| CHANGE ORDER NO. 2 | Date10/19/2017 |
|---|---|
| Project _Reso 2017-006 Construction of the Foundation | ers Wells CR-226 and CR-227 P.O. Number _1163 |
| Contractor Layne Christensen Company | |
| The following changes are made to the Contract: | |
| Attach support documentation to this Change Or numbers, attach a memo detailing each number | der. If paying on multiple accounts and/or project and related dollar amount. |
| Is this Change Order strictly a quantity adjustment? | YES NO |
| The Original Contract Price was | \$1,740,384.00 |
| Net Change by Previous Change Orders | \$10,489.50 |
| Contract Price Before this Change Order | \$1,750,873.50 |
| CURRENT Change Order AMOUNT (note + or -) | \$541,549.00 (Arapahoe Drilling Line items 1-9) |
| CURRENT Change Order AMOUNT (note + or -) | \$+396,375.60 (Lost Circulation)_ |
| CURRENT Change Order AMOUNT (note + or -) | \$+14,020.00 (Additional Development & pitless) |
| THE NEW CONTRACT PRICE WILL BE | \$ <u>1,619,720.10</u> |
| Original contract time: | <u>365</u> days |
| Net time change by previous Change Order(s): | <u>0</u> days |
| Net adjustment due to this Change Order: | <u>245</u> days |
| Current contract time including this Change Order | : <u>610</u> days |
| DATE FOR SUBSTANTIAL COMPLETION WILL B | E: June 1, 2018 |
| The contractor hereby certifies that all work specified to the original contract requirements except as modified to the original contract requirements. | |
| TOWN DIVISION APPROVAL | TOWN DIVISION APPROVAL |
| Ву: | By: |
| Title: | Title: |
| Date: | Date: |
| TOWN DIVISION APPROVAL | CONTRACTOR |
| Ву: | By: |
| Title: | Its: |
| Date: | Date: |
| Originals: Contractor; Purchasing and Contract File | |

Minus Arapahoe Well Drilling: Line Items 1-9

BID SCHEDULE C Arapahoe Well CR-227 Twelve-Inch Completion

| | _ | | | | | | |
|-------------|---|------|-----------------|------------|--------------------|--|--|
| <u>ITEM</u> | DESCRIPTION | UNIT | QUANTITY | UNIT PRICE | EXTENSION | | |
| 1. | Wellhead Completion | L.S. | 1 | \$ 127 | \$ 127 | | |
| 2. | Mobilization and Cleanup | L.S. | 1 | \$ 96161 | 5 96161 | | |
| 3. | Drilling 20.0-inch Diameter | L.F. | 2,779 | \$ 72 | \$ 2000 88 | | |
| 4. | Casing | | | \$ 0 | s | | |
| | a. 24-inch Diameter | L.F. | 40 | \$ 292 | \$ 11680 | | |
| | b. 12-inch Diameter | L.F. | 2,449 | \$ 29 | \$ 71021 | | |
| 5. | Well Screen Assembly | L.F. | 300 | \$ 203 | \$ 60900 | | |
| 6. | Gravel Pack | L.F. | 1,013 | \$ 37 | \$ 32416 | | |
| 7. | Grout Seal | L.F. | 1,766 | \$ 29 | \$ 51214 | | |
| 8. | Well Development | HR. | 52 | \$ 334 | 3 17368 | | |
| 9. | Geophysical Logging | L.S. | 1 | \$ 10325 | \$ 10725 \$541,549 | | |
| 10. | Well Pumping Test Tests Supply & Install Equipment | L.S. | 1 | \$ 29441 | \$ 29 441 | | |
| | a. 8 - hour Step Test | L.S. | 1 | s 6363 | \$ 6363 | | |
| | b. 72- hour Pumping test | L.S. | 1 | s 702PB | \$ 60568 | | |
| 11. | Disinfection | L.S. | 1 | \$ 1869 | s BEA | | |
| 12. | Video Survey | L.S. | 1 | \$ 1054 | \$ 1054 | | |
| 13. | Video Survey – Additional Pass | L.S. | 1 | \$ 843 | 8 843 | | |
| 14. | Pitless Wellheads | L.S. | 1 | 8 18517 | \$ 18517 | | |
| 15 | Provide Submersible Pump | L.S. | 1 | \$ 148145 | \$ 146145 | | |
| | Install Submersible Pump & Equipment | L.S. | 1 | \$ 13767 | s 13767 | | |
| 16 | Adjustable Frequency Drives Include description | L.S. | 1 | \$ 76880 | 5768BO 907,747 | | |
| DRII | LLING TOTAL (IN WORDS)_ | | | | | | |
| | Provide Submersible Pump L.S. 1 \$140145 \$140145 \$140145 \$140145 \$140145 \$140145 \$140145 \$140145 \$140145 \$140145 | | | | | | |

MINETULADORN SEVEN THOWARD SEVEN FRUMPHOD FORTY

Lost Circulation and 10" to 12" Additional Costs

Pending Change Orders (Revised per meeting with Castle Rock on September 25, 2017 & emails October 10, 2017)

| | | | <u>Initial</u> | | | Current | | |
|------|--|-------------|-------------------------|---------------------------|-------------|-------------------------|---------------------------|---|
| Part | Item | <u>Unit</u> | <u>Cost</u> | <u>Subtotal</u> | <u>Unit</u> | <u>Cost</u> | <u>Subtotal</u> | <u>Notes</u> |
| 2 | Surface casing Hard Rock Drilling | 8 | \$1,895.00 | \$15,160.00 | 8 | \$1,895.00 | \$15,160.00 | As agreed on Sept. 25, 2017 |
| 3 | Geophysical logging | 1.1 | \$25,325.00 | \$27,857.50 | 0 | \$25,325.00 | \$0.00 | This has been deleted |
| 4 | Wireline services to free stuck pipe | 1.05 | \$12,745.00 | \$13,382.25 | 0 | \$12,745.00 | \$0.00 | This has been deleted |
| 5 | LC Labor, Fuel and Equipment ("fishing") | 1.1 | \$101,412.00 | \$111,553.20 | 0 | \$101,412.00 | \$0.00 | Labor from 5-2-17 thru 5-15-17 has been deleted to account for the "fishing" operations |
| | LC Labor, Fuel and Equipment (not "fishing") (10% mark up) | 1.1 | \$125,210.00 | \$137,731.00 | 1.1 | \$99,149.80 | \$109,064.78 | Lost Circulation time May 16 through June 1 as discussed Sept 25, 2017. Revised to reflect actual job cost. 5/18/17 J. Chee time removed These are materials used to combat the lost circulation and should be reimbursed as it was |
| 6 | LC Materials - (10% mark up) | 1.1 | \$53,516.59 | \$58,868.25 | 1.1 | \$53,516.59 | \$58,868.25 | an unforeseen condition. As agreed Sept. 25, 2017 |
| 7 | Pilot footage drilled from 1880-2400 | 520 | \$74.00 | \$38,480.00 | 520 | \$50.00 | \$26,000.00 | Pilot hole rate adjusted. As agree Sept. 25, 2017 The unforeseen condition caused us to |
| 8 | Borehole abandonment (10% mark up) Well development | 1.1 | \$16,760.66 \$334.00 | \$18,436.73 \$5,344.00 | 1.1 | \$15,326.66 \$334.00 | \$16,768.57 \$5,344.00 | plug/abandon the hole up to the elevation the well was completed. Revised to reflect actual job cost The additional development time due to 5 lost circulation episodes and corresponding lost circulation material used to cure the problem. As agreed Sept 25, 2017 |
| 10 | Fluids disposal (5% mark up) | 1.05 | \$85,080.00 | \$89,334.00 | 1.05 | \$85,080.00 | \$89,334.00 | Additional fluid disposal resulted for the same reason as stated in number 9. \$131,500 in invoices attached with CO Documentation |
| 11 | Sound wall rental (5% mark up) | 3 | \$7,176.00 | \$21,528.00 | 3 | \$6,552.00 | \$19,656.00 | \$6420/mo + 5% mark up. June 16 - Sept 16 |
| 12 | Steel casing price escalation | 1.1 | \$7,377.30 | \$8,115.03 | 0 | \$7,377.30 | \$0.00 | This has been deleted |
| 13 | 10" to 12" well adjustment | 1 | \$36,774.00 | \$36,774.00 | 1 | \$36,774.00 | \$36,774.00 | These rates established per the contract |
| 14 | 12" screen left on site/not installed | 0 | \$0.00 | \$0.00 | 115 | \$196.00 | \$22,540.00 | Per our phone call of 07 September 2017 |
| 15 | 3rd Party Review | 0 | \$0.00 | \$0.00 | 1 | -\$3,134.00 | -\$3,134.00 | Split of \$6,268 in 3rd party reviewer's fees |

Heather Justus

From: Brian Dellett <Brian.Dellett@Layne.com>
Sent: Friday, October 20, 2017 6:51 AM

To: Heather Justus

Cc: Mike Schanaman; Steve Costello; Matt Benak; Tim Friday

Subject: RE: CR226 Denver Well

Heather, that is correct

Sincerely,

BRIAN DELLETT

Senior Account Manager, Water Resources

LAYNE | water + mineral + energy

17800 E. 22nd Avenue | Aurora, CO | 80011

Office: 303-755-1281 | Cell: 303-324-1357 | Fax: 303-755-1236

brian.dellett@layne.com | layne.com

From: Heather Justus [mailto:HJustus@crgov.com]

Sent: Thursday, October 19, 2017 4:24 PM

To: Brian Dellett

Cc: Mike Schanaman; Steve Costello; Matt Benak; Tim Friday

Subject: RE: CR226 Denver Well

Brian,

Would you also confirm the additional cost for the 12" pitless will be \$4,000 thus total equals \$14,020. Is this correct?

Thank you

Heather L. Justus, P.G.

Water Resources Program Anaylst

Castle Rock Water

(720) 733-6081 direct

(303) 817-8823 cell

hjustus@crgov.com

From: Brian Dellett [mailto:Brian.Dellett@Layne.com]

Sent: Wednesday, September 27, 2017 5:35 AM

To: Heather Justus

Cc: Mike Schanaman; Steve Costello; Matt Benak; Tim Friday

Subject: RE: CR226 Denver Well

Heather,

30 hours @ \$334.00 per hour = \$10,020

Sincerely,

BRIAN DELLETT

Senior Account Manager, Water Resources

LAYNE | water + mineral + energy

17800 E. 22nd Avenue | Aurora, CO | 80011

Office: 303-755-1281 | Cell: 303-324-1357 | Fax: 303-755-1236

brian.dellett@layne.com | layne.com

From: Heather Justus [mailto:HJustus@crgov.com]
Sent: Tuesday, September 26, 2017 3:11 PM

To: Brian Dellett

Cc: Mike Schanaman; Steve Costello; Matt Benak; Tim Friday; Steve Costello

Subject: RE: CR226 Denver Well

Brian,

Thank you.

Will you please provide a monetary estimate to the below additional development assuming that we will be able to pump to the sanitary?

Thanks HI

Heather L. Justus, PG

Water Resource Program Analyst Castle Rock Water - Town of Castle Rock

Direct: (720) 733-6081

From: Brian Dellett [mailto:Brian.Dellett@Layne.com]

Sent: Tuesday, September 26, 2017 11:00 AM

To: Heather Justus

Cc: Mike Schanaman; Steve Costello

Subject: CR226 Denver Well

Heather,

Our plan for the additional development on this well is as follows:

- -Mobilize a pump hoisting rig for the permanent pumping equipment
- -Introduce pdf into the well and swab for 10 hours
- -Install the permanent pumping equipment
- -Pump the well to waste for an estimated 10 hours, we would like to pump the well to waste to the closest sanitary sewer to eliminate the need for water hauling

If this works, we will need the distance to the closest sanitary sewer and permission to proceed with the purchase of the pitless unit. While we believe the work can be completed in 20 hours, I would estimate 30 hours so that we have some contingency per our discussion yesterday. Please contact us with any questions.

Sincerely,

BRIAN DELLETT

Senior Account Manager, Water Resources

LAYNE | water + mineral + energy

17800 E. 22nd Avenue | Aurora, CO | 80011

Office: 303-755-1281 | Cell: 303-324-1357 | Fax: 303-755-1236