

City of Broken Arrow Meeting Agenda Broken Arrow City Council

City Hall 220 S 1st Street Broken Arrow OK 74012

Mayor Craig Thurmond Vice Mayor Richard Carter Council Member Mike Lester Council Member Johnnie Parks Council Member Scott Eudey

Tuesday, February 28, 2017

6:00 PM

Public Safety Complex 1101 North 6th Street Broken Arrow, Oklahoma 74102

NOTICE AND AGENDA OF SPECIAL JOINT MEETING

- 1. Call to Order the Broken Arrow City Council
- 2. Call to Order the Broken Arrow Municipal Authority
- 3. Roll Call for the Broken Arrow City Council
- 4. Roll Call for the Broken Arrow Municipal Authority
- 5. Consideration of Consent Agenda

A. 17-1888 Award the lowest responsible bid to Cook Consulting, LLC, and

authorization to execute a construction contract for 209th Street Lift Station

and Force Main, Phase I, in the amount of \$615,850.00 (Project No. S.1608A), including the alternate for High Density Polyethylene (HDPE)

Pipe

Attachments: 170222 Location Map for BAMA

170223 CERTIFIED BID TAB S.1608A 170223 Ltr fr Cook Capability and Schedule

B. 17-1889 Award the lowest responsible bid to Cook Consulting, LLC, and

authorization to execute a construction contract for 209th Street Lift Station and Force Main, Phase II, in the amount of \$332,608.50 (Project No.

S.1608B), including the alternate for High Density Polyethylene (HDPE)

Pipe

Attachments: 170222 Location Map for BAMA

170223 CERTIFIED BID TAB S.1608B 170223 Ltr fr Cook Capability and Schedule

- 6. Consideration of Items Removed from Consent Agenda
- 7. General Council and Authority Business

- **A.** <u>17-1887</u> Presentation, discussion, and study session on the Long-Term Water Supply Study Report
- 8. Remarks and Inquiries by Governing Body Members
- 9. Remarks by City Manager
- 10. Adjournment of the Broken Arrow City Council
- 11. Adjournment of the Broken Arrow Municipal Authority

NOTICE:

If you wish to speak at this evening's meeting, please fill out a "Request to Speak" form. The forms are available from the City Clerk's table or at the entrance door. Please turn in your form prior to the start of the meeting. Topics are limited to items on the currently posted agenda, or relevant business.

All cell phones and pagers must be turned OFF or operated SILENTLY during meetings.

Exhibits, petitions, pictures, etc., shall be received and deposited in case files to be kept at the Broken Arrow City Hall. If you are a person with a disability and need some accommodation in order to participate in this meeting, please contact the City Clerk at 918-259-2400 Ext. 5418 to make arrangements.

POSTED this _	day of	 , at	a.m./p.m.
City Clerk			



City of Broken Arrow

Fact Sheet

File #: 17-1888, Version: 1

Broken Arrow Municipal Authority Special Meeting of: 02-28-17

To: Chairman and Authority Members

From: Engineering and Construction Department

Title:

Award the lowest responsible bid to Cook Consulting, LLC, and authorization to execute a construction contract for 209th Street Lift Station and Force Main, Phase I, in the amount of \$615,850.00 (Project No. S.1608A), including the alternate for High Density

Polyethylene (HDPE) Pipe

Background:

The 209th Street Lift Station currently drains to the Timberbrook Lift Station, which is at capacity. The new Broken Arrow Public Schools Elementary and Middle Schools under construction on the west side of 37th Street (209th E. Ave.) will be connected to the 209th Lift Station, which must be upgraded and the flows redirected to the County Line Trunk Sewer in order to provide adequate capacity for the additional load from the schools as well as other development in the vicinity. The new force main will be located on the south side of Kenosha Street and will cross under the Creek Turnpike, then parallel the Adams Creek Northwest force main to the County Line trunk sewer just north of State Highway 51. Right-of-way has been acquired and a license to bore under the Turnpike is forthcoming.

Because the timing of the lift station and force main is critical due to the school opening in August 2017, the contract was divided into two phases to ensure that two crews will be working simultaneously on the project. Phase I includes the lift station upgrade and the force main to 37th Street, and Phase II includes the remaining force main to the County Line Trunk Sewer (see attached map). An alternate for fusible High Density Polyethylene (HDPE) pipe in lieu of Polyvinyl Chloride (PVC) pipe was included in both bids. Both projects were advertised on January 31 and February 7, 2017, and bids were opened for both on February 23, 2017. Six (6) bids were received for Phase I. The low bidder was Cook Consulting, LLC, with a bid of \$594,113.00 for the Base Contract and \$615,850.00 for the Alternate (HDPE pipe). The engineer's estimate was \$747,480.00 for the Base Contract and \$866,440.00 for the Alternate. The certified bid tabulation is attached. Because the durability and ease of construction of HDPE pipe justifies the extra expense, and the total cost is well within the budgeted amount of the OWRB loan, Staff recommends award of the 209th Street Lift Station and Force Main - Phase I Alternate to the lowest responsible bidder, Cook Consulting, LLC, in the amount of \$615,850.00.

Cook Consulting, LLC, was the low bidder for both Phase I and Phase II. They have provided assurances that they have personnel and equipment to field two crews to construct both jobs simultaneously, and their intent to do so (attached letter). Therefore, Staff recommends award of both projects to Cook Consulting, LLC.

Funds for the work are available in Oklahoma Water Resources Board Loan No. FAP-17-0004-L.

File #: 17-1888, Version: 1

Cost: \$615,850.00

Prepared By: Alex M. Mills, P.E., CFM, Engineering and Construction Director

Reviewed By: Utilities Department

Finance Department

City Attorney

Assistant City Manager - Operations

Approved By: Michael L. Spurgeon, City Manager

Attachments: Map of Project

Certified Bid Tabulation

Letter from Cook Consulting, LLC

Recommendation:

Award the lowest responsible bid to Cook Consulting, LLC, and authorize execution of a construction contract for the 209th Street Lift Station and Force Main - Phase I, plus alternate for HDPE Pipe

AND FORCE MAIN TULSA COUNTY WAGONER COUNTY 209TH STREET NUMBER S.1608 A STATION

T-18-N R-14-E T-18-N R-15-E



COUNTY LINE (S. 193RD E. AVE

S. 209TH E. AVE.

KENOSHA (E. 71ST ST. S.)

PROJECT LOCATION SECTION 7 & 8, T-18-N, R-15-E, WAGONER COUNTY PROJECT LOCATION SECTION 12, T-18-N, R-14-E, TULSA COUNTY

BID TAB 209th STREET LIFT STATION AND FORCE MAIN - PHASE I PROJECT NO. S.1608B FAP-17-0004-L BID NO. 17.144 BID OPENING FEBRUARY 23, 2017 AT 2PM IN THE CITY OF BROKEN ARROW OPERATIONS BUILDING

					ENGINEER'S	ESTIMATE	COOK CONSU	ILTING LLC	CHEROKE	E PRIDE	KALKA CON	STRUCTION	MCGUIRE I	BROTHERS	MSB CONSTR	UCTION INC	R.L. HENS	SLEY
BASE B	D:				ENGINEER	ESTIMATE			CONSTRUCT		COMP		CONSTRUC		November and Automotive States and States an		CONSTRUCTION	ION, INC.
ITEM#	SPEC.	DESCRIPTION	UNIT		UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE E	EXTENSION
1	BA310	R.O.W. CLEARING AND RESTORATION	LF	3,568		\$ 17,840.00	\$ 1.00	\$ 3,568.00	1.00	\$ 3,568.00	\$ 3.00	\$ 10,704.00			\$ 2.00	\$ 7,136.00	\$ 13.50 \$	48,168.00
2	BA311A	COMMON EXCAVATION	CY	1,800	A STATE OF THE PARTY OF THE PAR	\$ 10,800.00	\$ 1.00	\$ 1,800.00	10.00	\$ 18,000.00	\$ 25.00	\$ 45,000.00	\$ 2.00	\$ 3,600.00	\$ 5.00	\$ 9,000.00	\$ 12.00 \$	21,600.00
3	BA311B	ROCK EXCAVATION	CY	185		\$ 9,250.00	\$ 35.00	\$ 6,475.00	100.00	Contract of the Contract of th	the state of the s	\$ 23,125.00	\$ 60.00	\$ 11,100.00	\$ 100.00	\$ 18,500.00	\$ 210.00 \$	38,850.00
4	BA312	COMMON BACKFILL AND COMPACTION	CY	2,160	\$ 8.00		\$ 1.00	\$ 2,160.00	2.00	\$ 4,320.00		\$ 54,000.00	\$ 2.00	\$ 4,320.00	\$ 2.00	\$ 4,320.00	\$ 6.00 \$	12,960.00
5	BA314	BORE AND 24" STEEL CASING (1/4" WALL THICKNESS)	LF	450	\$ 280.00	\$ 126,000.00	\$ 200.00	\$ 90,000.00	\$ 220.00	\$ 99,000.00	\$ 275.00	\$ 123,750.00	\$ 480.00	\$ 216,000.00	\$ 480.00	\$ 216,000.00	\$ 450.00 \$	202,500.00
6	BA330C	PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT)	CY	10	\$ 100.00	\$ 1,000.00	\$ 185.00	\$ 1,850.00	1,000.00	\$ 10,000.00	\$ 500.00	\$ 5,000.00	\$ 100.00	\$ 1,000.00	\$ 200.00	\$ 2,000.00	\$ 350.00 \$	3,500.00
7	BA330C	PLAIN CONCRETE (THRUST BLOCKING)	CY	30	\$ 120.00	\$ 3,600.00	\$ 185.00	\$ 5,550.00	\$ 500.00	\$ 15,000.00	\$ 500.00	\$ 15,000.00	\$ 100.00	\$ 3,000.00	\$ 150.00	\$ 4,500.00	\$ 350.00 \$	10,500.00
8	BA502	12" FORCE MAIN (PVC C900 DR-18)	LF	3,568	\$ 45.00	\$ 160,560.00	\$ 30.00	\$ 107,040.00	\$ 80.00	\$ 285,440.00	\$ 31.40	\$ 112,035.20	\$ 58.00	\$ 206,944.00	\$ 39.00	\$ 139,152.00	\$ 41.00 \$	146,288.00
9	BA502	12" FORCE MAIN (PVC C900 DR-18), RJ	LF	450	\$ 65.00	\$ 29,250.00	\$ 32.00	\$ 14,400.00	\$ 120.00	\$ 54,000.00	\$ 47.40	\$ 21,330.00	\$ 63.00	\$ 28,350.00	\$ 60.00	\$ 27,000.00	\$ 62.00 \$	27,900.00
10	BA510A1	12" 22.5 DEGREE BEND (DIP C153), RJ	EA	1	\$ 500.00	\$ 500.00	\$ 400.00	\$ 400.00	\$ 400.00	\$ 400.00	\$ 1,101.00	\$ 1,101.00	\$ 360.00	\$ 360.00	\$ 750.00	\$ 750.00	\$ 600.00 \$	600.00
11	BA510A2	12" 45 DEGREE BEND (DIP C153), RJ	EA	9	\$ 500.00	\$ 4,500.00	\$ 405.00	\$ 3,645.00	\$ 400.00	\$ 3,600.00	\$ 1,101.00	\$ 9,909.00	\$ 370.00	\$ 3,330.00	\$ 750.00	\$ 6,750.00	\$ 600.00 \$	5,400.00
12	BA510A3	12" 90 DEGREE BEND (DIP C153), RJ	EA	1	\$ 500.00	\$ 500.00	\$ 425.00	\$ 425.00	\$ 400.00	\$ 400.00	\$ 1,101.00	\$ 1,101.00	\$ 390.00	\$ 390.00	\$ 750.00	\$ 750.00	\$ 600.00 \$	600.00
13	BA654(C)	2" AIR RELIEF VALVE AND VAULT	EA	4	\$ 7,000.00	\$ 28,000.00	\$ 3,125.00	\$ 12,500.00	\$ 2,500.00	\$ 10,000.00	\$ 5,263.24	\$ 21,052.96	\$ 4,500.00	\$ 18,000.00	\$ 3,500.00	\$ 14,000.00	\$ 7,100.00 \$	28,400.00
14	221(C)	SILT FENCE	LF	2,000	\$ 2.00	\$ 4,000.00	\$ 2.00	\$ 4,000.00	\$ 1.00	\$ 2,000.00	\$ 6.00	\$ 12,000.00	\$ 3.00	\$ 6,000.00	\$ 3.00	\$ 6,000.00	\$ 4.00 \$	8,000.00
15	221(F)	SILT DIKE	LF	500	\$ 6.00	\$ 3,000.00	\$ 2.50	\$ 1,250.00	\$ 2.00	\$ 1,000.00	\$ 10.00	\$ 5,000.00	\$ 6.00	\$ 3,000.00	\$ 5.00	\$ 2,500.00	\$ 6.00 \$	3,000.00
16	230(A)	SOLID SLAB SODDING	SY	1,000	\$ 3.00	\$ 3,000.00	\$ 4.00	\$ 4,000.00	\$ 3.00	\$ 3,000.00	\$ 6.00	\$ 6,000.00	\$ 3.00	\$ 3,000.00	\$ 3.00	\$ 3,000.00	\$ 7.00 \$	7,000.00
17	303(A)	CLASS A AGGREGATE BASE (TRENCH STABILIZATION)	CY	10	\$ 40.00	\$ 400.00	\$ 55.00	\$ 550.00	\$ 100.00	\$ 1,000.00	\$ 45.00	\$ 450.00			\$ 30.00	\$ 300.00	\$ 82.00 S	820.00
18	642	CONSTRUCTION STAKING	EA	1	\$ 8,000.00	\$ 8,000.00	\$ 4,500.00	\$ 4,500.00	\$ 4,000,00	\$ 4,000,00	\$ 6,000,00	\$ 6,000,00	\$ 5,000,00	\$ 5,000,00	\$ 7,500,00	\$ 7,500,00	\$ 4,100,00 \$	4,100,00
19	SPECIAL	209TH STREET LIFT STATION IMPROVEMENTS (COMPLETE)	EA	1	\$ 300,000.00	\$ 300,000.00	\$ 310,000.00	\$ 310,000.00	\$ 218,000.00	\$ 218,000.00	\$ 395,000.00	\$ 395,000.00	\$ 445,000,00	\$ 445,000.00	\$ 500,000.00	\$ 500,000.00	\$ 457,000.00 \$	457,000.00
20	SPECIAL	CONSTRUCTION ALLOWANCE	ALLOW	1	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00 \$	20,000.00
-																		
		TOTAL BASE BID			\$	747,480.00	\$	594,113.00	\$	771,228.00	\$	887,558.16	\$	986,030.00	\$	989.158.00	\$ 1.	.047.186.00
ALTER	NATE NO. 1				\$	747,480.00	\$	594,113.00	\$	771,228.00	\$	887,558.16	\$	986,030.00	\$	989,158.00	\$ 1,	,047,186.00
ALTER	NATE NO. 1 SPEC.		UNIT						***************************************						\$ UNIT PRICE 1		······································	
		: DESCRIPTION	UNIT	QTY	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION		EXTENSION	UNIT PRICE E	EXTENSION
ITEM #	SPEC. BA310	: DESCRIPTION R.O.W. CLEARING AND RESTORATION	LF	QTY 3,568	UNIT PRICE \$ 5.00	EXTENSION \$ 17,840.00	UNIT PRICE \$ 1.00	EXTENSION \$ 3,568.00	UNIT PRICE 1.00	EXTENSION \$ 3,568.00	UNIT PRICE \$ 3.00	EXTENSION \$ 10,704.00	UNIT PRICE \$ 2.00	EXTENSION \$ 7,136.00	\$ 2.00	EXTENSION \$ 7,136.00	UNIT PRICE E \$ 13.50 \$	EXTENSION 48,168.00
A1 A2	SPEC. BA310 BA311A	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION	LF CY	QTY 3,568 1,800	UNIT PRICE \$ 5.00 \$ 6.00	EXTENSION \$ 17,840.00 \$ 10,800.00	UNIT PRICE \$ 1.00 \$ 1.00	EXTENSION \$ 3,568.00 \$ 1,800.00	UNIT PRICE \$ 1.00 \$ 10.00	EXTENSION \$ 3,568.00 \$ 18,000.00	UNIT PRICE \$ 3.00 \$ 25.00	EXTENSION \$ 10,704.00 \$ 45,000.00	UNIT PRICE \$ 2.00 \$ 2.00	EXTENSION \$ 7,136.00 \$ 3,600.00	\$ 2.00 \$ 5.00	EXTENSION \$ 7,136.00 \$ 9,000.00	UNIT PRICE E \$ 13.50 \$ \$ 12.00 \$	EXTENSION 48,168.00 21,600.00
ITEM # A1 A2 A3	SPEC. BA310 BA311A BA311B	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION	LF CY CY	QTY 3,568 1,800 185	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00	\$ 2.00 \$ 5.00 \$ 300.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00	UNIT PRICE E \$ 13.50 \$ \$ 12.00 \$ \$ 210.00 \$	EXTENSION 48,168.00 21,600.00 38,850.00
A1 A2	SPEC. BA310 BA311A	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION	LF CY	QTY 3,568 1,800 185 2,160	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00 \$ 1.00	EXTENSION \$ 3,568.00 \$ 1,800.00	UNIT PRICE \$ 1.00 \$ 10.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00	UNIT PRICE \$ 3.00 \$ 25.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00	UNIT PRICE E S 13.50 S 12.00 S 210.00 S S 6.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00
A1 A2 A3 A4 A5	BA310 BA311A BA311B BA312 BA314	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS)	LF CY CY CY LF	QTY 3,568 1,800 185 2,160 450	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00	UNIT PRICE E S 13.50 S 12.00 S 210.00 S 6.00 S 450.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00
A1 A2 A3 A4 A5 A6	BA311A BA311B BA312 BA314 BA330C	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT)	LF CY CY CY	QTY 3,568 1,800 185 2,160	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 185.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00 \$ 500.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00 \$ 100.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00	UNIT PRICE E S 13.50 S 12.00 S 210.00 S 6.00 S 450.00 S 350.00 S 350.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00
A1 A2 A3 A4 A5 A6 A7	BA311A BA311B BA312 BA314 BA330C BA654(C)	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT	LF CY CY CY LF CY	QTY 3,568 1,800 185 2,160 450 30	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00	\$ 1.00 \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 2,087.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00 \$ 22,957.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00 \$ 275.00 \$ 500.00 \$ 5,263.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00 \$ 100.00 \$ 4,500.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00	**EXTENSION** \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 1,650.00	UNIT PRICE E S 13.50 S 12.00 S 210.00 S 6.00 S 450.00 S 350.00 S 7,700.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00
A1 A2 A3 A4 A5 A6 A7 A8	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C)	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE	LF CY CY CY LF CY EA	QTY 3,568 1,800 185 2,160 450 30 11 2,000	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 185.00 \$ 2,087.00 \$ 2.087.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00 \$ 1.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 6.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00 \$ 100.00 \$ 4,500.00 \$ 3.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00 \$ 6,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 1,650.00 \$ 6,000.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S 6.00 S 450.00 S 350.00 S 7,700.00 S 4.00 S 4.00 S S 5.00 S 5.	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 8,000.00
A1 A2 A3 A4 A5 A6 A7 A8 A9	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F)	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE	LF CY CY CY LF CY EA LF LF	QTY 3,568 1,800 185 2,160 450 30 11 2,000 500	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00	UNIT PRICE \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 2,087.00 \$ 2.087.00 \$ 2.05	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00 \$ 1.00 \$ 2.00 \$ 2.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 6.00 \$ 10.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 5,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 480.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 6.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 5.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 1,650.00 \$ 6,000.00 \$ 2,500.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S 6.00 S 450.00 S 350.00 S 57,700.00 S 4.00 S 5 6.00 S 5 6.00 S S 5.00 S S 6.00 S S 6.00 S S 6.00 S S 5.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 8,000.00 3,000.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C)	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE	LF CY CY CY LF CY EA LF	QTY 3,568 1,800 185 2,160 450 30 11 2,000	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 3.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 185.00 \$ 2,087.00 \$ 2.087.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,000.00 \$	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00 \$ 1.00 \$ 2.00 \$ 2.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00 \$ 3,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 6.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 5,000.00 \$ 6,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 100.00 \$ 480.00 \$ 1,500.00 \$ 6.00 \$ 3.00 \$ 6.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 5.00 \$ 3.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 1,650.00 \$ 6,000.00 \$ 2,500.00	UNIT PRICE E S 13.50 S 12.00 S S 6.00 S S 450.00 S 5 7,700.00 S 5 4.00 S 5 6.00 S S 5 6.00 S S S 5 6.00 S S 5 5 5 5 5 5 5 5	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 8,000.00 3,000.00 6,000.00
A1 A2 A3 A4 A5 A6 A7 A8 A9	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A)	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING	LF CY CY CY LF CY EA LF LF SY	QTY 3,568 1,800 185 2,160 450 30 111 2,000 500 1,000	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 3.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00 \$ 4,000.00 \$ 4,000.00	UNIT PRICE \$ 1.00 \$ 1.00 \$ 35.00 \$ 200.00 \$ 2,087.00 \$ 2.08 \$ 2.50 \$ 4.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 1,000.00 \$ 3,500.00 \$ 1.00 \$ 3.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 275.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 6.00 \$ 10.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 5,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 6.00 \$ 3.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 49,500.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 500.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 1,650.00 \$ 6,000.00 \$ 2,500.00 \$ 3,000.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S 6.00 S 450.00 S 350.00 S 57,700.00 S 4.00 S 5 6.00 S 5 6.00 S S 5.00 S S 6.00 S S 6.00 S S 6.00 S S 5.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 8,000.00 3,000.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A) 303(A)	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING CLASS A AGGREGATE BASE (TRENCH STABILIZATION)	LF CY CY CY LF CY EA LF LF SY CY	QTY 3,568 1,800 185 2,160 450 30 111 2,000 500 1,000	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 3.00 \$ 40.00 \$ 8,000.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00	\$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 185.00 \$ 2,087.00 \$ 2,087.00 \$ 2.50 \$ 4.00 \$ 4,500.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,000.00 \$ 550.00 \$ 4,500.00 \$ 4,500.00 \$	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 1,000.00 \$ 3,500.00 \$ 2.00 \$ 1.00 \$ 1.00 \$ 1.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 275.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 10.00 \$ 10.00 \$ 45.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 6,000.00 \$ 450.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 6.00 \$ 3.00 \$ 55,000.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 5,000.00 \$ 5,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00 \$ 7,500.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 6,000.00 \$ 2,500.00 \$ 2,500.00 \$ 3,000.00 \$ 300.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S S 450.00 S S 7,700.00 S S 4.00 S S 6.00 S S 6.00 S S 6.00 S S 6.00 S S 4,100.00 S S 5.00 S S 4,100.00 S S 5.00 S S 4,100.00 S S 5.00 S S 5.0	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 3,000.00 6,000.00 820.00 4,100.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A) 303(A) 642	: DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING CLASS A AGGREGATE BASE (TRENCH STABILIZATION) CONSTRUCTION STAKING	LF CY CY CY LF CY EA LF LF LF SY CY EA	QTY 3,568 1,800 185 2,160 450 30 11 2,000 500 1,000 10	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 3.00 \$ 40.00 \$ 8,000.00 \$ 65.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 261,170.00	\$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 2,087.00 \$ 2,087.00 \$ 2,50 \$ 4,500.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,000.00 \$ 550.00 \$ 4,500.00 \$ 4,500.00 \$	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 1,000.00 \$ 3,500.00 \$ 2.00 \$ 1.00 \$ 4,000.00 \$ 4,000.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 33,5000.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 602,700.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 10.00 \$ 6.00 \$ 45.00 \$ 6,000.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 6,000.00 \$ 6,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 6.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 5,000.00 \$ 5,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00 \$ 7,500.00 \$ 51.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 6,000.00 \$ 2,500.00 \$ 3,000.00 \$ 300.00 \$ 7,500.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S S 450.00 S S 450.00 S S 4.00 S S 6.00 S S 6.00 S S 6.00 S S 6.00 S S 82.00 S S 4,100.00 S S 56.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 3,000.00 6,000.00 4,100.00 4,100.00 225,008.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A) 303(A) 642 SPECIAL	DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING CLASS A AGGREGATE BASE (TRENCH STABILIZATION) CONSTRUCTION STAKING 12" FORCE MAIN (DIPS HDPE DR11) 12" 22.5 DEGREE BEND (DIPS HDPE DR11)	LF CY CY CY LF CY EA LF SY CY EA LF	QTY 3,568 1,800 185 2,160 450 30 11 2,000 500 1,000 10 4,018	\$ 5.00 \$ 5.00 \$ 50.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 3.00 \$ 40.00 \$ 8,000.00 \$ 65.00 \$ 300.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 400.00 \$ 3,000.00 \$ 400.00 \$ 261,170.00 \$ 300.00	\$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 2,087.00 \$ 2,087.00 \$ 2,50 \$ 4,500.00 \$ 4,500.00 \$ 32.50	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,000.00 \$ 550.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 130,585.00 \$ 445.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00 \$ 2.00 \$ 100.00 \$ 1,000 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 3.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 4,000.00 \$ 4,000.00 \$ 602,700.00 \$ 2,500.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 275.00 \$ 5,263.00 \$ 6.00 \$ 10.00 \$ 45.00 \$ 45.00 \$ 6,000.00 \$ 1,101.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 17,000.00 \$ 57,893.00 \$ 12,000.00 \$ 6,000.00 \$ 450.00 \$ 6,000.00 \$ 140,630.00 \$ 140,630.00 \$ 1,101.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 50.00 \$ 50.00 \$ 50.00 \$ 5,000.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00 \$ 5,000.00 \$ 500.00 \$ 573,224.00 \$ 500.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00 \$ 7,500.00 \$ 1,000.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 6,000.00 \$ 2,500.00 \$ 3,000.00 \$ 300.00 \$ 7,500.00 \$ 204,918.00 \$ 1,000.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S S 450.00 S S 450.00 S S 4.00 S S 6.00 S S 4,100.00 S S 56.00 S	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 8,000.00 3,000.00 6,000.00 4,100.00 225,008.00 1,400.00 1,400.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A) 303(A) 642 SPECIAL SPECIAL	DESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING CLASS A AGGREGATE BASE (TRENCH STABILIZATION) CONSTRUCTION STAKING 12" FORCE MAIN (DIPS HDPE DR11) 12" 22.5 DEGREE BEND (DIPS HDPE DR11)	LF CY CY CY LF CY EA LF LF CY EA LF EA EA	QTY 3,568 1,800 185 2,160 450 30 11 2,000 500 1,000 10 4,018 4,018	\$ 5.00 \$ 50.00 \$ 50.00 \$ 50.00 \$ 8.00 \$ 280.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 3.00 \$ 40.00 \$ 8,000.00 \$ 300.00 \$ 300.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00	\$ 1.00 \$ 35.00 \$ 200.00 \$ 185.00 \$ 2,087.00 \$ 2.00 \$ 2.50 \$ 4,500.00 \$ 4,500.00 \$ 32.50 \$ 445.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 90,000.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,000.00 \$ 550.00 \$ 4,500.00 \$ 4,500.00 \$ 130,585.00 \$ 445.00 \$ 4,895.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00 \$ 1.00 \$ 1.00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 3.00 \$ 2.00 \$ 3.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 4,320.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 4,000.00 \$ 4,000.00 \$ 602,700.00 \$ 2,500.00 \$ 27,500.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 6.00 \$ 6.00 \$ 45.00 \$ 6,000.00 \$ 1,101.00 \$ 1,101.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 6,000.00 \$ 6,000.00 \$ 140,630.00 \$ 140,630.00 \$ 11,101.00 \$ 12,111.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 2.00 \$ 480.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 50.00 \$ 55,000.00 \$ 550.00 \$ 550.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00 \$ 5,000.00 \$ 500.00 \$ 573,224.00 \$ 5500.00 \$ 5,500.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00 \$ 7,500.00 \$ 1,000.00 \$ 1,000.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 216,000.00 \$ 6,000.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 300.00 \$ 7,500.00 \$ 204,918.00 \$ 1,000.00 \$ 11,000.00	UNIT PRICE E S 13.50 S 12.00 S 56.00 S 56.00 S S 6.00 S 5 6.00 S 6.0	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 84,700.00 3,000.00 6,000.00 4,100.00 4,100.00 225,008.00 1,400.00 20,900.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16	BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A) 303(A) 642 SPECIAL SPECIAL SPECIAL	EDESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING CLASS A AGGREGATE BASE (TRENCH STABILIZATION) CONSTRUCTION STAKING 12" FORCE MAIN (DIPS HDPE DR11) 12" 22.5 DEGREE BEND (DIPS HDPE DR11) 12" 45 DEGREE BEND (DIPS HDPE DR11) 12" 90 DEGREE BEND (DIPS HDPE DR11)	LF CY CY CY LF CY EA LF SY CY EA LF EA LF EA EA	QTY 3,568 1,800 185 2,160 450 30 11 2,000 500 1,000 10 4,018 11 7	UNIT PRICE \$ 5.00 \$ 6.00 \$ 50.00 \$ 8.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 40.00 \$ 40.00 \$ 65.00 \$ 300.00 \$ 300.00 \$ 300.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 3,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 261,170.00 \$ 33,00.00 \$ 2,100.00	UNIT PRICE \$ 1.00 \$ 35.00 \$ 200.00 \$ 185.00 \$ 2,087.00 \$ 2.50 \$ 4.00 \$ 55.00 \$ 4,500.00 \$ 32.50 \$ 445.00 \$ 445.00 \$ 445.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,500.00 \$ 4,500.00 \$ 130,585.00 \$ 445.00 \$ 4,895.00 \$ 4,895.00 \$ 3,115.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000,00 \$ 3,500.00 \$ 3,500.00 \$ 1.00 \$ 1.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 3,500.00 \$ 2.00 \$ 3,500.00 \$ 2.00 \$ 3,500.00 \$ 2,500.00 \$ 2,500.00 \$ 2,500.00	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 99,000.00 \$ 99,000.00 \$ 38,500.00 \$ 2,000.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 4,000.00 \$ 4,000.00 \$ 2,500.00 \$ 27,500.00 \$ 17,500.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 25.00 \$ 5,263.00 \$ 6.00 \$ 6.00 \$ 6.00 \$ 11.00 \$ 1.101.00 \$ 1.101.00 \$ 1.101.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 6,000.00 \$ 6,000.00 \$ 450.00 \$ 140,630.00 \$ 140,630.00 \$ 12,111.00 \$ 7,707.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 40.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 6.00 \$ 5,000.00 \$ 5,000.00 \$ 68.00 \$ 500.00 \$ 500.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 5,000.00 \$ 500.00 \$ 273,224.00 \$ 55,500.00 \$ 5,500.00 \$ 4,550.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00 \$ 7,500.00 \$ 1,000.00 \$ 1,000.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 1,650.00 \$ 6,000.00 \$ 1,650.00 \$ 3,000.00 \$ 2,500.00 \$ 3,000.00 \$ 300.00 \$ 1,000.00 \$ 1,000.00 \$ 7,500.00 \$ 1,000.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S S 6.00 S 5450.00	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 10,500.00 8,700.00 8,000.00 4,100.00 4,100.00 4,100.00 225,008.00 1,400.00 225,008.00 1,400.00 3,000.00 13,300.00
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15	SPEC. BA310 BA311A BA311B BA312 BA314 BA330C BA654(C) 221(C) 221(F) 230(A) 303(A) 642 SPECIAL SPECIAL SPECIAL SPECIAL SPECIAL	EDESCRIPTION R.O.W. CLEARING AND RESTORATION COMMON EXCAVATION ROCK EXCAVATION ROCK EXCAVATION COMMON BACKFILL AND COMPACTION BORE AND 24" STEEL CASING (1/4" WALL THICKNESS) PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT) 2" AIR RELIEF VALVE AND VAULT SILT FENCE SILT DIKE SOLID SLAB SODDING CLASS A AGGREGATE BASE (TRENCH STABILIZATION) CONSTRUCTION STAKING 12" FORCE MAIN (DIPS HDPE DR11) 12" 22.5 DEGREE BEND (DIPS HDPE DR11) 12" 45 DEGREE BEND (DIPS HDPE DR11) 12" 90 DEGREE BEND (DIPS HDPE DR11)	LF CY CY CY LF CY EA LF LF CY EA LF EA EA	QTY 3,568 1,800 185 2,160 450 30 11 2,000 500 1,000 10 4,018 1 11 7	\$ 5.00 \$ 50.00 \$ 50.00 \$ 8.00 \$ 100.00 \$ 7,000.00 \$ 2.00 \$ 6.00 \$ 40.00 \$ 300.00 \$ 300.00 \$ 300.00 \$ 300.00	EXTENSION \$ 17,840.00 \$ 10,800.00 \$ 9,250.00 \$ 17,280.00 \$ 126,000.00 \$ 77,000.00 \$ 4,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 3,000.00 \$ 261,170.00 \$ 3300.00 \$ 3,300.00 \$ 3,300.00 \$ 3,300.00	UNIT PRICE \$ 1.00 \$ 35.00 \$ 1.00 \$ 200.00 \$ 2,087.00 \$ 2.087.00 \$ 2.50 \$ 4.00 \$ 55.00 \$ 4,500.00 \$ 445.00 \$ 445.00 \$ 310,000.00	EXTENSION \$ 3,568.00 \$ 1,800.00 \$ 6,475.00 \$ 2,160.00 \$ 5,550.00 \$ 22,957.00 \$ 4,000.00 \$ 1,250.00 \$ 4,500.00 \$ 550.00 \$ 4,500.00 \$ 4,500.00 \$ 4,500.00 \$ 130,585.00 \$ 4,895.00 \$ 4,895.00 \$ 3,115.00 \$ 310,000.00	UNIT PRICE \$ 1.00 \$ 10.00 \$ 100.00 \$ 2.00 \$ 220.00 \$ 1,000.00 \$ 3,500.00 \$ 1.00 \$ 1.00 \$ 2.00 \$ 1.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 2.00 \$ 3,500.00 \$ 2.00 \$ 3.00 \$ 2.00 \$ 3.00 \$	EXTENSION \$ 3,568.00 \$ 18,000.00 \$ 18,500.00 \$ 99,000.00 \$ 30,000.00 \$ 38,500.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00 \$ 4,000.00 \$ 4,000.00 \$ 2,500.00 \$ 27,500.00 \$ 17,500.00 \$ 17,500.00 \$ 218,000.00	UNIT PRICE \$ 3.00 \$ 25.00 \$ 125.00 \$ 25.00 \$ 275.00 \$ 500.00 \$ 5,263.00 \$ 6.00 \$ 6.00 \$ 10.00	EXTENSION \$ 10,704.00 \$ 45,000.00 \$ 23,125.00 \$ 54,000.00 \$ 123,750.00 \$ 15,000.00 \$ 57,893.00 \$ 12,000.00 \$ 6,000.00 \$ 6,000.00 \$ 450.00 \$ 140,630.00 \$ 140,630.00 \$ 12,111.00 \$ 7,707.00 \$ 395,000.00	UNIT PRICE \$ 2.00 \$ 2.00 \$ 60.00 \$ 100.00 \$ 4,500.00 \$ 3.00 \$ 3.00 \$ 50.00 \$ 5,000.00 \$ 500.00 \$ 500.00 \$ 445,000.00	EXTENSION \$ 7,136.00 \$ 3,600.00 \$ 11,100.00 \$ 4,320.00 \$ 216,000.00 \$ 3,000.00 \$ 49,500.00 \$ 6,000.00 \$ 3,000.00 \$ 500.00 \$ 500.00 \$ 273,224.00 \$ 500.00 \$ 5,500.00 \$ 5,500.00 \$ 4,550.00 \$ 4,550.00 \$ 445,000.00	\$ 2.00 \$ 5.00 \$ 300.00 \$ 2.00 \$ 480.00 \$ 200.00 \$ 150.00 \$ 3.00 \$ 3.00 \$ 3.00 \$ 7,500.00 \$ 1,000.00 \$ 1,000.00 \$ 1,000.00	EXTENSION \$ 7,136.00 \$ 9,000.00 \$ 55,500.00 \$ 4,320.00 \$ 6,000.00 \$ 16,650.00 \$ 6,000.00 \$ 3,000.00 \$ 3,000.00 \$ 300.00 \$ 7,500.00 \$ 204,918.00 \$ 11,000.00 \$ 11,000.00 \$ 5,000.00 \$ 5,000.00 \$ 5,000.00	UNIT PRICE E S 13.50 S 12.00 S S 210.00 S 5 6.00 S 6.	EXTENSION 48,168.00 21,600.00 38,850.00 12,960.00 202,500.00 8,700.00 8,000.00 8,000.00 4,100.00 4,100.00 225,008.00 4,100.00 225,008.00 1,400.00 225,008.00 3,000.00 4,100.00 4,100.00 4,100.00 4,100.00 4,100.00 5,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00 6,000.00
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I certify that this is a true and correct Tabulation of Bids received at 2:00pm on February 23, 2017. This document does not imply that the contract will be awarded to any particular bidder. The City reserves the right to accept or reject any and all bids.

Planning Division Manager

COOK's CONSULTING LLC

PO Box 10

Fort Gibson, OK 74434

2/23/2017

Thomas D. Hendrix, P.E.
Planning Division Manager
Engineering and Construction Department
City of Broken Arrow
485 North Poplar Ave.
Broken Arrow, OK 74012
thendrix@brokenarrowok.gov
918-259-2400, ext. 5414

RE: 209th Lift Station and Force Main phase 1 & 2

Mr. Hendrix,

Per your request, I offer the following support information to confirm that Cook has the internal capacity to complete both phases of the subject project within the required 120 days.

Our plan is to self preform the line work and bores while sub contracting the lift station rehab to KBC Construction, Inc, (Steve Chambers). Our plan is to put one utility crew on laying phase 1 line from the east to the west, utilizing a Tesmec 1100 trencher (110k lb class) with necessary excavator assistance, while starting a second utility crew from County Line with a 60k lb class excavator.

The bore crew will start on the turnpike bore, moving to the 209^{th} bore then the 23^{rd} street bore, (allowing as much dry time as possible behind the residence near county line.

If the decision is made to utilize HDPE, (which I believe would be a time advantage), we believe one weld crew can keep up with both lay crews.

We do not expect to encounter rock except behind the post office, where we intend to trench and or hammer as necessary.

Our current Utility Fleet includes, at a minimum the following:

- 15 track excavators from 30k to 80k class (5 Hammers from 3,500lb to 8,500lb class)
- 10 Mini Excavators
- Two trenchers 50k and 110k class
- 10 track tractors 30 to 50k lb class
- Two 70-100k class drills, 4 − 20to 30k class drills, 2 small drills
- 10 loaders from 6.5k lb to 5 CY class

- HDPE welders up to 36"
- Pumps up to 8"

While we know all the above equipment is not necessary for this project, we want to exhibit that equipment availability should not be a problem.

If you have further questions, please feel free to call me at 918-260-8414

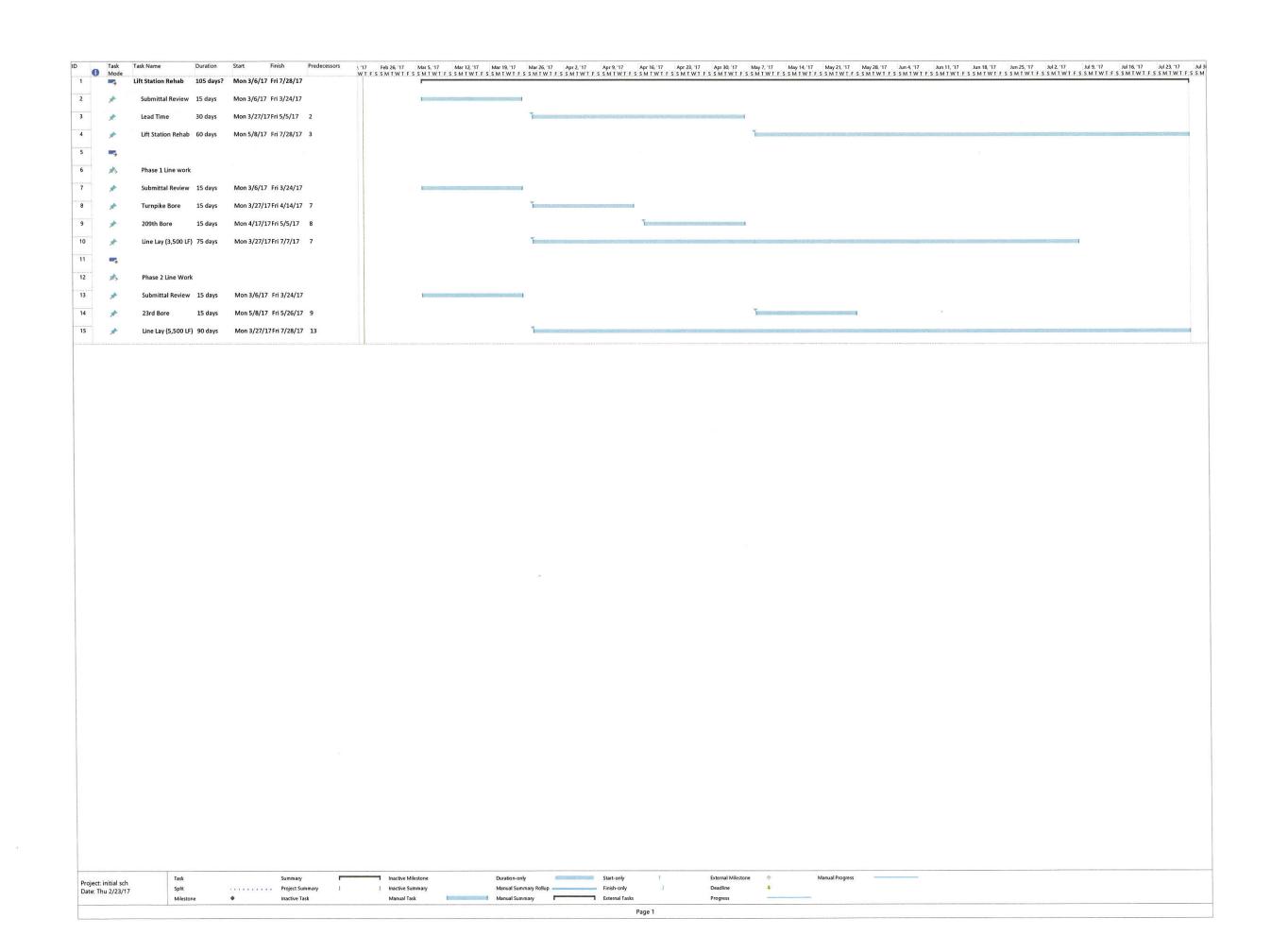
Justin Cook, P.E.

918.260.8414

Justinc@cook-eng.com

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		ASSIGNED	CHRRENT ASSIGNMENT	COMPLETION	COMPLETION NEXT ASSIGNMENT	COMPLETION
		ASSIGNED				
JUSTIN COOK	GM / OWNER		1			
TIM M.	DIRECTIONAL DRILL		2 Cheocta Sewer	Mar-17	Mar-17 Coweta Concrete Plant	Ongoing
JUAN L.	UTILITY, DRILLING		3 Cheocta Sewer	Mar-17	Mar-17 Fort Gibson Sewer	Jul-17
LOUIES	UTILITY, EARTH WORK		2 Cheocta Sewer	Mar-17	Mar-17 Fort Gibson Sewer	Apr-17
JIM F.	GENERAL LABOR		3 Georga Pacific Boiler	Ongoing		
CRAIG A.	UTILITY		4 TPWA 4th Street	1-Jun		おいました。治療症
TOMMY O.	PIPE WELDER, MILLWRIGHT		4 GP PM 12	Ongoing	GP PM 12	7/1/2017
HEAVY TRANSPORT (EDWARDS)	SUPPORT AND PIER DRILL		1			
DI IMAD TDI ICKING	CLIPPORT		2			
MATCHANICS	Tabadis		4			
MECHANICS	STORIOGE INICIAES		Cand Cuarry	On Going	FTG Lift Stations	
BREII FORBS	SPECIAL PROJECTS		A LIBRORY TO THE PARTY OF THE P	9		
CONCRETE	The second secon		,			
GEORGE A.	GENERAL SUPER CONCRETE		7			· · · · · · · · · · · · · · · · · · ·
ARMONDO	FINISHER GENERAL		SORTC			
MISTRO	FINISHER FORM		4 Fort Gibson Lift Station	17	GP Brown Paper Pulper	12/1/2017
JUAN O.	FINISHER STAIN STAMP		5 Broken Arrow Leisure Park	June		
RUFUS H.	FINISHER FORM SPECIAL		3 Cherokee Nation Complex	3/15/2017	Cherokee Nation Pavilion	10/1/2017
FRANDO	FENISHER GENERAL		4 Misc Slabs	3/1/2017	GP Brown Paper Pulper	12/1/2017
ON BURNS	GENERAL SUPERINTENDENT / OWNER					
	INVESTIGATION TO THE			Cohusery 16 201	February 15 201 BA 209th Phase 1	T10C/1/8
DANIEL	SITE, DIRT, GENERAL FORMAN			reducing 15 201	BA 200th Phase 1	7107/1/8
THOMAS	UTILITY				BA 209th Phase 2	6/1/201/
LEWIS	POLY WELDER		2 GP Boiler Gas Line	3/1/201/		
NICK G.	DRILLER/ WELDER		2 ORTC Stairs	3/15/2017	Broken Arrow 209th BORES	8/1/201/
TRUCKING	SUPPORT		1			
LABOR	SUPPORT		5			
TOMMY MARTIN	CFO / OWNER					
ACCOUNTS DAVABLE	ACCOUNTING					
ACCOUNTS DECIEVABLE	ACCOUNTING					
PEADWAIN			12			
MISKOGE	BEADYMIX BRODLICTION					
MOSKOGE	PEADVAIN BROBLICTION					
COWEIA	READTIMIA PRODUCTION					
MOBILE	CONCRETE SUPPORT					
PUMP TRUCK	CONCRETE SUPPORT		1 Ongoing Service			
KELLY COOK	GM / CRANES / OWNER		1 Ongoing Service			
TONY S.	UTILITY		2 GP Boiler Gas Line	3/15/2017		
I ANOL	DRILLING. RWD		2 RWD Maintaince	Ongoing		
CHRICT	MILIWRIGHT FORMAN					
ORDAN F	MILITA			3/15/2017		
DONNY COOK	BOOM TRUCKS / OWNER		1 Ongoing Service			
I II COS	CRANE OPERATOR		1 Ongoing Service			
	COURT OF THE COURT		Control of the Control of Control			
1						





City of Broken Arrow

Fact Sheet

File #: 17-1889, Version: 1

Broken Arrow Municipal Authority Special Meeting of: 02-28-17

To: Chairman and Authority Members

From: Engineering and Construction Department

Title:

Award the lowest responsible bid to Cook Consulting, LLC, and authorization to execute a construction contract for 209th Street Lift Station and Force Main, Phase II, in the amount of \$332,608.50 (Project No. S.1608B), including the alternate for High Density

Polyethylene (HDPE) Pipe

Background:

The 209th Street Lift Station currently drains to the Timberbrook Lift Station, which is at capacity. The new Broken Arrow Public Schools Elementary and Middle Schools under construction on the west side of 37th Street (209th E. Ave.) will be connected to the 209th Lift Station, which must be upgraded and the flows redirected to the County Line Trunk Sewer in order to provide adequate capacity for the additional load from the schools as well as other development in the vicinity. The new force main will be located on the south side of Kenosha Street and will cross under the Creek Turnpike, then parallel the Adams Creek Northwest force main to the County Line trunk sewer just north of State Highway 51. Right-of-way has been acquired and a license to bore under the Turnpike is forthcoming.

Because the timing of the lift station and force main is critical due to the school opening in August 2017, the contract was divided into two phases to ensure that two crews will be working simultaneously on the project. Phase I includes the lift station upgrade and the force main to 37th Street, and Phase II includes the remaining force main to the County Line Trunk Sewer (see attached map). An alternate for fusible High Density Polyethylene (HDPE) pipe in lieu of Polyvinyl Chloride (PVC) pipe was included in both bids. Both projects were advertised on January 31 and February 7, 2017, and bids were opened for both on February 23, 2017. Seven (7) bids were received for Phase II. The low bidder was Cook Consulting, LLC, with a bid of \$316,588.00 for the Base Contract and \$332,608.50 for the Alternate (HDPE pipe). The engineer's estimate was \$514,026.00 for the Base Contract and \$650,266.00 for the Alternate. The certified bid tabulation is attached. Because the durability and ease of construction of HDPE pipe justifies the extra expense, and the total cost is well within the budgeted amount of the OWRB loan, Staff recommends award of the 209th Street Lift Station and Force Main - Phase II Alternate to the lowest responsible bidder, Cook Consulting, LLC, in the amount of \$332,608.50.

Cook Consulting, LLC, was the low bidder for both Phase I and Phase II. They have provided assurances that they have personnel and equipment to field two crews to construct both jobs simultaneously, and their intent to do so (attached letter). Therefore, Staff recommends award of both projects to Cook Consulting, LLC.

Funds for the work are available in Oklahoma Water Resources Board Loan No. FAP-17-0004-L.

File #: 17-1889, Version: 1

Cost: \$332,608.50

Prepared By: Alex M. Mills, P.E., CFM, Engineering and Construction Director

Reviewed By: Utilities Department

Finance Department

City Attorney

Assistant City Manager - Operations

Approved By: Michael L. Spurgeon, City Manager

Attachments: Map of Project

Certified Bid Tabulation

Letter from Cook Consulting, LLC

Recommendation:

Award the lowest responsible bid to Cook Consulting, LLC, and authorize execution of a construction contract for the 209th Street Lift Station and Force Main - Phase II, plus alternate for HDPE Pipe

AND FORCE MAIN TULSA COUNTY WAGONER COUNTY 209TH STREET NUMBER S.1608 A STATION

T-18-N R-14-E T-18-N R-15-E



COUNTY LINE (S. 193RD E. AVE

S. 209TH E. AVE.

KENOSHA (E. 71ST ST. S.)

PROJECT LOCATION SECTION 7 & 8, T-18-N, R-15-E, WAGONER COUNTY PROJECT LOCATION SECTION 12, T-18-N, R-14-E, TULSA COUNTY

BID TAB
209th STREET LIFT STATION AND FORCE MAIN - PHASE 2
PROJECT NO. S.1608B FAP-17-0004-L BID NO. 17.144
BID OPENING FEBRUARY 23, 2017 AT 2PM AT THE CITY OF BROKEN ARROW OPERATIONS BUILDING

BASE BII):				ENGINEER'S		COOK CONSU		CROSS-BO CON	STRUCTION,		NSTRUCTION	CHEROK CONSTRUC		MCGUIRE I		KALKA CON	STRUCTION PANY		ENSLEY CTION, INC.
ITEM #	SPEC.	DESCRIPTION	UNIT	OTY	UNIT PRICE	EVTENCION	UNIT DDICE	EVTENCION	UNIT PRICE	EVTENCION										
1 I I	BA310	R.O.W. CLEARING AND RESTORATION		5.552							UNIT PRICE	THE REAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS	UNIT PRICE				UNIT PRICE			EXTENSION
2	BA311A		LF				\$ 1.00	\$ 5,552.00			\$ 7.00		\$ 1.00	\$ 5,552.00	\$ 2.00		\$ 3.00		\$ 13.00	
-			CY	3,410			\$ 1.00	\$ 3,410.00	\$ 3.00	\$ 10,230.00	\$ 1.00	\$ 3,410.00	\$ 10.00	\$ 34,100.00	\$ 2.00				\$ 12.00	
3	BA311B		CY	185			\$ 75.00	\$ 13,875.00	\$ 65.00	\$ 12,025.00	\$ 75.00	\$ 13,875.00	\$ 100.00	\$ 18,500.00	\$ 60.00		\$ 125.00		\$ 210.00	\$ 38,850.00
4	BA312	COMMON BACKFILL AND COMPACTION	CY	4,092		\$ 32,736.00	\$ 1.00	\$ 4,092.00	\$ 32.00	\$ 130,944.00	\$ 1.00	\$ 4,092.00	\$ 10.00	\$ 40,920.00	\$ 2.00	\$ 8,184.00	\$ 25.00	\$ 102,300.00	\$ 6.00	\$ 24,552.00
5	BA314	BORE AND 26" STEEL CASING (1/4" WALL THICKNESS)	LF	120		\$ 38,400.00	\$ 250.00	\$ 30,000.00	\$ 115.00	\$ 13,800.00	\$ 425.00	\$ 51,000.00	\$ 200.00	\$ 24,000.00	\$ 540.00	\$ 64,800.00	\$ 500.00	\$ 60,000.00	\$ 515.00	\$ 61,800.00
6	BA330C	PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT)	CY	10		\$ 1,000.00	\$ 185.00	\$ 1,850.00	\$ 100.00	\$ 1,000.00	\$ 175.00	\$ 1,750.00	\$ 1,000.00	\$ 10,000.00	\$ 100.00	\$ 1,000.00	\$ 500.00	\$ 5,000.00	\$ 335.00	\$ 3,350.00
7	BA330C	12	CY	50		\$ 6,000.00	\$ 185.00	\$ 9,250.00	\$ 100.00	\$ 5,000.00	\$ 175.00	\$ 8,750.00	\$ 500.00	\$ 25,000.00	\$ 100.00	\$ 5,000.00	\$ 500.00	\$ 25,000.00	\$ 335.00	\$ 16,750.00
8	BA501	15" GRAVITY SEWER (PVC C905 DR-18), RJ	LF	250	\$ 75.00	\$ 18,750.00	\$ 40.00	\$ 10,000.00	\$ 30.00	\$ 7,500.00	\$ 125.00	\$ 31,250.00	\$ 100.00	\$ 25,000.00	\$ 99.00	\$ 24,750.00	\$ 79.00	\$ 19,750.00	\$ 75.00	\$ 18,750.00
9	BA502	12" FORCE MAIN (PVC C900 DR-18)	LF	5552	\$ 45.00	\$ 249,840.00	\$ 29.50	\$ 163,784.00	\$ 29.00	\$ 161,008.00	\$ 36.00	\$ 199,872.00	\$ 56.00	\$ 310,912.00	\$ 61.00	\$ 338,672.00	\$ 31.65	\$ 175,720.80	\$ 45.00	
10	BA502	12" FORCE MAIN (PVC C900 DR-18), RJ	LF	110	\$ 65.00	\$ 7,150.00	\$ 32.00	\$ 3,520.00	\$ 35.00	\$ 3,850.00	\$ 44.00	\$ 4,840.00	\$ 90.00	\$ 9,900.00	\$ 66.00	\$ 7,260.00	\$ 48.67	\$ 5,353.70	\$ 64.00	
11	BA510A	1 12" 22.5 DEGREE BEND (DIP C153), RJ	EA	1	\$ 500.00	\$ 500.00	\$ 400.00	\$ 400.00	\$ 530.00	\$ 530.00	\$ 450.00	\$ 450.00	\$ 400.00	\$ 400.00	\$ 360.00	\$ 360.00				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
12	BA510A	2 12" 45 DEGREE BEND (DIP C153), RJ	EA	2	\$ 500.00	\$ 1,000.00	\$ 405.00	\$ 810.00	\$ 545.00	\$ 1,090.00	\$ 470.00	\$ 940.00	\$ 400.00	\$ 800.00	\$ 370.00	\$ 740.00				
13	BA510A	3 12" 90 DEGREE BEND (DIP C153), RJ	EA	6	\$ 500.00	\$ 3,000.00	\$ 425.00	\$ 2,550.00	\$ 565.00	\$ 3,390,00	\$ 485.00	\$ 2,910.00	\$ 400.00	\$ 2,400.00	\$ 390.00					
14	BA511D	5 FOOT ID MANHOLE W/ STANDARD LID	EA	1	\$ 2,500,00	\$ 2,500,00	\$ 5,500.00	\$ 5,500.00	\$ 1,800.00	\$ 1,800,00	\$ 4,000.00	\$ 4,000.00	\$ 4,000,00	\$ 4,000.00	\$ 5,600,00	\$ 5,600,00	\$ 3,000,00		\$ 7,600,00	
15	BA511F		EA	4		\$ 540.00	\$ 250.00	\$ 1,000.00	\$ 160.00	\$ 640.00	\$ 300.00	\$ 1,200.00	\$ 100.00	\$ 400.00	\$ 220.00				\$ 300.00	
16	BA654(C		EA	7	\$ 7,000.00	\$ 49,000.00	\$ 3,125,00	\$ 21,875.00		\$ 21,000.00	\$ 3,800.00	\$ 26,600,00	\$ 2,500.00	\$ 17,500.00	\$ 4,500.00				\$ 7,100.00	
17	221(C)	SILT FENCE	LF	2000		\$ 4,000.00	\$ 2.00	\$ 4,000.00	\$ 2.50	\$ 5,000.00	\$ 2.00	\$ 4,000.00	\$ 2,300.00	\$ 2,000.00	\$ 4,300.00					
18	221(F)	SILT DIKE	LF	500		\$ 3,000.00	\$ 2.50	\$ 1,250.00	\$ 5.00	\$ 2,500.00	\$ 4.00	\$ 2,000.00							\$ 4.00	
19	230(A)		SY	1000		\$ 3,000.00	\$ 4.00	\$ 4,000.00		\$ 4,500.00			\$ 2.00	\$ 1,000.00	\$ 6.00				\$ 6.00	
20	303(A)		CY	1000		\$ 400.00	\$ 55.00				the same of the sa	\$ 4,000.00			\$ 3.00				\$ 6.00	
21	601(A)	05.150.11.150.150.11.150.150.(11.151.151.151.151.151.151.151.151.151	CY	18				\$ 550.00		\$ 950.00	\$ 42.00	\$ 420.00	\$ 100.00	\$ 1,000.00					\$ 74.00	
22	642	CONSTRUCTION STAKING		18		\$ 1,440.00	\$ 90.00	\$ 1,620.00			\$ 40.00	\$ 720.00	\$ 100.00	\$ 1,800.00					\$ 200.00	
			EA	- 1	\$ 8,000.00	\$ 8,000.00	\$ 4,500.00	\$ 4,500.00		\$ 13,800.00	\$ 4,200.00	\$ 4,200.00	\$ 5,000.00	\$ 5,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00		\$ 6,400.00	
23	SPECIA		EA	1	\$ 8,000.00	\$ 8,000.00	\$ 8,500.00	\$ 8,500.00	\$ 6,100.00	\$ 6,100.00	\$ 7,500.00	\$ 7,500.00	\$ 5,500.00	\$ 5,500.00	\$ 8,500.00			\$ 6,000.00	\$ 9,400.00	\$ 9,400.0
24	SPECIA	(\(\text{\ti}\text{\texi}\text{\text{\text{\text{\text{\texi}\text{\text{\text{\texictex{\tirin\tine\tin{\tex{\texi}\texittit{\text{\tin}\tinex{\tiin}\tiintert{\texitit	LF	110		\$ 7,700.00	\$ 50.00				\$ 125.00	\$ 13,750.00	\$ 100.00	\$ 11,000.00	\$ 92.00	\$ 10,120.00	\$ 200.00	\$ 22,000.00	\$ 135.00	\$ 14,850.0
25	SPECIA	oral col monagement of the creation (in the contract the	LF	120		\$ 9,600.00	\$ 60.00	\$ 7,200.00			\$ 135.00	\$ 16,200.00	\$ 150.00	\$ 18,000.00	\$ 115.00	\$ 13,800.00	\$ 200.00	\$ 24,000.00	\$ 145.00	\$ 17,400.0
26	SPECIAL	9.1 5 FOOT ID SOLVENTLESS EPOXY MANHOLE COATING	VF	10	\$ 100.00		\$ 200.00	\$ 2,000.00	\$ 240.00	\$ 2,400.00	\$ 270.00	\$ 2,700.00	\$ 40.00	\$ 400.00	\$ 600.00	\$ 6,000.00	\$ 35.00	\$ 350.00	\$ 750.00	\$ 7,500.0
		TOTAL BASE BID			\$	514,026.00	\$	316,588.00	\$	440,561.00	\$	449,293.00	\$	578,084.00	\$	578,110.00	\$	652,496.50	S	674,818.00
ALTERN																				
ITEM#	SPEC.		UNIT	QTY	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION	UNIT PRICE	EXTENSION
Al	BA310		LF	5,552	\$ 5.00	\$ 27,760.00	\$ 1.00	\$ 5,552.00		\$ 11,104.00	\$ 7.00		\$ 1.00		\$ 2.00				\$ 13.00	
A2	BA311A	A COMMON EXCAVATION	CY	3,410	\$ 6.00	\$ 20,460.00	\$ 1.00	\$ 3,410.00	\$ 3.00	\$ 10,230.00	\$ 1.00	\$ 3,410.00	\$ 10.00	\$ 34,100.00	\$ 2.00	\$ 6,820.00	\$ 25.00	\$ 85,250.00	\$ 12.00	
A3	BA311E	ROCK EXCAVATION	CY	185	\$ 50.00	\$ 9,250.00	\$ 75.00	\$ 13,875.00	\$ 65.00	\$ 12,025.00	\$ 75.00	\$ 13,875.00					\$ 125.00		\$ 210.00	
A4	BA312	COMMON BACKFILL AND COMPACTION	CY	4,092	\$ 8.00	\$ 32,736.00	\$ 1.00	\$ 4,092.00	\$ 32.00	\$ 130,944.00	\$ 1.00	\$ 4,092.00							\$ 6.00	
A5	BA314	BORE AND 26" STEEL CASING (1/4" WALL THICKNESS)	LF	120	\$ 320.00	\$ 38,400.00	\$ 159.00	\$ 19,080.00		\$ 13,800.00	\$ 425.00	\$ 51,000.00	\$ 200.00							
A6	BA3300	PLAIN CONCRETE (CONCRETE CRADLE/ENCASEMENT)	CY	30		\$ 3,000,00	\$ 185.00	\$ 5,550.00	\$ 100.00	\$ 3,000.00	\$ 175.00	\$ 5,250.00	\$ 1,000,00							
A7	BA501	15" GRAVITY SEWER (PVC C905 DR-18), RJ	LF	250	\$ 75.00	\$ 18,750.00	\$ 40.00	\$ 10,000.00	\$ 30.00	\$ 7,500.00	\$ 125.00	\$ 31,250.00	\$ 100.00				\$ 79.00	\$ 19,750.00	\$ 75.00	
A8	BA511I		EA	1	\$ 2,500,00	\$ 2,500.00	\$ 5,500,00	\$ 5,500.00	\$ 1,800,00	\$ 1,800.00	\$ 4,000,00	\$ 4,000.00	\$ 4,000.00							
A9	BA511I		EA	4		\$ 540.00	\$ 250.00	\$ 1,000.00	\$ 160.00	\$ 640.00	\$ 300.00	\$ 1,200.00	\$ 100.00	\$ 4,000.00	\$ 220.00		\$ 3,000.00			,
A10		2" AIR RELIEF VALVE AND VAULT	EA	11		\$ 77,000.00	\$ 3,125.00	\$ 34,375.00	\$ 3,000.00	\$ 33,000.00	\$ 3,800.00	\$ 41.800.00			\$ 4,500.00					
All	221(C)		LF	2000			\$ 2.00	\$ 4,000.00	\$ 2.50	\$ 5,000.00	\$ 2.00	\$ 4,000.00	7				\$ 5,266.00			
A12	221(E)		LF	500			\$ 2.50	\$ 1,250.00	\$ 5.00	\$ 2,500.00					\$ 3.00		\$ 6.00		\$ 4.00	
A13	230(A)		SY	1,000	-		\$ 4.00	\$ 4,000.00							\$ 6.00					
A14	303(A)		CY	1,000			\$ 55.00			\$ 4,500.00					\$ 3.00					
A15	601(A)							\$ 550.00	\$ 95.00	\$ 950.00		\$ 420.00		-,	\$ 40.00					
A16	642		CY	18		\$ 1,440.00	\$ 90.00	\$ 1,620.00	\$ 60.00	\$ 1,080.00	\$ 40.00	\$ 720.00	\$ 100.00	\$ 1,800.00	\$ 60.00				\$ 200.00	- /
		CONSTRUCTION STAKING	EA	1		\$ 8,000.00	\$ 4,500.00	\$ 4,500.00						\$ 5,000.00	\$ 6,000.00					
A17	SPECIA		LF	5662		\$ 368,030.00	\$ 32.25	\$ 182,599.50	\$ 45.00	\$ 254,790.00	\$ 50.00		\$ 110.00	\$ 622,820.00	\$ 68.00				\$ 60.00	
A18	SPECIA	(EA	1	\$ 300.00	\$ 300.00	\$ 445.00	\$ 445.00	\$ 395.00	\$ 395.00	\$ 700.00	\$ 700.00		\$ 400.00	\$ 500.00	\$ 500.00			\$ 1,200.00	
A19	SPECIA		EA	11		\$ 3,300.00	\$ 445.00	\$ 4,895.00	\$ 395.00	\$ 4,345.00	\$ 750.00	\$ 8,250.00	\$ 400.00	\$ 4,400.00	\$ 500.00	- 7			\$ 1,600.00	\$ 17,600.0
A20	SPECIA		EA	7	\$ 300.00	\$ 2,100.00	\$ 445.00	\$ 3,115.00		\$ 2,765.00			\$ 400.00	\$ 2,800.00	\$ 620.00	\$ 4,340.00	\$ 705.00	\$ 4,935.00	\$ 1,600.00	\$ 11,200.0
A21	SPECIA		EA	1		\$ 8,000.00	\$ 8,500.00	\$ 8,500.00	\$ 6,100.00	\$ 6,100.00	\$ 7,500.00	\$ 7,500.00	\$ 5,500.00	\$ 5,500.00	\$ 8,500.00	\$ 8,500.00	\$ 6,000.00	\$ 6,000.00	\$ 9,400.00	\$ 9,400.0
A22	SPECIA		LF	110	\$ 70.00	\$ 7,700.00	\$ 50.00	\$ 5,500.00	\$ 72.00	\$ 7,920.00	\$ 125.00	\$ 13,750.00	\$ 100.00	\$ 11,000.00	\$ 92.00			\$ 22,000.00	\$ 135.00	
A23	SPECIA	L OPEN CUT INSTALLATION 26" STEEL CASING (1/4" WALL THICKNESS)	LF	120	\$ 80.00	\$ 9,600.00	\$ 60.00	\$ 7,200.00	\$ 95.00	\$ 11,400.00	\$ 135.00	\$ 16,200.00	\$ 150.00							
A24	SPECIAL	9.1 5 FOOT ID SOLVENTLESS EPOXY MANHOLE COATING	VF	10	\$ 100.00	\$ 1,000.00	\$ 200.00						\$ 40.00					- , , , , , , , , , , , , , , , , , , ,		
	*************	TOTAL ALTERNATE NO. 1 BID	-		S	650,266,00	S	332,608,50		541,988.00	\$	547,881.00		889.092.00		638,244.00		696.128.00		
		TOTAL DEPOSIT OF DEPOS			9	050,200.00	Ψ	334,000.30	y .	341,700.00	, J	347,001.00	[J	009,094.00	1 3	030,244.00	13	090,128.00	3	807,208.00

I certify that this is a true and correct Tabulation of Bids received at 2:00pm on February 23, 2017. This document does not imply that the contract will be awarded to any particular bidder. The City reserves the right to accept or reject any and all bids.

Thomas D. Hendrik, P.E.
Planning Division Manager

COOK's CONSULTING LLC

PO Box 10

Fort Gibson, OK 74434

2/23/2017

Thomas D. Hendrix, P.E.
Planning Division Manager
Engineering and Construction Department
City of Broken Arrow
485 North Poplar Ave.
Broken Arrow, OK 74012
thendrix@brokenarrowok.gov
918-259-2400, ext. 5414

RE: 209th Lift Station and Force Main phase 1 & 2

Mr. Hendrix,

Per your request, I offer the following support information to confirm that Cook has the internal capacity to complete both phases of the subject project within the required 120 days.

Our plan is to self preform the line work and bores while sub contracting the lift station rehab to KBC Construction, Inc, (Steve Chambers). Our plan is to put one utility crew on laying phase 1 line from the east to the west, utilizing a Tesmec 1100 trencher (110k lb class) with necessary excavator assistance, while starting a second utility crew from County Line with a 60k lb class excavator.

The bore crew will start on the turnpike bore, moving to the 209^{th} bore then the 23^{rd} street bore, (allowing as much dry time as possible behind the residence near county line.

If the decision is made to utilize HDPE, (which I believe would be a time advantage), we believe one weld crew can keep up with both lay crews.

We do not expect to encounter rock except behind the post office, where we intend to trench and or hammer as necessary.

Our current Utility Fleet includes, at a minimum the following:

- 15 track excavators from 30k to 80k class (5 Hammers from 3,500lb to 8,500lb class)
- 10 Mini Excavators
- Two trenchers 50k and 110k class
- 10 track tractors 30 to 50k lb class
- Two 70-100k class drills, 4 − 20to 30k class drills, 2 small drills
- 10 loaders from 6.5k lb to 5 CY class

- HDPE welders up to 36"
- Pumps up to 8"

While we know all the above equipment is not necessary for this project, we want to exhibit that equipment availability should not be a problem.

If you have further questions, please feel free to call me at 918-260-8414

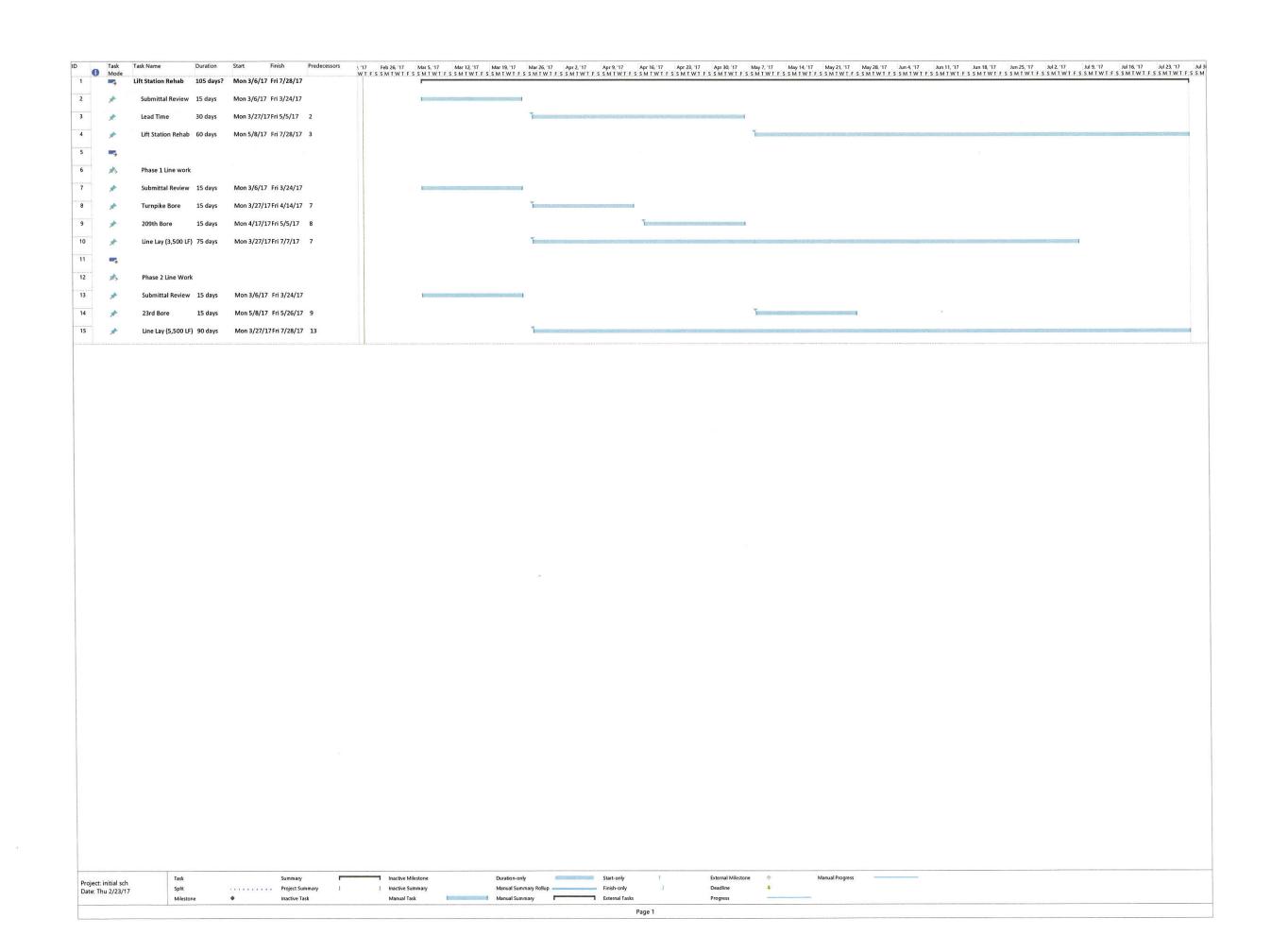
Justin Cook, P.E.

918.260.8414

Justinc@cook-eng.com

act	Je	
contra	on tin	
pending	ongoing	behind

		ASSIGNED	CHRRENT ASSIGNMENT	COMPLETION	COMPLETION NEXT ASSIGNMENT	COMPLETION
		ASSIGNED				
JUSTIN COOK	GM / OWNER		1			
TIM M.	DIRECTIONAL DRILL		2 Cheocta Sewer	Mar-17	Mar-17 Coweta Concrete Plant	Ongoing
JUAN L.	UTILITY, DRILLING		3 Cheocta Sewer	Mar-17	Mar-17 Fort Gibson Sewer	Jul-17
LOUIES	UTILITY, EARTH WORK		2 Cheocta Sewer	Mar-17	Mar-17 Fort Gibson Sewer	Apr-17
JIM F.	GENERAL LABOR		3 Georga Pacific Boiler	Ongoing		
CRAIG A.	UTILITY		4 TPWA 4th Street	1-Jun		おいました。治療症
TOMMY O.	PIPE WELDER, MILLWRIGHT		4 GP PM 12	Ongoing	GP PM 12	7/1/2017
HEAVY TRANSPORT (EDWARDS)	SUPPORT AND PIER DRILL		1			
DI IMAD TDI ICKING	CLIPPORT		2			
MATCHANICS	Tabadis		4			
MECHANICS	STORIOGE INICIAES		Cand Cuarry	On Going	FTG Lift Stations	
BREII FORBS	SPECIAL PROJECTS		A LIBRORY TO THE PARTY OF THE P	9		
CONCRETE	The second secon		,			
GEORGE A.	GENERAL SUPER CONCRETE		7			· · · · · · · · · · · · · · · · · · ·
ARMONDO	FINISHER GENERAL		SORTC			
MISTRO	FINISHER FORM		4 Fort Gibson Lift Station	17	GP Brown Paper Pulper	12/1/2017
JUAN O.	FINISHER STAIN STAMP		5 Broken Arrow Leisure Park	June		
RUFUS H.	FINISHER FORM SPECIAL		3 Cherokee Nation Complex	3/15/2017	Cherokee Nation Pavilion	10/1/2017
FRANDO	FENISHER GENERAL		4 Misc Slabs	3/1/2017	GP Brown Paper Pulper	12/1/2017
ON BURNS	GENERAL SUPERINTENDENT / OWNER					
	INVESTIGATION TO THE			Cohusery 16 201	February 15 201 BA 209th Phase 1	T10C/1/8
DANIEL	SITE, DIRT, GENERAL FORMAN			reducing 15 201	BA 200th Phase 1	7107/1/8
THOMAS	UTILITY				BA 209th Phase 2	6/1/201/
LEWIS	POLY WELDER		2 GP Boiler Gas Line	3/1/201/		
NICK G.	DRILLER/ WELDER		2 ORTC Stairs	3/15/2017	Broken Arrow 209th BORES	8/1/201/
TRUCKING	SUPPORT		1			
LABOR	SUPPORT		5			
TOMMY MARTIN	CFO / OWNER					
ACCOUNTS DAVABLE	ACCOUNTING					
ACCOUNTS DECIEVABLE	ACCOUNTING					
PEADWAIN			12			
MISKOGE	BEADYMIX BRODLICTION					
MOSKOGE	PEADVAIN BROBLICTION					
COWEIA	READTIMIA PRODUCTION					
MOBILE	CONCRETE SUPPORT					
PUMP TRUCK	CONCRETE SUPPORT		1 Ongoing Service			
KELLY COOK	GM / CRANES / OWNER		1 Ongoing Service			
TONY S.	UTILITY		2 GP Boiler Gas Line	3/15/2017		
I ANOL	DRILLING. RWD		2 RWD Maintaince	Ongoing		
CHRICT	MILIWRIGHT FORMAN					
ORDAN F	MILITA			3/15/2017		
DONNY COOK	BOOM TRUCKS / OWNER		1 Ongoing Service			
I II COS	CRANE ODERATOR		1 Ongoing Service			
	COURT OF THE COURT		Control of the Control of Control			
1						





City of Broken Arrow

Fact Sheet

File #: 17-1887, Version: 1

Broken Arrow City Council
Broken Arrow Municipal Authority
Joint Meeting of: 02-28-17

To: Mayor and City Council

Chairman and Authority Members

From: Engineering and Construction Department

Title:

Presentation, discussion, and study session on the Long-Term Water

Supply Study Report

Background:

The Consultant for the Long-Term Water Supply Study will present the findings of the Study and invite discussion by the City Council/BAMA Members.

As the construction of the Verdigris River Water Treatment Plant concluded, a need to consider supplemental long-range water supply sources was identified. HDR Engineering was hired to prepare a report to look at the water needs for the City of Broken Arrow through year 2060. The report looked at water rights in the Verdigris, Grand, and Illinois River systems, as well as other lakes, and conveyance systems to bring water from other sources to the new treatment plant were investigated in detail. Legal, engineering, and economic considerations were included in the study. At the October 20, 2015, BAMA meeting the presentation of the findings of the Long Range Water Supply Plan were presented. At the conclusion of that presentation, BAMA requested additional alternatives to be studied. BAMA contracted with HDR Engineering to study the different alternatives.

At tonight's study session, HDR will give a presentation on the Additional Water Supply Sources Study and at the conclusion of the presentation the Consultant will be available with staff to answer any questions.

Cost: \$0

Prepared By: Alex M. Mills, P.E., CFM, Engineering and Construction Director

Reviewed By: City Attorney

Assistant City Manager - Operations

Approved By: Michael L. Spurgeon, City Manager

File #: 17-1887, Version: 1

Attachments: None

Recommendation:

No action required. Direct staff as required.