

**DOCUMENT 00 90 01 – ADDENDUM NO. 1**

PROJECT: Bayer Street Water Main  
CIP NO.: MW-2515  
FROM: District Engineer  
Marina Coast Water District  
920 2<sup>nd</sup> Avenue, Suite A  
Marina, CA 93933

TO: **Prospective Bidders**

This Addendum forms a part of the Bidding Documents and will be incorporated into Contract Documents. Insofar as the Specifications or Drawings or both are inconsistent, this Addendum governs. Acknowledge receipt of the Addendum by inserting its number in Document 00 41 00 – Bid Form. **FAILURE TO DO SO WILL SUBJECT BID TO DISQUALIFICATION.**

**PART 1 – BIDDER INFORMATION ITEMS**

1. The sign-in sheet from the non-mandatory pre-bid meeting are attached.
2. The project was designed under CIP # MW-0322, but construction funding is under CIP # MW-2515.

**PART 2 - CHANGES TO PROJECT MANUAL**

1. None.

**PART 3 - CHANGES TO DRAWINGS**

1. Detail F on Sheet C3.2 is revised to reflect a minimum pavement section of 4-inches AC over 8-inches Class 2 AB.

**PART 4 – QUESTIONS RECEIVED**

- Q1 Does the bid bond need to be submitted in advance of the bid or with the bid?  
A1 Submit the bid bond with the bid.
- Q2 Can the District verify the pavement thickness for the trench repair?  
A2 The City's encroachment permit requires a minimum of 4-inch AC over 8-inches AB. Use that section for bidding.
- Q3 For reconnecting meter service laterals, are we splicing to the existing lateral?  
A3 No, new laterals are to be installed from the new main to the existing meters.
- Q4 What is the Engineer's Estimate for the Project?  
A4 The Engineer's Estimate is \$2,085,300.

Q5 Which permits does the allowance cover?

A5 The allowance is for the City encroachment permit, which includes the cost of the City inspector.

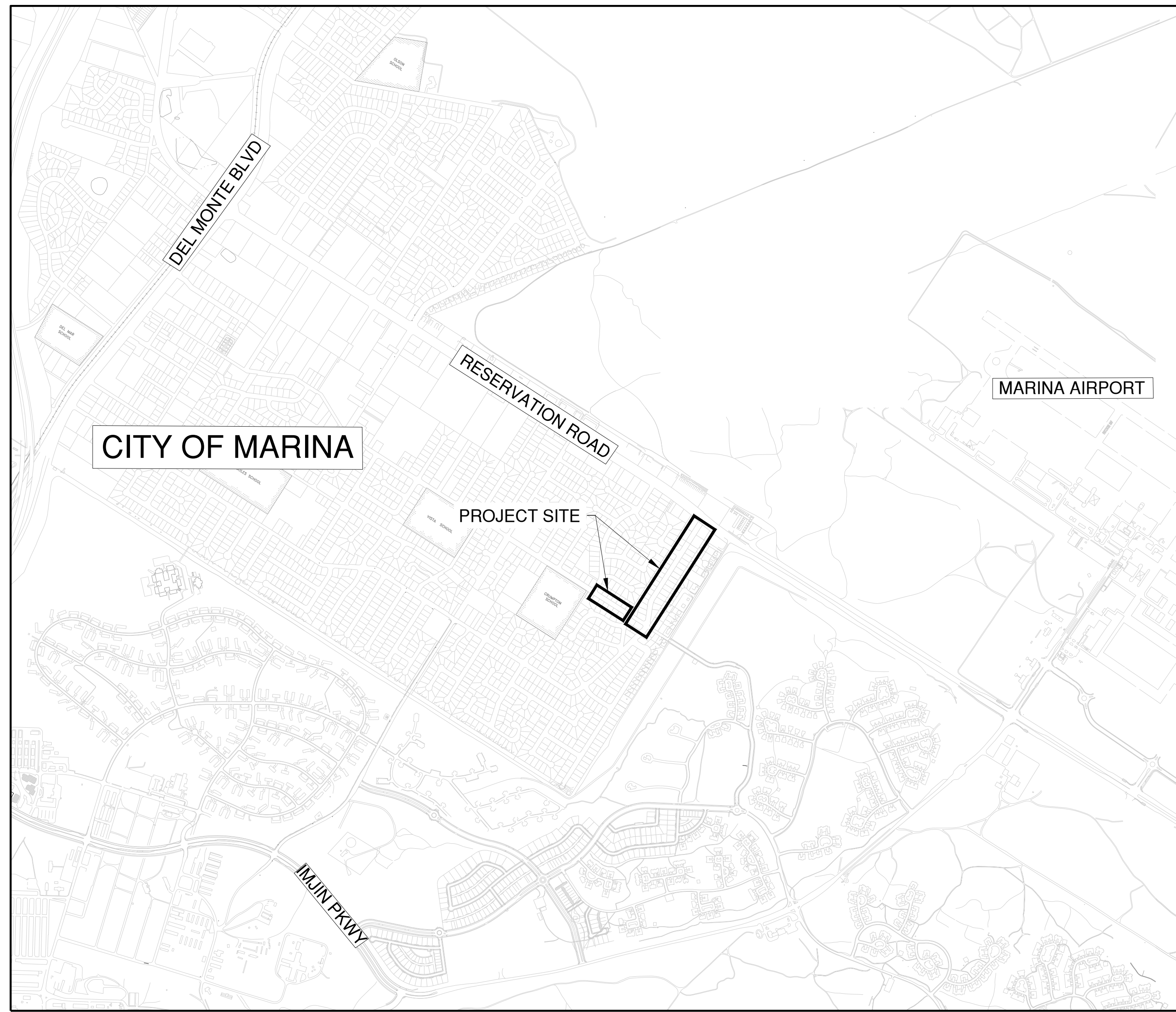
**END OF DOCUMENT**

**Bayer St Water Main Pre-Bid Meeting Sign-In**

<b>Name (original name)</b>	<b>Email</b>	<b>Duration (minutes)</b>	<b>Guest</b>
Teo Espero (IT Administrator)	support@mcwd.org	13	No
Todd Giovannoni		13	Yes
McGuire and Hester		13	Yes
Tom Seidel		13	Yes
Andy Sterbenz		13	Yes
Serge Bouchard		13	Yes
Charlie Krueger - Ghirardelli Associates		13	Yes
Aldo Jarvio		13	Yes
Marta's Notetaker (Otter.ai)		1	Yes
Marta Minkwitz, Ghirardelli Associates Inc.		11	Yes

# PLANS FOR THE BAYER STREET WATER MAIN DESIGN MARINA COAST WATER DISTRICT

## CIP NO. MW- 2515 <sup>△</sup>



VICINITY MAP

SUBMITTED:	12/15/2025
ANDREW A. STERBENZ, PE SCHAAF & WHEELER	DATE
REVIEWED: _____	
GARRETT HAERTEL, PE MARINA COAST WATER DISTRICT	DATE

M:\MWD\2025\_Design\Projects\Design\2515\DWG\2515-01-TITLE SHEET.dwg 12/20/25 3:11 AM AAS

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
 920 RESERVE TOWER SUITE A  
 MARINA, CA 93933  
 (831) 384-6131

**SCHAAF & WHEELER**  
 CONSULTING CIVIL ENGINEERS  
 3 QUAIL RUN CIRCLE, SUITE #101  
 SALINAS, CA 93907  
 (831) 883-4848



**BAYER STREET WATER MAIN DESIGN**  
  
**COVER SHEET**

DATE: DEC 2025  
 SCALE: NTS  
 DESIGN: ALJ  
 DRAWN: ALJ  
 CHECK: AAS

**SHEET**  
**G1.0**  
**1 of 11**



**GENERAL NOTES**

1. SHOULD IT APPEAR THAT THE WORK TO BE PERFORMED OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER AT (831) 384-6131 WITH ANY QUESTIONS OR DISCREPANCIES. ANY REVISIONS REQUIRE OWNER'S APPROVAL BEFORE PROCEEDING WITH REVISED PLANS.
2. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY OF THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE CIVIL ENGINEER AND THE OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THE PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CIVIL ENGINEER.
3. CONTRACTOR SHALL POSSESS A VALID CLASS A - GENERAL ENGINEERING CONTRACTOR LICENSE AT THE TIME THE CONTRACT IS AWARDED AND SHALL MAINTAIN THROUGHOUT THE LENGTH OF CONTRACT.
4. CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS AT THE JOB SITE FOR PUBLIC WORKS, AMBULANCE, POLICE AND FIRE DEPARTMENTS.
5. CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATION AND TRENCHING. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
6. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SETTLE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEETING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL EFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, STRUCTURE AND/OR BORING AND JACKING PIT IS REQUIRED, THE CONTRACTOR SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL ALWAYS COMPLY WITH OSHA REQUIREMENTS.
7. INFORMATION CONCERNING EXISTING UTILITIES IS NOT GUARANTEED; LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. DISTRICT DOES NOT GUARANTEE THE ACCURACY, COMPLETENESS, LOCATION, OR THE EXISTENCE OR NONEXISTENCE OF ANY UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS NECESSARY TO PROTECT UTILITY LINES, PIPES, OR STRUCTURES.
8. CONTRACTOR SHALL REQUEST THAT UNDERGROUND FACILITIES BE LOCATED AND MARKED IN THE FIELD A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION BY CALLING UNDERGROUND SERVICE ALERT (USA) 411.
9. CONTRACTOR SHALL POTHOLE, EXCAVATE, AND EXPOSE ALL UTILITY CROSSINGS OR CONNECTIONS AFFECTED BY THE WORK. ALL EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED TO THE SATISFACTION OF THE DISTRICT. IN THE EVENT OF DAMAGE TO ANY UTILITY OCCASIONED BY THE CONTRACTOR OPERATIONS, THE CONTRACTOR, AT HIS SOLE COST AND EXPENSE, WILL IMMEDIATELY CAUSE REPAIRS TO BE MADE TO THE SATISFACTION OF THE AFFECTED UTILITY. NOTIFY THE PROJECT ENGINEER OF ANY ADJUSTMENTS NECESSITATED BY WAY OF CONFLICT WITH EXISTING UTILITIES.
10. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN, CONES OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE SPECIFICATIONS.
11. MAINTAIN ONE-WAY TRAFFIC ON PUBLIC AND PRIVATE ROADS, PAVED OR UNPAVED, ON WHICH WORK IS BEING PERFORMED DURING WORKING HOURS, OR COORDINATE WITH OWNER TO PROVIDE AN ACCEPTABLE DETOUR ROUTE AROUND THE WORKING AREA. MAINTAIN NORMAL TRAFFIC TRAVEL WIDTH DURING NON-WORKING HOURS. REFER TO ENCROACHMENT PERMITS, LICENSES, EASEMENT CONDITIONS AND TRAFFIC PLANS, WHERE APPLICABLE, AS INCLUDED IN THE SPECIFICATIONS.
12. THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR ANY PRIVATE PROPERTY ADJACENT TO THE WORK AREA THROUGHOUT THE PERIOD OF CONSTRUCTION.
13. CONTRACTOR SHALL REPLACE, AT HIS EXPENSE, ALL TREES, SHRUBS, LAWNS, FENCES, IRRIGATION SYSTEMS AND IMPROVEMENTS WHICH ARE TO REMAIN INTACT BUT HAVE BEEN REMOVED OR DAMAGED DURING CONSTRUCTION.
14. ALL PERMANENT IMPROVEMENTS REMOVED OR DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL LOCATION AND CONDITION BY THE CONTRACTOR USING NEW MATERIALS AS DIRECTED BY THE ENGINEER.
15. ALL SURPLUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND PUBLIC RIGHT-OF-WAY.
16. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO KEEP PUBLIC STREETS FREE FROM DIRT AND DEBRIS. SHOULD ANY DIRT OR DEBRIS BE DEPOSITED IN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL REMOVE IT IMMEDIATELY.
17. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT ON SITE OR IN THE STREET RIGHT-OF-WAY SHALL NOT BE PERMITTED, EXCEPT AT LOCATION(S) APPROVED BY THE DISTRICT.
18. CONTRACTOR SHALL OBTAIN CITY OF MARINA ENCROACHMENT PERMITS FOR WORK WITHIN PUBLIC RIGHT-OF-WAY AND EASEMENTS. CONTRACTOR IS RESPONSIBLE FOR ANY/ALL PERMITS AND ASSOCIATED FEES FOR ENTRY OR USE OF PRIVATE PROPERTY.
19. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF THE DIVISION OF INDUSTRIAL SAFETY PERTAINING TO "CONFINED SPACES". ANY MANHOLE, CULVERT, DROP INLET OR TRENCH (WHICH COULD CONTAIN AIR) THAT IS NOT READILY VENTILATED MAY BE CONSIDERED A "CONFINED SPACE".
20. THE CONTRACTOR SHALL NOT DESTROY ANY PERMANENT SURVEY POINTS. ANY PERMANENT MONUMENTS OR POINTS DESTROYED SHALL BE REPLACED BY A LICENSED ENGINEER OR LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AN AIRBORNE DUST NUISANCE FROM THE CONSTRUCTION SITE BY WATERING AND/OR TREATING THE SITE IN SUCH A MANNER TO LIMIT THE EXTENT OF AIRBORNE DUST PARTICLES.
22. SITE WORK HOURS ARE 8:00 A.M. TO 5:00 P.M. MONDAY THRU FRIDAY. NO GRADING WORK SHALL BE PERFORMED ON SATURDAYS, SUNDAYS OR OBSERVED NATIONAL HOLIDAYS.
23. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SITE STORM WATER POLLUTION PREVENTION AND IMPLEMENTING NECESSARY BEST MANAGEMENT PRACTICES. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY. WET SEASON CONTROLS ARE REQUIRED (MINIMUM) BETWEEN OCTOBER 15 AND APRIL 15.
24. THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS AND PROCEDURES OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR MUNICIPAL, CONSTRUCTION AND INDUSTRIAL ACTIVITIES AS PROMULGATED BY THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD OR ANY OF ITS' REGIONAL WATER QUALITY CONTROL BOARDS. REFER TO THE FOLLOWING GENERAL PERMITS
  - a. WQO 2022-0057-DWQ, GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES, WITH AMENDMENTS
  - b. WQO 2014-0194-DWQ, GENERAL ORDER NO. CAG14001, STATEWIDE NPDES PERMIT FOR DRINKING WATER SYSTEM DISCHARGES TO WATERS OF THE UNITED STATES
  - c. WQO 2013-0001-DWQ, GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
25. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE FOLLOWING LIST OF STANDARDS ARE/OR SPECIFICATIONS ARE INCORPORATED INTO THESE PLANS BY REFERENCE. DESIGN AND CONSTRUCTION OF ALL IMPROVEMENTS SHALL COMPLY WITH ALL APPLICABLE STANDARDS INCLUDING:
  - a. MCWD STANDARD DETAILS AND SPECIFICATIONS
  - b. STANDARD SPECIFICATIONS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, 2023 EDITION
  - c. STANDARD PLANS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS), 2023 EDITION
  - d. CITY OF MARINA STANDARD PLANS AND SPECIFICATIONS
26. IF ARCHAEOLOGICAL RESOURCES OR HUMAN REMAINS ARE DISCOVERED DURING CONSTRUCTION, THE COUNTY CORONER SHALL BE NOTIFIED AND WORK SHALL BE HALTED TO WITHIN 150-FEET OF THE FIND UNTIL IT CAN BE EVALUATED BY A QUALIFIED PROFESSIONAL ARCHAEOLOGIST. IF THE FIND IS SIGNIFICANT, APPROPRIATE MITIGATION MEASURES SHALL BE FORMULATED AND IMPLEMENTED.
27. REPLACE STREET PAVEMENTS PER CITY OF MARINA STANDARD PLAN, STREET STRUCTURAL SECTIONS. MATCH EXISTING THICKNESS OF ASPHALT CONCRETE AND AGGREGATE BASE. TYPICAL THICKNESS IS 4 INCH ASPHALT CONCRETE AND 8 INCH AGGREGATE BASE.
28. WHEN REPLACING THE PAVEMENT ON AN EXISTING ROAD, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE AND REMOVED BACK TO AN EXISTING ADEQUATE STRUCTURAL SECTION. AN EXPLORATORY TRENCH OR POTHOLING MAY BE REQUIRED TO DETERMINE THE LIMITS OF PAVEMENT REMOVAL.
29. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING, ETC., AND TO AVOID THE CREATION OF ANY LOW SPOTS OR HAZARDOUS CONDITIONS OR ANY ABRUPT OR APPARENT CHANGES IN APPEARANCE, GRADES, OR CROSS SLOPES.
30. INSTALL PIPELINES AT UNIFORM LINE AND GRADE BETWEEN CONTROL ELEVATIONS NOTED ON DRAWINGS. NOMINAL COVER IS 42 INCHES.
31. WATER MAIN AND FITTINGS SHALL BE RESTRAINED BY THRUST BLOCKS OR MECHANICAL RESTRAINTS. SEE CONCRETE THRUST BLOCK DETAIL AND RESTRAINED LENGTH TABLE.
32. DISTURBED (E) THRUST BLOCKS TO BE REPLACED IN-KIND.
34. PRESSURE TEST WATER MAIN TO 200 PSI.
35. CONTRACTOR SHALL NOT OPERATE EXISTING VALVES. ALL SYSTEM OPERATIONS TO BE PERFORMED BY MCWD. COORDINATE WITH MCWD FOR SHUTDOWN.
36. THE CONTRACTOR SHALL SUBMIT TWO SETS OF "RED-LINE" AS-BUILT PLANS TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS.

**STANDARD WATER NOTES:**

1. THE WATER SYSTEM AS SHOWN ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD PLANS AND SPECIFICATIONS OF THE MARINA COAST WATER DISTRICT. CONTRACTOR SHALL KEEP A COPY OF THE STANDARD SPECIFICATIONS AND DRAWINGS ON THE JOBSITE AT ALL TIMES.
2. THE MARINA COAST WATER DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCING WORK ON THE WATER SYSTEM. PHONE (831) 384-6131 FOR INSPECTION. A PRECONSTRUCTION MEETING SHALL BE HELD AT LEAST 24 HOURS BEFORE STARTING CONSTRUCTION.
3. DOMESTIC WATER MAINS SHALL BE INSTALLED AFTER THE INSTALLATION OF CURB AND GUTTER AT SIX FEET OFF OF CURB FACE, OR AS STAKED BY THE SURVEYOR AT A MINIMUM 50-FOOT STATIONING, IF THERE ARE NO EXISTING CURBS.
4. ALL NUTS AND BOLTS, SHALL BE GRADE 316 STAINLESS STEEL. ALL BURIED FLANGES, VALVES AND FITTINGS SHALL BE WRAPPED WITH 10-MIL POLYETHYLENE SHEET.
5. ALL MAIN LINE VALVES SHALL BE MAINTAINED SO AS TO BE ACCESSIBLE DURING TRACT DEVELOPMENT, AND ALL VALVE STEM TOPS HAVING OVER 48 INCHES OF COVER MAY REQUIRE AN EXTENSION AS PER MCWD STANDARD PLAN W-7.
6. THE TOP OF THE PIPE SHALL BE A MINIMUM OF 42 INCHES OF COVER FROM THE FINISHED GRADE IN PAVED SECTIONS, UNLESS INDICATED OTHERWISE ON THE JOB PLANS OR DIRECTED OTHERWISE BY THE DISTRICT BECAUSE OF UNUSUAL CONDITIONS. PIPE SHALL BE BEDDED AND BACKFILLED PER MCWD STANDARD PLAN W-12.
7. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROPRIATE DETAILS HEREIN AND INSTALLED BEHIND CURBS AND SIDEWALKS WHERE THE SIDEWALKS ARE ADJACENT TO THE CURBS. FIRE HYDRANTS SHALL BE PER THE DISTRICT'S SPECIFICATIONS AND SHALL HAVE A CONCRETE PAD POURED AROUND THEM. ALL FIRE HYDRANTS SHALL BE SET WITH THE BOTTOM FLANGE 4 INCHES ABOVE THE CONCRETE PAD OR SIDEWALK.
8. NO FACILITY IS TO BE BACKFILLED UNTIL INSPECTED BY THE DISTRICT.
9. SHUT DOWN OR TAPPING OF EXISTING DOMESTIC WATERLINES TO FACILITATE CONNECTION TO EXISTING FACILITIES SHALL BE COORDINATED WITH THE DISTRICT AT LEAST 24 HOURS IN ADVANCE. ANY RELOCATION OF EXISTING FACILITIES IS SUBJECT TO APPROVAL OF THE DISTRICT ENGINEER.
10. NO TAPS OR OTHER CONNECTIONS SHALL BE MADE TO EXISTING DISTRICT WATER MAINS PRIOR TO CONDUCTING AN APPROVED PRESSURE AND BACTERIOLOGICAL TEST ON THE NEW WATER DISTRIBUTION SYSTEM. TAPPING SLEEVES SHALL BE PRESSURE TESTED IN AN APPROVED MANNER IN THE FIELD IN THE PRESENCE OF THE DISTRICT INSPECTOR, PRIOR TO TAPPING THE MAIN LINE. TAPPING OF THE MAIN LINE SHALL NOT PROCEED UNLESS A DISTRICT INSPECTOR IS PRESENT.
11. ALL WATER SERVICES SHALL BE INSTALLED PER THE DISTRICT'S STANDARD SPECIFICATIONS. ALL METERS SHALL BE INSTALLED IN GRASS OR PLANTER AREAS AND ACCESSIBLE BY VEHICLE. ANY SERVICES LOCATED IN SIDEWALKS ARE SUBJECT TO THE APPROPRIATE GOVERNING AGENCY AND DISTRICT APPROVAL. ANY METERS LOCATED IN BANKS OF 4 SHALL BE MANIFOLDED PER MCWD STANDARD PLAN W-3. ALL METER REGISTERS AND LIDS SHALL BE MARKED WITH ADDRESS IDENTIFICATION.
12. WHERE METERS AND METER BOXES ARE LOCATED WITHIN SLOPES, THE ANGLE METER STOPS SHALL BE SO LOCATED THAT THE METERS AND BOXES WILL BE PARALLEL AND FLUSH, RESPECTIVELY, WITH THE FINISHED STREET SURFACE. A RETAINING WALL MAY BE REQUIRED AROUND THE METER BOX.
13. THE APPLICANT SHALL FURNISH AND INSTALL THE SERVICE CONNECTIONS BETWEEN WATER MAINS AND METERS AND METER BOXES. WATER SERVICES SHALL BE INSTALLED TO THE PROPERTY LINE PRIOR TO PAVING OF THE STREET.
14. CURB FACE SHALL BE INSCRIBED WITH " W " INDICATING LOCATIONS OF ALL DOMESTIC WATER SERVICES.
15. WATER LOW-FLOW DEVICES SHALL BE PROVIDED FOR ALL UNITS WITHIN THIS DEVELOPMENT IN ACCORDANCE WITH RULES AND REGULATIONS OF THE DISTRICT.
16. ALL VALVES SHALL BE LOCATED OFF THE TEE UNLESS OTHERWISE APPROVED BY THE DISTRICT. AT INTERSECTIONS AND BUS STOPS WITH CONCRETE PADS, THE MAIN LINE SHALL BE ROPED TO AVOID CROSS GUTTER CONFLICT.
17. INDIVIDUAL PRESSURE REGULATORS WILL BE REQUIRED BY THE PLUMBING CODES OF THE CITY HAVING JURISDICTION IF STATIC PRESSURE REACHES 80 PSI OR MORE.
18. ALL WATER METERS WILL BE FURNISHED BY THE MARINA COAST WATER DISTRICT FOLLOWING RECEIPT OF APPLICATION AND DEPOSIT. THE DISTRICT WILL INSTALL WATER METERS UP TO 2 INCHES. THE CONTRACTOR SHALL INSTALL WATER METERS 3 INCHES AND GREATER. THE CONTRACTOR SHALL PLACE ALL PIPING PER DISTRICT PLANS AND PROPERLY LOCATE THE METER BOXES TO GRADE PRIOR TO INSTALLATION OF THE METERS BY THE DISTRICT.
19. ANY DISTRICT WATER USED FOR CONSTRUCTION SHALL BE METERED WITH A CONSTRUCTION METER OBTAINED FROM THE DISTRICT.
20. AN ENCROACHMENT PERMIT FROM THE COUNTY OR CITY HAVING JURISDICTION IS REQUIRED PRIOR TO ANY WORK WITHIN PUBLIC RIGHT-OF-WAY OR EASEMENT.
21. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. APPROVAL OF THESE PLANS BY THE DISTRICT DOES NOT GUARANTEE THE ACCURACY, COMPLETENESS, LOCATION, OR THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS NECESSARY TO PROTECT THOSE UTILITY LINES NOT SHOWN ON THESE PLANS.
22. THE APPLICANT SHALL REMOVE TO THE SATISFACTION OF THE MCWD INSPECTOR ALL UNUSED WATER STUBS AND/OR SERVICES THAT WAS PROVIDED TO THE PROJECT SITE

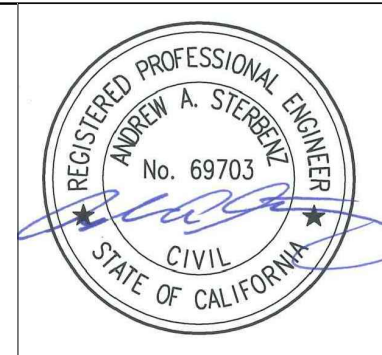
M:\MCWD\1000 - Plans - Public\Change\MCWD\04-CALTRANS\04-CALTRANS-DWG-01-2025\GENERAL NOTES.dwg, 12/20/25, 8:50 AM, ALJ/hm

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
 920 SECOND AVENUE, SUITE A  
 MARINA, CA 93933  
 (831) 384-6131

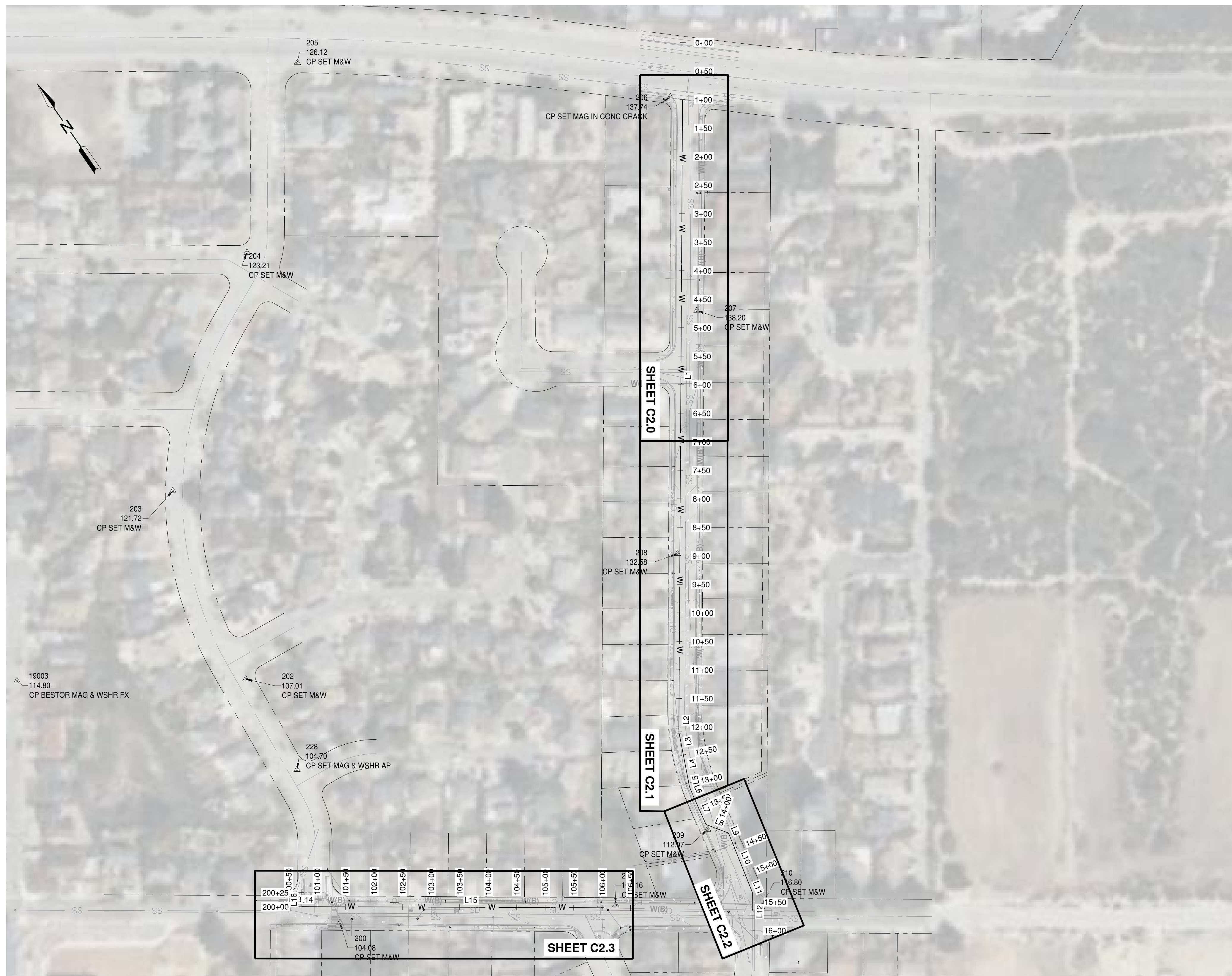
**SCHAAF & WHEELER**  
 CONSULTING CIVIL ENGINEERS  
 3 QUAIL RUN CIRCLE, SUITE #101  
 SALINAS, CA 93907  
 (831) 883-4848



**BAYER STREET WATER MAIN DESIGN**  
**GENERAL NOTES AND SPECIFICATIONS**

DATE:	DEC 2025
SCALE:	NTS
DESIGN:	ALJ
DRAWN:	ALJ
CHECK:	AAS

**SHEET**  
**G1.2**  
**3 of 11**



**SURVEY CONTROL PLAN**  
1" = 100'

SCALE: 1 INCH = 100 FEET

**LOCAL BENCHMARK:**

- BENCHMARK: POINT 615, ELEVATION 104.10' NAVD88

**SURVEY CONTROL**

POINT	CONTROL POINT DESCRIPTION	NORTHING	EASTING	ELEVATION
200	CP SET M&W	2140729.74	5745418.93	104.08
201	CP SET M&W	2140500.01	5745845.40	107.16
202	CP SET M&W	2141179.43	5745505.02	107.01
203	CP SET M&W	2141527.25	5745571.73	121.72
204	CP SET M&W	2141812.91	5745903.38	123.21
205	CP SET M&W	2142048.18	5746154.48	126.12
206	CP SET MAG IN CONC CRACK	2141650.64	5746677.26	137.74
207	CP SET M&W	2141308.40	5746518.39	138.20
208	CP SET M&W	2140965.04	5746263.39	132.58
209	CP SET M&W	2140526.71	5746052.19	112.97
210	CP SET M&W	2140362.07	5746060.45	116.80
228	CP SET MAG & WSHR AP	2140997.29	5745497.31	104.70
614	FD BD CL MON REC 20941	2140514.11	5745791.07	106.15
615	N&T CL MON LS 2679	2140947.55	5745480.04	104.10

**BAYER STREET**

STATION CENTERLINE & CURVE DATA

NUMBER	STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	LENGTH (FT)
L1	0+00.00	2141720.0547	5746746.5711	11+68.55	2140732.7186	5746121.5261	1168.552
L2	11+68.55	2140732.7186	5746121.5261	12+08.02	2140699.3730	5746100.4162	39.466
L3	12+08.02	2140699.3730	5746100.4162	12+47.48	2140662.5498	5746086.2174	39.466
L4	12+47.48	2140662.5498	5746086.2174	12+86.95	2140625.7266	5746072.0186	39.466
L5	12+86.95	2140625.7266	5746072.0186	13+06.68	2140607.3149	5746064.9192	19.733
L6	13+06.68	2140607.3149	5746064.9192	13+26.42	2140587.8721	5746061.5481	19.733
L7	13+26.42	2140587.8721	5746061.5481	13+79.02	2140535.7622	5746054.3763	52.601
L8	13+79.02	2140535.7622	5746054.3763	14+21.10	2140502.2247	5746079.7991	42.084
L9	14+21.10	2140502.2247	5746079.7991	14+23.10	2140500.2555	5746079.4502	2.000
L10	14+23.10	2140500.2555	5746079.4502	15+23.10	2140401.7892	5746062.0032	100.000
L11	15+23.10	2140401.7892	5746062.0032	15+33.54	2140391.5096	5746060.1818	10.440
L12	15+33.54	2140391.5096	5746060.1818	15+99.64	2140335.7886	5746024.6182	66.103

**CARMEL AVENUE**

STATION CENTERLINE & CURVE DATA

NUMBER	STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	LENGTH (FT)
L13	100+50.00	2140801.7407	5745357.4419	100+73.47	2140789.1467	5745377.2469	23.470
L14	100+73.47	2140789.1467	5745377.2469	100+90.72	2140779.8483	5745391.7812	17.254
L15	100+90.72	2140779.8483	5745391.7812	106+49.61	2140481.8899	5745864.6220	558.890

**LYNSCOTT DRIVE**

STATION CENTERLINE & CURVE DATA

NUMBER	STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	LENGTH (FT)
L16	200+00.00	2140789.6570	5745376.2154	200+24.89	2140810.8810	5745389.2245	24.894

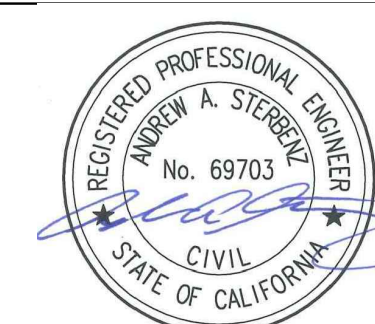
M:\WORKING\Bayer Street Water Main Design\PROJECT\KEY SHEET.dwg, 12/20/25, 1:10, ALJ/AAS

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
920 SECOND AVENUE, SUITE A  
MARINA, CA 93933  
(831) 384-6131

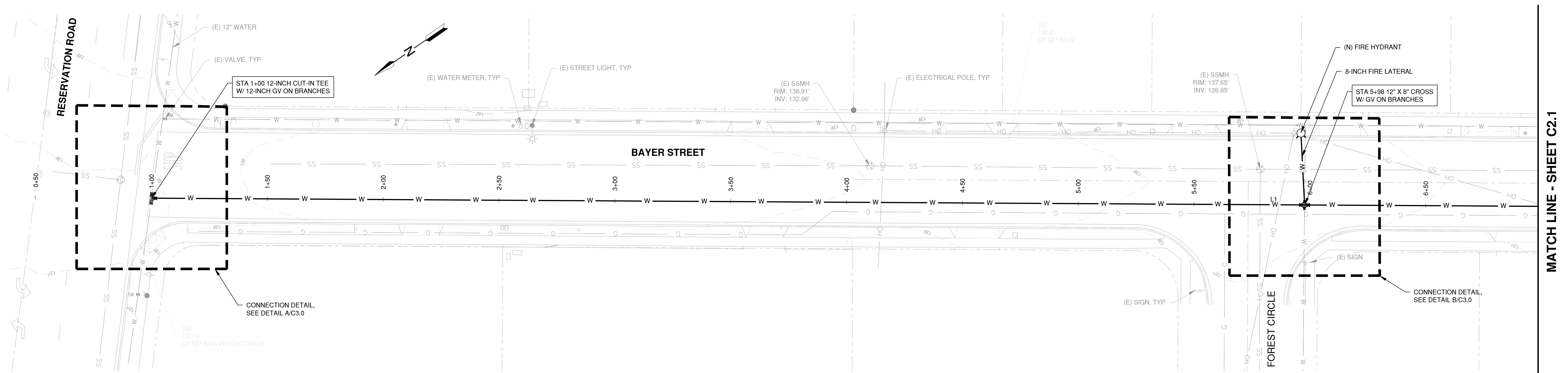
**SCHAAF & WHEELER**  
CONSULTING CIVIL ENGINEERS  
3 QUAIL RUN CIRCLE, SUITE #101  
SALINAS, CA 93907  
(831) 883-4848



**BAYER STREET WATER MAIN DESIGN**  
**PROJECT OVERVIEW & KEY SHEET**

DATE: DEC 2025  
SCALE: 1" = 100'  
DESIGN: ALJ  
DRAWN: ALJ  
CHECK: AAS

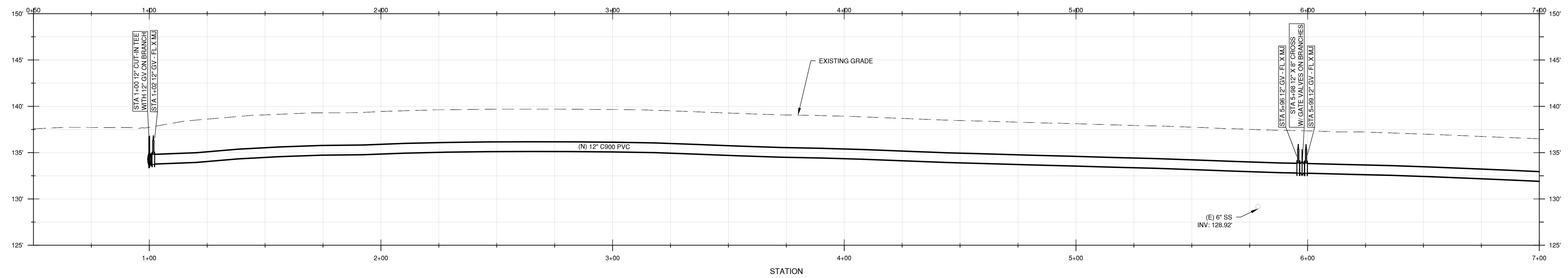
**SHEET**  
**C1.3**  
**4 of 11**



**PLAN**  
1" = 20'

SCALE: 1 INCH = 20 FEET

STATION  
0+50 TO 7+00



**PROFILE**  
HOR. SCALE: 1" = 20'  
VER. SCALE: 1" = 5'

M:\Projects\2025\Bayer Street Water Main Design\Drawings\Bayer Street Water Main Design.dwg, 12/20/2025, 10:58 AM, by ALJ

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
920 SECOND AVENUE, SUITE A  
MARINA, CA 93933  
(831) 384-6131

**SCHAAF & WHEELER**  
CONSULTING CIVIL ENGINEERS  
3 QUAIL RUN CIRCLE, SUITE #101  
SALINAS, CA 93907  
(831) 883-4848



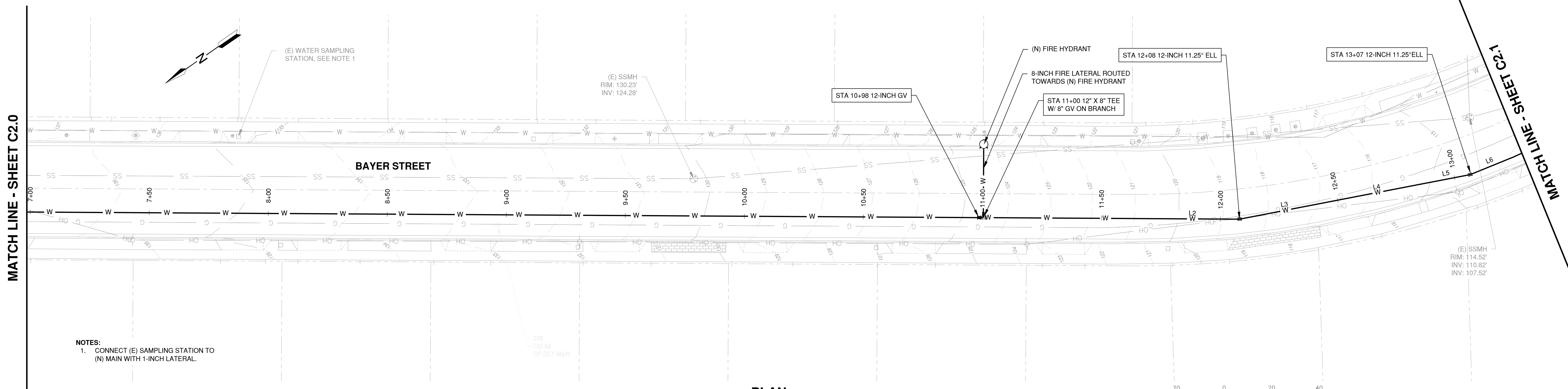
**BAYER STREET WATER MAIN DESIGN**  
**BAYER STREET PLAN AND PROFILE I**

DATE: DEC 2025  
SCALE: AS SHOWN  
DESIGN: ALJ  
DRAWN: ALJ  
CHECK: AAS

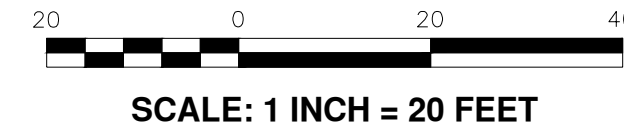
**SHEET**  
**C2.0**  
**5 of 11**

MATCH LINE - SHEET C2.0

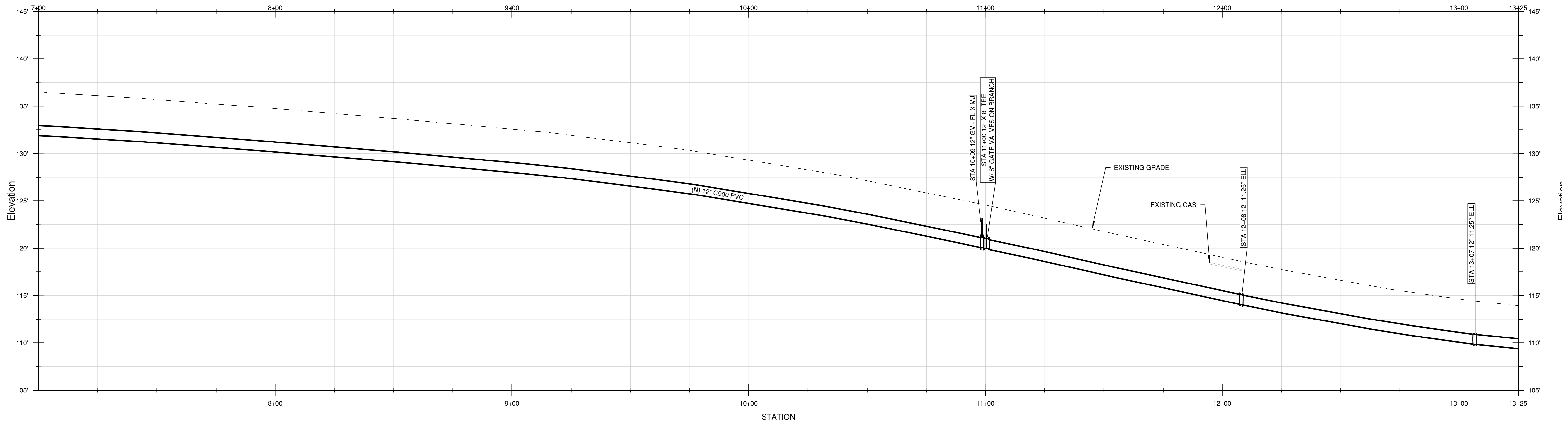
MATCH LINE - SHEET C2.1



**PLAN**  
1" = 20'



STATION  
7+00 TO 13+25



**PROFILE**  
HOR. SCALE: 1" = 20'  
VER. SCALE: 1" = 5'

M:\Projects\2025\Bayer Street Water Main Design\Drawings\Bayer Street Water Main Design\Profile.dwg, 12/20/2025, 10:50 AM by ALJ

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
 920 SECOND AVENUE, SUITE A  
 MARINA, CA 93933  
 (831) 384-6131

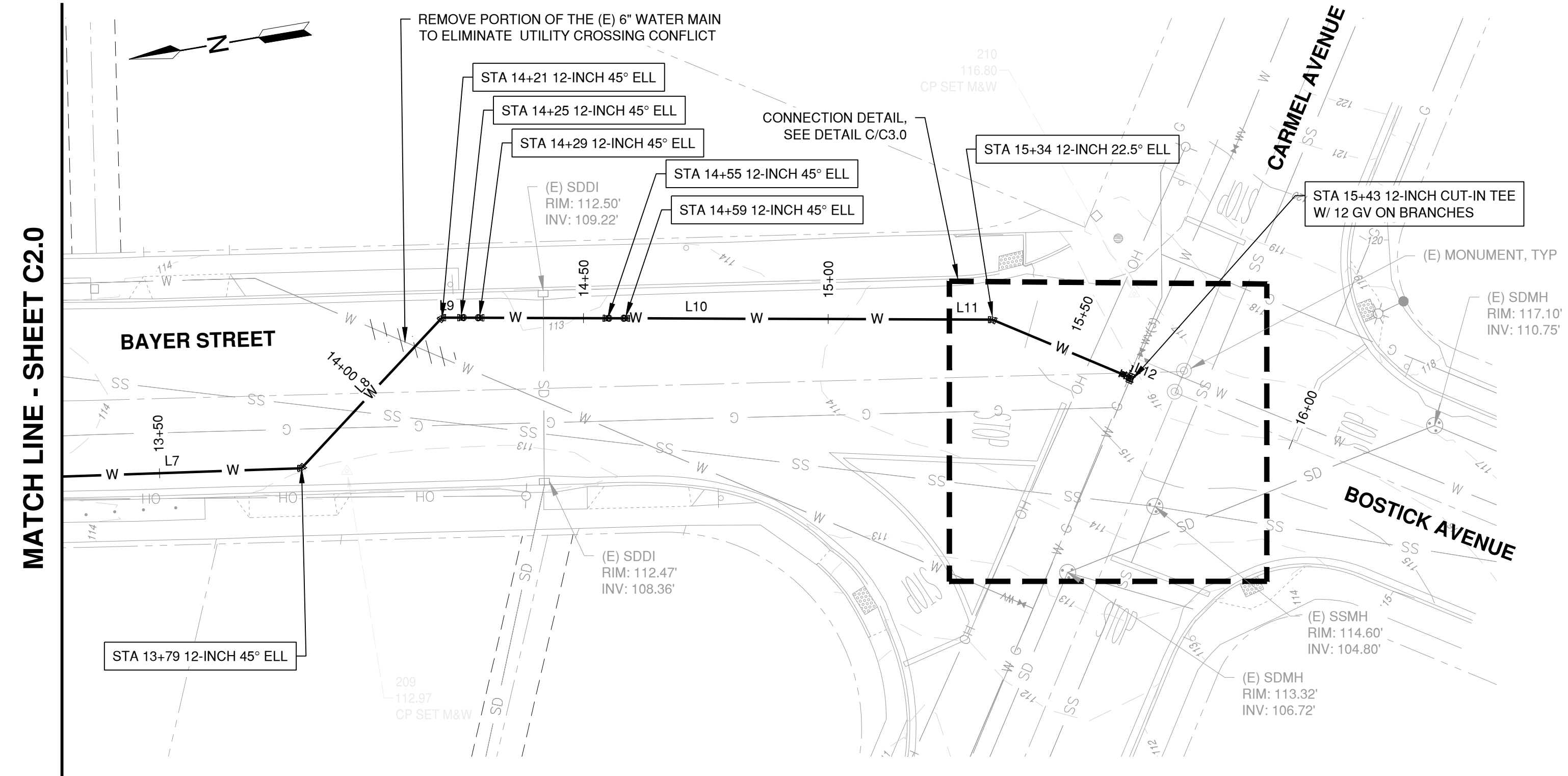
**SCHAAF & WHEELER**  
 CONSULTING CIVIL ENGINEERS  
 3 QUAIL RUN CIRCLE, SUITE #101  
 SALINAS, CA 93907  
 (831) 883-4848



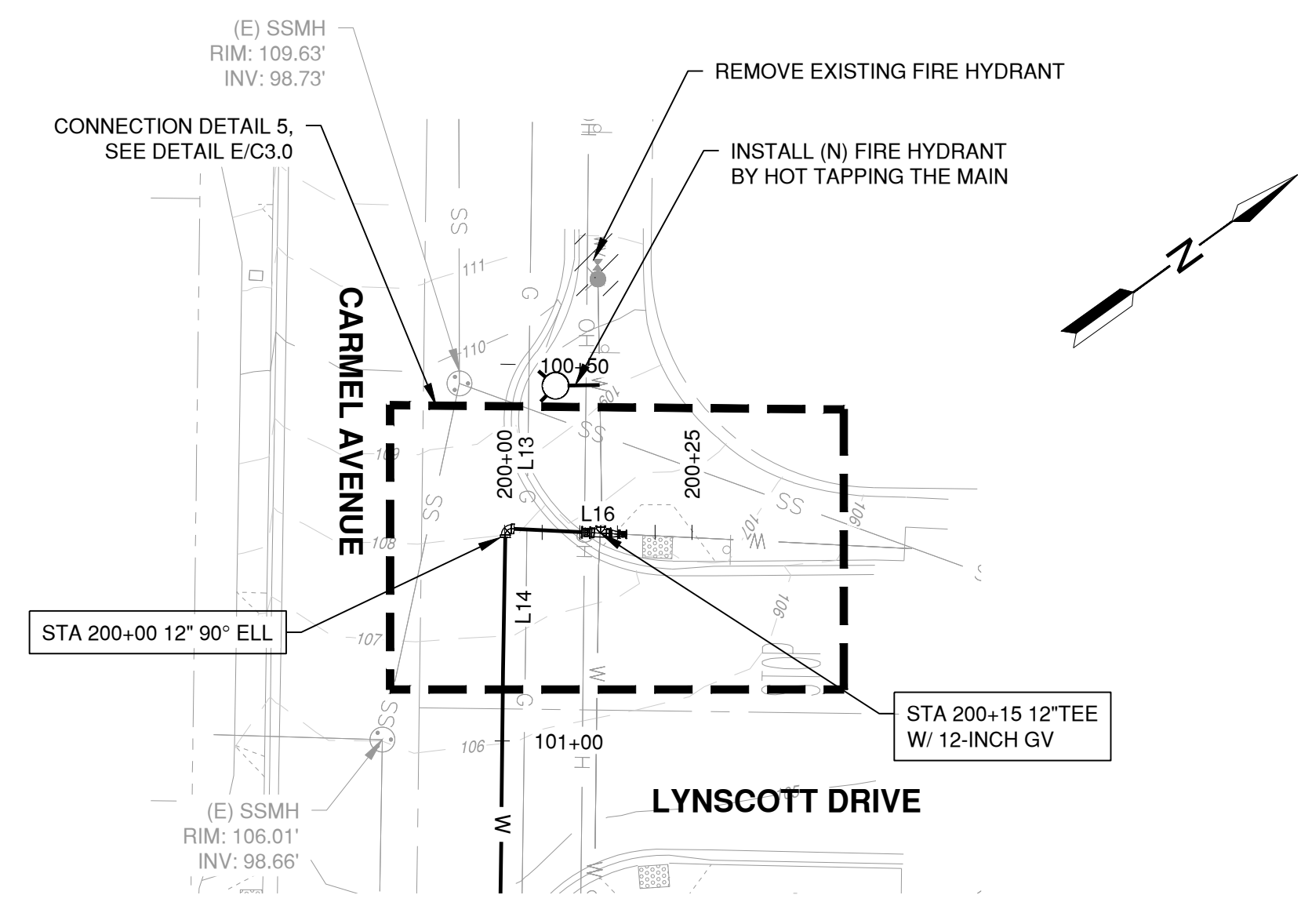
**BAYER STREET WATER MAIN DESIGN**  
**BAYER STREET PLAN AND PROFILE II**

DATE: DEC 2025  
 SCALE: AS SHOWN  
 DESIGN: ALJ  
 DRAWN: ALJ  
 CHECK: AAS

**SHEET**  
**C2.1**  
**6 of 11**



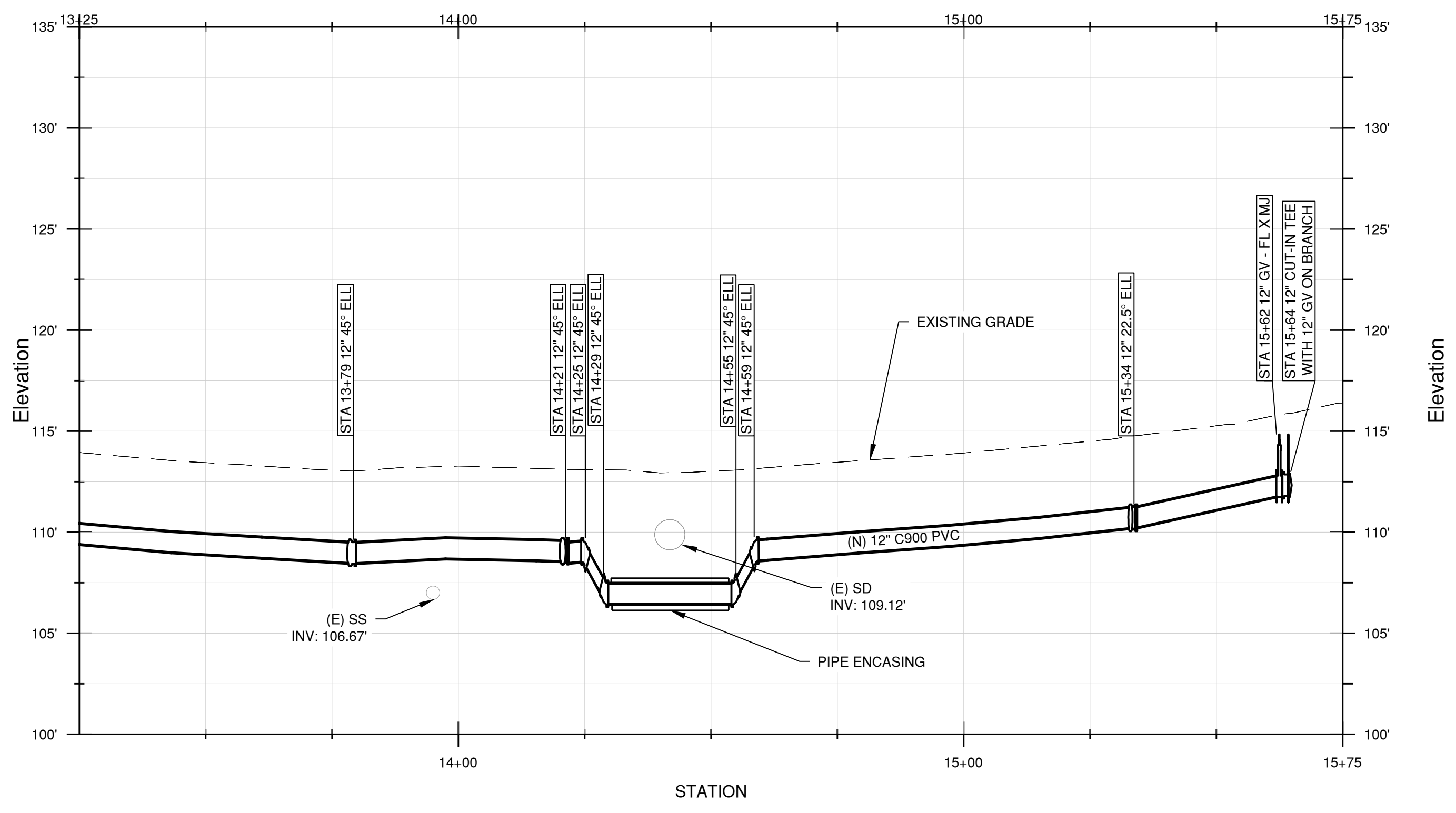
**PLAN**  
1" = 20'  
SCALE: 1 INCH = 20 FEET



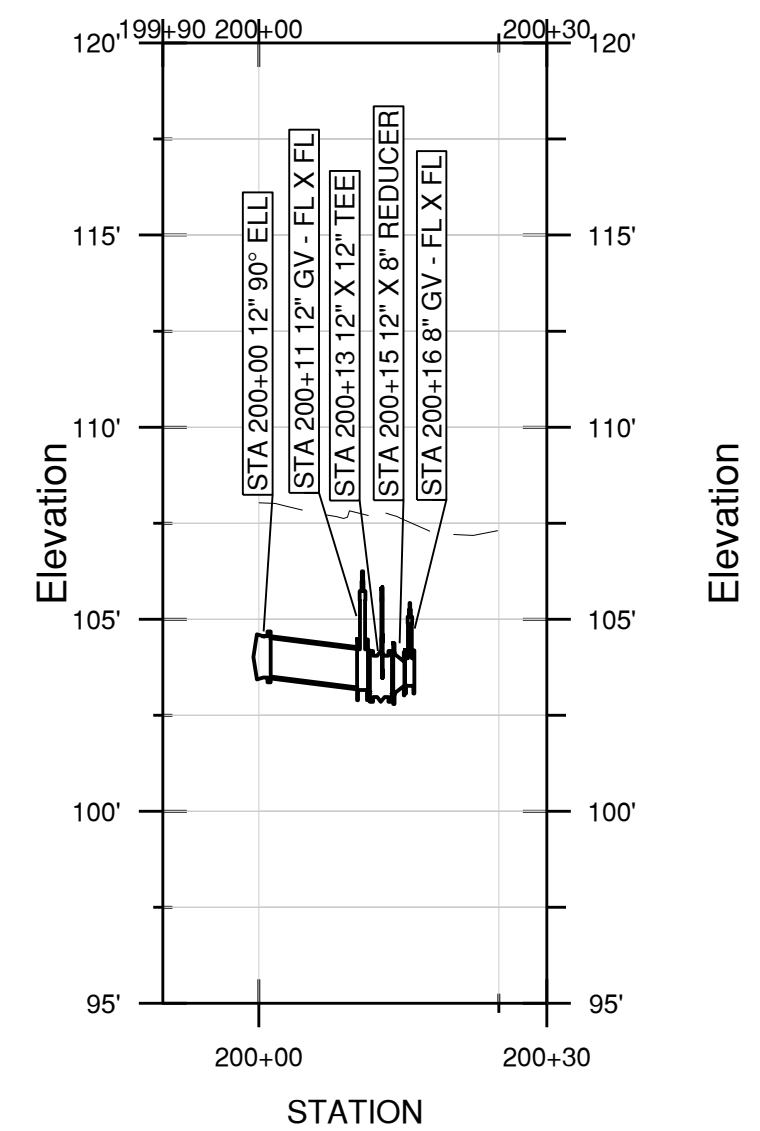
**PLAN**  
1" = 20'  
SCALE: 1 INCH = 20 FEET

STATION  
13+25 TO 15+75

STATION  
199+90 TO 200+30



**PROFILE**  
HOR. SCALE: 1" = 20'  
VER. SCALE: 1" = 5'



**PROFILE**  
HOR. SCALE: 1" = 20'  
VER. SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
920 SECOND AVENUE, SUITE A  
MARINA, CA 93933  
(831) 384-6131

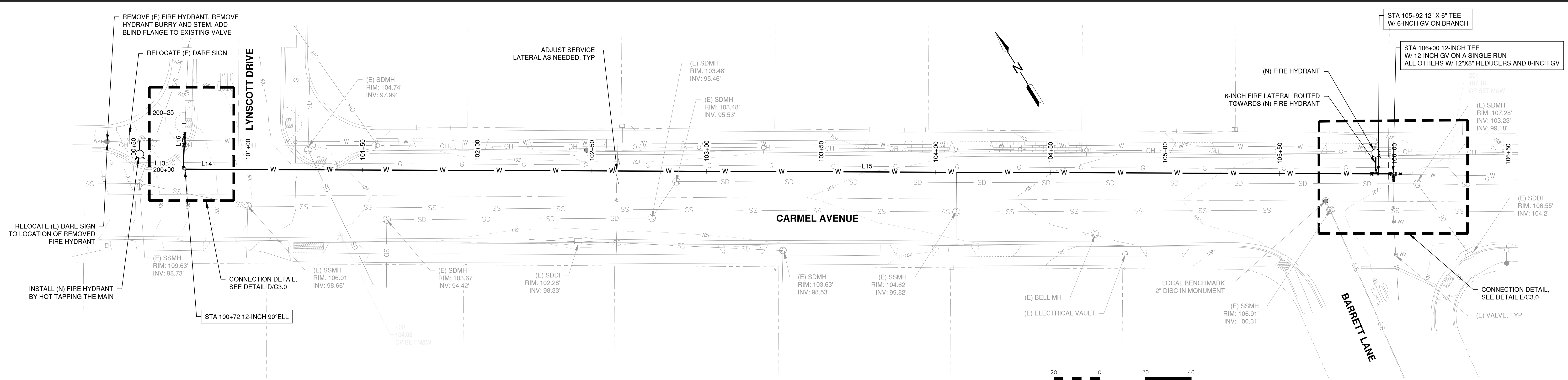
**SCHAAF & WHEELER**  
CONSULTING CIVIL ENGINEERS  
3 QUAIL RUN CIRCLE, SUITE #101  
SALINAS, CA 93907  
(831) 883-4848



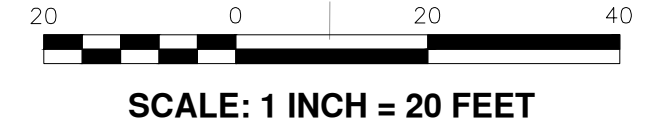
**BAYER STREET WATER MAIN DESIGN**  
**BAYER STREET PLAN AND PROFILE III**

DATE: DEC 2025  
SCALE: AS SHOWN  
DESIGN: ALJ  
DRAWN: ALJ  
CHECK: AAS

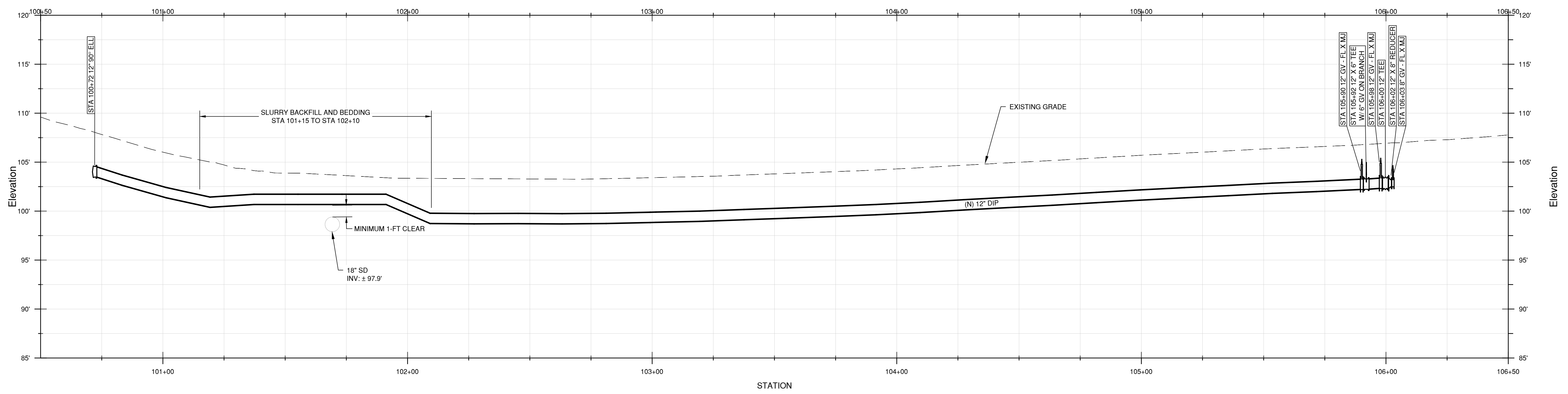
**SHEET**  
**C2.2**  
**7 of 11**



**PLAN**  
1" = 20'



STATION  
100+50 TO 106+50



**PROFILE**  
HOR. SCALE: 1" = 20'  
VER. SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
920 SECOND AVENUE, SUITE A  
MARINA, CA 93933  
(831) 384-6131

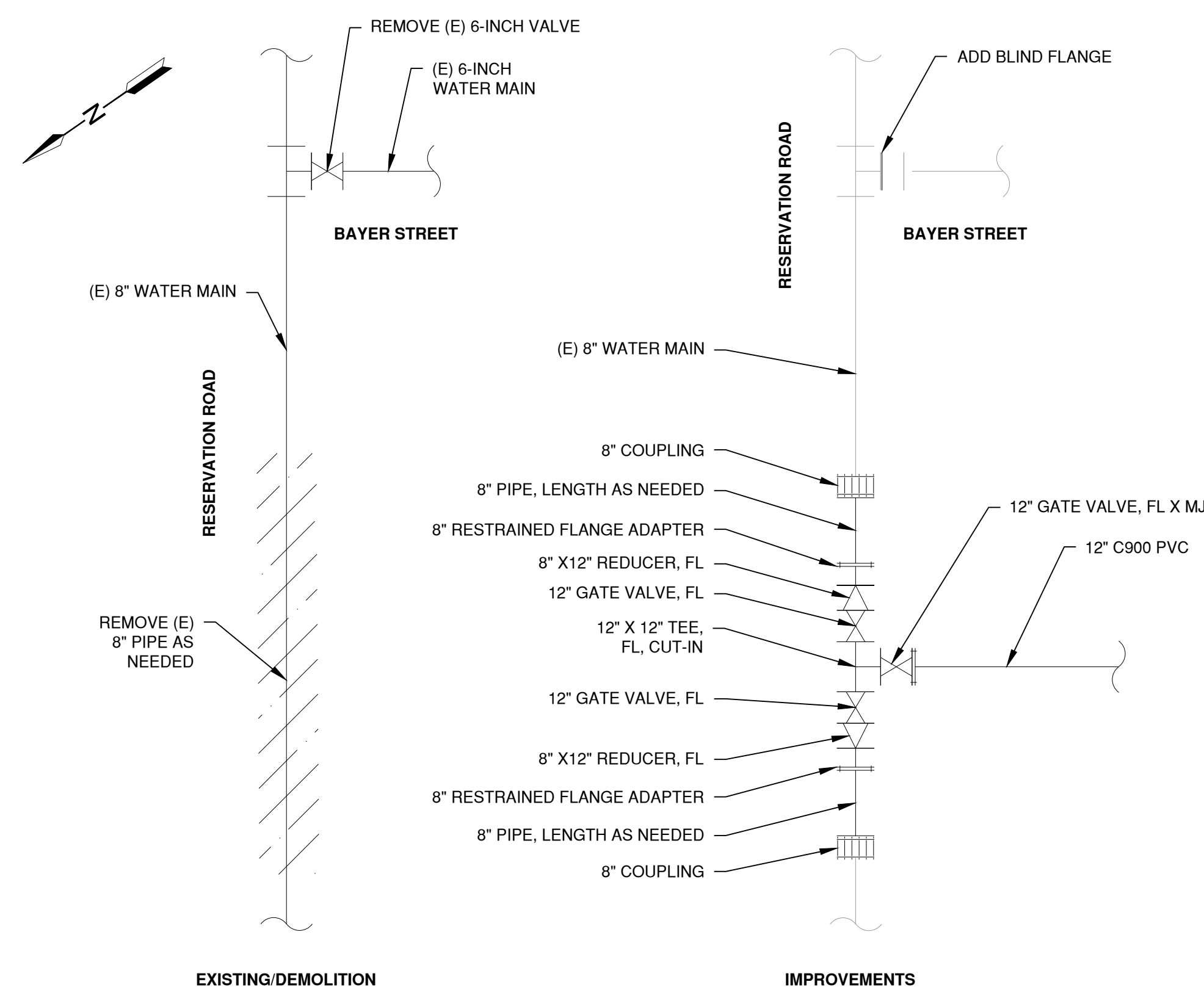
**SCHAAF & WHEELER**  
CONSULTING CIVIL ENGINEERS  
3 QUAIL RUN CIRCLE, SUITE #101  
SALINAS, CA 93907  
(831) 883-4848



**BAYER STREET WATER MAIN DESIGN**  
**CARMEL AVENUE PLAN AND PROFILE**

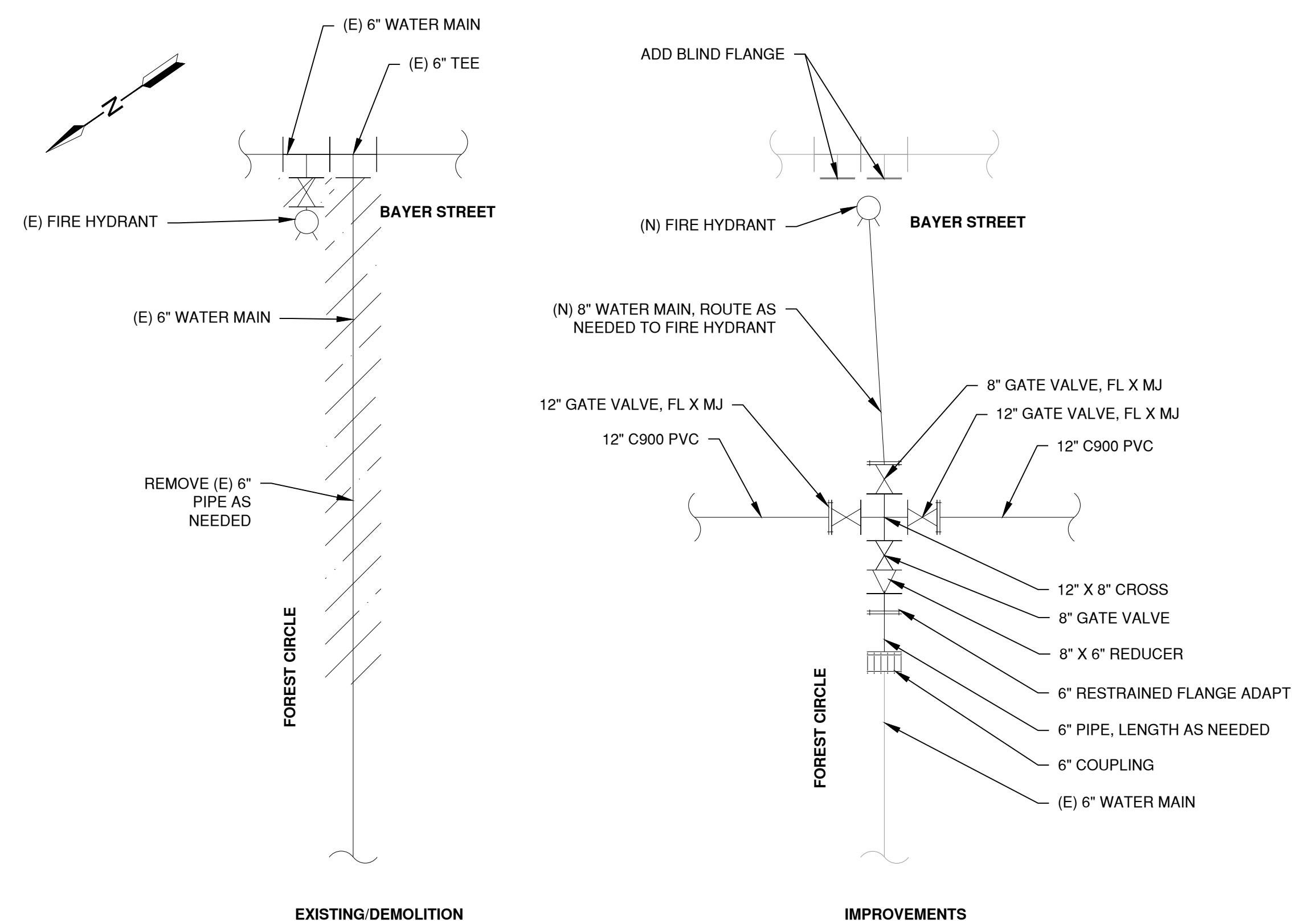
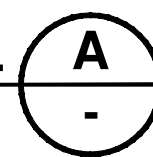
DATE: DEC 2025  
SCALE: AS SHOWN  
DESIGN: ALJ  
DRAWN: ALJ  
CHECK: AAS

**SHEET**  
**C2.3**  
**8 of 11**



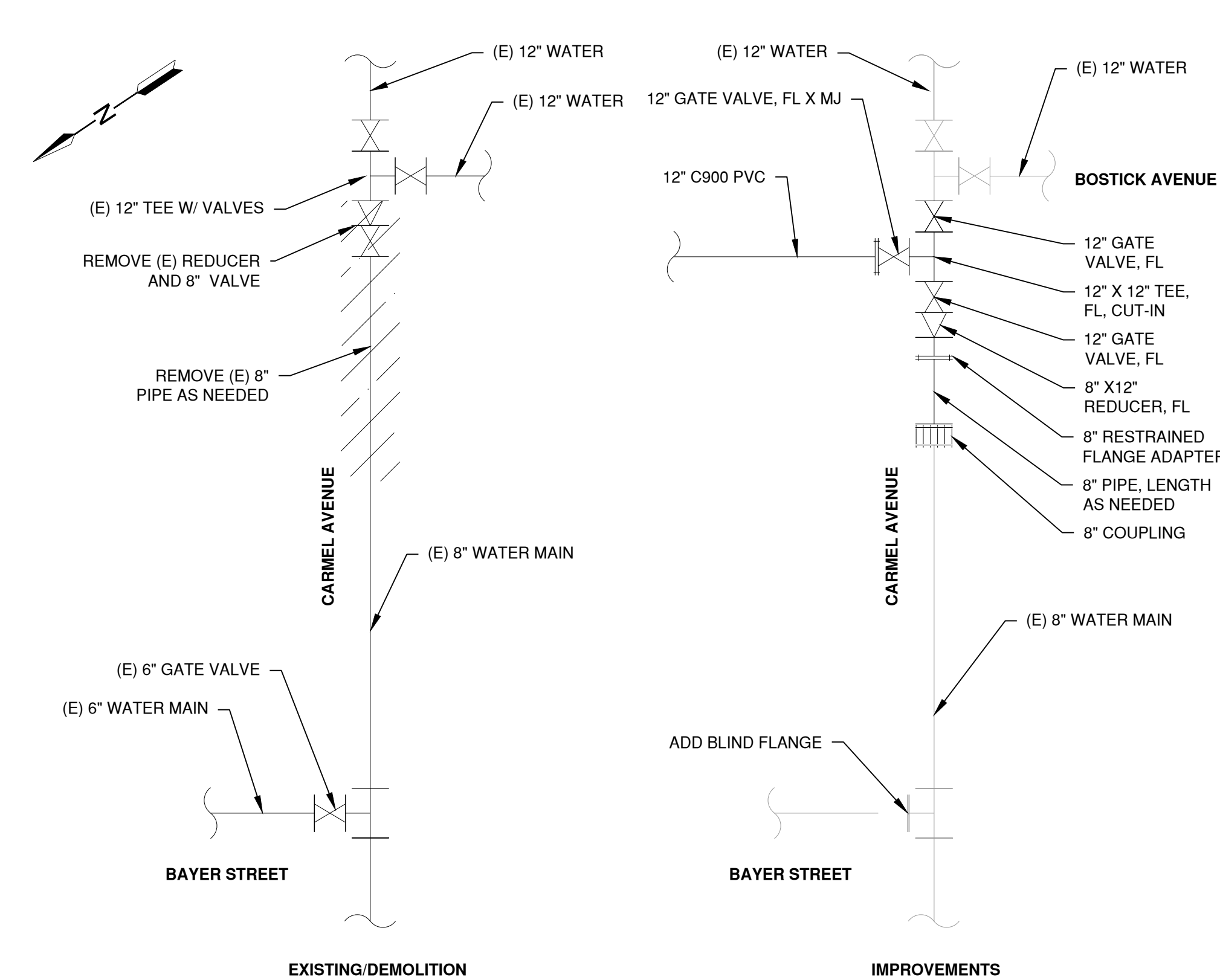
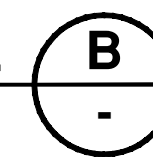
**CONNECTION AT RESERVATION RD & BAYER ST DETAIL**

SCALE: N.T.S.



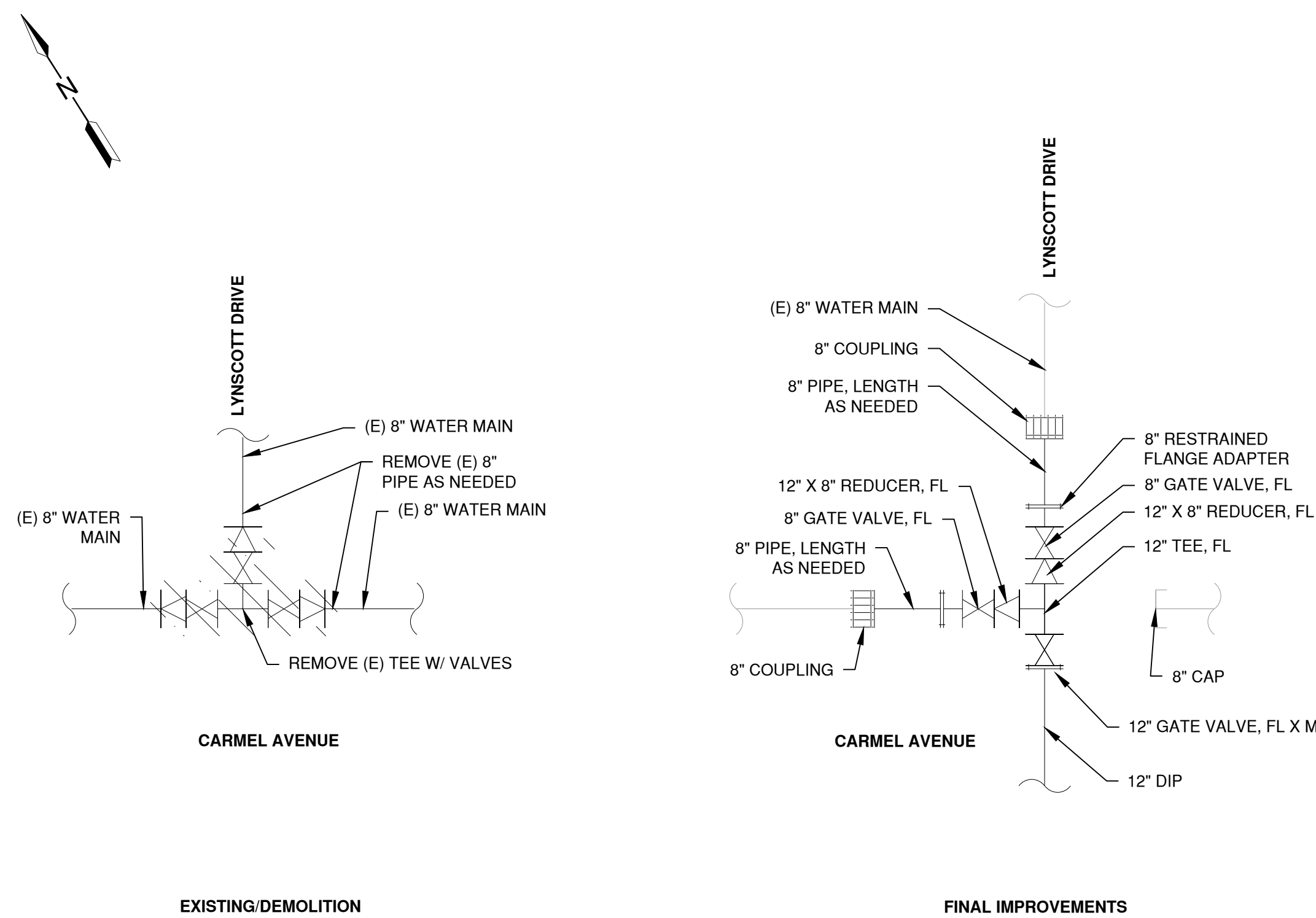
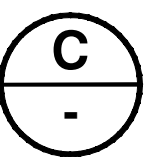
**CONNECTION AT BAYER ST & FOREST CIR DETAIL**

SCALE: N.T.S.



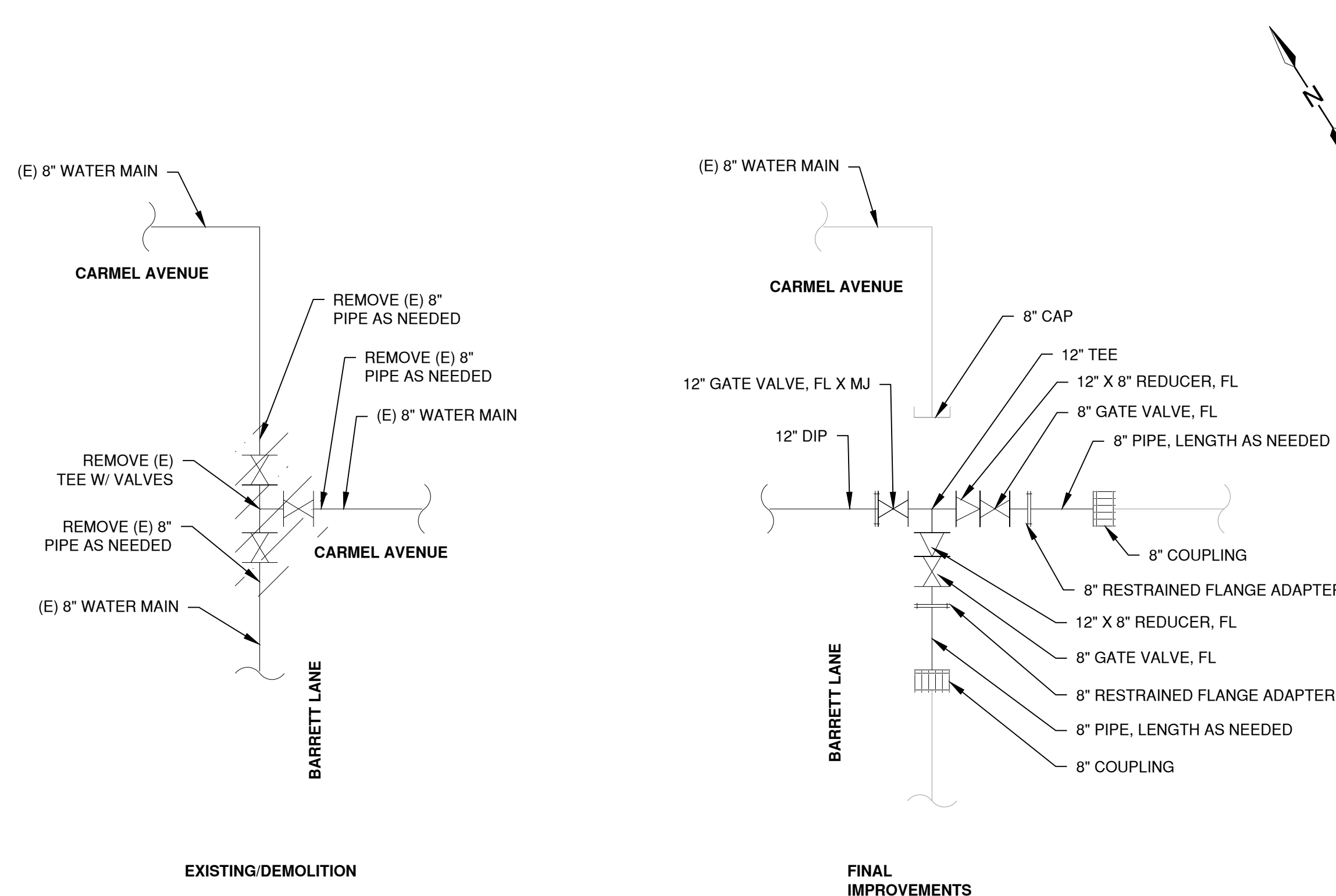
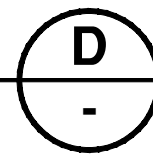
**CONNECTION AT BAYER ST & CARMEL AVE DETAIL**

SCALE: N.T.S.



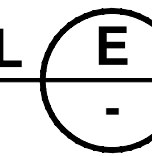
**CONNECTION AT CARMEL AVE & LYNSCOTT DR DETAIL**

SCALE: N.T.S.



**CONNECTION AT CARMEL AVE & BARRETT LN DETAIL**

SCALE: N.T.S.



**SEQUENCING OF WORK FOR CARMEL AVENUE WATER MAIN :**

1. INSTALL NEW 12-INCH WATER MAIN
  - 1.1. BUILD NEW 12-INCH WATER MAIN ON CARMEL AVENUE FROM THE INTERSECTION OF CARMEL AVENUE AND BARRETT LANE TO THE INTERSECTION OF CARMEL AVENUE AND LYNSCOTT DRIVE. STUB UP NEAR THE EXISTING WATER MAIN
  - 1.2. BUILD AND STUB UP THE NEW FIRE HYDRANT LATERAL FROM THE NEW WATER MAIN TO NEAR THE EXISTING FIRE HYDRANT LOCATION
  - 1.3. ONCE INSTALLATION IS COMPLETE, PRESSURE TEST AND DISINFECT NEW WATER MAIN
2. CONNECT NEW WATER MAIN TO EXISTING WATER SYSTEM
  - 2.1. CONNECT THE NEW 12-INCH WATER MAIN TO THE WATER SYSTEM AT CARMEL AVENUE AND LYNSCOTT DRIVE. REMOVE EXISTING TEE AND MAKE IMPROVEMENTS AS SHOWN ON D/C3.0
  - 2.2. ADD BLOW OFF VALVE TO THE DISCONNECTED EXISTING WATER MAIN
3. CONNECT NEW SERVICE LATERALS
  - 3.1. CONNECT NEW WATER SERVICE LATERALS FROM THE NEW WATER MAIN TO THE NEW WATER METERS AND DISCONNECT THE EXISTING SERVICES AS THE WORK PROGRESSES
  - 3.2. EACH METER SHALL RECEIVE A DEDICATED WATER SERVICE LATERAL
4. ABANDON EXISTING WATER MAIN
  - 4.1. ONCE ALL WATER SERVICES HAVE BEEN TRANSFERRED, CAP AND ABANDON THE EXISTING WATER MAIN AS SHOWN ON DETAILS D&E
  - 4.2. CONNECT NEW WATER MAIN AT THE INTERSECTION OF CARMEL AVENUE AND BARRETT LANE
  - 4.3. CONNECT NEW FIRE HYDRANT TO THE FIRE LATERAL SUBBED UP

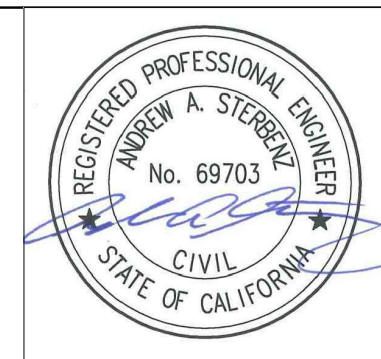
M:\MWD\0805\_Design\_Production\080504\_CARMEL\DWG\_DETAILS\CONNECTION\_DETAILS.dwg (12/20/2025 10:21 AM) by ALJ/ALJ

NO.	REVISION DESCRIPTION	DATE	APPR



**MARINA COAST WATER DISTRICT**  
 920 SECOND AVENUE, SUITE A  
 MARINA, CA 93933  
 (831) 384-6131

**SCHAAF & WHEELER**  
 CONSULTING CIVIL ENGINEERS  
 3 QUAIL RUN CIRCLE, SUITE #101  
 SALINAS, CA 93907  
 (831) 883-4848

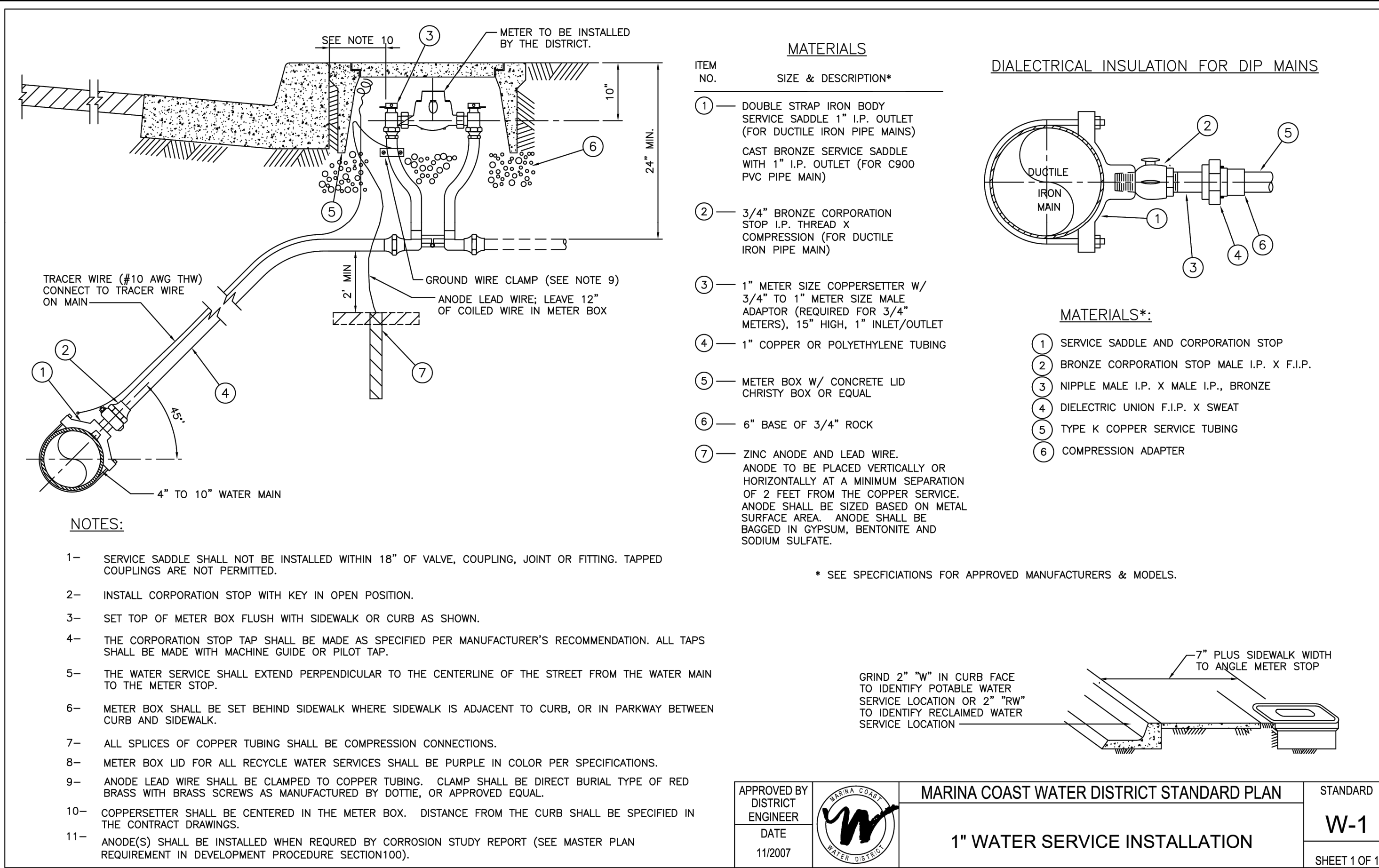


**BAYER STREET WATER MAIN DESIGN**

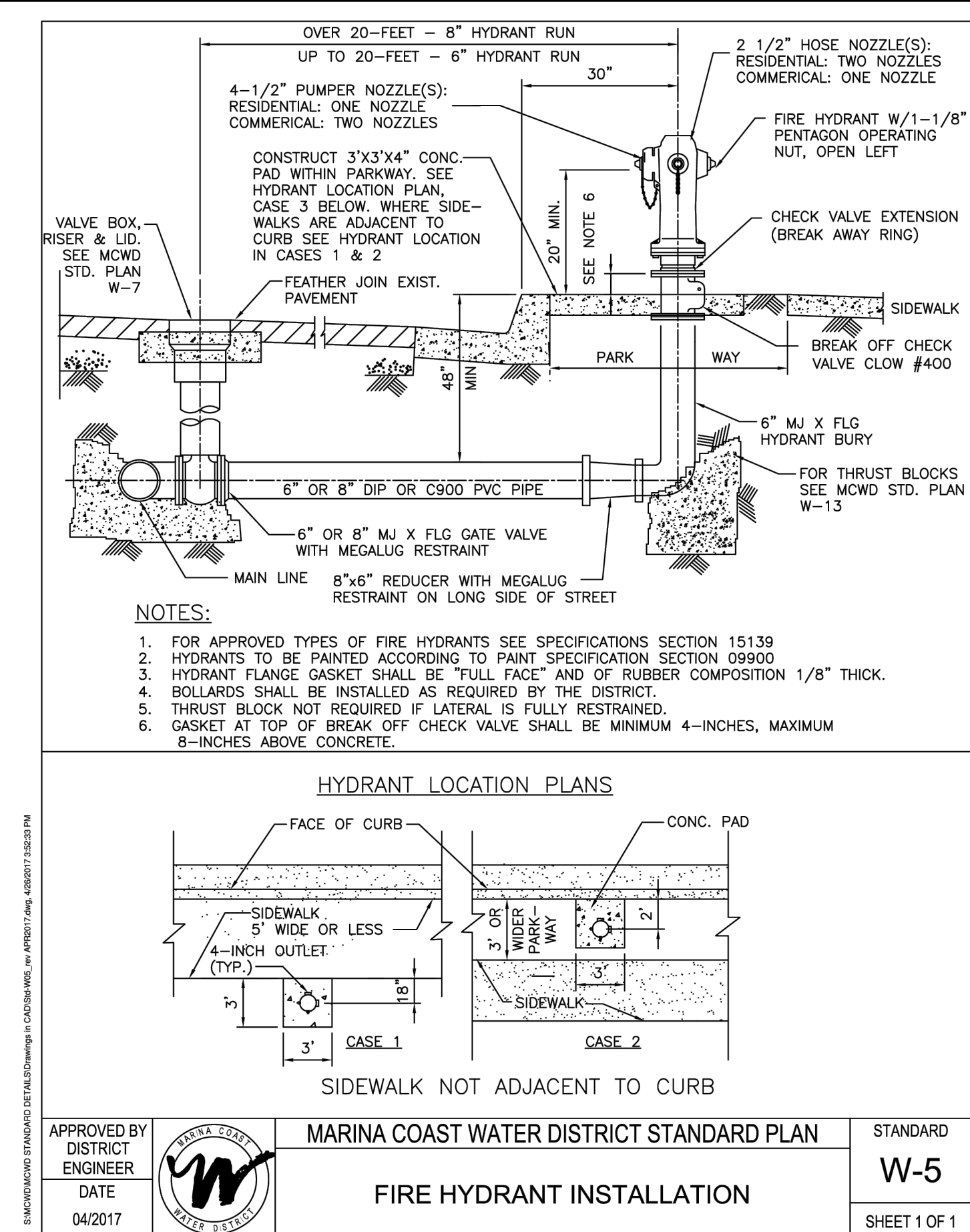
**CONNECTION DETAILS**

DATE: DEC 2025  
 SCALE: NTS  
 DESIGN: ALJ  
 DRAWN: ALJ  
 CHECK: AAS

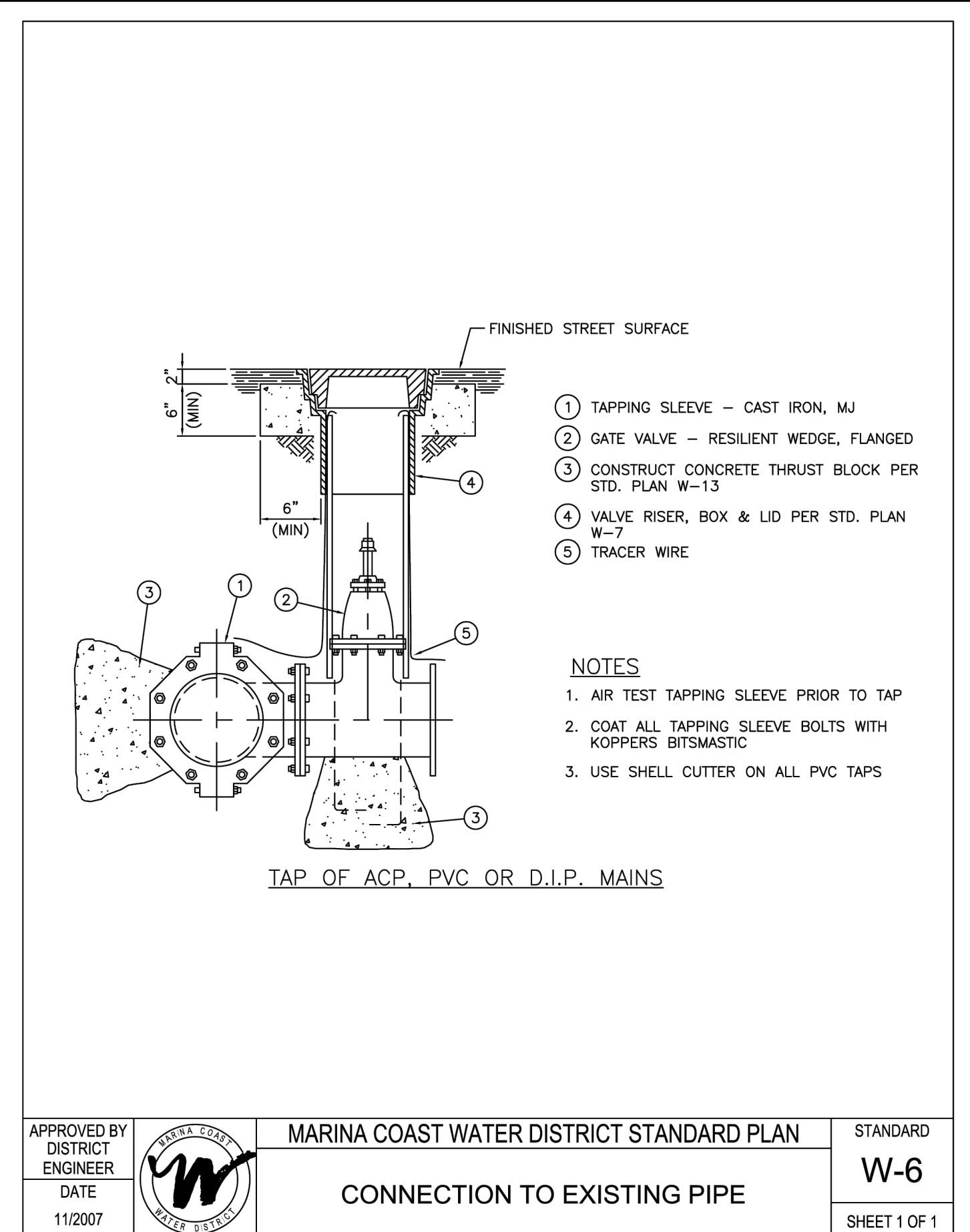
**SHEET**  
**C3.0**  
**9 of 11**



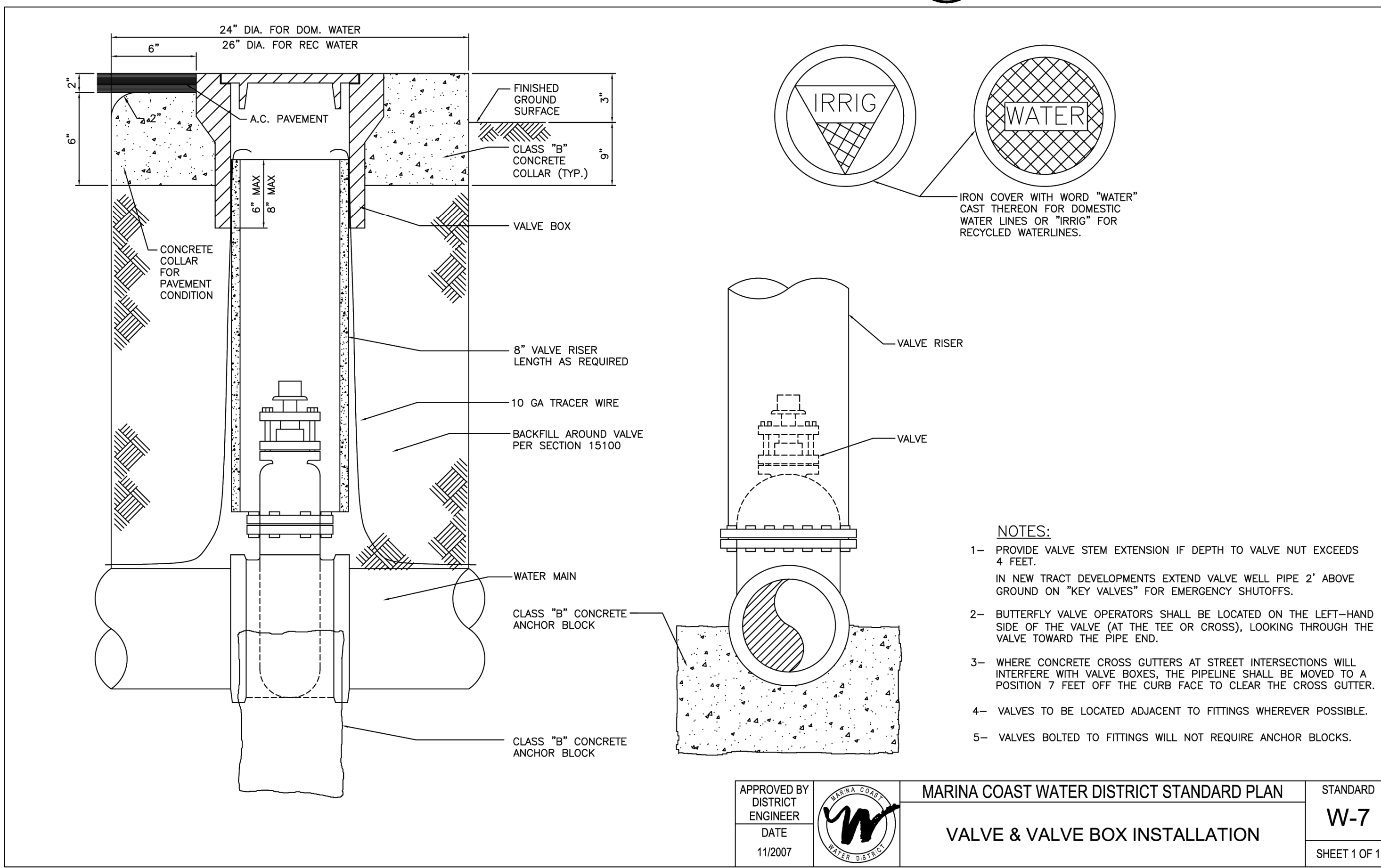
**1-INCH WATER SERVICE INSTALLATION (A)**  
SCALE: N.T.S.



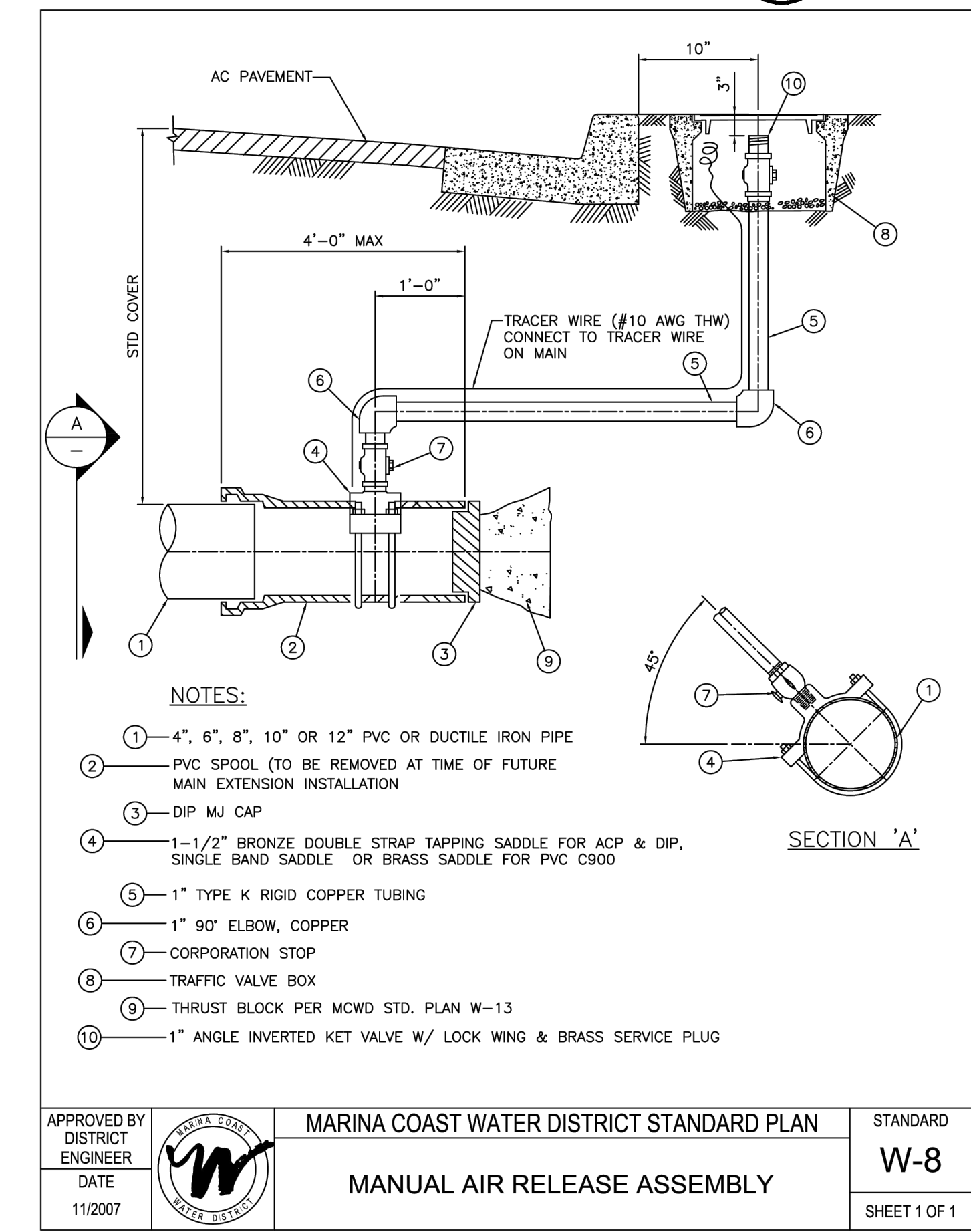
**FIRE HYDRANT INSTALLATION (B)**  
SCALE: N.T.S.



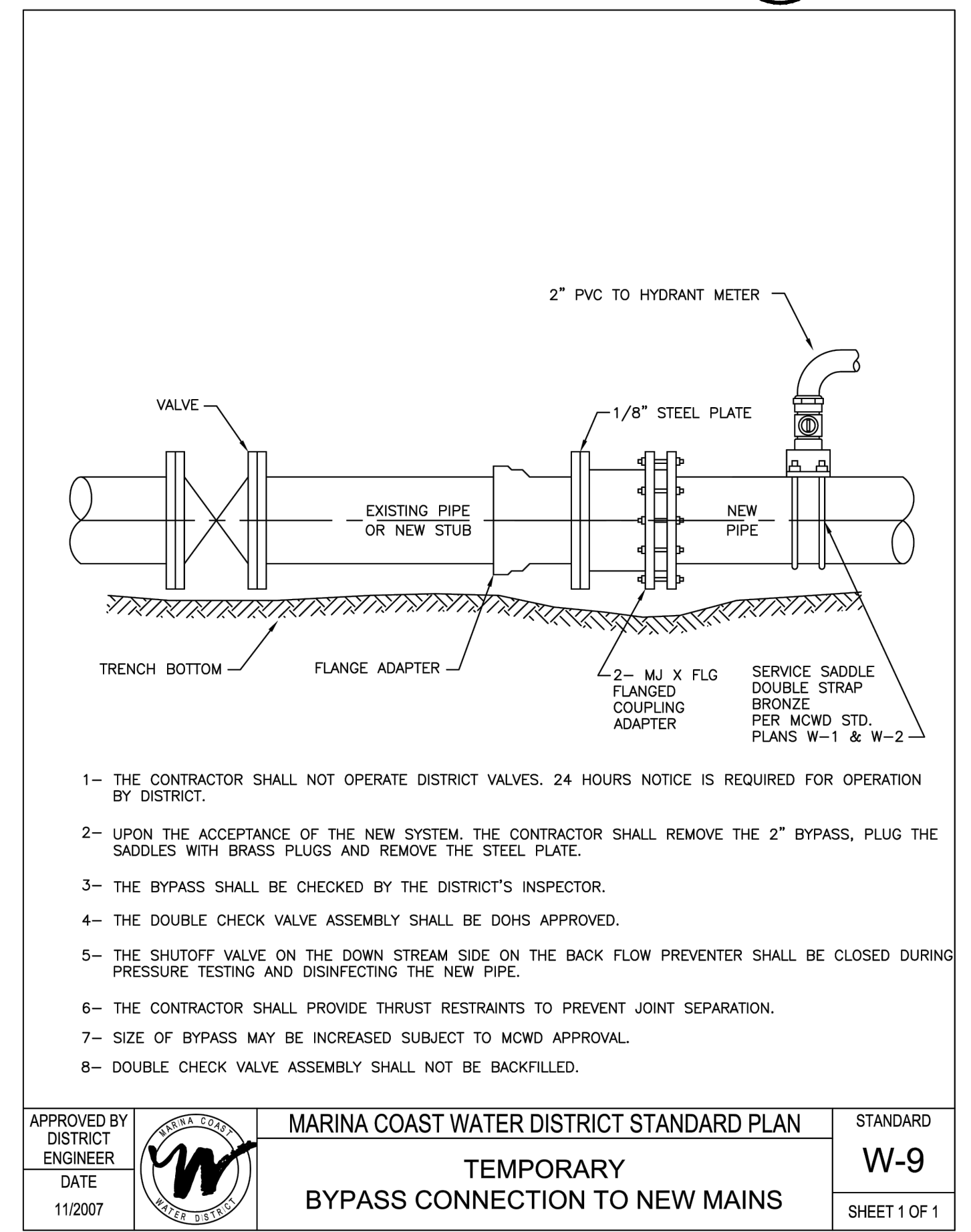
**CONNECTION TO EXISTING PIPE (C)**  
SCALE: N.T.S.



**VALVE AND VALVE BOX INSTALLATION (D)**  
SCALE: N.T.S.



**MANUAL AIR RELEASE ASSEMBLY (E)**  
SCALE: N.T.S.



**TEMPORARY BYPASS CONNECTION TO NEW MAINS (F)**  
SCALE: N.T.S.

NO.	REVISION DESCRIPTION	DATE	APPR

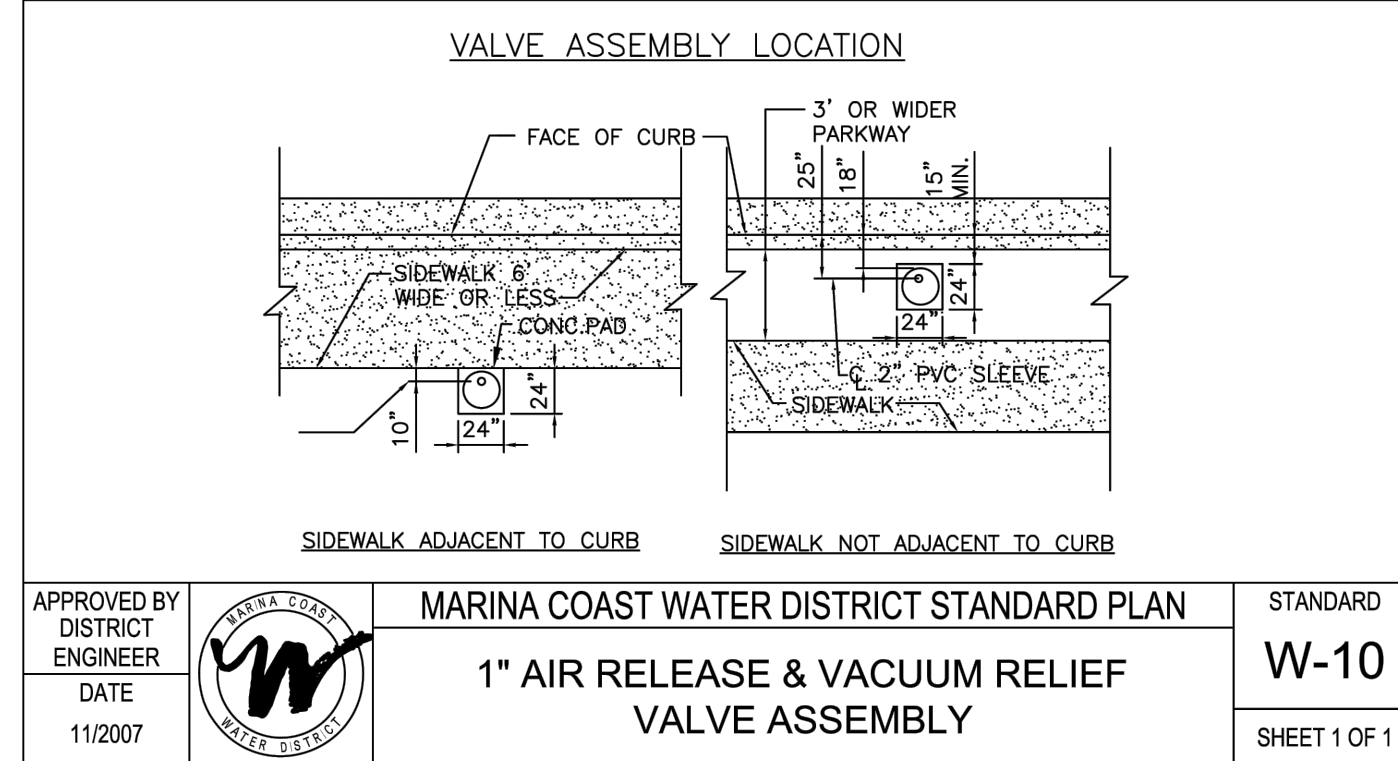
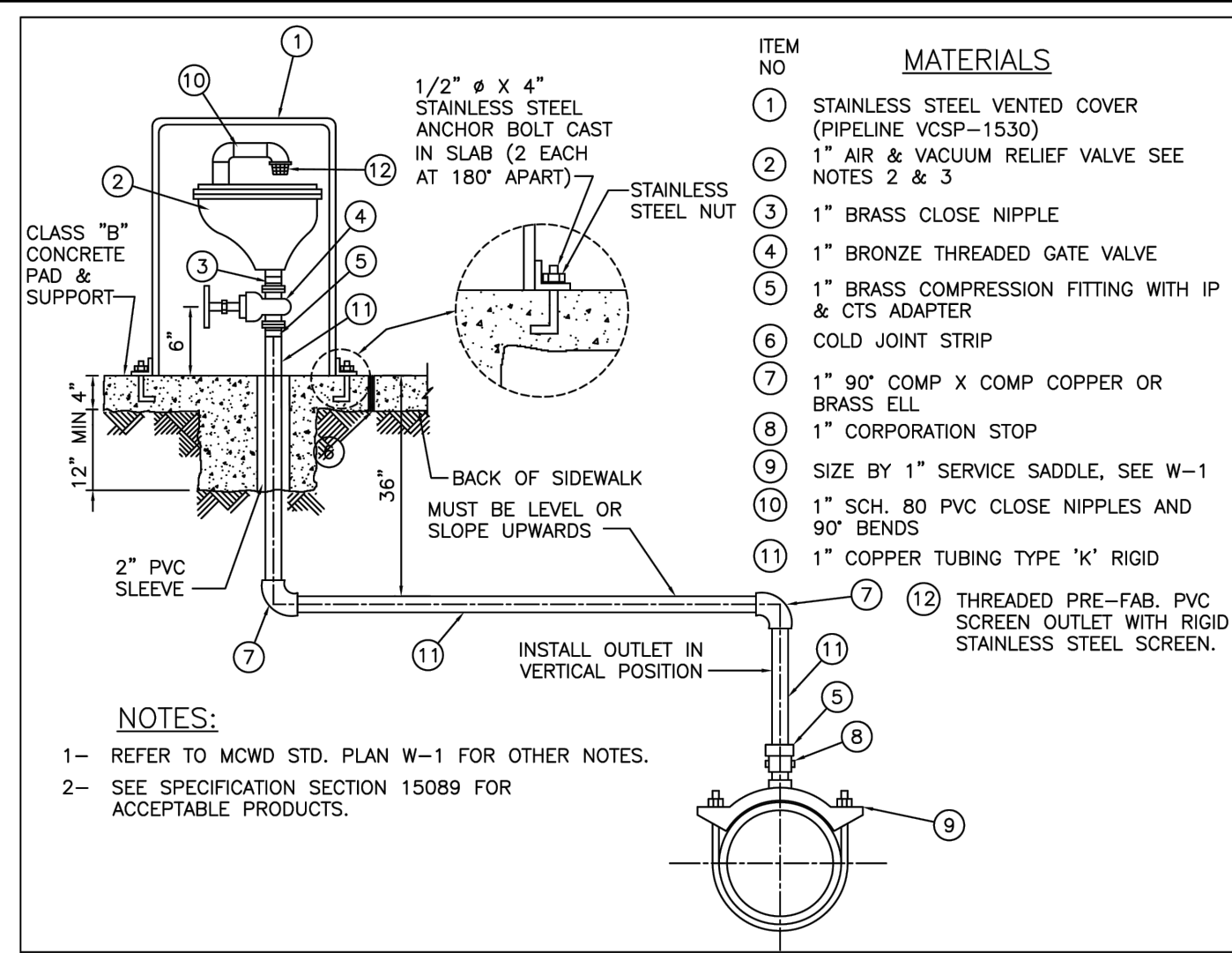
**MARINA COAST WATER DISTRICT**  
920 SECOND AVENUE, SUITE A  
MARINA, CA 93903  
(831) 384-6131

**SCHAAF & WHEELER**  
CONSULTING CIVIL ENGINEERS  
3 QUAIL RUN CIRCLE, SUITE #101  
SALINAS, CA 93907  
(831) 883-4848

REGISTERED PROFESSIONAL ENGINEER  
ANDREW A. STERNBERG  
No. 69703  
CIVIL  
STATE OF CALIFORNIA

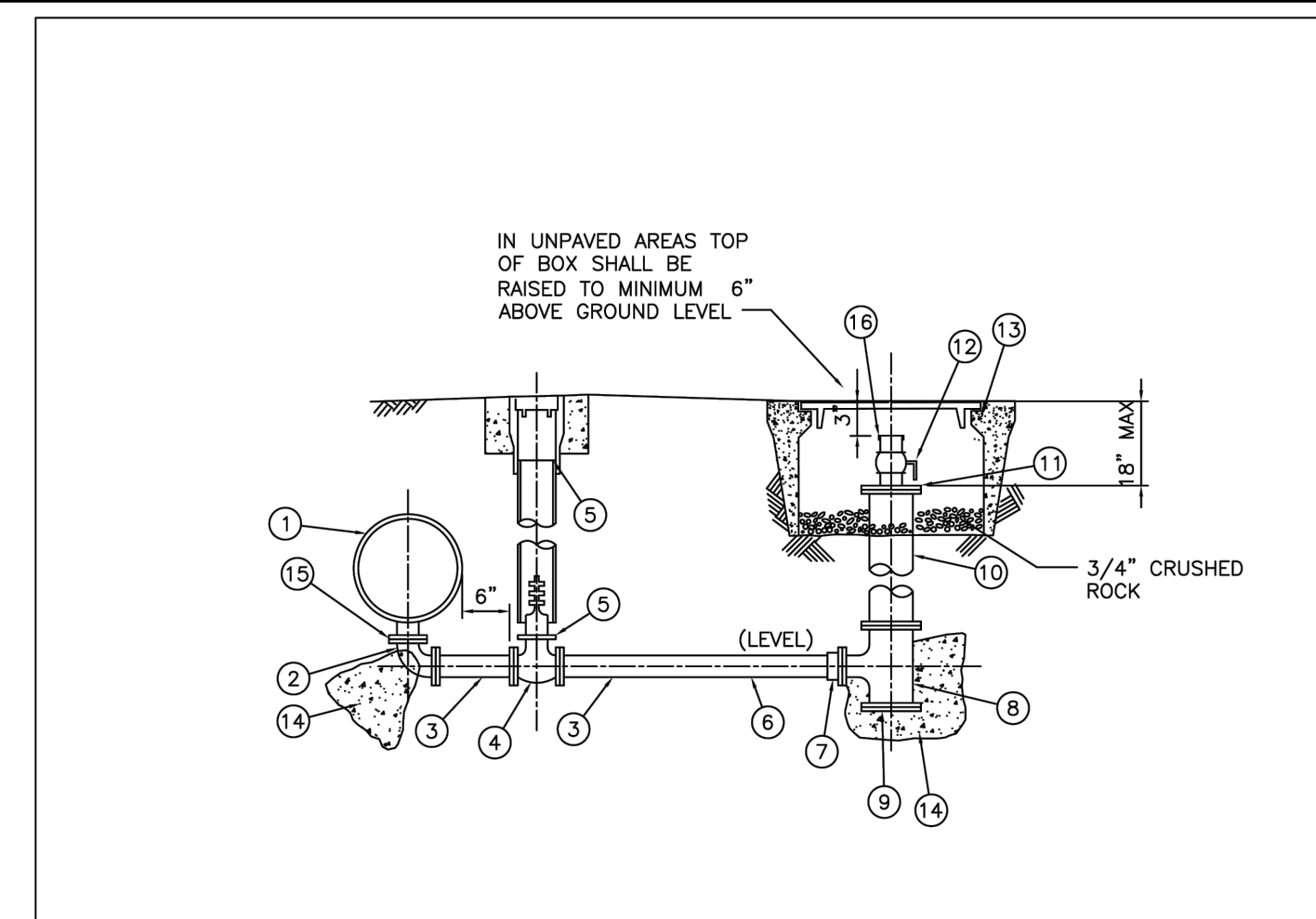
**BAYER STREET WATER MAIN DESIGN**  
**CIVIL DETAILS I**

DATE:	DEC 2025	<b>SHEET C3.1</b> <b>10 of 11</b>
SCALE:	NTS	
DESIGN:	ALJ	
DRAWN:	ALJ	
CHECK:	AAS	



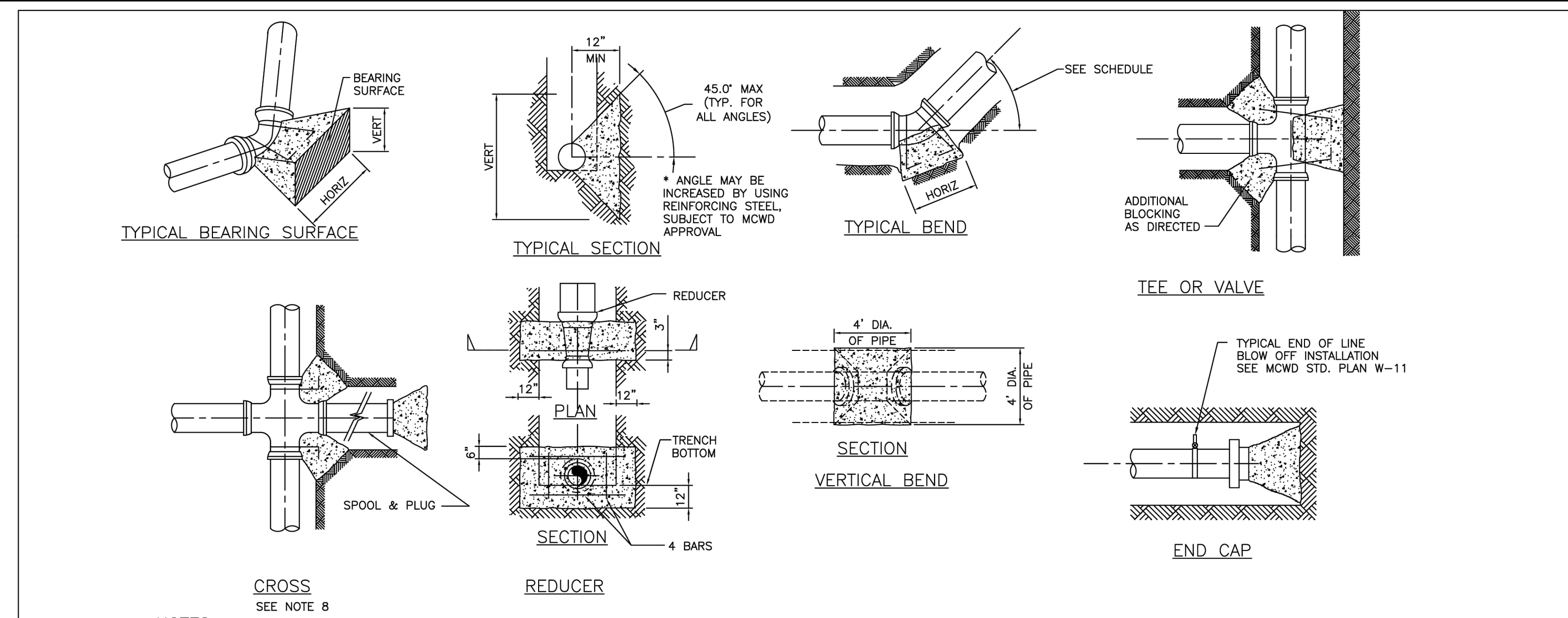
APPROVED BY DISTRICT ENGINEER [Signature] MARINA COAST WATER DISTRICT STANDARD PLAN W-10 1" AIR RELEASE & VACUUM RELIEF VALVE ASSEMBLY SHEET 1 OF 1

**1-INCH ARV ASSEMBLY (A)**  
SCALE: N.T.S.



APPROVED BY DISTRICT ENGINEER [Signature] MARINA COAST WATER DISTRICT STANDARD PLAN W-11 4 INCH LINE DRAIN BLOWOFF ASSEMBLY (FOR >12" MAINS) SHEET 1 OF 1

**BLOWOFF ASSEMBLY DETAIL (B)**  
SCALE: N.T.S.



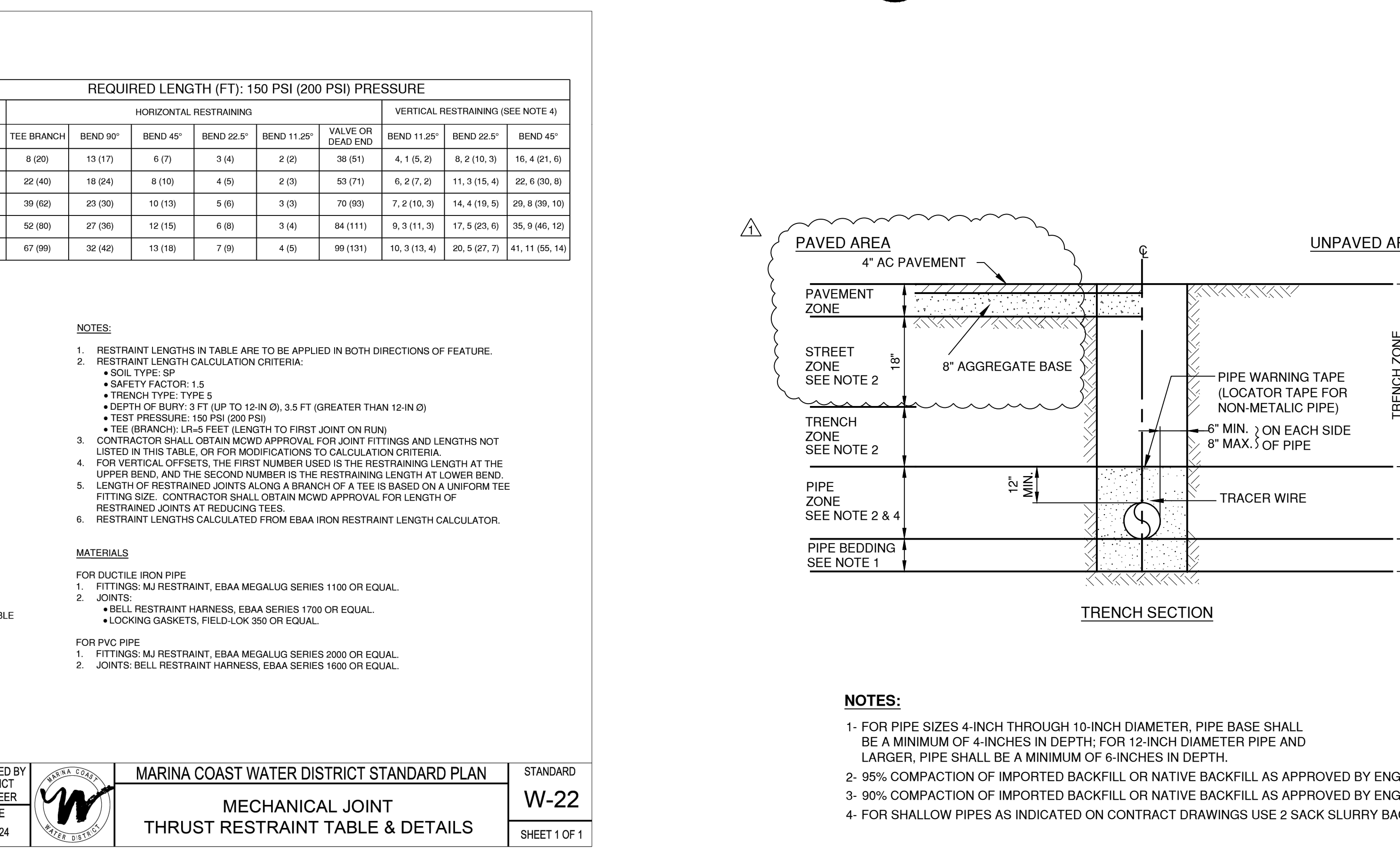
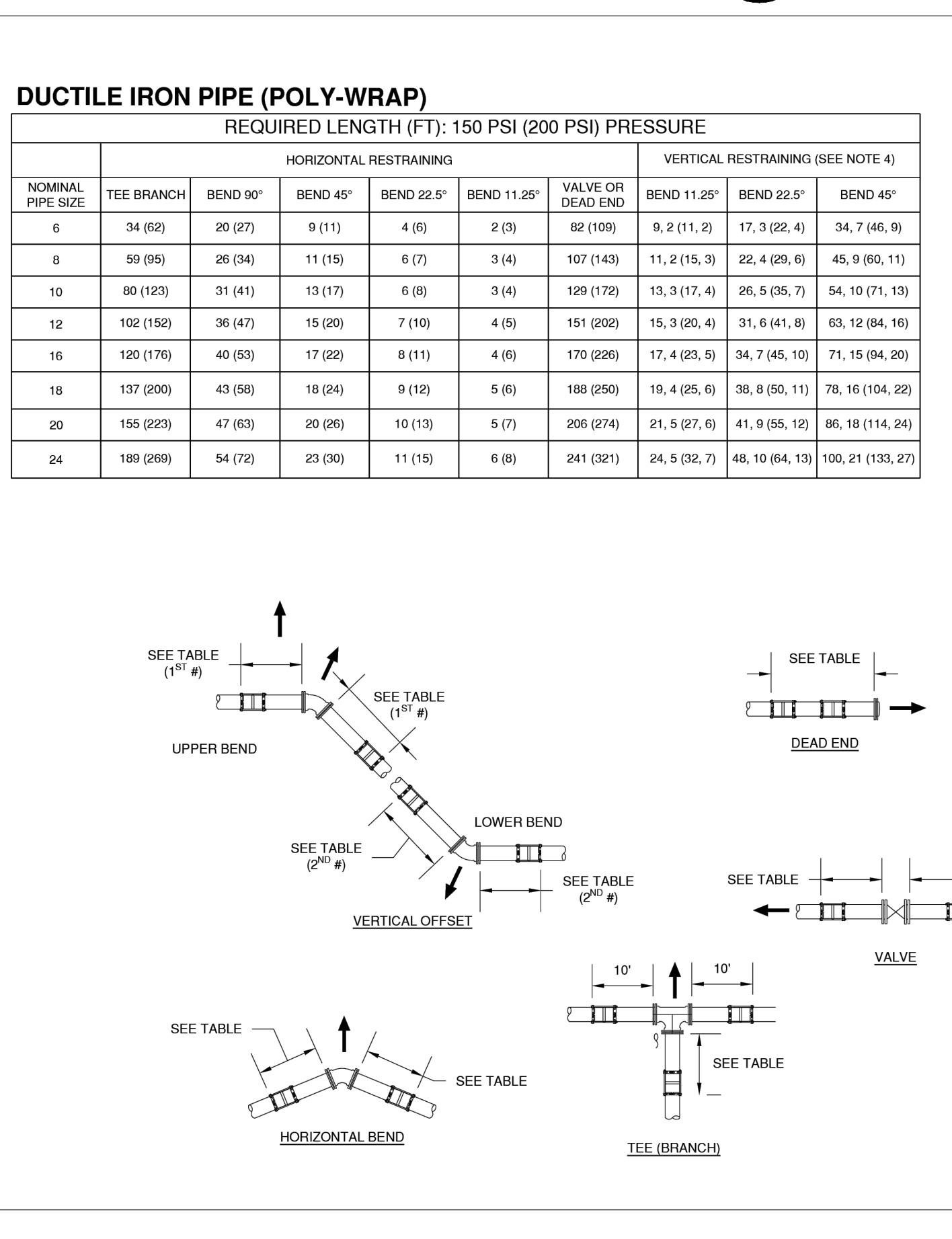
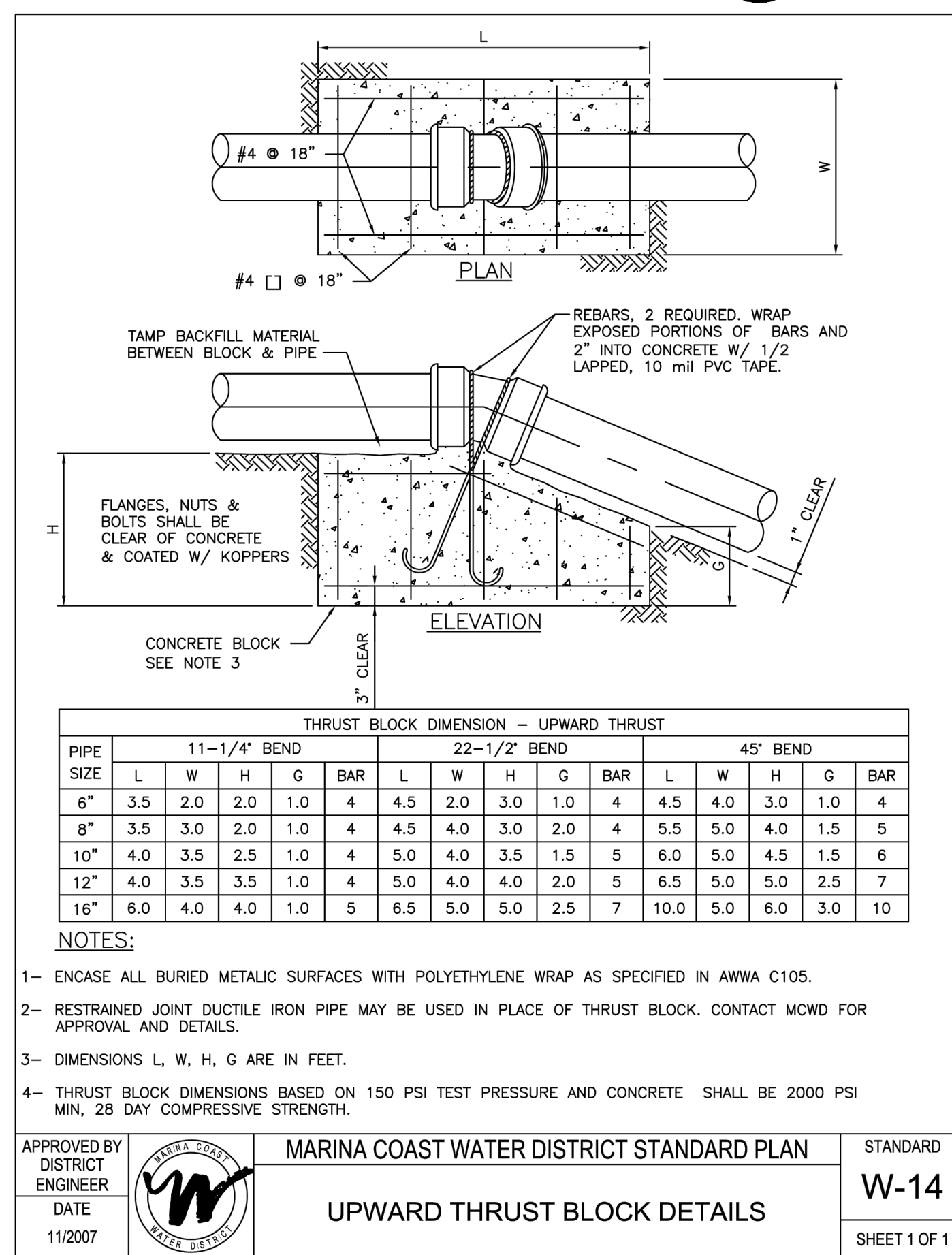
**MINIMUM SIZE OF THRUST BLOCK BEARING SURFACE**

PIPE SIZE	11 1/4" BEND		22 1/2" BEND		45° BEND		90° BEND		TEE		END CAP	
	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.
4"	1'-6"	0'-9"	1'-6"	0'-9"	1'-6"	1'-0"	2'-3"	1'-3"	1'-6"	1'-0"	1'-6"	1'-6"
6"	2'-6"	1'-0"	2'-6"	1'-0"	3'-6"	1'-6"	4'-6"	2'-3"	4'-0"	2'-0"	2'-6"	1'-9"
8"	3'-0"	1'-6"	3'-0"	1'-6"	4'-3"	2'-3"	5'-6"	3'-0"	5'-0"	2'-6"	3'-9"	2'-0"
10"	3'-9"	1'-9"	3'-9"	1'-9"	5'-0"	2'-9"	7'-0"	3'-6"	5'-6"	3'-3"	4'-6"	2'-6"
12"	4'-3"	2'-3"	4'-3"	2'-3"	5'-6"	3'-6"	8'-3"	4'-0"	7'-0"	3'-6"	5'-3"	3'-0"

**NOTES:**  
 1- THRUST BLOCK BEARING AREA BASED ON ALLOWABLE SOIL BEARING VALUE OF 1500 psf PRESSURE AND 225 psi LINE PRESSURE WITH 3'-0" COVER MINIMUM. FOR BEARING = 1000 psf, 1.5 X AREA SHOWN FOR BEARING = 500 psf, 3.0 X AREA SHOWN.  
 2- ALL THRUST BLOCKS SHALL BE 2,000 PSI CONCRETE AND PLACED AGAINST UNDISTURBED SOIL. DESIGN ENGINEER SHALL DETERMINE SIZES NOT SHOWN.  
 3- STRAPS TO BE #4 REBARS EMBEDDED IN THRUST BLOCK TO A DEPTH EQUAL TO 3/4 OF PIPE DIAMETER. STRAP BEND EQUALS 1/2 PIPE DIAMETER.  
 4- CONCRETE SHALL NOT EXTEND ONTO FLANGE OR ADJOINING PIPE.  
 5- JOINTS AND FACE OF PLUGS TO BE KEPT CLEAR OF CONCRETE.  
 6- WRAP EXPOSED PORTION OF BARS AND 2" INTO CONCRETE WITH HALF LAPPED, 10 MIL PVC TAPE.  
 7- WHEN CLEARANCES TO OTHER FACILITIES OR UTILITIES DO NOT ALLOW THE USE OF THRUST BLOCK, RESTRAINED PIPE SHALL BE USED.  
 8- THRUST BLOCKS ON CROSSES SHALL BE USED ONLY WHEN THERE IS A STUB-OUT ON ONE OR MORE SIDES, OR WHEN THERE IS ADJOINING UNRESTRAINED LENGTHS OF VALVES.  
 9- PIPE DIAMETERS GREATER THAN 12" SHALL BE CALCULATED BY THE ENGINEER & SUBMITTED TO DISTRICT ENGINEER FOR APPROVAL.  
 10- DISTRICT ALLOWS RESTRAINED JOINTS AS AN ALTERNATIVE TO THRUST BLOCKS.

APPROVED BY DISTRICT ENGINEER [Signature] MARINA COAST WATER DISTRICT STANDARD PLAN W-13 THRUST BLOCK DETAILS SHEET 1 OF 1

**THRUST BLOCK DETAIL (C)**  
SCALE: N.T.S.



1. MARINA COAST WATER DISTRICT STANDARD PLAN W-14, W-15, W-16, W-17, W-18, W-19, W-20, W-21, W-22, W-23, W-24, W-25, W-26, W-27, W-28, W-29, W-30, W-31, W-32, W-33, W-34, W-35, W-36, W-37, W-38, W-39, W-40, W-41, W-42, W-43, W-44, W-45, W-46, W-47, W-48, W-49, W-50, W-51, W-52, W-53, W-54, W-55, W-56, W-57, W-58, W-59, W-60, W-61, W-62, W-63, W-64, W-65, W-66, W-67, W-68, W-69, W-70, W-71, W-72, W-73, W-74, W-75, W-76, W-77, W-78, W-79, W-80, W-81, W-82, W-83, W-84, W-85, W-86, W-87, W-88, W-89, W-90, W-91, W-92, W-93, W-94, W-95, W-96, W-97, W-98, W-99, W-100, W-101, W-102, W-103, W-104, W-105, W-106, W-107, W-108, W-109, W-110, W-111, W-112, W-113, W-114, W-115, W-116, W-117, W-118, W-119, W-120, W-121, W-122, W-123, W-124, W-125, W-126, W-127, W-128, W-129, W-130, W-131, W-132, W-133, W-134, W-135, W-136, W-137, W-138, W-139, W-140, W-141, W-142, W-143, W-144, W-145, W-146, W-147, W-148, W-149, W-150, W-151, W-152, W-153, W-154, W-155, W-156, W-157, W-158, W-159, W-160, W-161, W-162, W-163, W-164, W-165, W-166, W-167, W-168, W-169, W-170, W-171, W-172, W-173, W-174, W-175, W-176, W-177, W-178, W-179, W-180, W-181, W-182, W-183, W-184, W-185, W-186, W-187, W-188, W-189, W-190, W-191, W-192, W-193, W-194, W-195, W-196, W-197, W-198, W-199, W-200, W-201, W-202, W-203, W-204, W-205, W-206, W-207, W-208, W-209, W-210, W-211, W-212, W-213, W-214, W-215, W-216, W-217, W-218, W-219, W-220, W-221, W-222, W-223, W-224, W-225, W-226, W-227, W-228, W-229, W-230, W-231, W-232, W-233, W-234, W-235, W-236, W-237, W-238, W-239, W-240, W-241, W-242, W-243, W-244, W-245, W-246, W-247, W-248, W-249, W-250, W-251, W-252, W-253, W-254, W-255, W-256, W-257, W-258, W-259, W-260, W-261, W-262, W-263, W-264, W-265, W-266, W-267, W-268, W-269, W-270, W-271, W-272, W-273, W-274, W-275, W-276, W-277, W-278, W-279, W-280, W-281, W-282, W-283, W-284, W-285, W-286, W-287, W-288, W-289, W-290, W-291, W-292, W-293, W-294, W-295, W-296, W-297, W-298, W-299, W-300, W-301, W-302, W-303, W-304, W-305, W-306, W-307, W-308, W-309, W-310, W-311, W-312, W-313, W-314, W-315, W-316, W-317, W-318, W-319, W-320, W-321, W-322, W-323, W-324, W-325, W-326, W-327, W-328, W-329, W-330, W-331, W-332, W-333, W-334, W-335, W-336, W-337, W-338, W-339, W-340, W-341, W-342, W-343, W-344, W-345, W-346, W-347, W-348, W-349, W-350, W-351, W-352, W-353, W-354, W-355, W-356, W-357, W-358, W-359, W-360, W-361, W-362, W-363, W-364, W-365, W-366, W-367, W-368, W-369, W-370, W-371, W-372, W-373, W-374, W-375, W-376, W-377, W-378, W-379, W-380, W-381, W-382, W-383, W-384, W-385, W-386, W-387, W-388, W-389, W-390, W-391, W-392, W-393, W-394, W-395, W-396, W-397, W-398, W-399, W-400, W-401, W-402, W-403, W-404, W-405, W-406, W-407, W-408, W-409, W-410, W-411, W-412, W-413, W-414, W-415, W-416, W-417, W-418, W-419, W-420, W-421, W-422, W-423, W-424, W-425, W-426, W-427, W-428, W-429, W-430, W-431, W-432, W-433, W-434, W-435, W-436, W-437, W-438, W-439, W-440, W-441, W-442, W-443, W-444, W-445, W-446, W-447, W-448, W-449, W-450, W-451, W-452, W-453, W-454, W-455, W-456, W-457, W-458, W-459, W-460, W-461, W-462, W-463, W-464, W-465, W-466, W-467, W-468, W-469, W-470, W-471, W-472, W-473, W-474, W-475, W-476, W-477, W-478, W-479, W-480, W-481, W-482, W-483, W-484, W-485, W-486, W-487, W-488, W-489, W-490, W-491, W-492, W-493, W-494, W-495, W-496, W-497, W-498, W-499, W-500, W-501, W-502, W-503, W-504, W-505, W-506, W-507, W-508, W-509, W-510, W-511, W-512, W-513, W-514, W-515, W-516, W-517, W-518, W-519, W-520, W-521, W-522, W-523, W-524, W-525, W-526, W-527, W-528, W-529, W-530, W-531, W-532, W-533, W-534, W-535, W-536, W-537, W-538, W-539, W-540, W-541, W-542, W-543, W-544, W-545, W-546, W-547, W-548, W-549, W-550, W-551, W-552, W-553, W-554, W-555, W-556, W-557, W-558, W-559, W-560, W-561, W-562, W-563, W-564, W-565, W-566, W-567, W-568, W-569, W-570, W-571, W-572, W-573, W-574, W-575, W-576, W-577, W-578, W-579, W-580, W-581, W-582, W-583, W-584, W-585, W-586, W-587, W-588, W-589, W-590, W-591, W-592, W-593, W-594, W-595, W-596, W-597, W-598, W-599, W-600, W-601, W-602, W-603, W-604, W-605, W-606, W-607, W-608, W-609, W-610, W-611, W-612, W-613, W-614, W-615, W-616, W-617, W-618, W-619, W-620, W-621, W-622, W-623, W-624, W-625, W-626, W-627, W-628, W-629, W-630, W-631, W-632, W-633, W-634, W-635, W-636, W-637, W-638, W-639, W-640, W-641, W-642, W-643, W-644, W-645, W-646, W-647, W-648, W-649, W-650, W-651, W-652, W-653, W-654, W-655, W-656, W-657, W-658, W-659, W-660, W-661, W-662, W-663, W-664, W-665, W-666, W-667, W-668, W-669, W-670, W-671, W-672, W-673, W-674, W-675, W-676, W-677, W-678, W-679, W-680, W-681, W-682, W-683, W-684, W-685, W-686, W-687, W-688, W-689, W-690, W-691, W-692, W-693, W-694, W-695, W-696, W-697, W-698, W-699, W-700, W-701, W-702, W-703, W-704, W-705, W-706, W-707, W-708, W-709, W-710, W-711, W-712, W-713, W-714, W-715, W-716, W-717, W-718, W-719, W-720, W-721, W-722, W-723, W-724, W-725, W-726, W-727, W-728, W-729, W-730, W-731, W-732, W-733, W-734, W-735, W-736, W-737, W-738, W-739, W-740, W-741, W-742, W-743, W-744, W-745, W-746, W-747, W-748, W-749, W-750, W-751, W-752, W-753, W-754, W-755, W-756, W-757, W-758, W-759, W-760, W-761, W-762, W-763, W-764, W-765, W-766, W-767, W-768, W-769, W-770, W-771, W-772, W-773, W-774, W-775, W-776, W-777, W-778, W-779, W-780, W-781, W-782, W-783, W-784, W-785, W-786, W-787, W-788, W-789, W-790, W-791, W-792, W-793, W-794, W-795, W-796, W-797, W-798, W-799, W-800, W-801, W-802, W-803, W-804, W-805, W-806, W-807, W-808, W-809, W-810, W-811, W-812, W-813, W-814, W-815, W-816, W-817, W-818, W-819, W-820, W-821, W-822, W-823, W-824, W-825, W-