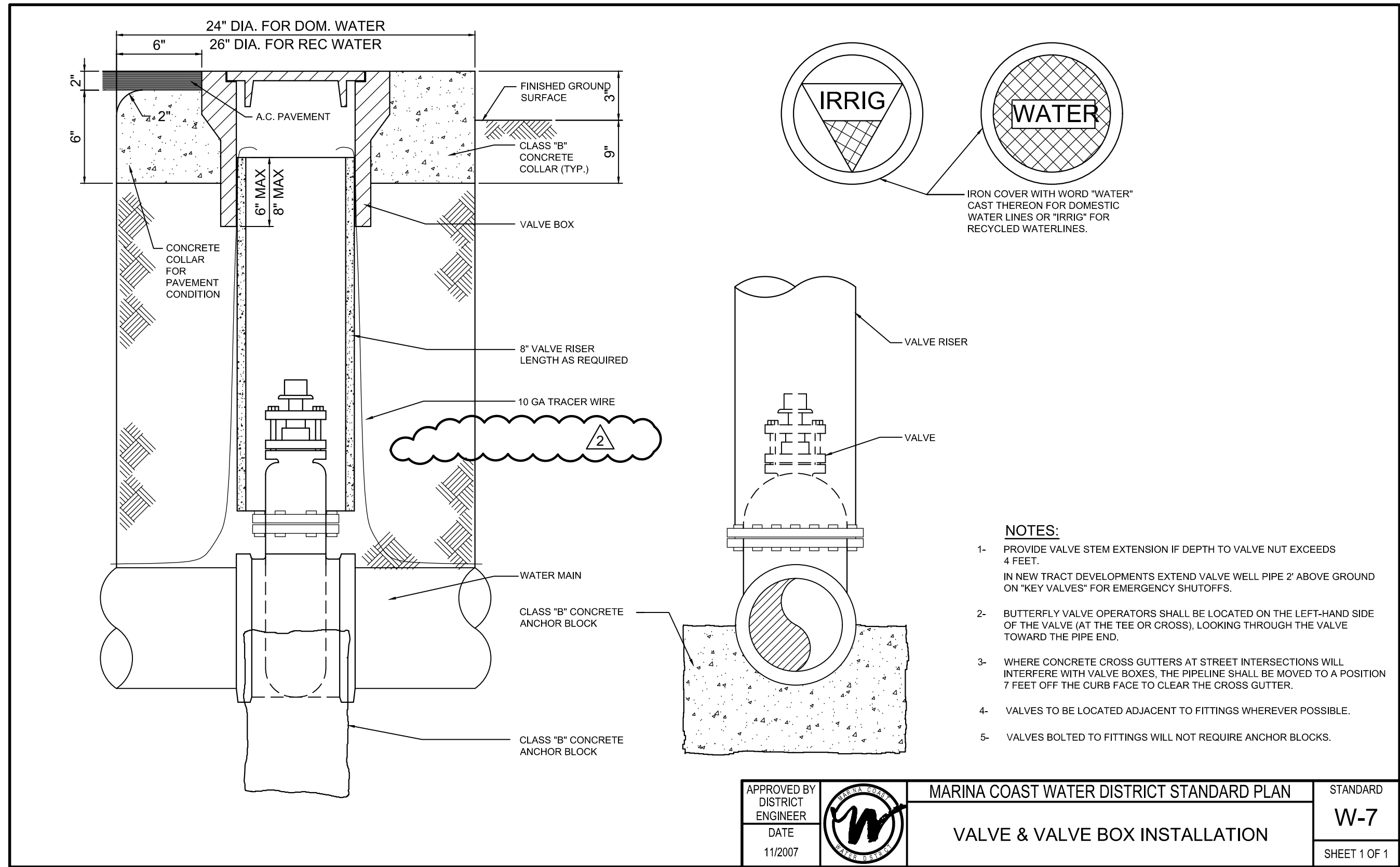
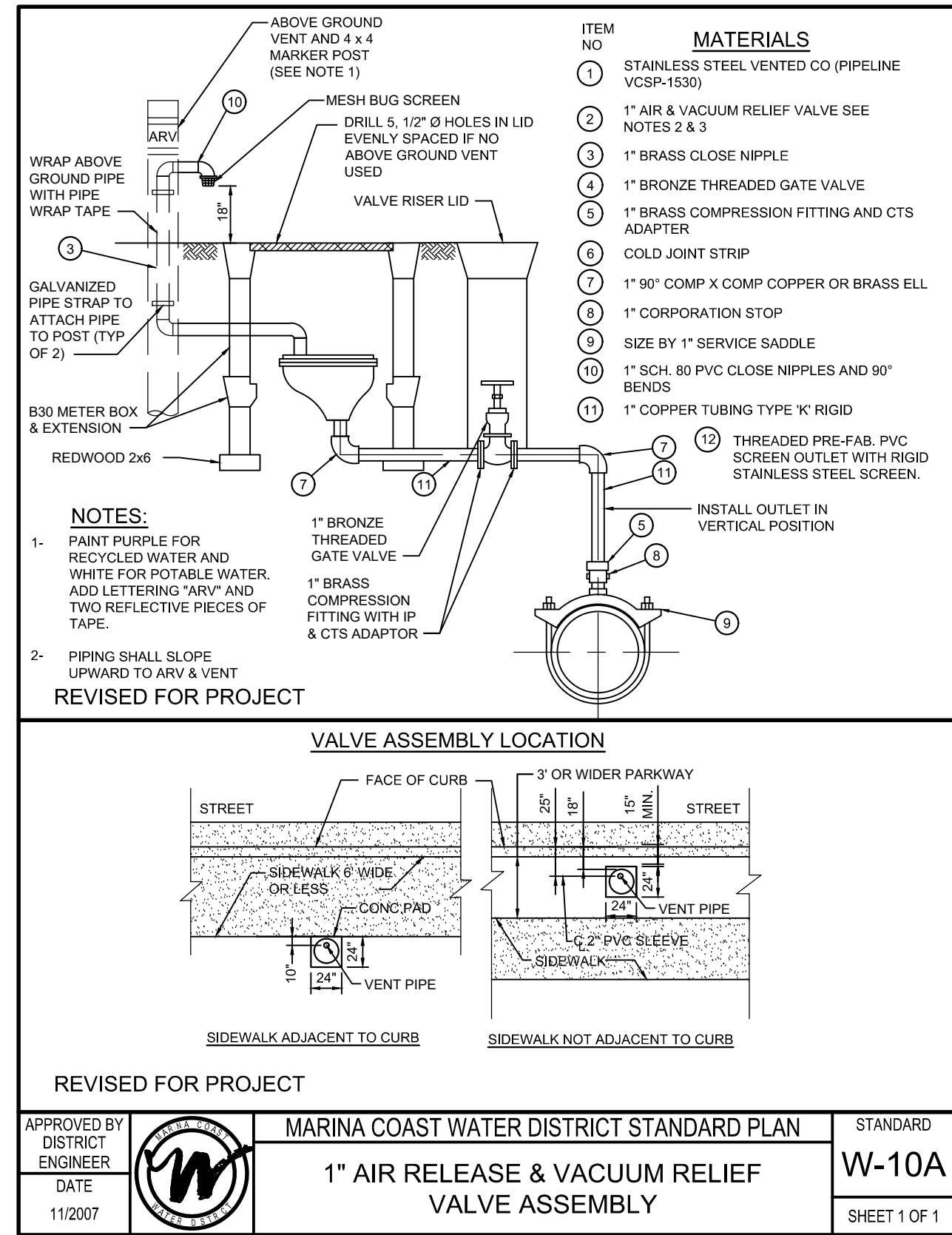


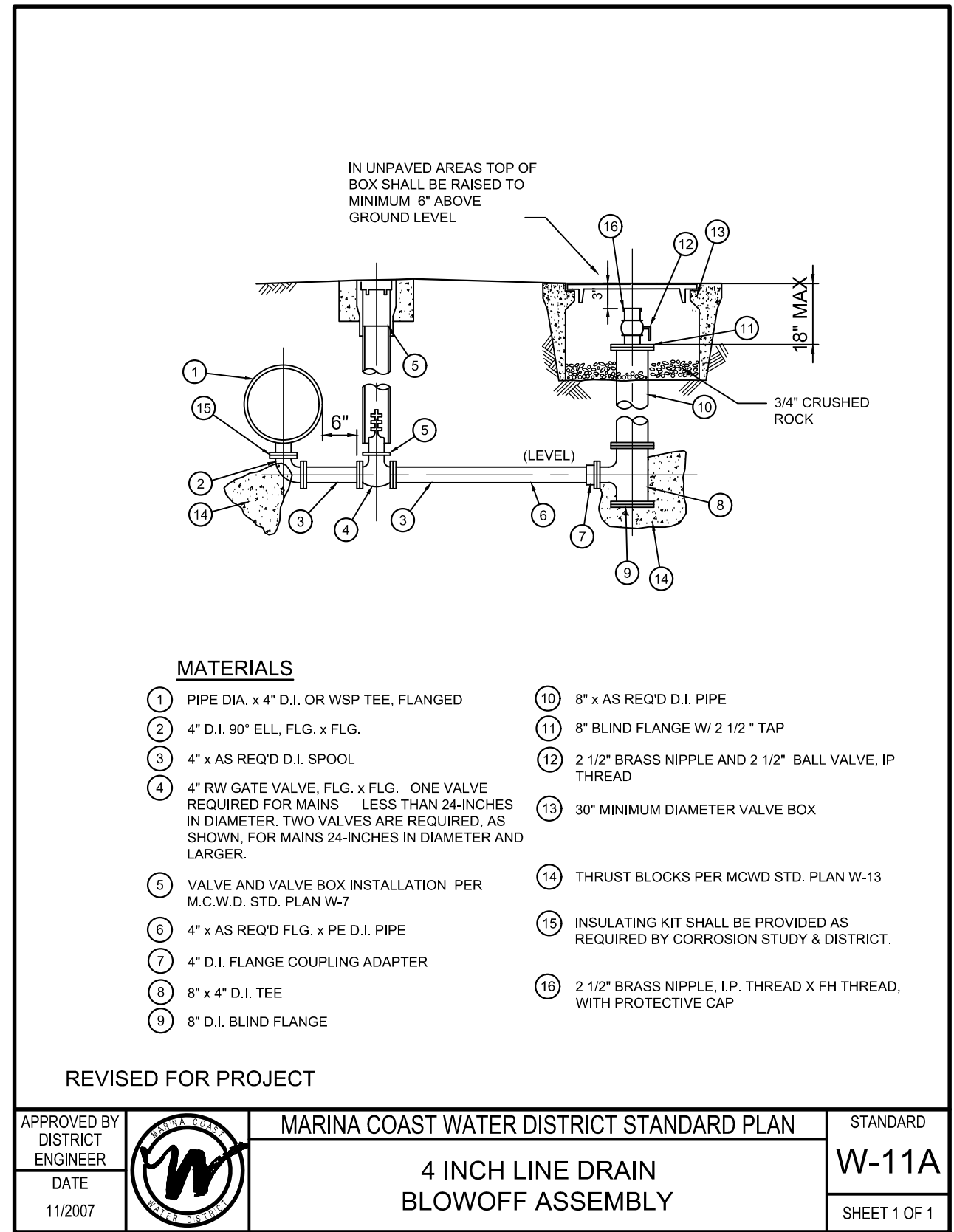
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APPROVED BY DISTRICT ENGINEER		MARINA COAST WATER DISTRICT STANDARD PLAN	STANDARD
DATE		VALVE & VALVE BOX INSTALLATION	W-7
11/2007			SHEET 1 OF 1



APPROVED BY DISTRICT ENGINEER		MARINA COAST WATER DISTRICT STANDARD PLAN	STANDARD
DATE		1\"/>	
11/2007			W-10A
			SHEET 1 OF 1



APPROVED BY DISTRICT ENGINEER		MARINA COAST WATER DISTRICT STANDARD PLAN	STANDARD
DATE		4 INCH LINE DRAIN BLOWOFF ASSEMBLY	W-11A
11/2007			SHEET 1 OF 1

FILE NAME: 7568C1000T03.dwg

PROJECT NO. 7568C10

LAST SAVED BY: bhawes

- (A) NEW WATER MAINS AND NEW SUPPLY LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST 10 FEET HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING:
- UNTREATED SEWAGE,
  - PRIMARY OR SECONDARY TREATED SEWAGE,
  - DISINFECTED SECONDARY-2.2 RECYCLED WATER (DEFINED IN SECTION 60301.220),
  - DISINFECTED SECONDARY-23 RECYCLED WATER (DEFINED IN SECTION 60301.225), AND
  - HAZARDOUS FLUIDS SUCH AS FUELS, INDUSTRIAL WASTES, AND WASTEWATER SLUDGE.
- (B) NEW WATER MAINS AND NEW SUPPLY LINES SHALL BE INSTALLED AT LEAST 4 FEET HORIZONTALLY FROM, AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING:
- DISINFECTED TERTIARY RECYCLED WATER (DEFINED IN SECTION 60301.230), AND
  - STORM DRAINAGE.
- (C) NEW SUPPLY LINES CONVEYING RAW WATER TO BE TREATED FOR DRINKING PURPOSES SHALL BE INSTALLED AT LEAST 4 FEET HORIZONTALLY FROM, AND ONE FOOT VERTICALLY BELOW, ANY WATER MAIN.
- (D) IF CROSSING A PIPELINE CONVEYING A FLUID LISTED IN SUBSECTION (A) OR (B), A NEW WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES TO AND AT LEAST ONE FOOT ABOVE THAT PIPELINE. NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN EIGHT HORIZONTAL FEET OF THE FLUID PIPELINE.
- (E) THE VERTICAL SEPARATION SPECIFIED IN SUBSECTIONS (A), (B), AND (C) IS REQUIRED ONLY WHEN THE HORIZONTAL DISTANCE BETWEEN A WATER MAIN AND PIPELINE IS LESS THAN TEN FEET.
- (F) NEW WATER MAINS SHALL NOT BE INSTALLED WITHIN 100 HORIZONTAL FEET OF THE NEAREST EDGE OF ANY SANITARY LANDFILL, WASTEWATER DISPOSAL POND, OR HAZARDOUS WASTE DISPOSAL SITE, OR WITHIN 25 HORIZONTAL FEET OF THE NEAREST EDGE OF ANY CESSPOOL, SEPTIC TANK, SEWAGE LEACH FIELD, SEEPAGE PIT, UNDERGROUND HAZARDOUS MATERIAL STORAGE TANK, OR GROUNDWATER RECHARGE PROJECT SITE.
- (G) THE MINIMUM SEPARATION DISTANCES SET FORTH IN THIS SECTION SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH PIPE BARREL.
- (H) WITH STATE BOARD APPROVAL, NEWLY INSTALLED WATER MAINS MAY BE EXEMPT FROM THE SEPARATION DISTANCES IN THIS SECTION, EXCEPT SUBSECTION (F), IF THE NEWLY INSTALLED MAIN IS:
- LESS THAN 1320 LINEAR FEET,
  - REPLACING AN EXISTING MAIN, INSTALLED IN THE SAME LOCATION, AND HAS A DIAMETER NO GREATER THAN SIX INCHES MORE THAN THE DIAMETER OF THE MAIN IT IS REPLACING, AND
  - INSTALLED IN A MANNER THAT MINIMIZES THE POTENTIAL FOR CONTAMINATION, INCLUDING, BUT NOT LIMITED TO:
- SLEEVING THE NEWLY INSTALLED MAIN, OR
  - UTILIZING UPGRADED PIPING MATERIAL.

### WATER MAIN SEPARATION REQUIREMENTS

State Water Resources Control Board  
Division of Drinking Water

December 14, 2017

**Separation of Water Mains and Non-Potable Pipelines – Requests for Alternatives to the Waterworks Standards**

Dear Public Water System Owners and Operators:

This letter supersedes prior guidance regarding the separation of water mains and non-potable pipelines, including Guidance Memo 2003-02, dated October 16, 2003. Guidance Memo 2003-02 and previous versions should be discarded.

The California Waterworks Standards (California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572) establish criteria for the separation of new water mains from non-potable pipelines. Public water systems should ensure that these distances are met, whenever feasible, for all new construction. The Division of Drinking Water (Division) recognizes that certain conditions may call for the installation of pipelines with less separation distance than what is required by the regulations. In these situations, the water system may propose an alternative pursuant to CCR, Title 22, Section 64551.100:

**§64551.100. Waivers and Alternatives.**

(a) A water system that proposes to use an alternative to a requirement in this chapter shall:

- Demonstrate to the State Board that the proposed alternative would provide at least the same level of protection to public health; and
- Obtain written approval from the State Board prior to implementation of the alternative.

In proposing an alternative to the Waterworks Standards, water systems should observe the following:

- The water system must accept responsibility for the adequacy of the proposed alternative. The Division may require a written statement, signed by the water system's management, certifying that the proposed alternative adequately protects public health.
- In most circumstances, the Division cannot offer technical assistance with pipeline or infrastructure design. The water system proposing an alternative must demonstrate adequate expertise on the part of its own personnel or its hired consultants.
- The water system should describe how the proposed alternative provides at least the same level of protection to public health as the minimum separation distances prescribed in the regulation.
- While exorbitant cost may present a hardship in meeting the regulatory separation requirements and can be considered, public health must be prioritized above construction costs in determining an acceptable alternative.

Felicia Mancini, Chief | Thomas Howarth, Director

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

### WATER MAIN SEPARATION REQUIREMENTS

Public Water Systems -2- December 14, 2017

The Division has prepared an application checklist that may be used by water systems in proposing an alternative to the Waterworks Standards (Enclosure). The purpose of the checklist is to ensure that the Division has sufficient information to evaluate the proposal. **The water system may submit the information in a different format from the checklist, provided that the submittal provides adequate information.** The checklist may also be used to provide written certification that the proposed alternative adequately protects public health.

If you have any questions, please contact the Division office that oversees your water system.

Sincerely,

Darrin Polhemus, P.E.  
Deputy Director  
Division of Drinking Water

Enclosure: Waterworks Standards Main Separation Alternative Request Example Checklist

### WATER MAIN SEPARATION REQUIREMENTS

DESIGNED	JPM
DRAWN	TLR
CHECKED	
DATE	OCTOBER 2019
REV	DESCRIPTION
1	12-09-19 JPM CHANGED PER ADDENDUM NO. 3
2	11-15-19 JPM CHANGED PER ADDENDUM NO. 1



Digitally signed by Jonathan P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2019.12.11 09:18:54-0800



Marina Coast Water District

REGIONAL URBAN WATER AUGMENTATION PROJECT  
RECYCLED WATER DISTRIBUTION MAINS  
TYPICALS  
AGENCY TYPICAL DETAILS - 3

VERIFY SCALES	JOB NO. 7568C.10
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0 1"	SHEET NO. 8 OF 66
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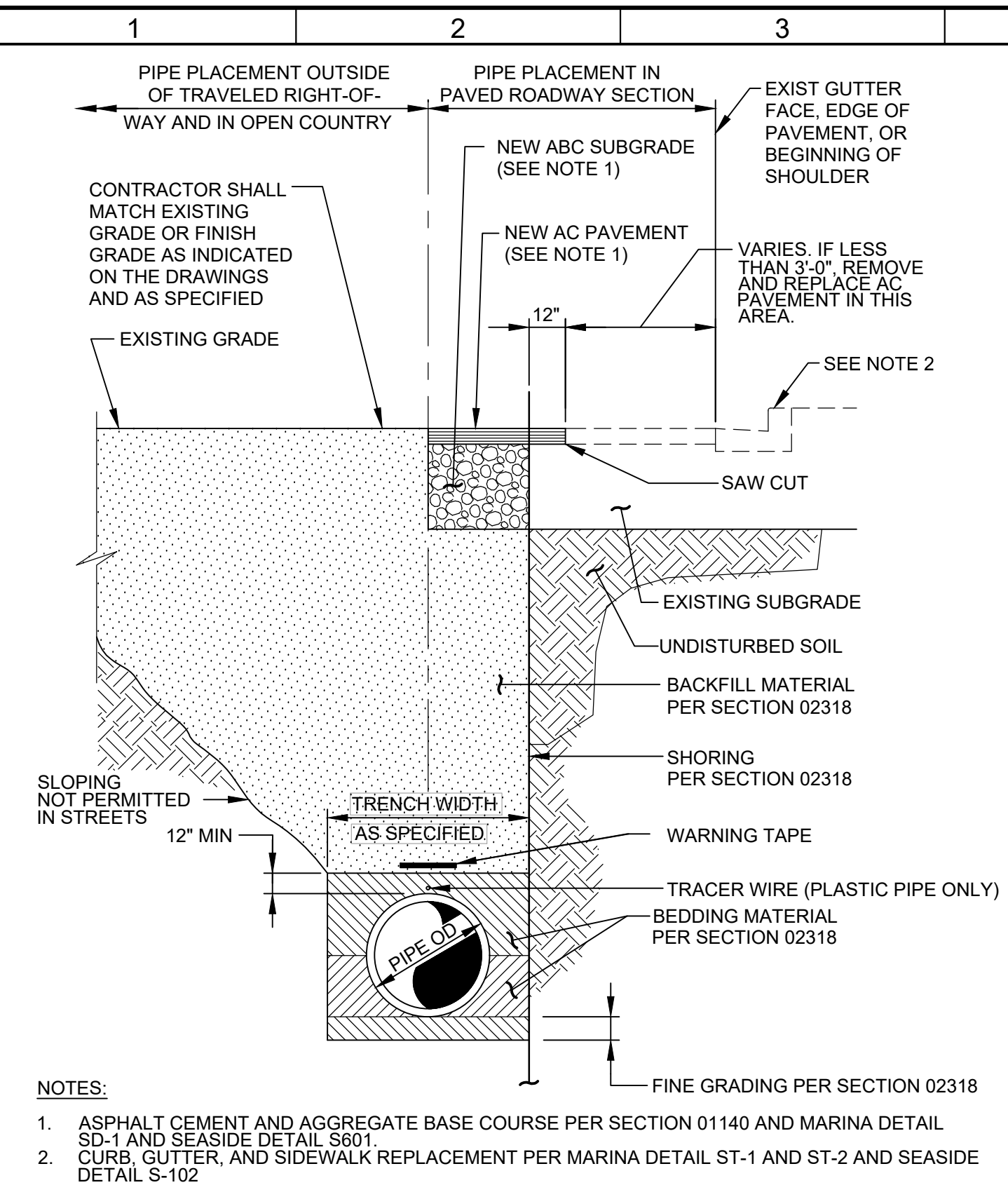


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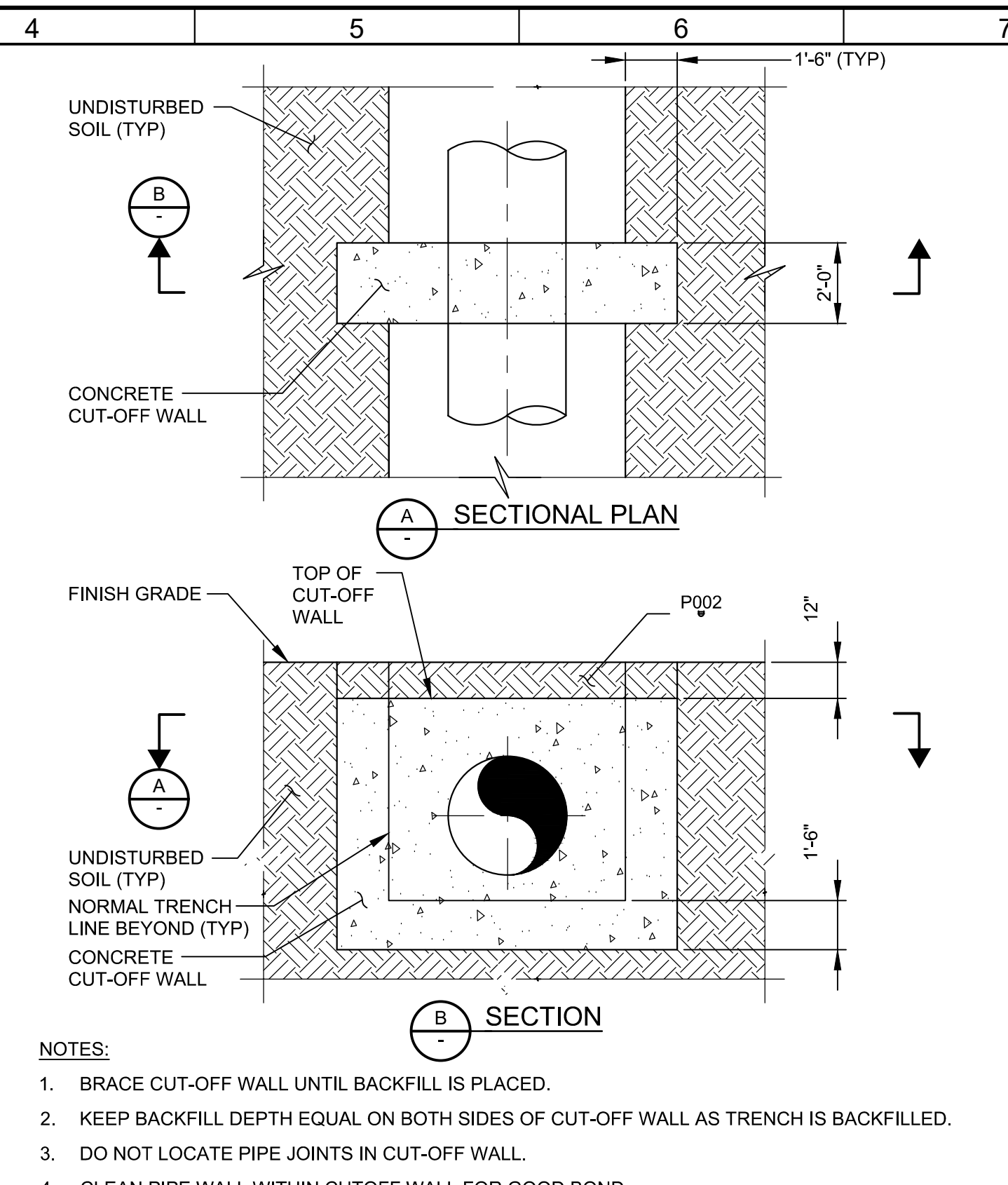
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PROJECT NO. 7568C10

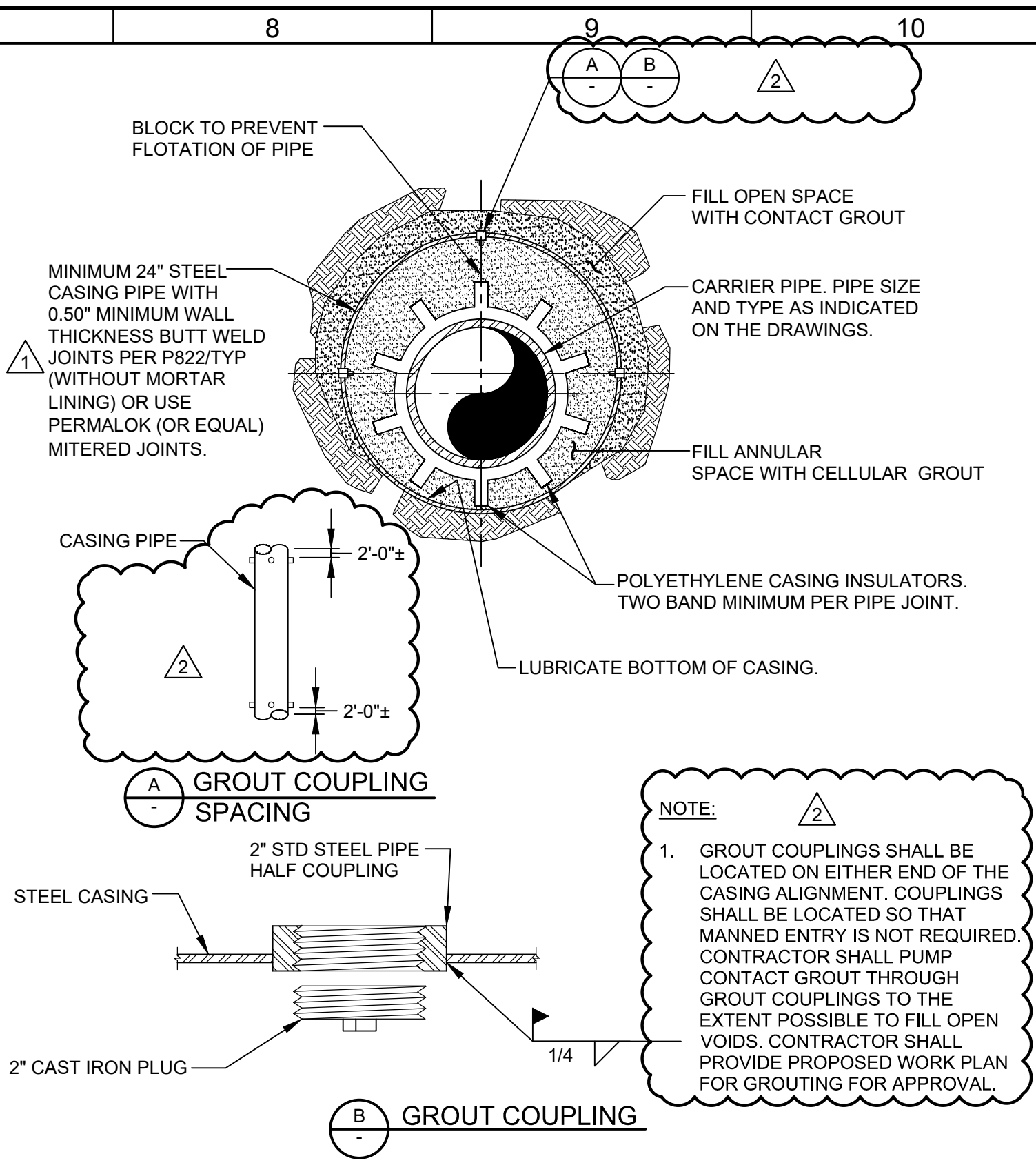
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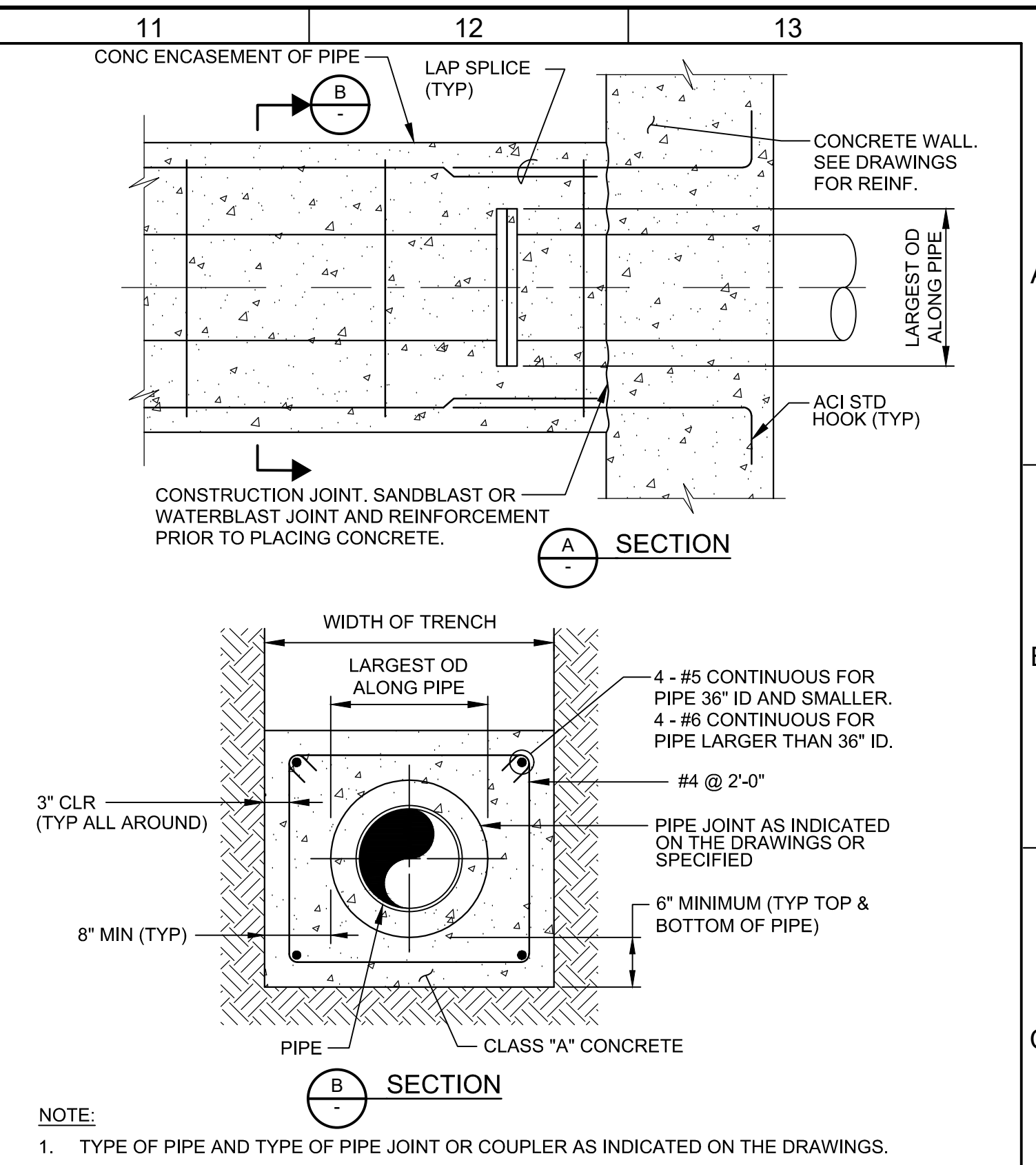
**P002 PIPE INSTALLATION AND PAVEMENT REPLACEMENT**  
TYP



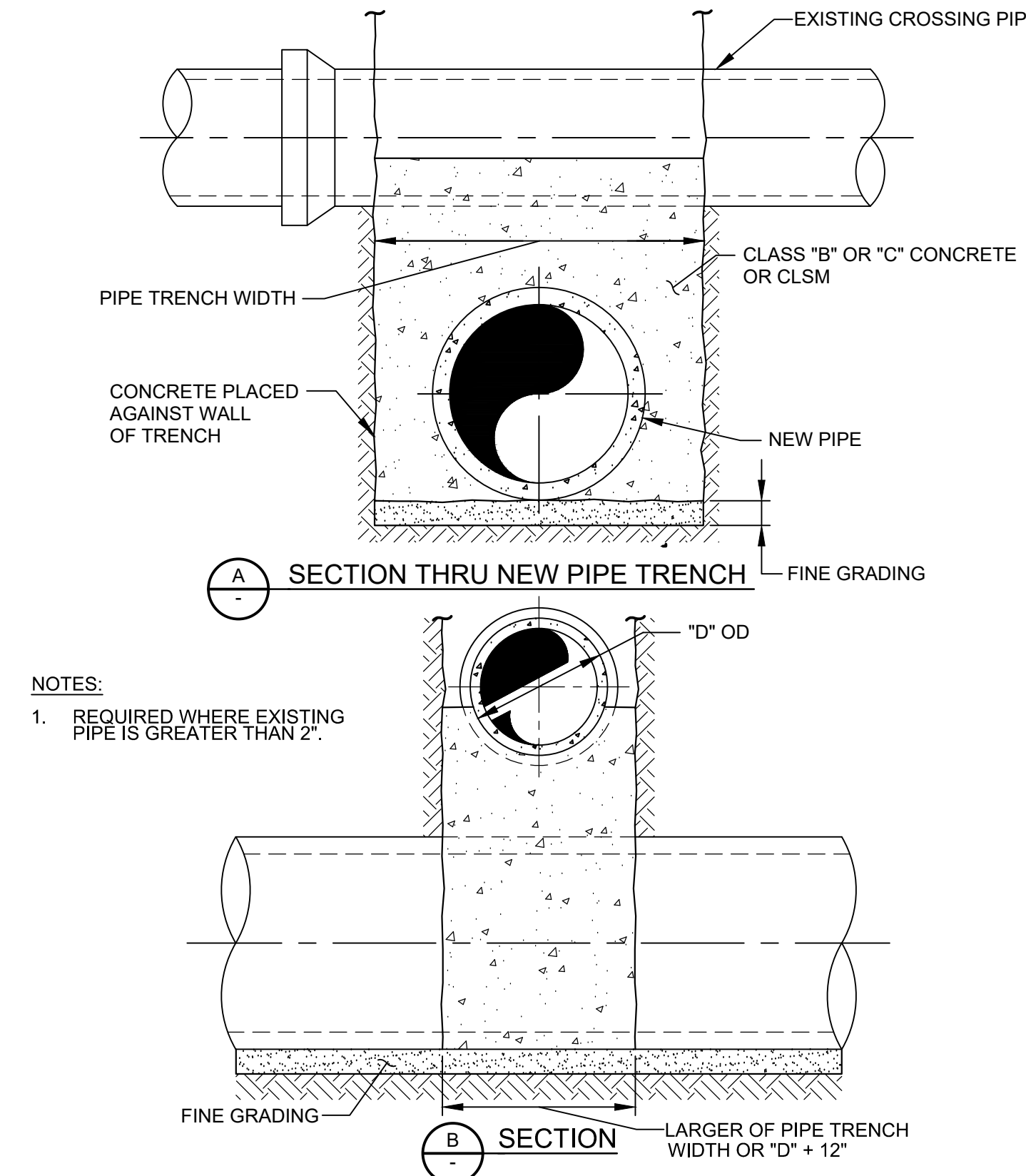
**P014 PIPE TRENCH CONCRETE CUT-OFF WALL**  
TYP



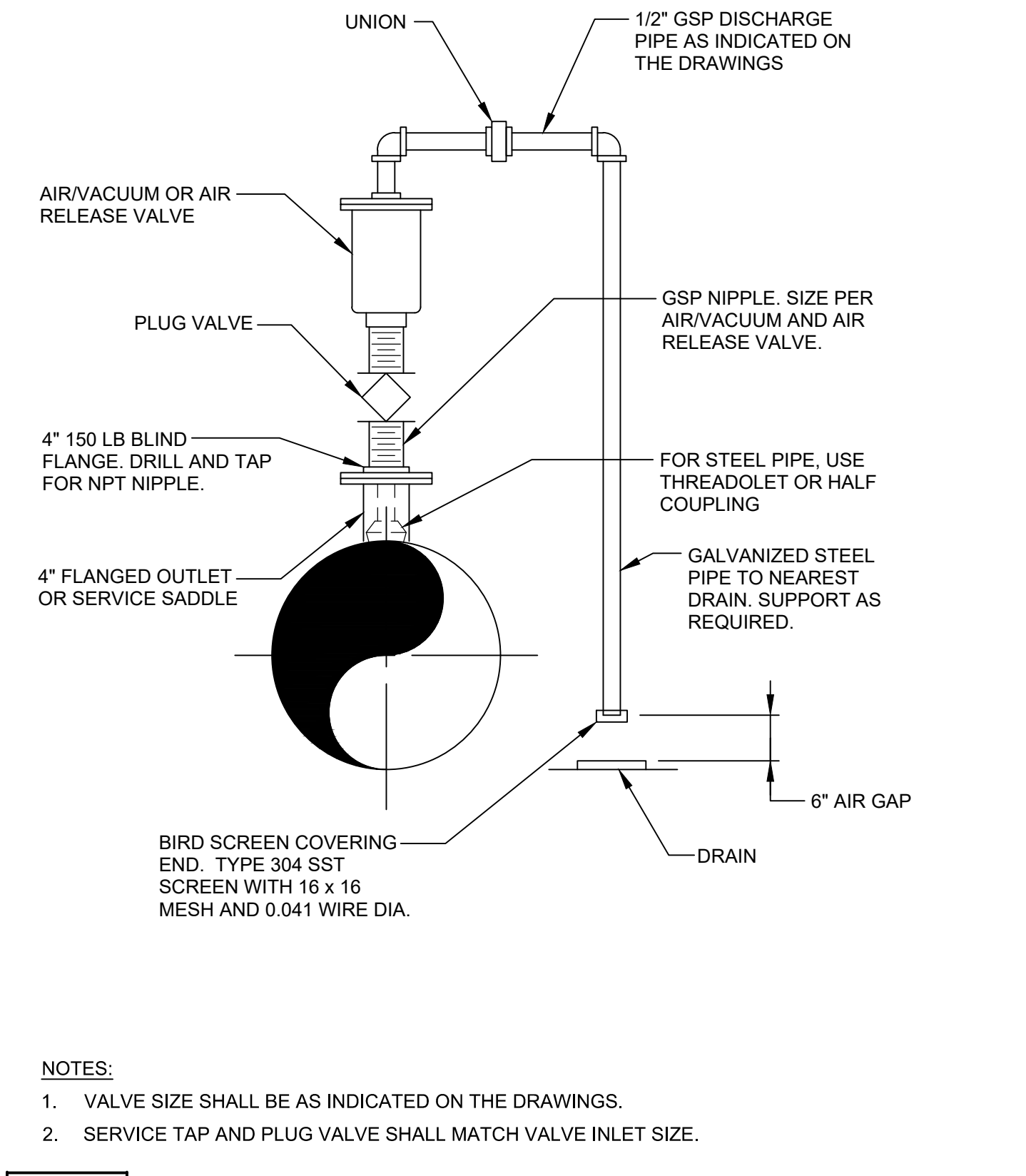
**P030 PIPE IN STEEL CASING - GROUT FILL**  
TYP



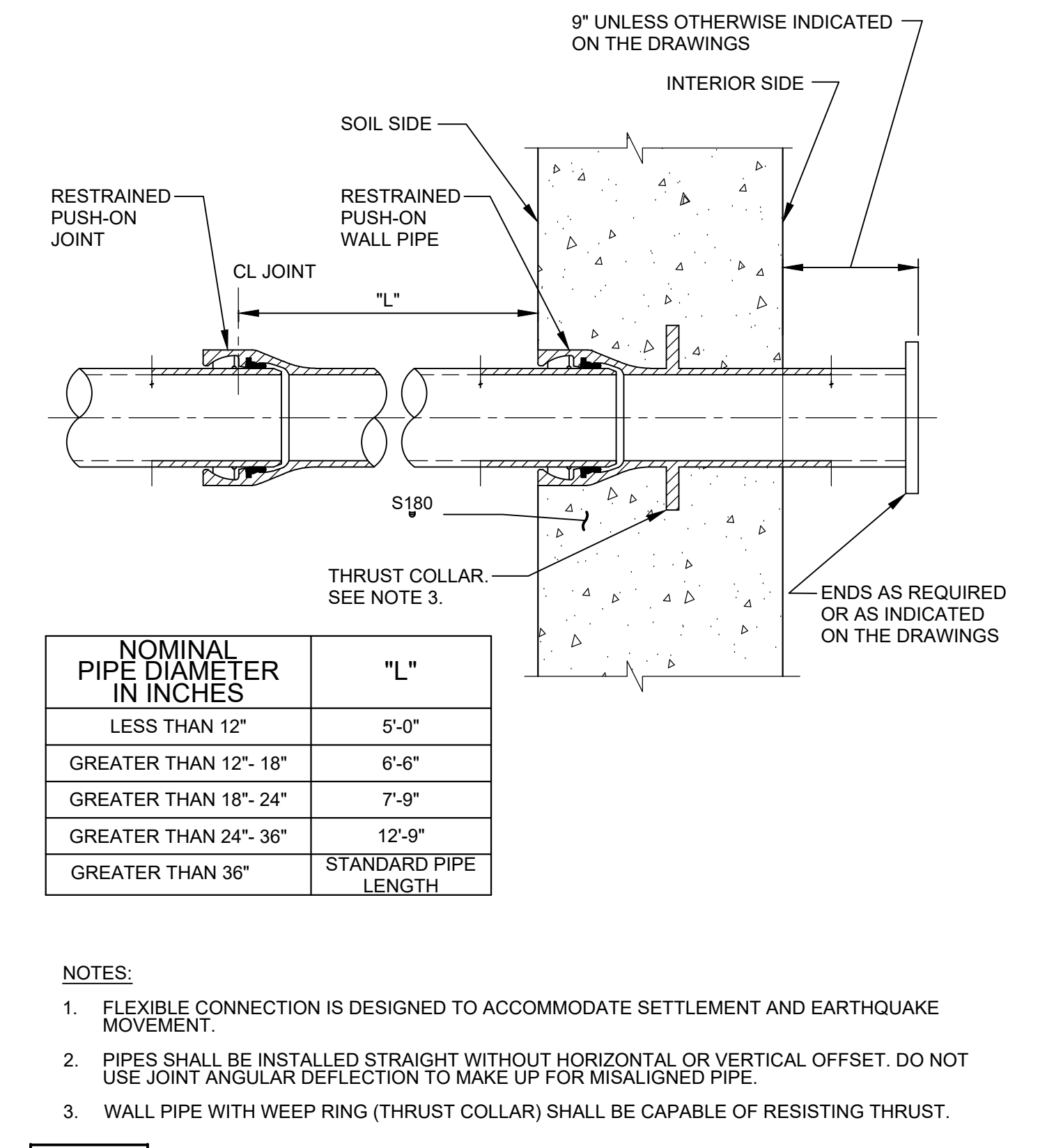
**P040 CONCRETE ENCASEMENT OF PIPE**  
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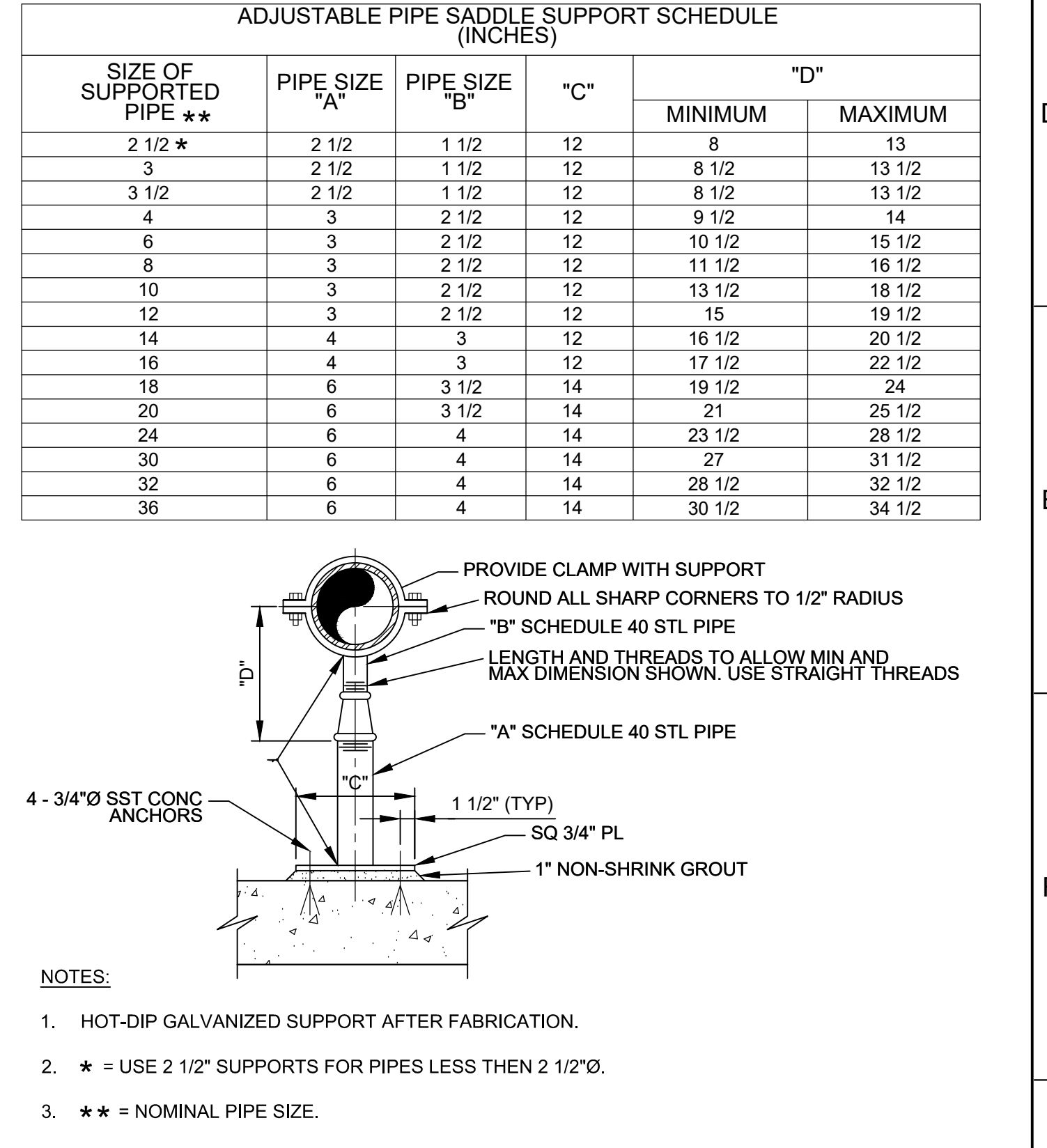
**P048 PIPE SUPPORT ACROSS TRENCH**  
TYP



**P240 AIR VACUUM AND AIR RELEASE FOR 3" AND SMALLER VALVE ASSEMBLY**  
TYP



**P342 RESTRAINED DIP FLEXIBLE CONNECTION AT WALL PENETRATION**  
TYP



**P624 ADJUSTABLE PIPE SUPPORT**  
TYP

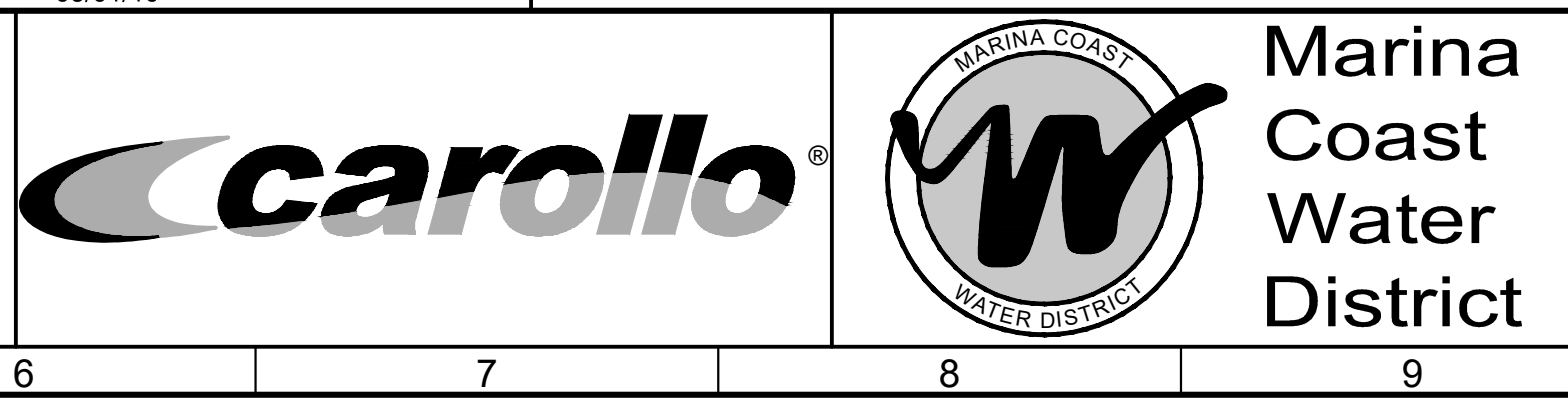
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11-15-19	JPM		CHANGED PER ADDENDUM NO. 1

DESIGNED	DRAWN	CHECKED	DATE
JPM	TLR		OCTOBER 2019



Digitally signed by Jonathan P. Marshall  
Contact Info: Carollo Engineers, Inc  
Date: 2019.12.11 09:18:04-0800

*Jonathan P. Marshall*



REGIONAL URBAN WATER AUGMENTATION PROJECT

RECYCLED WATER DISTRIBUTION MAINS

TYPICAL

PIPING TYPICAL DETAILS - 1

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 7568C.10

DRAWING NO. TP01

SHEET NO. 11 OF 66

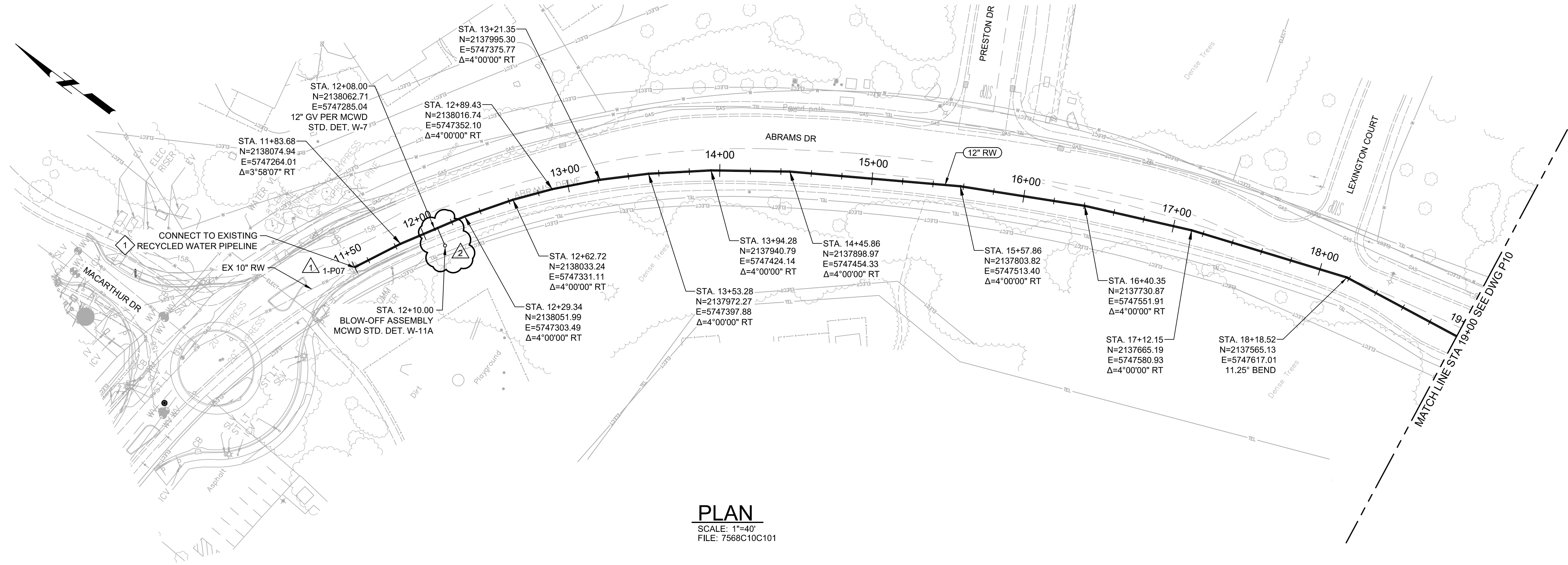


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PROJECT NO. 7568C10

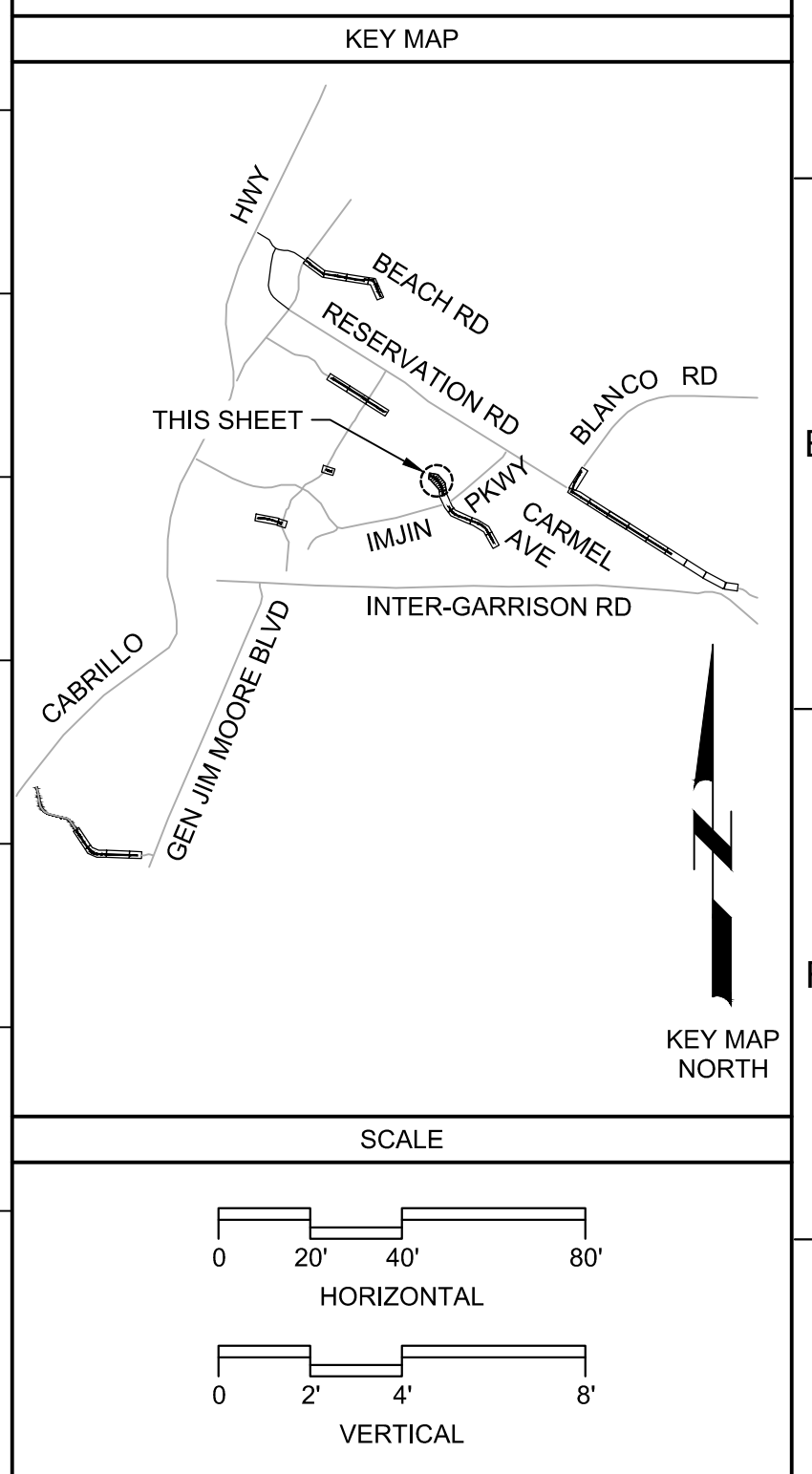
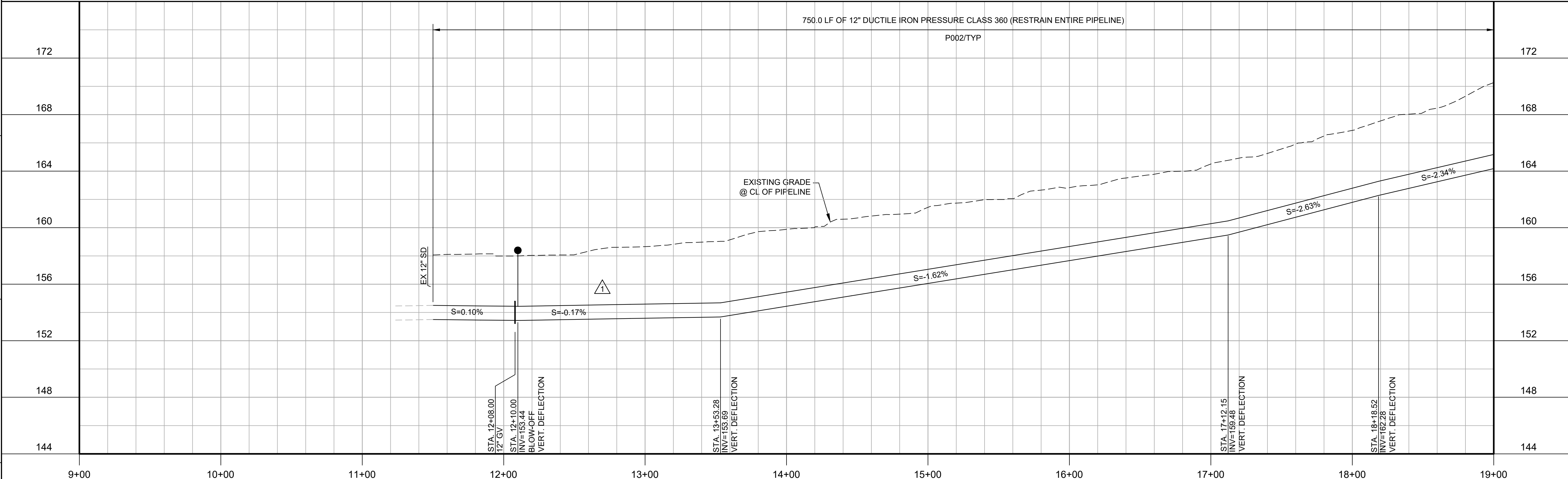
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- GENERAL NOTES:**
- CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SPECIFICALLY CALLED OUT TO BE LESS THAN 4'.
- KEY NOTES:**
- APPROXIMATE TIE-IN LOCATION. EXISTING PIPELINE IS APPROXIMATELY 3'-6" DEEP. CONTRACTOR TO POTHOLE TO VERIFY. REMOVE EXISTING PIPE CAP AND CONNECT TO THE EXISTING PIPE WITH 10" X 12" MECHANICAL JOINT REDUCER WITH MECHANICAL WEDGE ACTION JOINT RESTRAINTS.



Know what's below.  
Call before you dig.



REV	DATE	BY	DESCRIPTION
1	12-09-19	JPM	CHANGED PER ADDENDUM NO. 3
2	11-15-19	JPM	CHANGED PER ADDENDUM NO. 1

DESIGNED  
JPM/KMM

DRAWN  
AL/BWH

CHECKED

DATE  
OCTOBER 2019



Digitally signed by Jonathan P. Marshall  
Contact Info: Carollo Engineers, Inc.  
Date: 2019.12.11 09:18:04-0800



**Marina Coast Water District**

**REGIONAL URBAN WATER AUGMENTATION PROJECT**

**RECYCLED WATER DISTRIBUTION MAINS**

CIVIL DISTRIBUTION MAIN  
**ABRAMS DRIVE**  
**STA 11+50 TO 19+00**

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 7568C.10 DRAWING NO. <b>P09</b> SHEET NO. 31 OF 66
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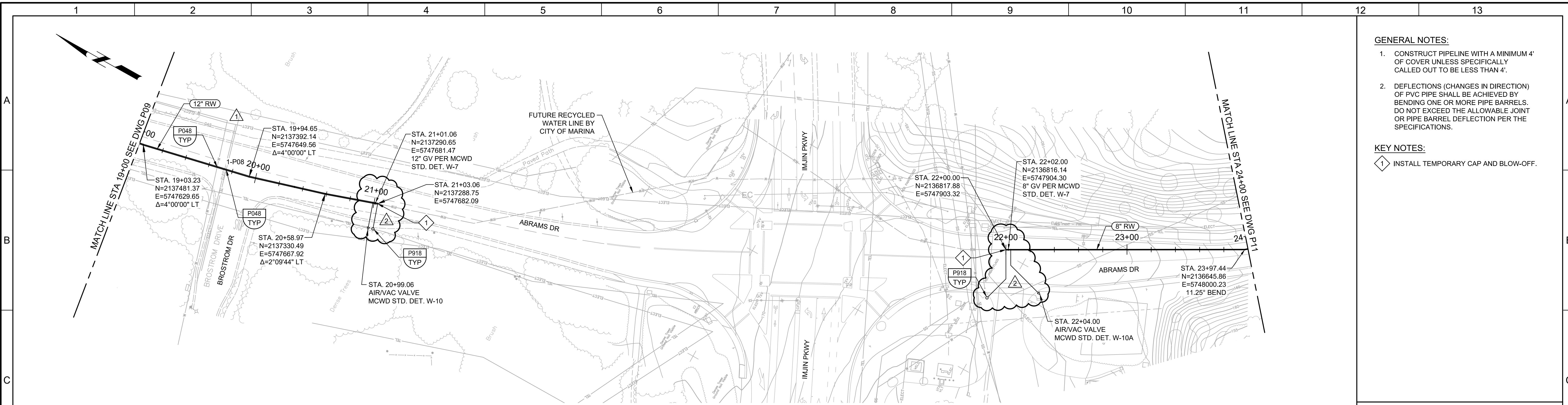


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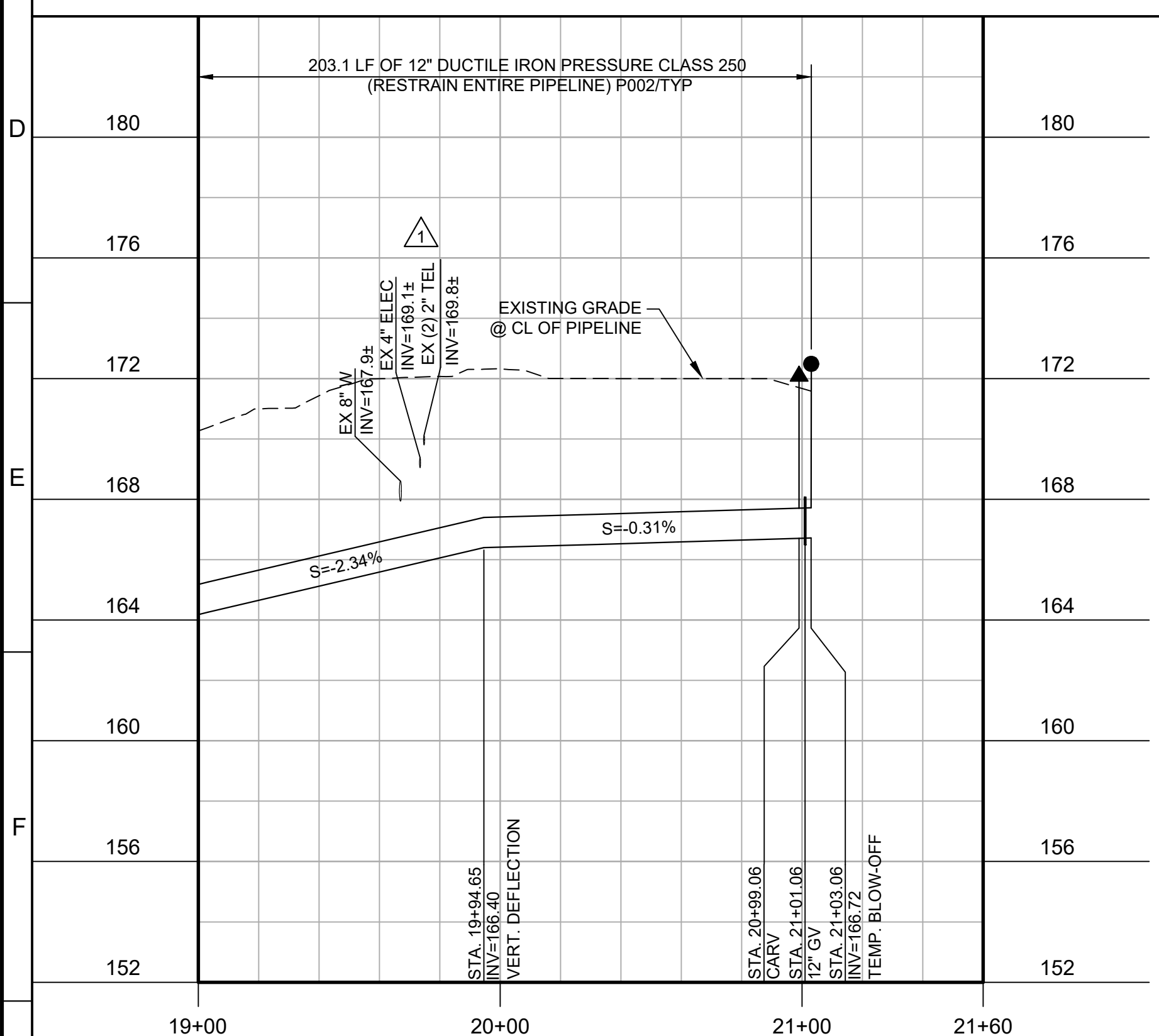
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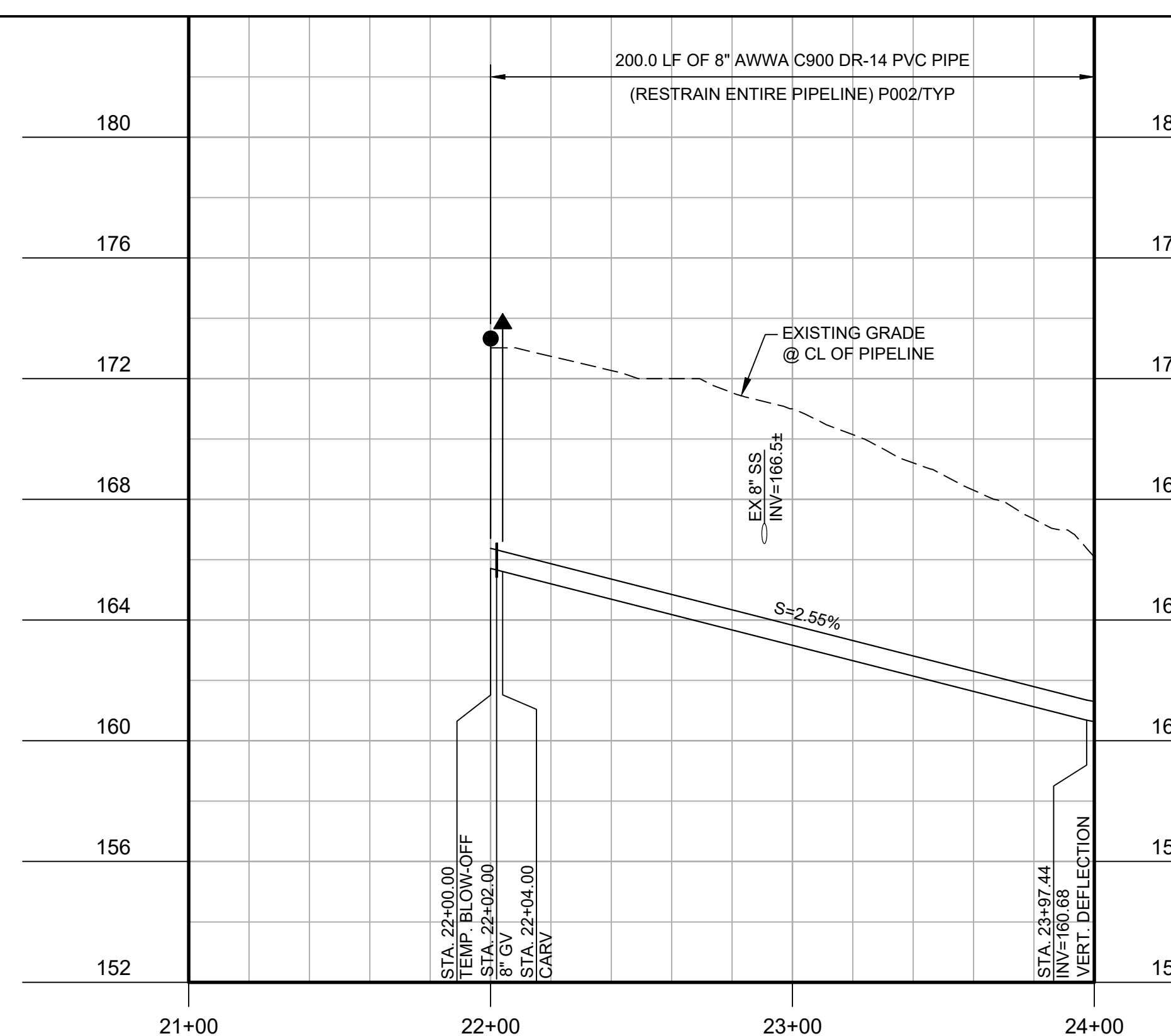
**PLAN**  
 SCALE: 1"=40'  
 FILE: 7568C10C101

- GENERAL NOTES:**
- CONSTRUCT PIPELINE WITH A MINIMUM 4' OF COVER UNLESS SPECIFICALLY CALLED OUT TO BE LESS THAN 4'.
  - DEFLECTIONS (CHANGES IN DIRECTION) OF PVC PIPE SHALL BE ACHIEVED BY BENDING ONE OR MORE PIPE BARRELS. DO NOT EXCEED THE ALLOWABLE JOINT OR PIPE BARREL DEFLECTION PER THE SPECIFICATIONS.

- KEY NOTES:**
- 1 INSTALL TEMPORARY CAP AND BLOW-OFF.



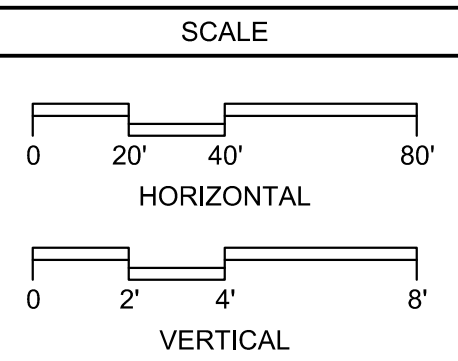
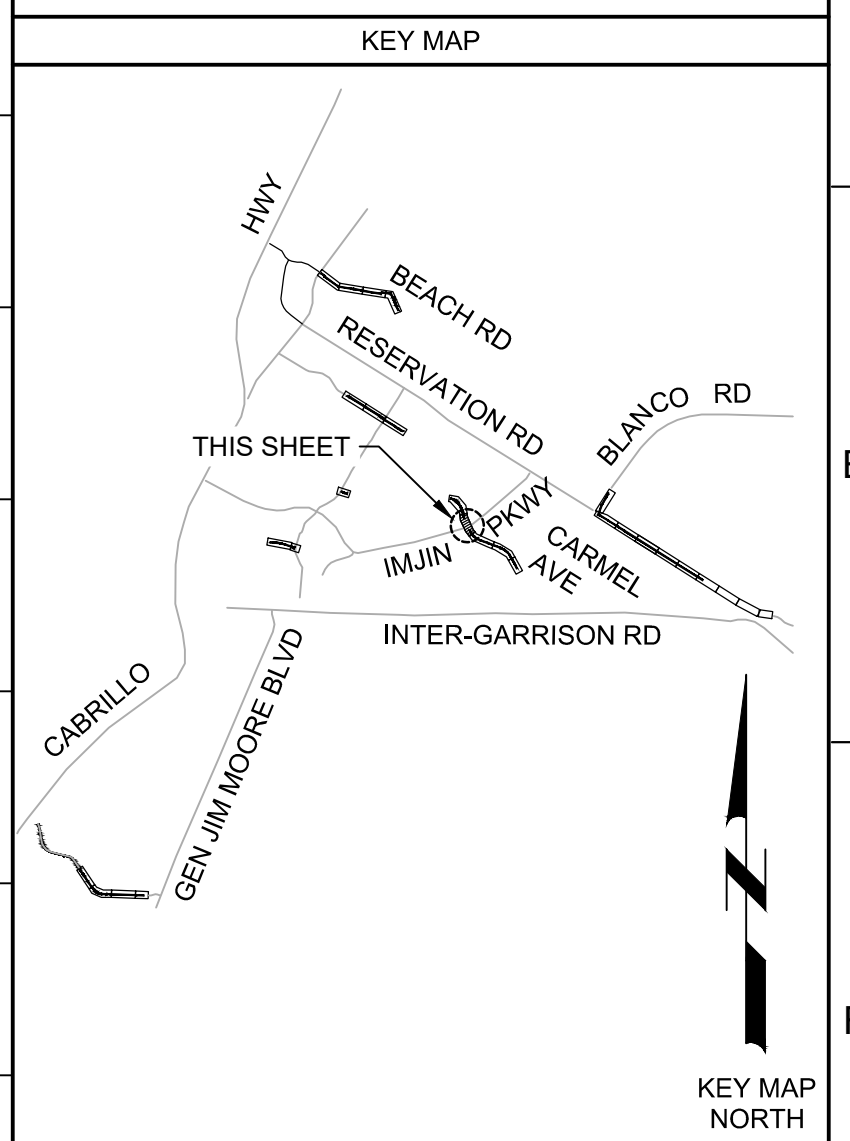
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 HORIZ SCALE: 1"=40'  
 VERT SCALE: 1"=4'  
 FILE: 7568C10C101



**PROFILE**  
 HORIZ SCALE: 1"=40'  
 VERT SCALE: 1"=4'  
 FILE: 7568C10C101



Know what's below.  
 Call before you dig.



REV	DATE	BY	DESCRIPTION
1	12-09-19	JPM	CHANGED PER ADDENDUM NO. 3
2	11-15-19	JPM	CHANGED PER ADDENDUM NO. 1

DESIGNED	DRAWN	CHECKED	DATE
JPM/KMM	AL/BWH		OCTOBER 2019



Digitally signed by Jonathan P. Marshall  
 Contact Info: Carollo Engineers, Inc.  
 Date: 2019.12.11 09:18:04-0800  
*Jonathan P. Marshall*



**Marina Coast Water District**

**REGIONAL URBAN WATER AUGMENTATION PROJECT**  
**RECYCLED WATER DISTRIBUTION MAINS**  
 CIVIL DISTRIBUTION MAIN  
**ABRAMS DRIVE**  
**STA 19+00 TO 21+03.06 AND STA 22+00 TO 24+00**

VERIFY SCALES	JOB NO. 7568C.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. P10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 32 OF 66