, greater than 10 feet to 14 feet deep	LF	
321		Additional Footage, greater than 14 feet to 18 feet deep	LF	
322	Pipe Installation - Open Cut DI, RC, VC Greater than 8-in to 16-in Diameter	Point Repair, up to 6 feet deep	EA	
323		Point Repair, greater than 6 feet to 10 feet deep	EA	
324		Point Repair, greater than 10 feet to 14 feet deep	EA	
325		Point Repair, greater than 14 feet to 18 feet deep	EA	
326		Additional Footage, up to 6 feet deep	LF	
327		Additional Footage, greater than 6 feet to 10 feet deep	LF	
328		Additional Footage, greater than 10 feet to 14 feet deep	LF	
329		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
330	Pipe Installation - Open Cut DI, RC, VC Greater than 16-in to 24-in Diameter	Point Repair, up to 6 feet deep	EA	
331		Point Repair, greater than 6 feet to 10 feet deep	EA	
332		Point Repair, greater than 10 feet to 14 feet deep	EA	
333		Point Repair, greater than 14 feet to 18 feet deep	EA	
334		Additional Footage, up to 6 feet deep	LF	
335		Additional Footage, greater than 6 feet to 10 feet deep	LF	
336		Additional Footage, greater than 10 feet to 14 feet deep	LF	
337		Additional Footage, greater than 14 feet to 18 feet deep	LF	
338	Pipe Installation - Open Cut DI, RC, VC Greater than 24-in to 36-in Diameter	Point Repair, up to 6 feet deep	EA	
339		Point Repair, greater than 6 feet to 10 feet deep	EA	
340		Point Repair, greater than 10 feet to 14 feet deep	EA	
341		Point Repair, greater than 14 feet to 18 feet deep	EA	
342		Additional Footage, up to 6 feet deep	LF	
343		Additional Footage, greater than 6 feet to 10 feet deep	LF	
344		Additional Footage, greater than 10 feet to 14 feet deep	LF	
345		Additional Footage, greater than 14 feet to 18 feet deep	LF	
346	Pipe Installation - Open Cut DI, RC, VC Greater than 36-in to 48-in Diameter	Point Repair, up to 6 feet deep	EA	
347		Point Repair, greater than 6 feet to 10 feet deep	EA	
348		Point Repair, greater than 10 feet to 14 feet deep	EA	
349		Point Repair, greater than 14 feet to 18 feet deep	EA	
350		Additional Footage, up to 6 feet deep	LF	
351		Additional Footage, greater than 6 feet to 10 feet deep	LF	
352		Additional Footage, greater than 10 feet to 14 feet deep	LF	
353		Additional Footage, greater than 14 feet to 18 feet deep	LF	
354	Pipe Installation - Open Cut DI, RC Greater than 48-in to 60-in Diameter	Point Repair, up to 6 feet deep	EA	
355		Point Repair, greater than 6 feet to 10 feet deep	EA	
356		Point Repair, greater than 10 feet to 14 feet deep	EA	
357		Point Repair, greater than 14 feet to 18 feet deep	EA	
358		Additional Footage, up to 6 feet deep	LF	
359		Additional Footage, greater than 6 feet to 10 feet deep	LF	
360		Additional Footage, greater than 10 feet to 14 feet deep	LF	
361		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
362	Pipe Installation - Open Cut RC 66-in Diameter	Point Repair, up to 6 feet deep	EA	
363		Point Repair, greater than 6 feet to 10 feet deep	EA	
364		Point Repair, greater than 10 feet to 14 feet deep	EA	
365		Point Repair, greater than 14 feet to 18 feet deep	EA	
366		Additional Footage, up to 6 feet deep	LF	
367		Additional Footage, greater than 6 feet to 10 feet deep	LF	
368		Additional Footage, greater than 10 feet to 14 feet deep	LF	
369		Additional Footage, greater than 14 feet to 18 feet deep	LF	
370	Pipe Installation - Open Cut RC 72-in Diameter	Point Repair, up to 6 feet deep	EA	
371		Point Repair, greater than 6 feet to 10 feet deep	EA	
372		Point Repair, greater than 10 feet to 14 feet deep	EA	
373		Point Repair, greater than 14 feet to 18 feet deep	EA	
374		Additional Footage, up to 6 feet deep	LF	
375		Additional Footage, greater than 6 feet to 10 feet deep	LF	
376		Additional Footage, greater than 10 feet to 14 feet deep	LF	
377		Additional Footage, greater than 14 feet to 18 feet deep	LF	
378	Pipe Installation - Open Cut RC 78-in Diameter	Point Repair, up to 6 feet deep	EA	
379		Point Repair, greater than 6 feet to 10 feet deep	EA	
380		Point Repair, greater than 10 feet to 14 feet deep	EA	
381		Point Repair, greater than 14 feet to 18 feet deep	EA	
382		Additional Footage, up to 6 feet deep	LF	
383		Additional Footage, greater than 6 feet to 10 feet deep	LF	
384		Additional Footage, greater than 10 feet to 14 feet deep	LF	
385		Additional Footage, greater than 14 feet to 18 feet deep	LF	
386	Pipe Installation - Open Cut RC 84-in Diameter	Point Repair, up to 6 feet deep	EA	
387		Point Repair, greater than 6 feet to 10 feet deep	EA	
388		Point Repair, greater than 10 feet to 14 feet deep	EA	
389		Point Repair, greater than 14 feet to 18 feet deep	EA	
390		Additional Footage, up to 6 feet deep	LF	
391		Additional Footage, greater than 6 feet to 10 feet deep	LF	
392		Additional Footage, greater than 10 feet to 14 feet deep	LF	
393		Additional Footage, greater than 14 feet to 18 feet deep	LF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
394	Pipe Installation - Open Cut RC 90-in Diameter	Point Repair, up to 6 feet deep	EA	
395		Point Repair, greater than 6 feet to 10 feet deep	EA	
396		Point Repair, greater than 10 feet to 14 feet deep	EA	
397		Point Repair, greater than 14 feet to 18 feet deep	EA	
398		Additional Footage, up to 6 feet deep	LF	
399		Additional Footage, greater than 6 feet to 10 feet deep	LF	
400		Additional Footage, greater than 10 feet to 14 feet deep	LF	
401		Additional Footage, greater than 14 feet to 18 feet deep	LF	
402	Pipe Installation - Open Cut RC 96-in Diameter	Point Repair, up to 6 feet deep	EA	
403		Point Repair, greater than 6 feet to 10 feet deep	EA	
404		Point Repair, greater than 10 feet to 14 feet deep	EA	
405		Point Repair, greater than 14 feet to 18 feet deep	EA	
406		Additional Footage, up to 6 feet deep	LF	
407		Additional Footage, greater than 6 feet to 10 feet deep	LF	
408		Additional Footage, greater than 10 feet to 14 feet deep	LF	
409		Additional Footage, greater than 14 feet to 18 feet deep	LF	
410	Pipe Installation - Open Cut RC 102-in Diameter	Point Repair, up to 6 feet deep	EA	
411		Point Repair, greater than 6 feet to 10 feet deep	EA	
412		Point Repair, greater than 10 feet to 14 feet deep	EA	
413		Point Repair, greater than 14 feet to 18 feet deep	EA	
414		Additional Footage, up to 6 feet deep	LF	
415		Additional Footage, greater than 6 feet to 10 feet deep	LF	
416		Additional Footage, greater than 10 feet to 14 feet deep	LF	
417		Additional Footage, greater than 14 feet to 18 feet deep	LF	
418	Pipe Installation - Open Cut RC 108-in Diameter	Point Repair, up to 6 feet deep	EA	
419		Point Repair, greater than 6 feet to 10 feet deep	EA	
420		Point Repair, greater than 10 feet to 14 feet deep	EA	
421		Point Repair, greater than 14 feet to 18 feet deep	EA	
422		Additional Footage, up to 6 feet deep	LF	
423		Additional Footage, greater than 6 feet to 10 feet deep	LF	
424		Additional Footage, greater than 10 feet to 14 feet deep	LF	
425		Additional Footage, greater than 14 feet to 18 feet deep	LF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
426	Internal Point Repair	Longitudinal	EA	
427		Protruding Pipe	EA	
428	Flared End Section Installation	For Pipe up to 16-inch	EA	
429		For Pipe greater than 16-inch to 24-inch	EA	
430		For Pipe greater than 24-inch to 36-inch	EA	
431		For Pipe greater than 36-inch to 48-inch	EA	
432	Precast Headwall Installation	For Pipe up to 16 Inch	EA	
433		For Pipe greater than 16 Inch to 24 Inch	EA	
434		For Pipe greater than 24 Inch to 36 Inch	EA	
435		For Pipe greater than 36 Inch to 48 Inch	EA	
436		For Pipe greater than 48 Inch to 60 Inch	EA	
437		For Pipe 66 Inch	EA	
438		For Pipe 72 Inch	EA	
439		For Pipe 78 Inch	EA	
440		For Pipe 84 inch	EA	
441		For Pipe 90 inch	EA	
442		For Pipe 96 inch	EA	
443		For Pipe 102 inch	EA	
444		For Pipe 108 Inch	EA	
445	Precast Manhole Installation 4-Foot Diameter	Typical, Up to 6-foot Constructed Height	EA	
446		Doghouse, Up to 6-foot Constructed Height	EA	
447		Additional Height	VF	
448	Precast Manhole Installation 5-Foot Diameter	Typical, Up to 6-foot Constructed Height	EA	
449		Doghouse, Up to 6-foot Constructed Height	EA	
450		Additional Height	VF	
451	Precast Manhole Installation 6-Foot Diameter	Typical, Up to 6-foot Constructed Height	EA	
452		Doghouse, Up to 6-foot Constructed Height	EA	
453		Additional Height	VF	
454	Precast Manhole Installation 7-Foot Diameter	Typical, Up to 8-foot Constructed Height	EA	
455		Doghouse, Up to 8-foot Constructed Height	EA	
456		Additional Height	VF	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
457	Precast Manhole Installation 8-Foot Diameter	Typical, Up to 10-foot Constructed Height	EA	
458		Doghouse, Up to 10-foot Constructed Height	EA	
459		Additional Height	VF	
460	Concrete Catch Basin Single Wing (GA DOT)	Top Slab	EA	
461		Spillway	EA	
462	Concrete Catch Basin Double Wing (GA DOT)	Top Slab	EA	
463		Spillway	EA	
464	Concrete Catch Basin Varying Sizes	Top Slab	SF	
465		Spillway	SF	
466	Catch Basin Spillway Throat	Up to 24 inch width	LF	
467	Concrete Structure Top / Lid	6 inch thick	SF	
468		8 inch thick	SF	
469		10 inch thick	SF	
470	Concrete Core	Up to 4-inch diameter core	EA	
471		Greater than 4-inch to 12-inch diameter core	EA	
472		Greater than 12-inch to 18-inch diameter core	EA	
473		Greater than 18-inch to 24-inch diameter core	EA	
474	Brick Work Wall Construction	1 Brick Thick	SF	
475		2 Brick Thick	SF	
476		3 Brick Thick	SF	
477		4 Brick Thick	SF	
478	Ring and Cover Installation	Installation	EA	
479		Additional Height, Per Brick Layer	EA	
480	Manhole/Structure Invert Construction	Cast-in-Place Concrete	EA	
481		Brick and Mortar	EA	
482	Cementitious Invert Lining	Grout Mixed by Hand	CF	
483		Grout Mixed by Plant	CY	
484		Pump Mobilization	EA	
485	Cementitious Grouting	Grout Mixed by Hand	CF	
486		Grout Mixed by Plant	CY	
487		Pump Mobilization	EA	

Division 2

Bid Requirements

Section 4: Bid Form - Revision #2

No.	Work Item	Detail	Unit	Unit Cost
488	Chemical Grouting	Grout Application	GAL	
489		Pump Mobilization	EA	
490	Hourly Labor	Superintendent	HR	
491		Foreman	HR	
492		Operator	HR	
493		Pipe Layer	HR	
494		Laborer	HR	
495	Hourly Equipment	78,000 # Class Excavator	HR	
496		52,000 # Class Excavator	HR	
497		45,000 # Class Excavator	HR	
498		17,000 # Class Excavator	HR	
499		10,000 # Class Excavator	HR	
500		30,000 # Class Rubber Tired Loader	HR	
501		Rubber Tired Backhoe / Loader	HR	
502		18,000 # Class Track Dozier	HR	
503		Vibratory Soil Compactor (Ride On) Up to 66-inch compaction width	HR	
504		Vibratory Soil Compactor (Remote Controlled) Up to 48-inch compaction width	HR	
505		Utility Truck Fully Equipped with Hand Tools, Air Tools, Cutting Tools, Mudhog Pump, Generator, Air Compressor, Mechanical Tamp	HR	
506		Hydro/Vacuum Excavator (Min. 12-ft Depth Capability)	Hr	
507	Equipment Rental	N/A	10%	N/A
508	Supplied Material	N/A	10%	N/A
509	Specialty Services	N/A	10%	N/A

Company Name of Bidder:

Division 2

Bid Requirements

Section 4: Bid Form – Revision #2

To be considered responsive, bidders are required to bid on all work items listed on the Bid Form - Pay Item Schedule.

Submitted by:

COMPANY NAME OF BIDDER

By: OFFICER NAME

SIGNATURE

TITLE

(SEAL)

ATTEST

COMPANY ADDRESS

CITY, STATE, ZIP CODE

LICENSE NUMBER (If Applicable)

PHONE NUMBER:

FAX NUMBER:

EMAIL ADDRESS:

DATE:

END OF SECTION

Division 4

Specifications

Section 1: Work Assignment and Measurement – Revised

1.1 General

- A. This Section describes how work is to be assigned and the basis that will be used for processing applications for payment. These provisions will apply to all work of the Contract Documents in addition to specific instructions provided within the individual specification sections.
- B. The basis for payment will be the bid unit cost amounts included in the Pay Item Schedule and the actual quantities of work completed by the Contractor and approved by the CCWA. The CCWA reserves the right to adjust the quantities up or down as necessary to address needs.
- C. Nothing in this Section shall be construed as providing for additional payment beyond the Work Items. No payment will be made for partially completed Work Items. No payment will be made for the completion of excessive quantities of a Work Item as determined by the CCWA.

1.2 Work Assignment

- A. Work to be performed under this annual contract will be assigned on an as needed when needed basis as determined by the CCWA in the form of a Project Work Order.

Project Set-Up for Non-Emergency Work

- 1. CCWA shall prepare draft work items and quantities for Contractor review.
- 2. Contractor shall provide comments on the draft work items and quantities to CCWA within 7 calendar days of issuance by CCWA in order that a Project Work Order can be issued.
- 3. Contractor shall commence work on-site within 7 calendar days of receipt of a Project Work Order.

Project Set-Up for Emergency Work

- 1. CCWA shall prepare draft work items and quantities for Contractor review.
- 2. Contractor shall provide comments on the draft work items and quantities to CCWA within 24 hours of notice of emergency mobilization by CCWA in order that a Project Work Order can be issued.
- 3. Contractor shall commence work on-site within 24 hours of notice of emergency mobilization by CCWA. CCWA shall issue Project Work Order prior to or concurrently with the start of work.

Division 4

Specifications

Section 1: Work Assignment and Measurement – Revised

- B. A Project Work Order will be for work items that are in a common geographic location. A common geographic location may be considered a sanitary sewer drainage basin, business/industrial park, city block or residential subdivision.
- C. Work of a Project Work Order shall be completed within the number of consecutive work days mutually agreed to by the Contractor and the CCWA prior to the start of the work. Unless approved by the CCWA in advance, the Contractor shall not leave the work site to complete work for others.

1.3 Work Items and Measurement

- A. The following descriptions explain the work that is to be completed as part of each Work Item and how work will be quantified.
- B. The Contractor shall provide all labor, equipment, tools, materials (unless indicated otherwise) and incidental items to complete the Work Items in accordance with specifications of the Contract Documents.
- C. The following Work Items correspond to the Work Items and Details listed on the “Pay Item Schedule” of the Bid Form.

Work Item 1. Mobilization: Defined as the Contractor’s administrative and preparatory operations which are necessary to initiate and start work on a project site within 7 calendar days of issuance of a Project Work Order. The Work Item will be paid at (2%) two percent of the total value of Work Items completed for a Project Work Order as authorized/approved by CCWA with a not to exceed amount of \$2,000.00 for any Project Work Order. The costs for demobilization, and re-mobilizations due to shut downs or suspensions of the work caused by the Contractor shall not be compensated. When the Contractor expends administrative and preparatory labor time to assess a project at the request of the CCWA and no subsequent Project Work Order is authorized by CCWA, the Contractor will be entitled to receive compensation for said hourly labor only in accordance with Hourly Labor Work Items.

Work Item 2. Emergency Mobilization: Defined as the Contractor’s administrative and preparatory operations which are necessary to arrive on-site and initiate and start work on a project site within 24 hours of a notice of an Emergency Mobilization request. The Work Item will be paid for a Project Work Order in accordance with the Pay Item Schedule and applicable Detail when authorized/approved by CCWA. The costs for demobilization, and re-

Division 4

Specifications

Section 1: Work Assignment and Measurement – Revised

mobilizations due to shut downs or suspensions of the work caused by the Contractor shall not be compensated. When the Contractor expends administrative and preparatory labor time to assess a project at the request of the CCWA and no subsequent Project Work Order is authorized by CCWA, the Contractor will be entitled to receive compensation for said hourly labor only in accordance with Hourly Labor Work Items.

Work Item 3. Performance and Payment Bonds: Defined as the Contractor obtaining and providing to the CCWA Performance and Payment Bonds in the required amounts for a Public Works project costing \$100,000 or more in value. This Work Item will be paid for a Project Work Order in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 4. PE Stamped Design Calculations: Defined as all the Contractor's cost which are necessary to provide CIPP design calculations in accordance with the reference standards prepared and stamped by an independent, third party, licensed professional engineer experienced with the work. The Work Item will be paid for a Project Work Order in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 5 - 8. Traffic Control (County Road): Defined as the Contractor preparing, securing and implementing an approved Clayton County Transportation and Development Department traffic control plan and utilizing all equipment and signs required by the MUTCD manual including a minimum of two (2) fulltime flagmen to close lanes of traffic or a road for a day or portion thereof while actively performing work in lanes of traffic. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 9 - 12. Traffic Control (State Road): Defined as the Contractor preparing, securing and implementing an approved Georgia Department of Transportation traffic control plan and utilizing all equipment and signs required by the MUTCD manual including a minimum of two (2) fulltime flagmen to close lanes of traffic or a road for a day or portion thereof while actively performing work in lanes of traffic. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 13 – 32. Pumping: Defined as the Contractor providing, operating and maintaining a complete pumping system that includes pumps,

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suction/discharge piping, pipe plugs, coffer dams, fuel, etc. of the minimum size to meet peak flow conditions for by-pass flow purposes. Where Single is indicated, one pumping system is to be provided. Where Redundant is indicated, one additional pumping system of the same size and equipped with automatic calling features is to be provided and integrated with the Single Pump. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 33 - 34. CCTV (Sanitary Sewer Pipe): Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing a CCTV inspection of sanitary sewer pipe using Pipeline Assessment and Certification Program® (PACP) practices, or view the pipe using only video. The Work Item includes the removal and proper disposal of all soil, silt, rocks, other granular material, grease, roots, scale, as well as other foreign debris from the pipeline using three (3) passes of appropriate water jet cleaning nozzles that produce a maximum pressure of 2,500 pounds per square inch (psi) at 80 gallons per minute (gpm). The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on a minimum two man crew using either the "With PACP Assessment" or using the "Without PACP Assessment" as measured in the pipe horizontally from where the pipe starts to where the pipe ends and as accepted/approved by CCWA.

Work Items 35 - 36. CCTV (Stormwater Pipe): Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing a CCTV inspection of stormwater pipe using Pipeline Assessment and Certification Program® (PACP) practices, or view the pipe using only video. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on a minimum two man crew using either the "With PACP Assessment" or using the "Without PACP Assessment" as measured in the pipe horizontally from where the pipe starts to where the pipe ends and as accepted/approved by CCWA.

Work Item 37. CCTV (Standby): Defined as the Contractor remaining on-site idle in order to complete CCTV inspection work. Remaining on-site idle shall only be performed at the request of the CCWA. The Work Item will be paid in

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accordance with the Pay Item Schedule and applicable Detail with cost based on time remaining on-site idle and as accepted/approved by CCWA.

Work Items 38 - 43. Heavy Cleaning (Sanitary Sewer Pipe) – Up to 60-inch Diameter: Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, grease, roots, scale and as well as other foreign debris from the pipe that remains in the pipe after completing three (3) passes of appropriate water jet cleaning nozzles that produce a maximum pressure of 2,500 psi at 80 gpm. The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where Heavy Cleaning starts to where cleaning equipment and debris is removed from within the pipe and as accepted/approved by CCWA. Heavy cleaning shall only be performed at the request of the CCWA.

Work Items 44 - 58. Cleaning (Stormwater Pipe) – Up to 48-inch Diameter: Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, roots and as well as other debris from the pipe. The complete removal will include a final water rinse of the pipe. The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with percent (%) of diameter determined by measuring the depth of soil/debris in the pipe as compared to pipe's diameter prior to the start of cleaning and linear footage as measured in the pipe horizontally from where cleaning starts to where cleaning stops in the pipe and as accepted/approved by CCWA. The percent (%) of pipe diameter selected to be cleaned for a particular pipe shall be effective throughout the length of that pipe segment without adjustment after cleaning has commenced.

Work Item 59. Cleaning (Stormwater Pipe) – Larger than 48-Inch Diameter: Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, roots and all other debris from the pipe. The complete removal will

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include a final water rinse of the pipe. The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on a minimum two man crew removing debris from the pipe and as accepted/approved by CCWA.

Work Items 60 - 61. Cleaning Structure: Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, roots and all other debris from the structure. The work will be completed prior to initiation of any work upstream of the structure being cleaned. Work shall be completed so that no materials are allowed to pass downstream of the structure being cleaned. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with depth being measured from the top of structure to structure invert and quantity of soil/debris removed based on the total in-place cubic footage of material as measured in the structure and as accepted/approved by CCWA.

Work Items 62 - 75. Pre-Liner: Defined as the Contractor installing a pre liner to properly prepare the host pipe for CIPP installation. Pre liners may also be used as recommended by the Contractor and as approved by the CCWA to control leakage and allow installation of the CIPP. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where the pipe starts to where the pipe ends and as accepted/approved by CCWA.

Work Item 76. Reinstatement of Existing Services: Defined as the Contractor locating, cutting, trimming and reconnecting an existing service connection after the completion of CIPP. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 77 – 80. Cured-In-Place Pipe Service Laterals: Defined as the Contractor installing and curing the CIPP service lateral, inspecting and returning the pipe line to service. The Work Item will be paid for the connection to the sewer main and first six linear feet of lateral CIPP in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA. The Work Items will be paid for additional linear footage beyond six linear feet in

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accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 81 – 126. Cured-In-Place Pipe: Defined as the Contractor completing the following work:

- a) Provide CIPP design calculations prepared under the supervision of a licensed Professional Engineer in accordance with the reference standards.
- b) Remove and re-install ring and covers, catch basin tops or solid tops as necessary.
- c) Cut and prepare ends of pipe within structures as necessary to successfully install required materials.
- d) Remove and properly dispose of all soil, silt, rocks, other granular material, grease, roots, scale, as well as other foreign debris from the pipeline using three (3) passes of appropriate water jet cleaning nozzles that produce a maximum pressure of 2,500 pounds per square inch (psi) at 80 gallons per minute (gpm). The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work and complete pre CCTV for documentation.
- e) Plug upstream pipes as necessary when flow bypass pumping is not utilized.
- f) Install and cure the CIPP.
- g) Complete post CCTV inspections of the work.
- h) Collect and deliver samples for testing as directed by CCWA, provide submittals and return the pipeline to service.
- i) Remove from site and dispose of all associated waste material.

The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where the pipe starts to the where the pipe ends and as accepted/approved by CCWA. Where design calculations indicate a change in thickness from the base thickness, then the per linear foot cost of the base thickness will be modified on a per “linear foot” unit cost in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where the pipe starts to the where the pipe ends and as accepted/approved by CCWA.

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Work Items 127 - 129. Sampling and Testing: Defined as the Contractor preparing samples, delivering samples to the independent testing laboratory and providing certified report results for material, structural/flexural, thickness, etc. properties in accordance with the reference standards. For pipelines up to 15-inches in diameter, field samples shall be based on taking a restrained sample of the actual CIPP as installed and cured in situ with the new CIPP. Samples for CIPP larger than 15-inch diameter shall be based on taking plate samples. Thickness testing for CIPP larger than 15-inch diameter and supplemental thickness testing as directed by CCWA shall be based on core drilling a minimum 2-inch diameter test coupon in the installed CIPP; repair of the core drilling shall be included in the Pay Item cost. Field sampling and third party independent laboratory testing shall be provided as directed by the CCWA. The Work Items will be in accordance with the Pay Item Schedule and applicable Detail and as accepted/approved by CCWA. No payment will be made for samples for work that is not accepted/approved by CCWA.

Work Items 130. Brush Removal: Defined as the Contractor removing from the work site and disposing brush, undergrowth, small trees, limbs, stumps, tap roots and other roots exceeding 1-inch in diameter to a depth of at least 18 inches. A small tree is considered any tree or plant growth less than 4 inches in diameter as measured 54 inches up from adjacent bare ground surface. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 131 - 134. Tree Removal: Defined as the Contractor removing from the work site and disposing, trees, limbs, stumps, tap roots and other roots exceeding 1-inch in diameter to a depth of at least 18 inches. A tree is considered a tree when its diameter is 4 inches or greater as measured 54 inches up from adjacent bare ground surface. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 135 – 138. Fence Work: Defined as the Contractor removing chain-linked fencing, wired fencing, wood privacy fencing and posts and disposing or subsequent reinstallation. Where reinstallation is required, Contractor shall provide necessary fasteners to match existing to complete the work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

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Work Items 138 - 142. General Excavation: Defined as the Contractor completing the excavation of soils and/or removal of structures, pipe and/or removal of debris to a required grade, dewatering as necessary and stockpiling or disposing. The Work Items may only be used when work cannot be completed through other Work Items of the Contract. The depth of work shall be determined by measuring from original ground surface to bottom of excavation. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 143 – 147. General Fill/Backfill: Defined as the Contractor placing soil and/or stone of varying sizes as listed in the Pay Item Schedule in excavations or other areas and dewatering as necessary or reinstalling previously removed structures. When placing soil, soil will be compacted to 95% of its maximum dry density as determined by a Standard Proctor Analysis. The Work Items may only be used when work cannot be completed through other Work Items of the Contract. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 148 - 156. Stone Placement: Defined as the Contractor placing stone of varying sizes as listed in the Pay Item Schedule to construct and/or add to sloped grade, access road or parking area at requested layer thickness. Stone shall be compacted using vibratory equipment. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 157. Geotextile Fabric Installation: Defined as the Contractor installing and anchoring geotextile fabric at a requested location. Geotextile Fabric shall be of woven or nonwoven fabric materials used to reinforce or separate soil and other materials. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 158 - 160. Sediment Barrier: Defined as the Contractor installing silt fence or hay bales as requested in accordance with “The Manual for Erosion and Sediment Control in Georgia”, latest Edition. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

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Work Item 161. Sediment Barrier Removal: Defined as the Contractor removing and disposing sediment barriers and stabilizing any subsequent disturbed soil in accordance with Work Items “Soil Stabilization”, as applicable. The Work Item will be paid in accordance with the Pay Item Schedule and applicable as authorized/approved by CCWA.

Work Items 162 - 166. Soil Stabilization: Defined as the Contractor returning the disturbed soil grade to match existing conditions, removing and disposing all rocks and dirt clogs 3/4-inch in size and larger and installing straw mulch, seed and straw mulch, seed and matt blanket or sod to match existing grass type. Soil stabilization measures shall include lime and fertilizer and shall be installed in accordance with “The Manual for Erosion and Sediment Control in Georgia”, latest Edition. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 167 - 171. Remove Asphalt Pavement: Defined as the Contractor saw cutting through asphalt surfaces, removing asphalt pavement from work site and disposing. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 172 - 177. Remove Concrete Flat Work: Defined as the Contractor saw cutting through concrete surfaces, removing concrete from work site and disposing. The Work Items shall be used where asphalt material is found to be over concrete material. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 178. Pavement Striping: Defined as the Contractor installing painted line of the appropriate color to asphalt and concrete surfaces of parking lots and roads. The Contractor shall provide a water-based paint, fast dry, formulated for pavement application; dry to the touch in 5 minutes, ready for traffic in 15 minutes. Sufficient paint shall be applied so that no asphalt or concrete color is visible through paint. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 179. Pavement Marking: Defined as the Contractor installing painted handicap symbol, complying with Figure 3B-22 of the Manual on Uniform Traffic Control Devices, of the appropriate color to asphalt and concrete surfaces of parking lots. The Contractor shall provide a water-based paint, fast dry,

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formulated for pavement application; dry to the touch in 5 minutes, ready for traffic in 15 minutes. Sufficient paint shall be applied so that no asphalt or concrete color is visible through paint. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 180. Pressure Washing: Defined as the Contractor using a minimum 3,500 psi pressure washer and removing soil / mud and stains from asphalt and concrete surfaces. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 181 - 182. Remove Concrete Structure: Defined as the Contractor removing a subgrade concrete structure from work site and disposing. The Work Items will be paid on a per “in-place cubic foot” (CF) unit cost or on a per “square foot” (SF) unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 183 - 184. Remove Brick Structure: Defined as the Contractor removing a subgrade brick structure from work site and disposing. The Work Items will be paid on a per “in-place cubic foot” (CF) unit cost or on a per square foot (SF) unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 185 - 187. Steel Plate Installation: Defined as the Contractor installing steel plates of varying sizes and thicknesses over excavations, installing pavement anchors and/or cold asphalt patch as required and removing plates upon completion of work. Steel Plate thickness for the applicable clear span shall be based on AASHTO H20-44 loading. Comply with “Steel Traffic Plate Installation” Detail. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 188 – 189. Asphalt Patching: Defined as the Contractor preparing and compacting existing stone base and installing/compacting to a final 3-inch thick layer of Type E asphalt. Where a more or less than 3-inch thick layer of asphalt is required, layer shall be added or reduced in 1-inch thick increments. Comply with “Typical Asphalt Replacement” Detail. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as accepted/approved by CCWA. Where more or less asphalt is required the Work

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Item will be paid on a per “square foot” unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 190 – 191. Asphalt Paving: Defined as the Contractor preparing and compacting existing stone base and using a mechanical/hydraulic spreader machine and vibratory roller to install/compact to a final 3-inch thick layer of Type E asphalt. Where a more or less than 3-inch thick layer of asphalt is required, layer shall be added or reduced in 1-inch thick increments. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as accepted/approved by CCWA. Where more or less asphalt is required the Work Item will be paid on a per “square foot” unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 192 – 193. Concrete Curb and Gutter: Defined as the Contractor preparing ground surface, installing necessary formwork and placing commercial grade 3,000 psi concrete. Control joints shall be installed at interval spacing not to exceed 10 feet. Control joints shall be installed by hand tooling during finishing. Concrete shall be finished with a brush finish parallel to road direction. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. Comply with “Slab-On-Grade” Detail. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 194 – 201. Concrete Slab-On-Grade: Defined as the Contractor excavating to grade where necessary, preparing ground surface, installing necessary formwork, installing wire mesh or steel reinforcing as requested by CCWA and placing commercial grade 3,000 psi concrete of varying thickness and area to a required grade. Placed concrete shall be vibratory consolidated prior to finishing. Control joints shall be installed at interval spacing of 1-1/2 times slab width or at maximum spacing of 10 feet, whichever is closer. Control joints, 1/4 of slab thickness, shall be installed by hand tooling during finishing or saw cut within 24 hours of initial placement. Concrete exposed to walking traffic shall be finished with a brush finish perpendicular to walking direction. Concrete not exposed to walking traffic shall be finished with a smooth steel trowel finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. The “Wire Mesh” description is for 4x4 – W2.1xW2.1 wire mesh. The “Steel Reinforcement” description is for No. 4 or No. 5, Grade 60 bars spaced at 6 inches on-center each way supported on chairs

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and secured using tie wire. Install reinforcement in accordance with the Concrete Reinforcement Steel Institute (CRSI) manual for placing reinforcing bars, latest edition. Comply with “Slab-On-Grade” Detail. The Work Items for concrete will be paid on a per “square foot” (SF) unit cost in accordance with the Pay Item Schedule and applicable depth Detail as authorized/approved by CCWA. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 202 – 425. Pipe Installation - Open Cut: (CCWA Provides Pipe, Gaskets and Necessary Fittings and Contractor Delivers to Site) Defined as the Contractor completing excavation work to the required depth, cutting and removing existing pipe of various types from excavation and disposing as necessary, installing required bedding, installing PVC, DI, RC, HDPE, or CM pipe, solid sleeves / couplings or fittings of requested size at necessary grade, making all necessary connections and completing excavation backfill to original grade with soil compacted to 95% of its maximum dry density. Comply with “Pipe Installation on Grade – PVC and HDPE” Detail, “Pipe Installation on Grade – DI, RC, CM” Detail and “Lateral Connection” Detail. Gaskets for piping shall be standard rubber or Field-Lock®. Where Point Repair is indicated, up to 20 feet (length) of pipe and/or including a service connection at a single location is to be installed. Where Additional Footage is indicated, pipe is installed at a linear footage beyond 20 feet. The depth of work shall be determined by measuring from original ground surface to bottom of excavation and along the length of the excavation. Linear foot shall refer to the length of pipe installed including connecting couplings. The Work Items detailed as “Point Repair” will be paid on a per “each” unit cost in accordance with the Pay Item Schedule and applicable depth Detail as authorized/approved by CCWA. The Work Item “Additional Footage” will be paid on a per “linear foot” unit cost in accordance with the Pay Item Schedule and applicable depth Detail as authorized/approved by CCWA.

Work Items 426 - 427. Internal Point Repair: Defined as the Contractor completing the reshaping of pipe (up to ten feet per repair as measured longitudinally, upstream to downstream) or the removal of a protruding pipe from another pipe and disposing of debris. The Work Items will be in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 428 – 431. Flared End Section Installation: (CCWA Provides Material and the Contractor Delivers to Site) Defined as the Contractor

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completing excavation to grade and removing existing flared end section as may be required and disposing, installing a new flared end section or repositioning an existing flared end of RC, HDPE or Metal and of the indicated size and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 432 – 444. Precast Headwall Installation: (CCWA Provides Precast Headwall Material and Contractor Delivers to Site) Defined as the Contractor completing excavation to grade and removing existing headwall as may be required and disposing, installing a new precast concrete headwall or repositioning an existing precast concrete headwall of the indicated size and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. Where a double barrel headwall is to be installed, this Work Item may be used and the work will be considered as two installations. Contractor shall provide and install brick and mortar to seal annular space between headwall and piping and/or space between adjacent headwall sections. Brick shall conform to ASTM C32-11, Grade MS and MM, plain textured surface. Mortar shall conform to ASTM C270, Type S. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 445 – 459. Precast Manhole Installation: (CCWA Provides Precast Manhole and Contractor Delivers to Site) Defined as the Contractor completing excavation to required grade, dewatering as necessary, installing precast concrete manhole of requested size and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. Contractor shall provide and install mortar to seal lift holes and sectional joints. Where applicable, Contractor shall provide and install brick and mortar to seal annular space between manhole and piping and/or space between adjacent headwall sections. Brick shall conform to ASTM C32-11, Grade MS and MM, plain textured surface. This Work Item may also be used to excavate and install additional riser sections or remove / replace riser sections. Comply with “Manhole Sections” Detail and “Dog House Manhole” Detail. Where Constructed Height is indicated, height is measured from top of structure to structure’s invert. For the first 6 Feet of completed structure, the Work Items will be paid on a per “each” unit cost in accordance with the Pay Item Schedule and applicable Detail as accepted/approved by CCWA. For additional height over 6 feet, the Work

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Items will be paid on a per “vertical foot” unit cost in accordance with the Pay Item Schedule as authorized/approved by CCWA.

Work Items 460 – 463. Concrete Catch Basin Single and Double Wing Top Slabs and Spillways (GA DOT): (CCWA Provides Ring and Cover and Contractor Delivers to Site) Defined as the Contractor excavating to grade where necessary and preparing ground surface for a spillway, installing necessary formwork, ring and cover, steel reinforcement and placing commercial grade 4,000 psi concrete to sizes in accordance with Georgia Department of Transportation (GA DOT) standards for a basin top slab and a basin spillway. Placed concrete shall be vibratory consolidated prior to finishing. Concrete for spill way shall be finished smooth. Concrete for top slab shall be finished with a brush finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. Steel reinforcement shall be No. 5, Grade 60 bars spaced at 6 inches on-center each way, supported on wire chairs and secured using annealed tie wire; other No. 3 bar reinforcement as required. Install reinforcement in accordance with the CRSI manual for placing reinforcing bars, latest edition. Comply with “GA DOT 1033D” and “GA DOT 1034D” Details; catch basin top slab and spillway with protruded back is not applicable. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 464 – 465. Concrete Catch Basin Top Slabs and Spillways Varying Sizes: (CCWA Provides Ring and Cover and Contractor Delivers to Site) Defined as the Contractor excavating to grade where necessary and preparing ground surface for a spillway, installing necessary formwork, ring and cover, steel reinforcement and placing commercial grade 4,000 psi concrete to varying sizes in general accordance with GA DOT standards for a basin spillway and a basin top. Placed concrete shall be vibratory consolidated prior to finishing. Concrete for spill way shall be finished smooth. Concrete for top slab shall be finished with a brush finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. Steel reinforcement shall be No. 5, Grade 60 bars spaced at 6 inches on-center each way, supported on wire chairs and secured using annealed tie wire; other No. 3 bar reinforcement as required. Install reinforcement in accordance with the CRSI manual for placing reinforcing bars, latest edition. Comply in general with “GA DOT 1033D” and “GA DOT 1034D” Details. The Work Items will be paid in

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accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 466. Catch Basin Spillway Throat: Defined as the Contractor excavating to grade where necessary, preparing ground surface, installing necessary formwork and placing commercial grade 3,000 psi concrete. Concrete shall be finished with a brush finish perpendicular to road direction. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposing. Comply with “GA DOT 1033D” and “GA DOT 1034D” Details. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 467 – 469. Concrete Structure Top / Lid: (CCWA Provides Ring and Cover or Hatch and Contractor Delivers to Site) Defined as the Contractor installing necessary formwork, steel reinforcing, ring and cover or hatch and placing commercial grade 4,000 psi concrete of varying thickness and sizes over an existing structure. Placed concrete shall be vibratory consolidated prior to finishing. Concrete shall be finished with a brush finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and loaded for disposal. Steel reinforcement shall be No. 4 or No. 5, Grade 60 bars spaced at 6 inches on-center each way, supported on wire chairs and secured using annealed tie wire. Install reinforcement in accordance with the CRSI manual for placing reinforcing bars, latest edition. Comply with “Concrete Structure Top / Lid” Detail, “Reinforcement in Top / Lid at Circular Opening” and “Reinforcement in Top / Lid at Rectangular Opening”. The area of a ring and cover or hatch is not deducted from the overall square footage. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 470 - 473. Concrete Core: Defined as the Contractor coring a hole of a requested size through existing concrete / steel reinforced concrete of varying thicknesses, removing concrete core piece and disposing and installing a Kor-N-Seal manhole to pipe connector or other seal required for the work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 474 – 477. Brick Work Wall Construction: Defined as the Contractor installing brick and mortar to form walls of varying thickness and constructing boxes / vaults of requested sizes. Brick shall conform to ASTM

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C32-11, Grade MS and MM, plain textured surface. Mortar shall conform to ASTM C270, Type S. The “Brick Deep Wall Construction” description indicates the number of bricks used to construct the depth of the wall. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 478 - 479. Ring and Cover Installation: (CCWA Provides Ring and Cover and Contractor delivers to Site) Defined as the Contractor installing traffic rated or non-traffic rated cast iron ring and cover, setting ring to grade in formwork or with brick and mortar on structure as required, grouting ring to structure or brick work and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. Brick shall conform to ASTM C32-11, Grade MS and MM, plain textured surface. Mortar shall conform to ASTM C270, Type S. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 480 – 481. Manhole/Structure Invert Construction: Defined as the Contractor installing concrete or brick and mortar channels of the necessary shape and size in manholes to direct flow. Concrete shall be commercial grade 3,000 psi compressive strength. Brick shall conform to ASTM C32-11, Grade SS and SM, smooth surface on both ends and face side. Mortar shall conform to ASTM C270, Type S. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 482 – 484. Cementitious Invert Lining: Defined as the Contractor placing minimum 5,000 psi (24-hour compressive strength) grout, filling voids and lining pipe invert with a consistent grout cross-section to stabilize pipe’s structural capacity such that pipe may still receive CIPP, removing and disposing any waste material. The “Grout Mixed By Hand” description is where mixture is provided in a sack, water is added at the work site and mixture and water are combined and mixed together using hand tools; cubic foot quantity is indicated on the sack. The “Grout Mixed By Plant” description is where mixture and water are combined at a plant and mixed in a cement truck. The “Pump Mobilization” description is where a pump is utilized to place grout. The Work Item Detail “Grout Mixed By Hand” will be paid on a per “cubic foot” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Grout By Plant Mixing” will be paid on a per “cubic yard” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The

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Work Item Detail “Pump Mobilization” will be paid once for a Project Work Order on a per “each” unit cost in accordance with the Pay Item Schedule as authorized/approved by CCWA.

Work Items 485 – 487. Cementitious Grouting: Defined as the Contractor installing necessary piping and/or bulk heads to facilitate the work, placing minimum 200 psi grout and completely filling pipe, repairing pipe invert, swiping joints, swiping annular space between host pipe and structure or other work as may be necessary and disposing any waste material. The “Grout Mixed By Hand” description is where mixture is provided in a sack, water is added at the work site and mixture and water are combined and mixed together using hand tools; cubic foot quantity is indicated on the sack. The “Grout Mixed By Plant” description is where mixture and water are combined at a plant and mixed in a cement truck. The “Pump Mobilization” description is where a pump is utilized to place grout. The Work Item Detail “Grout Mixed By Hand” will be paid on a per “cubic foot” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Grout By Plant Mixing” will be paid on a per “cubic yard” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Pump Mobilization” will be paid once for a Project Work Order on a per “each” unit cost in accordance with the Pay Item Schedule as authorized/approved by CCWA.

Work Items 488 – 489. Chemical Grouting: Defined as the Contractor installing necessary fittings, placing chemical grout to stop infiltration in concrete structures and/or fill voids in soil or other work as may be necessary and removing and disposing any waste material. The Work Item Detail “Grout Application” will be paid on a per “gallon” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Pump Mobilization” will be paid once for a Project Work Order in accordance with the Pay Item Schedule as authorized/approved by CCWA.

Work Items 490 - 494. Hourly Labor: Work Items shall be utilized on a case-by-case basis only when work cannot be completed using other Work Items. Defined as the Contractor providing and utilizing the indicated labor position to complete work as requested for a certain amount of time. Only the time the labor position is on the work site and working will be considered for payment. The hourly rate shall be the Contractor’s total expense per hour for the indicated labor position. Contractor shall provide documentation showing Project hourly costs.

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The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Items 495 - 506. Hourly Equipment: Work Items shall be utilized on a case-by-case basis. Defined as the Contractor providing and utilizing the indicated piece of equipment to complete work as requested for a certain amount of time. Only the time the piece of equipment is in operation will be considered for payment. The hourly rate shall be the Contractor's total expense per hour for the indicated piece of equipment. Contractor shall provide documentation showing Project hourly costs. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

Work Item 507. Equipment Rental: Work Item shall be utilized on a case-by-case basis. Defined as the Contractor furnishing equipment not included as part of other Work Items or listed in the Work Item "Hourly Equipment", to complete work. The Contractor may furnish equipment through a rental company or through the Contractor's company. Where the Contractor furnishes the equipment through the Contractor's company, industry standard rental rates for equivalent equipment shall apply. Contractor shall provide invoice from Vendor showing Project costs. The Work Item will be paid at invoice cost plus a Contractor's 10% percent markup in accordance with the Pay Item Schedule as authorized/approved by CCWA.

Work Item 508. Special Material: Work Item shall be utilized on a case-by-case basis. Defined as the Contractor furnishing material, not included as part of other Work Items, needed to complete the work. Contractor shall provide invoice from Vendor showing Project costs. The Work Item will be paid at invoice cost plus a Contractor's 10% percent markup in accordance with the Pay Item Schedule as authorized/approved by CCWA.

Work Item 509. Special Services: Work Item shall be utilized on a case-by-case basis. Defined as the Contractor furnishing services through another firm, for work related to this Contract, that is not included on the Pay Item Schedule that is needed to complete the work. Contractor shall provide invoice from Vendor showing Project costs. The Work Item will be paid at invoice cost plus a Contractor's 10% percent markup in accordance with the Pay Item Schedule as authorized/approved by CCWA.

END OF SECTION