

Contract Change Order # 4

Project Name: <u>Aspen Creek Relief Line</u>	Project Number: <u>S1307</u>
Project Location: <u>Between 121st and 111th following Aspen Creek</u>	Date of Application: <u>Wednesday, February 15, 2017</u>
Contractor: <u>Triangle Construction LLC</u>	Submitted By: <u>Landi Blosser</u>

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:

- Per Plan Revision #1, due to a revision of the alignment of the sanitary sewer line to remove the proposed manhole out of the creek flow line, the contractor is to follow the attached plans. The new alignment requires installation of ductile iron pipe with fully restrained joints
- 1) from manhole 24 to manhole 25; the ductile iron pipe shall be coated with Protecto 401 ceramic epoxy lining. The below costs are inclusive of all materials, labor, and OH&P.

Change in Contractual Project Time:

- 1) No additional Time is Being Requested with This Change Order.

Plan Sheets or Additional Documents Attached: ☒ Yes ☐ No ☒ Other: Revision #1 Plans

Work Order Quantities

Item#	(Spec)	Item Description	Units	Price	Quantity	Total Amount
CO1-1	NA	16" Dia. Ductile Iron Pipe W/ Protecto 401	LF	\$ 189.00	280	\$ 52,920.00
CO1-2	NA	Restraint Joint Gasket	EA	\$ 13.00	550	\$ 7,150.00
CO1-3	NA	16"x14" DIP Reducers W/ Protecto 401	EA	\$ 790.00	2	\$ 1,580.00
Total Change Cost:						\$ 61,650.00

Summary of Project Costs

Total Previous Change Orders:	\$ 36,613.50	Original Contract Amount:	\$ 799,938.00
Current Change Order:	\$ 61,650.00	Amended Contract Amount:	\$ 898,201.50
Total Cost of Change Orders:	\$ 98,263.50	Percent Change in Contract:	12.28%
Total Cost Applicable to CBA:	\$ 98,263.50	Percent Change Applicable to CBA:	12.28%

Change Order Authorization

Change Order # <u>4</u> in the sum of: \$ <u>61,650.00</u>	has been reviewed by all parties and is recommended for approval by:		
Contractor Submitting Change Order:	Name	Signature	Date
Construction Division Manager:	<u>Timothy S Robins, PE</u>		
Director of Engineering & Construction:	<u>Alex Mills, PE</u>		
Assistant City Manager - Operations:	<u>Kenneth D Schwab, PE</u>		
City Manager:	<u>Michael Spurgeon</u>		

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, February 21, 2017



TRIANGLE CONSTRUCTION & UTILITY
2241 S. 49TH W. AVE
TULSA, OK 74107
PH: 918.933.4151
FX: 918.933.4155

JOB:

ASPEN CREEK RELIEF LINE

CONTRACT NO. S.1307

BID NO 16.164

OWNER:

CITY OF BROKEN ARROW

485 N. POPLAR

BROKEN, ARROW, OK 74012

CHANGE ORDER #4

2/13/2017

BETWEEN MH # 25 AND #24

280' OF 16" DIP WITH 401 LINING @189.00 PER LF

\$ 52,920.00

13 EA RESTRAINT JOINT GASKETS @ \$550.00 EACH

\$ 7,150.00

2EA 16" X 14" REDUCERS LINED ALSO @ \$790.00 EACH

\$ 1,580.00

TOTAL CHANGE ORDER \$ 61,650.00

A handwritten signature in blue ink, appearing to read "Landi Blosser", is positioned above a horizontal line.

LANDI BLOSSER

Submitted By



19711 E. 6th St. Tulsa, OK 74108

Product Submittal Form, Ductile Iron Pipe

Manufactured by U S Pipe/Griffin Pipe

Standards Applicable to Ductile Iron Pipe:

Thickness Design of Ductile Iron Pipe
Ductile Iron Pipe for Water and Other Liquids

ANSI/AWWA C150/A21.50
ANSI/AWWA C151/A21.51
Federal WWP421D, GRADE C
ANSI/ASTM A746

Ductile Iron Pipe for Gravity Flow Service
Ductile Iron Pipe Coatings & Linings
Asphaltic

ANSI/AWWA C151/A21.51
ANSI/AWWA C110/A21.10
ANSI/AWWA C153/A21.53
ANSI/AWWA C104/A21.4

Cement Lining

Protecto 401 Ceramic Epoxy Lined

Joints- Pipe

Push-on, Mechanical Joint & TR-Flex Restrained Joint

Snap-Lok

ANSI/AWWA C111/A21.11
Federal WWP421D

Submitted	Size	Thickness Class	Thickness	O. D.	Push-on	M.J.	TR-Flex/Snap-Lok
	4"	51	.26"	4.80"			
	6"	50/350	.25"	6.90"			
	6"	51	.28"	6.90"			
	6"	52	.31"	6.90"			
	6"	53	.34"	6.90"			
	8"	50/350	.27"	9.05"			
	8"	51	.30"	9.05"			
	8"	52	.33"	9.05"			
	8"	53	.36"	9.05"			
	10"	50/350	.29"	11.10"			
	10"	51	.32"	11.10"			
	12"	50/350	.31"	13.20"			
	12"	51	.34"	13.20"			
	14"	50	.33"	15.30"			
	14"	51	.36"	15.30"			
X	16"	50	.34"	17.40"	X		
	16"	51	.37"	17.40"			
	18"	50	.35"	19.50"			
	18"	51	.38"	19.50"			
	20"	50	.36"	21.60"			
	24"	50	.38"	25.80"			
	30"	50	.39"	32.00"			

APPROVED

X
TRIANGLE CONSTRUCTION CO.



**ROMAC
INDUSTRIES,
INC.**

1-800-426-9341
www.romac.com



Piranha Restraint Gasket™

Material Specifications

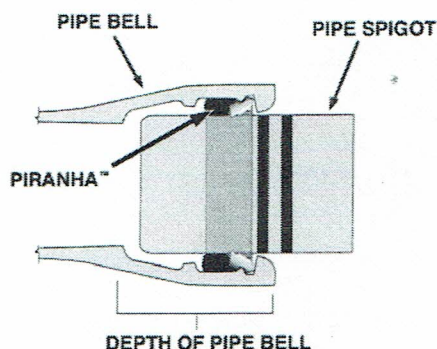
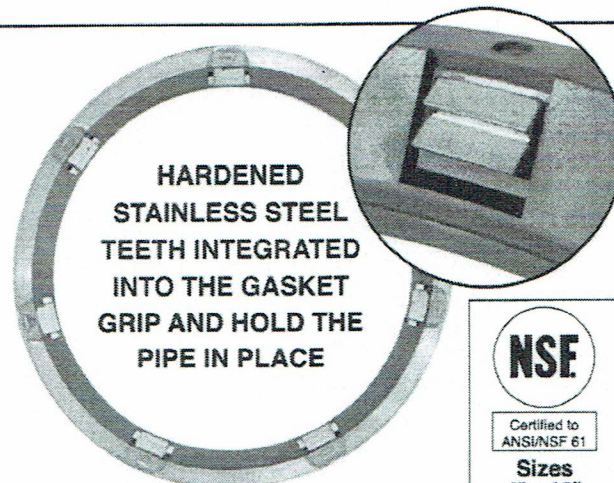
Rubber: 4 - 10 inch: Styrene Butadiene Rubber (SBR) in accordance with ASTM D2000 MBA 710. NSF61 Certified.

12 inch: Nitrile Butadiene Rubber (NBR), dual durometer 60/80 per ASTM D2000. NSF61 Certified.

14 - 24 inch: Dual durometer SBR per ASTM D 2000 MBA 610Z and MBA 810, compounded for water and sewer service. Meets ANSI/AWWA C111/A21.11-00. For other compounds, contact Romac Industries, Inc.

Teeth: Hardened Stainless Steel vulcanized into the rubber.

Use: For use only on Tyton® Ductile Iron Bell and Spigot Push-On Joints. Not for use with PVC pipe.



- **DUAL FUNCTION GASKET.**

Simultaneously seals and restrains Tyton Joint® ductile iron pipe, valves and fittings.

- **SIMPLE INSTALLATION.**

No threaded fasteners to torque.

- **MADE IN THE U.S.A.**

Go to www.romac.com, or contact Romac customer service for complete installation instructions.

NOM. PIPE SIZE	CATALOG NUMBER	PIPE OD	DEPTH OF BELL	WORKING PRESSURE (PSI)	MAX JOINT DEFLECTION (degrees)	LIST PRICE	WEIGHT (lbs.)
4"	PIRANHA - 0480	4.80	3.15	350	5	\$66.88	0.4 #
6"	PIRANHA - 0690	6.90	3.38	350	5	95.74	0.6 #
8"	PIRANHA - 0905	9.05	3.69	350	5	127.93	1.0 #
10"	PIRANHA - 1110	11.10	3.75	350	5	183.43	1.4 #
12"	PIRANHA - 1320	13.20	3.75	350	5	210.07	1.7 #
14"	PIRANHA - 1530	15.30	5.00	350	4	430.96	3.9 #
16"	PIRANHA - 1740	17.40	5.00	350	4	499.78	4.4 #
18"	PIRANHA - 1950	19.50	5.00	350	4	605.23	5.1 #
20"	PIRANHA - 2160	21.60	5.50	350	2.5	705.13	5.7 #
24"	PIRANHA - 2580	25.80	5.95	350	2.5	998.17	6.4 #

To Order Piranha™ Restraint Gasket: Specify Piranha™ catalog number [shaded number in table above].

*TYTON® and TYTON JOINT® are registered trademarks of the United States Pipe and Foundry, LLC which has no affiliation with Romac Industries, Inc. United States Pipe and Foundry Company, LLC does not manufacture, or endorse the Piranha Gasket.



Piranha™ is not recommended for above ground use.

APPROVED

x

TRIANGLE CONSTRUCTION CO.

7-19

ROMAC INDUSTRIES, INC.
PIRANHA RESTRAINING GASKET
14 THROUGH 24 INCH
SUBMITTAL INFORMATION

USE

The Romac PIRANHA restraining gasket is to be used with *Tyton® Joint bell configuration on ductile iron pipe, valves, fittings, and fire hydrants, in water and sewer transmission lines also fire protection lines. Not to be used on PVC pipe or HDPE.

Note: Some initial axial movement may occur in PIRANHA style restraints as the teeth seat. Movement is directly related to the size of the piping system and the system pressure. In general terms movement of up to 0.50 can be expected. If this is critical to your application please contact Romac Engineering for additional information.

MATERIALS

Gaskets	Dual durometer Styrene Butadiene Rubber (SBR) in accordance with ASTM D2000 MBA 610Z and MBA 810, compounded for water and sewer service. Meets ANSI/AWWA C111/A21.11-00.
Restraining Teeth	Hardened 400 Series Stainless Steel.
Performance	Meets the requirements of ANSI/AWWA C111/A21.11-00
Pressure	When installed properly may be used at 350 psi working pressure.
Sizes	See catalog.

*Tyton® and Tyton Joint® are registered trademarks of United States Pipe and Foundry Company, LLC, which has no affiliation with Romac Industries, Inc. United States Pipe and Foundry Company, LLC does not manufacture certify or endorse the Piranha gasket.

Document Number 02-8-0007

7/15

This information is based on the best data available at the date printed above, please check with Romac Engineering Department for any updates or changes.

Phone (425) 951 6200 • Toll Free 800 426 9341 • Fax (425) 951 6201 • www.romac.com

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TRIANGLE CONSTRUCTION CO.

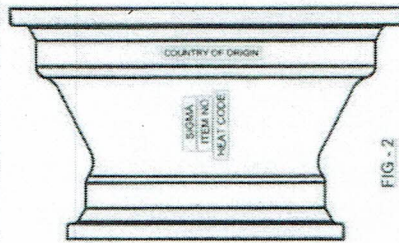


FIG - 2

SIZES 146 to 2420

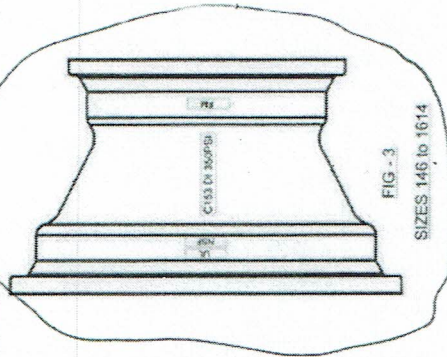


FIG - 3

SIZES 146 to 1614

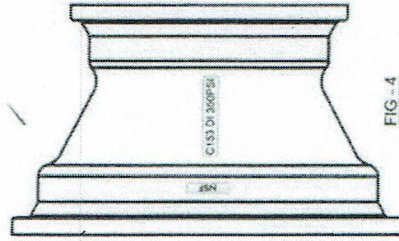


FIG - 4

SIZES 188 to 2420

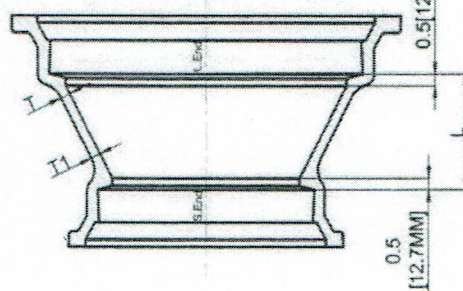


FIG - 1

SIZES 146 to 1816

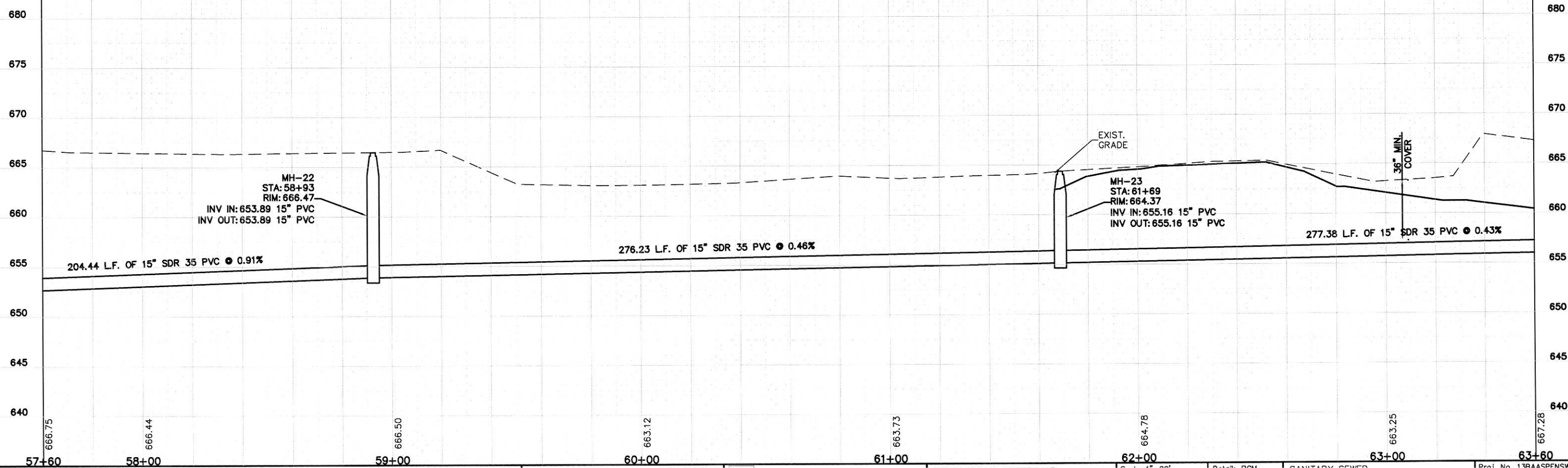
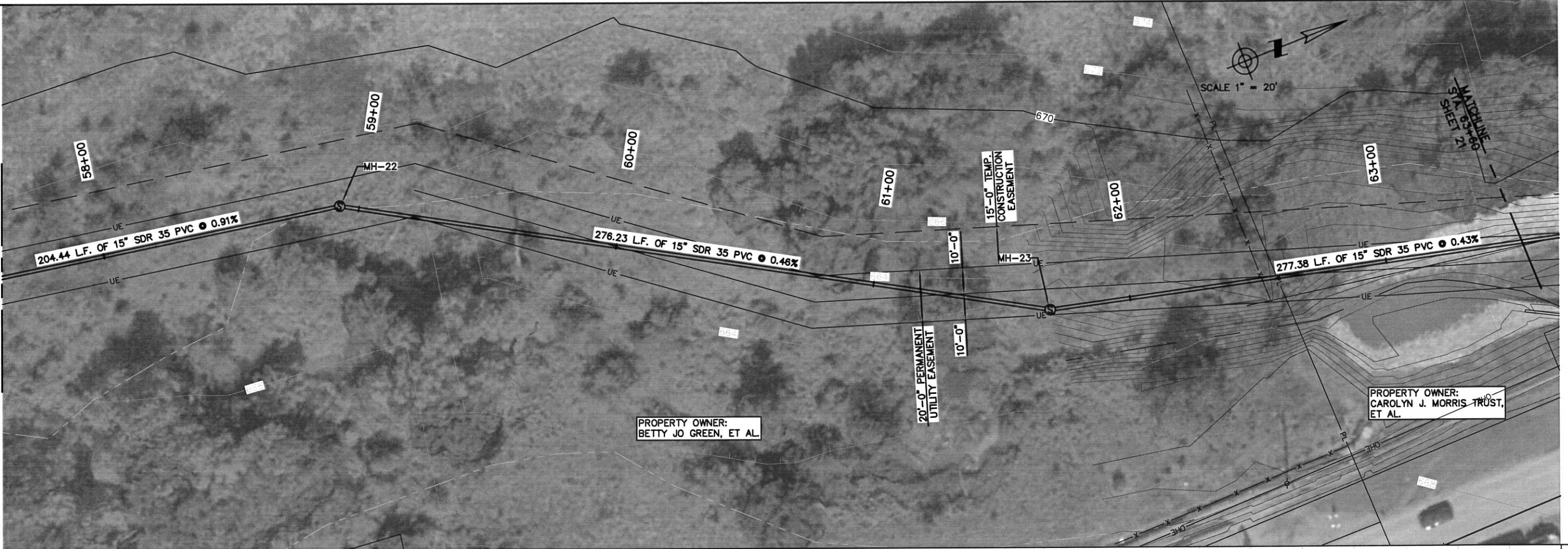
NOTES:-

1. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
2. The drawing design is as per ANSI/AWWA C153/A21.53-00
3. Pressure Rating:- 350psi.
4. For Fitting Bell dimensions refer to Drg. No:- DMJB - 3 - 12 & DMJB - 14 - 24
5. For Cast Marks & size refer to Drg No:- DMJC - 14 - 24.
6. Cement-Mortar Lining thickness as per ANSI/AWWA C104/A21.4-03
7. Refer Sigma QIP Doc. No: QA/SIG/MJF for manufacturing and inspection procedure.

Rev	Date	Revision Record	Prepared by	Approved by	TOLERANCES UNLESS OTHERWISE SPECIFIED	Product Group	Product Description	DATE	DRAWING FOR	CHECKED BY	APPROVED BY
01	06-16-2005	Re-Organization of the existing drawing	KPI	SRI	CAST: 0'-1" ±0.04" 0-25mm ±1mm 1'-4" ±0.06" 25-100mm ±1.5mm 4'-16" ±0.09" 100-400mm ±2.3mm 18'-30" ±0.11" 457-762mm ±2.8mm 36'-60" ±0.13" 914-1524mm ±3.3mm	Ductile Iron Fittings	Product Description- C153 Mechanical Joint Reducer Fitting & Cast Marks - DMR146-2420 Dimensions	06-16-2005	PRODUCTION	DG2/RM2	SR1
RADIUS: ±0.00, MACHINED: XX±0.15						DMR146-2420	01	NTS	1 OF 2		
<div>DRAWING RELEASED FOR PATTERN PRODUCTION DATE: 10-05-2005 SHEETWASH [Signature]</div>											
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MATCHLINE - STA. 57+60, SHEET 19



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905-A S. 9TH ST. - BROKEN ARROW, OKLAHOMA - 918/251-0717

ASPEN CREEK RELIEF LINE
BROKEN ARROW, OKLAHOMA

Scale: 1"=20'
Date: 2014

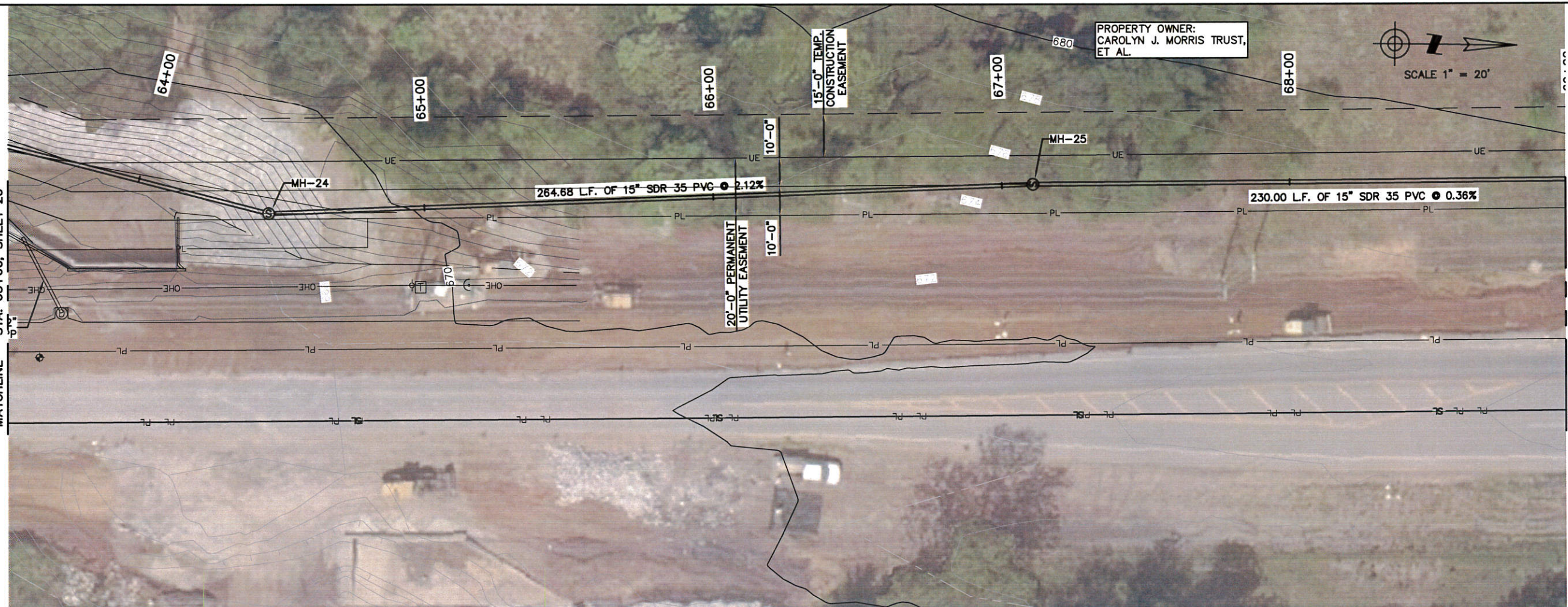
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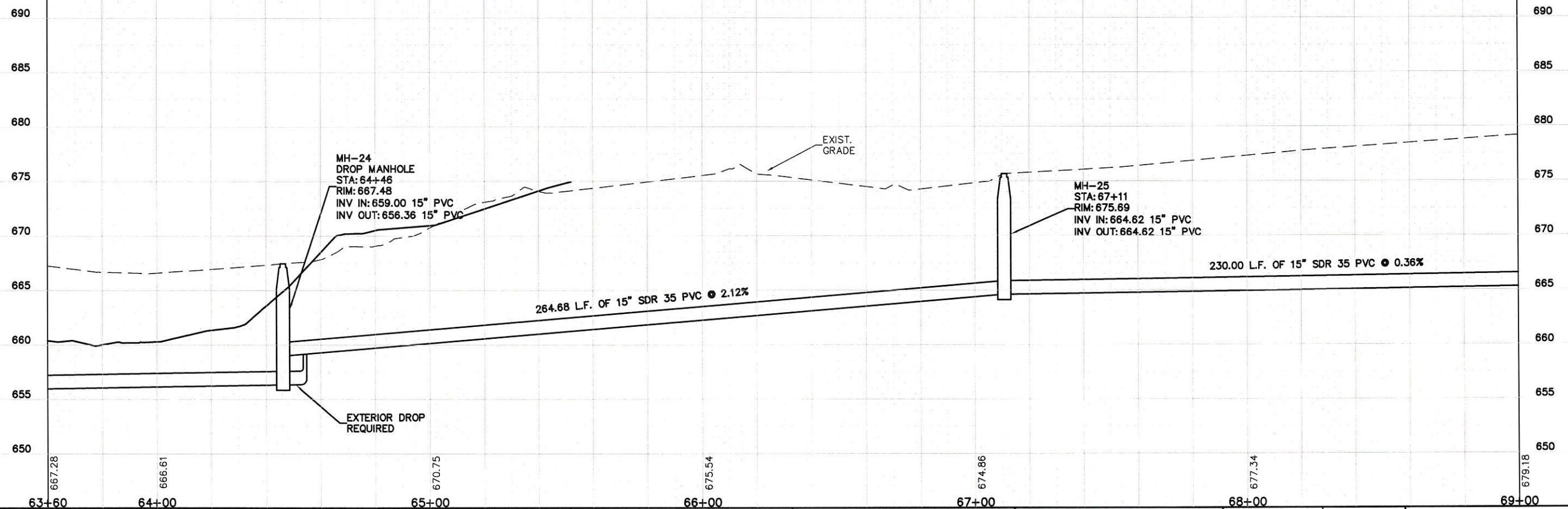
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Sht. No. 20

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MATCHLINE - STA. 63+60, SHEET 20



MATCHLINE - STA. 69+00, SHEET 22



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ASPEN CREEK RELIEF LINE
BROKEN ARROW, OKLAHOMA

Scale: 1"=20'
Date: 2014

Detail: PGM
Check: LST

SANITARY SEWER
PLAN & PROFILE

Proj. No. 13BAASPENSWR
Sht. No. 21