

Engine

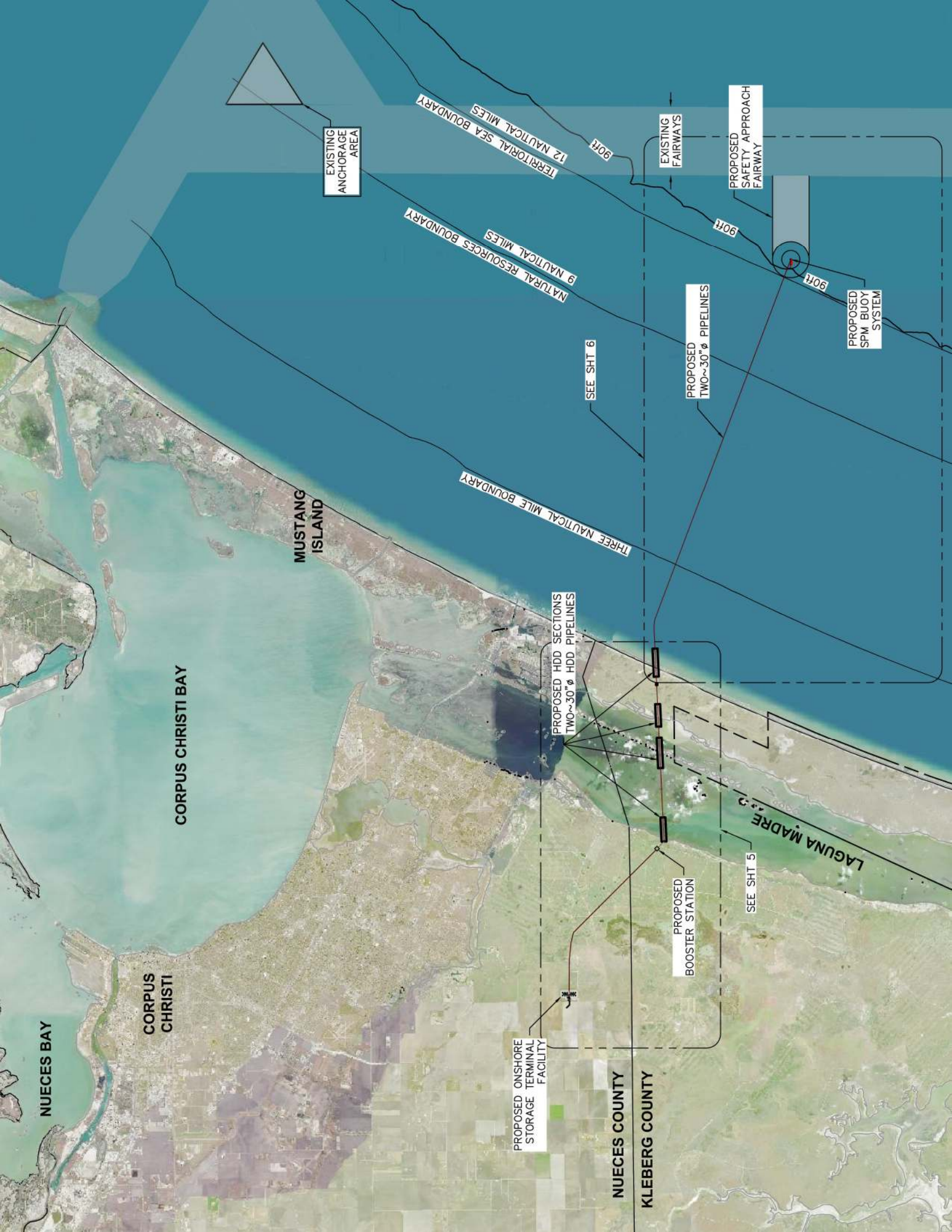
TEXAS GULF TERMINALS PROJECT ISSUED FOR PERMIT

JULY 2018

LOYD
ENGINEERING, INC.
HOUSTON TEXAS USA
(832) 426-4656
LICENSE NUMBER #002846



Sheet Number	Sheet Title
1	COVER
2	SHEET LIST
3	OVERALL PLAN
4	OFFSHORE PIPELINE NAVIGATION CHART
5	ONSHORE & INSHORE LAYOUT
6	OFFSHORE LAYOUT
7	SPM NAVIGATION ARRANGEMENT
8	SPM BUOY ARRANGEMENT
9	PLEM GENERAL ARRANGEMENT
10	ONSHORE STORAGE TERMINAL FACILITY
11	BOOSTER STATION
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13	ONSHORE VALVE STATION ARRANGEMENT
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15	PROFILE TO ST. -300
16	PROFILE TO ST. -250
17	PROFILE TO ST. -200
18	PROFILE TO ST. -150
19	PROFILE TO ST. -100
20	PROFILE TO ST. -50
21	PROFILE TO ST. -25
22	PROFILE TO ST. 00
23	PROFILE TO ST. 41
24	PROFILE ST. 91
25	PROFILE ST. 141
26	PROFILE ST. 191
27	PROFILE ST. 241
28	PROFILE ST. 291
29	PROFILE ST. 341
30	PROFILE ST. 391
31	PROFILE ST. 441
32	PROFILE ST. 491
33	PROFILE ST. 541
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EXISTING ANCHORAGE AREA

TERRITORIAL SEA BOUNDARY
12 NAUTICAL MILES

NATURAL RESOURCES BOUNDARY
9 NAUTICAL MILES

THREE NAUTICAL MILE BOUNDARY

SEE SHT 6

PROPOSED TWO~30"Ø PIPELINES

PROPOSED SPM BUOY SYSTEM

EXISTING FAIRWAYS

PROPOSED SAFETY APPROACH FAIRWAY

CORPUS CHRISTI BAY

MUSTANG ISLAND

PROPOSED HDD SECTIONS
TWO~30"Ø HDD PIPELINES

LAGUNA MADRE

PROPOSED BOOSTER STATION

SEE SHT 5

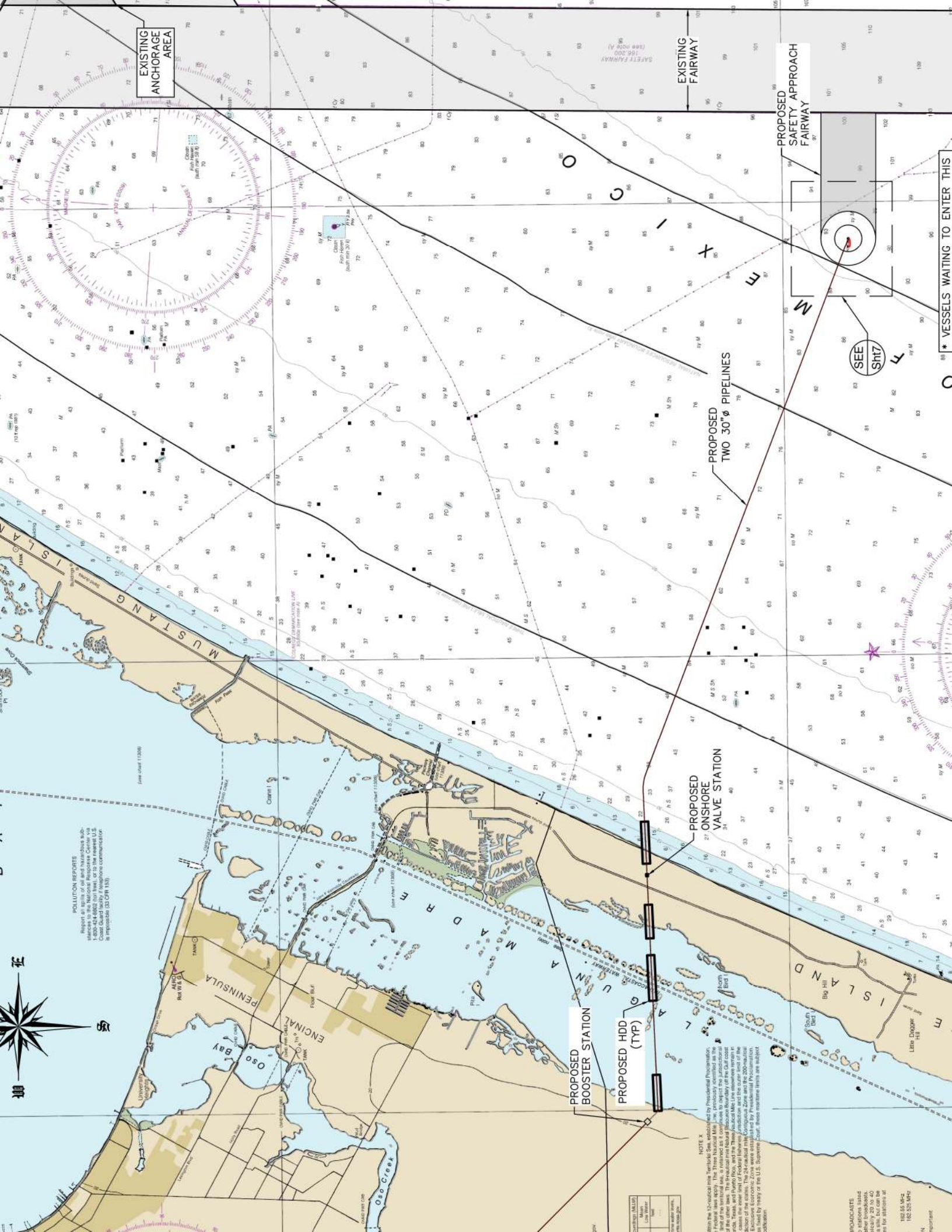
NUECES BAY

CORPUS CHRISTI

PROPOSED ONSHORE STORAGE TERMINAL FACILITY

NUECES COUNTY

KLEBERG COUNTY



EXISTING ANCHORAGE AREA

EXISTING FAIRWAY

PROPOSED SAFETY APPROACH FAIRWAY

PROPOSED TWO 30" Ø PIPELINES

PROPOSED ONSHORE VALVE STATION

PROPOSED BOOSTER STATION

PROPOSED HDD (TYP)

SEE SH17

* VESSELS WAITING TO ENTER THIS

POLLUTION REPORTS
 Report an spill of oil and hazardous substances to the National Response Center via 1-800-424-8802 or the U.S. Coast Guard Safety Reporting Center via 1-800-424-8802.



NOTE: X
 Within the 12-nautical-mile territorial sea, the Outer Continental Shelf (OCS) Regulations apply. The Outer Continental Shelf (OCS) Regulations apply to the Outer Continental Shelf (OCS) within the 12-nautical-mile territorial sea, in addition to the OCS Regulations. The OCS Regulations apply to the Outer Continental Shelf (OCS) within the 12-nautical-mile territorial sea, in addition to the OCS Regulations. The OCS Regulations apply to the Outer Continental Shelf (OCS) within the 12-nautical-mile territorial sea, in addition to the OCS Regulations.

PROPOSED
 180.55 MHz
 180.55 MHz
 180.55 MHz



NUCES COUNTY
KLEBERG COUNTY

PROPOSED BOOSTER STATION
(SEE SHT 11)

PROPOSED ONSHORE VALVE STATION
(SEE SHT 13)

PROPOSED HDD SECTIONS

2883'
1854'

0+00 -320+00 -300+00 -280+00

260+00

240+00

220+00

200+00

180+00

160+00

140+00

120+00

100+00

80+00

60+00

40+00

20+00

0+00

20+00

40+00

60+00

80+00

100+00

120+00

140+00

160+00

180+00

200+00

2883'

1854'

21458'

1435'

4304'

8813'
TRENCH & BURY

B
12

B
12

A
12

B
12

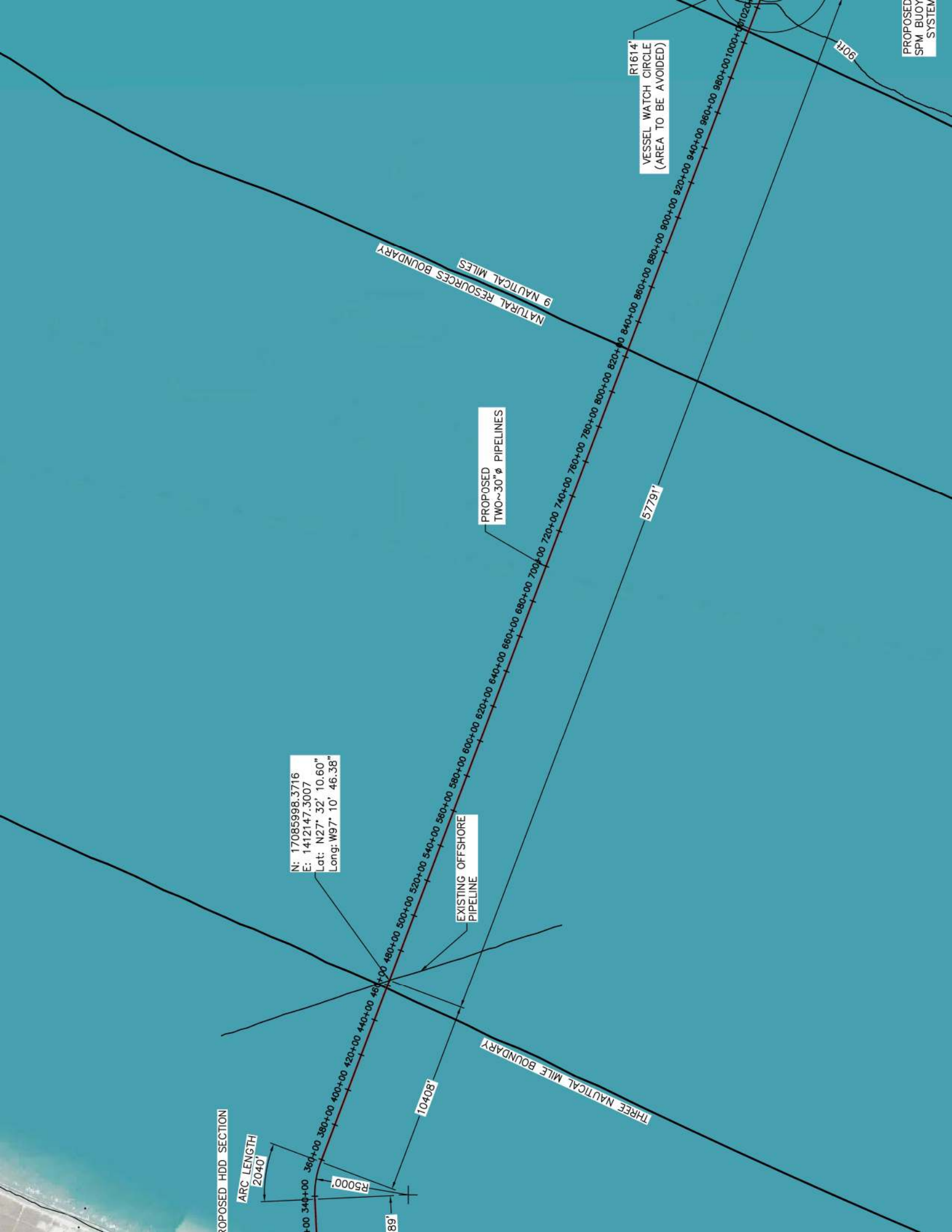
5500'

2000'
TRENCH & BURY

4000'

4900'
TRENCH & BURY

5000'



N: 17085998.3716
E: 1412147.3007
Lat: N27° 32' 10.60"
Long: W97° 10' 46.38"

PROPOSED HDD SECTION

ARC LENGTH
2040'

R5000'

89'

10408'

EXISTING OFFSHORE
PIPELINE

THREE NAUTICAL MILE BOUNDARY

NATURAL RESOURCES BOUNDARY
9 NAUTICAL MILES

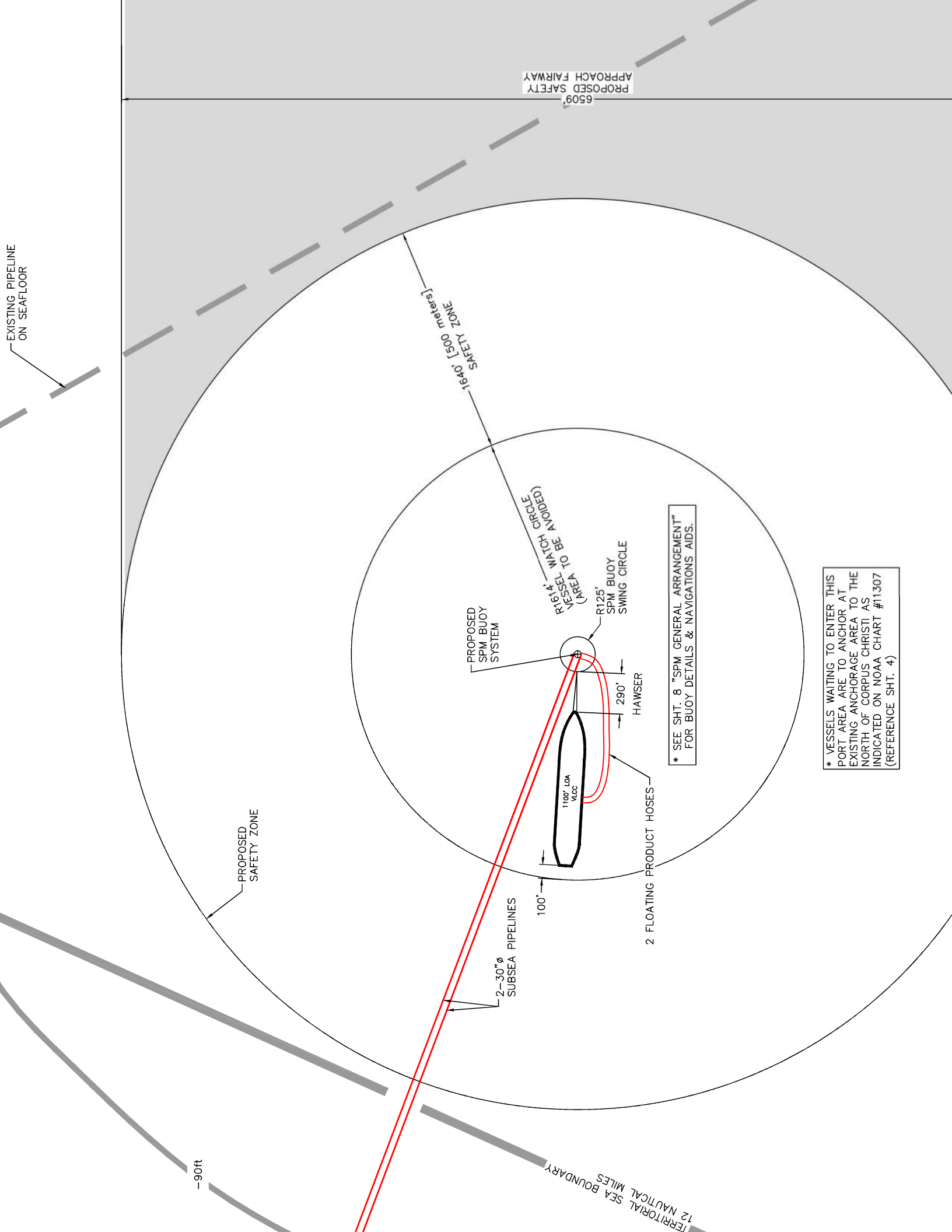
PROPOSED
TWO~30"Ø PIPELINES

57791'

R1614'
VESSEL WATCH CIRCLE
(AREA TO BE AVOIDED)

907'

PROPOSED
SPM BUOY
SYSTEM



6509
PROPOSED SAFETY
APPROACH FAIRWAY

1640' [500 meters]
SAFETY ZONE

AREA TO BE AVOIDED
VESSEL MATCH CIRCLE

PROPOSED
SPM BUOY
SYSTEM

R125'
SPM BUOY
SWING CIRCLE

* SEE SHT. 8 "SPM GENERAL ARRANGEMENT"
FOR BUOY DETAILS & NAVIGATIONS AIDS.

HAWSER

290'

100'

1100' LOA
VLCC

2 FLOATING PRODUCT HOSES

2-30"Ø
SUBSEA PIPELINES

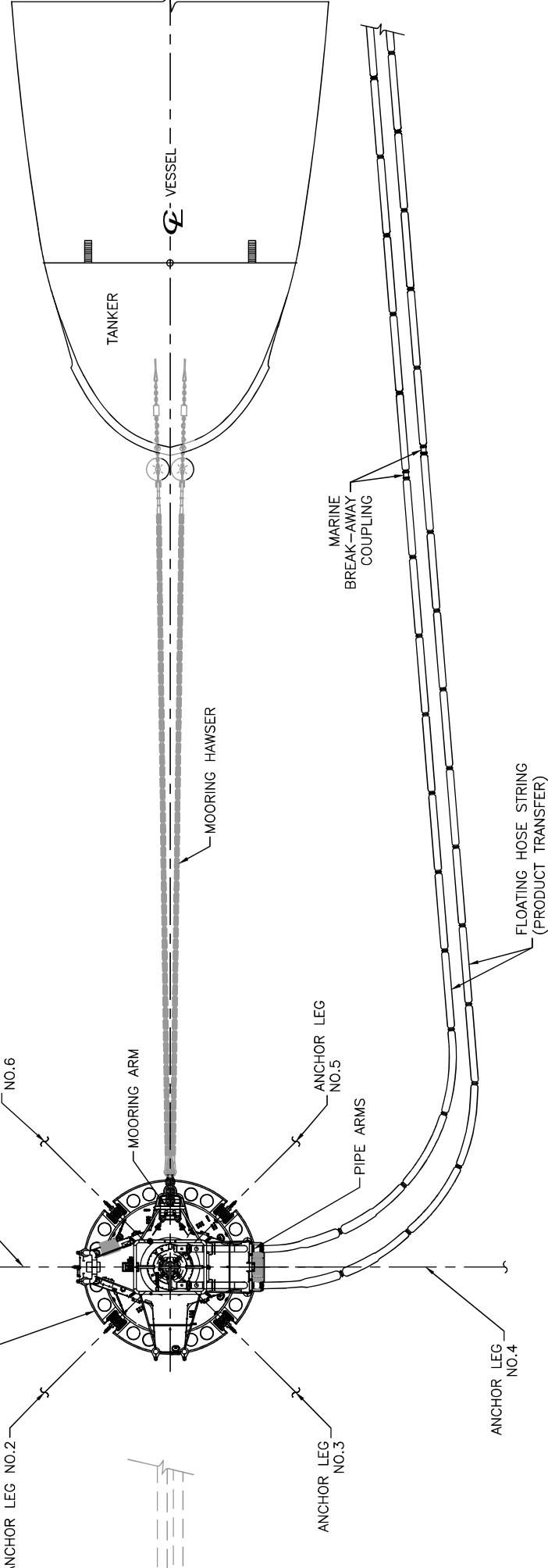
PROPOSED
SAFETY ZONE

* VESSELS WAITING TO ENTER THIS
PORT AREA ARE TO ANCHOR AT
EXISTING ANCHORAGE AREA TO THE
NORTH OF CORPUS CHRISTI AS
INDICATED ON NOAA CHART #11307
(REFERENCE SHT. 4)

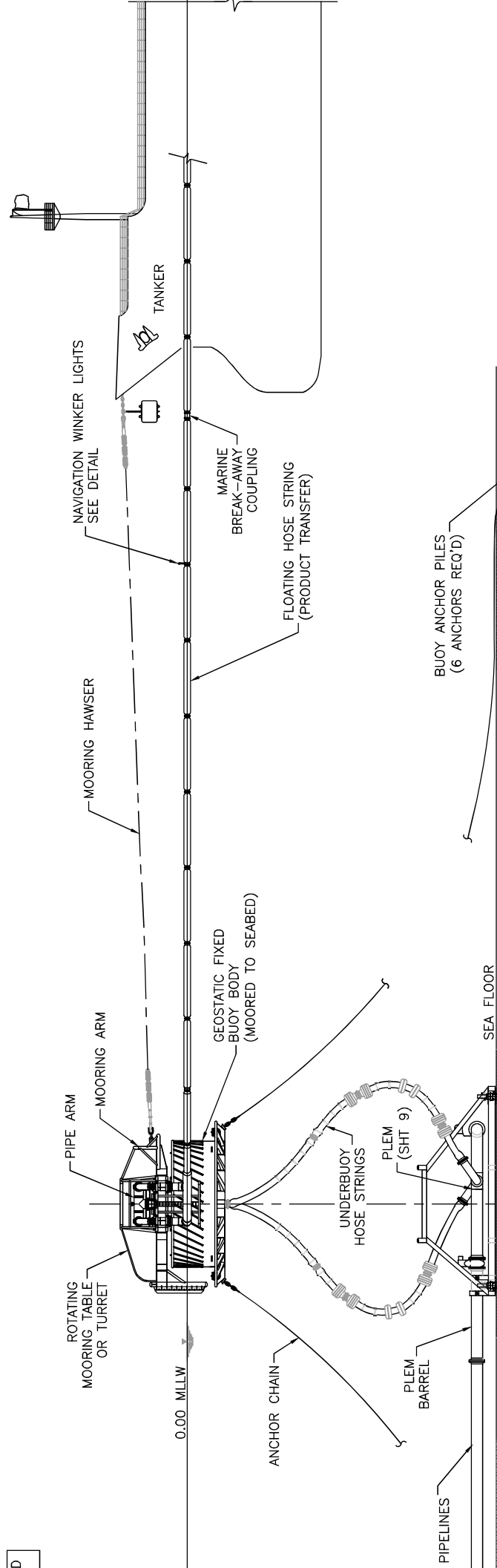
-90ft

TERRITORIAL SEA BOUNDARY
12 NAUTICAL MILES

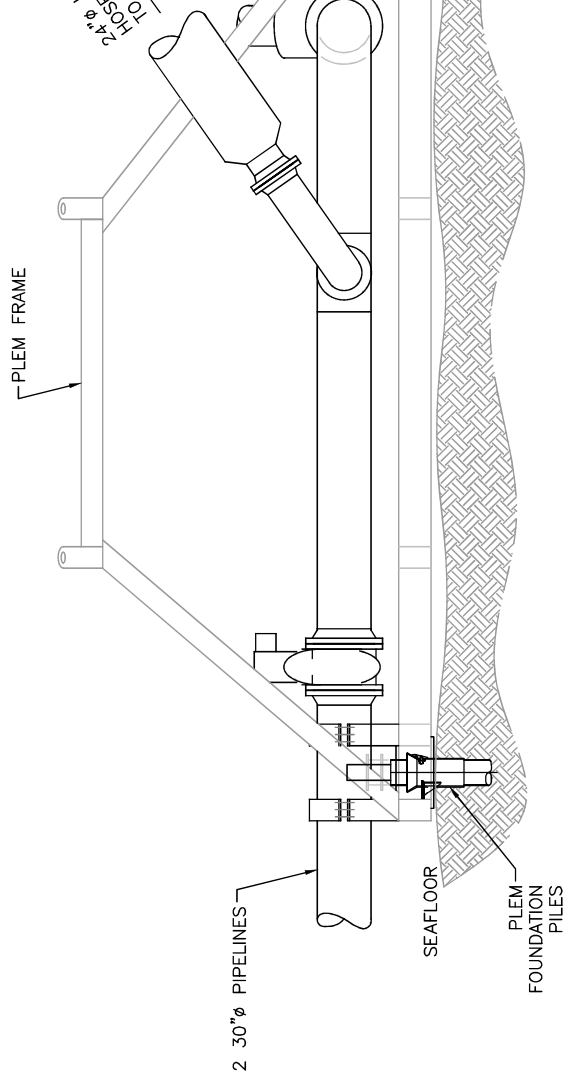
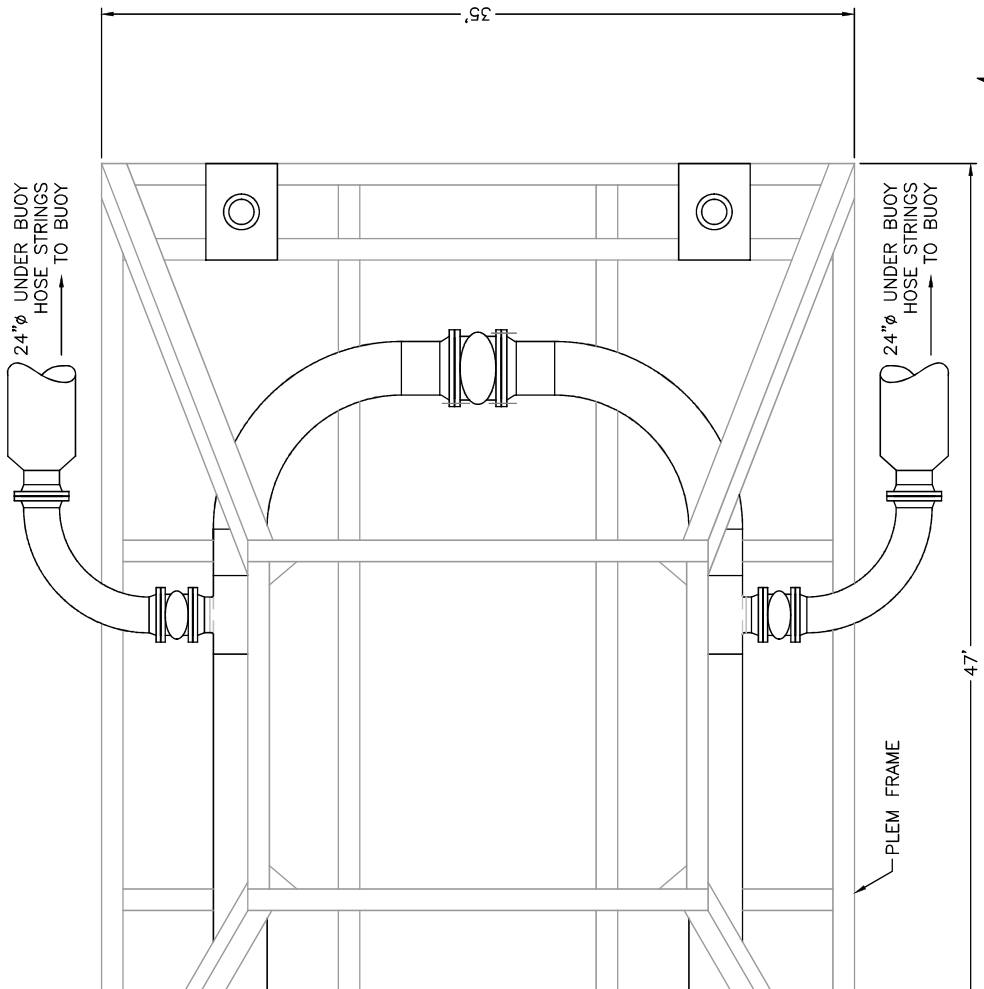
EXISTING PIPELINE
ON SEAFLOOR



PLAN
SPM BUOY SYSTEM ARRANGEMENT



BUOY ANCHOR PILES
(6 ANCHORS REQ'D)



A ELEVATION
NTS

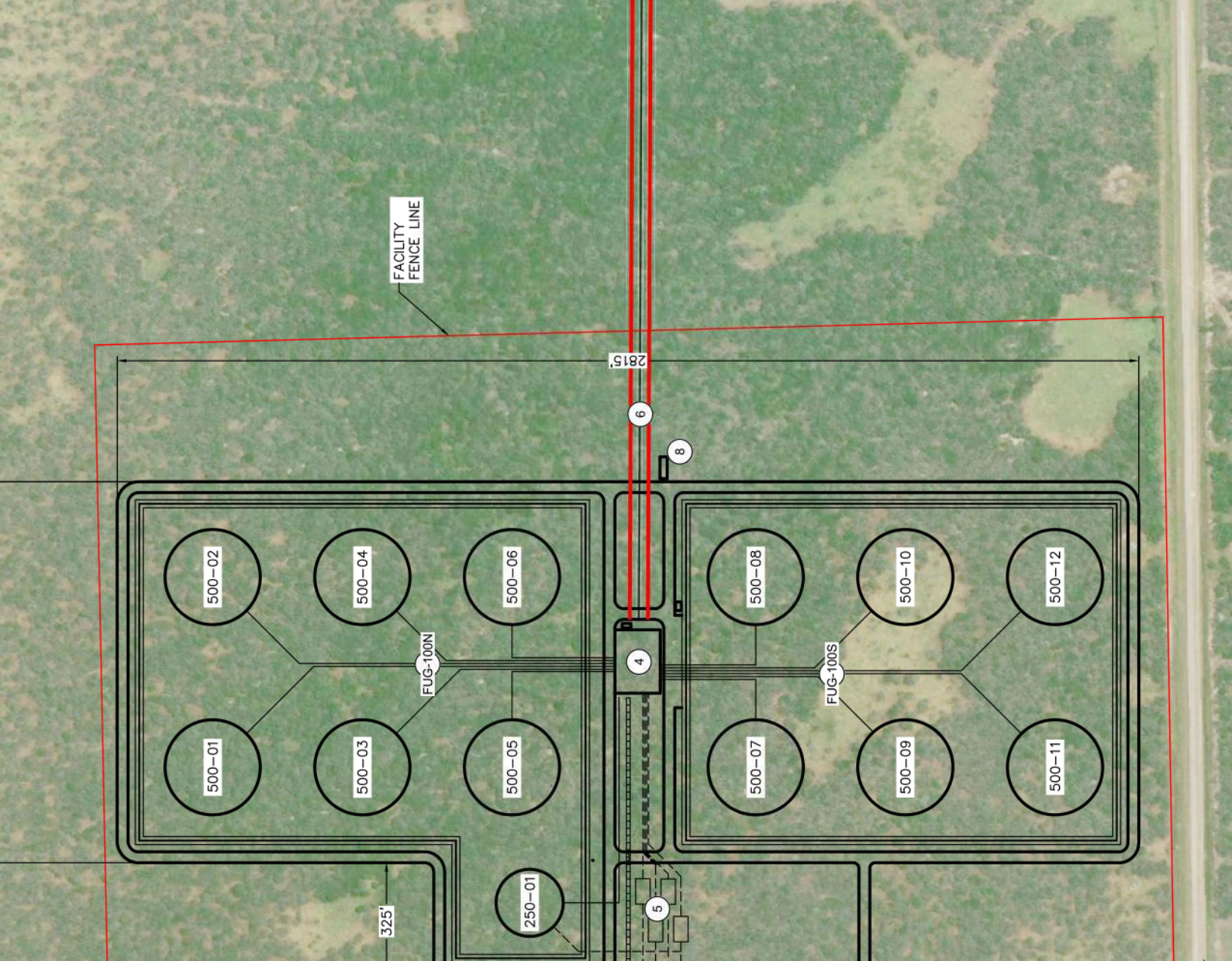
PLAN VIEW
SCALE: NTS

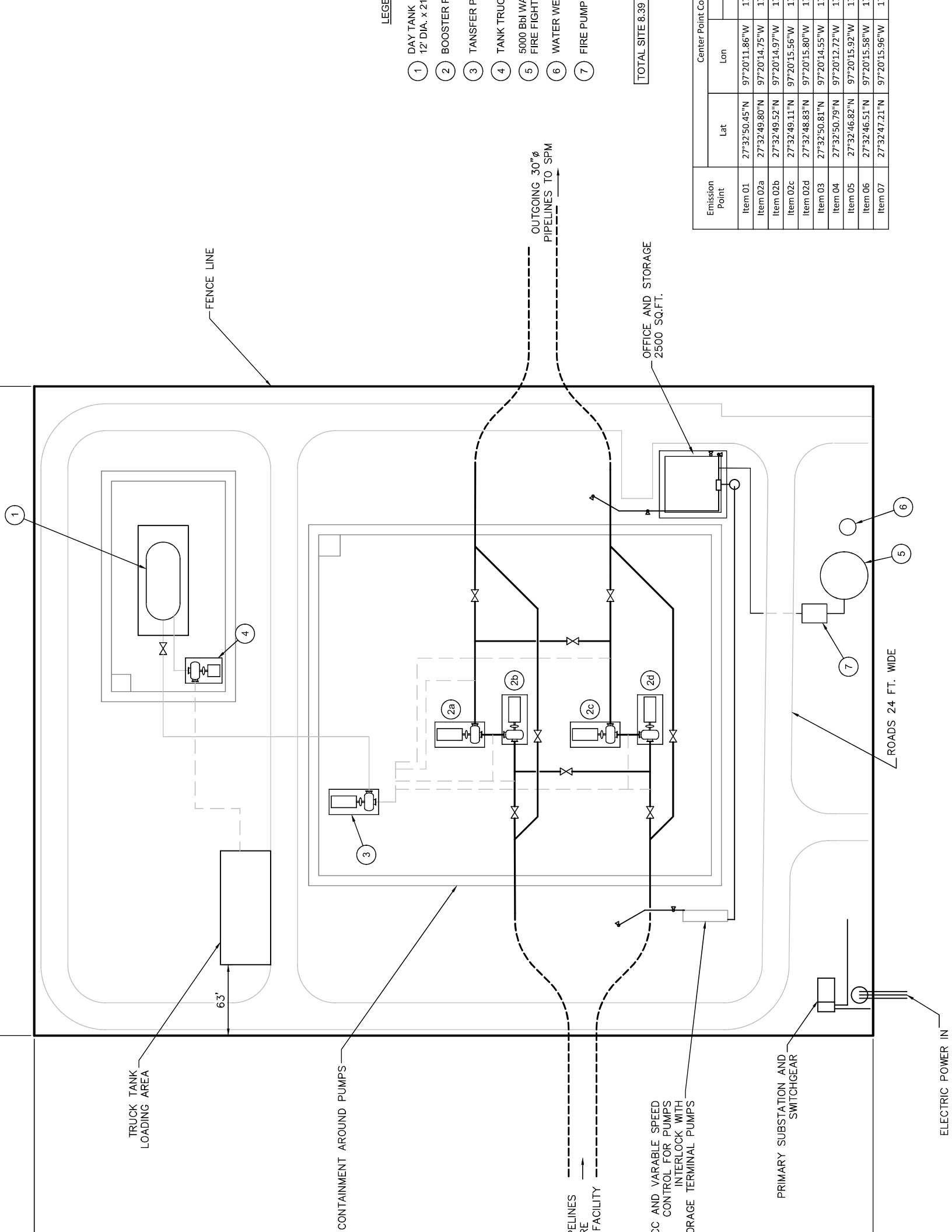
Emission Point	Center Point Coordinates		Tx S/E
	Lat	Lon	
Tank 500-01	27°35'39.00"N	97°25'05.19"W	17106306.549
Tank 500-02	27°35'38.96"N	97°24'59.36"W	17106306.549
Tank 500-03	27°35'34.92"N	97°25'05.23"W	17105894.049
Tank 500-04	27°35'34.88"N	97°24'59.40"W	17105894.049
Tank 500-05	27°35'30.84"N	97°25'05.27"W	17105481.549
Tank 500-06	27°35'30.79"N	97°24'59.44"W	17105481.549
Tank 500-07	27°35'24.19"N	97°25'05.34"W	17104810.049
Tank 500-08	27°35'24.14"N	97°24'59.50"W	17104810.049
Tank 500-09	27°35'20.10"N	97°25'05.38"W	17104397.549
Tank 500-10	27°35'20.06"N	97°24'59.54"W	17104397.549
Tank 500-11	27°35'16.02"N	97°25'05.42"W	17103985.049
Tank 500-12	27°35'15.97"N	97°24'59.58"W	17103985.049
Tank 250-01	27°35'30.38"N	97°25'09.43"W	17105432.799
FUG-100N	27°35'32.61"N	97°25'02.16"W	17105663.522
FUG-100S	27°35'22.52"N	97°25'02.44"W	17104643.702
FUG-200	27°35'27.37"N	97°25'02.06"W	17105134.333
FUG-300	27°35'26.80"N	97°25'09.70"W	17105071.127
VCU-01	27°35'28.07"N	97°25'13.74"W	17105195.367
FWP-01	27°35'20.98"N	97°25'12.11"W	17104480.655
OWS-01	27°35'26.53"N	97°24'56.12"W	17105054.032
GEN-01	27°35'17.28"N	97°25'13.41"W	17104106.216

LEGEND

- ① ADMIN / OPERATIONS BLDG.,.
- ② FIRE PUMP AND FIREWATER TANK / FWP-01
- ③ VCU-01
- ④ MANIFOLD / FUG-200
- ⑤ METER SKIDS / FUG 300
- ⑥ (2) 30" PIPELINES TO OUTBOUND
- ⑦ (4) INBOUND/OUTBOUND PIPELINES
- ⑧ OILY WATER SEPARATOR / OWS-01
- ⑨ GENERATOR / GEN-01

AREAS
 TOTAL SITE 150.0 ACRES
 NORTH TANK FARM 27.7 ACRES
 SOUTH TANK FARM 24.3 ACRES





LEGEND

- 1 DAY TANK
12' DIA. x 21'
- 2 BOOSTER PUMPS
- 3 TRANSFER PUMP
- 4 TANK TRUCK
- 5 5000 BBL WATER TANK
- 6 FIRE FIGHT
- 7 WATER WELLS
- 8 FIRE PUMP

TOTAL SITE 8.39

Emission Point	Center Point Co	
	Lat	Lon
Item 01	27°32'50.45"N	97°20'11.86"W
Item 02a	27°32'49.80"N	97°20'14.75"W
Item 02b	27°32'49.52"N	97°20'14.97"W
Item 02c	27°32'49.11"N	97°20'15.56"W
Item 02d	27°32'48.83"N	97°20'15.80"W
Item 03	27°32'50.81"N	97°20'14.55"W
Item 04	27°32'50.79"N	97°20'12.72"W
Item 05	27°32'46.82"N	97°20'15.92"W
Item 06	27°32'46.51"N	97°20'15.58"W
Item 07	27°32'47.21"N	97°20'15.96"W

TRUCK TANK LOADING AREA

63'

CONTAINMENT AROUND PUMPS

PLC AND VARIABLE SPEED CONTROL FOR PUMPS INTERLOCK WITH STORAGE TERMINAL PUMPS

PRIMARY SUBSTATION AND SWITCHGEAR

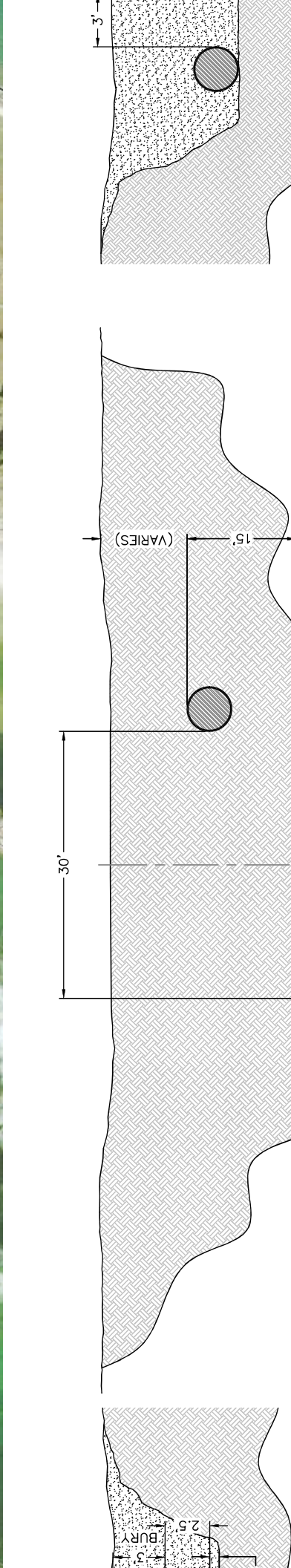
ELECTRIC POWER IN

FENCE LINE

OUTGOING 30" PIPELINES TO SPM

OFFICE AND STORAGE 2500 SQ.FT.

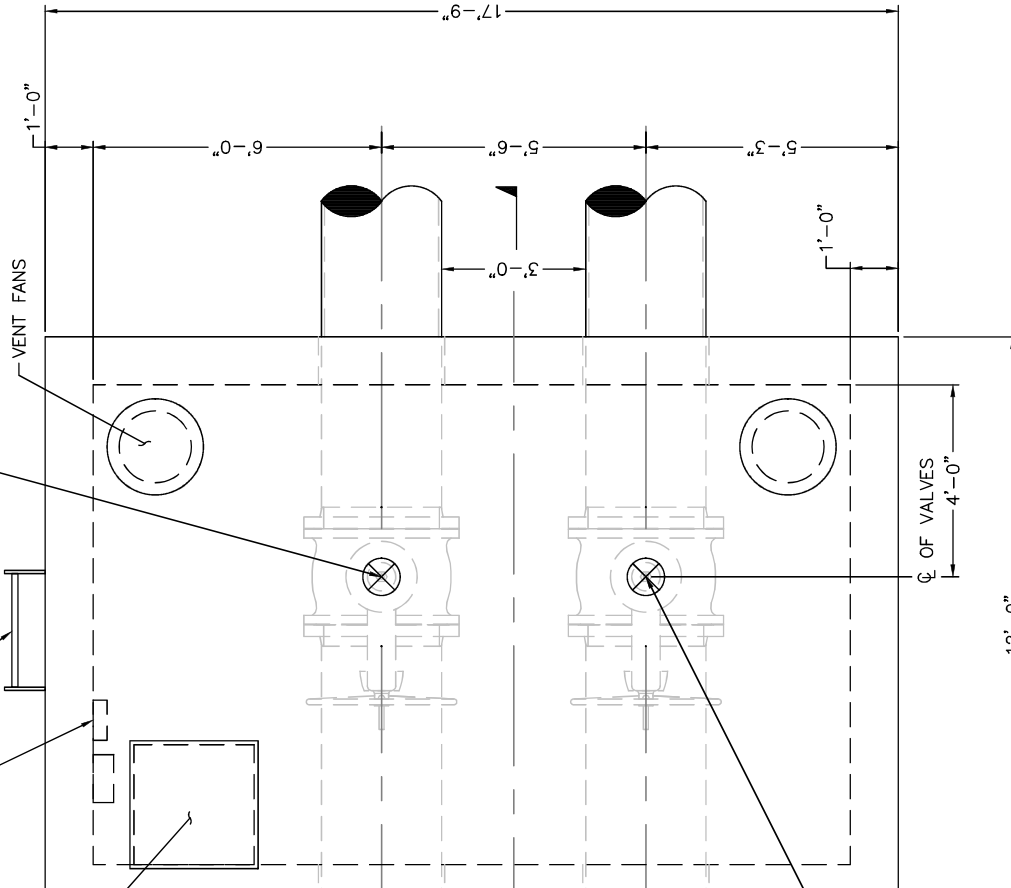
ROADS 24 FT. WIDE



N: 17089530.774
 E: 1390489.096
 LAT: N27° 32' 47.77"
 LONG: W97° 14' 46.58"

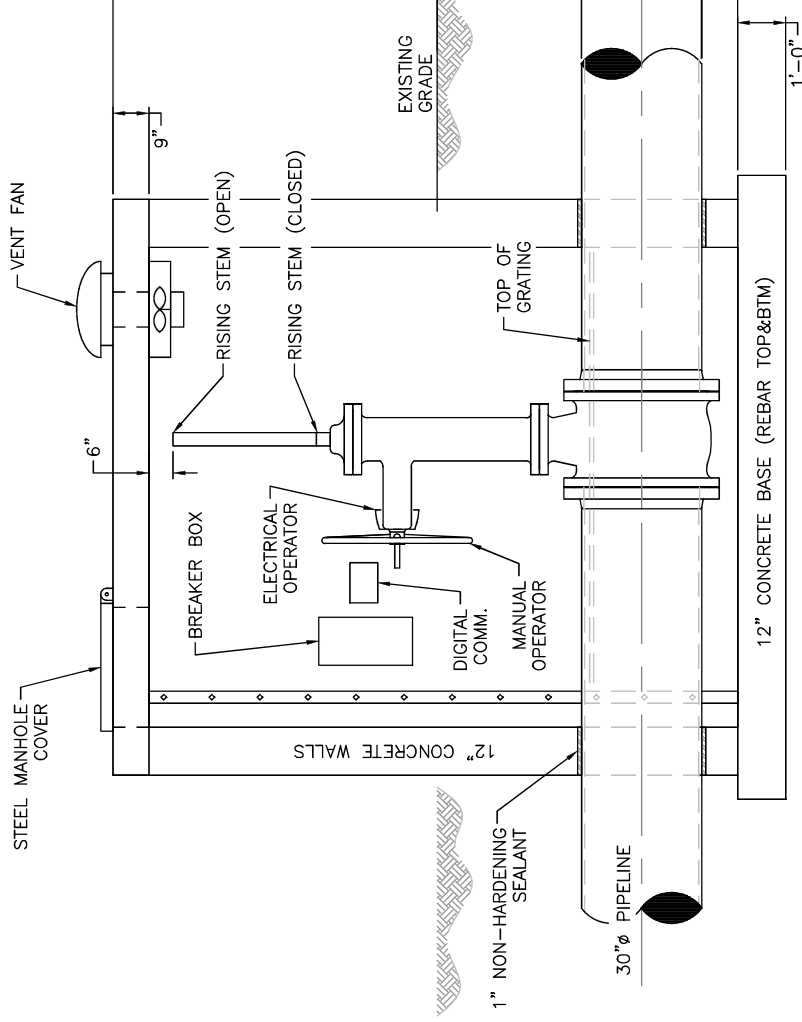
ACCESS LADDER

DIGITAL
 UNICATION



PLAN VIEW

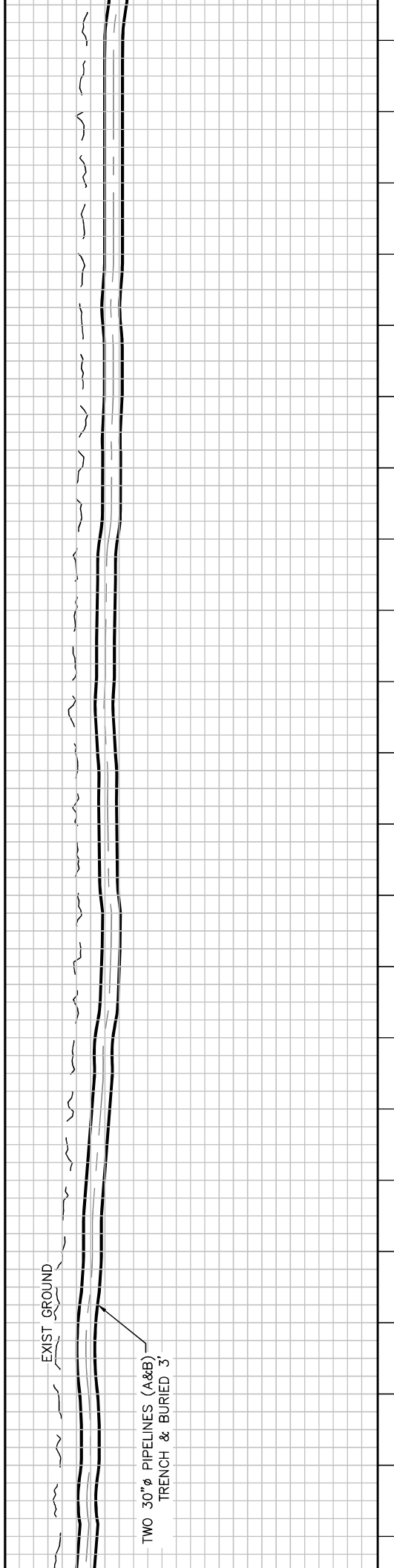
SCALE: 1"=2'-0"



A ELEVATION
 SCALE: 1"=2'-0"

NOTE:
 VALVES ARE 30" Ø FULL
 MOTOR OPERATED VALV

ING PIPELINES AT
RE STORAGE TERMINAL FACILITY



EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

-348+00 -347+00 -346+00 -345+00 -344+00 -343+00 -342+00 -341+00 -340+00 -339+00 -338+00 -337+00 -336+00 -335+00 -334+00 -333+00 -332+00 -331+00 -330+00 -329+00 -328+00 -327+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

-288+00 -287+00 -286+00 -285+00 -284+00 -283+00 -282+00 -281+00 -280+00 -279+00 -278+00 -277+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

-248+00 -247+00 -246+00 -245+00 -244+00 -243+00 -242+00 -241+00 -240+00 -239+00 -238+00 -237+00 -236+00 -235+00 -234+00 -233+00 -232+00 -231+00 -230+00 -229+00 -228+00 -227+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

41
47
48
00
81
91

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

18.31	-198+00
18.305	-197+00
18.73	-197+00
18.734	-197+00
17.47	-196+00
17.470	-196+00
17.34	-195+00
17.342	-195+00
17.52	-194+00
17.521	-194+00
17.07	-193+00
17.069	-193+00
17.74	-192+00
17.742	-192+00
16.74	-191+00
16.738	-191+00
16.83	-190+00
16.832	-190+00
17.52	-189+00
17.518	-189+00
17.99	-188+00
17.992	-188+00
17.35	-187+00
17.352	-187+00
17.20	-186+00
17.197	-186+00
18.06	-185+00
17.34	-184+00
17.344	-184+00
18.51	-183+00
18.510	-183+00
17.65	-182+00
17.645	-182+00
17.32	-181+00
17.323	-181+00
18.60	-180+00
18.599	-180+00
18.10	-179+00
18.100	-179+00
18.15	-178+00
18.150	-178+00
18.21	-177+00
18.215	-177+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

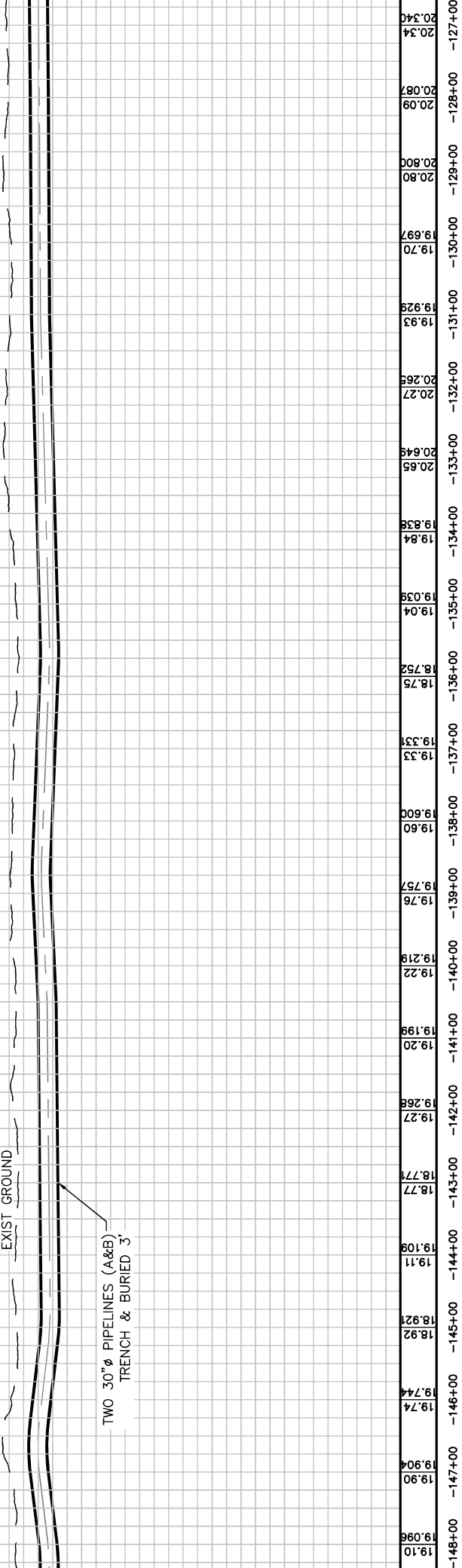
EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

18.31	-198+00
18.305	-197+00
18.73	-197+00
18.734	-197+00
17.47	-196+00
17.470	-196+00
17.34	-195+00
17.342	-195+00
17.52	-194+00
17.521	-194+00
17.07	-193+00
17.069	-193+00
17.74	-192+00
17.742	-192+00
16.74	-191+00
16.738	-191+00
16.83	-190+00
16.832	-190+00
17.52	-189+00
17.518	-189+00
17.99	-188+00
17.992	-188+00
17.35	-187+00
17.352	-187+00
17.20	-186+00
17.197	-186+00
18.06	-185+00
17.34	-184+00
17.344	-184+00
18.51	-183+00
18.510	-183+00
17.65	-182+00
17.645	-182+00
17.32	-181+00
17.323	-181+00
18.60	-180+00
18.599	-180+00
18.10	-179+00
18.100	-179+00
18.15	-178+00
18.150	-178+00
18.21	-177+00
18.215	-177+00

EXIST GROUND

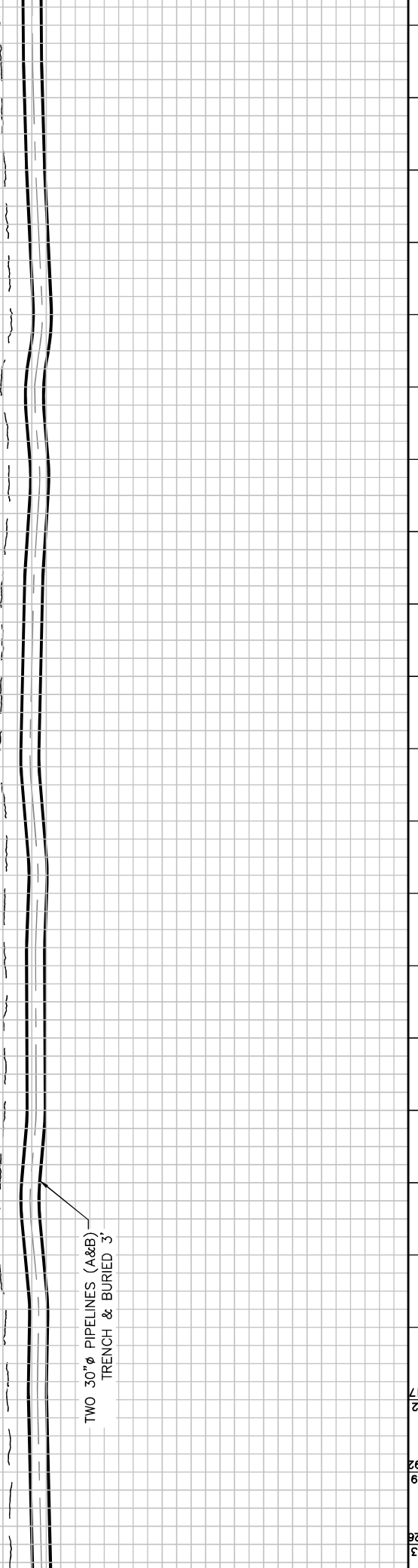
TWO 30"Ø PIPELINES (A&B)
TRENCH & BURIED 3'

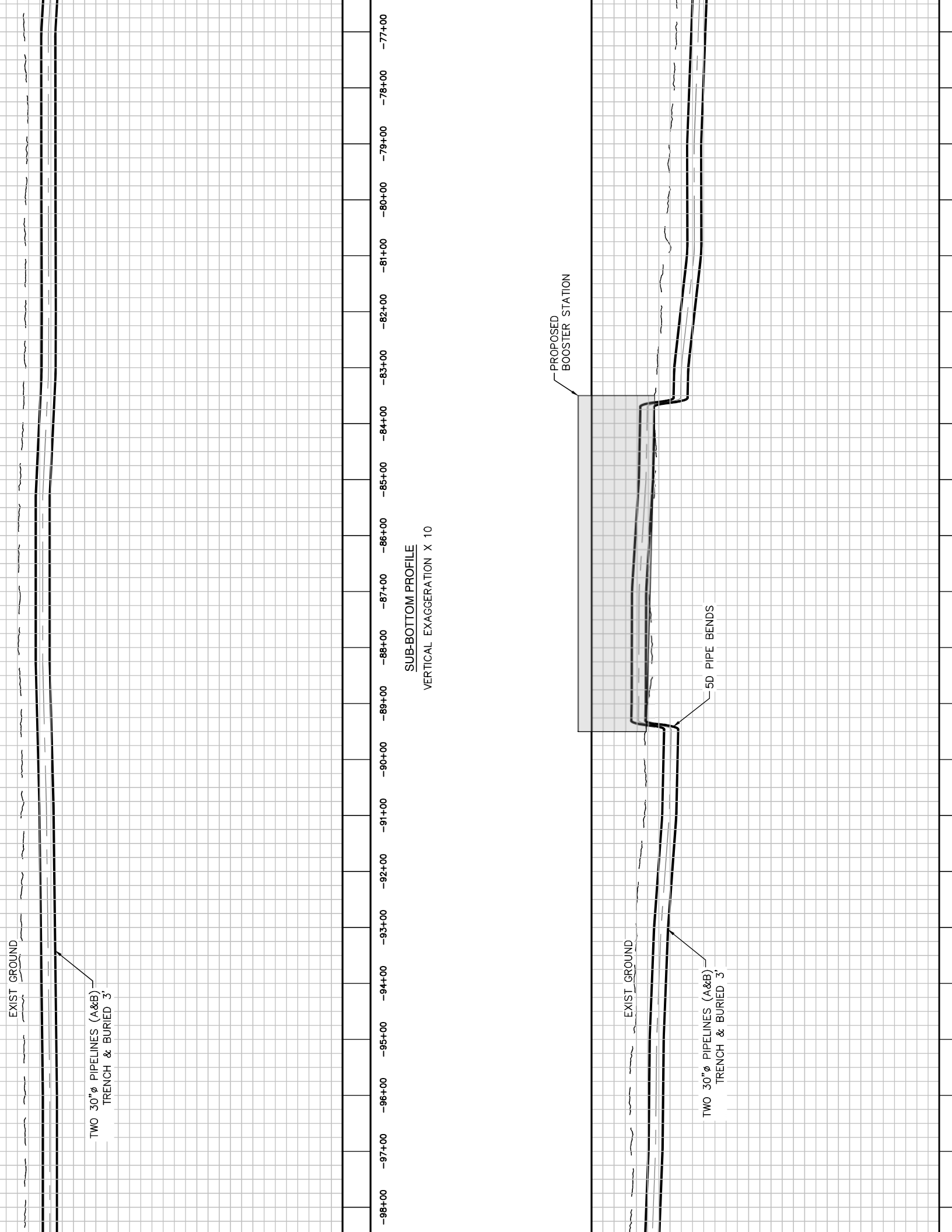


SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

EXIST GROUND

TWO 30"Ø PIPELINES (A&B)
TRENCH & BURIED 3'





EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

-98+00 -97+00 -96+00 -95+00 -94+00 -93+00 -92+00 -91+00 -90+00 -89+00 -88+00 -87+00 -86+00 -85+00 -84+00 -83+00 -82+00 -81+00 -80+00 -79+00 -78+00 -77+00

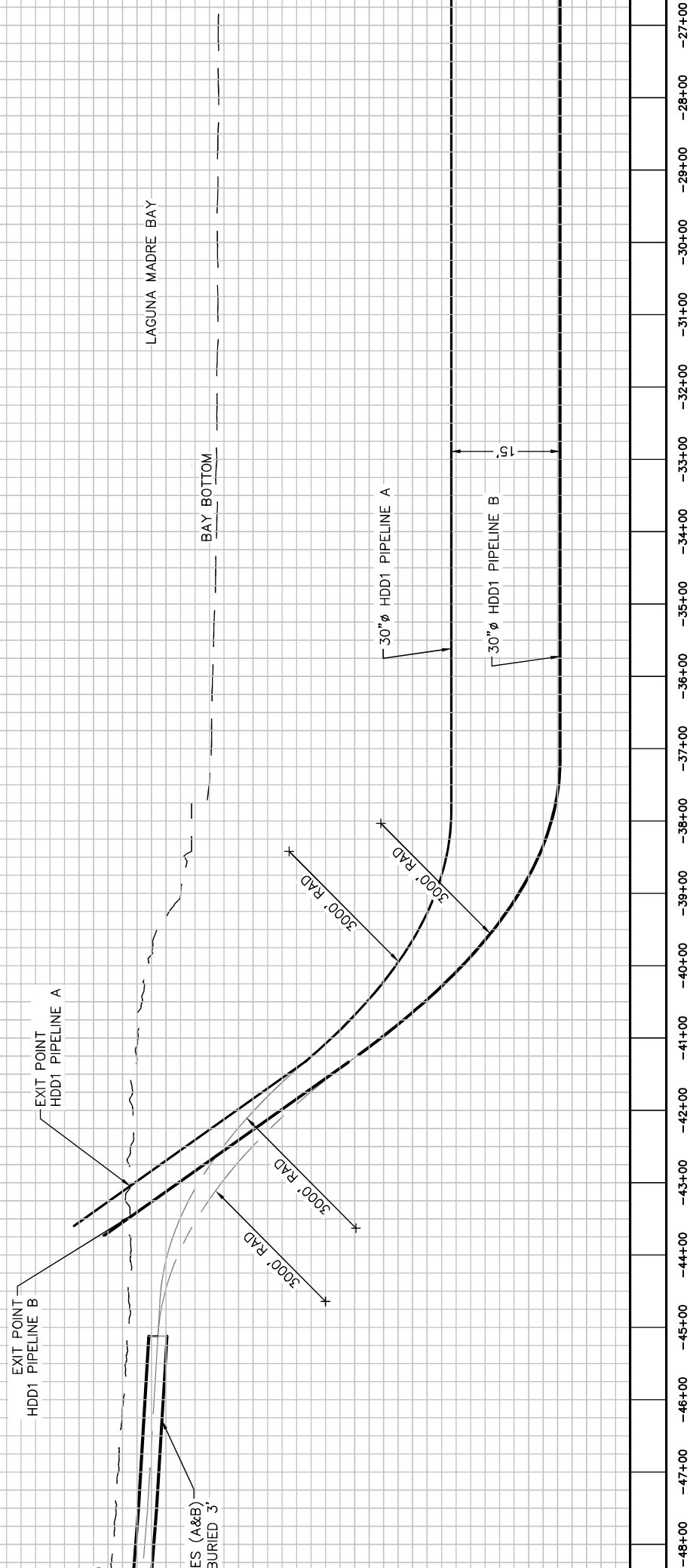
SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

PROPOSED
BOOSTER STATION

EXIST GROUND

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 3'

5D PIPE BENDS

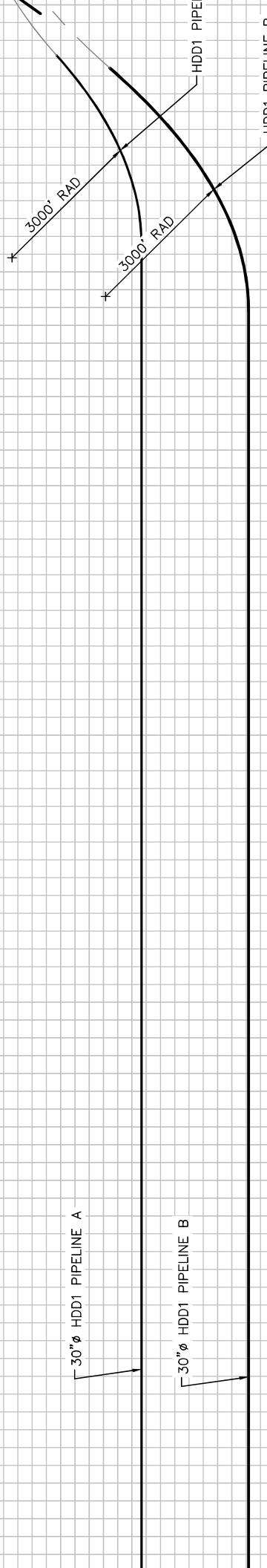


SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

ENTRY P
HDD1 PIPELIN

ENTRY P
HDD1 PIPELIN

TOM

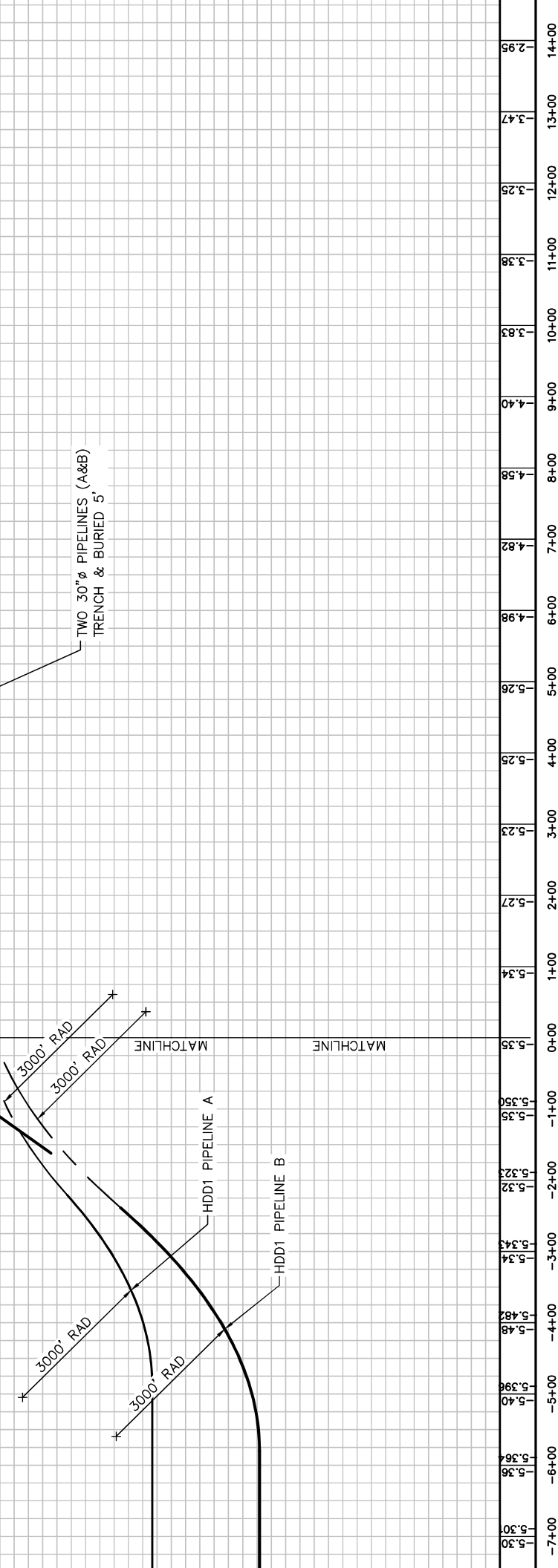


30" ϕ HDD1 PIPELINE A

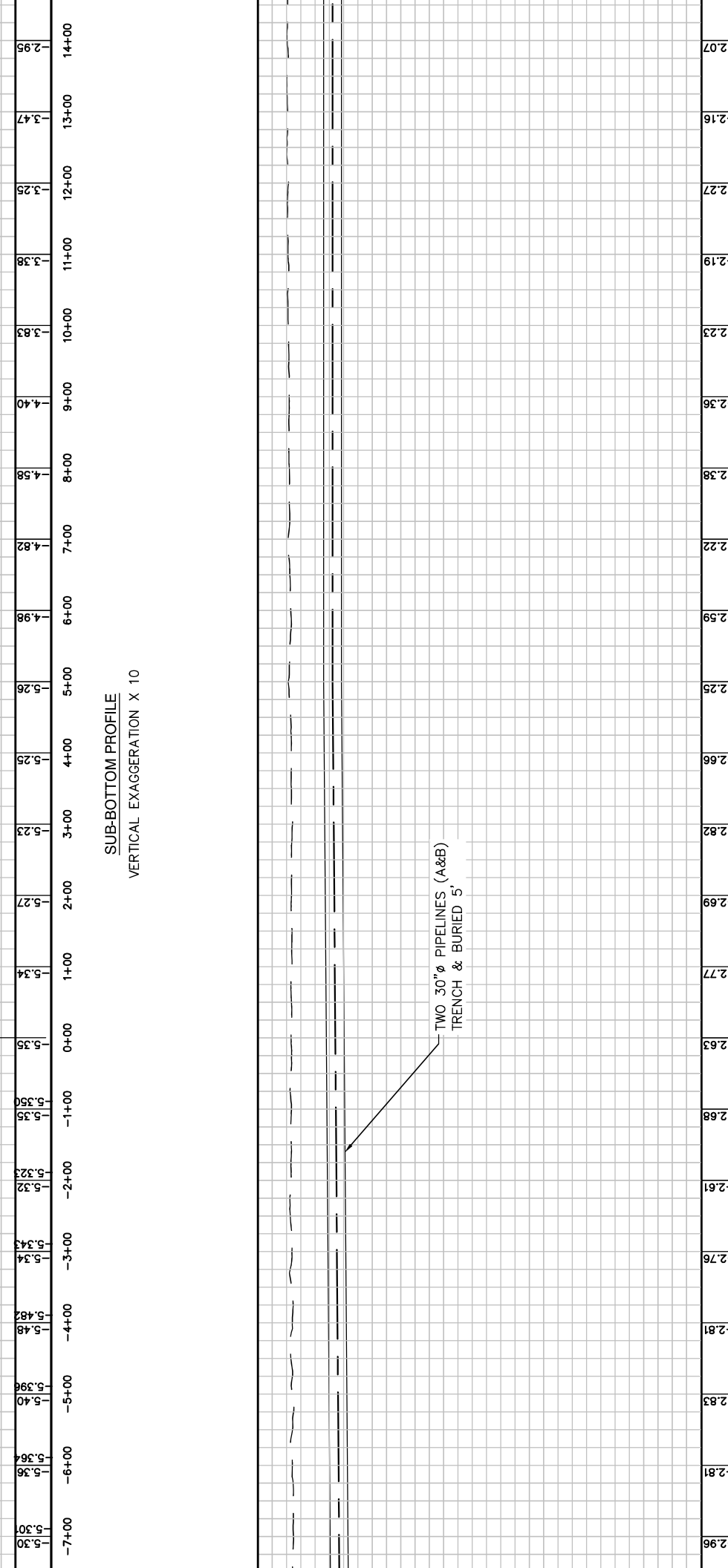
30" ϕ HDD1 PIPELINE B

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

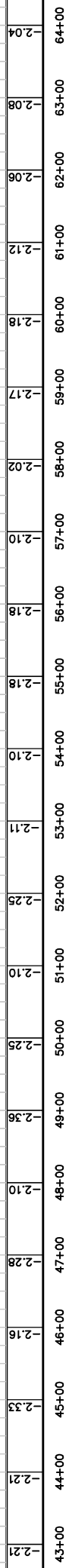
Station	Elevation
-23+00	3.567
-22+00	3.596
-21+00	3.640
-20+00	3.587
-19+00	3.517
-18+00	3.686
-17+00	3.627
-16+00	3.727
-15+00	3.712
-14+00	3.709
-13+00	3.923
-12+00	4.859
-11+00	4.897
-10+00	5.148
-9+00	5.186
-8+00	5.249
-7+00	5.307
-6+00	5.364
-5+00	5.396
-4+00	5.482
-3+00	5.343
-2+00	5.323



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

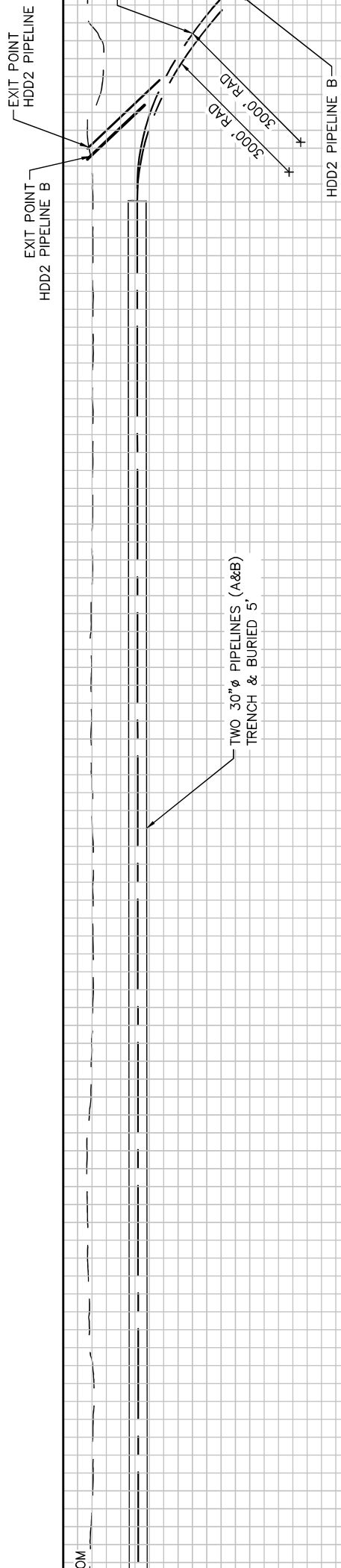


TOM



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 10

TOM



1.76

2.17

2.31

1.65

1.38

1.31

1.63

1.94

2.16

2.16

2.03

1.85

1.87

1.89

1.99

2.09

2.03

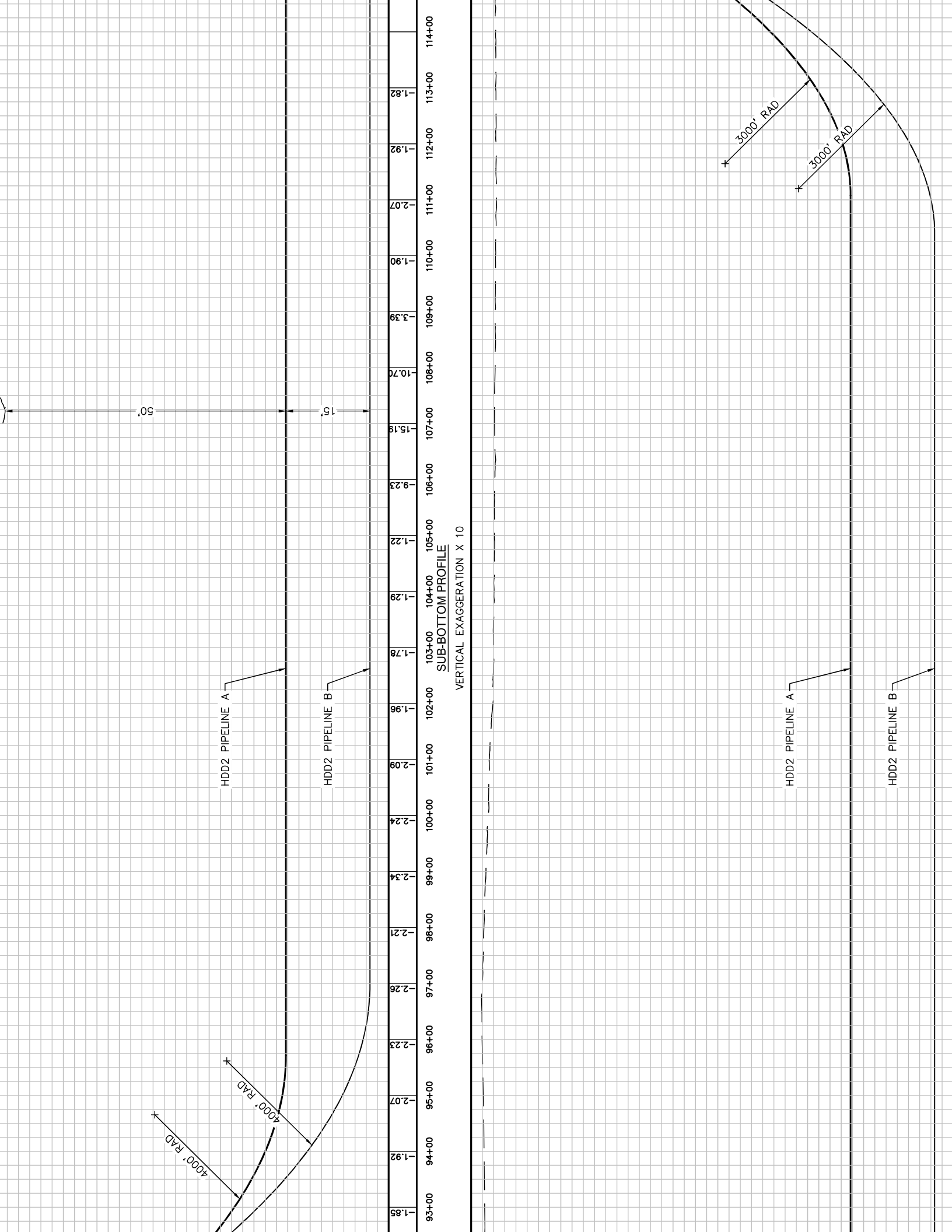
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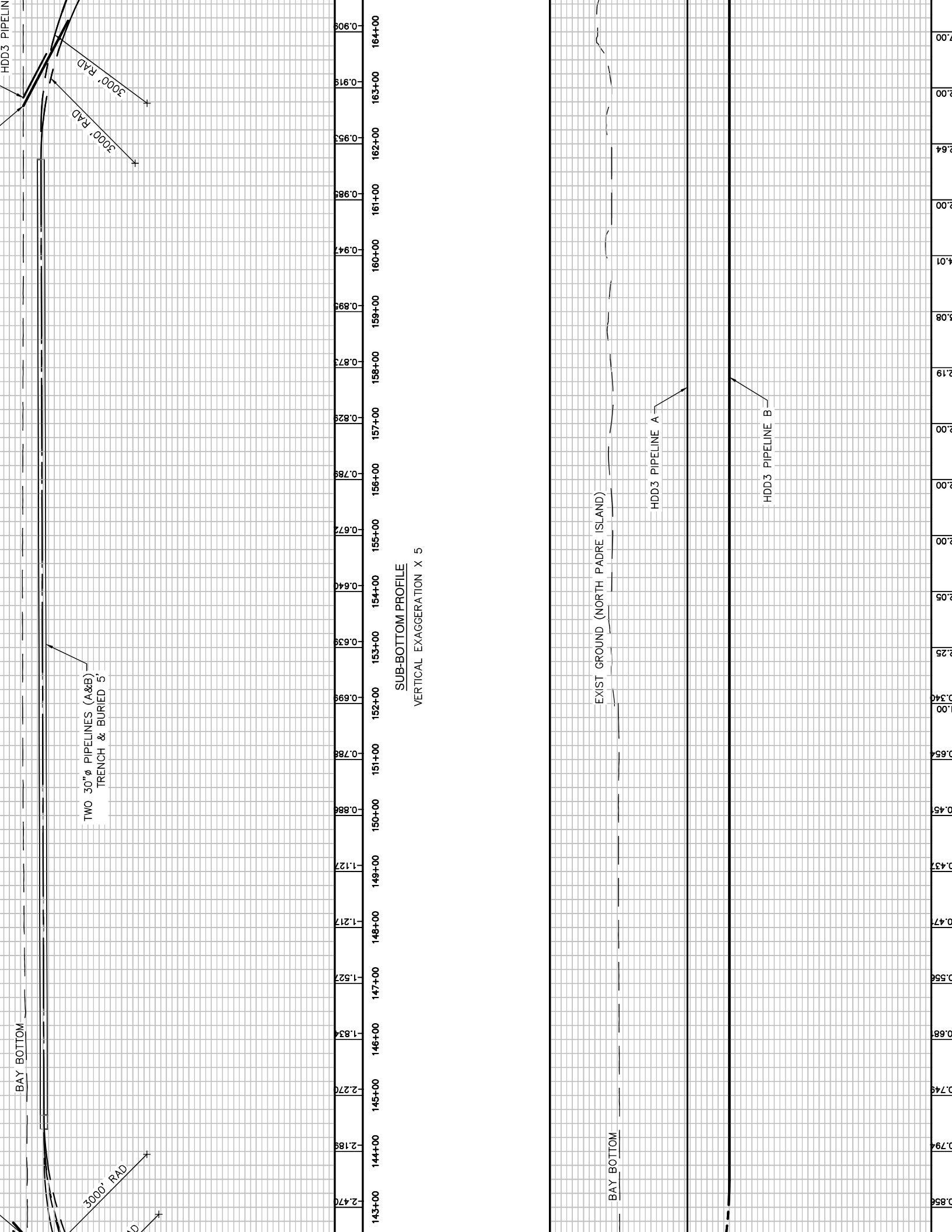
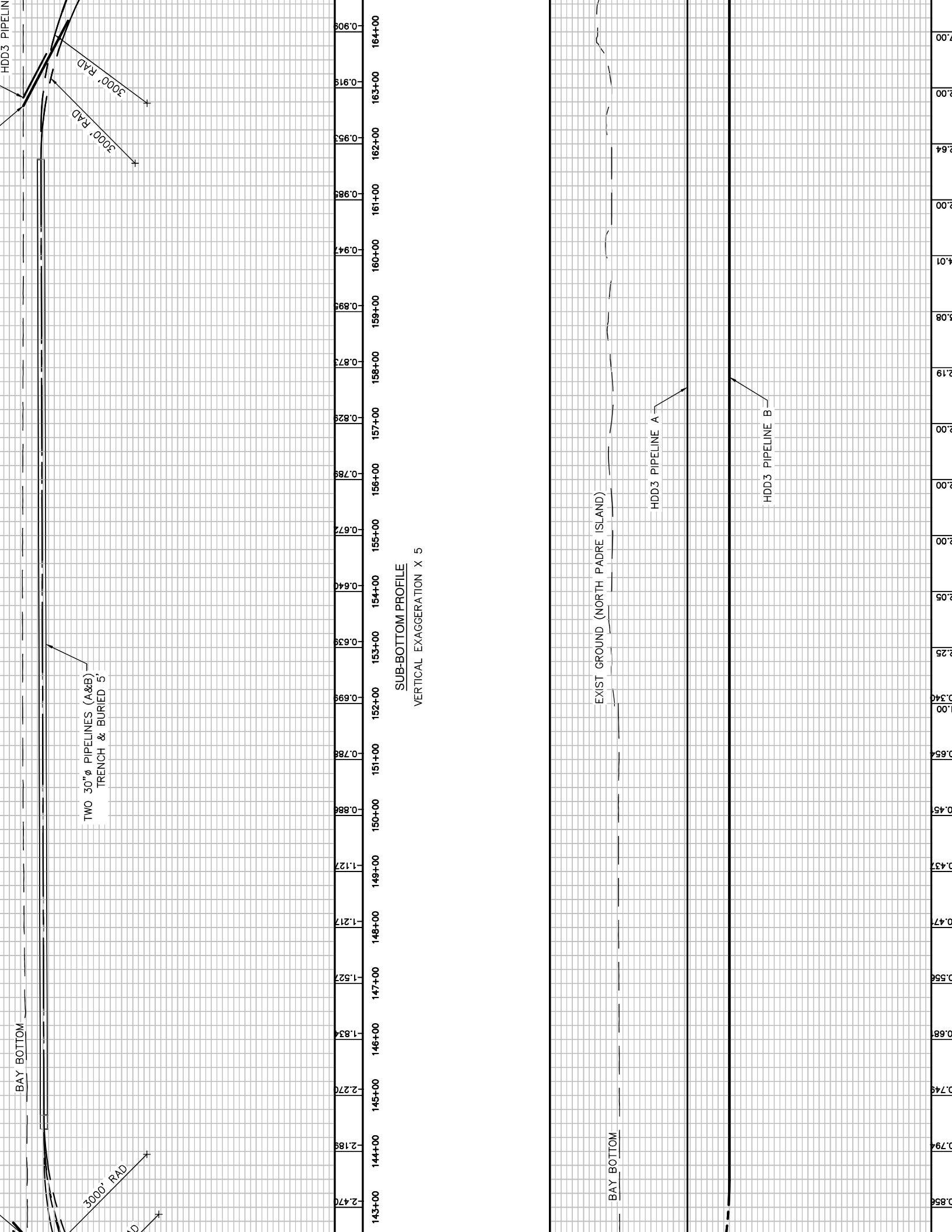
2.12

2.04

1.82

3.38





Station	Elevation
143+00	-2.47
144+00	-2.189
145+00	-2.27
146+00	-1.834
147+00	-1.527
148+00	-1.217
149+00	-1.127
150+00	-0.888
151+00	-0.788
152+00	-0.699
153+00	-0.639
154+00	-0.640
155+00	-0.672
156+00	-0.789
157+00	-0.829
158+00	-0.873
159+00	-0.899
160+00	-0.947
161+00	-0.989
162+00	-0.953
163+00	-0.919
164+00	-0.909

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

BAY BOTTOM

TWO 30" Ø PIPELINES (A&B)
TRENCH & BURIED 5'

EXIST GROUND (NORTH PADRE ISLAND)

HDD3 PIPELINE A

HDD3 PIPELINE B

BAY BOTTOM

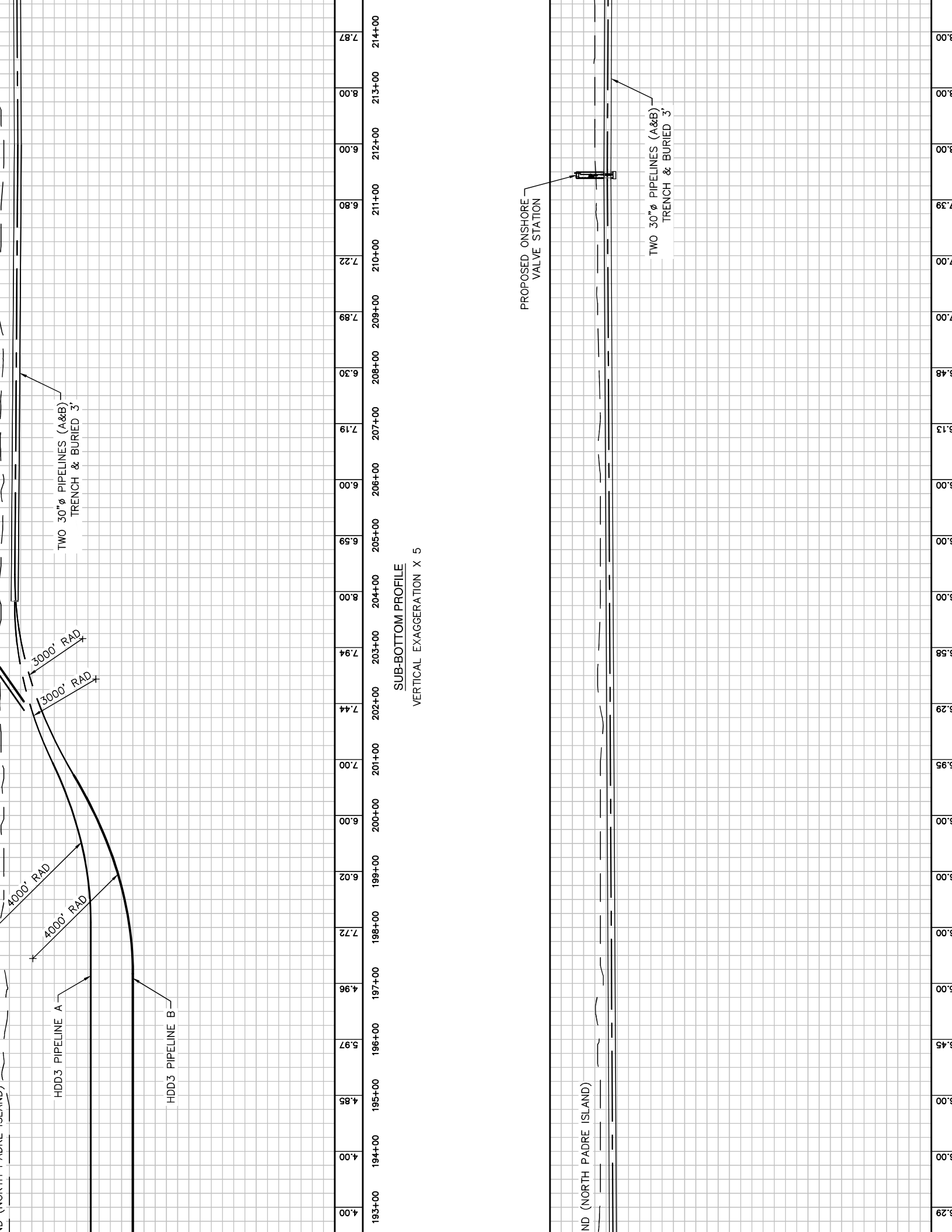
3000' RAD

3000' RAD

HDD3 PIPELINE

10'

Station	Elevation
143+00	-2.856
144+00	-2.794
145+00	-2.749
146+00	-2.687
147+00	-2.647
148+00	-2.637
149+00	-2.654
150+00	-2.654
151+00	-2.654
152+00	-2.654
153+00	-2.25
154+00	-2.05
155+00	-2.00
156+00	-2.00
157+00	-2.00
158+00	-2.19
159+00	-2.08
160+00	-2.01
161+00	-2.00
162+00	-2.64
163+00	-2.00
164+00	-2.00



TWO 30"Ø PIPELINES (A&B)
TRENCH & BURIED 3'

3000' RAD

3000' RAD

4000' RAD

4000' RAD

HDD3 PIPELINE A

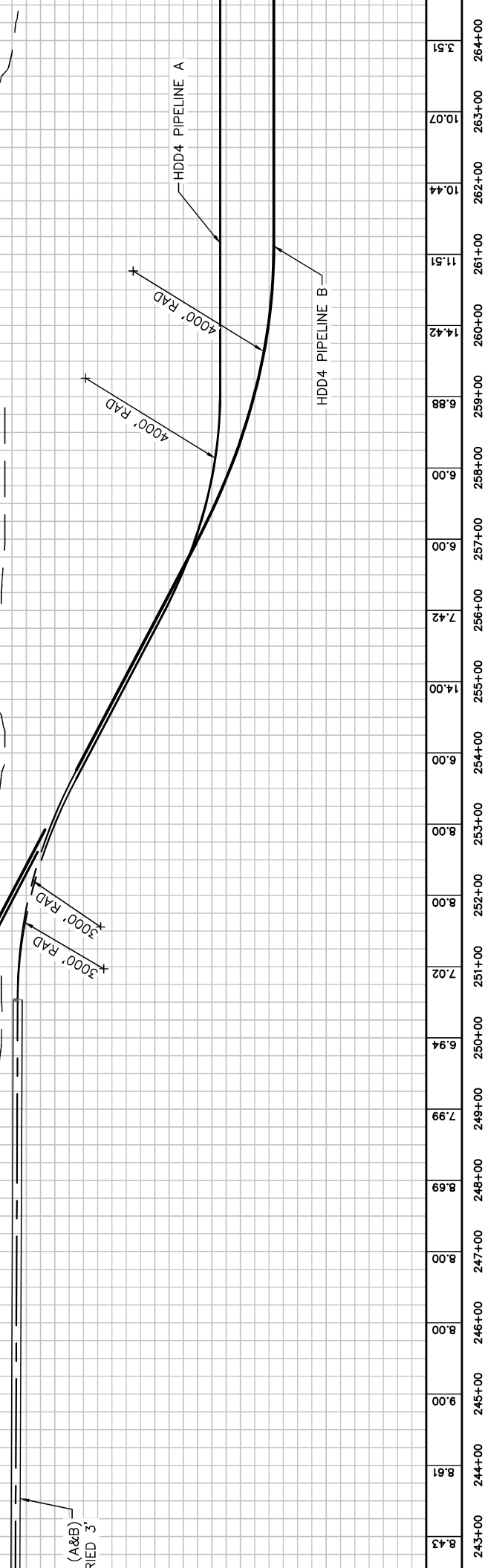
HDD3 PIPELINE B

PROPOSED ONSHORE
VALVE STATION

TWO 30"Ø PIPELINES (A&B)
TRENCH & BURIED 3'

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

ND (NORTH PADRE ISLAND)



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

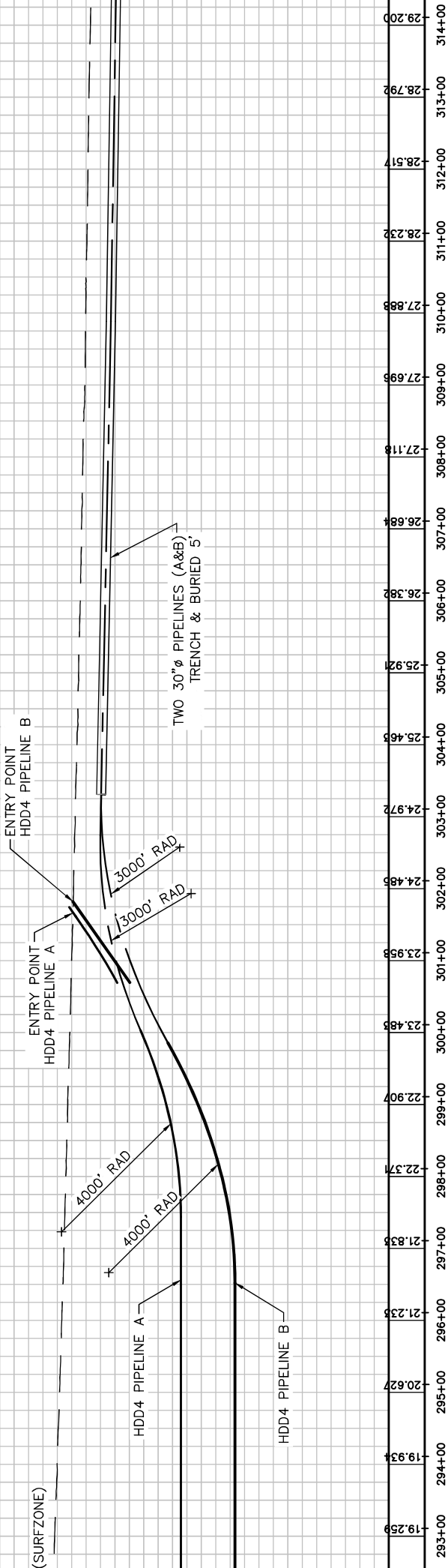
A BOTTOM (SURFZONE)

HDD4 PIPELINE A

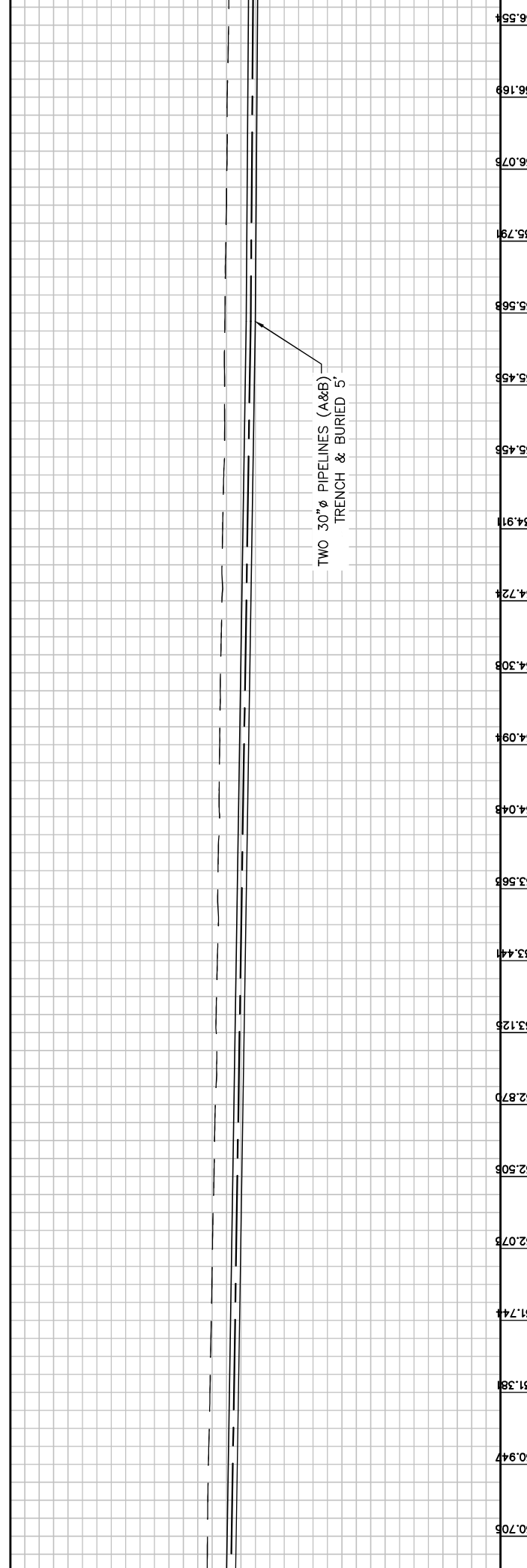
HDD4 PIPELINE B

243+00	8.43	244+00	8.61	245+00	9.00	246+00	8.00	247+00	8.00	248+00	8.69	249+00	7.99	250+00	6.94	251+00	7.02	252+00	8.00	253+00	8.00	254+00	6.00	255+00	14.00	256+00	7.42	257+00	6.00	258+00	6.00	259+00	6.88	260+00	14.42	261+00	11.51	262+00	10.44	263+00	10.07	264+00	3.51
--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	-------	--------	------	--------	------	--------	------	--------	------	--------	-------	--------	-------	--------	-------	--------	-------	--------	------

2.880	5.145	3.176	3.109	5.164	3.254	0.708	0.851	3.352	3.944	3.393	0.205	0.978	1.663	2.132	2.595	3.089	3.627	4.265	4.975	5.634	6.379
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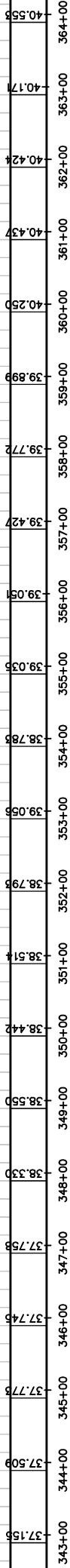


SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5



A FLOOR

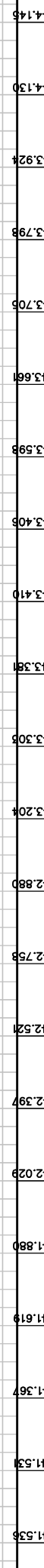
TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

A FLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

44.922	393+00	44.915
	394+00	44.915
	395+00	45.094
	396+00	45.145
	397+00	45.278
	398+00	45.140
	399+00	45.135
	400+00	45.339
	401+00	45.425
	402+00	45.860
	403+00	46.182
	404+00	46.322
	405+00	46.225
	406+00	46.327
	407+00	46.501
	408+00	46.759
	409+00	46.679
	410+00	46.821
	411+00	47.115
	412+00	47.081
	413+00	47.135
	414+00	47.245

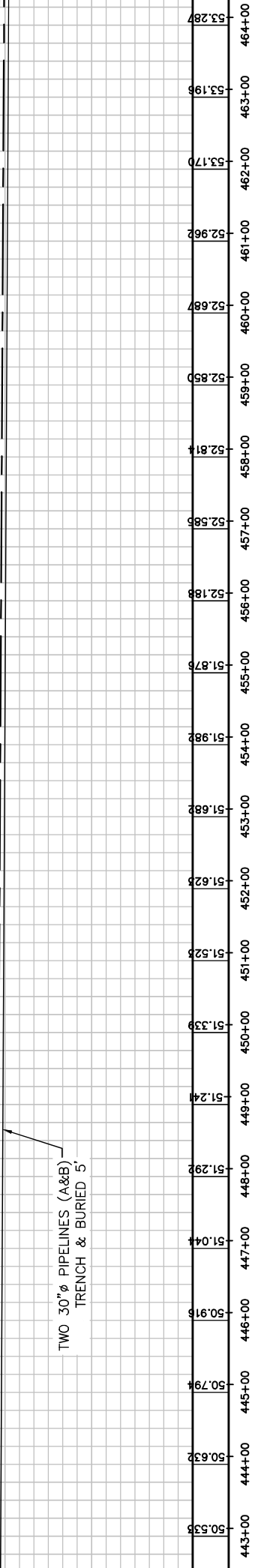
SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

SEAFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

7.744	393+00	7.859
	394+00	7.797
	395+00	8.082
	396+00	8.075
	397+00	8.292
	398+00	8.360
	399+00	8.435
	400+00	8.574
	401+00	8.627
	402+00	8.922
	403+00	8.981
	404+00	9.191
	405+00	9.099
	406+00	9.225
	407+00	9.505
	408+00	9.444
	409+00	9.628
	410+00	9.751
	411+00	9.970
	412+00	9.918

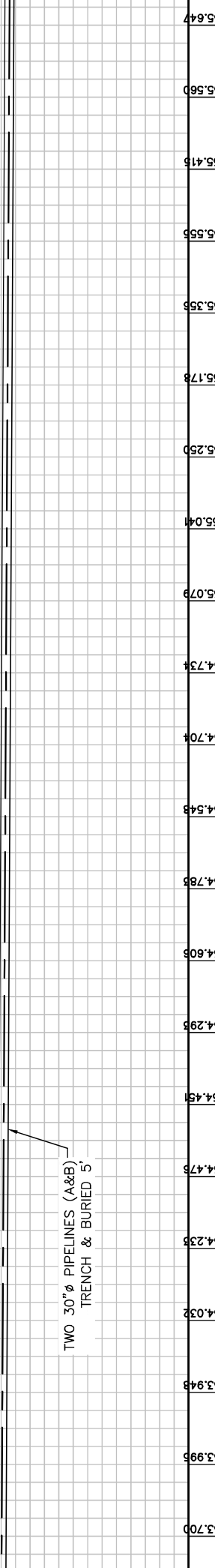
AFLOOR



TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

AFLOOR



TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

.00R

TWO 30"Ø PIPELINES (A&B)
TRENCH & BURIED 5'

55.950	493+00	514+00
55.930	494+00	513+00
56.038	495+00	512+00
56.115	496+00	511+00
56.203	497+00	510+00
56.255	498+00	509+00
56.457	499+00	508+00
56.378	500+00	507+00
56.557	501+00	506+00
56.460	502+00	505+00
56.757	503+00	504+00
56.713	504+00	503+00
56.791	505+00	502+00
57.065	506+00	501+00
56.988	507+00	500+00
56.945	508+00	999+00
57.132	509+00	998+00
57.135	510+00	997+00
57.218	511+00	996+00
57.220	512+00	995+00
57.428	513+00	994+00
57.461	514+00	993+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

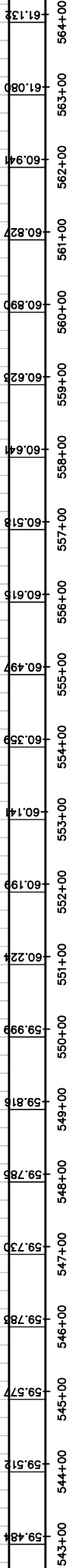
.00R

TWO 30"Ø PIPELINES (A&B)
TRENCH & BURIED 5'

7.794	493+00	514+00
7.664	494+00	513+00
7.795	495+00	512+00
8.019	496+00	511+00
8.145	497+00	510+00
8.015	498+00	509+00
8.208	499+00	508+00
8.227	500+00	507+00
8.413	501+00	506+00
8.451	502+00	505+00
8.405	503+00	504+00
8.653	504+00	503+00
8.493	505+00	502+00
8.505	506+00	501+00
8.793	507+00	500+00
8.785	508+00	999+00
8.824	509+00	998+00
8.842	510+00	997+00
8.998	511+00	996+00
9.095	512+00	995+00
8.875	513+00	994+00
9.291	514+00	993+00

AFLOOR

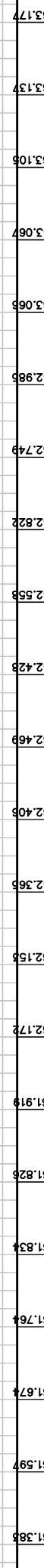
TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

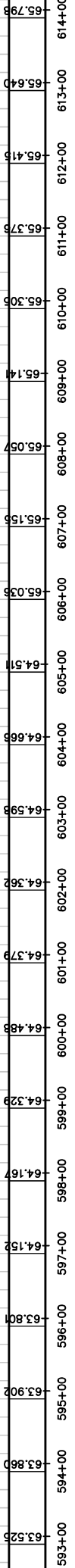
AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



AFLOOR

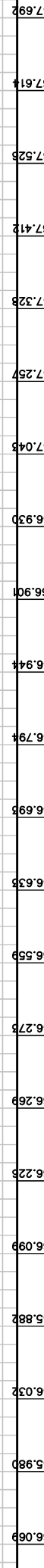
TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

68.107	643+00	68.217	644+00	68.235	645+00	68.359	646+00	68.489	647+00	68.508	648+00	68.610	649+00	68.697	650+00	68.782	651+00	68.797	652+00	68.858	653+00	69.052	654+00	69.095	655+00	69.248	656+00	69.319	657+00	69.239	658+00	69.375	659+00	69.474	660+00	69.457	661+00	69.558	662+00	69.600	663+00	69.610	664+00
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SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

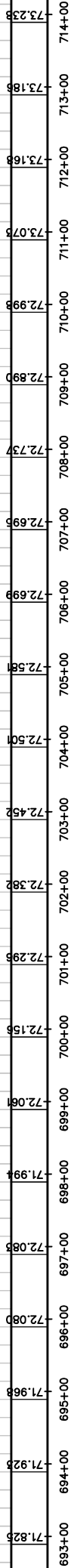
AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

0.030	0.094	0.265	0.332	0.277	0.347	0.435	0.670	0.689	0.719	0.828	0.832	0.865	0.922	1.041	1.041	1.072	1.231	1.338	1.420	1.412	1.460
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AFLOOR

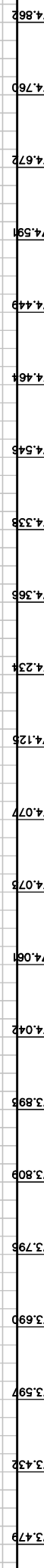
TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



A FLOOR

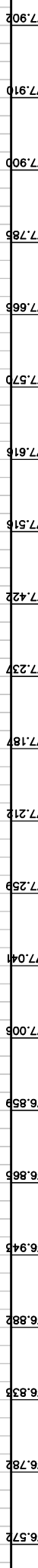
TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

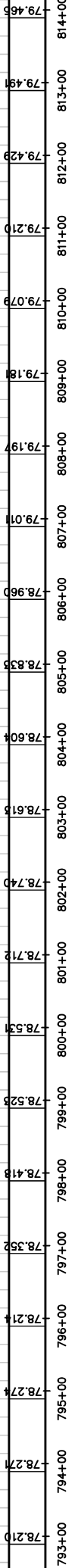
A FLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'



LOOR

TWO 30" Ø PIPELINES (A&B)
TRENCH & BURIED 5'



SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

LOOR

TWO 30" Ø PIPELINES (A&B)
TRENCH & BURIED 5'



AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

843+00 844+00 845+00 846+00 847+00 848+00 849+00 850+00 851+00 852+00 853+00 854+00 855+00 856+00 857+00 858+00 859+00 860+00 861+00 862+00 863+00 864+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

893+00 894+00 895+00 896+00 897+00 898+00 899+00 900+00 901+00 902+00 903+00 904+00 905+00 906+00 907+00 908+00 909+00 910+00 911+00 912+00 913+00 914+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

AFLOOR

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

A FLOOR

943+00 944+00 945+00 946+00 947+00 948+00 949+00 950+00 951+00 952+00 953+00 954+00 955+00 956+00 957+00 958+00 959+00 960+00 961+00 962+00 963+00 964+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

TWO 30" ϕ PIPELINES (A&B)
TRENCH & BURIED 5'

A FLOOR

TWO 30" Ø PIPELINES (A&B)
TRENCH & BURIED 5'

FLOOR

993+00 994+00 995+00 996+00 997+00 998+00 999+00 1000+00 1001+00 1002+00 1003+00 1004+00 1005+00 1006+00 1007+00 1008+00 1009+00 1010+00 1011+00 1012+00 1013+00 1014+00

SUB-BOTTOM PROFILE
VERTICAL EXAGGERATION X 5

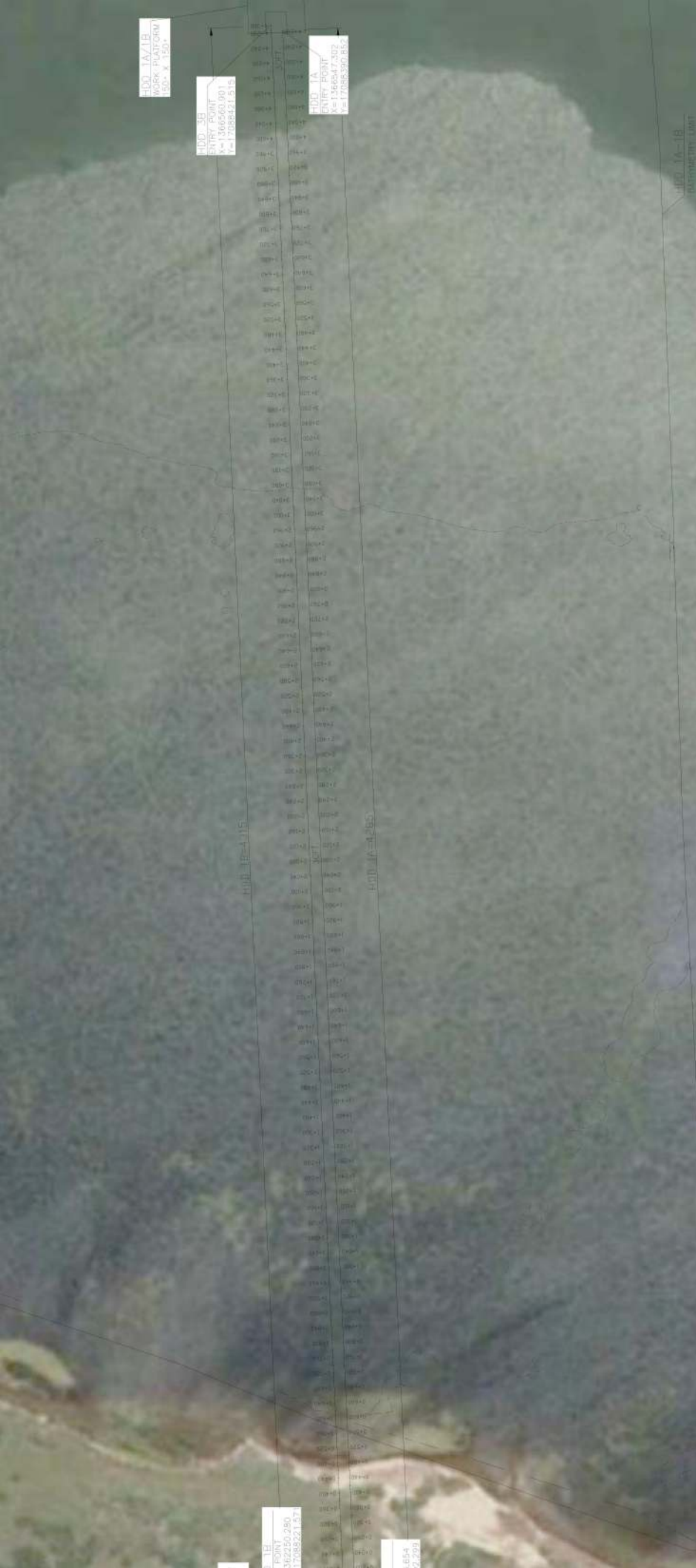
TWO 30" Ø PIPELINES (A&B)
TRENCH & BURIED 5'

FLOOR

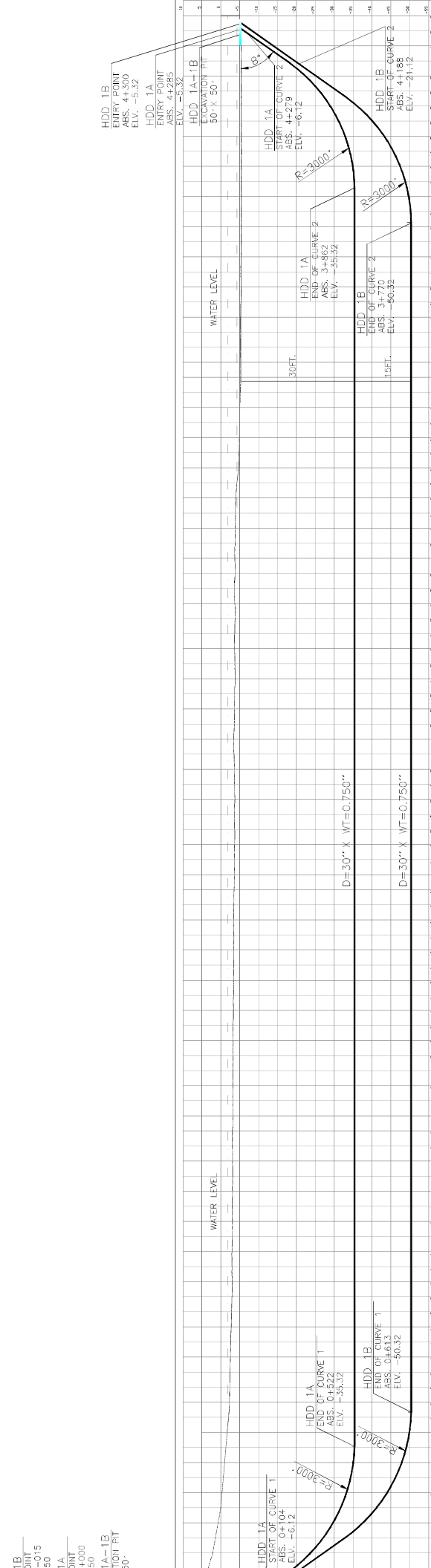
3000' RAD

PLEM

3000' RAD

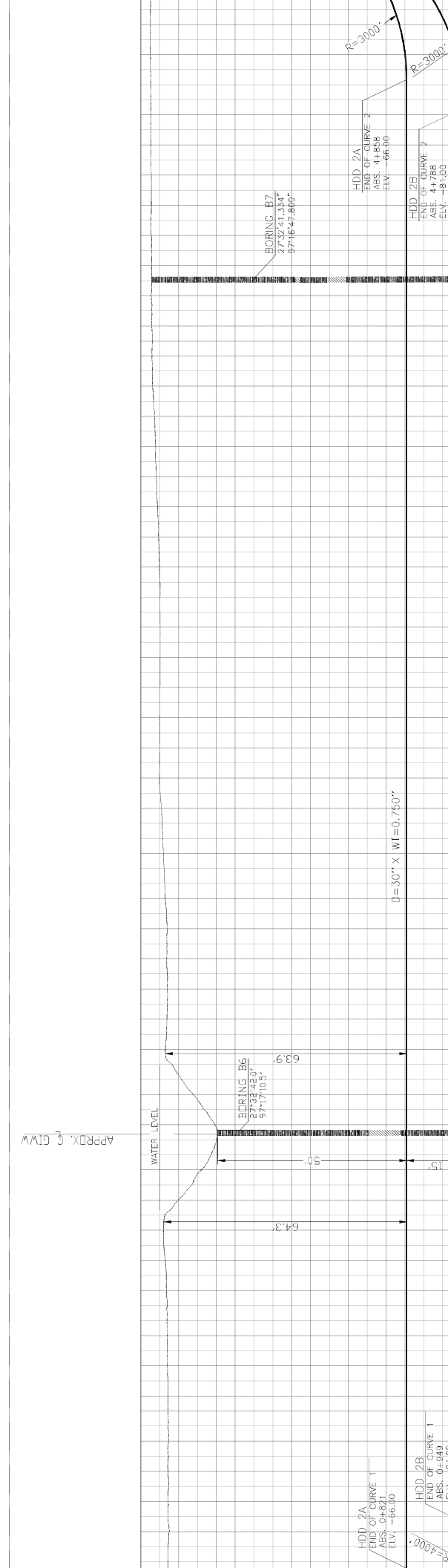


HDD 1A-1B PLAN VIEW



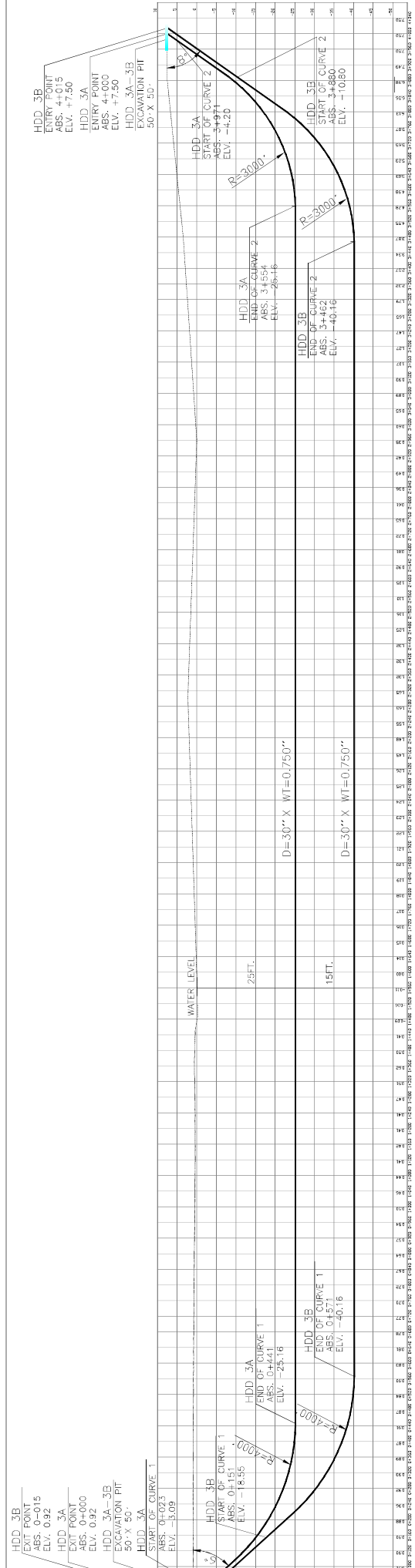


HDD 2A-2B PLAN VIEW





HDD 3A-3B PLAN VIEW

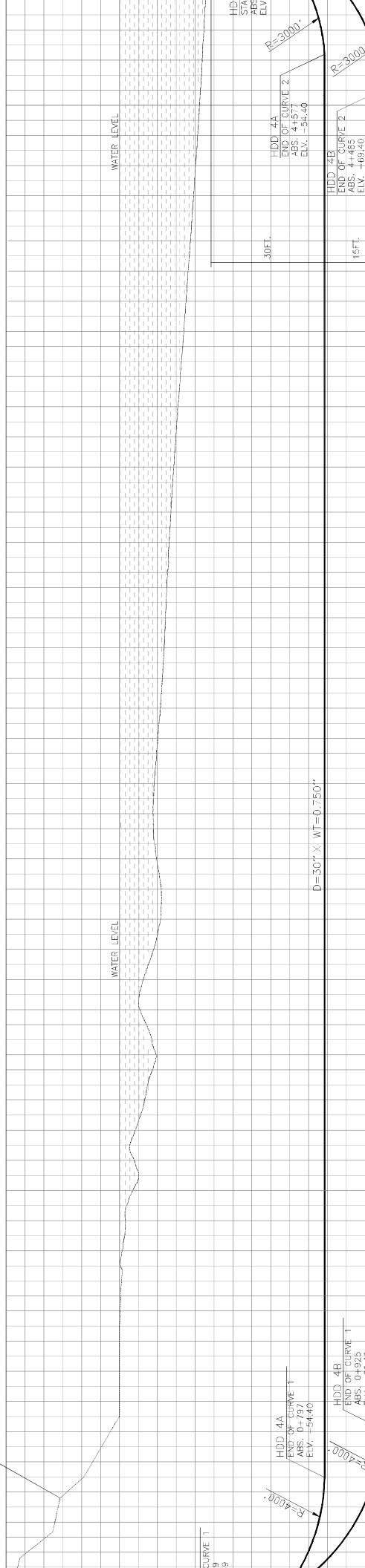


SCALE X:100 @ Y:1000



HDD 4A-4B PLAN VIEW

NORTH PADRE ISLAND
EXISTING GROUND



HDD 4A
END OF CURVE 1
ABS. 0+737
ELV. -5'40"

HDD 4B
END OF CURVE 1
ABS. 0+325
ELV. -5'40"

HDD 4A
END OF CURVE 2
ABS. 1+197
ELV. -5'40"

HDD 4B
END OF CURVE 2
ABS. 1+695
ELV. -5'40"

R=400'

R=3000'

30FT

15FT

D=30" X, WT=0.750"