

CITY OF HIGH POINT

AGENDA ITEM



Title: Riverdale Pump Station Phase 1 Repairs
Crowder Construction Company
Change Order 1

From: Terry Houk – Public Services Director
Derrick Boone – Public Services Asst. Director **Meeting Date:** November 4, 2019

Public Hearing: N/A

Advertising Date: N/A

Advertised By: N/A

Attachments: Attachment A – Change Order Document

PURPOSE:

To approve Change Order No. 1 to Crowder Construction Company for additional construction materials and work outside of the scope of the original contract.

BACKGROUND:

On July 15, 2019, City Council awarded a contract to Crowder Construction Company for \$3,726,504.00. to construct Phase 1 of the expansion of the Riverdale Lift Station. Phase 1 includes the installation of a 10 MGD submersible pump, construction of additional piping to connect to the existing force main, and the connection of a new generator/electrical equipment to increase the capacity of the station to 30 MGD. This project was declared a pressing need. Change order No. 1 includes the change in pipe material from HDPE to ductile iron, the re-installation of the existing pumps, and the construction of concrete pressure hatches.

BUDGET IMPACT:

Funds for this change order are available in the FY 2019-20 budget.

RECOMMENDATION / ACTION REQUESTED:

Public Services is recommending that Council approve Change Order 1 to Crowder Construction Company in the amount of \$248,884.00.



Hazen and Sawyer
629 Green Valley Road, Suite 200 • Greensboro, NC 27408

October 28, 2019

Mr. Terry Houk
Public Services Director
City of High Point
211 S. Hamilton Street
High Point, NC 27261

Re: Change Order #001
Riverdale Sewer Lift Station Expansion
City of High Point, North Carolina
Contractor: Crowder Construction Company
CHP PO# :
Hazen No.: 31408-006

Dear Mr. Houk:

The referenced work in the attached documents is outside of the scope of the original contract and warrants additional costs. Please find the enclosed documentation to be considered Change Order No. 1 amending the referenced contract to aid in the expansion of the Riverdale Sewer Lift Station.

Original Contract Value:	\$3,726,503.00	Completion Date: M1: August 22, 2019 Final: October 21, 2019
Change Order No. 1:	\$248,884.00	
PCO #01-Change in Pipe Material:	\$135,488.00	8 days to Final
PCO #02-Existing Pump Installation Support:	\$86,601.00	5 days to Milestone 1 and Final
PCO #03-Concrete for Pressure Hatches:	\$26,795.00	3 days to Milestone 1 and Final
Total Contract Value:	\$3,975,387.00	M1: August 30, 2019 Final: Nov. 06, 2019



Please let me know if there are any questions or concerns.

Best Regards,

A handwritten signature in blue ink, appearing to read "A D Babson". The signature is stylized with a large, looped "A" and a cursive "Babson".

Aaron D. Babson, PE
Senior Associate

Enclosure:
Contractor Backup Information

cc:

Date of Issuance: October 28, 2019
Owner: City of High Point, NC
Contractor: Crowder Construction Company
Engineer: Hazen and Sawyer
Project: Riverdale Sewer Lift Station Expansion

Effective Date:
Owner's Contract No.:
Contractor's Project No.: 51267
Engineer's Project No.: 31408-006
Contract Name: Riverdale SLS

The Contract is modified as follows upon execution of this Change Order:

Description: The Contractor was requested to provide a change of scope to the original contract documents as follows and described in the attached documents.

Attachments: PCO #01: Change in Pipe Material, PCO #02: Existing Pump Installation and Startup, PCO #03: Concrete Repair at the Pressure Hatches

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price: \$ <u>3,726,503.00</u>	Original Contract Times: Milestone 1 Completion: <u>August 22, 2019</u> Milestone 2 Completion: <u>October 21, 2019</u> days or dates
Increase from previously approved Change Orders No. <u>:</u> \$ <u>0.00</u>	Increase from previously approved Change Order No. <u>:</u> Substantial Completion: <u>NA</u> Ready for Final Payment: <u>NA</u>
Contract Price prior to this Change Order: \$ <u>3,726,503.00</u>	Contract Times prior to this Change Order: Substantial Completion: <u>August 22, 2019</u> Ready for Final Payment: <u>October 21, 2019</u>
Increase of this Change Order: \$ <u>248,884.00</u>	Increase of this Change Order: Substantial Completion: <u>8 days</u> Ready for Final Payment: <u>16 days</u> days or dates
Contract Price incorporating this Change Order: \$ <u>3,975,387.00</u>	Contract Times with all approved Change Orders: Substantial Completion: <u>August 30, 2019</u> Ready for Final Payment: <u>November 6, 2019</u>

RECOMMENDED:		ACCEPTED:		ACCEPTED:	
By: <u>AJR</u>	By: _____	By: _____	By: _____	By: _____	By: _____
Engineer (if required)	Owner (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)	Contractor (Authorized Signature)	Contractor (Authorized Signature)
Title: <u>SENIOR ASSOCIATE</u>	Title: _____	Title: _____	Title: _____	Title: _____	Title: _____
Date: <u>10/28/19</u>	Date: _____	Date: _____	Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____

WORK CHANGE DIRECTIVE

WORK CHANGE DIRECTIVE NO.: 001 DATE: August 04, 2019
Project: Riverdale Sewer Lift Station Expansion
Contractor: Crowder Construction Company
Engineer/Architect: Hazen and Sawyer (31408-004)

You are directed to proceed promptly with the following change (s):

Description: Change in pipe material from HDPE to Ductile Iron Pipe

Purpose of Work Change Directive: To approve the lump sum cost proposal to provide DIP vs. HDPE pipe

Attachments (List documents supporting change): Crowder T&M PCO-01 proposal and Engineer's determination on time

If a claim is made that the above change(s) have affected the Contract Sum or Price or the Contract Time or Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method in determining change in Contract:

Sum or Price:

<input type="checkbox"/>	Unit Price (s)
<input checked="" type="checkbox"/>	Lump Sum
<input type="checkbox"/>	Other: _____

Time or Times:

<input type="checkbox"/>	Contractor's records
<input type="checkbox"/>	Engineer's records
<input checked="" type="checkbox"/>	Other: <u>See attached determination</u>

Estimated increase/(decrease) in Contract Price:
\$ 135,488.00

Estimated increase/(decrease) in Contract Time:
Final Completion: 8 days;

If the change involves an increase from estimated prices and times included herein work shall not proceed without further authorization.

Work Change Directive will paid from:

<input type="checkbox"/>	General Contingency Allowance (Refer to attached GCA Summary Sheet)
<input checked="" type="checkbox"/>	Summary Change Order (Executed at a later date acceptable to both the Owner and Contractor)

RECOMMENDED:

By: 
Engineer/Architect

Date: 08/04/19

APPROVED:

By: _____
Owner

Date: _____

ACCEPTED:

By: _____
Contractor

Date: _____



Hazen and Sawyer
629 Green Valley Road, Suite 200
Greensboro, NC 27408

August 04, 2019

Aaron Watson
Project Manager
Crowder Construction Company
1111 Burma Drive
Apex, NC 27539

**Re: PCO #01 Engineer's Determination
Riverdale Sewer Lift Station Expansion Project
City of High Point, NC
Hazen Project No. 31408-004**

Dear Mr. Watson:

On July 19, 2019, Crowder Construction Company submitted a change order request, noted as PCO #01, for the lump sum price proposal of \$135,488.00, the addition of 28 calendar days to Milestone #2/Final Completion and the removal of Milestone #1 from the contract.

A request from the Owner was made at the value engineering meeting on July 11th, 2019 to change from the HDPE value engineering proposal to a mechanical joint ductile iron pipe as long MJ DIP had a similar lead time to the HDPE. Crowder assured the project team the MJ DIP was available and would not unduly extend the contract due to lead time based on a call to the supplier. Based on the results of this meeting and factoring the arrival of the pipe onsite this past week inside the time frame of the HDPE lead time, the engineer determines the 28 day time extension is not warranted.

However, the engineer recognizes the 8 days of additional labor required to install the MJ DIP and does recommend an extension to Milestone #2 of 8 calendar days.

Regarding the omission of Milestone #1, the engineer determines the installation of the discharge pipeline is not included in Milestone #1 and therefore should have no bearing on Milestone #1. Milestone #1 should remain unchanged as a result of this change order.

Please do not hesitate to call if you have any questions regarding this determination.

Best Regards,

Aaron D. Babson, PE
Senior Associate

Enclosure

Job no



July 19, 2019

Mr. Terry Houk
City of High Point
211 South Hamilton St.
High Point, NC 27261

Re: City of High Point Riverdale Sewer Lift Station Expansion
Proposed Change Order (PCO) #01 – Ductile Iron Pipe

Dear Terry,

Crowder proposes to provide ductile iron pipe per the submittal sent this week for the Riverdale Pump Station. We propose to make this change for the **Lump Sum price of \$135,488.00**. This change will require a time extension for the Milestone #2 date of 28 calendar days. We will continue to expedite the delivery of the ductile pipe with the goal of improving on the project schedule.

In addition we are requesting that Milestone #1 be deleted from the contract as there is a substantial amount of concurrent work in the pump station that was not considered in our original proposal. This work will impact the completion of the work in the wet-well. Crowder stands ready to assist on this work.

Due to the potential impact of the ductile iron pipe on the Milestone Schedule we request approval of this change within 3 business days. In addition, we would like to begin exploratory digging for this excavation in order to finalize the shoring plans for the pipe installation as well as identifying the exact tie-in location downstream. Please confirm the date that erosion control and excavation work can begin onsite.

Should you have any questions, please contact me on my mobile phone (630.750.1610).

Sincerely,

Aaron Watson
Senior Project Manager

Cc: Aaron Babson – Hazen and Sawyer
Dion Dreher – Crowder Industrial Construction
Mike Reisinger – Crowder Industrial Construction
File

ESTIMATE SUMMARY**JOB NAME:** High Point Riverdale Pump Station PCO #01**CONTACT:** Terry Houk, Aaron Babson**SITE:** Riverdale Pump Station**DATE:** 7/19/2019**QUOTE NUMBER:** PCO #01**Crew @ 60 hrs/Wk**

(1) Pipe Foremen

(3) Journeymen

(2) Operators

1. MATERIAL COST

Permanent Material (non-taxable)

Misc. Mat'l's/Consumables (taxable)

Crowder Markup 15%

Sales Tax on Misc. Mat'l's Above 6.75%

TOTAL MATERIAL COST

DESCRIPTION OF WORK: Provide ductile iron pipe for all underground pipe in lieu of HDPE pipe. All fittings will be compact MJ fittings with mega-lugs. No thrust blocks are included in this proposal. The lead time on this pipe is 4 to 6 weeks.

Estimate assumes that the pipe crew will spend approximately 8 days additional on Ductile Iron Pipe with megalugs and polywrap.

\$	59419
\$	3260
\$	9402
\$	220
\$	72301

2. LABOR COST:

Field Labor	ST Rate	ST Hrs	OT Rate	OT Hrs			
							\$ 0
							\$ 0
Journeyman (pipe)	\$51.07	180	\$72.52	40			\$ 12093
							\$ 0
							\$ 0
							\$ 0
Equipment Operator	\$53.45	60	\$75.90	20			\$ 4725
							\$ 0
							\$ 0
							\$ 0
Pipe Foreman	\$61.97	60	\$90.60	20			\$ 5530
							\$ 0
							\$ 0
TOTAL DIRECT LABOR		300		80		0	\$ 22349

Supervision	Trade Code	ST Rate	ST Hrs				
Sr Project Manager		\$121.94	10				\$ 1219
Project Engineer		\$77.84	15				\$ 1168
Safety Engineer		\$76.00	96				\$ 7296
QC Engineer		\$76.00					\$ 0
Superintendent		\$88.86	80				\$ 7109
Receptionist / Clerk		\$40.84	18				\$ 735
							\$ 0
TOTAL INDIRECT LABOR COST			219		0	0	\$ 17527

3. CONSTRUCTION EQUIPMENT

Crowder Rental Equipment

Trucks (2 each): @ \$285/week/truck

4 wks

3rd Party Rental Equipment

Crowder Markup 15%

Sales Tax on above Rental Eq 7.00%

TOTAL EQUIPMENT COST

\$	16300
\$	1140
\$	460
\$	69
\$	32
\$	18,001

5. SUB - CONTRACTORS

Sub Contractors Work

Crowder Markup 15%

Crowder Fabrication Shop

Crowder Markup 15%

TOTAL SUBCONTRACTOR COST

\$	
\$	0
\$	0
\$	0

6. Lodging / Per Diem

Mechanics/Helpers

Rate 8.00 MH 300

Foreman

Rate 9.00 MH 80

Supervision

Rate 10.00 MH 219

TOTAL LODGING COST**TOTAL QUOTED PRICE**

\$	2400
\$	720
\$	2190
\$	5310
\$	135,488

WORK CHANGE DIRECTIVE

WORK CHANGE DIRECTIVE NO.: 002 DATE: August 04, 2019
Project: Riverdale Sewer Lift Station Expansion
Contractor: Crowder Construction Company
Engineer/Architect: Hazen and Sawyer (31408-004)

You are directed to proceed promptly with the following change (s):

Description: Services to assist the City in the install of the existing pumps

Purpose of Work Change Directive: To approve the T&M scope and not to exceed for the services to install the pumps

Attachments (List documents supporting change): Crowder T&M PCO-02 proposal.

If a claim is made that the above change(s) have affected the Contract Sum or Price or the Contract Time or Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method in determining change in Contract:

Sum or Price:

☐ Unit Price (s)
☐ Lump Sum
☒ Other: T&M

Time or Times:

☐ Contractor's records
☐ Engineer's records
☒ Other: Based on Actual Impact Milestone #1

Estimated increase/(decrease) in Contract Price:

\$ 86,601.00

Estimated increase/(decrease) in Contract Time:

Milestone #1 and
Final Completion: TBD days;

If the change involves an increase from estimated prices and times included herein work shall not proceed without further authorization.

Work Change Directive will paid from:

☐ General Contingency Allowance (Refer to attached GCA Summary Sheet)
☒ Summary Change Order (Executed at a later date acceptable to both the Owner and Contractor)

RECOMMENDED:

By: 
Engineer/Architect

Date: 08/04/19

APPROVED:

By: _____
Owner

Date: _____

ACCEPTED:

By: _____
Contractor

Date: _____



July 19, 2019

Mr. Terry Houk
City of High Point
211 South Hamilton St.
High Point, NC 27261

Re: City of High Point Riverdale Sewer Lift Station Expansion
Proposed Change Order (PCO) #2 – Existing Pump Installation Support

Dear Terry,

Crowder proposes to re-install the three existing pump systems in the Riverdale Pump Station on a Time and Material basis. We propose to provide a millwright foremen and craft to complete this work. We reviewed the installation with the City during our visit to the site last week. We propose the purchase order be issued in the initial amount of **\$86,601.00** based on the attached estimate worksheet. Labor, materials, equipment and subcontract costs would be **billed on a T&M basis** and the final change order amount would be based on actual quantities.

We anticipate this work will take 3 to 6 weeks depending upon the material availability and fit-up of the material in the wetwell. These pumps will need to be online in order to complete Milestone #1 and this additional work will require the extension of Milestone #1 to a date beyond completion of this change order work. Should you have any questions, please contact me on my mobile phone (630.750.1610).

Sincerely,

Aaron Watson
Senior Project Manager

Cc: Aaron Babson – Hazen and Sawyer
Dion Dreher – Crowder Industrial Construction
Mike Reisinger – Crowder Industrial Construction
File

T&M ESTIMATE SUMMARY**JOB NAME:** High Point Riverdale Pump Station PCO #02**CONTACT:** Terry Houk, Aaron Babson**SITE:** Riverdale Pump Station**DATE:** 7/19/2019**QUOTE NUMBER:** PCO #02**Crew @ 60 hrs/Wk**

(1) Millwright Foremen

(2) Journeymen

(1) Operator

1. MATERIAL COST

Permanent Material (non-taxable)

Misc. Mat'l's/Consumables (taxable)

Crowder Markup 15%

Sales Tax on Misc. Mat'l's Above 6.75%

TOTAL MATERIAL COST

DESCRIPTION OF WORK: Re-install three existing pumps in Pump Station. Original budget is a four man crew for four weeks working 60 hours / week. Estimate assumes \$1000 in misc material purchases and \$1500 in misc equipment rentals.

\$	
\$	1000
\$	150
\$	68
\$	1218

2. LABOR COST:

Field Labor	ST Rate	ST Hrs	OT Rate	OT Hrs			
							\$ 0
							\$ 0
Millwright Journeyman	\$51.07	320	\$72.52	160			\$ 27946
							\$ 0
							\$ 0
							\$ 0
Equipment Operator	\$53.45	160	\$75.90	80			\$ 14624
							\$ 0
							\$ 0
							\$ 0
Foreman (Millwright)	\$61.97	160	\$90.60	80			\$ 17163
							\$ 0
							\$ 0
TOTAL DIRECT LABOR		640		320		0	\$ 59733

Supervision	ST Rate	ST Hrs	OT Rate	Ot Hrs			
Sr Project Manager	\$121.94	15					\$ 1829
Project Engineer	\$77.84	25					\$ 1946
Safety Engineer	\$76.00	45					\$ 3420
QC Engineer	\$76.00						\$ 0
Superintendent	\$88.86	45					\$ 3999
Receptionist / Clerk	\$40.84	25					\$ 1021
TOTAL INDIRECT LABOR COST		155		0		0	\$ 12215

3. CONSTRUCTION EQUIPMENT

Crowder Rental Equipment

Trucks (1 each): @ \$285/week/truck

3rd Party Rental Equipment

Crowder Markup 15%

Sales Tax on above Rental Eq 7.00%

TOTAL EQUIPMENT COST

\$	1500
\$	1140
\$	460
\$	69
\$	32
\$	3,201

5. SUB - CONTRACTORS

Sub Contractors Work

Crowder Markup 15%

Crowder Fabrication Shop

Crowder Markup 15%

TOTAL SUBCONTRACTOR COST

\$	
\$	0
\$	
\$	0
\$	0

6. Lodging / Per Diem

Mechanics/Helpers

Foreman

Supervision

Rate	MH
8.00	720
9.00	265
10.00	155

\$	5760
\$	2385
\$	1550

TOTAL LODGING COST**TOTAL QUOTED PRICE**

\$	9695
\$	86,061

PCO #2 TIME AND MATERIAL AGREEMENT

Under the terms of this Agreement between Crowder Construction and Owner, Crowder proposes to manage the project and assemble work crews to properly and expeditiously pursue the work to be performed. This includes selection and management of qualified subcontractors and/or engineering disciplines as would be required. This Agreement shall define costs and markups as follows:

Definition of Costs

- **Material** – Total material cost shall include actual invoice cost, sales tax and delivery charges. Materials shall include all permanent materials, incidentals, and consumables. **Markup on total Material cost – 15%**
- **Labor** – Labor shall be billed at hourly rates per the Labor Billing Rate attachment.
- **Premium Time Billing Rates** apply to time worked over 40 hours.
- **Subcontractor** - Subcontractor cost shall be in accordance with the actual subcontractor invoice including labor, material, sales tax, freight and construction equipment. **Markup on Subcontractor invoice – 15%.**
- **Construction Equipment – Third Party Rental** - Equipment costs will be based on actual invoice and shall include rental cost, sales tax, transportation charges, fuel and maintenance to the extent of the Contractor's responsibility as defined by the third party rental agreement. **Markup on Third Party Equipment Rental – 15%**
- **Construction Equipment – Crowder Owned** – Equipment shall be charged at **95%** of the current **Associated Equipment Distributor's** handbook rates. Equipment will be charged for entire time on the job including the time held in a state of readiness. Equipment operation expenses will be billed as material cost.
- **Transportation Charges** – Equipment and fabricated material hauling to and from the project on contractor's trucks shall be billed at **\$3.00** per mile each way. Invoices from third party haulers shall be billed as subcontractor invoices as defined above.
- **Worker Subsistence** - Worker subsistence is paid in strict accordance with Crowder Construction's Policy. Crowder's effort will be to provide craft workers on projects with available local employees. However, subsistence shall be paid to Crowder employees living outside a 50-mile radius of the project. Subsistence payment shall be based on the following:
 - Craft Worker - \$80.00 per day.
 - Foreman, Lead Men, Site Admin - \$90.00 per day.
 - Field Supervision - \$100.00 per day.

Management Travel – Actual Cost.

- **Small tools** - Small tools shall be defined as tools having an individual value of less than \$500.00. Any tools having a value greater than \$500.00 shall either be rented to the project at 95% AED rates or purchased as materials.
- **Home Office Overhead and Profit** - Labor billing rates includes Home Office overhead and profit only. Field overhead costs such as project management, clerical, field engineering and field office expense shall be reimbursed as defined above.
- **Project Duration** - These rates are valid for work performed during the original project duration, however Crowder reserves the right to review every 3 months from date of issue. These rates do not include costs applicable to work that extend the original project duration.

Billing

Each Crowder invoice will include all cost and appropriate fees. Billing will be bi-monthly. Owner will pay all Crowder Construction's invoices within 30 calendar days, with no retainage withheld.

Back-Up Accounting

Each Crowder invoice will be complete with the following back-up documentation.

1. Labor billing data shall include individual workmen's name, crew code, hours worked and billing rate of pay from Labor Billing Rate attachment.
2. Copies of invoices for material, hauling, third-party rentals, and subcontracts.
3. Copies of daily equipment rental sheets (these will be available to Owner on a daily basis).
4. Additionally, the project superintendent maintains daily documentation of labor time sheets, purchase orders and receiving reports for all materials and other incidental cost documentation -- all of which are subject to Owner's review. Copies of this documentation can be provided upon request.
5. Such other documentation as is necessary to establish cost of work.

LABOR AND BILLING RATES

Labor Classification	Straight Time	Premium Time
<u>Civil</u>		
Superintendent	\$67.73	\$96.18
General Foreman	\$64.73	\$91.91
Foreman	\$58.29	\$82.78
Leadperson	\$53.70	\$76.25
Carpenter	\$51.61	\$73.29
Carpenter Helper	\$38.75	\$55.03
Laborer	\$28.25	\$40.11
<u>Piping</u>		
Superintendent	\$74.16	\$105.31
General Foreman	\$64.73	\$91.91
Foreman	\$63.81	\$90.60
Leadperson	\$57.38	\$81.47
Pipe Fitter/Welder	\$53.45	\$75.90
Pipe Fitter Helper	\$38.75	\$55.03
Tubing Technician	\$60.80	\$86.34
<u>Equipment / Steel Erection</u>		
Superintendent	\$77.84	\$110.53
General Foreman	\$64.73	\$91.91
Foreman	\$61.97	\$88.00
Leadperson	\$56.46	\$80.17
Millwright / Iron Worker	\$53.45	\$75.90
Welder	\$53.45	\$75.90
Helper	\$38.75	\$55.03
<u>Electrical</u>		
Superintendent	\$74.16	\$105.31
General Foreman	\$64.73	\$91.91
Foreman	\$62.89	\$89.30



CROWDER CONSTRUCTION COMPANY

Leadperson	\$55.54	\$78.86
Electrician	\$51.61	\$73.29
Electrician Helper	\$38.75	\$55.03
<u>Equipment Operator</u>		
Equipment Operator	\$53.45	\$75.90
Crane Operator	\$58.96	\$83.73
<u>Supervision</u>		
Project Manager	\$121.94	\$173.15
Project Engineer	\$77.84	\$110.53
Safety Engineer	\$76.00	\$107.92
QC Engineer	\$76.00	\$107.92
Project Controls	\$98.05	\$139.23
Site Superintendent	\$88.86	\$126.18
Field Clerk	\$40.84	\$57.99

**DETERMINATION OF DAYS IMPACTED UPON BASE SCOPE
FROM PERFORMING T&M SCOPE ON PCO #02 - Install Existing Pump Support**

JOB NAME: High Point Riverdale Sewer Lift Station
QUOTE NUMBER: PCO #002 / WCD #002
COST CODE: 51267-990001

DESCRIPTION OF WORK PERFORMED:

Assembly and installation of existing pumps and drive shafts. Offloaded and assisted scaffold installation in the drywell for drive shaft bracing inspection/work access at direction of Hazen and Sawyer Construction Manager. Scaffolding materials provided by Crowder's scaffolding subcontractor (Sunbelt). See daily timesheets descriptions for more information on activities performed.

Manhours Worked on PCO #02 - Install Existing Pump Support

Name	Description	Date and Hours of Work Performed															
		8/1	8/2	8/3	8/10	8/12	8/13	8/14	8/15	8/16	8/19	8/20	8/23	8/24	8/26	8/27	8/28
Brandon Johnson	Foreman (Millwright)	10	5	6	3	6	10	10	9	10	10	8					
Corey Davis	Millwright Journeyman	10	5	6	3	6	10	10	10	10	10	8					
Jamie Hanks	Pipe Fitter Helper	10	5	6	1	6	10	10	10	10	10	8					
Jacob Steen	Foreman (Mechanical/Piping)														2	4	4
Rafael Montalvo	Carpenter															4	4
Jaime Hernandez	Carpenter															4	4
Avery Lewis	Carpenter Leadperson								4				5	3			
James Lowery	Foreman (Civil)								4	1							
Harold Wheeler	Carpenter Leadperson								3								
Subtotal Hours PCO#02		30	15	18	7	18	30	30	40	31	30	24	5	3	2	12	12
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cumulative Days Worked																	

Manhours Worked On Base Scope (corresponding days)

Name	Description	Date and Hours of Work Performed															
		8/1	8/2	8/3	8/10	8/12	8/13	8/14	8/15	8/16	8/19	8/20	8/23	8/24	8/26	8/27	8/28
James Lowery	Foreman (Civil)	10	10		8.5	10.5	10.5	10.5	6.5	10.5	0	10.5	10		0	0	
Avery Lewis	Carpenter Leadperson	10	10		8	10	10	6	6	10	8	0	5	5	10	10	8
Rafael Montalvo	Carpenter	10	10		8	10	10	10	10	10	10	10	10	8	10	6	6
Jaime Hernandez	Carpenter	10	10		5	10	10	10	10	10	10	10	10	8	10	6	6
harold wheeler	Carpenter Leadperson	10	10		8	10	10	10	7	8	10	10		8		10	10
jamie hanks	Pipe Fitter Helper			2	7	4	0	0	0	0	0	0	8				
corey davis	Millwright Journeyman			2	5	4	0	0	0	0	0	0	8				
brandon johnson	Foreman (Millwright)			2	5	4	0	0	1	0	0	0	8				
Kent Keith	Iron Worker				8					5							
Jose Ortiz	Iron Worker				8					5							
Jacob Steen	Foreman (Mechanical/Piping)					10	10	10	10	10	10	10			8	10	10
John Birston	General Foreman (Civil)										10	10	10	8	10	10	
Subtotal Hours on Base Scope		50	50	6	70.5	72.5	60.5	56.5	50.5	68.5	58	60.5	69	37	48	52	40

Ratio Hours Spent on PCO#02 vs Base Scope

Total Combined Hours for Day	80	65	24	77.5	90.5	90.5	86.5	90.5	99.5	88	84.5	74	40	50	64	52
Fraction of Day	0.38	0.23	0.75	0.09	0.2	0.33	0.35	0.44	0.31	0.34	0.28	0.07	0.08	0.04	0.19	0.23
Subtotal Days	4.30															
Days Impacted	5															

Note: Days impacted are rounded up to account for inefficiency of fractional days on base scope.

WORK CHANGE DIRECTIVE

WORK CHANGE DIRECTIVE NO.: 003 DATE: August 04, 2019
Project: Riverdale Sewer Lift Station Expansion
Contractor: Crowder Construction Company
Engineer/Architect: Hazen and Sawyer (31408-004)

You are directed to proceed promptly with the following change (s):

Description: To assist in the completion of the pressure hatch installation, placing concrete

Purpose of Work Change Directive: To approve the T&M scope and not to exceed for the
placement of concrete around the new pressure hatch (provided by others)

Attachments (List documents supporting change): Crowder T&M PCO-03 proposal.

If a claim is made that the above change(s) have affected the Contract Sum or Price or the Contract Time or Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method in determining change in Contract:

Sum or Price:

<input type="checkbox"/>	Unit Price (s)
<input type="checkbox"/>	Lump Sum
<input checked="" type="checkbox"/>	Other: T&M

Time or Times:

<input type="checkbox"/>	Contractor's records
<input type="checkbox"/>	Engineer's records
<input checked="" type="checkbox"/>	Other: Agreed upon extension

Estimated increase/(decrease) in Contract Price:

\$ 26,795.00

Estimated increase/(decrease) in Contract Time:

Milestone #1 and
Final Completion: 3 days;

If the change involves an increase from estimated prices and times included herein work shall not proceed without further authorization.

Work Change Directive will paid from:

<input type="checkbox"/>	General Contingency Allowance (Refer to attached GCA Summary Sheet)
<input checked="" type="checkbox"/>	Summary Change Order (Executed at a later date acceptable to both the Owner and Contractor)

RECOMMENDED:

By: 
Engineer/Architect

Date: 08/04/19

APPROVED:

By: _____
Owner

Date: _____

ACCEPTED:

By: _____
Contractor

Date: _____



July 26, 2019

Mr. Terry Houk
City of High Point
211 South Hamilton St.
High Point, NC 27261

Re: City of High Point Riverdale Sewer Lift Station Expansion
Proposed Change Order (PCO) #3 – Supply, Place, Finish Pressure Hatch Concrete

Dear Terry,

Crowder proposes to supply, place, and finish the three (3) pressure hatch concrete areas in the Riverdale Pump Station on a **Time and Material** basis. We propose to provide a Civil Foreman and craft to complete this work. We reviewed the installation with the City and the existing Contractor on site. As stated in the proposal, we will work together with the existing contractor to make the placements. Scope as defined in the description of PCO #03. We propose the purchase order be issued in the initial amount of **\$26,795.00** based on the attached estimate worksheet. Labor, materials, equipment and subcontract costs would be billed on a T&M basis and the final change order amount would be based on actual quantities.

We anticipate this work will take one (1) week depending upon the material availability, access and assumes no weather delays.

This work occurs concurrently with our base scope. For manpower resources, it makes the most economical sense to utilize the crew currently on-site; rather than mobilize/demobilize a separate crew. Thus, part of our crew will be spending productive hours on this additional scope in lieu of base scope. We request an additional three (3) days extension to Milestone #1 as part of this PCO #3.

Please approve this PCO #03 by Monday, July 29, 2019 to facilitate the possibility of the first placement to occur on Tuesday, July 30, 2019.

Concrete Supplier will be Chandler Concrete. Submittals are included with this PCO.

Should you have any questions, please contact me on my mobile phone (630.750.1610).

Sincerely,

Aaron Watson
Senior Project Manager

Cc: Aaron Babson – Hazen and Sawyer
Dion Dreher – Crowder Industrial Construction
Mike Reisinger – Crowder Industrial Construction
File

Riverdale Sewer Lift Station TIME AND MATERIAL AGREEMENT

Under the terms of this Agreement between Crowder Construction and Owner, Crowder proposes to manage the project and assemble work crews to properly and expeditiously pursue the work to be performed. This includes selection and management of qualified subcontractors and/or engineering disciplines as would be required. This Agreement shall define costs and markups as follows:

Definition of Costs

- **Material** – Total material cost shall include actual invoice cost, sales tax and delivery charges. Materials shall include all permanent materials, incidentals, and consumables. **Markup on total Material cost – 15%**
- **Labor** – Labor shall be billed at hourly rates per the Labor Billing Rate attachment.
- **Premium Time Billing Rates** apply to time worked over 40 hours.
- **Subcontractor** - Subcontractor cost shall be in accordance with the actual subcontractor invoice including labor, material, sales tax, freight and construction equipment. **Markup on Subcontractor invoice – 15%.**
- **Construction Equipment – Third Party Rental** - Equipment costs will be based on actual invoice and shall include rental cost, sales tax, transportation charges, fuel and maintenance to the extent of the Contractor's responsibility as defined by the third party rental agreement. **Markup on Third Party Equipment Rental – 15%**
- **Construction Equipment – Crowder Owned** – Equipment shall be charged at **95%** of the current **Associated Equipment Distributor's** handbook rates. Equipment will be charged for entire time on the job including the time held in a state of readiness. Equipment operation expenses will be billed as material cost.
- **Transportation Charges** – Equipment and fabricated material hauling to and from the project on contractor's trucks shall be billed at **\$3.00** per mile each way. Invoices from third party haulers shall be billed as subcontractor invoices as defined above.
- **Worker Subsistence** - Worker subsistence is paid in strict accordance with Crowder Construction's Policy. Crowder's effort will be to provide craft workers on projects with available local employees. However, subsistence shall be paid to Crowder employees living outside a 50-mile radius of the project. Subsistence payment shall be based on the following:
 - Craft Worker - \$80.00 per day.
 - Foreman, Lead Men, Site Admin - \$90.00 per day.
 - Field Supervision - \$100.00 per day.

Management Travel – Actual Cost.

- **Small tools** - Small tools shall be defined as tools having an individual value of less than \$500.00. Any tools having a value greater than \$500.00 shall either be rented to the project at 95% AED rates or purchased as materials.
- **Home Office Overhead and Profit** - Labor billing rates includes Home Office overhead and profit only. Field overhead costs such as project management, clerical, field engineering and field office expense shall be reimbursed as defined above.
- **Project Duration** - These rates are valid for work performed during the original project duration, however Crowder reserves the right to review every 3 months from date of issue. These rates do not include costs applicable to work that extend the original project duration.

Billing

Each Crowder invoice will include all cost and appropriate fees. Billing will be bi-monthly. Owner will pay all Crowder Construction's invoices within 30 calendar days, with no retainage withheld.

Back-Up Accounting

Each Crowder invoice will be complete with the following back-up documentation.

1. Labor billing data shall include individual workmen's name, crew code, hours worked and billing rate of pay from Labor Billing Rate attachment.
2. Copies of invoices for material, hauling, third-party rentals, and subcontracts.
3. Copies of daily equipment rental sheets (these will be available to Owner on a daily basis).
4. Additionally, the project superintendent maintains daily documentation of labor time sheets, purchase orders and receiving reports for all materials and other incidental cost documentation -- all of which are subject to Owner's review. Copies of this documentation can be provided upon request.
5. Such other documentation as is necessary to establish cost of work.

LABOR AND BILLING RATES

Labor Classification	Straight Time	Premium Time
<u>Civil</u>		
Superintendent	\$67.73	\$96.18
General Foreman	\$64.73	\$91.91
Foreman	\$58.29	\$82.78
Leadperson	\$53.70	\$76.25
Carpenter	\$51.61	\$73.29
Carpenter Helper	\$38.75	\$55.03
Laborer	\$28.25	\$40.11
<u>Piping</u>		
Superintendent	\$74.16	\$105.31
General Foreman	\$64.73	\$91.91
Foreman	\$63.81	\$90.60
Leadperson	\$57.38	\$81.47
Pipe Fitter/Welder	\$53.45	\$75.90
Pipe Fitter Helper	\$38.75	\$55.03
Tubing Technician	\$60.80	\$86.34
<u>Equipment / Steel Erection</u>		
Superintendent	\$77.84	\$110.53
General Foreman	\$64.73	\$91.91
Foreman	\$61.97	\$88.00
Leadperson	\$56.46	\$80.17
Millwright / Iron Worker	\$53.45	\$75.90
Welder	\$53.45	\$75.90
Helper	\$38.75	\$55.03
<u>Electrical</u>		
Superintendent	\$74.16	\$105.31
General Foreman	\$64.73	\$91.91
Foreman	\$62.89	\$89.30



CROWDER CONSTRUCTION COMPANY

Leadperson	\$55.54	\$78.86
Electrician	\$51.61	\$73.29
Electrician Helper	\$38.75	\$55.03
<u>Equipment Operator</u>		
Equipment Operator	\$53.45	\$75.90
Crane Operator	\$58.96	\$83.73
<u>Supervision</u>		
Project Manager	\$121.94	\$173.15
Project Engineer	\$77.84	\$110.53
Safety Engineer	\$76.00	\$107.92
QC Engineer	\$76.00	\$107.92
Project Controls	\$98.05	\$139.23
Site Superintendent	\$88.86	\$126.18
Field Clerk	\$40.84	\$57.99