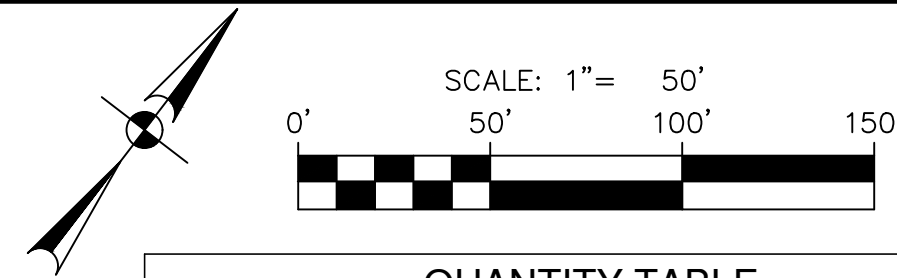


JOINT RESTRAINT NOTE

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NBU PRESSURE ZONE:

PROPOSED WATER MAIN IS WITHIN PRESSURE ZONE 5



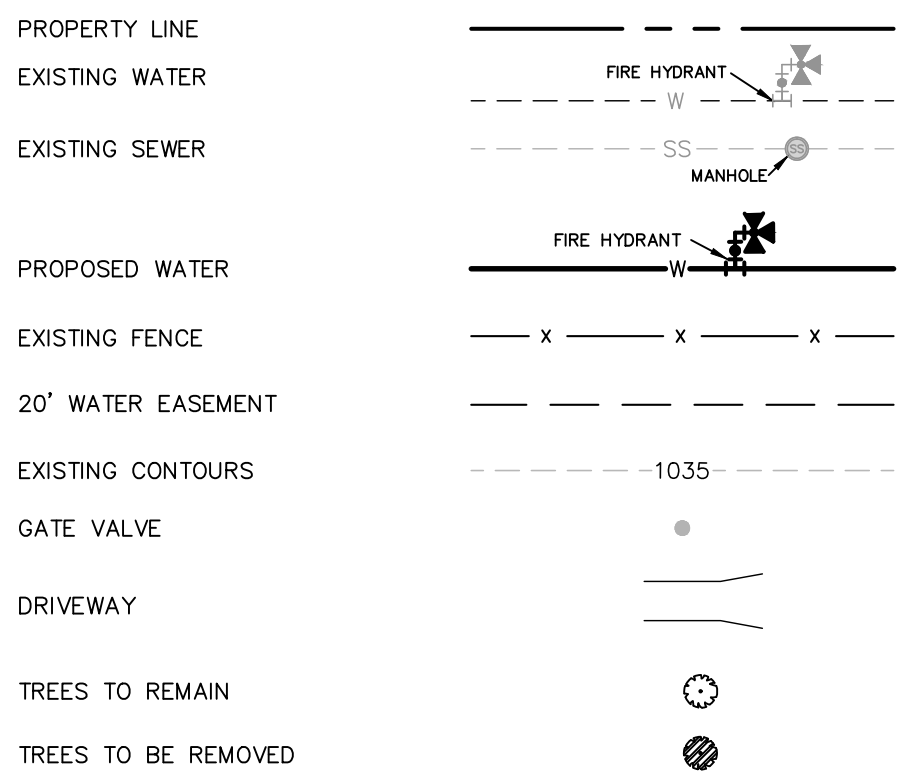
QUANTITY TABLE		
DESCRIPTION	UNIT	QTY
Trench Excavation Protection	LF	1000
16" PVC C900 Class 235 (Open Cut)	LF	1000
16" Gate Valve (M) with 6" Valve Box, Complete	EA	1
Air Release Valve Assembly	EA	2
Fire Hydrant Assembly	EA	3
Revegetation	SY	1778

Pipe Restraint Length Calculator

Source: EBAA Iron, Restraint Length Calculator v 7.1.2

Assumptions		16" Waterline	
Soil Type	CH	Horizontal Bends	
Safety Factor	1.5 to 1.0	11.25 Degrees	4
Trench Type	5	22.5 Degrees	7
Depth of Bury	5 FT	45 Degrees	13
Test Pressure	150 PSI	90 Degrees	32
		Misc. Fittings	
		12"X16" Reducer	37
		16"X16" Tee	87
		Valve	87
		Vertical Bends	
		11.25 Degrees	4

WATER LEGEND



CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

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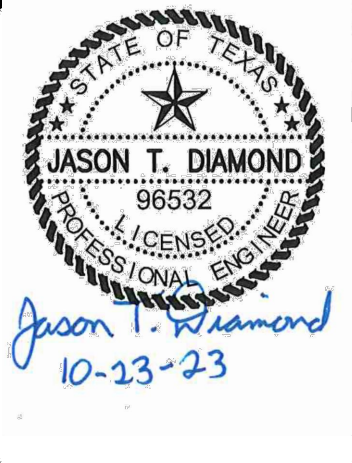
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TRENCH EXCAVATION SAFETY PROTECTION

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NO.	REVISION	DATE
1	ALIGNMENT REVISIONS	10/23/2023



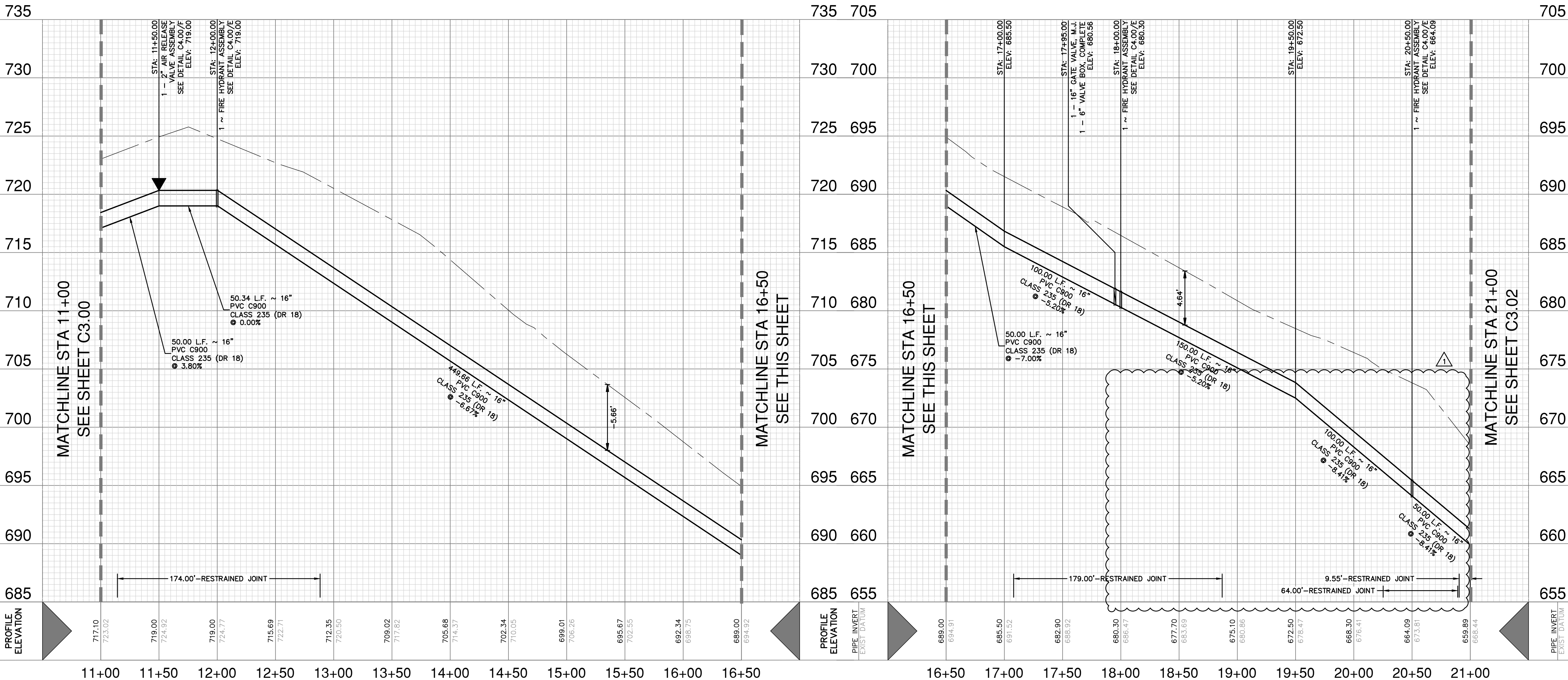
PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

VERAMENDI OFFSITE WATER LINE
NEW BRAUNFELS, TEXAS

WATER MAIN PLAN AND PROFILE
STA 11+00.00 TO STA 21+00.00

PLAT NO.	
JOB NO.	30001-46
DATE	OCTOBER 2023
DESIGNER	CN
CHECKED	MP
DRAWN	RJ
SHEET	C3.01



XXXXXXXXXX

Date: Oct. 21, 2023, 9:44pm User: ID: cmmg
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THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE© UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCO/Digital Globe,Texas Orthography Program, USDA Farm Service Agency.

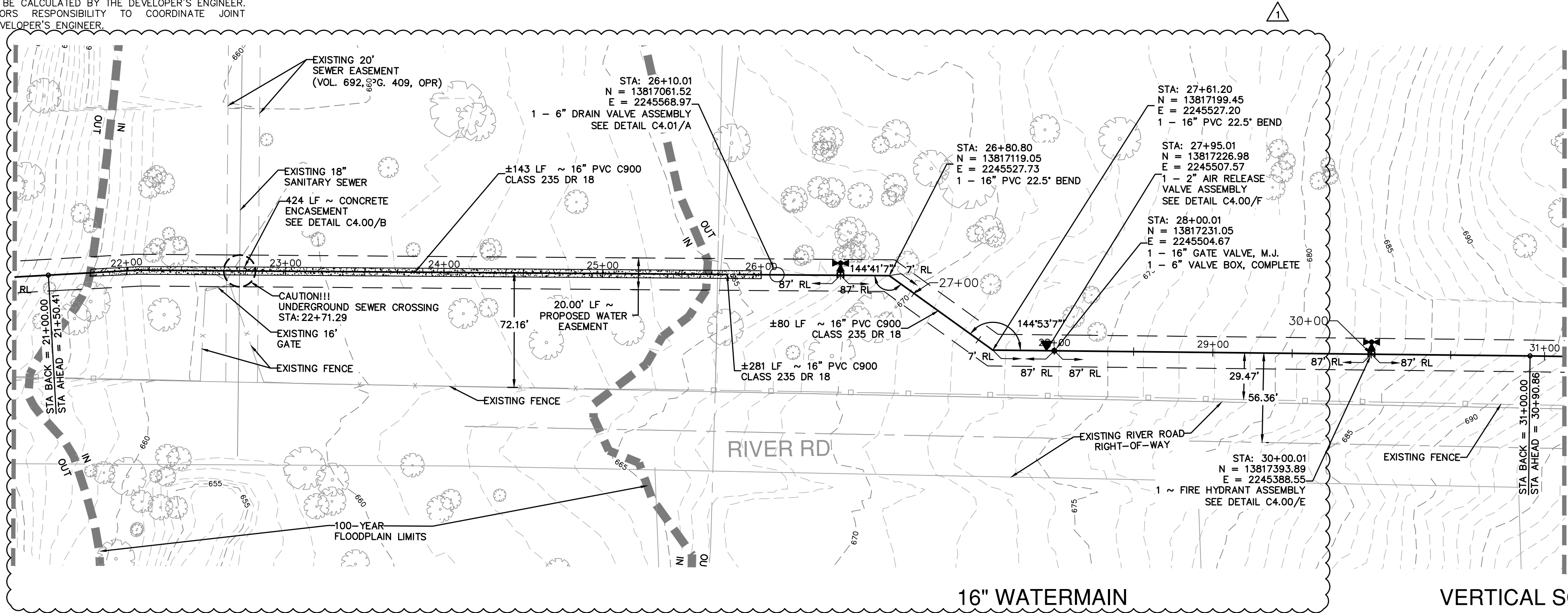
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NBU PRESSURE ZONE:

PROPOSED WATER MAIN IS WITHIN PRESSURE ZONE 5

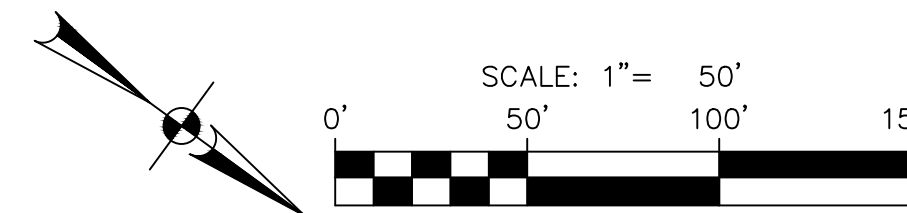
MATCHLINE STA 21+00
SEE SHEET C3.01



16" WATERMAIN
STA 21+00.00 TO STA 31+00.00

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

MATCHLINE STA 31+00
SEE SHEET C3.03



QUANTITY TABLE

DESCRIPTION	UNIT	QTY
Trench Excavation Protection	LF	1000
16" PVC C900 Class 235 (Open Cut)	LF	1000
16" Gate Valve (M) with 6" Valve Box, Complete	EA	1
Air Release Valve Assembly	EA	1
Drain Valve Assembly	EA	1
Fire Hydrant Assembly	EA	2
Concrete Encasement	CY	68
Revegetation	SY	1778

Pipe Restraint Length Calculator

Source: EBAA Iron, Restraint Length Calculator v 7.1.2

Assumptions		16" Waterline	
Soil Type	CH	11.25 Degrees	4
Safety Factor	1.5 to 1.0	22.5 Degrees	7
Trench Type	5	45 Degrees	13
Depth of Bury	5 FT	90 Degrees	32
Test Pressure	150 PSI	Misc. Fittings	
		12"X16" Reducer	37
		16"X16" Tee	87
		Valve	87
		Vertical Bends	
		11.25 Degrees	4

WATER LEGEND

PROPERTY LINE	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED WATER	---
EXISTING FENCE	---
20' WATER EASEMENT	---
EXISTING CONTOURS	---
GATE VALVE	---
DRIVEWAY	---
TREES TO REMAIN	---
TREES TO BE REMOVED	---

CAUTION OVERHEAD UTILITIES

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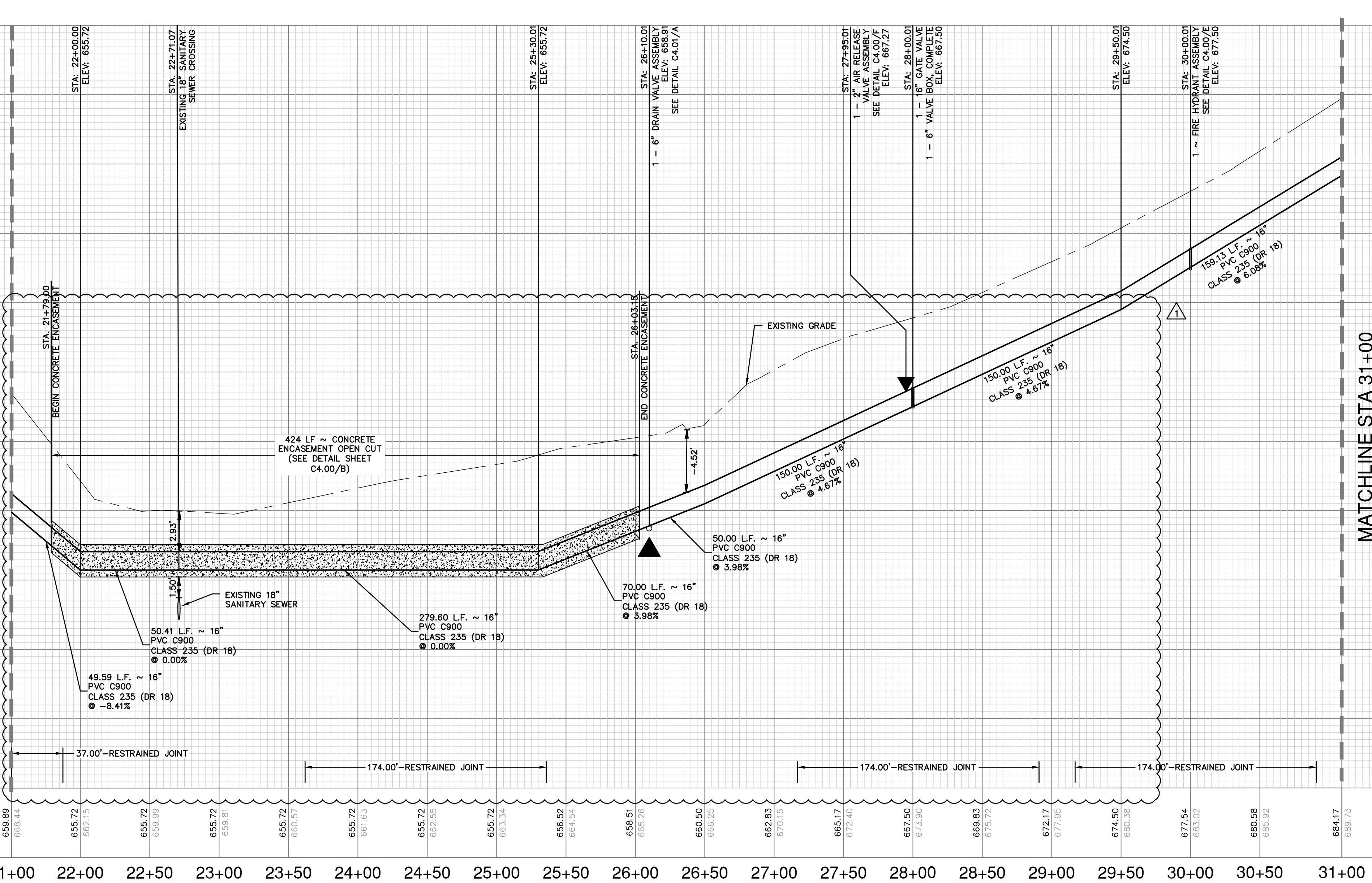
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TRENCH EXCAVATION SAFETY PROTECTION

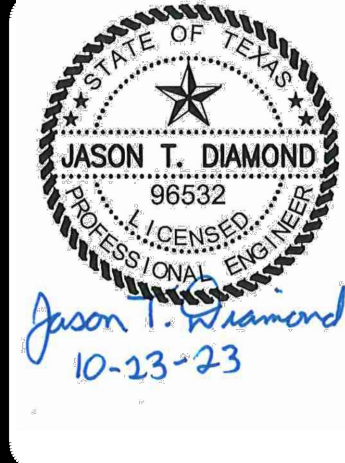
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MATCHLINE STA 21+00
SEE SHEET C3.01



MATCHLINE STA 31+00
SEE SHEET C3.03

NO.	REVISION	DATE
1	ALIGNMENT REVISIONS	10/23/2023



PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

VERAMENDI OFFSITE WATER LINE
NEW BRAUNFELS, TEXAS

WATER MAIN PLAN AND PROFILE
STA 21+00.00 TO STA 31+00.00

PLAT NO.	
JOB NO.	30001-46
DATE	OCTOBER 2023
DRAWN	CN
CHECKED	MP
DRAWN	RJ
SHEET	C3.02

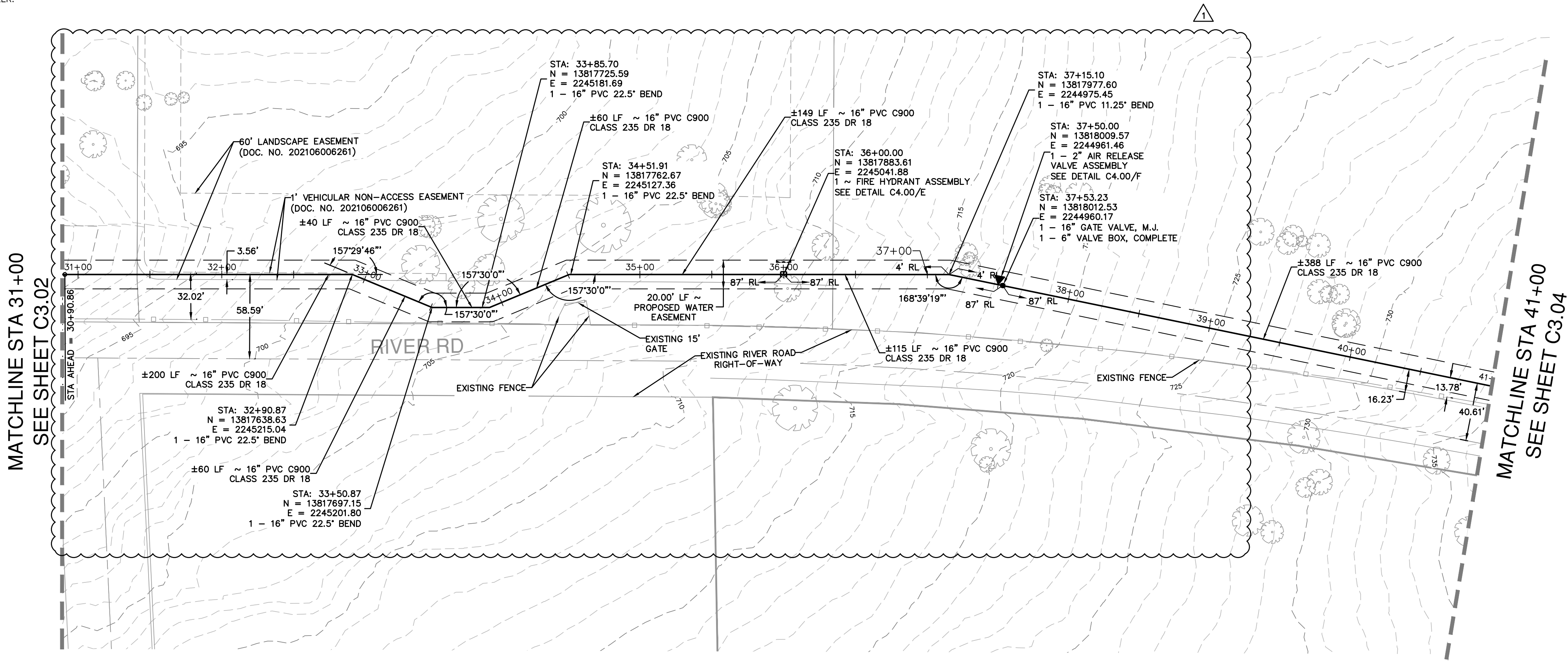
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NBU PRESSURE ZONE:

PROPOSED WATER MAIN IS WITHIN PRESSURE ZONE 5



SCALE: 1"= 50'

0' 50' 100' 150'



QUANTITY TABLE

DESCRIPTION	UNIT	QTY
Trench Excavation Protection	LF	1000
16" PVC C900 Class 235 (Open Cut)	LF	1000
16" Gate Valve (MJ) with 6" Valve Box, Complete	EA	1
Air Release Valve Assembly	EA	1
Fire Hydrant Assembly	EA	1
Revegetation	SY	1778

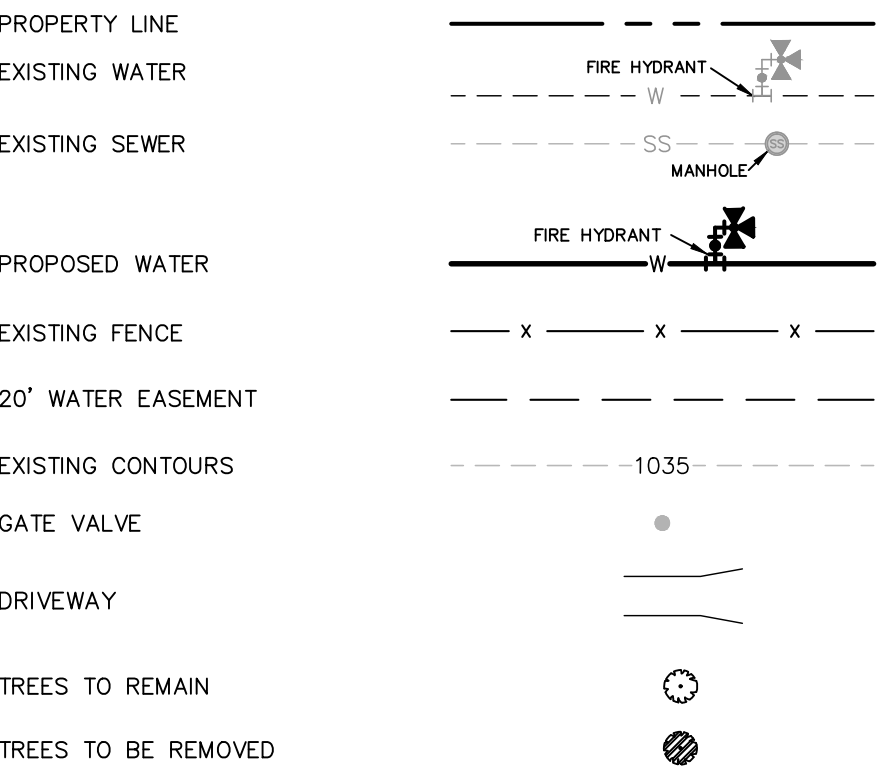
Pipe Restraint Length Calculator

Source: EBAA Iron Restraint Length Calculator v 7.1.2

Assumptions	
Soil Type	CH
Safety Factor	1.5 to 1.0
Trench Type	5
Depth of Bury	8 FT
Test Pressure	150 FSI

16" Waterline	
Horizontal Bends	
11.25 Degrees	4
22.5 Degrees	7
45 Degrees	13
90 Degrees	32
Misc. Fittings	
12"x16" Reducer	37
16"x16" Tee	87
Valve	87
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WATER LEGEND



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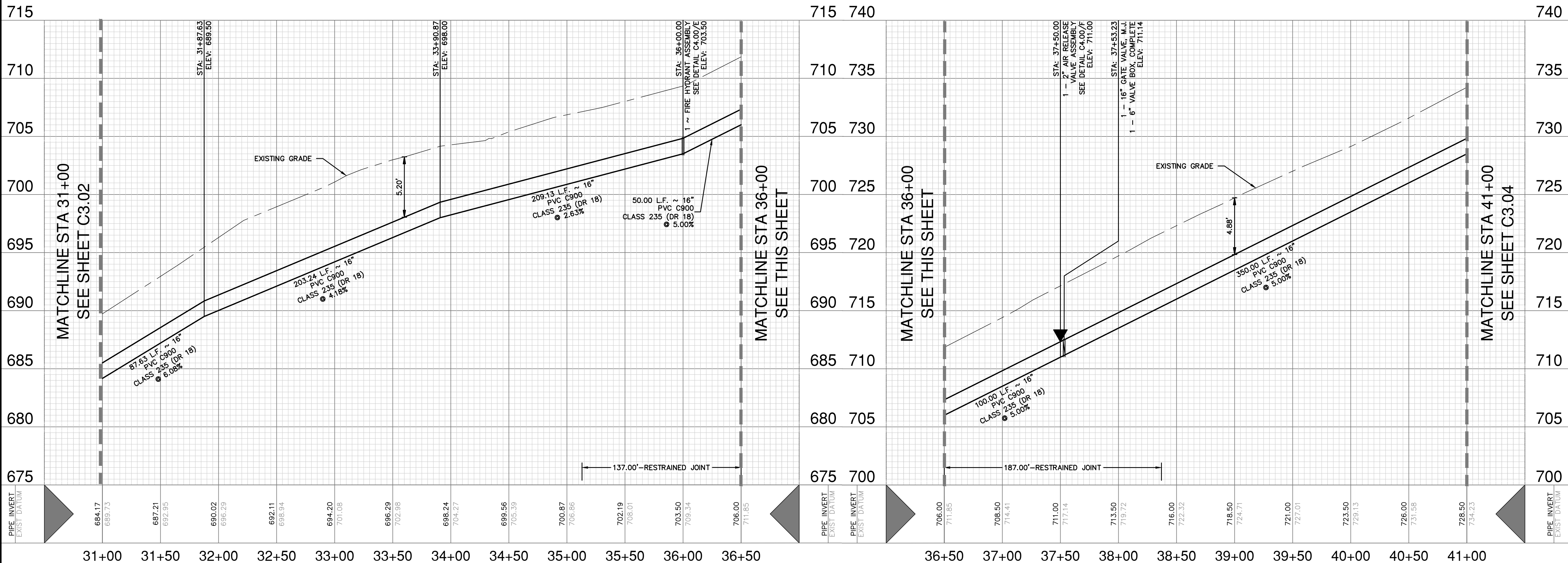
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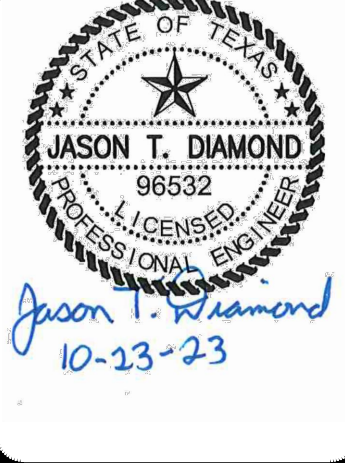
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16" WATERMAIN
STA 31+00.00 TO STA 41+00.00

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



NO.	REVISION	DATE
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JOB NO.	30001-46
DATE	OCTOBER 2023
DESIGNER	CN
CHECKED	MP
DRAWN	RJ
SHEET	C3.03

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