

Contract Change Order # 1

Project Name: LLWWTP Headworkds Improvements Project Number: 165420/165423
 Project Location: Lynn Lane Waste Water Treatment Plant Date of Application: Tuesday, October 9, 2018
 Contractor: Crossland Heavy Contractors Submitted By: Jason Smith

Summary of Change in Scope of Work

The following scope of work consisting of work location, work description, established quantities, and timeline for completion has been reviewed and agreed upon by the contractor, the origin funding department, and the Engineering and Construction Department.

Change of Work Items Included in this Change Order:

During construction preliminary investigation of installation of the 60" diameter influent line into the plant, it was discovered that the 18" sewer line that was noted as decommissioned actually had regular flow. As part of the resolution to the submitted RFI#36 (attached), the 1) proposed costs for installing two additional manholes and an 18" diameter interceptor line have been summarized into this change order. The proposed costs below are described in detail within the attached contractors cost change proposal. The costs summarized below are inclusive of all work described above and in the directive RFI and include all applicable markups.

Change in Contractual Project Time:

1) Due to the complexity of the operations of this 18" interceptor, additional time due to this change will be assessed at the end of the project.

Plan Sheets or Additional Documents Attached: Yes No Other: RFI#36

Work Order Quantities

Item#	(Spec)	Item Description	Units	Price	Quantity	Total Amount
CO1-1	NA	18" Interceptor	LS	\$ 109,954.37	1	\$ 109,954.37
Total Change Cost:						\$ 109,954.37

Summary of Project Costs

Total Previous Change Orders:	\$	-	Original Contract Amount:	\$	9,772,200.00
Current Change Order:	\$	109,954.37	Amended Contract Amount:	\$	9,882,154.37
Total Cost of Change Orders:	\$	109,954.37	Percent Change in Contract:		1.13%
Total Cost Applicable to CBA:	\$	109,954.37	Percent Change Applicable to CBA:		1.13%

Change Order Authorization

Change Order # <u>1</u> in the sum of:	\$ <u>109,954.37</u>	has been reviewed by all parties and is recommended for approval by:
Contractor Submitting Change Order:	Name	Signature
Construction Division Manager:	Timothy S Robins, PE	Date
Director of Engineering & Construction:	Alex Mills, PE	Date
Assistant City Manager - Operations:	Kenneth D Schwab, PE	Date
City Manager:	Michael Spurgeon	Date

This Change is Executed Through:

- This change to the contract documents is authorized by the City Manager's authority in accordance with the applicable state statutes and COBA Code of Ordinances.
 or
 This change to the contract documents was approved at the City Council/BAMA meeting held on : Tuesday, October 16, 2018

CROSSLAND HEAVY CONTRACTORS

14149 East Admiral Place

Tulsa, Oklahoma 74116

tel 918.438.2800

fax 918.438.2801

Date: October 4, 2018

Dear Tim Robins,

This letter is to address the additional costs associated with the 18" Interceptor Line.

Below is a cost breakdown for the proposed materials.

CHC	\$99,958.52
Profit & Overhead	\$9,995.85

Total Cost: **\$109,954.37**

Should you have any questions or comments please feel free to contact me at (918) 230-9573

Respectfully,



Jason Smith
Crossland Heavy Contractors, Inc.

COST BREAKDOWN FOR SUPPORT OF ALLOWANCE AUTHORIZATION NO.

Reference Document: RFI No. 36

Contract No.: Project Number 165420 & 165423
 Project No.: Lynn Lane Headworks Improvements
 Contractor: Crossland Heavy Contractors, Inc.

Date: 10/03/18

Description of Work: 18" Interceptor

Materials:

Items	Units	Cost	Quantity	Amount
Manholes	LS	\$3,046.00	1.00	\$3,046.00
Pipe Materials (Ferguson)	LS	\$12,567.12	1.00	\$12,567.12
Fuel (By-Pass Pump)	LS	\$4,149.90	1.00	\$4,149.90
Pipe STS	LS	\$500.00	1.00	\$500.00
Concrete	CY	\$91.50	12.00	\$1,098.00
#57 Rock	TN	\$15.39	30.00	\$461.70
Manhole Shields	LS	\$1,467.00	2.00	\$2,934.00
Trench Boxes	LS	\$1,617.00	2.00	\$3,234.00
Street Plates	LS	\$717.00	3.00	\$2,151.00
Dumpster	LS	\$2,016.00	1.00	\$2,016.00
Plug & Accessories	LS	\$930.00	1.00	\$930.00
Sub-Total				\$33,087.72
10% Profit				\$3,308.77
Total				\$36,396.49

Labor:

Job Title	Rate/Hr.	Total Hrs.	Amount
Pipe Superintendent	\$35.60	155.00	\$5,518.00
Skilled Operator - 2	\$22.83	306.00	\$6,985.98
Skilled Laborer - 2	\$25.32	302.00	\$7,646.64
Sub-Total			\$20,150.62
15% Profit			\$3,022.59
Total			\$23,173.21

Payroll Additives:

Item	% of Labor	Amount
Insurance	8.00%	\$1,612.05
Bond	0.00%	\$0.00
Social Security	7.65%	\$1,541.52
Taxes	3.80%	\$765.72
Worker's Compensation	22.00%	\$4,433.14
Employee Fringe Benefits	20.00%	\$4,030.12
Total		\$12,382.56

Equipment:

Type	Cost/Hr.	Total Hrs.	Amount
Excavator	\$115.25	106.00	\$12,216.50
Loader	\$36.25	116.00	\$4,205.00
Light Plant	\$13.13	16.00	\$210.08
Superintendent Truck	\$22.37	155.00	\$3,467.35
Total			\$20,098.93

Sub-Contractor Cost - Champion Concrete, Dump Truck, Pumps	\$7,188.48
Mark-up On Sub-Contractor (10%)	\$718.85
Contractor Cost	\$99,958.52
Contractor Profit	\$9,995.85
Contractor Total	\$109,954.37

Total Lump Sum Cost for Work Described	\$109,954.37
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If Not Lump Sum, Cost Per Unit	Total Cost
	Quantity



 Contractor's Signature
 Printed Name: Jason C. Smith



FERGUSON WATERWORKS #1895
 1820 N. WILLOW AVE
 BROKEN ARROW, OK 74012-9169

Phone: 888-637-3505
 Fax: 918-459-9540

Deliver To: From: Zach Thompson Comments:
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11:01:56 SEP 21 2018

Page 1 of 2

FEI-WW BROKEN ARROW #1895

Price Quotation

Phone: 888-637-3505

Fax: 918-459-9540

Bid No: B318850
Bid Date: 09/21/18
Quoted By: ZTX

Cust Phone: 620-429-1410
Terms: NET 10TH PROX

Customer: BROKEN ARROW MUNICIPAL AUT
 CONTRACT NO: 165420-165423
 FAP PROJECT NO: FAP-17-004-L
 PO BOX 350
 COLUMBUS, KS 66725

Ship To: BROKEN ARROW MUNICIPAL AUT
 CONTRACT NO: 165420-165423
 FAP PROJECT NO: FAP-17-004-L
 PO BOX 350
 COLUMBUS, KS 66725

Cust PO#:

Job Name: LYNN LANE FAP-17-0004-L

Item	Description	Quantity	Net Price	UM	Total
SDR26HWSP1814	18X14 F679 PS115 HW PVC GJ SWR STOCK IN LUBBOCK, TX IF DIAMOND PLASTICS HAS SOMETHING FOR THIS TO RIDE WITH WHEN ORDERED THERE WILL NOT BE ANY FREIGHT CHARGE. IF NEED ASAP & DIAMOND DOESN'T HAVE ANYTHING FOR THIS TO RIDE WITH AN ESTIMATED \$1,500 - \$2,000 FREIGHT CHARGE WILL BE ADDED ----	42	24.640	FT	1034.88
FBTP4LA18	18 MJ C110 P-401 TEE L/A	1	2830.610	EA	2830.61
SSLCE18	18 PVC WDG REST GLND *ONELOK	3	231.493	EA	694.48
TTHBNFR	3/4X4-1/2 TEF THEAD N&B	36	3.040	EA	109.44
SP-R051-MJSDR18	18 MJ X SDR35 SWR TRANS GSKT	3	107.000	EA	321.00
FB4P4LA18	18 MJ C110 P-401 45 BEND L/A	1	1631.840	EA	1631.84
SSLCE18	18 PVC WDG REST GLND *ONELOK	2	231.493	EA	462.99
SP-R051-MJSDR18	18 MJ X SDR35 SWR TRANS GSKT	2	107.000	EA	214.00
TTHBNFR	3/4X4-1/2 TEF THEAD N&B	24	3.040	EA	72.96
FB9P4LA18	18 MJ C110 P-401 90 BEND L/A	1	2251.570	EA	2251.57
SSLCE18	18 PVC WDG REST GLND *ONELOK	2	231.493	EA	462.99
TTHBNFR	3/4X4-1/2 TEF THEAD N&B	24	3.040	EA	72.96
SP-R051-MJSDR18	18 MJ X SDR35 SWR TRANS GSKT	2	144.200	EA	288.40
F10021818	18 CLAY X 18 CI PVC COUP ----	1	119.000	EA	119.00

Net Total: \$10567.12
Tax: \$0.00
Freight: \$0.00
Total: \$10567.12

FEI-WW BROKEN ARROW #1895
Price Quotation

Fax: 918-459-9540

11:01:56 SEP 21 2018

Reference No: B318850

Quoted prices are based upon receipt of the total quantity for immediate shipment (48 hours). SHIPMENTS BEYOND 48 HOURS SHALL BE AT THE PRICE IN EFFECT AT TIME OF SHIPMENT UNLESS NOTED OTHERWISE. QUOTES FOR PRODUCTS SHIPPED FOR RESALE ARE NOT FIRM UNLESS NOTED OTHERWISE.

CONTACT YOUR SALES REPRESENTATIVE IMMEDIATELY FOR ASSISTANCE WITH DBE/MBE/WBE/SMALL BUSINESS REQUIREMENTS.

Seller not responsible for delays, lack of product or increase of pricing due to causes beyond our control, and/or based upon Local, State and Federal laws governing type of products that can be sold or put into commerce. This Quote is offered contingent upon the Buyer's acceptance of Seller's terms and conditions, which are incorporated by reference and found either following this document, or on the web at http://wolseley.com/terms_conditionsSale.html.

Govt Buyers: All items are open market unless noted otherwise.

LEAD LAW WARNING: It is illegal to install products that are not "lead free" in accordance with US Federal or other applicable law in potable water systems anticipated for human consumption. Products with *NP in the description are NOT lead free and can only be installed in non-potable applications. Buyer is solely responsible for product selection.

Quote



Scurlock Industries

of Miami, Inc.
 600 NEWMAN RD. P.O. BOX 257
 NORTH MIAMI, OK 74358
 PH. (918) 542-1884

Order Number: 0014902

Order Date: 3/1/2018

Customer Number: 04-QUOTE

Sold To:
 MIAMI OK QUOTE

Ship To:
 CROSSLAND HEAVY LYNN LANE WWTP
 BROKEN ARROW, OK

Confirm To:

Customer P.O.	Ship VIA	F.O.B.		Terms		
LYNN LANE WWTP				No Terms		
Item Number	Unit	Ordered	Shipped	Back Order	Price	Amount
MHTU48-6	EA	2.00	0.00	0.00	950.00	1,900.00
4' ID SANITARY MANHOLE (0'-6') W/ DOGHOUSE OPENINGS, NO BASE, STEPS, FLAT TOP Whse: 000						
OR CONE ,RING AND COVER						
MHED-48	VF	3.28	0.00	0.00	69.00	226.32
48" i.d. Manhole Extra Depth. Whse: 000						
MHTU60-6	EA	1.00	0.00	0.00	1,450.00	1,450.00
60" SANITARY MANHOLE (0'-6') W/ NO BASE, DOG HOUSE OPENINGS, ALOKS, FLAT TOP, Whse: 000						
RING AND COVER						
MHED-60	VF	14.00	0.00	0.00	114.00	1,596.00
60" i.d. Manhole Extra Depth. Whse: 000						

Net Order: 5,172.32
 Less Discount: 0.00
 Freight: 0.00
 Sales Tax: 0.00
Order Total: 5,172.32
 Less Deposit: 0.00
Order Balance: 5,172.32

Scurlock Industries Accepted By

This quote: good for 60 days; based on entire order.

1
 P.O. BOX 1500
 800 W. JOHNSON
 JONESBORO, AR 72403
 (870) 935-5913

2
 P.O. BOX 1078
 3401 W. COMMERCIAL
 SPRINGFIELD, MO 65801
 (417) 862-5088

3
 P.O. BOX 1082
 3725 S. MCCOLLUM AVE.
 FAYETTEVILLE, AR 72702
 (479) 521-0504

4
 P.O. BOX 257
 600 NEWMAN RD.
 NORTH MIAMI, OK 74358
 (918) 542-1884

Champion Concrete Services, Inc.

Estimate

P.O. Box 691976
Tulsa , Ok. 74169

Quote Number
2101

(918) 438-6203

Quote Date
Oct 4, 2018

Page: 1

Customer
Crossland Heavy Contractors
P.O. Box 350
Columbus , KS 66725

Job Site
Jason

Customer ID	Good Thru	Payment Terms	Sales Rep
CROSSLANDHEAVYCONTR	11/3/18	Net 30 Days	MIKEB

Quantity	Description	Unit Price	Totals
	Cut 2' X 3' X 6" deep box in sewer pipe. Cut done from midnight to three in the morning.		1,375.00
Balance Due upon 100% completion Thank You!		Subtotal:	1,375.00
		Sales Tax	
		Total	1,375.00



PUMP SOLUTIONS
 BRANCH 154
 5444 SOUTH 108TH EAST AVE
 TULSA OK 74146
 918-977-3700
 918-622-7402 FAX

160676886

Job site Address

WWTP
 LYNN LANE & E. NASHVILLE ST
 X:..@..
 BROKEN ARROW OK 74103
Office: 620-429-1410 Cell: 620-429-1410

Customer # : 420065
Reserved Date : 08/28/18
Scheduled Out : 10/06/18 07:00 AM
Estimated In : 10/13/18 07:00 AM
UR Job Loc : LYNN LANE & E. NASHV
UR Job # : 353
Customer Job ID: 08018RD
P.O. # : QUOTE
Requested By : RICK STEVENS
Written By : AUSTIN CARTWRIGHT
Salesperson : ANDREW ISENBART

CROSSLAND HEAVY CONTRACTORS, I
 PO BOX 350
 COLUMBUS KS 66725-0350

**This is not an invoice
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RENTAL ITEMS:							
Qty	Equipment	Description	Minimum	Day	Week	4 Week	Estimated Amt.
2	5202003	PUMP 6" VAC ASSIST - DIESEL D= 90 6" FLC Facing Tongue of Trailer S= 6" MCL Fuel 3/4	170.00	170.00	548.00	1497.00	1,096.00
4	545/6901	FLOAT SWITCH		15.00	30.00	64.00	120.00
5	538/6820	HOSE 8X50 RUBBER DISCHARGE - CAMLOCK		50.00	100.00	298.00	500.00
1	538/2720	HOSE 8X20 TANK TRUCK - CAMLOCK		63.00	125.00	373.00	125.00
1	545/1140	SUCTION/DISCHARGE MANIFOLD		100.00	200.00	600.00	200.00
2	523/1506	6" CHECK VALVE		23.00	45.00	133.00	90.00
6	537/2720	HOSE 6X20 TANK TRUCK - CAMLOCK		44.00	87.00	261.00	522.00
Rental Subtotal:							2,653.00
SALES/MISCELLANEOUS ITEMS:							
Qty	Item		Price		Unit of Measure		Extended Amt.
2	BERMPAC, 8'X10'X12" 40MIL PE	[PT81012/PACTC]	325.000		EACH		650.00
1	DELIVERY RENTAL CONTRACT	[DELIVERY/MCI]	500.000		EACH		500.00
1	PICKUP ON RENTAL CONTRACT	[PICKUP/MCI]	500.000		EACH		500.00
Sales/Misc Subtotal:							1,650.00
Agreement Subtotal:							4,303.00
Tax:							310.48
Estimated Total:							4,613.48

COMMENTS/NOTES:

CONTACT: RICK STEVENS
 CELL#: 620-429-1410

TO SCHEDULE EQUIPMENT FOR PICKUP, CALL 800-UR-RENTS (800-877-3687)
 WE ARE AVAILABLE 24/7 TO SUPPLY YOU WITH A CONFIRMATION #
 IN ORDER TO CLOSE THIS CONTRACT

CONTINUED



160676886

PUMP SOLUTIONS
BRANCH 154
5444 SOUTH 108TH EAST AVE
TULSA OK 74146
918-977-3700
918-622-7402 FAX

**Job site
Address**

WWTP
LYNN LANE & E. NASHVILLE ST
X:..@..
BROKEN ARROW OK 74103
Office: 620-429-1410 Cell: 620-429-1410

Customer # : 420065
Reserved Date : 08/28/18
Scheduled Out : 10/06/18 07:00 AM
Estimated In : 10/13/18 07:00 AM
UR Job Loc : LYNN LANE & E. NASHV
UR Job # : 353
Customer Job ID: 08018RD
P.O. # : QUOTE
Requested By : RICK STEVENS
Written By : AUSTIN CARTWRIGHT
Salesperson : ANDREW ISENBART

CROSSLAND HEAVY CONTRACTORS, I
PO BOX 350
COLUMBUS KS 66725-0350

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Please do not pay from this document**

Customer Accounting Page

<u>Start Dt</u>	<u>End Date</u>	<u>Percent</u>	<u>Pre-Tax</u>	<u>Tax</u>	<u>Total</u>
10/06/18	10/13/18	100	4303.00	310.48	4613.48

<u>Description</u>	<u>Code</u>
JOB #	TBD
PO #	
PROJECT PHASE	

Request for Information No.036

Project Name:	Lynn Lane Wastewater Treatment Plant Headworks Improvements	Initiated by:	<input type="checkbox"/> HDR	<input type="checkbox"/> OWNER	<input checked="" type="checkbox"/> CONTRACTOR
Project Owner:	Broken Arrow Municipal Authority (BAMA) Project No. 165420/165423	Transmitted By:	Robby Rosencutter		Date: 6/8/2018
HDR Project No.	10026444	Initiated to:	<input checked="" type="checkbox"/> HDR	<input type="checkbox"/> OWNER	<input type="checkbox"/> CONTRACTOR
Contractor:	Crossland Heavy Contractors	Transmitted To:	HDR (Jenifer Rayshell)		Date: 6/8/2018
Owner Contract #	Bid No. 18.110 OWRB Loan No. FAP-17-0004-L				
Subject: Directive for Existing 18"-RS Line to be Abandoned	Discipline: Civil / Utilities				
Reference Transmittal					

Attention:

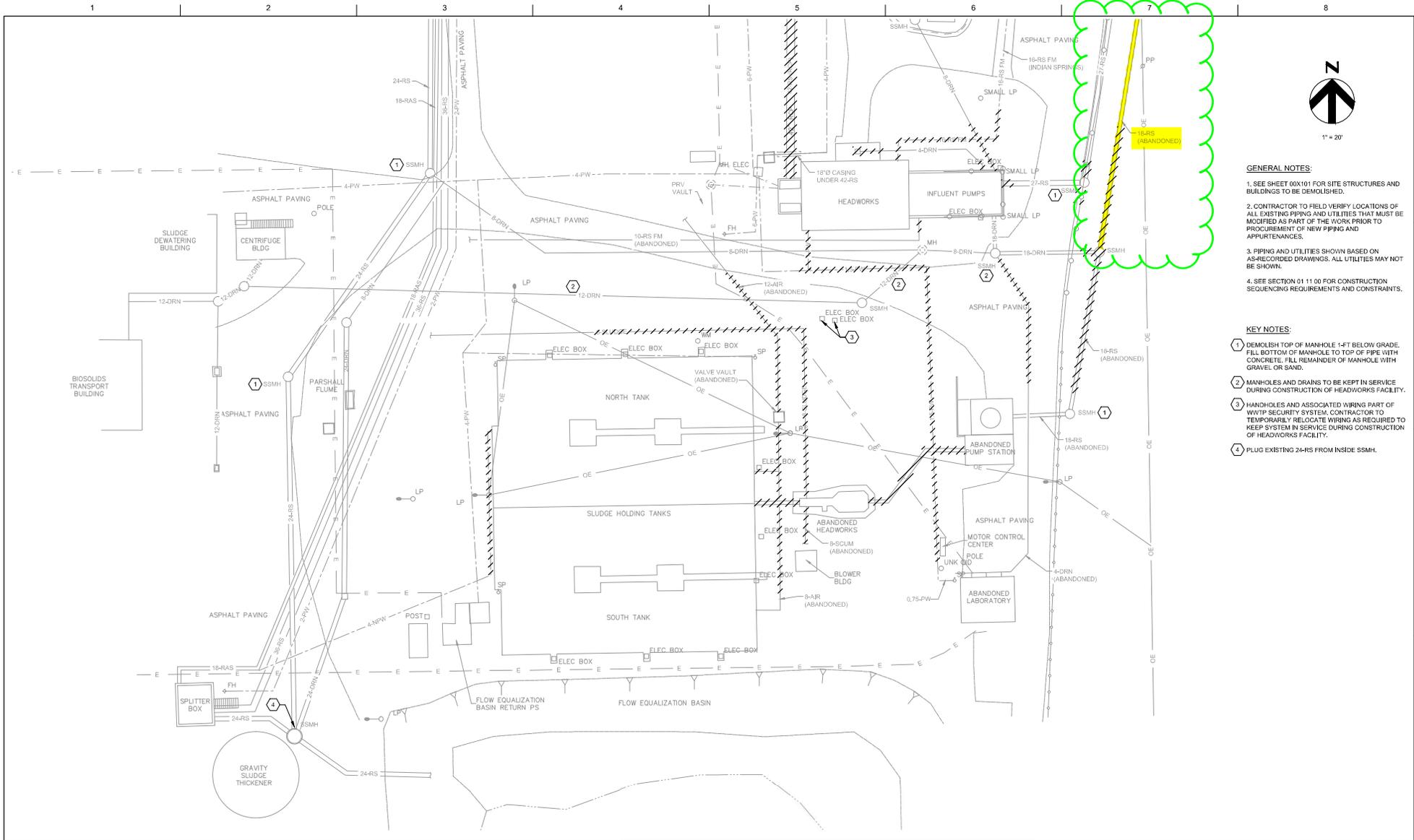
The following is an internal Request for Information between the Contractor and the Engineer (HDR).

The General Conditions specifies that once the Engineer provides a response to a Contractor's RFI, that determination shall be final and binding on the Contractor unless the Contractor delivers to the Owner written notice of a change in the work within a certain period of time of receipt of that determination. See the GCs for further clarification.

Information Requested	Date Required:
<p>The following information needs to be verified and/or clarified on the contract documents:</p> <p>Please see markups on attached Plan Sheets: 00C102 and 00C104, and provide directive to deal with Existing, In-Service 18"- RS Line to be abandoned, which will conflict with installation of New 60"- RS Line to be installed.</p> <p>Please advise.</p> <p>Requested by: Robby Rosencutter</p>	

Response:
<p>The Contractor proposed bypass approach (see attached) is approved.</p>
<p>Answered by: Todd Townsend Date Answered: October 10, 2018</p>

Will this request possibly create a change order:
 Yes (Deductive) No



1" = 20'

- GENERAL NOTES:**
1. SEE SHEET 00X101 FOR SITE STRUCTURES AND BUILDINGS TO BE DEMOLISHED.
 2. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING PIPING AND UTILITIES THAT MUST BE MODIFIED AS PART OF THE WORK PRIOR TO PROCUREMENT OF NEW PIPING AND APPURTENANCES.
 3. PIPING AND UTILITIES SHOWN BASED ON AS-RECORDED DRAWINGS. ALL UTILITIES MAY NOT BE SHOWN.
 4. SEE SECTION 01 11 00 FOR CONSTRUCTION SEQUENCING REQUIREMENTS AND CONSTRAINTS.

- KEY NOTES:**
- 1 DEMOLISH TOP OF MANHOLE 1-FT BELOW GRADE. FILL BOTTOM OF MANHOLE TO TOP OF PIPE WITH CONCRETE. FILL REMAINDER OF MANHOLE WITH GRAVEL OR SAND.
 - 2 MANHOLES AND DRAINS TO BE KEPT IN SERVICE DURING CONSTRUCTION OF HEADWORKS FACILITY.
 - 3 HANDHOLES AND ASSOCIATED WIRING PART OF WWTP SECURITY SYSTEM, CONTRACTOR TO TEMPORARILY RELOCATE WIRING AS REQUIRED TO KEEP SYSTEM IN SERVICE DURING CONSTRUCTION OF HEADWORKS FACILITY.
 - 4 PLUG EXISTING 24-RS FROM INSIDE SSMH.

BKL
 incorporated
 ENGINEERS | ARCHITECTS
 CA. 0049 (INCH) RENEWAL DATE: 6-30-2019
 CA. 00262 (FE) RENEWAL DATE: 6-30-2019

HDR
 HDR ENGINEERING, INC.
 CA. 1446 (PE)
 RENEWAL DATE: 6-30-2019

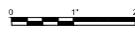
ISSUE	DATE	DESCRIPTION
0	12/21/2017	ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JOEL R. CANTWELL
CIVIL	T. TOWNSEND
STRUCTURAL	S. LOEFFLER
ARCHITECTURAL	K. REEVE
PROCESS	T. TOWNSEND
MECHANICAL	B. PERLBERG
PLUMBING	B. PERLBERG
ELECTRICAL	D. BESINGER
PROJECT NUMBER	10026444



**BROKEN ARROW
 MUNICIPAL AUTHORITY
 CITY OF BROKEN ARROW, OK**

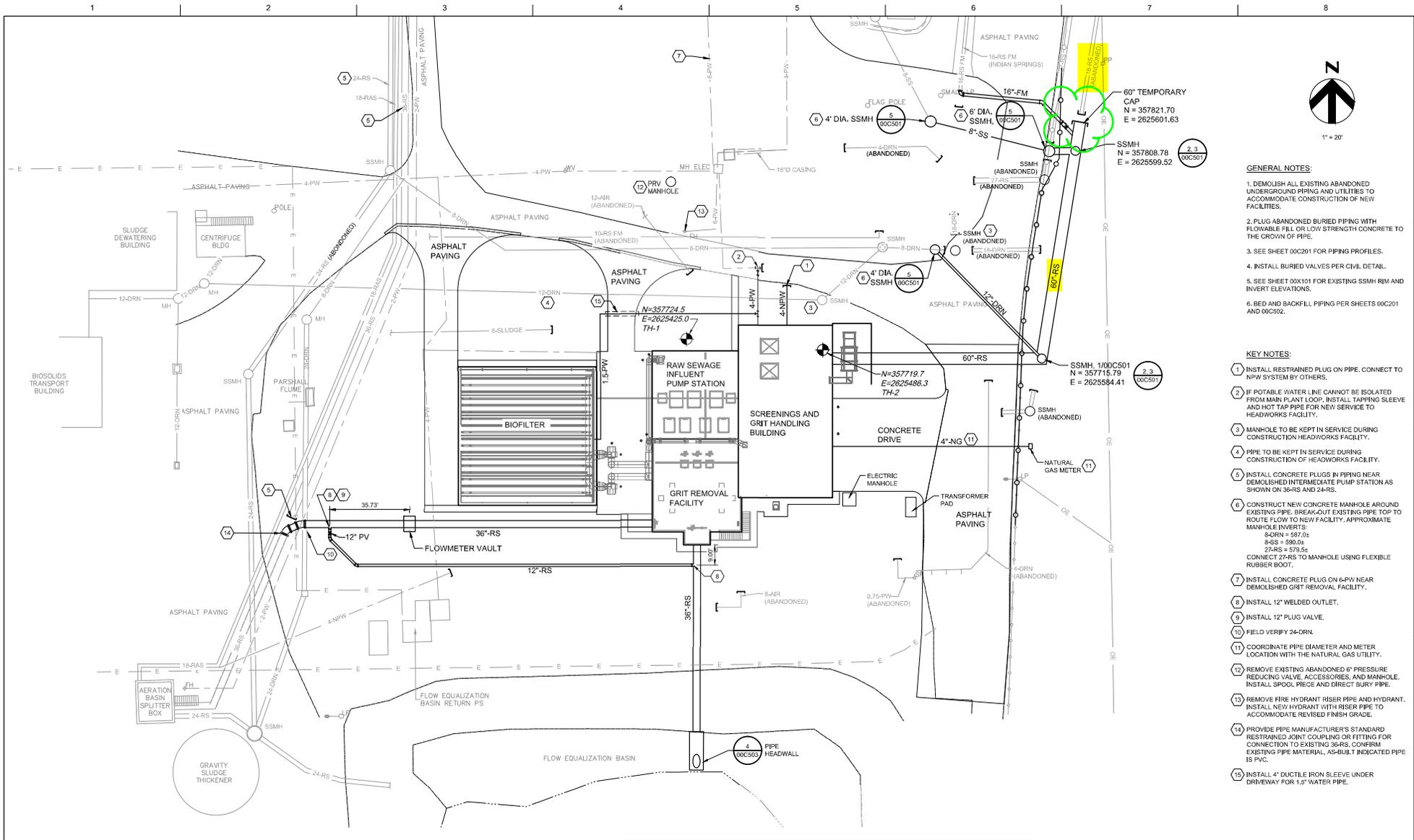
**LYNN LANE WWTP
 HEADWORKS IMPROVEMENTS**



FILENAME: 000210.dwg
 SCALE: 1" = 20'

SHEET
00C102

**GENERAL
 CIVIL
 EXISTING SITE PLAN AND YARD PIPING
 HEADWORKS AREA**



GENERAL NOTES:

1. DEMOLISH ALL EXISTING ABANDONED UNDERGROUND PIPING AND UTILITIES TO ACCOMMODATE CONSTRUCTION OF NEW FACILITIES.
2. PLUG ABANDONED BURIED PIPING WITH FLOWABLE FILL OR LOW STRENGTH CONCRETE TO THE CROWN OF PIPE.
3. SEE SHEET 00C201 FOR PIPING PROFILES.
4. INSTALL BURIED VALVES PER CIVIL DETAIL.
5. SEE SHEET 00X101 FOR EXISTING SSMH RIM AND INVERT ELEVATIONS.
6. BED AND BACKFILL PIPING PER SHEETS 00C201 AND 00C202.

KEY NOTES:

1. INSTALL RESTRAINED PLUG ON PIPE. CONNECT TO NPW SYSTEM BY OTHERS.
2. IF POTABLE WATER LINE CANNOT BE ISOLATED FROM MAIN PLANT LOOP, INSTALL TAPPING SLEEVE AND HOT TAP PIPE FOR NEW SERVICE TO HEADWORKS FACILITY.
3. MANHOLE TO BE KEPT IN SERVICE DURING CONSTRUCTION HEADWORKS FACILITY.
4. PIPE TO BE KEPT IN SERVICE DURING CONSTRUCTION OF HEADWORKS FACILITY.
5. INSTALL CONCRETE PLUGS IN PIPING NEAR DEMOLISHED INTERMEDIATE PUMP STATION AS SHOWN ON 36-RS AND 24-RS.
6. CONSTRUCT NEW CONCRETE MANHOLE AROUND EXISTING PIPE. BREAK-OUT EXISTING PIPE TOP TO ROUTE FLOW TO NEW FACILITY. APPROXIMATE MANHOLE INVERTS:
 8-DRN = 587.02
 8-RS = 590.03
 27-RS = 579.52
 CONNECT 27-RS TO MANHOLE USING FLEXIBLE RUBBER BOOT.
7. INSTALL CONCRETE PLUG ON 6-PW NEAR DEMOLISHED GRIT REMOVAL FACILITY.
8. INSTALL 12" WELDED OUTLET.
9. INSTALL 12" PLUG VALVE.
10. FIELD VERIFY 24-DRN.
11. COORDINATE PIPE DIAMETER AND METER LOCATION WITH THE NATURAL GAS UTILITY.
12. REMOVE EXISTING ABANDONED 6" PRESSURE REDUCING VALVE, ACCESSORIES, AND MANHOLE. INSTALL SPOOL PIECE AND DIRECT BURRY PIPE.
13. REMOVE FIRE HYDRANT RISER PIPE AND HYDRANT. INSTALL NEW HYDRANT WITH RISER PIPE TO ACCOMMODATE REVERSED FINISH GRADE.
14. PROVIDE PIPE MANUFACTURER'S STANDARD RESTRAINED JOINT COUPLING OR FITTING FOR CONNECTION TO EXISTING 36-RS. CONFIRM EXISTING PIPE MATERIAL, AS-BUILT INDICATED PIPE IS PVC.
15. INSTALL 4" DUCTILE IRON SLEEVE UNDER DRIVEWAY FOR 1.5" WATER PIPE.



ISSUE	DATE	DESCRIPTION
0	12/21/2017	ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JOEL R. CANTWELL
CIVIL	T. TOWNSEND
STRUCTURAL	S. LOEFFLER
ARCHITECTURAL	K. REEVE
PROCESS	T. TOWNSEND
MECHANICAL	B. PERLBERG
PLUMBING	B. PERLBERG
ELECTRICAL	D. BESINGER
PROJECT NUMBER	10026444



**BROKEN ARROW
MUNICIPAL AUTHORITY
CITY OF BROKEN ARROW, OK**

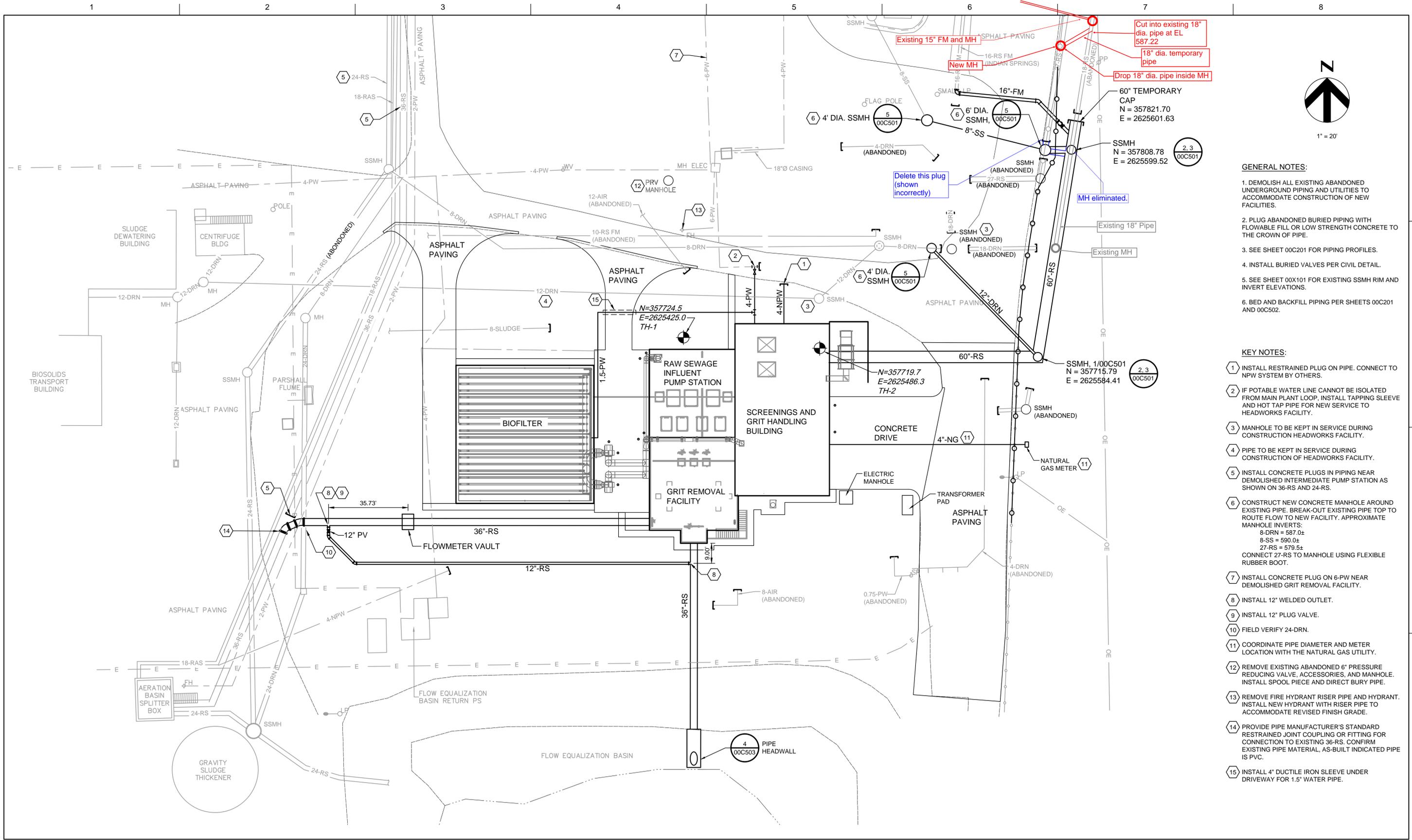
**LYNN LANE WWTW
HEADWORKS IMPROVEMENTS**



**GENERAL
CIVIL
YARD PIPING PLAN HEADWORKS AREA**

FILENAME: 00C104.dwg
SCALE: 1" = 20'

SHEET
00C104



- GENERAL NOTES:**
1. DEMOLISH ALL EXISTING ABANDONED UNDERGROUND PIPING AND UTILITIES TO ACCOMMODATE CONSTRUCTION OF NEW FACILITIES.
 2. PLUG ABANDONED BURIED PIPING WITH FLOWABLE FILL OR LOW STRENGTH CONCRETE TO THE CROWN OF PIPE.
 3. SEE SHEET 00C201 FOR PIPING PROFILES.
 4. INSTALL BURIED VALVES PER CIVIL DETAIL.
 5. SEE SHEET 00X101 FOR EXISTING SSMH RIM AND INVERT ELEVATIONS.
 6. BED AND BACKFILL PIPING PER SHEETS 00C201 AND 00C502.

- KEY NOTES:**
- 1 INSTALL RESTRAINED PLUG ON PIPE. CONNECT TO NPW SYSTEM BY OTHERS.
 - 2 IF POTABLE WATER LINE CANNOT BE ISOLATED FROM MAIN PLANT LOOP, INSTALL TAPPING SLEEVE AND HOT TAP PIPE FOR NEW SERVICE TO HEADWORKS FACILITY.
 - 3 MANHOLE TO BE KEPT IN SERVICE DURING CONSTRUCTION HEADWORKS FACILITY.
 - 4 PIPE TO BE KEPT IN SERVICE DURING CONSTRUCTION OF HEADWORKS FACILITY.
 - 5 INSTALL CONCRETE PLUGS IN PIPING NEAR DEMOLISHED INTERMEDIATE PUMP STATION AS SHOWN ON 36-RS AND 24-RS.
 - 6 CONSTRUCT NEW CONCRETE MANHOLE AROUND EXISTING PIPE. BREAK-OUT EXISTING PIPE TOP TO ROUTE FLOW TO NEW FACILITY. APPROXIMATE MANHOLE INVERTS:
8-DRN = 587.0±
8-SS = 590.0±
27-RS = 579.5±
CONNECT 27-RS TO MANHOLE USING FLEXIBLE RUBBER BOOT.
 - 7 INSTALL CONCRETE PLUG ON 6-PW NEAR DEMOLISHED GRIT REMOVAL FACILITY.
 - 8 INSTALL 12\"/>



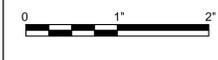
ISSUE	DATE	DESCRIPTION
0	12/21/2017	ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JOEL R. CANTWELL
CIVIL	T. TOWNSEND
STRUCTURAL	S. LOEFFLER
ARCHITECTURAL	K. REEVE
PROCESS	T. TOWNSEND
MECHANICAL	B. PERLBERG
PLUMBING	B. PERLBERG
ELECTRICAL	D. BESINGER
PROJECT NUMBER	10026444



**BROKEN ARROW
MUNICIPAL AUTHORITY
CITY OF BROKEN ARROW, OK**

**LYNN LANE WWTP
HEADWORKS IMPROVEMENTS**



**GENERAL
CIVIL
YARD PIPING PLAN HEADWORKS AREA**

FILENAME | 00C104.dwg
SCALE | 1" = 20'

SHEET
00C104

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