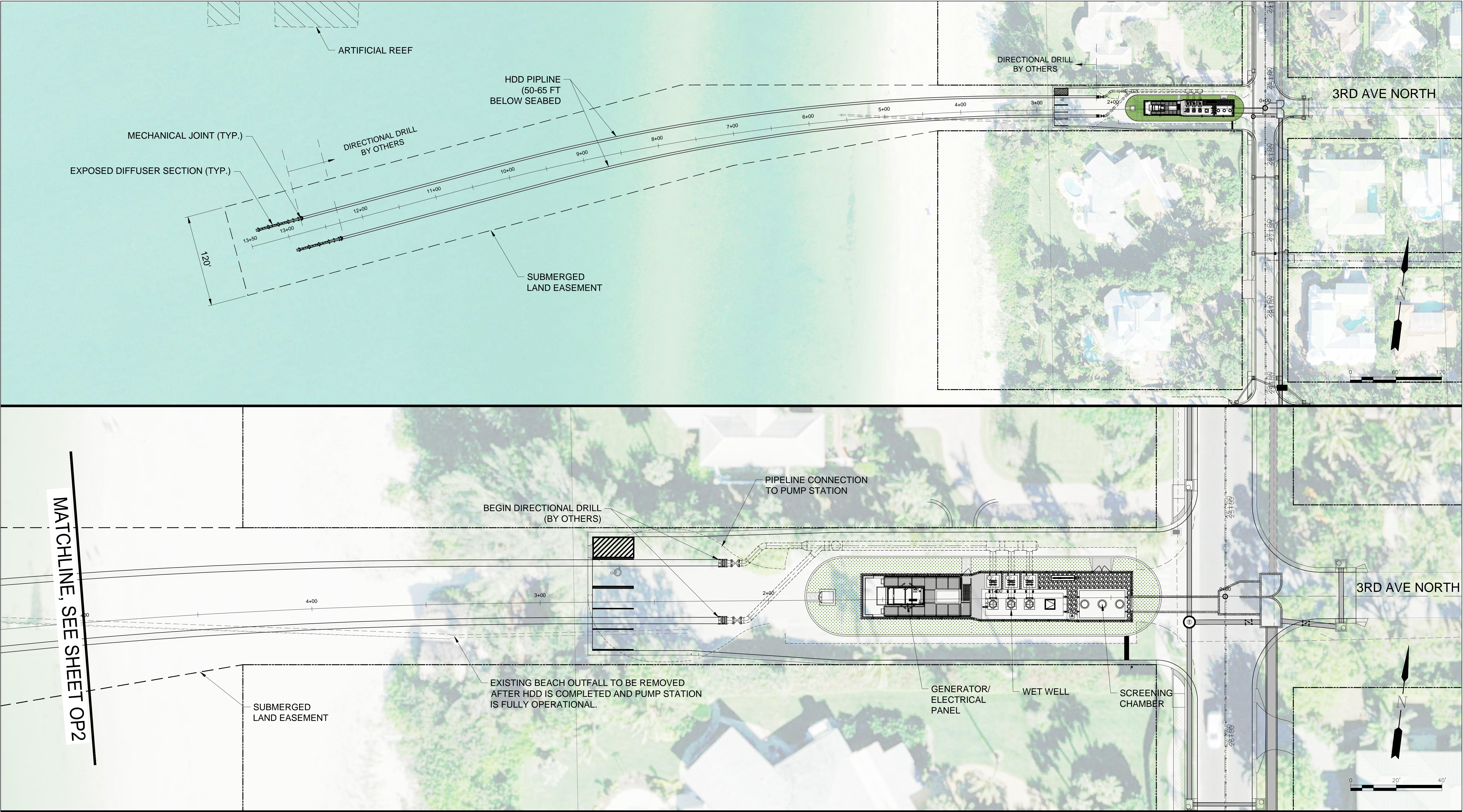


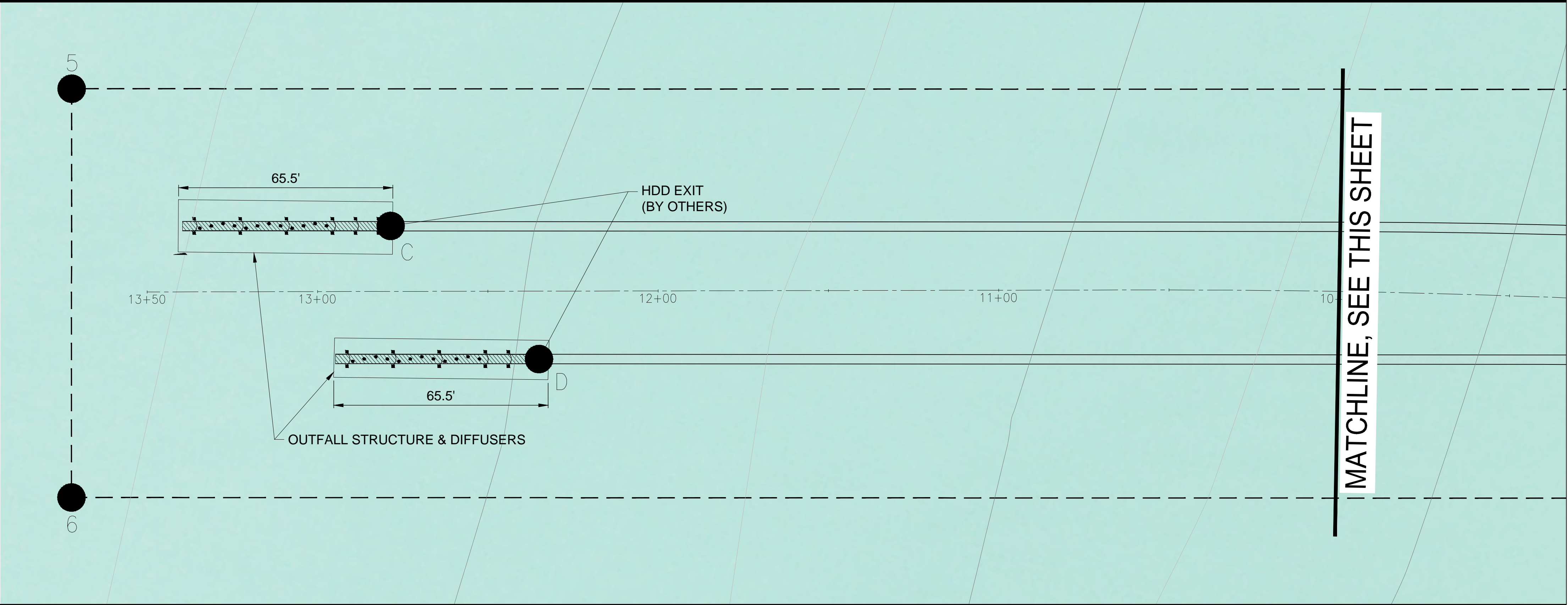
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COORDINATE TABLE SUBMERGED LAND EASEMENT		
POINT	NORTHING	EASTING
1	660692	390680
2	660723	390961
3	660742	390620
4	660646	390702
5	660510	390043
6	660399	390088




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# City of Naples



Title		
OFFSHORE PLAN VIEW		
Project No. 20-380	Scale AS NOTED	
Drawing No.	Sheet	Revision
OP	2	0











Diagram illustrating the cross-section of a trench installation. The diagram shows a horizontal pipe (30" FPVC DR-21) with various components and anchors. The vertical axis represents depth, ranging from -5 to -30 feet. The horizontal axis represents distance, ranging from 0 to 65.5 feet.

Key components and labels include:

- EXISTING SEABED**: Indicated by a dashed line on the left side of the trench.
- 30" MECHANICAL JOINT BEND**: Located at the start of the pipe section (0 feet).
- 30" FPVC DR-21**: The main pipe section.
- 30" MECHANICAL JOINT SLEEVE**: Located at the 10-foot mark.
- 10" DUCKBILL DIFFUSER**: Located at the 30-foot mark.
- ANCHORS AND STRAP (TYP)**: Indicated by vertical lines with cross-anchors, spaced at 17' (TYP) intervals.
- CAP END ASSEMBLY**: Located at the right end of the pipe (65.5 feet).

The diagram shows the pipe is installed at a depth of approximately -10 feet, with the seabed sloping upwards from left to right. The anchors are spaced at 17-foot intervals along the length of the pipe.

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File Name:  
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# City of Naples

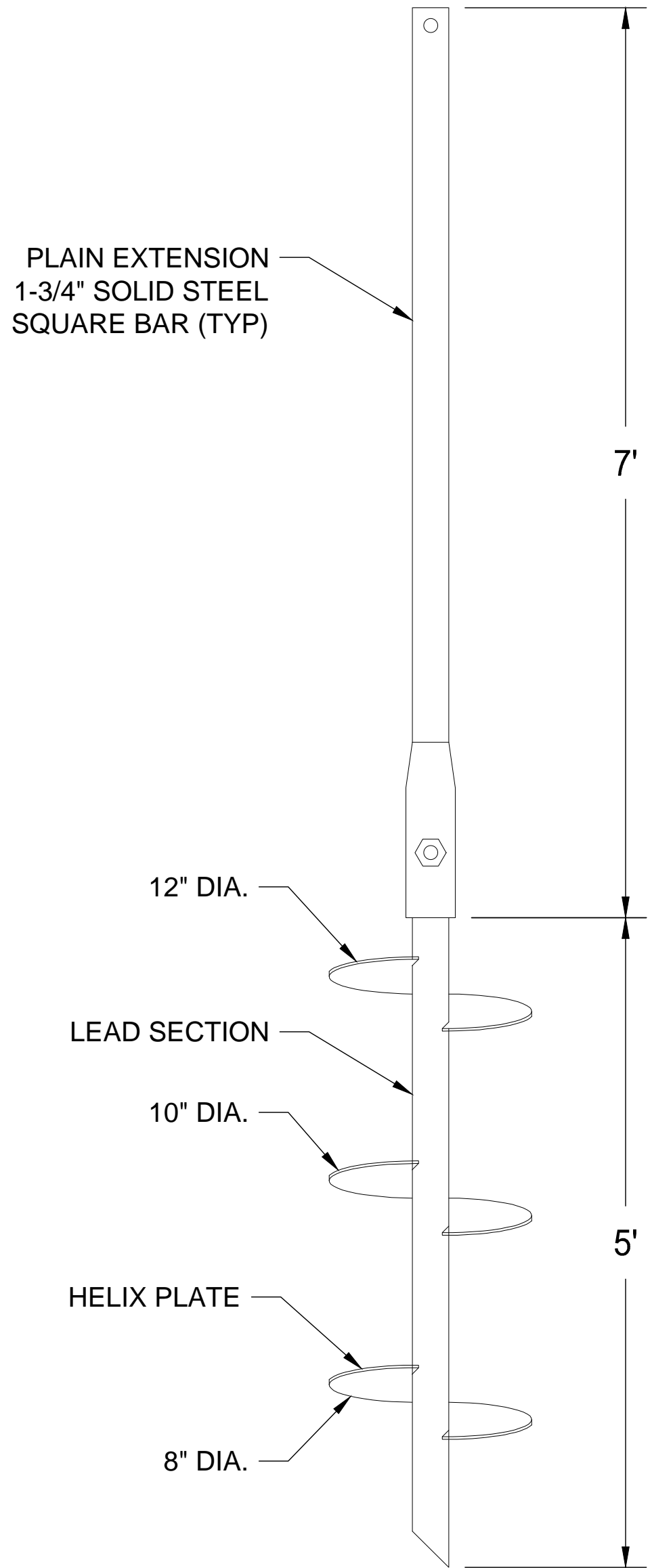
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Drawing No.	Sheet	Revision
OP	5	0







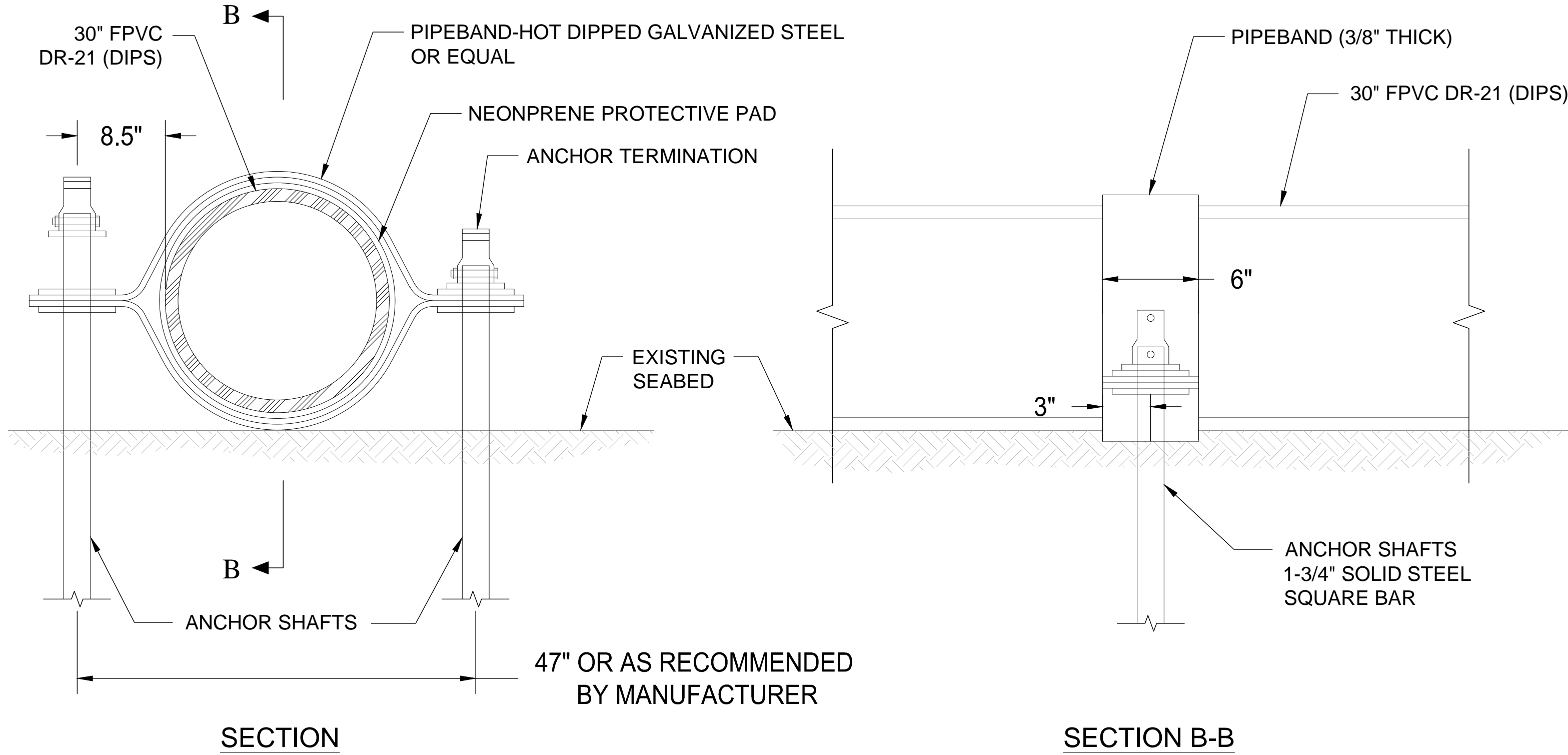
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TYPICAL HELIX ANCHOR/PIER ASSEMBLY (OR EQUAL)  
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL USE HELIX ANCHORS, CHANCE TYPE SS175 ANCHORS. THE ANCHOR SHAFTS SHALL BE 1.75" BY 1.75" SOLID SQUARE SHAFT OR MANUFACTURER RECOMMENDED HELIX ANCHOR OR APPROVED EQUAL. A 8" /10" /12" TRIPLE HELIX CONFIGURATION SHALL BE USED WITH A SEVEN FOOT PLAIN EXTENSION AS SHOWN.
2. ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED PER ASTM A153.
3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, PRODUCT CUT SHEETS, FABRICATION SPECIFICATIONS, A SUMMARY OF MANUFACTURER RECOMMENDATIONS AND A DETAILED DESCRIPTION INSTALLATION METHODS FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION OF THE ANCHORING SYSTEM, STRAPPING AND DIFFUSER MECHANISM.



PIPEBANDS, TERMINATIONS AND ANCHOR DETAIL  
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CITY OF NAPLES  
735 8th St S  
NAPLES, FL.  
Naples Beach Restoration  
& Water Quality  
Improvement Project

File Name:  
16-329\_Naples Outfalls\_OffshorePipelines.dwg

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Dwn.	Chkd.	Dsgn.	YY.MM.DD



Title

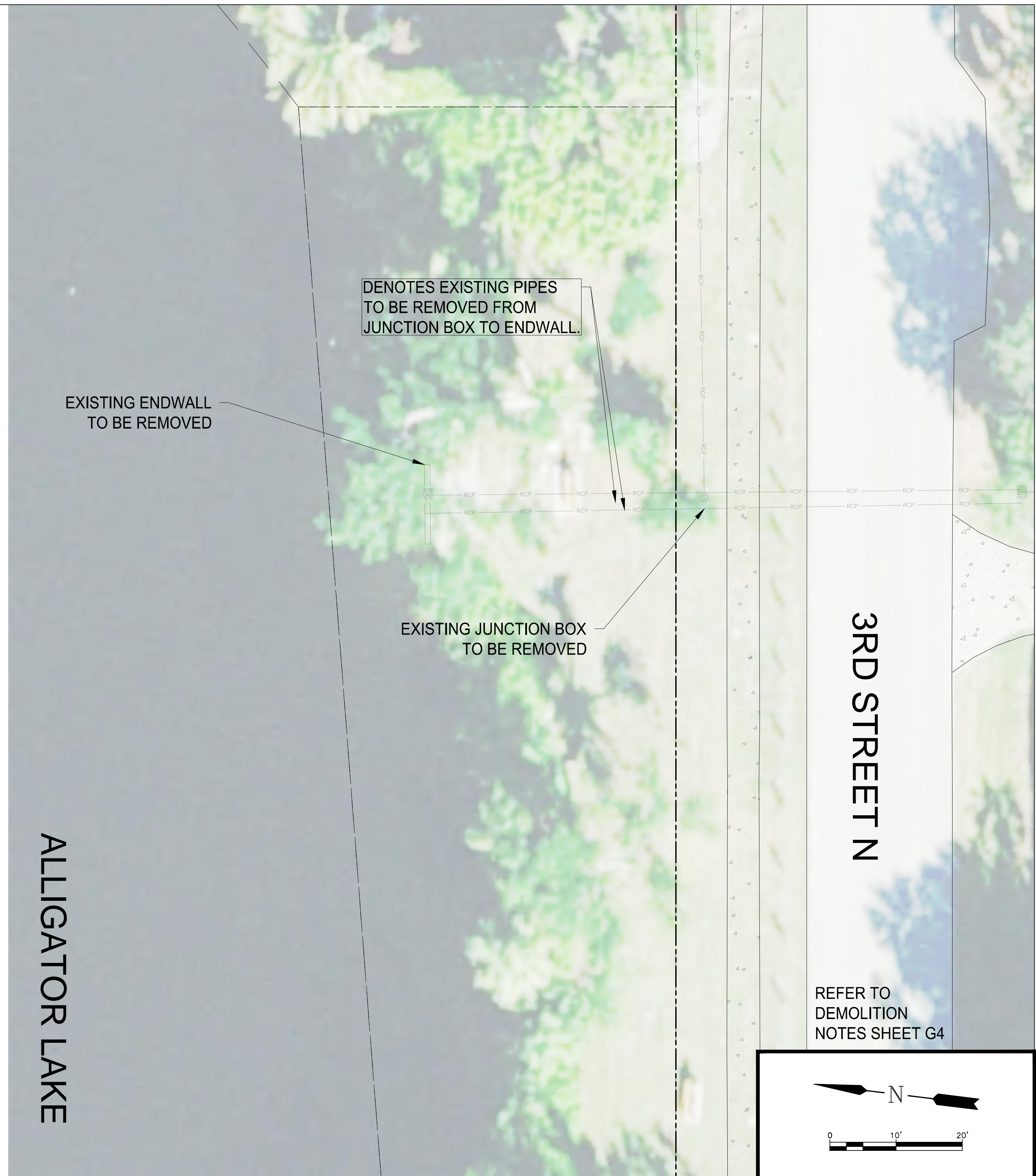
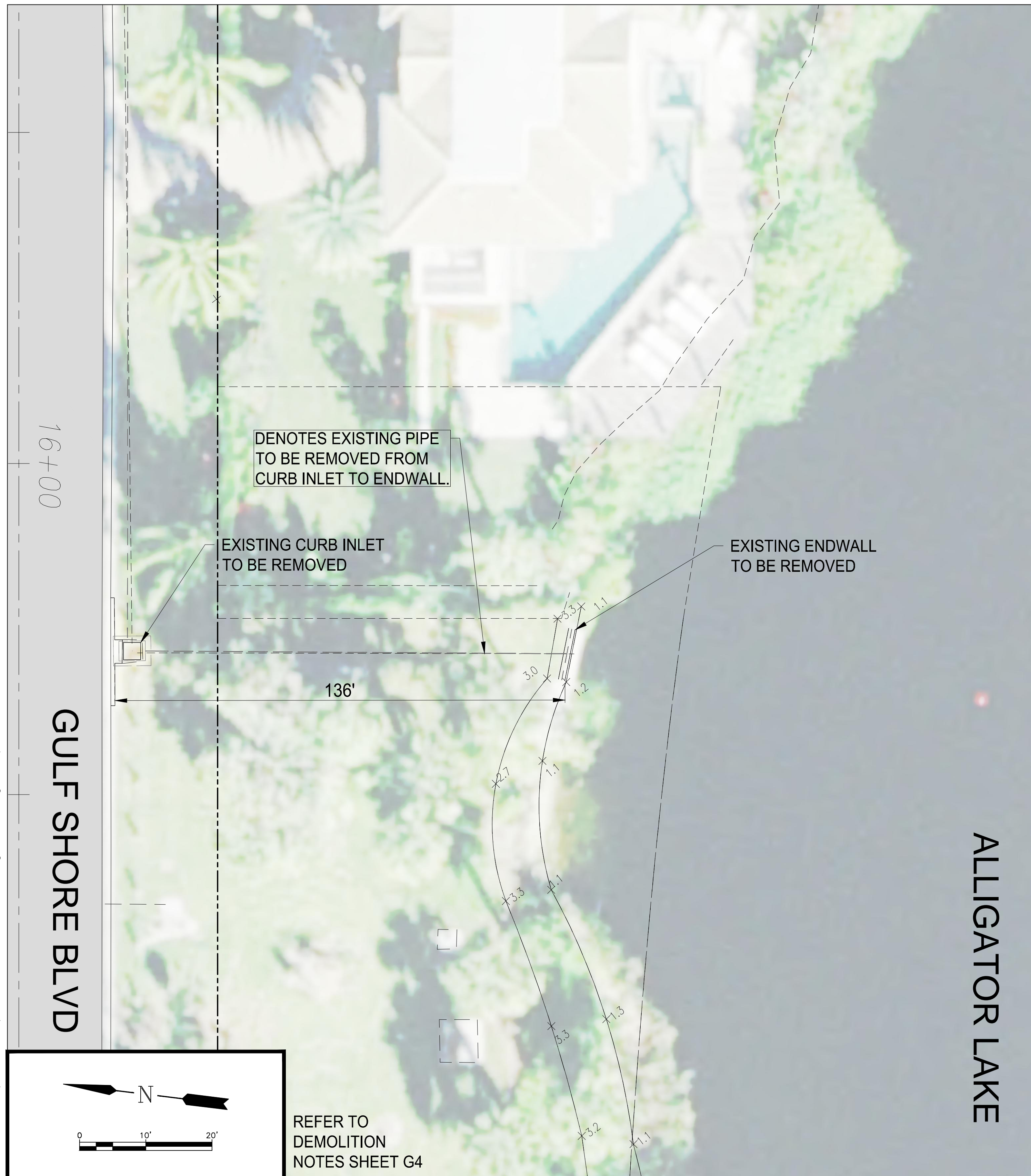
PIPELINE  
ANCHORING DETAILS

Project No. 20-380	Scale AS NOTED	Revision
Drawing No. OP	Sheet 7	Revision 0



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Client/Project

CITY OF NAPLES

735 8th St S


NAPLES, FL.

Naples Beach Restoration  
& Water Quality  
Improvement Project

File Name:  
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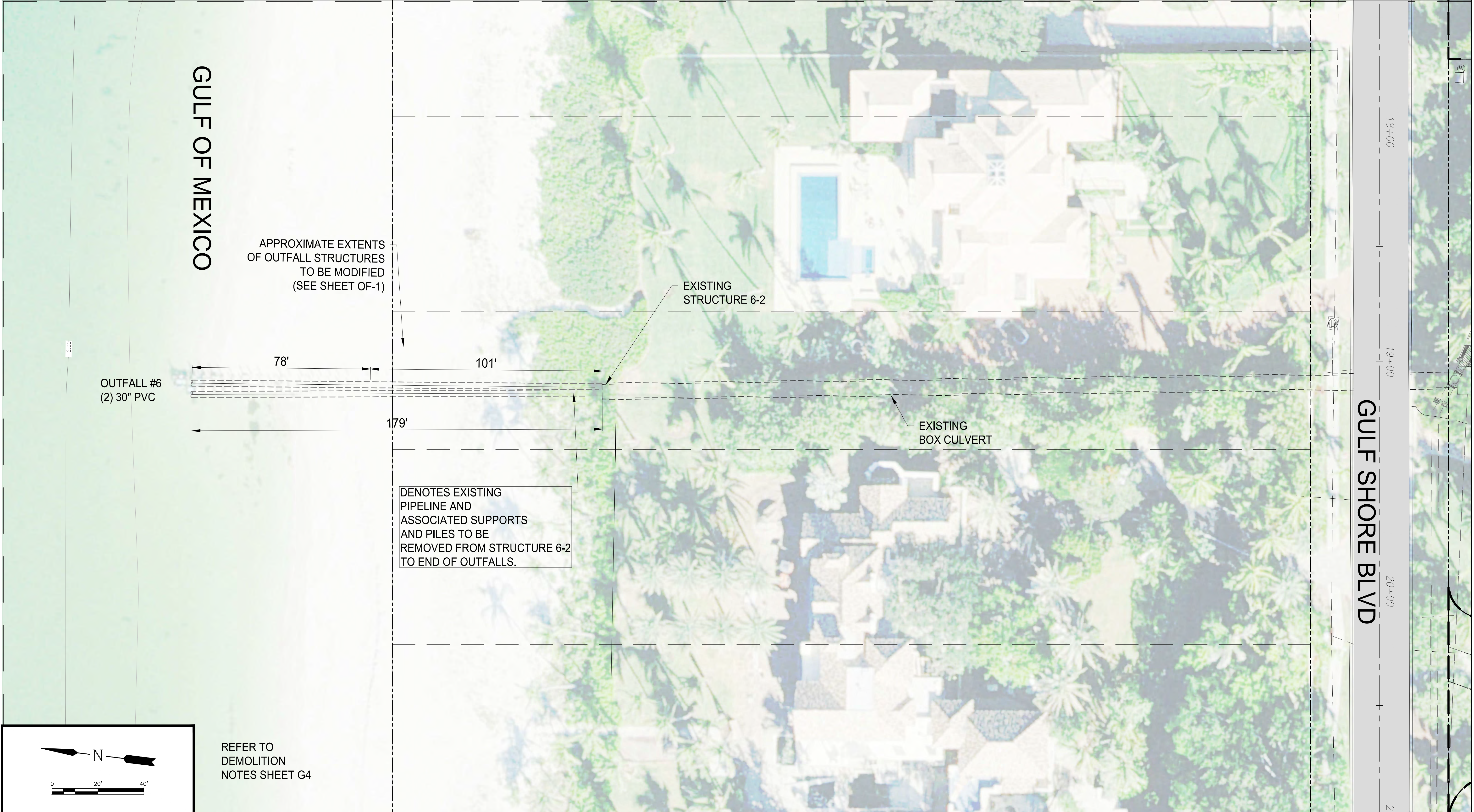
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Dwn.	Chkd.	Dgn.	YY.MM.DD

City of Naples

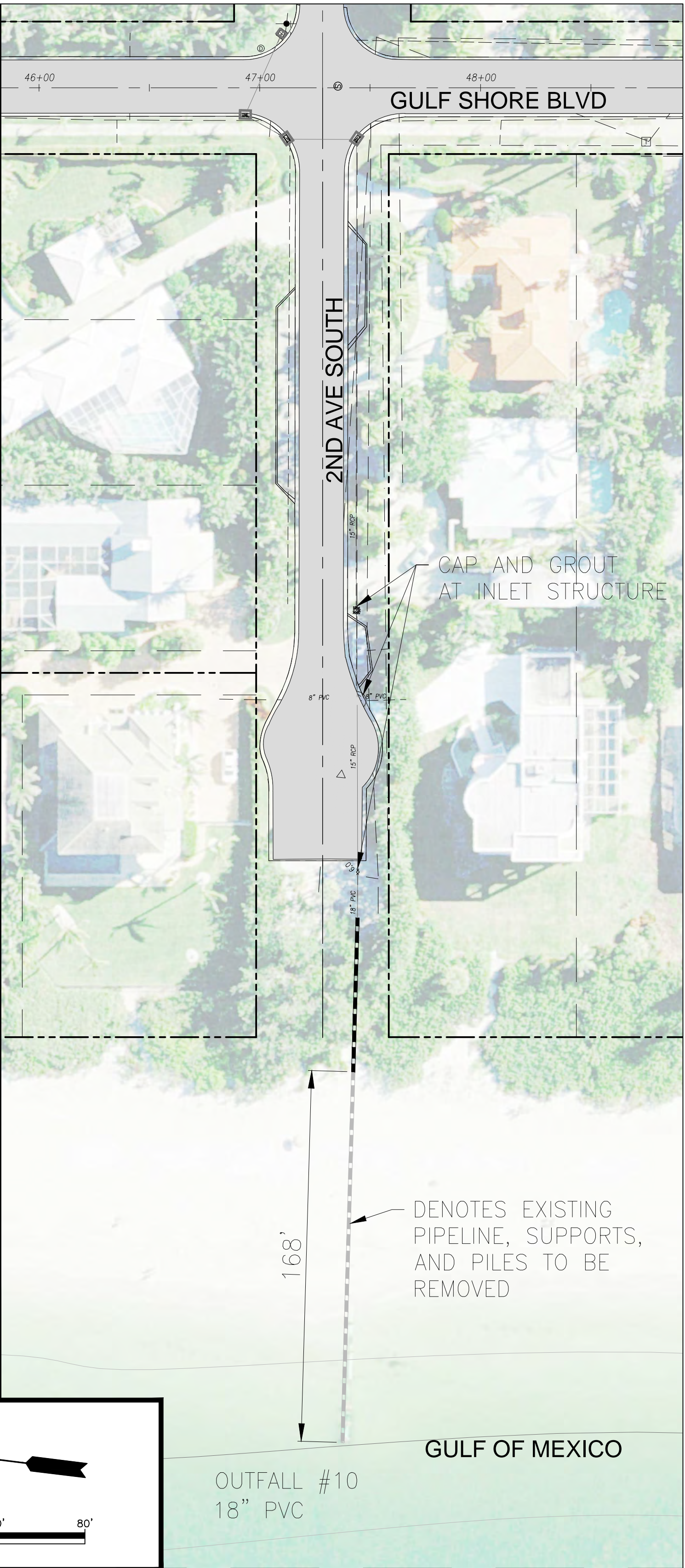
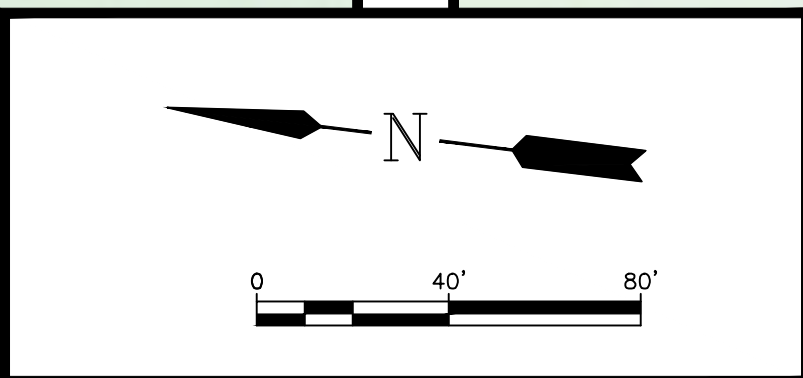
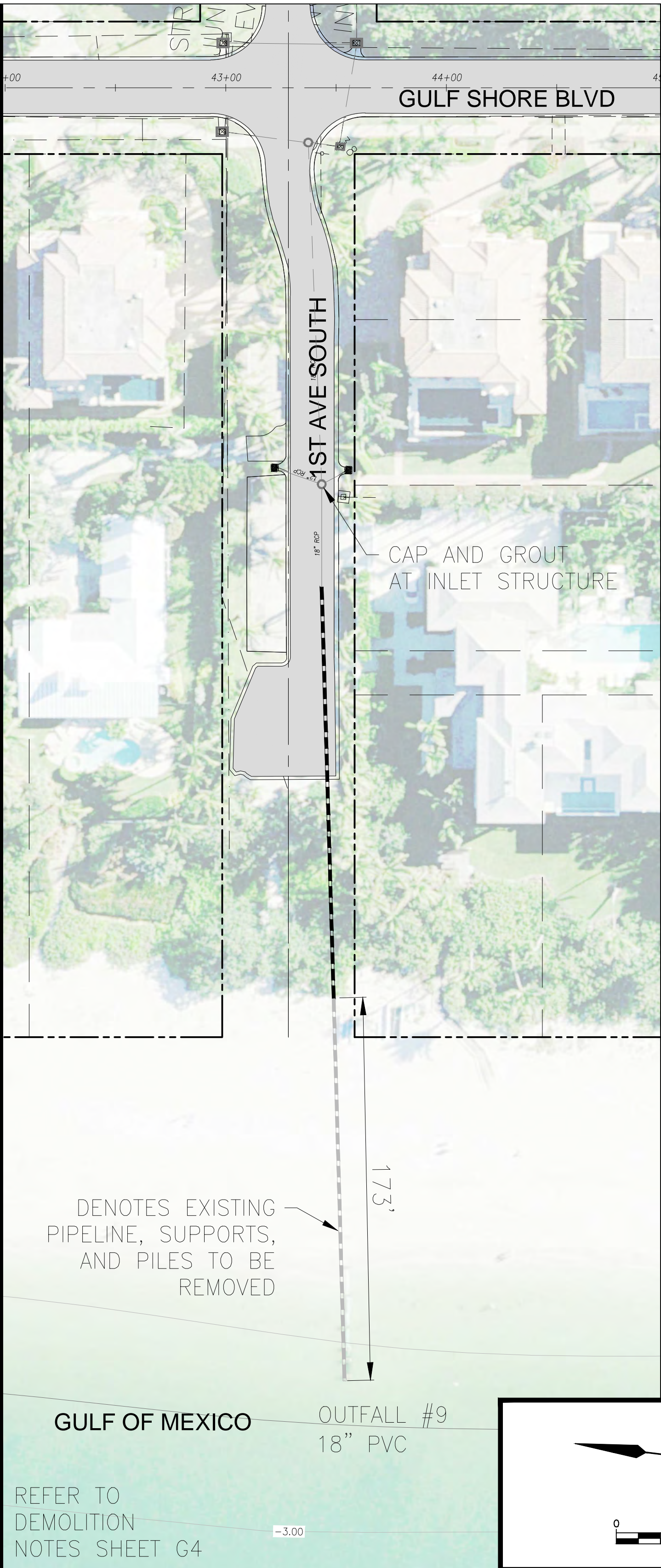
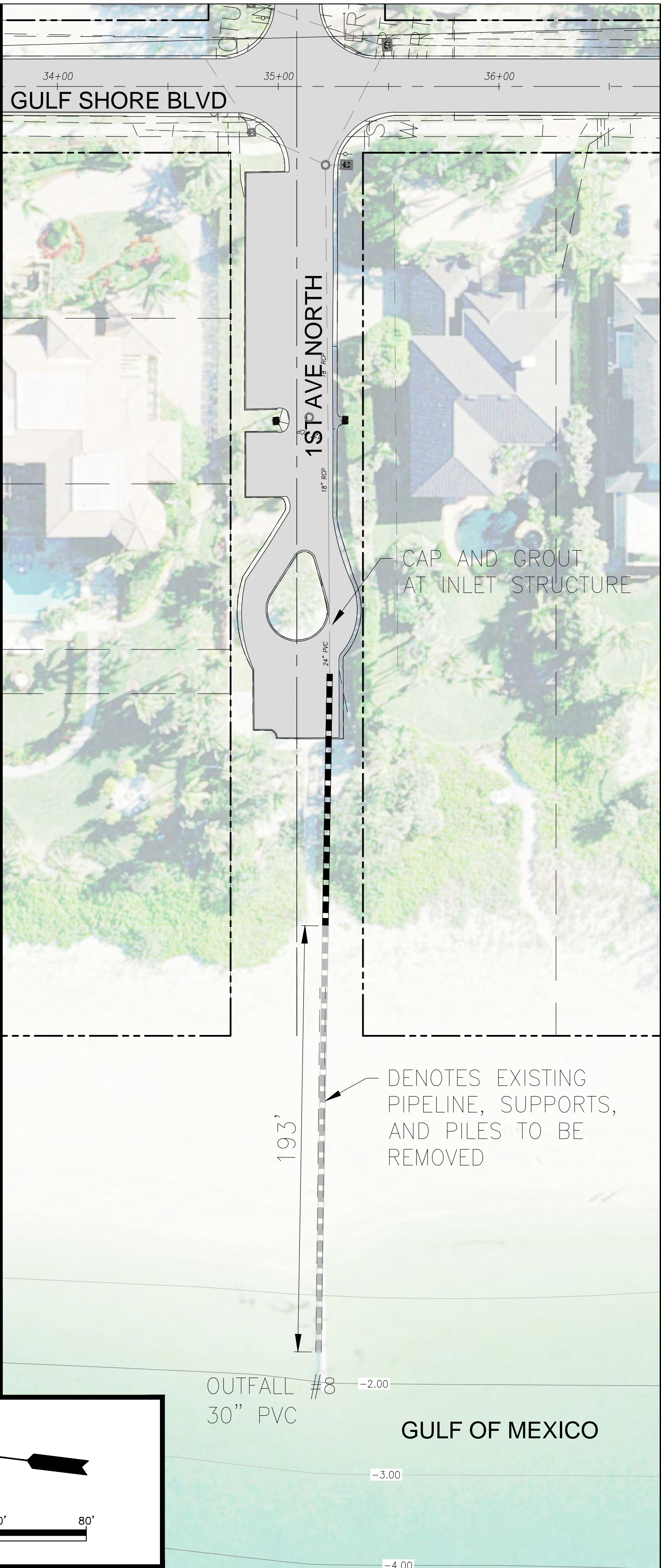
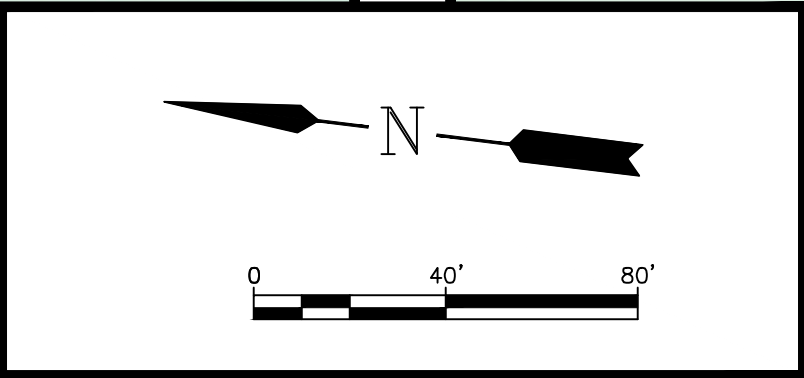


Title		
EXISTING HEADWALLS DEMOLITION PLAN		
Project No. 20-380	Scale AS NOTED	
Drawing No.	Sheet	Revision
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Client/Project

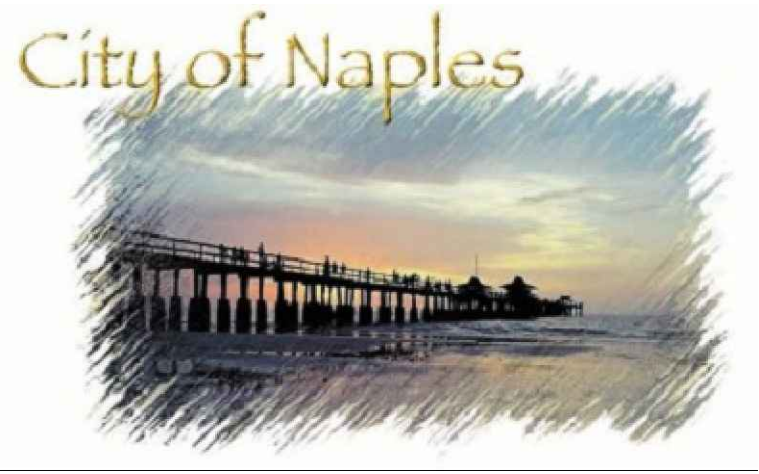
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NAPLES, FL.

**Naples Beach Restoration  
& Water Quality  
Improvement Project**

File Name:  
16-329\_Naples Outfalls\_60-90% Drawings\_Demo.dwg

JAW	SWT	KME	21.06.01
Dwn.	Chkd.	Dsgn.	YY-MM-DD



Title		
EXISTING OUTFALLS #7, 8, 9, AND 10 DEMOLITION PLAN		
Project No. 20-380	Scale AS NOTED	
Drawing No.	Sheet	Revision
D	4	0



The diagram illustrates a square wall footing with a circular opening. Key components and labels include:

- Dimensions:**
  - Reference Bottom Slab Depth
  - Reference Top Slab Depth
  - Slab Thickness (See Table 6)
  - Slab Depth
  - Slab Thickness (See Table 6)
  - Structure Bottom
- Reinforcement Details:**
  - Top Slab:** Includes Bars A and Bars B. Horizontal Wall Reinf. (See Table 8) is shown with #4 @ 12" Ctrs. (Vertical Bars). Vertical Wall Reinf. (See Table 8) is also indicated.
  - Bottom Slab:** Includes Bars A and Bars B. Horizontal Wall Reinf. (See Table 8) is shown with #4 @ 12" Ctrs. (Vertical Bars). Vertical Wall Reinf. (See Table 8) is also indicated.
  - Opening:** A circular opening with a 3" clearance (3" Cl.) from the top and bottom slabs. The opening is supported by a 5/8" Concrete Support Post.
  - Reinforcement Spacing:** Horizontal Wall Reinf. (See Table 8) is shown with #4 @ 12" Ctrs. (Vertical Bars). Vertical Wall Reinf. (See Table 8) is also indicated.
  - Reinforcement Type:** t<sub>1</sub> (Type A) or t<sub>3</sub> (Type B) is specified for the top slab reinforcement.
  - Reinforcement Spacing:** 3" Cl. (Single Layer) Or 2" Cl. (Double Layer) to Horizontal Bars (Typ. For Walls) is specified for the bottom slab reinforcement.
- Notes:**
  - NOTE:** Provide one extra #4 bar reinforcement each side of each opening and two extra #4 bars at 3" min. spacing above each opening.
- Other Labels:**
  - Riser, Inlet Or Inlet Top (Type B Riser Shown)
  - To Be Paid For Under The Contract Unit Price For Inlets, Manholes Or Junction Boxes, EA.

\* See FDOT Standard Index 425-010 & 425-001 For Additional Details

STRUCTURE BOTTOM TYPE J

Type	Wall Length (ft)	Max. Depth (ft)	Wall Thickness ( $t_3$ )	
			CIP (in.)	Precast (in.)
P	3'-6"	40	6 Riser 8 Bottom	6
J	4'-0"	40	8	6
J	5'-0"	22	-	6
J	6'-0"	15	-	6
J	5'-0" to 9'-0"	40	8	8
J	10'-0"	26	8	8
J	10'-0" to 12'-0"	40	10	9
J	16'-0"	35	-	9
J	16'-0"	40	10	10
J	20'-0"	25	-	9
J	20'-0"	30	10	10

Diagram illustrating the required clearances for a precast opening in a structure wall, accommodating a pipe passing through at an angle.

Key dimensions and labels shown in the diagram:

- 3" Clear (Inside)**: Clearance on the top horizontal wall.
- Structure Wall**: The main wall through which the opening is made.
- Provide Extra Reinforcing Each Side Of Opening (See Note Section B-B)**: Reinforcement requirement for the wall around the opening.
- Skew Angle**: The angle at which the pipe passes through the wall.
- Horizontal Wall Reinforcing (Vertical Wall Reinforcing Not Shown For Clarity)**: Reinforcement for the horizontal walls.
- Precast Opening**: The opening in the wall.
- Pipe O.D. + 6"**: The total height of the precast opening, consisting of the pipe's outside diameter plus 6 inches.
- 1" Clear**: Clearance on the top horizontal wall, below the 3" clear.
- 2" Clear (Inside)**: Clearance on the bottom horizontal wall.
- 2" Clear (Outside)**: Clearance on the bottom horizontal wall, outside the structure.
- 1" Clear**: Clearance on the bottom horizontal wall, below the 2" clear.

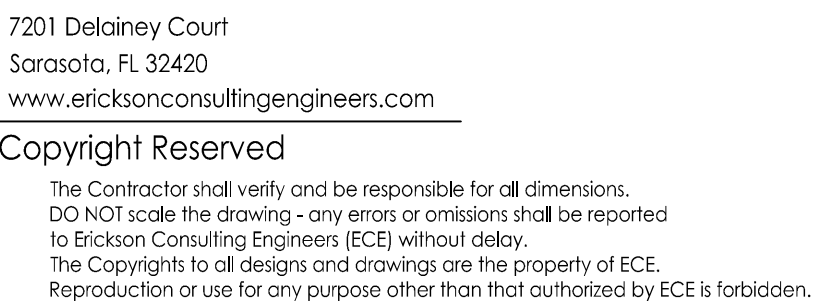
PIPE SIZE	RECTANGULAR		ROUND	
	Side Dimension (L)		Diameter (D)	
	Single Pipe Per Side	Note Number	Single Pipe or = 180°	2 to 4 Pipes = 90°
18"	3'-6"		3'-6"	4'-0"
24"	3'-6"		3'-6"	5'-0"
30"	3'-6"/4'-0"	2	4'-0"	6'-0"
36"	4'-0"/5'-0"	3	5'-0"	7'-0"
42"	5'-0"		6'-0"	7'-0"
48"	6'-0"		6'-0"	8'-0"
54"	6'-0"		7'-0"	10'-0"
60"	7'-0"		7'-0"	10'-0"
66"	7'-0"/8'-0"	4	8'-0"	12'-0"
72"	8'-0"		8'-0"	12'-0"
78"	9'-0"		10'-0"	12'-0"
84"	9'-0"		12'-0"	N/A

**TABLE 3 NOTES:**

1. For Round Structures sizes with variable angles between pipes and variable pipe sizes, refer to the FDOT Storm Drain Handbook.
2. For 3'-6" Precast Square Structure Bottoms, 30" Pipes with similar invert elevations are not permitted in adjacent walls. Use 4'-0" Side Dimensions when 30" pipe openings are required on adjacent walls and the difference in flow lines is less than 3'-0".
3. For 4'-0" Precast Square Structure Bottoms, 36" Pipes with similar invert elevations are not permitted in adjacent walls. Use 5'-0" Side Dimensions when 36" pipe openings are required on adjacent walls and the difference in flow lines is less than 3'-0".

	WALL	PIPE SIZE											
	THICKNESS	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"
MAXIMUM SKEW ANGLE	8"	19°	17°	16°	16°	15°	14°	14°	13°	13°	13°	12°	12°
	6"	21°	20°	18°	17°	17°	16°	15°	15°	14°	14°	13°	13°

TABLE 5 NOTES:  
 These values are based on 2" clearance for precast structures.  
 Larger skews are possible for Cast-In-Place Structures or  
 elliptical pipe openings when approved by the Engineer.

[illegible]

City of Naples



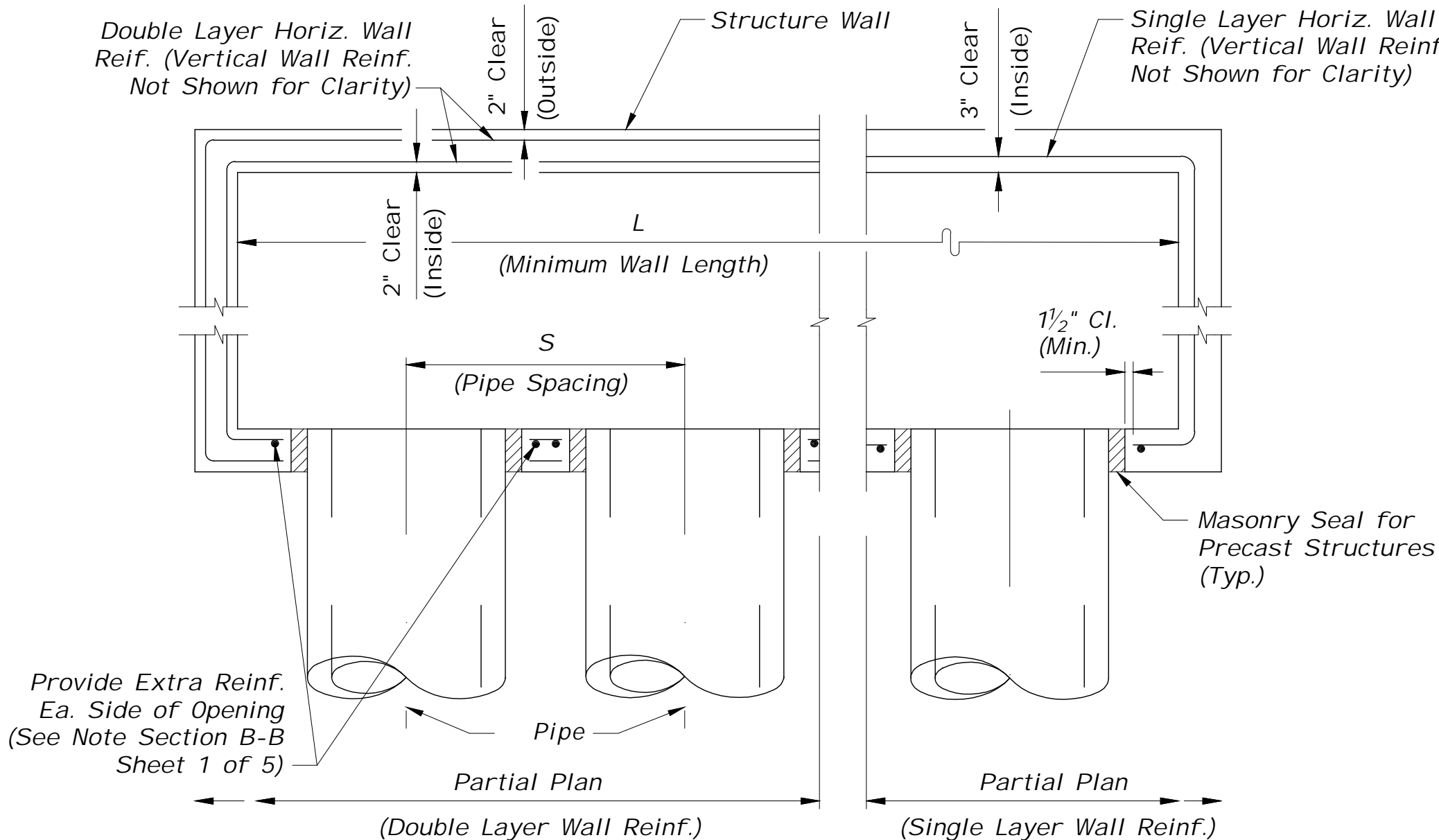
Project No. 16-329	Scale AS NOTED	
Drawing No.	Sheet	Revision
CD	1	0



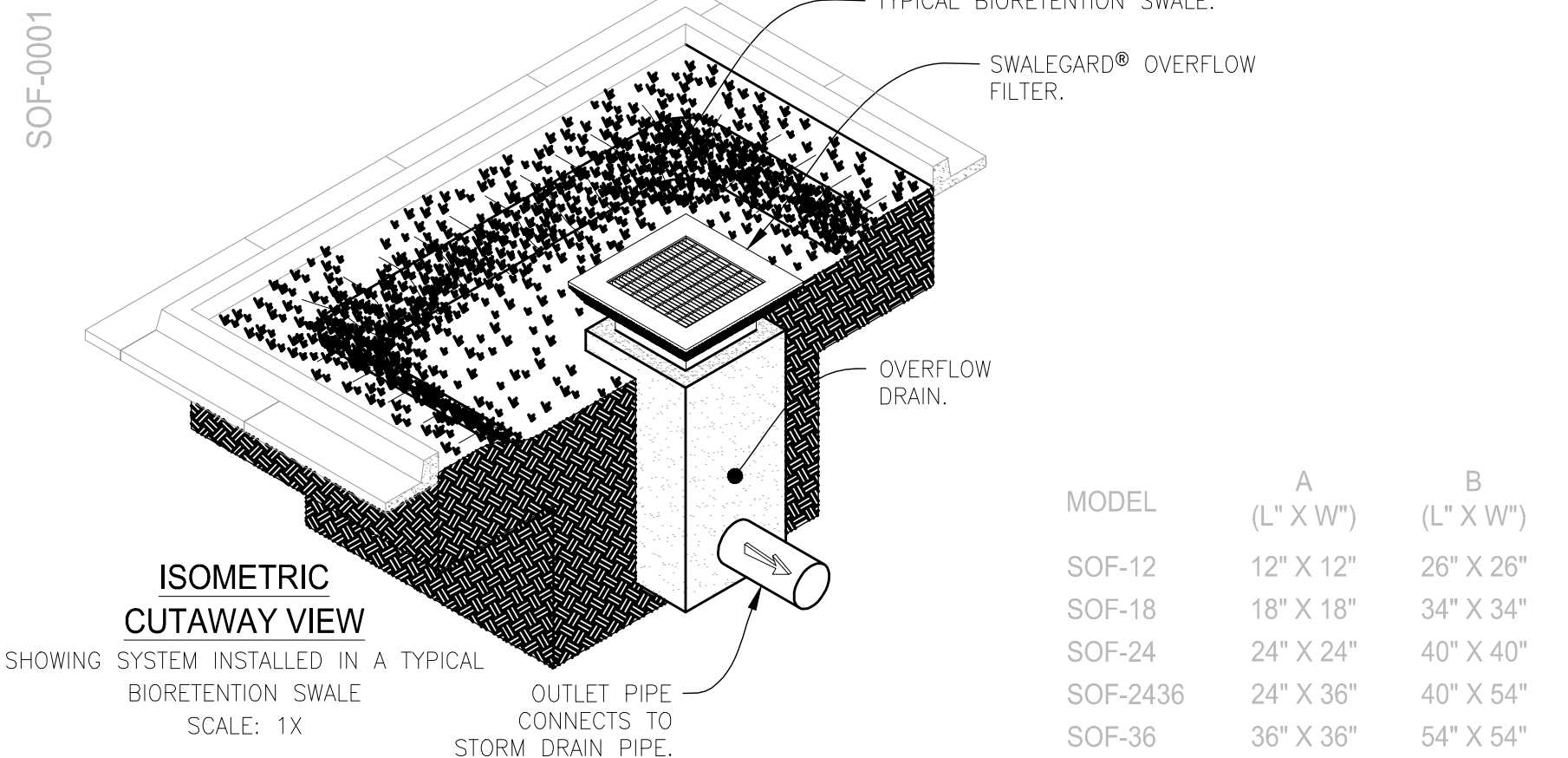
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TABLE 4-MINIMUM SIZES FOR MULTIPLE PARALLEL PIPE CONNECTIONS FOR RECTANGULAR STRUCTURE BOTTOMS				
PIPE SIZE	PIPE SPACING (S)	MINIMUM WALL LENGTH (L) FOR NUMBER OF PARALLEL PIPES		
		2	3	4
18"	2'-10"	6'-0"	8'-6"	11'-0"
24"	3'-5"	6'-6"	10'-0"	13'-6"
30"	4'-3"	8'-0"	12'-6"	16'-6"
36"	5'-1'	9'-6"	14'-6"	19'-6"
42"	6'-0"	11'-0"	17'-0"	-
48"	6'-9"	12'-6"	19'-0"	-
54"	7'-8"	14'-0"	-	-
60"	8'-6"	15'-0"	-	-
66"	9'-0"	16'-6"	-	-
72"	10'-0"	18'-0"	-	-
78"	10'-9"	19'-0"	-	-
84"	11'-8"	20'-6"	-	-

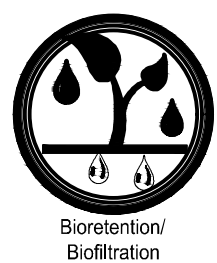
- TABLE 4 NOTES:
- Minimum wall lengths based on precast structures, using concrete pipe with maximum skew angles per Table 5.
  - Wall lengths exceeding 20'-0" require special designs.



MULTIPLE PARALLEL PIPE CONNECTIONS DETAIL PLAN VIEW



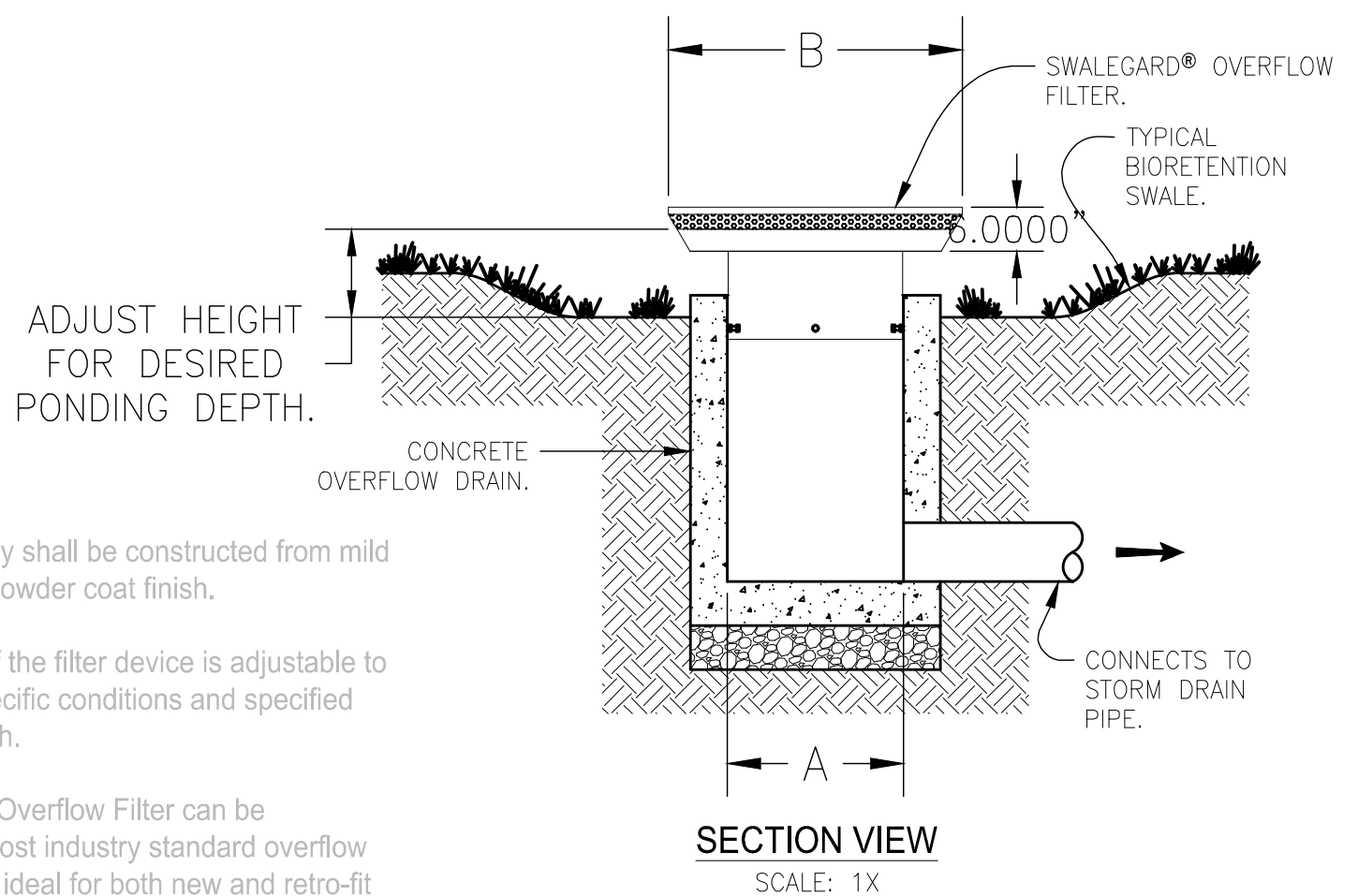
- NOTES:
- The filter body shall be constructed from mild steel with a powder coat finish.
  - The height of the filter device is adjustable to meet site specific conditions and specified ponding depth.
  - Swalegard® Overflow Filter can be installed in most industry standard overflow drains and is ideal for both new and retro-fit applications.
  - For sizes not shown in the tabulation contact Oldcastle® Stormwater Solutions for assistance.



**SwaleGard®**  
Overflow Filter  
Swale Prefilter & Overflow Device



7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com  
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DRAWING NO. SOF-0001 REV. ECO NEW 7/13/16 DATE 6/15/15 SHEET 1 OF 1



GRATE INLET SKIMMER BOX FOR DRAINAGE STRUCTURES ALONG GBS

**Lifts Out Through Manhole**

**Suntree Technologies Inc.**  
798 Clearlake Road, Cocoa, FL 32922  
Ph: 321-637-7552 FAX: 321-637-7554  
www.suntreetech.com

**5 Year Warranty**

**Curb Inlet Basket**  
High Capacity  
Patented

**Multi-Stage Filtration**  
Screens of Different Sieve Sizes  
Optimize Filtration And Water Flow

Storm Boom

Stainless Steel Screens

Coarse Sieve Size Screen

Medium Sieve Size Screen

Fine Sieve Size Screen  
(Fine sieve size screen also on bottom)

**Will Not Impede The Flow Of The Inlet**

**Installation Schematic**

**For use in inlets where the only access is through a manhole.**  
  
A shelf system directs water flow into the filtration basket and positions the basket directly under the manhole for easy access. If necessary, the water flow can bypass the entire filtration system simply by flowing past the filter and into the catchbasin.

SUNTREE OR EQUAL



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Naples Beach Restoration  
& Water Quality  
Improvement Project

File Name:  
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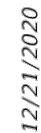
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GENERAL CONSTRUCTION  
DETAILS (2)


Project No. 16-329	Scale AS NOTED	
Drawing No.	Sheet	Revision

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<b>WALL DEPTH</b>	<b>SCHEDULE</b>	<b>AREA (in.<sup>2</sup>/ft.)</b>	<b>MAX. SPACING</b>	
			<b>BARS</b>	<b>WWR</b>
0' - 6'	A12	0.20	12"	8"
6' - 10'	A6	0.20	6"	5"
10' - 13'	A4	0.20	4"	3"
10' - 15'	B5.5	0.24	5½"	5"

LAST REVISION 11/01/20	DESCRIPTION:	 FY 2021-22 STANDARD PLANS	CURB INLET TYPE 8	INDEX 425-023	SHEET 2 of 2
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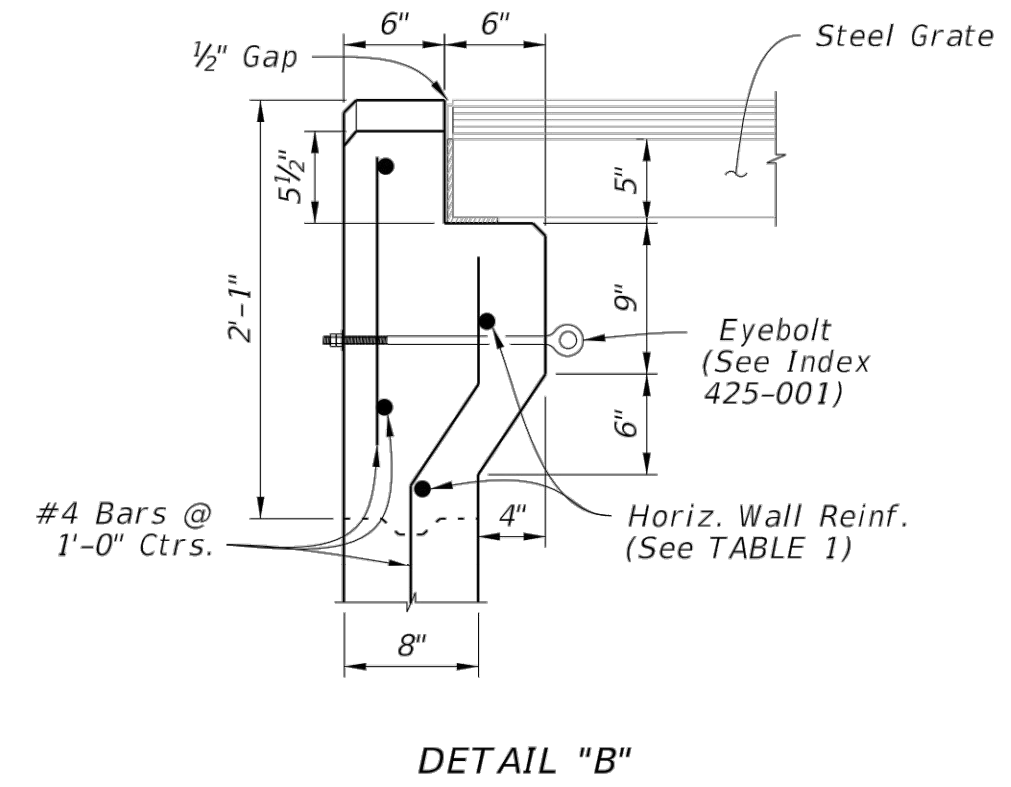
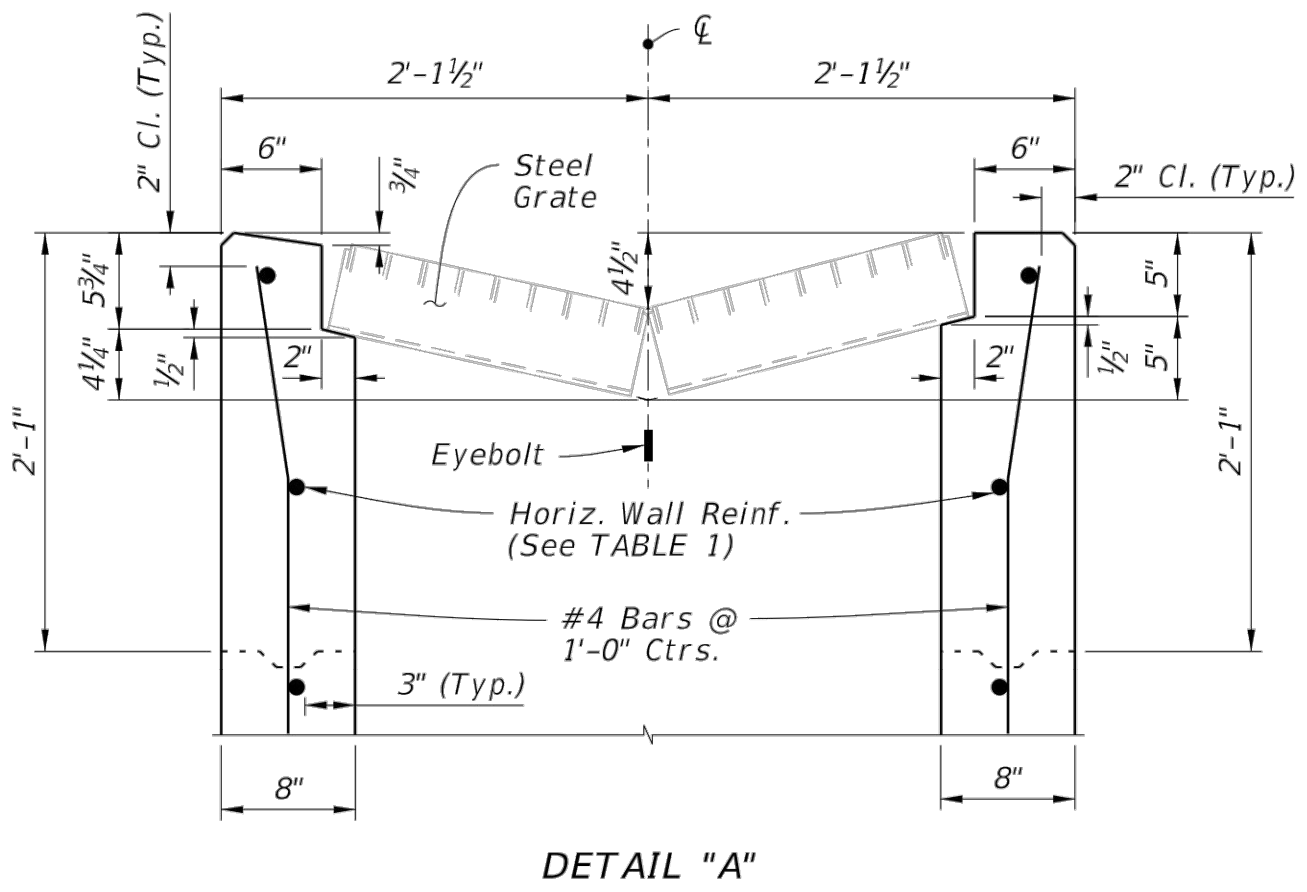
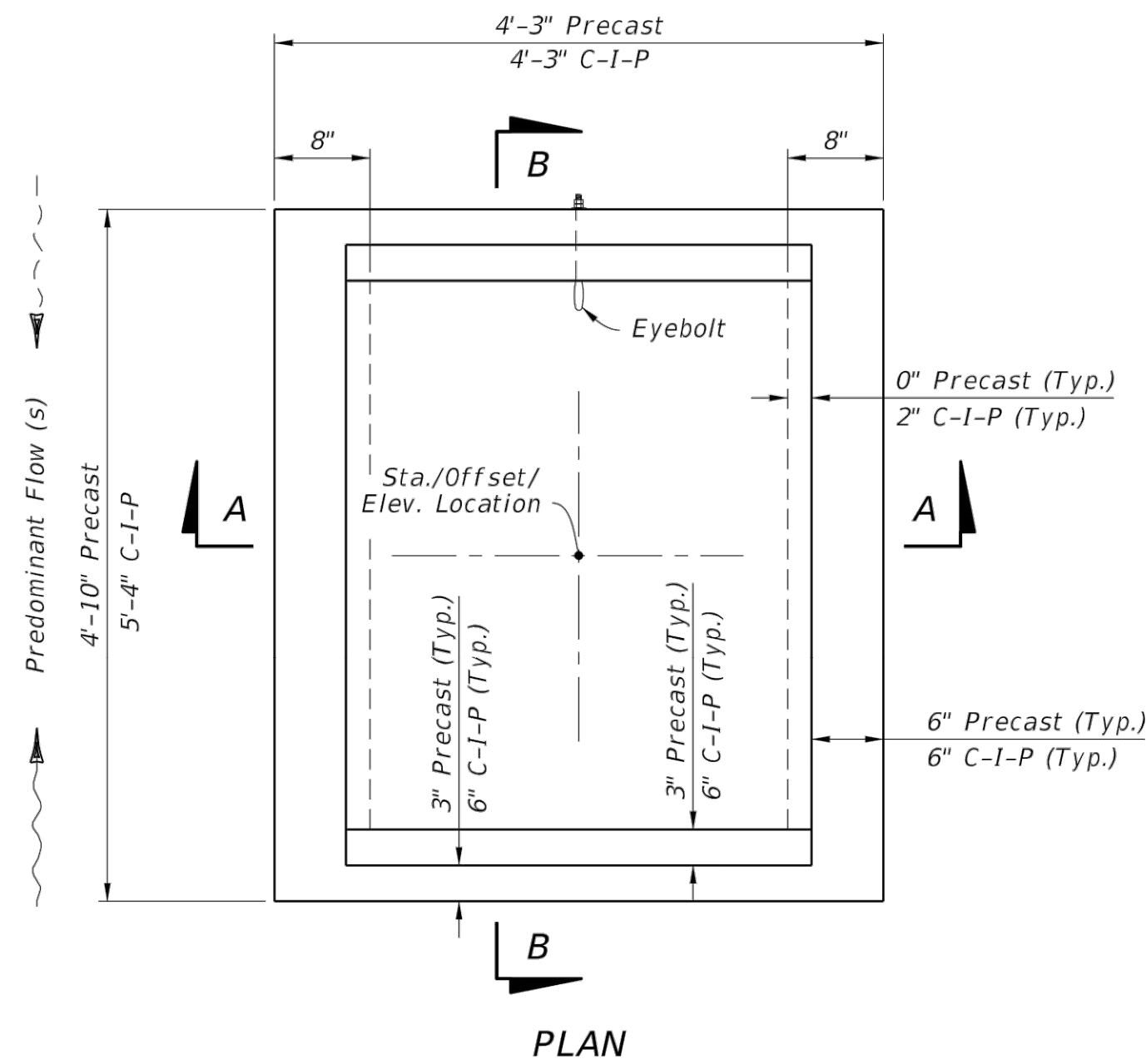
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City of Naples

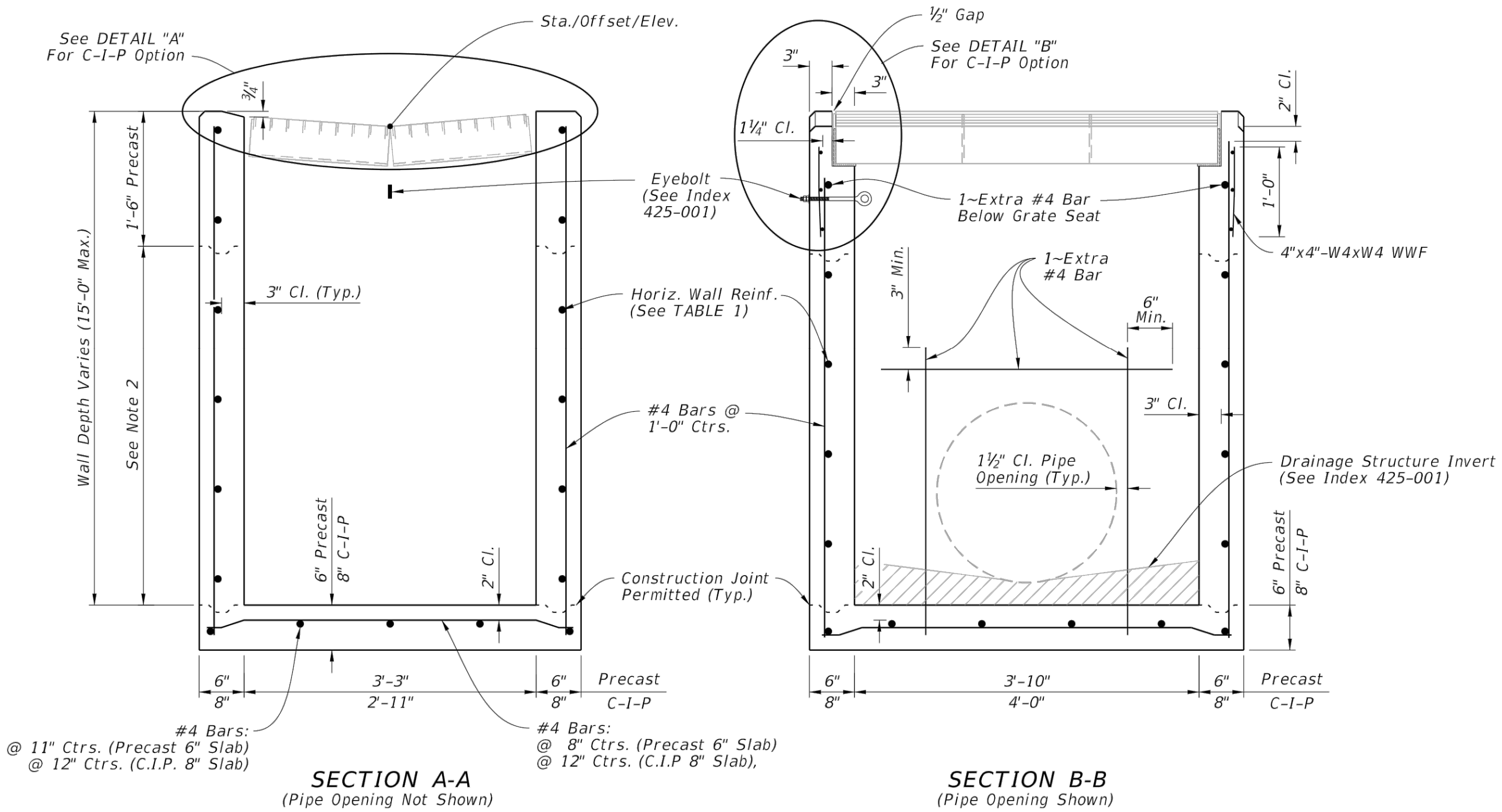


Title		
GENERAL CONSTRUCTION DETAILS (3)		
Project No. 16-329	Scale AS NOTED	
Drawing No.	Sheet	Revision
CD	3	0





### CAST-IN-PLACE OPTION




<p style="text-align: center;"><b>TABLE 1</b> <b>HORIZONTAL WALL REINFORCING SCHEDULE</b></p>
---

WALL DEPTH	SCHEDULE	AREA (in. <sup>2</sup> /ft.)	MAX. SPACING	
			BAR#	WWR
0' - 5'	A12	0.20	12"	8"
5' - 9'	A6	0.20	6"	5"
9' - 12'	A4	0.24	4"	3"
9' - 15'	B5.5	0.24	5½"	5"

NOTES:

1. Concrete Apron/Transition not shown.
2. Construction joints permitted between these limits. See Index 425-001 for minimum dimensions.

## DIMENSIONAL AND REINFORCING DETAILS

LAST REVISION 11/01/20	DESCRIPTION:  <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 10px;">             FY 2021-22 STANDARD PLANS           </div> </div>	GUTTER INLET TYPE S	INDEX 425-040	SHEET 2 of 5
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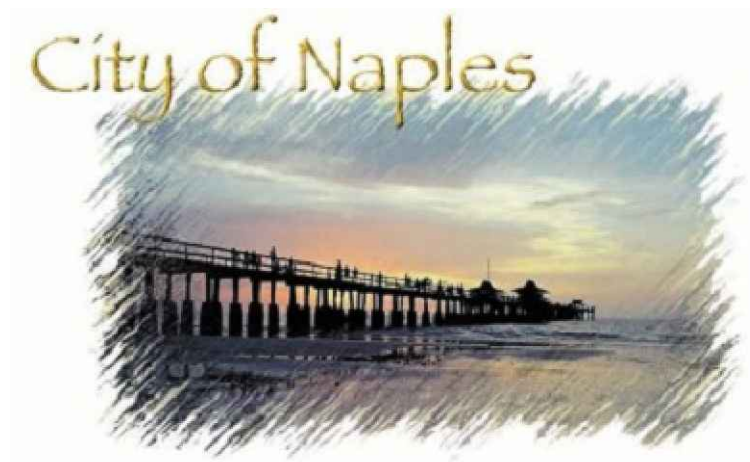
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Title

## CONSTRUCTION DETAILS

### DETAILS (4)

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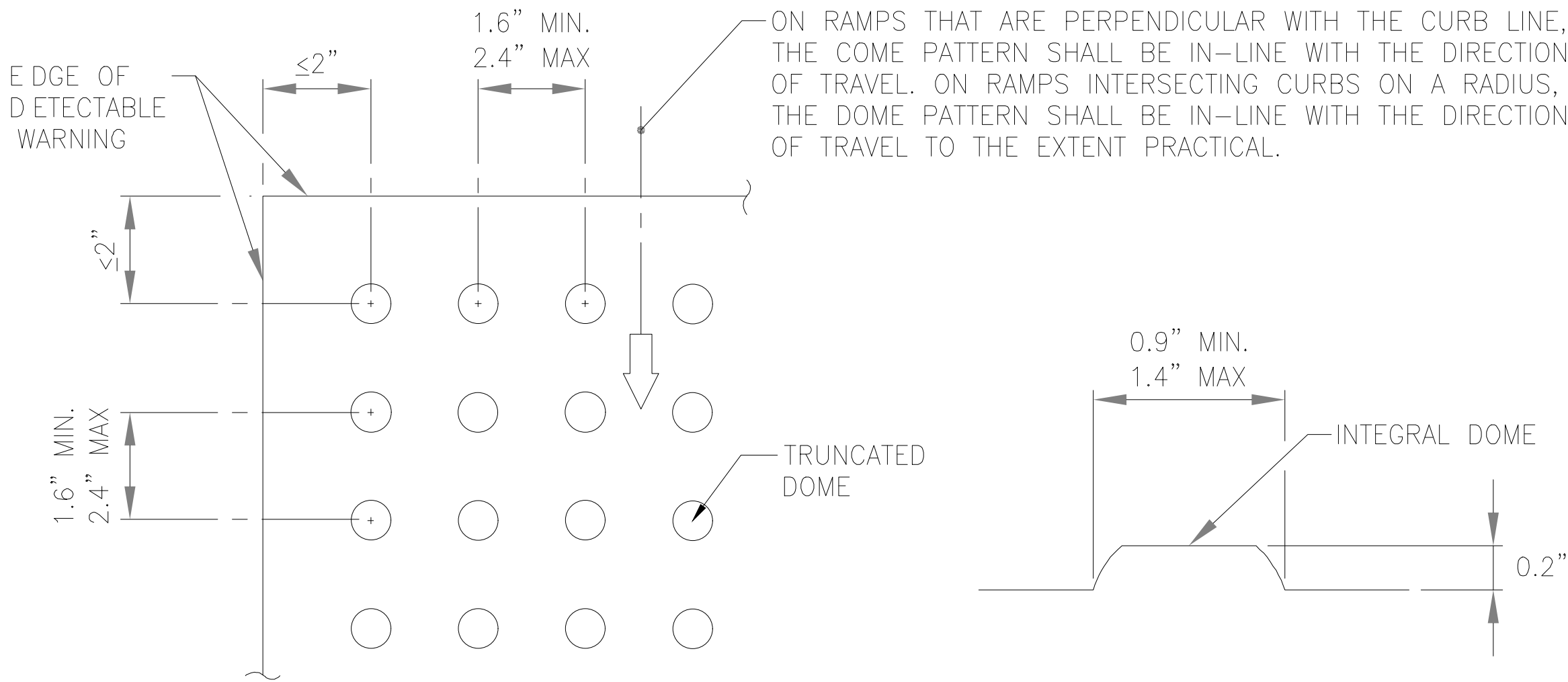
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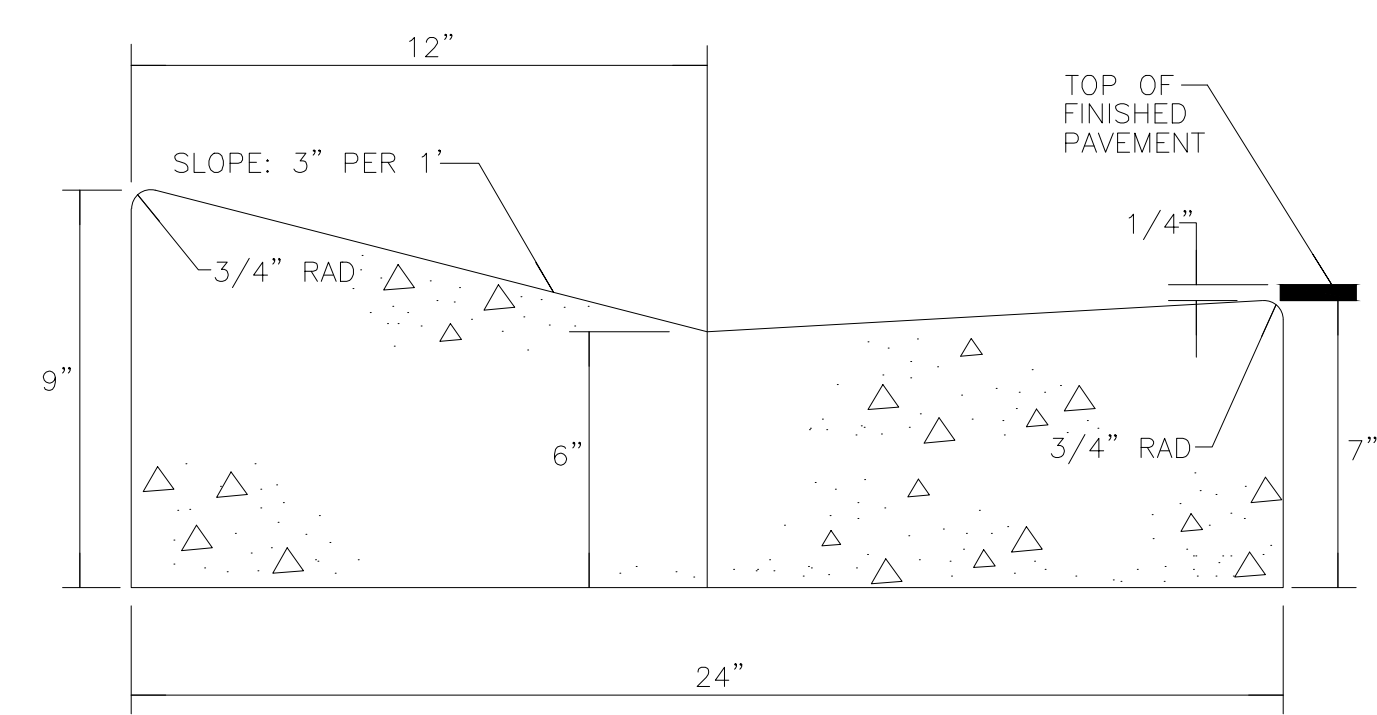
BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

PLAN VIEW

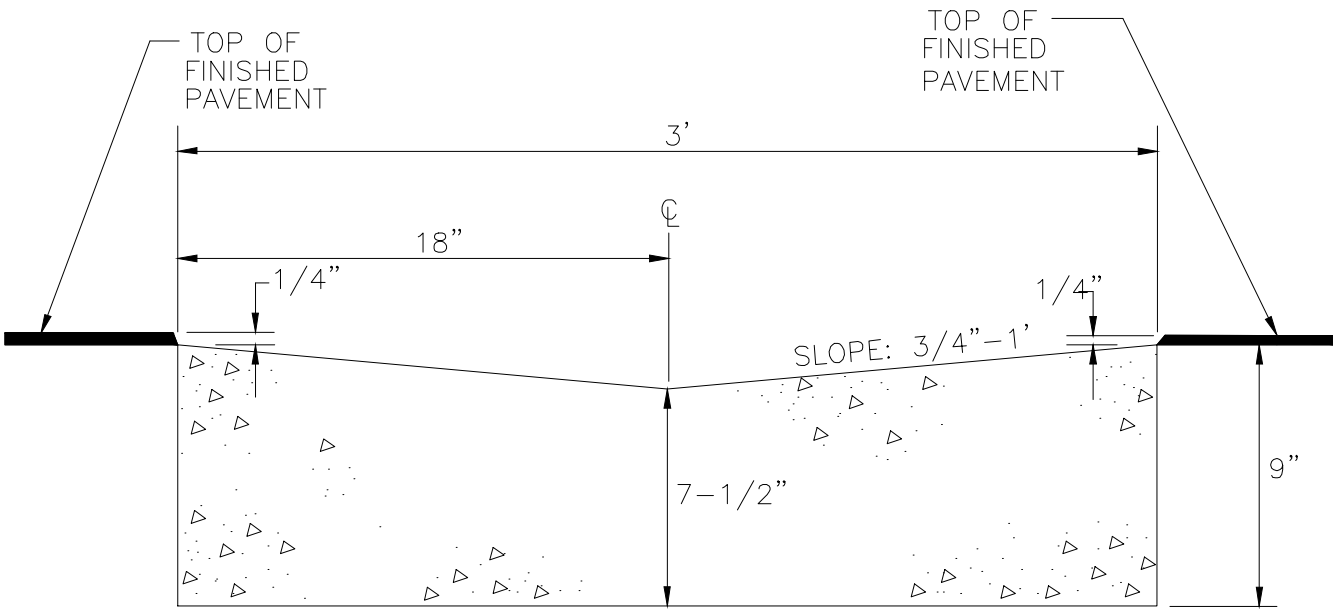
TRUNCATED DOME

ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES (610 MM) FROM THE BACK OF CURB.

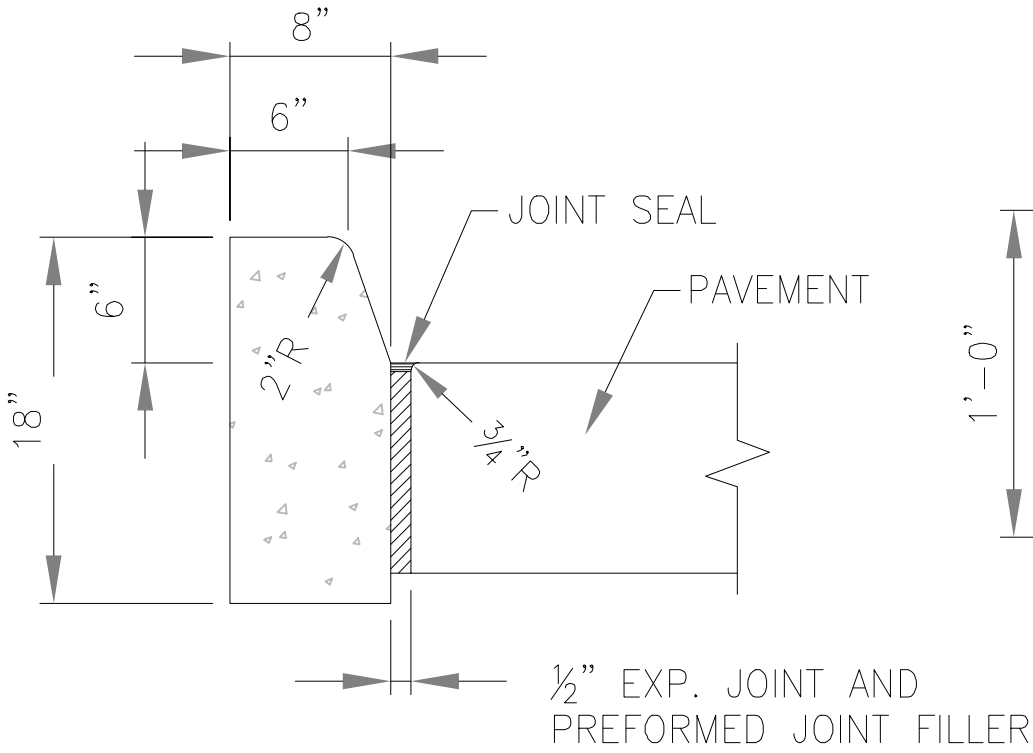
CURB RAMP DETECTABLE WARNING DETAIL  
N.T.S.



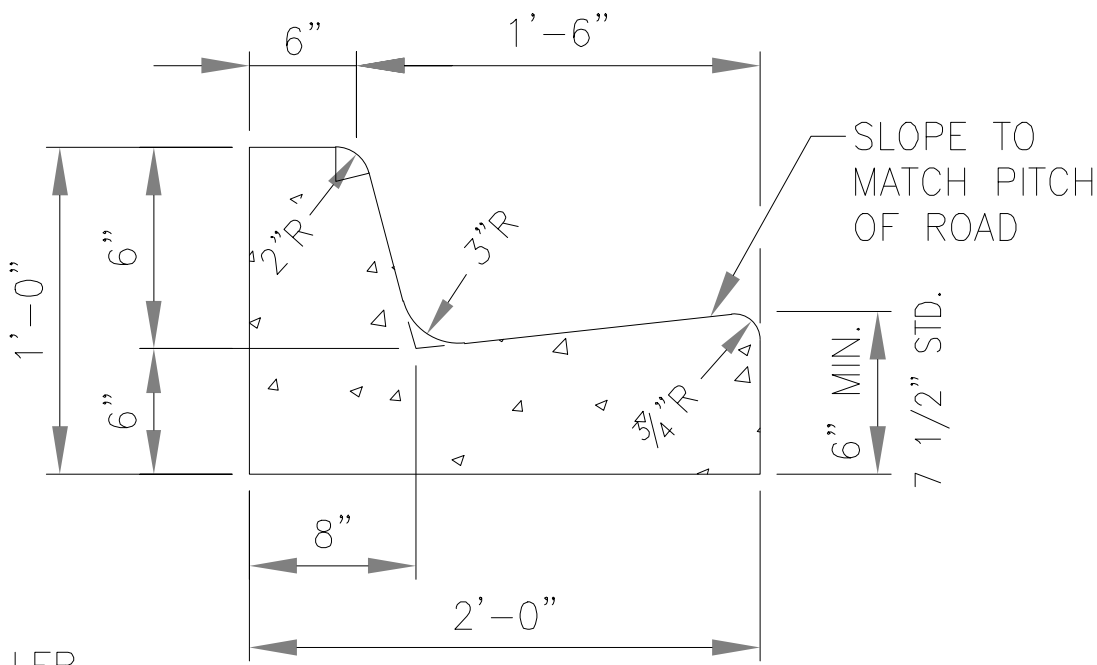
GUTTER CURB  
N.T.S.



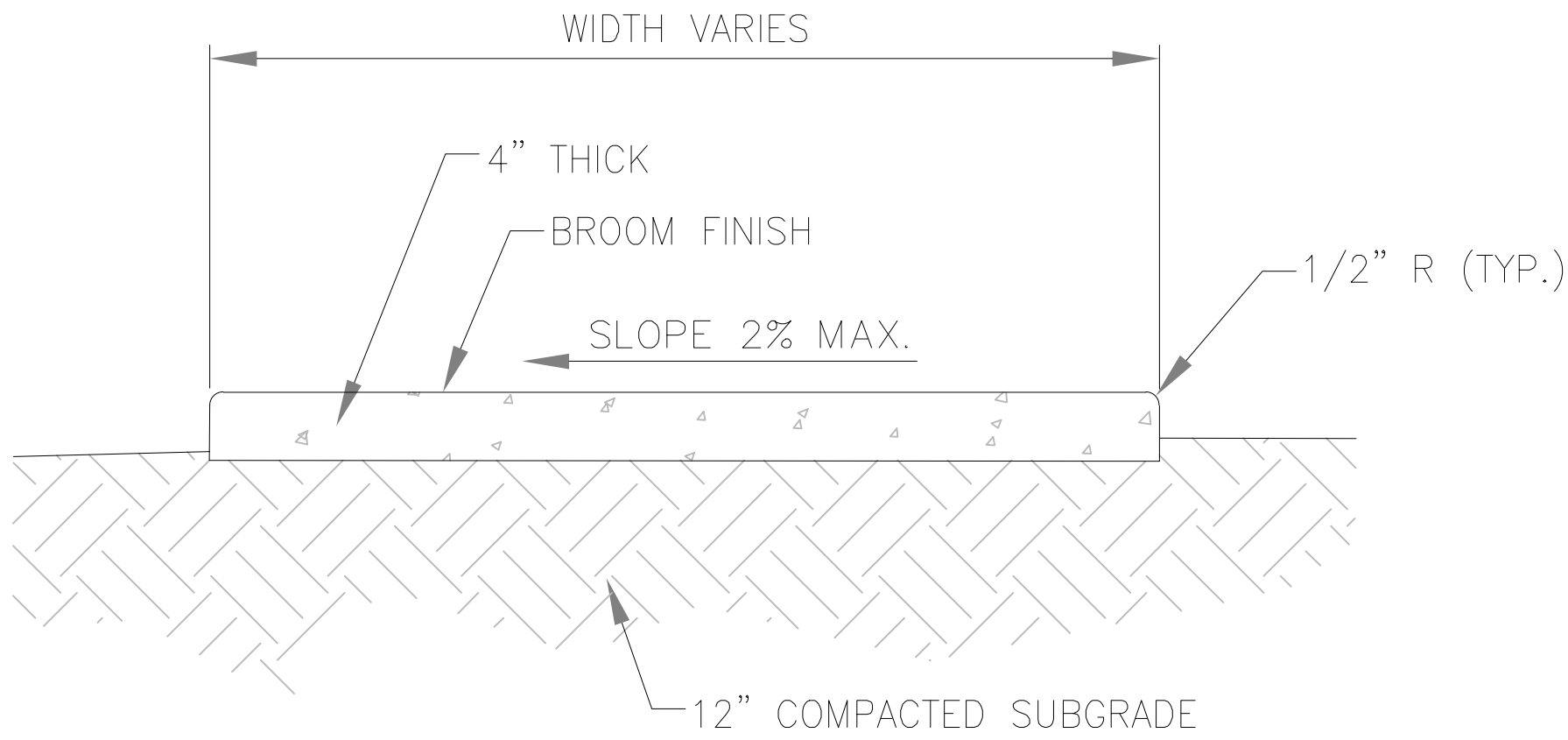
DROP CURB  
N.T.S.



TYPE 'D' CURB  
N.T.S.

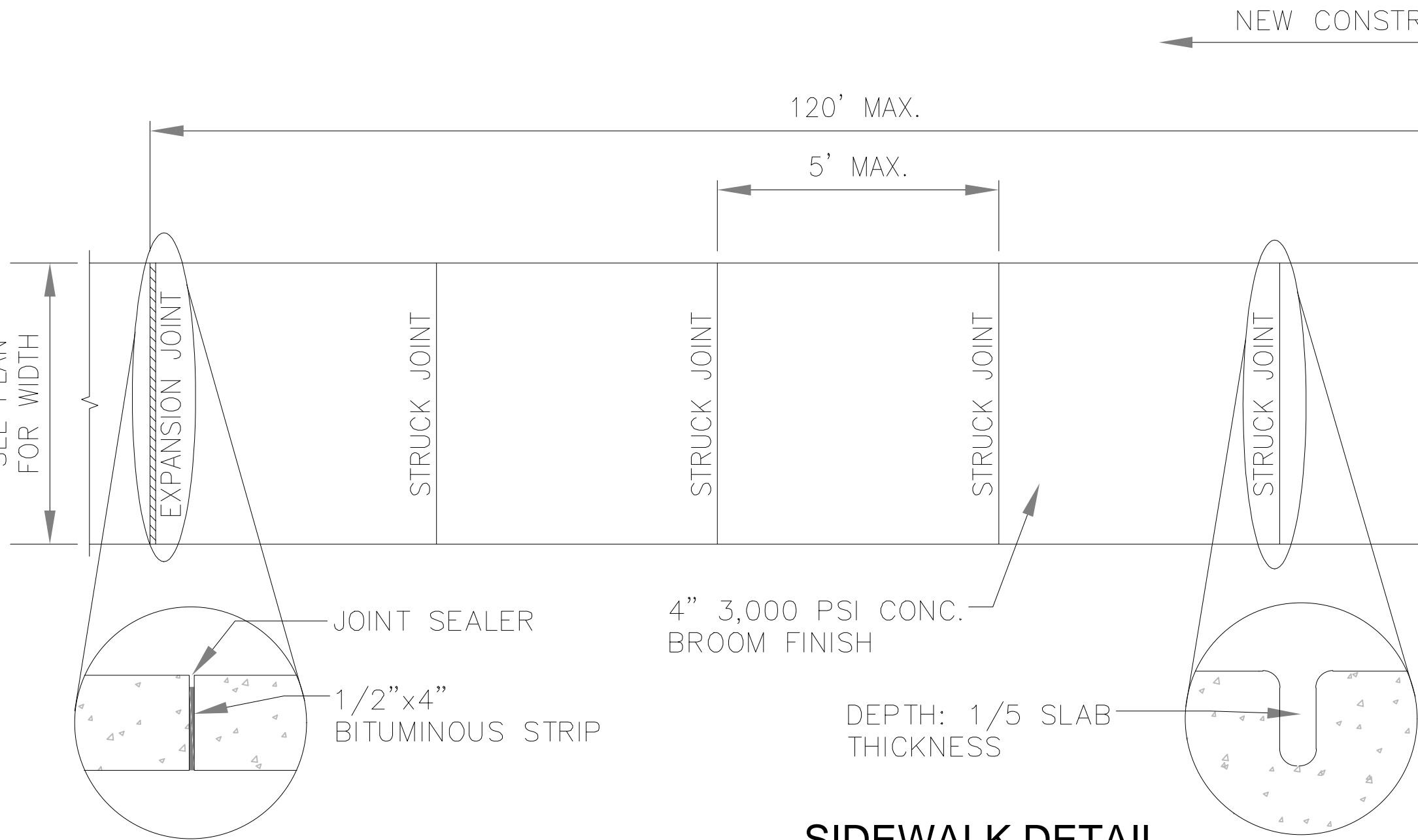


TYPE 'F' CURB  
N.T.S.



1. THE PROPOSED FILL SHALL BE COMPACTED IN 12" LIFTS TO 95% MAXIMUM DENSITY IN ACCORDANCE WITH AASHTO T-180 AND THE ENGINEER'S SPECIFICATIONS.
2. SUBGRADE SHALL BE SAND, COMPACTED TO A FIRM EVEN SURFACE, TRUE TO GRADE AND CROSS- SECTION, AND BE MOIST WHEN CONCRETE IS PLACED.
3. SIDEWALK SHALL HAVE CONTRACTION JOINTS AT 5' INTERVALS AND AN EXPANSION JOINT EVERY 120' MAXIMUM.

TYPICAL SIDEWALK SECTION  
N.T.S.



SIDEWALK DETAIL  
N.T.S.

NOTES:

1. SIDEWALKS SHALL HAVE TOOLED EDGES.
2. CONSTRUCTION JOINTS SHALL BE LOCATED AT STRUCK JOINTS OR EXPANSION JOINTS ONLY.
3. WALKS LOCATED WITHIN RIGHT OF WAY SHALL COMPLY WITH FDOT INDEX #310 AND CORRESPONDING SPECIFICATIONS.



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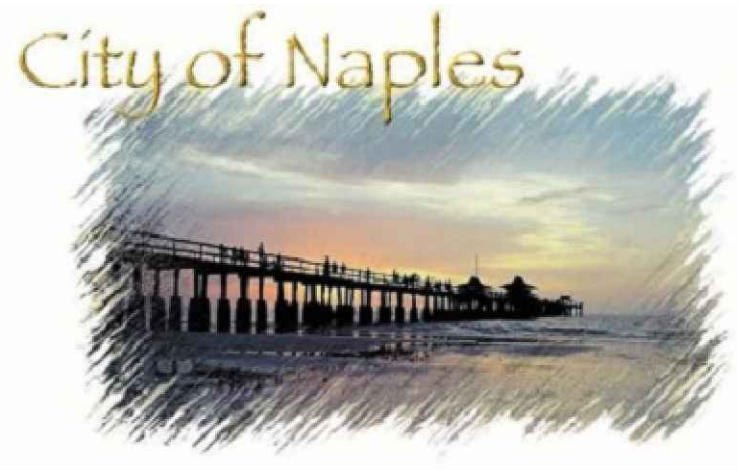
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& Water Quality  
Improvement Project

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Title

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DETAILS (5)

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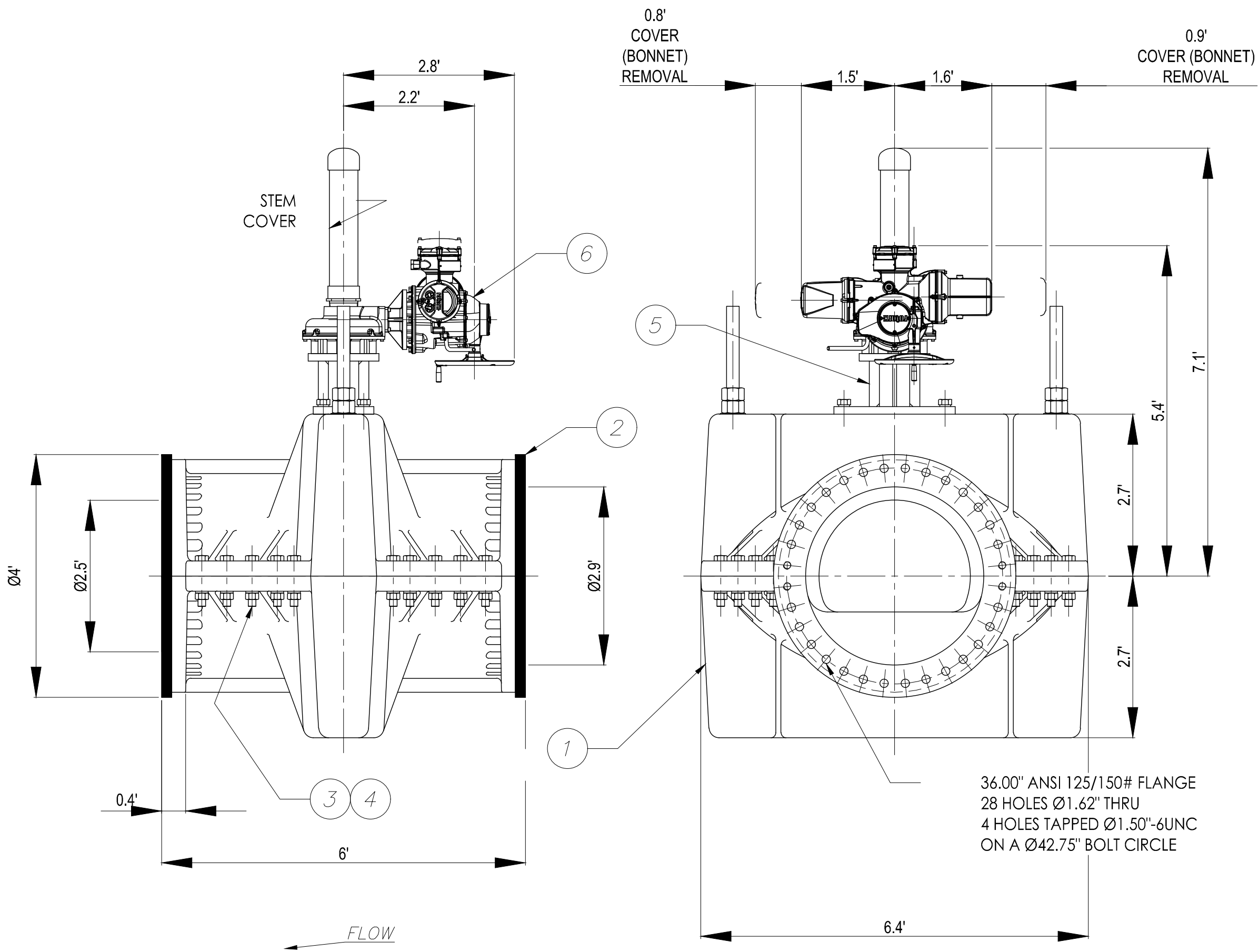
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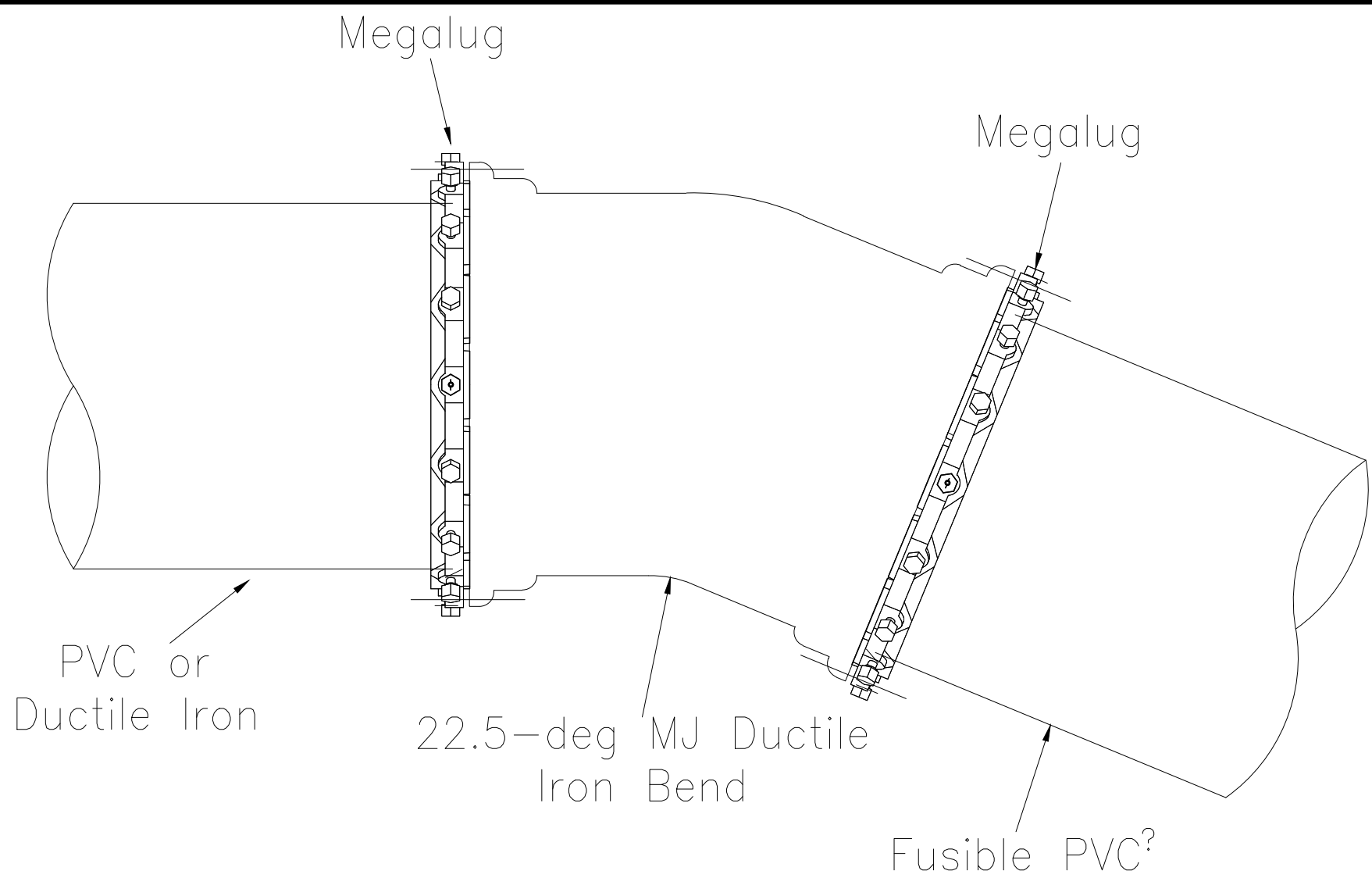
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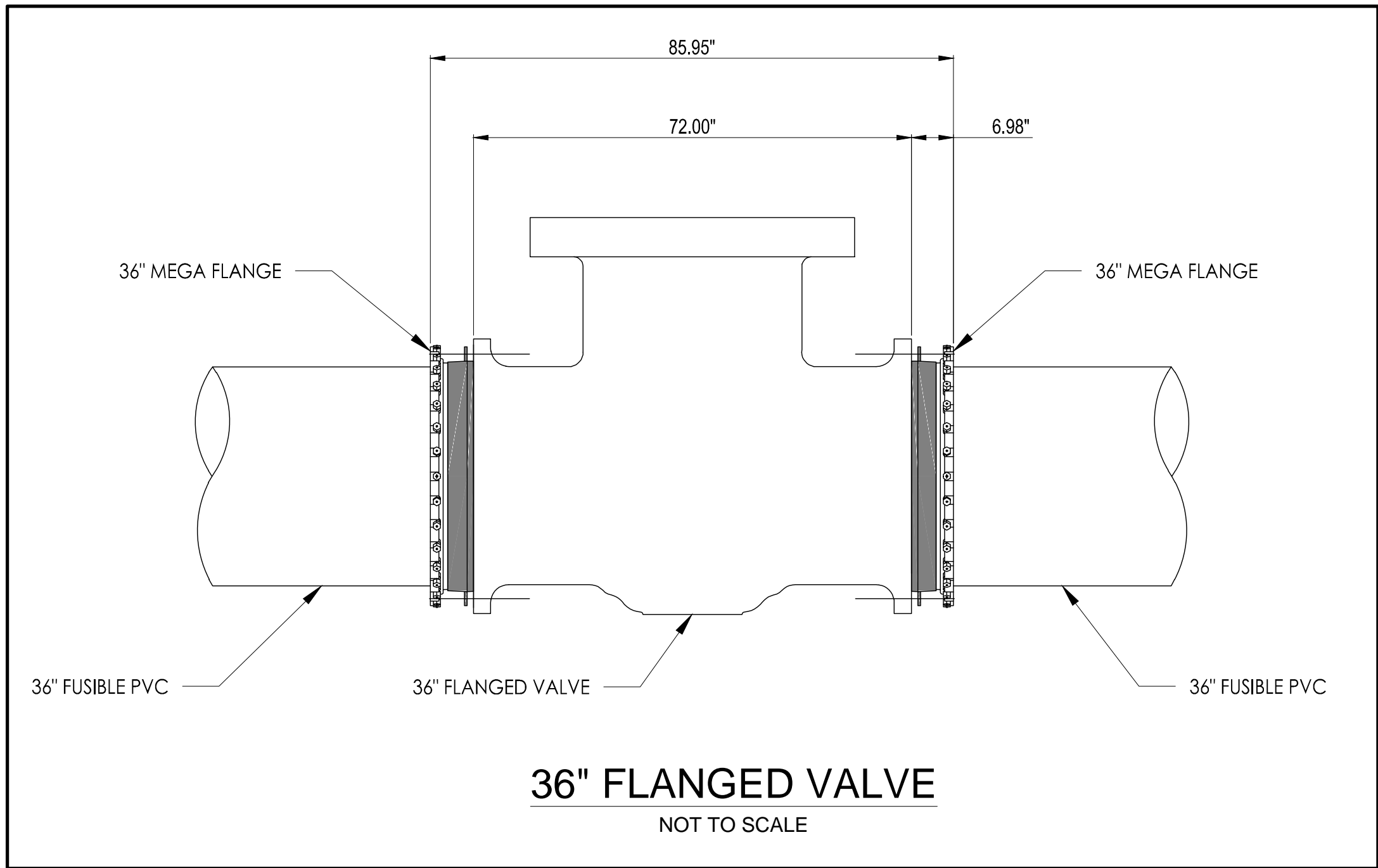




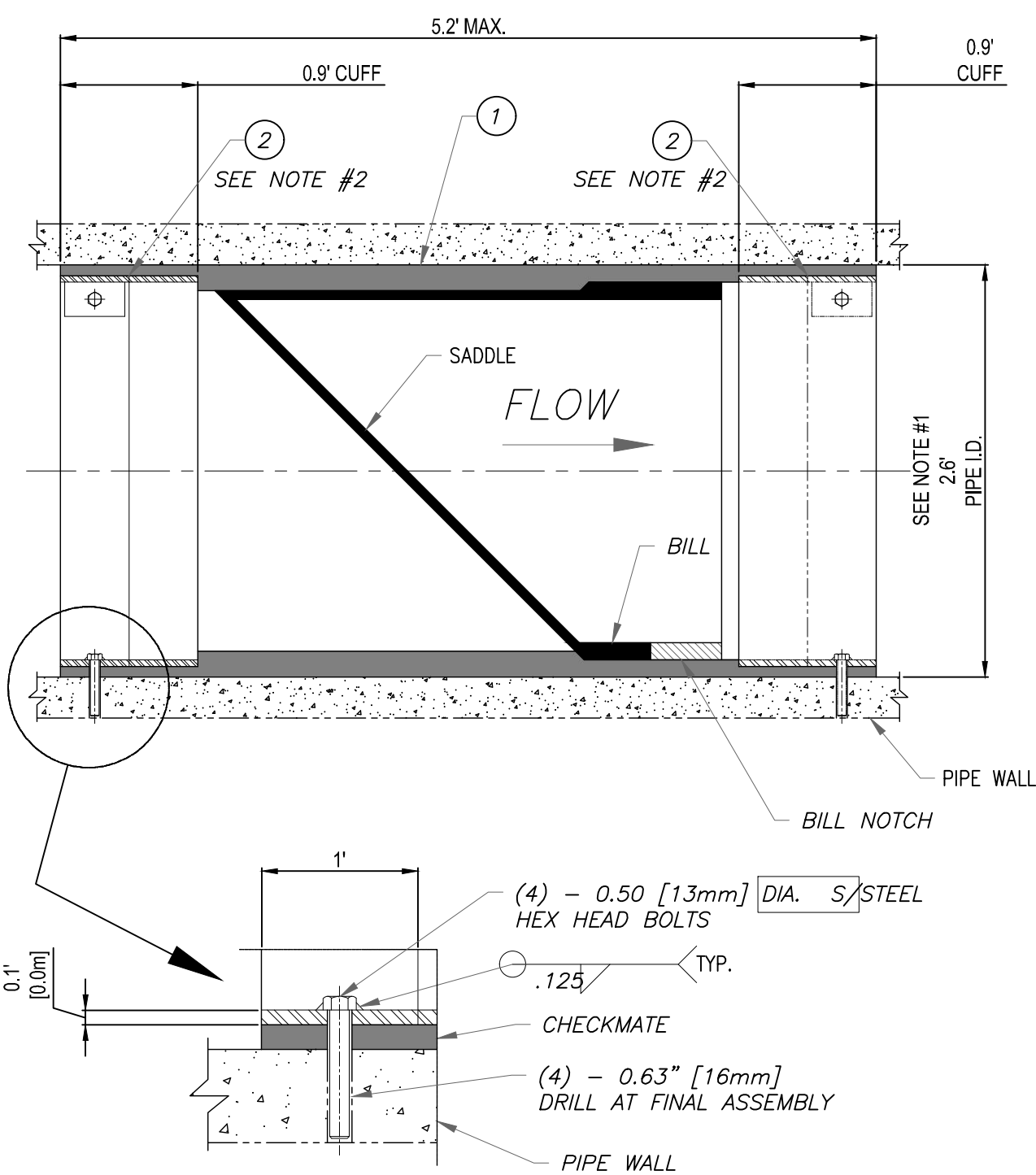
PINCH VALVE - 36.00" SERIES 5200E (OR 5700E) WITH ACTUATOR  
NOT TO SCALE



36" MECHANICAL JOINT DETAIL  
NOT TO SCALE

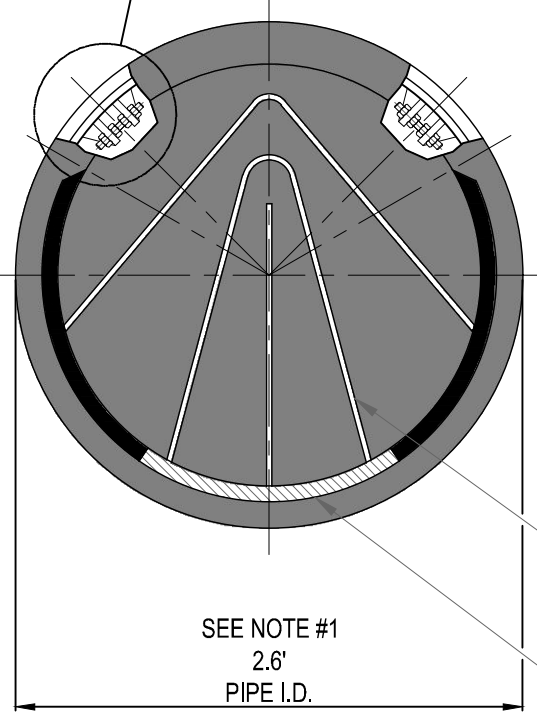


36" FLANGED VALVE  
NOT TO SCALE



ITEM	QTY.	DESCRIPTION	MAT'L
1	1	ULTRAFLEX CHECKMATE CHECK VALVE	MUST BE SUPPLIED
2	2	CLAMP	MUST BE SUPPLIED

- NOTES:
- PIPE INSIDE DIAMETER - MUST BE SUPPLIED  
(MINIMUM ALLOWABLE PIPE DIAMETER - 23.25 INCHES)
  - CLAMP INSTALLED IN UPSTREAM OR DOWNSTREAM CUFF  
DEPENDING ON INSTALLATION ORIENTATION
  - MAXIMUM ALLOWABLE BACK PRESSURE - 45.0 FEET
  - IT IS RECOMMENDED TO BOLT OR PIN CHECKMATE  
TO PIPE AS SHOWN, 4 PLACES 90° APART



PRELIMINARY DRAWING  
NOT FOR APPROVAL PURPOSES

OPPORTUNITY No: XXXXX	SALES ORDER No: TXX-XXXX
<b>Tideflex</b> Technologies A Division of Red Valve Company, Inc.	
750 HOLIDAY DR. STE.400 PITTSBURGH, PA. 15220 info@redvalve.com 412.279.0044 fax 412.279.5410	
TT PRODUCT: 24" ULTRAFLEX CHECKMATE CHECK VALVE	
TT PART No: CMCBUF-240-APPROVAL	
DR. BY: TLM	DATE: 2-6-17
CAD SCALE: FULL	CHKD. BY: DATE:
PLOT SCALE: 1 = 1	REV
DWG No: TTS-XXXX	

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PIN PER NOTE #4  
RECOMMENDED PINNING CONFIGURATION  
(SUPPLIED BY CUSTOMER) (SEE I.O.M.)  
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CUSTOMER: XXX  
ORDER No: XXX



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File Name: 16-329_Naples Outfalls_DirectionalDrill.dwg			
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# Naples Beach Restoration & Water Quality Improvement Project

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Title

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16-329

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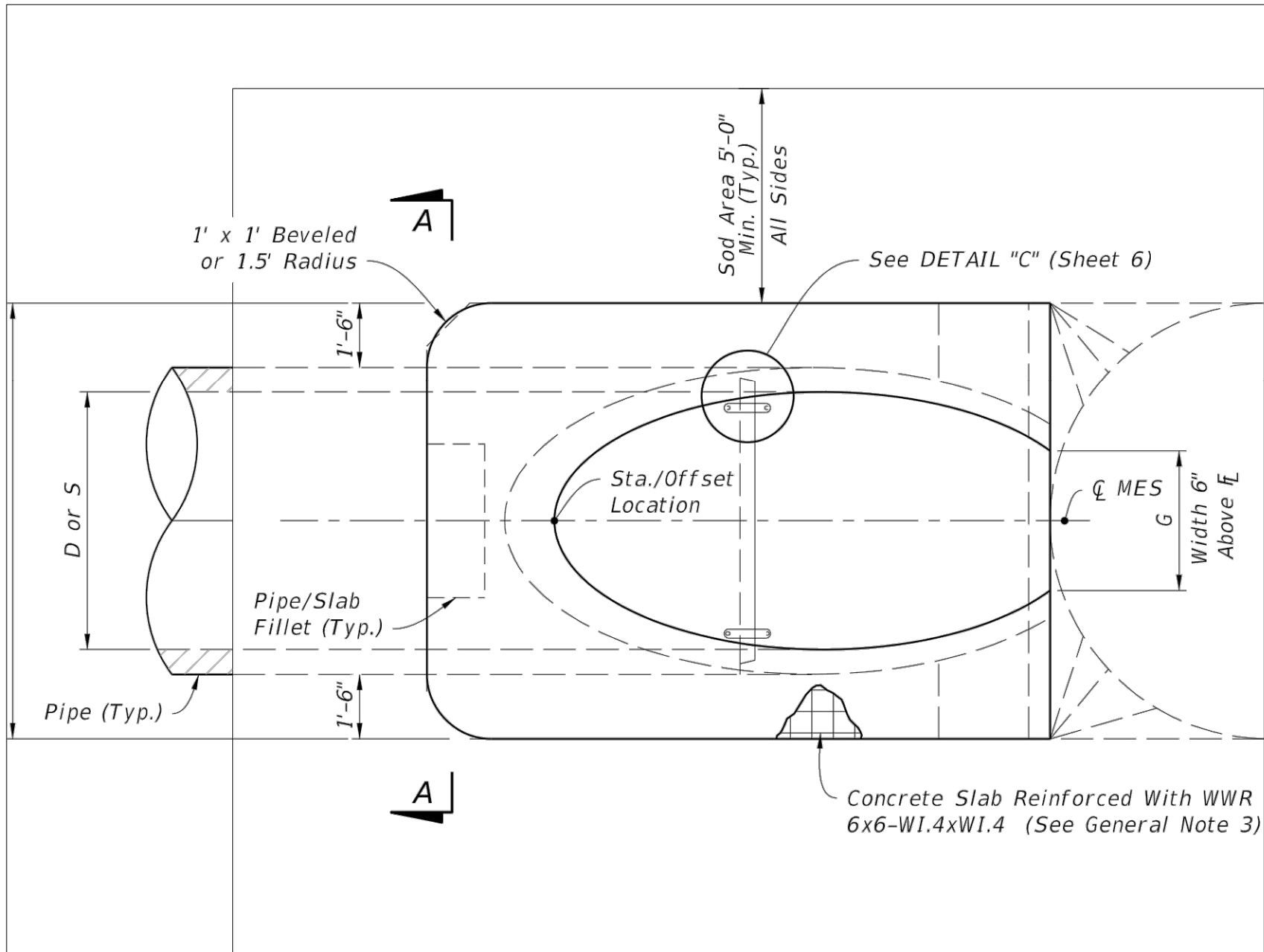
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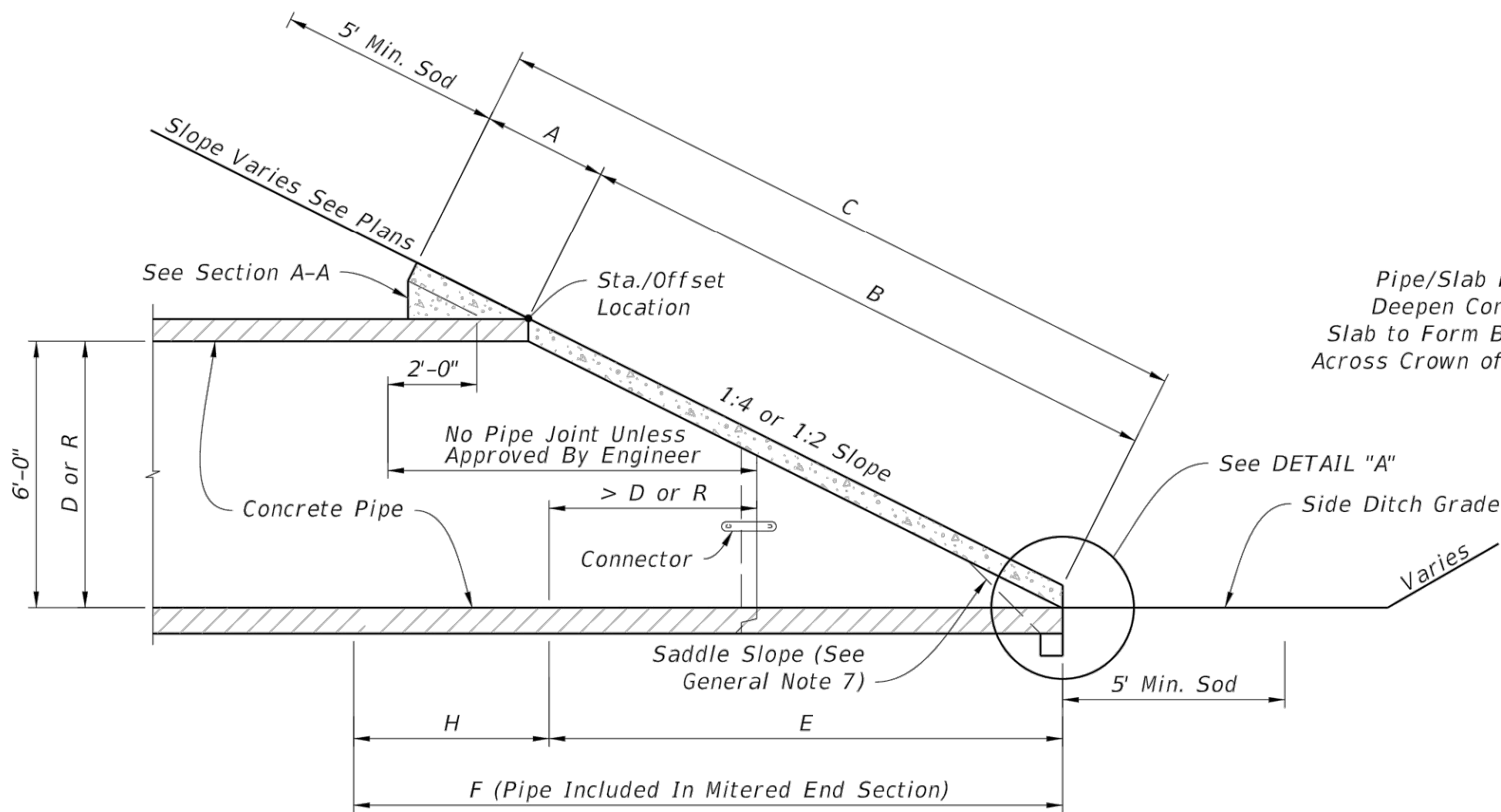
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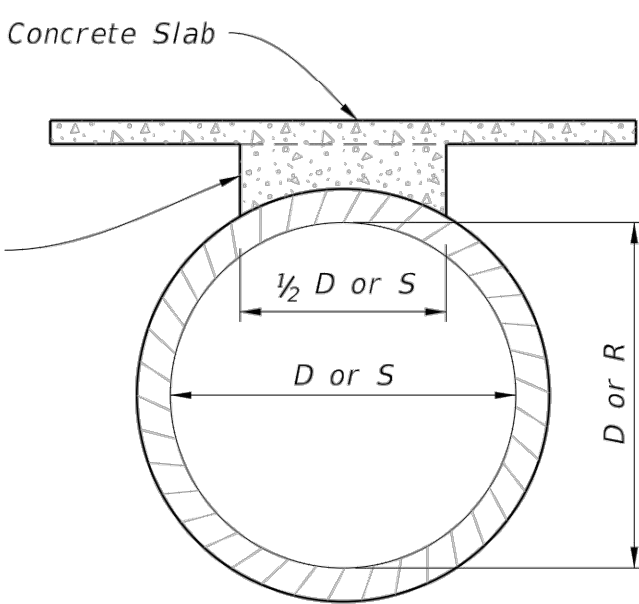




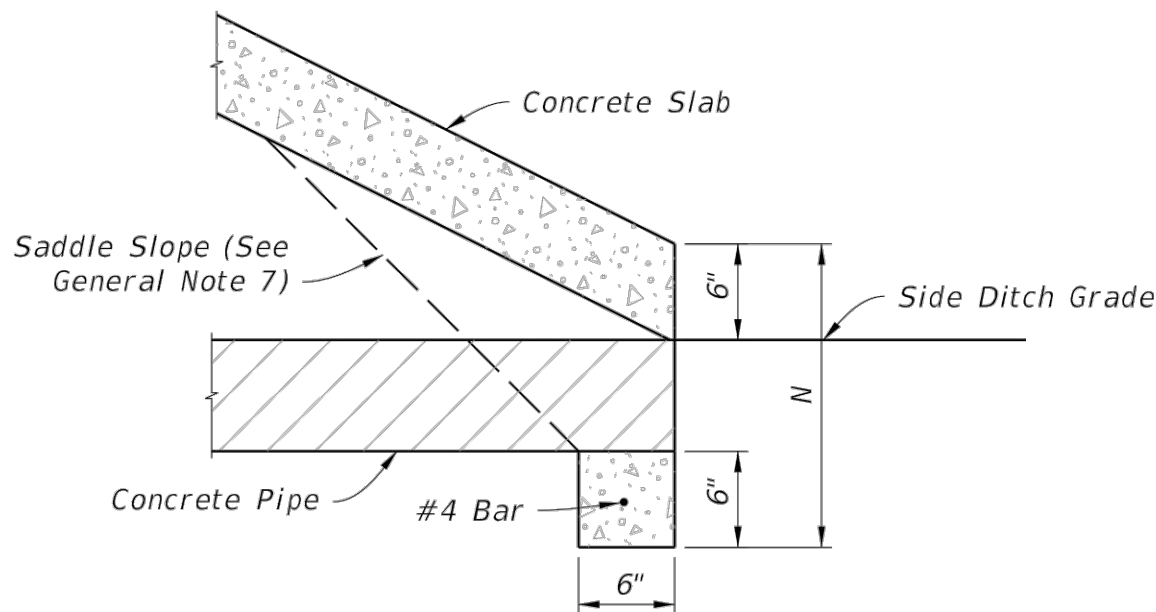
PLAN - SINGLE PIPE



ELEVATION



SECTION A-A  
(Pipe/Slab Fillet)



DETAIL "A"

ROUND CONCRETE PIPE

GENERAL NOTES:

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of cross drain pipe; corrugated steel pipe mitered end sections may be used with any type of cross drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of cross drain pipe except steel pipe. When bituminous coated metal pipe is specified for cross drain pipe, construct the mitered end sections with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the cross drain pipe, construct a concrete jacket in accordance with Index 430-001.
2. Use either corrugated metal or concrete mitered end sections for corrugated polyethylene pipe (HDPE), polyvinyl-chloride pipe (PVC), steel reinforced polyethylene pipe (SRPE), and polypropylene pipe (PP). When used in conjunction with corrugated mitered end sections, make connection using either a formed metal band specifically designated to join HDPE, PVC, SRPE, or PP pipe, with metal pipe. When used in conjunction with a concrete mitered end sections, construct concrete jacket in accordance with Index 430-001.
3. Class NS concrete cast-in-place reinforced slabs are required for all sizes of cross drain pipes. Construct slabs at 5½" thick, unless 3" thickness is called for in the Plans.
4. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered end section.
5. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.
6. When existing multiple cross drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered end sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.
7. Saddle Slope:  
1:4 Miter - Slope to  $\phi$  of pipe for round pipes less than or equal to 18" diameter and 1:1 for round pipes greater than or equal to 24" diameter.  
Slope to the major axis for elliptical pipes 24"x38" or smaller and 1:2 for pipes 29"x45" or larger.  
Slope to the span line for pipe arch 28"x20" or smaller and 1:2 for pipe arch 35"x24" or larger.  
  
1:2 Miter - Slope to  $\phi$  of pipe for round pipes less than or equal to 18"diameter and 1:2 for round pipes greater than or equal to 24" diameter.  
Slope to the major axis for elliptical pipes 29"x45" or smaller and 1:1 for pipes 34"x53" or larger.  
Slope 1:1 for all pipe arch sizes.
8. Quantities shown are for estimating purposes only.

CROSS DRAIN MITERED SECTION

FDOT INDEX 430-021



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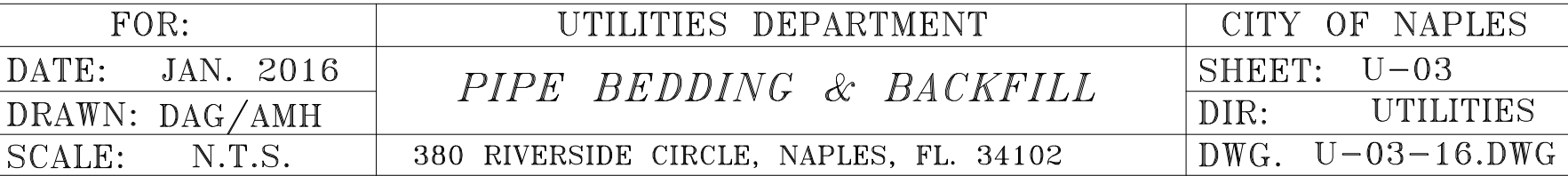
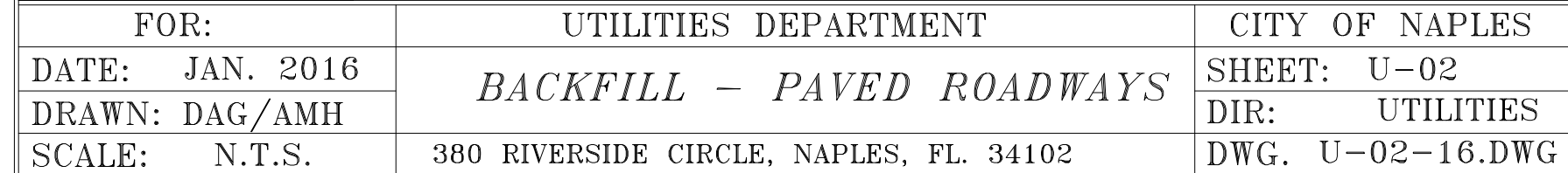
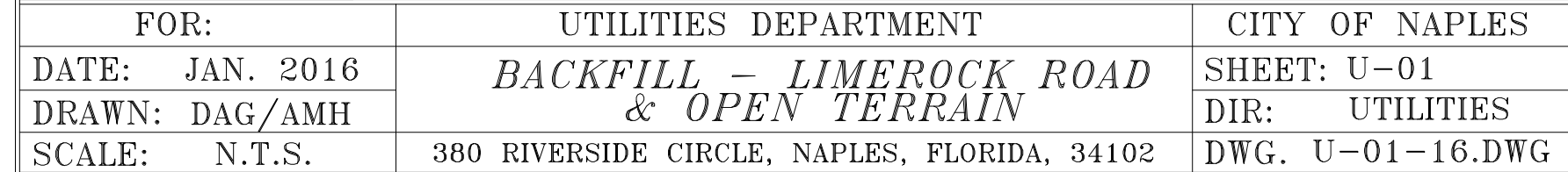
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TABLE 1 SINGLE AND MULTIPLE CONCRETE PIPE DIMENSIONS AND QUANTITIES																													
	Dia. D	Rise R	Span S	X	A	B	C	E	F	G	H	M				N	5½" CONC. SLAB (CY) (See General Note 3)				3" CONC. SLAB (CY) (See General Note 3)				SODDING (SY)				
												Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe		Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	
Round Concrete Pipe	15"	—	—	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	2.9'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	0.27	0.41	0.54	0.67	21	24	27	30	
	18"	—	—	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	0.31	0.45	0.60	0.75	22	25	28	31	
	24"	—	—	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	3.4'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	0.39	0.59	0.79	1.00	24	28	32	35	
	30"	—	—	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	0.46	0.76	1.04	1.32	26	31	35	40	
	36"	—	—	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	0.55	0.94	1.33	1.71	28	34	39	45	
	42"	—	—	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	0.66	1.15	1.66	2.15	30	37	43	50	
	48"	—	—	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	0.76	1.37	1.96	2.57	32	39	47	54	
	54"	—	—	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	0.87	1.62	2.38	3.14	34	42	51	59	
	60"	—	—	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	0.99	1.90	2.81	3.73	36	45	55	64	
	66"	—	—	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	1.11	2.15	3.21	4.27	38	48	58	68	
	72"	—	—	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	1.24	2.46	3.68	4.90	40	51	62	73	
Round Concrete Pipe	15"	—	—	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	0.40	0.61	0.80	1.00	23	26	29	32	
	18"	—	—	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	0.47	0.69	0.91	1.14	25	28	31	35	
	24"	—	—	3'-5"	2.53'	7.18'	9.71'	7.03'	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	0.60	0.90	1.21	1.52	28	32	36	40	
	30"	—	—	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	0.76	1.19	1.63	2.07	31	36	41	46	
	36"	—	—	5'-1"	2.87'	11.31'	14.18'	11.03'	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	0.89	1.48	2.05	2.63	34	40	46	52	
	42"	—	—	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	1.05	1.82	2.57	3.34	38	44	51	58	
	48"	—	—	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	1.21	2.15	3.07	4.00	41	48	56	63	
	54"	—	—	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	1.39	2.55	3.72	4.88	44	52	61	69	
	60"	—	—	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	1.59	3.02	4.44	5.86	47	56	66	75	
	66"	—	—	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	1.91	3.66	5.40	7.15	49	59	69	80	
	72"	—	—	10'-0"	3.91'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	2.12	4.18	6.24	8.30	52	63	74	85	
Elliptical Concrete Pipe	12"	18"	2'-10"	1.97'	1.62'	3.59'	1.56'	4'	1.50'	2.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.30	0.49	0.67	0.85	0.19	0.33	0.45	0.57	21	24	27	30		
	14"	23"	3'-4"	2.01'	1.99'	4.00'	1.89'	5'	1.90'	3.1'	5.38'	8.71'	12.04'	15.38'	1.23'	0.37	0.59	0.81	1.02	0.25	0.40	0.55	0.69	22	26	29	33		
	19"	30"	4'-0"	2.11'	2.92'	5.03'	2.73'	6'	2.37'	3.3'	6.04'	10.04'	14.04'	18.04'	1.27'	0.50	0.80	1.09	1.39	0.34	0.55	0.75	0.95	24	28	33	37		
	24"	38"	5'-0"	2.20'	3.85'	6.05'	3.56'	7'	2.85'	3.4'	6.79'	11.79'	16.79'	21.79'	1.31'	0.62	1.03	1.45	1.86	0.43	0.71	1.00	1.28	26	31	37	42		
	29"	45"	5'-11"	2.34'	4.79'	7.13'	4.39'	8'	3.19'	3.6'	7.50'	13.42'	19.33'	25.25'	1.38'	0.75	1.30	1.84	2.39	0.52	0.90	1.27	1.65	28	34	41	47		
	34"	53"	7'-0"	2.43'	5.72'	8.15'	5.23'	9'	3.57'	3.8'	8.25'	15.25'	22.25'	29.25'	1.42'	0.90	1.61	2.32	3.03	0.62	1.11	1.60	2.09	30	37	45	53		
	38"	60"	7'-10"	2.52'	6.46'	8.98'	5.89'	9'	3.95'	3.1'	8.92'	16.75'	24.58'	32.42'	1.46'	1.03	1.89	2.74	3.60	0.70	1.29	1.87	2.46	31	40	49	57		
	43"	68"	8'-11"	2.62'	7.39'	10.01'	6.73'	10'	4.28'	3.3'	9.67'	18.58'	27.50'	36.42'	1.50'	1.19	2.26	3.33	4.40	0.81	1.54	2.26	2.99	33	43	53	63		
	48"	76"	9'-11"	2.71'	8.33'	11.04'	7.56'	11'	4.59'	3.4'	10.42'	20.33'	30.25'	40.17'	1.54'	1.38	2.65	3.93	5.21	0.93	1.79	2.66	3.53	35	46	57	68		
	53"	83"	10'-8"	2.80'	9.26'	12.06'	8.39'	12'	4.77'	3.6'	11.08'	21.75'	32.42'	43.08'	1.58'	1.55	3.03	4.50	5.96	1.04	2.04	3.03	4.02	37	49	61	73		
	58"	91"	11'-8"	2.90'	10.19'	13.09'	9.23'	13'	5.01'	3.8'	11.83'	23.50'	35.17'	46.83'	1.63'	1.75	3.47	5.20	6.93	1.17	2.33	3.49	4.66	39	52	65	78		
Elliptical Concrete Pipe	12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.45	0.68	0.92	1.14	0.30	0.45	0.61	0.76	23	26	29	32		
	14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'	0.53	0.83	1.13	1.42	0.36	0.56	0.76	0.95	24	28	32	35		
	19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	0.74	1.15	1.57	1.98	0.51	0.79	1.08	1.36	27	32	36	40		
	24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	0.97	1.57	2.19	2.81	0.68	1.10	1.53	1.96	30	36	41	47		
	29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	1.22	2.07	2.92	3.77	0.86	1.45	2.04	2.63	33	40	46	53		
	34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	1.48	2.62	3.77	4.92	1.02	1.81	2.60	3.39	36	44	52	59		
	38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	1.72	3.12	4.53	5.92	1.18	2.14	3.10	4.05	38	47	56	65		
	43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	2.02	3.78	5.56	7.32	1.38	2.58	3.79	4.99	41	51	61	71		
	48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	2.34	4.49	6.64	8.79	1.59	3.05	4.51	5.97	44	55	66	77		
	53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	2.66	5.17	7.66	10.16	1.80	3.50	5.19	6.88	47	59	71	83		
	58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3.02	5.98	8.95	11.90	2.04	4.04	6.05	8.05	50	63	76	89		
												B	E																
												△ 6.42'		△ 6.25'		Dimensions permitted to allow use of 8' standard pipe lengths.													
												◇ 10.40'		◇ 10.10'		Dimensions permitted to allow use of 12' standard pipe lengths.													



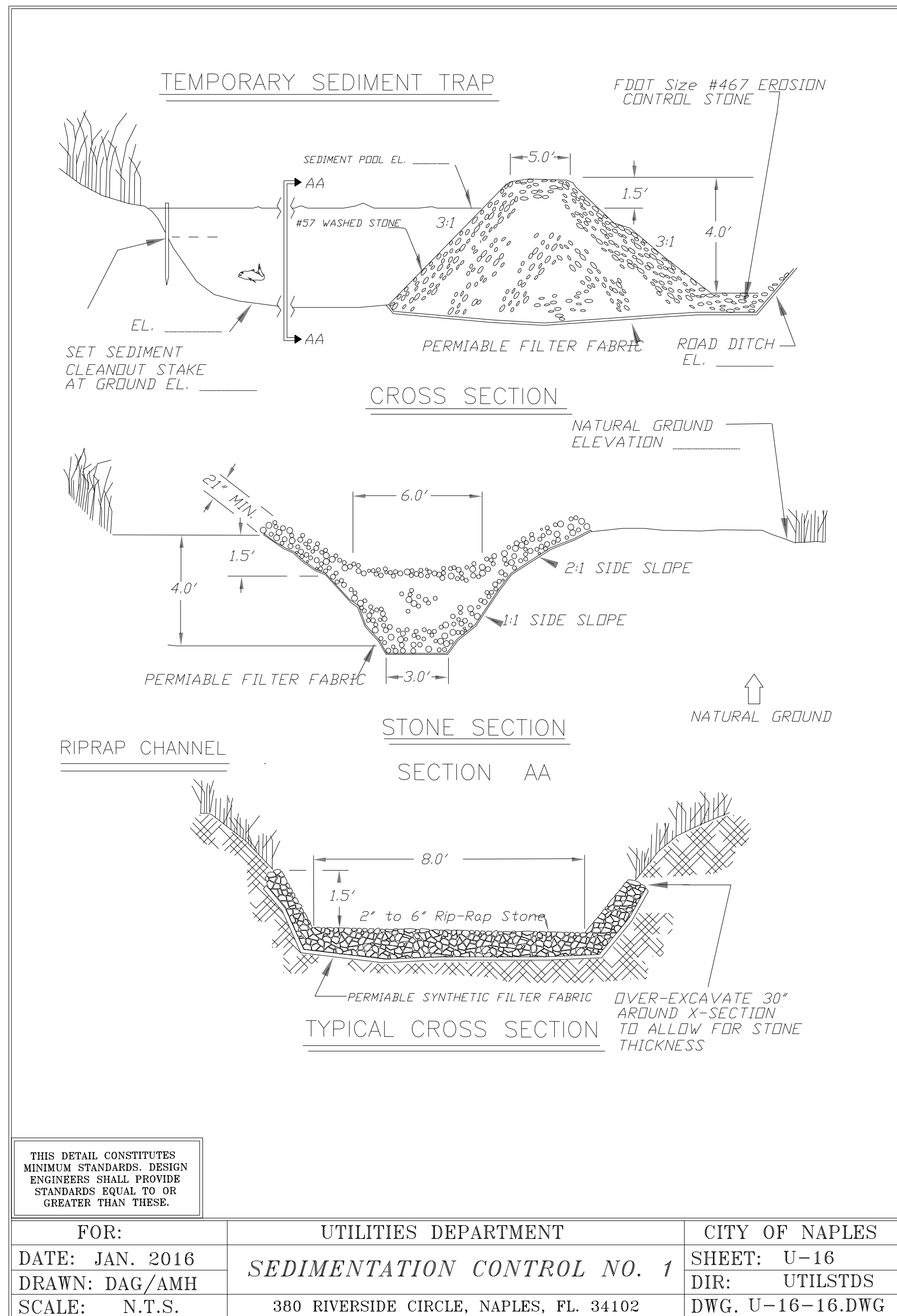
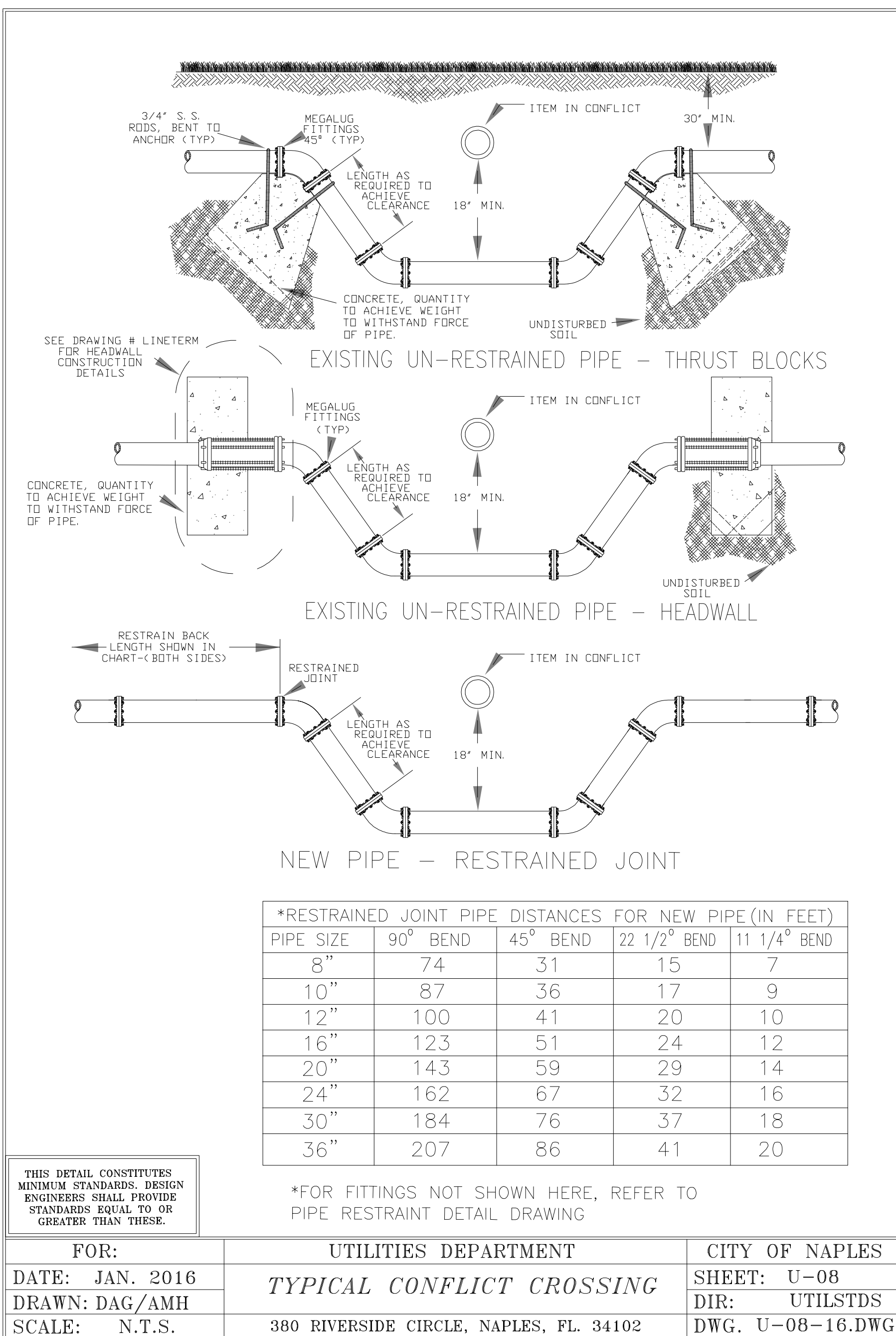
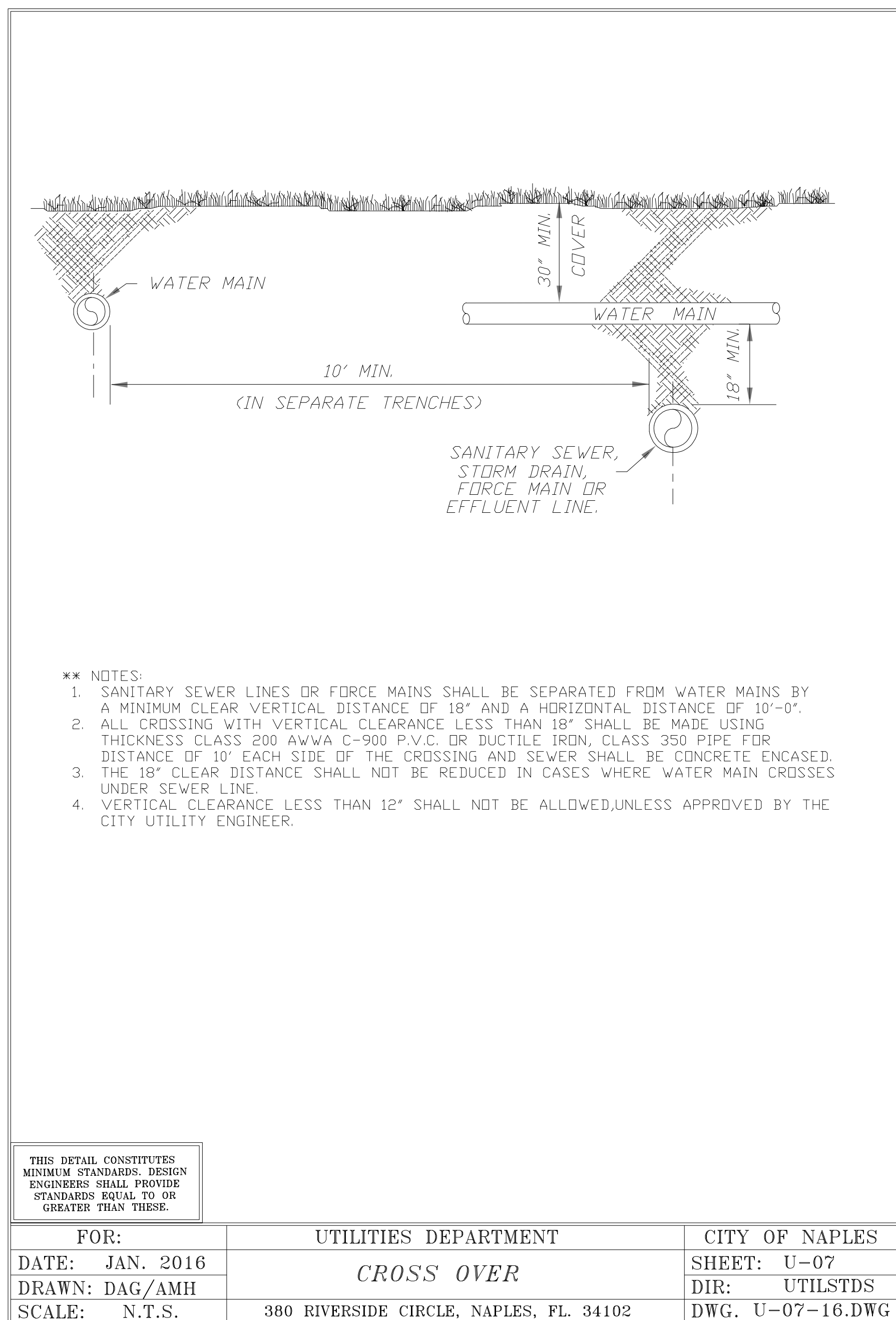
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Title		
GENERAL CONSTRUCTION DETAILS (10)		
Project No. 16-329	Scale AS NOTED	
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CD	10	0







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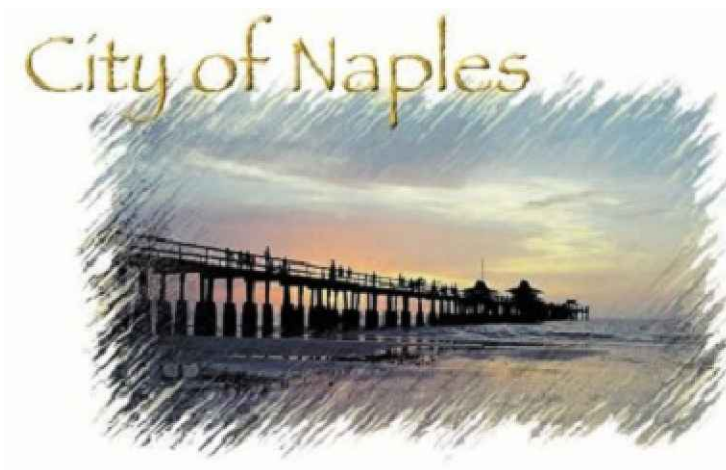
Client/Project

CITY OF NAPLES  
735 8th St S  
NAPLES, FL.

Naples Beach Restoration  
& Water Quality  
Improvement Project

File Name: 16-329\_Naples Outfalls\_60-90% Drawings\_Details-General.dwg

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Title

## GENERAL CONSTRUCTION DETAILS (12)

Project No  
16-329

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Drawing No.

Sheet

Revision

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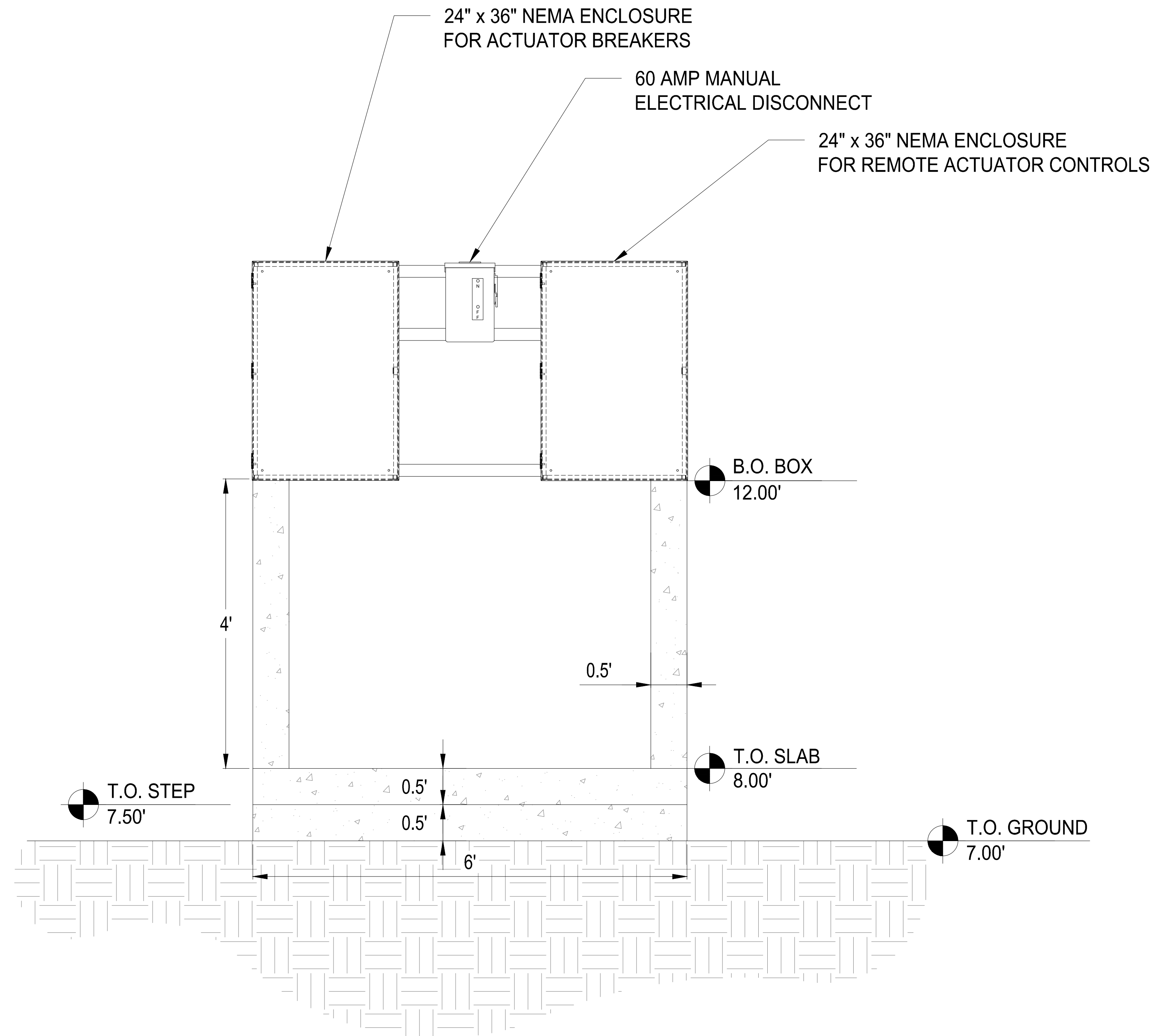
12

C









ALLIGATOR LAKE ELECTRICAL PANEL DETAIL

N.T.S.

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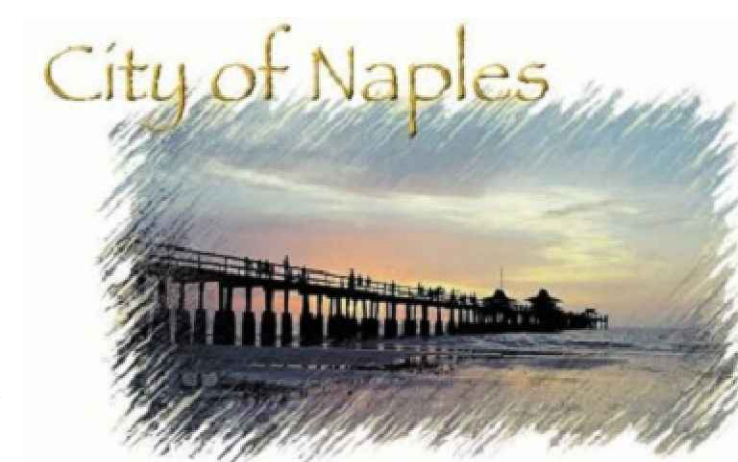
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CITY OF NAPLES  
735 8th St S  
NAPLES, FL.

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& Water Quality  
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Title

## GENERAL CONSTRUCTION DETAILS (14)

Project No.  
16-329

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