



AIA® Document G714® – 2017

Construction Change Directive

PROJECT: *(name and address)*
Hidalgo County El Paraiso Health Clinic
& Community Resource Center

CONTRACT INFORMATION:
Contract For: General Construction

Date: November 28, 2023

CCD INFORMATION:
Directive Number: 002

Date: November 13, 2024

OWNER: *(name and address)*
County of Hidalgo
100 East Cano, 2nd Floor
Edinburg, Texas 78539

ARCHITECT: *(name and address)*
ERO Architects
P.O. Box 720428
McAllen, Texas 78504

CONTRACTOR: *(name and address)*
NM Contracting, LLC
2022 Orchid Avenue
McAllen, Texas 78504

The Contractor is hereby directed to make the following change(s) in this Contract:
(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits.)

NM Contracting is to proceed with the following proposals issued in this CCD:

1.) Change Proposal Request 004 PR 001 SWSC Water Line / Storm Improvement. \$44,688.04
This proposal excludes the fence repair alternate, originally valued at \$13,574.00. Upon further examination of the contract documents, it has been determined that the contractor is responsible for leaving all fencing in at least the same condition as it was prior to construction, or better.

2.) Change Proposal Request 006 ASI 1 Changes to Leach Field. \$25,200.00

Total for CCD 002: \$69,888.04

PROPOSED ADJUSTMENTS

- The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is:
 - Lump Sum decrease of \$0.00
 - Unit Price of \$ per
 - Cost, as defined below, plus the following fee:
(Insert a definition of, or method for determining, cost)
 - As follows: Not to exceed \$69,888.04

- The Contract Time is proposed to increase. The proposed adjustment, if any, is (14 days).

NOTE: The Owner, Architect and Contractor should execute a Change Order to supersede this Construction Change Directive to the extent they agree upon adjustments to the Contract Sum, Contract Time, or Guaranteed Maximum price for the change(s) described herein.

When signed by the Owner and Architect and received by the Contractor, this document becomes effective IMMEDIATELY as a Construction Change Directive (CCD), and the Contractor shall proceed with the change(s) described above.

Contractor signature indicates agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this CCD.

ERO Architects

ARCHITECT *(Firm name)*

County of Hidalgo

OWNER *(Firm name)*

NM Contracting, LLC

CONTRACTOR *(Firm name)*

Octavio Cantu, AIA
SIGNATURE

Octavio Cantu, AIA, Principal
PRINTED NAME AND TITLE

November 13, 2024
DATE

SIGNATURE

PRINTED NAME AND TITLE

DATE

SIGNATURE

PRINTED NAME AND TITLE

DATE



Change Proposal Request (CPR)

Project Information	
Project #	2134
Title	Hidalgo County El Paraiso Project
Address	1901 N Los Ebanos Rd
City, State, Zip	Alton, TX 78573
Country	United States

Change Proposal Request	
Contract #	001
CPR #	004
Issue Date	24-Sep-2024
Subject	RFP 001 - SWSC Water Line/Storm Improvement

Prime Contract Company	
Contact	Noel Munoz Jr
Company	NM Contracting, LLC
Address	2022 Orchid Ave
City, State, Zip	McAllen, TX 78504-4152
Country	United States
Phone	956-631-5667
Fax	

Owner	
Contact	Hidalgo County Precinct 3 County of Hidalgo
Company	Hidalgo County Precinct 3
Address	724 Breyfogle Rd
City, State, Zip	Mission, TX 78574
Country	United States
Phone	956-585-4509
Fax	

Description of the proposed change:

Attachments are cost proposal for the changes implemented in the revisions called CP 001 (Civil). This price proposal includes the labor and material for the sharyland water supply proposed modification as indicated on the attached narrative and cut sheets from Halff.

Please see the sheets with changes mark in **RED** below, the prior sheets are per base bid. This will help identify the changes.

Net Amount of this Proposed Change:

~~\$99,340.60~~

The Contract time due to this Change Proposal Request is to be determined at a later date.

This document, when fully executed as accepted, shall constitute authorization to proceed with the work described herein.

Submitted By _____
 NM Contracting, LLC
 Company

Response: Accept Do Not Accept

 Hidalgo County Precinct 3
 Company

By _____ Date _____

By _____ Date _____

Design Team and Brownstone Recommendation:

Approved Price: \$44,688.04

Change Proposal Request (CPR)

Proposed Items

Item #	Item Description	Quantity	Unit	Unit Price	Subtotal
1	1-1/2" BACKFLOW PREVENTER	2	EA	-3,850.00	-7,700.00
6	18" BORE W / STEEL CASING	8.8	LF	-350.00	-3,080.00
7	2" BACKFLOW PREVENETER	2	EA	4,582.00	9,164.00
8	2" DOMESTIC WATER SERVICE	2	EA	2,955.00	5,910.00
9	2" X 1-1/2" PVC REDUCER	2	EA	125.00	250.00
10	8" X 4" REDUCER	1	EA	850.00	850.00
11	8" GATE VALVE	1	EA	3,055.00	3,055.00
12	12" GATE VALVE	3	EA	5,035.00	15,105.00
13	12" X 8" TEE	1	EA	2,415.00	2,415.00
14	12" X 45 DEG. BEND	5	EA	1,331.00	6,655.00
15	4" PVC C900 DR18 PIPE	17.76	LF	85.00	1,509.60
16	CONCRETE VAULT (FIRE METER LINE)	1	EA	14,301.00	14,301.00
17	OPEN CUT	26	LF	159.00	4,134.00
18	24" PVC CASING	60	LF	194.00	11,640.00
19	24" STEEL CASING	29	LF	242.00	7,018.00
20	ADJ EXISTING 12" WATERLINE AT STA 1+00	1	LS	9,200.00	9,200.00
21	TRAFFIC CONTROL	5	Day	1,150.00	5,750.00
22	INSTALL NEW 60" STORM MANHOLE	1	EA	6,170.00	6,170.00
23	REM & REINSTALL EXIT 24" RCP PIPE	70	LF	83.00	5,810.00
24	REM & DISPOSE 60" STORM MANHOLE	1	EA	1,184.00	1,184.00
26	Fence Replacement Alternate: \$13,574.00	1	LS	0.00	0.00

Subtotal = \$99,340.60

Tax = \$0.00

Total = \$99,340.60

Pricing Break down for SWSC

Hidalgo County El Paraiso PR001

JR-Garcia Company, LLC

3406 Joycee Dr

Mission, TX 78573

Contact: Jose Luis Garcia

Phone: (956) 529-7140

Fax:

Quote To:Job Name:Bid Date:Date of Plans:Revision Date:Phone:Fax:Attn:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
WATER LINE IMPROVEMENTS					
1	2" BACKFLOW PREVENETER	2.00	EA	4,582.00	9,164.00
2	2" DOMESTIC WATER SERVICE	2.00	EA	2,955.00	5,910.00
3	2" X 1-1/2" PVC REDUCER	2.00	EA	125.00	250.00
4	8" X 4" REDUCER	1.00	EA	850.00	850.00
5	8" GATE VALVE	1.00	EA	3,055.00	3,055.00
6	12" GATE VALVE	3.00	EA	5,035.00	15,105.00
7	12" X 8" TEE	1.00	EA	2,415.00	2,415.00
8	12" X 45 DEG. BEND	5.00	EA	1,331.00	6,655.00
9	4" PVC C900 DR18 PIPE	17.76	LF	85.00	1,509.60
10	CONCRETE VAULT (FIRE METER LINE)	1.00	EA	14,301.00	14,301.00
11	OPEN CUT	26.00	LF	159.00	4,134.00
12	24" PVC CASING	60.00	LF	194.00	11,640.00
13	24" STEEL CASING	29.00	LF	242.00	7,018.00
14	ADJ EXISTING 12" WATERLINE AT STA 1+00	1.00	LS	9,200.00	9,200.00
15	TRAFFIC CONTROL	5.00	DAY	1,150.00	5,750.00
16	1-1/2" BACKFLOW PREVENTER	-2.00	EA	3,850.00	-7,700.00
17	1-1/2" DOMESTIC WATER SERVICE	-2.00	EA	1,350.00	-2,700.00
18	12" TEE	-1.00	EA	1,965.00	-1,965.00
19	12" X 4" REDUCER	-1.00	EA	800.00	-800.00
20	12" PVC C900 DR18 PIPE	-17.76	LF	95.00	-1,687.20
21	18" BORE W / STEEL CASING	-8.80	LF	350.00	-3,080.00
WATER LINE IMPROVEMENTS SUBTOTAL					\$79,024.40
STORM DRAINAGE IMPROVEMENTS					
1	INSTALL NEW 60" STORM MANHOLE	1.00	EA	6,170.00	6,170.00
2	REM & REINSTALL EXIT 24" RCP PIPE	70.00	LF	83.00	5,810.00
3	REM & DISPOSE 60" STORM MANHOLE	1.00	EA	1,184.00	1,184.00

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	STORM DRAINAGE IMPROVEMENTS				\$13,164.00
	SUBTOTAL				
GRAND TOTAL					\$92,188.40

NOTES:

JR-Garcia Company, LLC. will not enter into a sub-contract agreement with the Contractor, unless the sub-contract terms are mutually agreed upon by both parties.

JR-Garcia Company, LLC requires 12 Extra Days to be add to the contract.

All traffic control to be the responsibility of others.

JR-Garcia Company, LLC. will perform construction staking from conveniently located controls placed by the General Contractor.

Additional quantities will require a Change Order prior to additional work being installed.

The prices quoted do NOT include the cost of payment and performance bond.

The pricing herein is offered based on servicing the total project. we reserve the right to adjust the quoted prices should our bid not be accepted in full.

The prices quoted for the referenced project are valid for a period of thirty (30) Days from proposal date.

JR-Garcia Company, LLC. will not dispose of or mitigate any insitu materials that may be hazardous.

Hazardous materials include, but are not limited to contaminated soils, asbestos cementious pipe, lead, etc.

The remediation or removal of hazardous materials is the responsibility of others.

The Owner / General Contractor shall be responsible for any damages to JR-Garcia Company, LLC. as a result of encountering hazardous materials, these possible costs include but are not limited to clean up of equipment and standby charges.

Title to, Ownership of legal responsibility and liability for any and all Hazardous Materials shall at all times remain with the Owner or General Contractor.

In the event that additional information is required, please feel free to contact me.

Sincerely,

Jose Luis Garcia

Cost Report

JR-Garcia Company LLC

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240917

EL PARAISO - PR001 (WATER AND STORM)

09/24/2024 9:10 AM

Biditem

GENERAL CONDITIONS

5

Takeoff Qty: 1.000 LS

Bid Qty: 1.000 LS

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	6,282.00	1,553.08	7,835.08	3,080.83	250.00	1,305.01	0.00	0.00	12,470.92
Total	6,282.00	1,553.08	7,835.08	3,080.83	250.00	1,305.01	0.00	0.00	12,470.92

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
180.0000	0.0056	180.0000	69.2829	34.9000	43.5282	0.0037

Activity: 108 Project Manager Quantity: 12 Unit: WD

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	100.00	24.95	124.95	21.40	0.00	0.00	0.00	0.00	146.35
Total	1,200.00	299.40	1,499.40	256.75	0.00	0.00	0.00	0.00	1,756.15

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
146.3458	2.0000	0.5000	73.1729	3.0000	4.0000	0.2500	585.3833

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
24.0000	0.5000	2.0000	62.4750	100.0000

Calendar: 40 40 Hour Work Week 5 x 8 hr Hrs/Shift: 8 WC: TX5506 Average Worker's Comp

Crew: LPM PROJECT MANAGER Prod: SU 0.25 Eff: 100.00 Crew Hrs: 24.00 Labor Pcs: 1.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPU	Pickup Truck	1.00	24.00	HR	10.70	100.00	10.70	256.75
LSUPM	Project Manager	1.00	24.00	MH	50.00	100.00	62.48	1,499.40

Activity: 120 Foreman w/ Pickup Quantity: 12 Unit: WD

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	330.00	82.34	412.34	85.58	0.00	0.00	0.00	0.00	497.92
Total	3,960.00	988.02	4,948.02	1,027.01	0.00	0.00	0.00	0.00	5,975.03

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
497.9192	8.0000	0.1250	62.2399	12.0000	1.0000	1.0000	497.9192

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
96.0000	0.1250	8.0000	51.5419	330.0000

Calendar: 40 40 Hour Work Week 5 x 8 hr Hrs/Shift: 8 WC: TX5506 Average Worker's Comp

Crew: LFOR FOREMAN ROADWORK Prod: SU 1 Eff: 100.00 Crew Hrs: 96.00 Labor Pcs: 1.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPUFO	Foreman's Pickup	1.00	96.00	HR	10.70	100.00	10.70	1,027.01
LSUFOR	Foreman Strs & Roadwork	1.00	96.00	MH	41.25	100.00	51.54	4,948.02

Activity: 121 Crew Truck Quantity: 12 Unit: WD

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
128.3600	10.0000	0.1000	12.8360	12.0000	1.0000	1.0000	128.3600

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: CT0 Crew Truck Prod: SU 1 Eff: 100.00 Crew Hrs: 120.00 Labor Pcs: 0.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TCR	Crew Truck w/o Tools	1.00	120.00	HR	12.84	100.00	12.84	1,540.32

Activity: 125 Survey Party Quantity: 12 Unit: WD

100.0000	0.0200	50.0000	20.8149	841.5000
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Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: LBM5 LOADER BACKHOE, 5 MEN Prod: US 1 Eff: 100.00 Crew Hrs: 20.00 Labor Pcs: 5.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	20.00	HR	25.67	100.00	25.67	513.48
LCUT1	Utility Man	2.00	40.00	MH	14.00	110.00	19.05	761.85
LCUT3	Skilled Labor	2.00	40.00	MH	16.00	110.00	21.77	870.69
LOPEX1	Backhoe Operator	1.00	20.00	MH	16.50	110.00	22.45	448.95

Activity: 210 2" BFP Quantity: 2 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	1,525.75	0.00	0.00	0.00	1,525.75
Total	0.00	0.00	0.00	0.00	3,051.50	0.00	0.00	0.00	3,051.50

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	1.00	CY	126.50	100.00	126.50	126.50
2ZZDCBFP	2" Backflow Preventer	1.00	2.00	EA	1,462.50	100.00	1,462.50	2,925.00

Biditem 30 2" DOMESTIC WATER SERVICE

30

Takeoff Qty: 2.000 EA
 Bid Qty: 2.000 EA

Client #: 2

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	370.36	40.56	410.92	143.44	1,436.98	0.00	0.00	0.00	1,991.33
Total	740.72	81.11	821.83	286.87	2,873.96	0.00	0.00	0.00	3,982.66

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
44.3200	0.0451	22.1600	89.8615	16.7130	18.5431	0.2458

Activity: 130 Install Saddle & Corp Stop Quantity: 2 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	105.19	11.52	116.71	32.10	0.00	0.00	0.00	0.00	148.81
Total	210.38	23.04	233.42	64.19	0.00	0.00	0.00	0.00	297.61

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
148.8050	1.2500	0.8000	119.0440	0.2500	8.0000	0.1250	1,190.4400

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
12.5000	0.1600	6.2500	18.6736	105.1900

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 8 Eff: 100.00 Crew Hrs: 2.50 Labor Pcs: 5.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	2.50	HR	25.67	100.00	25.68	64.19
LCUT1	Utility Man	2.00	5.00	MH	14.00	110.00	17.09	85.43
LCUT3	Skilled Labor	2.00	5.00	MH	16.00	110.00	19.53	97.64
LOPEX1	Backhoe Operator	1.00	2.50	MH	16.50	110.00	20.14	50.35

Activity: 140 Install Service Line 40 lf / ea Quantity: 80 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	4.53	0.50	5.02	2.14	0.00	0.00	0.00	0.00	7.16
Total	362.04	39.64	401.68	171.33	0.00	0.00	0.00	0.00	573.01

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
7.1626	0.0455	21.9998	157.5762	0.3636	219.9978	0.0045	1,575.7617

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
21.8200	3.6664	0.2728	18.4088	4.5255

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp
 Crew: LBM5 LOADER BACKHOE, 5 MEN Prod: US 220 Eff: 100.00 Crew Hrs: 3.64 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	3.64	HR	25.67	100.00	25.67	93.45
8R048	Roller 48"	1.00	3.64	HR	21.40	100.00	21.40	77.88
LASR	Roller Operator Utility	1.00	3.64	MH	14.00	110.00	17.09	62.20
LCUT1	Utility Man	2.00	7.27	MH	14.00	110.00	17.09	124.22
LCUT3	Skilled Labor	2.00	7.27	MH	16.00	110.00	19.53	141.96
LOPEX1	Backhoe Operator	1.00	3.64	MH	16.50	110.00	20.14	73.30

Activity: 150 Set Meter Stop Quantity: 2 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	84.15	9.22	93.37	25.68	0.00	0.00	0.00	0.00	119.04
Total	168.30	18.43	186.73	51.35	0.00	0.00	0.00	0.00	238.08

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
119.0400	1.0000	1.0000	119.0400	0.2000	10.0000	0.1000	1,190.4000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
10.0000	0.2000	5.0000	18.6730	84.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp
 Crew: LBM5 LOADER BACKHOE, 5 MEN Prod: US 10 Eff: 100.00 Crew Hrs: 2.00 Labor Pcs: 5.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	2.00	HR	25.67	100.00	25.68	51.35
LCUT1	Utility Man	2.00	4.00	MH	14.00	110.00	17.09	68.35
LCUT3	Skilled Labor	2.00	4.00	MH	16.00	110.00	19.53	78.11
LOPEX1	Backhoe Operator	1.00	2.00	MH	16.50	110.00	20.14	40.27

Activity: 210 Saddle 12" x 2" Quantity: 2 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CDDBM	12" x 2" Brass Saddle	1.00	2.00	EA	364.59	100.00	364.59	729.18

Activity: 220 Corp Stop 2" Quantity: 2 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CDDCC	2" Corp Stop	1.00	2.00	EA	403.09	100.00	403.09	806.18

Activity: 230 2" PVC Sch40 Pipe Quantity: 80 Unit: LF

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CAABBF	2" PVC SCH40 Pipe SWB 20'	1.00	80.00	LF	2.50	100.00	2.50	200.00

Activity: 240 Curb Stop 2" Quantity: 2 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CDDCE	2" Curb Stop	1.00	2.00	EA	413.85	100.00	413.85	827.70

Activity: 246 Meter Box Quantity: 2 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CDDAA	Plastic Meter Box	1.00	2.00	EA	155.45	100.00	155.45	310.90

Biditem
40

2" X 1-1/2" PVC REDUCER

Takeoff Qty: 2.000 EA
Bid Qty: 2.000 EA

Client #: 3

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	42.08	4.61	46.68	12.84	5.00	0.00	0.00	0.00	64.52
Total	84.15	9.21	93.36	25.67	10.00	0.00	0.00	0.00	129.03

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
5.0000	0.4000	2.5000	25.8060	16.8300	18.6720	2.0000

Activity: 130 Install Reducer Quantity: 2 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	42.08	4.61	46.68	12.84	0.00	0.00	0.00	0.00	59.52
Total	84.15	9.21	93.36	25.67	0.00	0.00	0.00	0.00	119.03

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
59.5150	0.5000	2.0000	119.0300	0.1000	20.0000	0.0500	1,190.3000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
5.0000	0.4000	2.5000	18.6720	42.0750

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 20 Eff: 100.00 Crew Hrs: 1.00 Labor Pcs: 5.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	1.00	HR	25.67	100.00	25.67	25.67
LCUT1	Utility Man	2.00	2.00	MH	14.00	110.00	17.09	34.17
LCUT3	Skilled Labor	2.00	2.00	MH	16.00	110.00	19.53	39.05
LOPEX1	Backhoe Operator	1.00	1.00	MH	16.50	110.00	20.14	20.14

Activity: 210 2" x 1-1/2" PVC SCH40 Reducer Quantity: 2 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZPVC	2" x 1-1/2" PVC Reducer	1.00	2.00	EA	5.00	100.00	5.00	10.00

Biditem
50

8" X 4" REDUCER

Takeoff Qty: 1.000 EA
Bid Qty: 1.000 EA

Client #: 4

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	128.26	14.04	142.30	77.02	337.44	0.00	0.00	0.00	556.76
Total	128.26	14.04	142.30	77.02	337.44	0.00	0.00	0.00	556.76

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
7.3400	0.1362	7.3400	75.8529	17.4741	19.3869	0.6000

Activity: 120 Make Ready Fitting Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	22.11	2.42	24.53	0.00	0.00	0.00	0.00	0.00	24.53
Total	22.11	2.42	24.53	0.00	0.00	0.00	0.00	0.00	24.53

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
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24.5300	0.6667	1.4999	36.7932	0.0667	14.9993	0.0667	367.9316
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Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
1.3400	0.7463	1.3400	18.3060	22.1100

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp
 Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 15 Eff: 100.00 Crew Hrs: 0.67 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	0.67	MH	14.00	110.00	17.09	11.45
LCUT3	Skilled Labor	1.00	0.67	MH	16.00	110.00	19.52	13.08

Activity: 130 Set Fitting Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	106.15	11.62	117.77	77.02	0.00	0.00	0.00	0.00	194.79
Total	106.15	11.62	117.77	77.02	0.00	0.00	0.00	0.00	194.79

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
194.7900	1.0000	1.0000	194.7900	0.1000	10.0000	0.1000	1,947.9000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
6.0000	0.1667	6.0000	19.6283	106.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp
 Crew: PE206W 20 TON EXC, 2CY LOAD W Water Prod: US 10 Eff: 100.00 Crew Hrs: 1.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	1.00	HR	51.35	100.00	51.35	51.35
8LB	Loader / Backhoe	1.00	1.00	HR	25.67	100.00	25.67	25.67
LCUT1	Utility Man	2.00	2.00	MH	14.00	110.00	17.09	34.17
LCUT3	Skilled Labor	2.00	2.00	MH	16.00	110.00	19.53	39.05
LOPEX1	Backhoe Operator	1.00	1.00	MH	16.50	110.00	20.14	20.14
LOPEX3	Excavator Operator Utility	1.00	1.00	MH	20.00	110.00	24.41	24.41

Activity: 210 8" x 4" MJ Reducer Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	337.44	0.00	0.00	0.00	337.44
Total	0.00	0.00	0.00	0.00	337.44	0.00	0.00	0.00	337.44

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	0.25	CY	126.50	100.00	126.52	31.63
2CBACE	8" x 4" MJ Reducer	1.00	1.00	EA	109.44	100.00	109.44	109.44
2CBBCAB	4" Megalug	1.00	1.00	EA	73.03	100.00	73.03	73.03
2CBBCAD	8" Megalug	1.00	1.00	EA	123.34	100.00	123.34	123.34

Biditem

8" GATE VALVE

60

Takeoff Qty: 1.000 EA
 Bid Qty: 1.000 EA

Client #: 5

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	233.45	55.27	288.72	109.11	1,750.11	0.00	0.00	0.00	2,147.94
Total	233.45	55.27	288.72	109.11	1,750.11	0.00	0.00	0.00	2,147.94

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
13.5900	0.0736	13.5900	158.0530	17.1781	21.2450	0.3429

Activity: 120 Make Ready Valves Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
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U. Cost	22.11	5.23	27.34	0.00	0.00	0.00	0.00	0.00	27.34
Total	22.11	5.23	27.34	0.00	0.00	0.00	0.00	0.00	27.34

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
27.3400	0.6667	1.4999	41.0079	0.0667	14.9993	0.0667	410.0795

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
1.3400	0.7463	1.3400	20.4030	22.1100

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 15 Eff: 100.00 Crew Hrs: 0.67 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	0.67	MH	14.00	110.00	19.04	12.76
LCUT3	Skilled Labor	1.00	0.67	MH	16.00	110.00	21.76	14.58

Activity: 130 Set In Line Valve Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	106.15	25.13	131.28	77.02	0.00	0.00	0.00	0.00	208.30
Total	106.15	25.13	131.28	77.02	0.00	0.00	0.00	0.00	208.30

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
208.3000	1.0000	1.0000	208.3000	0.1000	10.0000	0.1000	2,083.0000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
6.0000	0.1667	6.0000	21.8800	106.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 1.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	1.00	HR	51.35	100.00	51.35	51.35
8LB	Loader / Backhoe	1.00	1.00	HR	25.67	100.00	25.67	25.67
LCUT1	Utility Man	2.00	2.00	MH	14.00	110.00	19.05	38.09
LCUT3	Skilled Labor	2.00	2.00	MH	16.00	110.00	21.77	43.53
LOPEX1	Backhoe Operator	1.00	1.00	MH	16.50	110.00	22.45	22.45
LOPEX3	Excavator Operator Utility	1.00	1.00	MH	20.00	110.00	27.21	27.21

Activity: 160 Reset Valve Box Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	105.19	24.91	130.10	32.09	0.00	0.00	0.00	0.00	162.19
Total	105.19	24.91	130.10	32.09	0.00	0.00	0.00	0.00	162.19

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
162.1900	1.2500	0.8000	129.7520	0.1250	8.0000	0.1250	1,297.5200

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
6.2500	0.1600	6.2500	20.8160	105.1900

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 8 Eff: 100.00 Crew Hrs: 1.25 Labor Pcs: 5.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	1.25	HR	25.67	100.00	25.67	32.09
LCUT1	Utility Man	2.00	2.50	MH	14.00	110.00	19.05	47.62
LCUT3	Skilled Labor	2.00	2.50	MH	16.00	110.00	21.77	54.42
LOPEX1	Backhoe Operator	1.00	1.25	MH	16.50	110.00	22.45	28.06

Activity: 210 8" MJ V & B Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	1,750.11	0.00	0.00	0.00	1,750.11
Total	0.00	0.00	0.00	0.00	1,750.11	0.00	0.00	0.00	1,750.11

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	0.25	CY	126.50	100.00	126.52	31.63
2CBBCAD	8 " Megalug	1.00	2.00	EA	123.34	100.00	123.34	246.68
2CDAA	Valve Box	1.00	1.00	EA	73.13	100.00	73.13	73.13
2CDAN	8" MJ Gate Valve	1.00	1.00	EA	1,398.67	100.00	1,398.67	1,398.67

Biditem
70

12" GATE VALVE

Takeoff Qty: 3.000 EA
Bid Qty: 3.000 EA

Client #: 6

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	233.34	55.24	288.58	109.11	3,265.94	0.00	0.00	0.00	3,663.63
Total	700.01	165.73	865.74	327.34	9,797.81	0.00	0.00	0.00	10,990.89

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
40.7500	0.0736	13.5833	269.7151	17.1782	21.2452	0.3429

Activity: 120 Make Ready Valves Quantity: 3 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	22.00	5.21	27.21	0.00	0.00	0.00	0.00	0.00	27.21
Total	66.00	15.62	81.62	0.00	0.00	0.00	0.00	0.00	81.62

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
27.2067	0.6667	1.5000	40.8100	0.2000	15.0000	0.0667	408.1000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
4.0000	0.7500	1.3333	20.4050	22.0000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 15 Eff: 100.00 Crew Hrs: 2.00 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	2.00	MH	14.00	110.00	19.05	38.09
LCUT3	Skilled Labor	1.00	2.00	MH	16.00	110.00	21.77	43.53

Activity: 130 Set In Line Valve Quantity: 3 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	106.15	25.13	131.28	77.02	0.00	0.00	0.00	0.00	208.30
Total	318.45	75.40	393.85	231.06	0.00	0.00	0.00	0.00	624.91

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
208.3033	1.0000	1.0000	208.3033	0.3000	10.0000	0.1000	2,083.0333

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
18.0000	0.1667	6.0000	21.8806	106.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 3.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	3.00	HR	51.35	100.00	51.35	154.04
8LB	Loader / Backhoe	1.00	3.00	HR	25.67	100.00	25.67	77.02
LCUT1	Utility Man	2.00	6.00	MH	14.00	110.00	19.05	114.28
LCUT3	Skilled Labor	2.00	6.00	MH	16.00	110.00	21.77	130.60
LOPEX1	Backhoe Operator	1.00	3.00	MH	16.50	110.00	22.45	67.34
LOPEX3	Excavator Operator Utility	1.00	3.00	MH	20.00	110.00	27.21	81.63

Activity: 160 Reset Valve Box Quantity: 3 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	105.19	24.90	130.09	32.09	0.00	0.00	0.00	0.00	162.18
Total	315.56	74.71	390.27	96.28	0.00	0.00	0.00	0.00	486.55

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
162.1833	1.2500	0.8000	129.7467	0.3750	8.0000	0.1250	1,297.4667

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
18.7500	0.1600	6.2500	20.8144	105.1867

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 8 Eff: 100.00 Crew Hrs: 3.75 Labor Pcs: 5.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	3.75	HR	25.67	100.00	25.67	96.28
LCUT1	Utility Man	2.00	7.50	MH	14.00	110.00	19.05	142.85
LCUT3	Skilled Labor	2.00	7.50	MH	16.00	110.00	21.77	163.25
LOPEX1	Backhoe Operator	1.00	3.75	MH	16.50	110.00	22.45	84.17

Activity: 210 12" MJ V & B Quantity: 3 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	3,265.94	0.00	0.00	0.00	3,265.94
Total	0.00	0.00	0.00	0.00	9,797.81	0.00	0.00	0.00	9,797.81

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	0.75	CY	126.50	100.00	126.51	94.88
2CBBCAF	12" Megalug	1.00	6.00	EA	158.48	100.00	158.48	950.88
2CDAA	Valve Box	1.00	3.00	EA	73.13	100.00	73.13	219.39
2CDAS	12" MJ Gate Valve	1.00	3.00	EA	2,844.22	100.00	2,844.22	8,532.66

Biditem

12" X 8" TEE

80

Takeoff Qty: 1.000 EA
 Bid Qty: 1.000 EA

Client #: 7

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	128.26	30.36	158.62	77.02	1,506.51	0.00	0.00	0.00	1,742.15
Total	128.26	30.36	158.62	77.02	1,506.51	0.00	0.00	0.00	1,742.15

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
7.3400	0.1362	7.3400	237.3501	17.4741	21.6104	0.6000

Activity: 120 Make Ready Fitting Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	22.11	5.23	27.34	0.00	0.00	0.00	0.00	0.00	27.34
Total	22.11	5.23	27.34	0.00	0.00	0.00	0.00	0.00	27.34

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
27.3400	0.6667	1.4999	41.0079	0.0667	14.9993	0.0667	410.0795

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
1.3400	0.7463	1.3400	20.4030	22.1100

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 15 Eff: 100.00 Crew Hrs: 0.67 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	0.67	MH	14.00	110.00	19.04	12.76
LCUT3	Skilled Labor	1.00	0.67	MH	16.00	110.00	21.76	14.58

Activity: 130 Set Fitting Quantity: 1 Unit: EA

Table with columns: Base Labor, Burden, Total Labor, Equipment, Perm Matls, Const Matls, Sub, Trucking, Total. Rows: U. Cost, Total.

Table with columns: Crew \$/Unit, Crew Hrs/Unit, Units/Crew Hr, \$/Crew Hour, Shifts, Units/Shift, Shifts/Unit, \$/Shift. Row: 208.3000, 1.0000, 1.0000, 208.3000, 0.1000, 10.0000, 0.1000, 2,083.0000

Table with columns: Manhours, Unit/MH, MH/Unit, Total Labor/MH, Base Labor/Unit. Row: 6.0000, 0.1667, 6.0000, 21.8800, 106.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 1.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Table with columns: Resource, Description, Pcs/Wste, Quantity, Unit, Unit Cost, Tax/OT %, Actual UC, Total. Rows: 8E20, 8LB, LCUT1, LCUT3, LOPEX1, LOPEX3

Activity: 135 12" x 8" Tee Quantity: 1 Unit: EA

Table with columns: Base Labor, Burden, Total Labor, Equipment, Perm Matls, Const Matls, Sub, Trucking, Total. Rows: U. Cost, Total.

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Table with columns: Resource, Description, Pcs/Wste, Quantity, Unit, Unit Cost, Tax/OT %, Actual UC, Total. Rows: 2B2AH, 2CBAGAG, 2CBBCAD, 2CBBCAF

Biditem 12" X 45 DEG. BEND

90

Takeoff Qty: 5.000 EA
Bid Qty: 5.000 EA

Client #: 8

Table with columns: Base Labor, Burden, Total Labor, Equipment, Perm Matls, Const Matls, Sub, Trucking, Total. Rows: U. Cost, Total.

Table with columns: Manhours, Unit/MH, MH/Unit, \$/MH, Base Labor/MH, Total Labor/MH, Unit/CH. Row: 36.6600, 0.1364, 7.3320, 124.6694, 17.4752, 21.6132, 0.6000

Activity: 120 Make Ready Fitting Quantity: 5 Unit: EA

Table with columns: Base Labor, Burden, Total Labor, Equipment, Perm Matls, Const Matls, Sub, Trucking, Total. Rows: U. Cost, Total.

Table with columns: Crew \$/Unit, Crew Hrs/Unit, Units/Crew Hr, \$/Crew Hour, Shifts, Units/Shift, Shifts/Unit, \$/Shift. Row: 27.1840, 0.6667, 1.5000, 40.7764, 0.3333, 15.0002, 0.0667, 407.7641

Table with columns: Manhours, Unit/MH, MH/Unit, Total Labor/MH, Base Labor/Unit. Row: 6.6600, 0.7508, 1.3320, 20.4084, 21.9780

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 15 Eff: 100.00 Crew Hrs: 3.33 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	3.33	MH	14.00	110.00	19.05	63.43
LCUT3	Skilled Labor	1.00	3.33	MH	16.00	110.00	21.77	72.49

Activity: 130 Set Fitting Quantity: 5 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	106.15	25.13	131.28	77.02	0.00	0.00	0.00	0.00	208.31
Total	530.75	125.67	656.42	385.11	0.00	0.00	0.00	0.00	1,041.53

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
208.3060	1.0000	1.0000	208.3060	0.5000	10.0000	0.1000	2,083.0600

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
30.0000	0.1667	6.0000	21.8807	106.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 5.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	5.00	HR	51.35	100.00	51.35	256.74
8LB	Loader / Backhoe	1.00	5.00	HR	25.67	100.00	25.67	128.37
LCUT1	Utility Man	2.00	10.00	MH	14.00	110.00	19.05	190.46
LCUT3	Skilled Labor	2.00	10.00	MH	16.00	110.00	21.77	217.67
LOPEX1	Backhoe Operator	1.00	5.00	MH	16.50	110.00	22.45	112.24
LOPEX3	Excavator Operator Utility	1.00	5.00	MH	20.00	110.00	27.21	136.05

Activity: 135 12" x 45 Deg Bend Quantity: 5 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	678.59	0.00	0.00	0.00	678.59
Total	0.00	0.00	0.00	0.00	3,392.93	0.00	0.00	0.00	3,392.93

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	1.25	CY	126.50	100.00	126.50	158.13
2CBBAABF	12" MJ 45 Bend	1.00	5.00	EA	330.00	100.00	330.00	1,650.00
2CBBCAF	12" Megalug	1.00	10.00	EA	158.48	100.00	158.48	1,584.80

Biditem 4" PVC C900 DR18 PIPE

100

Takeoff Qty: 17.760 LF

Client #: 9

Bid Qty: 17.760 LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	14.77	3.50	18.27	6.99	24.14	0.00	0.00	3.16	52.56
Total	262.29	62.10	324.39	124.18	428.75	0.00	0.00	56.20	933.52

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
15.6400	1.1355	0.8806	59.6880	16.7705	20.7410	4.5679

Activity: 120 String Pipe Quantity: 17.76 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.27	0.06	0.34	0.22	0.00	0.00	0.00	0.00	0.55
Total	4.85	1.14	5.99	3.85	0.00	0.00	0.00	0.00	9.84

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
0.5541	0.0050	200.0000	110.8108	0.0089	2,000.0000	0.0005	1,108.1081

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
0.2700	65.7778	0.0152	22.1852	0.2731

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L20M2 2CY LOADER, 2 MEN Prod: US 2000 Eff: 100.00 Crew Hrs: 0.09 Labor Pcs: 3.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	0.09	HR	42.79	100.00	42.78	3.85
LCUT3	Skilled Labor	2.00	0.18	MH	16.00	110.00	21.78	3.92
LOPLD	Loader Operator	1.00	0.09	MH	17.00	110.00	23.00	2.07

Activity: 130 Install 4" W/L Main Quantity: 17.76 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	2.58	0.61	3.20	2.44	0.00	0.00	0.00	0.00	5.63
Total	45.90	10.86	56.76	43.30	0.00	0.00	0.00	0.00	100.06

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
5.6340	0.0250	40.0000	225.3604	0.0444	400.0000	0.0025	2,253.6036

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
2.6500	6.7019	0.1492	21.4189	2.5845

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 400 Eff: 100.00 Crew Hrs: 0.44 Labor Pcs: 6.00 Equipment Pcs: 3.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	0.44	HR	51.35	100.00	51.34	22.59
8LB	Loader / Backhoe	1.00	0.44	HR	25.67	100.00	25.68	11.30
8R048	Roller 48"	1.00	0.44	HR	21.40	100.00	21.39	9.41
LASR	Roller Operator Utility	1.00	0.44	MH	14.00	110.00	19.05	8.38
LCUT1	Utility Man	2.00	0.89	MH	14.00	110.00	19.04	16.95
LCUT3	Skilled Labor	1.00	0.44	MH	16.00	110.00	21.77	9.58
LOPEX1	Backhoe Operator	1.00	0.44	MH	16.50	110.00	22.45	9.88
LOPEX3	Excavator Operator Utility	1.00	0.44	MH	20.00	110.00	27.20	11.97

Activity: 210 PVC 4" DR 18 W/L Quantity: 17.76 Unit: LF

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CAAABA	4" C900 DR18 Pipe	1.15	20.42	LF	7.79	100.00	7.79	159.07

Activity: 221 Backfill Sand by the Cy Quantity: 2 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	4.95	0.00	0.00	28.10	33.05
Total	0.00	0.00	0.00	0.00	9.90	0.00	0.00	56.20	66.10

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBBD	Bedding Sand (cy)	1.65	3.30	TCY	3.00	100.00	3.00	9.90
5ACC	Haul Sand by the cy	1.65	3.30	TCY	14.00	100.00	14.00	46.20
5AGA	Haul Dirt by the bcy	1.00	2.00	BCY	5.00	100.00	5.00	10.00

Activity: 300 Set Test Plug Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	33.28	7.88	41.16	12.84	0.00	0.00	0.00	0.00	54.00
Total	33.28	7.88	41.16	12.84	0.00	0.00	0.00	0.00	54.00

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
54.0000	0.5000	2.0000	108.0000	0.0500	20.0000	0.0500	1,080.0000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
2.0000	0.5000	2.0000	20.5800	33.2800

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 20 Eff: 100.00 Crew Hrs: 0.50 Labor Pcs: 4.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	0.50	HR	25.67	100.00	25.68	12.84
LCUT1	Utility Man	2.00	1.00	MH	14.00	110.00	19.05	19.05
LCUT3	Skilled Labor	1.00	0.50	MH	16.00	110.00	21.76	10.88
LOPEX1	Backhoe Operator	1.00	0.50	MH	16.50	110.00	22.46	11.23

Activity: 305 4" MJ Cap Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	259.78	0.00	0.00	0.00	259.78
Total	0.00	0.00	0.00	0.00	259.78	0.00	0.00	0.00	259.78

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	0.33	CY	126.50	100.00	126.52	41.75
2CBBADE	4" x 2" MJ Tapped Cap	1.00	1.00	EA	145.00	100.00	145.00	145.00
2CBBCAB	4" Megalug	1.00	1.00	EA	73.03	100.00	73.03	73.03

Activity: 310 Test W/L Quantity: 17.76 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.67	0.16	0.83	0.00	0.00	0.00	0.00	0.00	0.83
Total	11.88	2.82	14.70	0.00	0.00	0.00	0.00	0.00	14.70

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
0.8277	0.0200	50.0000	41.3851	0.0355	500.0000	0.0020	413.8514

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
0.7200	24.6667	0.0405	20.4167	0.6689

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB12 LABOR CREW 1 SKILL, 2 UTIL Prod: US 500 Eff: 100.00 Crew Hrs: 0.36 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	0.36	MH	14.00	110.00	19.06	6.86
LCUT3	Skilled Labor	1.00	0.36	MH	16.00	110.00	21.78	7.84

Activity: 320 Rem Test Plug & Tie In Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	166.38	39.40	205.78	64.19	0.00	0.00	0.00	0.00	269.97
Total	166.38	39.40	205.78	64.19	0.00	0.00	0.00	0.00	269.97

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
269.9700	2.5000	0.4000	107.9880	0.2500	4.0000	0.2500	1,079.8800

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
10.0000	0.1000	10.0000	20.5780	166.3800

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LBM5 LOADER BACKHOE, 5 MEN Prod: US 4 Eff: 100.00 Crew Hrs: 2.50 Labor Pcs: 4.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	2.50	HR	25.67	100.00	25.68	64.19
LCUT1	Utility Man	2.00	5.00	MH	14.00	110.00	19.05	95.23
LCUT3	Skilled Labor	1.00	2.50	MH	16.00	110.00	21.77	54.42
LOPEX1	Backhoe Operator	1.00	2.50	MH	16.50	110.00	22.45	56.13

Biditem

CONCRETE VAULT (FIRE METER LINE)

110

Takeoff Qty: 1.000 EA
 Bid Qty: 1.000 EA

Client #: 10

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	1,061.50	251.33	1,312.83	770.21	8,000.00	0.00	0.00	0.00	10,083.04
Total	1,061.50	251.33	1,312.83	770.21	8,000.00	0.00	0.00	0.00	10,083.04

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
60.0000	0.0167	60.0000	168.0507	17.6917	21.8805	0.1000

Activity: 120 Install Concrete Vault Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	1,061.50	251.33	1,312.83	770.21	0.00	0.00	0.00	0.00	2,083.04
Total	1,061.50	251.33	1,312.83	770.21	0.00	0.00	0.00	0.00	2,083.04

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
2,083.0400	10.0000	0.1000	208.3040	1.0000	1.0000	1.0000	2,083.0400

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
60.0000	0.0167	60.0000	21.8805	1,061.5000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE206W 20 TON EXC., 2CY LOAD W Water Prod: US 1 Eff: 100.00 Crew Hrs: 10.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	10.00	HR	51.35	100.00	51.35	513.47
8LB	Loader / Backhoe	1.00	10.00	HR	25.67	100.00	25.67	256.74
LCUT1	Utility Man	2.00	20.00	MH	14.00	110.00	19.05	380.93
LCUT3	Skilled Labor	2.00	20.00	MH	16.00	110.00	21.77	435.34
LOPEX1	Backhoe Operator	1.00	10.00	MH	16.50	110.00	22.45	224.47
LOPEX3	Excavator Operator Utility	1.00	10.00	MH	20.00	110.00	27.21	272.09

Activity: 210 Concrete Vault Quantity: 1 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
ZZZCV	Concrete Vault	1.00	1.00	EA	8,000.00	100.00	8,000.00	8,000.00

Biditem

OPEN CUT

120

Takeoff Qty: 26.000 LF
 Bid Qty: 26.000 LF

Client #: 11

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	29.28	6.93	36.21	21.07	19.05	0.00	10.77	10.77	97.87
Total	761.20	180.23	941.43	547.73	495.36	0.00	280.00	280.08	2,544.60

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
46.0000	0.5652	1.7692	55.3174	16.5478	20.4659	2.6000

Activity: 120 Saw & Cut Exist HMAC Quantity: 52 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	1.27	0.30	1.57	0.00	0.00	0.00	0.00	0.00	1.57
Total	66.00	15.62	81.62	0.00	0.00	0.00	0.00	0.00	81.62

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
1.5696	0.0385	26.0000	40.8100	0.2000	260.0000	0.0038	408.1000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
4.0000	13.0000	0.0769	20.4050	1.2692

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 260 Eff: 100.00 Crew Hrs: 2.00 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	2.00	MH	14.00	110.00	19.05	38.09
LCUT3	Skilled Labor	1.00	2.00	MH	16.00	110.00	21.77	43.53

Activity: 130 8" Prep. Subgrade Quantity: 20 Unit: SY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	12.38	2.93	15.31	10.27	0.00	0.00	0.00	0.00	25.58
Total	247.50	58.60	306.10	205.40	0.00	0.00	0.00	0.00	511.50

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
25.5750	0.1500	6.6667	170.5000	0.3000	66.6667	0.0150	1,705.0000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
15.0000	1.3333	0.7500	20.4067	12.3750

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L20M2 2CY LOADER, 2 MEN Prod: US 66.6667 Eff: 100.00 Crew Hrs: 3.00 Labor Pcs: 5.00 Equipment Pcs: 3.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	3.00	HR	42.79	100.00	42.79	128.37
8R048	Roller 48"	1.00	3.00	HR	21.40	100.00	21.40	64.19
8RP	Plate Compactor	1.00	3.00	HR	4.28	100.00	4.28	12.84
LASR	Roller Operator Utility	1.00	3.00	MH	14.00	110.00	19.05	57.14
LCUT1	Utility Man	2.00	6.00	MH	14.00	110.00	19.05	114.28
LCUT3	Skilled Labor	1.00	3.00	MH	16.00	110.00	21.77	65.30
LOPLD	Loader Operator	1.00	3.00	MH	17.00	110.00	23.13	69.38

Activity: 135 Install 10" Flexbase Quantity: 20 Unit: SY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	12.38	2.93	15.31	10.27	0.00	0.00	0.00	0.00	25.58
Total	247.50	58.60	306.10	205.40	0.00	0.00	0.00	0.00	511.50

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
25.5750	0.1500	6.6667	170.5000	0.3000	66.6667	0.0150	1,705.0000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
15.0000	1.3333	0.7500	20.4067	12.3750

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L20M2 2CY LOADER, 2 MEN Prod: US 66.6667 Eff: 100.00 Crew Hrs: 3.00 Labor Pcs: 5.00 Equipment Pcs: 3.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	3.00	HR	42.79	100.00	42.79	128.37
8R048	Roller 48"	1.00	3.00	HR	21.40	100.00	21.40	64.19
8RP	Plate Compactor	1.00	3.00	HR	4.28	100.00	4.28	12.84
LASR	Roller Operator Utility	1.00	3.00	MH	14.00	110.00	19.05	57.14
LCUT1	Utility Man	2.00	6.00	MH	14.00	110.00	19.05	114.28
LCUT3	Skilled Labor	1.00	3.00	MH	16.00	110.00	21.77	65.30
LOPLD	Loader Operator	1.00	3.00	MH	17.00	110.00	23.13	69.38

Activity: 145 Caliche Base Quantity: 9.5 Unit: TON

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	11.88	0.00	0.00	20.01	31.89
Total	0.00	0.00	0.00	0.00	112.86	0.00	0.00	190.08	302.94

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBAA	Caliche Base	1.25	11.88	TON	9.50	100.00	9.50	112.86

5AAA	Haul Caliche by the Ton	1.25	11.88	TON	16.00	100.00	16.00	190.08
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Activity: 150 Install 2" Hot Mix Quantity: 20 Unit: SY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	10.01	2.37	12.38	6.85	0.00	0.00	0.00	0.00	19.23
Total	200.20	47.41	247.61	136.93	0.00	0.00	0.00	0.00	384.54

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
19.2270	0.1000	10.0000	192.2700	0.2000	100.0000	0.0100	1,922.7000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
12.0000	1.6667	0.6000	20.6342	10.0100

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L20M2 2CY LOADER, 2 MEN Prod: US 100 Eff: 100.00 Crew Hrs: 2.00 Labor Pcs: 6.00 Equipment Pcs: 3.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	2.00	HR	42.79	100.00	42.79	85.58
8R048	Roller 48"	1.00	2.00	HR	21.40	100.00	21.40	42.79
8RP	Plate Compactor	1.00	2.00	HR	4.28	100.00	4.28	8.56
LASR	Roller Operator Utility	1.00	2.00	MH	14.00	110.00	19.05	38.09
LCUT1	Utility Man	2.00	4.00	MH	14.00	110.00	19.05	76.19
LCUT3	Skilled Labor	2.00	4.00	MH	16.00	110.00	21.77	87.07
LOPLD	Loader Operator	1.00	2.00	MH	17.00	110.00	23.13	46.26

Activity: 155 Hot Mix Quantity: 3 Unit: TON

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	127.50	0.00	0.00	30.00	157.50
Total	0.00	0.00	0.00	0.00	382.50	0.00	0.00	90.00	472.50

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EAC	Hot Mix	1.50	4.50	TON	85.00	100.00	85.00	382.50
5ABA	Haul Hot Mix by the Ton	1.50	4.50	TON	20.00	100.00	20.00	90.00

Activity: 210 Install MC-30 Quantity: 4 Unit: GAL

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
4EEA	Asphalt Material MC-30	1.00	4.00	GAL	70.00	100.00	70.00	280.00

Biditem

130

24" PVC CASING

Takeoff Qty: 60.000 LF
 Bid Qty: 60.000 LF

Client #: 12

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	7.58	1.80	9.38	5.51	117.69	0.00	0.00	9.23	141.80
Total	455.05	107.75	562.80	330.42	7,061.33	0.00	0.00	553.64	8,508.19

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
25.7200	2.3328	0.4287	330.8005	17.6925	21.8818	14.0000

Activity: 130 Install 24" PVC Casing Quantity: 60 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	7.58	1.80	9.38	5.51	0.00	0.00	0.00	0.00	14.89
Total	455.05	107.75	562.80	330.42	0.00	0.00	0.00	0.00	893.22

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
14.8870	0.0714	14.0000	208.4187	0.4286	140.0005	0.0071	2,084.1869

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
25.7200	2.3328	0.4287	21.8818	7.5842

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: PE206W 20 TON EXC, 2CY LOAD W Water Prod: US 140 Eff: 100.00 Crew Hrs: 4.29 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	4.29	HR	51.35	100.00	51.35	220.28
8LB	Loader / Backhoe	1.00	4.29	HR	25.67	100.00	25.67	110.14
LCUT1	Utility Man	2.00	8.57	MH	14.00	110.00	19.05	163.23
LCUT3	Skilled Labor	2.00	8.57	MH	16.00	110.00	21.77	186.55
LOPEX1	Backhoe Operator	1.00	4.29	MH	16.50	110.00	22.45	96.30
LOPEX3	Excavator Operator Utility	1.00	4.29	MH	20.00	110.00	27.21	116.72

Activity: 210 24" PVC Casing Quantity: 60 Unit: LF

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZZPVCCA	24" PVC Casing	1.00	60.00	LF	97.73	100.00	97.73	5,863.80

Activity: 215 Casing Spacers 12" x 24" Quantity: 60 Unit: LF

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZCS12X24	Casing Spacer 12" x 24"	1.00	60.00	LF	8.00	100.00	8.00	480.00

Activity: 217 End Seals 12" x 24" Quantity: 4 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZES12X24	End Seal 12" x 24"	1.00	4.00	EA	155.00	100.00	155.00	620.00

Activity: 220 Backfill Sand by the Cy Quantity: 19.7 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	4.95	0.00	0.00	28.10	33.05
Total	0.00	0.00	0.00	0.00	97.53	0.00	0.00	553.64	651.17

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBBD	Bedding Sand (cy)	1.65	32.51	TCY	3.00	100.00	3.00	97.53
5ACC	Haul Sand by the cy	1.65	32.51	TCY	14.00	100.00	14.00	455.14
5AGA	Haul Dirt by the bcy	1.00	19.70	BCY	5.00	100.00	5.00	98.50

Biditem

24" STEEL CASING

135

Takeoff Qty: 29.000 LF
 Bid Qty: 29.000 LF

Client #: 13

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	7.58	1.79	9.37	5.50	154.97	0.00	0.00	9.21	179.05
Total	219.73	52.02	271.75	159.44	4,494.18	0.00	0.00	267.02	5,192.39

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
12.4200	2.3349	0.4283	418.0668	17.6916	21.8800	14.0002

Activity: 130 Install 24" PVC Casing Quantity: 29 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	7.58	1.79	9.37	5.50	0.00	0.00	0.00	0.00	14.87
Total	219.73	52.02	271.75	159.44	0.00	0.00	0.00	0.00	431.19

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
14.8686	0.0714	14.0002	208.1636	0.2071	140.0019	0.0071	2,081.6356

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
12.4200	2.3349	0.4283	21.8800	7.5769

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE206W 20 TON EXC, 2CY LOAD W Water Prod: US 140 Eff: 100.00 Crew Hrs: 2.07 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	2.07	HR	51.35	100.00	51.35	106.29
8LB	Loader / Backhoe	1.00	2.07	HR	25.67	100.00	25.68	53.15
LCUT1	Utility Man	2.00	4.14	MH	14.00	110.00	19.05	78.85
LCUT3	Skilled Labor	2.00	4.14	MH	16.00	110.00	21.77	90.11
LOPEX1	Backhoe Operator	1.00	2.07	MH	16.50	110.00	22.44	46.46
LOPEX3	Excavator Operator Utility	1.00	2.07	MH	20.00	110.00	27.21	56.33

Activity: 210 24" Steel Casing Quantity: 29 Unit: LF

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CACCM	24" x .375" Steel Carrier Pi	1.00	29.00	LF	134.66	100.00	134.66	3,905.14

Activity: 215 Casing Spacers 12" x 24" Quantity: 29 Unit: LF

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZCS12X24	Casing Spacer 12" x 24"	1.00	29.00	LF	8.00	100.00	8.00	232.00

Activity: 217 End Seals 12" x 24" Quantity: 2 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZES12X24	End Seal 12" x 24"	1.00	2.00	EA	155.00	100.00	155.00	310.00

Activity: 220 Backfill Sand by the Cy Quantity: 9.5 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	4.95	0.00	0.00	28.11	33.06
Total	0.00	0.00	0.00	0.00	47.04	0.00	0.00	267.02	314.06

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBBD	Bedding Sand (cy)	1.65	15.68	TCY	3.00	100.00	3.00	47.04
5ACC	Haul Sand by the cy	1.65	15.68	TCY	14.00	100.00	14.00	219.52
5AGA	Haul Dirt by the bcy	1.00	9.50	BCY	5.00	100.00	5.00	47.50

Biditem

ADJ EXISTING 12" WATERLINE AT STA 1+00

140

Takeoff Qty: 1.000 LS

Client #: 14

Bid Qty: 1.000 LS

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	1,085.23	256.98	1,342.21	782.21	3,927.85	0.00	0.00	107.61	6,159.88
Total	1,085.23	256.98	1,342.21	782.21	3,927.85	0.00	0.00	107.61	6,159.88

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
62.4700	0.0160	62.4700	98.6054	17.3720	21.4857	0.0712

Activity: 120 Make Ready Fitting Quantity: 4 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	22.03	5.22	27.24	0.00	0.00	0.00	0.00	0.00	27.24
Total	88.11	20.86	108.97	0.00	0.00	0.00	0.00	0.00	108.97

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
27.2425	0.6667	1.5000	40.8632	0.2667	14.9998	0.0667	408.6324

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
5.3400	0.7491	1.3350	20.4064	22.0275

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 15 Eff: 100.00 Crew Hrs: 2.67 Labor Pcs: 2.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	1.00	2.67	MH	14.00	110.00	19.04	50.85
LCUT3	Skilled Labor	1.00	2.67	MH	16.00	110.00	21.77	58.12

Activity: 130 Set Fitting Quantity: 4 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	106.15	25.14	131.29	77.02	0.00	0.00	0.00	0.00	208.31
Total	424.60	100.54	525.14	308.09	0.00	0.00	0.00	0.00	833.23

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
208.3075	1.0000	1.0000	208.3075	0.4000	10.0000	0.1000	2,083.0750

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
24.0000	0.1667	6.0000	21.8808	106.1500

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 4.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	4.00	HR	51.35	100.00	51.35	205.39
8LB	Loader / Backhoe	1.00	4.00	HR	25.67	100.00	25.68	102.70
LCUT1	Utility Man	2.00	8.00	MH	14.00	110.00	19.05	152.37
LCUT3	Skilled Labor	2.00	8.00	MH	16.00	110.00	21.77	174.14
LOPEX1	Backhoe Operator	1.00	4.00	MH	16.50	110.00	22.45	89.79
LOPEX3	Excavator Operator Utility	1.00	4.00	MH	20.00	110.00	27.21	108.84

Activity: 135 12" x 45 Deg Bend Quantity: 4 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	678.59	0.00	0.00	0.00	678.59
Total	0.00	0.00	0.00	0.00	2,714.34	0.00	0.00	0.00	2,714.34

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	1.00	CY	126.50	100.00	126.50	126.50
2CBBAABF	12" MJ 45 Bend	1.00	4.00	EA	330.00	100.00	330.00	1,320.00
2CBBCAF	12" Megalug	1.00	8.00	EA	158.48	100.00	158.48	1,267.84

Activity: 140 String Pipe Quantity: 15 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.28	0.07	0.34	0.23	0.00	0.00	0.00	0.00	0.57
Total	4.14	0.98	5.12	3.42	0.00	0.00	0.00	0.00	8.54

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
0.5693	0.0050	200.0000	113.8667	0.0075	2,000.0000	0.0005	1,138.6667

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
0.2300	65.2174	0.0153	22.2609	0.2760

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L20M2 2CY LOADER, 2 MEN Prod: US 2000 Eff: 100.00 Crew Hrs: 0.08 Labor Pcs: 3.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	0.08	HR	42.79	100.00	42.75	3.42
LCUT3	Skilled Labor	2.00	0.15	MH	16.00	110.00	21.80	3.27
LOPLD	Loader Operator	1.00	0.08	MH	17.00	110.00	23.13	1.85

Activity: 145 Install 12" W/L Main Quantity: 15 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	23.61	5.59	29.21	26.24	0.00	0.00	0.00	0.00	55.45
Total	354.20	83.88	438.08	393.67	0.00	0.00	0.00	0.00	831.75

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
55.4500	0.2667	3.7500	207.9375	0.4000	37.5000	0.0267	2,079.3750

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
20.0000	0.7500	1.3333	21.9040	23.6133

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 37.5 Eff: 100.00 Crew Hrs: 4.00 Labor Pcs: 5.00 Equipment Pcs: 3.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	4.00	HR	51.35	100.00	51.35	205.39
8LB	Loader / Backhoe	1.00	4.00	HR	25.67	100.00	25.68	102.70
8R048	Roller 48"	1.00	4.00	HR	21.40	100.00	21.40	85.58
LASR	Roller Operator Utility	1.00	4.00	MH	14.00	110.00	19.05	76.19
LCUT1	Utility Man	1.00	4.00	MH	14.00	110.00	19.05	76.19
LCUT3	Skilled Labor	1.00	4.00	MH	16.00	110.00	21.77	87.07
LOPEX1	Backhoe Operator	1.00	4.00	MH	16.50	110.00	22.45	89.79
LOPEX3	Excavator Operator Utility	1.00	4.00	MH	20.00	110.00	27.21	108.84

Activity: 210 PVC 12" DR 18 W/L Quantity: 15 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	55.32	0.00	0.00	0.15	55.47
Total	0.00	0.00	0.00	0.00	829.83	0.00	0.00	2.20	832.03

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2CAAABE	12" C900 DR18 Pipe	1.15	17.25	LF	48.11	100.00	48.11	829.83
5AGA	Haul Dirt by the bcy	1.00	0.44	BCY	5.00	100.00	5.00	2.20

Activity: 221 Backfill Sand by the Cy Quantity: 3.75 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	4.95	0.00	0.00	28.11	33.06
Total	0.00	0.00	0.00	0.00	18.57	0.00	0.00	105.41	123.98

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBBD	Bedding Sand (cy)	1.65	6.19	TCY	3.00	100.00	3.00	18.57
5ACC	Haul Sand by the cy	1.65	6.19	TCY	14.00	100.00	14.00	86.66
5AGA	Haul Dirt by the bcy	1.00	3.75	BCY	5.00	100.00	5.00	18.75

Activity: 300 Set Test Plug Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	33.28	7.88	41.16	12.84	0.00	0.00	0.00	0.00	54.00
Total	33.28	7.88	41.16	12.84	0.00	0.00	0.00	0.00	54.00

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
54.0000	0.5000	2.0000	108.0000	0.0500	20.0000	0.0500	1,080.0000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
2.0000	0.5000	2.0000	20.5800	33.2800

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 20 Eff: 100.00 Crew Hrs: 0.50 Labor Pcs: 4.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	0.50	HR	25.67	100.00	25.68	12.84
LCUT1	Utility Man	2.00	1.00	MH	14.00	110.00	19.05	19.05
LCUT3	Skilled Labor	1.00	0.50	MH	16.00	110.00	21.76	10.88
LOPEX1	Backhoe Operator	1.00	0.50	MH	16.50	110.00	22.46	11.23

Activity: 305 12" MJ Cap Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	365.11	0.00	0.00	0.00	365.11
Total	0.00	0.00	0.00	0.00	365.11	0.00	0.00	0.00	365.11

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	0.25	CY	126.50	100.00	126.52	31.63
2CBBADV	12" x 2" MJ Tapped Cap	1.00	1.00	EA	175.00	100.00	175.00	175.00
2CBBCAF	12" Megalug	1.00	1.00	EA	158.48	100.00	158.48	158.48

Activity: 310 Test W/L Quantity: 15 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.97	0.23	1.20	0.00	0.00	0.00	0.00	0.00	1.20
Total	14.52	3.44	17.96	0.00	0.00	0.00	0.00	0.00	17.96

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
1.1973	0.0200	50.0000	59.8667	0.0300	500.0000	0.0020	598.6667

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
0.9000	16.6667	0.0600	19.9556	0.9680

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB12 LABOR CREW 1 SKILL, 2 UTIL Prod: US 500 Eff: 100.00 Crew Hrs: 0.30 Labor Pcs: 3.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	2.00	0.60	MH	14.00	110.00	19.05	11.43
LCUT3	Skilled Labor	1.00	0.30	MH	16.00	110.00	21.77	6.53

Activity: 320 Rem Test Plug & Tie In Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	166.38	39.40	205.78	64.19	0.00	0.00	0.00	0.00	269.97
Total	166.38	39.40	205.78	64.19	0.00	0.00	0.00	0.00	269.97

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
269.9700	2.5000	0.4000	107.9880	0.2500	4.0000	0.2500	1,079.8800

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
10.0000	0.1000	10.0000	20.5780	166.3800

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LBM5 LOADER BACKHOE, 5 MEN Prod: US 4 Eff: 100.00 Crew Hrs: 2.50 Labor Pcs: 4.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	2.50	HR	25.67	100.00	25.68	64.19
LCUT1	Utility Man	2.00	5.00	MH	14.00	110.00	19.05	95.23
LCUT3	Skilled Labor	1.00	2.50	MH	16.00	110.00	21.77	54.42
LOPEX1	Backhoe Operator	1.00	2.50	MH	16.50	110.00	22.45	56.13

Biditem

TRAFFIC CONTROL

145

Takeoff Qty: 5.000 DAY
 Bid Qty: 5.000 DAY

Client #: 15

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	420.20	46.01	466.21	53.49	0.00	54.38	0.00	0.00	574.08
Total	2,101.00	230.06	2,331.06	267.45	0.00	271.88	0.00	0.00	2,870.39

	Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
	130.0000	0.0385	26.0000	22.0799	16.1615	17.9312	0.1111

Activity: 140 **Purchase Material** **Quantity: 1** **Unit: LS**

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
3QE	Purchase Additional TC Mat'l	1.00	1.00	LS	250.00	108.75	271.88	271.88

Activity: 150 **Set Up Barricades** **Quantity: 1** **Unit: DAY**

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	484.00	53.00	537.00	0.00	0.00	0.00	0.00	0.00	537.00
Total	484.00	53.00	537.00	0.00	0.00	0.00	0.00	0.00	537.00

	Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
	537.0000	10.0000	0.1000	53.7000	1.0000	1.0000	1.0000	537.0000

	Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
	30.0000	0.0333	30.0000	17.9000	484.0000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Crew: LAB12 LABOR CREW 1 SKILL, 2 UTIL Prod: US 1 Eff: 100.00 Crew Hrs: 10.00 Labor Pcs: 3.00 Equipment Pcs: 0.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
LCUT1	Utility Man	2.00	20.00	MH	14.00	110.00	17.09	341.73
LCUT3	Skilled Labor	1.00	10.00	MH	16.00	110.00	19.53	195.27

Activity: 155 **Install Barricades** **Quantity: 2** **Unit: DAY**

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	484.00	53.00	537.00	53.49	0.00	0.00	0.00	0.00	590.49
Total	968.00	105.99	1,073.99	106.98	0.00	0.00	0.00	0.00	1,180.97

	Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
	590.4850	10.0000	0.1000	59.0485	2.0000	1.0000	1.0000	590.4850

	Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
	60.0000	0.0333	30.0000	17.8998	484.0000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp

Crew: LAB12 LABOR CREW 1 SKILL, 2 UTIL Prod: US 1 Eff: 100.00 Crew Hrs: 20.00 Labor Pcs: 3.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPU	Pickup Truck 50%50	1.00	20.00	HR	10.70	100.00	5.35	106.98
LCUT1	Utility Man	2.00	40.00	MH	14.00	110.00	17.09	683.45
LCUT3	Skilled Labor	1.00	20.00	MH	16.00	110.00	19.53	390.54

Activity: 160 **Remove Barricades** **Quantity: 1** **Unit: DAY**

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	484.00	53.00	537.00	106.98	0.00	0.00	0.00	0.00	643.98
Total	484.00	53.00	537.00	106.98	0.00	0.00	0.00	0.00	643.98

	Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
	643.9800	10.0000	0.1000	64.3980	1.0000	1.0000	1.0000	643.9800

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
30.0000	0.0333	30.0000	17.9000	484.0000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp
 Crew: LAB12 LABOR CREW 1 SKILL, 2 UTIL Prod: US 1 Eff: 100.00 Crew Hrs: 10.00 Labor Pcs: 3.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPU	Pickup Truck	1.00	10.00	HR	10.70	100.00	10.70	106.98
LCUT1	Utility Man	2.00	20.00	MH	14.00	110.00	17.09	341.73
LCUT3	Skilled Labor	1.00	10.00	MH	16.00	110.00	19.53	195.27

Activity: 180 Maintain Barricades Quantity: 5 Unit: DAYS

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	33.00	3.61	36.61	10.70	0.00	0.00	0.00	0.00	47.31
Total	165.00	18.07	183.07	53.49	0.00	0.00	0.00	0.00	236.56

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
47.3120	1.0000	1.0000	47.3120	0.5000	10.0000	0.1000	473.1200

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
10.0000	0.5000	2.0000	18.3070	33.0000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX9999 No Workman's Comp
 Crew: LAB11 LABOR CREW 1 SKILL, 1 UTIL Prod: US 10 Eff: 100.00 Crew Hrs: 5.00 Labor Pcs: 2.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPU	Pickup Truck	1.00	5.00	HR	10.70	100.00	10.70	53.49
LCUT1	Utility Man	1.00	5.00	MH	14.00	110.00	17.09	85.43
LCUT3	Skilled Labor	1.00	5.00	MH	16.00	110.00	19.53	97.64

Biditem 150 **1-1/2" BACKFLOW PREVENTER** Client #: 16
 Takeoff Qty: -2.000 EA
 Bid Qty: -2.000 EA

Biditem 160 ~~1-1/2" DOMESTIC WATER SERVICE~~ Client #: 17
 Takeoff Qty: -2.000 EA
 Bid Qty: -2.000 EA

Biditem 170 ~~12" TEE~~ Client #: 18
 Takeoff Qty: -1.000 EA
 Bid Qty: -1.000 EA

Biditem 180 ~~12" X 4" REDUCER~~ Client #: 19
 Takeoff Qty: -1.000 EA
 Bid Qty: -1.000 EA

Biditem 190 ~~12" PVC C900 DR18 PIPE~~ Client #: 20
 Takeoff Qty: -17.760 LF
 Bid Qty: -17.760 LF

Biditem

18" BORE W / STEEL CASING

200

Takeoff Qty: -8.800 LF
Bid Qty: -8.800 LF

Client #: 21

Subtotal

WATER LINE IMPROVEMENTS SUBTOTAL

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Misc 2	Misc 3	Total
Total	10,284.49	2,046.38	12,330.87	4,783.26	47,127.73	271.88	280.00	1,264.55	0.00	0.00	66,058.29

Biditem

INSTALL NEW 60" STORM MANHOLE

220

Takeoff Qty: 1.000 EA
Bid Qty: 1.000 EA

Client #: 1

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	584.66	138.42	723.08	352.67	3,144.31	0.00	0.00	27.34	4,247.40
Total	584.66	138.42	723.08	352.67	3,144.31	0.00	0.00	27.34	4,247.40

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
33.8300	0.0296	33.8300	125.5513	17.2823	21.3739	0.1446

Activity: 120 Unload Inlet / Manhole Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	9.08	2.15	11.23	10.70	0.00	0.00	0.00	0.00	21.93
Total	9.08	2.15	11.23	10.70	0.00	0.00	0.00	0.00	21.93

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
21.9300	0.2500	4.0000	87.7200	0.0250	40.0000	0.0250	877.2000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
0.5000	2.0000	0.5000	22.4600	9.0800

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L20M2 2CY LOADER, 2 MEN Prod: US 40 Eff: 100.00 Crew Hrs: 0.25 Labor Pcs: 2.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	0.25	HR	42.79	100.00	42.80	10.70
LCUT3	Skilled Labor	1.00	0.25	MH	16.00	110.00	21.76	5.44
LOPLD	Loader Operator	1.00	0.25	MH	17.00	110.00	23.16	5.79

Activity: 130 Install Manhole Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	353.81	83.76	437.57	256.48	0.00	0.00	0.00	0.00	694.05
Total	353.81	83.76	437.57	256.48	0.00	0.00	0.00	0.00	694.05

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
694.0500	3.3333	0.3000	208.2171	0.3333	3.0000	0.3333	2,082.1708

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
20.0000	0.0500	20.0000	21.8785	353.8100

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE2061 20 TON Inlet Crew Prod: US 3 Eff: 100.00 Crew Hrs: 3.33 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
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8E20	Excavator 20 ton	1.00	3.33	HR	51.35	100.00	51.35	170.99
8LB	Loader / Backhoe	1.00	3.33	HR	25.67	100.00	25.67	85.49
LCUT1	Utility Man	2.00	6.67	MH	14.00	110.00	19.05	127.04
LCUT3	Skilled Labor	2.00	6.67	MH	16.00	110.00	21.77	145.18
LOPEX1	Backhoe Operator	1.00	3.33	MH	16.50	110.00	22.45	74.75
LOPEX3	Excavator Operator Utility	1.00	3.33	MH	20.00	110.00	27.21	90.60

Activity: 150 Finish Manhole Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	221.77	52.51	274.28	85.49	0.00	0.00	0.00	0.00	359.77
Total	221.77	52.51	274.28	85.49	0.00	0.00	0.00	0.00	359.77

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
359.7700	3.3333	0.3000	107.9321	0.3333	3.0000	0.3333	1,079.3208

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
13.3300	0.0750	13.3300	20.5761	221.7700

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 3 Eff: 100.00 Crew Hrs: 3.33 Labor Pcs: 4.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	3.33	HR	25.67	100.00	25.67	85.49
LCUT1	Utility Man	2.00	6.67	MH	14.00	110.00	19.05	127.04
LCUT3	Skilled Labor	1.00	3.33	MH	16.00	110.00	21.77	72.49
LOPEX1	Backhoe Operator	1.00	3.33	MH	16.50	110.00	22.45	74.75

Activity: 210 60" Concrete Manhole Quantity: 1 Unit: EA

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2A15AAB	Manhole Ty A+1	1.00	1.00	EA	2,900.00	100.00	2,900.00	2,900.00

Activity: 220 3000 PSI Concrete Quantity: 1.5 Unit: CY

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B2AH	3000 PSI Concrete	1.00	1.50	CY	126.50	100.00	126.50	189.75

Activity: 221 Gravel Bedding Quantity: 1.5 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	36.37	0.00	0.00	18.23	54.60
Total	0.00	0.00	0.00	0.00	54.56	0.00	0.00	27.34	81.90

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBCA	Gravel Bedding	1.65	2.48	TON	22.00	100.00	22.00	54.56
5AEA	Haul Gravel by the Ton	1.65	2.48	TON	8.00	100.00	8.00	19.84
5AGA	Haul Dirt by the bcy	1.00	1.50	BCY	5.00	100.00	5.00	7.50

Biditem

230

REM & REINSTALL EXIT 24" RCP PIPE

Takeoff Qty: 70.000 LF
 Bid Qty: 70.000 LF

Client #: 2

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	13.88	3.29	17.17	12.57	14.58	0.00	0.00	7.31	51.62
Total	971.55	230.03	1,201.58	880.09	1,020.36	0.00	0.00	511.54	3,613.57

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
55.4300	1.2629	0.7919	65.1916	17.5275	21.6774	6.8572

Activity: 120 Rem Exist 24" RCP Pipe 5' Cut Quantity: 70 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	7.38	1.75	9.12	6.41	0.00	0.00	0.00	0.00	15.54
Total	516.40	122.27	638.67	449.03	0.00	0.00	0.00	0.00	1,087.70

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
15.5386	0.0833	12.0001	186.4639	0.5833	120.0007	0.0083	1,864.6392

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
29.1600	2.4005	0.4166	21.9023	7.3771

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 120 Eff: 100.00 Crew Hrs: 5.83 Labor Pcs: 5.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	5.83	HR	51.35	100.00	51.35	299.35
8LB	Loader / Backhoe	1.00	5.83	HR	25.67	100.00	25.67	149.68
LCUT1	Utility Man	2.00	11.67	MH	14.00	110.00	19.05	222.27
LCUT3	Skilled Labor	1.00	5.83	MH	16.00	110.00	21.77	126.91
LOPEX1	Backhoe Operator	1.00	5.83	MH	16.50	110.00	22.45	130.87
LOPEX3	Excavator Operator Utility	1.00	5.83	MH	20.00	110.00	27.21	158.62

Activity: 130 Install 24" RCP Pipe 5' Cut Quantity: 70 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	6.50	1.54	8.04	6.16	0.00	0.00	0.00	0.00	14.20
Total	455.15	107.76	562.91	431.06	0.00	0.00	0.00	0.00	993.97

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
14.1996	0.0625	16.0000	227.1931	0.4375	160.0000	0.0063	2,271.9314

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
26.2700	2.6646	0.3753	21.4279	6.5021

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 160 Eff: 100.00 Crew Hrs: 4.38 Labor Pcs: 6.00 Equipment Pcs: 3.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	4.38	HR	51.35	100.00	51.35	224.90
8LB	Loader / Backhoe	1.00	4.38	HR	25.67	100.00	25.67	112.45
8R048	Roller 48"	1.00	4.38	HR	21.40	100.00	21.39	93.71
LASR	Roller Operator Utility	1.00	4.38	MH	14.00	110.00	19.05	83.42
LCUT1	Utility Man	2.00	8.75	MH	14.00	110.00	19.05	166.66
LCUT3	Skilled Labor	1.00	4.38	MH	16.00	110.00	21.77	95.34
LOPEX1	Backhoe Operator	1.00	4.38	MH	16.50	110.00	22.45	98.32
LOPEX3	Excavator Operator Utility	1.00	4.38	MH	20.00	110.00	27.21	119.17

Activity: 221 Gravel Bedding Quantity: 28.1 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	36.31	0.00	0.00	18.20	54.52
Total	0.00	0.00	0.00	0.00	1,020.36	0.00	0.00	511.54	1,531.90

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBCA	Gravel Bedding	1.65	46.38	TON	22.00	100.00	22.00	1,020.36
5AEA	Haul Gravel by the Ton	1.65	46.38	TON	8.00	100.00	8.00	371.04
5AGA	Haul Dirt by the bcy	1.00	28.10	BCY	5.00	100.00	5.00	140.50

Biditem

REM & DISPOSE 60" STORM MANHOLE

240

Takeoff Qty: 1.000 EA
 Bid Qty: 1.000 EA

Client #: 3

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	221.38	52.42	273.80	192.56	0.00	0.00	0.00	260.00	726.36
Total	221.38	52.42	273.80	192.56	0.00	0.00	0.00	260.00	726.36

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
12.5000	0.0800	12.5000	58.1088	17.7104	21.9040	0.4000

Activity: 120 Rem Exist 60" Manhole Quantity: 1 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	221.38	52.42	273.80	192.56	0.00	0.00	0.00	0.00	466.36
Total	221.38	52.42	273.80	192.56	0.00	0.00	0.00	0.00	466.36

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
466.3600	2.5000	0.4000	186.5440	0.2500	4.0000	0.2500	1,865.4400

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
12.5000	0.0800	12.5000	21.9040	221.3800

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 4 Eff: 100.00 Crew Hrs: 2.50 Labor Pcs: 5.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	2.50	HR	51.35	100.00	51.35	128.37
8LB	Loader / Backhoe	1.00	2.50	HR	25.67	100.00	25.68	64.19
LCUT1	Utility Man	2.00	5.00	MH	14.00	110.00	19.05	95.23
LCUT3	Skilled Labor	1.00	2.50	MH	16.00	110.00	21.77	54.42
LOPEX1	Backhoe Operator	1.00	2.50	MH	16.50	110.00	22.45	56.13
LOPEX3	Excavator Operator Utility	1.00	2.50	MH	20.00	110.00	27.21	68.02

Activity: 310 Haul Off - 100% Fluff Quantity: 1 Unit: LD

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
5HSUB	Haul Off Sub	1.00	1.00	LD	260.00	100.00	260.00	260.00

Subtotal

STORM DRAINAGE IMPROVEMENTS SUBTOTAL

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Misc 2	Misc 3	Total
Total	1,777.59	420.87	2,198.46	1,425.32	4,164.67	0.00	0.00	798.88	0.00	0.00	8,587.33

Report Summary

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
Total	18,344	4,020	22,364	9,289	51,542	1,577	280	2,063	87,117

Calendars Used In Estimate

- 40 40 Hour Work Week 5 x 8 hr
- 50 50 Hour Work Week 5 x 10hr

In equipment resources, Rent % and EOE % that are not 100% are represented as XXX%YYY, where XXX = Rent % and YYY = EOE %

Alternate Fence Replacement Pricing





AMERICAN FENCE

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Ph. (956)929-6000 * (956)867-6988
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Representative: Cesar Cantu
Phone Number: 867.69.88

PRICE 1	PRICE 2	PRICE 3	PRICE 4	PRICE 5
\$3,765. ⁰⁰	\$1,865. ⁰⁰	\$2,684. ⁰⁰	\$1,270. ⁰⁰	\$3,990

PROJECT ESTIMATE

Date: 09/24/2024
Company Name: NM Contrators Project Name: El Paredon
City: Altam Phone: 655-69-95
Total Ft. 482 Height: 6ft chain link / 6ft Cedar fence
Gates: 1 Walking Gate 5ft wide 6ft High of Chain Link
1 Double Gate 15ft wide 6ft High of Chain Link

JOB PLAN

INSTALLATION / LOCATION

TOTAL FT. HEIGHT

Price 1: Remove existing chain link 88ft. 6ft High & Install New Chain Link with (Walking Gate) Double Gate 15ft wide.

Price 2: Remove existing chain link 150ft. 5ft High & Install new chain link.

Price 3: Remove 30ft of cedar fence 6ft High & Remove 80ft. of chain link 6ft High & Install 30ft of cedar new and 80ft of new chain link 6ft High.

Price 3: Block by owner.

Price 4: Remove 64ft. of existing chain link fence 6ft High & Install 64ft of new chain link fence.

Price 5: Remove 30ft of existing chain link fence 6ft High & Remove 80ft of cedar fence.

Installation of 30ft. of new chain link 6ft High & Installation of 80ft of cedar fence 6ft High.

Note: Block by owner.



AIA[®]

Document G709™ – 2018

Proposal Request

PROJECT: *(name and address)*
Hidalgo County El Paraiso Health Clinic
& Community Resource Center

CONTRACT INFORMATION:
Contract For: General Construction

Date: November 28, 2023

Architect’s Project Number: 21087
Proposal Request Number: 001

Proposal Request Date: August 21, 2024

OWNER: *(name and address)*
County of Hidalgo
100 East Cano, 2nd Floor
Edinburg, Texas 78539

ARCHITECT: *(name and address)*
ERO Architects
P.O. Box 720428
McAllen, Texas 78504

CONTRACTOR: *(name and address)*
NM Contracting, LLC
2022 Orchid Avenue
McAllen, Texas 78504

The Owner requests an itemized proposal for changes to the Contract Sum and Contract Time for proposed modifications to the Contract Documents described herein. The Contractor shall submit this proposal within Fourteen (14) days or notify the Architect in writing of the anticipated date of submission.

(Insert a detailed description of the proposed modifications to the Contract Documents and, if applicable, attach or reference specific exhibits.)

Provide a price proposal to include labor and materials for the Sharyland Water Supply proposed modifications as indicated on the attached narrative and cut sheets from Halff.

Attachments: Narrative, C4.00, C4.01, C5.01, C7.01, C7.02, C7.03 & C7.04

THIS IS NOT A CHANGE ORDER, A CONSTRUCTION CHANGE DIRECTIVE, OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.

REQUESTED BY THE ARCHITECT:

Octavio Cantu, AIA, Principal

PRINTED NAME AND TITLE



5000 West Military, Ste 100
 McAllen, Texas 78503
 (956) 664-0286
 Fax (956) 664-0282

PROPOSAL REQUEST

To:	NM Contracting, LLC Attn: Melissa Champion – Project Manager	Date:	8/20/24
From:	Solveig Klassen, PE	AVO:	52183.001
		PR No.:	001 (Civil)
Email:	sklassen@halff.com	Project:	Hidalgo County El Paraiso Project 1901 N. Los Ebanos Rd Alton, Texas 78573
Subject:	SWSC – Water Revision		

Please submit an itemized proposal for changes in the Contract Sum and Contract Time for proposed modifications to the Contract Documents described herein. Within the agreed upon days stated on the attached AIA document, the Contractor must submit this proposal or notify the Engineer, in writing, of the date on which proposal submission is anticipated.

This is not a change order, a construction change directive or a direction to proceed with the work described in the proposed modifications.

If Contractor has not submitted a cost proposal during the time agreed upon, then it is assumed that there is no cost or schedule impact to the project and the Engineer can issue out the attached documents as an official Revision to the Construction Documents

DESCRIPTION:

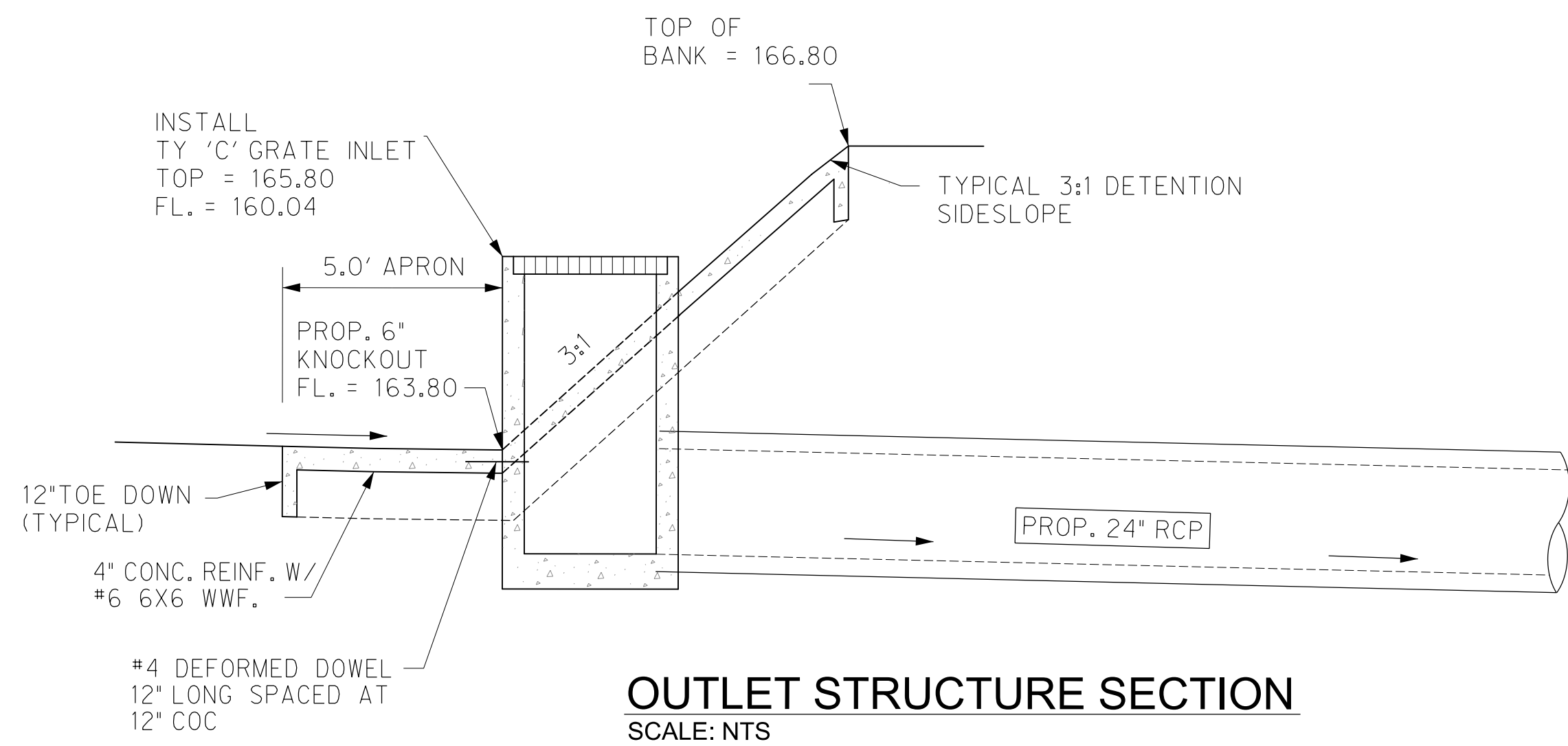
Contractor is to provide a cost proposal for the changes implemented in attached Revision called CP 001 (Civil)

- C4.00 – Flowlines of the storm discharge pipe were modified to accommodate the proposed waterline on the plan view.
- C4.01 - Flowlines of the storm discharge pipe were modified to accommodate the proposed waterline on the profile.
- C5.01 – The connection along St Jude Ave has been modified to accommodate SWSC comments of an open cut installation, with steel casing, and vertical bends outside of the pavement section. Refer to Detail 02, 03 & B on Sheet C5.01.
- C7.01 – Added detail for a water meter box – blue color
- C7.02 – Removed a detail
- C7.03 – Added SWSC standard details.
- C7.04 – Added SWSC standard details.

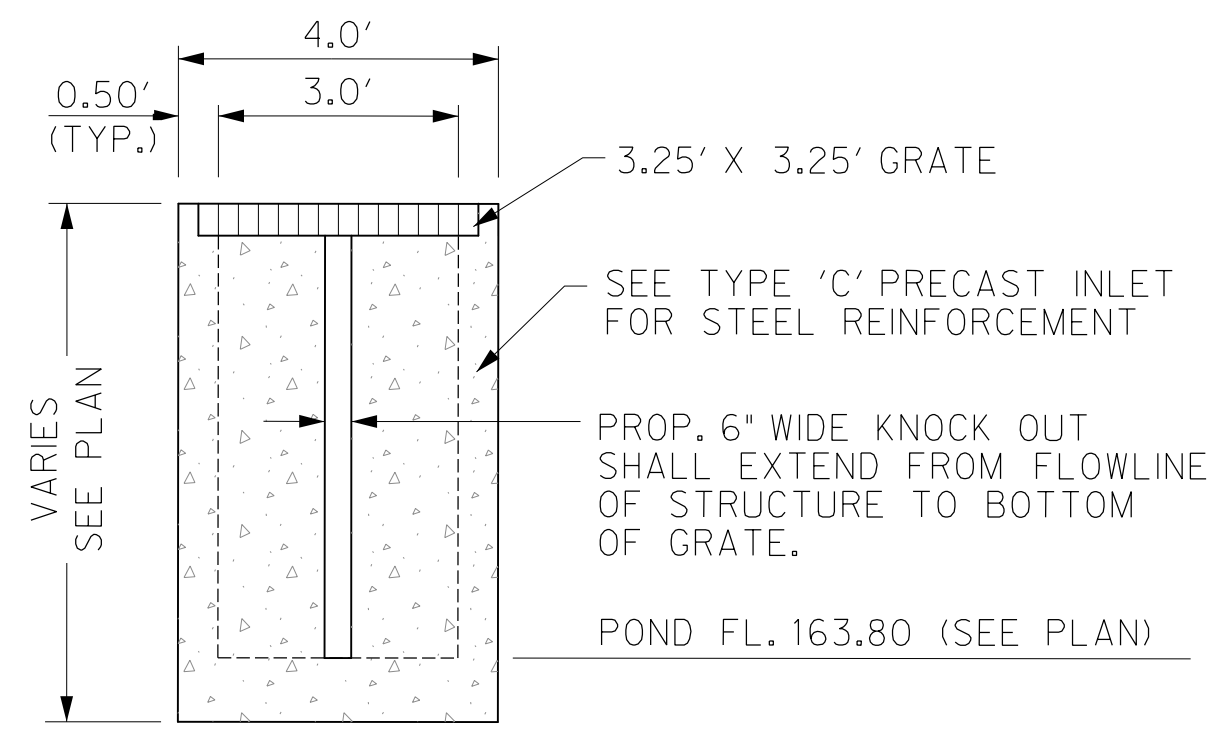
Copies: File Contractor Owner Other:

Attachments: Attachment - CP 001 (Civil) Revision (7 pages)

Sheet
C4.00



OUTLET STRUCTURE SECTION
SCALE: NTS



TYPICAL OUTLET STRUCTURE ELEVATION
SCALE: NTS

NOTICE TO CONTRACTORS

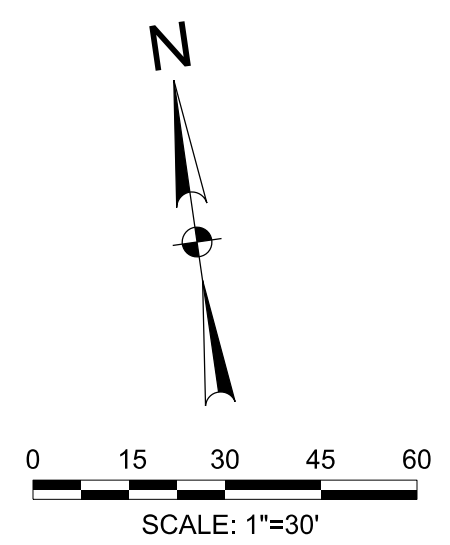
1. PRIOR TO CONSTRUCTION OF ANY PROPOSED IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF BURIED UTILITIES AND STRUCTURES, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
TELEPHONE, STORMSEWER, WATER, GAS, CABLE TV, SANITARY SEWER, ELECTRIC.

2. IF DISCREPANCIES OCCUR BETWEEN THAT WHICH IS SHOWN ON THE PLANS AND CONDITIONS PRESENT IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING IMMEDIATELY. FAILURE TO DO SO SHALL ABSOLVE OWNER AND ENGINEER OF LIABILITY AND ASSOCIATED COST.

***** STOP! CALL BEFORE YOU DIG! *****

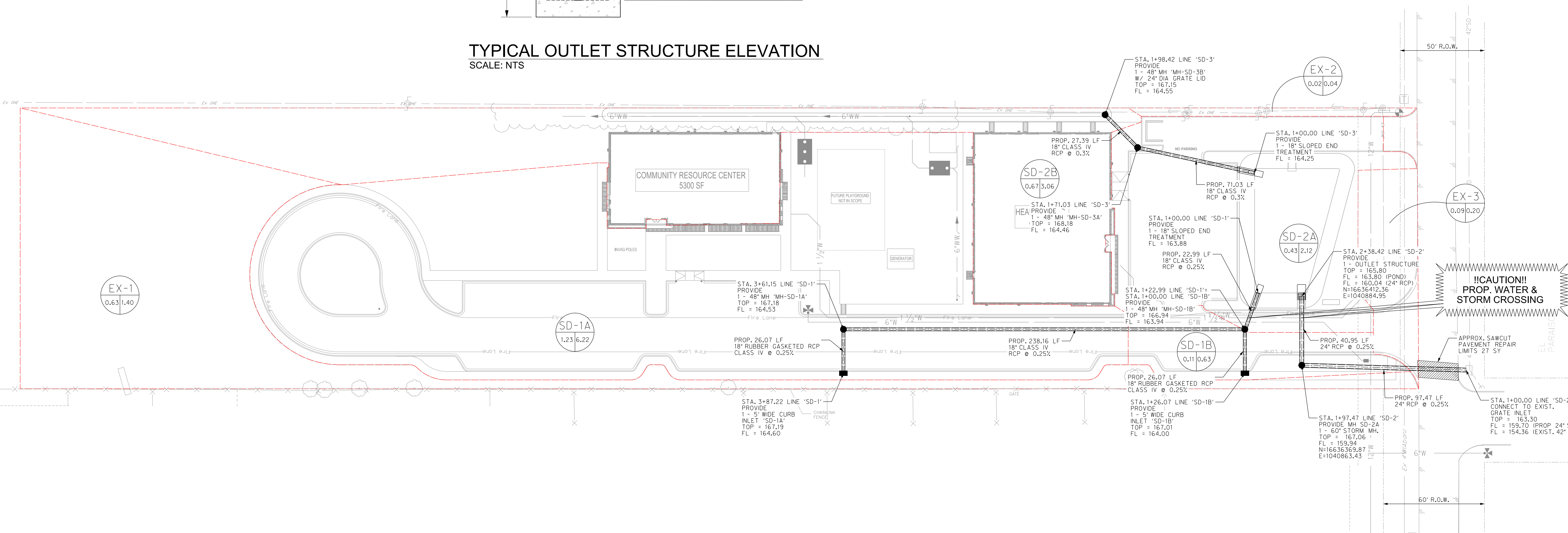
AS REQUIRED BY THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT TEXAS811 MUST BE CONTACTED AT LEAST 2 WORKING DAYS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE CALL SYSTEM. THE CONTRACTOR SHALL ALSO CALL 811, AND ALL OTHER LOCATED COMPANIES PRIOR TO EXCAVATION ACTIVITIES.

INFORMATION ON EXISTING UTILITIES IS FROM BEST AVAILABLE INFORMATION OF RECORD AND SPOT FIELD LOCATIONS. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO ACCURATELY DEPICT ALL UTILITIES, NOT ALL (PUBLIC AND PRIVATE) MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION AND LOCATION OF THESE UNDERGROUND UTILITIES AS REQUIRED AT NO SEPARATE PAY. CONTRACTOR TO COORDINATE WITH ALL UTILITY COMPANIES.



LEGEND

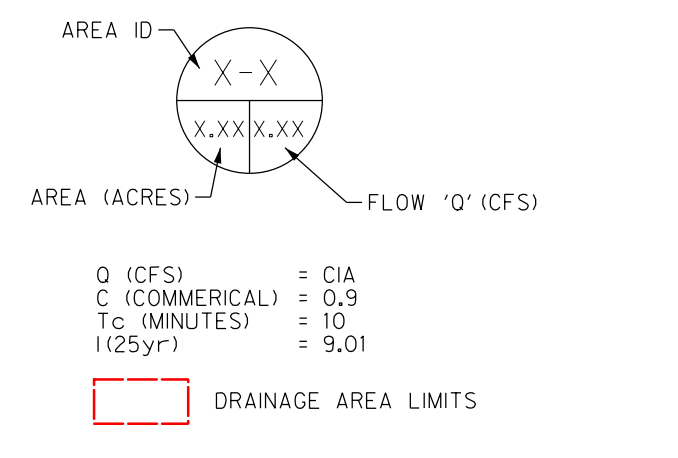
- | PROPOSED | EXISTING | |
|----------|----------|----------------------|
| □ | □ | INLET |
| □ | □ | GRATE INLET |
| ○ | ○ | MANHOLE |
| ○ | ○ | GATE VALVE & BOX |
| ○ | ○ | WATER METER |
| ○ | ○ | FIRE HYDRANT |
| ○ | ○ | SANITARY CLEAN OUT |
| ○ | ○ | ELECTRIC POLE |
| ○ | ○ | ELECTRIC BOX |
| ○ | ○ | POWER POLE |
| ○ | ○ | TELEPHONE PEDESTAL |
| ○ | ○ | FENCE |
| ○ | ○ | TRAFFIC SIGN |
| ○ | ○ | OVERHEAD ELECTRIC |
| ○ | ○ | UNDERGROUND ELECTRIC |
| ○ | ○ | GAS LINE |
| ○ | ○ | FIBER OPTIC LINE |
| ○ | ○ | TELEPHONE LINE |
| ○ | ○ | ASPHALT PAVEMENT |
| ○ | ○ | SAN. SEWER |
| ○ | ○ | WATER |
| ○ | ○ | FIRE PROTECTION |
| ○ | ○ | STORM SEWER |
| ○ | ○ | CONTOUR |
| ○ | ○ | TOP OF PAVEMENT |
| ○ | ○ | TOP OF CURB |
| ○ | ○ | GUTTER |
| ○ | ○ | TOP OF WALK |
| ○ | ○ | FINISHED GRADE |
| ○ | ○ | ASPHALT PAVEMENT |
| ○ | ○ | CONCRETE PAVEMENT |



!CAUTION!
EXISTING OVERHEAD
ELECTRIC LINES

**CALL TEXAS 811
BEFORE YOU DIG**

!CAUTION!
EXISTING UNDERGROUND
ELEC. & COMM. LINES



PROPOSED RUNOFF COMPUTATIONS

Drainage Basin	Basin Information			Computed C	Cumulative CA	Time of Concentration		Intensity			Flow		
	Area (Ac)	PerVIOUS Area (Ac) for C(0.5)	Inspervious Area (Ac) for C(0.9)			Tc (minutes)	Tc Used (minutes)	I ₁ (in/hr)	I ₂ (in/hr)	I ₃ (in/hr)	Q ₁ (cfs)	Q ₂ (cfs)	Q ₃ (cfs)
SD-1A	1.23	0.44	0.79	0.88	0.84	2.02	10.00	7.40	10.25	11.51	6.22	8.62	9.68
SD-1B	0.11	0.00	0.09	0.77	0.88	0.25	10.00	7.40	10.25	11.51	0.63	0.87	0.97
SD-2A	0.43	0.17	0.26	0.67	0.29	1.08	10.00	7.40	10.25	11.51	2.12	2.93	3.29
SD-2B	0.67	0.31	0.36	0.62	0.41	2.42	10.00	7.40	10.25	11.51	3.06	4.25	4.77
EX-1	0.63	0.63	0.00	0.30	0.19	0.00	10.00	7.40	10.25	11.51	1.40	1.94	2.17
EX-2	0.02	0.02	0.00	0.00	0.01	0.00	10.00	7.40	10.25	11.51	0.04	0.06	0.07
EX-3	0.09	0.09	0.00	0.30	0.03	0.00	10.00	7.40	10.25	11.51	0.20	0.28	0.31

25-YR Proposed Conditions

RUNOFF COLLECTION POINT (Inlet or Manhole)	Distance Between Collection Points	INCREMENTAL DRAINAGE AREA			Accumulated CA	Time at Upstream Station (minutes)	Design Storm Frequency (yrs)	Intensity T (inches/hr)	Storm Water Runoff Q (c.f.a.)	Slope of Hydraulic Gradient 'S' (ft/ft)	Number of Conduits	Selected Storm Sewer Height (in)	Velocity in Sewer Between Collection Points (f.p.s.)	Head Loss Coeff. K _f	Velocity Head Loss of Upstream Station K(V ² /2g) (feet)	Flow Time in Sewer (minutes)	Distance V x 60 (minutes)	Hydraulic Grade	
		Drainage Area 'A' (Acres)	Runoff Coeff. 'C'	Incremental 'CA'															
INLET 'SD-1A'	26.07	1.23	0.68	0.84	10.00	25	9.01	7.58	0.0052	1	18	4.29	1.25	0.36	0.10	166.57	166.93	167.06	
MH-SD-1A	238.16	0.00	0.68	0.00	0.84	10.10	25	8.98	7.55	0.0052	1	18	4.28	0.50	0.14	0.93	165.20	165.34	166.57
MH-SD-1B (To Detention Pond)	22.99	0.00	0.77	0.00	0.93	11.03	25	8.70	8.05	0.0059	1	18	4.56	0.50	0.18	0.08	164.88	165.06	165.20
Inlet SD-1B (To MH-SD-1B)	26.07	0.11	0.77	0.08	0.08	10.00	25	9.01	0.76	0.0001	1	18	0.43	1.25	0.00	1.01	166.57	166.57	166.57
MH-SD-2B	27.39	0.67	0.62	0.41	0.41	10.00	25	9.01	3.73	0.0013	1	18	2.11	1.25	0.09	0.22	165.87	165.96	165.99
MH-SD-2A (To Detention)	71.03	0.00	0.67	0.00	0.41	10.22	25	8.95	3.71	0.0012	1	18	2.10	0.50	0.03	0.56	165.75	165.78	165.87

*RAINFALL INTENSITY-DURATION-FREQUENCY COEFFICIENTS FOR TEXAS
Based on 'National Oceanic and Atmospheric Administration's (NOAA) Atlas 14
Precipitation-Frequency Atlas of the United States, Volume 11 Version 2.0: Texas' (Perica et al. 2018)



Know what's below.
Call before you dig.

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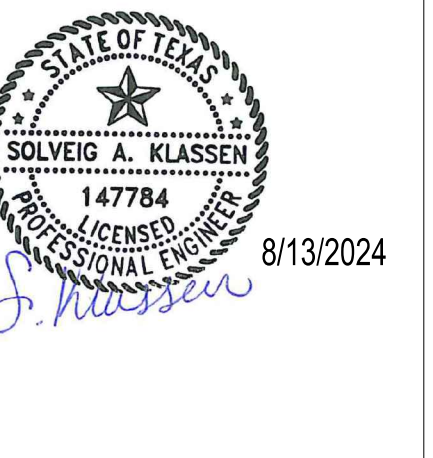
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T 956-661-0400 | goero.com

The Seal appearing on this document was authorized by Solving A. Klassen, P.E. Number 147784 on August 12, 2023. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act. The Record Copy of this drawing is on file at the offices of half Associates, Inc., 5000 N. Military Suite 100, McAllen, TX 78503, TPE FIRM #F-312



HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

PROJECT NO:	21087
ISSUE DATE:	8/2/2023
DRAWN BY:	SK
CHECKED BY:	RG
SHEET NAME:	DRAINAGE PLAN
Sheet Number:	C4.00
Project Status:	CONSTRUCTION DOCUMENTS



HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

NOTICE TO CONTRACTORS

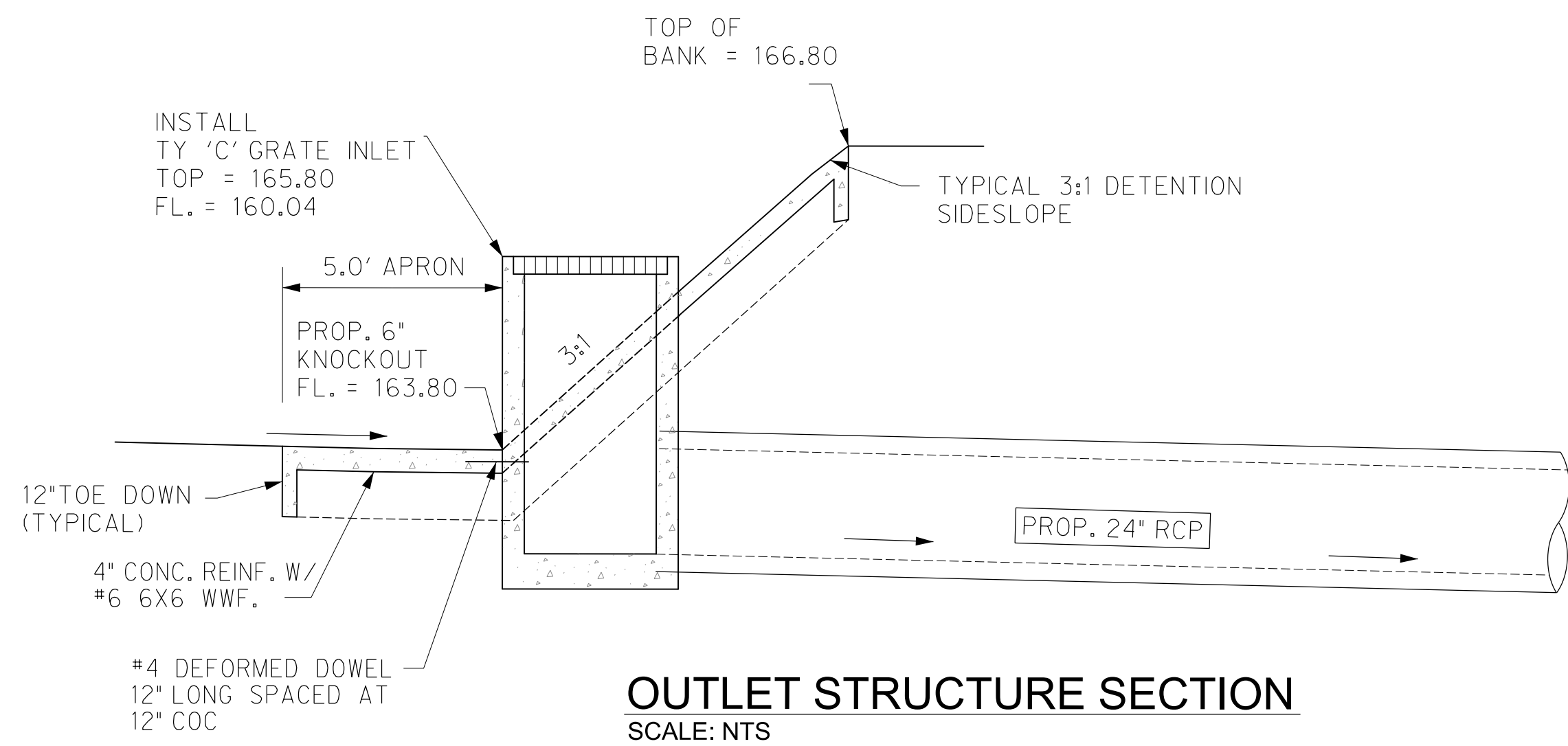
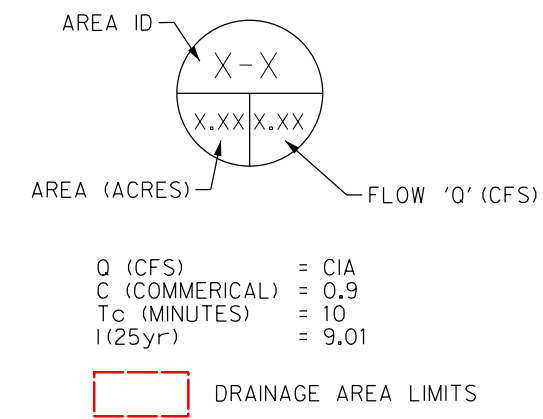
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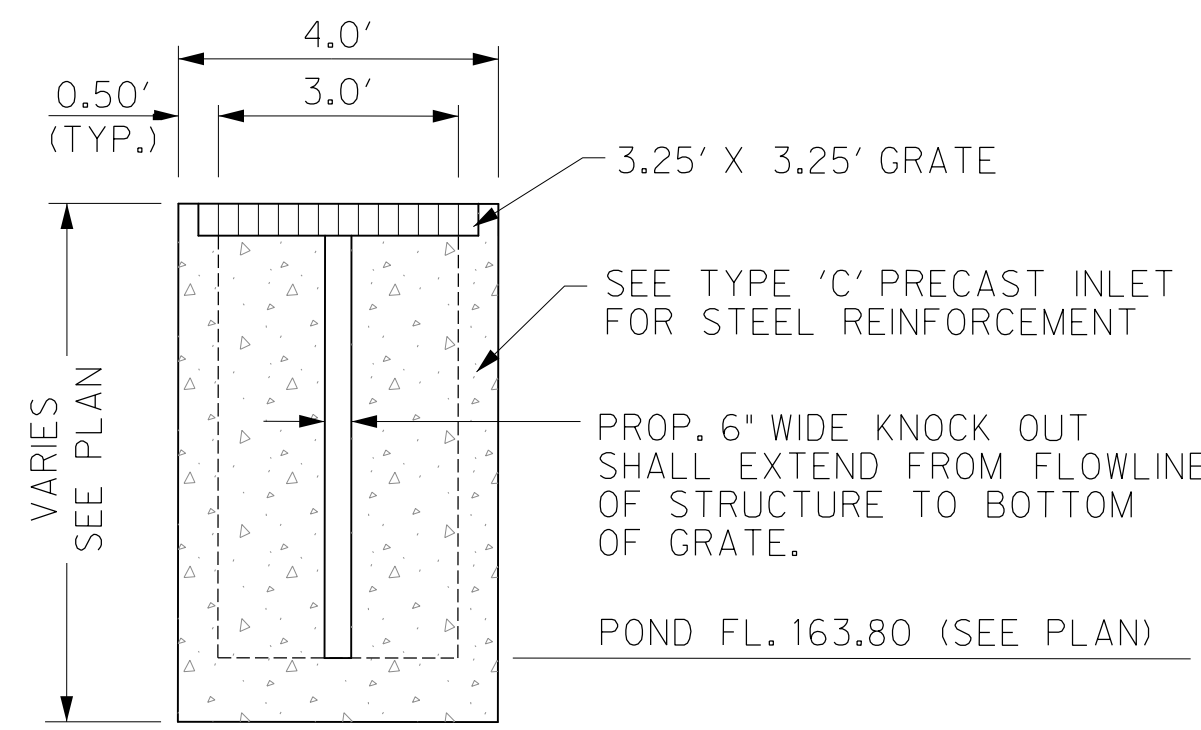
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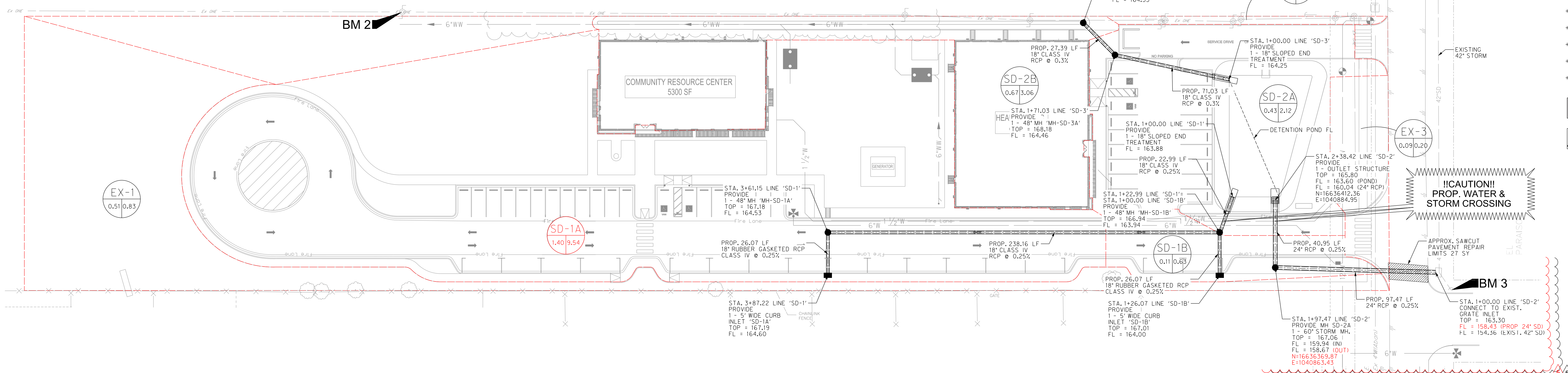
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OUTLET STRUCTURE SECTION
SCALE: NTS



TYPICAL OUTLET STRUCTURE ELEVATION
SCALE: NTS



Detention Calculations

Existing Conditions	Total Disturbed Area	Runoff Coefficient	Intensity (in/hr)	Time (min)	Flow "Q" (cfs)	Runoff Volume Existing (ac-ft)	Runoff Volume Proposed (ac-ft)	Detention Required (ac-ft)
Proposed Conditions	3.18	0.4	7.2 (10-Year)	30	9.12	0.25	0.49	0.24
		0.6	10.25 (50-Year)	30	12.39			

PROPOSED RUNOFF COMPUTATIONS

Drainage Basin	Basin Information				Computed C	Cumulative CA	Time of Concentration Tc (minutes)	Intensity			Flow		
	Area (Ac)	Pervious Area (Ac) for C=0.3	Impervious Area (Ac) for C=0.9	C				I ₁₀ (in/hr)	I ₂₅ (in/hr)	I ₅₀ (in/hr)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)
SD-1A	1.4	0.55	0.85	0.66	0.93	2.02	10.00	7.40	10.25	11.51	6.88	9.54	10.71
SD-1B	0.11	0.02	0.09	0.77	0.08	0.25	10.00	7.40	10.25	11.51	0.63	0.87	0.97
SD-2A	0.43	0.17	0.26	0.67	0.29	1.08	10.00	7.40	10.25	11.51	2.12	2.93	3.29
SD-2B	0.67	0.31	0.36	0.62	0.41	2.42	10.00	7.40	10.25	11.51	3.06	4.25	4.77
EX-1	0.51	0.63	-0.12	0.16	0.08	0.00	10.00	7.40	10.25	11.51	0.60	0.83	0.93
EX-2	0.02	0.02	0.00	0.30	0.01	0.00	10.00	7.40	10.25	11.51	0.04	0.06	0.07
EX-3	0.09	0.09	0.00	0.30	0.03	0.00	10.00	7.40	10.25	11.51	0.20	0.28	0.31

25-YR Proposed Conditions

RUNOFF COLLECTION POINT (Inlet or Manhole)	Distance Between Collection Points	INCREMENTAL DRAINAGE AREA			Accumulated "CA"	Time at Upstream Station (minutes)	Design Storm Frequency (yrs.)	Intensity "I" (inches/hr.)	Storm Water Runoff "Q" (c.f.s.)	Slope of Hydraulic Gradient "S" (ft./ft.)	Number of Conduits	Selected Storm Sewer Height (in)	Velocity In Sewer Between Collection Points (f.p.s.)	Head Loss Coeff. K _j	Velocity Head Loss of Upstream Station K _j (V ² /2g) (feet)	Flow Time in Sewer (minutes)	Distance V x t (minutes)	Hydraulic Grade	
		Drainage Area "A" (Acres)	Runoff Coeff. "C"	Incremental "CA"															
INLET 'SD-1A'	26.07	1.40	0.66	0.93	0.93	10.00	25	9.01	8.39	0.0064	1	18	4.75	1.25	0.44	0.09	166.94	167.38	167.54
MH-SD-1A	238.16	0.00	0.66	0.00	0.93	10.09	25	8.99	8.36	0.0063	1	18	4.73	0.50	0.17	0.84	165.26	165.43	166.94
MH-SD-1B (To Detention Pond)	22.99	0.00	0.77	0.00	1.02	10.93	25	8.73	8.86	0.0071	1	18	5.01	0.50	0.22	0.08	164.88	165.10	165.26
Inlet SD-1B (To MH-SD-1B)	26.07	0.11	0.77	0.08	0.08	10.00	25	9.01	0.76	0.0001	1	18	0.43	1.25	0.00	1.01	166.94	166.94	166.95
MH-SD-2B	27.39	0.67	0.62	0.41	0.41	10.00	25	9.01	3.73	0.0013	1	18	2.11	1.25	0.09	0.22	165.87	165.96	165.99
MH-SD-2A (To Detention)	71.03	0.00	0.67	0.00	0.41	10.22	25	8.95	3.71	0.0012	1	18	2.10	0.50	0.03	0.56	165.75	165.78	165.87

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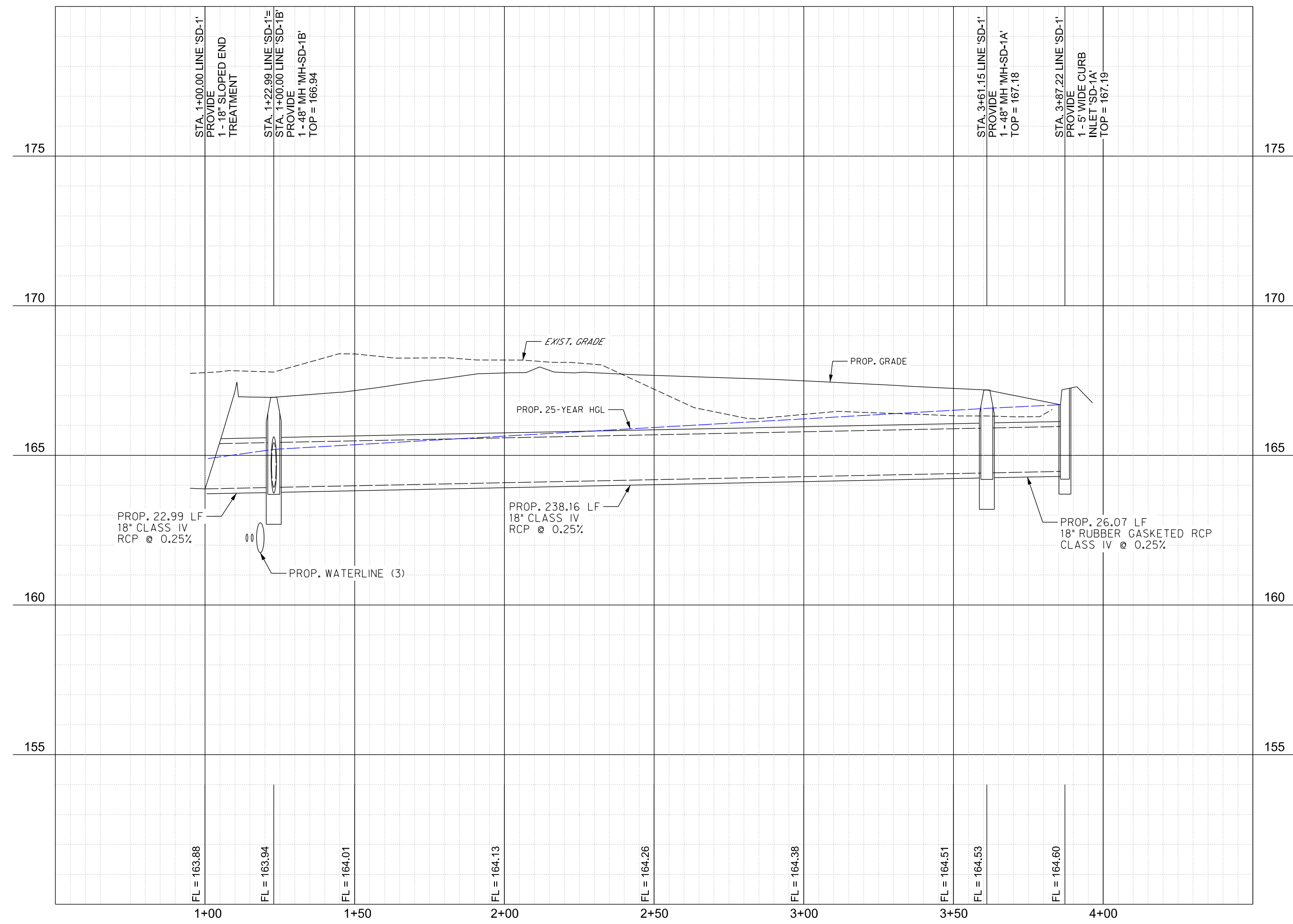


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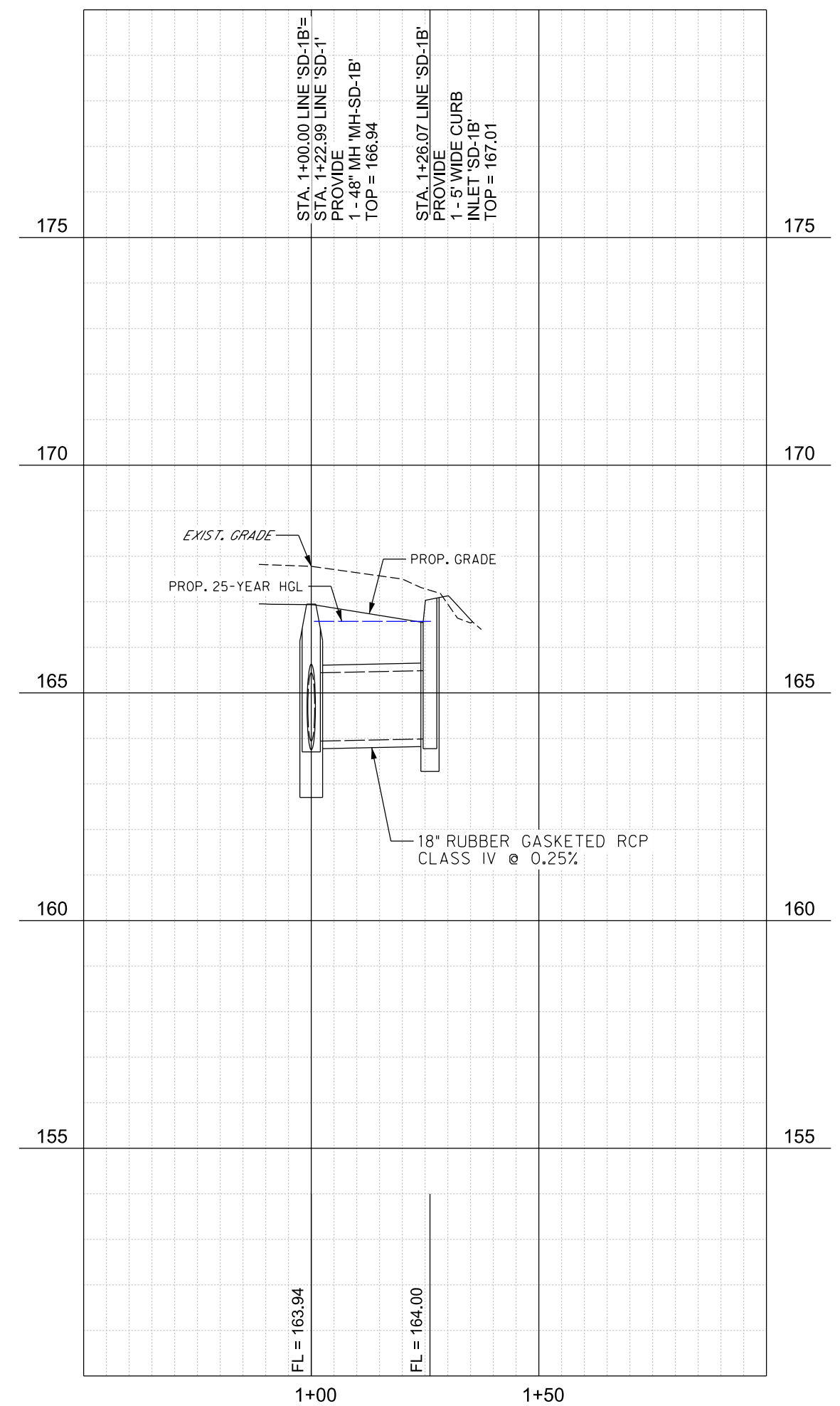


Sheet
C4.10

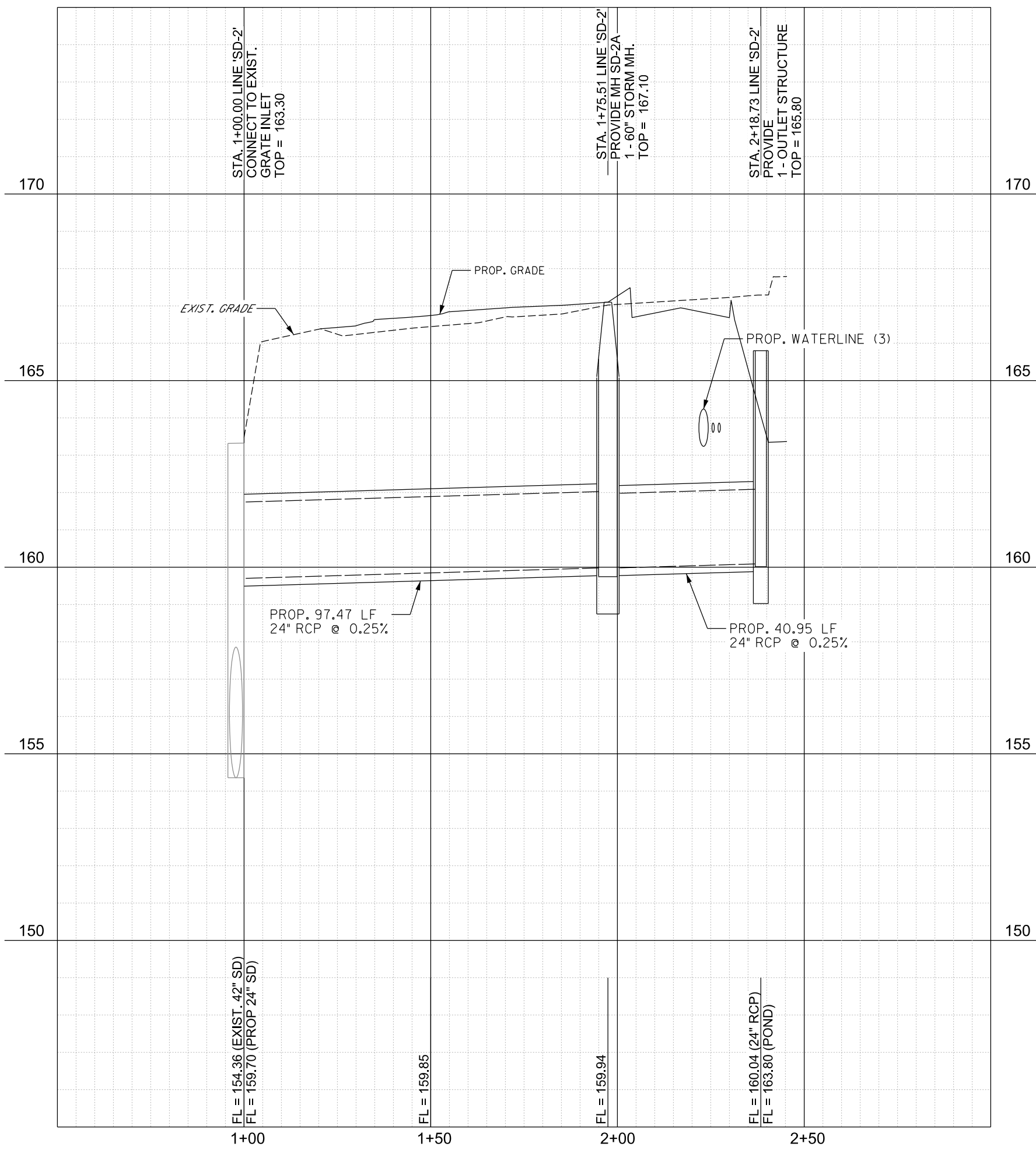
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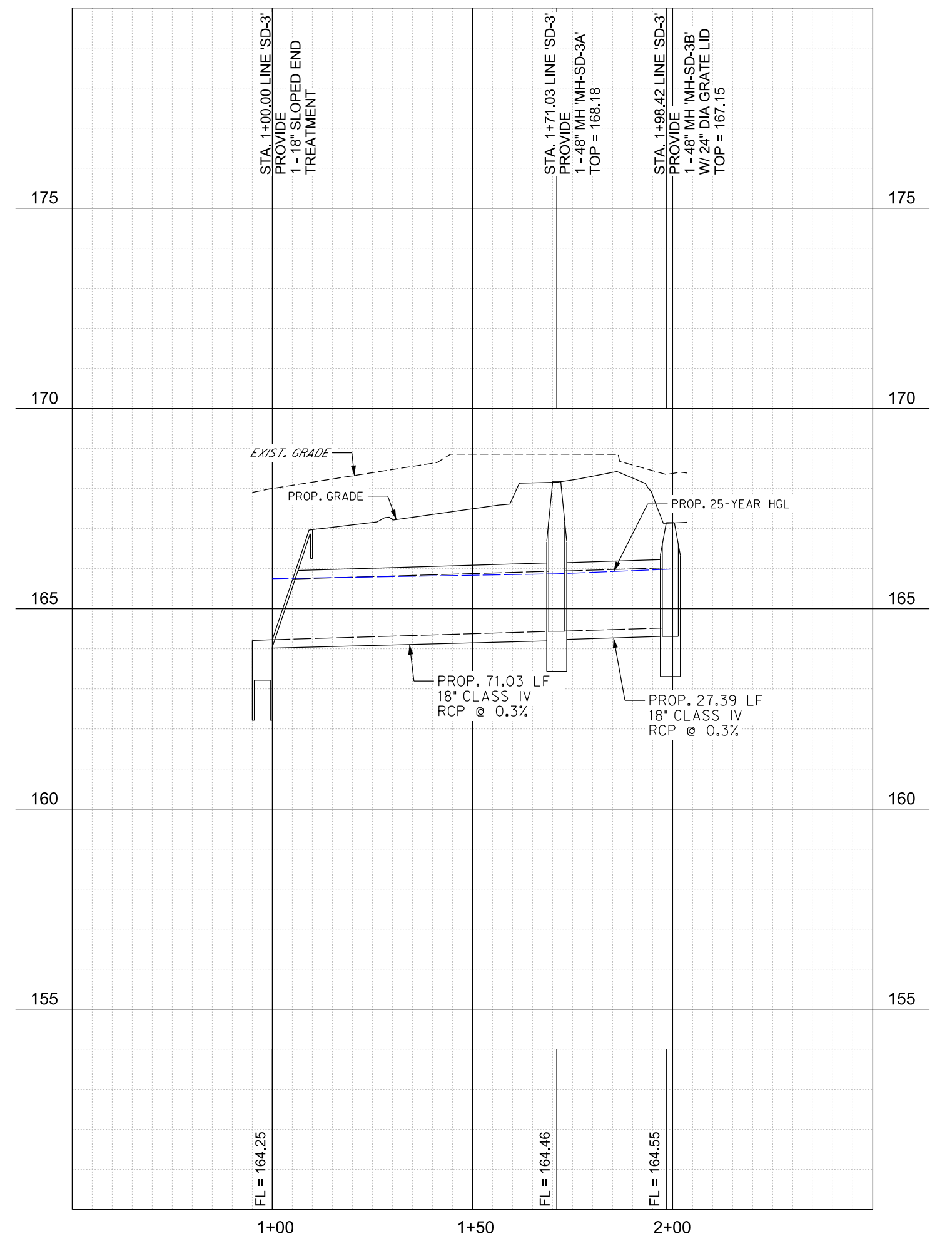
PROFILE LINE 'SD-1'
H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-1B'
H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-2'
H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-3'
H: 1"= 30' V: 1"= 3'

P.O. BOX 720428, McAllen, Tx 78504
T 956-661-0400 | goero.com

The Seal appearing on this document was authorized by Solvig A. Klassen, P.E. Number 147784 on August 2, 2023. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act. The Record Copy of this drawing is on file at the offices of SEFF Associates, Inc., 5000 N. Military Suite 100, McAllen, TX 78503. TPE FIRM #F-312



HIDALGO COUNTY EL PARAISO PROJECT HIDALGO COUNTY 1901 N. LOS EBANOS RD., ALTON, TX 78573

No.	Date	Description

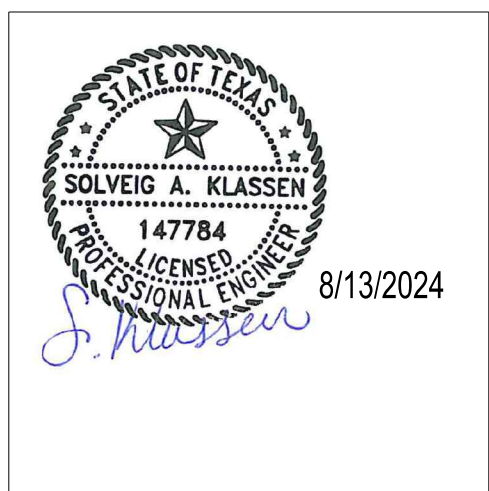
PROJECT NO.: 21087
 ISSUE DATE: 8/2/2023
 DRAWN BY: SK
 CHECKED BY: RG
 SHEET NAME:

DRAINAGE PROFILES

Sheet Number
C4.01

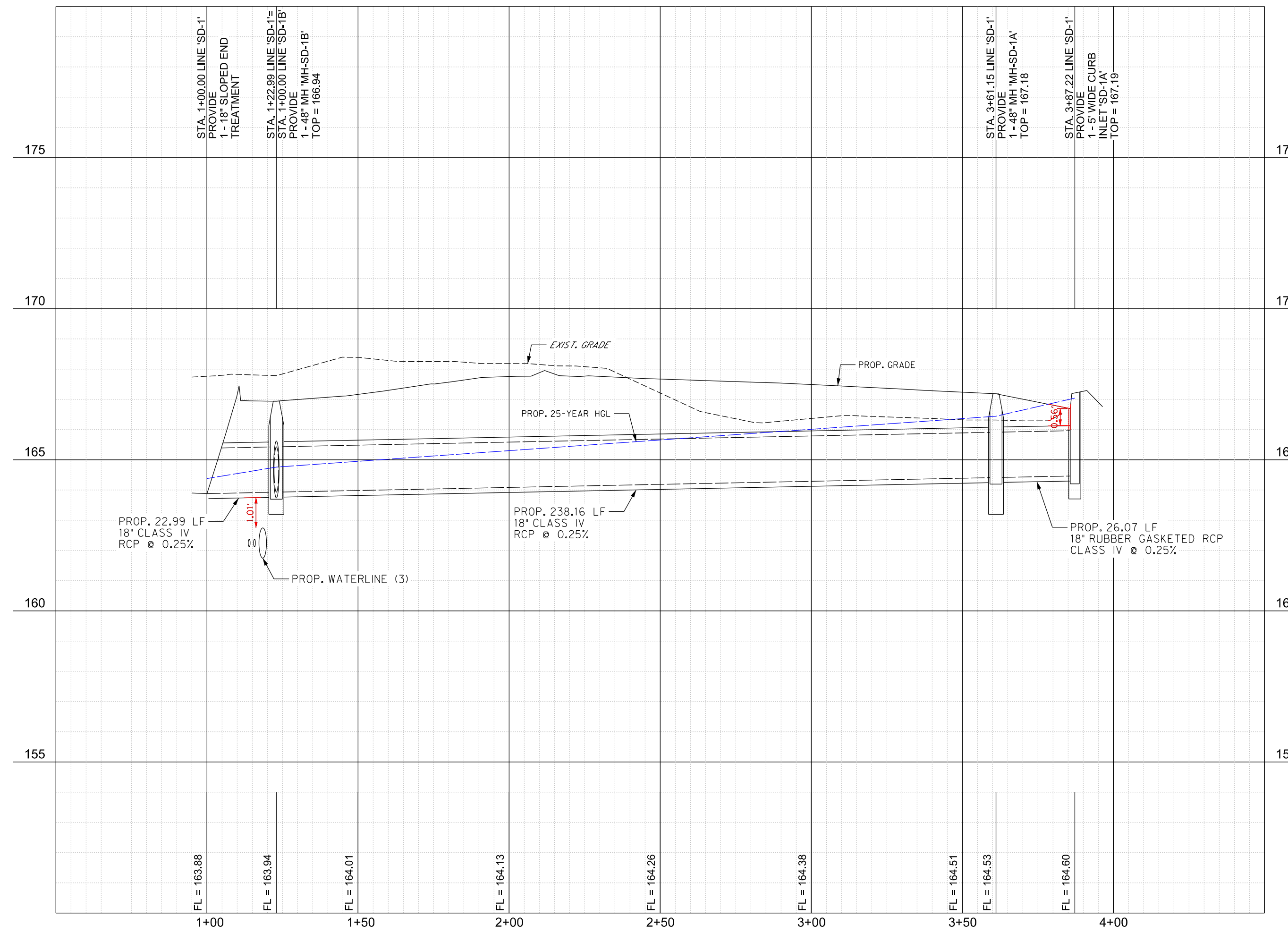
Project Status:
CONSTRUCTION DOCUMENTS

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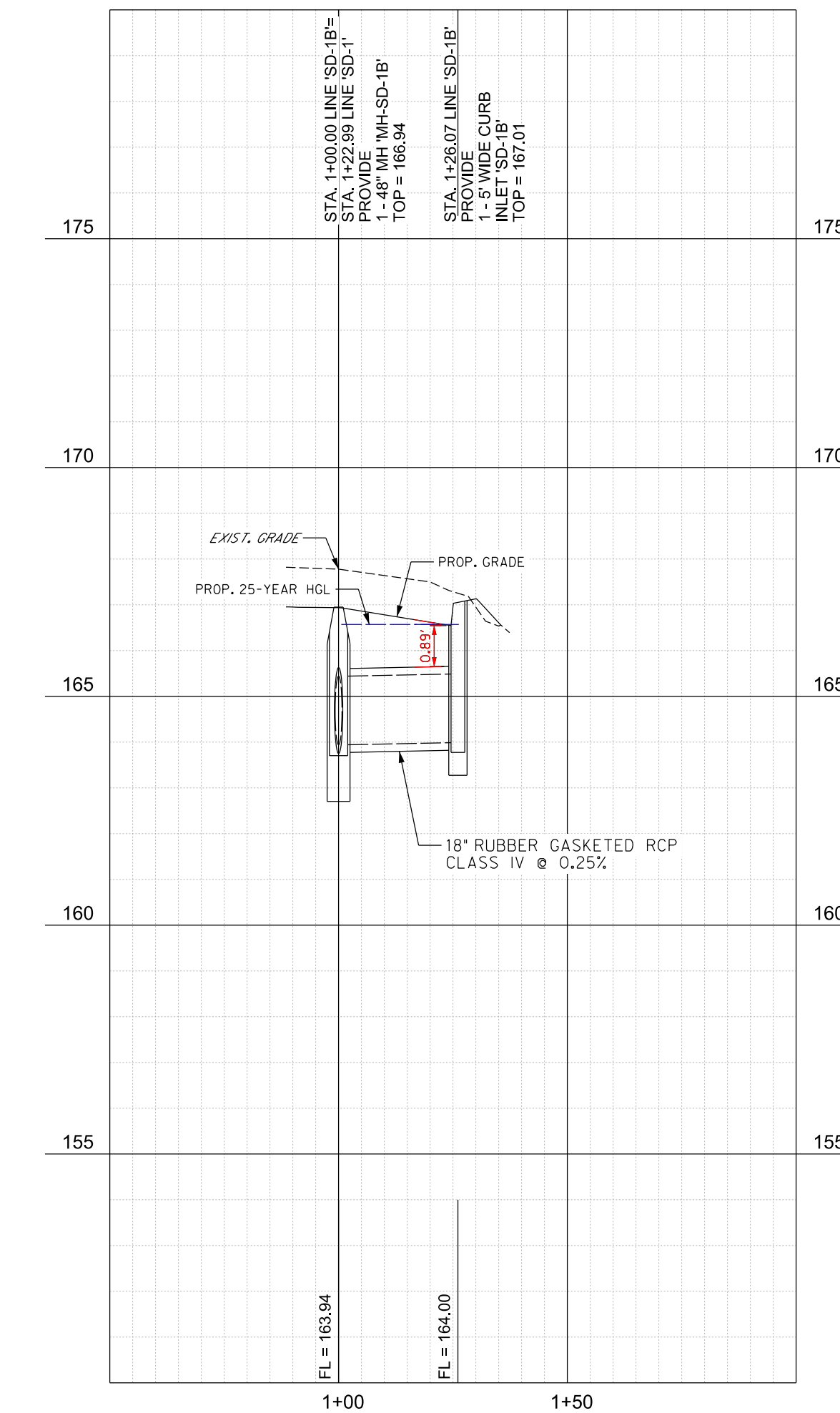


HIDALGO COUNTY EL PARAISO PROJECT

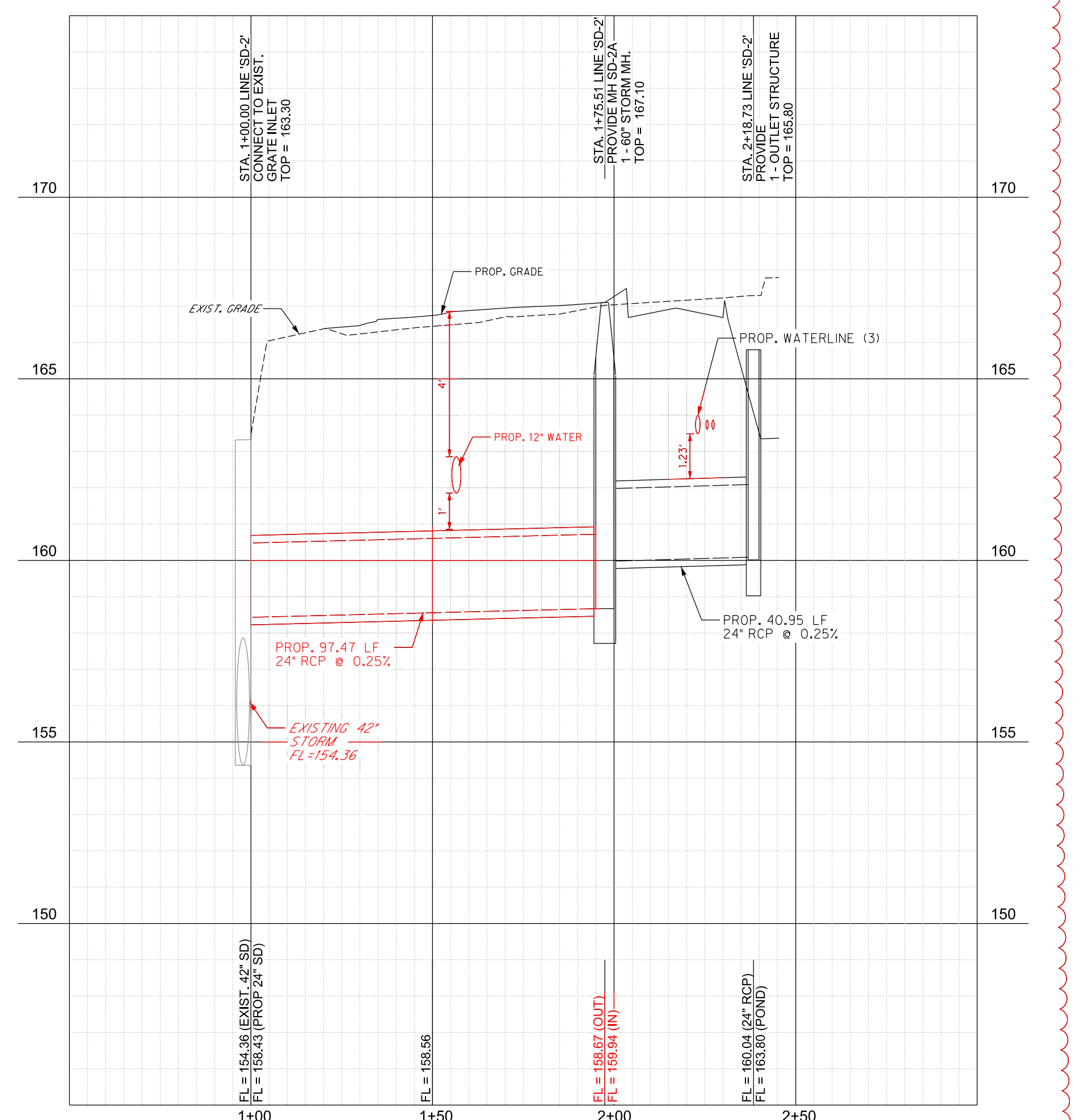
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573



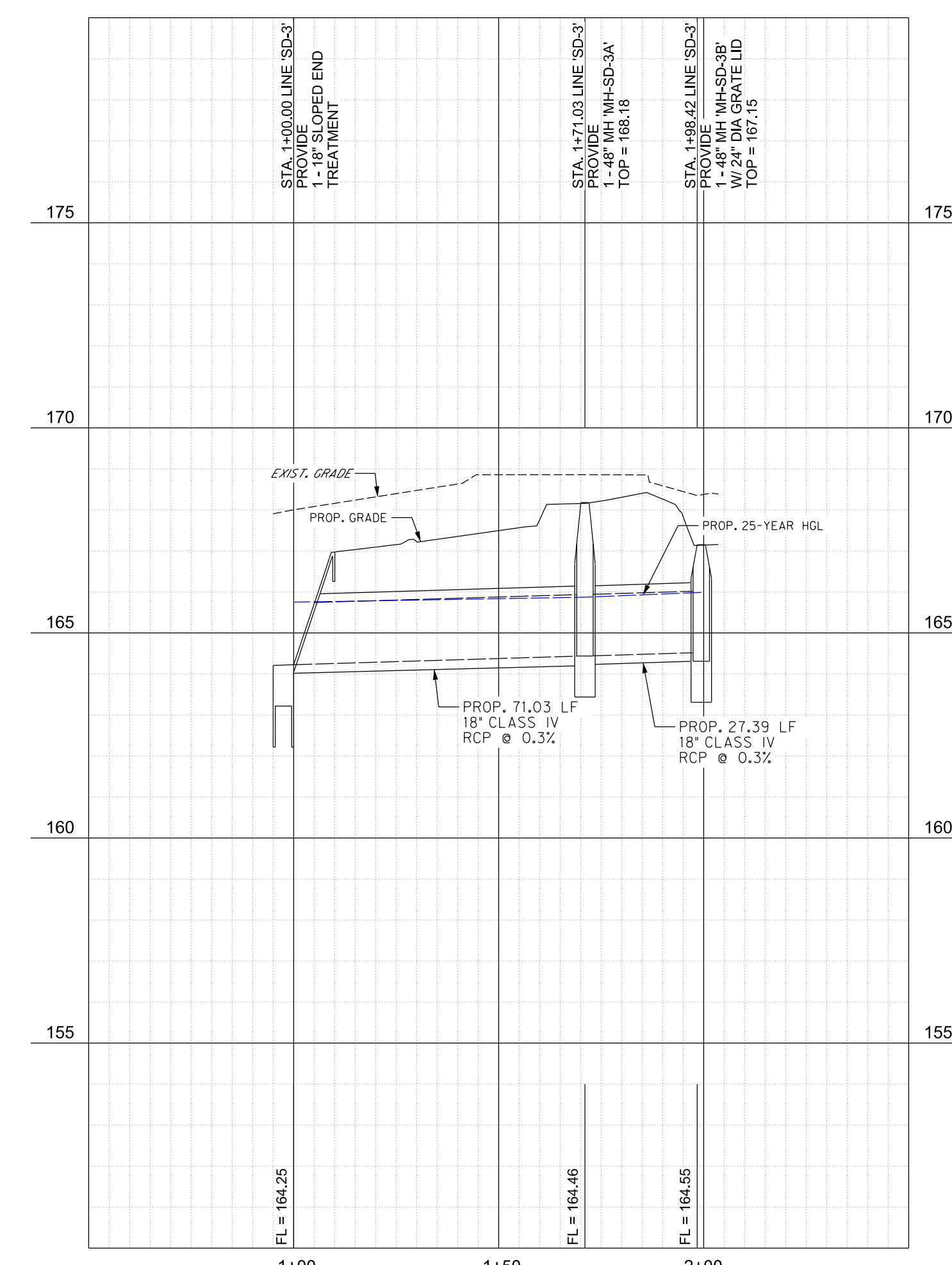
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H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-1B'
H: 1"= 30' V: 1"= 3'



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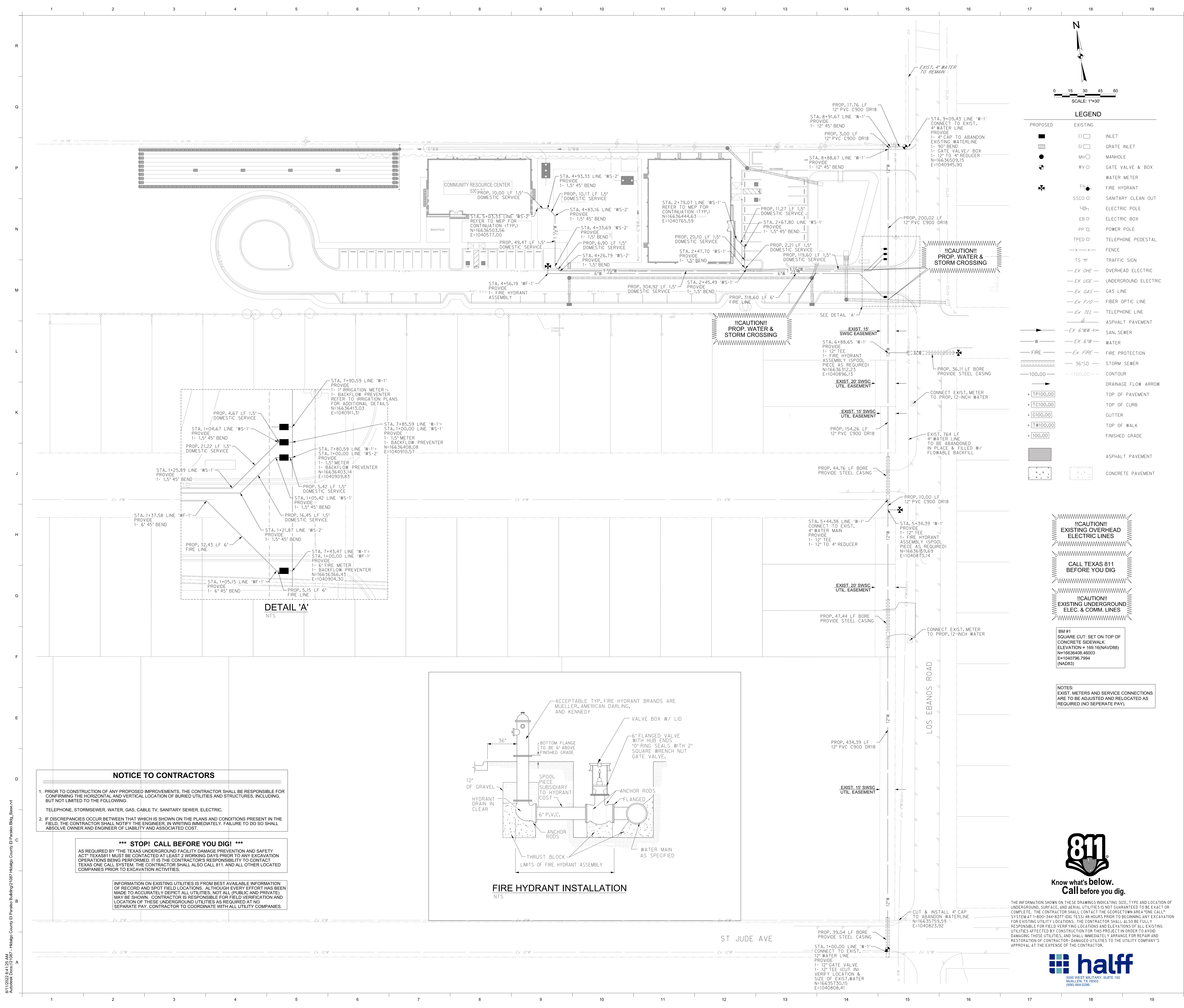


PROFILE LINE 'SD-3'
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8/11/2024 8:41:25 AM Autodesk Docs/21087 - Hidalgo County El Paraiso Building/21087 Hidalgo County El Paraiso Bldg_Base.rvt

Description	AS:001 CP:001
Date	3/14/2024 8/13/2024
No.	4 5
PROJECT NO.	21087
ISSUE DATE	8/13/2024
DRAWN BY	SK
CHECKED BY	RG
SHEET NAME	DRAINAGE PROFILES
Sheet Number	C4.01
Project Status:	CONSTRUCTION DOCUMENTS

Sheet
C5.01



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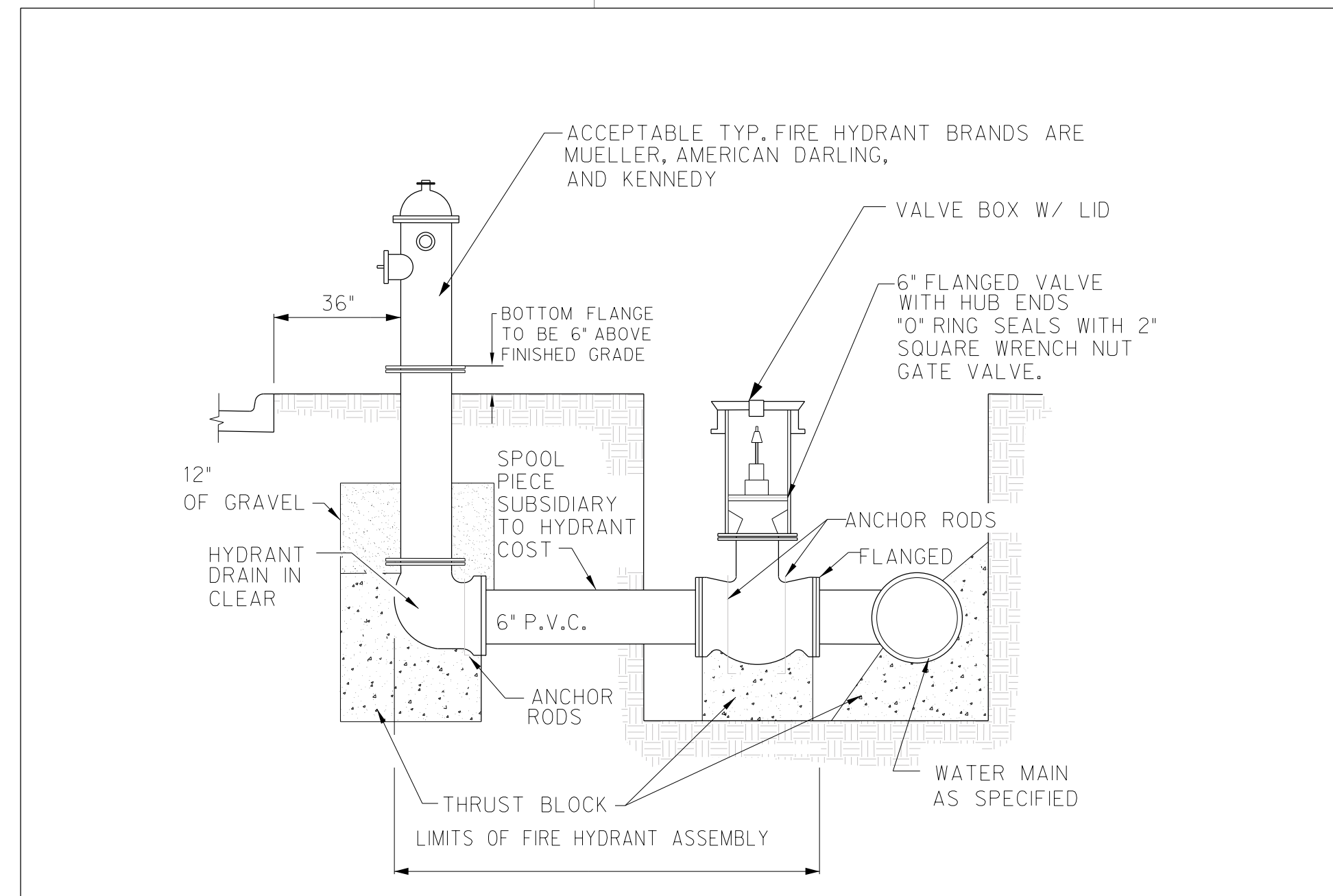
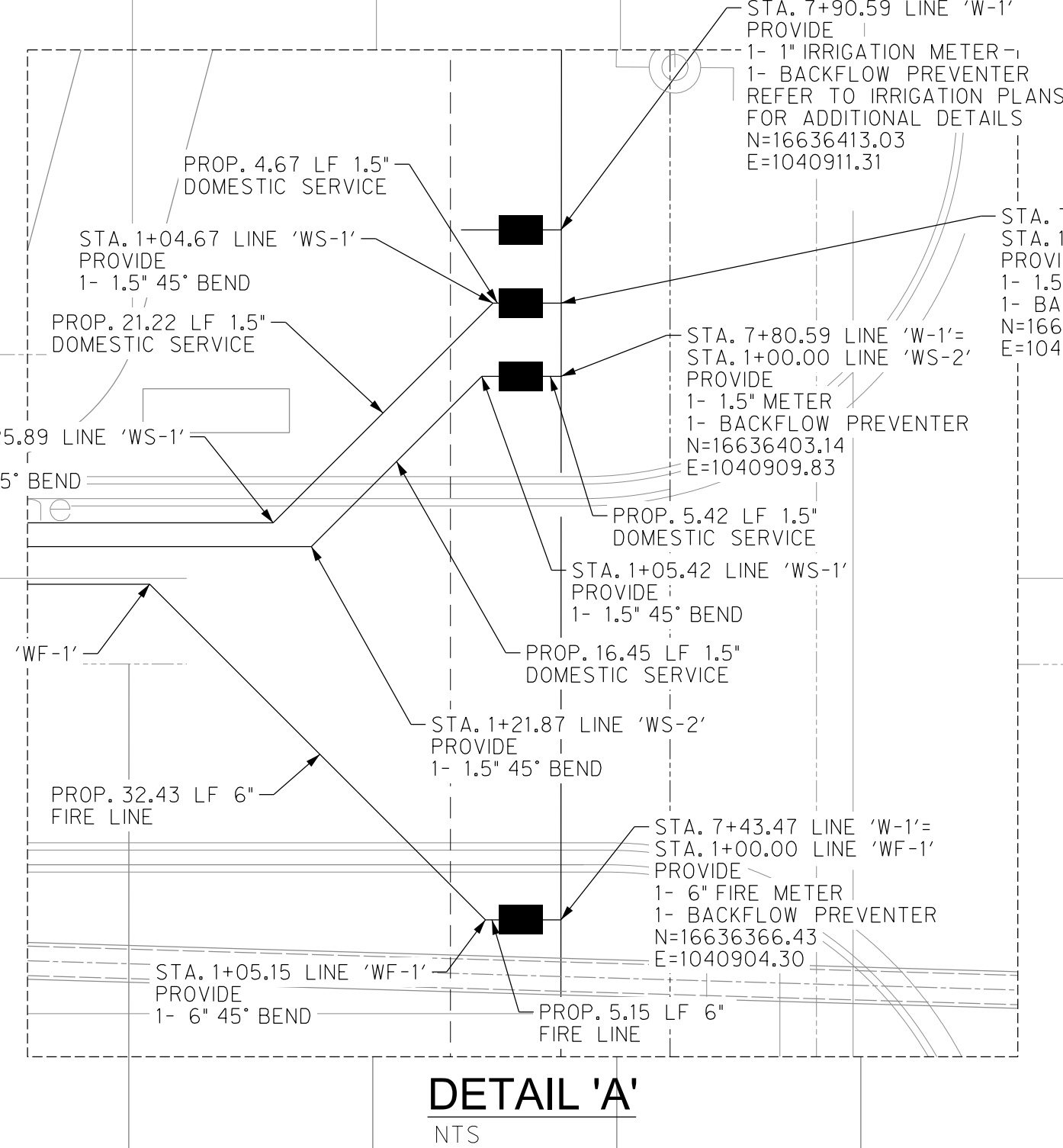
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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

LEGEND

PROPOSED	EXISTING	DESCRIPTION
□	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	GATE VALVE & BOX
○	○	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
○	○	ELECTRIC BOX
○	○	POWER POLE
○	○	TELEPHONE PEDESTAL
○	○	FENCE
○	○	TRAFFIC SIGN
○	○	OVERHEAD ELECTRIC
○	○	UNDERGROUND ELECTRIC
○	○	GAS LINE
○	○	FIBER OPTIC LINE
○	○	TELEPHONE LINE
○	○	ASPHALT PAVEMENT
○	○	SAN. SEWER
○	○	WATER
○	○	FIRE PROTECTION
○	○	STORM SEWER
○	○	CONTOUR
○	○	DRAINAGE FLOW ARROW
○	○	TOP OF PAVEMENT
○	○	TOP OF CURB
○	○	GUTTER
○	○	TOP OF WALK
○	○	FINISHED GRADE
○	○	ASPHALT PAVEMENT
○	○	CONCRETE PAVEMENT

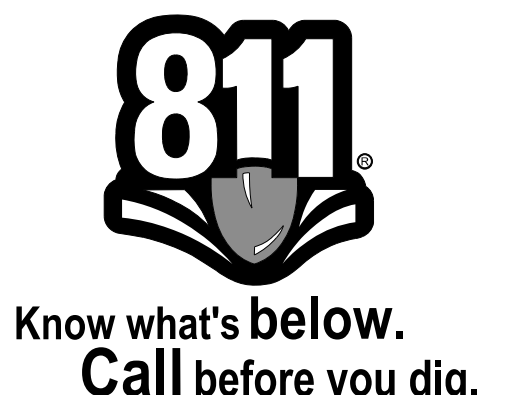


NOTICE TO CONTRACTORS

- PRIOR TO CONSTRUCTION OF ANY PROPOSED IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF BURIED UTILITIES AND STRUCTURES, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
TELEPHONE, STORMSEWER, WATER, GAS, CABLE TV, SANITARY SEWER, ELECTRIC.
- IF DISCREPANCIES OCCUR BETWEEN THAT WHICH IS SHOWN ON THE PLANS AND CONDITIONS PRESENT IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING IMMEDIATELY. FAILURE TO DO SO SHALL ABSOLVE OWNER AND ENGINEER OF LIABILITY AND ASSOCIATED COST.

***** STOP! CALL BEFORE YOU DIG! *****
AS REQUIRED BY "THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT" TEXAS 811 MUST BE CONTACTED AT LEAST 2 WORKING DAYS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE CALL SYSTEM. THE CONTRACTOR SHALL ALSO CALL 811, AND ALL OTHER LOCATED COMPANIES PRIOR TO EXCAVATION ACTIVITIES.

INFORMATION ON EXISTING UTILITIES IS FROM BEST AVAILABLE INFORMATION OF RECORD AND SPOT FIELD LOCATIONS. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO ACCURATELY DEPICT ALL UTILITIES, NOT ALL (PUBLIC AND PRIVATE) MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION AND LOCATION OF THESE UNDERGROUND UTILITIES AS REQUIRED AT NO SEPARATE PAY. CONTRACTOR TO COORDINATE WITH ALL UTILITY COMPANIES.

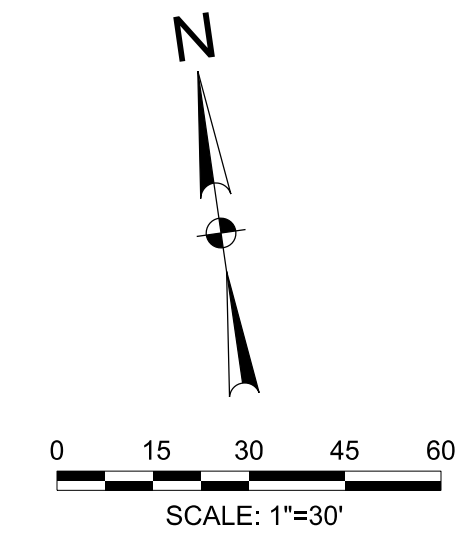


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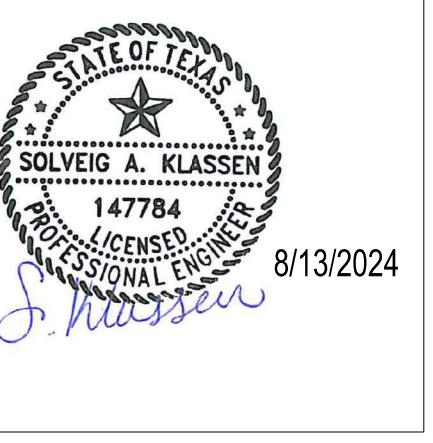


PROJECT NO.: 21087
ISSUE DATE: 8/2/2023
DRAWN BY: SK
CHECKED BY: RG
SHEET NAME: WATERLINE PLAN

Sheet Number: **C5.01**
Project Status: CONSTRUCTION DOCUMENTS



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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

LEGEND

PROPOSED	EXISTING	DESCRIPTION
□	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	GATE VALVE & BOX
○	○	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
○	○	ELECTRIC BOX
○	○	POWER POLE
○	○	TELEPHONE PEDESTAL
○	○	FENCE
○	○	TRAFFIC SIGN
○	○	OVERHEAD ELECTRIC
○	○	UNDERGROUND ELECTRIC
○	○	GAS LINE
○	○	FIBER OPTIC LINE
○	○	TELEPHONE LINE
○	○	ASPHALT PAVEMENT
○	○	SAN. SEWER
○	○	FIRE PROTECTION
○	○	STORM SEWER
○	○	CONTOUR
○	○	DRAINAGE FLOW ARROW
○	○	TOP OF PAVEMENT
○	○	TOP OF CURB
○	○	GUTTER
○	○	TOP OF WALK
○	○	FINISHED GRADE
○	○	ASPHALT PAVEMENT
○	○	CONCRETE PAVEMENT

!CAUTION!
EXISTING OVERHEAD ELECTRIC LINES
CALL TEXAS 811 BEFORE YOU DIG
!CAUTION!
EXISTING UNDERGROUND ELEC. & COMM. LINES

BM #1
SQUARE CUT: SET ON TOP OF CONCRETE SIDEWALK
ELEVATION = 169.16 (NAVD88)
N=16636408.46
E=10409879.79
(NAD83)
BM #2
COTTON PICKER SPINDLE ON EXIST. POWER POLE
ELEVATION = 170.91 (NAVD88)
N=16636602.27
E=10409879.79
(NAD83)
BM #3
TOP OF EXIST. STORM MH
ELEVATION = 166.02 (NAVD88)
N=16636340.43
E=10409871.13
(NAD83)

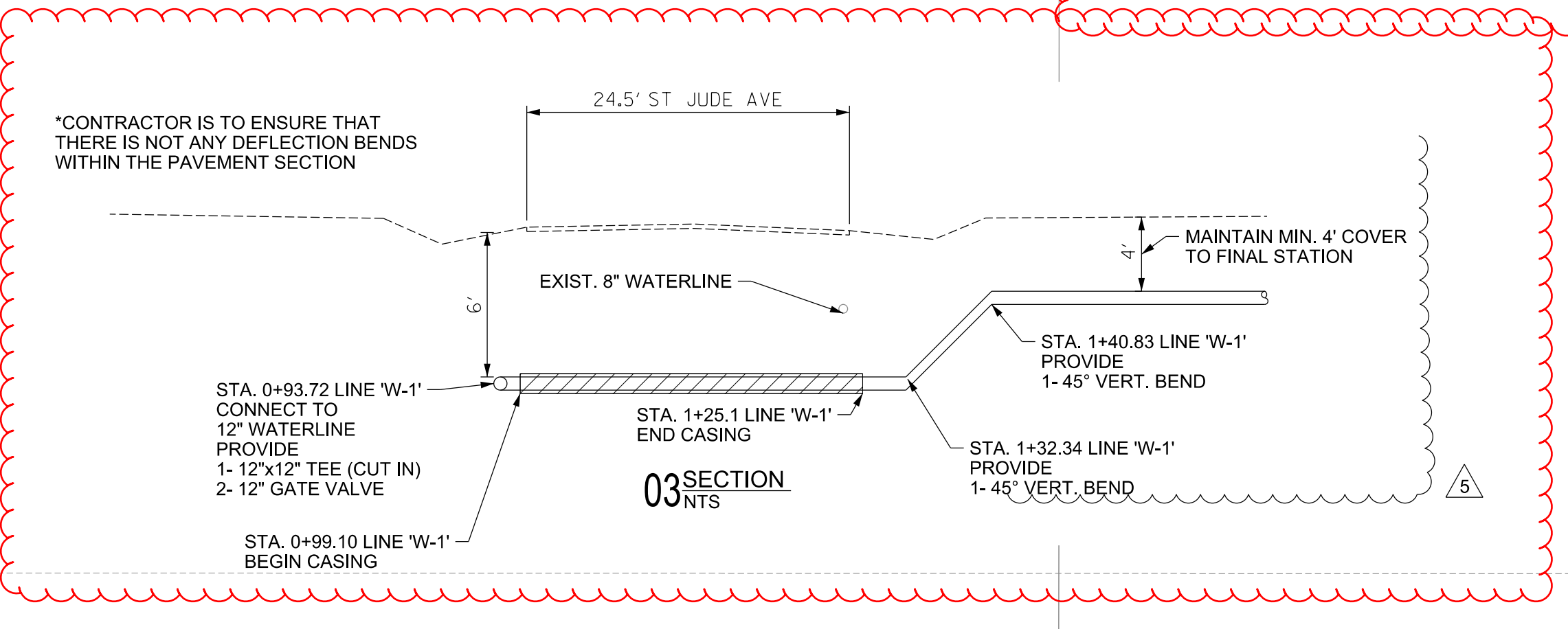
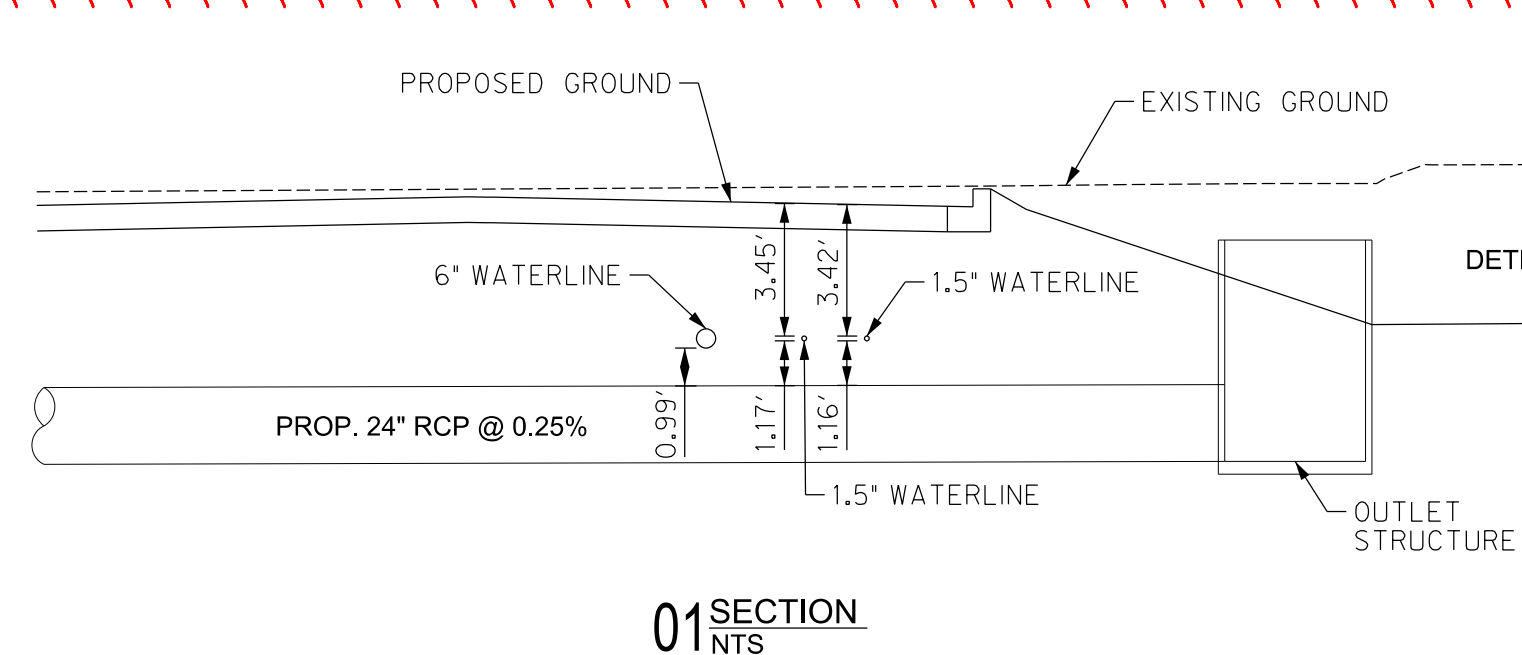
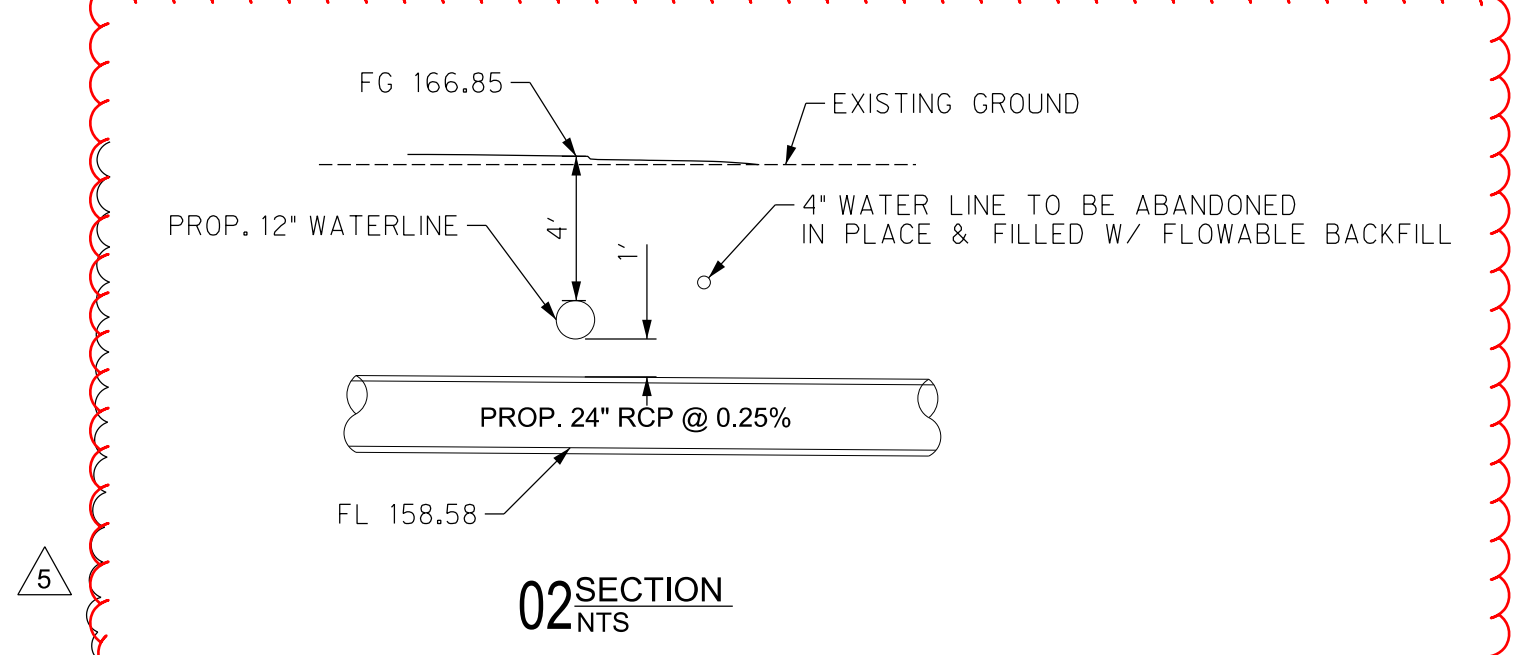
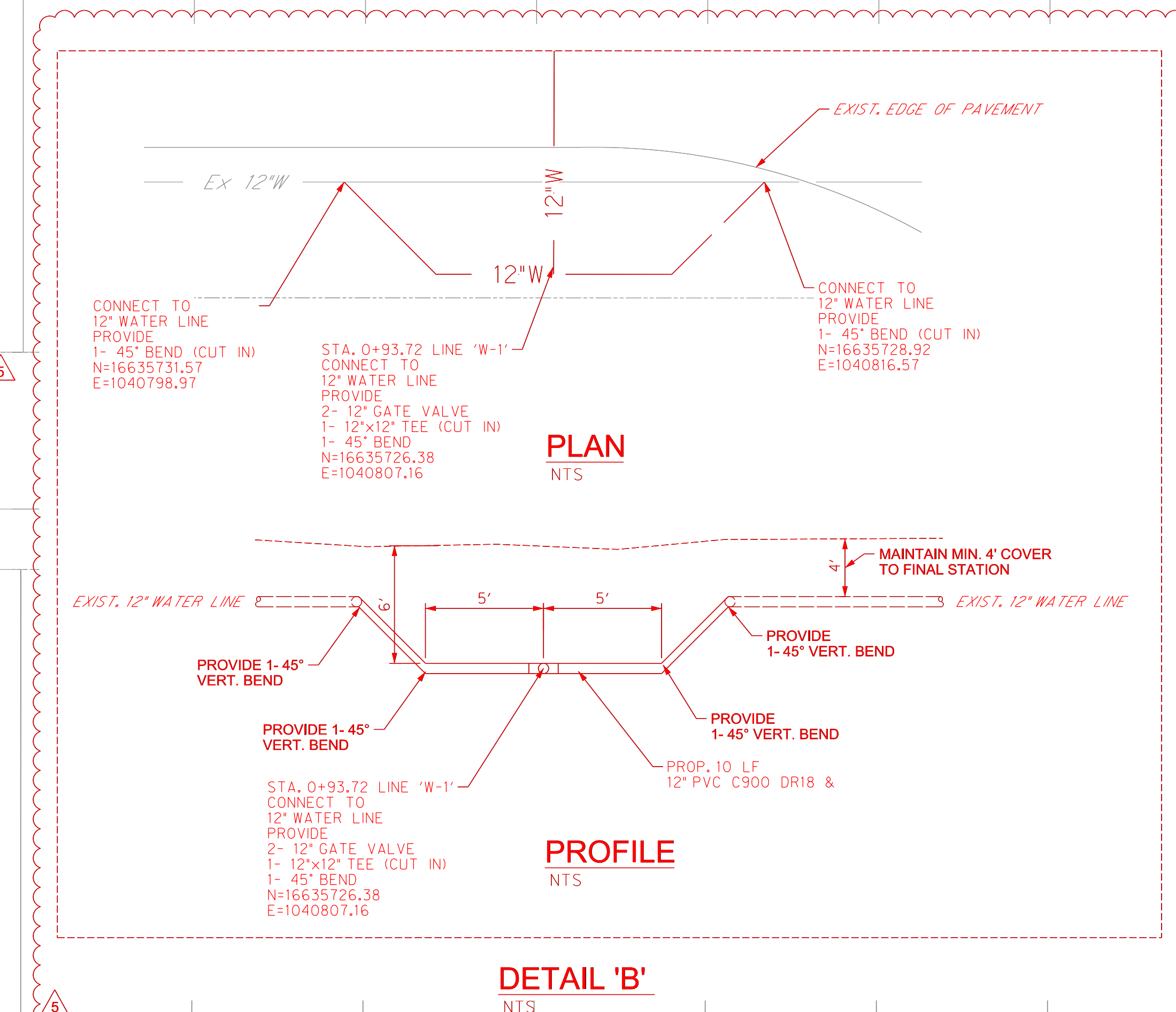
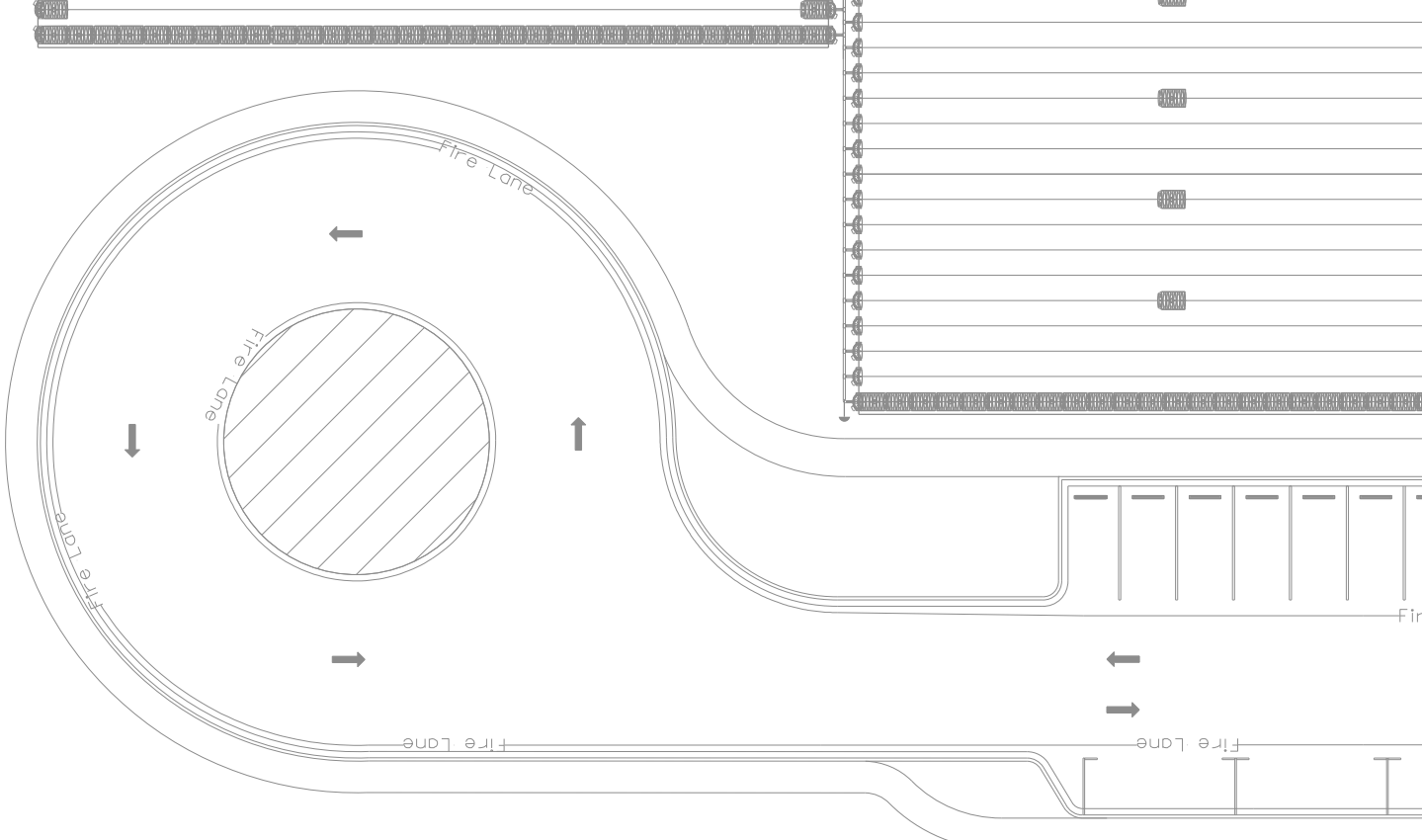
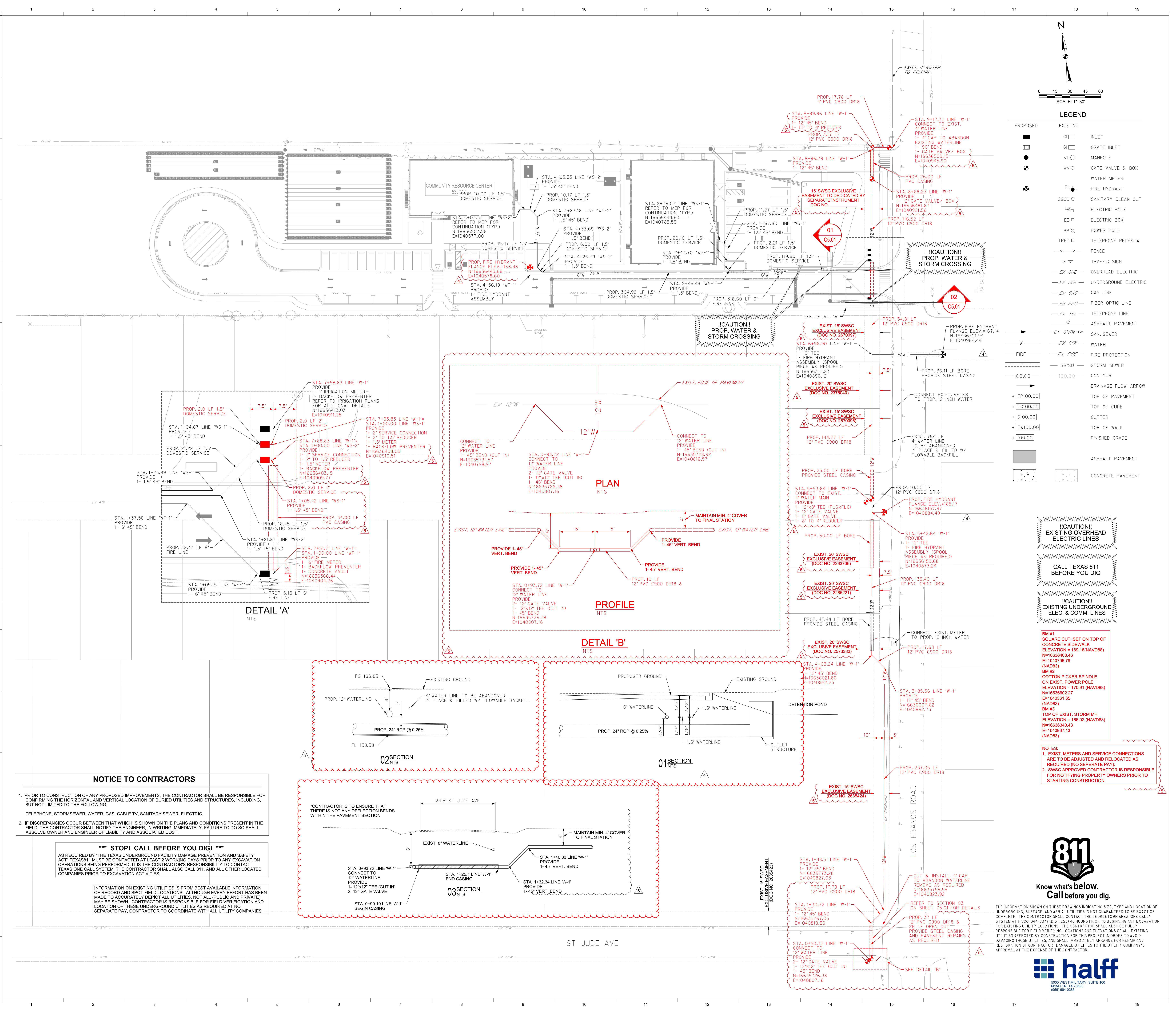
NOTES:
1. EXIST. METERS AND SERVICE CONNECTIONS ARE TO BE ADJUSTED AND RELOCATED AS REQUIRED (NO SEPARATE PAY).
2. SWSC APPROVED CONTRACTOR IS RESPONSIBLE FOR NOTIFYING PROPERTY OWNERS PRIOR TO STARTING CONSTRUCTION.



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PROJECT NO: 21087
ISSUE DATE: 8/13/2024
DRAWN BY: SK
CHECKED BY: HGS
SHEET NAME: WATERLINE PLAN
Sheet Number: C5.01
Project Status: CONSTRUCTION DOCUMENTS



NOTICE TO CONTRACTORS

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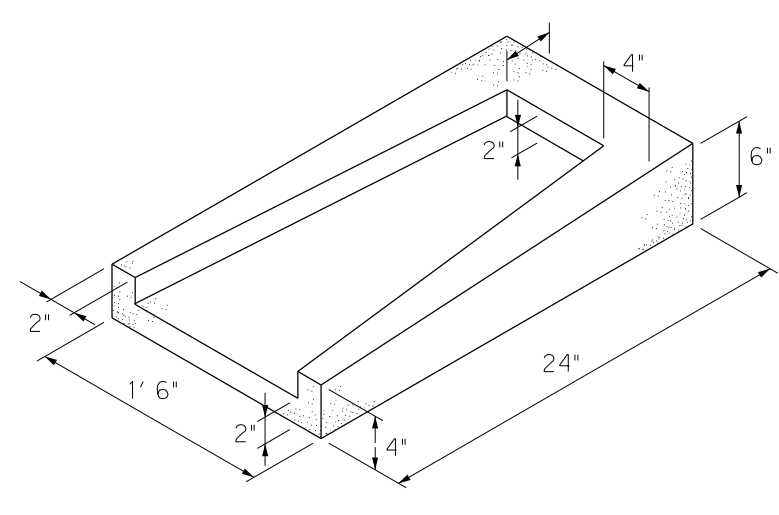
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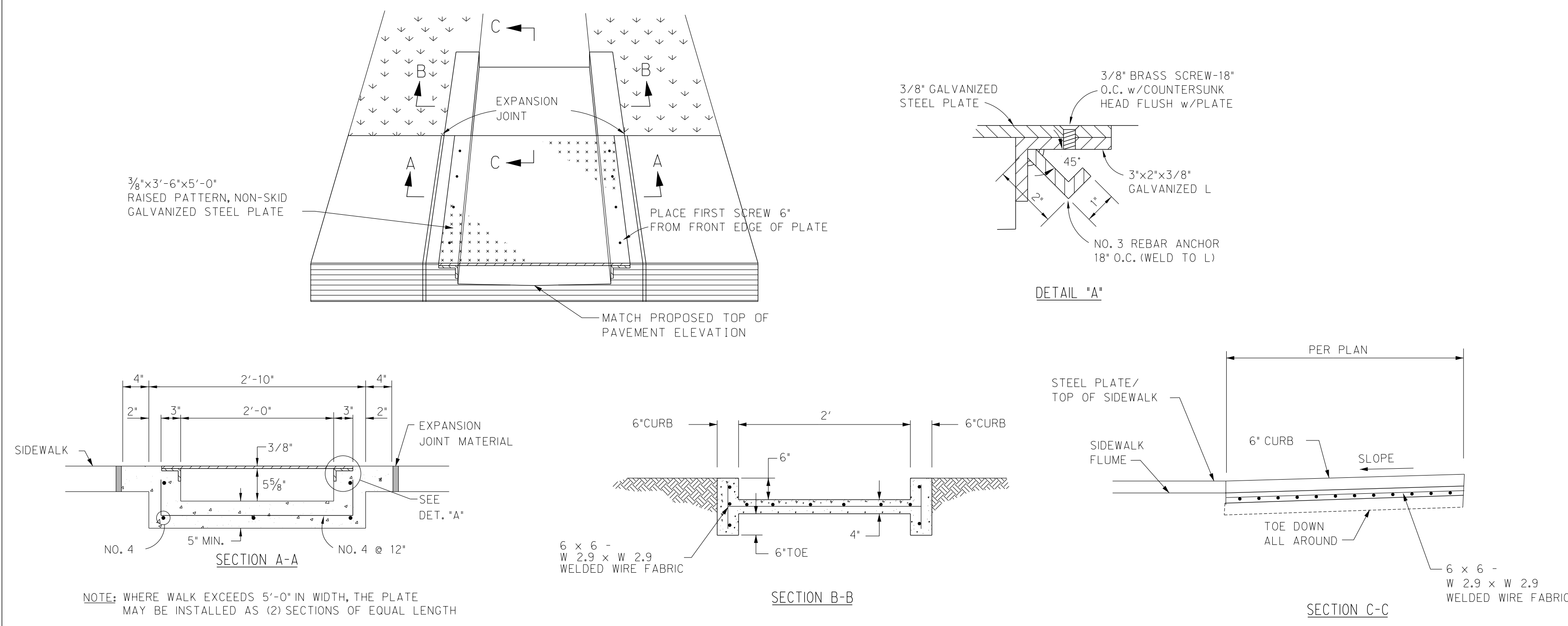
*CONTRACTOR IS TO ENSURE THAT THERE IS NOT ANY DEFLECTION BENDS WITHIN THE PAVEMENT SECTION

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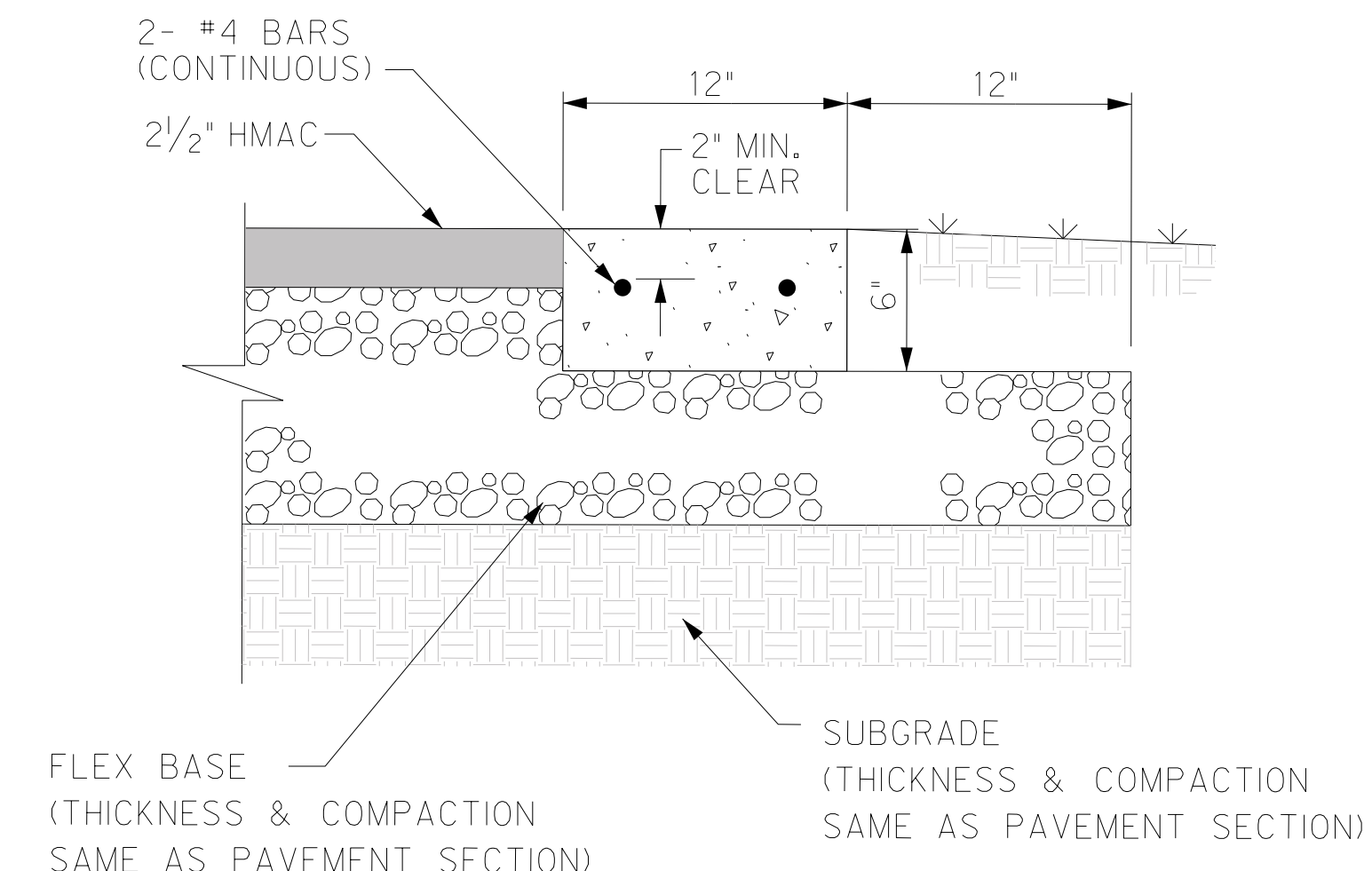
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C7.01



SPLASH BLOCK DETAIL
NTS

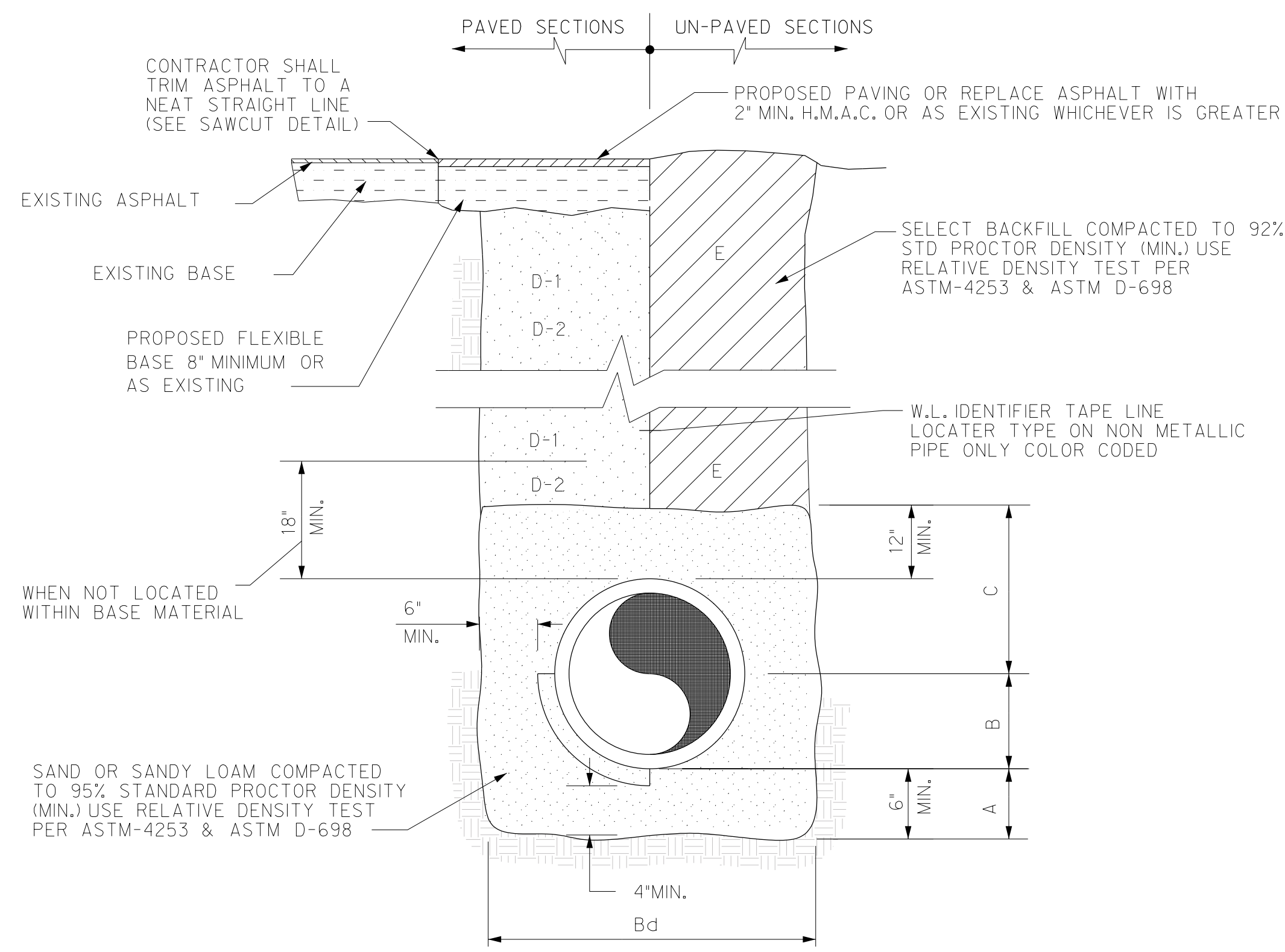


CONCRETE FLUME & SIDEWALK FLUME DETAIL
NTS



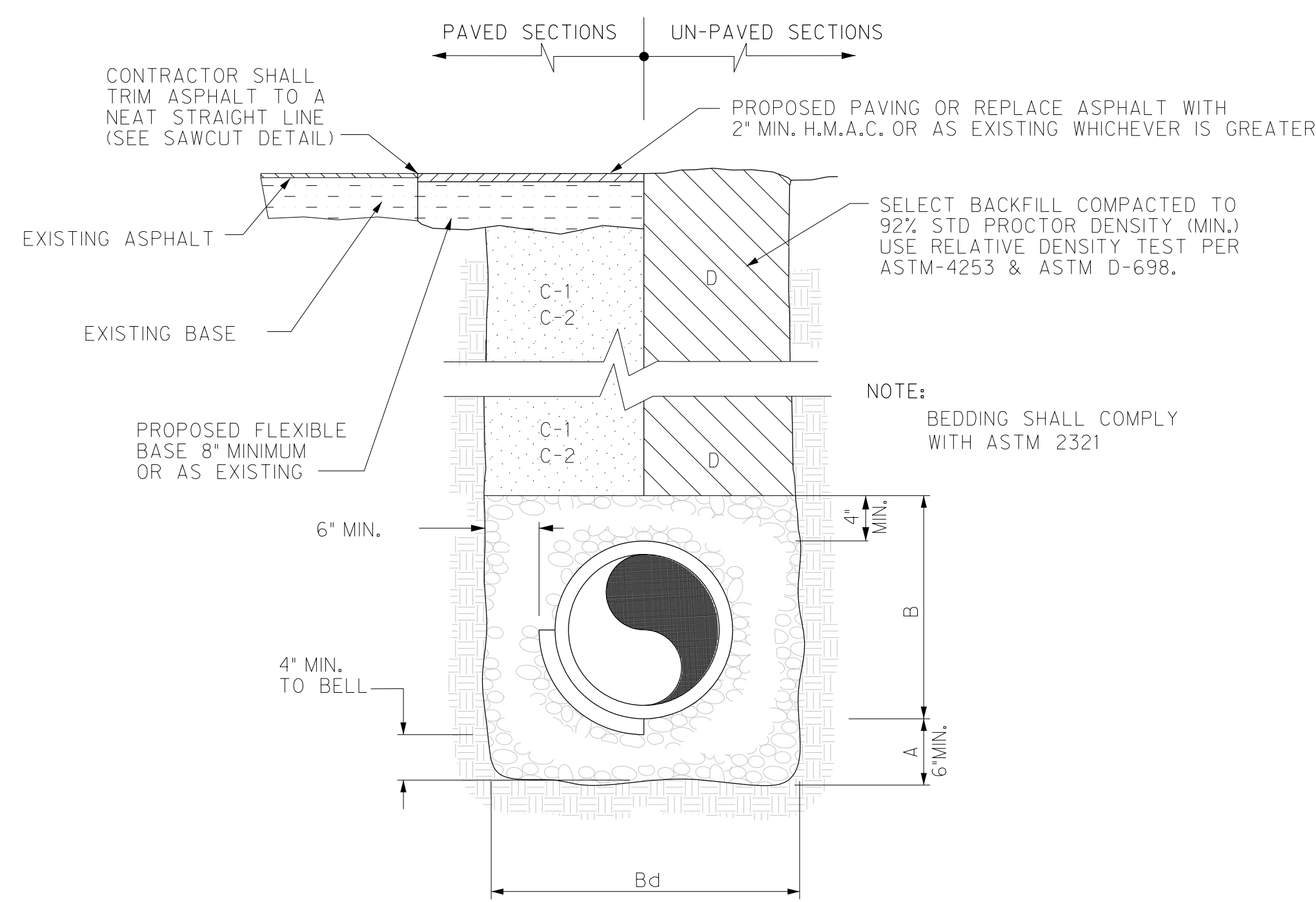
HEADER CURB
NTS

NOTE:
PLACE CONTRACTION JOINT EVERY 15 LF
PLACE EXPANSION JOINT EVERY 150 LF
AND AT ALL P.C. & P.T.



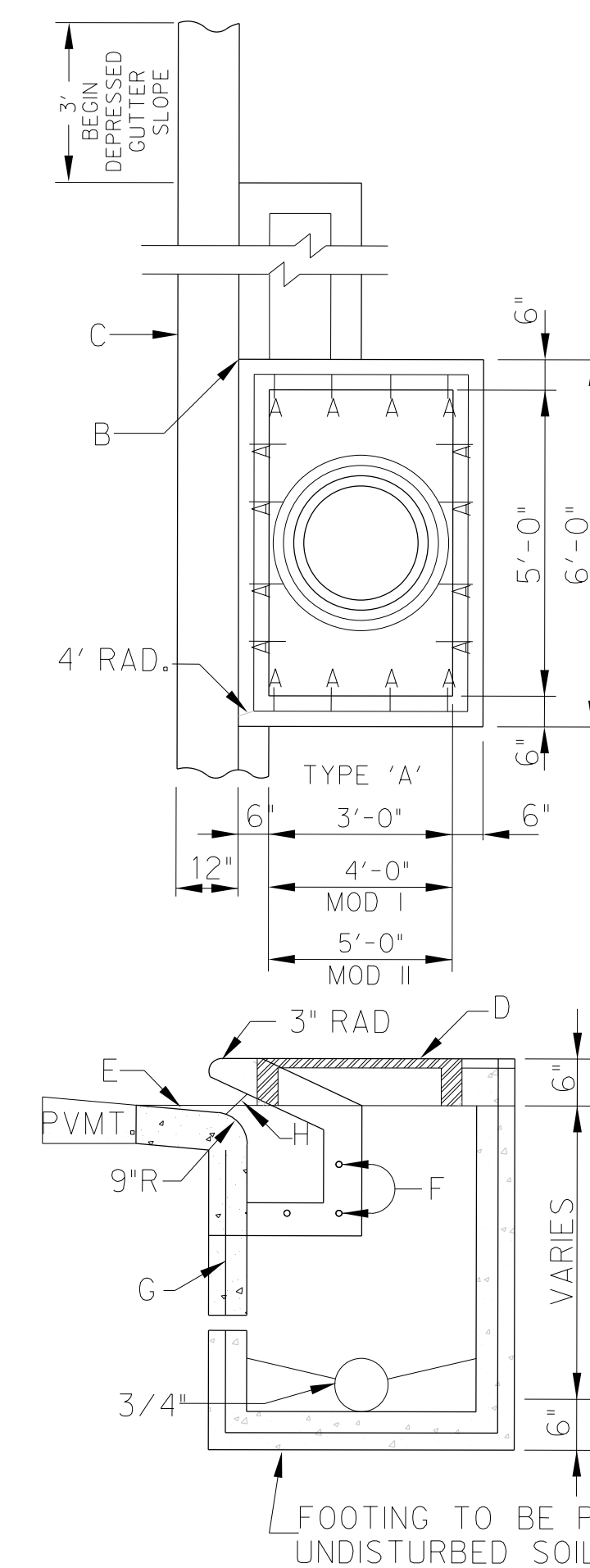
WATER LINE BEDDING
NTS

- A. SAND OR SANDY LOAM BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS= 6")
- B. SAND OR SANDY LOAM BACKFILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, HAND TAMPED) B_d TRENCH WIDTHS SHALL BE PIPE O.D. + 12" OR IN ACCORDANCE WITH ASTM 2321 FOR PVC PIPE.
- C. SAND OR SANDY LOAM BACKFILL PLACED FROM SPRING LINE OF PIPE TO 12" ABOVE TOP OF PIPE. (6" LIFTS, HAND TAMPED)
- D-1. CITY STREETS, PARKING AREA, DRIVEWAYS: SELECTED BACKFILL SHALL BE PLACED IN 8" LIFTS MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- D-2. (STATE MAINTAINED ROADWAY) COMPACTED SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED AS PER ASTM D-4253 AND ASTM D-698.
- E. SELECT EARTH BACKFILL COMPACTED TO 92% STD. PROCTOR DENSITY (12" LIFTS; FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO 95% STD. PROCTOR DENSITY (USE RELATIVE DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURE BACKFILL MATERIAL SHALL BE SAND, APPROVED SITE SOIL, OR OTHER APPROVED SUBSTITUTE.



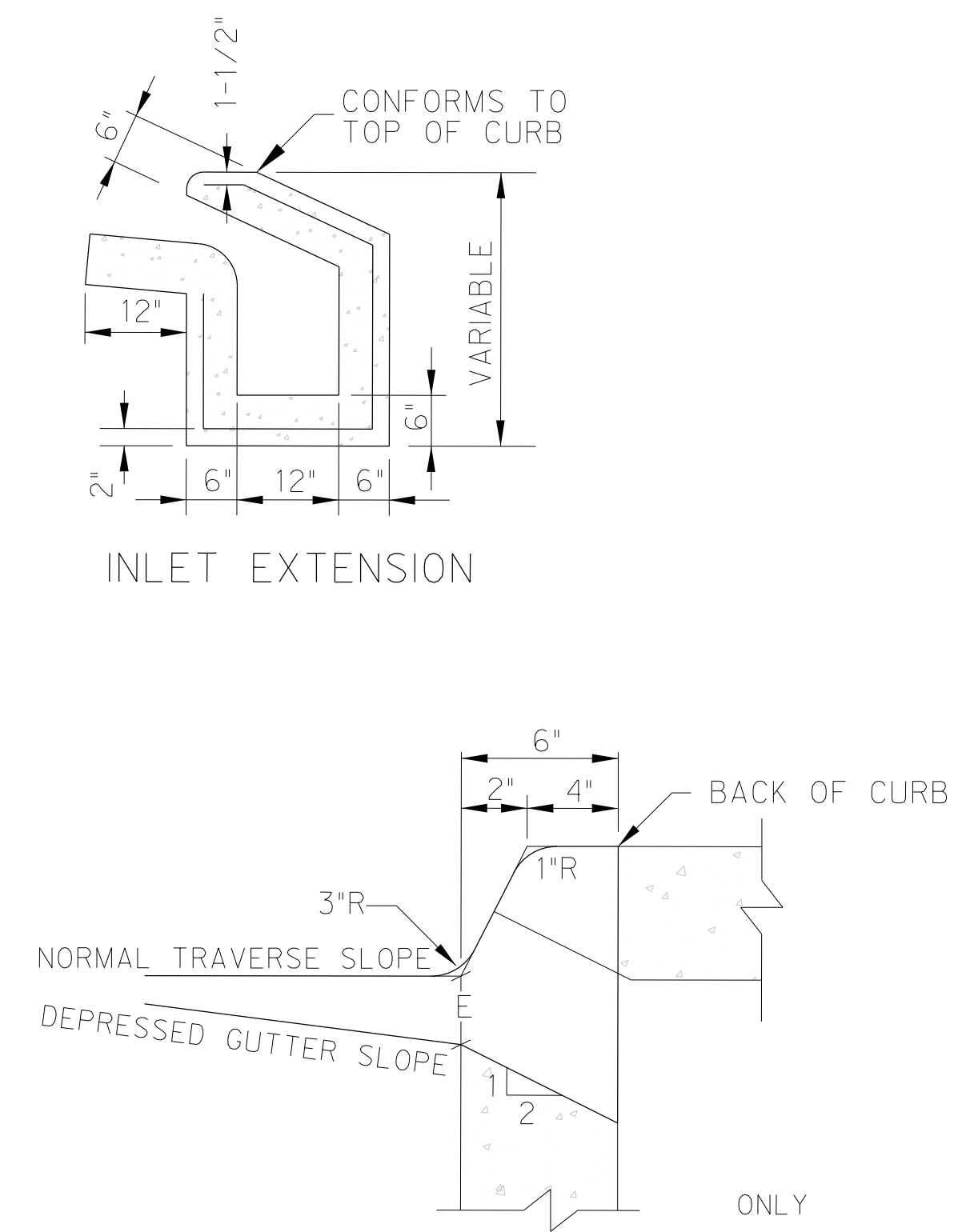
SANITARY SEWER BEDDING
NTS

- A. GRAVEL BEDDING PLACED BEFORE PIPE IS LAID (MIN. THICKNESS = 6"). PIT RUN GRAVEL 3/4" MAX. SIZE.
- B. GRAVEL PLACED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 4" ABOVE THE TOP OF PIPE. PIT RUN GRAVEL 3/4" MAX. SIZE.
- B_d. TRENCH WIDTHS SHALL BE EQUAL TO PIPE BELL O.D. + 12" OR IN ACCORDANCE WITH ASTM 2321.
- C-1. CITY STREETS, PARKING AREA, DRIVEWAYS: SELECTED BACKFILL SHALL BE PLACED IN 8" LIFTS MECHANICALLY COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- C-2. STATE MAINTAINED ROADWAYS: SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT, COMPACTED AS PER ASTM D-4253 AND ASTM D-698.
- D. SELECTED EARTH BACKFILL MECHANICALLY COMPACTED TO 92% STD. PROCTOR DENSITY (12" LIFTS; FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO 95% STD. PROCTOR DENSITY (USE RELATIVE DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 6". STRUCTURAL BACKFILL MATERIAL SHALL BE AS APPROVED BY THE ENGINEER.



CURB INLET
NTS

- CONSTRUCTION NOTES**
- A. NO. 4 VERTICAL REIN. HOOK 15" OR 6" AS REQUIRED AT TOP.
 - B. 6" x 6" CONCRETE SUPPORT USED WHEN EXTENSION BOX CALLED FOR.
 - C. REGULAR CURB & GUTTER SECTION.
 - D. C.I. MANHOLE RING & COVER SHALL BE ALAMO 862-22 OR EQUAL.
 - E. DEPRESS 4" BELOW NORMAL GUTTER.
 - F. DOWEL BARS
 - G. ALL REIN. NO. 4 BARS 12" O.C. EACH WAY.
 - H. 7" CLEAR OPENINGS



THROAT DETAIL

- GENERAL NOTES**
1. SLOPE BOTTOM OF INLET 1/2" PER. FT. TOWARD INLET.
 2. EXTENSION TO INLET TO BE MADE IN INCREMENTS OF 3'-0" OR 6'-0"
 3. INLET EXTENSION MUST BE APPROVED BY CITY ENGINEER PRIOR TO CONSTRUCTION.
 4. TRANSITION NORMAL GUTTER TO INLET FLOW SLOPE APPROX. 3'
 5. INLET TOP SHALL BE A PRE-CAST SECTION EITHER PART OF PRE-CAST SYSTEM OR PRE-CAST ON THE SITE BY CONTRACTOR.

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HIDALGO COUNTY
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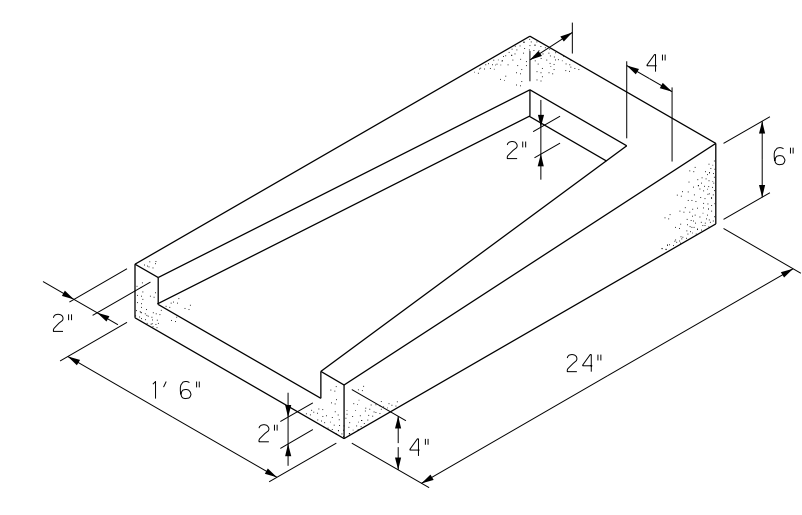
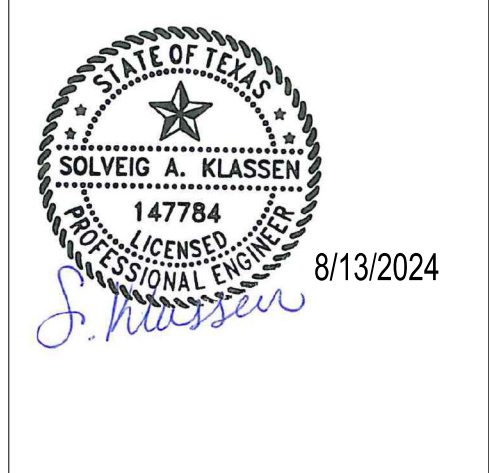
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PROJECT NO.: 21087
ISSUE DATE: 8/2/2023
DRAWN BY: SK
CHECKED BY: BG
SHEET NAME: MISCELLANEOUS DETAILS

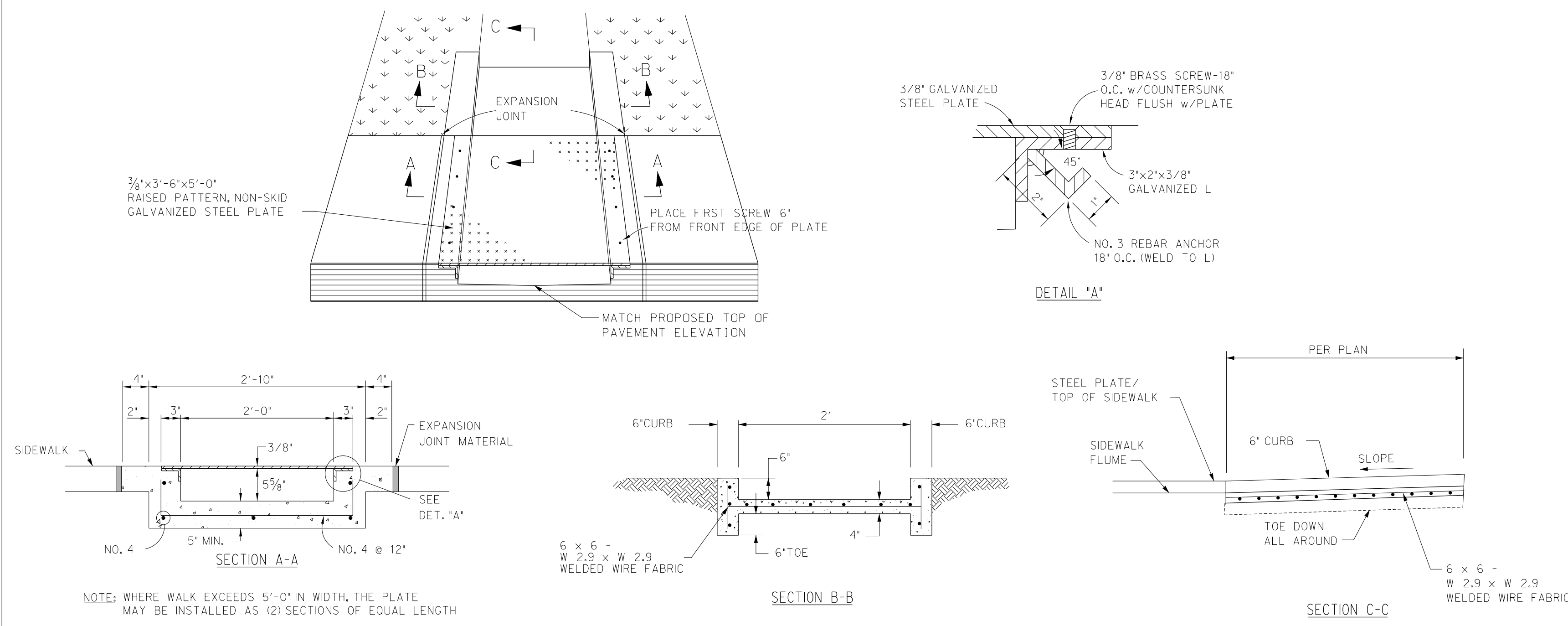
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Project Status:
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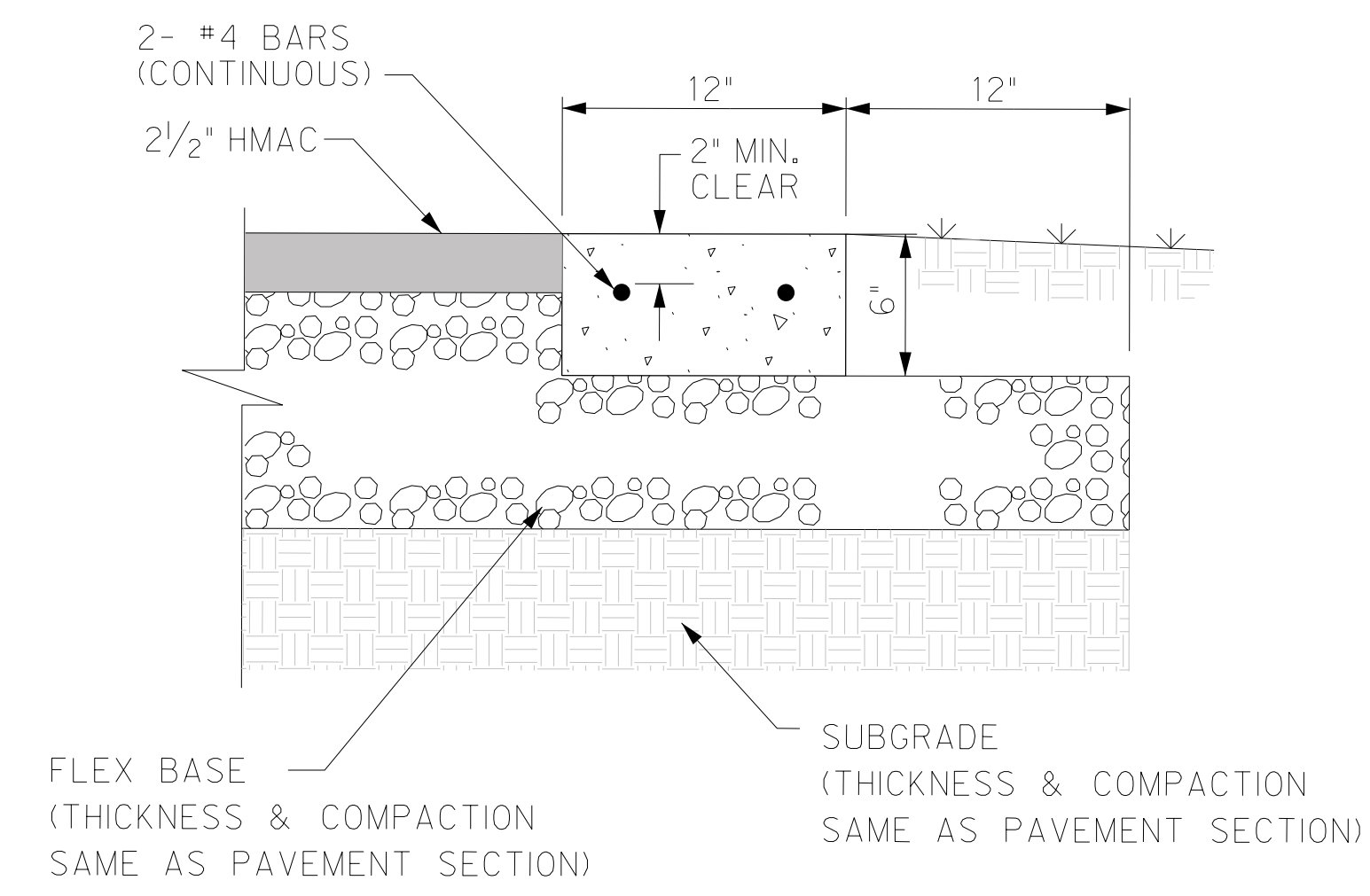
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SPLASH BLOCK DETAIL
NTS

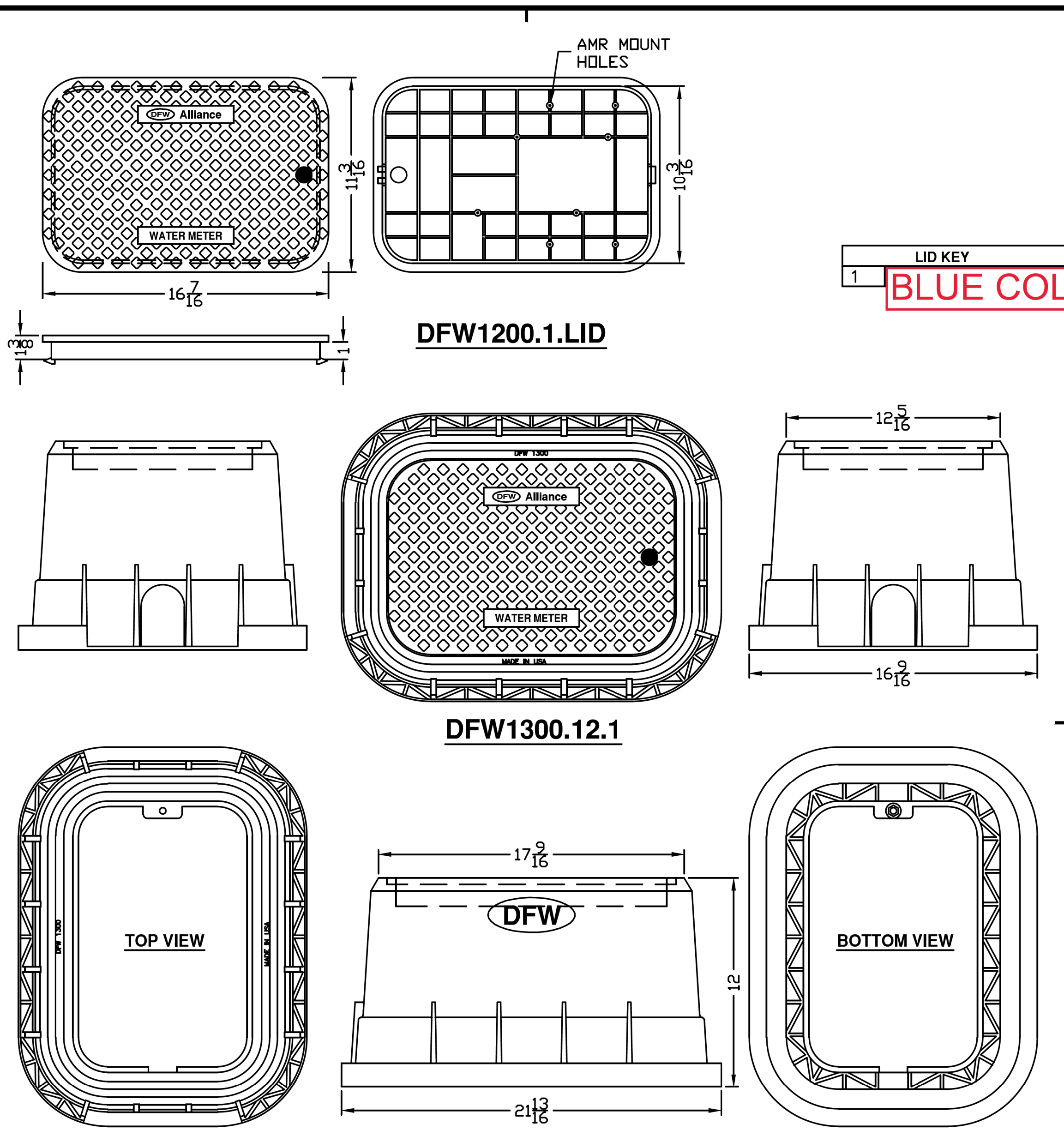


CONCRETE FLUME & SIDEWALK FLUME DETAIL
NTS



HEADER CURB
NTS

NOTE:
PLACE CONTRACTION JOINT EVERY 15 LF
PLACE EXPANSION JOINT EVERY 150 LF
AND AT ALL P.C. & P.T.



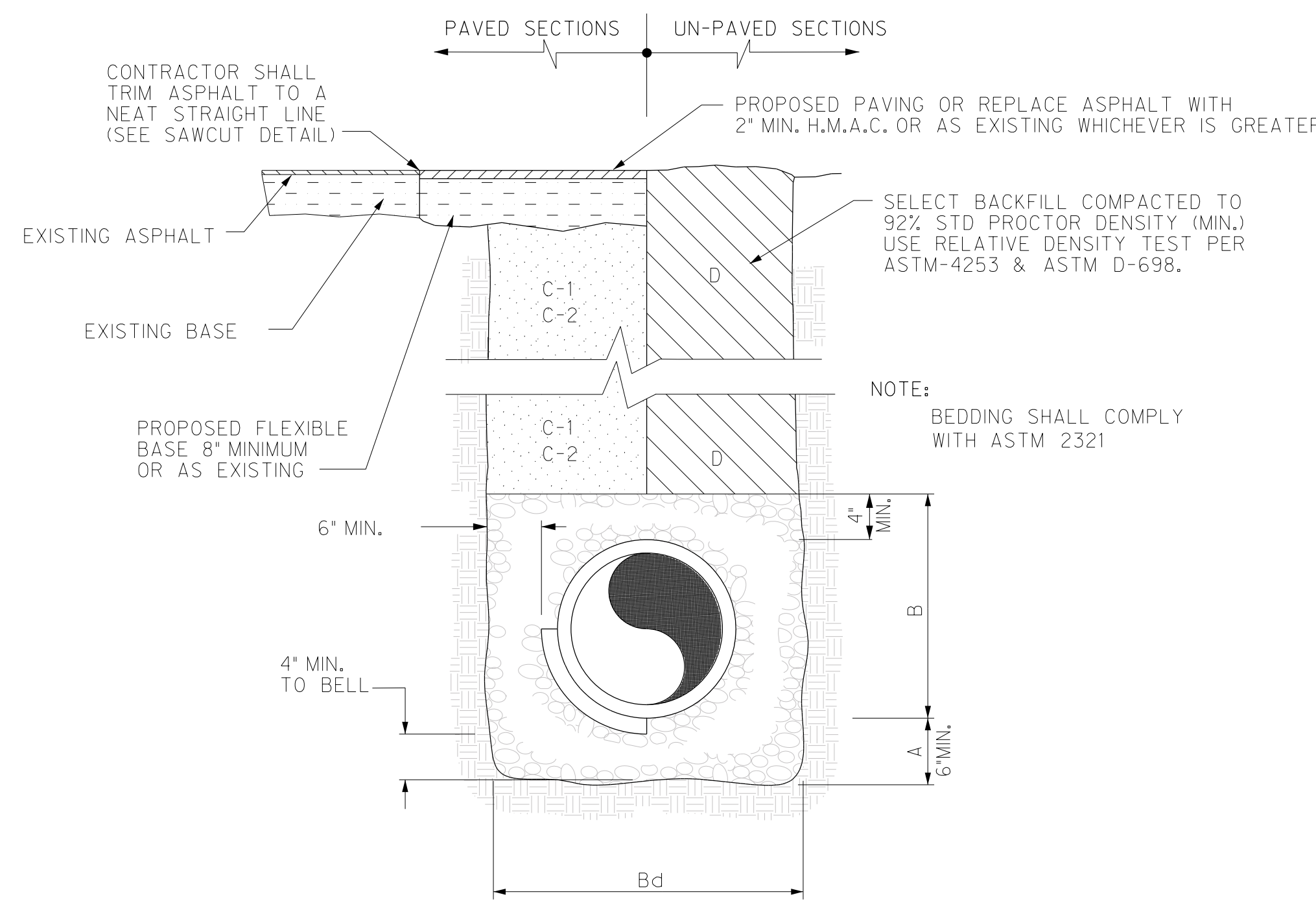
DFW1300.12.1

NOTES:
1) DIM'S ± 1/8" U.N.O.
2) LID MATERIAL: POLYPROPYLENE
3) BODY MATERIAL: POLYPROPYLENE
4) WALL THICKNESS: 1/8" ± 5%
5) I.W.A. = INSIDE WORK AREA

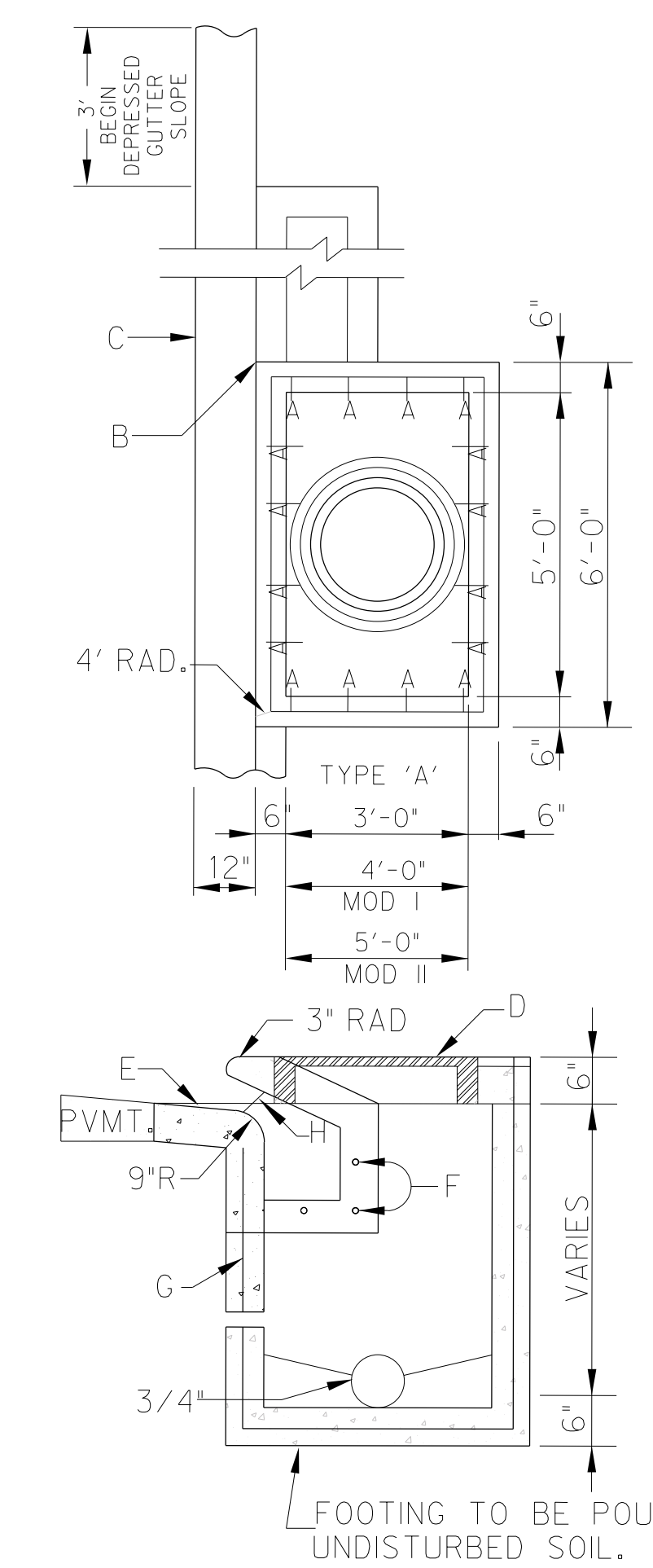
DFW PLASTICS, INC. ENGAGES IN ONGOING RESEARCH AND DEVELOPMENT TO IMPROVE AND ENHANCE ITS PRODUCTS. THEREFORE, DFW PLASTICS, INC. RESERVES THE RIGHT TO CHANGE PRODUCT OR SYSTEM SPECIFICATIONS WITHOUT NOTICE.

 DFW PLASTICS, INC. PO BOX 648 BEDFORD, TEXAS 76095 (817) 439-3600 (817) 439-3700 (f) www.dfwplasticinc.com	CREATED: 09/12/2013
	UPDATED: 03/20/2014
	ACCEPTED: JMc
	DRAWN BY: RMc
	PLOT SCALE: 1:8

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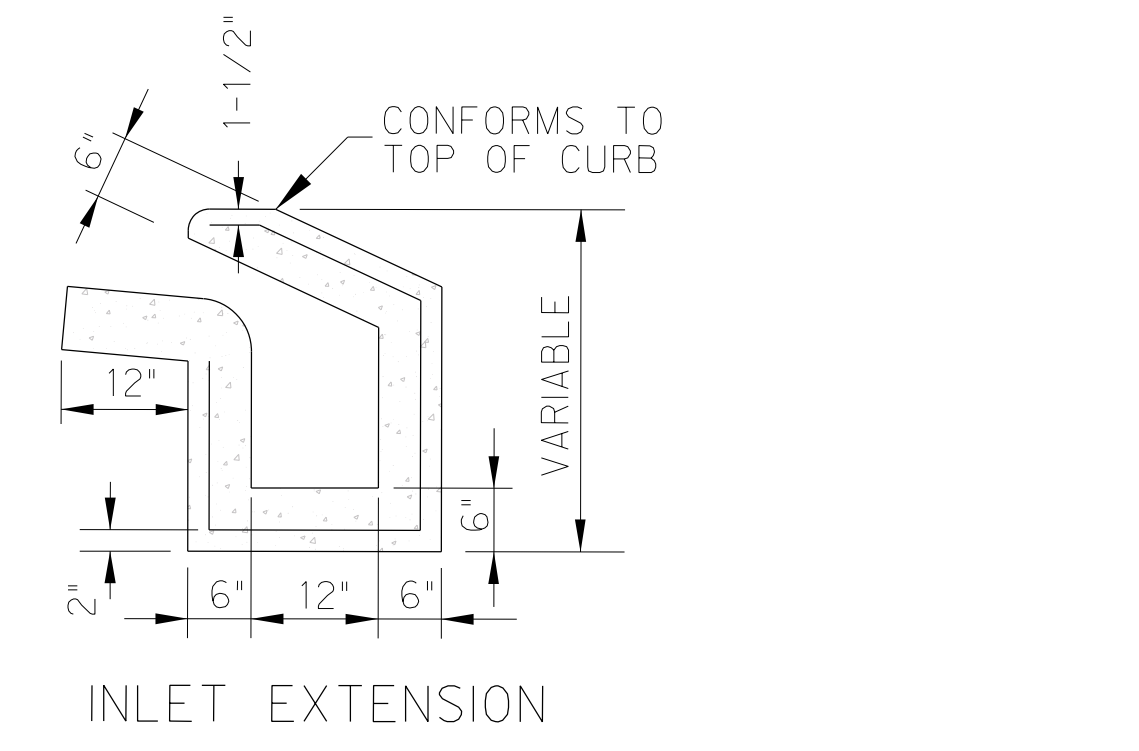


SANITARY SEWER BEDDING
NTS

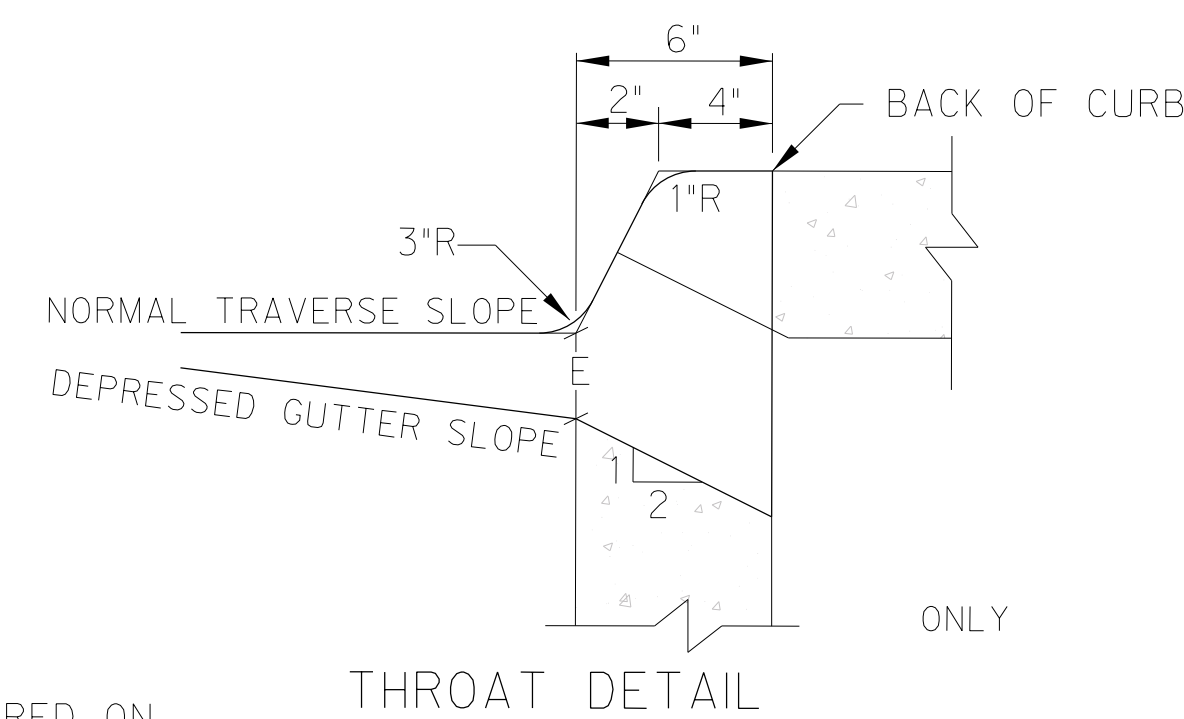


CURB INLET
NTS

- CONSTRUCTION NOTES**
- NO. 4 VERTICAL REIN. HOOK 15" OR 6" AS REQUIRED AT TOP.
 - 6" x 6" CONCRETE SUPPORT USED WHEN EXTENSION BOX CALLED FOR.
 - REGULAR CURB & GUTTER SECTION.
 - MANHOLE RING & COVER SHALL BE ALAMO 862-22 OR EQUAL.
 - DEPRESS: 4" BELOW NORMAL GUTTER.
 - DOWEL BARS
 - ALL RENF. NO. 4 BARS 12" O.C. EACH WAY.
 - 7" CLEAR OPENINGS



INLET EXTENSION



THROAT DETAIL

- GENERAL NOTES**
- SLOPE BOTTOM OF INLET 1/2" PER. FT. TOWARD INLET.
 - EXTENSION TO INLET TO BE MADE IN INCREMENTS OF 3'-0" OR 6'-0"
 - INLET EXTENSION MUST BE APPROVED BY CITY ENGINEER PRIOR TO CONSTRUCTION.
 - TRANSITION NORMAL GUTTER TO INLET FLOW SLOPE APPROX. 3'
 - INLET TOP SHALL BE A PRE-CAST SECTION EITHER PART OF PRE-CAST SYSTEM OR PRE-CAST ON THE SITE BY CONTRACTOR.

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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

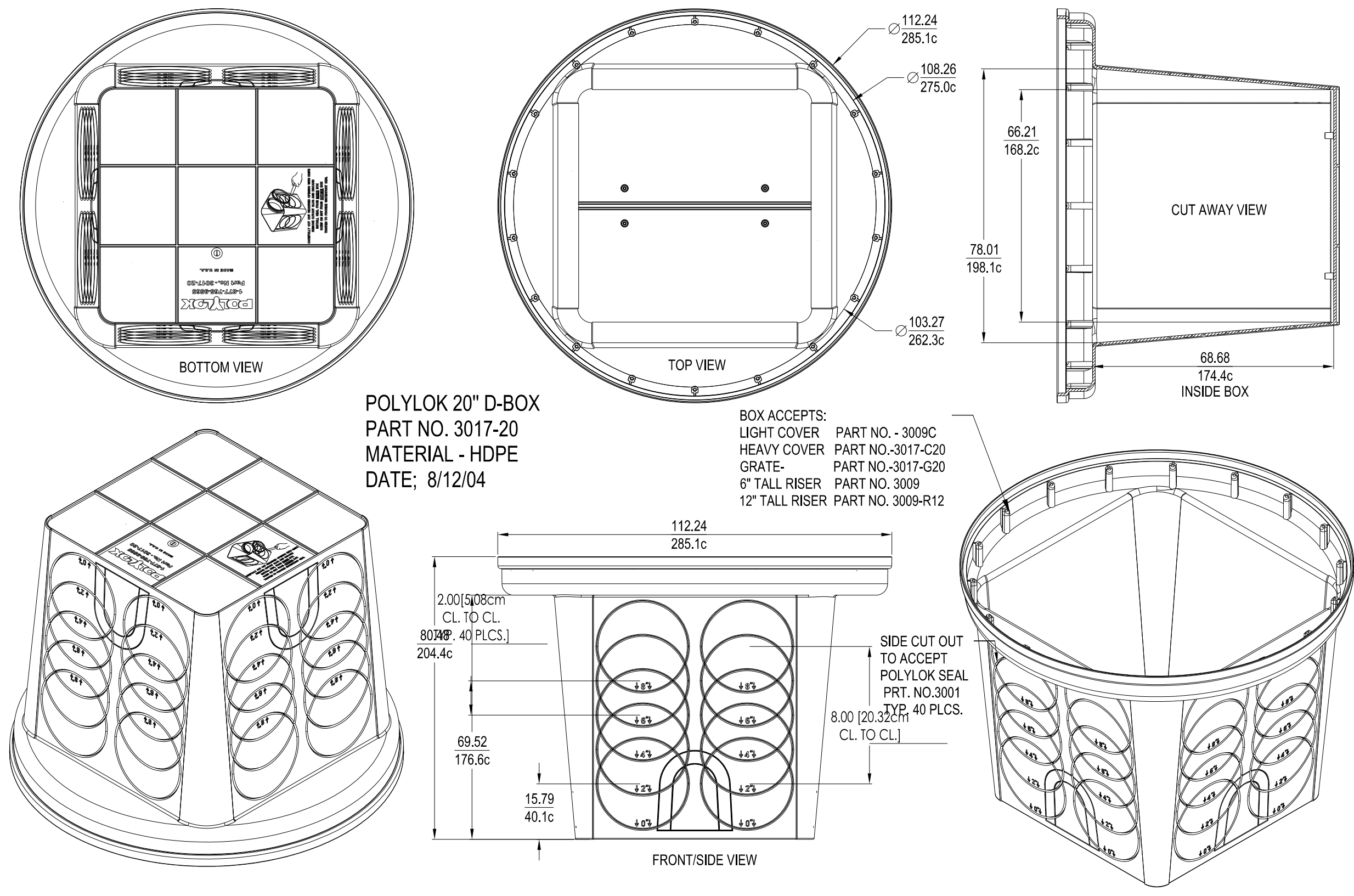
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ISSUE DATE: 8/13/2024
DRAWN BY: SK
CHECKED BY: HG
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Sheet Number
C7.01

Project Status:
CONSTRUCTION DOCUMENTS

Sheet
C7.02

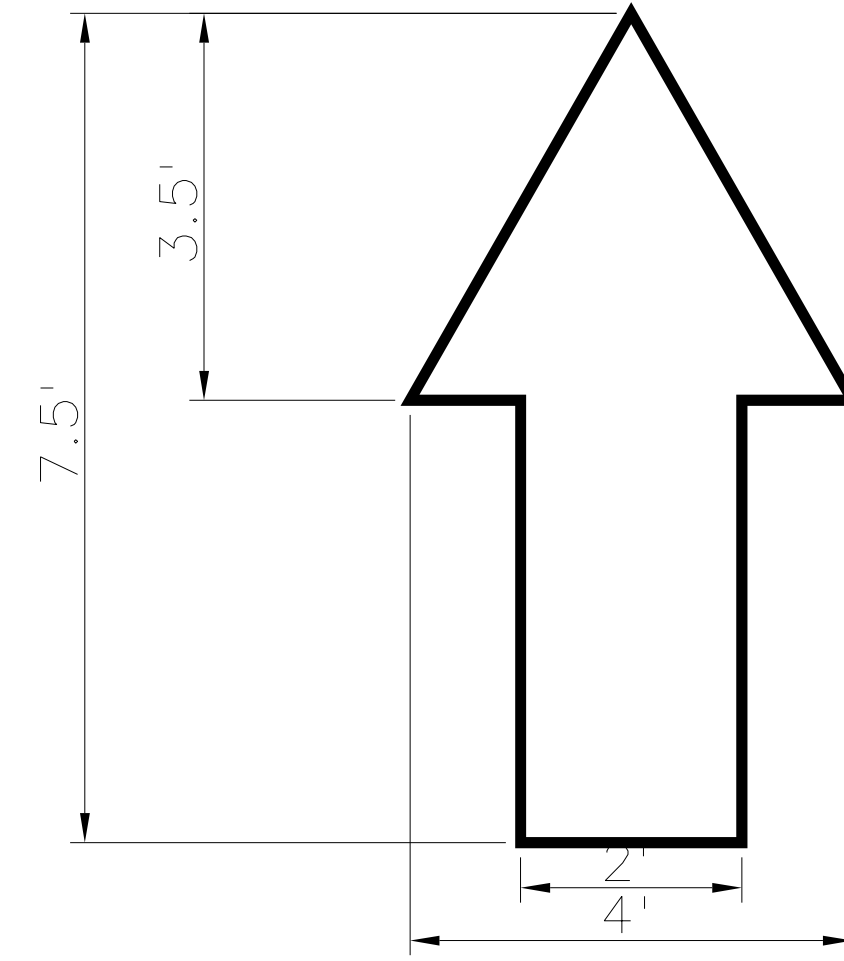


POLYLOK 20" D-BOX
PART NO. 3017-20
MATERIAL - HDPE
DATE: 8/12/04

BOX ACCEPTS:
 LIGHT COVER PART NO. 3009C
 HEAVY COVER PART NO. 3017-C20
 GRATE PART NO. 3017-G20
 6" TALL RISER PART NO. 3009
 12" TALL RISER PART NO. 3009-R12

SIDE CUT OUT TO ACCEPT POLYLOK SEAL PRT. NO. 3001 8.00 (20 PLCS. CL TO CL.)

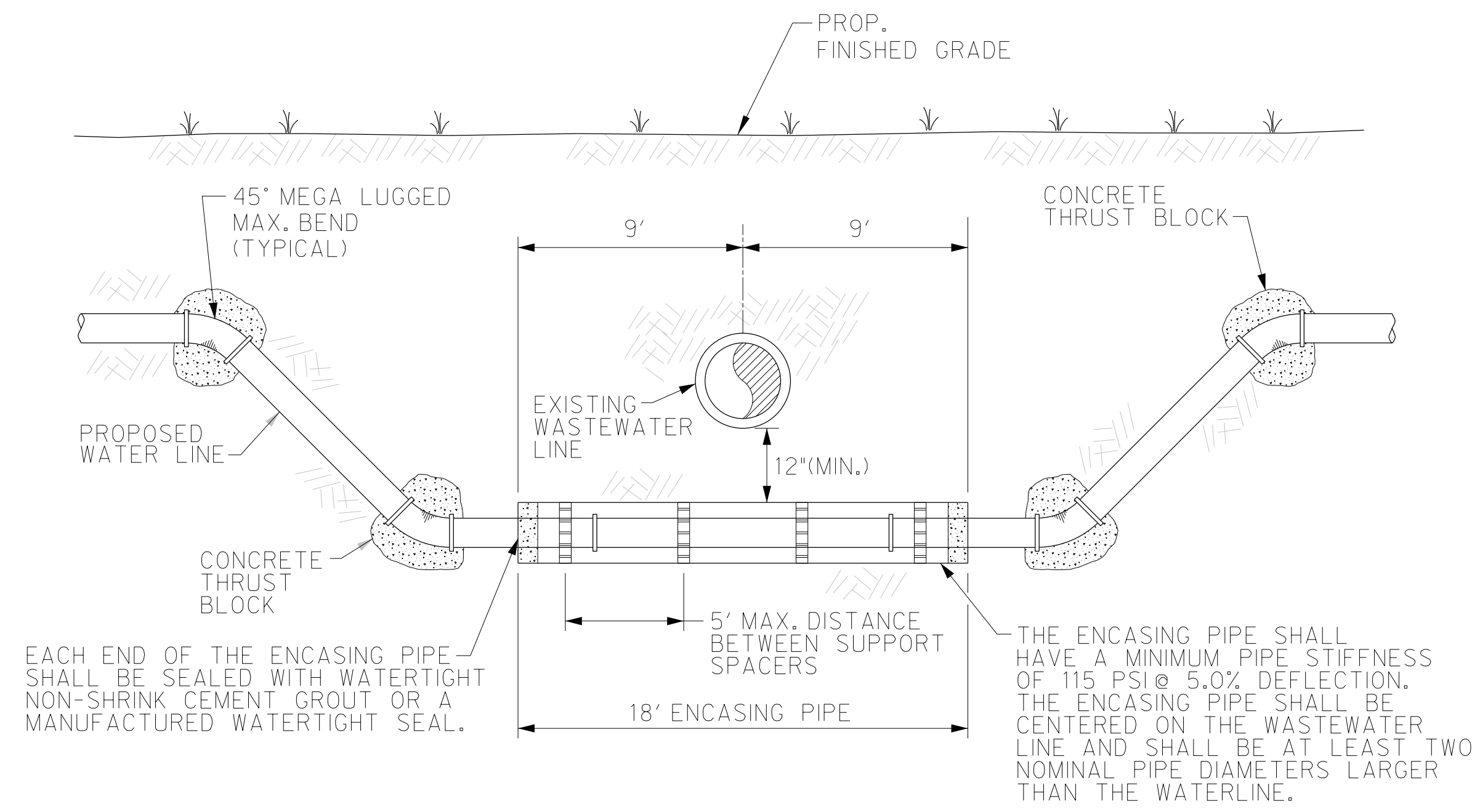
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 SCALE: NTS



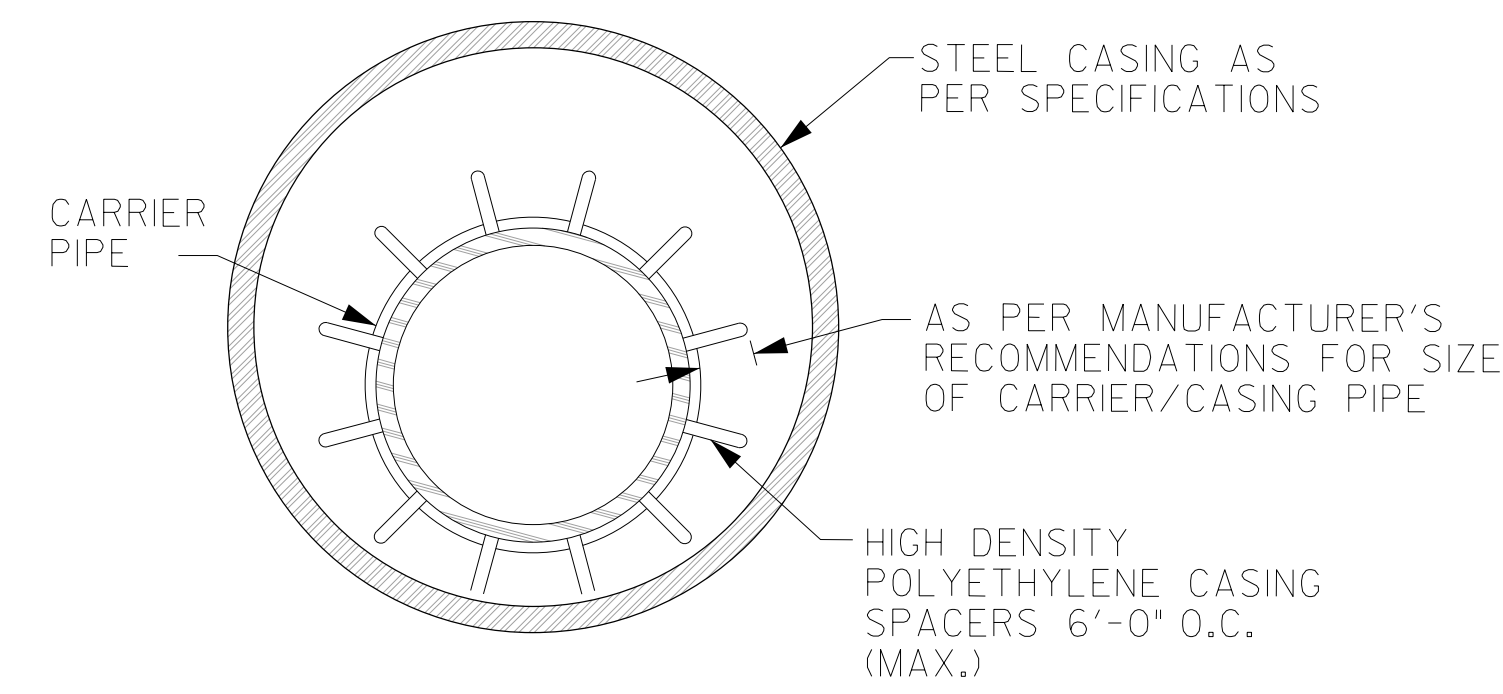
TRAFFIC MARKINGS
 SCALE: NTS



TRAFFIC MARKINGS
 SCALE: NTS



TYPICAL WATER DEFLECTION
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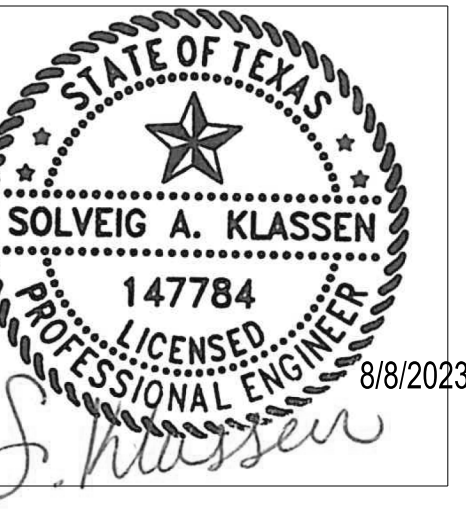
INSTALLATION		
CARRIER PIPE SIZE	PIPE CASING SIZE	MIN. WALL THICKNESS
2"	6"	0.375"
4"	10"	0.375"
6"	14"	0.375"
8"	16"	0.375"
10"	18"	0.375"
12"	20"	0.375"
14", 15"	24"	0.375"
16"	26"	0.375"
18"	30"	0.375"
24"	36"	0.375"
36"	48"	0.625"

PIPE ENCASEMENT DETAIL
 NTS

GENERAL NOTES:

1. ALL STEEL CASING SHALL BE WELDED.
2. STEEL CASING SHALL BE CLOSED AT EACH END USING BRICK OR BLOCK AND MORTAR GROUTED.
3. CASING SPACERS SHALL BE USED TO INSTALL THE CARRIER PIPE INSIDE THE ENCASEMENT PIPE. CASING SPACERS SHALL FASTEN TIGHTLY ONTO THE CARRIER PIPE SO THAT WHEN THE CARRIER PIPE IS BEING INSTALLED THE SPACERS WILL NOT MOVE ALONG THE PIPELINE. CASING SPACERS SHALL BE DOUBLED ON EACH END OF THE ENCASEMENT.
4. PROJECTION TYPE CASING SPACERS SHALL BE CONSTRUCTED SECTIONS OF HIGH DENSITY POLYETHYLENE. THE FLEXIBLE SECTIONS SHALL BE JOINED TOGETHER AROUND THE PIPE TO PROVIDE A MINIMUM OF 16 PLASTIC PROJECTIONS PER SPACER SECTION.
5. INSTALLATION AND SIZE OF SPACERS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

The Seal appearing on this document was authorized by Solvig A. Klassen, P.E. Number 147784 on August 8, 2023. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act. The Record Copy of this drawing is on file at the offices of SEFF Associates, Inc., 5000 N. Military Suite 100, McAllen, TX 78503, TPE FIRM #F-312



HIDALGO COUNTY EL PARAISO PROJECT
 HIDALGO COUNTY
 1901 N. LOS EBANOS RD., ALTON, TX 78573

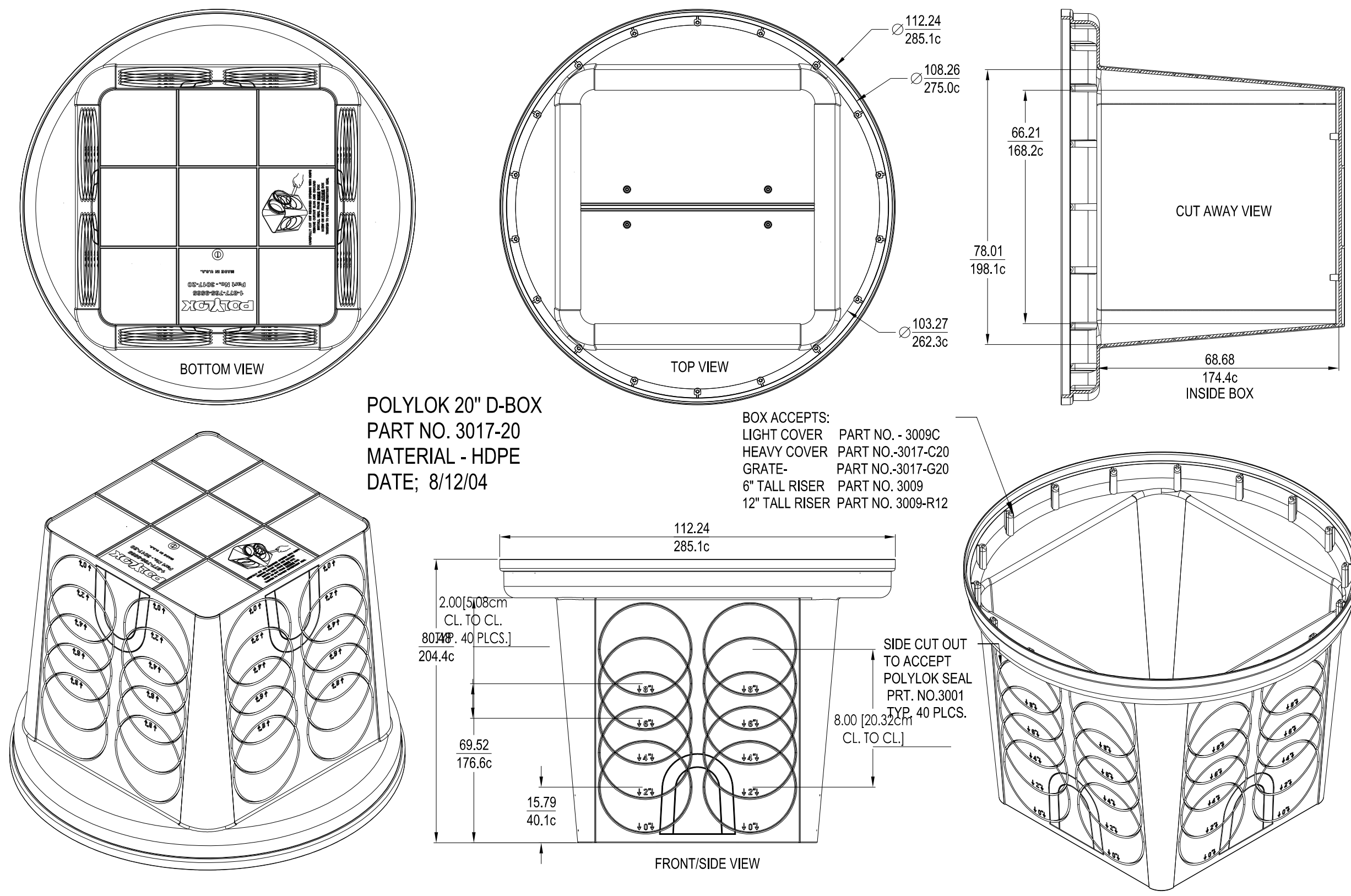
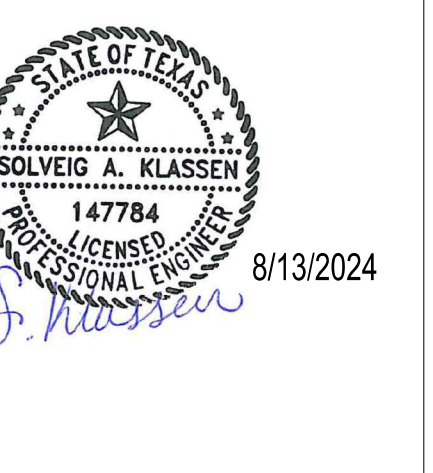
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PROJECT NO.: 21087
 ISSUE DATE: 8/8/2023
 DRAWN BY: SK
 CHECKED BY: PG

SHEET NAME: MISCELLANEOUS DETAILS

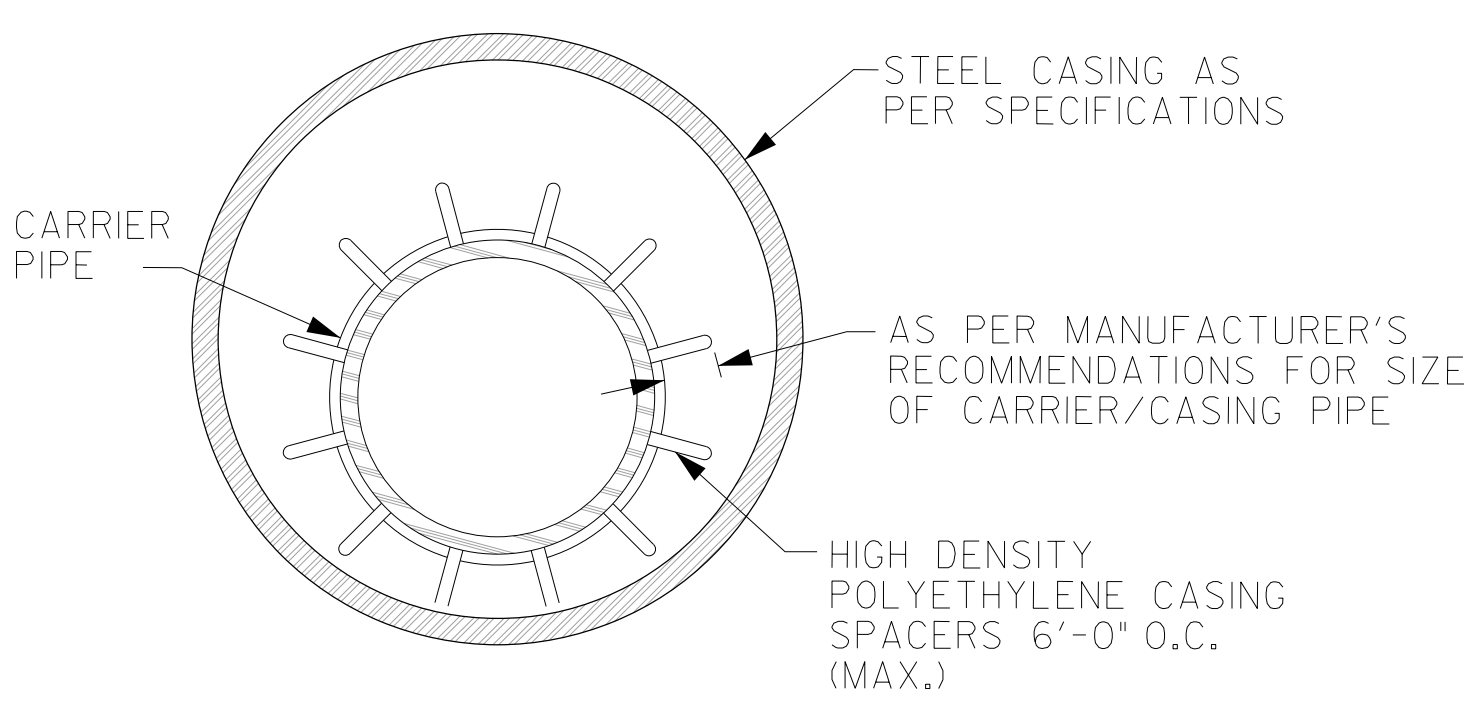
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Project Status: CONSTRUCTION DOCUMENTS



POLYLOK 20" D-BOX PART NO. 3017-20

SCALE: NTS

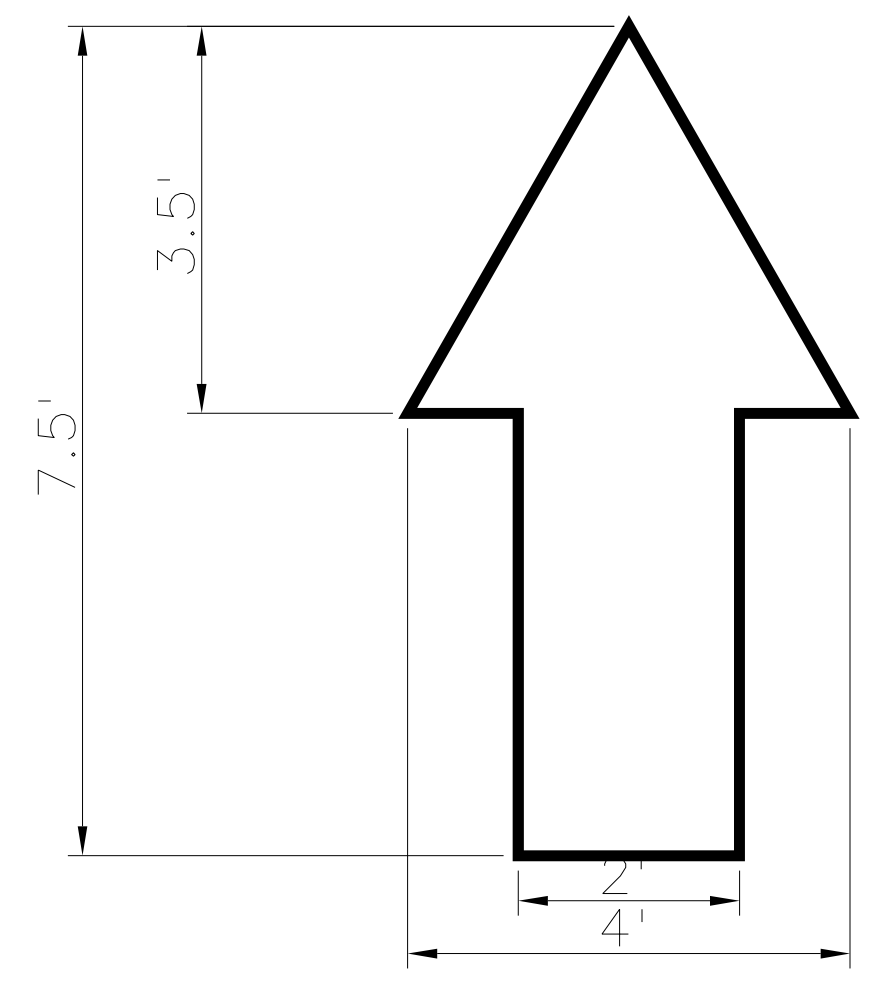


INSTALLATION

CARRIER PIPE SIZE	PIPE CASING SIZE	MIN. WALL THICKNESS
2"	6"	0.375"
4"	10"	0.375"
6"	14"	0.375"
8"	16"	0.375"
10"	18"	0.375"
12"	20"	0.375"
14", 15"	24"	0.375"
16"	26"	0.375"
18"	30"	0.375"
24"	36"	0.375"
36"	48"	0.625"

PIPE ENCASEMENT DETAIL

NTS



TRAFFIC MARKINGS

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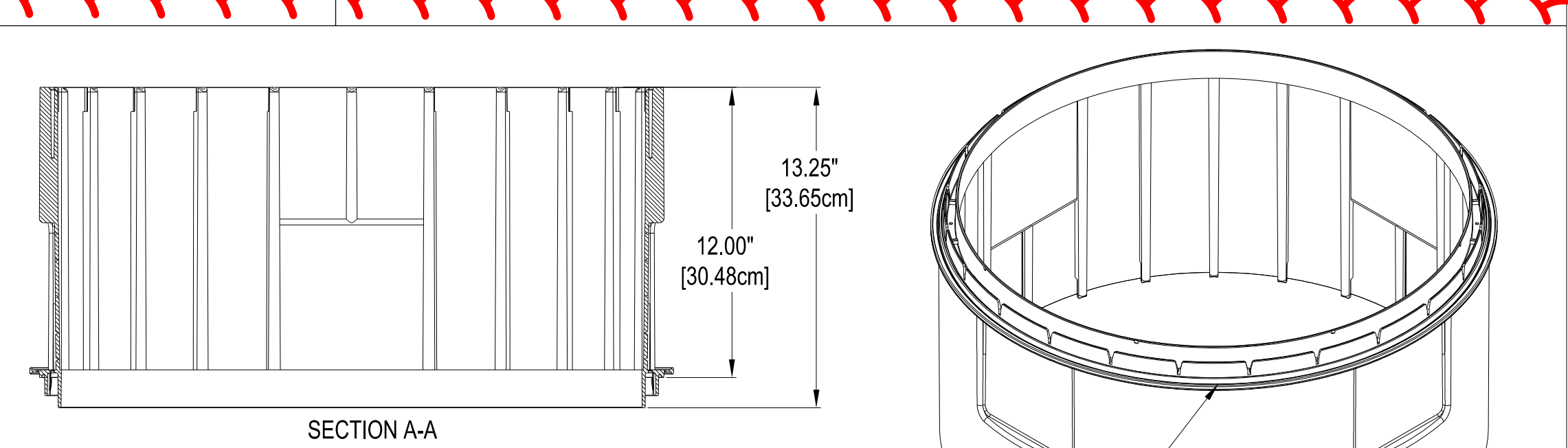


TRAFFIC MARKINGS

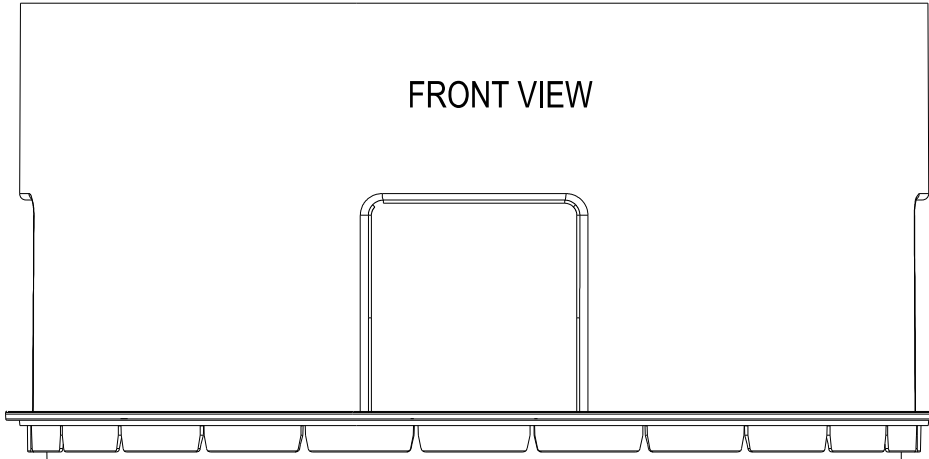
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GENERAL NOTES:

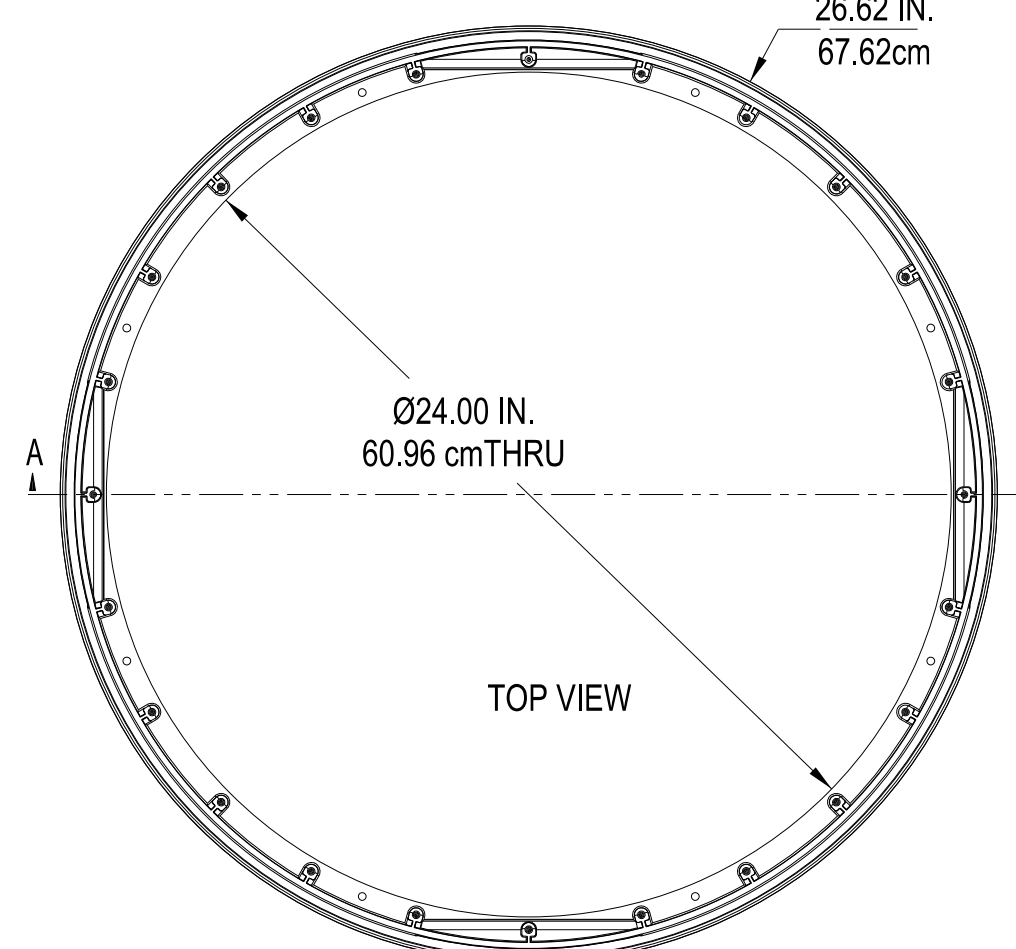
- ALL STEEL CASING SHALL BE WELDED.
- STEEL CASING SHALL BE CLOSED AT EACH END USING BRICK OR BLOCK AND MORTAR GROUTED.
- CASING SPACERS SHALL BE USED TO INSTALL THE CARRIER PIPE INSIDE THE ENCASEMENT PIPE. CASING SPACERS SHALL FASTEN TIGHTLY ONTO THE CARRIER PIPE SO THAT WHEN THE CARRIER PIPE IS BEING INSTALLED THE SPACERS WILL NOT MOVE ALONG THE PIPELINE. CASING SPACERS SHALL BE DOUBLED ON EACH END OF THE ENCASEMENT.
- PROJECTION TYPE CASING SPACERS SHALL BE CONSTRUCTED SECTIONS OF HIGH DENSITY POLYETHYLENE. THE FLEXIBLE SECTIONS SHALL BE JOINED TOGETHER AROUND THE PIPE TO PROVIDE A MINIMUM OF 16 PLASTIC PROJECTIONS PER SPACER SECTION.
- INSTALLATION AND SIZE OF SPACERS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.



SECTION A-A



POLYLOK 12 X 24 RISER PART NO. 3008-R12F MATERIAL - HDPE COLOR - GREEN



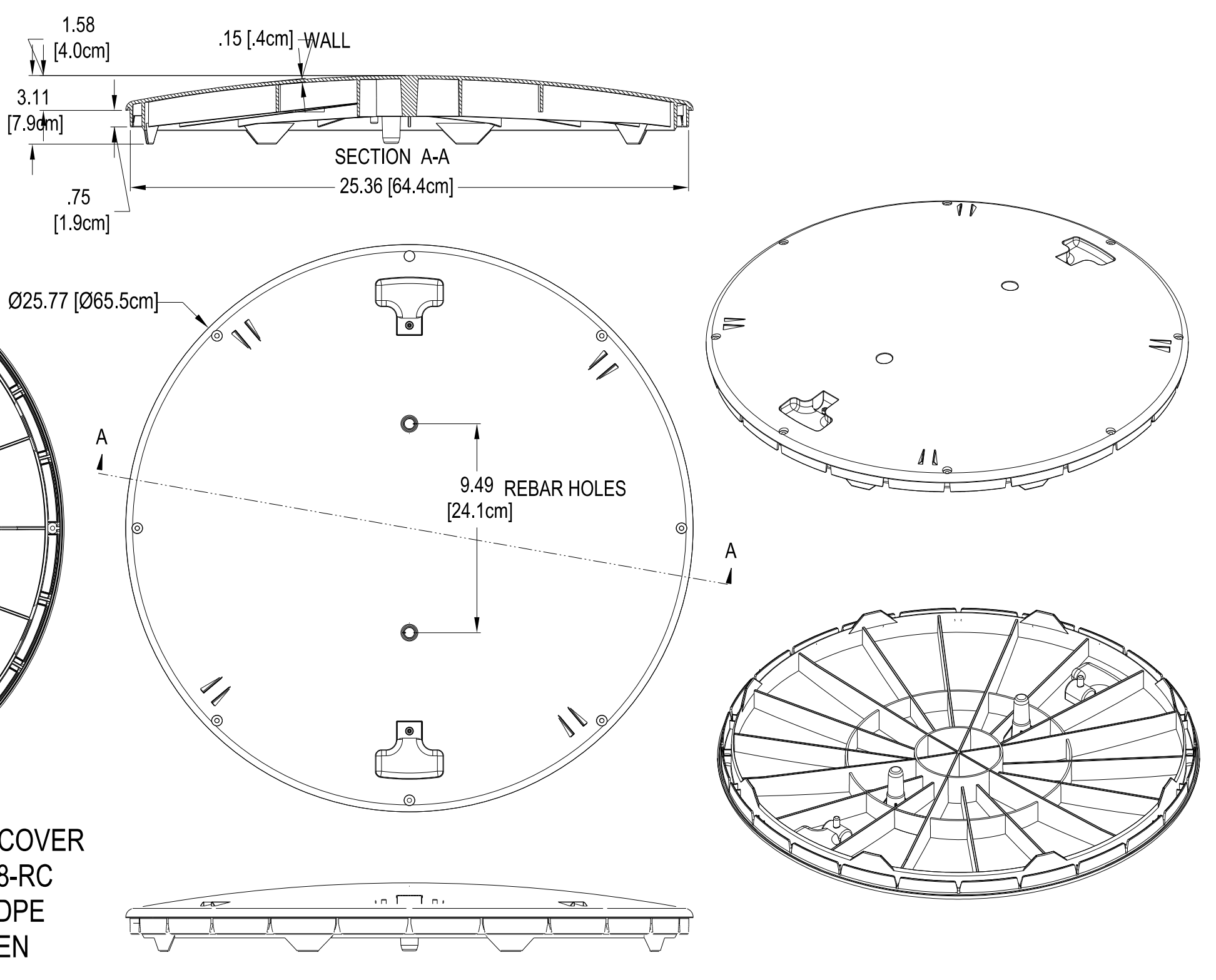
POLYLOK 12 X 24 RISER

SCALE: NTS

BOTTOM DETAIL FITS POLYLOK PART NO. - 3008
3008-R12
3008-R12B
3009-AR
3009-RTR24
3008-RP

TOP DETAIL FITS POLYLOK PART NO. - 3008
3008-RC
3008-R12
3008-G24
3008-HD
3008-RP

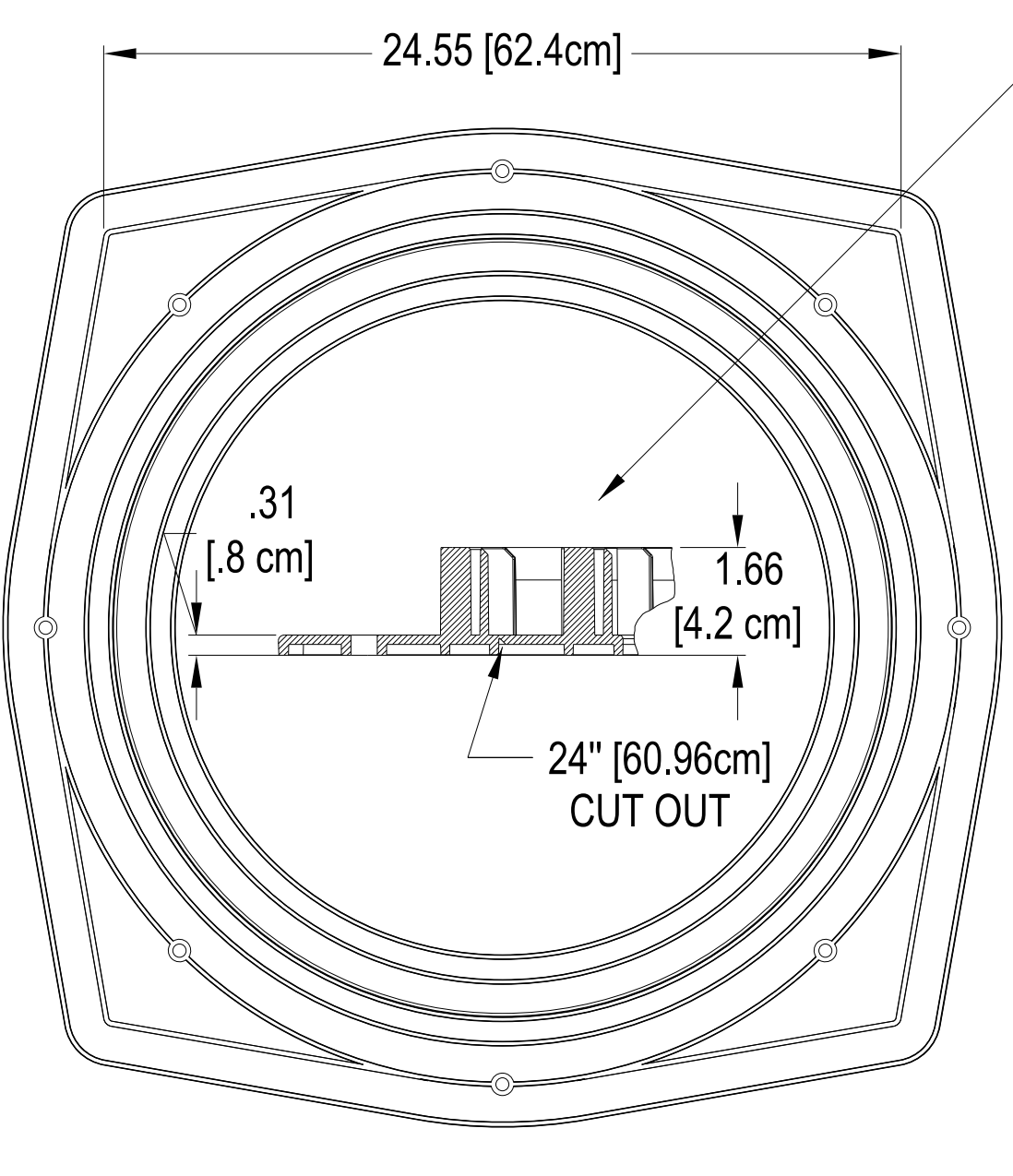
4 - 6" x 6" [15.24 cm X 15.24 cm] PANELS TO ALLOW FOR EASY WALL PENETRATION USING WATER TIGHT GROMMETS



POLYLOK 24" COVER PART NO. 3008-RC MATERIAL - HDPE COLOR - GREEN

POLYLOK 24" COVER

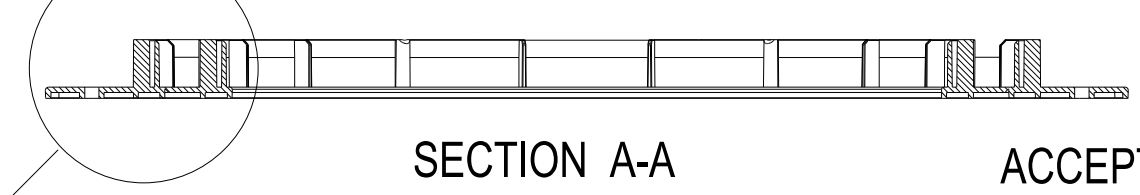
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POLYLOK ADAPTER RING PART NO. 3009-AR MATERIAL - HDPE COLOR - GREEN

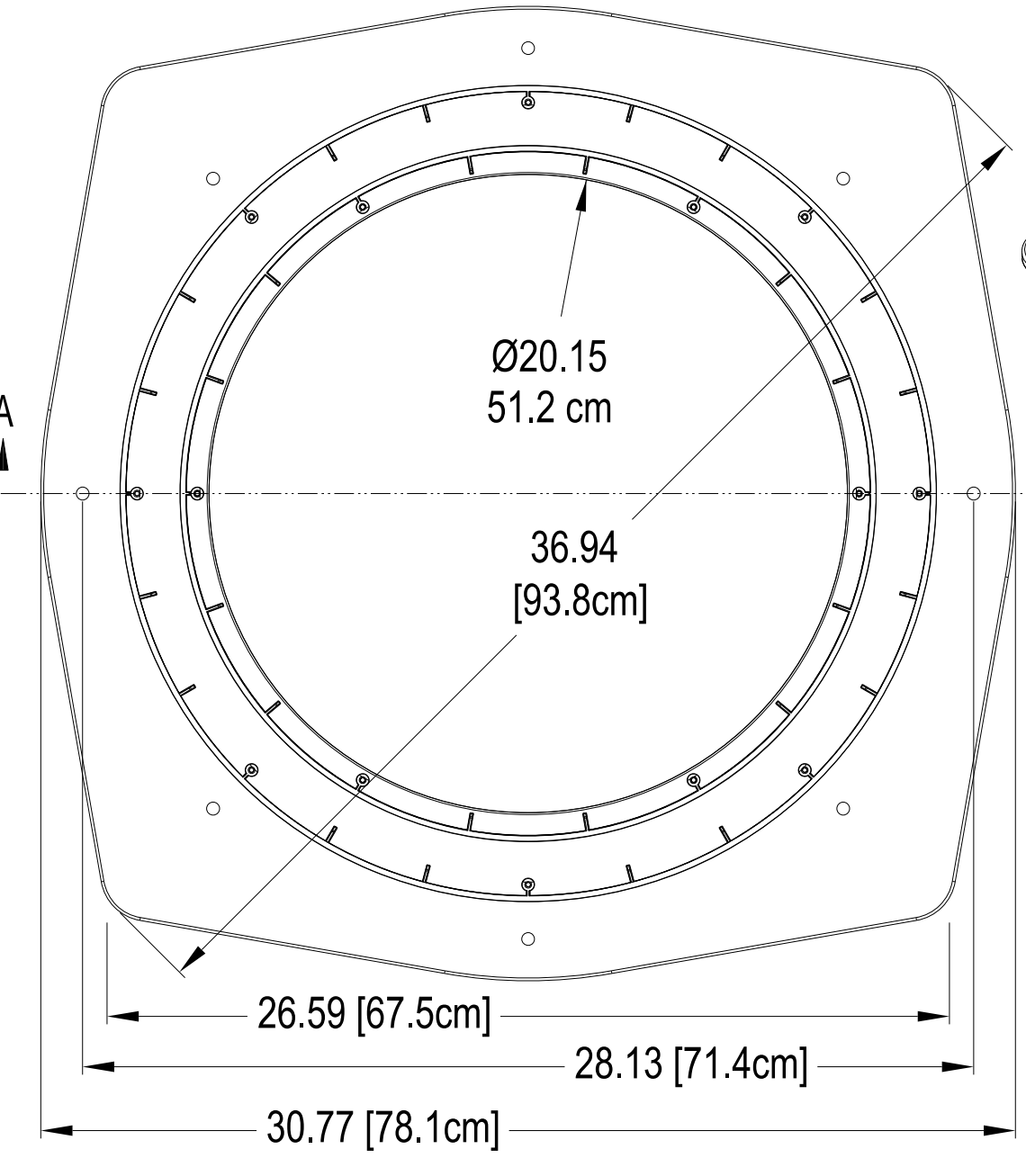
POLYLOK ADAPTER RING

SCALE: NTS

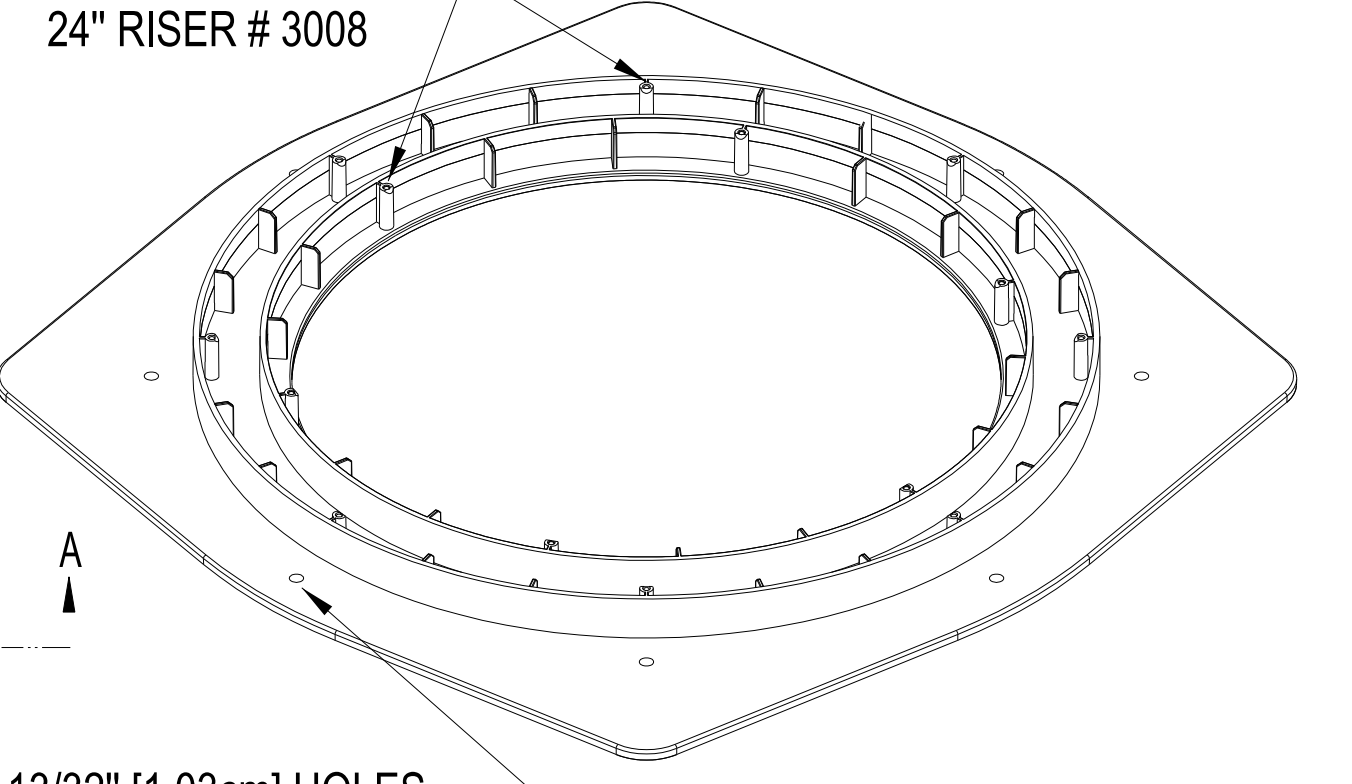


SECTION A-A

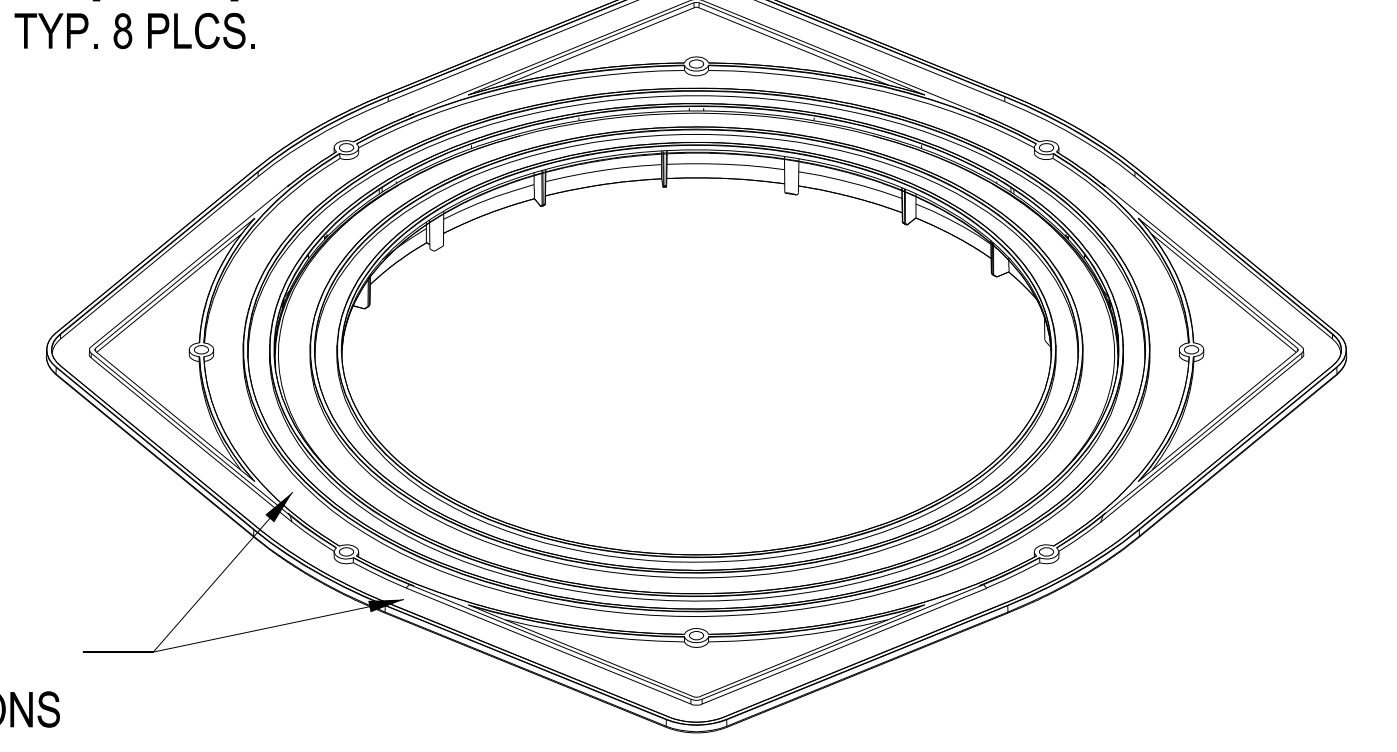
ACCEPTS 20" RISER # 3009
24" RISER # 3008



GASKET APPLIED HERE FOR SQUARE OR ROUND APPLICATIONS

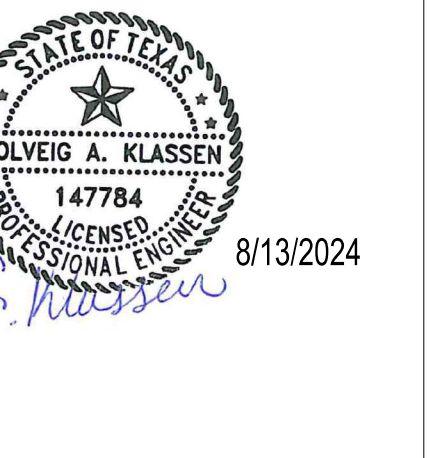


13/32" [1.03cm] HOLES TYP. 8 PLCS.



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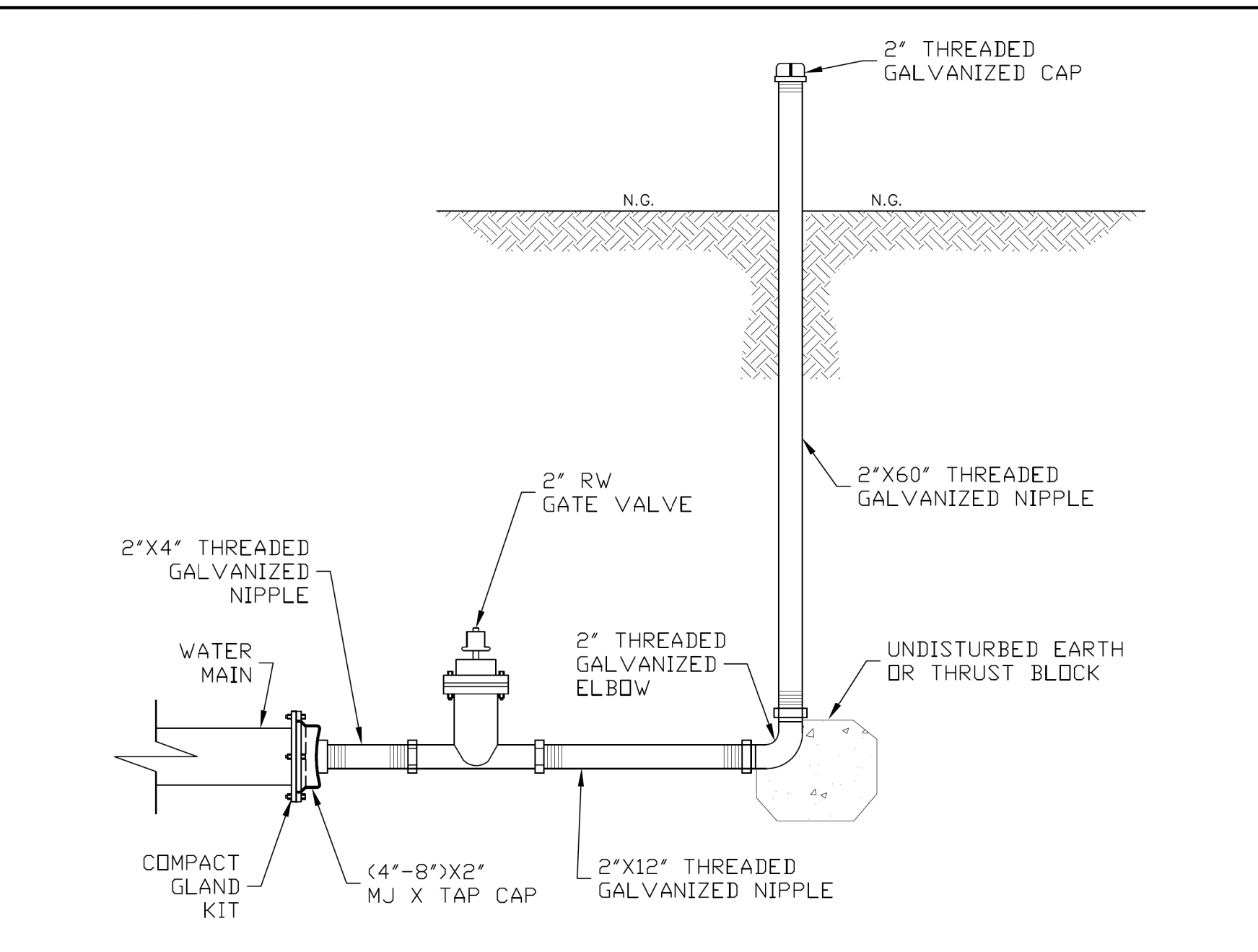
HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

Sharyland
WATER SUPPLY CORPORATION



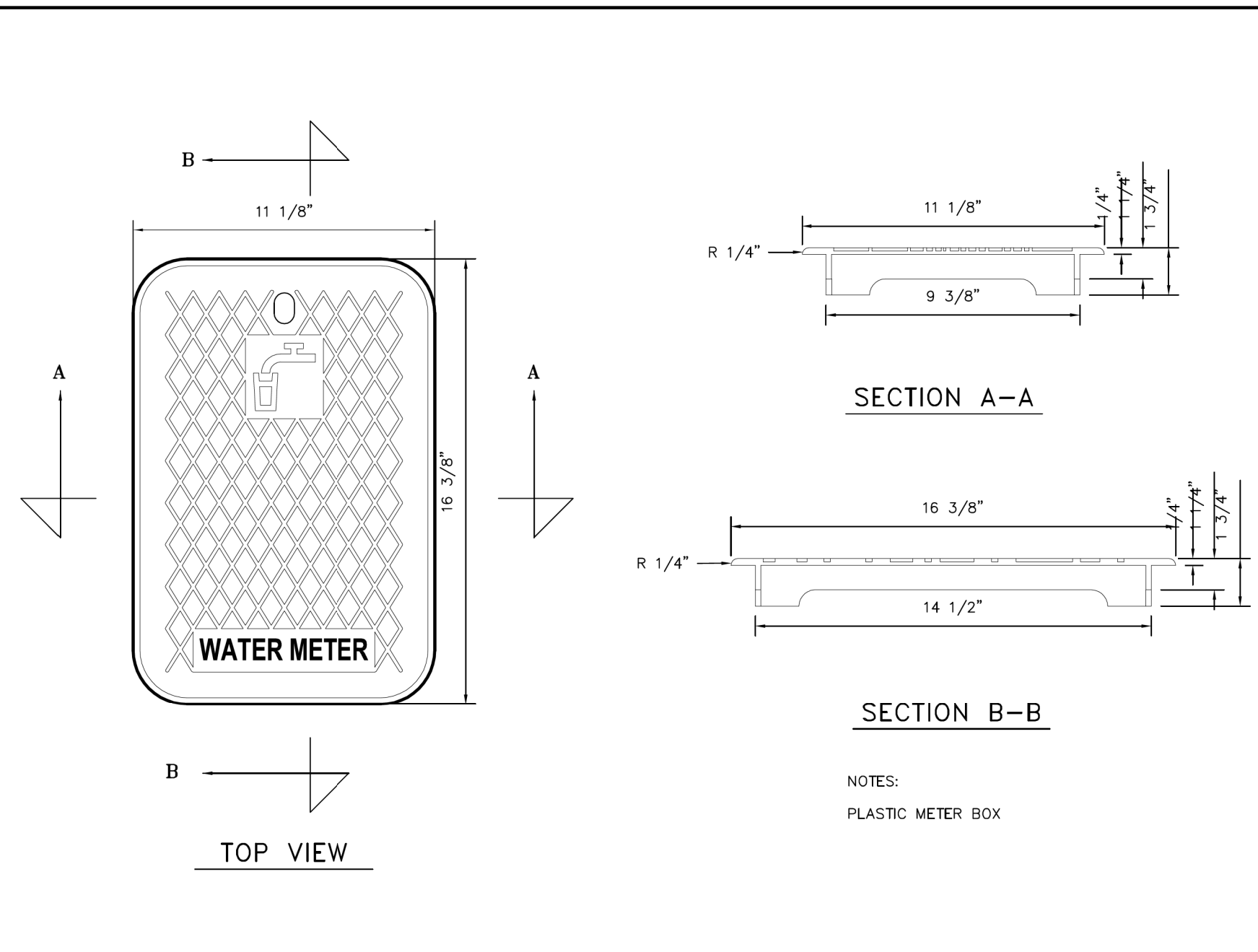
W-9

OMIT
(FUTURE DETAIL USE)



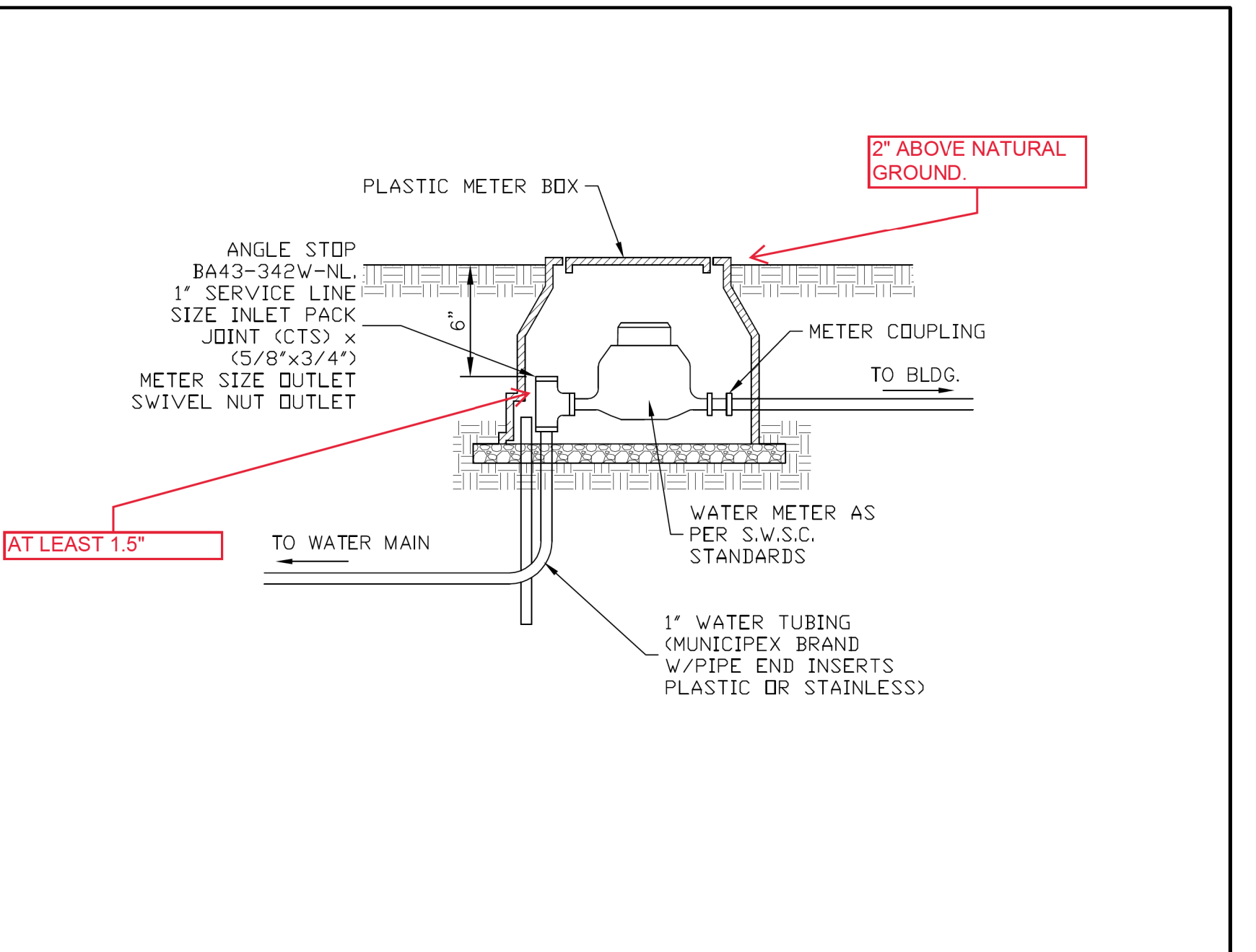
W-10

FLUSH VALVE
DETAIL



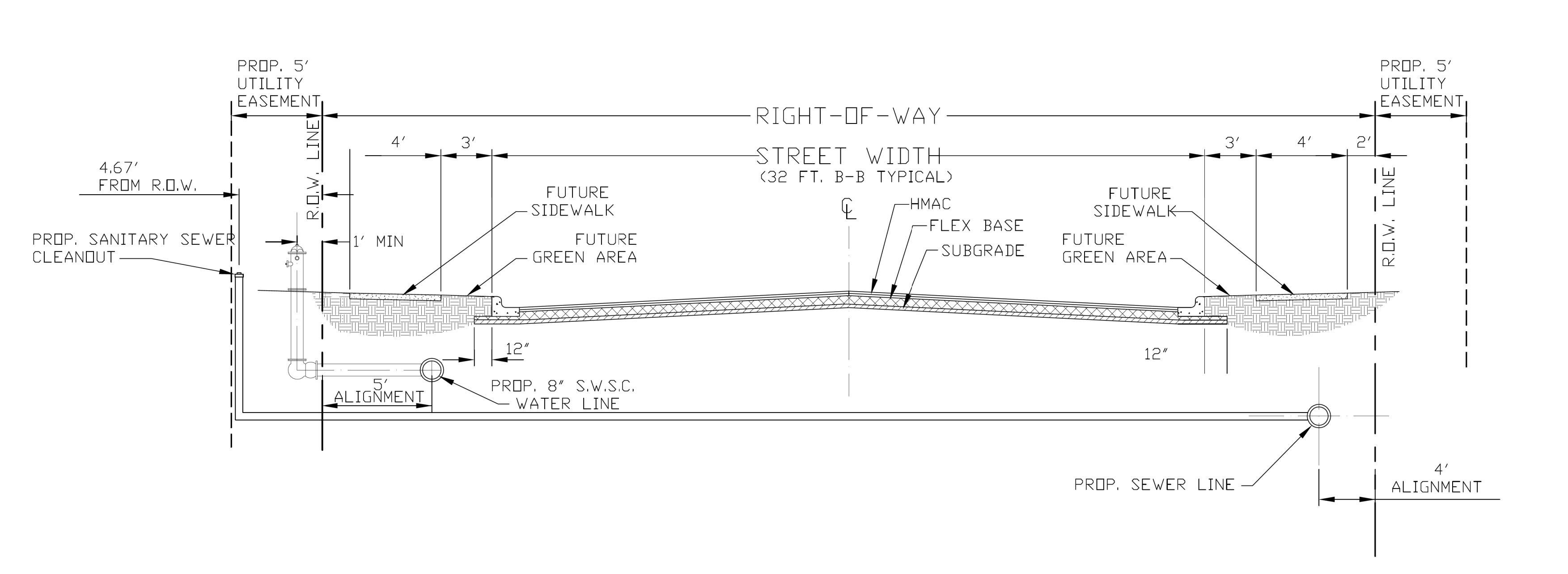
W-11

METER COVER
DETAIL



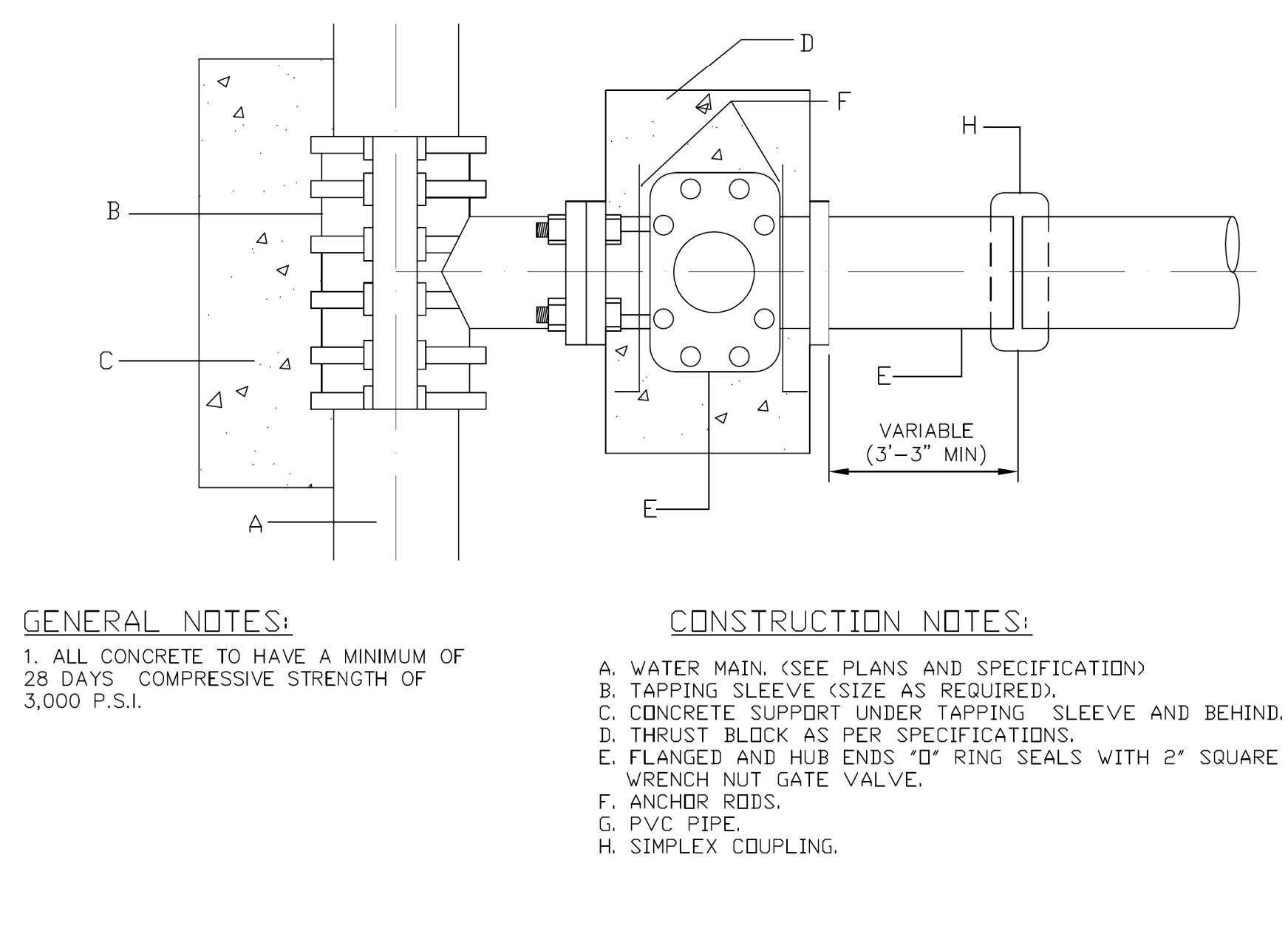
W-12

TYPICAL WATER METER
INSTALLATION



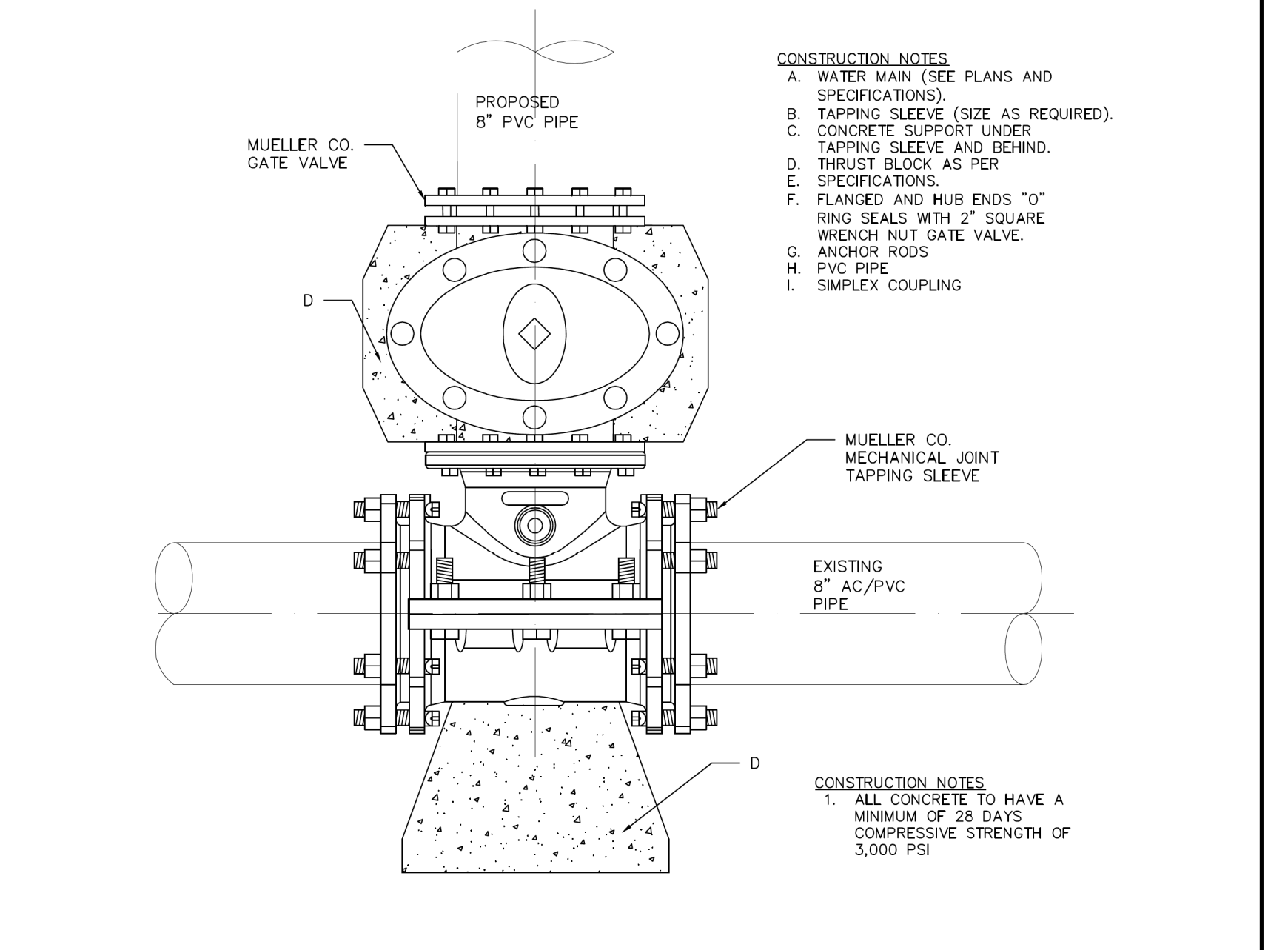
W-13

TYPICAL LOCAL STREET SECTION



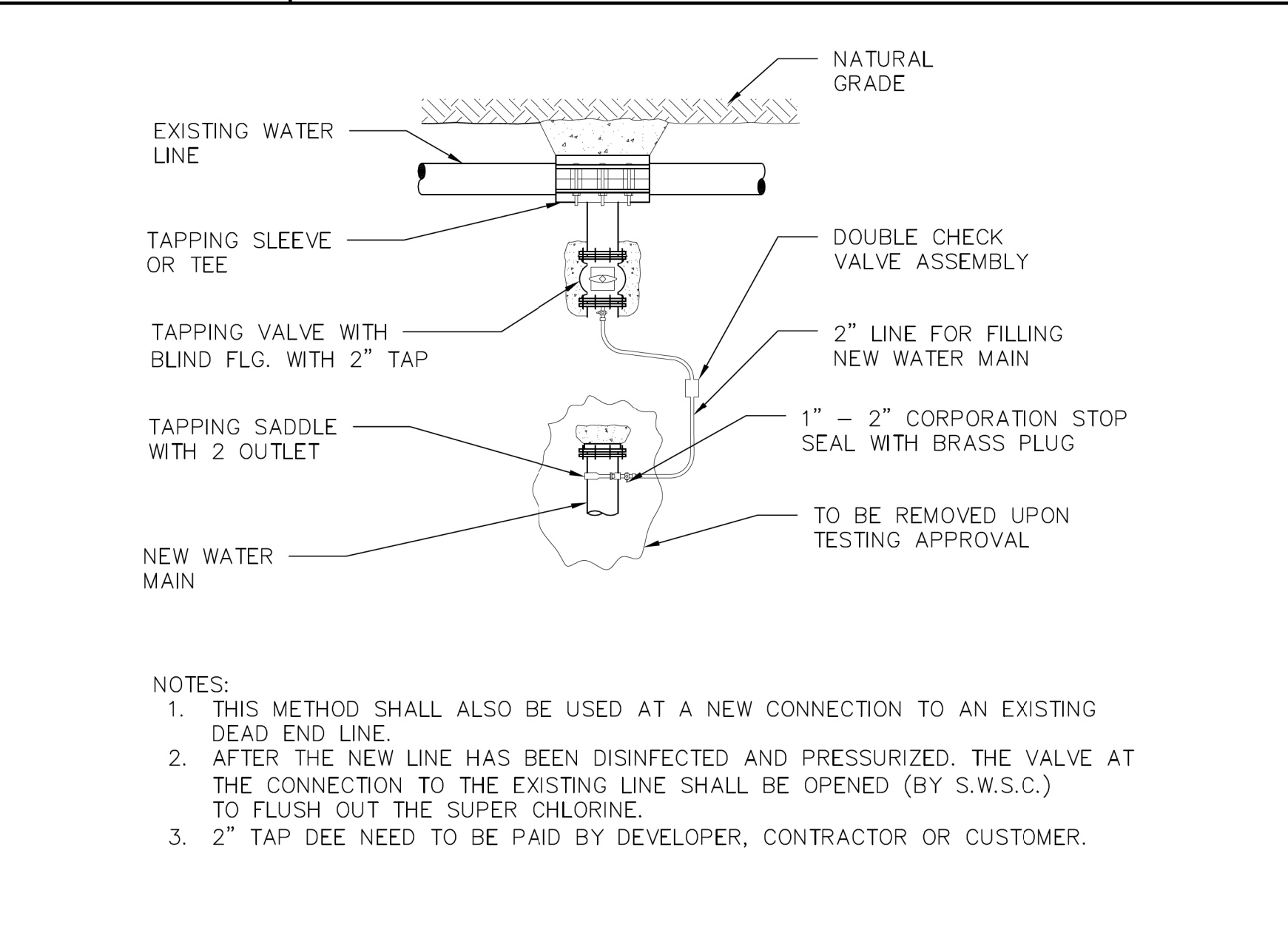
W-14

WATER TAPPING SLEEVE & VALVE
INSTALLATION



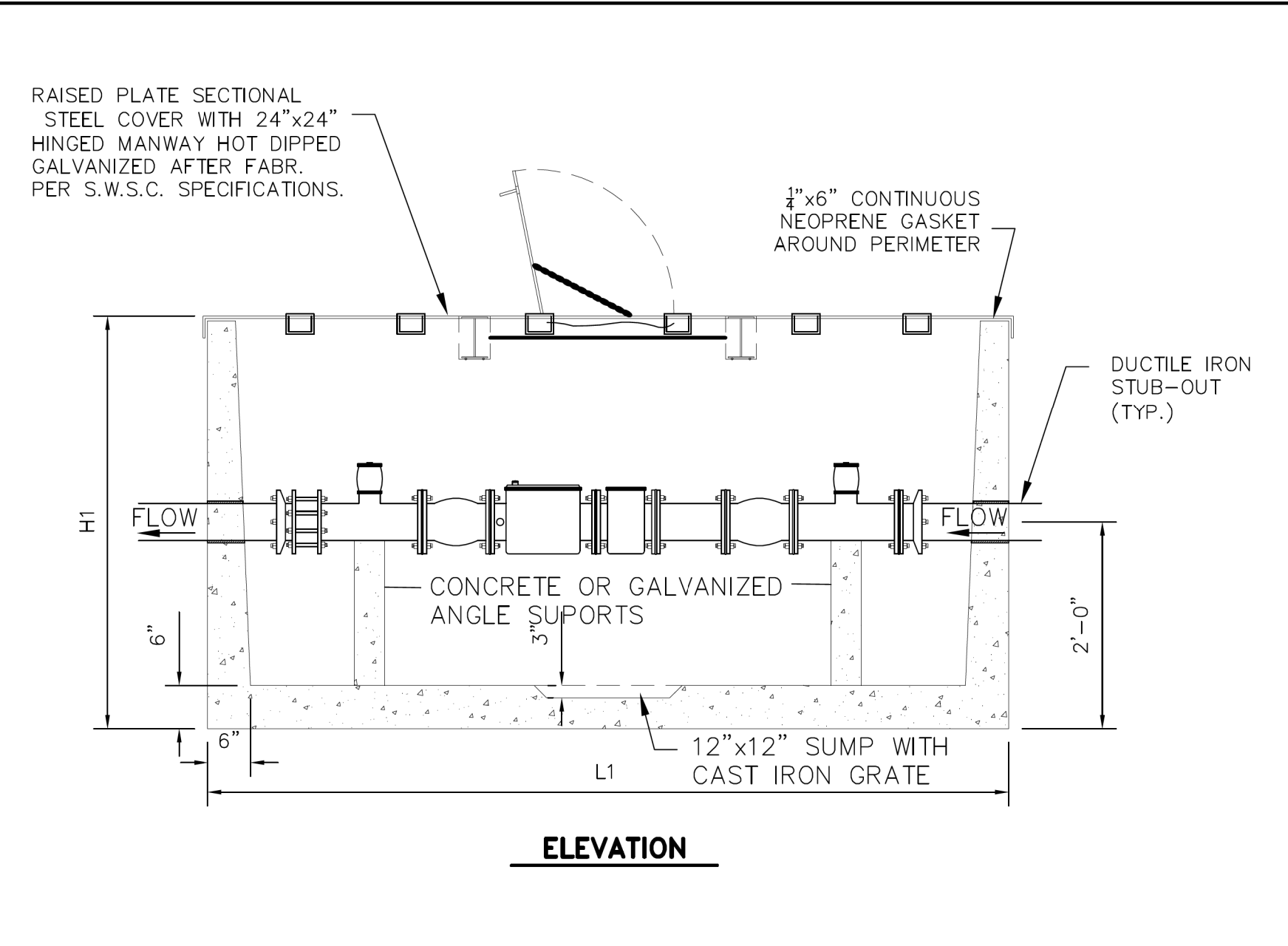
W-15

SAME SIZE WATER TAPPING SLEEVE
AND VALVE INSTALLATION



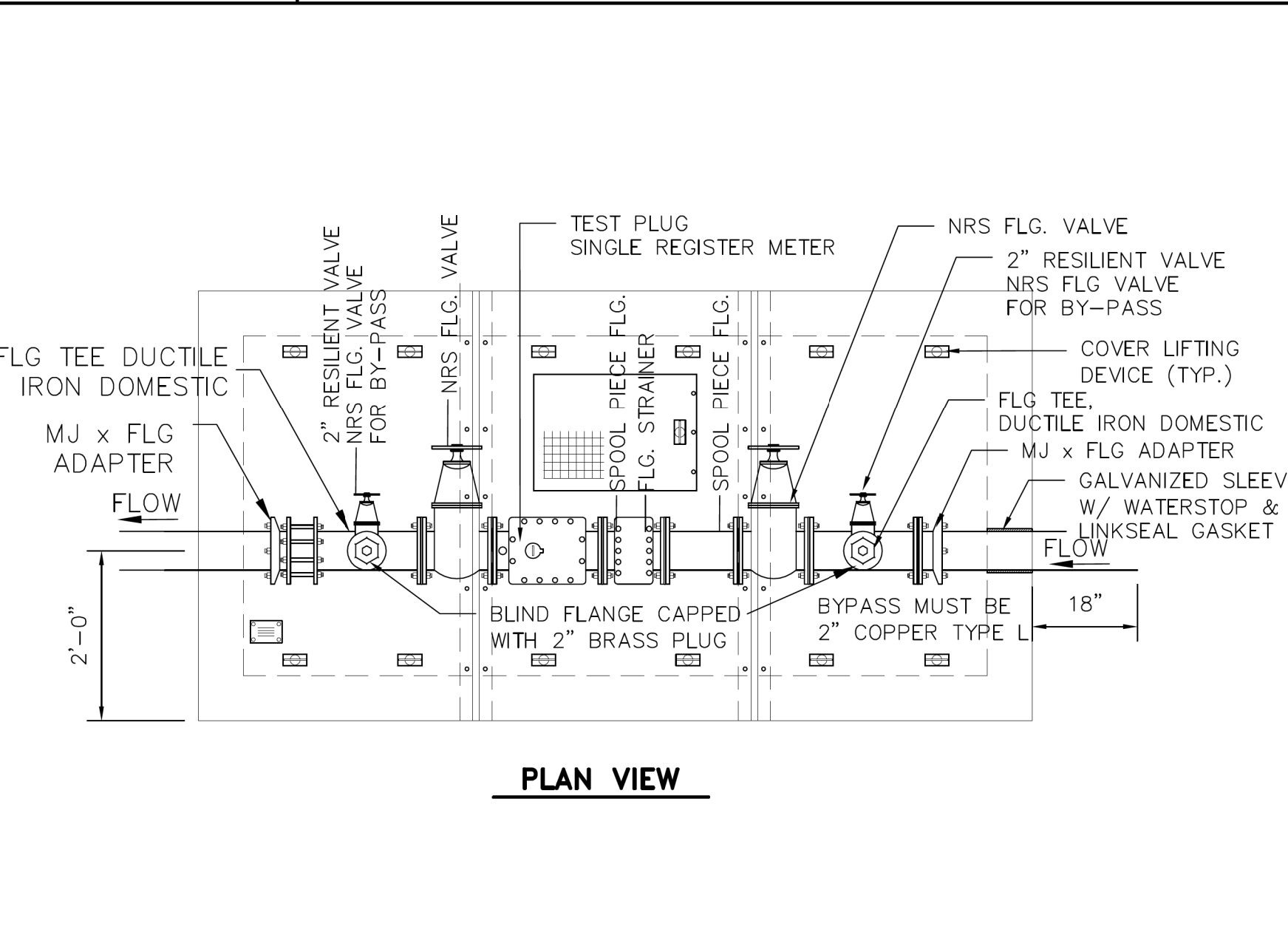
W-16

METHOD FOR FILLING NEW WATER LINES
PRIOR TO CHLORINATION AND TESTING



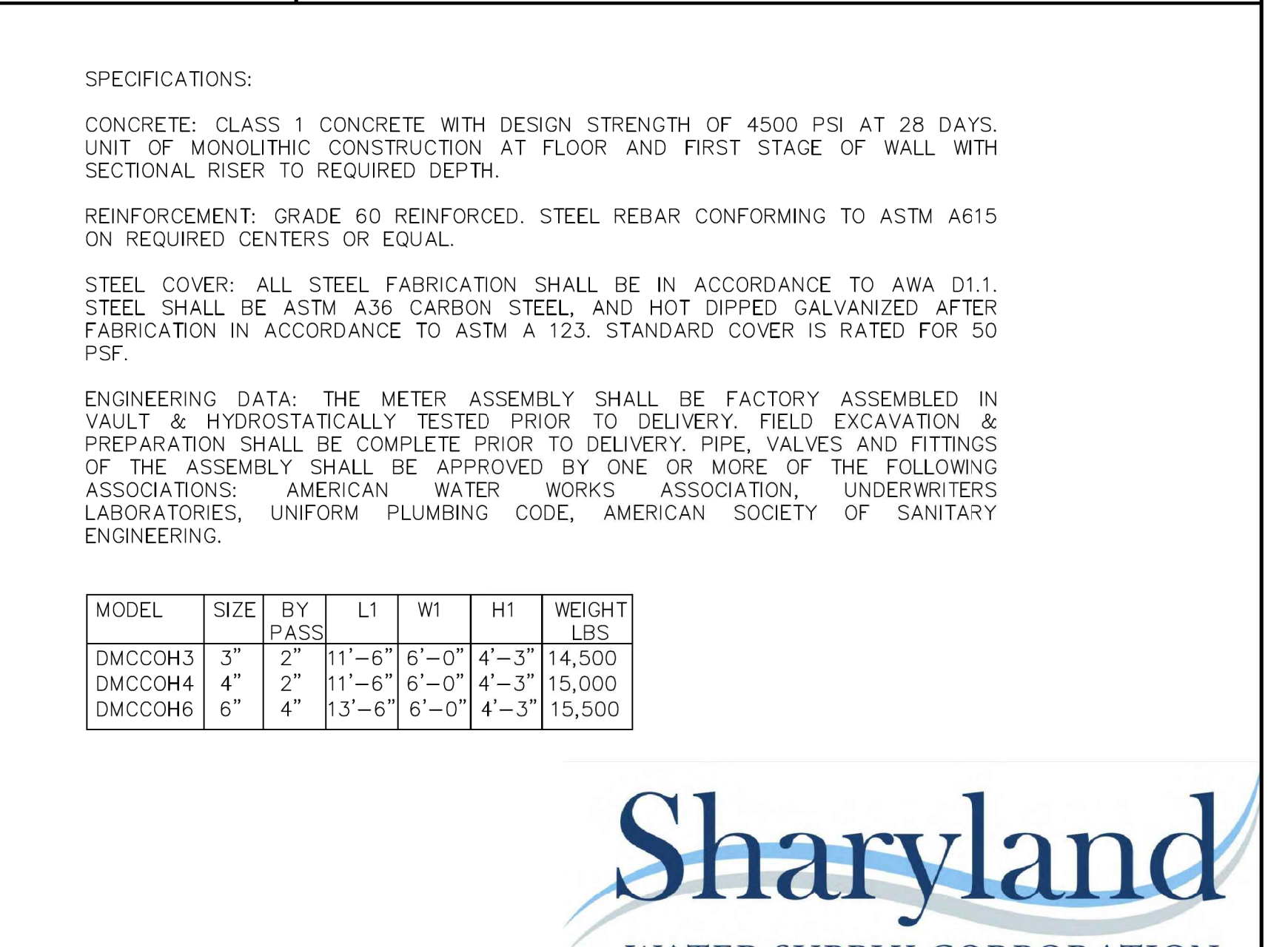
W-17A

METER VAULT
DETAILS



W-17B

METER VAULT
DETAILS



W-17C

METER VAULT
GENERAL NOTES

Description	AZ02040041
AS0101	
CF 001	
Date	8/8/2024
	3/14/2024
	8/13/2024
No.	1
	4
	6

PROJECT NO.: 21087
ISSUE DATE: 8/13/2024
DRAWN BY: SK
CHECKED BY: BG

SHEET NAME

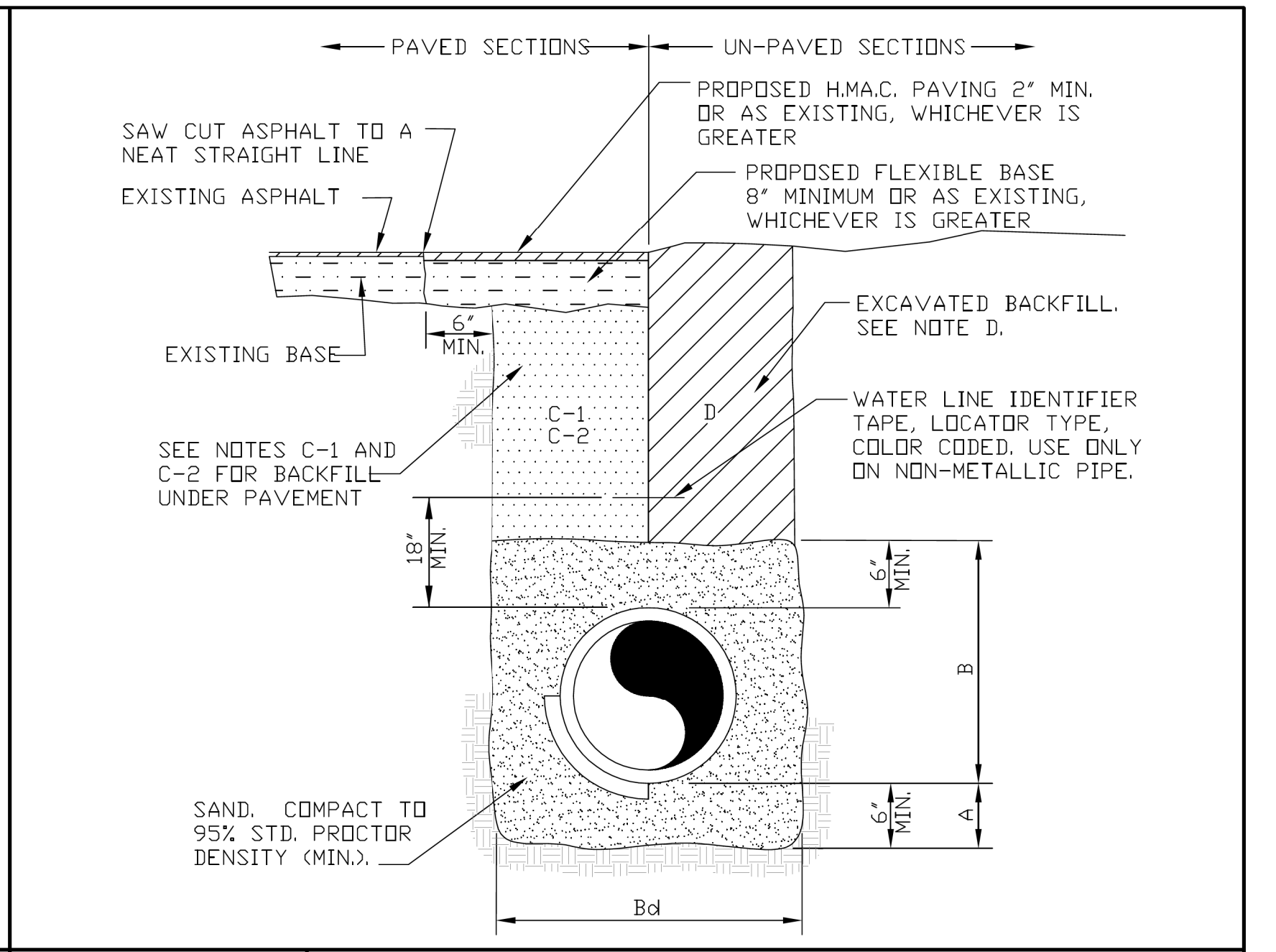
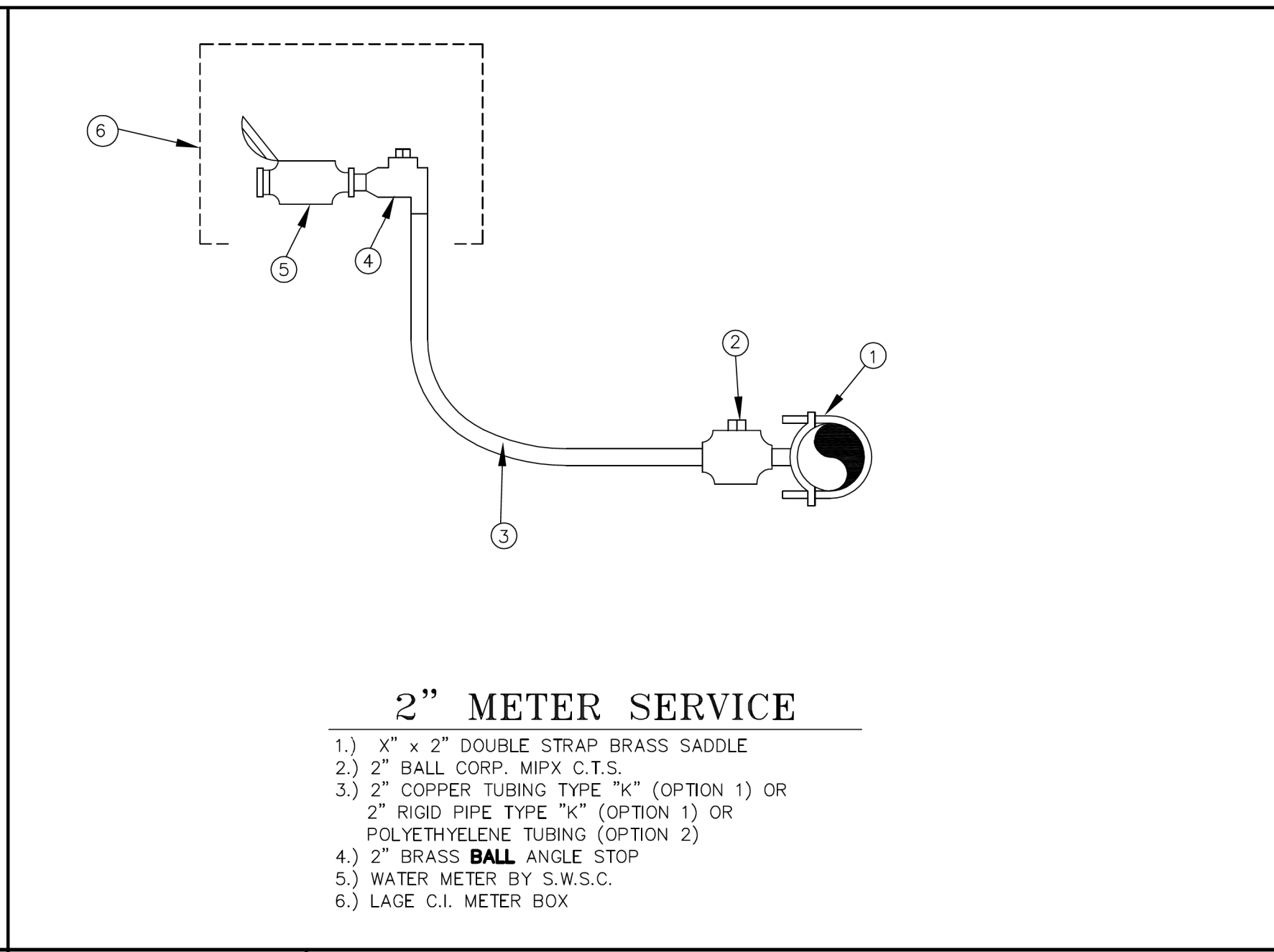
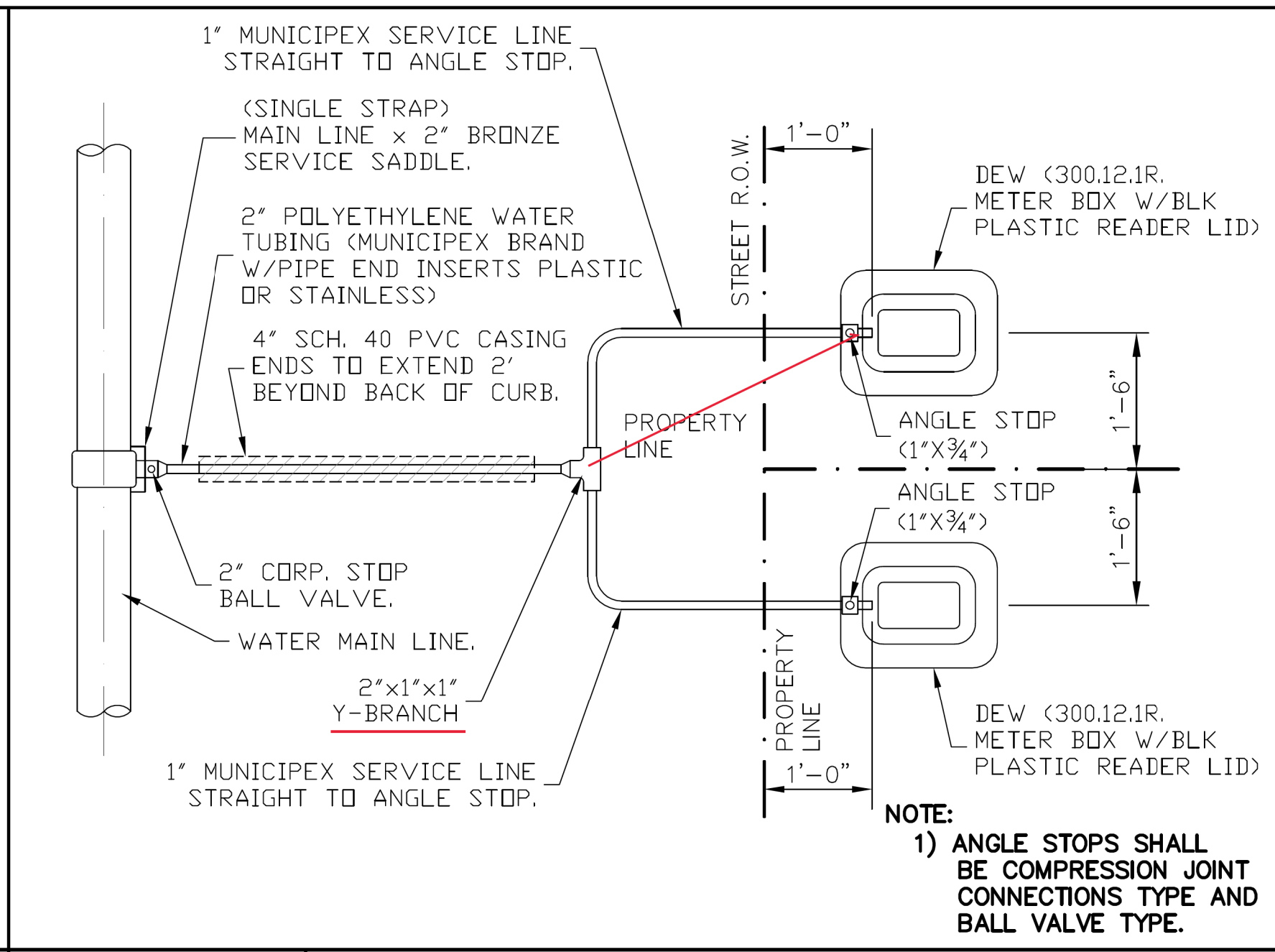
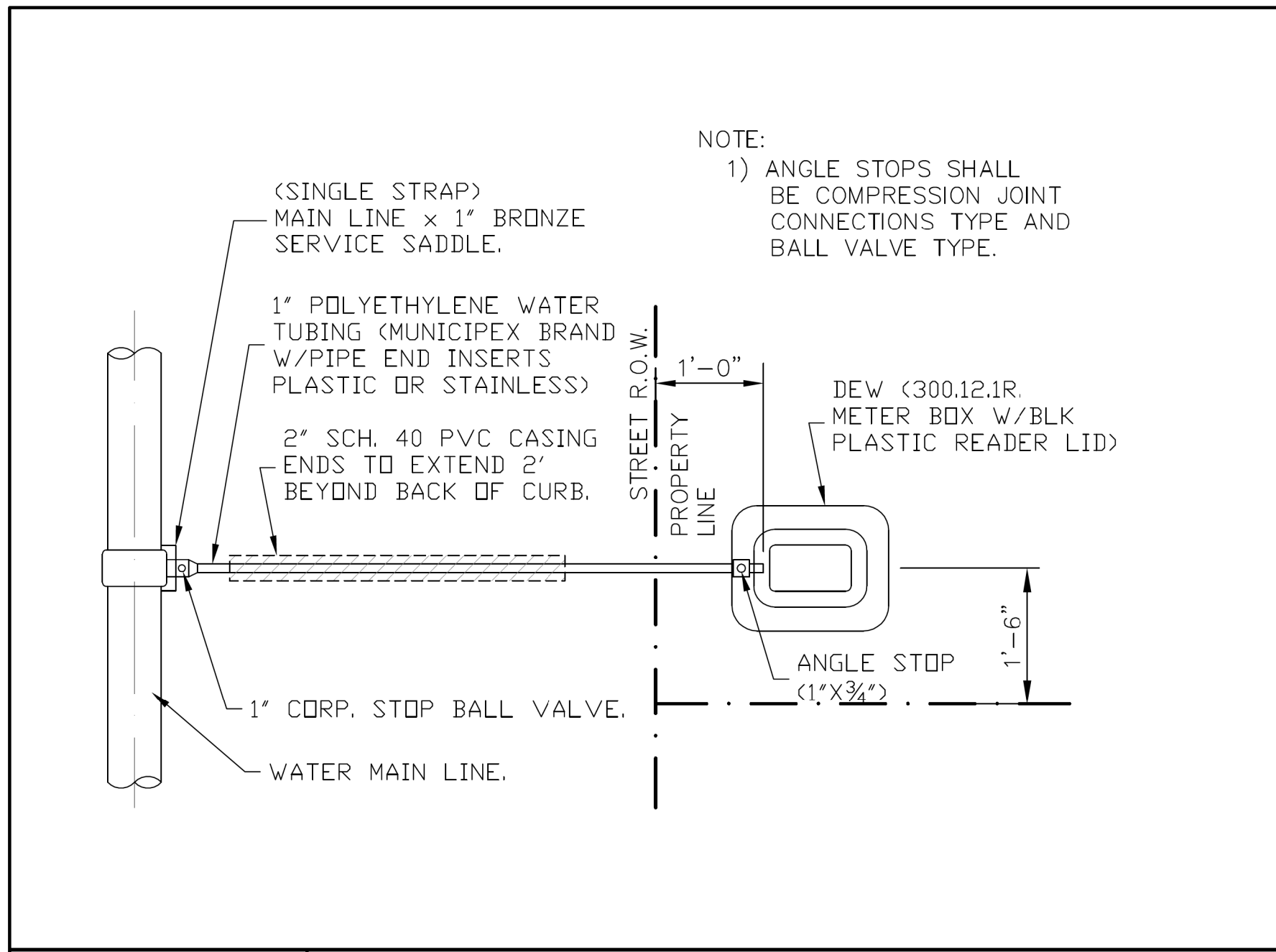
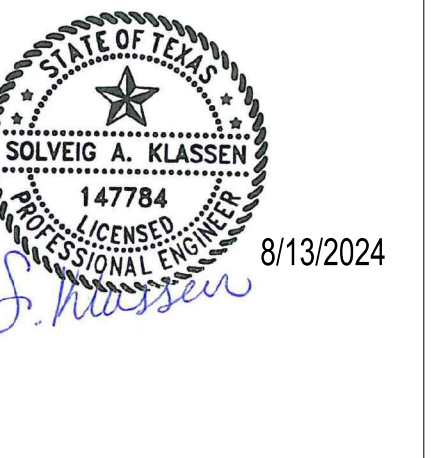
WATERLINE
DETAILS

Sheet Number
C7.03

Project Status

CONSTRUCTION DOCUMENTS

Sheet
C7.04



W-1 RESIDENTIAL SINGLE WATER SERVICE CONNECTION

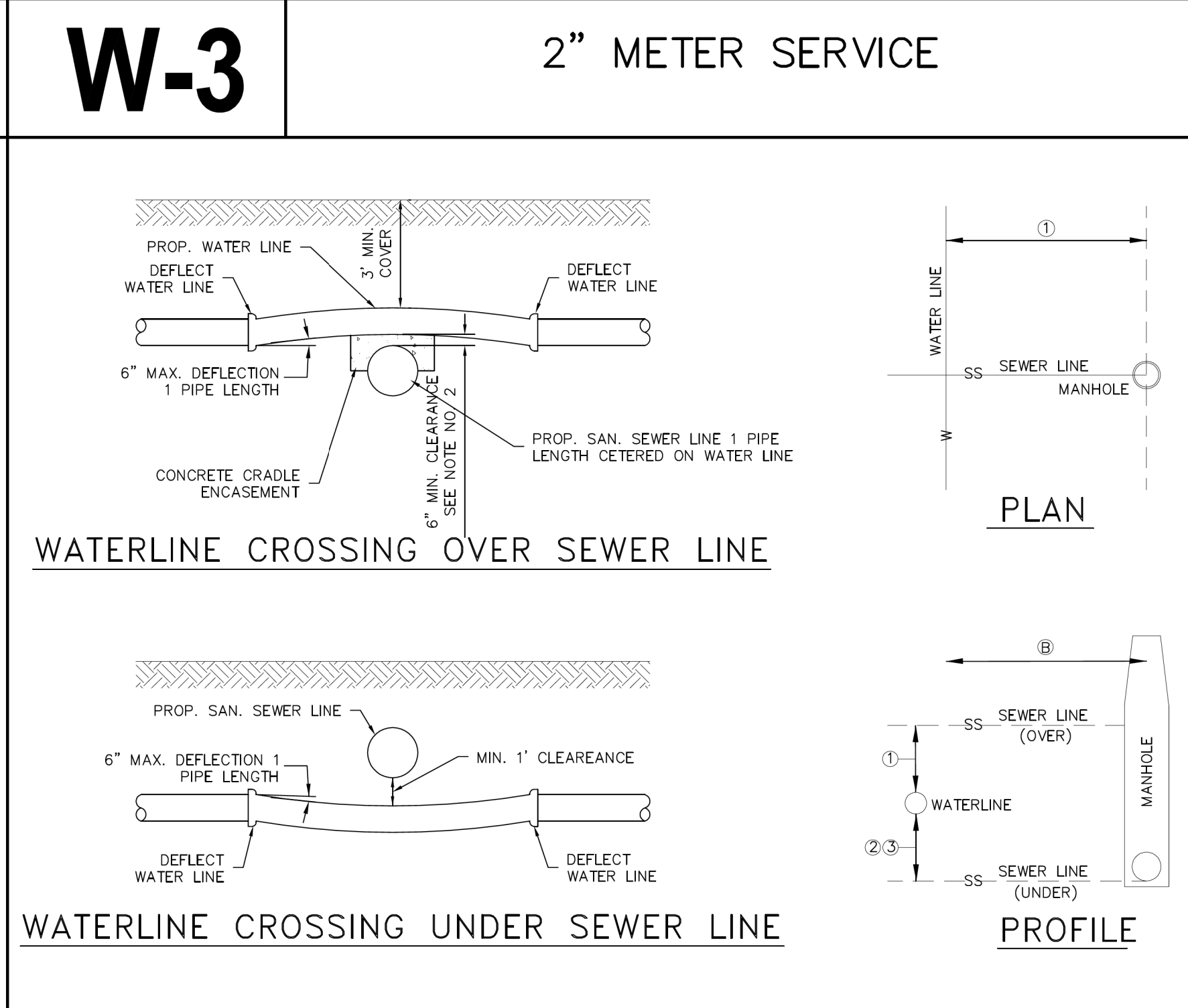
NOTES:
A. SAND BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").
B. SAND BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 6" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE MANHOLES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.
C-1. (CITY STREETS, PARKING AREA AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAX. LIFTS.
C-2. (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.
D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY 90% OUTSIDE RIGHT OF WAY, 95% INSIDE RIGHT OF WAY.
E. EMBODIMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBODIMENT MATERIAL SHALL BE CLASS II OR III WITH < 50% PASSING A No. 200 SIEVE AND PLASTICITY INDEX < 7.
F. WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.
G. FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS DIRECTED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.
H. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.
GENERAL NOTES:
1.) THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY COMPANIES FOR THE LOCATION OF ALL UTILITIES WITHIN CONSTRUCTION AREA.
2.) ALL EXIST. UTILITIES ARE AT APPROXIMATE LOCATIONS.
3.) THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED ON OBSERVATION OF ABOVEGROUND STRUCTURES, LINES SPOTTED BY THE OWNER, AND UTILITY SPOTTING. ACTUAL LOCATION OF THESE UTILITIES MAY VARY, AND ADDITIONAL BURIED UTILITIES MAY BE ENCOUNTERED UPON EXCAVATION.
4.) BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CALL FOR UTILITY SPOTTING BY THE APPROPRIATE AGENCY AND VERIFY THE LOCATION OF THESE UTILITIES TO HIS SATISFACTION.
5.) ANY DAMAGE CAUSED TO EXISTING STRUCTURES AND/OR UTILITIES BY THE CONTRACTOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT AT HIS EXPENSE.
6.) ANY DAMAGE TO PROPERTY, OUTSIDE THE CONSTRUCTION ZONE, CAUSED BY THE CONTRACTOR, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT AT HIS EXPENSE.

W-2 RESIDENTIAL DUAL WATER SERVICE CONNECTION

THRUST BLOCK SIZE			
DIAMETER OF PIPE IN INCHES	SURFACE AREA SQ. FT.	THICKNESS IN INCHES	WEIGHT LBS.
22-1/2" BEND	2	8	1,700
6" OR LESS	2	12	3,000
10	3.5	12	4,500
12	4	14	6,000
14	5	18	9,000
16	6	18	11,800
45° BEND			
6" OR LESS	4	12	3,200
10	6	15	5,800
12	7	18	13,000
14	8	24	12,000
16	11.5	24	23,200
90° BEND			
6" OR LESS	6	12	6,000
8	8	15	16,700
10	10	18	18,700
12	12	18	24,000
14	18	24	32,600
16	21	24	42,700

TEES & DEAD ENDS **VERTICAL BENDS**
HORIZONTAL BENDS **HYDRANT BURYS**

THRUST BLOCKS DETAILS
NOTE: ALL VALUES SHOWN ARE MIN. FOR A HYDROSTATIC PRESSURE OF 150 P.S.I. AND A SOIL RESISTANCE OF 2,000 P.S.F. FOR 50 FT. WITH PROPER PAVING A MIN. OF 3 FT. OF COVER WITH CURB & GUTTER AND A 3 FT. MIN. WITHOUT CURB & GUTTER



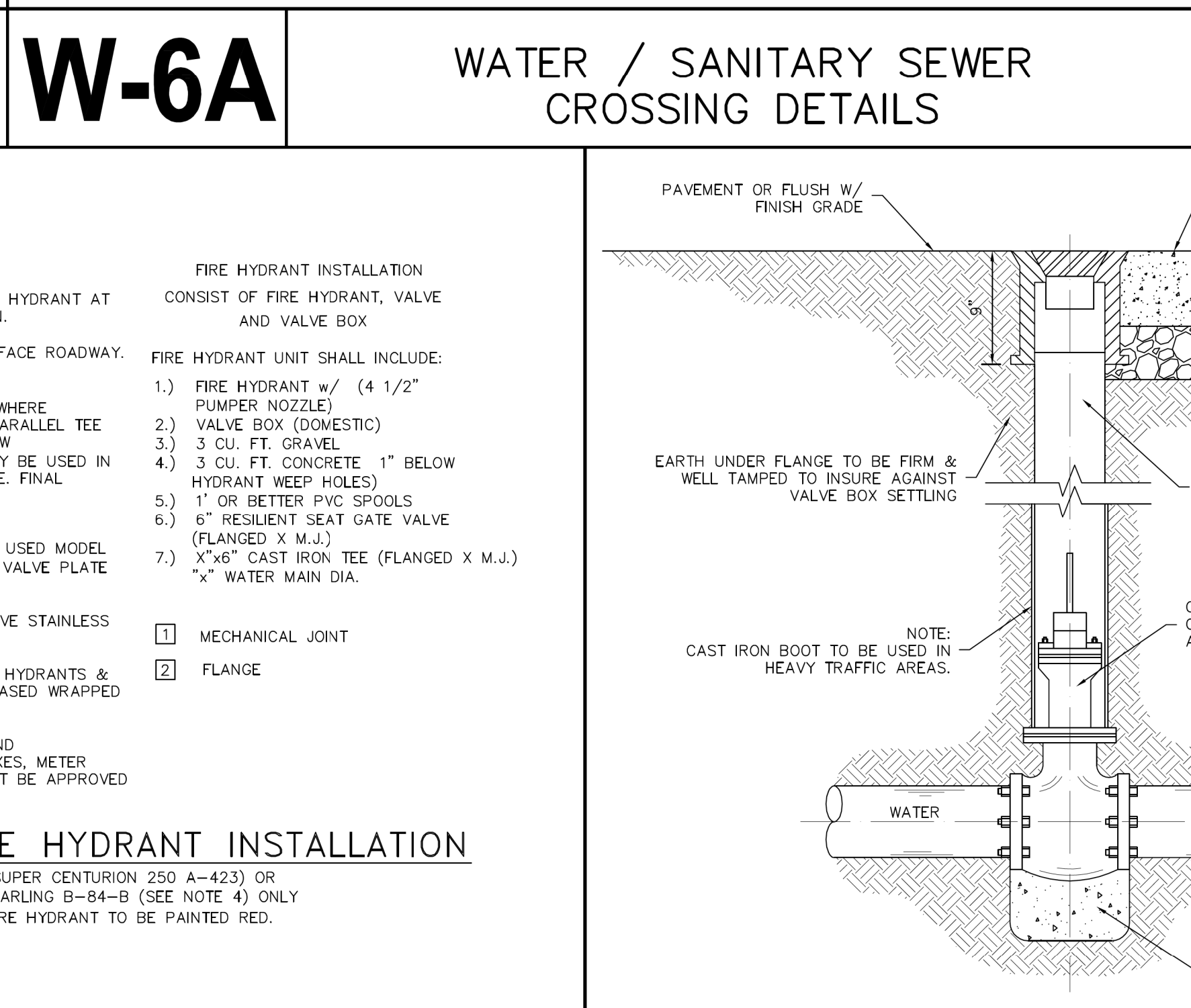
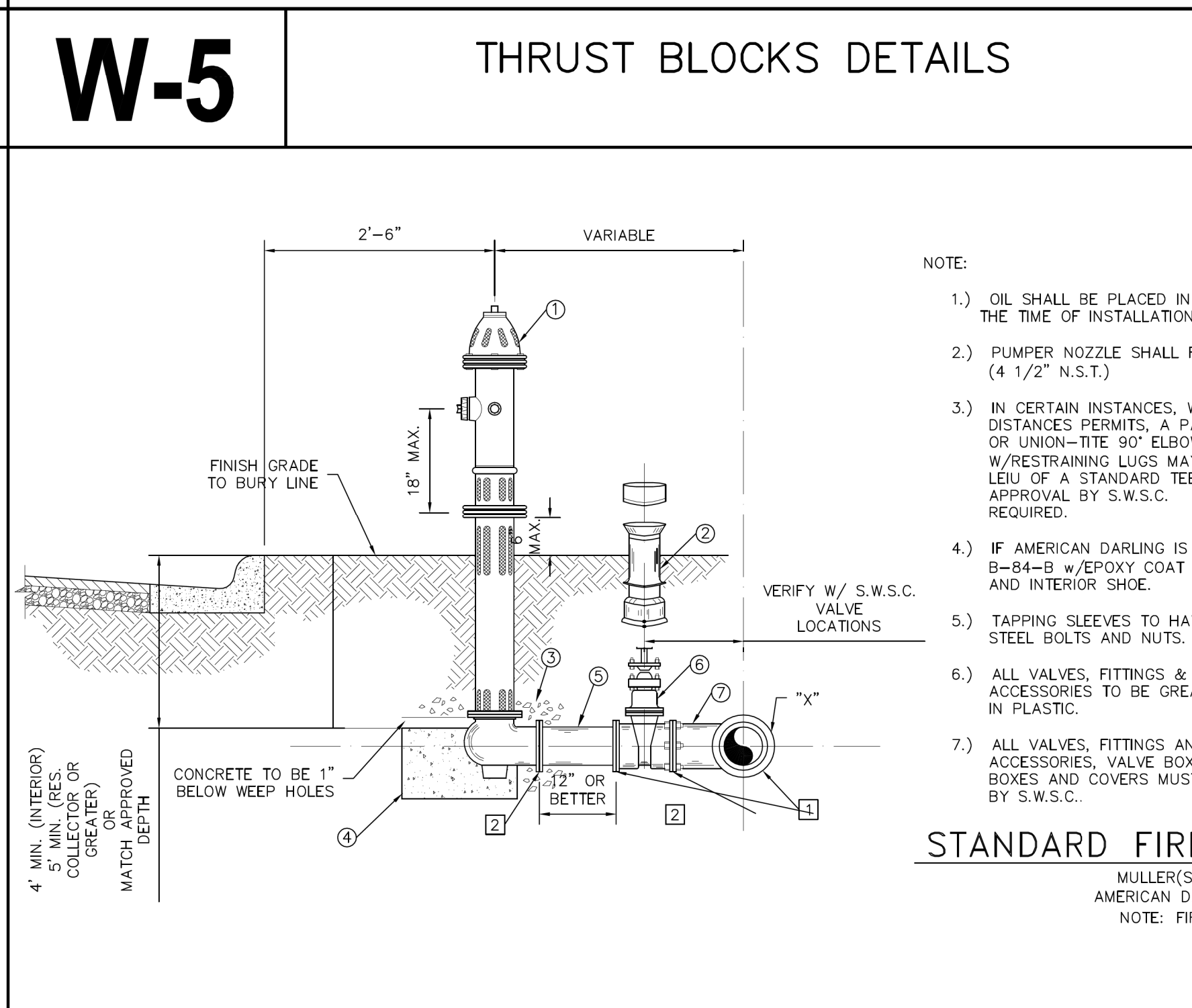
W-4A TYPICAL WATER LINE AND SEWER FORCEMAIN BEDDING DETAIL

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 3 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS

(1) COLLECTION SYSTEM PIPES MUST BE INSTALLED IN TRENCHES SEPARATE FROM WATER SUPPLY TRENCHES.
(2) WHEREVER POSSIBLE, A COLLECTION SYSTEM PIPE MUST BE LOCATED BELOW A WATER SUPPLY PIPE. IF A COLLECTION SYSTEM PIPE CANNOT BE LOCATED BELOW A WATER SUPPLY PIPE, THE OWNER MUST JUSTIFY IN THE ENGINEERING REPORT WHY IT IS NOT POSSIBLE TO LOCATE THE COLLECTION SYSTEM PIPE BELOW THE PUBLIC WATER SUPPLY PIPE.
(3) WHEREVER POSSIBLE, COLLECTION SYSTEM PIPES AND MANHOLES MUST BE LOCATED AT LEAST NINE FEET FROM ALL WATER SUPPLY PIPES. IF A COLLECTION SYSTEM PIPE OR MANHOLE CANNOT BE LOCATED AT LEAST NINE FEET AWAY FROM A WATER SUPPLY PIPE, THE OWNER MUST JUSTIFY IN THE ENGINEERING REPORT WHY IT IS NOT POSSIBLE TO PROVIDE AT LEAST NINE FEET OF SEPARATION. TABLE C.L. IN FIGURE 30 TAC 801.530(D)(3) PROVIDES A REFERENCE TO PARAGRAPHS IN THIS SUBSECTION THAT APPLY IF A COLLECTION SYSTEM PIPE OR MANHOLE CANNOT BE LOCATED AT LEAST NINE FEET AWAY FROM A WATER SUPPLY PIPE TO THE WATER SUPPLY PIPE. EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST BE ENCASED. THE CASING PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI SQUARE INCH (PSI) PRESSURE CLASS PIPE THAT:
(A) ENCASES THE ENTIRE LENGTH OF COLLECTION SYSTEM PIPE THAT IS WITHIN NINE FEET OF THE WATER SUPPLY PIPE;
(B) IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
(C) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
(D) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
(4) IF A COLLECTION SYSTEM PIPE CROSSES ABOVE A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH. (A) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES ABOVE A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS: (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; (II) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
(5) IF A COLLECTION SYSTEM PIPE CROSSES ABOVE A WATER SUPPLY PIPE AND RUNS PARALLEL TO THE WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH.
(6) IF A COLLECTION SYSTEM PIPE IS LOCATED BELOW A WATER SUPPLY PIPE AND RUNS PARALLEL TO THE WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH.

W-4B STANDARD WATER PIPE BEDDING DETAILS

(A) A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL TO AND BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE THAT:
(I) IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE;
(II) BE LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND
(III) INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
(B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT:
(I) IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
(II) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
(III) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
(7) IF A COLLECTION SYSTEM PIPE CROSSES BELOW A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN CEMENT-STABILIZED SAND ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (C) OF THIS PARAGRAPH. (A) A COLLECTION SYSTEM THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE THAT:
(I) HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
(II) BE CENTERED ON THE CROSSING; (III) BE AT LEAST 18 FEET LONG; AND
(IV) TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
(8) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
(I) HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND
(II) BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH.
(C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
(I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
(II) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
(III) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 7 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
(9) CEMENT-STABILIZED SAND FOR ENCASED COLLECTION SYSTEM PIPES MUST:
(I) INCLUDE AT LEAST 160 POUNDS OF CEMENT FOR EVERY CUBIC YARD OF SAND;
(II) BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE;
(III) BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER.



W-6B WATER / SANITARY SEWER CROSSING DETAILS

Sharyland
WATER SUPPLY CORPORATION

W-6C WATER / SANITARY SEWER CROSSING DETAILS

W-7 STANDARD WATER PIPE BEDDING DETAILS

W-8 TYPICAL VALVE AND VALVE BOX INSTALLATION ON MAIN LINE

HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

Revision: AZERQDQW4H1
AS-001
CF-001

Date: 8/8/2024
3/4/2024
07/12/2024

No: 1 4 6

PROJECT NO.: 21087
ISSUE DATE: 8/13/2024
DRAWN BY: SK
CHECKED BY: HJ
SHEET NAME

WATERLINE DETAILS

Sheet Number
C7.04

Project Status:

CONSTRUCTION DOCUMENTS

8/11/2024 8:41:22 AM Autodesk Docs/21087 - Hidalgo County El Paraiso Building/21087 Hidalgo County El Paraiso (Bldg)_Basin.rvt

Change Proposal Request (CPR)

Project Information	
Project #	2134
Title	Hidalgo County El Paraiso Project
Address	1901 N Los Ebanos Rd
City, State, Zip	Alton, TX 78573
Country	United States

Change Proposal Request	
Contract #	001
CPR #	006
Issue Date	16-Oct-2024
Subject	ASI 001 Changes to Leech Field

Prime Contract Company	
Contact	Andrew Martinez
Company	NM Contracting, LLC
Address	2022 Orchid Ave
City, State, Zip	McAllen, TX 78504-4152
Country	United States
Phone	956-631-5667
Fax	

Owner	
Contact	Hidalgo County Precinct 3 County of Hidalgo
Company	Hidalgo County Precinct 3
Address	724 Breyfogle Rd
City, State, Zip	Mission, TX 78574
Country	United States
Phone	956-585-4509
Fax	

Description of the proposed change:

Scope of work identified below is aligned with ASI 001 and the revisions and clarifications based on building permit comments from Hidalgo County health department & fire marshall. The changes to the plan documents are identified below as Clouded (RED) & RED Lined . The cost for the new proposed pricing for the Sanitary Sewer System are shown in the attached documents with the breakdown from subcontractor. The scope of work increased in size, material & labor cost. Keep in mind that the work being done is being priced at today's market prices and not when previously bid.

Net Amount of this Proposed Change:

~~\$130,451.26~~

The Contract time due to this Change Proposal Request has increased by ~~35 Working Days.~~

This document, when fully executed as accepted, shall constitute authorization to proceed with the work described herein.

Submitted By
 NM Contracting, LLC
 Company

 By _____ Date 10/16/2024

Response: Accept Do Not Accept
 Hidalgo County Precinct 3
 Company
 By _____ Date _____

Design Team and Brownstone Recommendation:

Approved Price: \$25,200
 Approved Days: 14 days

Change Proposal Request (CPR)

Proposed Items

Item #	Item Description	Quantity	Unit	Unit Price	Subtotal
1	6" Sewer Lines, WYE, CO, & 45's String Pipe \$91.72 Install Sewer Line & Fitting \$2261.00 Test 8' Sewer \$168.44 Pull Mandrel \$257.88 Materials \$5,070.12 Gravel Bedding \$1,125.35	1	LS	8,974.51	8,974.51
2	New Designed Leaching Field (84'x99') Exc Leaching Field \$11,304.98 Install Chambers \$12,435.49 Install Inspection Port W / Valves \$904.41 Backfill Native Soil - 40% Fluff \$25,882.27 Spread Excess Dirt on Site \$1216.34 Leaching Field Materials \$36,058.00	1	LS	87,801.49	87,801.49
3	New Designed Leaching Field (8'x125' & 20' x 132') Exc Leaching Field \$10,730.49 Install Chambers \$5,132.46 Install Inspection Port W / Valves \$452.21 Backfill Native Soil - 40% Fluff \$12,362.26 Spread Excess Dirt on Site \$501.25 Leaching Field Materials \$15,632.64	1	LS	44,811.51	44,811.51
4	OH & Profit of Sub	1	LS	25,485.75	25,485.75
5	OH & Profit of GC	1	LS	18,378.00	18,378.00
6	Credit Back as per SOV 6" sanitary sewer connection \$2,500.00 6" sanitary sewer connection Labor \$1,000.00 6" clean out assembly Materials \$5,080.00 6" clean out assembly Labor \$1,250.00 6" wye Materials \$1,000.00 6" wye Labor \$500 6" 45° elbow Material \$800.00 6" 45° elbow Labor \$370.00 Leach field aggregate/soils \$10,000.00 Leach field Material \$20,000.00 Leach field Labor \$12,500.00	1	LS	-55,000.00	-55,000.00

Subtotal = \$130,451.26

Tax = \$0.00

Total = \$130,451.26

Cost Report

JR-Garcia Company

Page 1 of 12

240716-2

HC EL PARAISO-ASI 01-SEWER SYSTEM_REV1

10/03/2024 1:34 PM

Biditem

GENERAL CONDITIONS

5

Takeoff Qty: 1.000 LS

Bid Qty: 1.000 LS

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	18,705.00	4,631.20	23,336.20	8,343.96	500.00	0.00	0.00	0.00	32,180.16
Total	18,705.00	4,631.20	23,336.20	8,343.96	500.00	0.00	0.00	0.00	32,180.16

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
510.0000	0.0020	510.0000	63.0984	36.6765	45.7573	0.0014

Activity: 108 Project Manager Quantity: 30 Unit: WD

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	200.00	49.90	249.90	42.79	0.00	0.00	0.00	0.00	292.69
Total	6,000.00	1,497.00	7,497.00	1,283.76	0.00	0.00	0.00	0.00	8,780.76

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
292.6920	4.0000	0.2500	73.1730	15.0000	2.0000	0.5000	585.3840

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
120.0000	0.2500	4.0000	62.4750	200.0000

Calendar: 40 40 Hour Work Week 5 x 8 hr Hrs/Shift: 8 WC: TX5506 Average Worker's Comp

Crew: LPM PROJECT MANAGER Prod: SU 0.5 Eff: 100.00 Crew Hrs: 120.00 Labor Pcs: 1.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPU	Pickup Truck	1.00	120.00	HR	10.70	100.00	10.70	1,283.76
LSUPM	Project Manager	1.00	120.00	MH	50.00	100.00	62.48	7,497.00

Activity: 120 Foreman w/ Pickup Quantity: 30 Unit: WD

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	330.00	82.34	412.34	85.58	0.00	0.00	0.00	0.00	497.92
Total	9,900.00	2,470.05	12,370.05	2,567.52	0.00	0.00	0.00	0.00	14,937.57

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
497.9190	8.0000	0.1250	62.2399	30.0000	1.0000	1.0000	497.9190

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
240.0000	0.1250	8.0000	51.5419	330.0000

Calendar: 40 40 Hour Work Week 5 x 8 hr Hrs/Shift: 8 WC: TX5506 Average Worker's Comp

Crew: LFOR FOREMAN ROADWORK Prod: SU 1 Eff: 100.00 Crew Hrs: 240.00 Labor Pcs: 1.00 Equipment Pcs: 1.00

Notes: based on supervising
6 men
1 hour of Foreman / 6 mh's

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPUFO	Foreman's Pickup	1.00	240.00	HR	10.70	100.00	10.70	2,567.52
LSUFOR	Foreman Strs & Roadwork	1.00	240.00	MH	41.25	100.00	51.54	12,370.05

Activity: 121 Crew Truck Quantity: 30 Unit: WD

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
128.3600	10.0000	0.1000	12.8360	30.0000	1.0000	1.0000	128.3600

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: CT0 Crew Truck Prod: SU 1 Eff: 100.00 Crew Hrs: 300.00 Labor Pcs: 0.00 Equipment Pcs: 1.00

Notes: based on supervising
6 men

1 hour of Foreman / 6 mh's

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TCR	Crew Truck w/o Tools	1.00	300.00	HR	12.84	100.00	12.84	3,850.80

Activity: 125 Survey Party Quantity: 30 Unit: WD

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	93.50	22.14	115.64	21.40	0.00	0.00	0.00	0.00	137.03
Total	2,805.00	664.15	3,469.15	641.88	0.00	0.00	0.00	0.00	4,111.03

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
137.0343	2.5000	0.4000	54.8137	7.5000	4.0000	0.2500	548.1373

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
150.0000	0.2000	5.0000	23.1277	93.5000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: SURV02 2 MAN SURVEY CREW Prod: SU 0.25 Eff: 100.00 Crew Hrs: 75.00 Labor Pcs: 2.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8TPU	Pickup Truck 80%80	1.00	75.00	HR	10.70	100.00	8.56	641.88
LSRRO	Rodman	1.00	75.00	MH	14.00	110.00	19.05	1,428.47
LSRSU	Surveyor	1.00	75.00	MH	20.00	110.00	27.21	2,040.68

Activity: 210 Project Water Quantity: 1 Unit: MG

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2B6CZ	Water	1.00	1.00	MG	500.00	100.00	500.00	500.00

Biditem
20

6" SEWER LINES, WYE, C.O. AND 45'S

Take off Qty: 157.000 LF
Bid Qty: 157.000 LF

Client #: 1

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	8.83	2.09	10.92	6.78	37.07	0.00	0.00	2.39	57.16
Total	1,386.52	328.29	1,714.81	1,064.23	5,819.66	0.00	0.00	375.81	8,974.51

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
79.2200	1.9818	0.5046	113.2859	17.5021	21.6462	10.0600

Activity: 110 String Pipe Quantity: 167 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.27	0.06	0.33	0.22	0.00	0.00	0.00	0.00	0.55
Total	45.10	10.68	55.78	35.94	0.00	0.00	0.00	0.00	91.72

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
0.5492	0.0050	200.0000	109.8443	0.0835	2,000.0000	0.0005	1,098.4431

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
2.5100	66.5339	0.0150	22.2231	0.2701

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: L20M2 2CY LOADER, 2 MEN Prod: US 2000 Eff: 100.00 Crew Hrs: 0.84 Labor Pcs: 3.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8L20	Loader 2 cy	1.00	0.84	HR	42.79	100.00	42.79	35.94
LCUT3	Skilled Labor	2.00	1.67	MH	16.00	110.00	21.77	36.35
LOPLD	Loader Operator	1.00	0.84	MH	17.00	110.00	23.13	19.43

Activity: 120 Install Sewer Line & Fittings Quantity: 157 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	6.80	1.61	8.41	6.00	0.00	0.00	0.00	0.00	14.40
Total	1,067.00	252.64	1,319.64	941.36	0.00	0.00	0.00	0.00	2,261.00

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
14.4013	0.0637	15.7000	226.1000	1.0000	157.0000	0.0064	2,261.0000

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
60.0000	2.6167	0.3822	21.9940	6.7962

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 157 Eff: 100.00 Crew Hrs: 10.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	10.00	HR	51.35	100.00	51.35	513.47
8L20	Loader 2 cy	1.00	10.00	HR	42.79	100.00	42.79	427.89
LCUT1	Utility Man	2.00	20.00	MH	14.00	110.00	19.05	380.93
LCUT3	Skilled Labor	2.00	20.00	MH	16.00	110.00	21.77	435.34
LOPEX3	Excavator Operator Utility	1.00	10.00	MH	20.00	110.00	27.21	272.09
LOPLD	Loader Operator	1.00	10.00	MH	17.00	110.00	23.13	231.28

Activity: 150 Test 8" Sewer Quantity: 167 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.69	0.16	0.86	0.15	0.00	0.00	0.00	0.00	1.01
Total	115.52	27.35	142.87	25.57	0.00	0.00	0.00	0.00	168.44

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
1.0086	0.0143	70.0004	70.6040	0.2386	700.0042	0.0014	706.0402

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
7.1600	23.3240	0.0429	19.9539	0.6917

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LAB12 LABOR CREW 1 SKILL, 2 UTIL Prod: US 700 Eff: 100.00 Crew Hrs: 2.39 Labor Pcs: 3.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8A150	Air Compressor 100 - 199 CFM	1.00	2.39	HR	10.70	100.00	10.70	25.57
LCUT1	Utility Man	2.00	4.77	MH	14.00	110.00	19.05	90.85
LCUT3	Skilled Labor	1.00	2.39	MH	16.00	110.00	21.77	52.02

Activity: 160 Pull Mandrel Quantity: 167 Unit: LF

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.95	0.23	1.18	0.37	0.00	0.00	0.00	0.00	1.54
Total	158.90	37.62	196.52	61.36	0.00	0.00	0.00	0.00	257.88

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
1.5442	0.0143	70.0004	108.0941	0.2386	700.0042	0.0014	1,080.9406

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
9.5500	17.4869	0.0572	20.5780	0.9515

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: LBM4 LOADER BACKHOE, 4 MEN Prod: US 700 Eff: 100.00 Crew Hrs: 2.39 Labor Pcs: 4.00 Equipment Pcs: 1.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8LB	Loader / Backhoe	1.00	2.39	HR	25.67	100.00	25.67	61.36
LCUT1	Utility Man	2.00	4.77	MH	14.00	110.00	19.05	90.85
LCUT3	Skilled Labor	1.00	2.39	MH	16.00	110.00	21.77	52.02
LOPEX1	Backhoe Operator	1.00	2.39	MH	16.50	110.00	22.45	53.65

Activity: 210 Materials Quantity: 1 Unit: LS

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZSSMAT	SS Pipe & Fittings	1.00	1.00	LS	5,070.12	100.00	5,070.12	5,070.12

Activity: 225 Gravel Bedding Quantity: 20.65 Unit: CY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	0.00	0.00	0.00	0.00	36.30	0.00	0.00	18.20	54.50
Total	0.00	0.00	0.00	0.00	749.54	0.00	0.00	375.81	1,125.35

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Notes: [[Attached Files: PVC Bedding Calcs.xlsx]]

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2EBCA	Gravel Bedding	1.65	34.07	TON	22.00	100.00	22.00	749.54
5AEA	Haul Gravel by the Ton	1.65	34.07	TON	8.00	100.00	8.00	272.56
5AGA	Haul Dirt by the bcy	1.00	20.65	BCY	5.00	100.00	5.00	103.25



40

Takeoff Qty: 1.000 EA
 Bid Qty: 1.000 EA

Client #: 3

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	21,998.86	5,208.71	27,207.57	24,535.92	36,058.00	0.00	0.00	0.00	87,801.49
Total	21,998.86	5,208.71	27,207.57	24,535.92	36,058.00	0.00	0.00	0.00	87,801.49

Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
1,202.7500	0.0008	1,202.7500	73.0006	18.2905	22.6211	0.0050

Activity: 120 Exc Leaching Field Quantity: 2621.5 Unit: BCY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	2.04	0.48	2.52	1.80	0.00	0.00	0.00	0.00	4.31
Total	5,335.00	1,263.18	6,598.18	4,706.80	0.00	0.00	0.00	0.00	11,304.98

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
4.3124	0.0191	52.4300	226.0996	5.0000	524.3000	0.0019	2,260.9960

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
300.0000	8.7383	0.1144	21.9939	2.0351

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 524.3 Eff: 100.00 Crew Hrs: 50.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Notes: 2,156 BCY of Excavation Leach
 465.5 BCY of Slope Excavation
 2,621.5 BCY Dirt Excavation Total

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	50.00	HR	51.35	100.00	51.35	2,567.35
8L20	Loader 2 cy	1.00	50.00	HR	42.79	100.00	42.79	2,139.45
LCUT1	Utility Man	2.00	100.00	MH	14.00	110.00	19.05	1,904.63
LCUT3	Skilled Labor	2.00	100.00	MH	16.00	110.00	21.77	2,176.72
LOPEX3	Excavator Operator Utility	1.00	50.00	MH	20.00	110.00	27.21	1,360.45
LOPLD	Loader Operator	1.00	50.00	MH	17.00	110.00	23.13	1,156.38

Activity: 130 Install Chambers Quantity: 550 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	10.67	2.53	13.20	9.41	0.00	0.00	0.00	0.00	22.61
Total	5,868.50	1,389.50	7,258.00	5,177.49	0.00	0.00	0.00	0.00	12,435.49

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
22.6100	0.1000	10.0000	226.0998	5.5000	100.0000	0.0100	2,260.9982

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
330.0000	1.6667	0.6000	21.9939	10.6700

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 100 Eff: 100.00 Crew Hrs: 55.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	55.00	HR	51.35	100.00	51.35	2,824.09
8L20	Loader 2 cy	1.00	55.00	HR	42.79	100.00	42.79	2,353.40
LCUT1	Utility Man	2.00	110.00	MH	14.00	110.00	19.05	2,095.09
LCUT3	Skilled Labor	2.00	110.00	MH	16.00	110.00	21.77	2,394.39
LOPEX3	Excavator Operator Utility	1.00	55.00	MH	20.00	110.00	27.21	1,496.50
LOPLD	Loader Operator	1.00	55.00	MH	17.00	110.00	23.13	1,272.02

Activity: 140 Install Inspection Port W / Valves Quantity: 4 Unit: EA

Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
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U. Cost	106.70	25.27	131.97	94.14	0.00	0.00	0.00	0.00	226.10
Total	426.80	101.06	527.86	376.55	0.00	0.00	0.00	0.00	904.41

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
226.1025	1.0000	1.0000	226.1025	0.4000	10.0000	0.1000	2,261.0250

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
24.0000	0.1667	6.0000	21.9942	106.7000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 4.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	4.00	HR	51.35	100.00	51.35	205.39
8L20	Loader 2 cy	1.00	4.00	HR	42.79	100.00	42.79	171.16
LCUT1	Utility Man	2.00	8.00	MH	14.00	110.00	19.05	152.37
LCUT3	Skilled Labor	2.00	8.00	MH	16.00	110.00	21.77	174.14
LOPEX3	Excavator Operator Utility	1.00	4.00	MH	20.00	110.00	27.21	108.84
LOPLD	Loader Operator	1.00	4.00	MH	17.00	110.00	23.13	92.51

Activity: 150 Backfill Native Soil - 40% Fluff Quantity: 3494 Unit: TCY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	2.83	0.67	3.50	3.90	0.00	0.00	0.00	0.00	7.41
Total	9,896.76	2,343.27	12,240.03	13,642.24	0.00	0.00	0.00	0.00	25,882.27

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
7.4076	0.0250	40.0000	296.3053	8.7350	400.0000	0.0025	2,963.0532

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
524.1000	6.6667	0.1500	23.3544	2.8325

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L30M2 3CY LOADER, 2 MEN Prod: US 400 Eff: 100.00 Crew Hrs: 87.35 Labor Pcs: 6.00 Equipment Pcs: 5.00

Notes: 40% Fluff

Chamber Area In CY
1 Chamber = 0.32 CY

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8B15	Blade > 150 HP	1.00	87.35	HR	42.79	100.00	42.79	3,737.62
8L30	Loader 3 cy	1.00	87.35	HR	51.35	100.00	51.35	4,485.16
8RC084	Compactor 84"	1.00	87.35	HR	27.81	100.00	27.81	2,429.47
8TDT14	Dump Truck Tandem 14 cy	2.00	174.70	HR	17.12	100.00	17.11	2,989.99
LCUT3	Skilled Labor	1.00	87.35	MH	16.00	110.00	21.77	1,901.36
LDRDT	Dump Truck Driver	2.00	174.70	MH	17.00	110.00	23.13	4,040.40
LOPBL	Blade Operator	1.00	87.35	MH	20.00	110.00	27.21	2,376.71
LOPLD	Loader Operator	1.00	87.35	MH	17.00	110.00	23.13	2,020.20
LOPRC	Compactor Operator	1.00	87.35	MH	16.00	110.00	21.77	1,901.36

Activity: 160 Spread Excess Dirt on Site Quantity: 246.4 Unit: TCY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	1.91	0.45	2.37	2.57	0.00	0.00	0.00	0.00	4.94
Total	471.80	111.70	583.50	632.84	0.00	0.00	0.00	0.00	1,216.34

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
4.9364	0.0200	50.0000	246.8222	0.4928	500.0000	0.0020	2,468.2224

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
24.6500	9.9959	0.1000	23.6714	1.9148

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: L30M2 3CY LOADER, 2 MEN Prod: US 500 Eff: 100.00 Crew Hrs: 4.93 Labor Pcs: 5.00 Equipment Pcs: 4.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8B15	Blade > 150 HP	1.00	4.93	HR	42.79	100.00	42.79	210.95
8L30	Loader 3 cy	1.00	4.93	HR	51.35	100.00	51.35	253.14
8TDT14	Dump Truck Tandem 14 cy	2.00	9.86	HR	17.12	100.00	17.11	168.75
LCUT3	Skilled Labor	1.00	4.93	MH	16.00	110.00	21.77	107.31
LDRDT	Dump Truck Driver	2.00	9.86	MH	17.00	110.00	23.13	228.04
LOPBL	Blade Operator	1.00	4.93	MH	20.00	110.00	27.21	134.14
LOPLD	Loader Operator	1.00	4.93	MH	17.00	110.00	23.13	114.01

Activity: 210 Leaching Field Materials Quantity: 1 Unit: LS

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
ZZZLFM	Leaching Field Materials	1.00	1.00	LS	36,058.00	100.00	36,058.00	36,058.00

Biditem
50

LEACHING FIELD (8' X 125' & 20' X 132')

Takeoff Qty: 1.000 EA
Bid Qty: 1.000 EA

Client #: 4

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	12,600.51	2,983.46	15,583.97	13,594.70	15,632.84	0.00	0.00	0.00	44,811.51
Total	12,600.51	2,983.46	15,583.97	13,594.70	15,632.84	0.00	0.00	0.00	44,811.51

	Manhours	Unit/MH	MH/Unit	\$/MH	Base Labor/MH	Total Labor/MH	Unit/CH
	688.6900	0.0015	688.6900	65.0678	18.2963	22.6284	0.0097

Activity: 120 Exc Leaching Field & Stockpile Quantity: 1386.85 Unit: BCY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	3.64	0.86	4.50	3.24	0.00	0.00	0.00	0.00	7.74
Total	5,043.50	1,194.17	6,237.67	4,492.82	0.00	0.00	0.00	0.00	10,730.49

	Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
	7.7373	0.0252	39.6243	306.5854	3.5000	396.2429	0.0025	3,065.8543

	Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
	280.0000	4.9530	0.2019	22.2774	3.6367

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 396.2429 Eff: 100.00 Crew Hrs: 35.00 Labor Pcs: 8.00 Equipment Pcs: 4.00

Notes: 977.15 BCY of Excavation Leach
409.70 BCY of Slope Excavation
1,386.85 BCY Dirt Excavation Total

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	35.00	HR	51.35	100.00	51.35	1,797.15
8L20	Loader 2 cy	1.00	35.00	HR	42.79	100.00	42.79	1,497.62
8TDT14	Dump Truck Tandem 14 cy	2.00	70.00	HR	17.12	100.00	17.12	1,198.05
LCUT1	Utility Man	2.00	70.00	MH	14.00	110.00	19.05	1,333.24
LCUT3	Skilled Labor	2.00	70.00	MH	16.00	110.00	21.77	1,523.70
LDRDT	Dump Truck Driver	2.00	70.00	MH	17.00	110.00	23.13	1,618.94
LOPEX3	Excavator Operator Utility	1.00	35.00	MH	20.00	110.00	27.21	952.32
LOPLD	Loader Operator	1.00	35.00	MH	17.00	110.00	23.13	809.47

Activity: 130 Install Chambers Quantity: 227 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	10.67	2.53	13.20	9.41	0.00	0.00	0.00	0.00	22.61
Total	2,422.09	573.48	2,995.57	2,136.89	0.00	0.00	0.00	0.00	5,132.46

	Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
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22.6100	0.1000	10.0000	226.0996	2.2700	100.0000	0.0100	2,260.9956
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Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
136.2000	1.6667	0.6000	21.9939	10.6700

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 100 Eff: 100.00 Crew Hrs: 22.70 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	22.70	HR	51.35	100.00	51.35	1,165.58
8L20	Loader 2 cy	1.00	22.70	HR	42.79	100.00	42.79	971.31
LCUT1	Utility Man	2.00	45.40	MH	14.00	110.00	19.05	864.70
LCUT3	Skilled Labor	2.00	45.40	MH	16.00	110.00	21.77	988.23
LOPEX3	Excavator Operator Utility	1.00	22.70	MH	20.00	110.00	27.21	617.64
LOPLD	Loader Operator	1.00	22.70	MH	17.00	110.00	23.13	525.00

Activity: 140 Install Inspection Port W / Valves Quantity: 2 Unit: EA

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	106.70	25.27	131.97	94.14	0.00	0.00	0.00	0.00	226.11
Total	213.40	50.54	263.94	188.27	0.00	0.00	0.00	0.00	452.21

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
226.1050	1.0000	1.0000	226.1050	0.2000	10.0000	0.1000	2,261.0500

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
12.0000	0.1667	6.0000	21.9950	106.7000

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: PE20M7 20 TON EXC, 2CY LOAD W/ 7MEN Prod: US 10 Eff: 100.00 Crew Hrs: 2.00 Labor Pcs: 6.00 Equipment Pcs: 2.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8E20	Excavator 20 ton	1.00	2.00	HR	51.35	100.00	51.35	102.69
8L20	Loader 2 cy	1.00	2.00	HR	42.79	100.00	42.79	85.58
LCUT1	Utility Man	2.00	4.00	MH	14.00	110.00	19.05	76.19
LCUT3	Skilled Labor	2.00	4.00	MH	16.00	110.00	21.77	87.07
LOPEX3	Excavator Operator Utility	1.00	2.00	MH	20.00	110.00	27.21	54.42
LOPLD	Loader Operator	1.00	2.00	MH	17.00	110.00	23.13	46.26

Activity: 150 Backfill Native Soil - 40% Fluff Quantity: 1668.95 Unit: TCY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	2.83	0.67	3.50	3.90	0.00	0.00	0.00	0.00	7.41
Total	4,727.06	1,119.23	5,846.29	6,515.97	0.00	0.00	0.00	0.00	12,362.26

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
7.4072	0.0250	40.0000	296.2880	4.1724	399.9995	0.0025	2,962.8797

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
250.3300	6.6670	0.1500	23.3543	2.8324

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: L30M2 3CY LOADER, 2 MEN Prod: US 400 Eff: 100.00 Crew Hrs: 41.72 Labor Pcs: 6.00 Equipment Pcs: 5.00

Notes: 40% Fluff
 Chamber Area In CY
 1 Chamber = 0.32 CY

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8B15	Blade > 150 HP	1.00	41.72	HR	42.79	100.00	42.79	1,785.16
8L30	Loader 3 cy	1.00	41.72	HR	51.35	100.00	51.35	2,142.20
8RC084	Compactor 84"	1.00	41.72	HR	27.81	100.00	27.81	1,160.36
8TDT14	Dump Truck Tandem 14 cy	2.00	83.45	HR	17.12	100.00	17.12	1,428.25
LCUT3	Skilled Labor	1.00	41.72	MH	16.00	110.00	21.77	908.12

LDRDT	Dump Truck Driver	2.00	83.45	MH	17.00	110.00	23.13	1,930.01
LOPBL	Blade Operator	1.00	41.72	MH	20.00	110.00	27.21	1,135.16
LOPLD	Loader Operator	1.00	41.72	MH	17.00	110.00	23.13	964.88
LOPRC	Compactor Operator	1.00	41.72	MH	16.00	110.00	21.77	908.12

Activity: 160 Spread Excess Dirt on Site Quantity: 101.7 Unit: TCY

	Base Labor	Burden	Total Labor	Equipment	Perm Matls	Const Matls	Sub	Trucking	Total
U. Cost	1.91	0.45	2.36	2.56	0.00	0.00	0.00	0.00	4.93
Total	194.46	46.04	240.50	260.75	0.00	0.00	0.00	0.00	501.25

Crew \$/Unit	Crew Hrs/Unit	Units/Crew Hr	\$/Crew Hour	Shifts	Units/Shift	Shifts/Unit	\$/Shift
4.9287	0.0200	50.0000	246.4356	0.2034	500.0000	0.0020	2,464.3559

Manhours	Unit/MH	MH/Unit	Total Labor/MH	Base Labor/Unit
10.1600	10.0098	0.0999	23.6713	1.9121

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp
 Crew: L30M2 3CY LOADER, 2 MEN Prod: US 500 Eff: 100.00 Crew Hrs: 2.03 Labor Pcs: 5.00 Equipment Pcs: 4.00

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
8B15	Blade > 150 HP	1.00	2.03	HR	42.79	100.00	42.79	86.86
8L30	Loader 3 cy	1.00	2.03	HR	51.35	100.00	51.34	104.23
8TDT14	Dump Truck Tandem 14 cy	2.00	4.07	HR	17.12	100.00	17.12	69.66
LCUT3	Skilled Labor	1.00	2.03	MH	16.00	110.00	21.77	44.19
LDRDT	Dump Truck Driver	2.00	4.07	MH	17.00	110.00	23.13	94.13
LOPBL	Blade Operator	1.00	2.03	MH	20.00	110.00	27.21	55.23
LOPLD	Loader Operator	1.00	2.03	MH	17.00	110.00	23.13	46.95

Activity: 210 Leaching Field Materials Quantity: 1 Unit: LS

Calendar: 50 50 Hour Work Week 5 x 10hr Hrs/Shift: 10 WC: TX5506 Average Worker's Comp

Resource	Description	Pcs/Wste	Quantity	Unit	Unit Cost	Tax/OT %	Actual UC	Total
2ZZLFM	Leaching Field Materials	1.00	1.00	LS	15,632.84	100.00	15,632.84	15,632.84

493	480	SANITARY SEWER		
494	481	6" sanitary sewer connection		\$2,500.00
495	482	6" sanitary sewer connection Labor		\$1,000.00
496	483	6" clean out assembly Materials		\$5,080.00
497	484	6" clean out assembly Labor		\$1,250.00
498	485	6" wye Materials		\$1,000.00
499	486	6" wye Labor		\$500.00
500	487	6" 45* elbow Material		\$800.00
501	488	6" 45* elbow Labor		\$370.00
502	489	Leach field aggregate/soils		\$10,000.00
503	490	Leach field Material		\$20,000.00
504	491	Leach field Labor		\$12,500.00
505	492	5000 septic tank Material		\$32,500.00
506	493	5000 septic tank Labor		\$7,500.00
507	494	4000 septic tanks Material		\$22,500.00
508	495	4000 septic tank Labor		\$7,500.00
509	496	Grease tank Material		\$10,000.00
510	497	Grease tank Labor		\$5,000.00

Base (Credit)
\$140,00.00

Credit Back
\$55,000.00
per SOV

ASI 001
Old Drawings vs New Drawings
(Red Lined with Changes)



AIA[®] Document G710[™] – 2017

Architect's Supplemental Instructions

PROJECT: *(name and address)*
Hidalgo County El Paraiso Health Clinic
& Community Resource Center

CONTRACT INFORMATION:
Contract For: General Construction

Date: November 28, 2023

ASI INFORMATION:
ASI Number: 001

Date: March 15, 2024

OWNER: *(name and address)*
County of Hidalgo
100 East Cano, 2nd Floor
Edinburg, Texas 78539

ARCHITECT: *(name and address)*
ERO Architects
P.O. Box 720428
McAllen, Texas 78504

CONTRACTOR: *(name and address)*
NM Contracting, LLC
2022 Orchid Avenue
McAllen, Texas 78504

The Contractor shall carry out the Work in accordance with the following supplemental instructions without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgment that there will be no change in the Contract Sum or Contract Time.
(Insert a detailed description of the Architect's supplemental instructions and, if applicable, attach or reference specific exhibits.)

ASI 001: Revisions and clarifications based on building permit comments.

Attachments: C2.00, C3.00, C4.00, C4.01, C5.00, C5.01, C6.00 & C7.02

ISSUED BY THE ARCHITECT:

ERO Architects

ARCHITECT *(Firm name)*

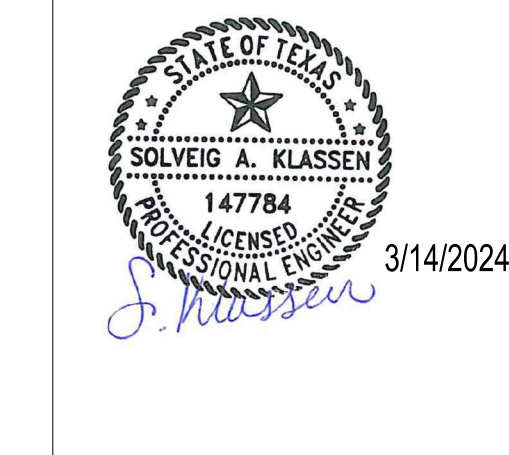

SIGNATURE

Octavio Cantu, AIA, Principal
PRINTED NAME AND TITLE

March 15, 2024
DATE

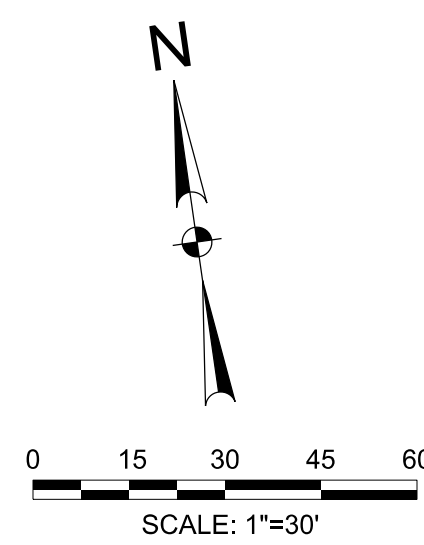
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The Seal appearing on this document was authorized by Solving A. Klassen, P.E. Number 147784 on March 14, 2024. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act. The Record Copy of this drawing is on file at the offices of ero Associates, Inc., 5000 N. Military Suite 100, McAllen, TX 78503. TPEF FIRM #1-312



HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

Description	AS20000401#1 AS20000401#2 AS20000401#3
Date	8/8/2023 3/14/2024 3/14/2024
No.	1
PROJECT NO.	21087
ISSUE DATE	3/14/2024
DRAWN BY	SK
CHECKED BY	HS
SHEET NAME	
Sheet Number	
PROJECT NAME	
PROJECT NO.	21087
ISSUE DATE	3/14/2024
DRAWN BY	SK
CHECKED BY	HS
SHEET NAME	
Sheet Number	
PROJECT NAME	
PROJECT NO.	21087
ISSUE DATE	3/14/2024
DRAWN BY	SK
CHECKED BY	HS
SHEET NAME	
Sheet Number	
PROJECT NAME	



LEGEND

PROPOSED	EXISTING	DESCRIPTION
■	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	GATE VALVE & BOX
□	□	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
□	□	ELECTRIC BOX
□	□	POWER POLE
□	□	TELEPHONE PEDESTAL
—x—	—x—	FENCE
TS	TS	TRAFFIC SIGN
—EX OHE—	—EX OHE—	OVERHEAD ELECTRIC
—EX UGE—	—EX UGE—	UNDERGROUND ELECTRIC
—EX GAS—	—EX GAS—	GAS LINE
—EX F/O—	—EX F/O—	FIBER OPTIC LINE
—EX TEL—	—EX TEL—	TELEPHONE LINE
—	—	ASPHALT PAVEMENT
—	—	SAN. SEWER
—	—	EX 6" W
—	—	EX 6" W
—	—	EX FIRE
—	—	EX FIRE
—	—	36" SD
—	—	100.00
—	—	100.00
—	—	CONTOUR
—	—	DRAINAGE FLOW ARROW
—	—	TOP OF PAVEMENT
—	—	TOP OF CURB
—	—	GUTTER
—	—	TOP OF WALK
—	—	FINISHED GRADE
—	—	ASPHALT PAVEMENT
—	—	CONCRETE PAVEMENT

!CAUTION!
EXISTING OVERHEAD ELECTRIC LINES

CALL TEXAS 811 BEFORE YOU DIG

!CAUTION!
EXISTING UNDERGROUND ELEC. & COMM. LINES

BM #1
SQUARE CUT; SET ON TOP OF CONCRETE SIDEWALK
ELEVATION = 169.16 (NAVD8)
N=16636408.46
E=1040798.79
(NAD83)

BM #2
COTTON PICKER SPINDLE ON EXIST. POWER POLE
ELEVATION = 170.91 (NAVD8)
N=16636802.27
E=1040914.55
(NAD83)

BM #3
TOP OF EXIST. STORM MH
ELEVATION = 166.02 (NAVD8)
N=16636340.43
E=1040987.13
(NAD83)



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NOTICE TO CONTRACTORS

1. PRIOR TO CONSTRUCTION OF ANY PROPOSED IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF BURIED UTILITIES AND STRUCTURES, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
TELEPHONE, STORMSEWER, WATER, GAS, CABLE TV, SANITARY SEWER, ELECTRIC.

2. IF DISCREPANCIES OCCUR BETWEEN THAT WHICH IS SHOWN ON THE PLANS AND CONDITIONS PRESENT IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING IMMEDIATELY. FAILURE TO DO SO SHALL ABSOLVE OWNER AND ENGINEER OF LIABILITY AND ASSOCIATED COST.

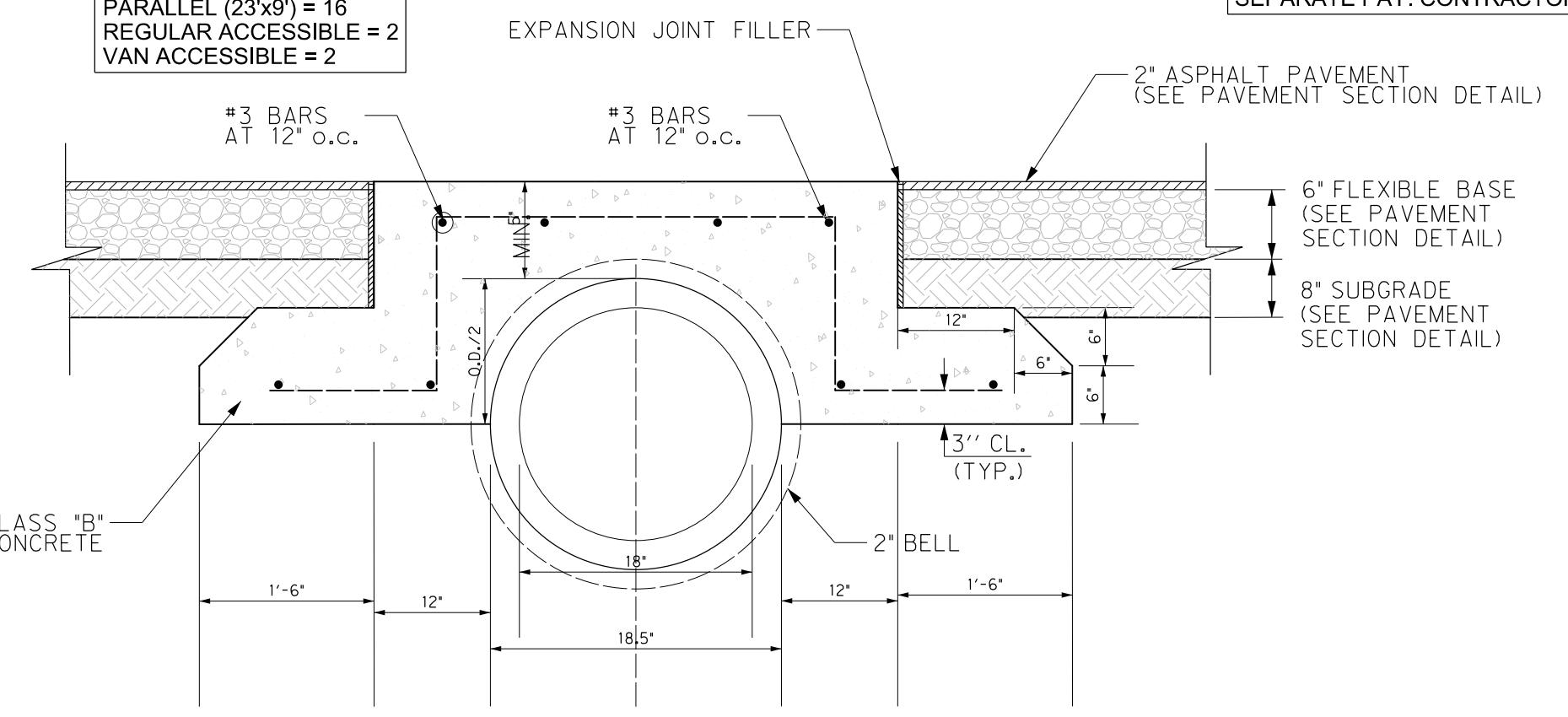
***** STOP! CALL BEFORE YOU DIG! *****

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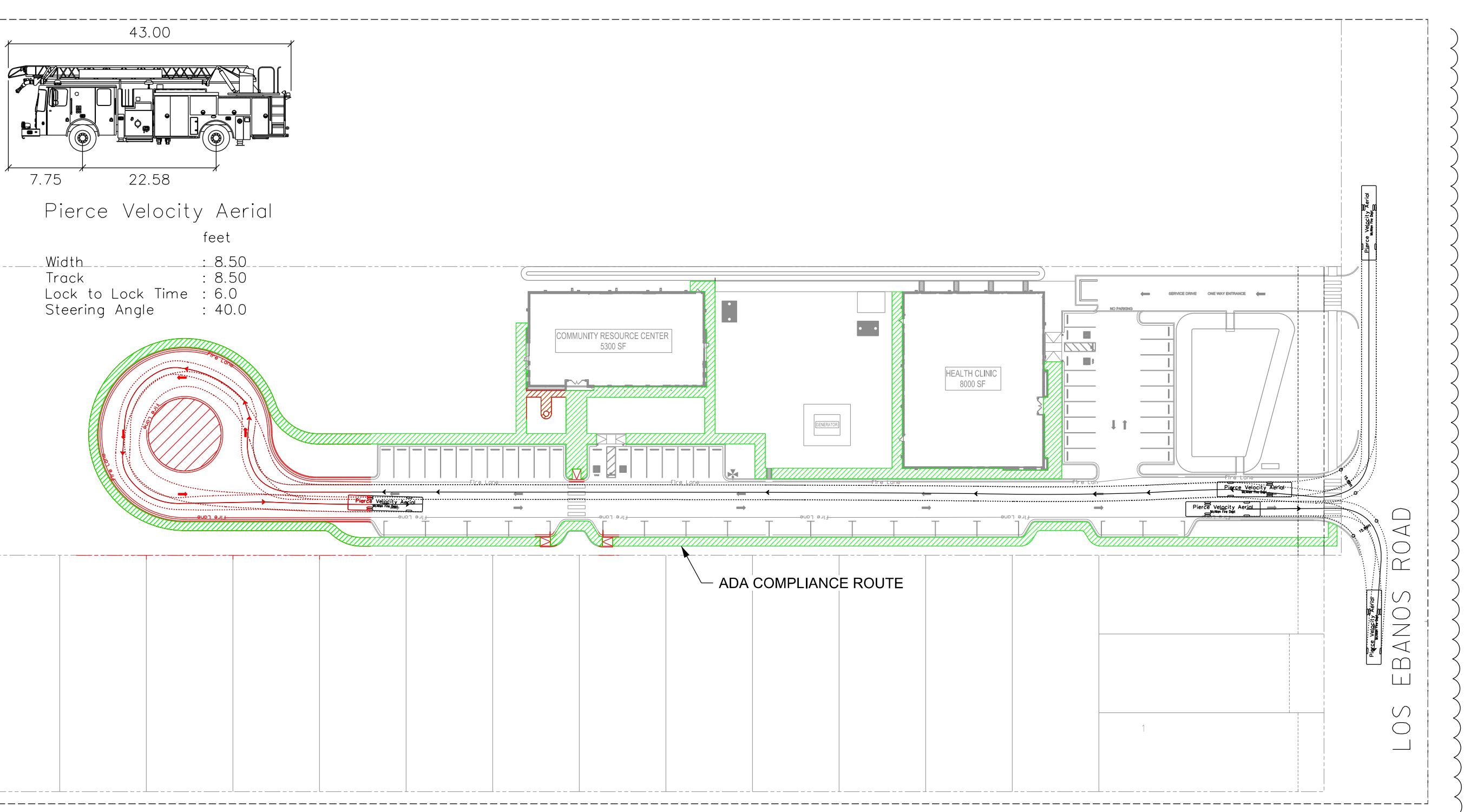
INFORMATION ON EXISTING UTILITIES IS FROM BEST AVAILABLE INFORMATION OF RECORD AND SPOT FIELD LOCATIONS. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO ACCURATELY DETECT ALL UTILITIES, NOT ALL (PUBLIC AND PRIVATE) MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION AND LOCATION OF THESE UNDERGROUND UTILITIES AS REQUIRED AT NO SEPARATE PAY. CONTRACTOR TO COORDINATE WITH ALL UTILITY COMPANIES.

- NOTES:**
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - PAVEMENT MARKING NOTES:
1. THE PAVEMENT SURFACE SHALL BE MADE FREE OF DELETERIOUS MATERIAL PRIOR TO APPLICATION OF PERMANENT MARKINGS.
2. ALL PROPOSED PARKING STALLS 4' WHITE STRIPING SHALL BE AEXCEL WHITE HI-PERFORMANCE ACRYLIC ZONE MARKING PAINT (PRODUCT NO. 22V-ED08) OR APPROVED EQUAL. CONTRACTOR SHALL APPLY ALL STRIPING PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL PROPOSED TRAFFIC DIRECTIONAL ARROWS SHALL BE AEXCEL WHITE HI-PERFORMANCE ACRYLIC ZONE MARKING PAINT (PRODUCT NO. 22V-ED08) OR APPROVED EQUAL. CONTRACTOR SHALL APPLY ALL MARKINGS PER MANUFACTURER'S RECOMMENDATIONS.
4. FIRE LANE STRIPING SHALL BE INSTALLED PER COUNTY FIRE MARSHAL REQUIREMENTS.

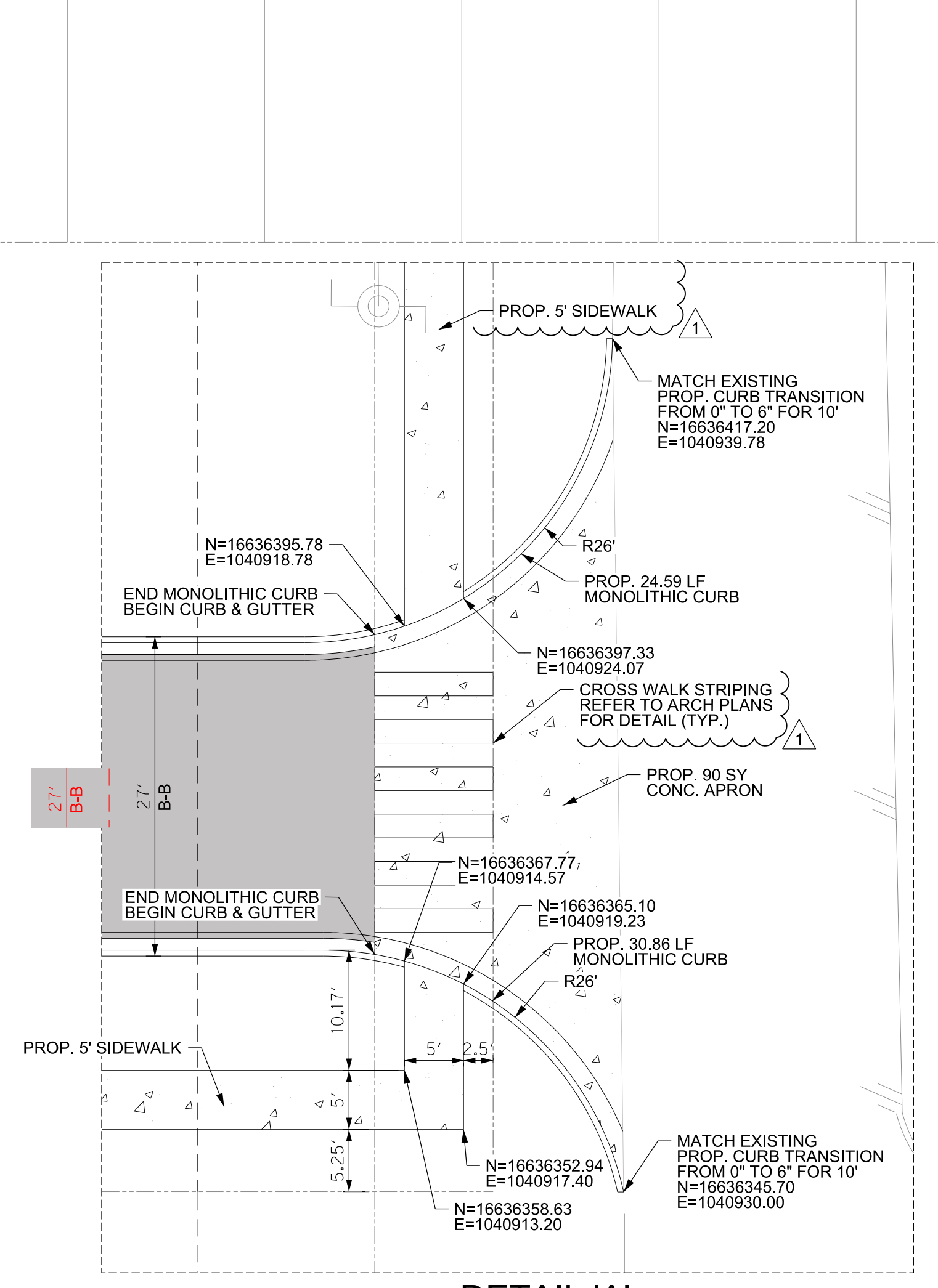
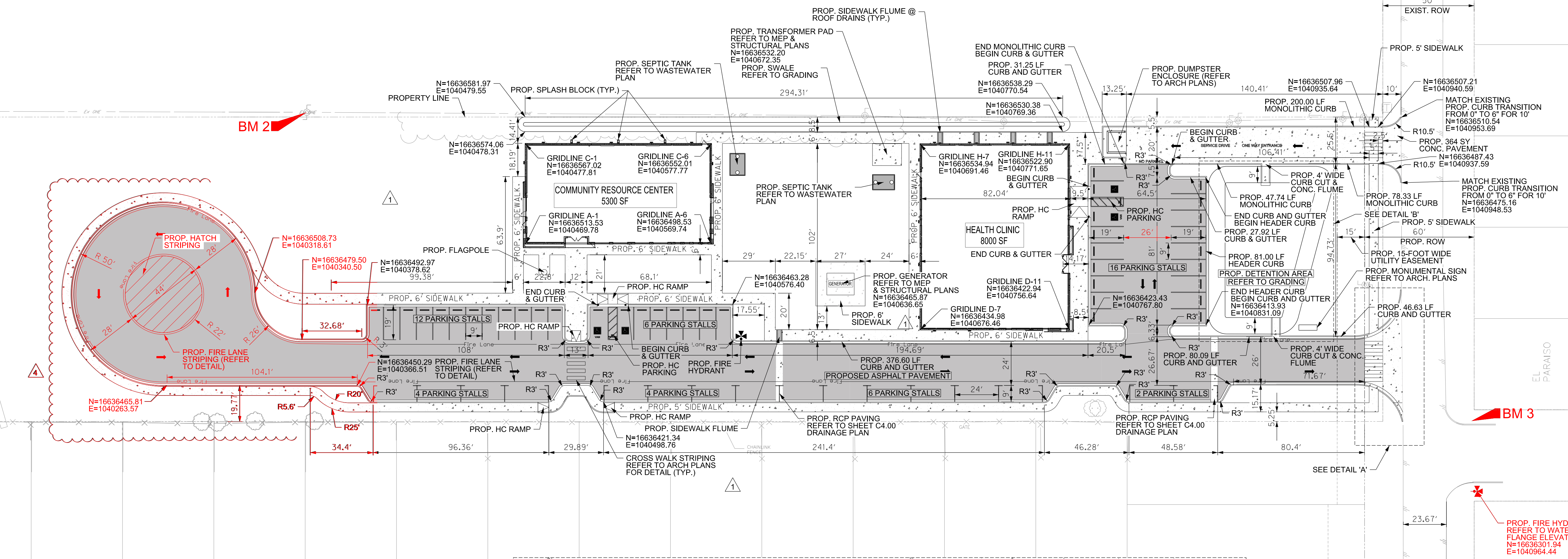
LOT PARKING COUNT
PROVIDED:
REGULAR (9'x19') = 34
PARALLEL (27'x9') = 16
REGULAR ACCESSIBLE = 2
VAN ACCESSIBLE = 2



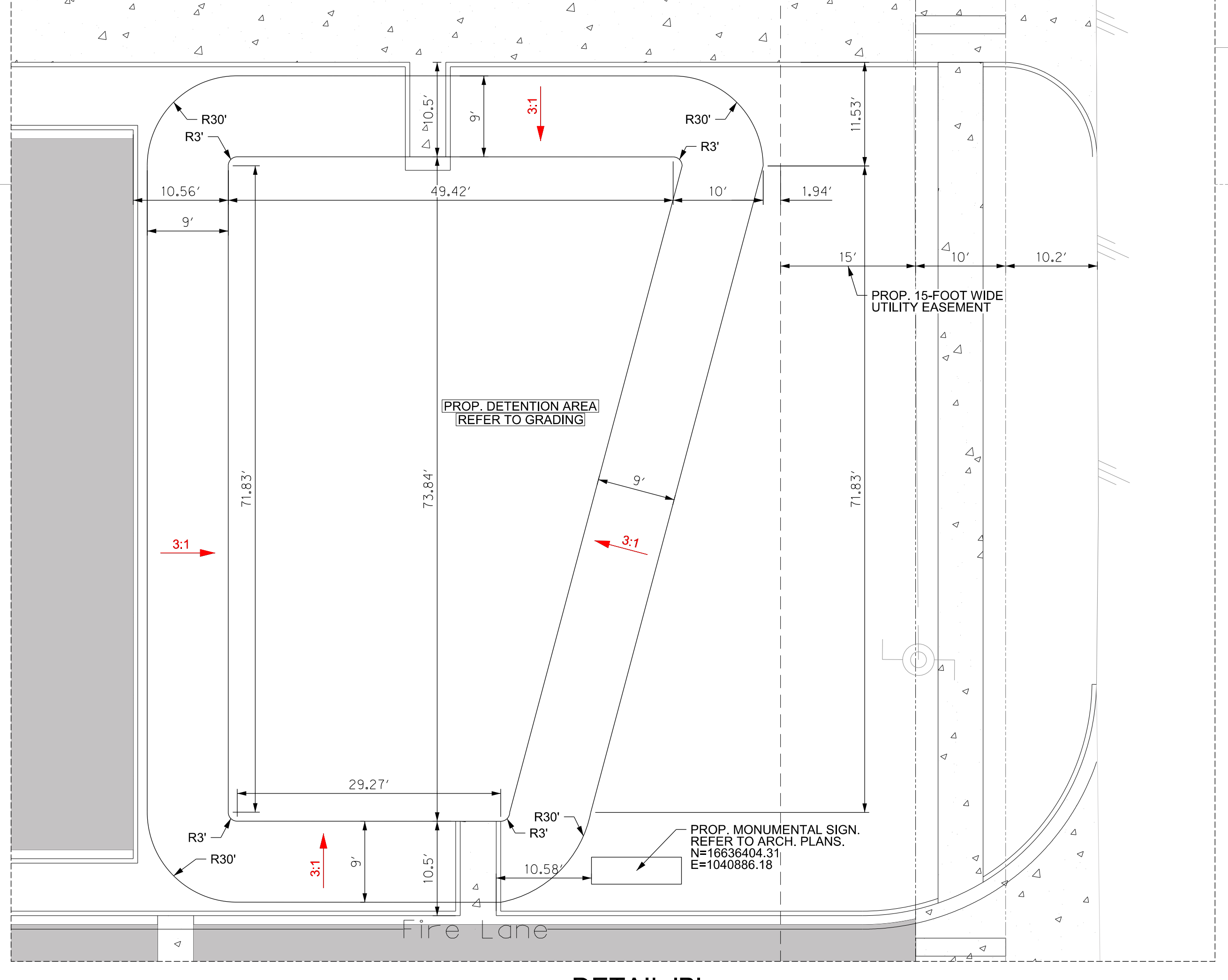
RCP PAVING DETAIL
NTS



AUTOTURN & ADA ROUTE EXHIBIT
NTS



DETAIL 'A'
NTS



DETAIL 'B'
NTS

8/11/2023 8:41:26 AM
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Sheet
C3.00

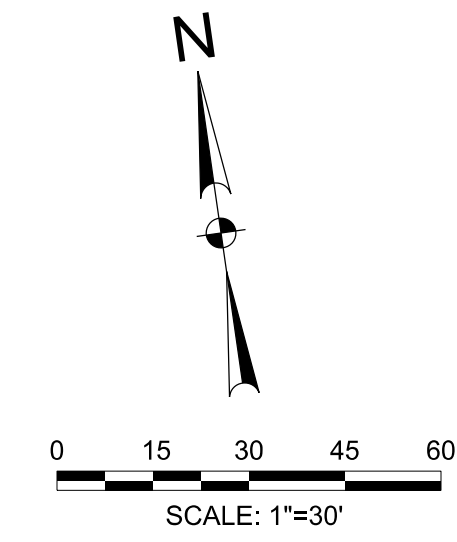
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- IF DISCREPANCIES OCCUR BETWEEN THAT WHICH IS SHOWN ON THE PLANS AND CONDITIONS PRESENT IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING IMMEDIATELY. FAILURE TO DO SO SHALL ABSOLVE OWNER AND ENGINEER OF LIABILITY AND ASSOCIATED COST.

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LEGEND

PROPOSED	EXISTING	DESCRIPTION
□	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	WATER VALVE & BOX
○	○	GATE VALVE & BOX
○	○	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
□	□	ELECTRIC BOX
□	□	POWER POLE
□	□	TELEPHONE PEDESTAL
—x—	—x—	FENCE
TS	TS	TRAFFIC SIGN
—EX OHE—	—EX OHE—	OVERHEAD ELECTRIC
—EX UGE—	—EX UGE—	UNDERGROUND ELECTRIC
—EX GAS—	—EX GAS—	GAS LINE
—EX F/O—	—EX F/O—	FIBER OPTIC LINE
—EX TEL—	—EX TEL—	TELEPHONE LINE
—	—	ASPHALT PAVEMENT
—	—	SAN, SEWER
—	—	WATER
—	—	FIRE PROTECTION
—	—	STORM SEWER
—	—	CONTOUR
→	→	DRAINAGE FLOW ARROW
TP100.00	TP100.00	TOP OF PAVEMENT
TC100.00	TC100.00	TOP OF CURB
G100.00	G100.00	GUTTER
TW100.00	TW100.00	TOP OF WALK
100.00	100.00	FINISHED GRADE
■	■	ASPHALT PAVEMENT
■	■	CONCRETE PAVEMENT

!CAUTION!
EXISTING OVERHEAD
ELECTRIC LINES

**CALL TEXAS 811
BEFORE YOU DIG**

!CAUTION!
EXISTING UNDERGROUND
ELEC. & COMM. LINES

GRADING NOTES:

- ALL PROP. SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2% AND RUNNING SLOPES SHALL NOT EXCEED 5%.
- ALL PROP. CONCRETE PAVEMENT CROSS SLOPES SHALL NOT EXCEED 5%. RUNNING SLOPES SHALL NOT EXCEED 10%.
- ALL PROP. CURB RAMP SIDE SLOPES SHALL NOT EXCEED 2%. RUNNING SLOPES SHALL NOT EXCEED 8.33%.
- ALL SPOT ELEVATIONS AND PROPOSED CONTOURS REPRESENT FINISHED GRADES. TOPS OF PAVEMENT, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBTRACTING NECESSARY SOI, PAVEMENT THICKNESS, TOPSOIL DEPTH, ETC. TO ARRIVE AT ROUGH GRADE ELEVATIONS.
- ALL DISTURBED AREAS SHALL BE REVEGETATED PER STANDARD COUNTY REVEGETATION REQUIREMENTS.
- ALL SPOT GRADES ARE AT GUTTER/ TOP OF PAVEMENT ELEVATION UNLESS OTHERWISE NOTED. TW= TOP OF SIDEWALK, PL= FLOWLINE OF SWALE, FG= FINISHED GRADE, FF= FINISHED FLOOR, TC= TOP OF CURB, G= GUTTER, TP= TOP OF PAVEMENT.
- THE PROPOSED BUILDINGS DO NOT HAVE WEEP HOLES. IF THERE IS A DISCREPANCY BETWEEN CIVIL NOTE AND ARCHITECTURAL DETAILS, NOTIFY ENGINEER FOR GRADING ADJUSTMENTS.

SITE PREPARATION NOTES:
CONTRACTOR SHALL REFER TO GEOTECH REPORT (PROJECT # 3101 DATED MARCH 1, 2023) PREPARED BY B2Z ENGINEERING, LLC FOR DETAILED SITE PREPARATION REQUIREMENTS.



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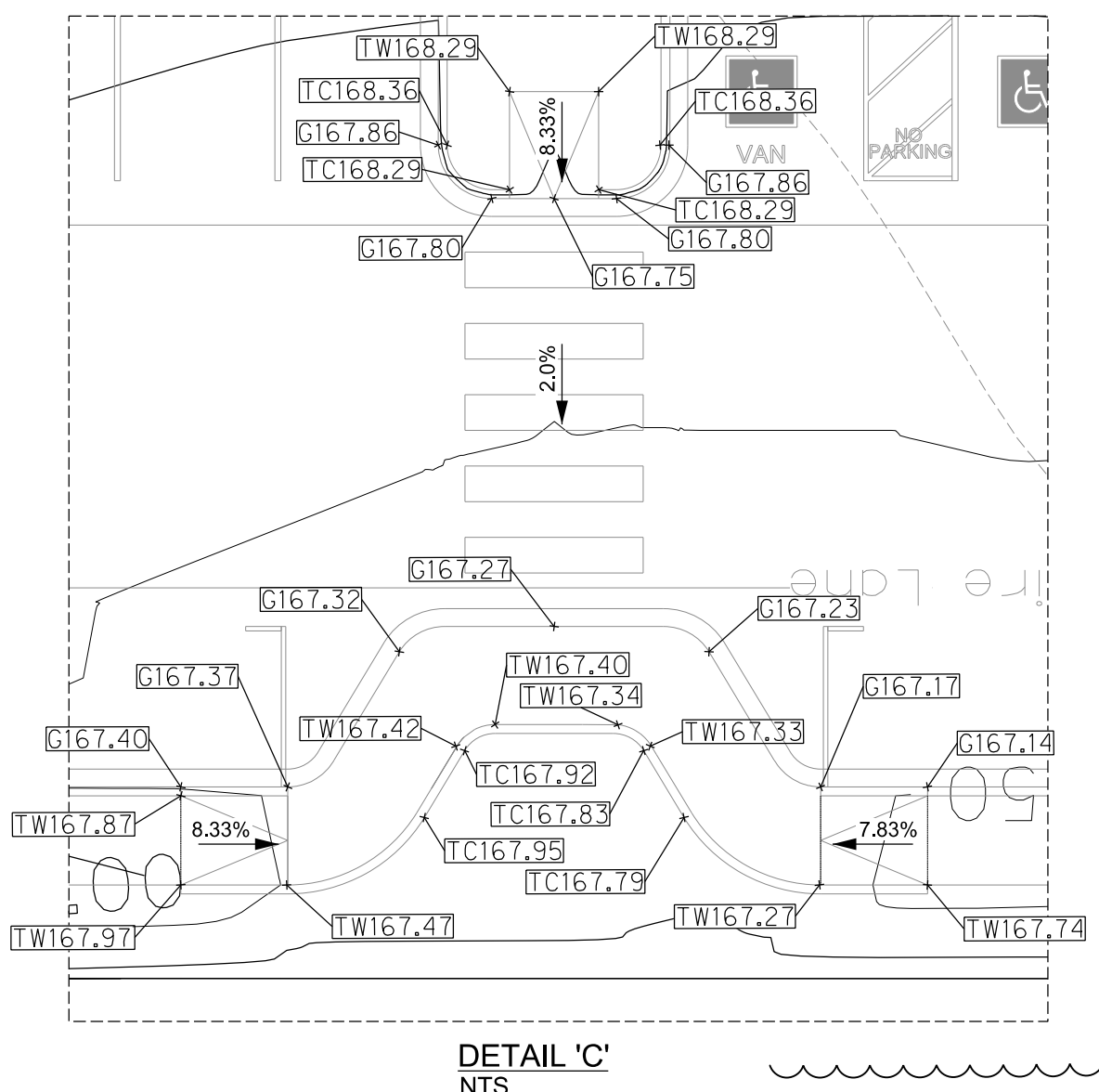
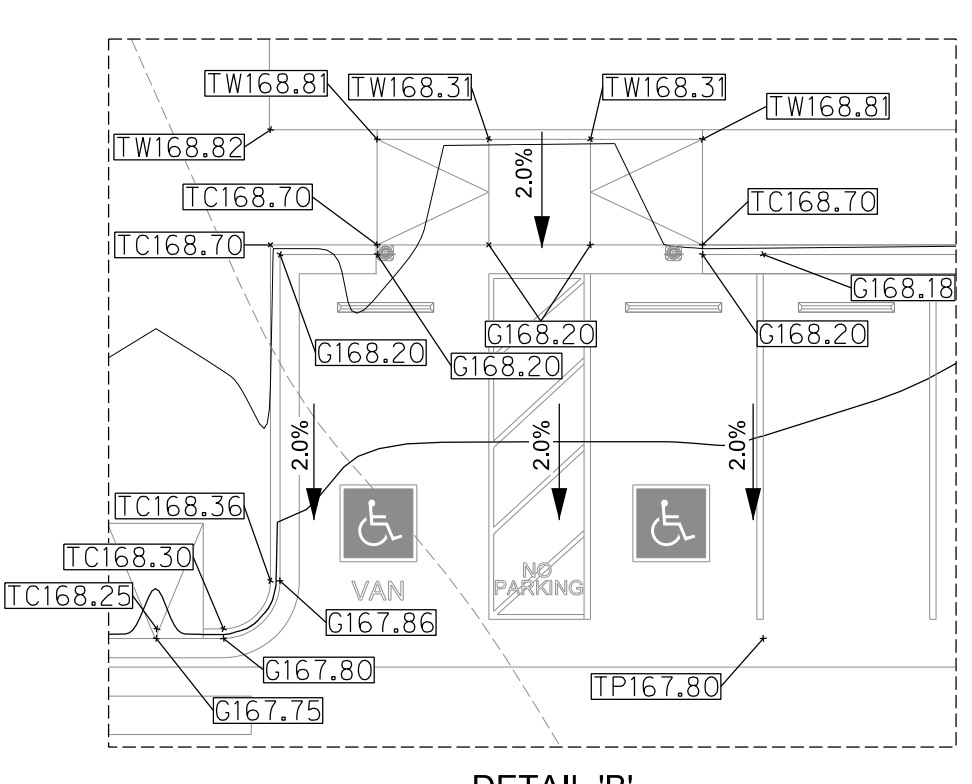
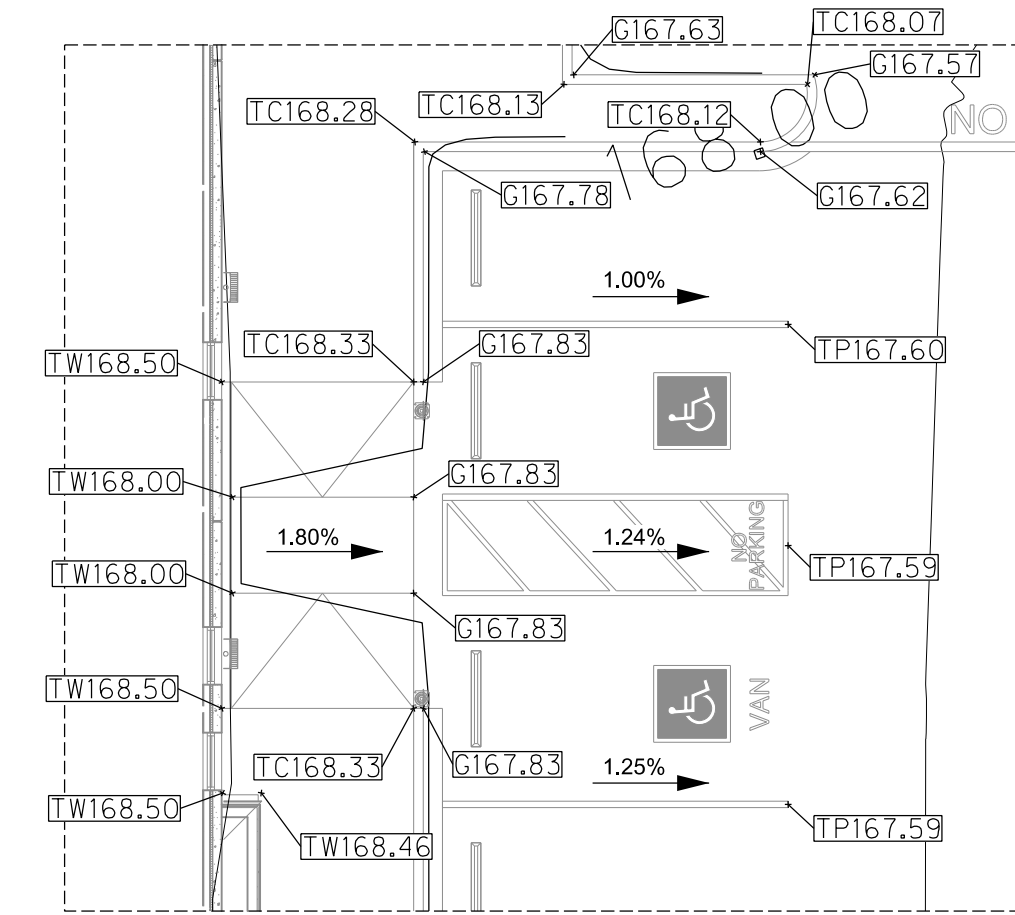
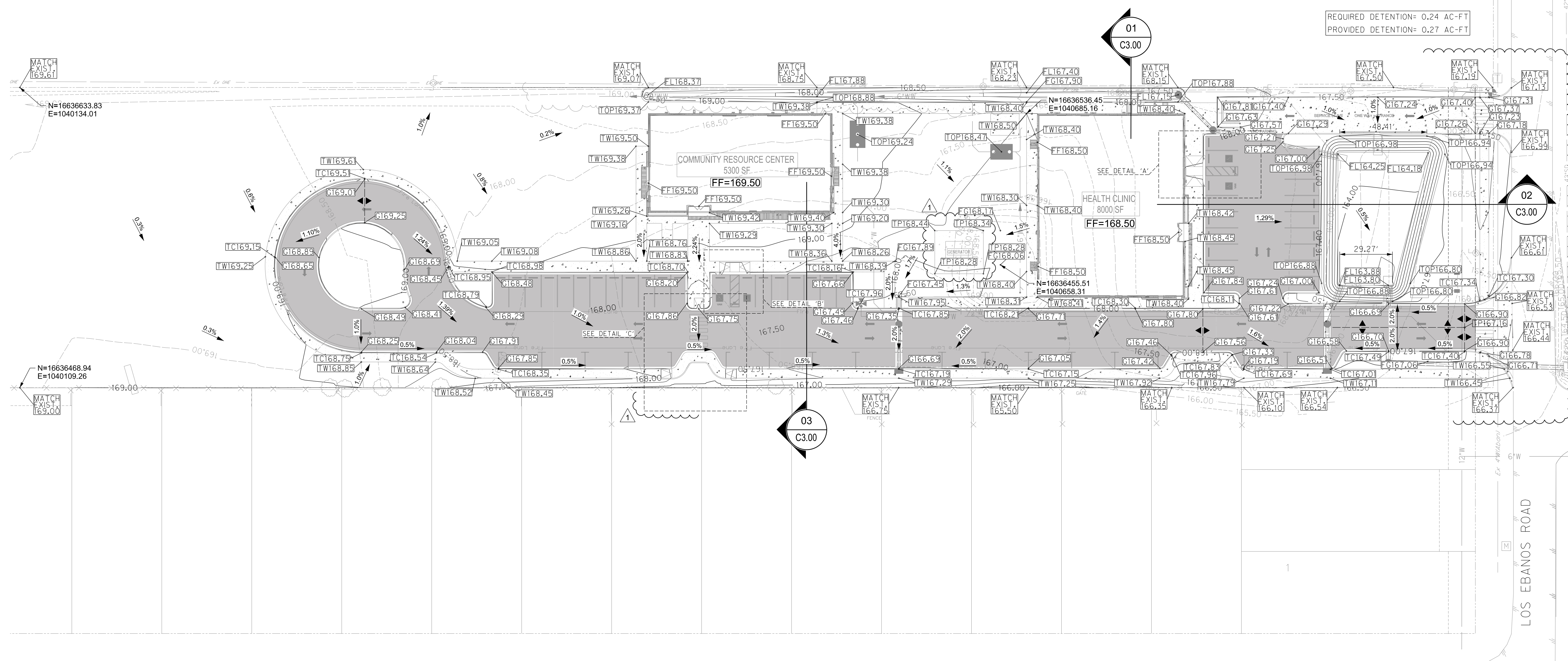
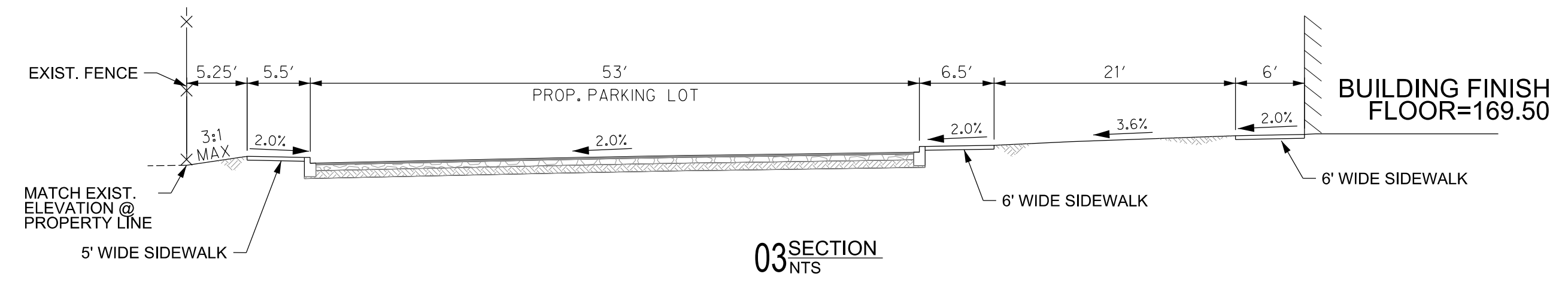
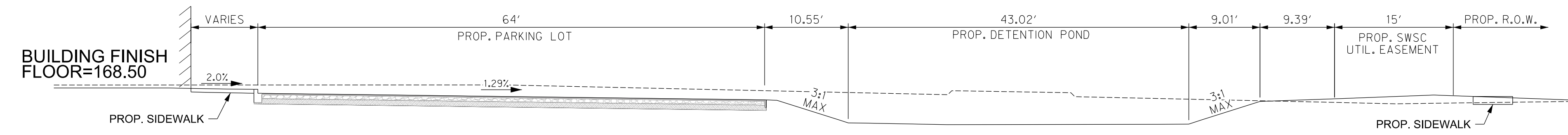
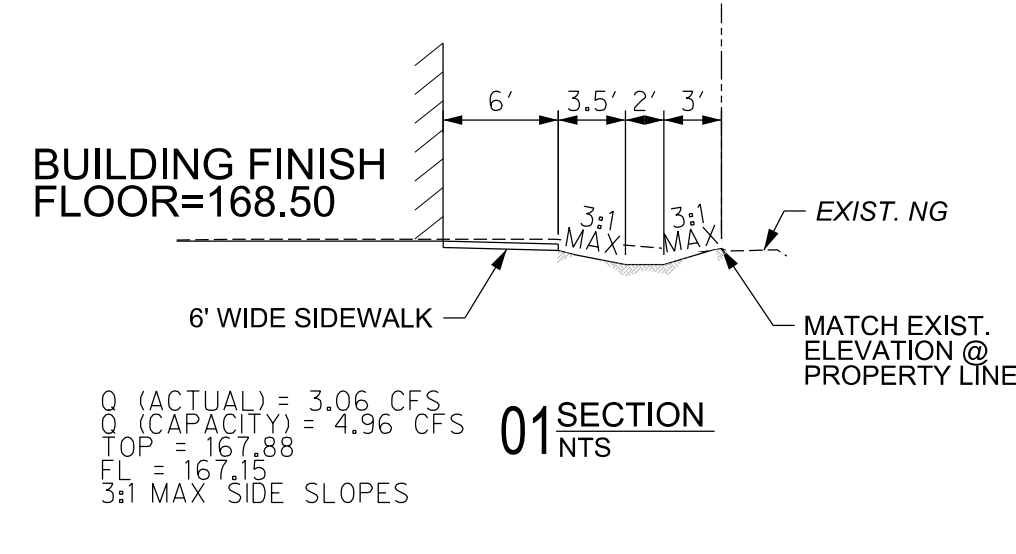
P.O. BOX 720428, McAllen, Tx 78504
T 956-661-0400 | goero.com

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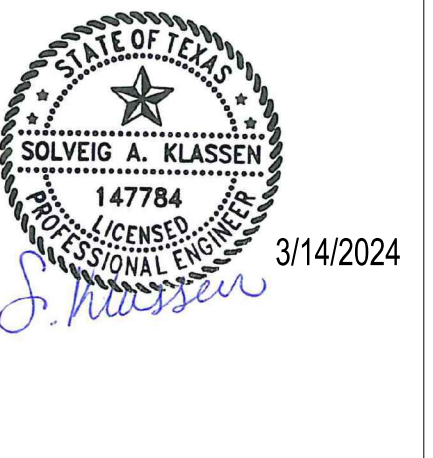
HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

Description	ADDENDUM #1
Date	8/8/2023
No.	1
PROJECT NO.	21087
ISSUE DATE	8/8/2023
DRAWN BY	SK
CHECKED BY	HS
SHEET NAME	
GRADING PLAN	
Sheet Number	
C3.00	
Project Status:	
CONSTRUCTION DOCUMENTS	



8/11/2023 8:41:25 AM Autodesk Docs/21087 - Hidalgo County El Paraiso Building/21087 Hidalgo County El Paraiso (Bldg)_Base.rvt

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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

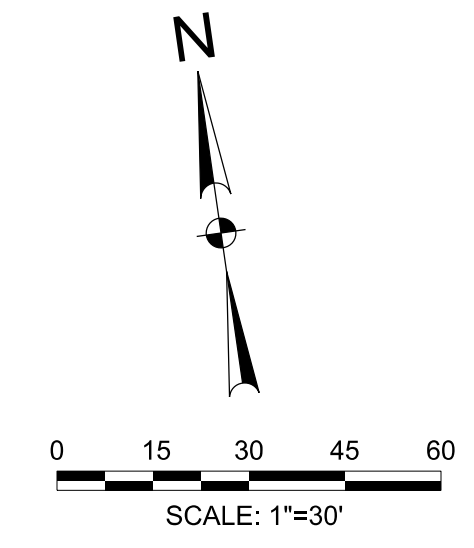
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LEGEND

PROPOSED	EXISTING	DESCRIPTION
□	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	WATER VALVE & BOX
○	○	GATE VALVE & BOX
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○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
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—	—	SAN. SEWER
—	—	WATER
—	—	FIRE PROTECTION
—	—	STORM SEWER
—	—	CONTOUR
→	→	DRAINAGE FLOW ARROW
—	—	TOP OF PAVEMENT
—	—	TOP OF CURB
—	—	GUTTER
—	—	TOP OF WALK
—	—	FINISHED GRADE
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—	—	CONCRETE PAVEMENT

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ELECTRIC LINES

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BEFORE YOU DIG**

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ELEC. & COMM. LINES

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CONCRETE SIDEWALK
ELEVATION = 169.16 (NAVD88)
N=16636408.46
E=1040109.26
(NAD83)
- BM #2
COTTON PICKER SPINDLE
ON EXIST. POWER POLE
ELEVATION = 170.91 (NAVD88)
N=16636602.27
E=1040109.26
(NAD83)
- BM #3
TOP OF EXIST. STORM MH
ELEVATION = 166.02 (NAVD88)
N=16636340.43
E=1040967.13
(NAD83)

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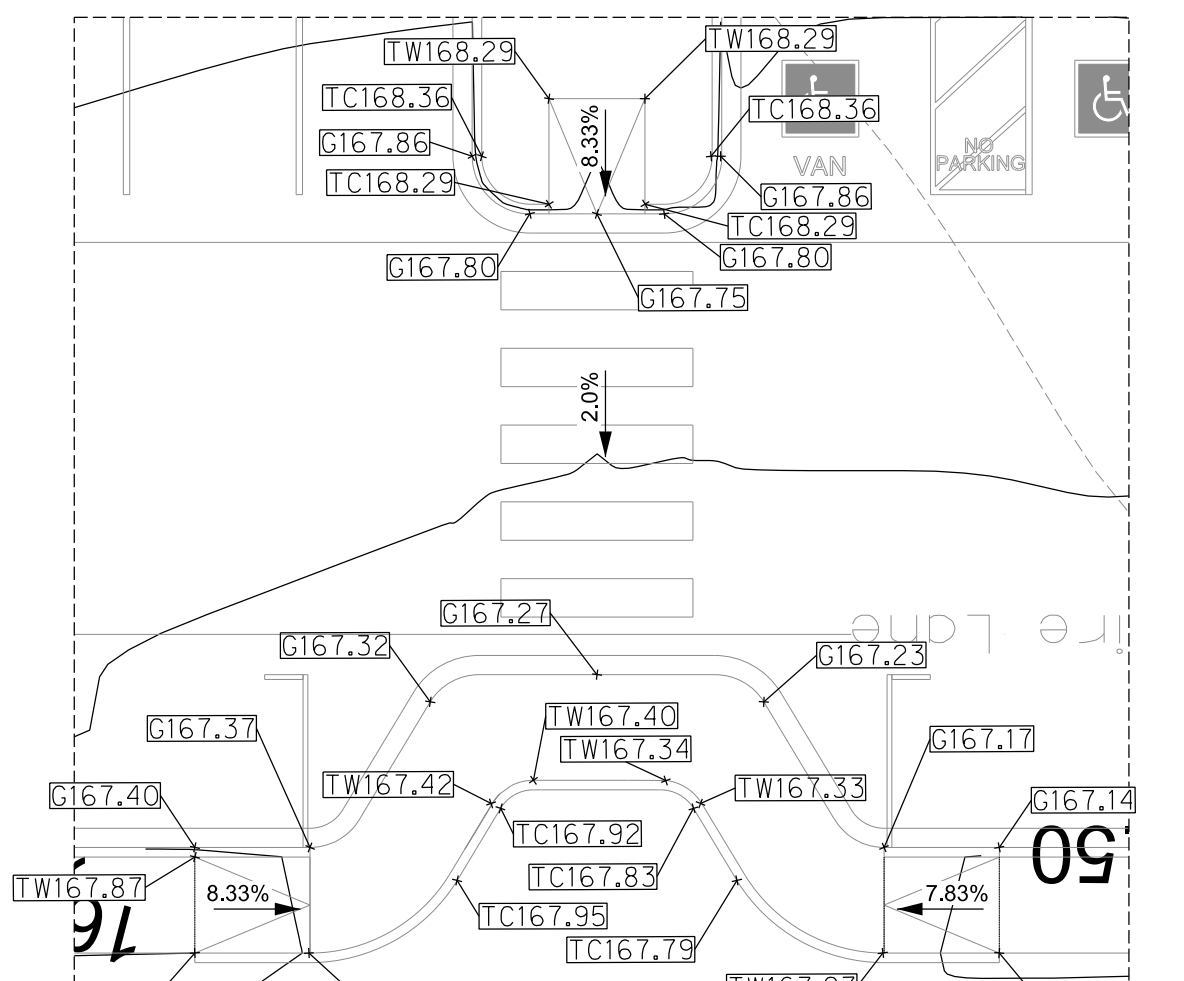
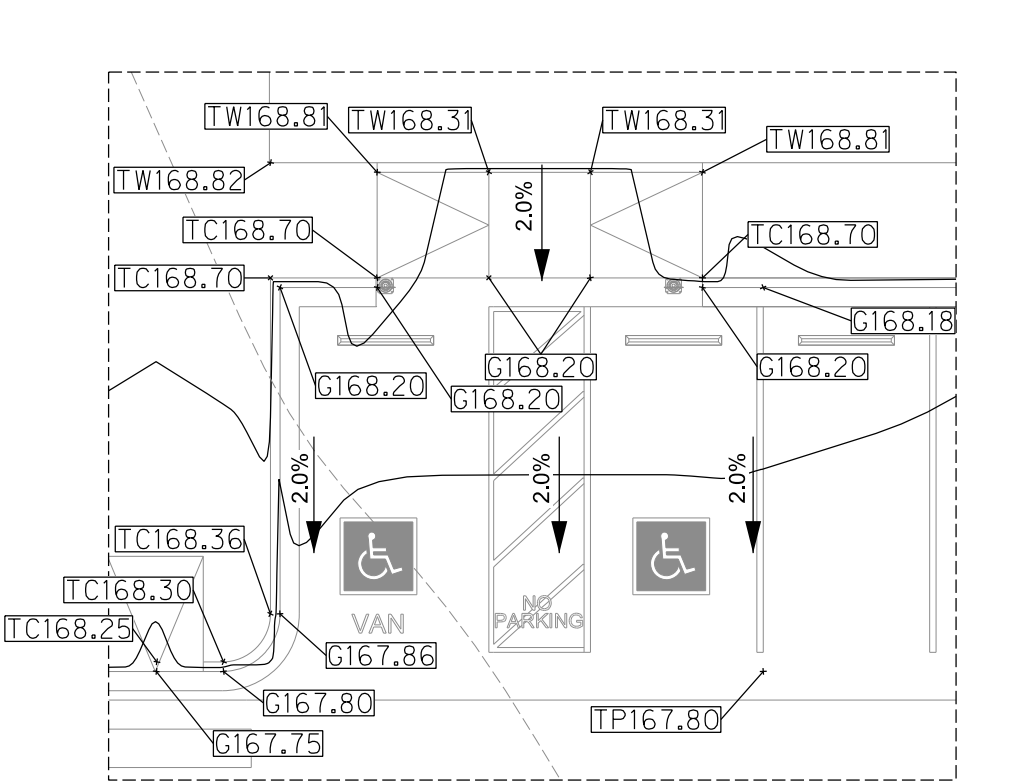
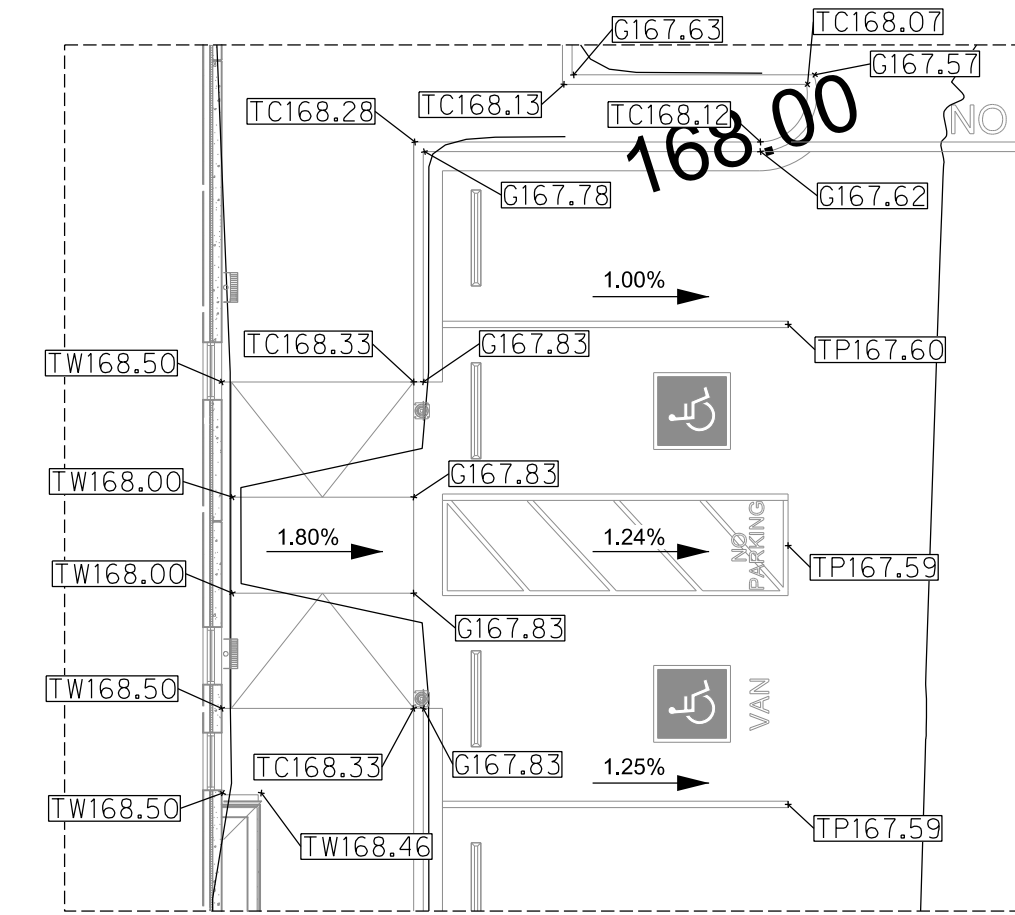
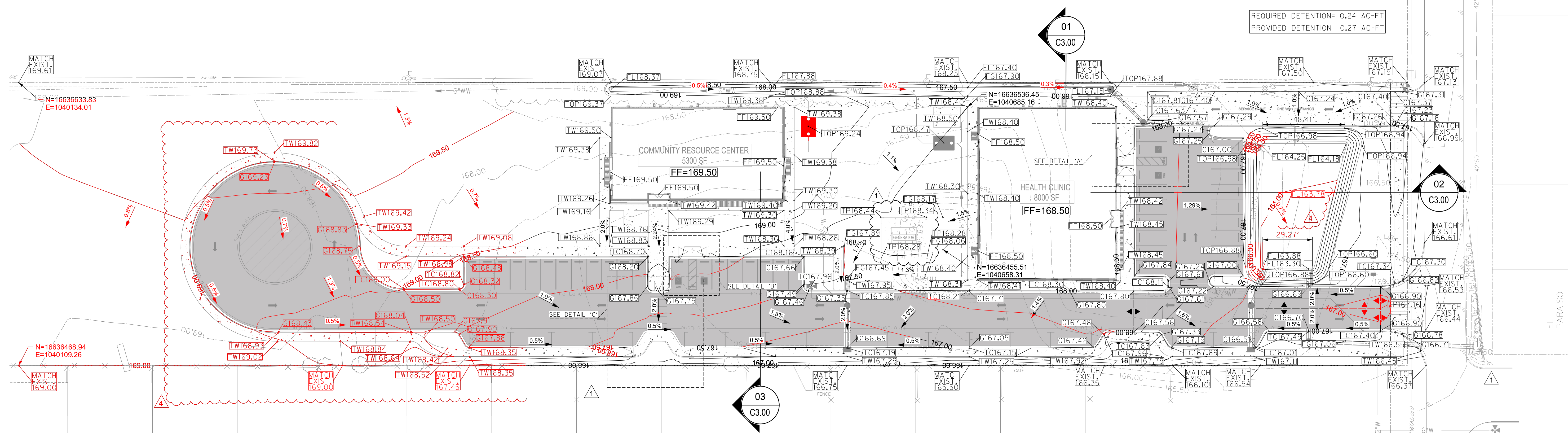
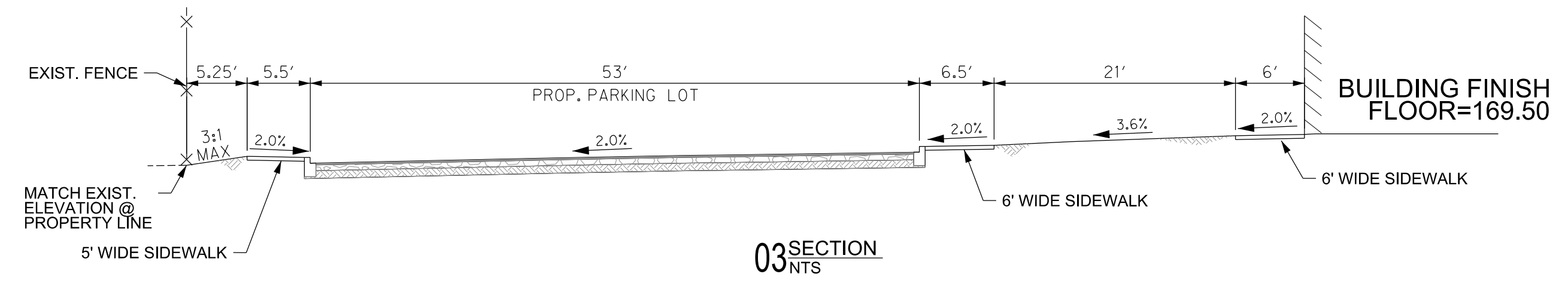
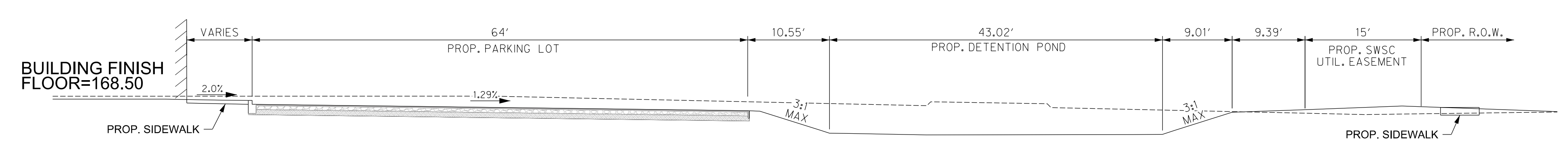
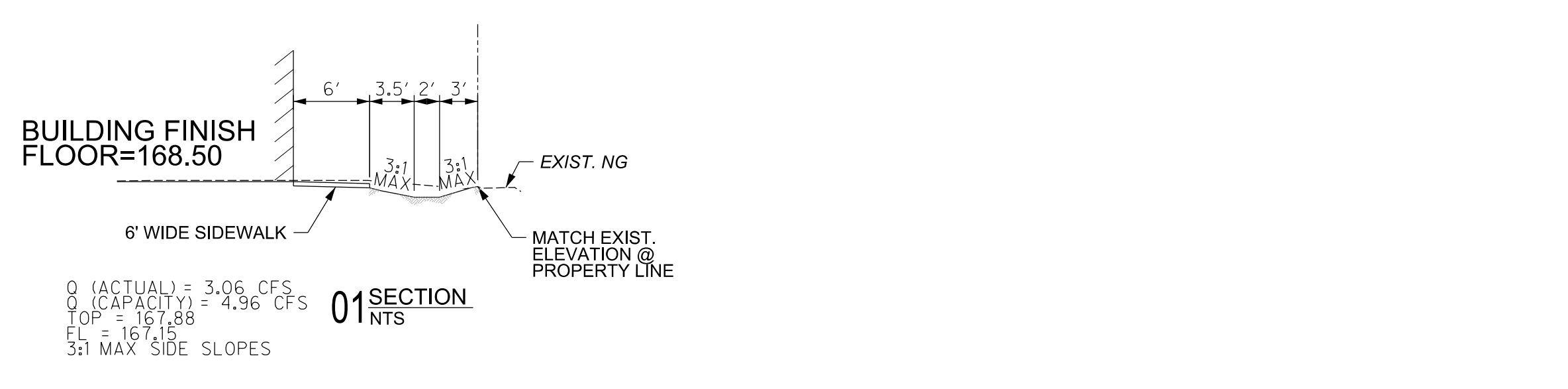
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PROJECT NO.: 21087
ISSUE DATE: 3/14/2024
DRAWN BY: SK
CHECKED BY: HGS
SHEET NAME

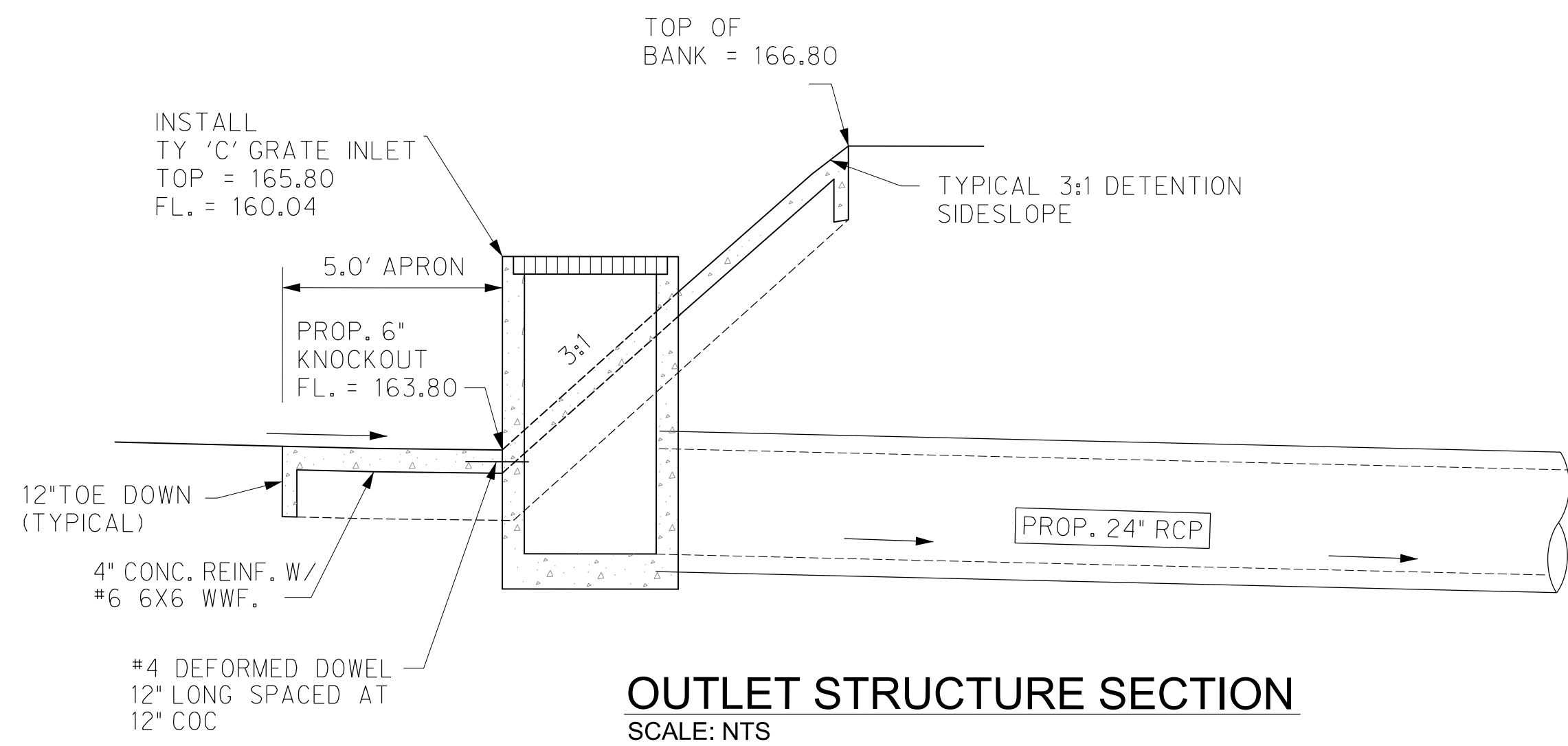
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C3.00

CONSTRUCTION DOCUMENTS

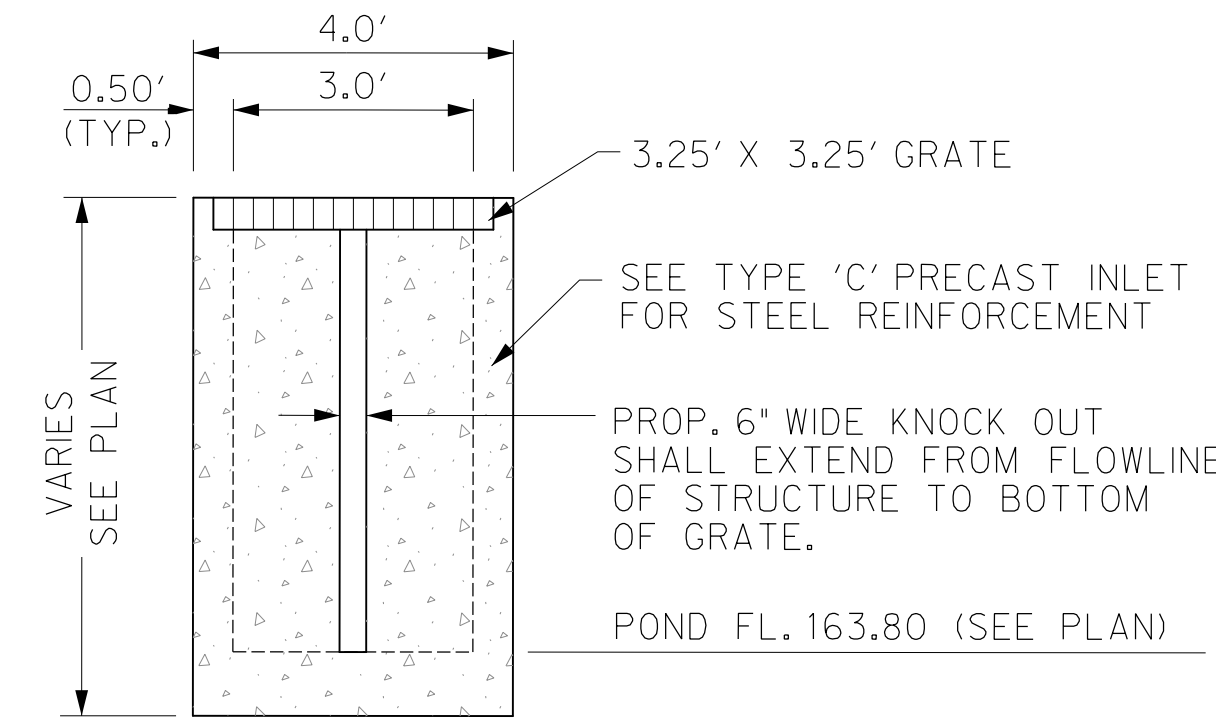


3/14/2024 8:41:26 AM
AutoSave Drawings 21087 - Hidalgo County El Paraiso Building 21087 - Hidalgo County El Paraiso (Bldg)_Base.rvt

Sheet
C4.00



OUTLET STRUCTURE SECTION
SCALE: NTS



TYPICAL OUTLET STRUCTURE ELEVATION
SCALE: NTS

NOTICE TO CONTRACTORS

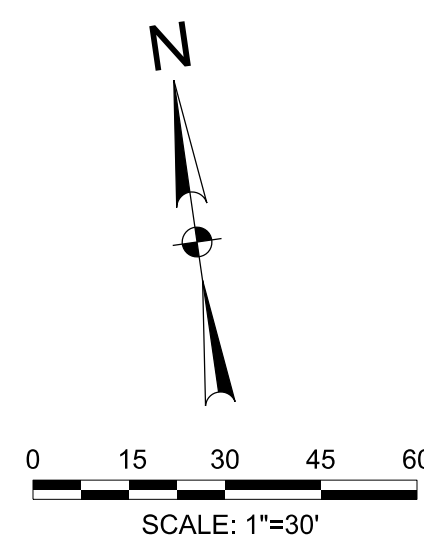
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TELEPHONE, STORMSEWER, WATER, GAS, CABLE TV, SANITARY SEWER, ELECTRIC.

2. IF DISCREPANCIES OCCUR BETWEEN THAT WHICH IS SHOWN ON THE PLANS AND CONDITIONS PRESENT IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING IMMEDIATELY. FAILURE TO DO SO SHALL ABSOLVE OWNER AND ENGINEER OF LIABILITY AND ASSOCIATED COST.

***** STOP! CALL BEFORE YOU DIG! *****

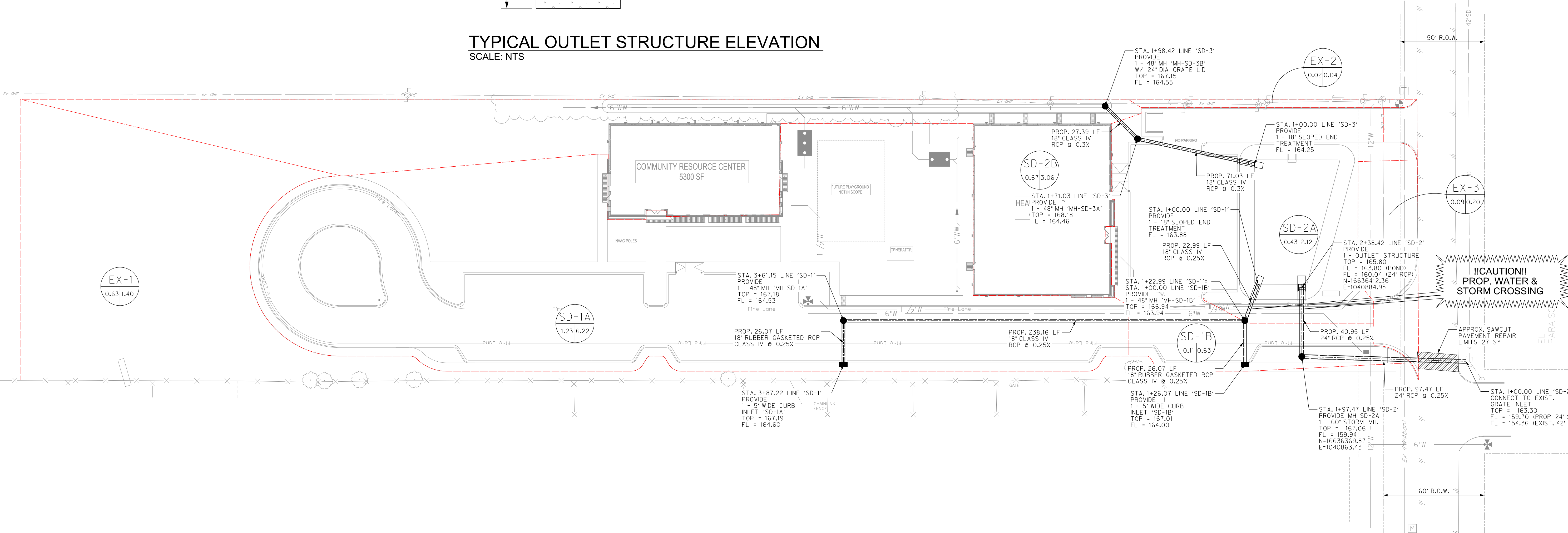
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LEGEND

- | PROPOSED | EXISTING | |
|----------|----------|----------------------|
| □ | □ | INLET |
| □ | □ | GRATE INLET |
| ○ | ○ | MANHOLE |
| ○ | ○ | GATE VALVE & BOX |
| ○ | ○ | WATER METER |
| ○ | ○ | FIRE HYDRANT |
| ○ | ○ | SANITARY CLEAN OUT |
| ○ | ○ | ELECTRIC POLE |
| ○ | ○ | ELECTRIC BOX |
| ○ | ○ | POWER POLE |
| ○ | ○ | TELEPHONE PEDESTAL |
| ○ | ○ | FENCE |
| ○ | ○ | TRAFFIC SIGN |
| ○ | ○ | OVERHEAD ELECTRIC |
| ○ | ○ | UNDERGROUND ELECTRIC |
| ○ | ○ | GAS LINE |
| ○ | ○ | FIBER OPTIC LINE |
| ○ | ○ | TELEPHONE LINE |
| ○ | ○ | ASPHALT PAVEMENT |
| ○ | ○ | SAN. SEWER |
| ○ | ○ | WATER |
| ○ | ○ | FIRE PROTECTION |
| ○ | ○ | STORM SEWER |
| ○ | ○ | CONTOUR |
| ○ | ○ | TOP OF PAVEMENT |
| ○ | ○ | TOP OF CURB |
| ○ | ○ | GUTTER |
| ○ | ○ | TOP OF WALK |
| ○ | ○ | FINISHED GRADE |
| ○ | ○ | ASPHALT PAVEMENT |
| ○ | ○ | CONCRETE PAVEMENT |



!CAUTION!
EXISTING OVERHEAD
ELECTRIC LINES

**CALL TEXAS 811
BEFORE YOU DIG**

!CAUTION!
EXISTING UNDERGROUND
ELEC. & COMM. LINES

PROPOSED RUNOFF COMPUTATIONS

Drainage Basin	Basin Information			Computed C	Cumulative CA	Time of Concentration		Intensity			Flow		
	Area (Ac)	PerVIOUS Area (Ac) for C_D	ImpervIOUS Area (Ac) for C_D			T_C (minutes)	T_U (minutes)	I₁ (in/hr)	I₂ (in/hr)	I₃ (in/hr)	Q₁ (cfs)	Q₂ (cfs)	Q₃ (cfs)
SD-1A	1.23	0.44	0.79	0.88	0.84	2.02	10.00	7.40	10.25	11.51	6.22	8.62	9.68
SD-1B	0.11	0.00	0.09	0.77	0.88	0.25	10.00	7.40	10.25	11.51	0.63	0.87	0.97
SD-2A	0.43	0.17	0.26	0.67	0.29	1.08	10.00	7.40	10.25	11.51	2.12	2.93	3.29
SD-2B	0.67	0.31	0.36	0.62	0.41	2.42	10.00	7.40	10.25	11.51	3.06	4.25	4.77
EX-1	0.63	0.63	0.00	0.30	0.19	0.00	10.00	7.40	10.25	11.51	1.40	1.94	2.17
EX-2	0.02	0.02	0.00	0.00	0.01	0.00	10.00	7.40	10.25	11.51	0.04	0.06	0.07
EX-3	0.09	0.09	0.00	0.30	0.03	0.00	10.00	7.40	10.25	11.51	0.20	0.28	0.31

25-YR Proposed Conditions

RUNOFF COLLECTION POINT (Inlet or Manhole)	Distance Between Collection Points	INCREMENTAL DRAINAGE AREA			Accumulated CA	Time at Upstream Station (minutes)	Design Storm Frequency (yrs)	Intensity T (inches/hr)	Storm Water Runoff Q (c.f.s.)	Slope of Hydraulic Gradient "S" (ft/ft)	Number of Conduits	Selected Storm Sewer Height (in)	Velocity in Sewer Between Collection Points (f.p.s.)	Head Loss Coeff. K_f	Velocity Head Loss of Upstream Station K_fV₂ (feet)	Flow Time in Sewer (minutes)	Distance V x 60 (minutes)	Hydraulic Grade
		Drainage Area "A" (Acres)	Runoff Coeff. "C"	Incremental "CA"														
INLET SD-1A	26.07	1.23	0.68	0.84	10.00	25	9.01	7.58	0.0052	1	18	4.29	1.25	0.36	0.10	166.57	166.93	167.06
MH-SD-1A	238.16	0.00	0.68	0.00	10.10	25	8.98	7.55	0.0052	1	18	4.28	0.50	0.14	0.93	165.20	165.34	166.57
MH-SD-1B (To Detention Pond)	22.99	0.00	0.77	0.00	11.03	25	8.70	8.05	0.0059	1	18	4.56	0.50	0.18	0.08	164.88	165.06	165.20
Inlet SD-1B (To MH-SD-1B)	26.07	0.11	0.77	0.08	10.00	25	9.01	0.76	0.0001	1	18	0.43	1.25	0.00	1.01	166.57	166.57	166.57
MH-SD-2B	27.39	0.67	0.62	0.41	10.00	25	9.01	3.73	0.0013	1	18	2.11	1.25	0.09	0.22	165.87	165.96	165.99
MH-SD-2A (To Detention)	71.03	0.00	0.67	0.00	10.22	25	8.95	3.71	0.0012	1	18	2.10	0.50	0.03	0.56	165.75	165.78	165.87

*RAINFALL INTENSITY-DURATION-FREQUENCY COEFFICIENTS FOR TEXAS
Based on "National Oceanic and Atmospheric Administration's (NOAA) Atlas 14
Precipitation-Frequency Atlas of the United States, Volume 11 Version 2.0: Texas" (Perica et al. 2018)



**Know what's below.
Call before you dig.**

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P.O. BOX 720428, McAllen, TX 78504
T 956-661-0400 | goero.com

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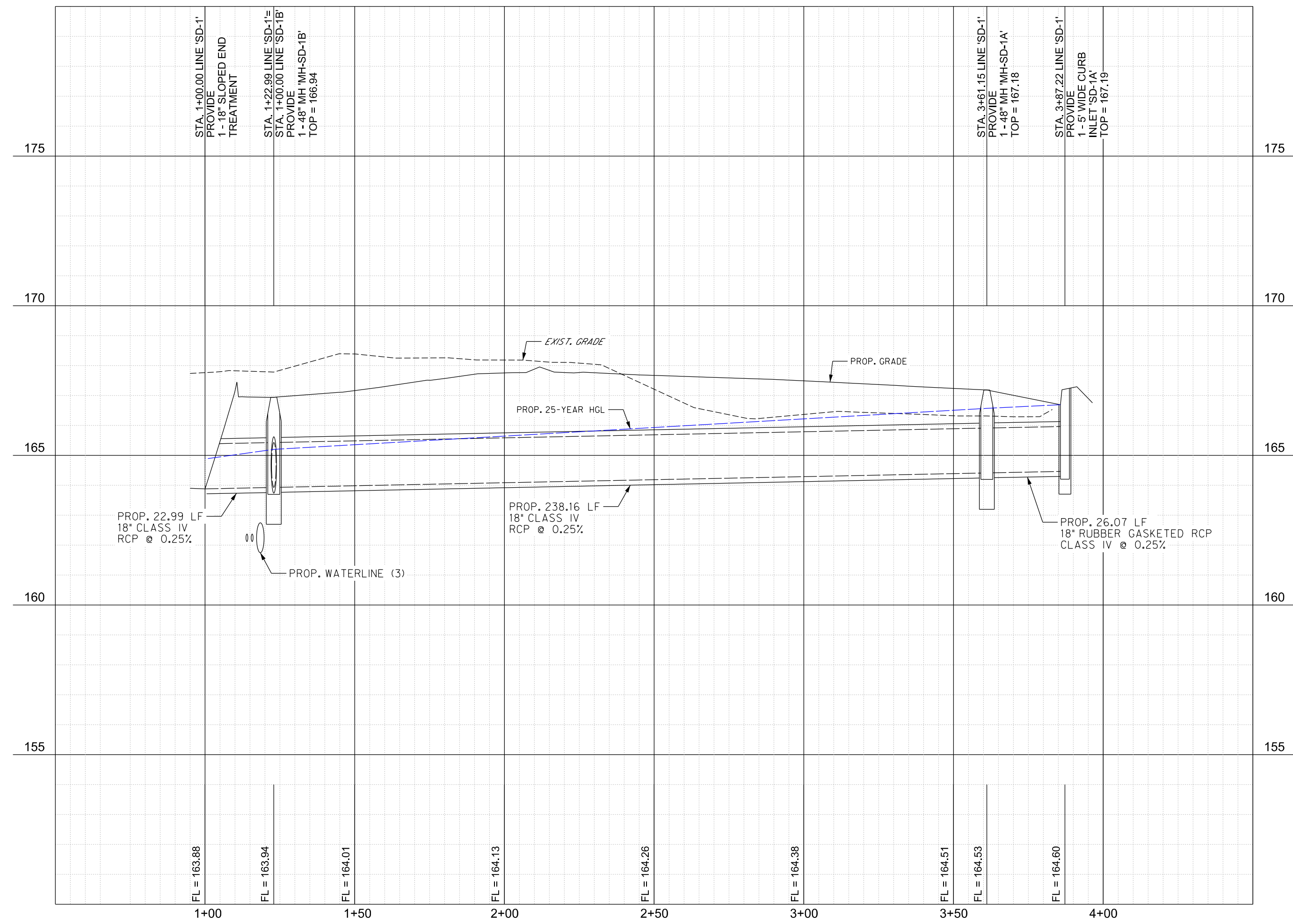


HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

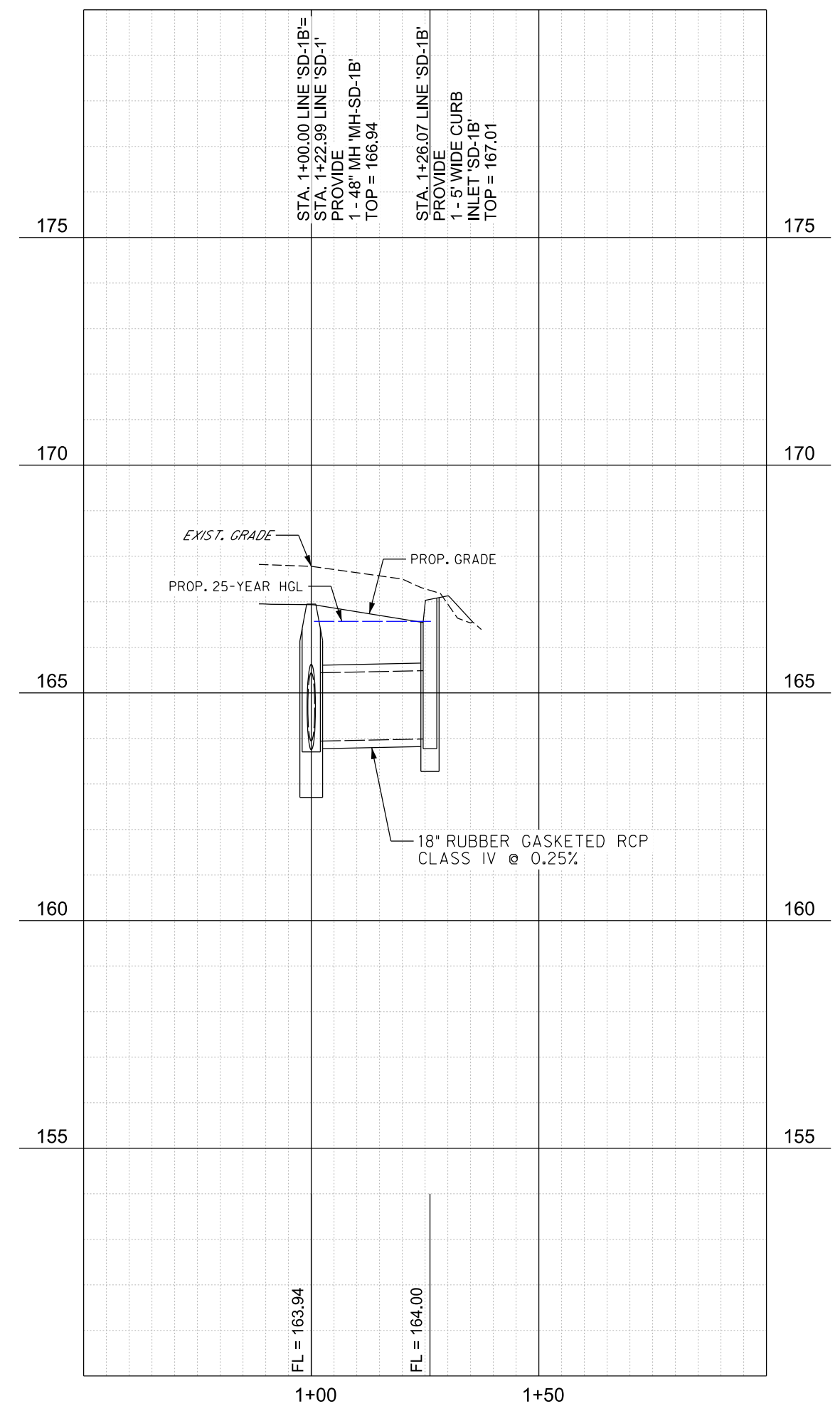
PROJECT NO:	21087
ISSUE DATE:	8/2/2023
DRAWN BY:	SK
CHECKED BY:	RG
SHEET NAME:	DRAINAGE PLAN
Sheet Number:	C4.00
Project Status:	CONSTRUCTION DOCUMENTS

Sheet
C4.10

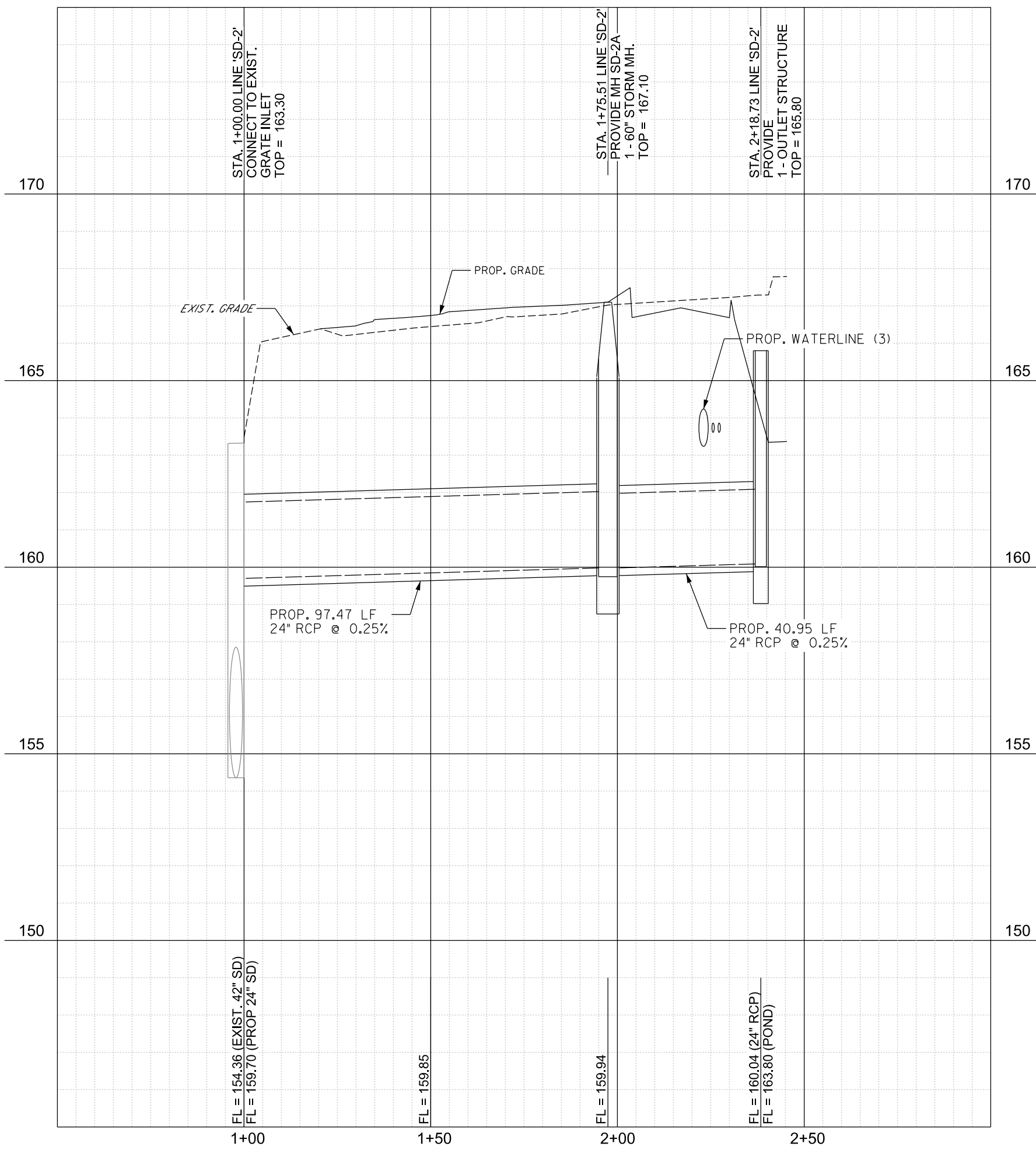
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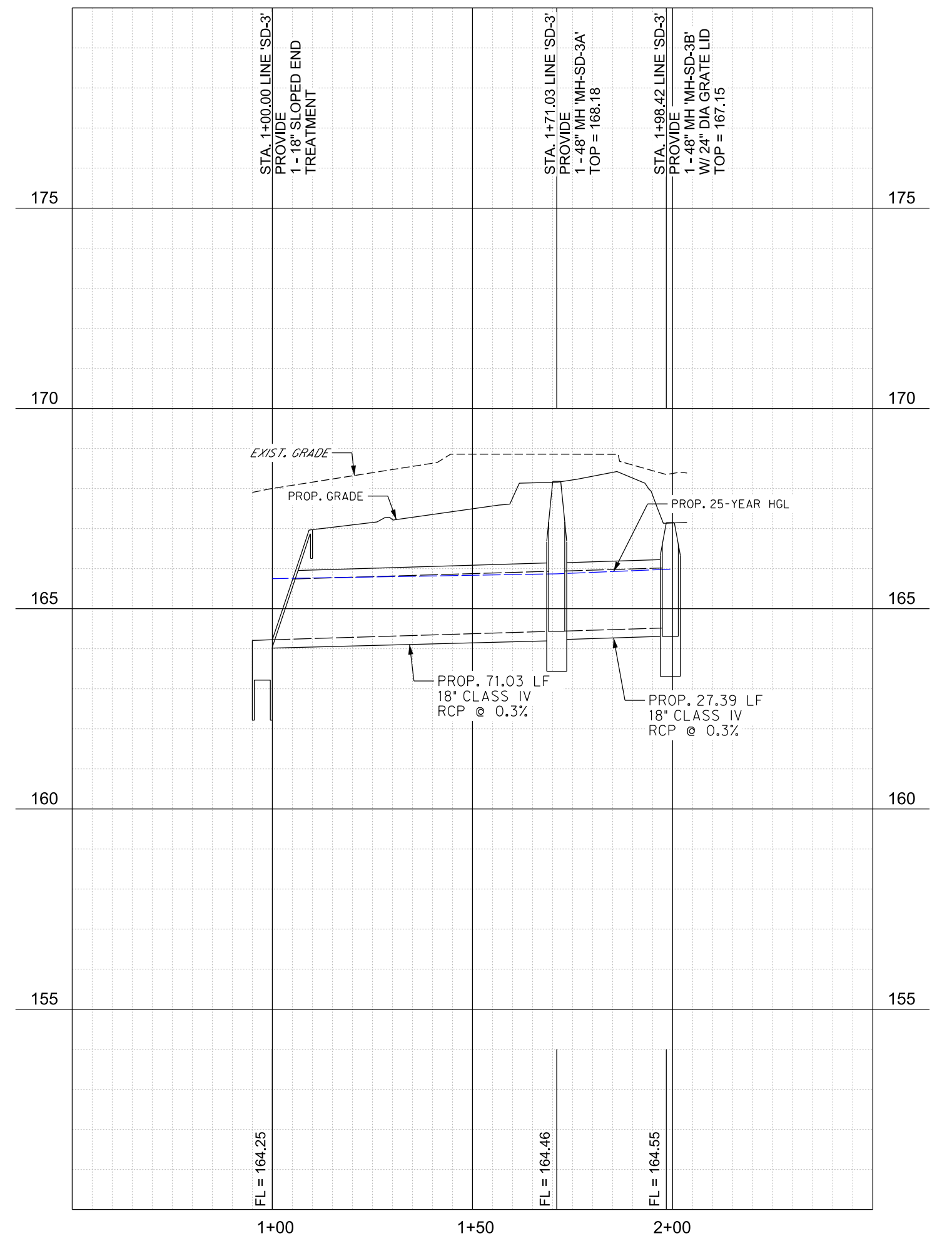
PROFILE LINE 'SD-1'
H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-1B'
H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-2'
H: 1"= 30' V: 1"= 3'



PROFILE LINE 'SD-3'
H: 1"= 30' V: 1"= 3'

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HIDALGO COUNTY EL PARAISO PROJECT HIDALGO COUNTY 1901 N. LOS EBANOS RD., ALTON, TX 78573

No.	Date	Description

PROJECT NO.: 21087
 ISSUE DATE: 8/2/2023
 DRAWN BY: SK
 CHECKED BY: RG
 SHEET NAME:

DRAINAGE PROFILES

Sheet Number
C4.01

Project Status:
CONSTRUCTION DOCUMENTS

Sheet
C5.00

STANDARD FEATURES:
 5000 PSI CONCRETE
 GRADE 60 REINFORCING
 8" TRAFFIC BEARING LID
 AASHTO H-20 RATED
 4" WALLS AND FLOOR

WEIGHT (APPROXIMATE):
 TANK 18,500 LBS
 24" EXTENSION 4,200 LBS
 8" SLAB TOP 11,000 LBS

NOTES:
 ALLOW FOR MANHOLE AND COVER IN TOTAL HEIGHT.
 STANDARD INLET/OUTLET FITTINGS ARE 6" BOOT (4" AVAILABLE)
 MAXIMUM BURY DEPTH TO BOTTOM OF TANK: 9 FT.

CAPITAL PRECAST, INC.
 695 SOUTH OLD BASTROP HWY
 SAN MARCOS, TEXAS 78666
 PH: (430) 696-4230

FOR 4000 GALLON SEPTIC TANK

JOB NO.	DATE	BY	SHEET
192022-01-11-25 AM	08/22/2023	SK	60

STANDARD FEATURES:
 5000 PSI CONCRETE
 GRADE 60 REINFORCING
 8" TRAFFIC BEARING LID
 AASHTO H-20 RATED
 4" WALLS AND FLOOR

WEIGHT (APPROXIMATE):
 TANK 19,170 LBS
 48" EXTENSION 12,264 LBS
 8" SLAB TOP 12,650 LBS
 TOTAL 43,085 LBS

NOTES:
 GROUND WATER MUST BE 6 FT OR MORE BELOW GRADE.
 ALLOW FOR MANHOLE AND COVER IN TOTAL HEIGHT.
 STANDARD INLET/OUTLET FITTINGS ARE 6" BOOT (4" AVAILABLE)
 MAXIMUM BURY DEPTH TO BOTTOM OF TANK:
 AASHTO H-20 LOADING: 11 FT
 NON TRAFFIC (SOIL) LOADING: 13 FT

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 695 SOUTH OLD BASTROP HWY
 SAN MARCOS, TEXAS 78666
 PH: (430) 696-4230

FOR 5000 GALLON SEPTIC TANK

JOB NO.	DATE	BY	SHEET
192022-01-11-25 AM	08/22/2023	SK	60

NOTICE TO CONTRACTORS

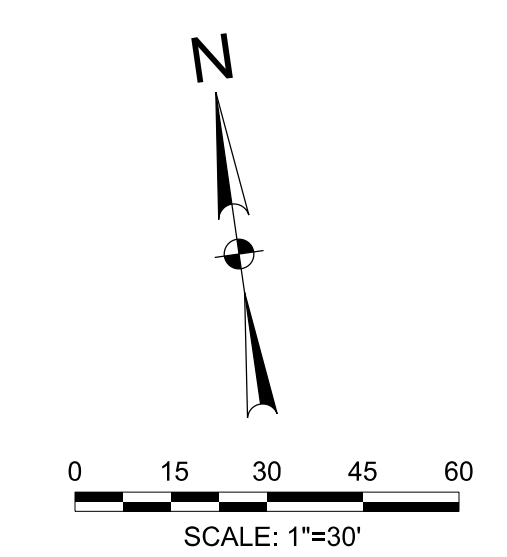
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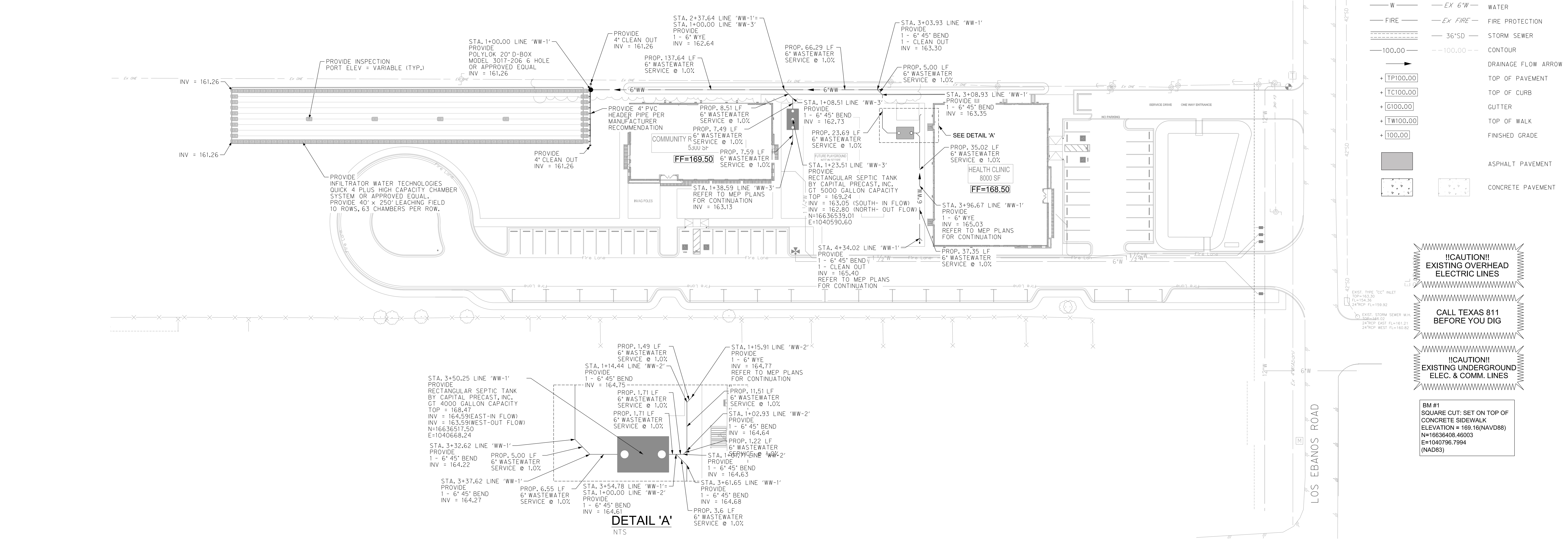


LEGEND

PROPOSED	EXISTING	DESCRIPTION
□	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	GATE VALVE & BOX
○	○	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
○	○	ELECTRIC BOX
○	○	POWER POLE
○	○	TELEPHONE PEDESTAL
○	○	FENCE
○	○	TRAFFIC SIGN
○	○	OVERHEAD ELECTRIC
○	○	UNDERGROUND ELECTRIC
○	○	GAS LINE
○	○	FIBER OPTIC LINE
○	○	TELEPHONE LINE
○	○	ASPHALT PAVEMENT
○	○	SAN. SEWER
○	○	WATER
○	○	FIRE PROTECTION
○	○	STORM SEWER
○	○	CONTOUR
○	○	TOP OF PAVEMENT
○	○	TOP OF CURB
○	○	GUTTER
○	○	TOP OF WALK
○	○	FINISHED GRADE
○	○	ASPHALT PAVEMENT
○	○	CONCRETE PAVEMENT

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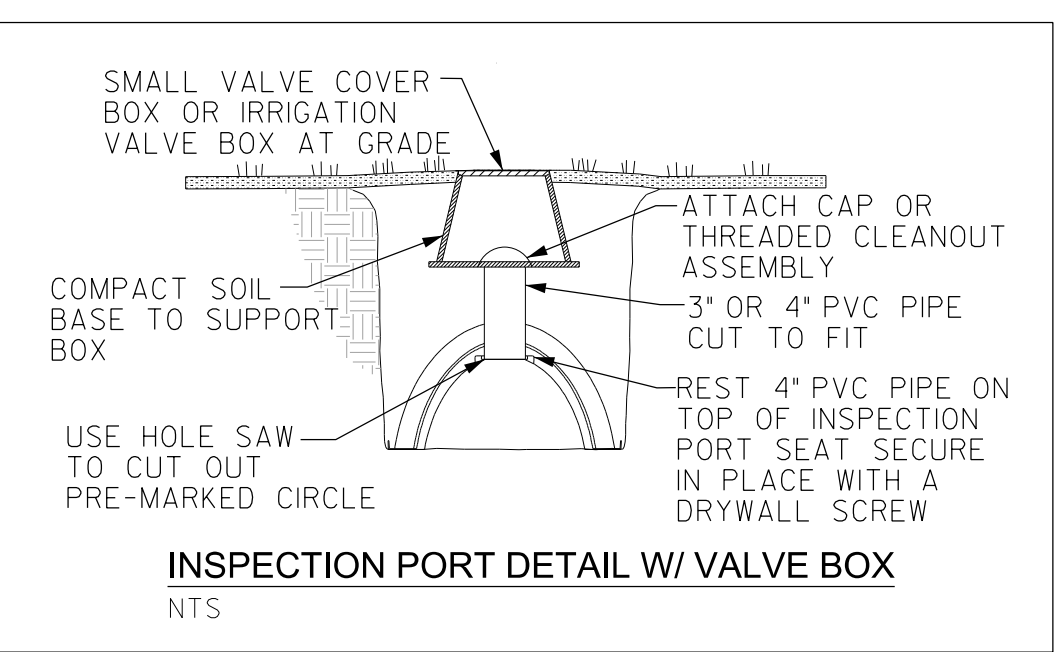
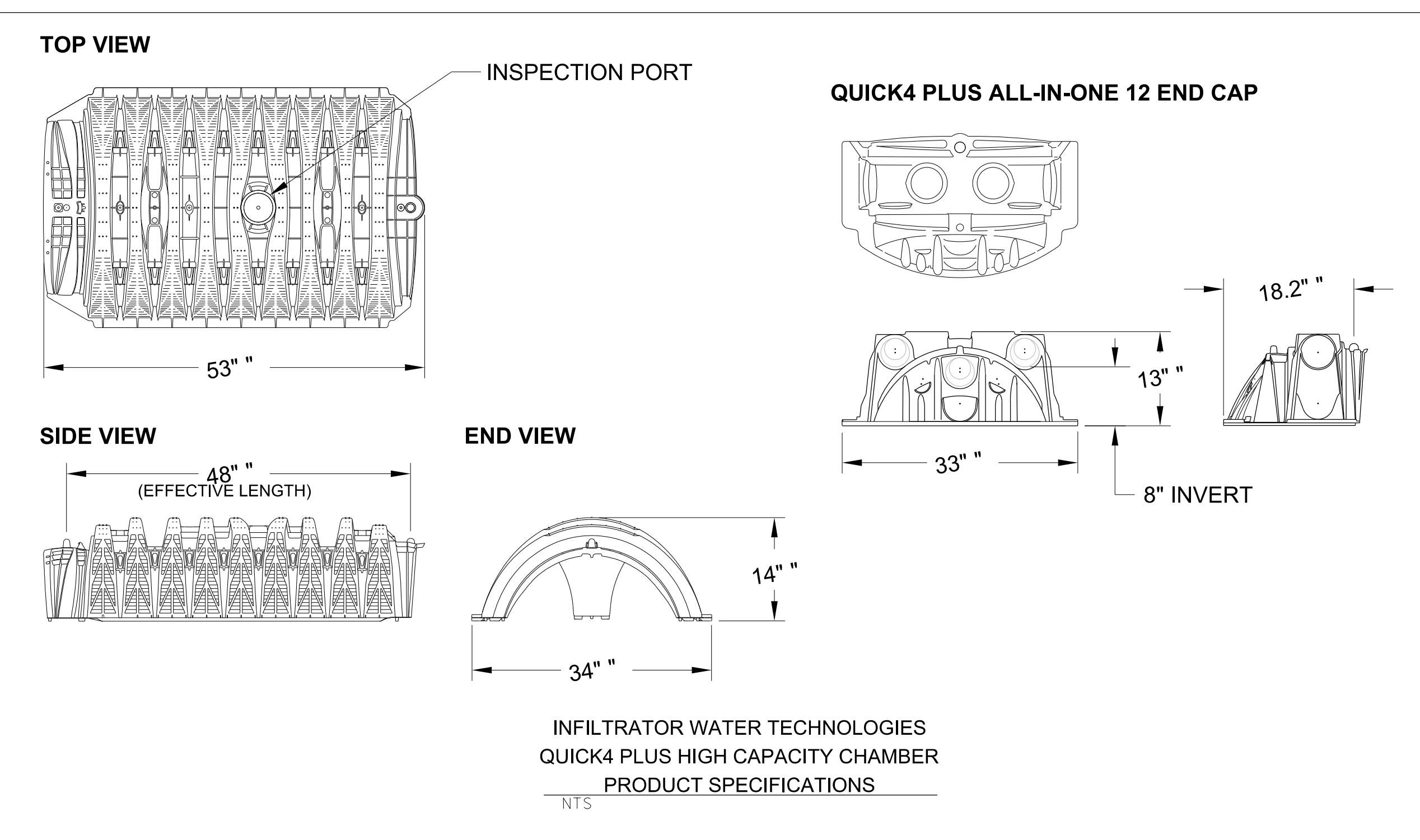
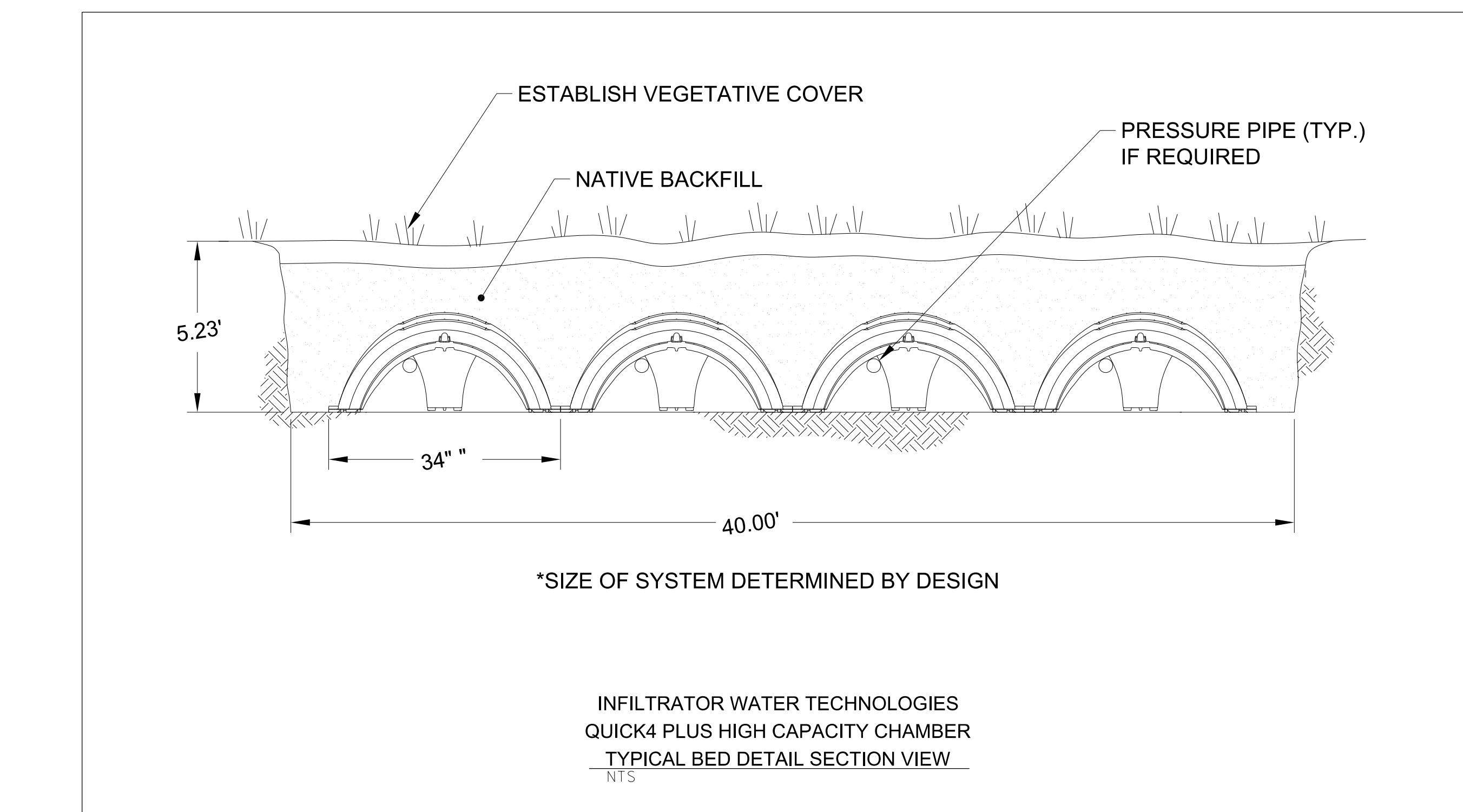
!CAUTION!
 EXISTING OVERHEAD ELECTRIC LINES

CALL TEXAS 811 BEFORE YOU DIG

!CAUTION!
 EXISTING UNDERGROUND ELEC. & COMM. LINES

BM #1
 SQUARE CUT: SET ON TOP OF CONCRETE SIDEWALK
 ELEVATION = 169.16 (NAVD88)
 N=16636408.46003
 E=1040796.7994
 (NAD83)

HIDALGO COUNTY EL PARAISO PROJECT
 HIDALGO COUNTY
 1901 N. LOS EBANOS RD., ALTON, TX 78573



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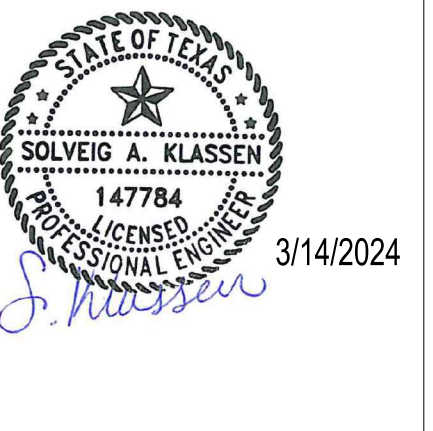
PROJECT NO.: 21087
 ISSUE DATE: 8/22/2023
 DRAWN BY: SK
 CHECKED BY: HG
 SHEET NAME:

WASTEWATER PLAN

Sheet Number **C5.00**

Project Status: CONSTRUCTION DOCUMENTS

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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

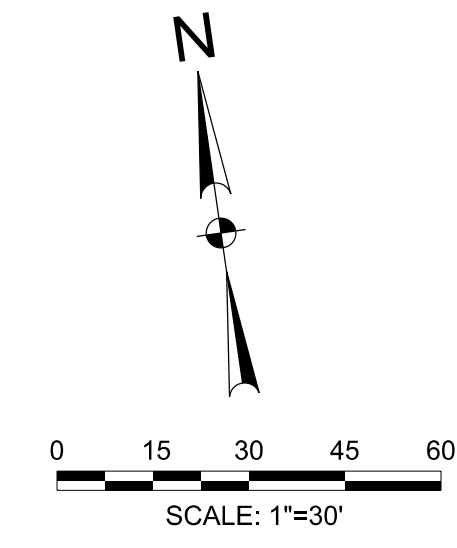
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LEGEND

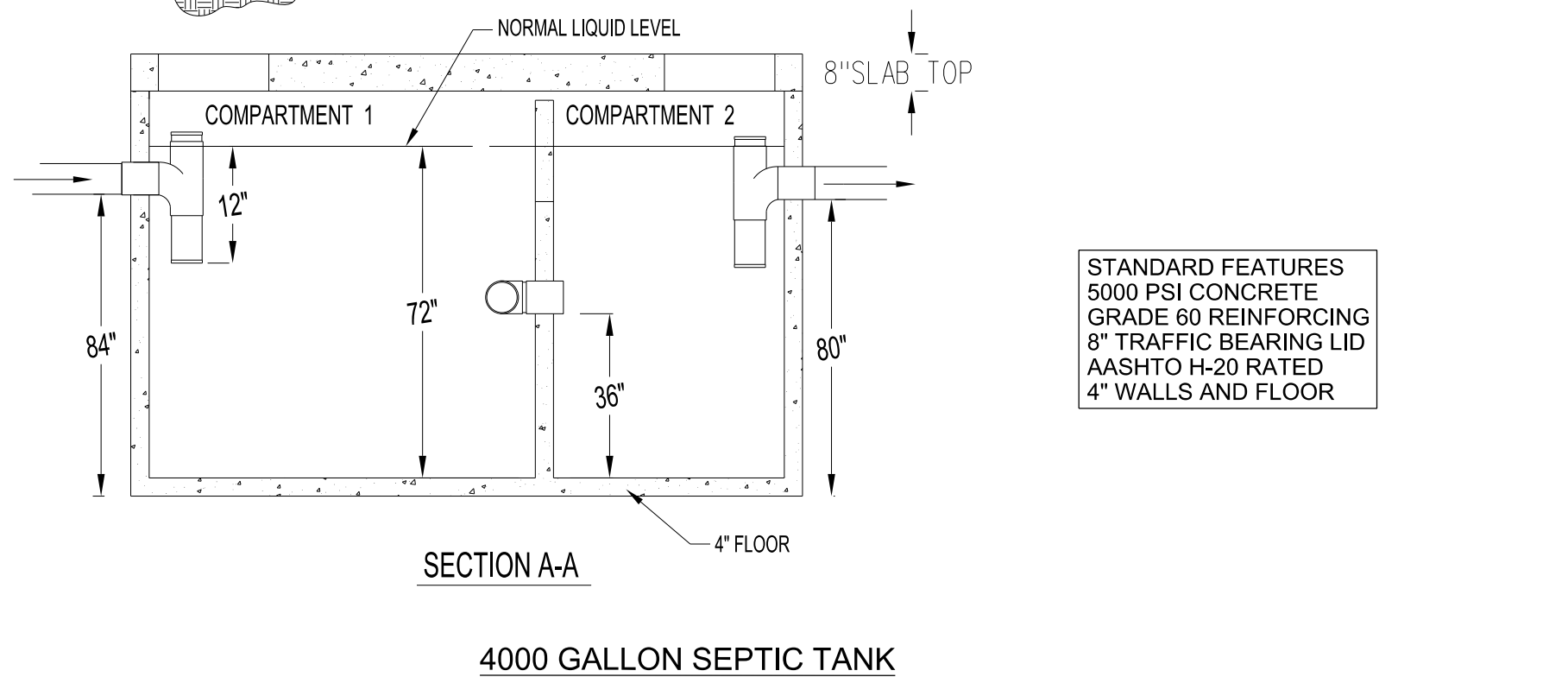
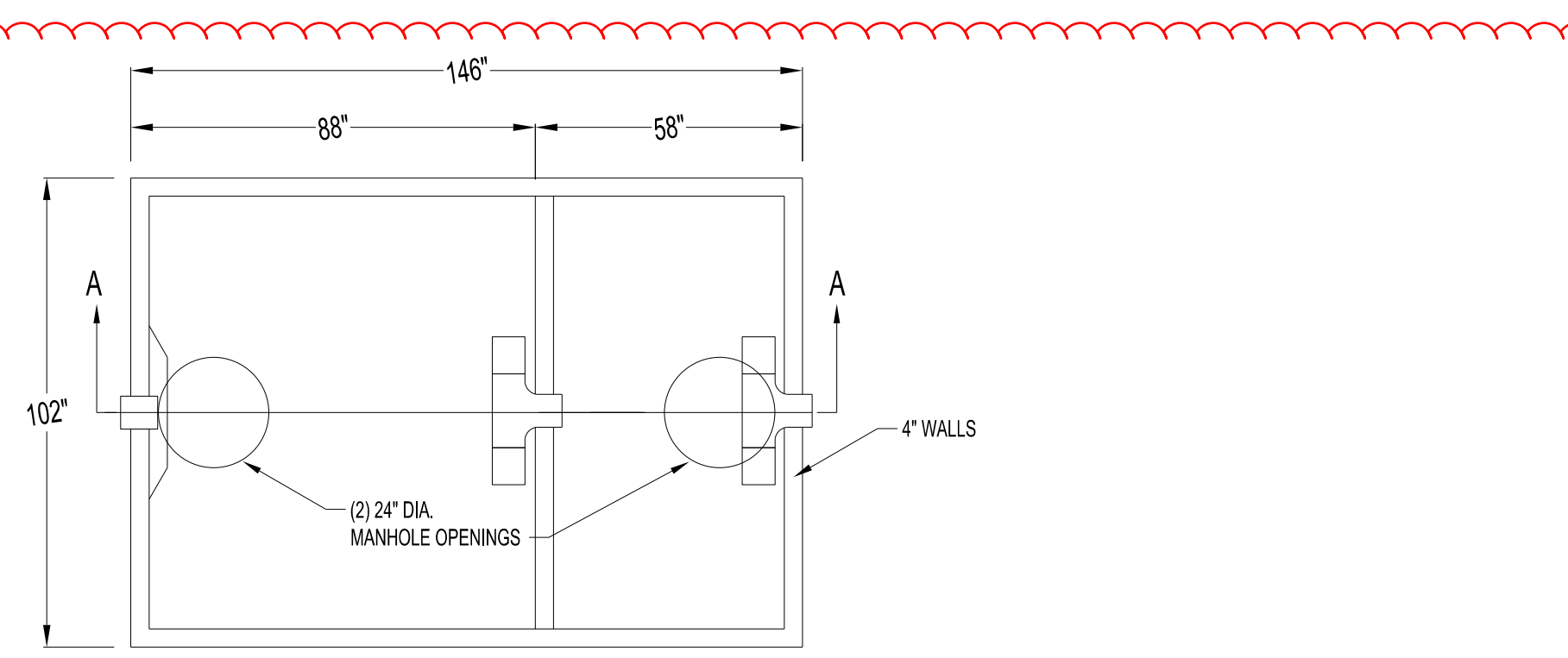
- | | |
|----------------------|----------------------|
| PROPOSED | EXISTING |
| INLET | INLET |
| GRATE INLET | GRATE INLET |
| MANHOLE | MANHOLE |
| GATE VALVE & BOX | GATE VALVE & BOX |
| WATER METER | WATER METER |
| FIRE HYDRANT | FIRE HYDRANT |
| SANITARY CLEAN OUT | SANITARY CLEAN OUT |
| ELECTRIC POLE | ELECTRIC POLE |
| ELECTRIC BOX | ELECTRIC BOX |
| POWER POLE | POWER POLE |
| TELEPHONE PEDESTAL | TELEPHONE PEDESTAL |
| FENCE | FENCE |
| TRAFFIC SIGN | TRAFFIC SIGN |
| OVERHEAD ELECTRIC | OVERHEAD ELECTRIC |
| UNDERGROUND ELECTRIC | UNDERGROUND ELECTRIC |
| GAS LINE | GAS LINE |
| FIBER OPTIC LINE | FIBER OPTIC LINE |
| TELEPHONE LINE | TELEPHONE LINE |
| ASPHALT PAVEMENT | ASPHALT PAVEMENT |
| SAN. SEWER | SAN. SEWER |
| WATER | WATER |
| FIRE PROTECTION | FIRE PROTECTION |
| STORM SEWER | STORM SEWER |
| CONTOUR | CONTOUR |
| TOP OF PAVEMENT | TOP OF PAVEMENT |
| TOP OF CURB | TOP OF CURB |
| GUTTER | GUTTER |
| TOP OF WALK | TOP OF WALK |
| FINISHED GRADE | FINISHED GRADE |
| ASPHALT PAVEMENT | ASPHALT PAVEMENT |
| CONCRETE PAVEMENT | CONCRETE PAVEMENT |

!CAUTION!
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ELECTRIC LINES

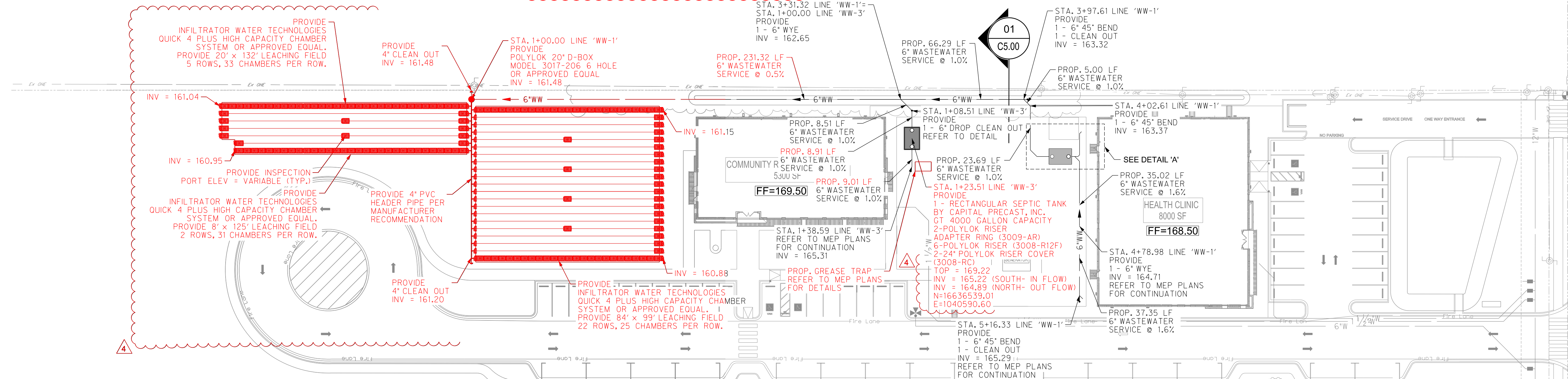
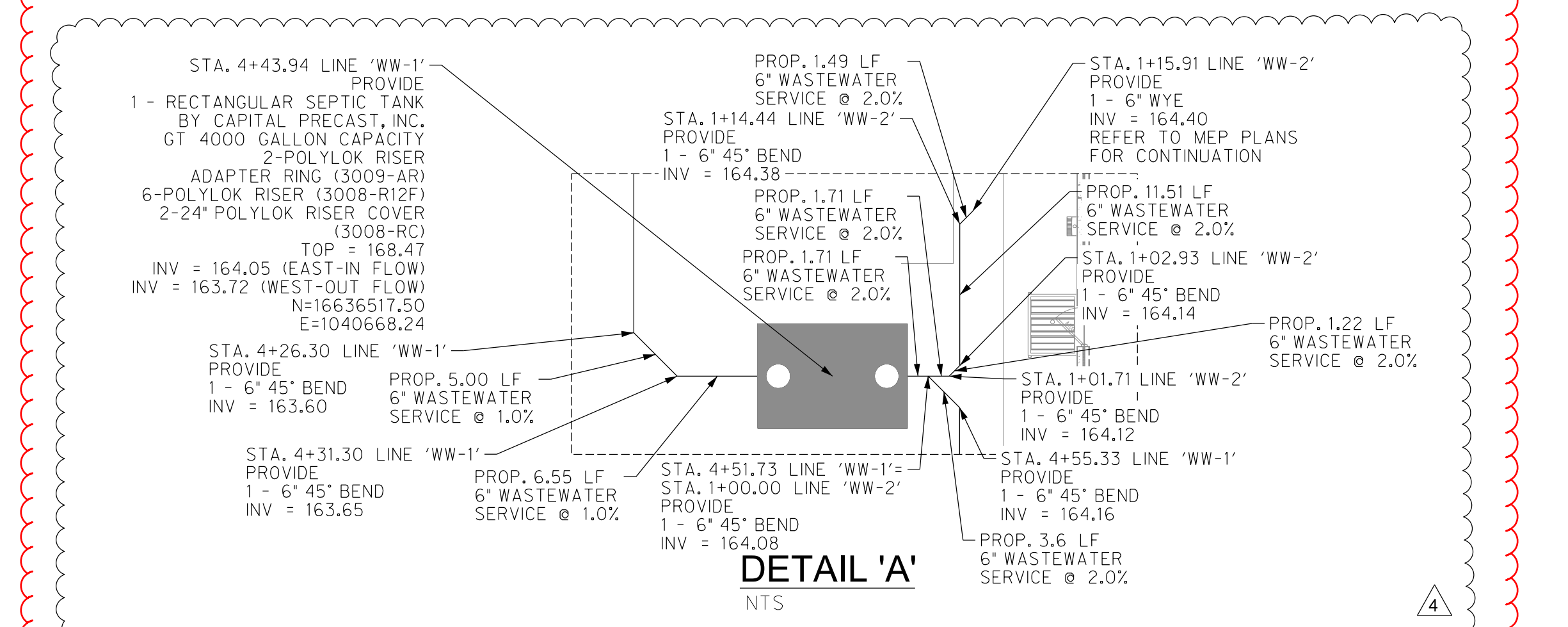
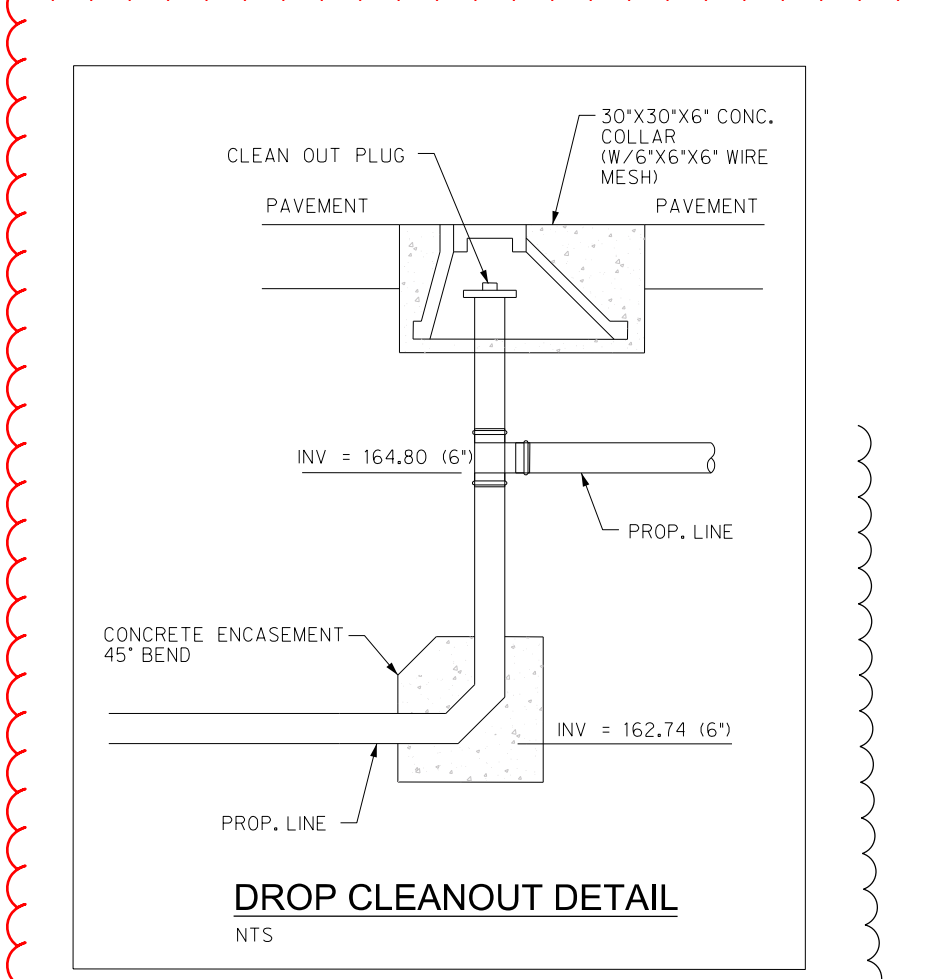
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BEFORE YOU DIG

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BM #1
SQUARE CUT; SET ON TOP OF
CONCRETE SIDEWALK
ELEVATION = 169.16 (NAVD88)
N=16636408.46
E=1040976.79
(NAD83)
BM #2
COTTON PICKER SPINDLE
ON EXIST. POWER POLE
ELEVATION = 170.91 (NAVD88)
N=16636602.27
E=1040981.65
(NAD83)
BM #3
TOP OF EXIST. STORM MH
ELEVATION = 166.02 (NAVD88)
N=16636340.43
E=1040987.13
(NAD83)



STANDARD FEATURES
5000 PSI CONCRETE
GRADE 60 REINFORCING
8\"/>

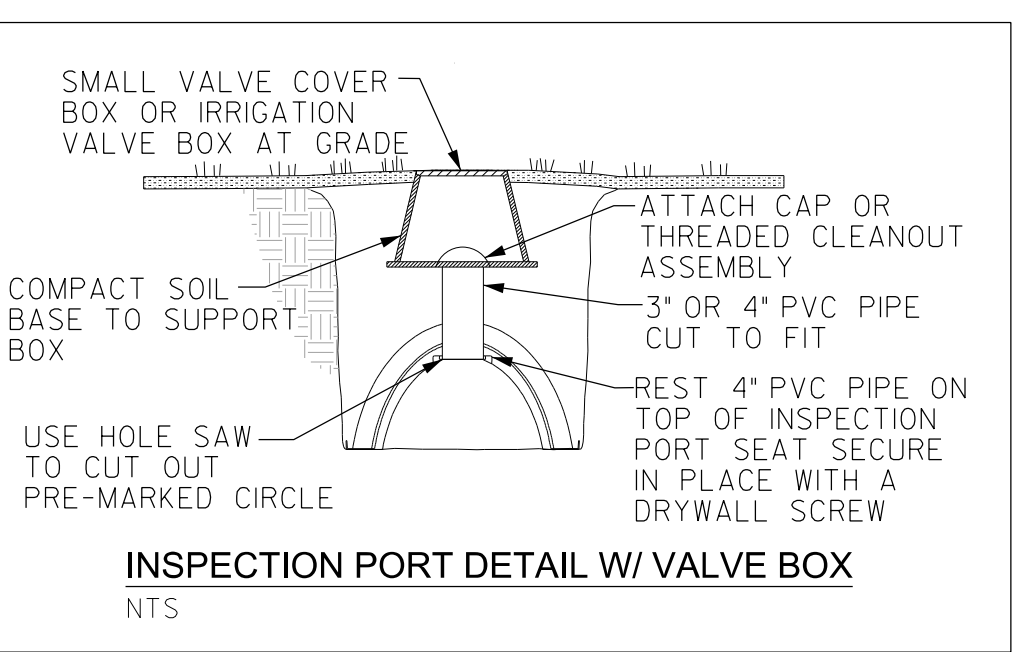
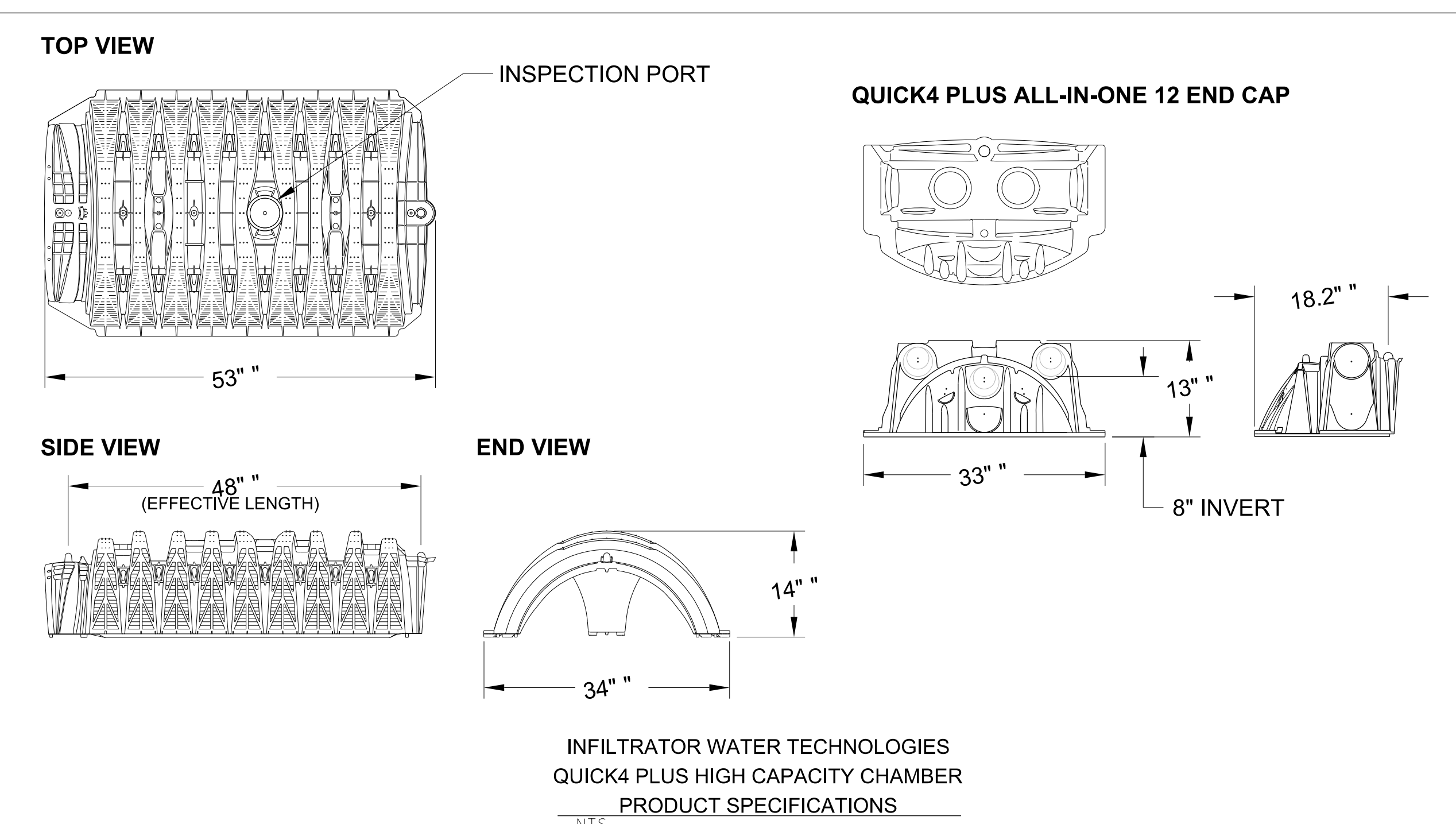
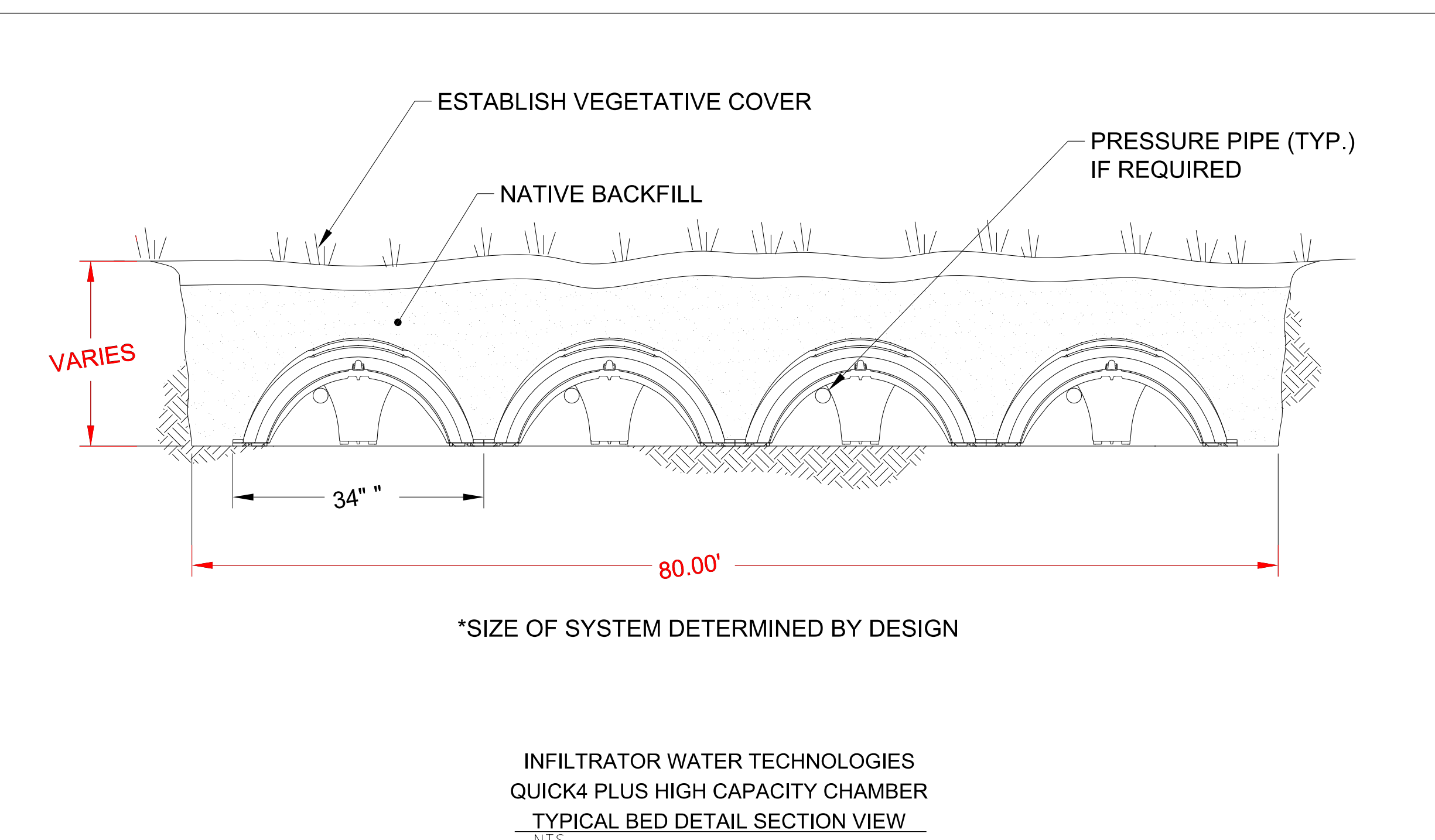


COMMUNITY RESOURCE CENTER SEPTIC TANK CALCULATIONS FOR ABSORPTION FIELD

POPULATION				EVAPORATION RATE		SOIL CLASSIFICATION		FEET PER ROW OF CHAMBER		EXCAVATION WIDTH (EW)		FLOW IN A DAY (Q)	
WOMEN	MEN	HOURS PER DAY	PEOPLE PER DAY	MAXIMUM DAILY DEMAND	SOIL CLASSIFICATION BASED ON ON-SITE SEWAGE FACILITIES OSSF	Laredo	SOIL APPLICATION RATE (Ra) PER FCID ON 285.91 TABLE 1	MAXIMUM TRENCH SLOPE	FEET PER ROW OF CHAMBER	EXCAVATION WIDTH (EW)	FLOW IN A DAY (Q)	FEET PER ROW OF CHAMBER	FLOW IN A DAY (Q)
p/hr	p/hr	h/day	#	gal/day	II	0.23	0.25	%	ft	ft	gal/day	ft	gal/day
20	20	9	36	8	II	0.23	0.25	0.33	4	84	2880		

HEALTH CLINIC SEPTIC TANK CALCULATIONS FOR ABSORPTION FIELD

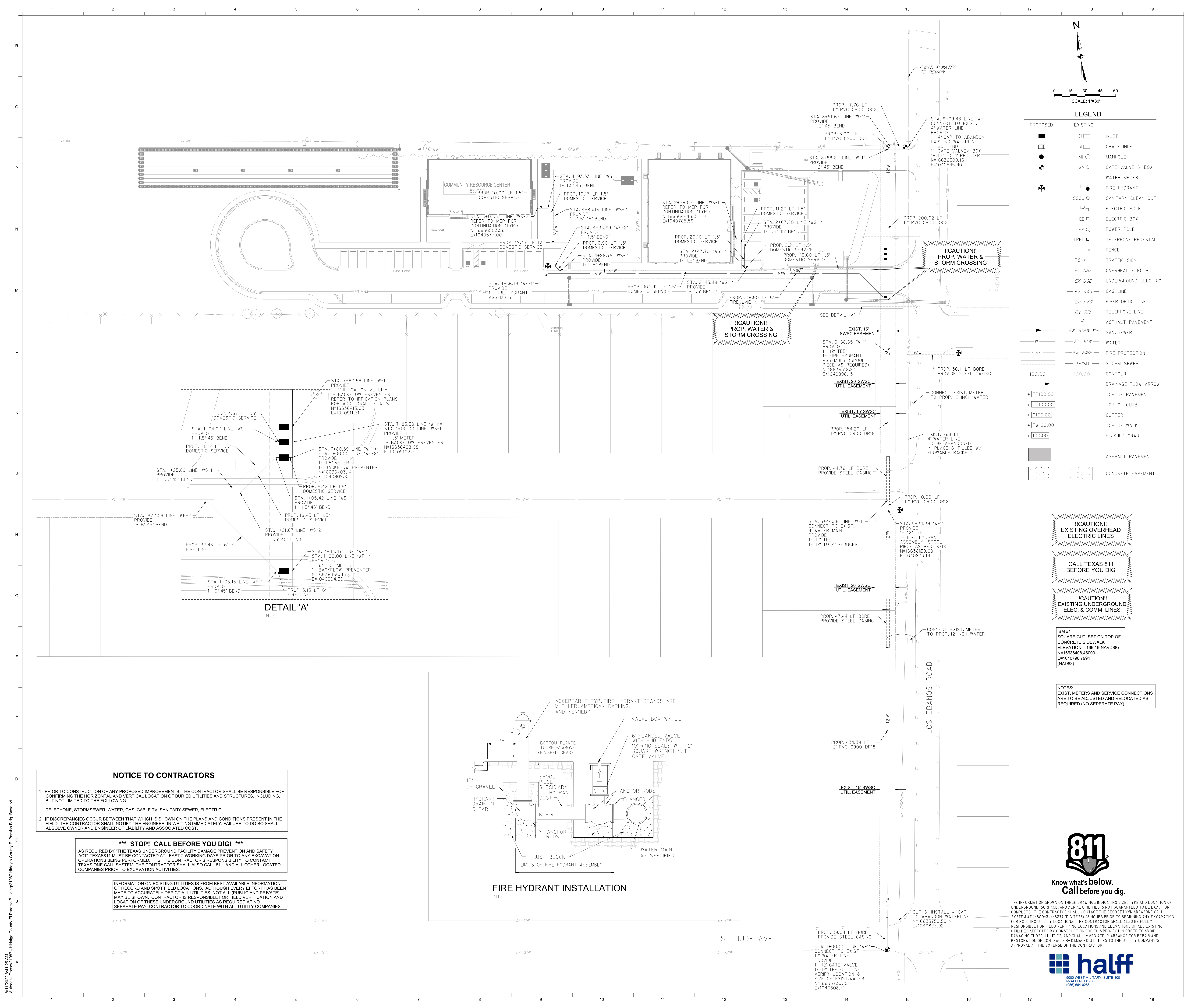
POPULATION				EVAPORATION RATE		SOIL CLASSIFICATION		FEET PER ROW OF CHAMBER		EXCAVATION WIDTH (EW)		FLOW IN A DAY (Q)	
WOMEN	MEN	HOURS PER DAY	PEOPLE PER DAY	MAXIMUM DAILY DEMAND	SOIL CLASSIFICATION BASED ON ON-SITE SEWAGE FACILITIES OSSF	Laredo	SOIL APPLICATION RATE (Ra) PER FCID ON 285.91 TABLE 1	MAXIMUM TRENCH SLOPE	FEET PER ROW OF CHAMBER	EXCAVATION WIDTH (EW)	FLOW IN A DAY (Q)	FEET PER ROW OF CHAMBER	FLOW IN A DAY (Q)
p/hr	p/hr	h/day	#	gal/day	II	0.23	0.25	%	ft	ft	gal/day	ft	gal/day
20	20	9	36	4	II	0.23	0.25	0.33	4	28	1440		



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Sheet
C5.01



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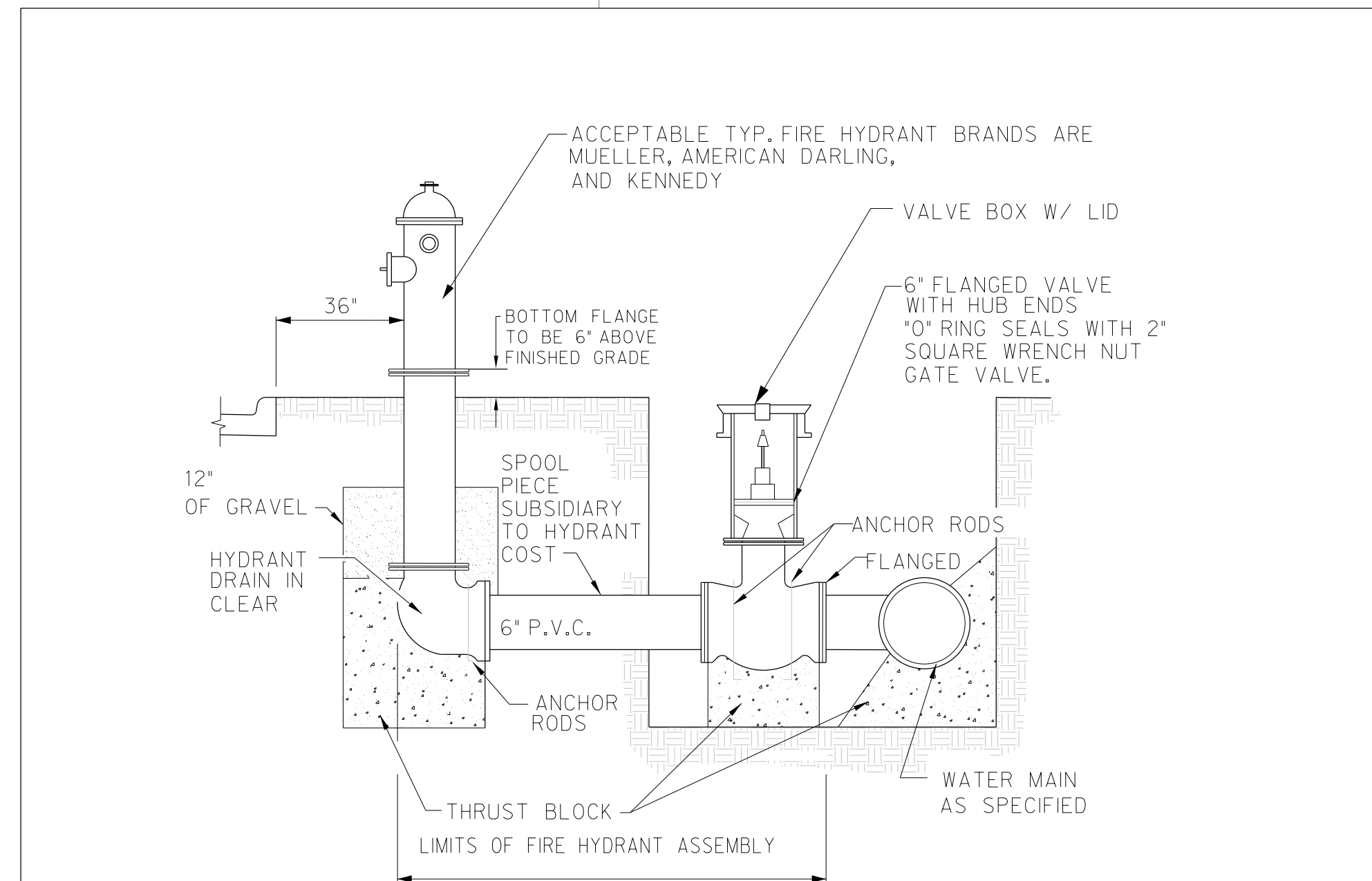
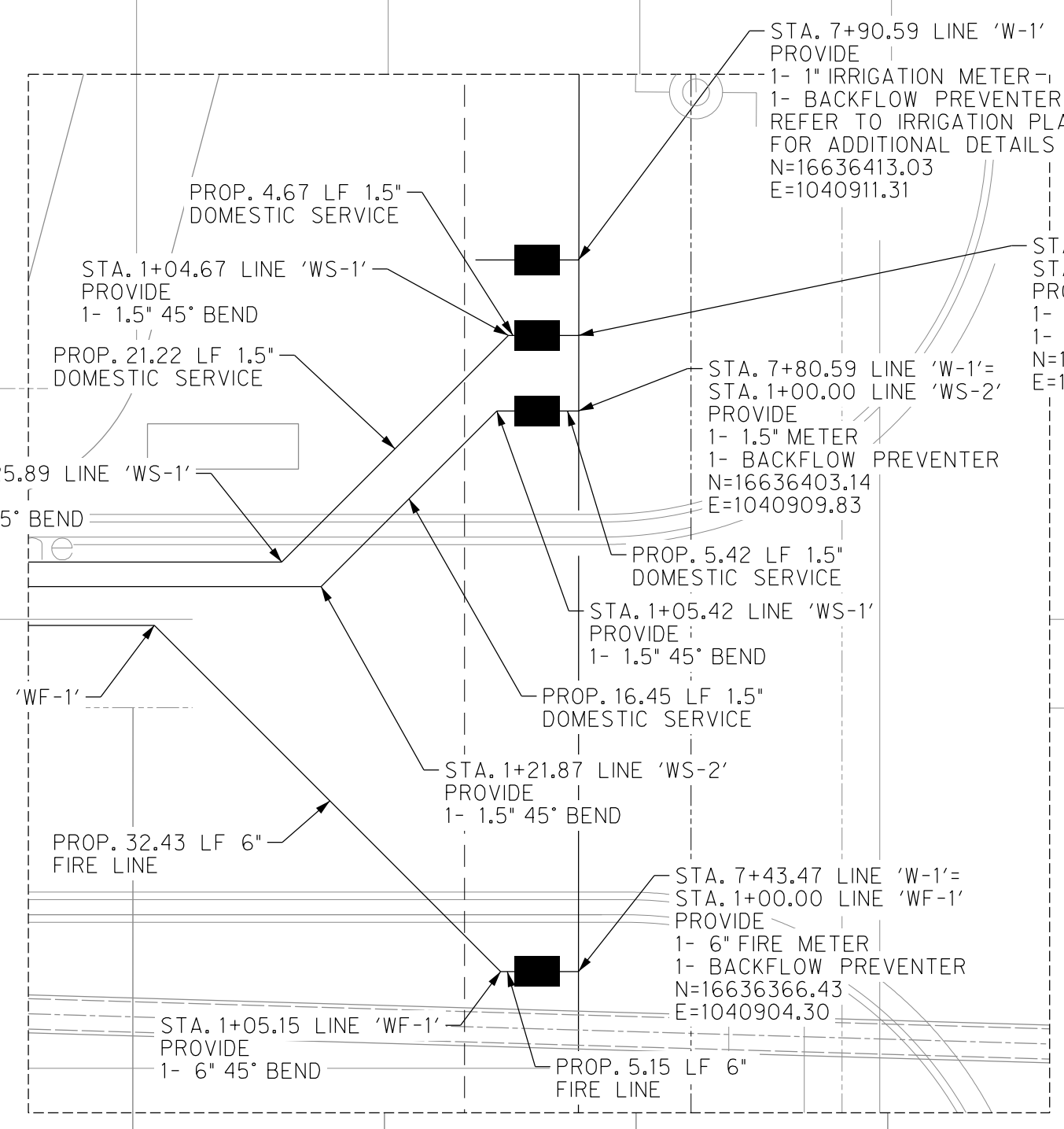
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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

LEGEND

PROPOSED	EXISTING	DESCRIPTION
□	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	GATE VALVE & BOX
○	○	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
○	○	ELECTRIC BOX
○	○	POWER POLE
○	○	TELEPHONE PEDESTAL
○	○	FENCE
○	○	TRAFFIC SIGN
○	○	OVERHEAD ELECTRIC
○	○	UNDERGROUND ELECTRIC
○	○	GAS LINE
○	○	FIBER OPTIC LINE
○	○	TELEPHONE LINE
○	○	ASPHALT PAVEMENT
○	○	SAN. SEWER
○	○	WATER
○	○	FIRE PROTECTION
○	○	STORM SEWER
○	○	CONTOUR
○	○	DRAINAGE FLOW ARROW
○	○	TOP OF PAVEMENT
○	○	TOP OF CURB
○	○	GUTTER
○	○	TOP OF WALK
○	○	FINISHED GRADE
○	○	ASPHALT PAVEMENT
○	○	CONCRETE PAVEMENT



FIRE HYDRANT INSTALLATION
NTS

NOTICE TO CONTRACTORS

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***** STOP! CALL BEFORE YOU DIG! *****

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!CAUTION!
EXISTING UNDERGROUND ELEC. & COMM. LINES

BM #1
SQUARE CUT: SET ON TOP OF CONCRETE SIDEWALK
ELEVATION = 169.16(NAVD88)
N=16636408.46003
E=1040796.7994
(NAD83)

NOTES:
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Know what's below. Call before you dig.

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PROJECT NO.: 21087
ISSUE DATE: 8/2/2023
DRAWN BY: SK
CHECKED BY: RG
SHEET NAME:

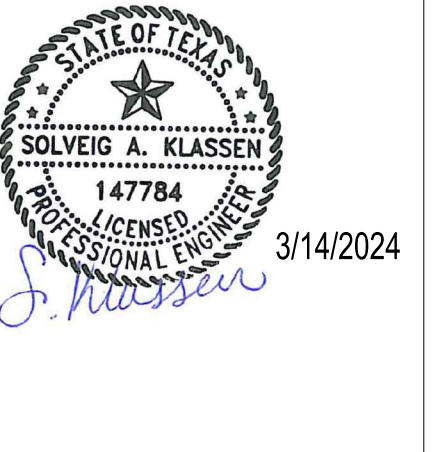
WATERLINE PLAN

Sheet Number
C5.01

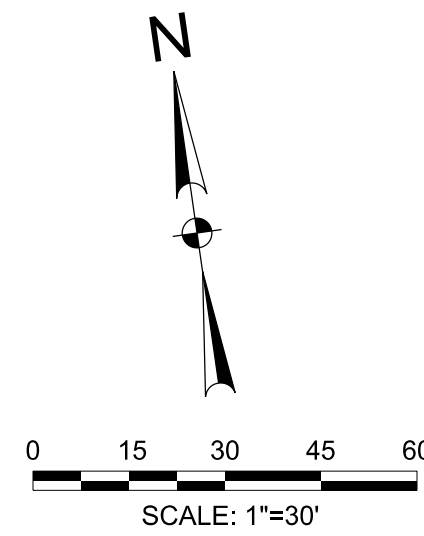
Project Status:
CONSTRUCTION DOCUMENTS

8/14/2023 8:41:26 AM Autodesk Docs/21087 - Hidalgo County El Paraiso Building/21087 Hidalgo County El Paraiso Bldg_Basemnt

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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

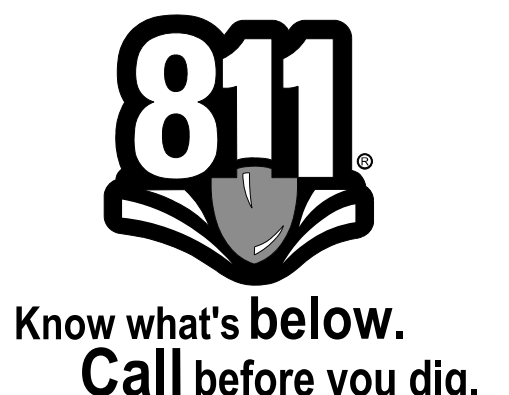


PROPOSED	EXISTING	DESCRIPTION
■	□	INLET
□	□	GRATE INLET
○	○	MANHOLE
○	○	GATE VALVE & BOX
○	○	WATER METER
○	○	FIRE HYDRANT
○	○	SANITARY CLEAN OUT
○	○	ELECTRIC POLE
○	○	ELECTRIC BOX
○	○	POWER POLE
○	○	TELEPHONE PEDESTAL
○	○	FENCE
○	○	TRAFFIC SIGN
○	○	OVERHEAD ELECTRIC
○	○	UNDERGROUND ELECTRIC
○	○	GAS LINE
○	○	FIBER OPTIC LINE
○	○	TELEPHONE LINE
○	○	ASPHALT PAVEMENT
○	○	SAN. SEWER
○	○	WATER
○	○	FIRE PROTECTION
○	○	STORM SEWER
○	○	CONTOUR
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○	○	TOP OF PAVEMENT
○	○	TOP OF CURB
○	○	GUTTER
○	○	TOP OF WALK
○	○	FINISHED GRADE
○	○	ASPHALT PAVEMENT
○	○	CONCRETE PAVEMENT

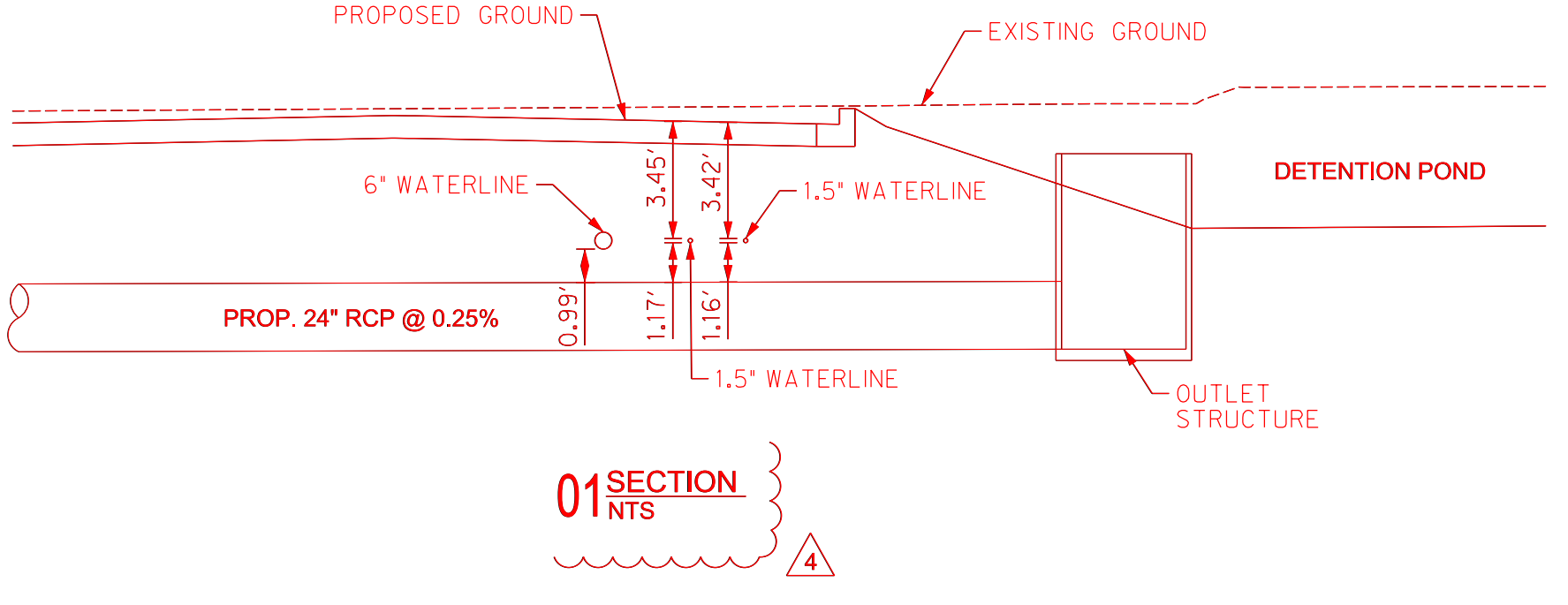
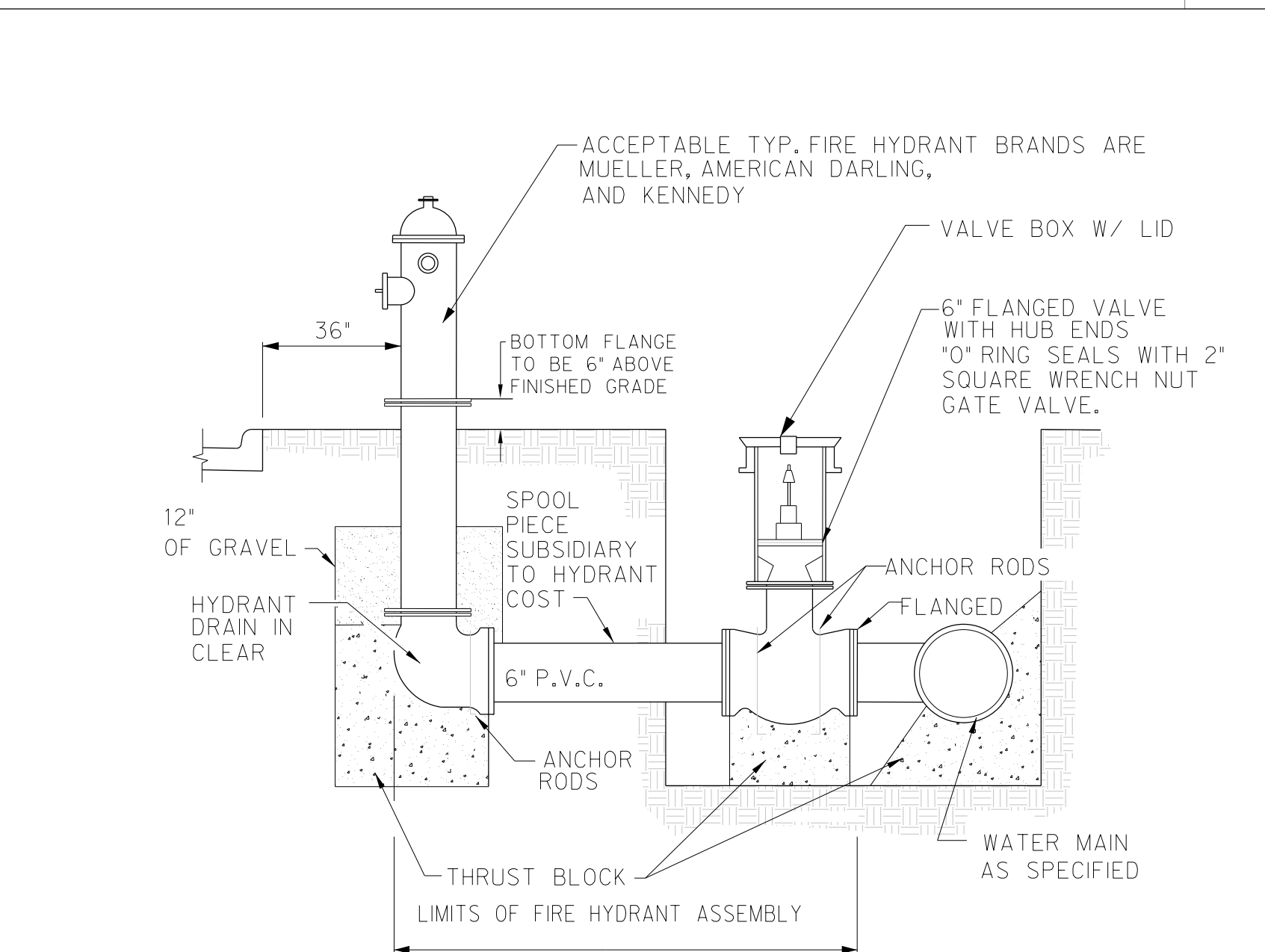
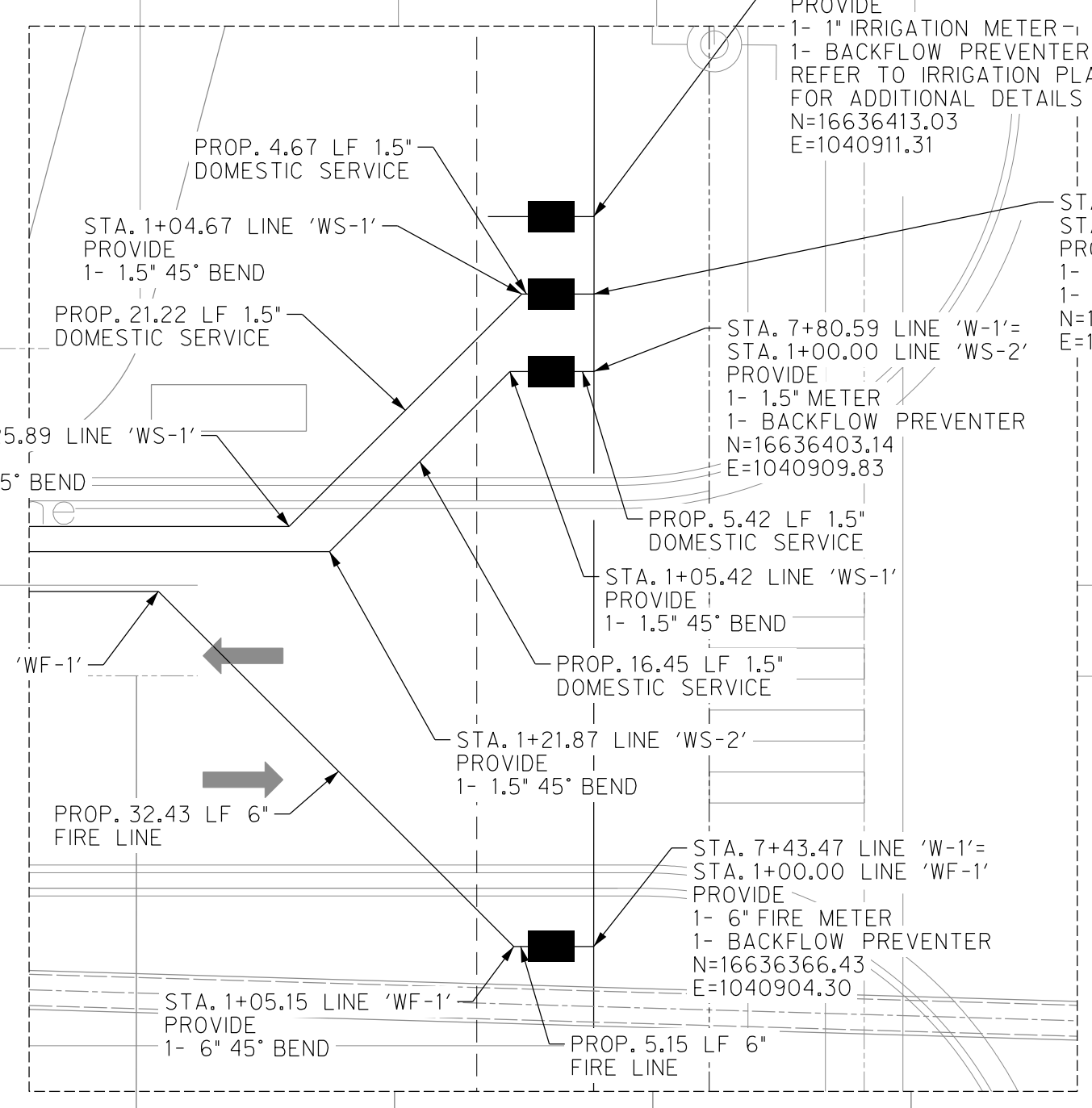
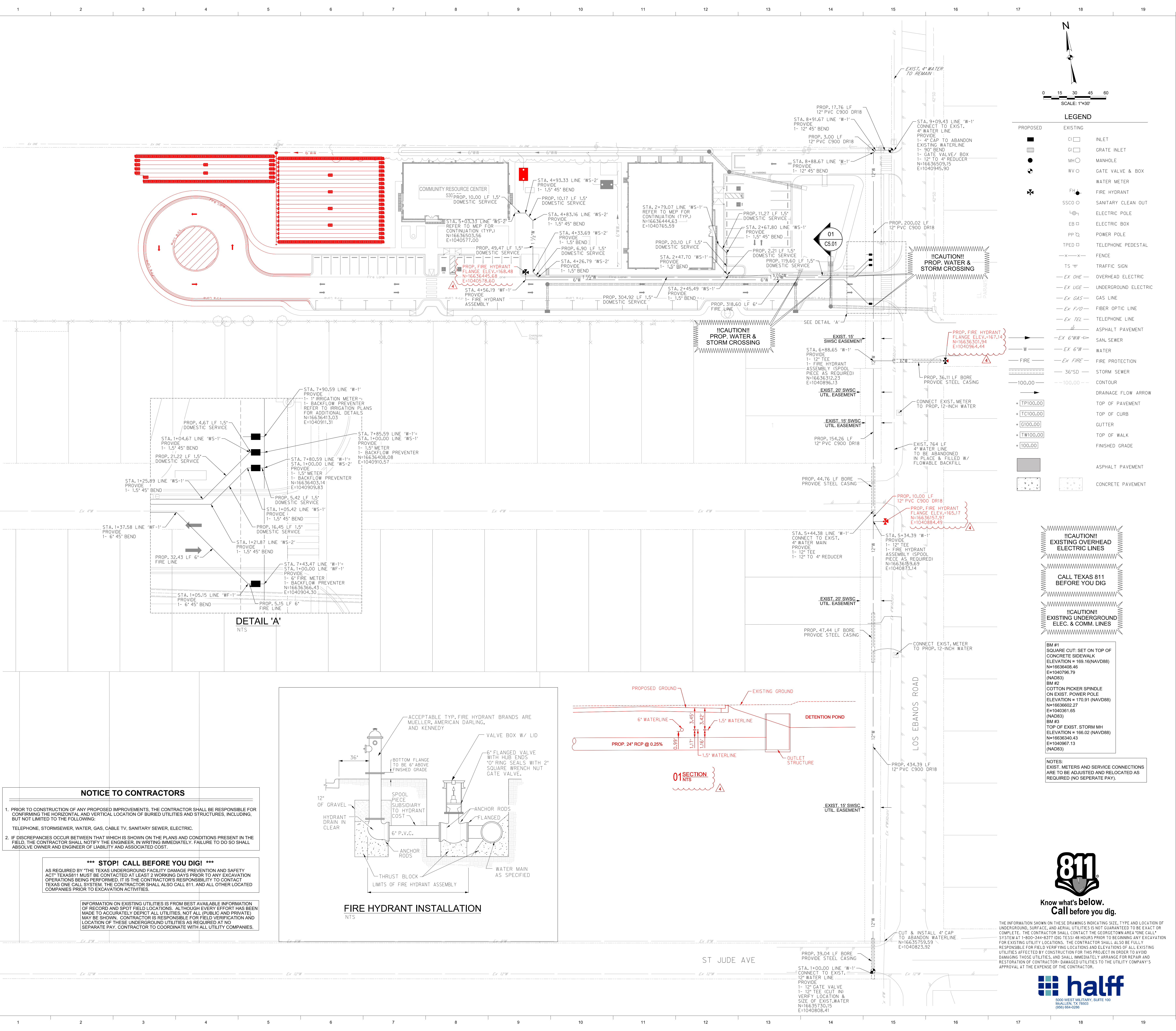
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N=16636408.46
E=104098.79
(NAD83)
BM #2
COTTON PICKER SPINDLE ON EXIST. POWER POLE
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E=104098.65
(NAD83)
BM #3
TOP OF EXIST. STORM MH
ELEVATION = 166.02 (NAVD88)
N=16636340.43
E=104098.13
(NAD83)

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NOTICE TO CONTRACTORS

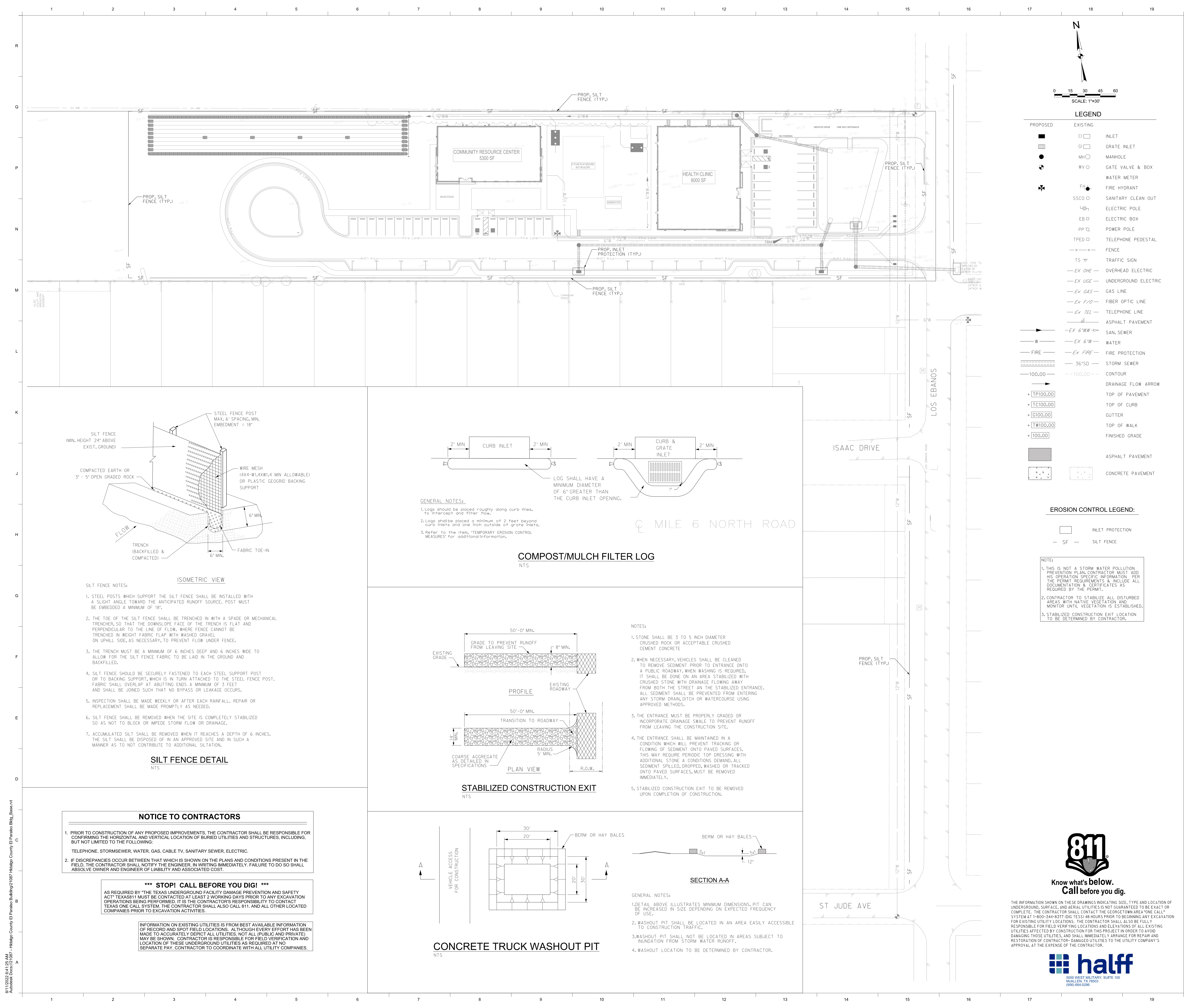
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HIDALGO COUNTY EL PARAISO PROJECT
 HIDALGO COUNTY
 1901 N. EBANOS RD., ALTON, TX 78573

LEGEND

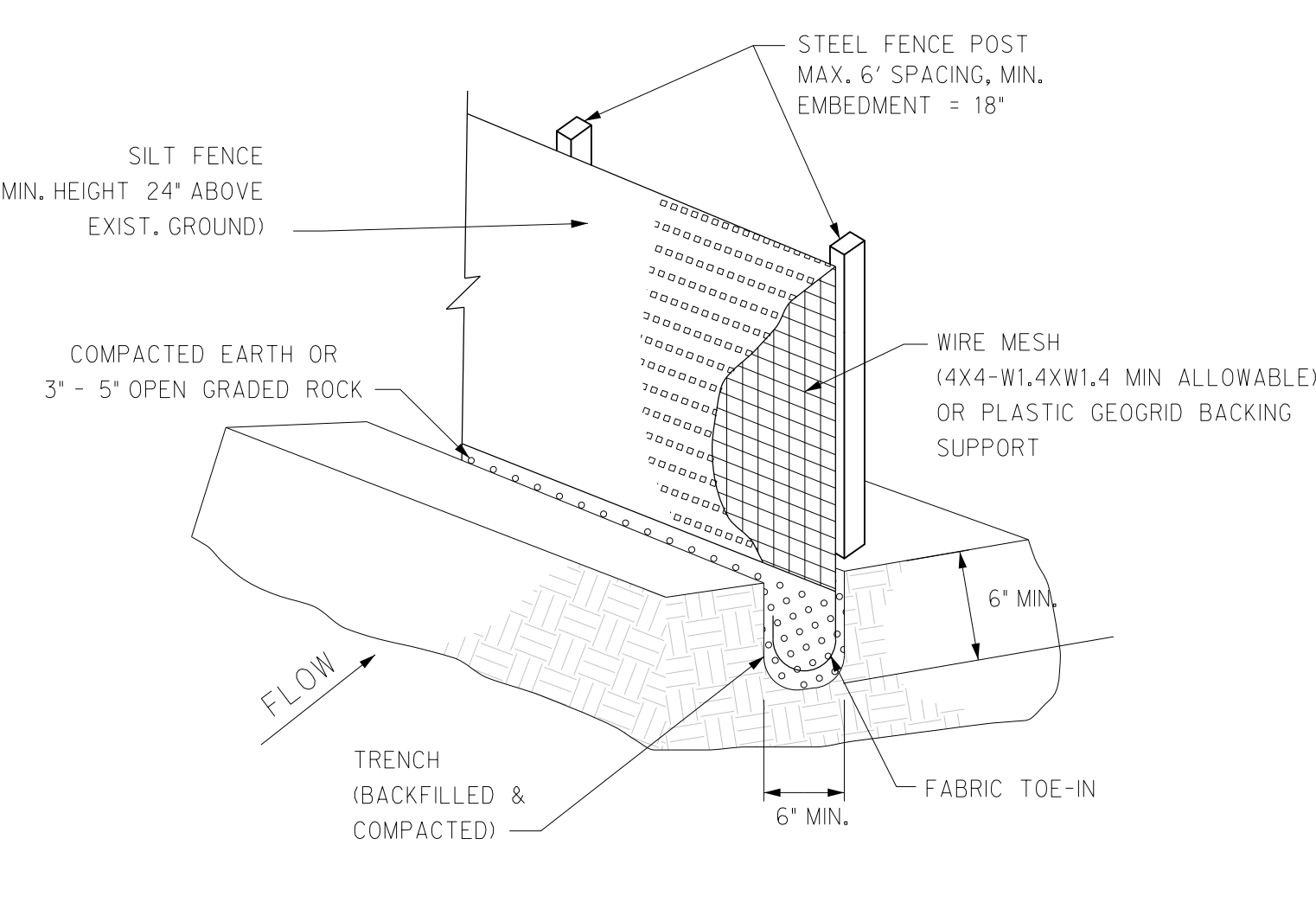
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[Symbol]	[Symbol]	MANHOLE
[Symbol]	[Symbol]	GATE VALVE & BOX
[Symbol]	[Symbol]	WATER METER
[Symbol]	[Symbol]	FIRE HYDRANT
[Symbol]	[Symbol]	SANITARY CLEAN OUT
[Symbol]	[Symbol]	ELECTRIC POLE
[Symbol]	[Symbol]	ELECTRIC BOX
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[Symbol]	[Symbol]	TELEPHONE PEDESTAL
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[Symbol]	[Symbol]	CONTOUR
[Symbol]	[Symbol]	DRAINAGE FLOW ARROW
[Symbol]	[Symbol]	TOP OF PAVEMENT
[Symbol]	[Symbol]	TOP OF CURB
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[Symbol]	[Symbol]	TOP OF WALK
[Symbol]	[Symbol]	FINISHED GRADE
[Symbol]	[Symbol]	ASPHALT PAVEMENT
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EROSION CONTROL LEGEND:

[Symbol]	INLET PROTECTION
[Symbol]	SILT FENCE

NOTE:

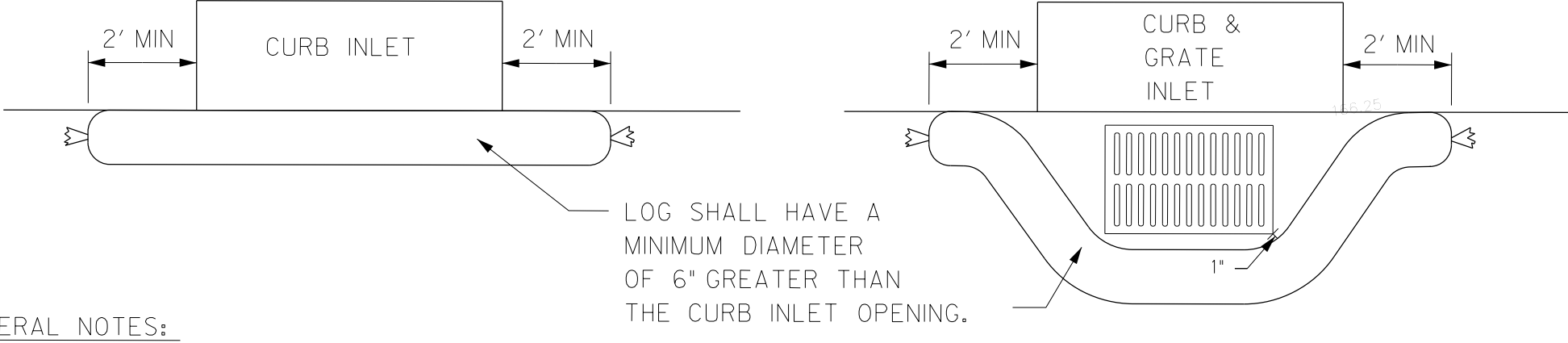
- THIS IS NOT A STORM WATER POLLUTION PREVENTION PLAN. CONTRACTOR MUST ADD HIS OPERATION SPECIFIC INFORMATION PER THE PERMIT REQUIREMENTS & INCLUDE ALL DOCUMENTATION & CERTIFICATES AS REQUIRED BY THE PERMIT.
- CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITH NATIVE VEGETATION AND MONITOR UNTIL VEGETATION IS ESTABLISHED.
- STABILIZED CONSTRUCTION EXIT LOCATION TO BE DETERMINED BY CONTRACTOR.



ISOMETRIC VIEW
NTS

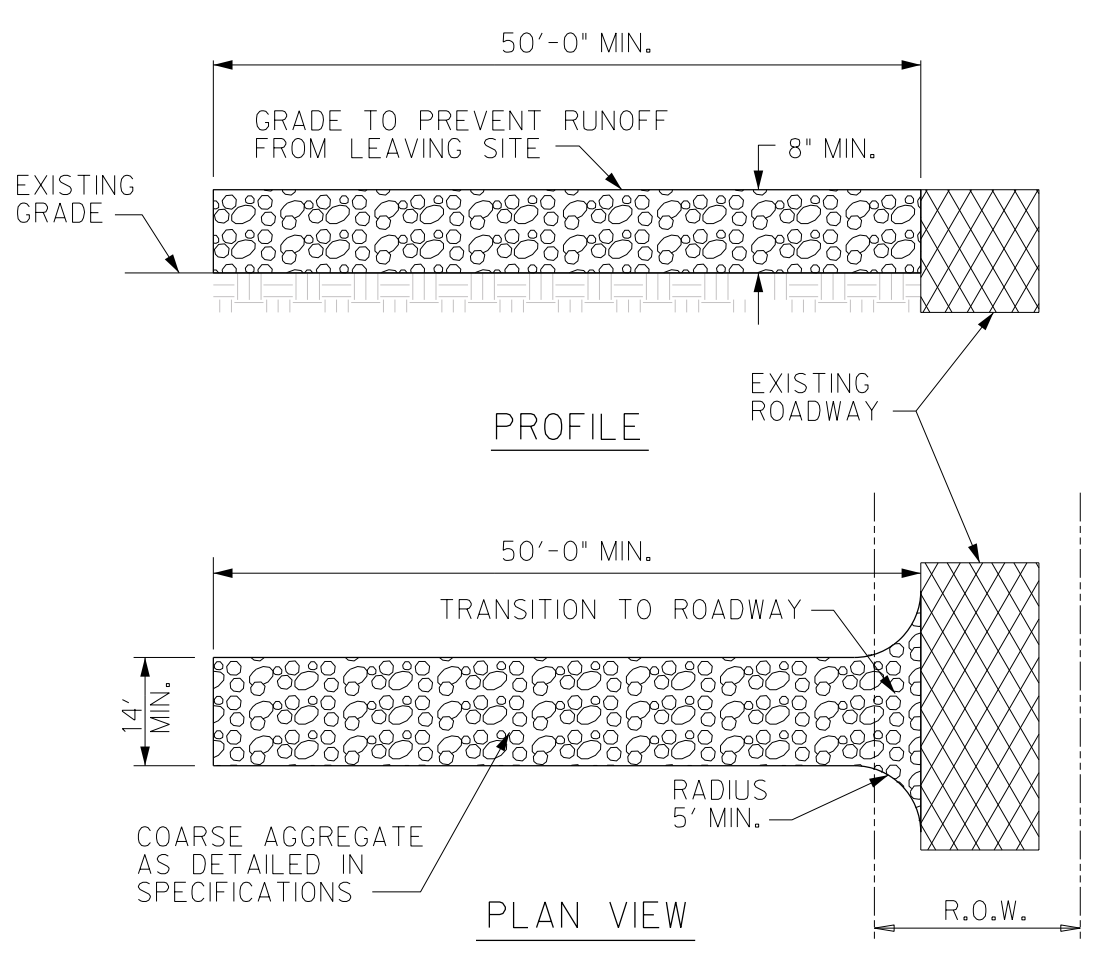
- SILT FENCE NOTES:**
- STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED WITH A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 18".
 - THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN, WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE, AS NECESSARY, TO PREVENT FLOW UNDER FENCE.
 - THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED.
 - SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO BACKING SUPPORT, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. FABRIC SHALL OVERLAP AT ABUTTING ENDS A MINIMUM OF 3 FEET AND SHALL BE JOINED SUCH THAT NO BYPASS OR LEAKAGE OCCURS.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 - SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

SILT FENCE DETAIL
NTS



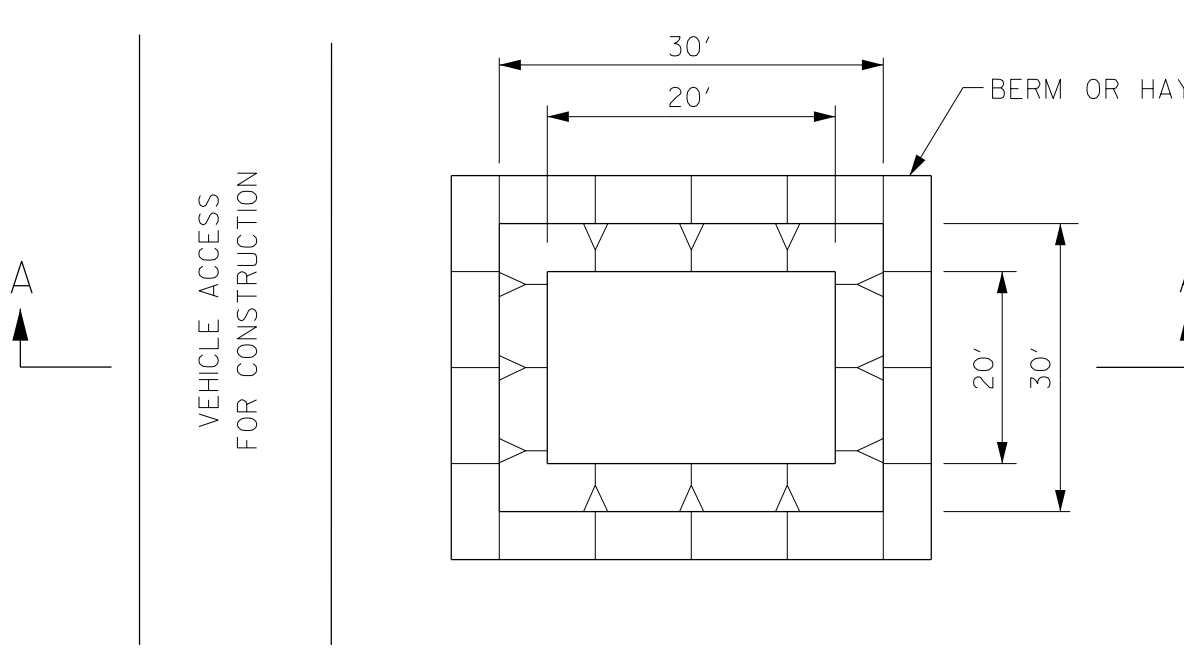
COMPOST/MULCH FILTER LOG
NTS

- GENERAL NOTES:**
- Logs should be placed roughly along curb lines, to intercept and filter flow.
 - Logs should be placed a minimum of 2 feet beyond curb inlets and one foot outside of grate inlets.
 - Refer to the item, 'TEMPORARY EROSION CONTROL MEASURES' for additional information.

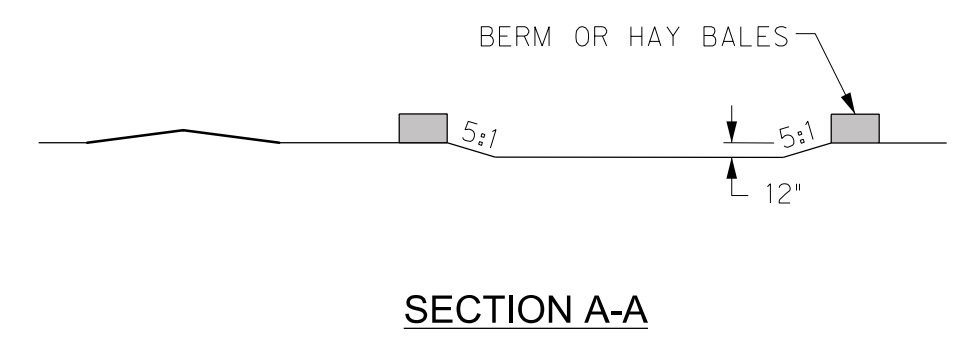


STABILIZED CONSTRUCTION EXIT
NTS

- NOTES:**
- STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK OR ACCEPTABLE CRUSHED CEMENT CONCRETE.
 - WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
 - THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE A CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES, MUST BE REMOVED IMMEDIATELY.
 - STABILIZED CONSTRUCTION EXIT TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.



CONCRETE TRUCK WASHOUT PIT
NTS



- GENERAL NOTES:**
- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 - WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 - WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
 - WASHOUT LOCATION TO BE DETERMINED BY CONTRACTOR.

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Know what's below. Call before you dig.

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5000 WEST MILITARY, SUITE 100
MCALLEN, TX 78503
(956) 664-0200

PROJECT NO.: 21087
ISSUE DATE: 8/2/2023
DRAWN BY: SK
CHECKED BY: HGS
SHEET NAME:

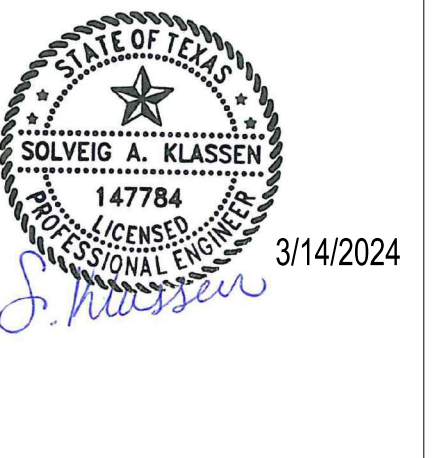
SUGGESTED EROSION CONTROL PLAN

Sheet Number
C6.00

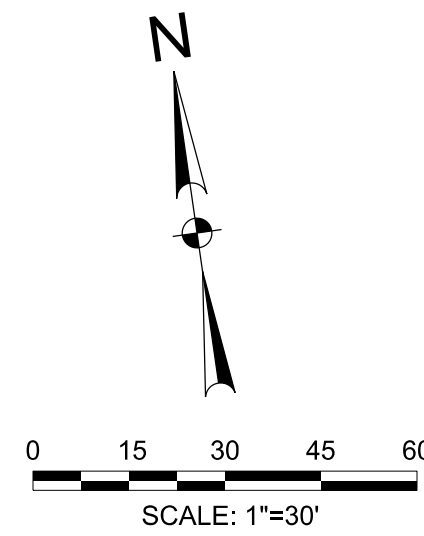
Project Status:
CONSTRUCTION DOCUMENTS

8/11/2023 8:41:25 AM - Hidalgo County El Paraiso Building 21087 - Hidalgo County El Paraiso County El Paraiso (Bldg)_Base.rvt

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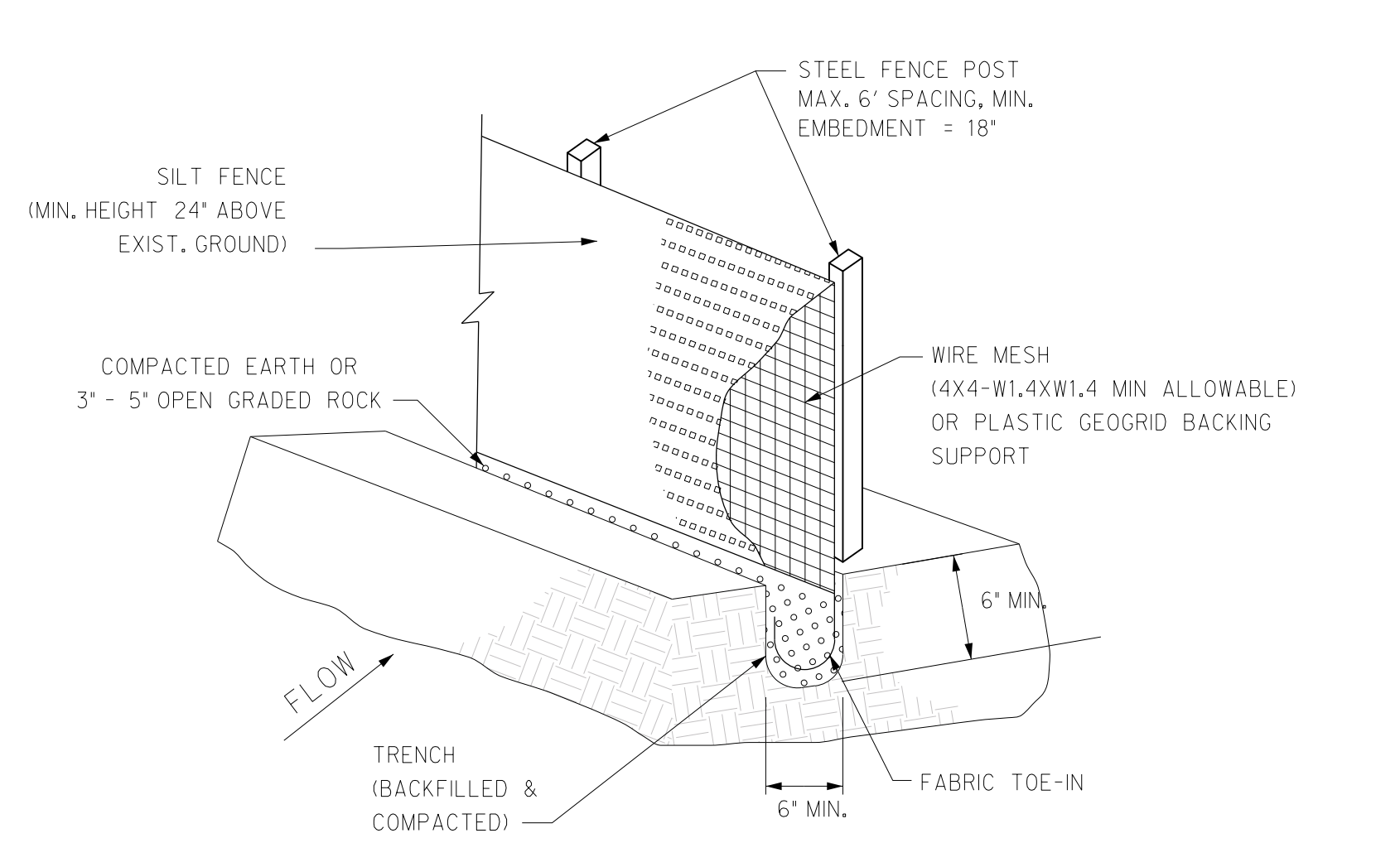
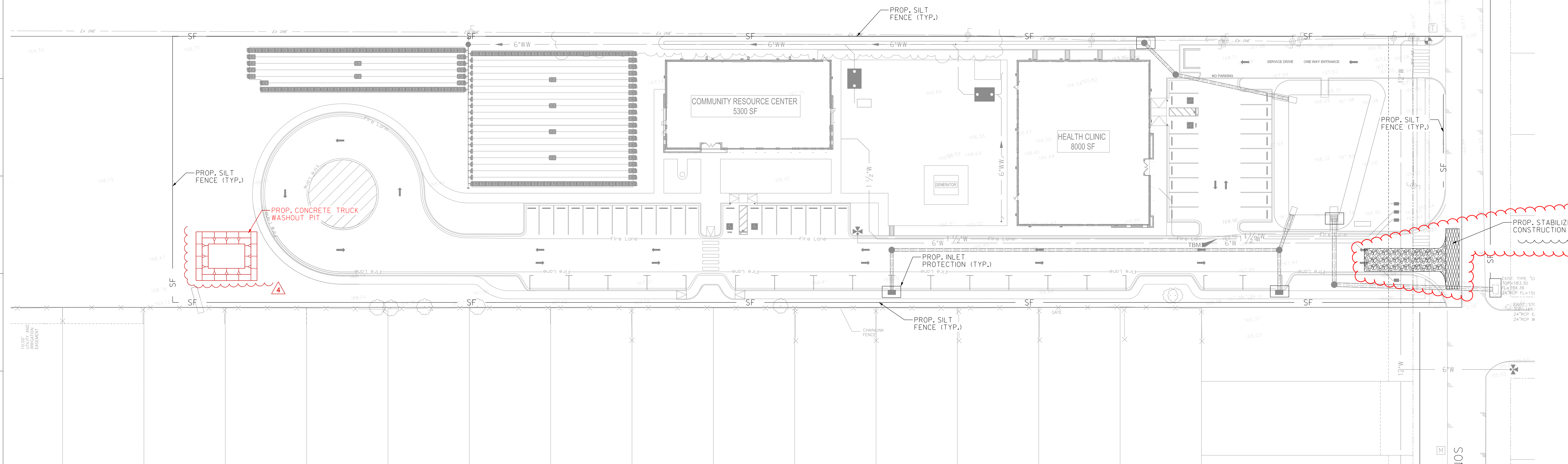
HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573



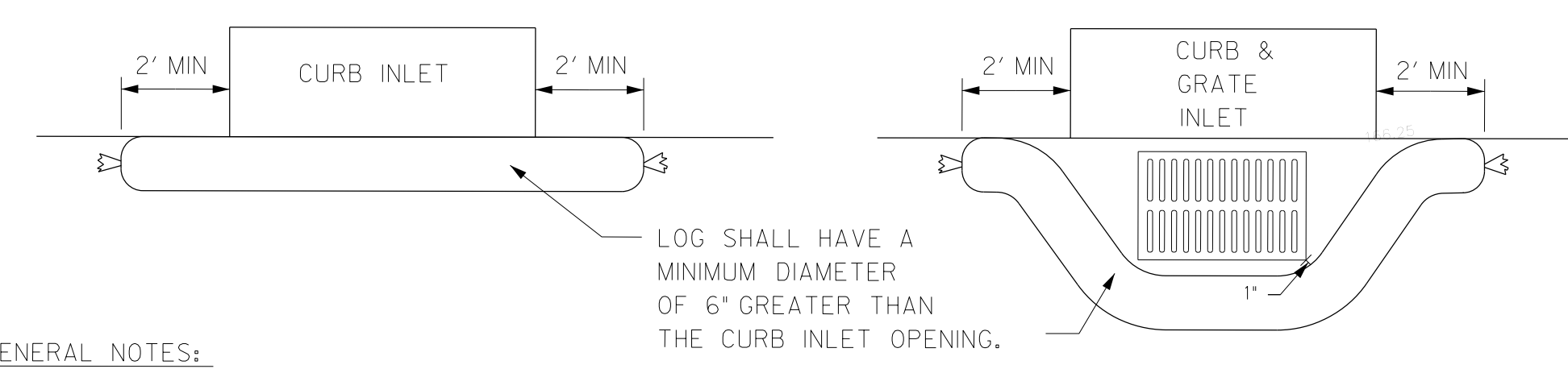
PROPOSED	EXISTING	DESCRIPTION
		INLET
		GRATE INLET
		MANHOLE
		GATE VALVE & BOX
		WATER METER
		FIRE HYDRANT
		SANITARY CLEAN OUT
		ELECTRIC POLE
		ELECTRIC BOX
		POWER POLE
		TELEPHONE PEDESTAL
		FENCE
		TRAFFIC SIGN
		OVERHEAD ELECTRIC
		UNDERGROUND ELECTRIC
		GAS LINE
		FIBER OPTIC LINE
		TELEPHONE LINE
		ASPHALT PAVEMENT
		SAN. SEWER
		WATER
		FIRE PROTECTION
		STORM SEWER
		CONTOUR
		DRAINAGE FLOW ARROW
		TOP OF PAVEMENT
		TOP OF CURB
		GUTTER
		TOP OF WALK
		FINISHED GRADE
		ASPHALT PAVEMENT
		CONCRETE PAVEMENT

EROSION CONTROL LEGEND:	
	INLET PROTECTION
	SILT FENCE

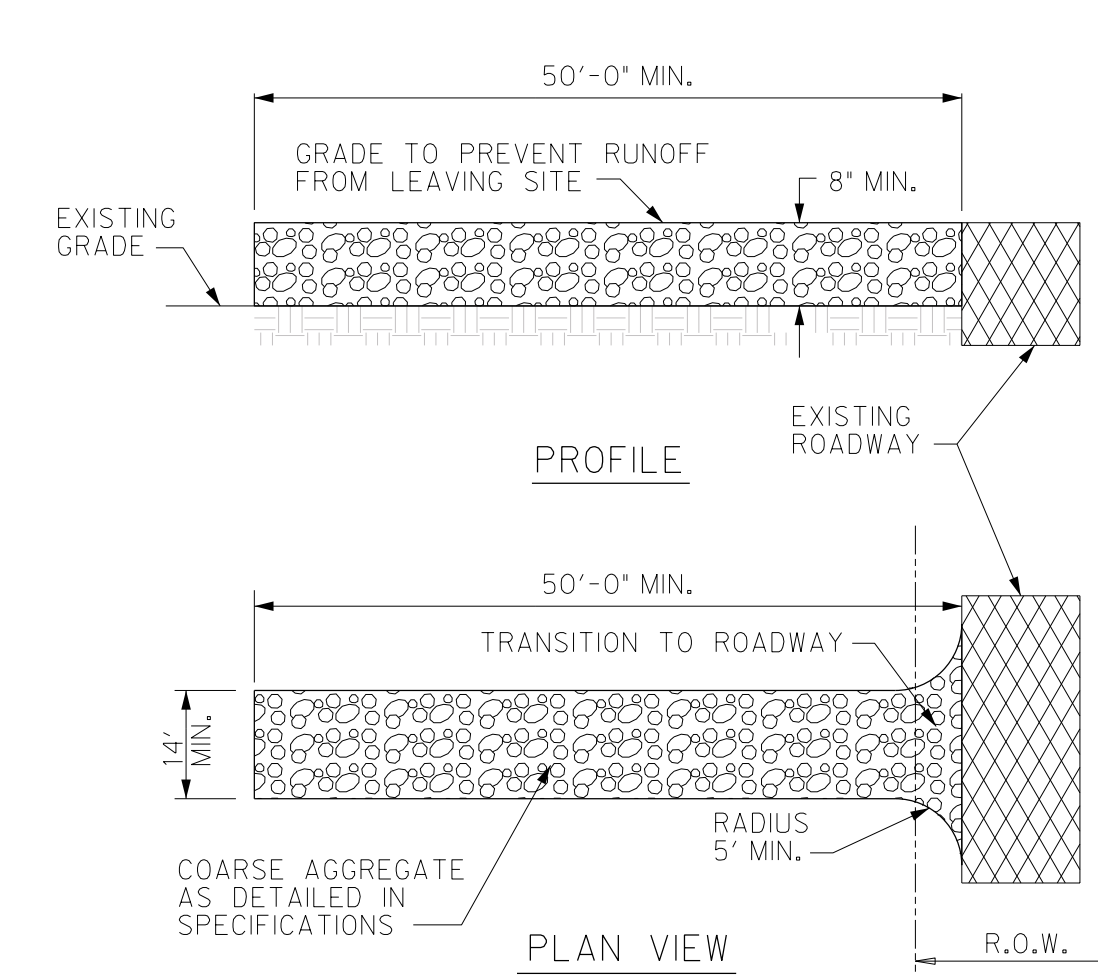
NOTE:
1. THIS IS NOT A STORM WATER POLLUTION PREVENTION PLAN. CONTRACTOR MUST ADD HIS OPERATION SPECIFIC INFORMATION PER THE PERMIT REQUIREMENTS & INCLUDE ALL DOCUMENTATION & CERTIFICATES AS REQUIRED BY THE PERMIT.
2. CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITH NATIVE VEGETATION AND MONITOR UNTIL VEGETATION IS ESTABLISHED.
3. STABILIZED CONSTRUCTION EXIT LOCATION TO BE DETERMINED BY CONTRACTOR.



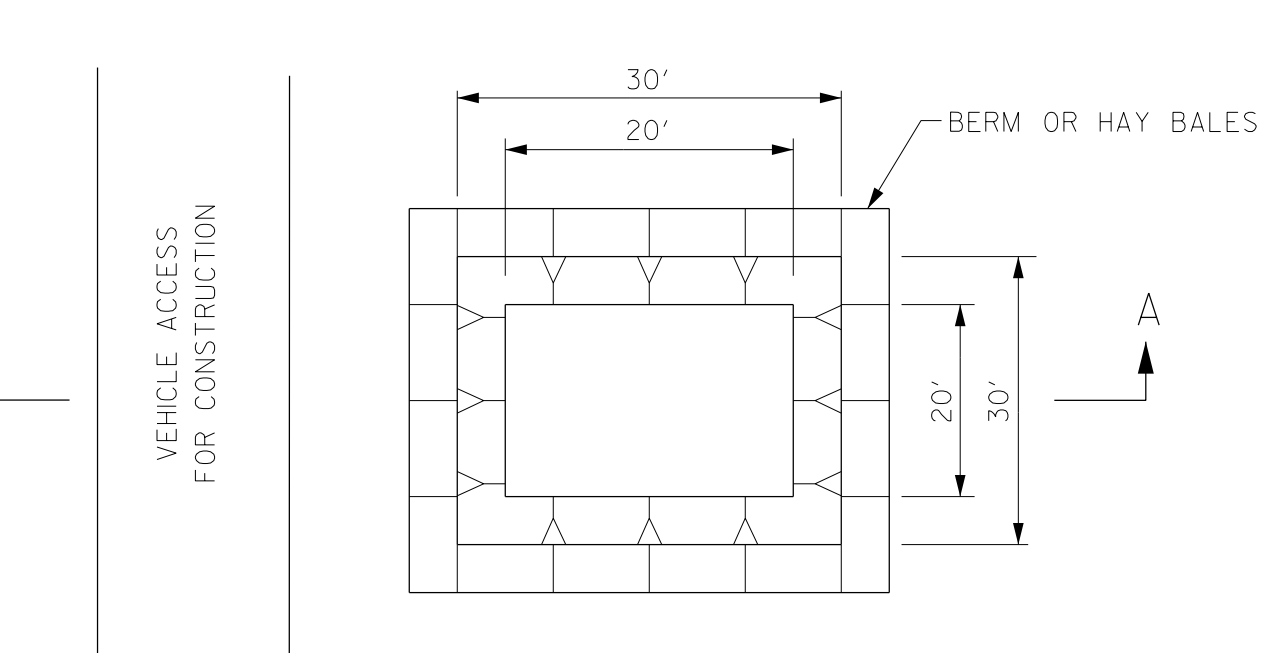
- SILT FENCE NOTES:**
- STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED WITH A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 18".
 - THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN, WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE, AS NECESSARY, TO PREVENT FLOW UNDER FENCE.
 - THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED.
 - SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO BACKING SUPPORT, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. FABRIC SHALL OVERLAP AT ABUTTING ENDS A MINIMUM OF 3 FEET AND SHALL BE JOINED SUCH THAT NO BYPASS OR LEAKAGE OCCURS.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 - SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.



- GENERAL NOTES:**
- Logs should be placed roughly along curb lines, to intercept and filter flow.
 - Logs should be placed a minimum of 2 feet beyond curb lines and one foot outside of grate inlets.
 - Refer to the item, 'TEMPORARY EROSION CONTROL MEASURES' for additional information.



- NOTES:**
- STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK OR ACCEPTABLE CRUSHED CEMENT CONCRETE.
 - WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
 - THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE A CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES, MUST BE REMOVED IMMEDIATELY.
 - STABILIZED CONSTRUCTION EXIT TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.



- GENERAL NOTES:**
- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 - WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 - WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
 - WASHOUT LOCATION TO BE DETERMINED BY CONTRACTOR.

NOTICE TO CONTRACTORS

- PRIOR TO CONSTRUCTION OF ANY PROPOSED IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF BURIED UTILITIES AND STRUCTURES, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
TELEPHONE, STORMSEWER, WATER, GAS, CABLE TV, SANITARY SEWER, ELECTRIC.
- IF DISCREPANCIES OCCUR BETWEEN THAT WHICH IS SHOWN ON THE PLANS AND CONDITIONS PRESENT IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING IMMEDIATELY, AND FAILURE TO DO SO SHALL ABSOLVE OWNER AND ENGINEER OF LIABILITY AND ASSOCIATED COST.

***** STOP! CALL BEFORE YOU DIG! *****
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PROJECT NO.: 21087
ISSUE DATE: 3/14/2024
DRAWN BY: SK
CHECKED BY: HGS
SHEET NAME: SUGGESTED EROSION CONTROL PLAN
Sheet Number: C6.00
Project Status: CONSTRUCTION DOCUMENTS

3/14/2024 8:41:25 AM - Hidalgo County El Paraiso Building 21087 - Hidalgo County El Paraiso County El Paraiso (Bldg.) Base.rvt

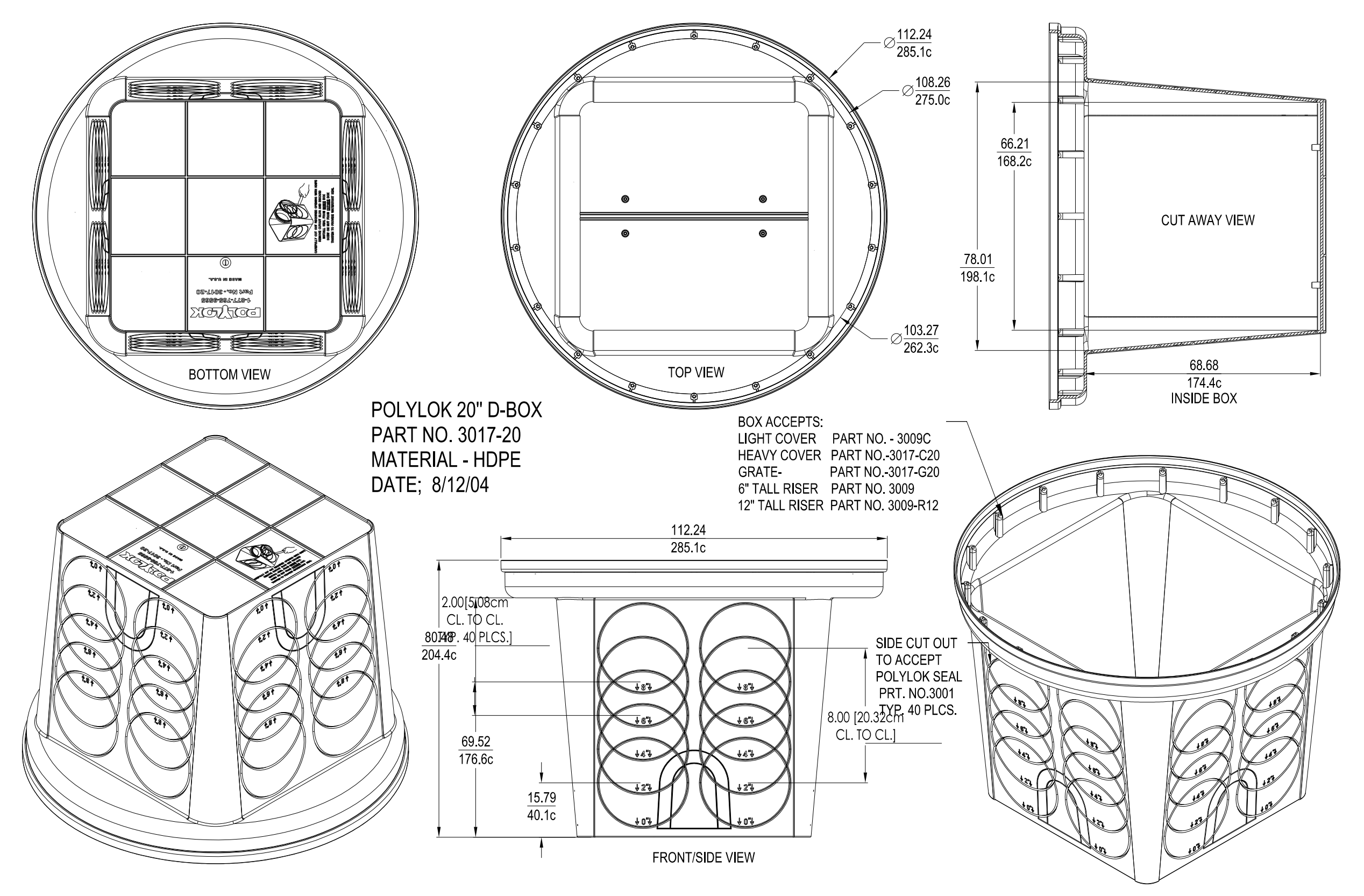
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C7.02

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HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

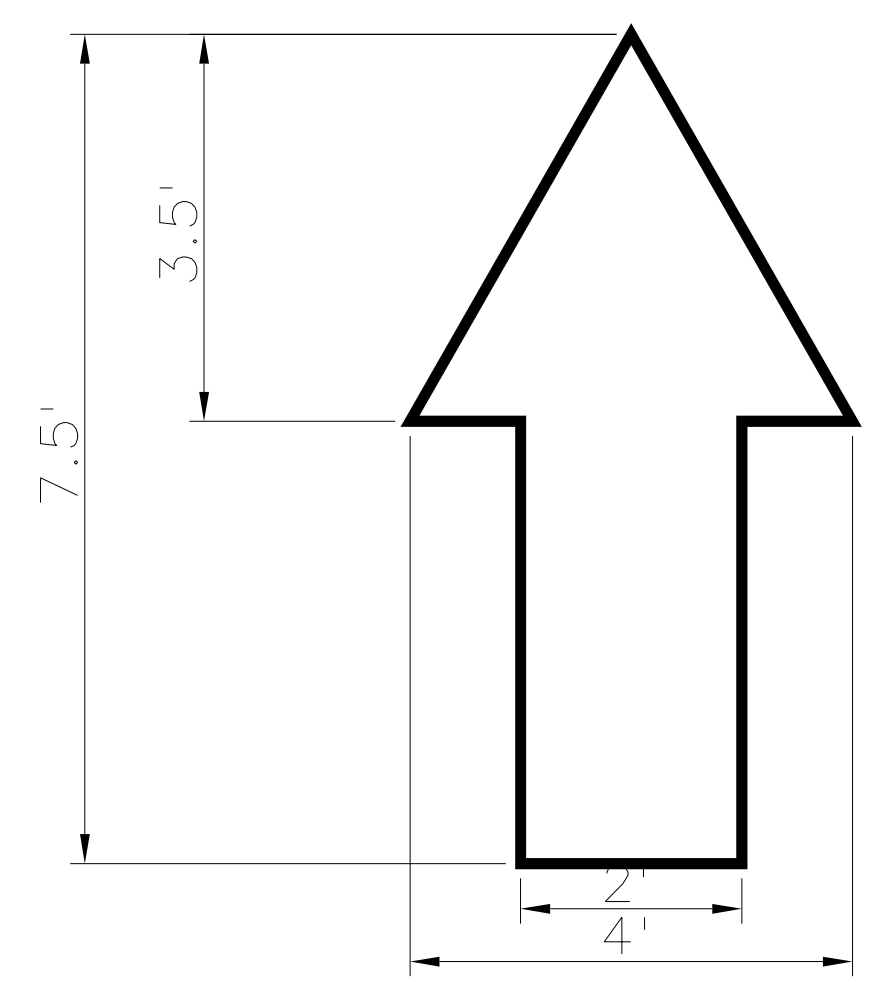
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Date	8/8/2023
No.	1
PROJECT NO.	21087
ISSUE DATE	8/8/2023
DRAWN BY	SK
CHECKED BY	PG
SHEET NAME	MISCELLANEOUS DETAILS
Sheet Number	C7.02
Project Status	CONSTRUCTION DOCUMENTS



POLYLOK 20" D-BOX
PART NO. 3017-20
MATERIAL - HDPE
DATE: 8/12/04

BOX ACCEPTS:
LIGHT COVER PART NO. 3009C
HEAVY COVER PART NO. 3017-C20
GRATE PART NO. 3017-G20
6" TALL RISER PART NO. 3009
12" TALL RISER PART NO. 3009-R12

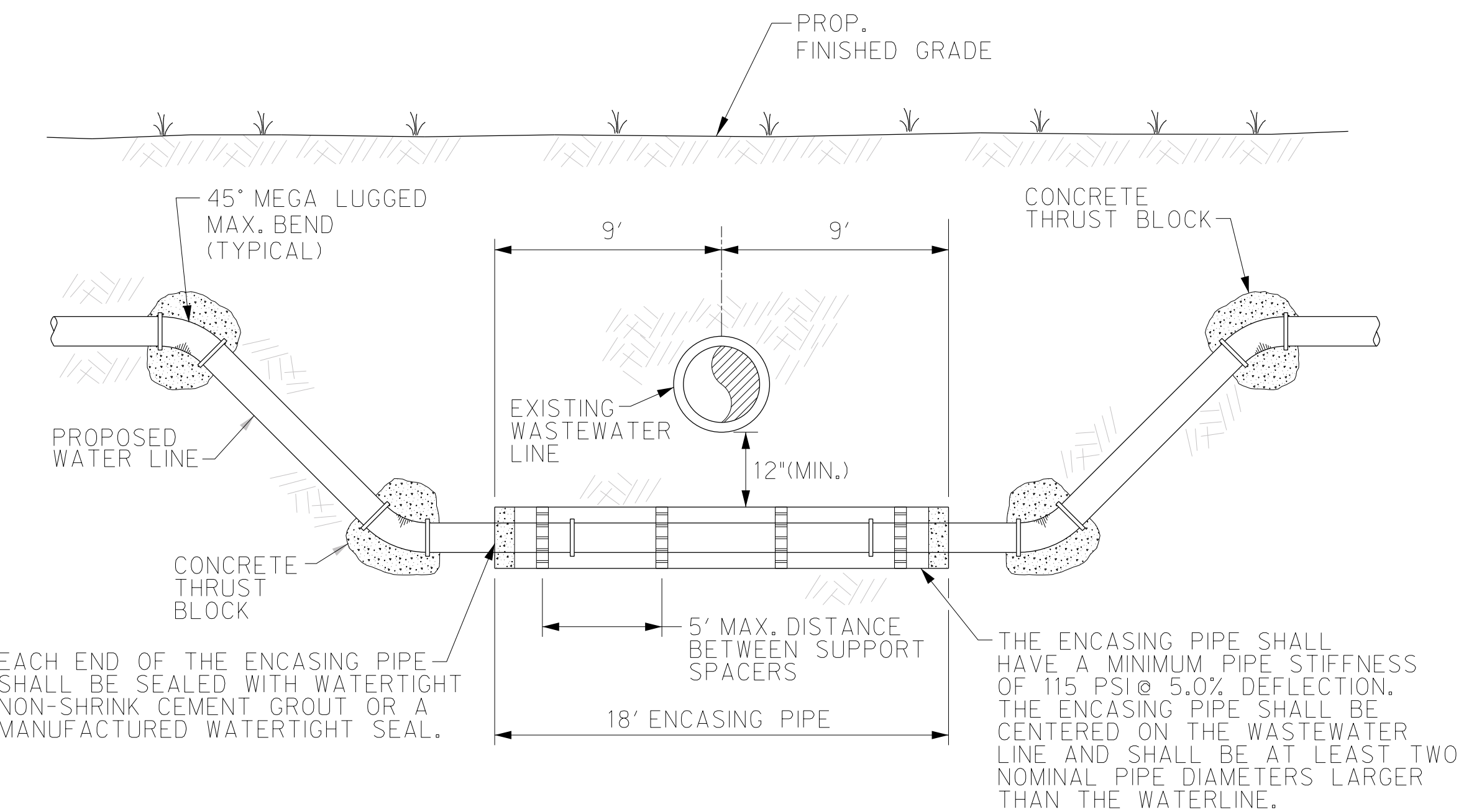
POLYLOK 20" D-BOX PART NO. 3017-20
SCALE: NTS



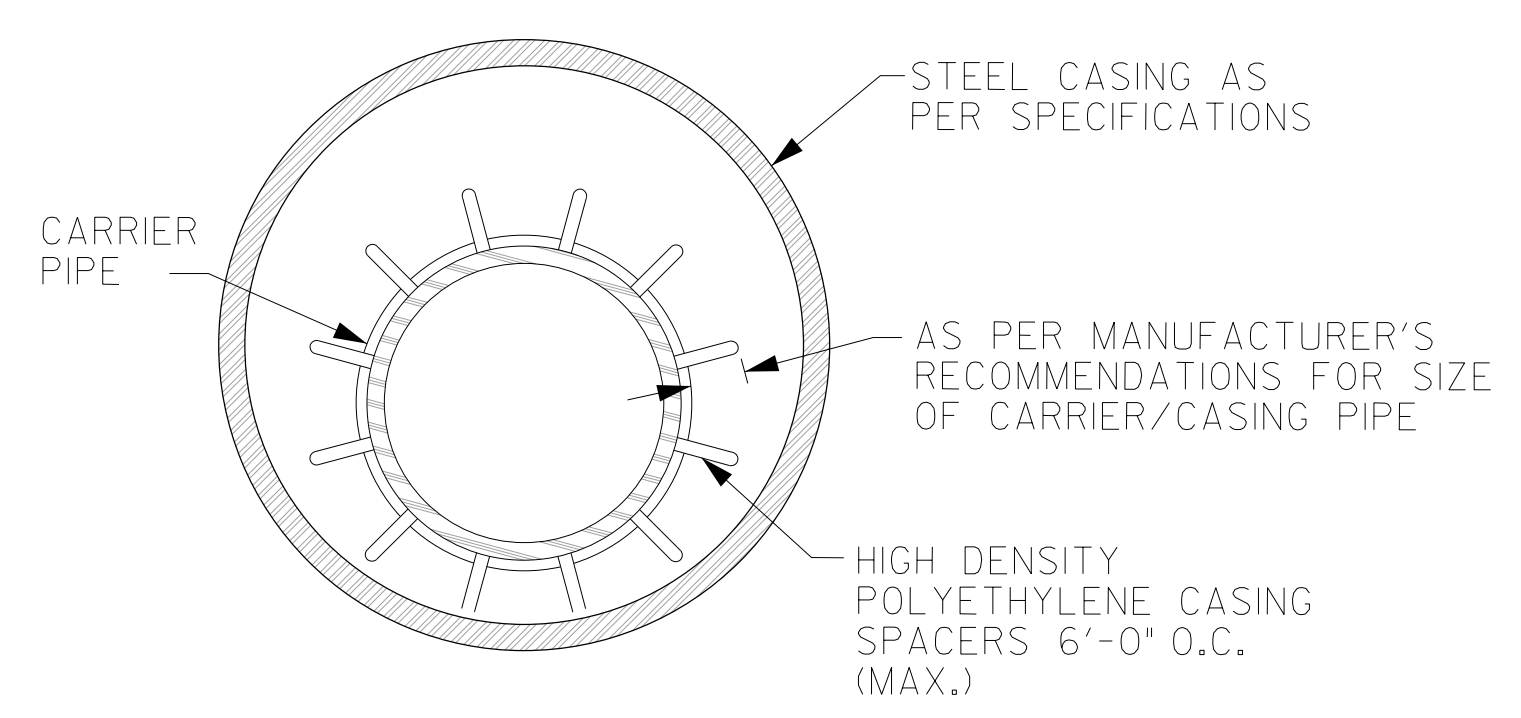
TRAFFIC MARKINGS
SCALE: NTS



TRAFFIC MARKINGS
SCALE: NTS



TYPICAL WATER DEFLECTION
NTS



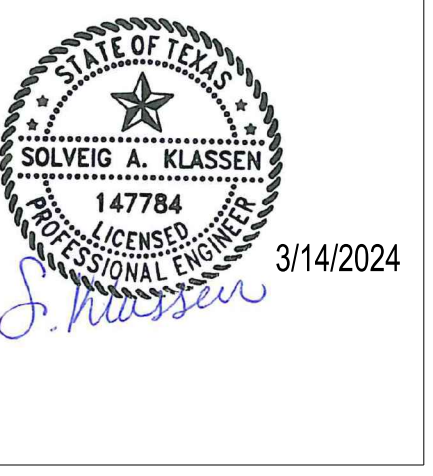
INSTALLATION		
CARRIER PIPE SIZE	PIPE CASING SIZE	MIN. WALL THICKNESS
2"	6"	0.375"
4"	10"	0.375"
6"	14"	0.375"
8"	16"	0.375"
10"	18"	0.375"
12"	20"	0.375"
14", 15"	24"	0.375"
16"	26"	0.375"
18"	30"	0.375"
24"	36"	0.375"
36"	48"	0.625"

PIPE ENCASEMENT DETAIL
NTS

GENERAL NOTES:

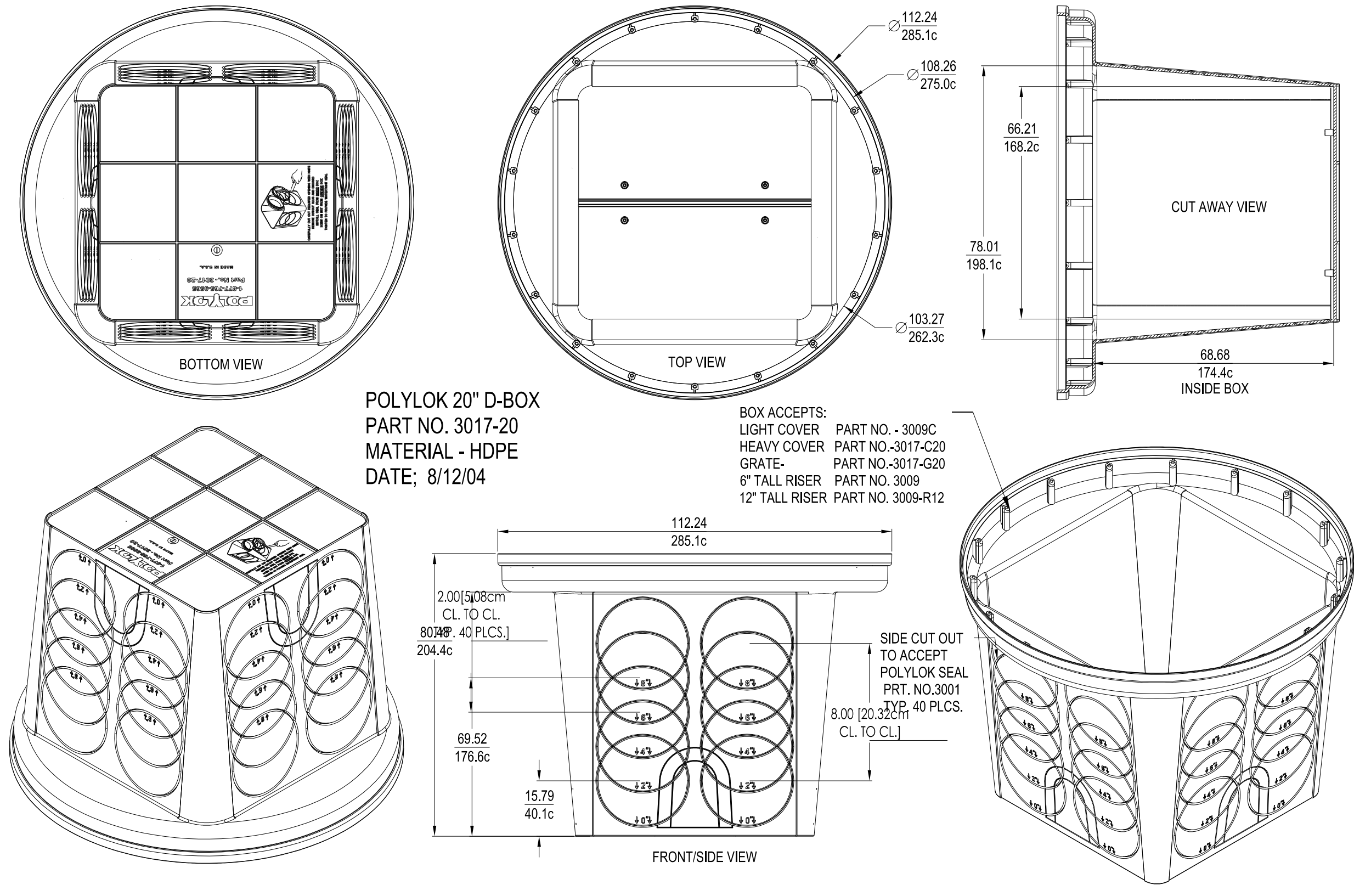
1. ALL STEEL CASING SHALL BE WELDED.
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3. CASING SPACERS SHALL BE USED TO INSTALL THE CARRIER PIPE INSIDE THE ENCASEMENT PIPE. CASING SPACERS SHALL FASTEN TIGHTLY ONTO THE CARRIER PIPE SO THAT WHEN THE CARRIER PIPE IS BEING INSTALLED THE SPACERS WILL NOT MOVE ALONG THE PIPELINE. CASING SPACERS SHALL BE DOUBLED ON EACH END OF THE ENCASEMENT.
4. PROJECTION TYPE CASING SPACERS SHALL BE CONSTRUCTED SECTIONS OF HIGH DENSITY POLYETHYLENE. THE FLEXIBLE SECTIONS SHALL BE JOINED TOGETHER AROUND THE PIPE TO PROVIDE A MINIMUM OF 16 PLASTIC PROJECTIONS PER SPACER SECTION.
5. INSTALLATION AND SIZE OF SPACERS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

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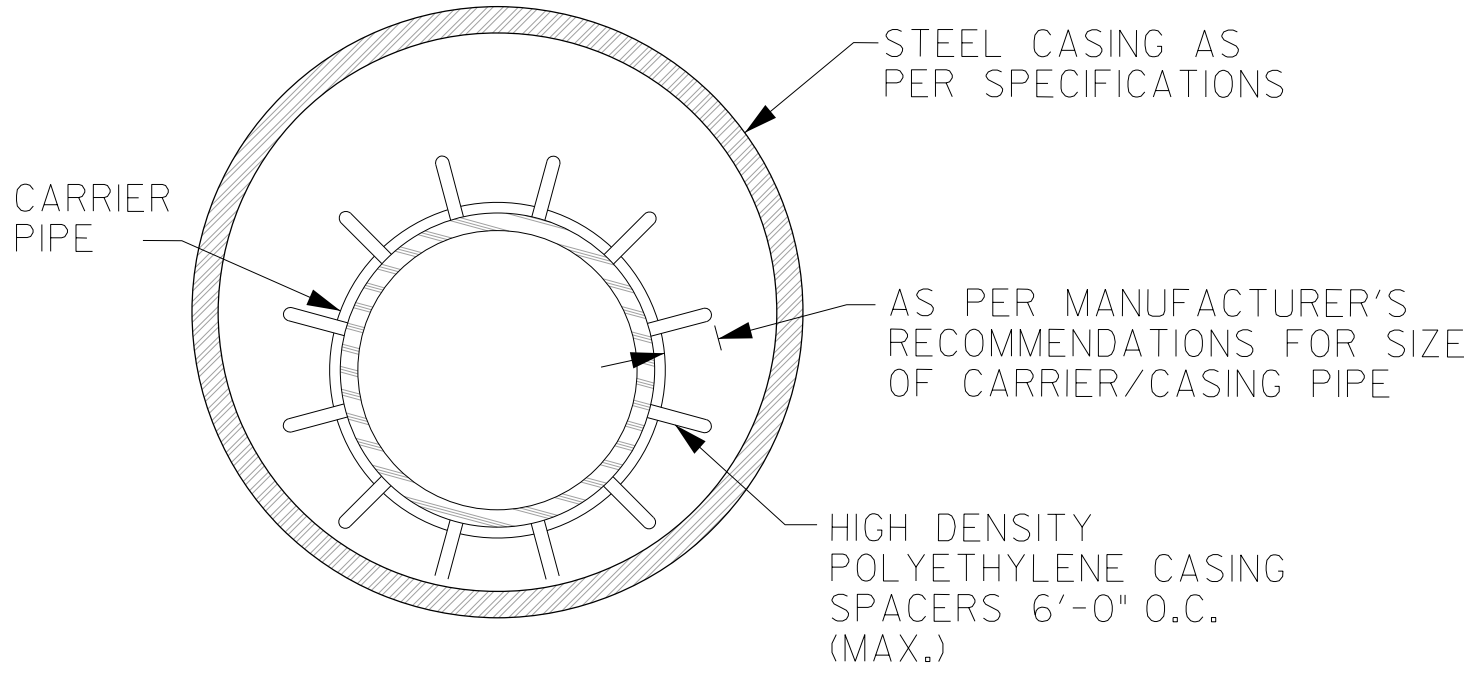
HIDALGO COUNTY EL PARAISO PROJECT
HIDALGO COUNTY
1901 N. LOS EBANOS RD., ALTON, TX 78573

Description	AS20000411
Date	3/14/2024
No.	1
Project No.	21087
Issue Date	3/14/2024
Drawn By	SK
Checked By	HS
Sheet Name	MISCELLANEOUS DETAILS
Sheet Number	C7.02
Project Status	CONSTRUCTION DOCUMENTS



POLYLOK 20" D-BOX PART NO. 3017-20
MATERIAL - HDPE
DATE: 8/12/04
SCALE: NTS

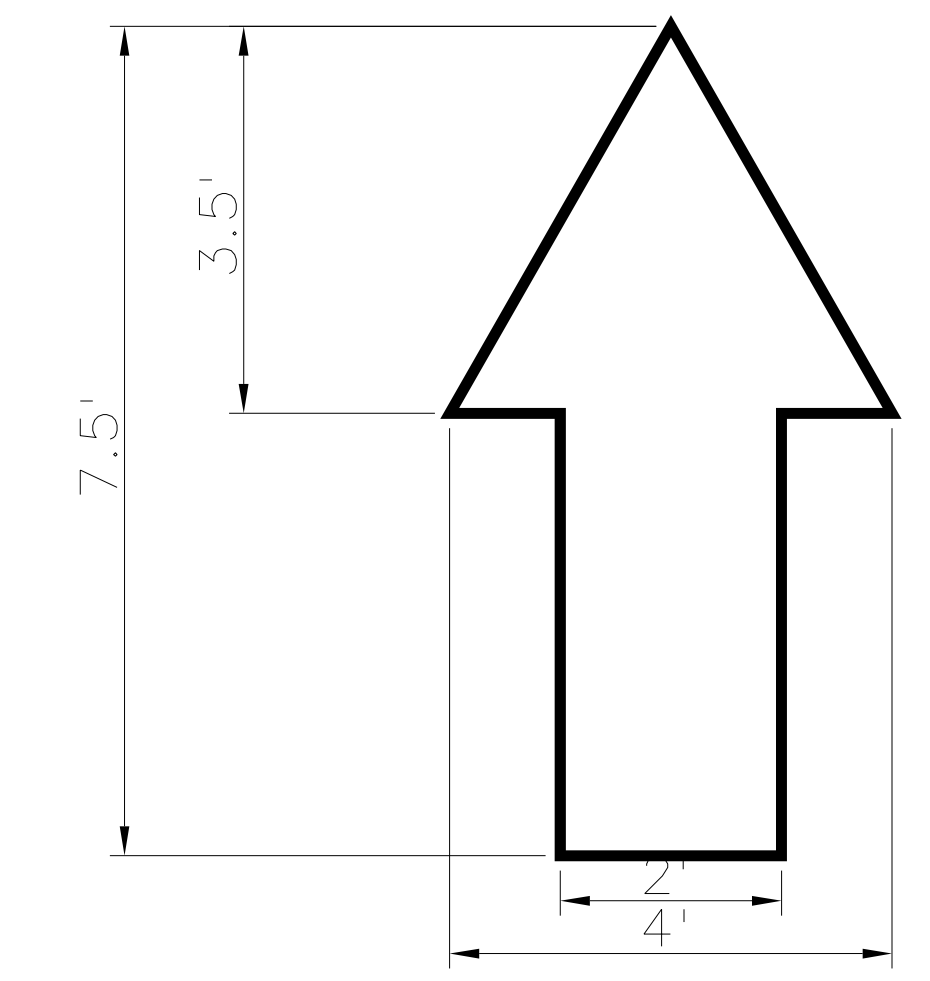
80X ACCEPTS:
LIGHT COVER PART NO. 3009C
HEAVY COVER PART NO. 3017-C20
GRATE PART NO. 3017-G20
6" TALL RISER PART NO. 3009
12" TALL RISER PART NO. 3009-R12



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18"	30"	0.375"
24"	36"	0.375"
36"	48"	0.625"

PIPE ENCASEMENT DETAIL
NTS

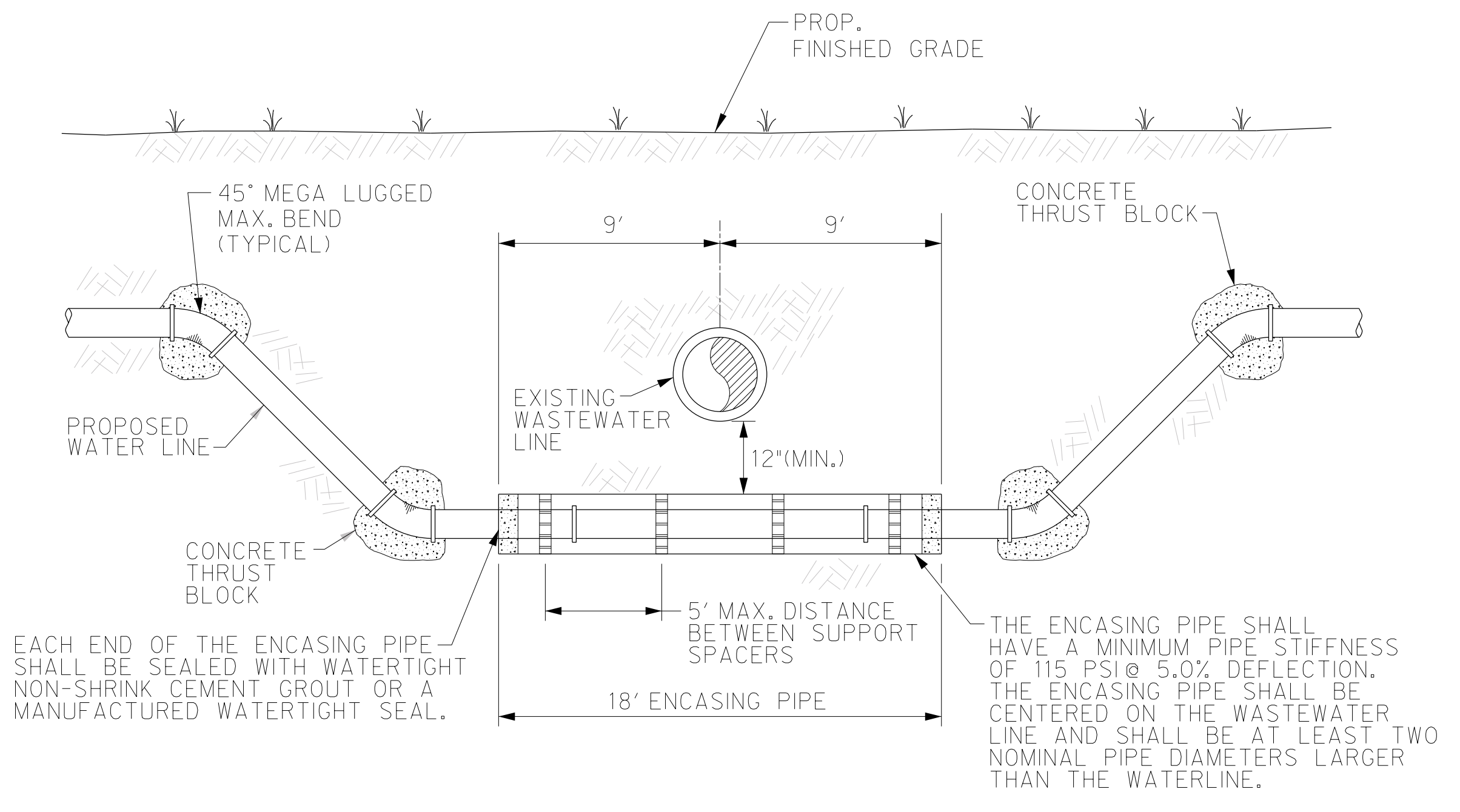
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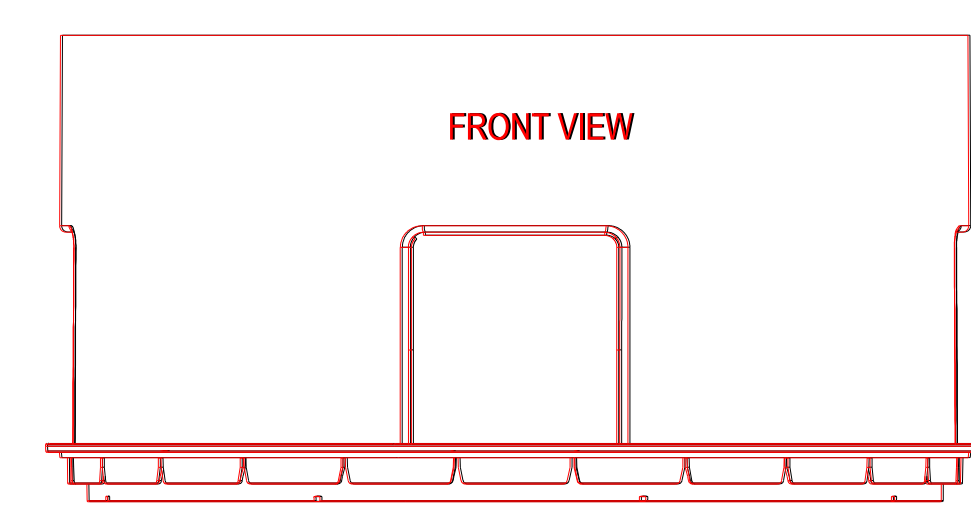
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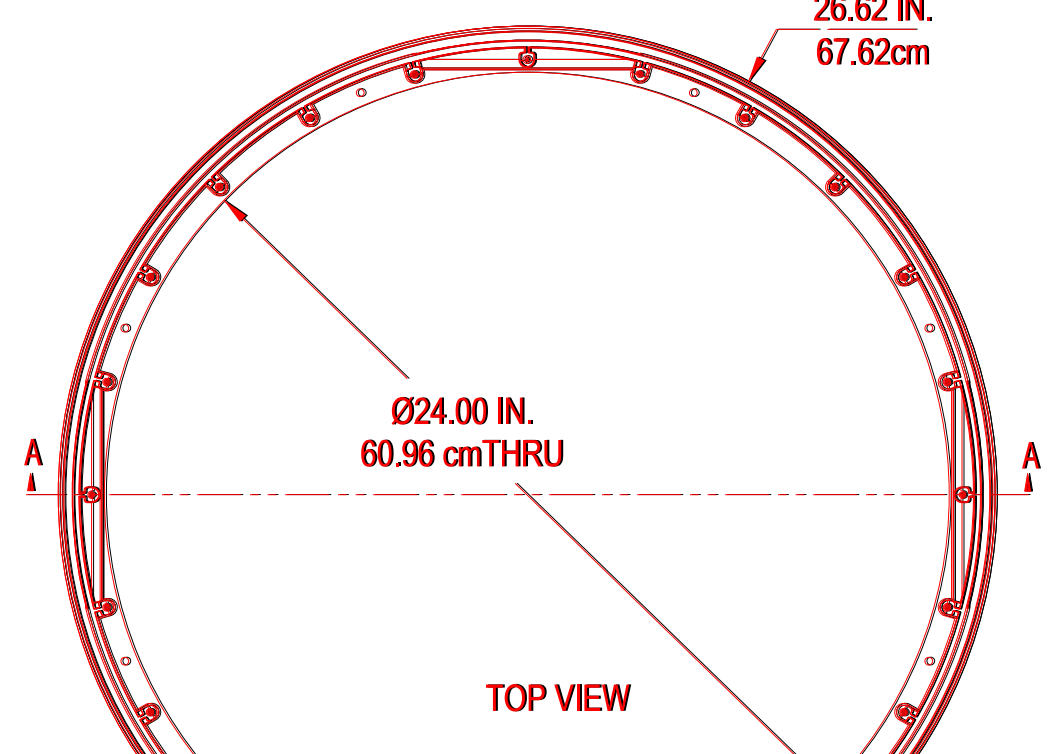
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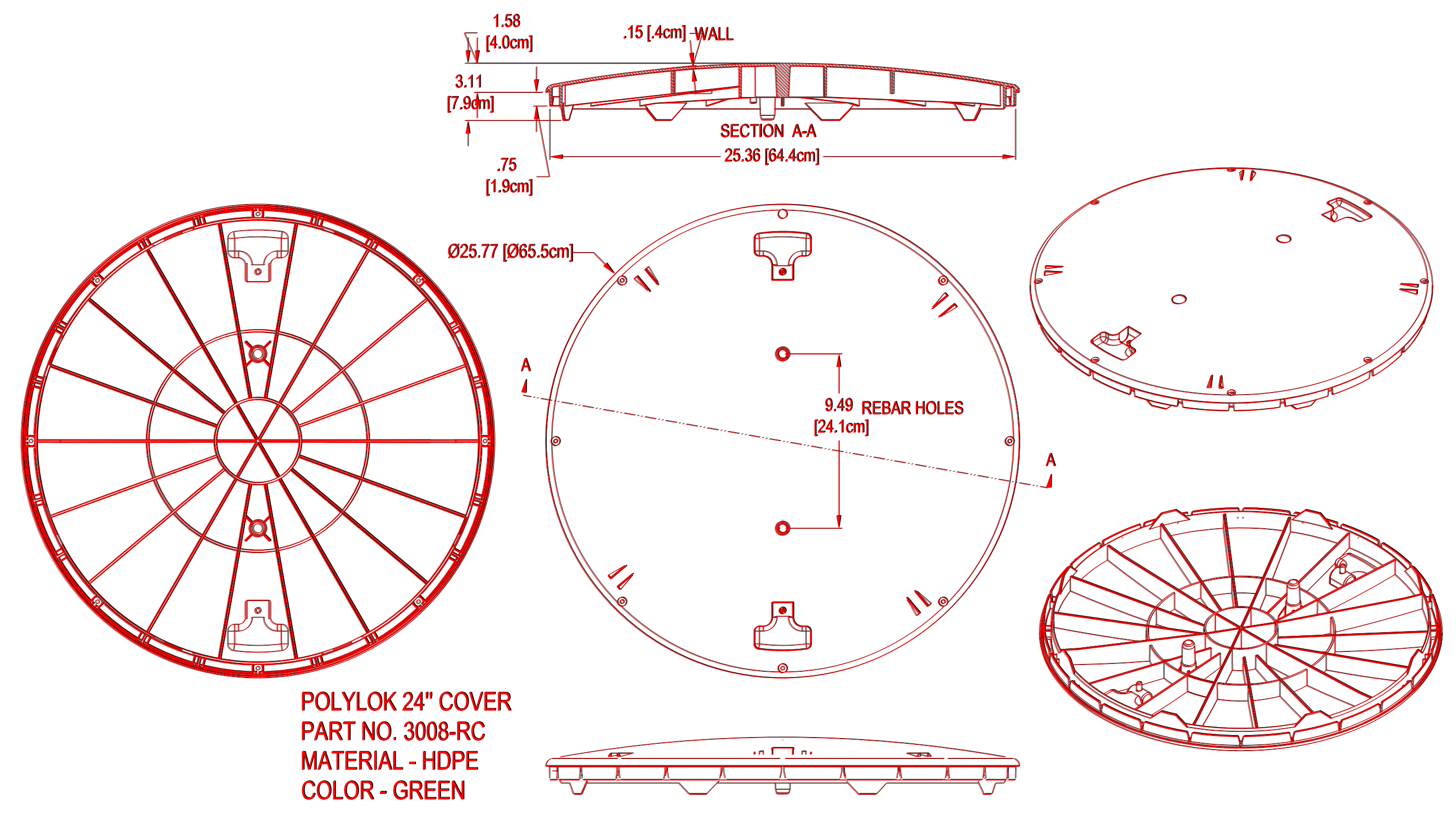
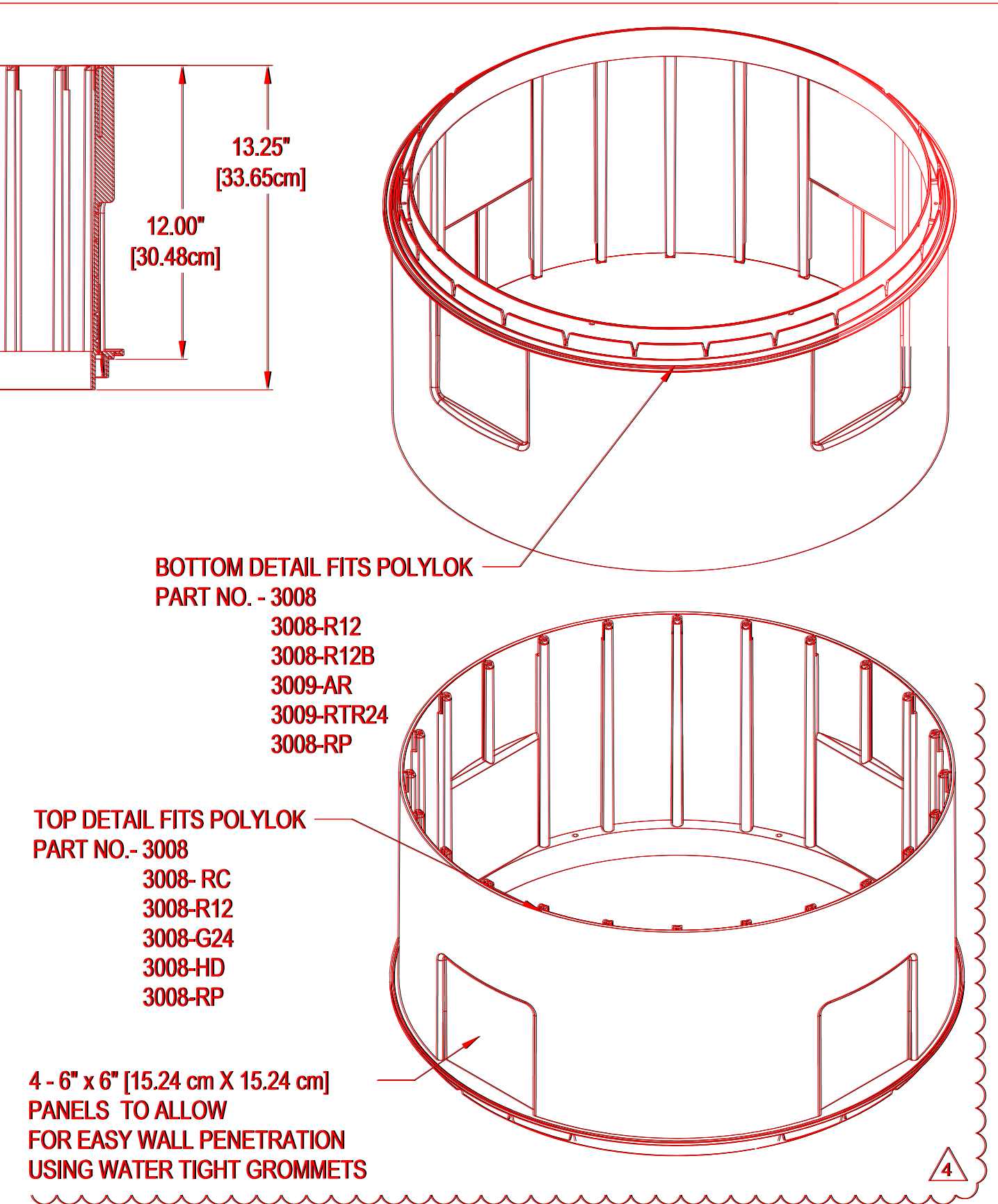
TYPICAL WATER DEFLECTION
NTS



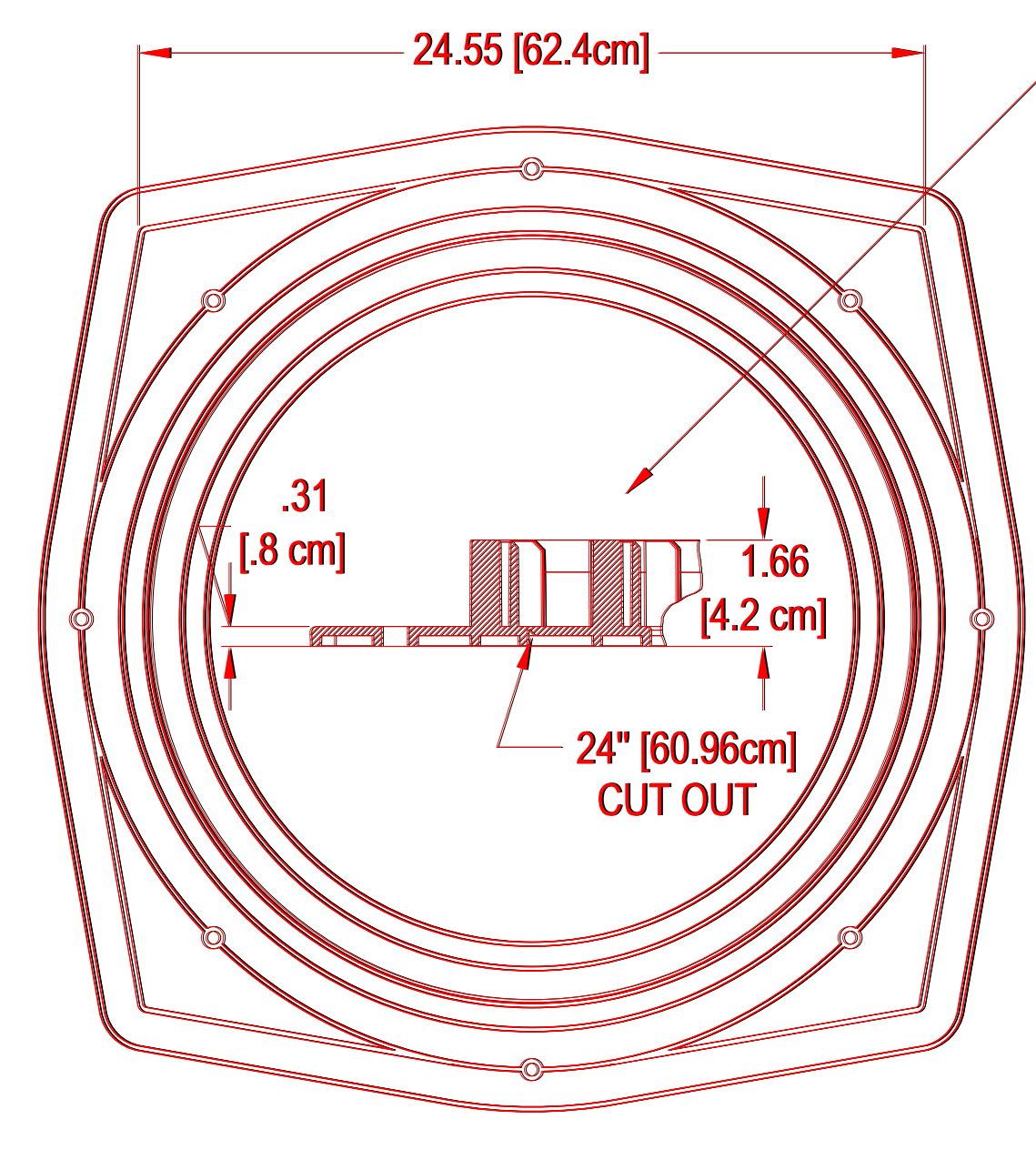
POLYLOK 12 X 24 RISER
PART NO. 3008-R12F
MATERIAL - HDPE
COLOR - GREEN



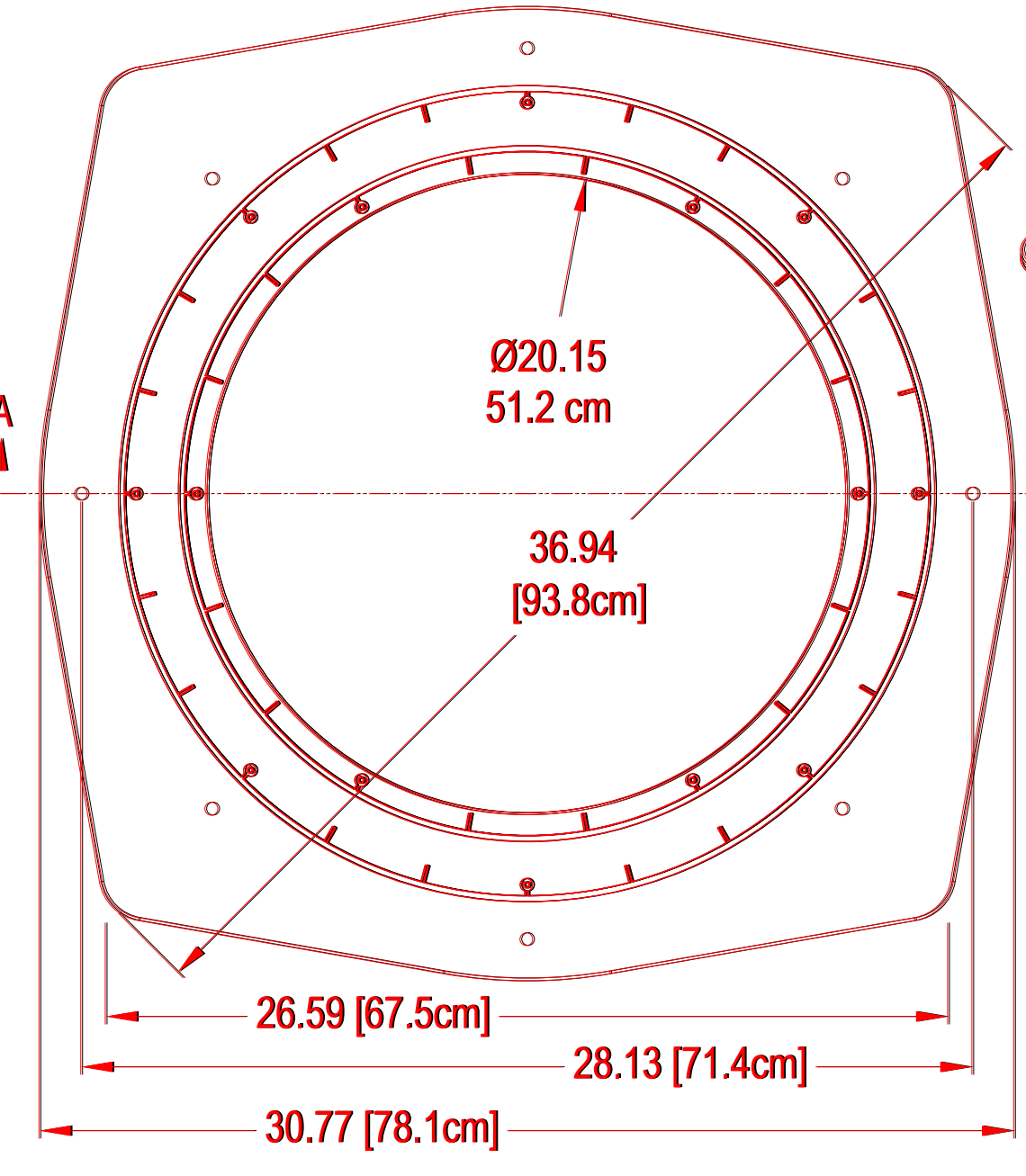
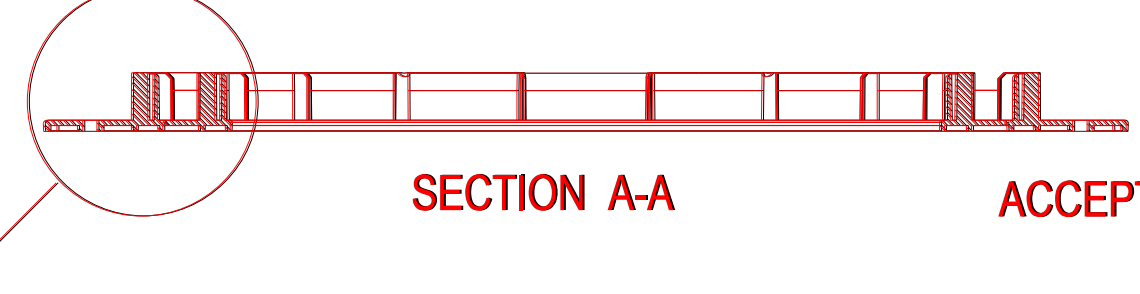
POLYLOK 12 X 24 RISER
SCALE: NTS



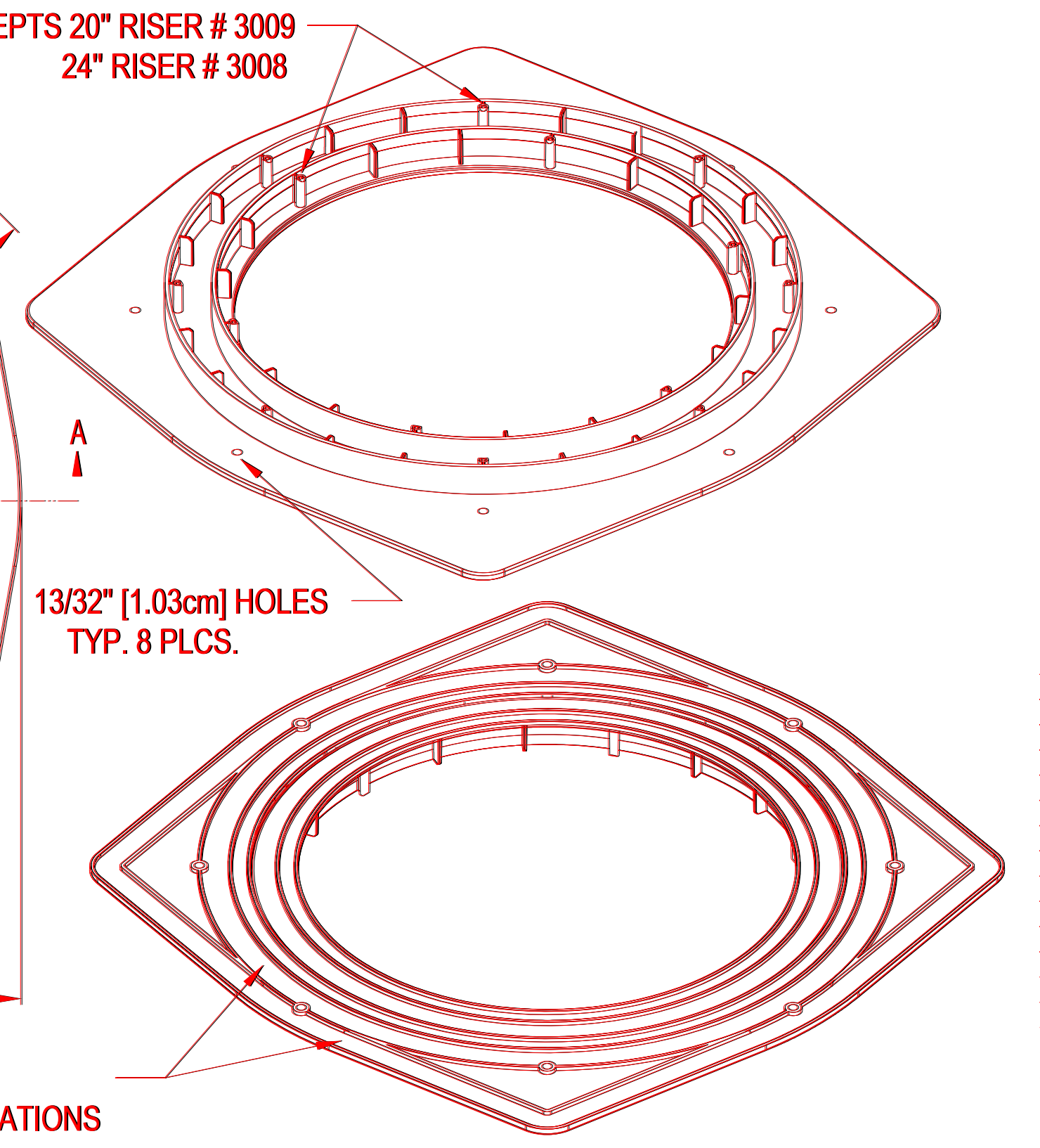
POLYLOK 24" COVER
PART NO. 3008-RC
MATERIAL - HDPE
COLOR - GREEN
SCALE: NTS



POLYLOK ADAPTER RING
PART NO. 3009-AR
MATERIAL - HDPE
COLOR - GREEN
SCALE: NTS



POLYLOK ADAPTER RING
SCALE: NTS



GASKET APPLIED HERE FOR SQUARE OR ROUND APPLICATIONS