

May 9, 2019

Mercy Rushing
Mineola City Hall
300 Greenville Highway
Mineola, TX 75773

via email

**RE: City of Mineola
Utility Infrastructure Improvements for Sanderson Farms
KSA Project No. MN.160
Contract Work Acceptance**

Dear Mercy:

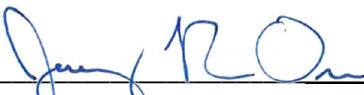
The Contractor has completed all work for the above referenced project. KSA has reviewed the work and has verified the work's for conformance to the Contract requirements. To close out the City's contract with Duplichain Contractors, LLC. of Alto, Texas. The following actions are recommended:

- Approval of Change Order No. 2 (Reconciliatory) - This change order reduces the total contract price by \$13,260.00.
- Approval of Contractor's final pay estimate with retainage reduced to 0%. The final payment amount is \$58,971.59. The final contract amount for the completed project is \$589,715.90.
- Approval of the Certificate of Construction Completion.

Please return executed copies of the change order, final pay estimate, and Certificate of Construction Completion so we can forward these documents to the grant administrator. Enclosed for your records is a copy of the Contractor's affidavit for the project and Record Drawings.

Sincerely,

KSA Engineers, Inc.



Jeremy R. Ori, P.E.
Project Manager

JRO/ss

Enclosures



Construction Contract Change Order

A505

Grant Recipient: City of Mineola Select: City County
 Contract No.: 7217052 Change Order No.: 2 Region: ETCOG

Contractor:

Duplichain Contractors, Inc.
 100 Elkhart St.
 Alto, TX 75925

Engineer:

KSA Engineers, Inc.
 6871 Oak Hill Blvd.
 Tyler, TX 75703

Select Change Order Type(s): Change to Existing Line Items New Items Requested Change in Contract Duration

Grant recipient is requesting Texas Department of Agriculture review to determine eligibility of change order expenses.

Changes to Existing Line Items (Items from original bid or added in previous change order ONLY)

Bid Item #	Item Description	Original Qty.	Proposed Qty.	UOM	Unit Price	Δ Qty.	Change in Contract Price	
1.08	Filter Fabric Fence	1,360	0	LF	\$3.50	-1,360	(\$4,760.00)	+
1.10	Foundation Material for Trench	302	14	CY	\$10.00	-288	(\$2,880.00)	-
2.03	Temporary Bypass Pumping	1	0	LS	\$1,000.00	-1	(\$1,000.00)	-
2.09	18-in PS 115 PVC Gravity Sewer	14	0	LF	\$330.00	-14	(\$4,620.00)	-
Contract Change Sub-Total:							(\$13,260.00)	

Justification for Change

	Increase	Decrease	No Change
1. Effect of this change on scope of work:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Effect on operation and maintenance costs:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Yes	No	Not Applicable
3. Will this Change Order change the number of beneficiaries or TxCDBG contract Performance Statement Exhibit A?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Has this change created new circumstances or environmental conditions which may affect the project's impact, such as concealed or unexpected conditions discovered during actual construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is the TCEQ clearance still valid?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are other TxCDBG contractual special condition clearances still valid?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If new items are included that were not included in the competitive bid, have the prices been determined to be reasonable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Change Order Summary

Original Contract Price:	<input type="text" value="\$605,975.90"/>	Original Contract End Date:	<input type="text"/>
Net Previous Change Order(s):	<input type="text" value="\$0.00"/>	Net change of previous Change Orders (days):	<input type="text"/>
This Net Change Order:	<input type="text" value="(\$13,260.00)"/>	Increase/Decrease of this Change Order (days):	<input type="text"/>
New Contract Price:	<input type="text" value="\$592,715.90"/>	Change Order Contract End Date	<input type="text"/>
Cumulative % Change:	<input type="text" value="-2.188%"/>		


NOTE: Change orders for an increase of more than 25% will be rejected. The State of Texas considers a change in the construction contract price of greater than 25% to be non-competitive, as other potential bidders did not have the opportunity to bid on the true scope of the project during the procurement process. Grant Recipient must rebid project in the event of an increase of 25% or more.

Grant Recipient Approval (REQUIRED)

<input type="text"/>	<input type="text"/>
Authorized Signature	Date

Authorized Signatory's Name and Title

Engineer's Recommendation

 Engineer's Signature	<input type="text" value="5/6/2019"/> Date
---	---

Engineer's Name

Contractor's Authorization

 Contractor's Signature	<input type="text" value="5/6/19"/> Date
---	---

Contractor's Name and Title

To receive an email copy of the TDA response, provide contact information below

Name	Email	
<input type="text"/>	<input type="text"/>	+
<input type="text"/>	<input type="text"/>	-

For TDA office use only

This Net Change Order:	<input type="text" value="(\$13,260.00)"/>	Increase/decrease of this Change Order (days):	<input type="text"/>
Net Change Order Approved:	<input type="text"/>	Increase/decrease of this Change Order Approved:	<input type="text"/>
Approved Contract Amount:	<input type="text"/>	Approved Contract Time:	<input type="text"/>

Notes:

<input type="text"/>	<input type="text"/>
Contract Specialist Signature	Date

Director Signature (optional)	Date

Grant Recipient: City of Mineola

Contract No.: 7217052

Change Order No.: 2

This form required as of September 1, 2016.
All previous versions no longer valid.

PROGRESS ESTIMATE

**KSA
6781 OAK HILL BLVD.
TYLER, TX 75703**

Estimate No.: 7

Date: January 15, 2019

Project: Utility Infrastructure for Sanderson Farms

Period: From: 7/25/18 To: 4/12/19

Contractor: Duplichain Contractors, LLC

Address: 100 Elkhart, Alto, TX 75925

Amount of Contract as Awarded: \$605,975.90

Notice to Proceed Date: March 9, 2018

Contract Time: 150 Days

% Complete (Time) 208%

% Complete (\$) 100%

Project No: MN.160

PREVIOUS PAYMENTS AUTHORIZED

#1	152,718.70	#10	
#2	98,226.04	#11	
#3	75,902.77	#12	
#4	50,134.50	#13	
#5	135,124.20	#14	
#6	18,638.10	#15	
#7		#16	
#8		#17	
#9		#18	

Change Orders:

# 1 \$	(3,000.00)	# 6 \$	
# 2 \$	(13,260.00)	# 7 \$	
# 3 \$		# 8 \$	
# 4 \$		# 9 \$	
# 5 \$		#10 \$	

Total Change Orders: (\$16,260.00)

Total Adjusted Contract: \$589,715.90

Total Payments Previously Authorized: \$530,744.31

Item No.	Description	Unit of Meas.	Quantity Original Estimate	Previous Month's Quantity	Current Month's Quantity	Quantity Completed To Date	Unit Price (\$)	Value of Completed Work (\$)
Schedule 1.0 - General Conditions								
1.01	Mobilization, Insurance, and Bonds	LS	1	1.00		1.00	\$25,400.00	25,400.00
1.02	Project Sign	EA	1	1.00		1.00	\$500.00	500.00
1.03	Barricades, Signs, and Traffic Handling	LS	1	1.00		1.00	\$500.00	500.00
1.04	Stormwater Pollution Prevention	LS	1	1.00		1.00	\$1,500.00	1,500.00
1.05	Care of Water during Construction	LS	1	1.00		1.00	\$500.00	500.00
1.06	Hydromulch	AC	2.40	2.40		2.40	\$2,880.00	6,912.00
1.07	Erosion Control Matting	SY	1,510	1510.00		1,510.00	\$2.00	3,020.00
1.08	Filter Fabric Fence	LF	**0	0.00		0.00	\$3.50	0.00
1.09	Clearing and Grubbing	AC	0.80	0.80		0.80	\$4,000.00	3,200.00
1.10	Foundation Material for Trench	CY	**14	14.00		14.00	\$10.00	140.00
1.11	Excavation Safety	LS	1	1.00		1.00	\$5,000.00	5,000.00
1.12	Trench Safety	LF	*6,365	6365.00		6,365.00	\$1.00	6,365.00
Schedule 2.0 - Gravity Sewer Line, Force Main, and Lift Station								
2.01	Gravity Sewer Line and Manhole Testing	LS	1	1.00		1.00	\$2,500.00	2,500.00
2.02	Force Main Testing	LS	1	1.00		1.00	\$1,500.00	1,500.00
2.03	Temporary Bypass Pumping	LS	**0	0.00		0.00	\$1,000.00	0.00
2.04	4-in SDR 21 PVC Force Main	LF	1,374	1374.00		1,374.00	\$7.60	10,442.40
2.05	4-in Restrained Joint SDR 21 PVC Force Main by Directional Drill	LF	490	490.00		490.00	\$24.00	11,760.00
2.06	10-in Steel Encasement with Pipe Supports by Open Cut	LF	40	40.00		40.00	\$105.00	4,200.00
2.07	14-in Steel Encasement by Dry Bore	LF	*0	0.00		0.00	\$155.00	0.00
2.08	Combination Air Valve Assembly	EA	2	2.00		2.00	\$3,600.00	7,200.00
2.09	18-in PS 115 PVC Gravity Sewer Line	LF	**0	0.00		0.00	\$330.00	0.00
2.10	8-in SDR 26 PVC Gravity Sewer Line	LF	*252	252.00		252.00	\$44.00	11,088.00
2.11	Connect to Existing Sewer	EA	1	1.00		1.00	\$1,000.00	1,000.00
2.12	48-in Diameter Manhole	EA	4	4.00		4.00	\$4,920.00	19,680.00
2.13	60-in Diameter Manhole	EA	1	1.00		1.00	\$7,000.00	7,000.00
2.14	Sanitary Sewer Lift Station	LS	1	1.00		1.00	\$83,950.00	83,950.00
2.15	Electrical Power Service	LS	1	1.00		1.00	\$15,000.00	15,000.00
2.16	Electrical and Controls	LS	1	1.00		1.00	\$36,800.00	36,800.00
2.17	Rock and Filter Fabric for Lift Station Site	SY	85	85.00		85.00	\$25.00	2,125.00
2.18	Intruder Resistant Chainlink Fence	LF	120	120.00		120.00	\$30.00	3,600.00
2.19	12-ft Intruder Resistant Chainlink Fence Gate	EA	1	1.00		1.00	\$1,200.00	1,200.00
2.20	Barbed Wire Fence Repair	LF	35	35.00		35.00	\$10.00	350.00
2.21	All Weather Access Road	SY	90	90.00		90.00	\$25.00	2,250.00
2.22	30-in Class III RCP	LF	36	36.00		36.00	\$110.00	3,960.00
2.23	30-in 6:1 Safety End Treatment	EA	2	2.00		2.00	\$1,850.00	3,700.00
*2.24	8-in RJ Sewer Line by Directional	LF	420	420.00		420.00	\$60.00	25,200.00

Item No.	Description	Unit of Meas.	Quantity Original Estimate	Previous Month's Quantity	Current Month's Quantity	Quantity Completed To Date	Unit Price (\$)	Value of Completed Work (\$)
Schedule 3.0 - 12-Inch Water Line								
4.01	Water Line Disinfection and Testing	LS	1	1.00		1.00	\$2,000.00	2,000.00
4.02	12-in C900 Water Line	LF	4,829	4829.00		4,829.00	\$26.50	127,968.50
4.03	12-in Restrained Joint C900 PVC Water Line By Directional Drill	LF	771	771.00		771.00	\$95.00	73,245.00
4.04	12-in Gate Valve Assembly	EA	8	8.00		8.00	\$2,620.00	20,960.00
4.05	Fire Hydrant Assembly	EA	7	7.00		7.00	\$4,000.00	28,000.00
4.06	Connect to Existing Water Line	EA	1	1.00		1.00	\$4,000.00	4,000.00
4.07	20-in Steel Encasement by Dry Bore	LF	80	80.00		80.00	\$210.00	16,800.00
4.08	20-in Steel Encasement with Pipe Supports by Open Cut	LF	60	60.00		60.00	\$150.00	9,000.00
4.09	Barbed Wire Fence Repair	LF	20	20.00		20.00	\$10.00	200.00

*Per Change Order No. 1 **Per Change Order No. 2

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Engineer represents to the Owner that to the best of the Engineer's knowledge, information and belief, the Work (excluding trench safety) has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the **AMOUNT PAYABLE**. The Contractor is solely responsible for trench safety and as such, the Engineer makes no representation that this pay item has been performed in a manner consistent with the Contract Documents.

By		Total Amount to Date	\$589,715.90
Date	5-6-2019	Material on Hand	\$0.00
Approved:	CITY OF MINEOLA	Less 0% Retainage	\$0.00
By		Net Total	\$589,715.90
Date		Less Previous Payments	\$530,744.31
		Amount Payable to Contractor This Estimate	\$58,971.59

A709

Certificate of Construction Completion (COCC)

(Submit one for each Prime Construction Contract)

Grant Recipient: City of Mineola

TxCDBG Contract No: 7217052

This is to certify that a final inspection of the project described below was conducted on the 12th day of April, 2019. Contract was entered into on the 3rd day of January, 2018 between the city/county of Mineola and Duplichain Contractors, LLC, for the construction of Utility Infrastructure Improvements for Sanderson Farms.

This is to further certify that:

1. The work has been completed in accordance with the plans and specifications and all amendments, change orders and supplemental agreements thereto.

2. The sum of \$ _____, has been deducted from the final payment to the Contractor in accordance with any contract liquidated damages requirements, separate from any liquidated damages resulting from Davis-Bacon compliance.

3. All programmatic requirements have been met, all claims and disputes have been settled, all warranties have been received, and all liens have been released.

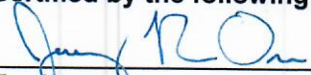
4. The Contractor has presented on behalf of itself and its sureties, satisfactory evidence that he or she will repair, replace and rectify any faulty workmanship and/or materials discovered in the work within a period of 12 months from this date, as provided in the Contract.

5. All bills for materials, apparatus, fixtures, machinery, labor, and equipment used in connection with the construction of this project have been fully paid.

6.	Amount of Original Contract	\$	605,975.90
	Cumulative Change Orders	\$	16,260.00
	Final Amount of Contract	\$	589,715.90
	Less Previous Payments	\$	530,744.31
	Less Deductions (from #2 above)	\$	
	FINAL PAYMENT (Balance)	\$	58,971.59

7. The Final Payment above is now due and payable.

Certified by the following Engineer, Contractor, and Chief Elected Official/Designee:



Engineer
Project Manager
Title
KSA Engineers, Inc.
Firm

Chief Elected Official/Designee

Title

City / County



Contractor
Vice President
Title
Duplichain Contractors
Firm



100 Elkhart St./P. O. Box 637
Alto, Texas 75925
(936) 858-4100 * (936) 858-4789-Fax
jasond@consolidated.net

LETTER OF TRANSMITTAL
Date: January 14, 2019
Attention: Christina Boykin
RE: <u>CITY OF MINEOLA</u> Utility Infrastructure Improvements for Sanderson Farms TCF Contract No. 7217052

To: KSA Engineers, Inc.
6781 Oak Hill Blvd.
Tyler, TX 75703

WE ARE SENDING YOU 1 PDF OF THE FOLLOWING:

- | | | |
|--|---|---|
| <input type="checkbox"/> Pay Estimate | <input type="checkbox"/> O & M Manual | <input checked="" type="checkbox"/> Affidavit of Bills Paid |
| <input type="checkbox"/> Transmittal | <input type="checkbox"/> As-Built Plans | <input checked="" type="checkbox"/> Release of Lien Form |
| <input type="checkbox"/> Notice of Award | <input type="checkbox"/> Certificate of Insurance | <input type="checkbox"/> Submittal Data |

THESE ARE TRANSMITTED AS CHECKED BELOW:

- | | |
|--|--|
| <input type="checkbox"/> For Approval | <input type="checkbox"/> Approved as Submitted |
| <input checked="" type="checkbox"/> For Your Use | <input type="checkbox"/> Approved as Noted |
| <input type="checkbox"/> As Requested | <input type="checkbox"/> Returned for Correction |
| <input type="checkbox"/> For Review & Comment | <input type="checkbox"/> Price Quote |
| <input type="checkbox"/> For Your Files | <input type="checkbox"/> Bid Date _____ |
| <input type="checkbox"/> Other _____ | |

REMARKS: CLOSING DOCUMENTS to KSA Engineers for the City of Mineola: Utility Infrastructure Improvements for Sanderson Farms - TCF Contract No. 7217052 project.

DUPLICHA IN CONTRACTORS, LLC

FROM: Jason Duplichain
Vice President

DATE: January 14, 2019

CC File

STATE OF TEXAS

COUNTY OF CHEROKEE

AFFIDAVIT

THAT I, the undersigned, being duly sworn, say that I was the Contractor for the performance of certain work entered into the 3rd day of January , 2018, between THE CITY OF MINEOLA, TEXAS, and DUPLICHAIR CONTRACTORS, LLC for construction of the City of Mineola: Utility Infrastructure Improvements for Sanderson Farms - TCF Contract No. 7217052.

KNOW ALL MEN BY THESE PRESENTS:

1. The undersigned hereby certifies the improvements on the aforementioned project have been fully and satisfactorily completed in conformity with the contract.
2. The undersigned further certifies that there are no claims of laborers or mechanics for unpaid wages arising out of the performance of said contract and that the wage rates paid by Contractor and all Subcontractors were in conformity with the contract provisions relating to said wage rates.
3. The undersigned further certifies that there are no claims of subcontractors or materials suppliers for unpaid bills for labor or materials and supplies furnished in the course of the contract.

CERTIFIED TRUE AND CORRECT

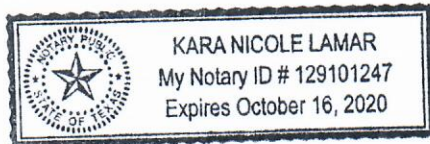
Jason Duplichain
DUPLICHAIR CONTRACTORS, LLC

STATE OF TEXAS

COUNTY OF CHEROKEE

BEFORE me, the undersigned, a Notary Public in and for said County and State, on this day personally appeared JASON DUPLICHAIR, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand this 14th day of January, A.D., 2019.



Kara Lamar
Notary Public in and for CHEROKEE
COUNTY, TEXAS

RELEASE OF LIEN FORM

GENERAL CONTRACTOR'S AFFIDAVIT, WARRANTY, AND LIEN WAIVER

STATE OF TEXAS
COUNTY OF CHEROKEE

THAT I, the undersigned, being duly sworn, do depose and say that I was contracted to construct, alter, and/or repair the public facilities improvements identified in Construction Contracts Document entitled: City of Mineola: Utility Infrastructure Improvements for Sanderson Farms - TCF Contract No. 7217052 .

THAT these improvements have been fully and satisfactorily completed in substantial conformity with the contract.

THAT all the materials used in said improvement, all labor performed thereon and all fees, insurance, and permits, in connection with the said improvements which might give rise to liens have been paid in full.

Listed below are all subcontractors and major materialmen included in this work. Attached are waivers of liens from all of them as substantiation of the above statement.

NAME OF SUBCONTRACTOR OR MATERIALMEN AND ADDRESS

Table with 2 columns: NAME and ADDRESS. Rows include Core & Main Waterworks, Electro-Mec, Inc., and DXP/York Pump & Equipment.

THAT I hereby waive any lien or right to lien which he/she may have against the described improvements and warrants to save harmless the CITY OF MINEOLA, TEXAS from any liens which are now in existence, or may hereafter arise by reason of said improvements, and cause the same to be released of accord immediately.

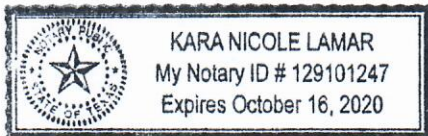
THAT the foregoing waiver and these statements are an express warranty and representation to the CITY OF MINEOLA, TEXAS of the facts herein sworn to and is made for valuable consideration, receipt whereof is acknowledged.

DUPLICHAIR CONTRACTORS, LLC

Signature of Jason Duplichain, Vice President

SUBSCRIBED AND SWORN to before me this 14th day of January, 2019.

Signature of Kara Lamar, Notary Public, State of Texas. My Commission expires: October 16, 2020



CITY OF MINEOLA, TEXAS UTILITY INFRASTRUCTURE IMPROVEMENTS FOR SANDERSON FARMS

MAYOR

KEVIN WHITE

CITY COUNCIL

SUE JONES
POLLY JONES
JACK NEWMAN
JAYNE LANKFORD
NOVADA BIGHAM
MITCHELL TUCK

CITY ADMINISTRATOR /

EXECUTIVE DIRECTOR

ECONOMIC DEVELOPMENT

CORPORATION

MERCY RUSHING, PCED, CTE

DIRECTOR OF PUBLIC WORKS

WILLIAM CRUMP

PREPARED BY:

KSA

WALTER F. HICKS, III, P.E.

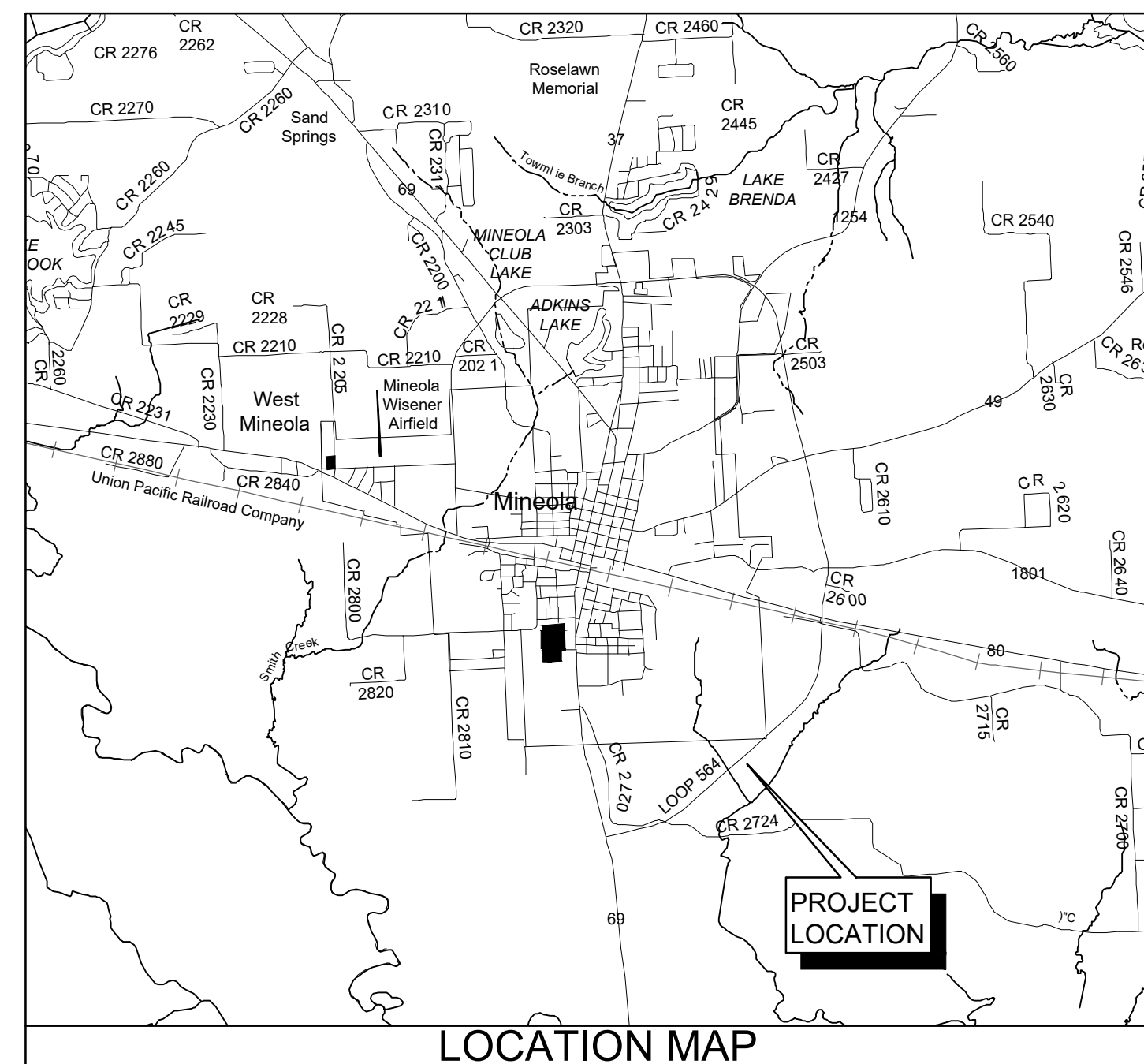
DATE

VICE PRESIDENT

JEREMY R. ORR, P.E.

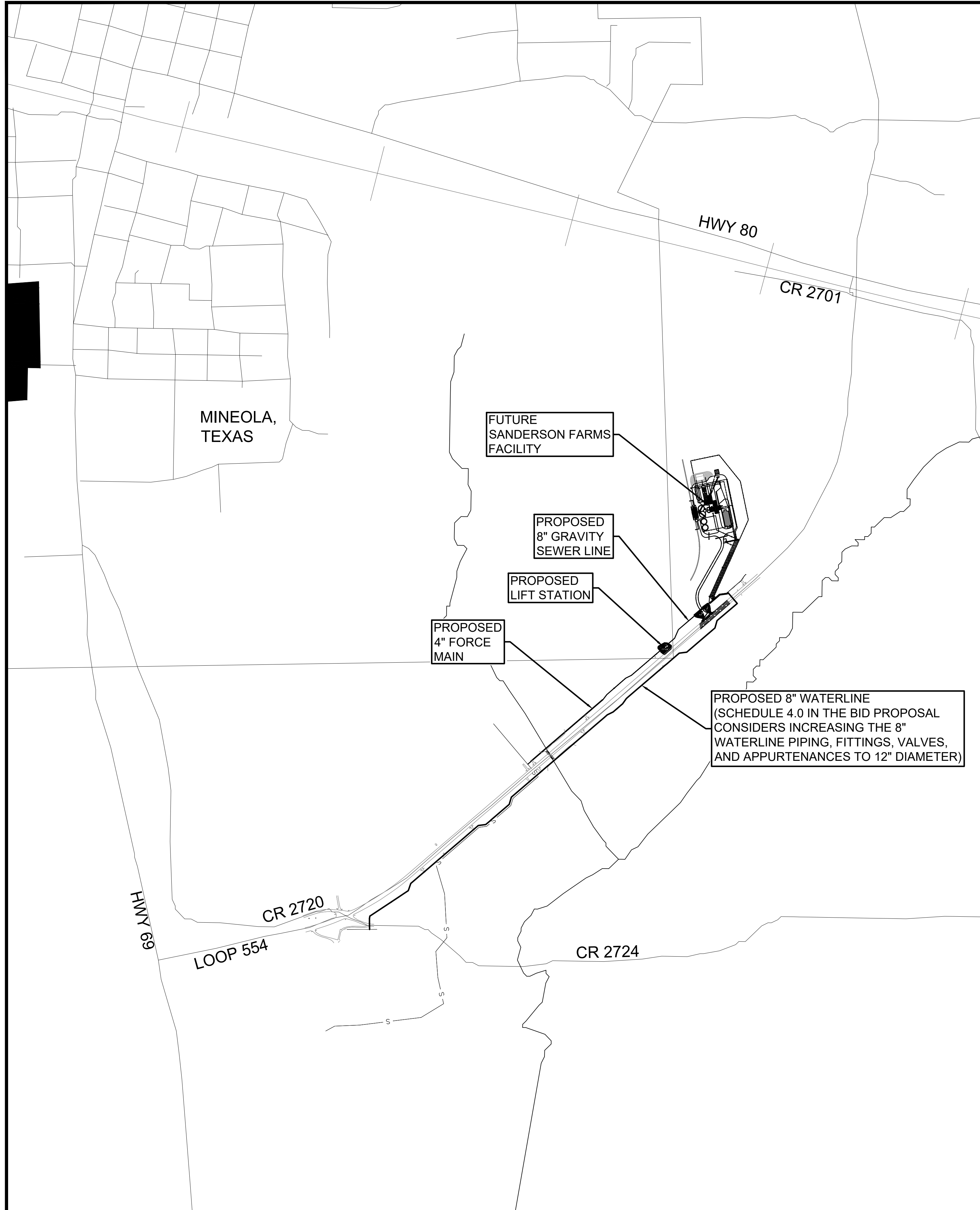
DATE

PROJECT ENGINEER



KSA

6781 Oak Hill Blvd., Tyler, Texas 75703
T. 903-581-8141 F. 903-581-6853
www.ksaeng.com



SHEET INDEX	
SHEET NO.	SHEET TITLE
1	COVER SHEET
2	LOCATION MAP AND SHEET INDEX
3	LEGEND, ABBREVIATIONS, AND GENERAL CONSTRUCTION NOTES
4	WATERLINE PLAN AND PROFILE STA 0+00 TO 14+00
5	WATERLINE PLAN AND PROFILE STA 14+00 TO 28+00
6	WATERLINE PLAN AND PROFILE STA 28+00 TO 42+00
7	WATERLINE PLAN AND PROFILE STA 42+00 TO 56+00
8	SANITARY SEWER PLAN AND PROFILE STA 0+00 TO 13+50
9	SANITARY SEWER PLAN AND PROFILE STA 13+50 TO 25+57
10	SANDERSON FARMS LIFT STATION SITE PLAN
11	MISCELLANEOUS DETAILS I
12	MISCELLANEOUS DETAILS II
13	MISCELLANEOUS DETAILS III
14	MISCELLANEOUS DETAILS IV
15	PRECAST SAFETY END TREATMENT TYPE II - PARALLEL DRAINAGE**
E-4.1	SANDERSON FARMS ELECTRICAL SITE PLAN & AREA CLASSIFICATION
E-6.1	ELECTRICAL DETAILS I
E-6.2	ELECTRICAL DETAILS II
E-7.1	ELEMENTARY DIAGRAMS

STANDARD SHEETS IDENTIFIED BY ** AFTER SHEET NAME HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT.


WALTER F. HICKS, III, P.E. _____ DATE _____

MARK	REVISION	DATE

LOCATION MAP AND SHEET INDEX
 SHEET NAME:

CITY OF MINEOLA
 UTILITY INFRASTRUCTURE IMPROVEMENTS
 FOR SANDERSON FARMS
 MINEOLA, TEXAS
 PROJECT NAME:

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	11/20/2017
KSA JOB NO.:	MIN-160


KSA
 6781 Oak Hill Blvd., Tyler, Texas 75703
 T: 903-581-8141 F: 903-581-8653
 www.ksaeng.com

THIS RECORD DRAWING IS A COMPILED OF A COPY OF THE SEALED ENGINEERING DRAWING FOR THIS PROJECT; MODIFIED BY ADDENDUM, CHANGE ORDERS, FIELD WORK ORDERS, AND INFORMATION FURNISHED BY THE CONTRACTOR AND/OR THE RESIDENT PROJECT REPRESENTATIVE. THE INFORMATION THAT WAS PROVIDED BY THE CONTRACTOR AND/OR OTHERS NOT ASSOCIATED WITH THE DESIGN ENGINEER CANNOT BE VERIFIED FOR ACCURACY OR COMPLETENESS. THE ORIGINAL SEALED DRAWINGS ARE ON FILE AT THE OFFICES OF KSA.

RECORD DRAWING

SEAL:
 TBPE Firm Registration No. F-1356
 SHEET NO.

2

LEGEND

EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		RIGHT OF WAY LINE			TRAFFIC SIGNAL
		TxDOT RIGHT OF WAY LINE			SIGN
		RAILROAD RIGHT OF WAY LINE			SIGN AND POLE
		UNION PACIFIC RAILROAD RIGHT OF WAY			TRAFFIC SIGNAL BOX
		INDEX CONTOUR			UTILITY POLE / POWER POLE
		INTERMEDIATE CONTOUR			GUY WIRE
		CREEK OR DITCH			GUY POLE
		DOWNHILL SLOPE			LIGHT POLE
		PROPERTY LINE			ELECTRIC METER
		EDGE OF PAVEMENT			ELECTRICAL PEDESTAL
		UNDERGROUND ELECTRICAL LINE			JUNCTION BOX (AS LABEL)
		OVERHEAD TELEPHONE LINE			TELEPHONE MANHOLE
		UNDERGROUND TELEPHONE LINE			TELEPHONE PEDESTAL
		FIBER OPTIC CABLE			GAS VALVE
		UNDERGROUND CABLE TV			GAS METER
		GAS LINE			WATER METER
		WATER LINE			WATER VALVE
		WATER SERVICE			WATER VALVE IN PAVEMENT
		IRRIGATION LINE			FIRE HYDRANT, 3-PORT
		SANITARY SEWER LINE			AIR RELIEF VALVE
		FORCE MAIN LINE			BLOW-OFF VALVE
		STORM SEWER LINE			WATER WELL/PUMP
		CULVERT (AS LABELED)			PLUG
		BARB WIRE FENCE			SANITARY SEWER MANHOLE
		CHAINLINK FENCE			SANITARY SEWER CLEAN-OUT
		WOOD FENCE			VENT (AS LABEL)
		PIPE FENCE			STORM SEWER MANHOLE
		NET WIRE FENCE			STORM SEWER INLET OR JUNCTION BOX
		METAL FENCE			MAILBOX
		PLASTIC FENCE			SATELLITE DISH
		FILTER FABRIC FENCE			ANTENNA
		METAL BEAM GUARD FENCE			FLAG POLE
		R.O.W. MONUMENT			YARD DRAIN
		CONCRETE MONUMENT (POURED TY II)			SPRINKLER HEAD
		BENCHMARK			INTERCEPTOR DIKE
		CONTROL POINT X IN CONCRETE			HUB/TACK
		CONTROL POINT			REFERENCE MARKER
		TRAVERSE POINT			MARKER POST
		IRON ROD			PEDESTRIAN SIGNAL BOX
		IRON PIPE / IRON PIN			CONTROL PANEL
		BRASS CAP			RAILROAD CONTROL BOX SIGNAL
		NAIL			RAILROAD CROSSING SIGN
		OWNERSHIP TIE			RAILROAD SIGNAL STANDARD
		TREE LINE			SIGNAL PEDESTAL
		TREE (AS LABEL)			SINGAL/SPAN WIRE SUPPORT/MAST ARM
		SHRUB			TRANSFORMER
		HEDGE			TOWER, SINGLE COLUMN
		SOIL BORE			MONITORING TEST STATION

ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
@	AT	HMAC	HOT MIX ASPHALTIC CONCRETE	RT	RIGHT
APPROX	APPROXIMATE	HORZ	HORIZONTAL	SST	STAINLESS STEEL
ASPH	ASPHALT	ID	INSIDE DIAMETER	SS	SANITARY SEWER
BLDG	BUILDING	IP	IRON PIN	SSWR	SANITARY SEWER
BM	BENCHMARK	IR	IRON ROD	SCH	SCHEDULE
BOC	BACK OF CURB	JB	JUNCTION BOX	SPECs	SPECIFICATIONS
BOP	BEGINNING OF PROJECT	JT	JOINT	SQ	SQUARE
CF	CUBIC FEET	LT	LEFT	ST	STATION
CI	CAST IRON	LEN	LENGTH	STD	STANDARD
CK	CREEK	LF	LINEAR FEET	STL	STEEL
CL	CENTERLINE	LS	LIFT STATION	STM	STORM SEWER
CO	CLEAN OUT	LP	LIGHT POLE	STRM	STORM WATER
CMP	CORRUGATED METAL PIPE	LB	POUND	SW	SIDEWALK
CONC	CONCRETE	LBS	POUNDS	TEL	TELEPHONE
CONT	CONTINUOUS	MB	MAILBOX	TPED	TELEPHONE PEDESTAL
CPT	CENTER POINT OF TANGENCY	MH	MANHOLE	TFR	TRANSFORMER
CU	CUBIC	MAX	MAXIMUM	TOB	TOP OF BANK
CULV	CULVERT	MJ	MECHANICAL JOINT	TOP	TOP OF PIPE
Δ	DEFLECTION ANGLE	MFG	MANUFACTURER	TOS	TOP OF SLOPE
DI	DUCTILE IRON	MIN	MINIMUM	TOF	TOP OF FOOTING
DIA	DIAMETER	MISC	MISCELLANEOUS	TOW	TOP OF WALL
DR	DRIVE	N	NORTH	TP	TRAVERSE POINT
E	EAST	NTS	NOT TO SCALE	TPT	TRAVERSE TURNING POINT
EACH	EACH	N/A	NOT APPLICABLE	V	VOLT
ELEC	ELECTRIC	No	NUMBER	VERT	VERTICAL
ELEV	ELEVATION	OCEW	ON CENTER EACH WAY	VPI	VERTICAL POINT INVERSE
ENC	ENCASEMENT	OD	OUTSIDE DIAMETER	VPC	VERTICAL POINT CURVATURE
ECC	EDGE OF CONCRETE	PC	POINT OF CURVATURE	VPT	VERTICAL POINT TANGENCY
EOG	EDGE OF GRAVEL	PI	POINT OF INVERSION	W	WATT
EOP	END OF PROJECT	PL	PIPELINE	WTR	WATER
EX	EXISTING	PP	POWER POLE	WWF	WELDED WIRE FABRIC
FC	FENCE CORNER	PR	PRESSURE RATED	w	WITH
FNC	FENCE	PRC	POINT OF REVERSE CURVATURE	w/o	WITHOUT
FH	FIRE HYDRANT	PROP	PROPOSED	WM	WATER METER
FL	FLOWLINE	PSI	POUNDS PER SQUARE INCH	WV	WATER VALVE
FD	FOUND	PT	POINT OF TANGENCY		
FT	FEET (FOOT)	PVC	POLYVINYL CHLORIDE		
GAL	GALLON	PVMT	PAVEMENT		
GALV	GALVANIZED	ROW	RIGHT OF WAY		
GM	GAS METER	RCP	REINFORCED CONCRETE PIPE		
GUY	GUY WIRE	RD	ROAD		
GV	GAS VALVE	REINF	REINFORCEMENT		

GENERAL CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL ANTICIPATE ALL UNDERGROUND AND ABOVE GROUND OBSTRUCTIONS SUCH AS, BUT NOT LIMITED TO, WATER MAINS, GAS LINES, STORM AND SANITARY SEWERS, TELEPHONE LINES, ELECTRIC LINES, OR POWER DUCTS, CONCRETE, POLES, AND DEBRIS. ANY SUCH LINES OR OBSTRUCTIONS INDICATED ON THE PLANS SHOW ONLY THE APPROXIMATE LOCATIONS AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- THE OWNER AND ENGINEER WILL ENDEAVOR TO FAMILIARIZE THE CONTRACTOR WITH ALL KNOWN UTILITIES AND OBSTRUCTIONS, BUT THIS SHALL NOT RELIEVE THE CONTRACTOR FROM FULL RESPONSIBILITY IN ANTICIPATING ALL UNDERGROUND AND ABOVE GROUND OBSTRUCTIONS WHETHER OR NOT SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL MAKE ADJUSTMENT FOR ANY AND ALL UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH, AND THE SIZE OF EXISTING PIPELINES AND UTILITIES, WHETHER SHOWN ON PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION, AND NOTIFY THE ENGINEER OF POTENTIAL GRADE CONFLICTS IN ADVANCE OF CONSTRUCTION.
- WATER IN EXCAVATION: KEEP WORK FREE FROM GROUND OR SURFACE WATER AT ALL TIMES. PROVIDE PUMPS OF ADEQUATE CAPACITY OR OTHER APPROVED METHOD TO REMOVE WATER FROM THE EXCAVATION IN SUCH A MANNER THAT IT WILL NOT INTERFERE WITH THE PROGRESS OF THE WORK OR THE PROPER PLACING OF OTHER WORK. THE COST OF DEWATERING THE EXCAVATION SHALL BE SUBSIDIARY TO THE CARE OF WATER DURING CONSTRUCTION BID ITEM. REFER TO TECHNICAL SPECIFICATION SECTION 01553.
- SHEETING AND BRACING: CONTRACTOR HAS SOLE RESPONSIBILITY FOR TRENCH AND EXCAVATION SAFETY. INSTALL SHEETING AND BRACING NECESSARY TO SUPPORT THE SIDES OF TRENCHES AND OTHER EXCAVATIONS WITH VERTICAL SIDES, AS REQUIRED BY CURRENT OSHA REGULATIONS.
- MINIMUM COVER: ALL PIPES SHALL HAVE A MINIMUM COVER OF 36 INCHES. COVER SHALL BE MEASURED IN ALL DIRECTIONS (HORIZONTAL, VERTICAL, AND DIAGONAL) FROM THE OUTSIDE EDGE OF THE PIPE. IF 36 INCHES OF COVER CAN NOT BE MAINTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CORRECTIVE MEASURES SHALL BE MADE.
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND GRADE OF PROPOSED UTILITY LINES PRIOR TO INSTALLATION AND SHALL MAKE ADJUSTMENTS AS NECESSARY TO AVOID CONFLICTS.
- INVERT FLOWLINE ELEVATIONS SHOWN ON THESE PLANS ARE FOR THE FLOWLINES AT THE CENTER OF THE PROPOSED MANHOLES. CONTRACTOR SHALL CONSTRUCT OR MANUFACTURE MANHOLE BOTTOMS WITH THE CORRECT INFLOW AND OUTFLOW ELEVATIONS AT THE GRADES OF CORRESPONDING INFLOW AND OUTFLOW PIPES.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BYPASS PUMPING AS REQUIRED TO MAINTAIN OPERATION OF THE WASTEWATER COLLECTION SYSTEM AT ALL TIMES DURING CONSTRUCTION. PAYMENT FOR TEMPORARY BYPASS PUMPING SHALL BE MADE UNDER THE TEMPORARY BYPASS PUMPING BID ITEM.
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE. PAYMENT FOR THIS ITEM IS SUBSIDIARY TO THE UNIT PRICE FOR UTILITY CONSTRUCTION.
- WHERE REQUIRED FOR CONSTRUCTION, CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS TO INSTALL PIPE AS SHOWN. THE COST OF ANY ADDITIONAL FITTINGS REQUIRED SHALL BE SUBSIDIARY TO THE PIPE LINE INSTALLATION.
- ALL BURIED FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT TYPE. FITTINGS SHALL INCLUDE MECHANICAL THRUST RESTRAINING DEVICES (MULTIPLE GRIPPING WEDGES OR FULL CIRCLE GRIPPING RINGS) AND CONCRETE THRUST BLOCKING.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY FITTINGS AND APPURTENANCES FOR THE INSTALLATION OF THE PIPELINES AT HORIZONTAL AND VERTICAL BENDS. ALL FITTINGS SHALL BE RATED FOR THE WORKING PRESSURE OF THE PIPE WITH ALLOWANCES FOR SURGE AND SAFETY. ALL FITTINGS SHALL BE RESTRAINED AS REQUIRED FOR PROPER OPERATION.
- CONTRACTOR SHALL COORDINATE WITH THE OWNER'S REPRESENTATIVE BEFORE OPERATING ALL WATER MAIN VALVES. CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES WITHOUT AUTHORIZATION FROM THE OWNER
- CONTRACTOR SHALL USE DUE CARE AND DILIGENCE IN CONSERVING THE EXISTING GRASSED AREAS. ALL AREAS DAMAGED BY CONTRACTOR'S CONSTRUCTION ACTIVITIES OUTSIDE WORK AREA SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
- ALL UNPAVED AREAS WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED WITH FINISH GRADING, AND SEEDING, UNLESS OTHERWISE INDICATED ON THE PLANS. ALL SLOPES GREATER THAN 5:1 SHALL RECEIVE EROSION CONTROL MATTING.
- TOPSOIL REPLACEMENT IS REQUIRED IN ALL UNPAVED AREAS. TOPSOIL SHALL INCLUDE THE TOP SIX (6) INCHES OF TRENCH. TOPSOIL SHALL BE KEPT SEPARATE FROM GENERAL TRENCH EXCAVATED MATERIAL. IN CULTIVATED AREAS ROCK FROM THE TRENCH EXCAVATION SHALL NOT BE INCLUDED IN THE TOP SIX INCHES OF TOPSOIL BACKFILL.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.
- CONTRACTOR SHALL MAINTAIN TRAFFIC CONTROL AT ALL TIMES IN ACCORDANCE WITH THE LATEST VERSION OF THE TEXAS MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AS PUBLISHED BY THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND AS REQUIRED BY CONDITIONS OF TXDOT PERMITS FOR CONSTRUCTION ON STATE RIGHT-OF-WAYS.
- CONTRACTOR SHALL NOTIFY TXDOT, 48 HOURS PRIOR TO STARTING CONSTRUCTION WITHIN THE TXDOT RIGHT-OF-WAY IN ORDER THAT TXDOT MAY HAVE A REPRESENTATIVE PRESENT.
- CONTRACTOR SHALL NOTE AND COMPLY WITH ALL SPECIAL CONDITIONS FOR TXDOT, LANDOWNERS, AND CITY OF MINEOLA IN THE SPECIFICATIONS. COST OF COMPLIANCE WITH SPECIAL CONDITIONS SHALL BE SUBSIDIARY TO PROPOSED INSTALLATION.
- NOTIFY ALL UTILITY COMPANIES INVOLVED TO HAVE THEIR UTILITIES LOCATED AND MARKED IN THE FIELD. ALL UNDERGROUND UTILITIES SHALL THEN BE UNCOVERED TO VERIFY LOCATION AND ELEVATION BEFORE CONSTRUCTION BEGINS. COORDINATE WITH UTILITY OWNER IF UTILITY INSPECTOR MUST BE ON SITE WHEN LOCATING OR EXCAVATING NEAR UTILITIES. LOCATING UTILITIES ARE SUBSIDIARY TO THE BID.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY OF MINEOLA, PIPELINE, AND UTILITY COMPANIES HAVING PROPERTY IN THE AREA OF CONSTRUCTION A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND CONTINUAL COORDINATION AS REQUIRED.

UTILITY COMPANY	PHONE NUMBER
CITY OF MINEOLA	(903) 569-2535
DIGTESS	(800) 344-8377
TEXAS ONE CALL	(800) 245-4545
LONE STAR NOTIFICATION CENTER	(800) 545-6005
AEP/SWEPCO	(888) 216-3523
AT&T	(800) 464-7928
CENTERPOINT ENERGY	(800) 669-8344
SUDENLINK COMMUNICATIONS	(903) 572-6107

MARK	REVISION	DATE

LEGEND, ABBREVIATIONS, AND GENERAL CONSTRUCTION NOTES

CITY OF MINEOLA
UTILITY INFRASTRUCTURE IMPROVEMENTS AND GENERAL CONSTRUCTION NOTES
FOR SANDERSON FARMS
MINEOLA, TEXAS

DRAWN BY:	DESIGNED BY:	LATEST REVISION:	ISSUED NO.:	MIN+160
NR	CA	8/29/2017	USA JOB NO.:	



THIS RECORD DRAWING IS A COMPILED OF A COPY OF THE SEALED ENGINEERING DRAWING FOR THIS PROJECT, MODIFIED BY ADDITIONAL CHANGE ORDERS, FIELD WORK ORDERS, AND INFORMATION FURNISHED BY THE CONTRACTOR AND/OR THE DESIGNER. THE INFORMATION THAT WAS PROVIDED BY THE CONTRACTOR AND/OR OTHERS NOT ASSOCIATED WITH THE DESIGN ENGINEER CANNOT BE VERIFIED FOR ACCURACY OR COMPLETENESS. THE ORIGINAL SEALED DRAWINGS ARE ON FILE AT THE OFFICES OF KSA.

RECORD DRAWING

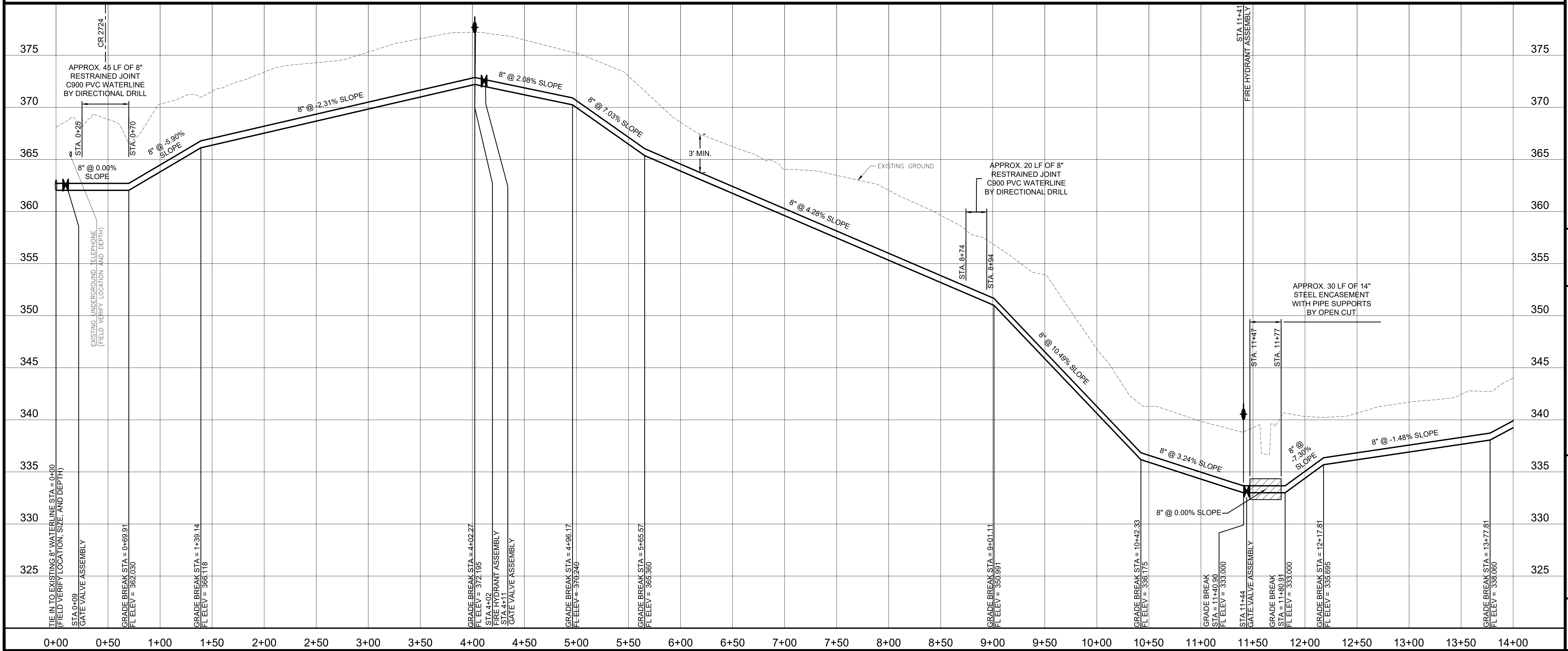
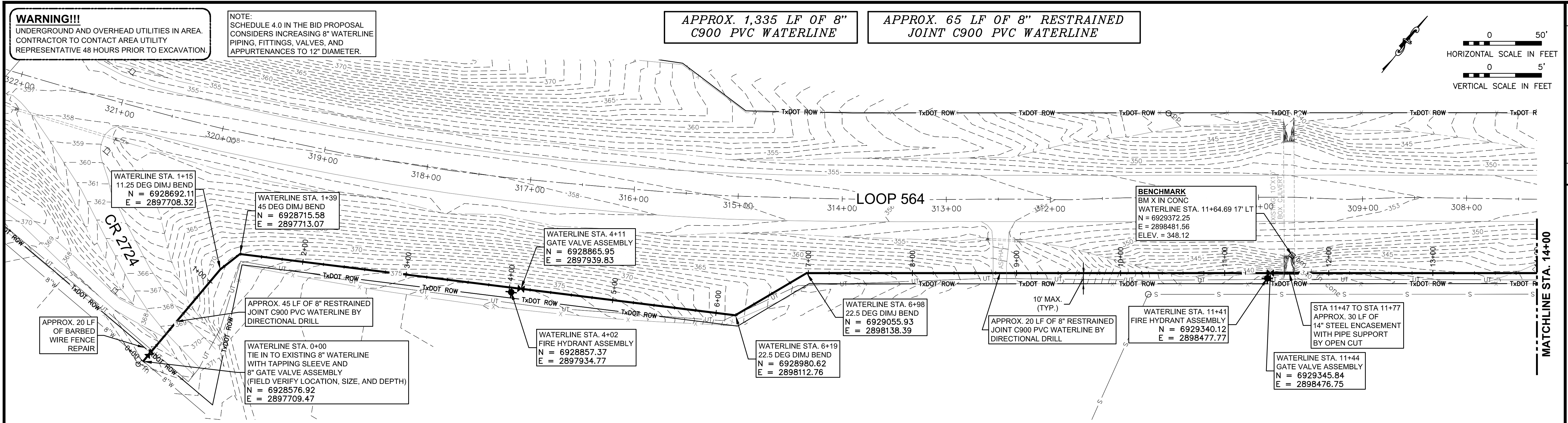
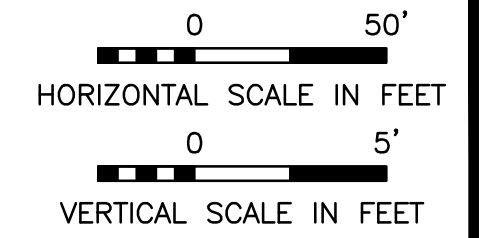
SEAL: TBPE Firm Registration No. F-1356
SHEET NO.

WARNING!!!
UNDERGROUND AND OVERHEAD UTILITIES IN AREA. CONTRACTOR TO CONTACT AREA UTILITY REPRESENTATIVE 48 HOURS PRIOR TO EXCAVATION.

NOTE:
SCHEDULE 4.0 IN THE BID PROPOSAL CONSIDERS INCREASING 8" WATERLINE PIPING, FITTINGS, VALVES, AND APPURTENANCES TO 12" DIAMETER.

APPROX. 1,335 LF OF 8" C900 PVC WATERLINE

APPROX. 65 LF OF 8" RESTRAINED JOINT C900 PVC WATERLINE



MARK	REVISION	DATE

WATERLINE PLAN AND PROFILE STA 0+00 TO 14+00

CITY OF MINEOLA UTILITY INFRASTRUCTURE IMPROVEMENTS FOR SANDERSON FARMS MINEOLA, TEXAS

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	11/20/2017
KSA JOB NO.:	MIN-160



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RECORD DRAWING

SEAL: TBPE Firm Registration No. F-1356
SHEET NO. **4**

WARNING!!!
UNDERGROUND AND OVERHEAD UTILITIES IN AREA. CONTRACTOR TO CONTACT AREA UTILITY REPRESENTATIVE 48 HOURS PRIOR TO EXCAVATION.

NOTE:
SCHEDULE 4.0 IN THE BID PROPOSAL CONSIDERS INCREASING 8" WATERLINE PIPING, FITTINGS, VALVES, AND APPURTENANCES TO 12" DIAMETER.

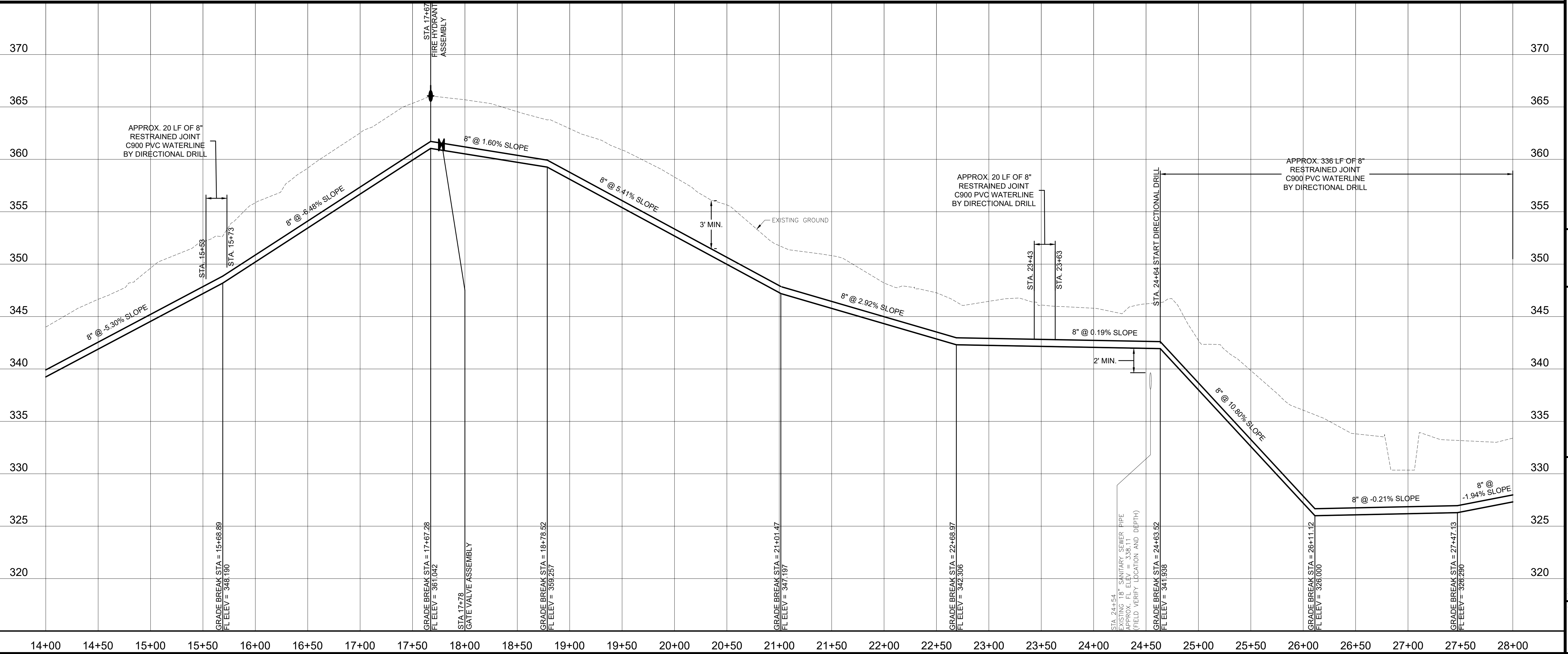
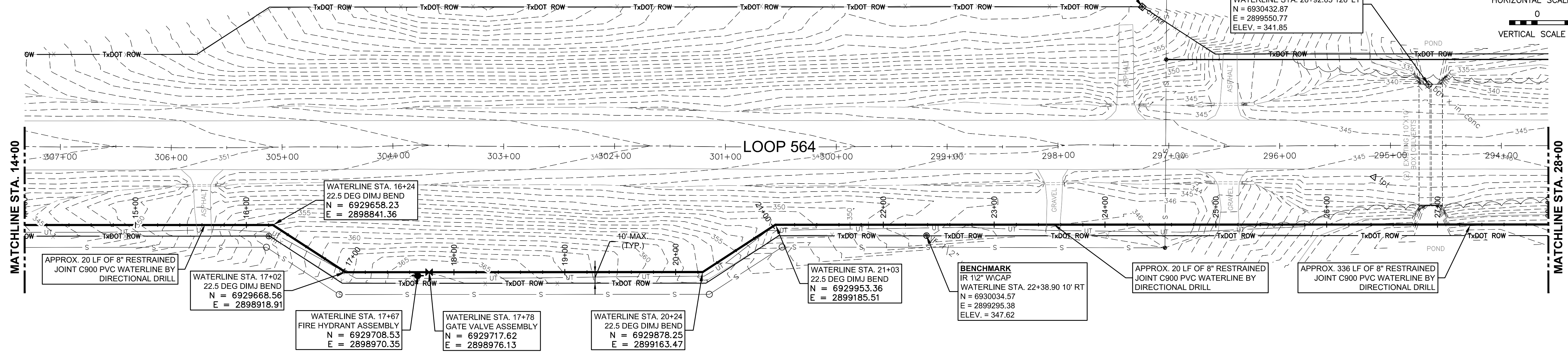
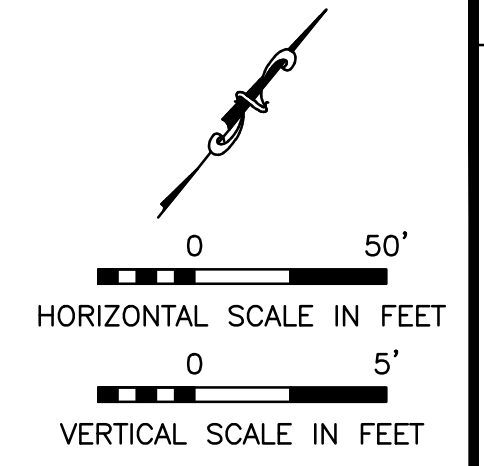
APPROX. 1,024 LF OF 8" C900 PVC WATERLINE

APPROX. 376 LF OF 8" RESTRAINED JOINT C900 PVC WATERLINE

BENCHMARK
CMKPR
WATERLINE STA. 24+33.71 197' LT
N = 6930318.14
E = 2899308.85
ELEV. = 358.39

BENCHMARK
BM X IN CONC
WATERLINE STA. 26+92.05 126' LT
N = 6930432.87
E = 2899550.77
ELEV. = 341.85

BENCHMARK
IR 1/2" WICAP
WATERLINE STA. 22+38.90 10' RT
N = 6930034.57
E = 2899295.38
ELEV. = 347.62



**WATERLINE
PLAN AND PROFILE
STA 14+00 TO 28+00**

**CITY OF MINEOLA
UTILITY INFRASTRUCTURE
IMPROVEMENTS
FOR SANDERSON FARMS
MINEOLA, TEXAS**

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	11/20/2017
KSA JOB NO.:	MIN+160



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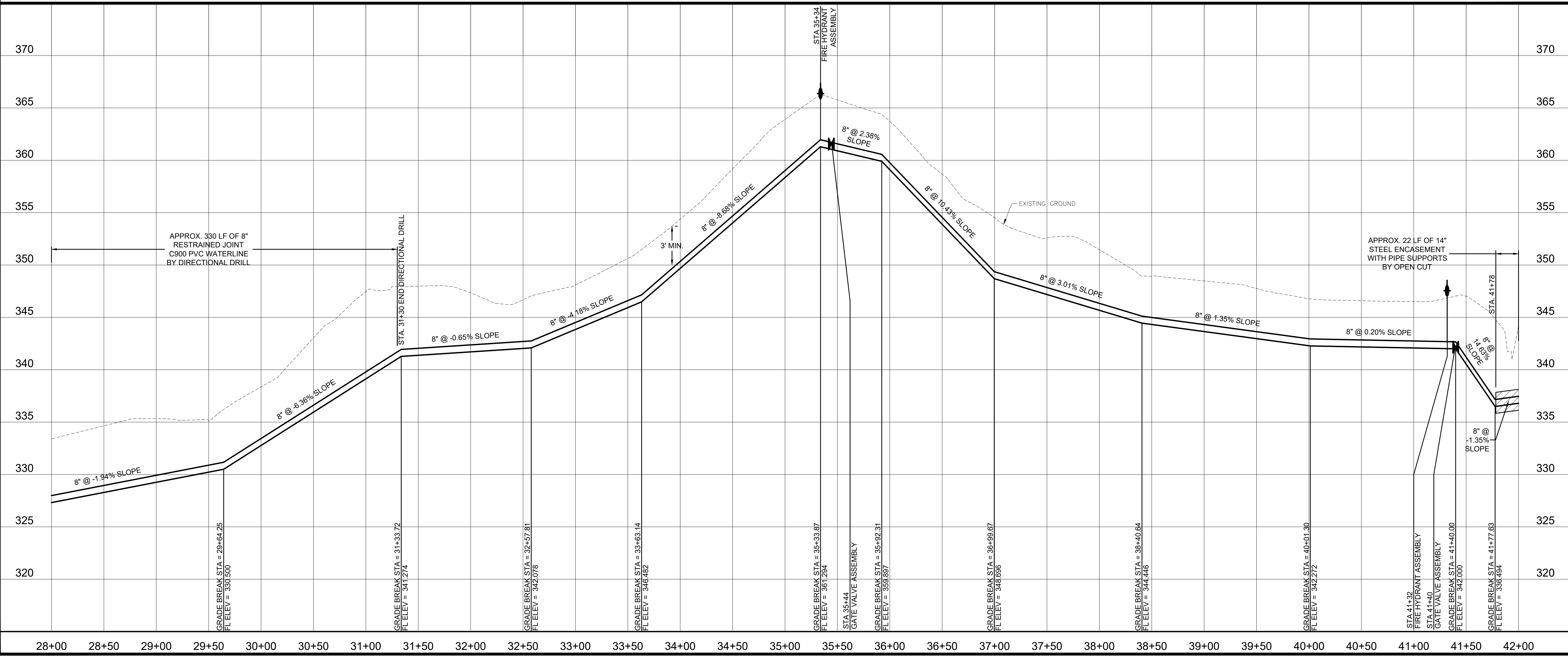
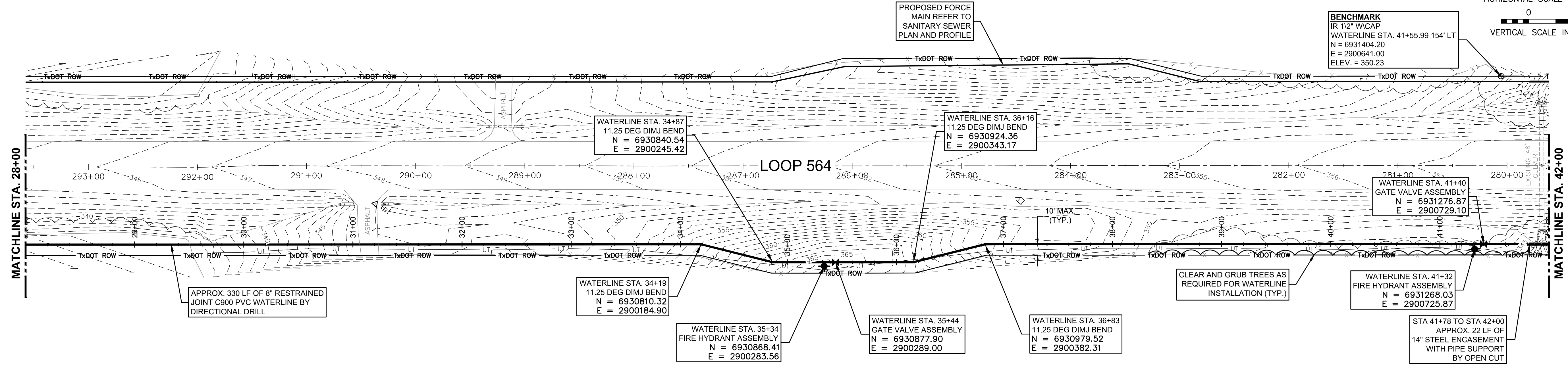
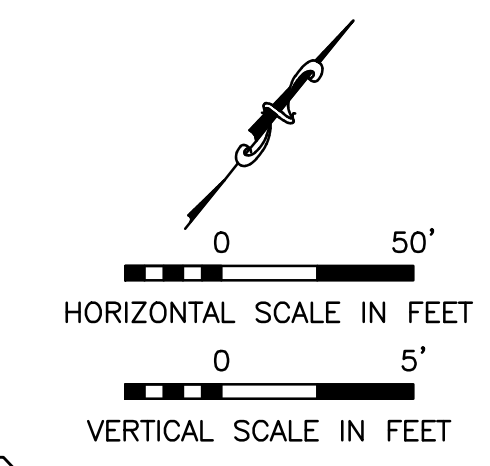
SEAL:
TBPE Firm Registration No. F-1356
SHEET NO.

WARNING!!!
 UNDERGROUND AND OVERHEAD UTILITIES IN AREA.
 CONTRACTOR TO CONTACT AREA UTILITY
 REPRESENTATIVE 48 HOURS PRIOR TO EXCAVATION.

NOTE:
 SCHEDULE 4.0 IN THE BID PROPOSAL
 CONSIDERS INCREASING 8" WATERLINE
 PIPING, FITTINGS, VALVES, AND
 APPURTENANCES TO 12" DIAMETER.

APPROX. 1,070 LF OF 8"
 C900 PVC WATERLINE

APPROX. 330 LF OF 8" RESTRAINED
 JOINT C900 PVC WATERLINE



**WATERLINE
 PLAN AND PROFILE
 STA 28+00 TO 42+00**

**CITY OF MINEOLA
 UTILITY INFRASTRUCTURE
 IMPROVEMENTS
 FOR SANDERSON FARMS
 MINEOLA, TEXAS**

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	11/20/2017
KSA JOB NO.:	MIN-160



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RECORD DRAWING

SEAL:
 TBPE Firm Registration No. F-1356
 SHEET NO.

WARNING!!!
 UNDERGROUND AND OVERHEAD UTILITIES IN AREA.
 CONTRACTOR TO CONTACT AREA UTILITY
 REPRESENTATIVE 48 HOURS PRIOR TO EXCAVATION.

NOTE:
 SCHEDULE 4.0 IN THE BID PROPOSAL
 CONSIDERS INCREASING 8" WATERLINE
 PIPING, FITTINGS, VALVES, AND
 APPURTENANCES TO 12" DIAMETER.

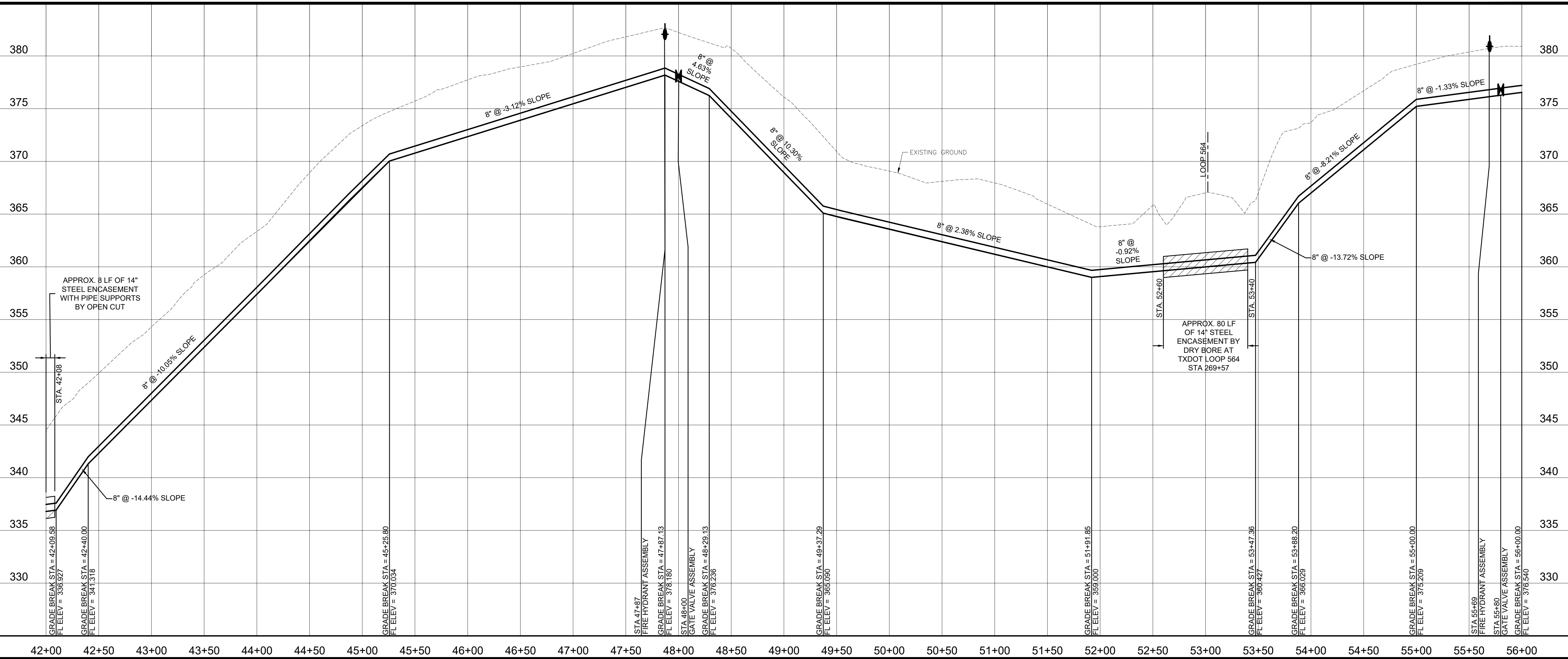
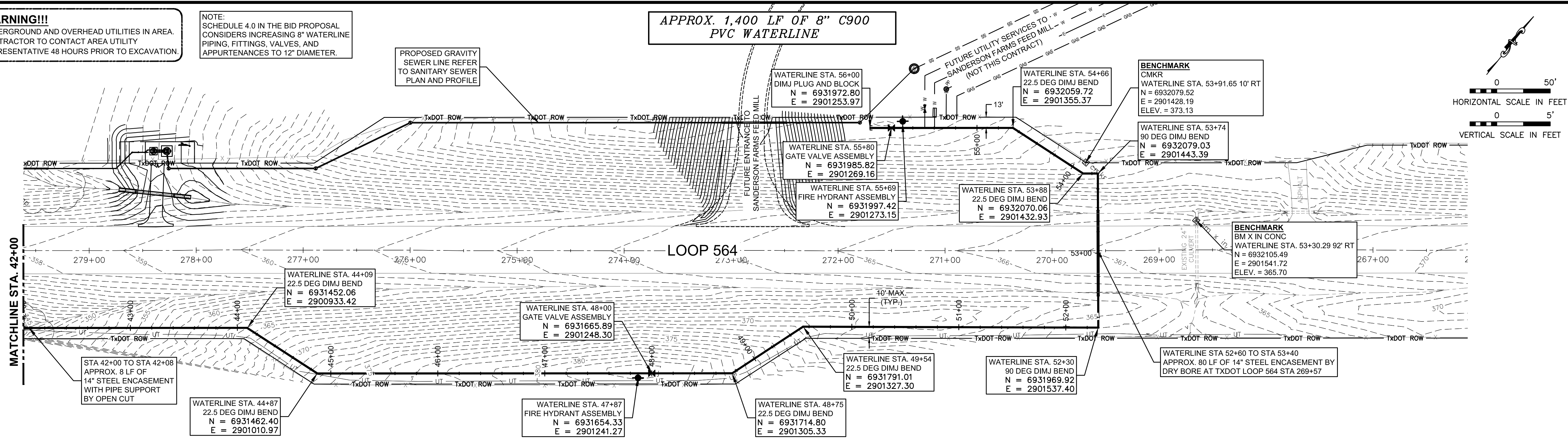
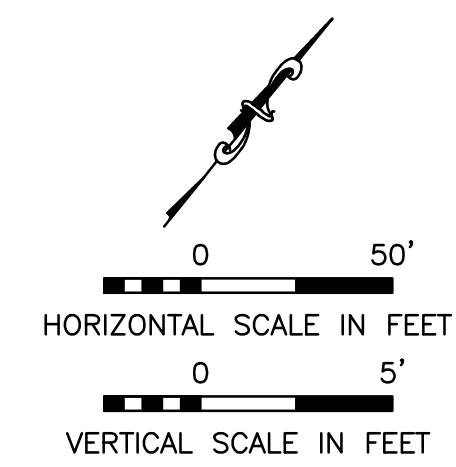
PROPOSED GRAVITY
 SEWER LINE REFER
 TO SANITARY SEWER
 PLAN AND PROFILE

APPROX. 1,400 LF OF 8" C900
 PVC WATERLINE

BENCHMARK
 CMKR
 WATERLINE STA. 53+91.65 10' RT
 N = 6932079.52
 E = 2901428.19
 ELEV. = 373.13

WATERLINE STA. 53+74
 90 DEG DIMJ BEND
 N = 6932079.03
 E = 2901443.39

BENCHMARK
 BM X IN CONC
 WATERLINE STA. 53+30.29 92' RT
 N = 6932105.49
 E = 2901541.72
 ELEV. = 365.70



MARK	REVISION	DATE

**WATERLINE
 PLAN AND PROFILE
 STA 42+00 TO 56+00**

**CITY OF MINEOLA
 UTILITY INFRASTRUCTURE
 IMPROVEMENTS
 FOR SANDERSON FARMS
 MINEOLA, TEXAS**

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	11/20/2017
KSA JOB NO.:	MIN-160



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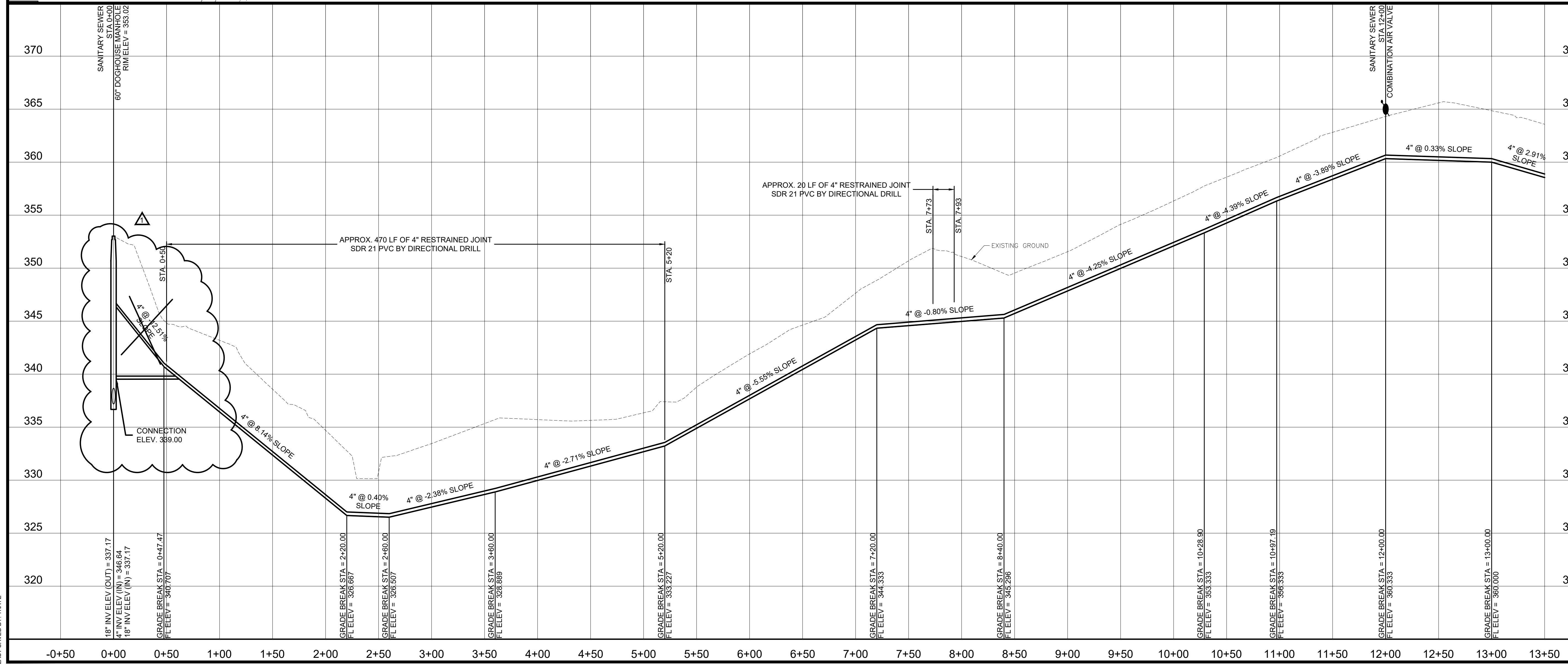
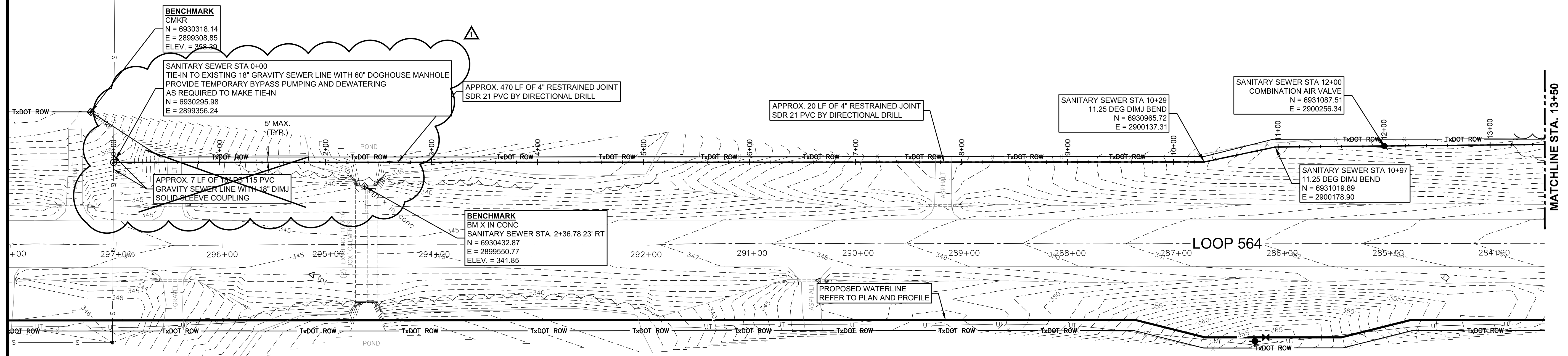
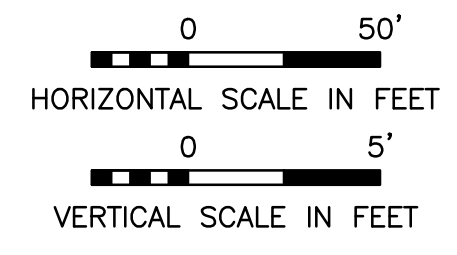
SEAL:
 TBPE Firm Registration No. F-1356
 SHEET NO.

WARNING!!!
 UNDERGROUND AND OVERHEAD UTILITIES IN AREA.
 CONTRACTOR TO CONTACT AREA UTILITY
 REPRESENTATIVE 48 HOURS PRIOR TO EXCAVATION.

APPROX. 860 LF OF 4" SDR 21 PVC FORCE MAIN

APPROX. 490 LF OF 4" RESTRAINED JOINT SDR 21 PVC FORCE MAIN

APPROX. 14 LF OF 18" PS 115 PVC GRAVITY SEWER LINE



**SANITARY SEWER
 PLAN AND PROFILE
 STA 0+00 TO 13+50**

**CITY OF MINEOLA
 UTILITY INFRASTRUCTURE
 IMPROVEMENTS
 FOR SANDERSON FARMS
 MINEOLA, TEXAS**

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	1/30/2019
KSA JOB NO.:	MIN-160



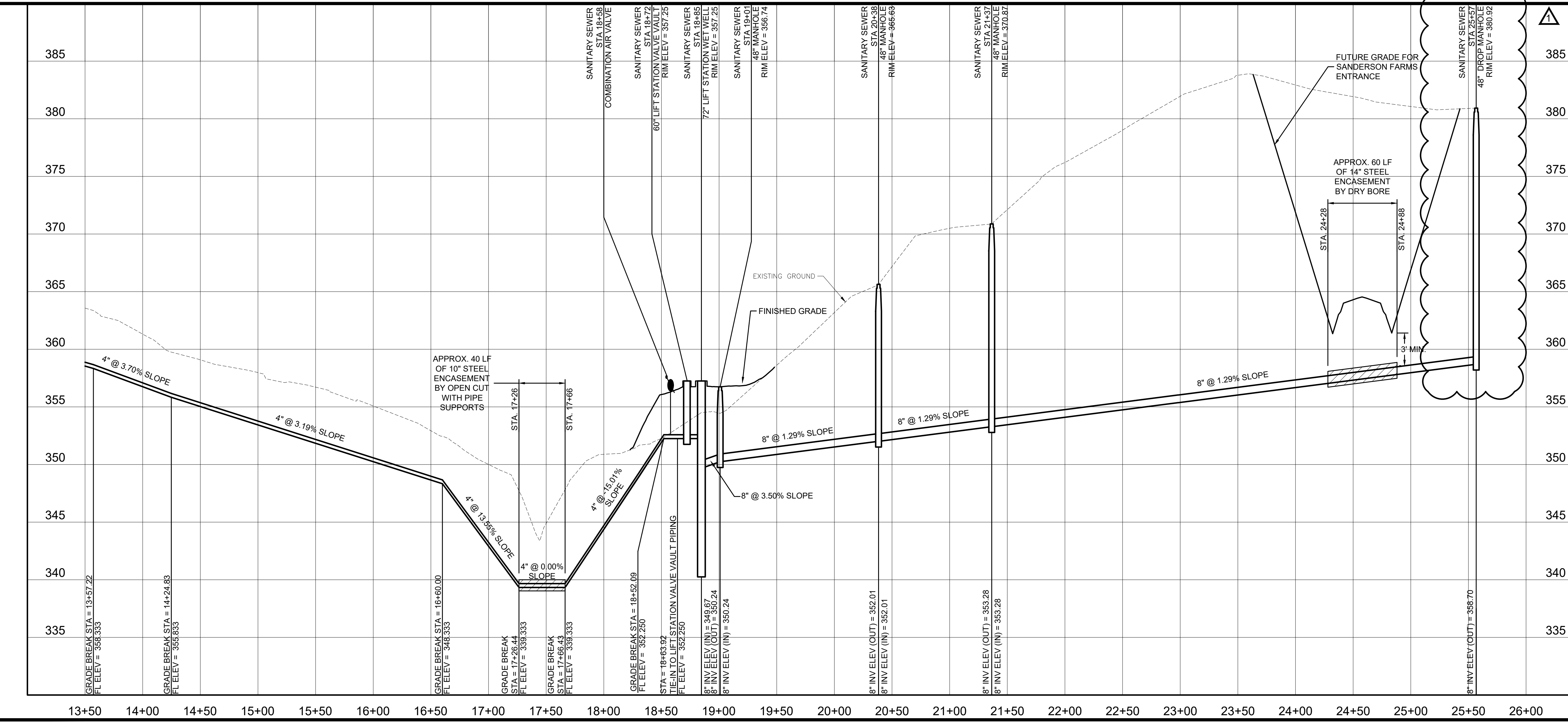
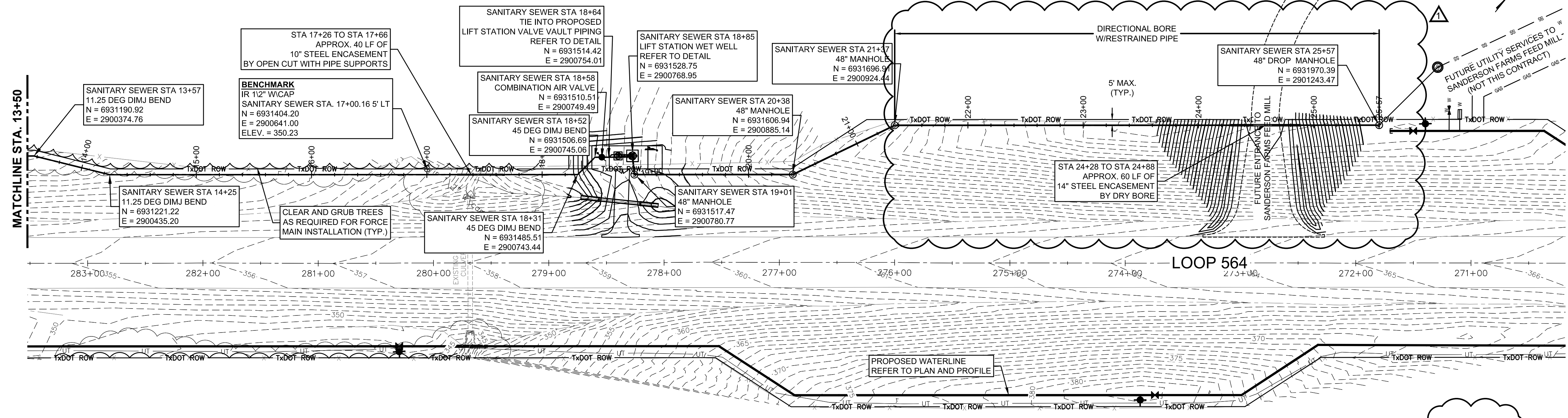
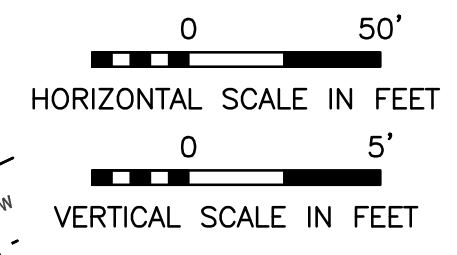
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RECORD DRAWING

SEAL: TBPE Firm Registration No. F-1356
 SHEET NO.

WARNING!!!
 UNDERGROUND AND OVERHEAD UTILITIES IN AREA.
 CONTRACTOR TO CONTACT AREA UTILITY
 REPRESENTATIVE 48 HOURS PRIOR TO EXCAVATION.

APPROX. 514 LF OF 4" SDR 21 PVC FORCE MAIN
 APPROX. 672 LF OF 8" SDR 26 PVC GRAVITY SEWER LINE



**SANITARY SEWER
 PLAN AND PROFILE
 STA 13+50 TO 25+57**

**CITY OF MINEOLA
 UTILITY INFRASTRUCTURE
 IMPROVEMENTS
 FOR SANDERSON FARMS
 MINEOLA, TEXAS**

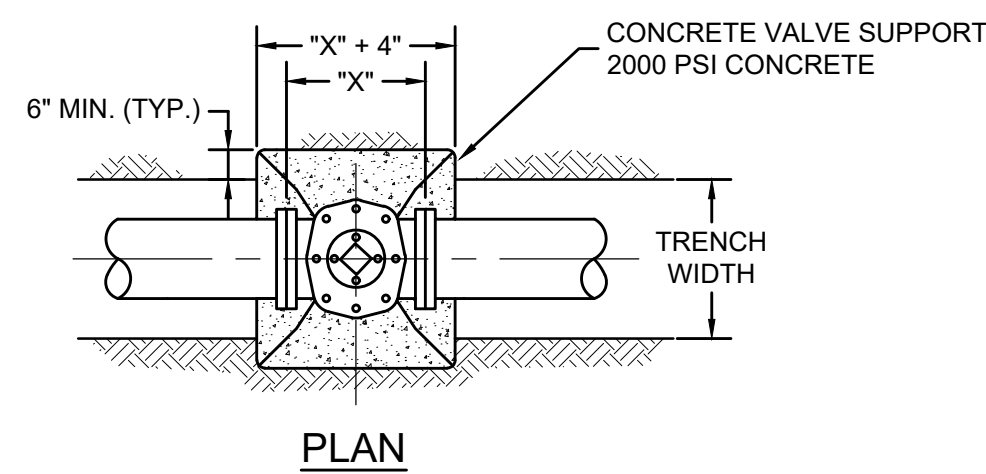
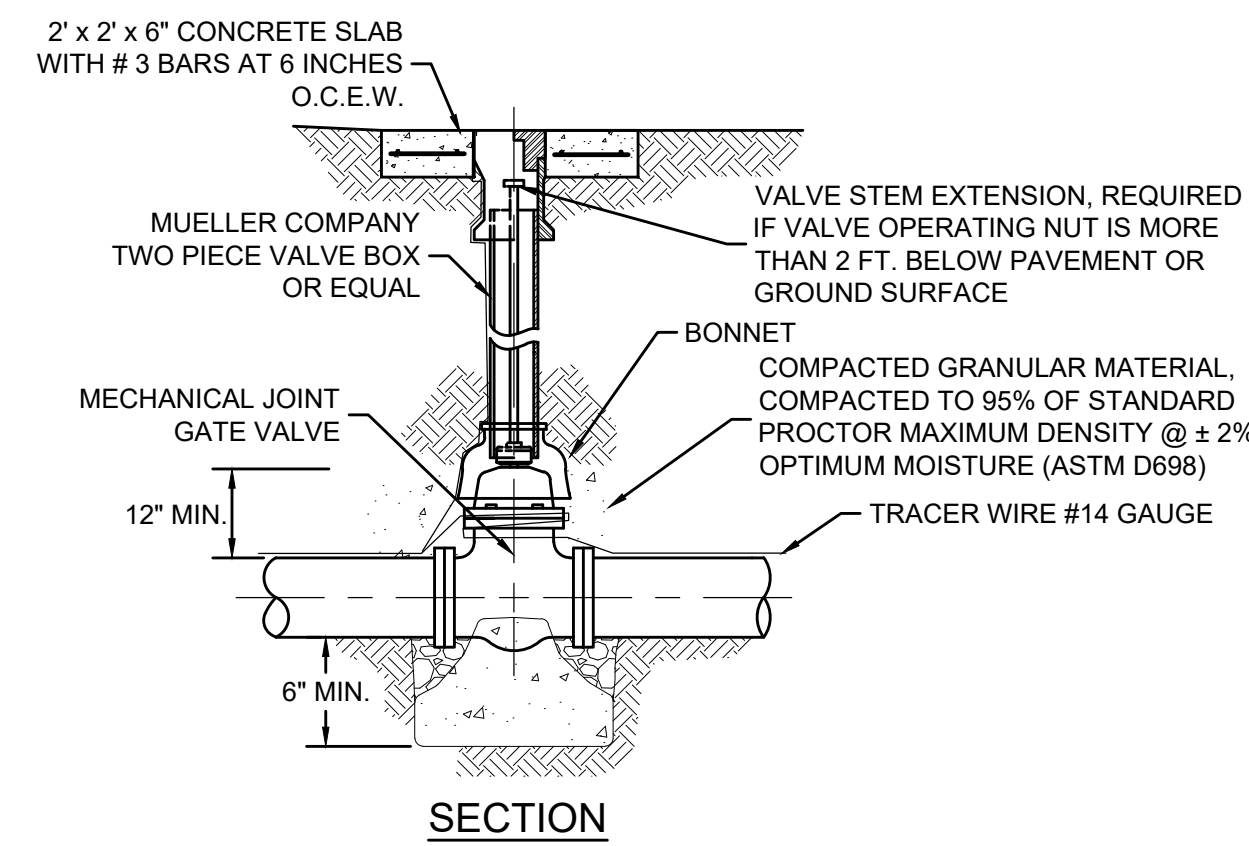
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LATEST REVISION:	1/30/2019
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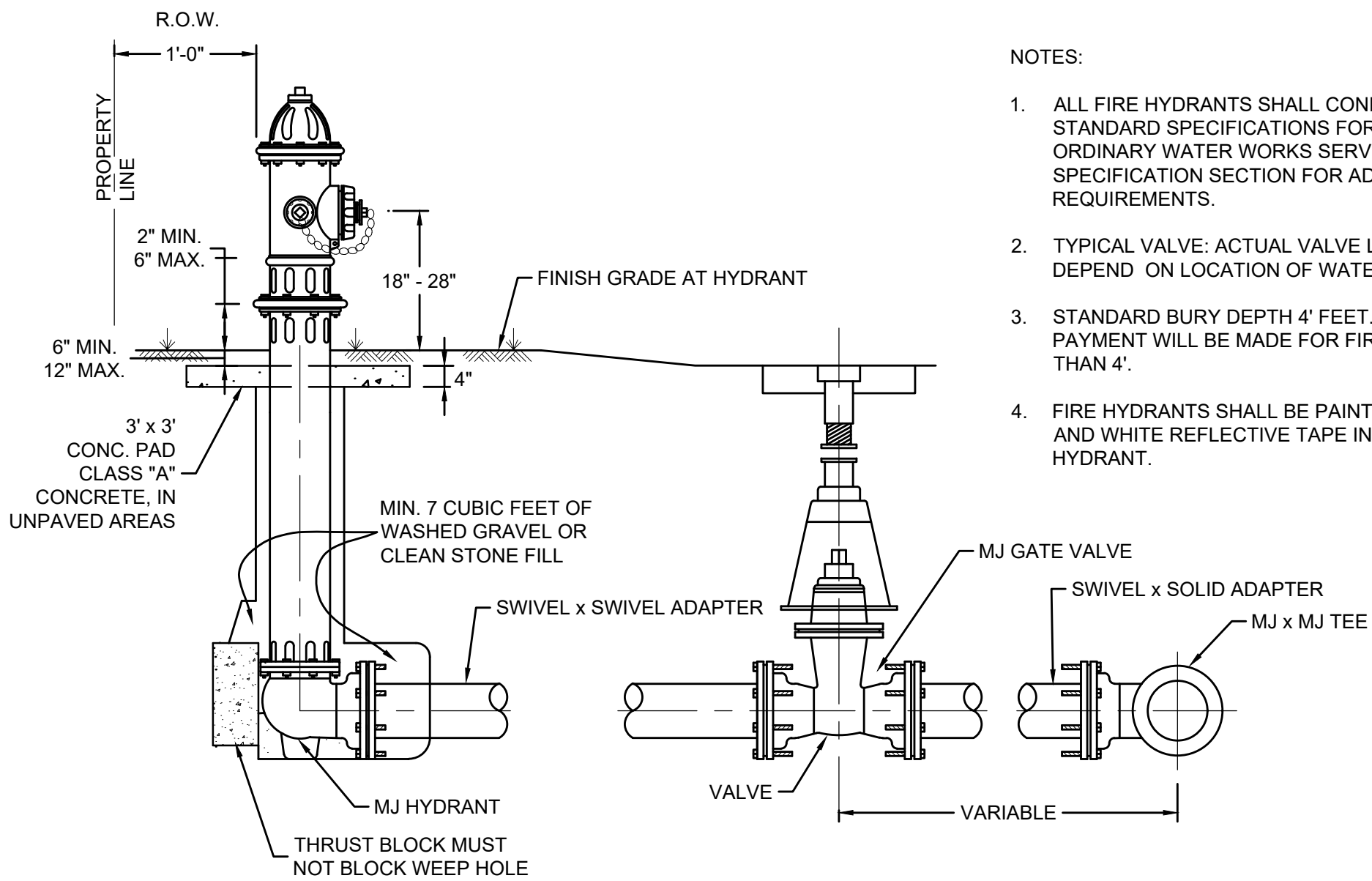
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 TBPE Firm Registration No. F-1356
 SHEET NO.

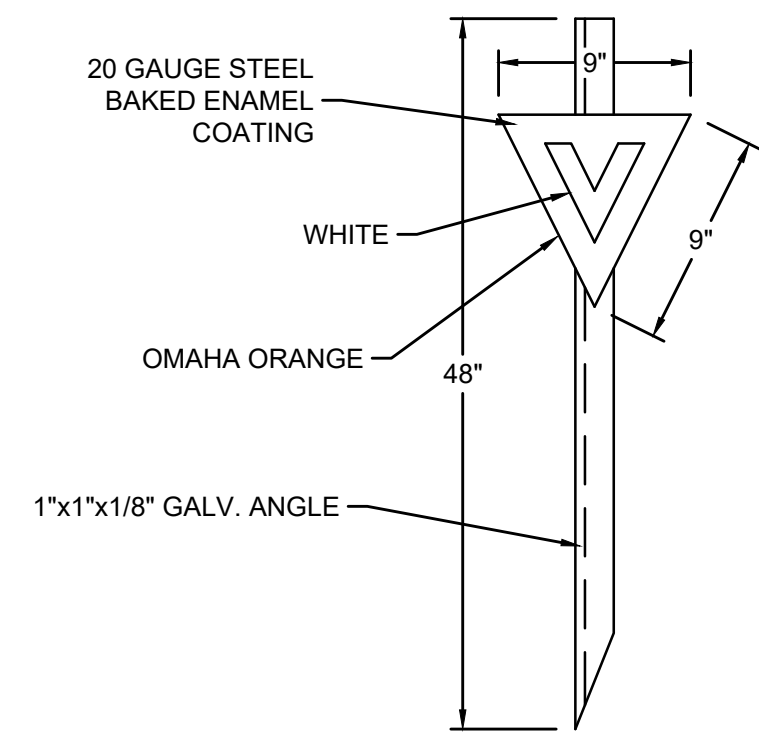


TYPICAL VALVE, VALVE BOX, AND EXTENSION STEM DETAIL
NTS



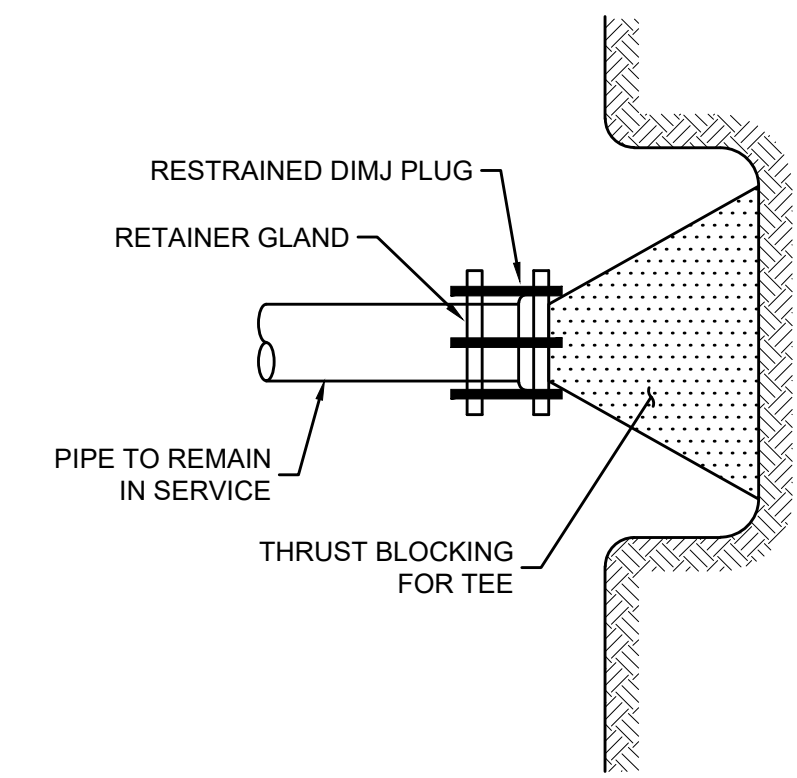
- NOTES:
- ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. SEE SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.
 - TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
 - STANDARD BURY DEPTH 4' FEET. NO ADDITIONAL PAYMENT WILL BE MADE FOR FIRE HYDRANTS DEEPER THAN 4'.
 - FIRE HYDRANTS SHALL BE PAINTED BLACK WITH RED AND WHITE REFLECTIVE TAPE INSTALL AROUND HYDRANT.

FIRE HYDRANT INSTALLATION
NTS

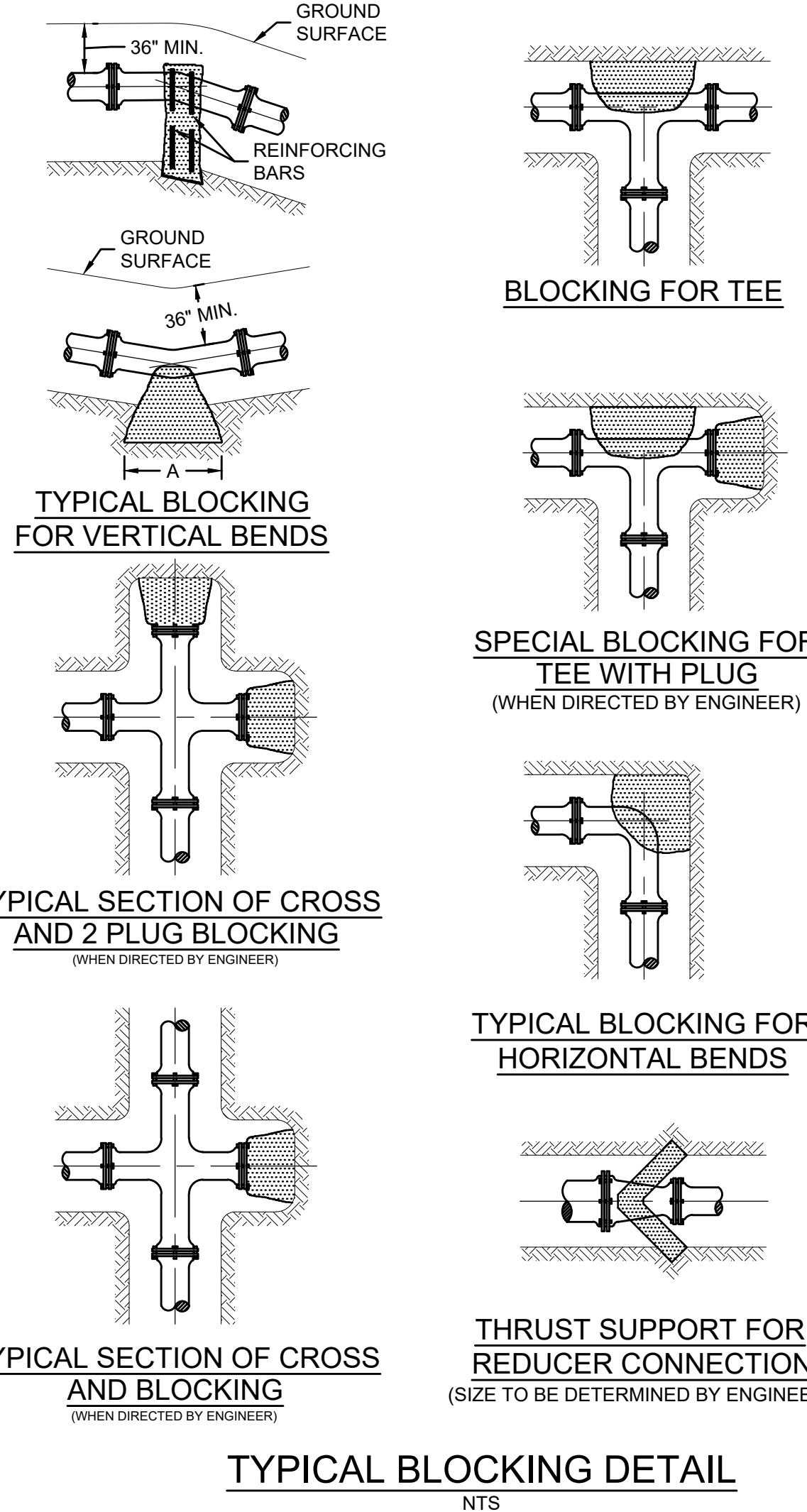


VALVE MARKER SIGN
NTS

- NOTE:
1. VALVE MARKERS SHALL BE PROVIDED AT ALL GATE VALVES.



CUT AND PLUG DETAIL
NTS



TYPICAL BLOCKING DETAIL
NTS

NOTES ON THRUST BLOCKING:

- ALL BLOCKING SHALL BE AGAINST UNDISTURBED HAND DUG SOIL AND SHALL BE CONCRETE HAVING A MINIMUM 28 DAY STRENGTH OF 3000 LB. PER SQUARE INCH.
- THRUST CALCULATIONS TO BE BASED ON THRUST DUE TO WATER PRESSURE AT 100% OF TEST PRESSURE.
THRUST = 2 AP SIN 1/2 Ø
WHERE A = AREA OF PIPE
P = WATER PRESSURE
Ø = DEFLECTION ANGLE.
- VERTICAL UPLIFT BLOCKS SHALL BE DESIGNED ON THE BASIS OF 150 LBS. PER CU. FT. FOR CONCRETE AND SOIL AT 120 LBS. PER CU. FT. OVER THE AREA OF BLOCK.
- VERTICAL DOWN THRUST BLOCKS SHALL BE DESIGNED ON THE BASIS OF 3000 LB. PER SQ. FT. ALLOWABLE SOIL BEARING PRESSURE. DIMENSIONS MAY BE DECREASED WITH APPROVAL OF THE ENGINEER OR MEASURED SOIL CONDITIONS PERMIT. IN POOR SOIL CONDITIONS, BLOCK DIMENSIONS SHALL BE INCREASED IN PROPORTION TO ALLOWABLE BEARING VALUE.
- THRUST BLOCKS ON HORIZONTAL BENDS, TEES, CROSSES, AND REDUCERS SHALL BE SIZED BASED ON 2400 LBS. PER SQ. FT. OF BLOCKING SURFACE AREA IN CONTACT WITH UNDISTURBED SOIL. BLOCK DIMENSIONS MAY BE DECREASED WITH APPROVAL OF THE ENGINEER OR MEASURED SOIL CONDITIONS PERMIT. IN POOR SOIL CONDITIONS, BLOCK DIMENSIONS SHALL BE INCREASED IN PROPORTION TO THE ALLOWABLE BEARING VALUE.
- ALL BLOCKING SHALL HAVE A MINIMUM SOIL COVER OF 1 FT.
- ADDITIONAL REINFORCING MAY BE REQUIRED FOR HORIZONTAL BLOCKING TO HANDLE UNUSUAL SHEAR LOADING CONDITIONS.
- ANCHOR COLLARS SHALL BE REINFORCED IN ACCORDANCE WITH REINFORCING BAR SCHEDULE FOR REDUCED BLOCKS SHOWN ABOVE. STEEL ANCHOR RING IN ACCORDANCE WITH DIMENSIONS OF ANCHOR COLLAR.

PIPE SIZE	TEES				BENDS				REDUCER		
	THRUST BLOCKING REQUIRED (SF)	90° THRUST BLOCKING REQUIRED (SF)	45° THRUST BLOCKING REQUIRED (SF)	22 1/2° THRUST BLOCKING REQUIRED (SF)	PIPE SIZE (IN.)	ANGLE (THETA)	THRUST BLOCKING REQUIRED (SF)				
2 1/2"	0.61	0.43	0.23	0.12	4 - 3	8.2	0.05				
3"	0.88	0.62	0.34	0.17	6 - 3	19.5	0.45				
4"	1.57	1.11	0.60	0.31	6 - 4	12.8	0.22				
6"	3.53	2.50	1.35	0.69	8 - 6	10.5	0.25				
8"	6.28	4.44	2.40	1.23	10 - 8	9.6	0.30				
10"	9.82	6.94	3.76	1.92	12 - 10	8.2	0.31				
12"	14.14	10.00	5.41	2.76	14 - 12	7.2	0.32				
14"	19.24	13.61	7.36	3.75	18 - 12	18.4	2.83				
16"	25.13	17.77	9.62	4.90	20 - 14	17.5	3.04				
18"	31.81	22.49	12.17	6.21	20 - 16	11.5	1.42				
20"	39.27	27.77	15.03	7.66	24 - 18	14.5	3.12				
24"	56.55	39.99	21.64	11.03	24 - 20	9.6	1.44				
30"	88.36	62.48	33.81	17.24	30 - 20	19.5	8.30				
36"	127.23	89.97	48.69	24.82	30 - 24	11.5	3.20				

MARK	REVISION	DATE

MISCELLANEOUS DETAILS I

CITY OF MINEOLA UTILITY INFRASTRUCTURE IMPROVEMENTS FOR SANDERSON FARMS MINEOLA, TEXAS

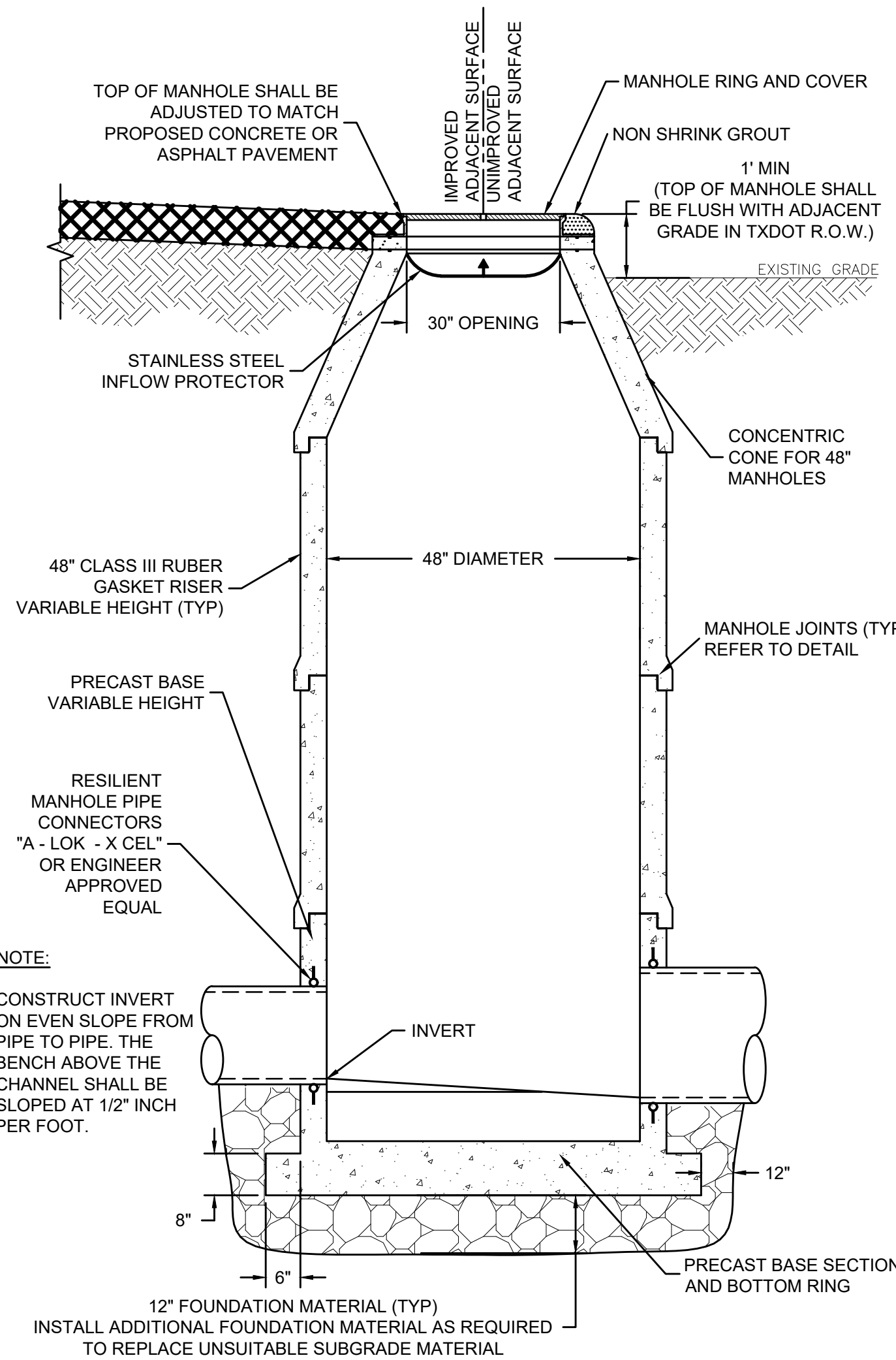
DESIGNED BY:	LATEST REVISION:	KSA JOB NO.:	MIN-160
NR	1/30/2019		



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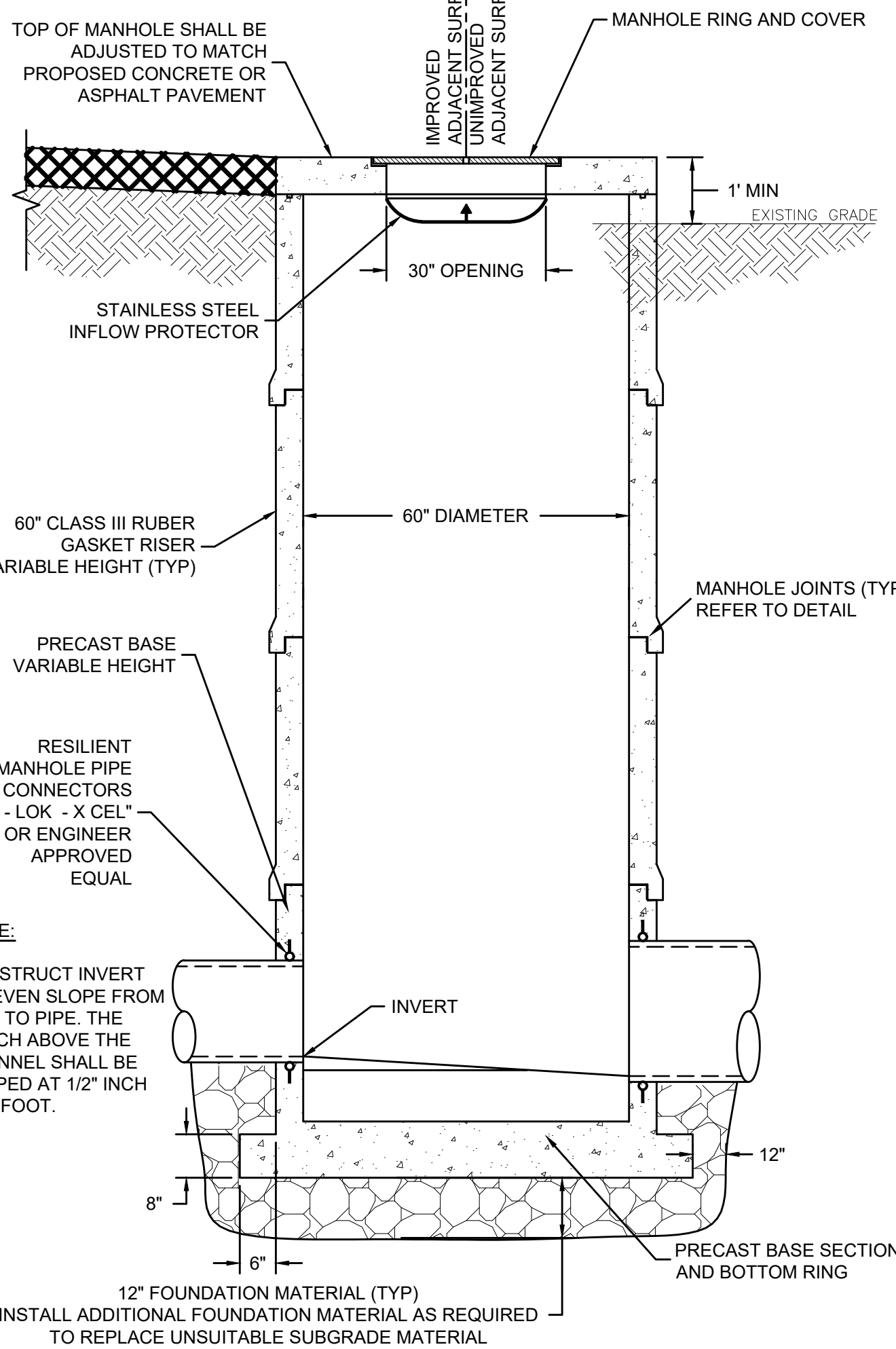


TYPICAL 48" MANHOLE SECTION

NTS

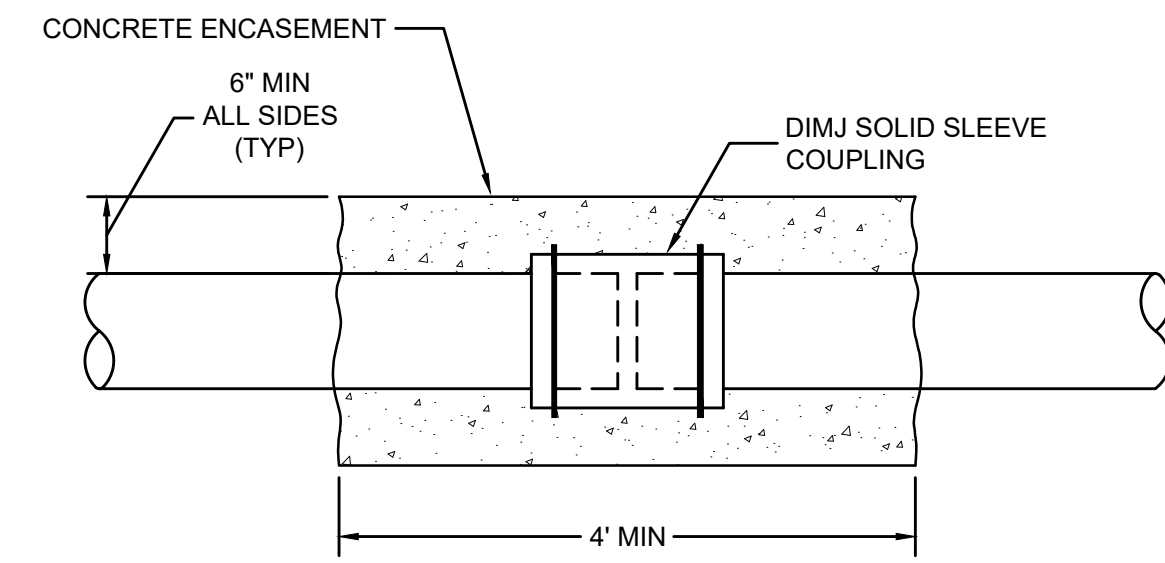
CONCRETE MANHOLE GENERAL NOTES:

1. PRECAST RISERS, CONES, FLOORS, GRADE RINGS, AND RINGS AND COVERS SHALL BE MANUFACTURED ACCORDING TO THE MOST RECENT ASTM C-478 SPECIFICATIONS.
2. ALL MANHOLE CONSTRUCTION SHALL BE WATERTIGHT. JOINTS SHALL BE RUBBER GASKET MANHOLE SECTIONS WITH PROFILE JOINT AND FORSHEDA 114 JOINT SEALS OR APPROVED EQUALS.
3. ANY ERECTION HOLES, STEP HOLES, OR OTHER HOLES THROUGH THE WALL OF THE MANHOLE SHALL BE COVERED WITH 3" NON-SHRINK CONCRETE GROUT. ANY LIFTING LOOPS OR RINGS SHALL BE REMOVED FLUSH WITH THE SURFACE OF THE MANHOLE.
4. GRADE RINGS SHALL BE FORMED WITH TONGUE AND GROOVE OF LUGS AND NOTCHES. GRADE RINGS SHALL BE SET IN MORTAR.
5. WHEN FIELD CONDITIONS REQUIRE HEIGHT TO BE ADJUSTED, ADDITIONAL GRADE RINGS MAY BE USED AS DIRECTED BY THE ENGINEER.
6. WHENEVER THE SUBGRADE FOR ANY MANHOLE OR DROP MANHOLE IS OF AN UNSATISFACTORY MATERIAL, UNSATISFACTORY MATERIAL SHALL BE REMOVED AND REPLACED WITH A FOUNDATION MATERIAL AND COMPACTED TO THE SATISFACTION OF THE ENGINEER.
7. ALL CONCRETE ENCASEMENT IN ROCK SHALL BE POURED AGAINST THE FACE OF THE ROCK. NO PAYMENT WILL BE MADE FOR EXTRA CONCRETE USED IN OVER BREAKAGE OF THE DIMENSIONS AS SHOWN ON THE TYPICAL SECTION OF CONCRETE ENCASEMENT.
8. WHENEVER SEWER PIPE IS CONNECTED INTO THE WALL OF A MANHOLE WITHOUT A RESILIENT MANHOLE PIPE CONNECTOR THE FIRST JOINT OF THE SEWER PIPE SHALL BE LOCATED A MAXIMUM OF 12" OUTSIDE THE WALL OF THE MANHOLE. CONNECTION INTO A MANHOLE WITHOUT A RESILIENT CONNECTOR WILL BE USED ONLY UPON APPROVAL OF THE ENGINEER.
9. BACKFILL EXCAVATION WITH SELECT FILL COMPACTED IN 8" LAYERS TO 95% OF MAXIMUM DENSITY WITHIN 2% OF OPTIMUM MOISTURE AS DETERMINED BY ASTM D-698.
10. MANHOLES CHANNEL DEPTH SHALL BE EQUAL TO HALF THE DIAMETER OF THE LARGEST PIPE.



TYPICAL 60" FLAT TOP MANHOLE SECTION

NTS

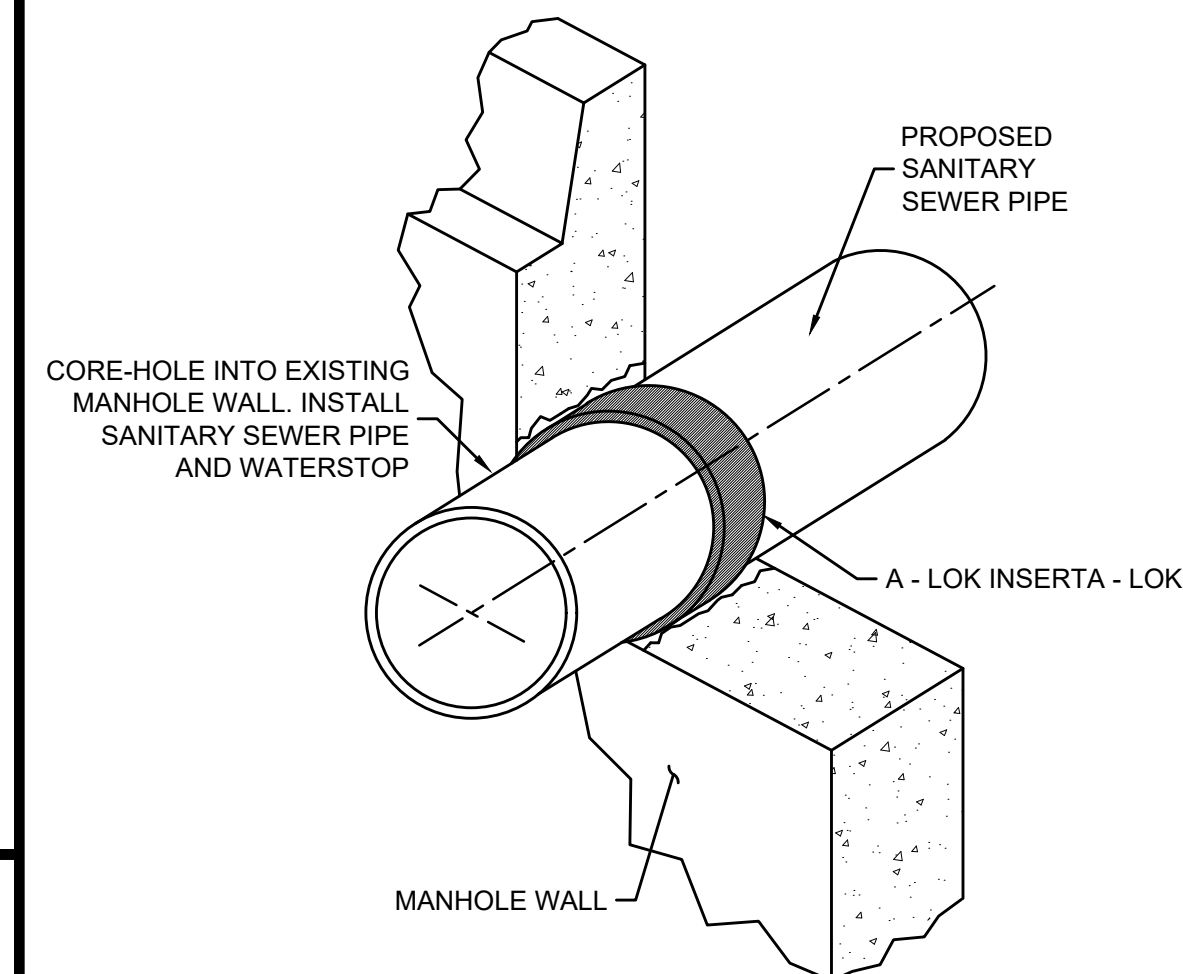


PIPE TRANSITION COUPLING DETAIL

(USE WHERE DIFFERENT PIPE TYPES MUST BE JOINED)

NOTES:

1. USE TRANSITION GASKETS BETWEEN PIPE TYPES WHEN POSSIBLE.
2. BLOCK PIPES CAREFULLY PRIOR TO CONCRETE ENCASEMENT TO ENSURE ACCURATE PIPE ALIGNMENT.
3. COMPLETED JOINT MUST BE ABLE TO PASS MANDRELL TESTING.

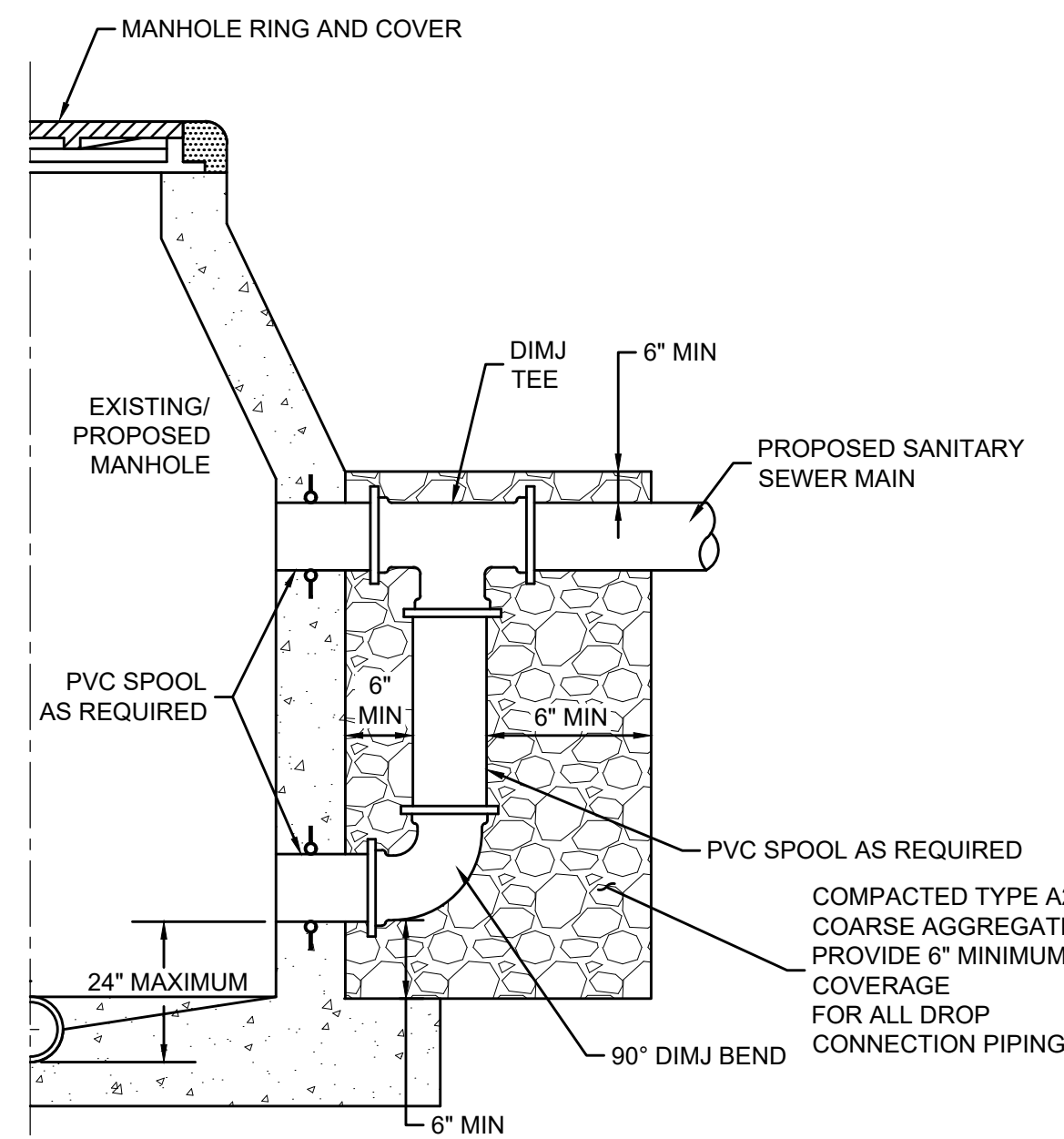


TIE-IN TO EXISTING MANHOLE DETAIL

NTS

NOTES:

1. PIPE ENTRANCE SHALL BE ADJUSTED TO AVOID CONNECTION AT MANHOLE JOINTS.
2. USE A - LOK INSERTA - LOK RESILIENT CONNECTOR MEETING ASTM C-923 OR ENGINEER APPROVED EQUAL.

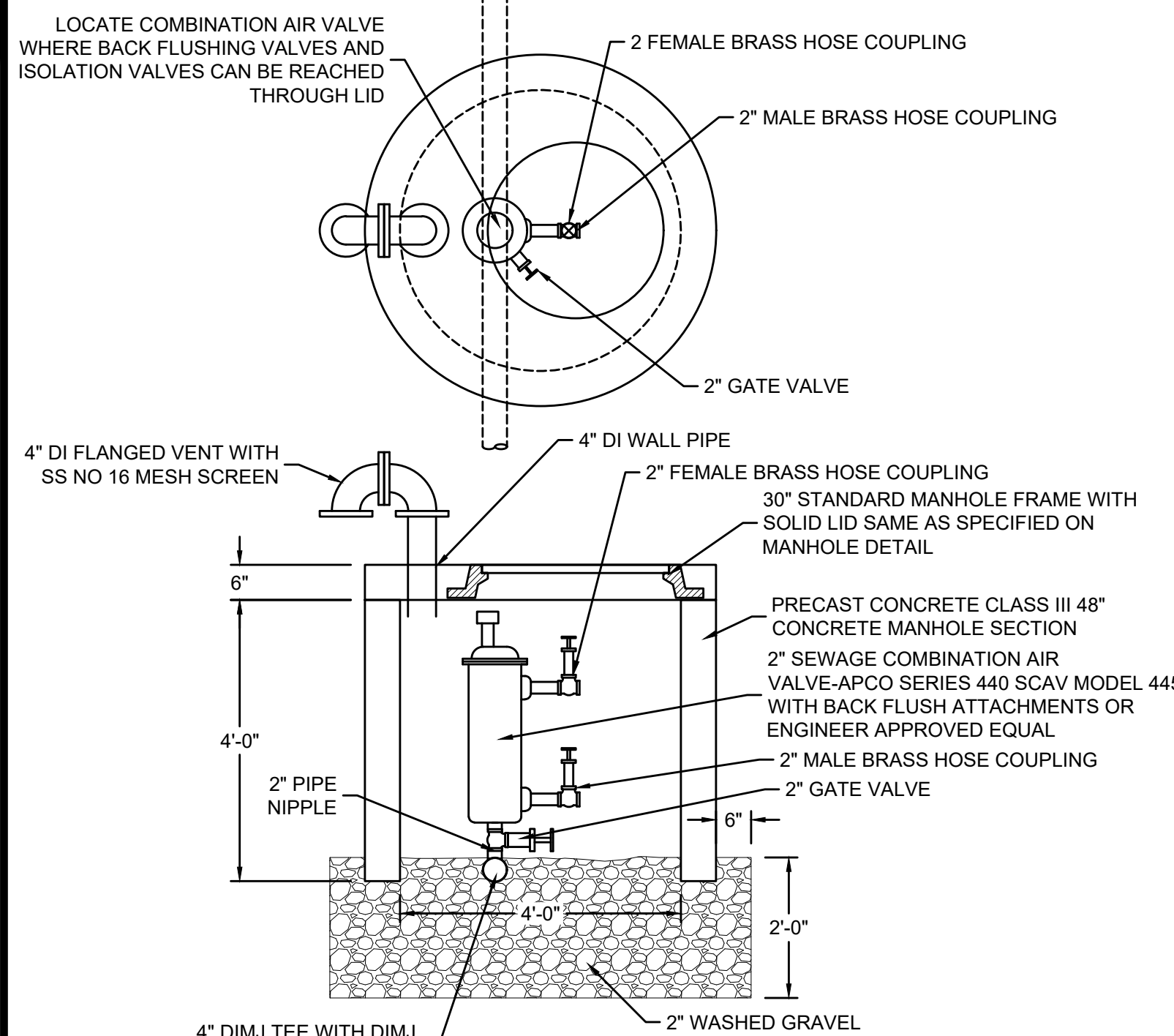


DROP MANHOLE CONNECTION

NTS

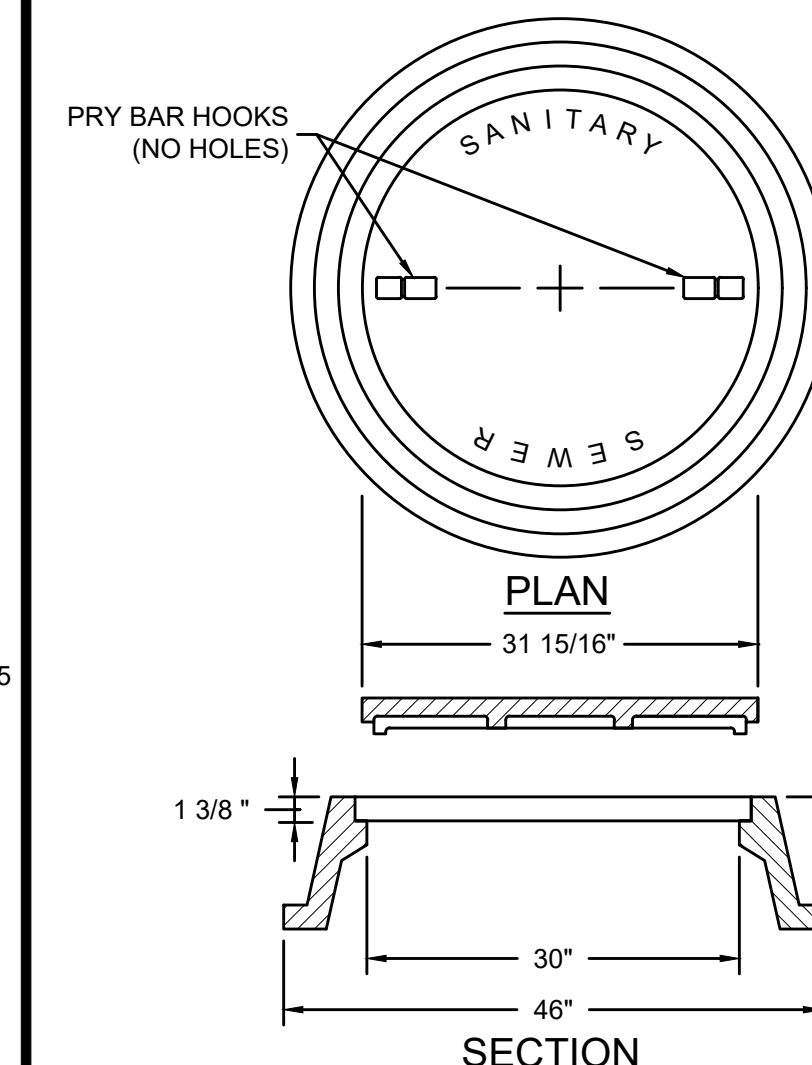
NOTES:

DROP MANHOLE CONNECTIONS SHALL BE CONSTRUCTED WHERE A CONNECTION PIPE ENTERS A MANHOLE MORE THAN 24" ABOVE THE MANHOLE INVERT.



COMBINATION AIR VALVE ASSEMBLY

NTS

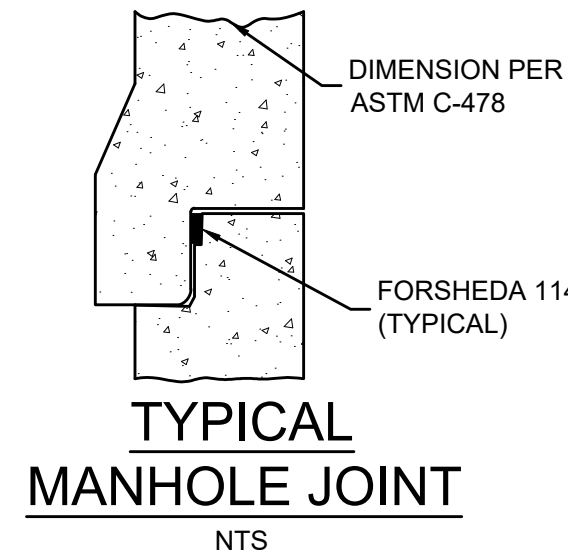


STANDARD MANHOLE RING AND COVER

NTS

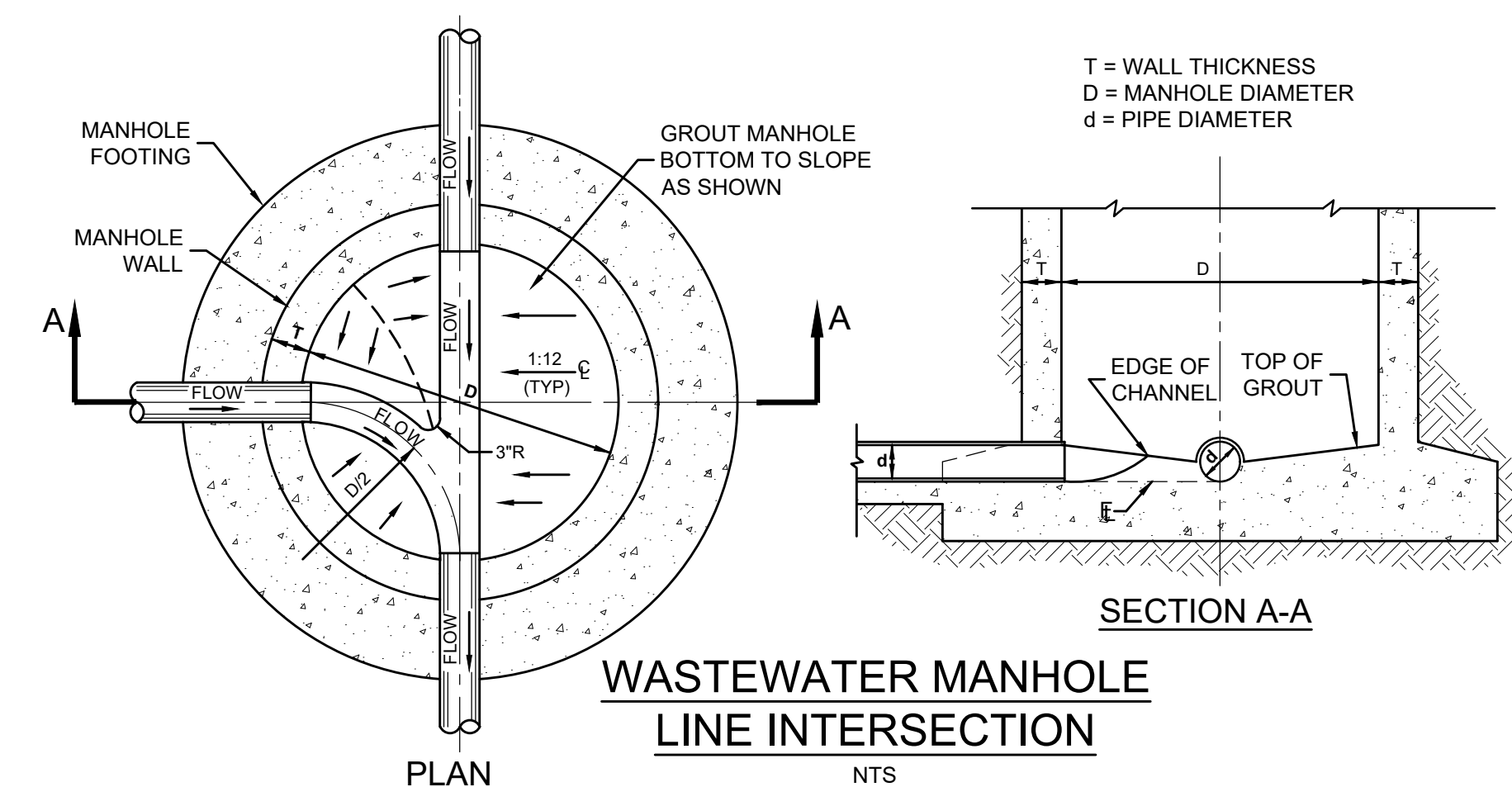
NOTE:

FRAME AND COVER TO BE MACHINED SURFACE CAST IRON NON-ROCKING TYPE. (REFER TO SPECIFICATIONS)



TYPICAL MANHOLE JOINT

NTS



WASTEWATER MANHOLE LINE INTERSECTION

NTS

MARK	REVISION	DATE

MISCELLANEOUS DETAILS II

CITY OF MINEOLA UTILITY INFRASTRUCTURE IMPROVEMENTS FOR SANDERSON FARMS MINEOLA, TEXAS

DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	1/30/2019
KSA JOB NO.:	MIN-160

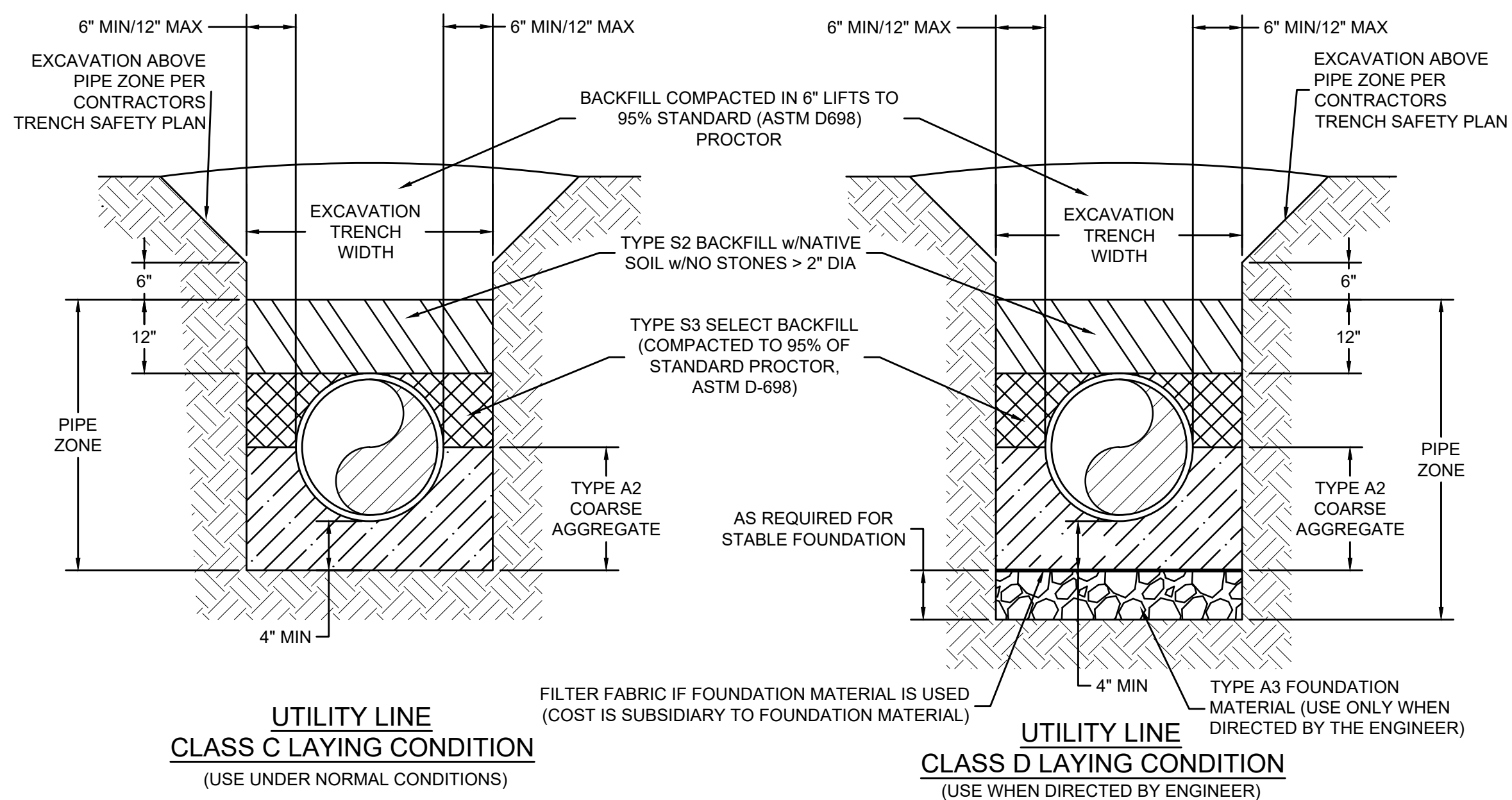


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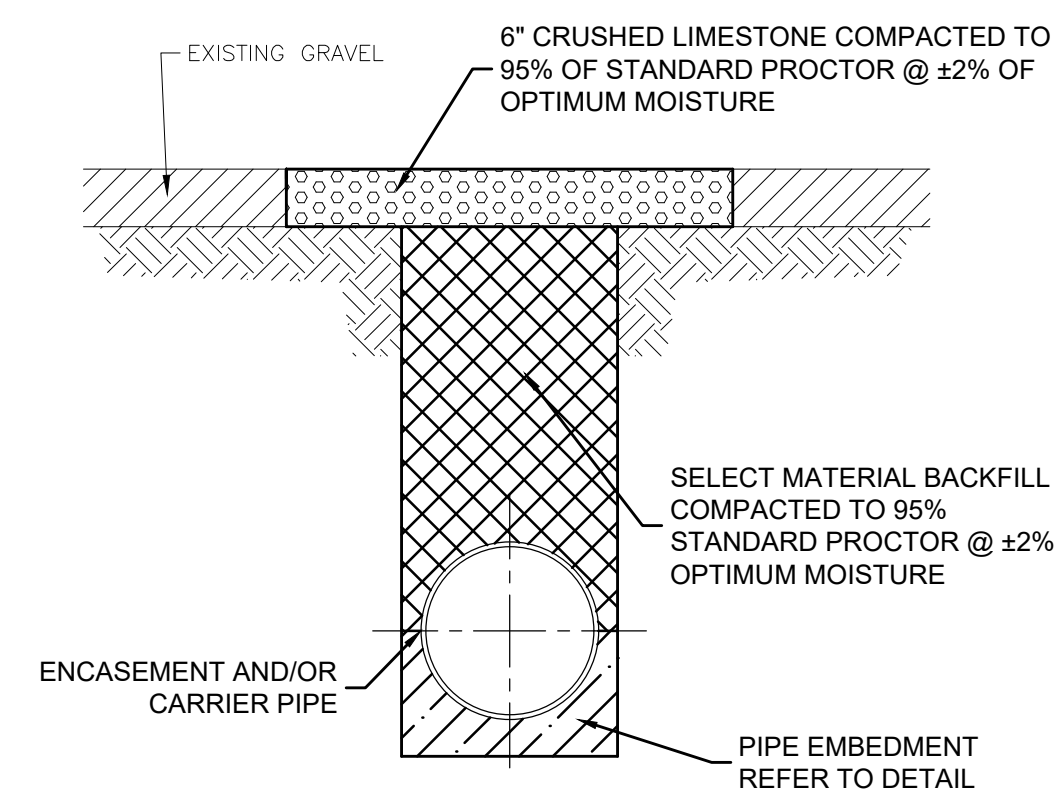
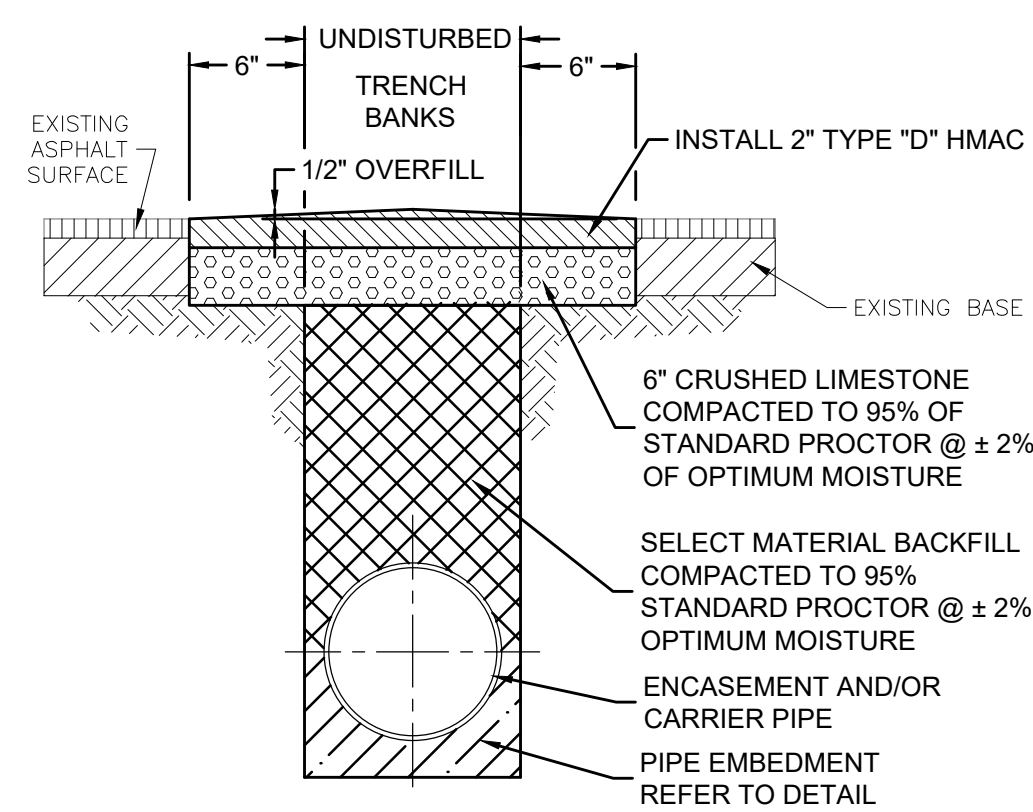
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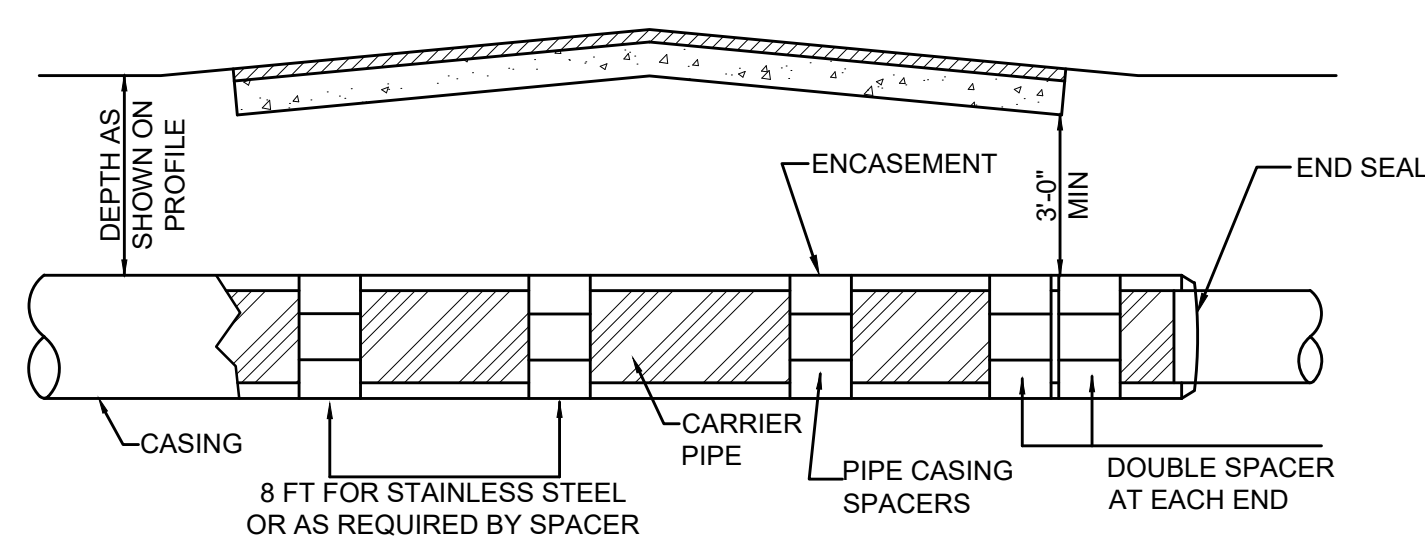


UTILITY LINE
EMBEDMENT DETAILS FOR UTILITIES
NTS



OPEN-CUT REPAIR DETAIL
ASPHALT SURFACE
NTS

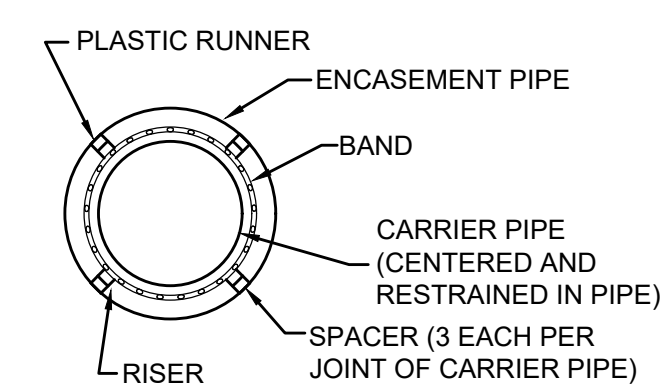
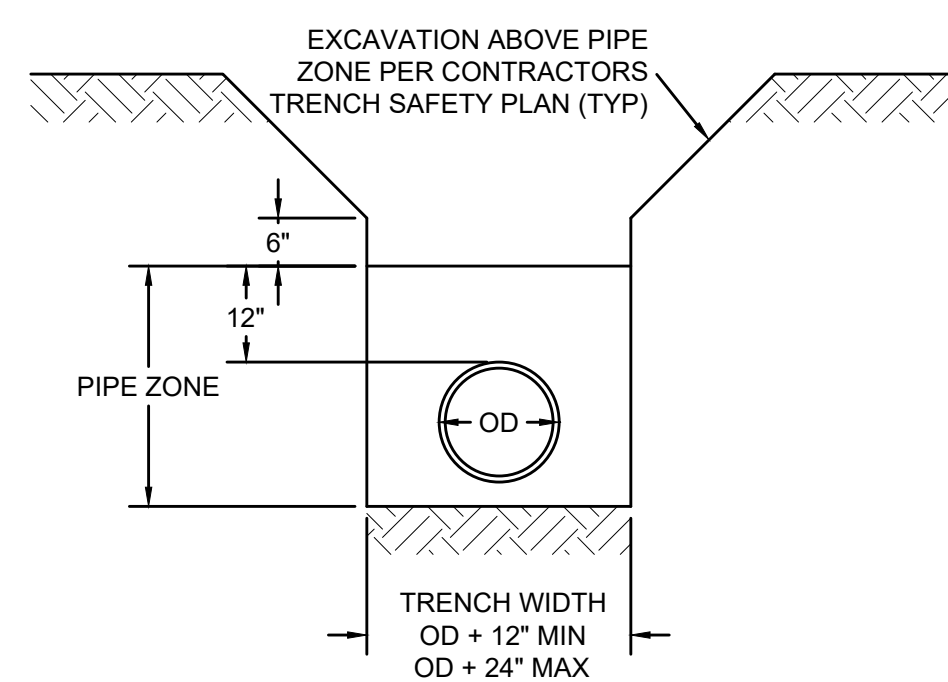
OPEN-CUT REPAIR DETAIL
GRAVEL PAVEMENT
NTS



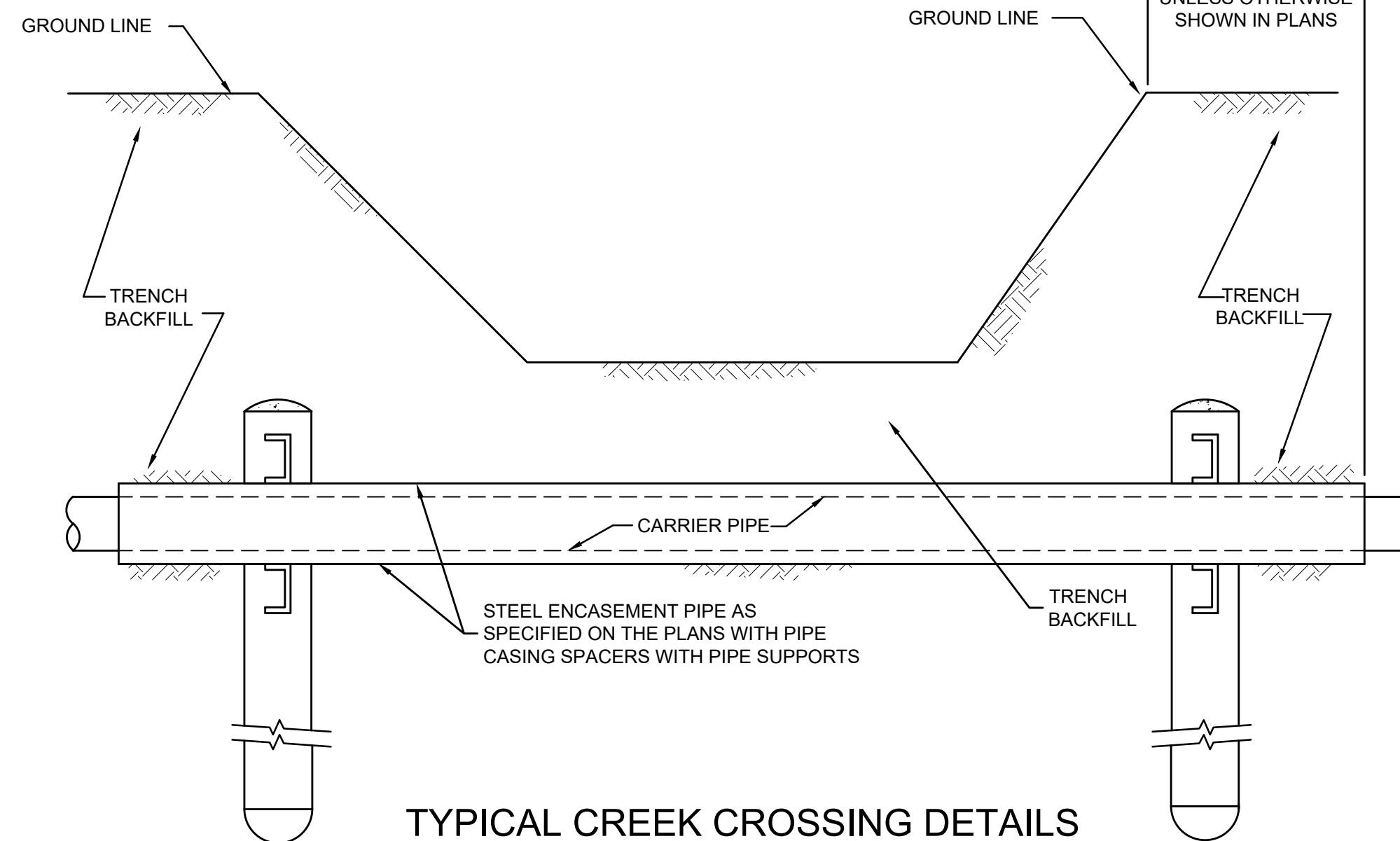
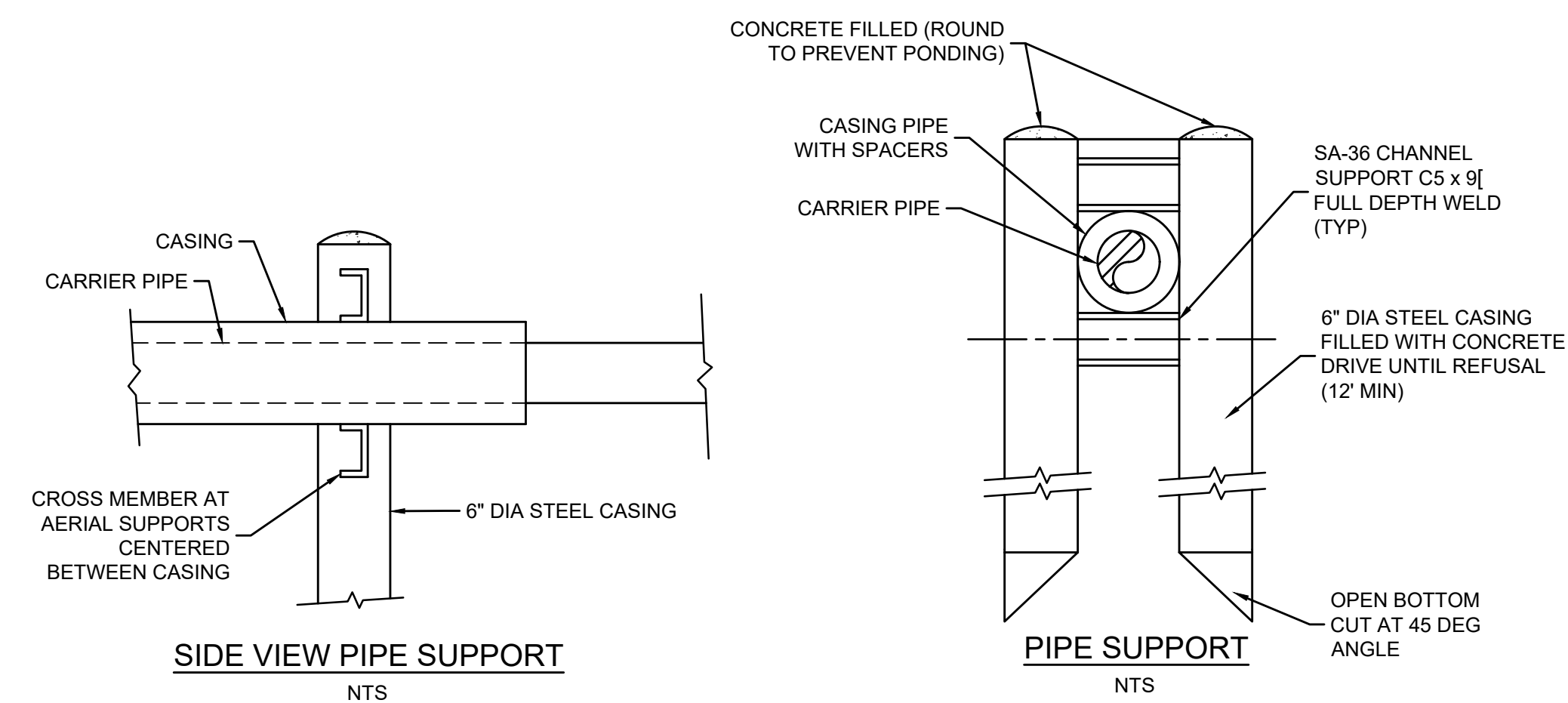
NOTES:

- CASING SPACERS SHALL BE STAINLESS STEEL.
- ENCASEMENT PIPE SHALL BE OF SIZE AND THICKNESS SPECIFIED IN THE TECHNICAL SPECIFICATIONS.
- CASING SPACERS SHALL CENTER AND RESTRAIN CARRIER PIPE IN CASING.
- CASING END SEALS SHALL BE "PULLON" TYPE. "WRAP AROUND" END SEALS ARE PROHIBITED.

PIPE CASING DETAILS
NTS



CASING SPACER DETAIL
NTS



TYPICAL CREEK CROSSING DETAILS
NTS

MARK	REVISION	DATE

**MISCELLANEOUS
DETAILS III**

**CITY OF MINEOLA
UTILITY INFRASTRUCTURE
IMPROVEMENTS
FOR SANDERSON FARMS
MINEOLA, TEXAS**

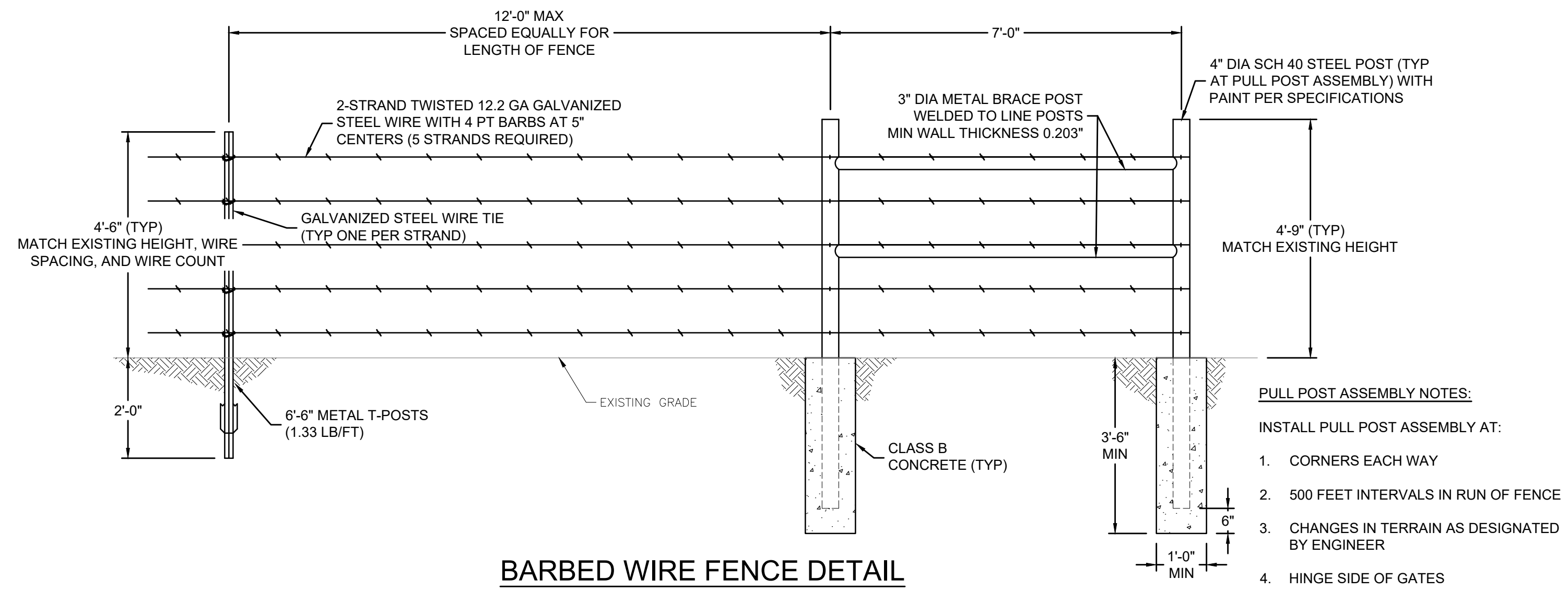
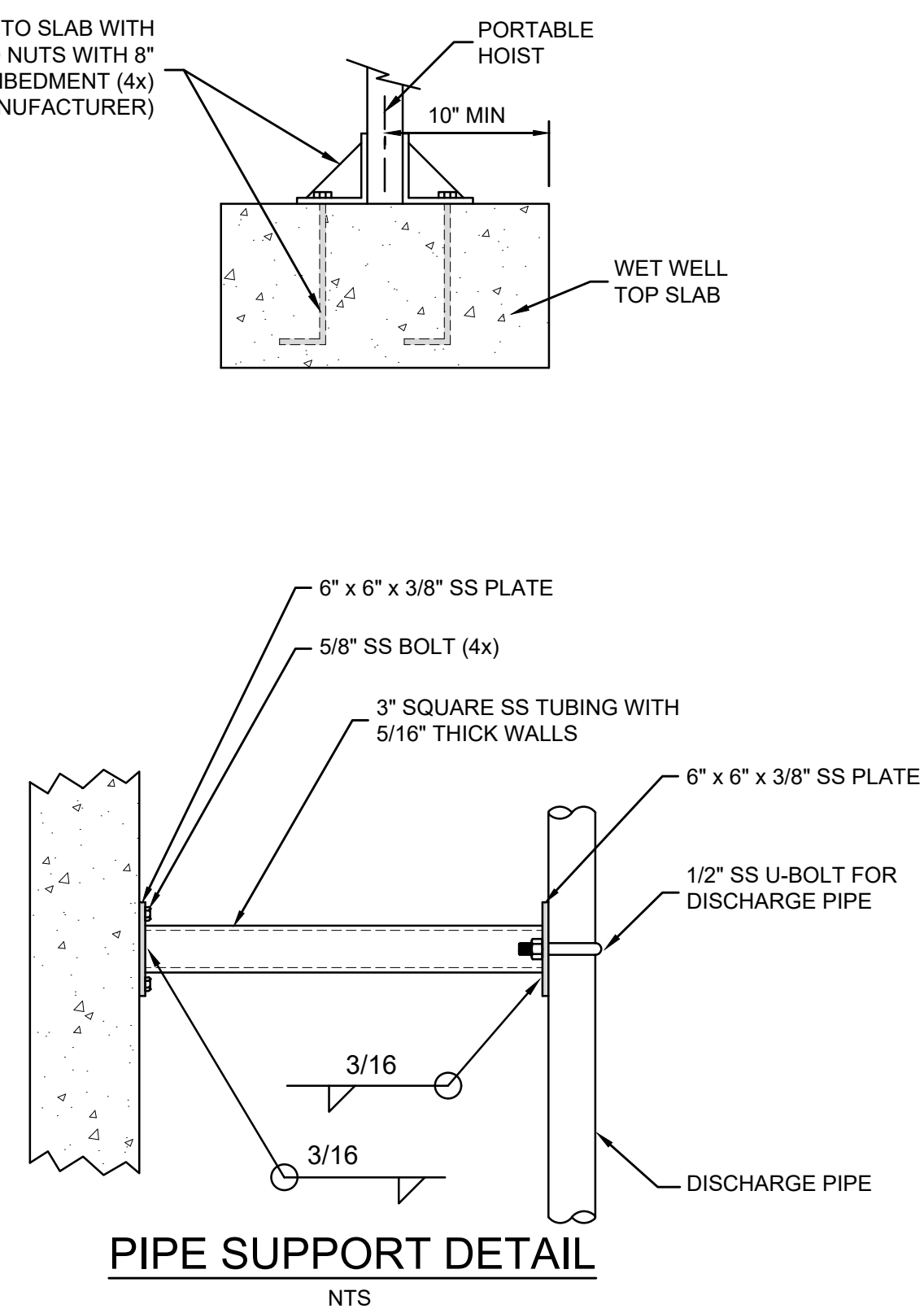
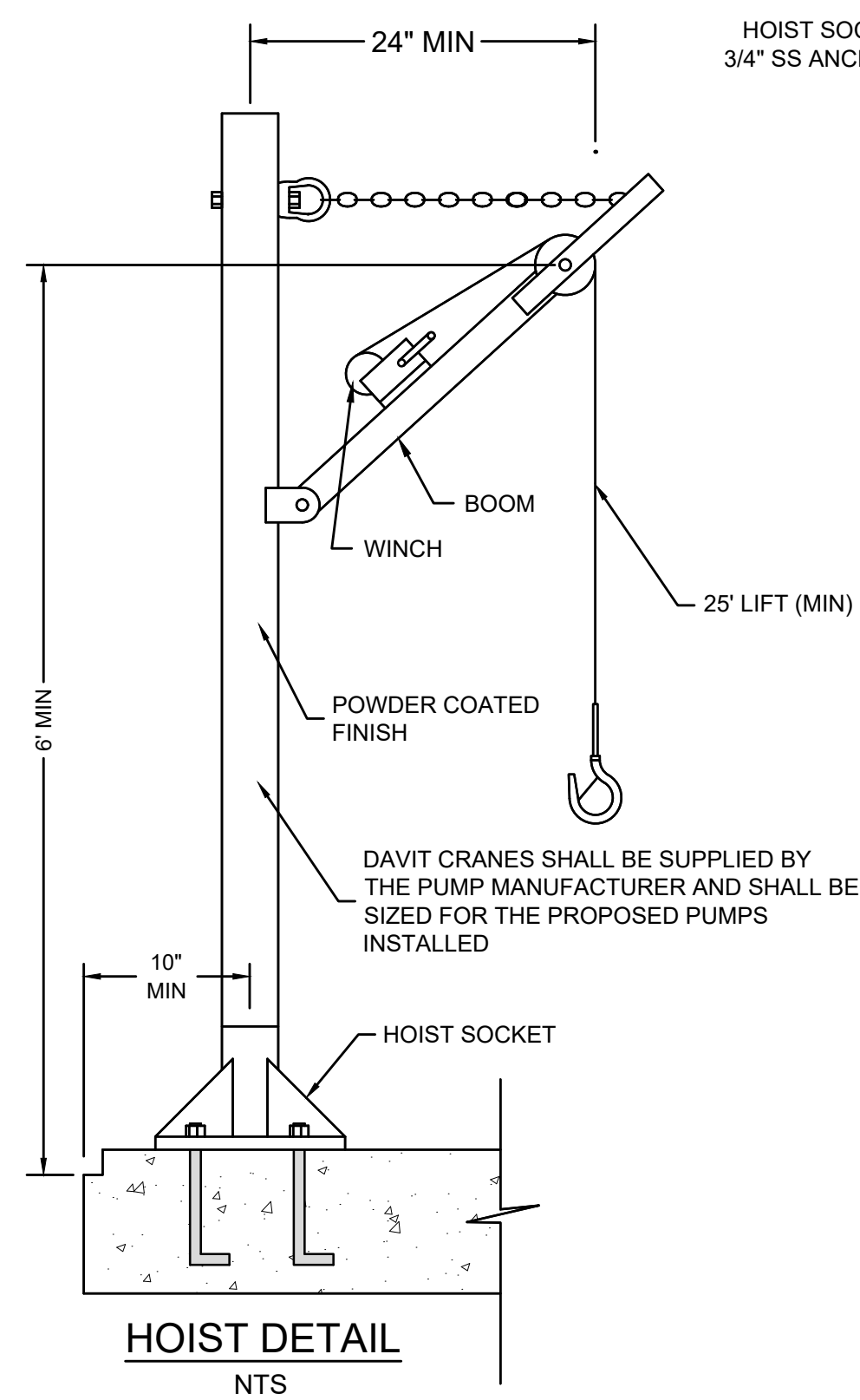
DRAWN BY:	NR
DESIGNED BY:	CA
LATEST REVISION:	8/29/2017
KSA JOB NO.:	MIN-160



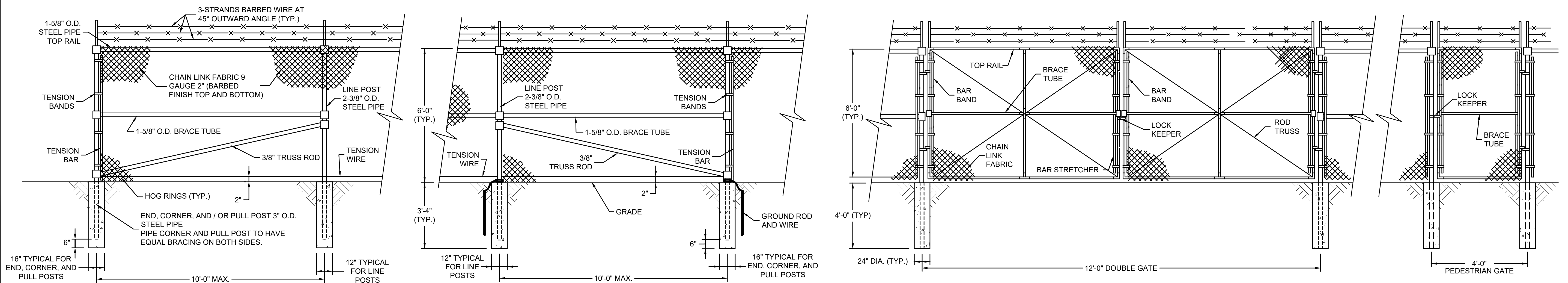
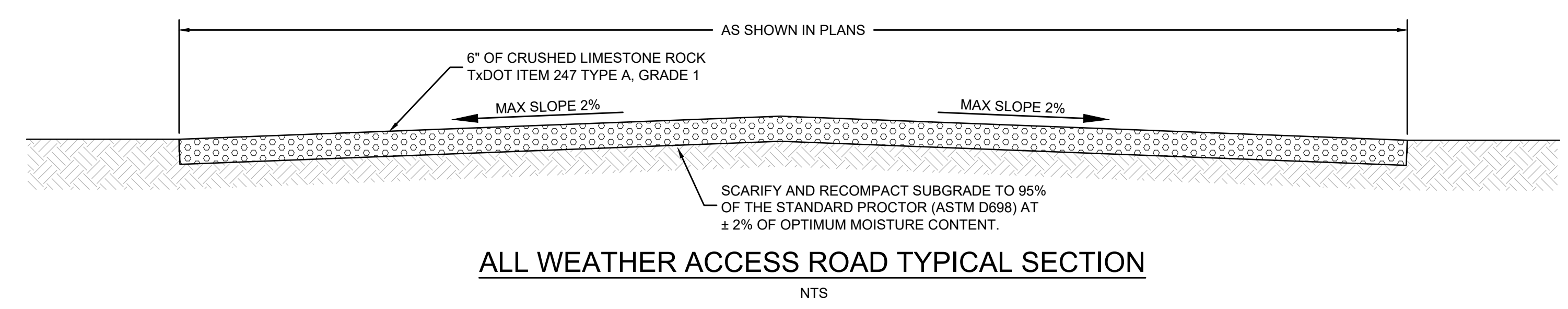
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SHEET NO.



- NOTES:
1. POST HEIGHT DIMENSION AND FENCE TYPE SHALL BE THE SAME AS THE ADJACENT FENCE.
 2. PAINT ALL POSTS AND BRACES PER TxDOT SPECIFICATIONS ITEM 446, "SYSTEM II", COLOR SELECTED BY LANDOWNER.



INTRUDER RESISTANT CHAINLINK FENCE DETAIL
N.T.S.

MARK	REVISION	DATE

**MISCELLANEOUS
DETAILS IV**

**CITY OF MINEOLA
UTILITY INFRASTRUCTURE
IMPROVEMENTS
FOR SANDERSON FARMS
MINEOLA, TEXAS**

DRAWN BY:	NR
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LATEST REVISION:	10/6/2017
KSA JOB NO.:	MIN-160



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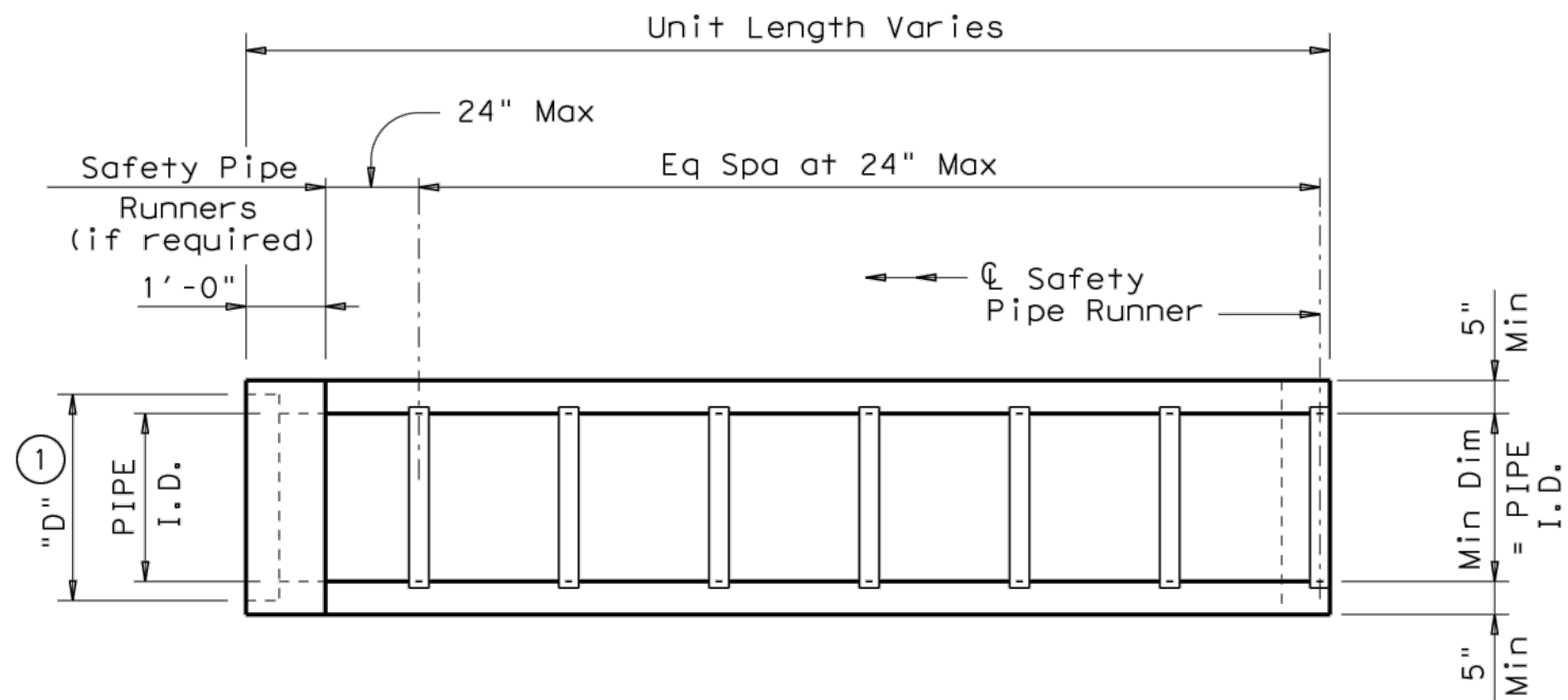
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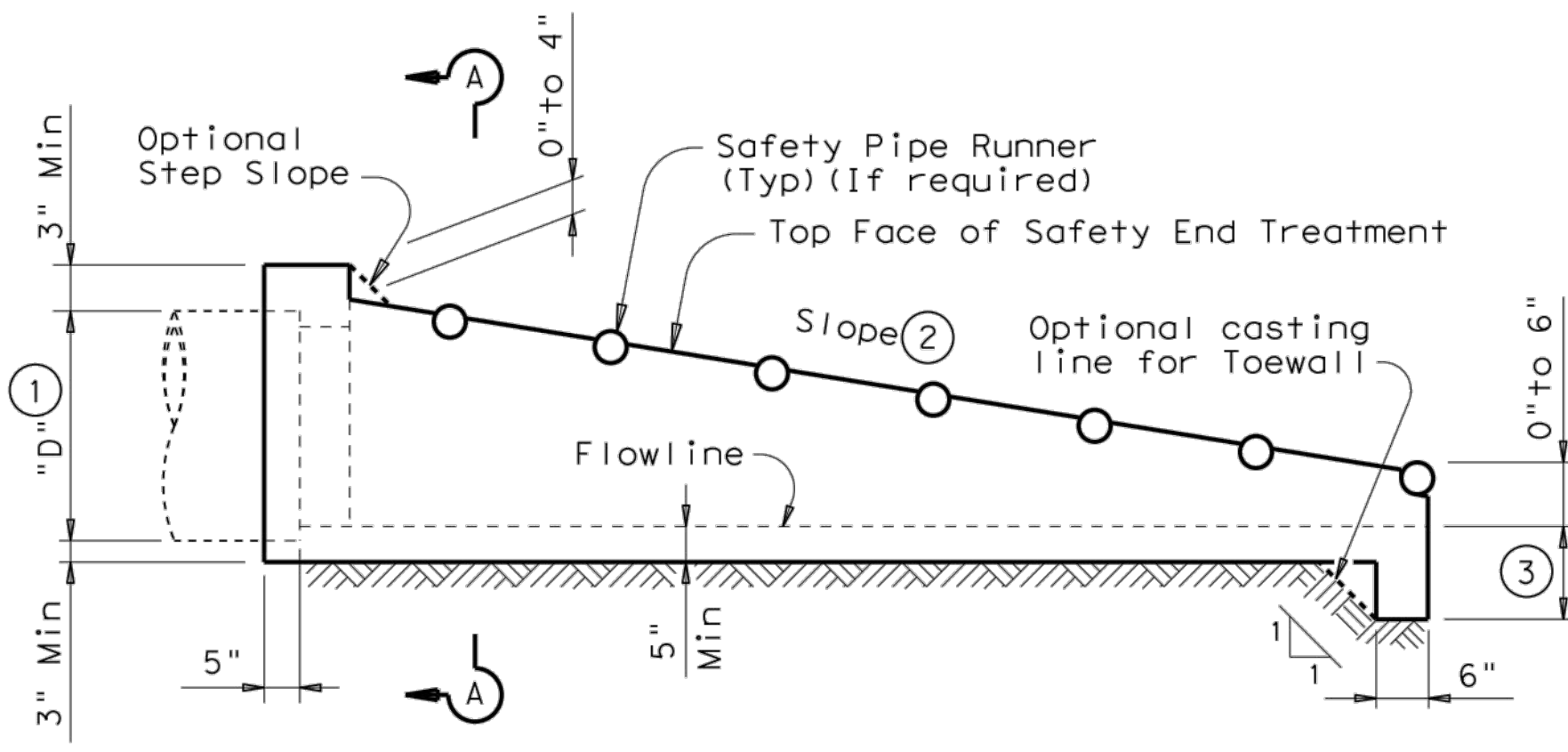
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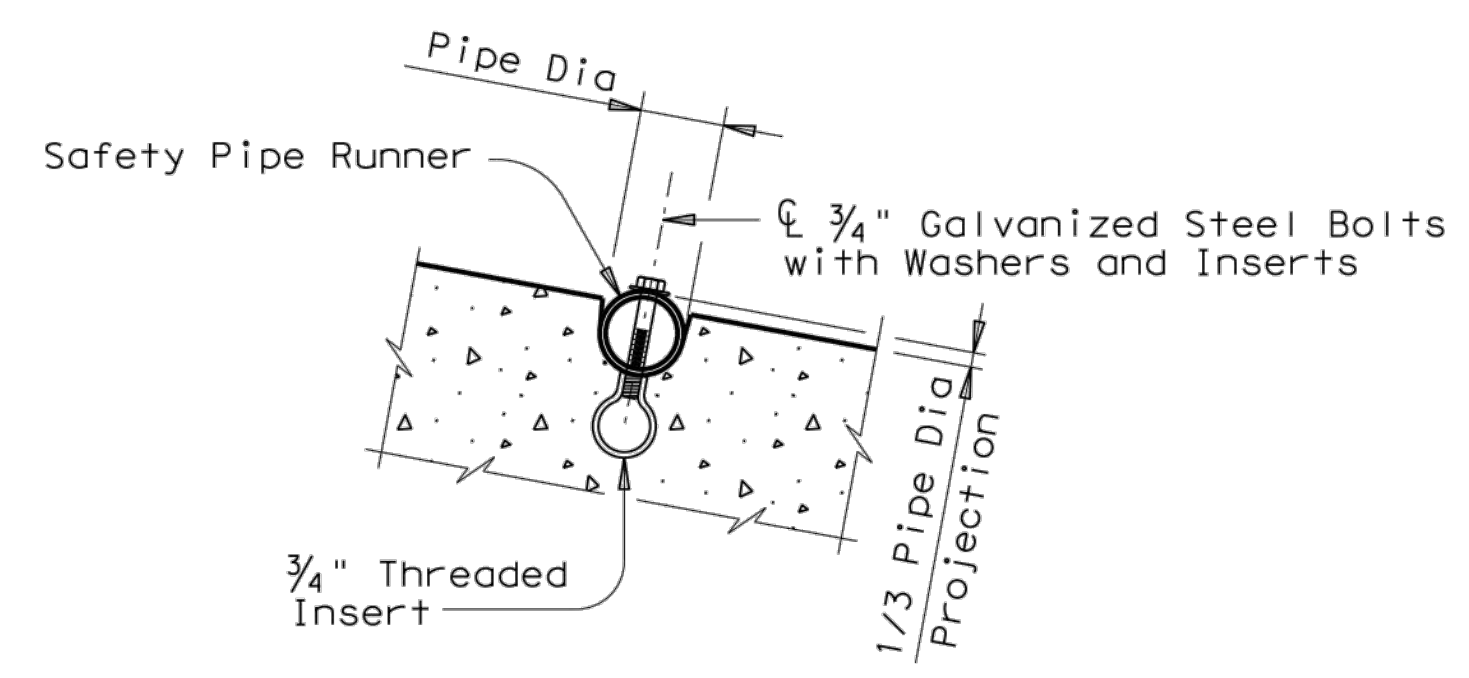
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PLAN

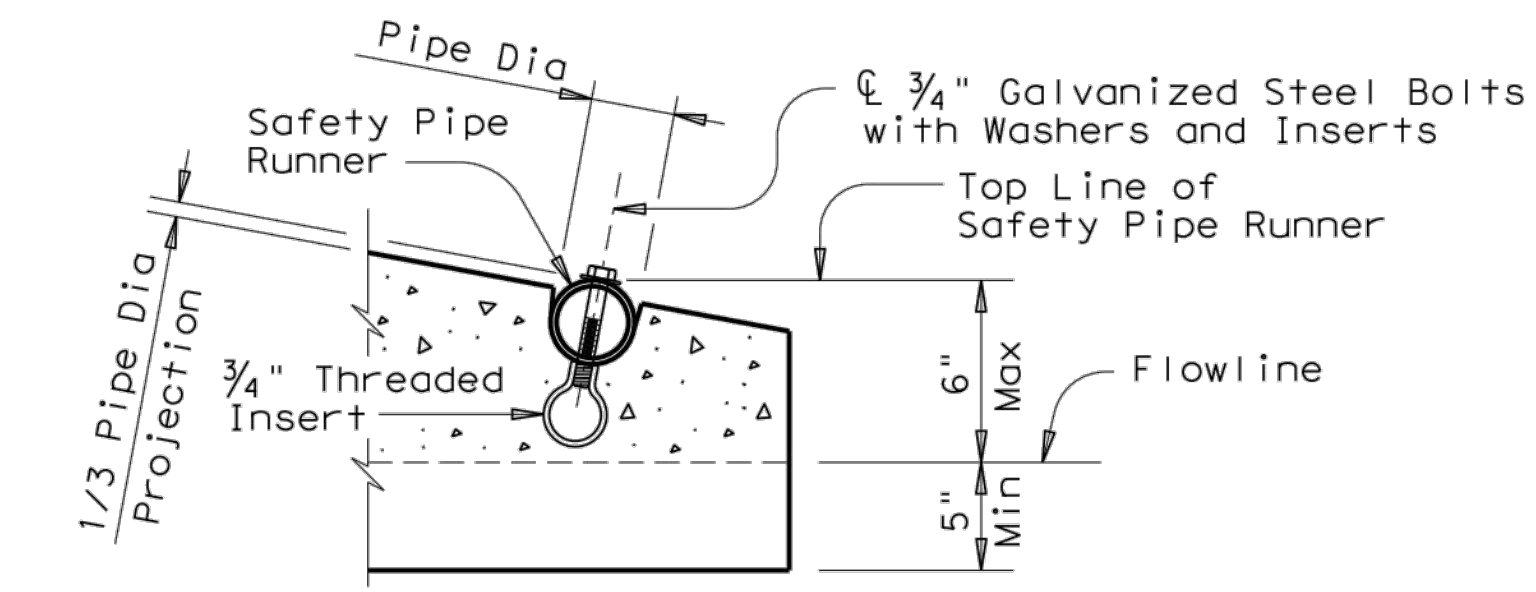


LONGITUDINAL ELEVATION

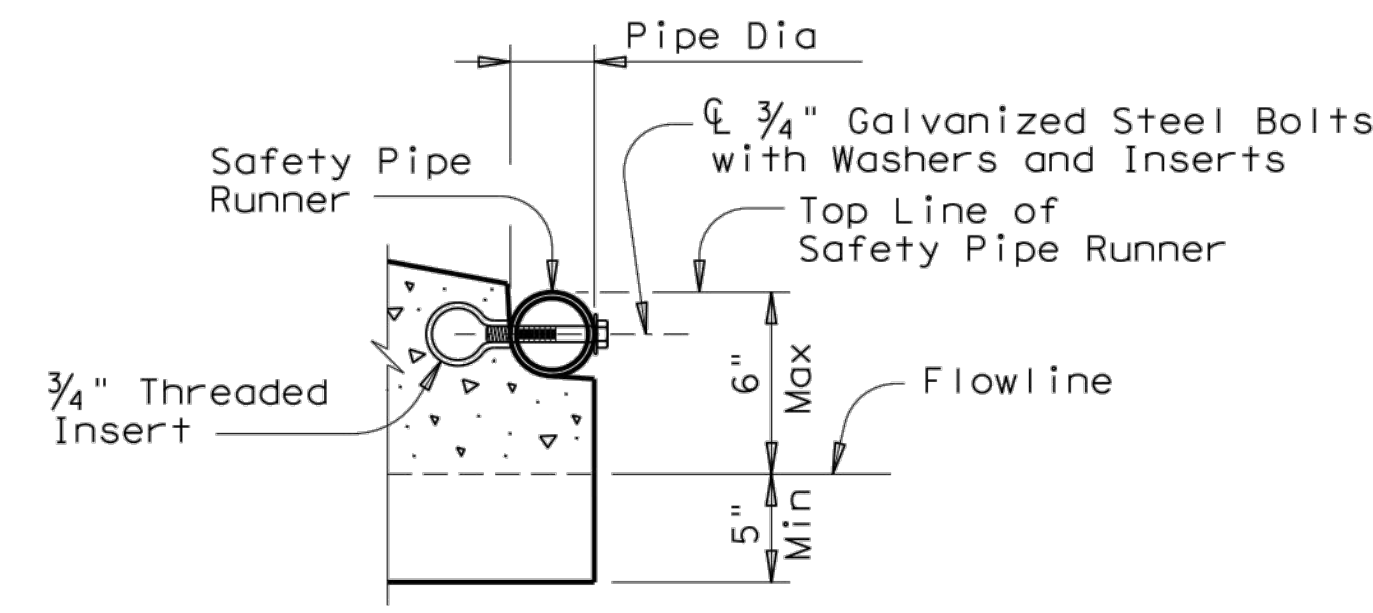


INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

(If required)



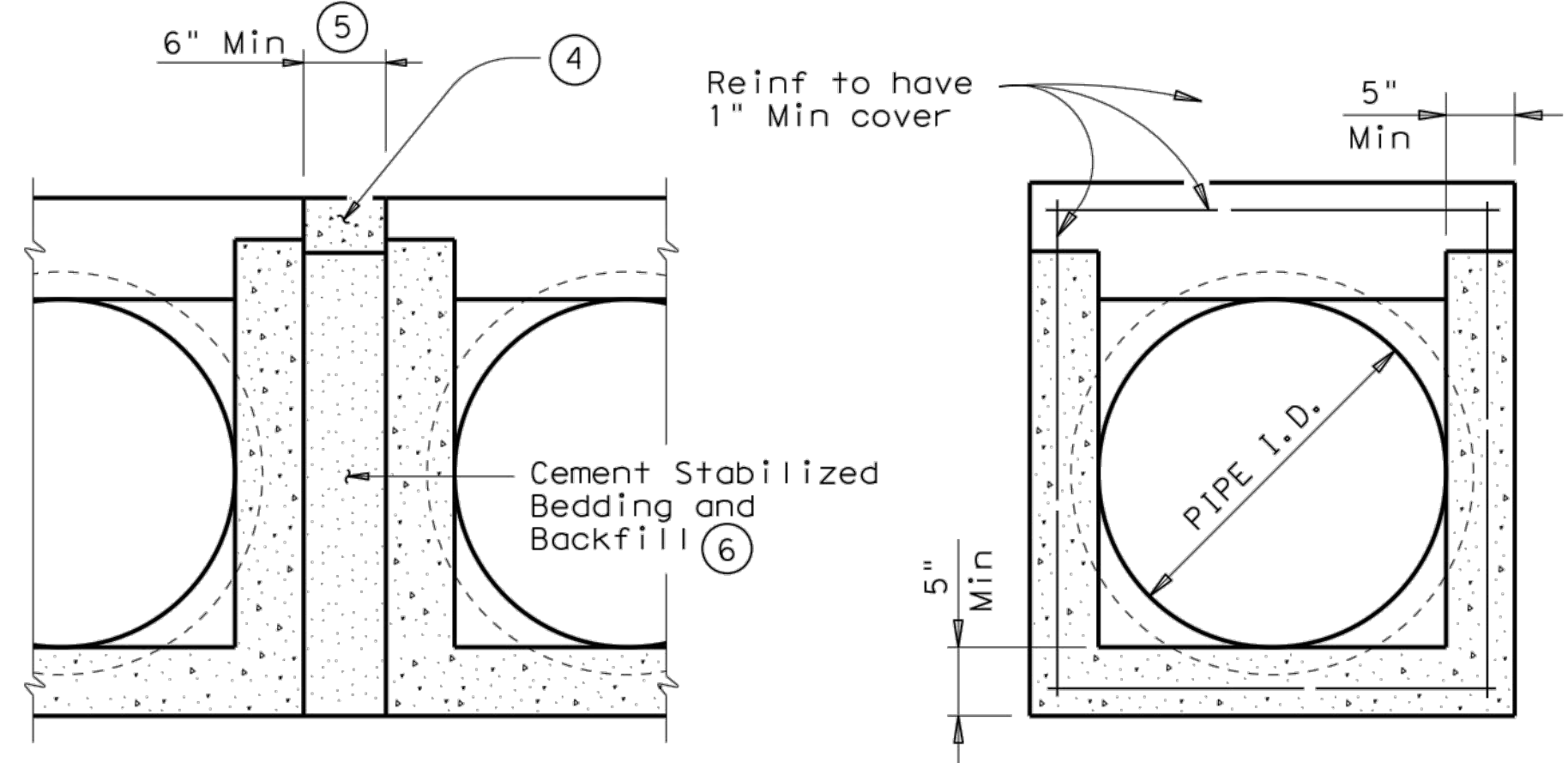
OPTION A



OPTION B

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

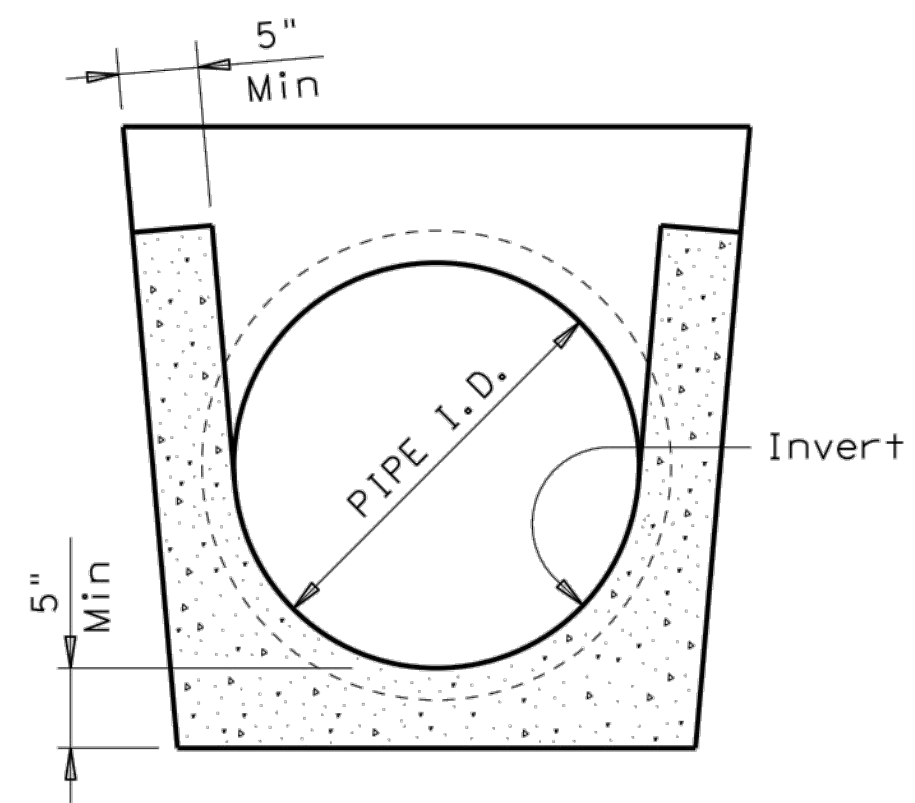
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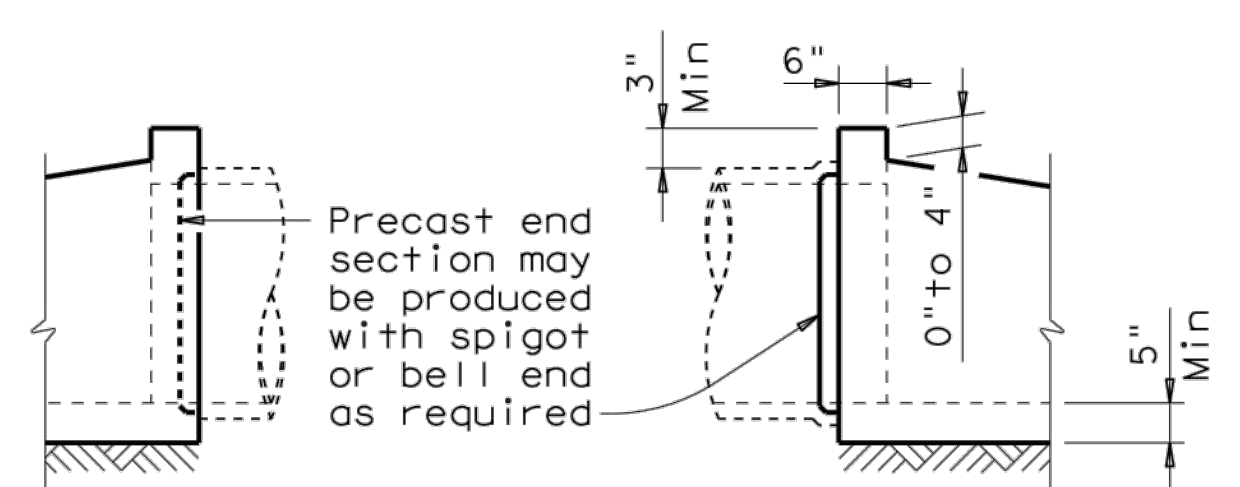
MULTIPLE PIPE INSTALLATION

OPTION WITH SQUARE BOTTOM

SECTION A-A



OPTION WITH INVERT BOTTOM



OPTIONAL JOINT

(Showing joint between RCP and Precast Safety End Treatment)

PIPE I. D.	PIPE WALL "B" THICKNESS	"D" ①	MAXIMUM SLOPE	MINIMUM LENGTH OF UNIT	PIPE RUNNERS REQUIRED		REQUIRED PIPE RUNNER SIZES		
					SINGLE PIPE	MULTIPLE PIPE	NOMINAL DIA.	O. D.	I. D.
12"	2"	17"	6:1	4'-9"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
15"	2 1/4"	20 1/2"	6:1	6'-5"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
18"	2 1/2"	24"	6:1	8'-0"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
24"	3"	31"	6:1	11'-3"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
30"	3 1/2"	38 1/2"	6:1	14'-8"	No	Yes	4" STD	4.500"	4.026"
36"	4"	45 1/2"	6:1	17'-11"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 1/2"	52 1/2"	6:1	21'-2"	Yes	Yes	4" STD	4.500"	4.026"

- ① Dimension "D" is based on ASTM C-76, Class III, Wall "B" thickness. If any other wall thickness is used, dimension "D" must be adjusted accordingly.
- ② Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.
- ③ Toewall to be used only when dimension is shown elsewhere in the plans.
- ④ The top 4" of void between Precast End Treatments shall be filled with concrete Riprap and shall be considered subsidiary to Safety End Treatment.
- ⑤ Clear distance between pipes shall be adjusted to provide for the minimum distance between safety end treatments.
- ⑥ Cement stabilized bedding and backfill shall be in accordance with the Item, "Excavation and Backfill for Structures". Bedding and backfill shall be considered subsidiary to the Item "Safety End Treatment". When concrete riprap is specified around the safety end treatment, backfill shall be as directed by Engineer.

GENERAL NOTES:

Precast safety end treatment for reinforced concrete pipe may be used for TYPE II end treatment as specified in Item "Safety End Treatment". When Precast Safety End Treatment is used as a Contractor's alternate to mitered RCP, Riprap will not be required unless noted otherwise on the plans.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Manufacture of this product shall conform to requirements of Item "Safety End Treatment" except as noted below:

- A. Minimum reinforcing shall be #4 at 6" (Grade 40) or #4 at 9" (Grade 60) each way or 6 x 6 - W12 x W12 or 5 x 5 - W10 x W10 welded wire reinforcement (WWR).
- B. Concrete for precast (steel formed) sections shall be Class "C" with a minimum compressive strength of 3600 psi.

At the option and expense of the Contractor the next larger size of Safety End Treatment may be furnished; as long as the "D" dimension cast is that of the required size of pipe.

Pipe Runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

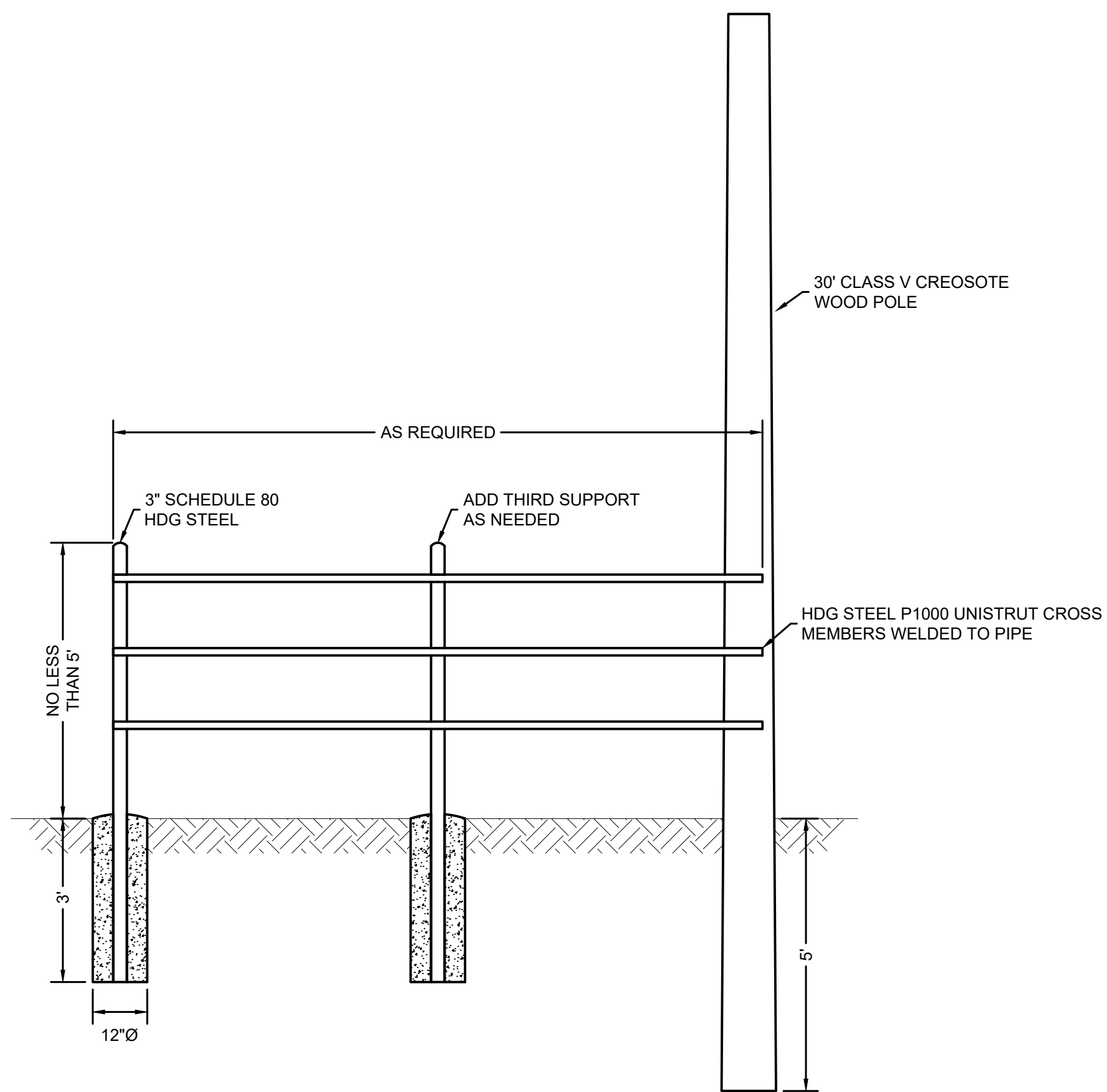
Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

All steel components except reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

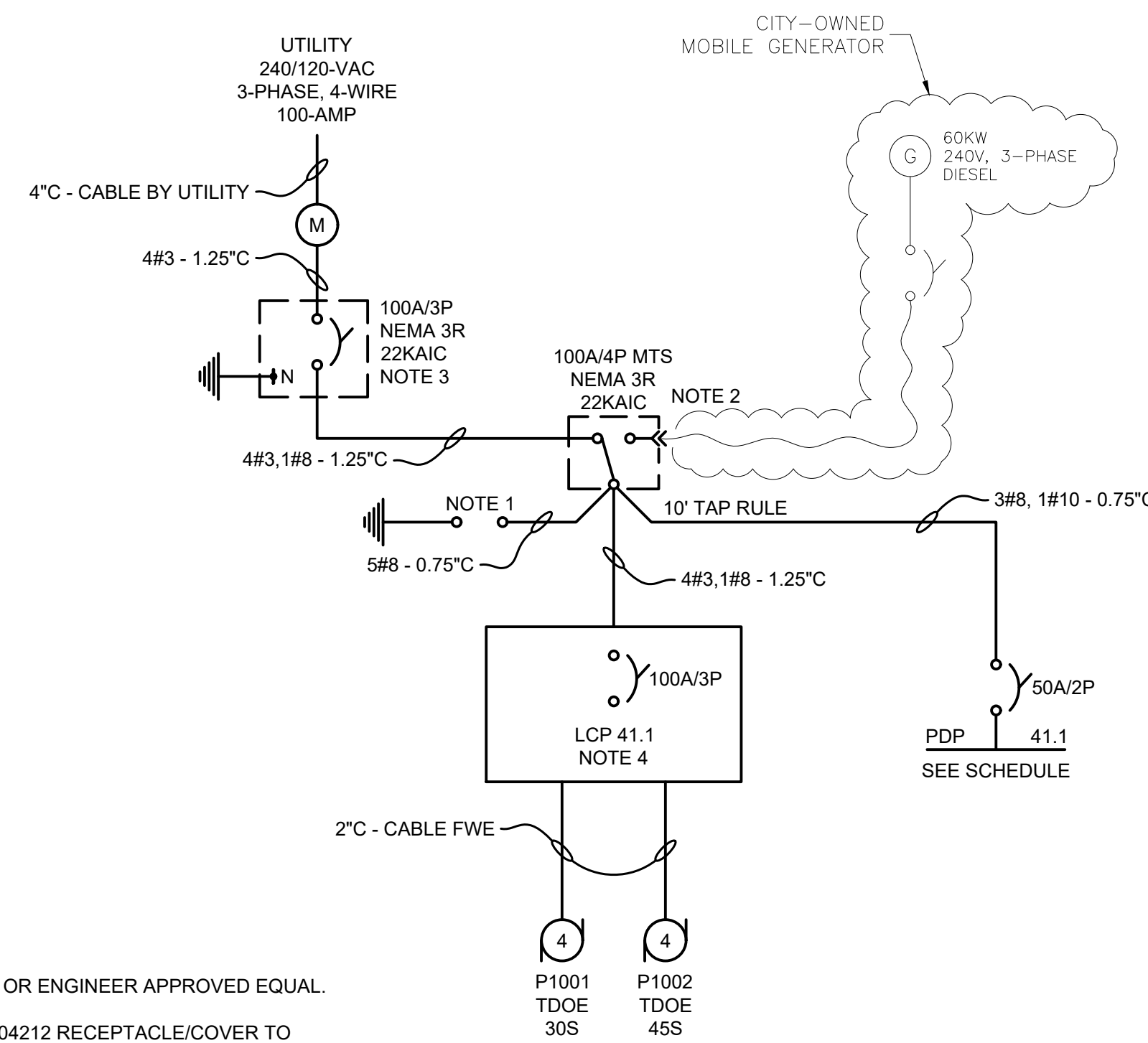
					Bridge Division Standard	
PRECAST SAFETY END TREATMENT TYPE II ~ PARALLEL DRAINAGE						
PSET-SP						
FILE: psetspss.dgn	DN: RLW	CK: KLR	DW: JTR	CK: GAF		
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY		
REVISIONS						
11-10: Add note for synthetic fibers.	DIST	COUNTY	SHEET NO.		15	

TYPICAL RACK LAYOUT

N.T.S.



SINGLE LINE DIAGRAM

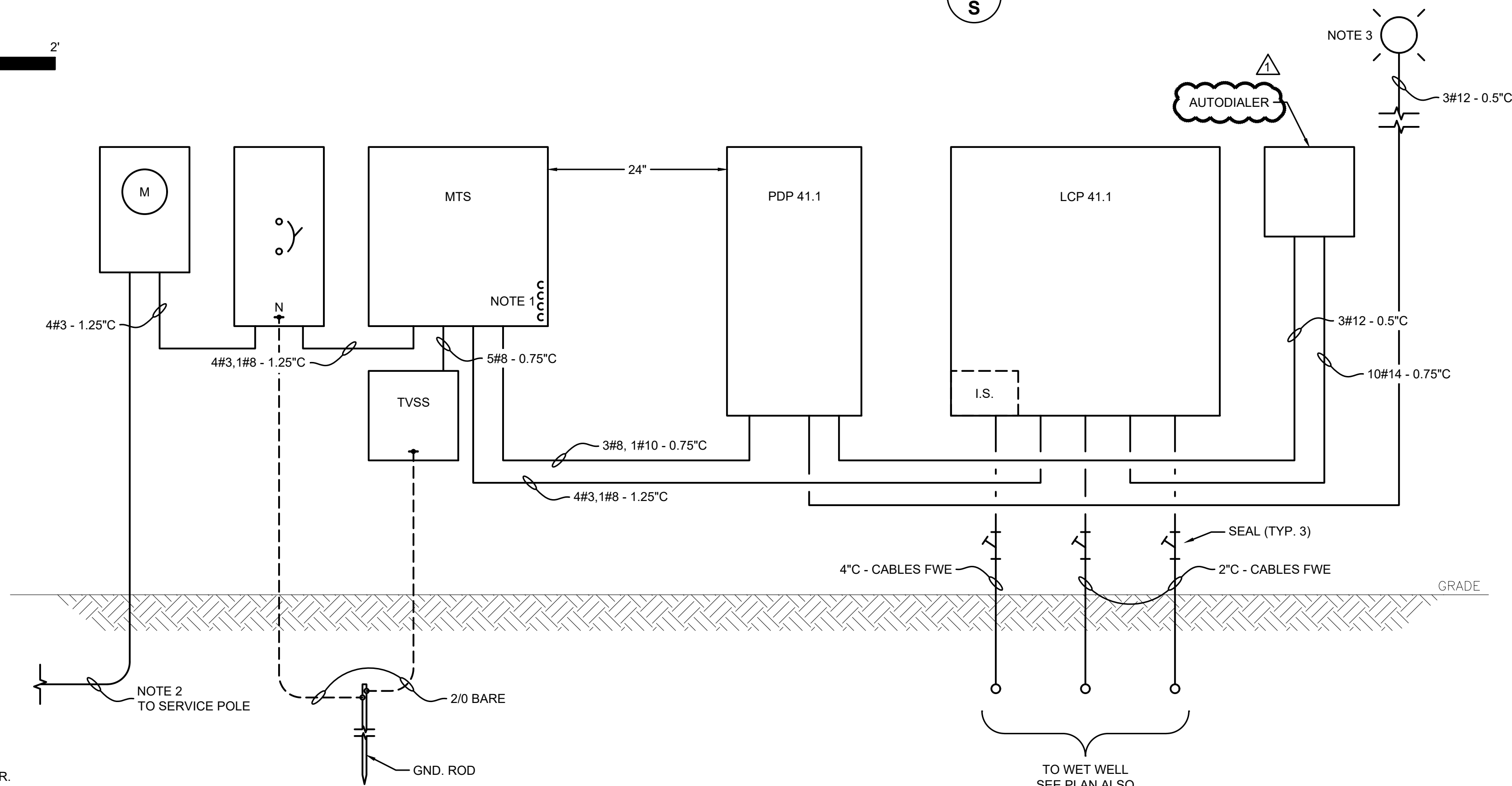
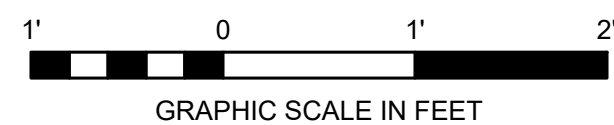


NOTES:

1. TVSS - EATON SPD 160 (240V) 30 OR ENGINEER APPROVED EQUAL.
2. PROVIDE CROUSE HINDS APR204212 RECEPTACLE/COVER TO MATE WITH AP204612 ON OWNERS MOBILE GENERATOR.
3. PROVIDE WITH INTEGRAL METERING - EATON IQ 150 OR ENGINEER APPROVED EQUAL.
4. SIZE LCP 41.1 FOR FUTURE 10HP PUMPS.

ELECTRICAL RACK RISER DIAGRAM

41.1 S

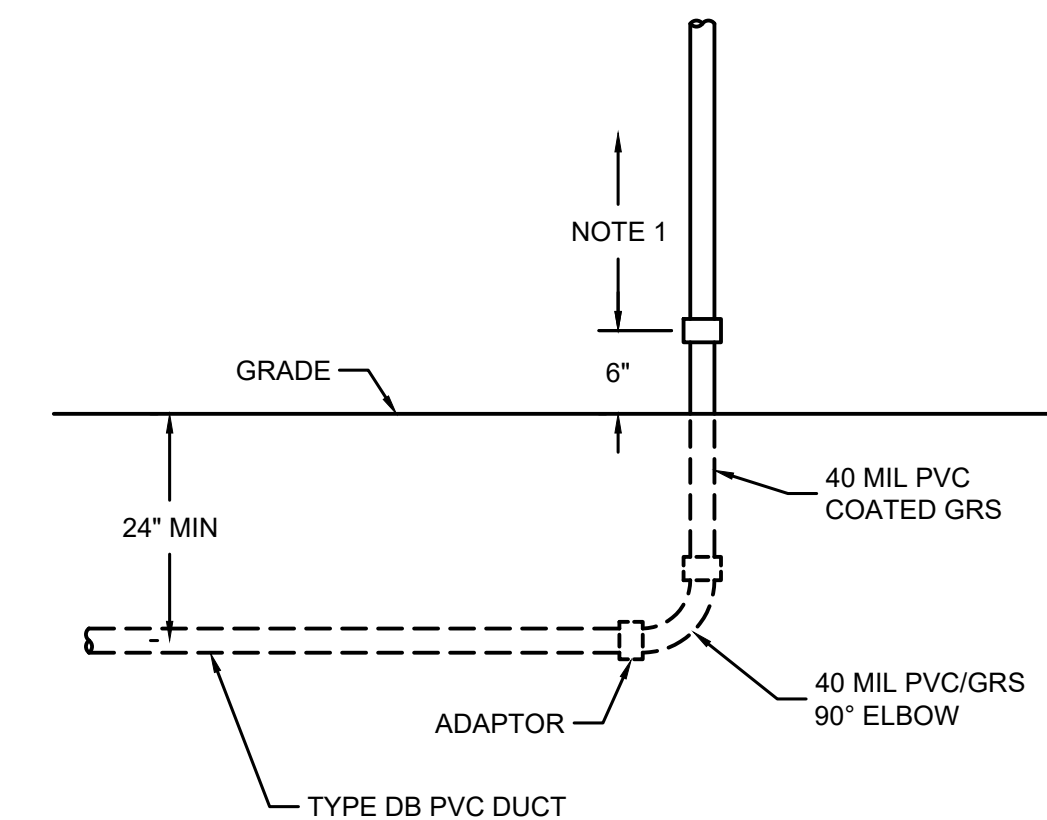


NOTES:

1. CROUSE HINDS RECEPTACLE/COVER.
2. 1.5\"/>
- 3. HUBBELL DDL-140L-1 AT 20-FT ABOVE GRADE.

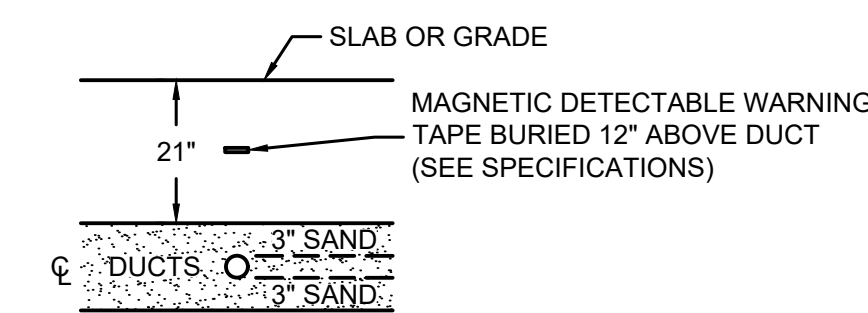
TYPICAL CONDUIT DETAIL

N.T.S.



DUCT BANK SECTION

N.T.S.



NOTES:

1. ALL ABOVE GROUND CONDUIT WHETHER OR NOT ASSOCIATED WITH STUB-UP SHALL BE PVC/GRS.

RECORD DRAWING

04/19	REVISION	DATE

ELECTRICAL DETAILS II

**CITY OF MINEOLA
UTILITY INFRASTRUCTURE
IMPROVEMENTS
FOR SANDERSON FARMS
MINEOLA, TEXAS**

DRAWN BY:	MB
DESIGNED BY:	LPS
LATEST REVISION:	4/16/2019
KSA JOB NO.:	MIN-160

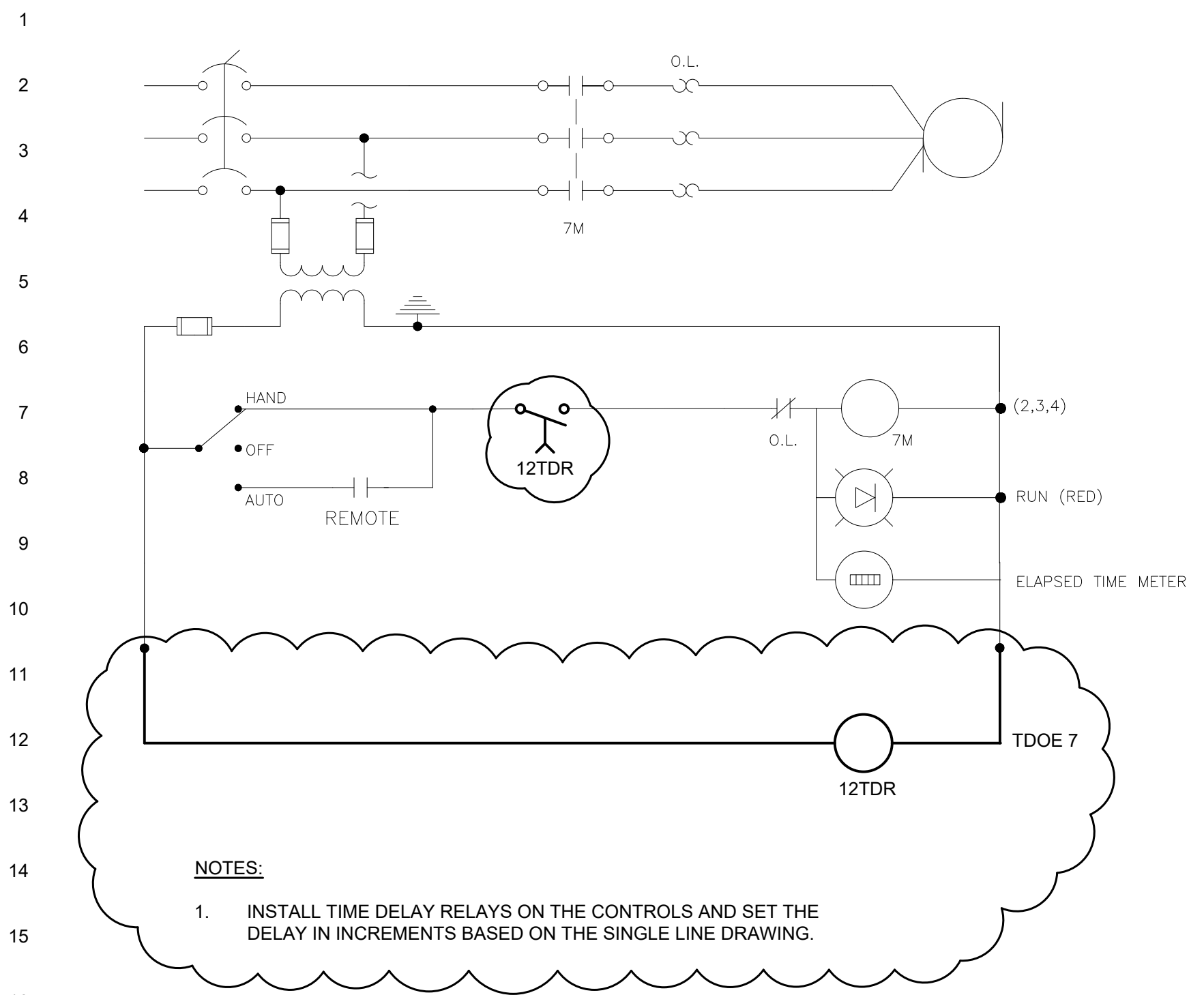


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SEAL: TBPE Firm Registration No. F-1356
SHEET NO.

E-6.2

MOTOR CONTROL CIRCUIT
TYPICAL FOR ALL MOTOR CONTROL CIRCUITS



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MARK	REVISION	DATE

ELEMENTARY DIAGRAMS

**CITY OF MINEOLA
UTILITY INFRASTRUCTURE
IMPROVEMENTS
FOR SANDERSON FARMS
MINEOLA, TEXAS**

DRAWN BY:	MB
DESIGNED BY:	LPS
LATEST REVISION:	4/16/2019
KSA JOB NO.:	MIN-160

KSA
6781 Oak Hill Blvd., Tyler, Texas 75703
T: 903-381-8141 F: 903-381-8653
www.ksaeng.com

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SEAL:
TBPE Firm Registration No. F-1356
SHEET NO.

RECORD DRAWING

E-7.1