

CITY OF HIGH POINT

AGENDA ITEM



TITLE: Waterview Pump Station Force Main Extension, Change Order Number 6 Baker Underground Inc.	
FROM: Robby Stone – Public Services Director Derrick Boone – Asst. Public Services Director	MEETING DATE: April 1, 2024
PUBLIC HEARING: n/a	ADVERTISED DATE/BY: March 18, 2022
ATTACHMENTS: Change Order Number 6	

PURPOSE: To approve Change Order Number 6 to Baker Underground Inc. for the final installed quantities on the Waterview Pump Station Force Main Extension Project.

BACKGROUND: The purpose of the force main extension project was to increase the capacity of the Waterview Pump Station. City Council approved the original contract on May 2, 2022, to Baker Underground Inc for \$2,767,305.00. There have been five additional change orders for the project.

Change Order Number 6 includes adjustments for various overruns and underruns encountered during construction of the Waterview Pump Station Force Main Extension Project.

Change Order Number 6 is the “Final Adjusting Change Order” which represents final installed quantities. All work has been completed.

BUDGET IMPACT: Funds for this project are available in the FY 2023-2024 budget.

RECOMMENDATION/ACTION REQUESTED Public Services is recommending that Council approve Change Order Number 6 to Baker Underground Inc. in the amount of \$104,121.65. Upon approval of Change Order Number 6, the new total contract amount will be increased to \$4,280,097.41.



March 19, 2024

Re: City of High Point, NC
Waterview Pump Station
Force Main Extension
DMP Project 200077 (BF)

Mr. Derrick Boone
City of High Point
Public Services Department
PO Box 230
High Point, NC 27261

Dear Derrick:

Now that all of the work has been completed on the Waterview Force Main Extension, we have prepared Change Order No. 6 for the Final Adjusting Change Order to adjust the Contract Amount in accordance with the final installed quantities.

Most of the line items in the Base Bid and Change Orders No. 1 – 5 include relatively minor quantity underruns or overruns. We did want to mention several of the more significant quantity overruns and reasons for them as noted below

Base Bid

- Item 5 – 16" FPVC, Installed by HDD. The quantity overrun was due to the Value Engineering decision to install the force main by horizontal directional drill (HDD) method along Penny Road in front of O'Reilly Auto Parts and Dollar General. This decision was made to limit disturbance of the existing ground surface, to eliminate a bore-and-jack encasement under Samet Drive, and to eliminate an air release valve manhole in front of O'Reilly Auto Parts.
- Item 28 – Remove & Replace Concrete Sidewalk. The quantity overrun was due to having to replace additional sections of existing sidewalk along Skeet Club Road from Eastchester Drive to the west side of Whites Mill Road.
- Item 31 – Remove & Replace Asphalt Roadway. The quantity overrun was due to having to replace more sections of asphalt roadway than was anticipated at Penny Road, Sunnyvale Drive, and Skeet Club Road.

Change Order #2

- Item 2 – 16" FPVC, Installed by HDD in Soil. The quantity overrun was due to having to extend the HDD installation an extra 54 feet to reach the tie-in point on the existing 16" force main without creating a high spot in the force main that would have required another air release valve.

Change Order #4

- Item 7 – 16" DI Fittings. The quantity overrun was due to having to install additional fittings on the Skeet Club Road force main replacement, to negotiate around the existing 4" gas main that was not marked by NC 811.

- Item 10 – Select Backfill Borrow Material. The quantity overrun was due to having to remove and replace wet, unsuitable soils that were encountered during the Skeet Club Road force main replacement.
- Item 11 – Driveway and Shoulder Stone. The quantity overrun was due to having to place more driveway and shoulder stone than originally anticipated, to maintain access to existing driveways during the Skeet Club Road force main replacement.
- Item 12 – Remove & Replace Concrete Sidewalk. The quantity overrun was due to having to replace more sections of sidewalk than originally anticipated during the Skeet Club Road force main replacement. Sections of existing sidewalk at the bulb turn-around near the intersection of Skeet Club Road and Braddock Road, and on the east side of the main driveway entrance to Covenant Church United Methodist were originally supposed to remain. However, these sections of sidewalk were damaged during construction, and could not be avoided, so they had to be replaced.
- Item 15 – Remove & Replace Asphalt Roadway. The quantity overrun was due to having to replace more sections of asphalt roadway than was anticipated in Skeet Club Road, Braddock Road, and the main driveway entrance to Covenant Church United Methodist.
- Item 16 – Abandon Existing ARV MH. The quantity overrun was due to having to abandon two existing air release valves in Skeet Club Road (the original ARV MH plus the temporary ARV MH installed by Breece), as well as abandoning an existing gravity sewer MH in Braddock Road and replacing it with a new gravity sewer MH.

DMP resident project representatives measured and verified the installed quantities that are listed in the Final Adjusting Change Order. Therefore, we recommend that the City approve Change Order No. 6 for the Final Adjusting Change Order.

DMP appreciates the opportunity to assist City staff with this project, and if you have questions, or need any additional information, please let me know.

Sincerely,

DAVIS • MARTIN • POWELL & ASSOCIATES



Andrew P. Larrick, PE

Attachments:
Final Adjusting Change Order Breakdown

C: Robby Stone, PE
Allan Hicks, PE
File

City of High Point, NC
Waterview Pump Station Forcemain Extension
DMP Project 200077
Final Adjusting Change Order

Description		Proposed Quantity	Unit	Actual Quantity	Unit Price	Total Contract Amount	Actual Totals From Contractor's Pay Applications	Amount Under Total Contract Amount	Amount Over Total Contract Amount
BASE BID									
1	Mobilization (Max 3% of bid)	1	LS	1	\$82,000.00	\$82,000.00	\$82,000.00	\$0.00	\$0.00
2	Clearing & grubbing	1	LS	1	\$60,000.00	\$60,000.00	\$60,000.00	\$0.00	\$0.00
3	12" PVC forcemain	30	LF	25	\$180.00	\$5,400.00	\$4,500.00	\$900.00	\$0.00
4	16" PVC forcemain	4,480	LF	4,132	\$200.00	\$896,000.00	\$826,400.00	\$69,600.00	\$0.00
5	16" FPVC, installed by HDD	1,065	LF	1,575	\$400.00	\$426,000.00	\$630,000.00	\$0.00	\$204,000.00
6	8" PVC sanitary sewer (0-8' cut)	90	LF	90	\$150.00	\$13,500.00	\$13,500.00	\$0.00	\$0.00
7	18" PVC sanitary sewer (10-12' cut)	53	LF	28	\$400.00	\$21,200.00	\$11,200.00	\$10,000.00	\$0.00
8	18" PVC sanitary sewer (12-14' cut)	12	LF	4	\$400.00	\$4,800.00	\$1,600.00	\$3,200.00	\$0.00
9	18" PVC sanitary sewer, installed in encasement	45	LF	60	\$600.00	\$27,000.00	\$36,000.00	\$0.00	\$9,000.00
10	24" PVC sanitary sewer (6-8' cut)	54	LF	76	\$500.00	\$27,000.00	\$38,000.00	\$0.00	\$11,000.00
11	30" Steel Encasement (bore & Jack - in soil)	295	LF	305	\$700.00	\$206,500.00	\$213,500.00	\$0.00	\$7,000.00
12	30" Steel Encasement (Bore & Jack - not in soil)	295	LF	0	\$700.00	\$206,500.00	\$0.00	\$206,500.00	\$0.00
13	4' dia. Manhole (0-6' cut) precast concrete	1	Ea	1	\$24,000.00	\$24,000.00	\$24,000.00	\$0.00	\$0.00
14	5' dia. Manhole (6-8' cut) polymer concrete	1	Ea	1	\$28,000.00	\$28,000.00	\$28,000.00	\$0.00	\$0.00
15	5' dia. Manhole (10-12' cut) polymer concrete	2	Ea	2	\$30,000.00	\$60,000.00	\$60,000.00	\$0.00	\$0.00
16	5' dia. Doghouse manhole (6-8' cut) polymer concrete	1	Ea	1	\$28,000.00	\$28,000.00	\$28,000.00	\$0.00	\$0.00
17	5' dia. Doghouse manhole (12-14' cut) polymer concrete	1	Ea	1	\$32,000.00	\$32,000.00	\$32,000.00	\$0.00	\$0.00
18	CAVV in 5' dia. Precast manhole	3	Ea	3	\$20,000.00	\$60,000.00	\$60,000.00	\$0.00	\$0.00
19	Tracer wire	5,575	LF	7,282	\$3.00	\$16,725.00	\$21,846.00	\$0.00	\$5,121.00
20	Tracer wire access box	5	Ea	4	\$1,000.00	\$5,000.00	\$4,000.00	\$1,000.00	\$0.00
21	16" DI Fittings	14,500	Lbs	14,500	\$15.00	\$217,500.00	\$217,500.00	\$0.00	\$0.00
22	16"x16" Tapping sleeve & valve	1	Ea	0	\$36,000.00	\$36,000.00	\$0.00	\$36,000.00	\$0.00
23	16" Plug Valve & CI box	1	Ea	1	\$20,000.00	\$20,000.00	\$20,000.00	\$0.00	\$0.00
24	Trench Rock Removal	200	CY	0	\$80.00	\$16,000.00	\$0.00	\$16,000.00	\$0.00
25	Trench Stabilization Stone	500	Ton	459.44	\$80.00	\$40,000.00	\$36,755.20	\$3,244.80	\$0.00
26	Select backfill borrow material	200	CY	51.4286	\$140.00	\$28,000.00	\$7,200.00	\$20,800.00	\$0.00
27	Driveway and Shoulder Stone	200	Ton	177.30	\$100.00	\$20,000.00	\$17,730.00	\$2,270.00	\$0.00
28	Remove & Replace concrete sidewalk	120	SF	570	\$80.00	\$9,600.00	\$45,600.00	\$0.00	\$36,000.00
29	Remove & Replace concrete curb & gutter	150	LF	32	\$80.00	\$12,000.00	\$2,560.00	\$9,440.00	\$0.00
30	Remove & Replace asphalt drive	100	SY	138.49	\$200.00	\$20,000.00	\$27,698.00	\$0.00	\$7,698.00
31	Remove & Replace asphalt roadway	125	SY	424.60	\$300.00	\$37,500.00	\$127,380.00	\$0.00	\$89,880.00
32	Remove existing sewer manhole	2	Ea	2	\$8,000.00	\$16,000.00	\$16,000.00	\$0.00	\$0.00

City of High Point, NC
Waterview Pump Station Forcemain Extension
DMP Project 200077
Final Adjusting Change Order

Description		Proposed Quantity	Unit	Actual Quantity	Unit Price	Total Contract Amount	Actual Totals From Contractor's Pay Applications	Amount Under Total Contract Amount	Amount Over Total Contract Amount
33	Temp. silt fence	4,176	LF	4,654	\$5.00	\$20,880.00	\$23,270.00	\$0.00	\$2,390.00
34	Stone outlets in silt fence	21	Ea	14	\$300.00	\$6,300.00	\$4,200.00	\$2,100.00	\$0.00
35	Erosion Control Matting (as directed by Engineer)	200	SY	700	\$25.00	\$5,000.00	\$17,500.00	\$0.00	\$12,500.00
36	Inlet Protection (structure or pipe)	3	Ea	4	\$300.00	\$900.00	\$1,200.00	\$0.00	\$300.00
37	Seeding & mulching	3	Acre	4.50	\$10,000.00	\$32,000.00	\$45,000.00	\$0.00	\$13,000.00
Total Base Bid Amount						\$2,767,305.00	\$2,784,139.20	\$381,054.80	\$397,889.00
Change Order #1									
1	Restrained Joints for 16" Carrier Pipes	295	LF	264	\$78.00	\$23,010.00	\$20,592.00	\$2,418.00	\$0.00
2	Duke Power Relocation #1	1	LS	1	\$1,421.29	\$1,421.29	\$1,421.29	\$0.00	\$0.00
3	Duke Power Relocation #2	1	LS	1	\$2,170.39	\$2,170.39	\$2,170.39	\$0.00	\$0.00
Total Change Order #1						\$26,601.68	\$24,183.68	\$2,418.00	\$0.00
Change Order #2									
1	Mobilization	1	LS	1	\$11,500.00	\$11,500.00	\$11,500.00	\$0.00	\$0.00
2	16" FPVC, installed by HDD in Soil	730	LF	784	\$465.00	\$339,450.00	\$364,560.00	\$0.00	\$25,110.00
3	16" FPVC, installed by HDD in Rock	730	LF	0	\$975.00	\$0.00	\$0.00	\$0.00	\$0.00
4	Traffic Control/Road Plates (2 months plus maintenance, cold patch)	1	LS	0.90	\$45,000.00	\$45,000.00	\$40,500.00	\$4,500.00	\$0.00
5	Tracer wire	1,460	LF	1,568	\$3.00	\$4,380.00	\$4,704.00	\$0.00	\$324.00
6	Tracer wire access box	1	Ea	2	\$1,000.00	\$1,000.00	\$2,000.00	\$0.00	\$1,000.00
7	Cut and connect to existing pipe	1	LS	1	\$2,400.00	\$2,400.00	\$2,400.00	\$0.00	\$0.00
8	16"x16" Tapping sleeve & valve (credit)	-1	Ea	0	\$36,000.00	-\$36,000.00	\$0.00	\$0.00	\$36,000.00
9	16" DI Fittings	2,490	Lbs	460	\$15.00	\$37,350.00	\$6,900.00	\$30,450.00	\$0.00
10	Pipe abandonment (plug line, pump sewage out, fill with flowable fill)	1	LS	0.33	\$22,665.00	\$22,665.00	\$7,479.45	\$15,185.55	\$0.00
11	Pre/Post Photography	1	LS	1	\$2,400.00	\$2,400.00	\$2,400.00	\$0.00	\$0.00
12	16" Plug Valve & CI box	1	Ea	1	\$20,000.00	\$20,000.00	\$20,000.00	\$0.00	\$0.00
13	Performance and Payment Bond	1	LS	1	\$5,401.74	\$5,401.74	\$5,401.74	\$0.00	\$0.00
Total Change Order #2						\$455,546.74	\$467,845.19	\$50,135.55	\$62,434.00

City of High Point, NC
Waterview Pump Station Forcemain Extension
DMP Project 200077
Final Adjusting Change Order

Description		Proposed Quantity	Unit	Actual Quantity	Unit Price	Total Contract Amount	Actual Totals From Contractor's Pay Applications	Amount Under Total Contract Amount	Amount Over Total Contract Amount
Change Order #3									
1	Additional 18" RCP and Grading at Sunnyvale Drive	1	LS	1	\$18,641.04	\$18,641.04	\$18,641.04	\$0.00	\$0.00
2	Pipe Harness at Tie-in Location, Each Leg of Pipe	2	EA	2	\$3,700.00	\$7,400.00	\$7,400.00	\$0.00	\$0.00
3	Line Stop - Mobilization, Demo, Pipe Prep, Installation, Removal, and Pumping	1	LS	0.1	\$23,460.00	\$23,460.00	\$2,346.00	\$21,114.00	\$0.00
4	16" FPVC, installed by HDD in Rock	175	LF	175	\$510.00	\$89,250.00	\$89,250.00	\$0.00	\$0.00
5	15" RCP in Conflict with Ex. Force Main - Removal, Installation, Concrete Collar	1	LS	1	\$4,670.00	\$4,670.00	\$4,670.00	\$0.00	\$0.00
6	Specialized Fittings - Ordered for this Project, VE'd out, (Net of Restock - 50%)	1	LS	1	\$10,012.00	\$10,012.00	\$10,012.00	\$0.00	\$0.00
7	Flowable Fill for Trench Backfill, Paving, and Curb	25.5	CY	11	\$400.00	\$10,200.00	\$4,400.00	\$5,800.00	\$0.00
8	Additional Bond (1.2% on \$164,778.77)	1	LS	1	\$1,977.35	\$1,977.35	\$1,977.35	\$0.00	\$0.00
Total Change Order #3						\$165,610.39	\$138,696.39	\$26,914.00	\$0.00
Change Order #4									
1	Mobilization	1	LS	1	\$30,000.00	\$30,000.00	\$30,000.00	\$0.00	\$0.00
2	Clearing & Grubbing	1	LS	1	\$5,000.00	\$5,000.00	\$5,000.00	\$0.00	\$0.00
3	16" PVC Forcemain	1640	LF	1,640	\$220.00	\$360,800.00	\$360,800.00	\$0.00	\$0.00
4	CAVV in 5' Dia. Precast Manhole	1	Ea	1	\$28,000.00	\$28,000.00	\$28,000.00	\$0.00	\$0.00
5	Tracer Wire	1640	LF	1,640	\$3.00	\$4,920.00	\$4,920.00	\$0.00	\$0.00
6	Tracer Wire Access Box	2	Ea	2	\$1,000.00	\$2,000.00	\$2,000.00	\$0.00	\$0.00
7	16" DI Fittings	2320	LB	4,035	\$15.00	\$34,800.00	\$60,525.00	\$0.00	\$25,725.00
8	Trench Rock Removal	50	CY	8	\$150.00	\$7,500.00	\$1,200.00	\$6,300.00	\$0.00
9	Trench Stabilization Stone	80	Ton	94.78	\$80.00	\$6,400.00	\$7,582.40	\$0.00	\$1,182.40
10	Select Backfill Borrow Material	50	CY	195.64	\$140.00	\$7,000.00	\$27,389.60	\$0.00	\$20,389.60
11	Driveway and Shoulder Stone	40	Ton	175.80	\$100.00	\$4,000.00	\$17,580.00	\$0.00	\$13,580.00
12	Remove & Replace Concrete Sidewalk	6000	SF	7,880	\$16.00	\$96,000.00	\$126,080.00	\$0.00	\$30,080.00
13	Remove and Replace Handicap Ramps	2	EA	4	\$3,000.00	\$6,000.00	\$12,000.00	\$0.00	\$6,000.00
14	Remove & Replace Concrete Curb & Gutter	150	LF	150	\$50.00	\$7,500.00	\$7,500.00	\$0.00	\$0.00
15	Remove & Replace Asphalt Roadway	125	SY	216.88	\$300.00	\$37,500.00	\$65,064.00	\$0.00	\$27,564.00
16	Abandon Existing ARV MH	1	Ea	3	\$8,000.00	\$8,000.00	\$24,000.00	\$0.00	\$16,000.00
17	Temporary Silt Fence	1700	LF	1,700	\$5.00	\$8,500.00	\$8,500.00	\$0.00	\$0.00
18	Stone Outlets in Silt Fence	4	Ea	4	\$300.00	\$1,200.00	\$1,200.00	\$0.00	\$0.00
19	Erosion Control Matting (as directed by Engineer)	200	SY	0	\$20.00	\$4,000.00	\$0.00	\$4,000.00	\$0.00
20	Inlet Protection (structure or pipe)	3	Ea	0	\$300.00	\$900.00	\$0.00	\$900.00	\$0.00
21	Seeding & Mulching	1	Acre	0.6	\$10,000.00	\$10,000.00	\$6,000.00	\$4,000.00	\$0.00

City of High Point, NC
Waterview Pump Station Forcemain Extension
DMP Project 200077
Final Adjusting Change Order

Description	Proposed Quantity	Unit	Actual Quantity	Unit Price	Total Contract Amount	Actual Totals From Contractor's Pay Applications	Amount Under Total Contract Amount	Amount Over Total Contract Amount
22 Traffic Control	1	LS	1	\$12,000.00	\$12,000.00	\$12,000.00	\$0.00	\$0.00
23 Tie-in to Existing Forcemain	2	Ea	2	\$10,000.00	\$20,000.00	\$20,000.00	\$0.00	\$0.00
24 Abandon Existing Sewer Line (Flowable Fill)	46	CY	16	\$700.00	\$32,200.00	\$11,200.00	\$21,000.00	\$0.00
Total Change Order #4					\$734,220.00	\$838,541.00	\$36,200.00	\$140,521.00
Change Order #5								
1 Surface Paving - Mill and Replace 25 feet each direction. Billed at cost plus 15% instead of contract value	1	LS	1	\$15,525.00	\$15,525.00	\$15,525.00	\$0.00	\$0.00
2 Traffic Control for Paving Operations	1	LS	1	\$2,500.00	\$2,500.00	\$2,500.00	\$0.00	\$0.00
3 Replacement of Thermoplastic Pavement Markings	1	LS	1	\$2,900.00	\$2,900.00	\$2,900.00	\$0.00	\$0.00
4 Adjustment of Existing Valve Box in Skeet Club Road	1	Ea	1	\$1,000.00	\$1,000.00	\$1,000.00	\$0.00	\$0.00
5 Hydrovac Excavation for Conflict with 4" Gas Main	1	LS	1	\$4,450.44	\$4,450.44	\$4,450.44	\$0.00	\$0.00
6 Additional Bond (\$26,375.44 x 1.20%)	1	LS	1	\$316.51	\$316.51	\$316.51	\$0.00	\$0.00
Total Change Order #5					\$26,691.95	\$26,691.95	\$0.00	\$0.00
Total of Change Orders					\$1,408,670.76	\$1,495,958.21	\$115,667.55	\$202,955.00
Total Contract Amount					\$4,175,975.76	\$4,280,097.41	\$496,722.35	\$600,844.00

	Total Adjusted Contract Amount (Base + CO)	Actual Totals From Contractor's Pay Applications	Amount Under Total Adjusted Contract Amount	Amount Over Total Adjusted Contract Amount
TOTALS	\$4,175,975.76	\$4,280,097.41	\$496,722.35	\$600,844.00

Recommended: Davis-Martin-Powell & Associates, Inc. (Engineer)	By: <i>Andrew P. Larrick</i>	Date: 03/19/2024
Accepted: Baker Underground, Inc. (Contractor)	By: <i>David R. Baker</i>	Date: 03/19/2024
Accepted: City of High Point, NC (Owner)	By:	Date: