



ELSINORE VALLEY

MUNICIPAL WATER DISTRICT

VOLUME 2 STANDARD DRAWINGS

JUNE 2023

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1. All work shall conform to the Elsinore Valley Municipal Water District (EVMWD) design and construction standards for water, recycled water and sanitary sewer facilities.
2. Construction materials testing and inspection shall comply with standards and specifications and shall meet or exceed the requirements of the governing agency, the Standard Specifications for Public Works Construction ("Green Book") and the American Society for Testing and Materials (ASTM) standards. Failure to meet any of the above requirements shall be cause for rejection.
3. The contractor shall notify EVMWD (5) five working days prior to beginning work (951) 674-3146.
4. Depth and location of existing underground facilities shall be determined by the contractor by potholing and a field survey of elevations and shall be given to the inspector prior to trenching. The contractor shall also contact Underground Service Alert (811) prior to any excavation work.
5. All construction and operations by the contractor shall be in accordance with Cal-OSHA requirements.
6. The contractor shall keep a complete record of all construction changes and shall make information available to the inspector for preparation of "As Built" drawings. The "As Built" drawings shall be submitted to EVMWD for review prior to final review and acceptance of the project.
7. Where the water main and sewer cross storm drains, other pipelines, telephone and electric ducts, or similar installations, a minimum of 12 inches of vertical clearance shall be provided between the main or sewer and other installations unless otherwise directed by EVMWD personnel.
8. Separation of sewer and water lines must comply with EVMWD standard plans S-3 or W-2 and shall meet or exceed the requirements of the State of California, Department of Public Health Title 22, Chapter 16, Article 4, Section 64572.
9. Connections to existing EVMWD sewer or water lines shall be in accordance with standard EVMWD procedures and shall not be made unless EVMWD inspector is present.
10. Unless waived by EVMWD an insulated copper solid core 10 gage tracer wire shall be placed with each sewer main to assist with future location. Warning tape shall be placed at least 6" above sewer main & sewer laterals, but not deeper than 24" below the existing finished grade. Water mains shall also have tracer wire and warning tape installed in the trench.

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11. The length of open trench at any one time shall be limited to 600 feet along road right-of-way unless otherwise agreed to in writing by EVMWD. Trench shall be backfilled and compacted at the conclusion of each day. Open trench limits are subject to city requirements.
12. Surface improvements damaged or removed as a result of the contractor's operations shall be reconstructed by the contractor to the local governing agency's requirements at the contractor's expense.
13. All revisions to these drawings must be approved by EVMWD Engineering Manager.
14. It is the project engineer's responsibility to tie out any existing street monumentation either visible or buried, prior to construction.
15. It is the contractor's responsibility to protect any street monumentation in place. If any monument is disturbed or destroyed, the contractor will be required to contract with a registered land surveyor for the re-establishment and mapping of the destroyed monument at the contractor's expense.
16. The existence and location of any underground utility pipes or structures shown on these plans were obtained by a search of the available records. To the best of EVMWD knowledge there are no existing utilities except as shown on these plans. The contractor is required to take due precautionary measures to protect the utility lines shown and any other lines not on record or not shown on these plans or marked on the ground by Underground Service Alert.
17. It shall be the responsibility of the developer or contractor to apply for any necessary encroachment permit from all governing agencies.
18. It shall be the responsibility of the contractor/developer to stamp a 2" high "S" "W" or "IW" on the curb face for all sewer, water, and irrigation laterals at the location where the lateral passes beneath the curb. A "V" shall be stamped on the curb face at all valves.
19. A steel rod or stake 6" above the ground or 10 gage copper wire with 2" copper tag, shall be installed at the end of each sewer lateral to assist in locating at a later date. In new tract development a 3"x8' PVC pipe or 2"x4"x8' board shall be used to mark the ends of laterals.
20. All sewers shall be balled, air tested, mandrel tested and CCTV inspected prior to acceptance by the district. Air test shall be per UNI-B-6; mandrel test shall be in accordance with section 306-1.2.12 of the standard specification for Public Works construction and closed circuit television inspection per District Standards.

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21. A property line cleanout will be installed, 5½' deep minimum, outside of right-of-way line. The 1/8 bend and 45° wye connection shall be Polyvinyl Chloride (PVC) or Acrylonitrile Butadiene Styrene (ABS).
22. Protect pipe, joints, lining and coating, and bed pipe carefully to provide continuous bearing and prevent uneven settlement. Pipe shall be protected against flotation at all times. Open ends of the installed sewer pipe shall be sealed at all times when construction is not in process.
23. Pipe joints shall not be deflected greater than 80% of the maximum angle recommended by the pipe manufacturer.
24. Sewer and water pipe trench backfill shall be in accordance with EVMWD standard drawings S-1 & W-3 and the governing agency. A full time soils technician must be onsite during backfilling and compaction.
25. All service laterals shall be located at right angles to the main unless otherwise indicated on the plans and accepted by EVMWD. Materials for laterals shall meet EVMWD specifications. Sewer elevations shown are flowline (conduit invert).
26. Minimum cover for all water mains less than 12 inches in diameter shall be 3.5 feet. water mains 12 inches and greater shall have a minimum cover of 4 feet. maximum cover for water mains shall be 8 feet, unless accepted by the EVMWD Engineering Manager.
27. Wherever valves are to be installed, the invert slope of the main shall not exceed six percent. Valves shall be located so that there will be a minimum clearance of 6 inches between the top of the valve and the bottom of the valve box cover at street sections.
28. The minimum clearance between fire hydrants and utility poles, light standards and sign posts shall be 3 feet.
29. No water meter boxes shall be installed in driveways or sidewalks. Meter boxes shall be set at high grade to eliminate water runoff. install reduced pressure principle or back flow device after irrigation meter. Install a pressure regulator on homes or business if the pressure is over 80 PSI. A pressure regulator shall be installed prior to entering the house/building plumbing.
30. Any change in flow direction (bends, tees, fire hydrants, etc.) shall utilize restrained ductile iron pipe and fittings, in lieu of thrust blocks.
31. Air valves shall be installed at high points and blowoffs at all low points on the line as per EVMWD standard drawings W-16, W-17, and W-19.


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32. If required, a reservoir and booster pump station will have to be constructed and in service before any service can be provided to the units constructed within this subdivision.
33. Prior to paving the street section, all underground facilities with laterals, including but not limited to sewer, water, telephone, electric power, gas, cable television and drainage facilities shall be in place, tested and accepted by the responsible utility/agency.
34. House slab elevations that are lower than the upstream manhole rim elevation shall be equipped with backwater valves. The project engineer shall indicate on the sewer lateral table which lots are involved.
35. Prior to the construction of any backflow protection device, the contractor shall notify the district backflow assembly inspector 24 hours prior to the construction of assembly. The district backflow inspector shall provide final inspection, testing and acceptance prior to turning on the water supply.
36. Survey staking for water pipelines is at 50-foot intervals plus all appurtenances, horizontal alignment changes and vertical alignment changes. Survey staking for sewer pipelines is at 25-foot intervals plus all laterals, manholes in and out, appurtenances, cleanouts, horizontal & vertical alignment changes, beginning of curves, and end of curves.
37. All water valves in unpaved areas shall be surrounded by an asphalt pad installed in accordance with EVMWD standard drawing W-27. A valve marker shall be installed in unpaved areas in accordance with EVMWD standard drawing W-28.
38. All manholes installed in unpaved areas shall be surrounded by an asphalt pad installed in accordance with EVMWD standard drawing S-10.
39. All facilities located downstream of the water meter and fire detector check meter are private and are to be maintained by the owner.
40. Interior off sewer manholes shall receive spray-on epoxy coating or polyurethane lining. Refer to Accepted Materials Guideline List for approved manufacturer.

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RECYCLED WATER GENERAL NOTES

1. Five (5) days prior to commencement of any excavation of on-site improvements, the contractor shall notify the Elsinore Valley Municipal Water District Engineering and Inspection Department at (951) 674-3146 x 8402.
2. All work shall be done in accordance with the Elsinore Valley Municipal Water District (EVMWD) "Rules and Regulations for Recycled Water Use and Distribution within the Elsinore Valley Municipal Water District", and the State Water Resources Control Board - Division of Drinking Water (DDW) requirements.
3. Cross connection between recycled water lines and potable water lines is strictly prohibited.
4. No substitution of pipe materials will be allowed without prior approval by the EVMWD and DDW.
5. All below grade recycled water pipe shall be color code purple pantone #522 or distinctively sleeved in purple recycled water protective wrapping or in purple tape fixed to top of pipe and stenciled with "Caution recycled water - DO NOT DRINK". Orient the stenciling to the top of the trench for laterals. Install purple metallic tape over the recycled water mains per the recycled water system standard design requirements in the EVMWD standard specifications and drawings.
6. All above ground recycled water facilities shall be purple colored pantone #512 and marked to differentiate recycled water facilities from potable water or wastewater facilities per American Water Works Association (AWWA) guidelines and section 116815 of the California Health and Safety Code.
7. Provide a minimum cover of all pipes in accordance with EVMWD standard specifications and drawings per the standard design requirements for recycled water pipelines.
8. Maintain separation between potable water, recycled water, and/or sewer pipelines according to the EVMWD standard drawings and CDPH guidance memo no. 2003-02 latest revision.
9. All public and private potable water mains including fire mains, services and any water wells and water courses within the recycled water project shall be shown on the plans.
10. Tag all valves and other below grade facilities within boxes with permanent recycled water labels that identify the facility as "Recycled Water - DO NOT DRINK NO BEBER". Attach the label with either stainless steel wire or self-locking plastic ties.
11. Blowoff assemblies for recycled water shall be in accordance with EVMWD standard drawing RW-1.
12. All public facilities such as comfort stations, drinking fountains, outdoor eating areas, etc. shall be protected from spray and or misting by recycled water.
13. No ponding, run-off, misting, or over spray is permitted. Relocate or adjust all irrigation heads to prevent over spraying onto sidewalks, streets, private lots, and areas not approved for recycled water use.

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				 <p>ELSINORE VALLEY MUNICIPAL WATER DISTRICT</p> <p><i>Parag Kalaria</i> 06/22/2023 PARAG KALARIA R.C.E. 83927 DATE</p>	<p>RECYCLED WATER GENERAL NOTES</p>	<p>GN-5</p>


RECYCLED WATER GENERAL NOTES (CONT.)

14. Areas not approved for recycled water use shall be protected from contact with recycled water, whether by windblown spray or by direct application through irrigation or other use. Lack of protection, whether by design, construction practice, or system operation is strictly prohibited.
15. Hose bibs on recycled water systems are prohibited.
16. Recycled water quick coupling valves shall be designed for use on recycled water in accordance with the rules, and regulations.
17. Quick coupling valves use in recycled water systems shall conform the following:
 - 17.1. Quick coupling valves can be 1 inch or 3/4 inch nominal size, with brass construction and a normal working pressure of 150 psi or equal.
 - 17.2. A purple rubber or vinyl locking cover shall be permanently attached to the quick coupling valves, Nelson 7645 with Acme threads.
18. When potable water and recycled water lines cross, the recycled water line shall be installed within a protective pipe similar to standard drawing W-6 except AWWA C-905 PVC pipe can be used in place of steel pipe. The protective pipe shall extend 10 feet from each side of the outside edge of the potable water line.
19. Provide a minimum of 12 inches of vertical separation between potable water, recycled water, and sewer line according to these rules and DDW. Maintain at least 12 inches crossing separation between other utilities unless otherwise directed by EVMWD personnel.
20. Install purple colored pantone #512 material for all above grade irrigation facilities per AWWA guidelines and section 116815 of the California Health and Safety Code.
 - 20.1. Valve and other on - grade boxes - purple color.
 - 20.2. Sprinkler heads - purple color.
21. All recycled water sprinkler control valves and others below grade facilities within boxes shall be tagged with identification tags. Tags shall be weather proof plastic 3 inches x 4 inches, purple in color, with words "Recycled Water - DO NOT DRINK" and "Aviso Aqua Impura - NO TOMAR" imprinted on one side, and the recognized symbol for not drinking on the other side. Imprinting shall be permanent and black in color. One tag shall be attached either to the valve stem directly with plastic tie wrap, or to the solenoid wire directly with plastic tie wrap per EVMWD standard drawing RW-3.
22. The contractor shall conduct a cross-connection control shutdown test and coverage test (as defined in section 4.8 of the District's rules) when requested by the District or DDW prior to any use of recycled water. The method of this test must be accepted by the district.
23. The required cross-connection shutdown test may be performed by a certified cross-connection control specialist as defined in the district's rules and witnessed by the district's cross-connection specialist. Copies of inspection reports shall be forwarded to the district.

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RECYCLED WATER GENERAL NOTES (CONT.)

24. ALL MAIN LINE AND LATERAL LINE PIPING AND CONTROL WIRES UNDER PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES. MAIN AND LATERAL LINE SLEEVES SHALL BE A MINIMUM OF TWICE (2X) THE DIAMETER OF THE PIPE TO BE SLEEVED. CONTROL WIRE SLEEVES SHALL BE OF SUFFICIENT SIZE FOR THE REQUIRED NUMBER OF WIRES UNDER PAVING.
25. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWING. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.
26. RECYCLED WATER METER SHALL BE CONSIDERED EXISTING PER THE CIVIL ENGINEER'S PLANS
27. FINAL LOCATION OF THE AUTOMATIC CONTROLLERS BE APPROVED BY THE LANDSCAPE IRRIGATION CONSULTANT AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
28. 120/240 VAC ELECTRICAL POWER SOURCE AT CONTROLLER AND PUMP LOCATION SHALL BE PROVIDED BY THE DEVELOPER. THE IRRIGATION CONTRACTOR SHALL MAKE THE FINAL CONNECTION FROM THE ELECTRICAL SOURCE TO THE PROPOSED NEW CONTROLLERS.
29. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.
30. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE WITH NO OVERSPRAY ONTO WALKS, STREETS, WALLS, ETC.
31. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE
32. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO BECOME FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, STRUCTURES AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY THEIR WORK. WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES THROUGH WALL, UNDER ROADWAYS AND PAVING, ETC.
33. THE SPRINKLER SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE AS SHOWN ON THE RESPECTIVE POINT OF CONNECTION NOTES. CONTRACTOR SHALL VERIFY WATER PRESSURES PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCES BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

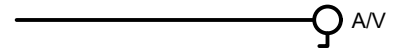
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					RECYCLED WATER GENERAL NOTES (CONTINUED)

RECYCLED WATER GENERAL NOTES (CONT.)

34. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
35. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
36. THE IRRIGATION CONTRACTOR SHALL INSTALL KBI SERIES ADV'S (ANTI DRAIN VALVES) ON ALL HEADS IN AREAS WHERE FINISH GRADE EXCEEDS 4:1, WHERE POST VALVE
37. SHUT-OFF DRAINING OF THE IRRIGATION HEAD OCCURS OR AS DIRECTED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
38. SHRUB HEADS AND RISERS MAY NOT BE SUBSTITUTED FOR POP-UP HEADS IN PLANTED AREAS WITHOUT PRIOR WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT, LANDSCAPE IRRIGATION CONSULTANT, AND THE CITY.
39. CALL THE CITY PLANNING DEPARTMENT FOR ALL LANDSCAPE AND IRRIGATION INSPECTIONS PRIOR TO ANY INSTALLATION. (951) 674-3124 EX 278.
40. ELSINORE VALLEY MUNICIPAL WATER DISTRICT FOR INSPECTION OF RECLAIMED WATER.
41. INSTALLATION OF IRRIGATION RECYCLED WATER TO BE PER ELSINORE VALLEY MUNICIPAL WATER DISTRICT STANDARDS.

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AIR RELEASE AND VACUUM ASSEMBLY



BACKFLOW PREVENTER



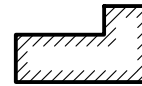
BLOW OFF VALVE



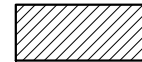
BRUSH (LANDSCAPING)



BUILDING



BRICK



CATCH BASIN



CITY LIMITS LINE



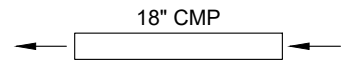
CLEAN-OUT



CONCRETE BLOCK



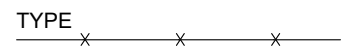
CULVERT



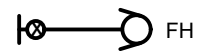
DISTRICT BOUNDARY LINE



FENCE



FIRE HYDRANT



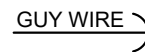
FLOWLINE



GAS METER



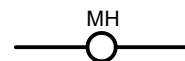
GUY WIRE



HEDGE (LANDSCAPING)



MANHOLE



REVISION	BY	APPR	DATE

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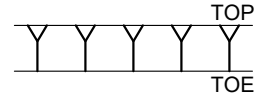
DRAFTING SYMBOLS

STD. DWG. NO.
G-1

SHRUB (LANDSCAPING)



SLOPE



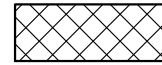
TELEPHONE, POWER OR LIGHT POLE



TREE (LANDSCAPING)



TILE



TRAFFIC SIGNAL



UTILITIES

GAS



ELECTRIC



CABLE TV



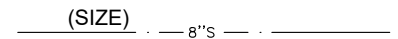
FIBER OPTIC



TELEPHONE



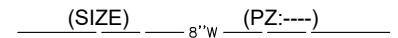
SEWER



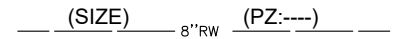
SEWER FORCE MAIN



WATER



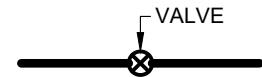
RECYCLED WATER



VALVE



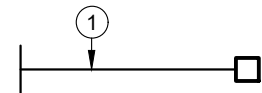
WATER MAIN TO BE CONSTRUCTED



WATER METER



WATER SERVICE



WEIGHT OF LINES

A. EASEMENT



B. PAVEMENT EDGE, EDGE OF ROAD



C. EXISTING UTILITIES



D. NEW WATER MAIN OR OTHER PIPE LINES



E. R.O.W.




REVISION	BY	APPR	DATE

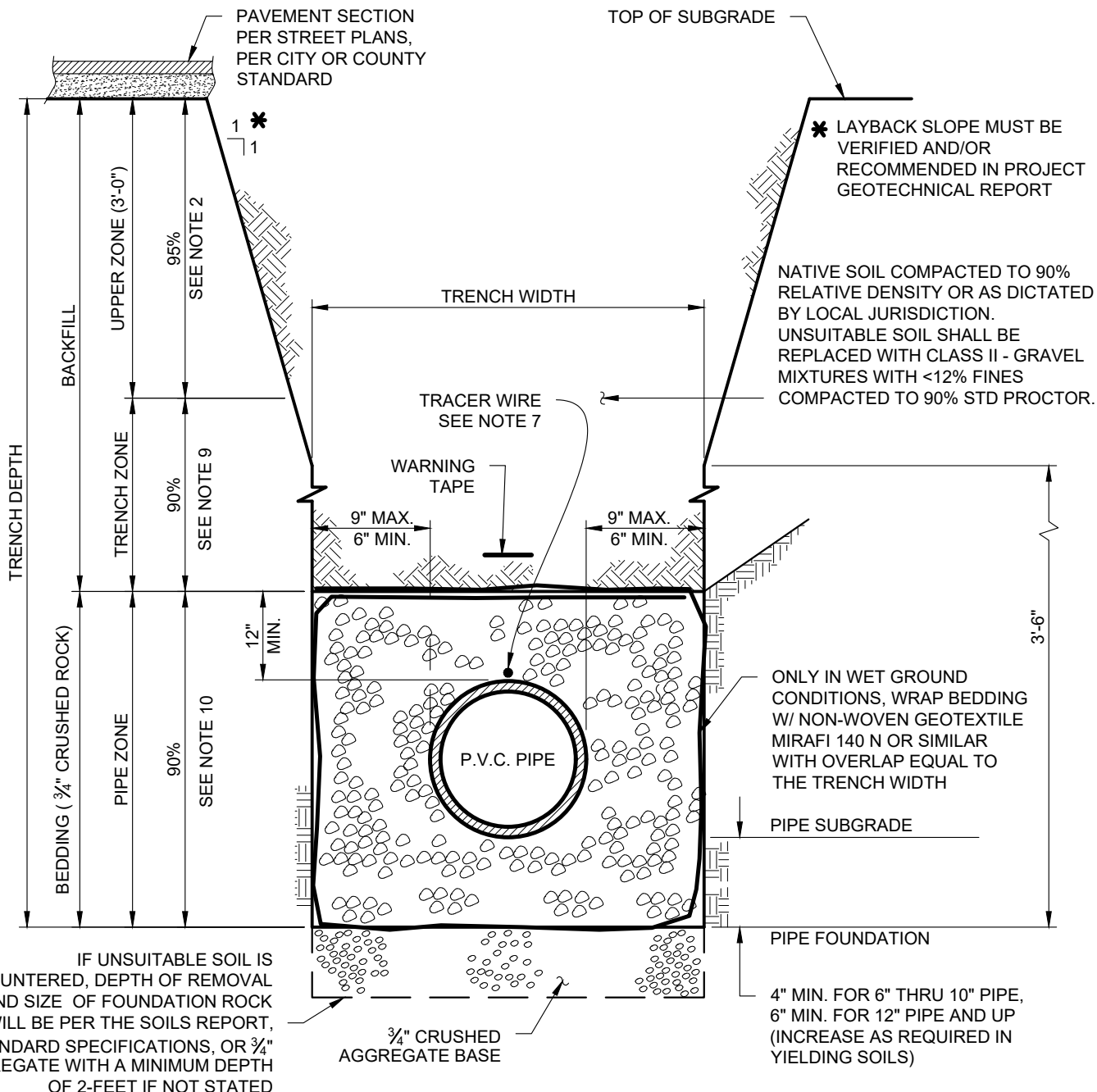
PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

DRAFTING SYMBOLS (CONTINUED)

STD. DWG. NO.
G-2

AC	ASPHALTIC CONCRETE
AV	AIR RELEASE & VACUUM RELIEF VALVE ASSEMBLY
BC	BEGIN CURVE
BP	BACKFLOW PREVENTER
BV	BUTTERFLY VALVE
BO	BLOW OFF
CML&C OR CMLC	CEMENT MORTAR LINED & COATED
DI	DUCTILE IRON
E, OR T	ELECTRICAL & TELEPHONE CONDUIT
(E)	EAST
EC	END CURVE
ELEV.	ELEVATION
EVMWD	ELSINORE VALLEY MUNICIPAL WATER DISTRICT
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FL	FLOWLINE
FLG	FLANGE
G	GAS LINE
GB	GRADE BREAK
GV	GATE VALVE
INV.	INVERT
MH	MANHOLE
MJ	MECHANICAL JOINT
NIC	NOT IN CONTRACT
(N)	NORTH
PAD ELEV.	PAD ELEVATION
PO	PUSH ON
PVC	POLYVINYL CHLORIDE
ROW OR R/W	RIGHT OF WAY
RW	RECYCLED WATER
RPP	REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE
S	SEWER LINE
(S)	SOUTH
W	WATER LINE
(W)	WEST

REVISION	BY	APPR	DATE	 <p>ELSINORE VALLEY MUNICIPAL WATER DISTRICT</p> <p><i>Parag Kalaria</i> 06/22/2023 PARAG KALARIA R.C.E. 83927 DATE</p>	<h1>ABBREVIATIONS</h1>	STD. DWG. NO.
						G-3



IF UNSUITABLE SOIL IS ENCOUNTERED, DEPTH OF REMOVAL AND SIZE OF FOUNDATION ROCK WILL BE PER THE SOILS REPORT, STANDARD SPECIFICATIONS, OR 3/4" AGGREGATE WITH A MINIMUM DEPTH OF 2-FEET IF NOT STATED

NOTES:

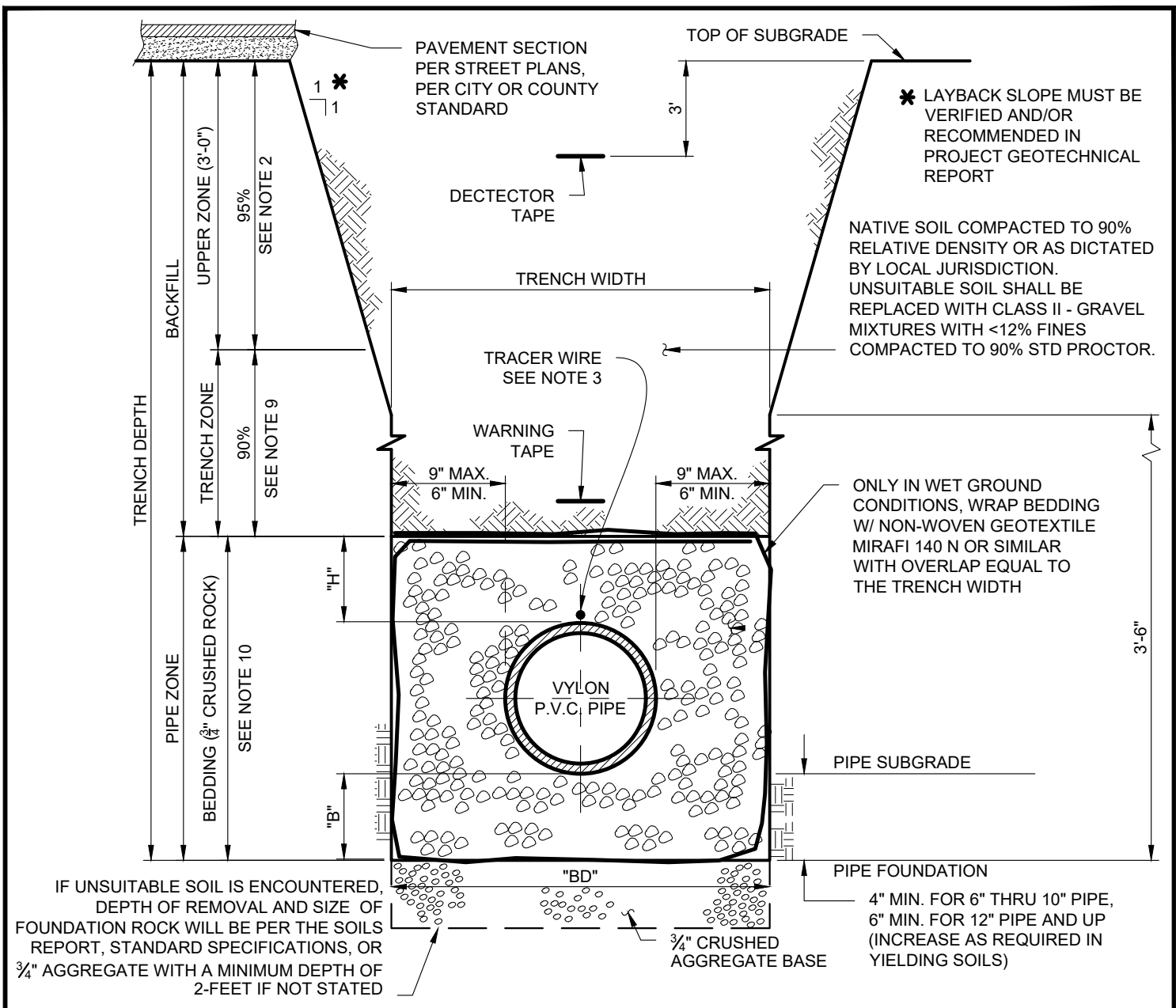
1. PAVING DICTATED BY LOCAL JURISDICTION.
2. 95% MAXIMUM DENSITY MINIMUM AS DETERMINED BY ASTM D1557.
3. TRENCHES GREATER THAN 5' DEPTH REQUIRE CAL/OSHA EXCAVATION PERMIT.
4. CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TRENCHING AND EXCAVATION IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8.
5. EXCAVATION, BACKFILL AND COMPACTION TO BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
6. FULL TIME SOILS TECHNICIAN MUST BE ON-SITE DURING BACKFILLING AND COMPACTION AS DETERMINED BY EVMWD.
7. INSTALLATION OF TRACER WIRE FOR GRAVITY SEWER PIPE IS NOT REQUIRED. INSTALL TRACER WIRE FOR ALL SEWER FORCEMAINS.
8. INSTALL SE 30 SAND IN PIPE ZONE FOR SEWER FORCEMAINS.
9. IF TRENCH DEPTH IS GREATER THAN 30-FEET TRENCH BACKFILL SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
10. PIPE ZONE MATERIAL SHALL BE MOISTURE CONDITIONED AND MECHANICALLY DENSIFIED AS REQUIRED.
11. MAXIMUM ROCK SIZE (GREATEST DIMENSION) FOR TRENCH BACKFILL SHALL BE 3".

REVISION	BY	APPR	DATE
TRENCH ZONE BACKFILL	AK	JZ	01-24-24

06/22/2023
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**STANDARD SEWER
 PIPE BEDDING FOR PVC
 UP TO 18-INCHES IN DIAMETER**

STD. DWG. NO.
S-1A




NOTES:

1. PAVING DICTATED BY LOCAL JURISDICTION.
2. 95% MAXIMUM DENSITY MINIMUM AS DETERMINED BY ASTM D1557.
3. TRENCHES GREATER THAN 5' DEPTH REQUIRE CAL/OSHA EXCAVATION PERMIT.
4. CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TRENCHING AND EXCAVATION IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8.
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10. PIPE ZONE MATERIAL SHALL BE MOISTURE CONDITIONED AND MECHANICALLY DENSIFIED AS REQUIRED.
11. MAXIMUM ROCK SIZE (GREATEST DIMENSION) FOR TRENCH BACKFILL SHALL BE 3".

TYPES OF INSTALLATION:

- A. SHALLOW (LESS THAN 25FT OF COVER)
 1. SHOVEL SLICE OR COMPACT EMBEDMENT IN HAUNCHES TO SPRINGLINE.
 2. "H" (HEIGHT OF COVER) IS 6" FOR 21" - 54" PIPE.
 3. "BD" (MIN. TRENCH WIDTH) IS THE PIPE OD + 18" FOR 21" - 54" PIPE.
 4. "B" (PIPE BEDDING) IS 4" FOR 21" - 54" PIPE.
- B. DEEP (25FT TO 50FT COVER)
 1. SHOVEL SLICE STONE OR COMPACT GRAVEL-SAND MIXTURE IN HAUNCHES THROUGH SPRINGLINE IN LIFTS UNTIL PIPE IS COVERED.
 2. "H" (HEIGHT OF COVER) IS 6" FOR 21" - 54" PIPE.
 3. "BD" (MIN. TRENCH WIDTH) IS THE PIPE OD + 18" FOR 21" - 54" PIPE.
 4. "B" (PIPE BEDDING) IS 4" FOR 21" - 54" PIPE.
 5. TO OBTAIN LATERAL SUPPORT FOR PIPE WHERE AN UNSTABLE SOIL CONDITION IS ENCOUNTERED. USE A MINIMUM TRENCH WIDTH OF TWO PIPE DIAMETERS.

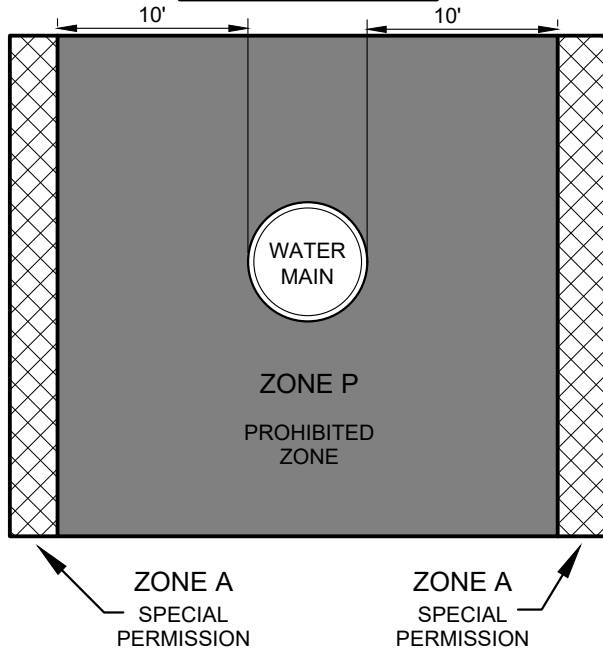
REVISION	BY	APPR	DATE
TRENCH ZONE BACKFILL	AK	JZ	01-24-24


ELSINORE VALLEY
 MUNICIPAL WATER DISTRICT
06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

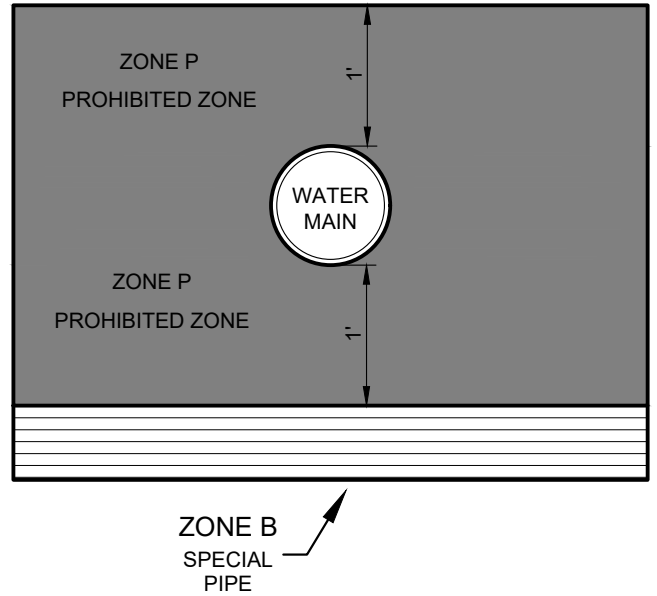
**STANDARD PIPE BEDDING FOR
 VYLON PVC GRAVITY SEWER
 21 - 54 INCHES IN DIAMETER**

STD. DWG. NO.
S-1B

**PARALLEL
CONSTRUCTION**



**PERPENDICULAR
CONSTRUCTION**



NOTES:

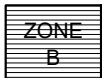
- SEWER MAINS ARE NOT PERMITTED WITHIN THE PROHIBITED ZONE UNLESS APPROVED BY THE STATE WATER RESOURCE CONTROL BOARD (STATE BOARD). IF APPROVAL IS REQUIRED, THE ENGINEER OF RECORD SHALL SUBMIT A WATERWORKS STANDARDS MAIN SEPARATION ALTERNATIVE REQUEST CHECKLIST TO THE DISTRICT. THE DISTRICT WILL COORDINATE THE APPROVAL WITH THE STATE BOARD ON THE DEVELOPER'S BEHALF.
- SEPARATION OF WATER MAIN FROM SEWER AND OTHER NON-POTABLE FLUID MAINS SHALL BE IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 OR RECENT UPDATE.
- DIMENSIONS ARE FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER OR NON-POTABLE FLUID PIPELINES.

ZONE

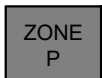
WATER CONSTRUCTION REQUIREMENTS



PARALLEL SEWER MAINS SHALL BE CONSTRUCTED AT LEAST 10' HORIZONTAL FROM A WATERMAIN



SEWER MAINS SHALL BE CONSTRUCTED AT LEAST 1' VERTICAL AND NO LESS THAN 45-DEGREES BELOW A WATER MAIN. NO CONNECTION JOINTS ON THE WATER MAIN WITHIN 8 HORIZONTAL FEET FROM THE SEWER MAIN.



SEWER MAINS ARE PROHIBITED IN THIS ZONE UNLESS STATE BOARD WRITTEN APPROVAL IS OBTAINED.

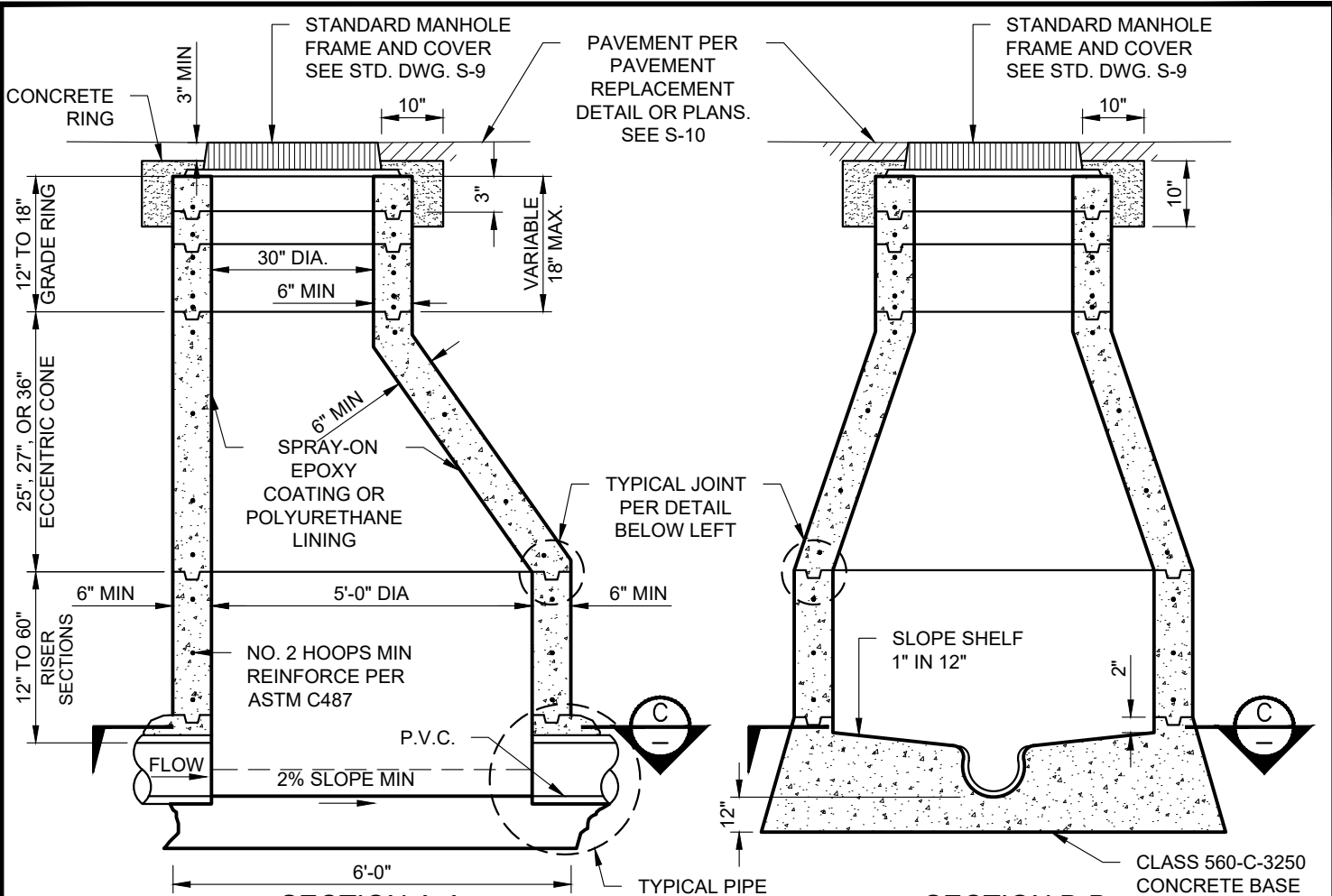
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**PIPELINE SEPARATION
REQUIREMENTS**

STD. DWG. NO.
S-3



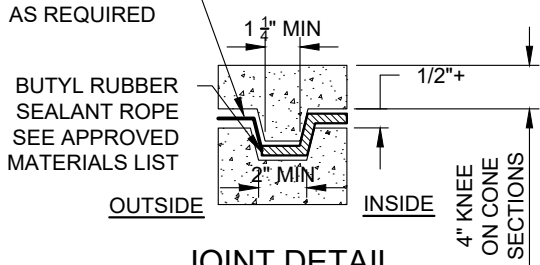
SECTION A-A

(SIDE INLETS NOT SHOWN)

SECTION B-B

(SIDE INLETS NOT SHOWN)

FILL JOINTS WITH MORTAR AS REQUIRED



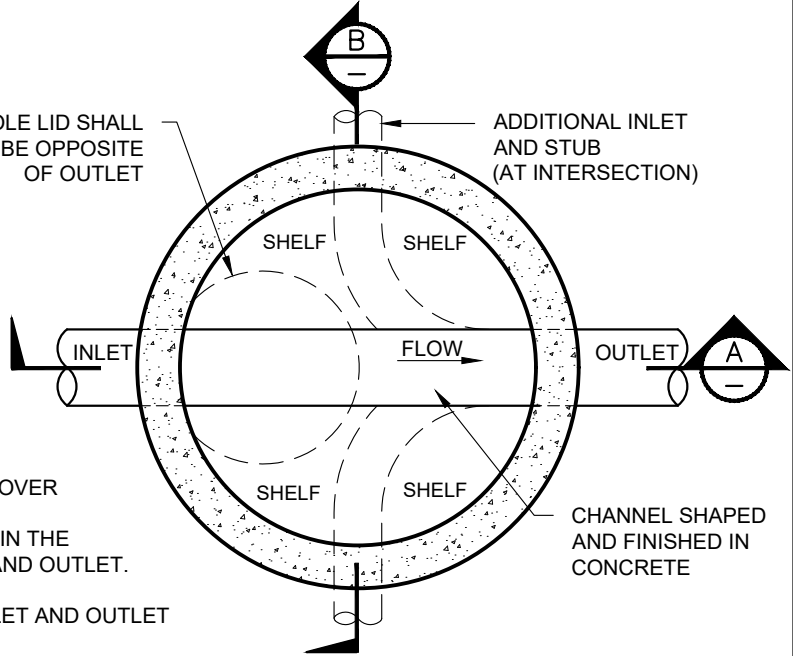
JOINT DETAIL

MANHOLE LID SHALL BE OPPOSITE OF OUTLET

ADDITIONAL INLET AND STUB (AT INTERSECTION)

NOTES:

1. SEE STANDARD SPECIFICATIONS FOR MANHOLE, MANHOLE LINING, MANHOLE PATCHING AND REPAIR REQUIREMENTS.
2. VERTICAL WALL OF CONE SHALL BE ON THE UPSTREAM SIDE OF THE MANHOLE.
3. REINFORCEMENT SHALL HAVE A MINIMUM OF 2' CLEAR COVER TO INSIDE FACE OF MANHOLE.
4. MANHOLES AT INTERSECTIONS SHALL HAVE STUB OUTS IN THE OTHER TWO DIRECTIONS WITH RESPECT TO THE INLET AND OUTLET. SEE SECTION 2.04B OF THE DESIGN STANDARDS.
5. SEE SECTION 2.04B OF THE DESIGN STANDARDS FOR INLET AND OUTLET PIPES OF DIFFERENT SIZES.
6. DROP ACROSS MANHOLE SHALL BE 0.1' MIN. SEE DESIGN STANDARDS SECTION 2.04B-5b FOR SPECIFIC DIRECTIONS.
7. SHALLOW MANHOLES MAY REQUIRE MODIFICATIONS TO THIS STD. DWG. ALL MODIFICATIONS SHALL BE APPROVED BY EVMWD.



SECTION C-C

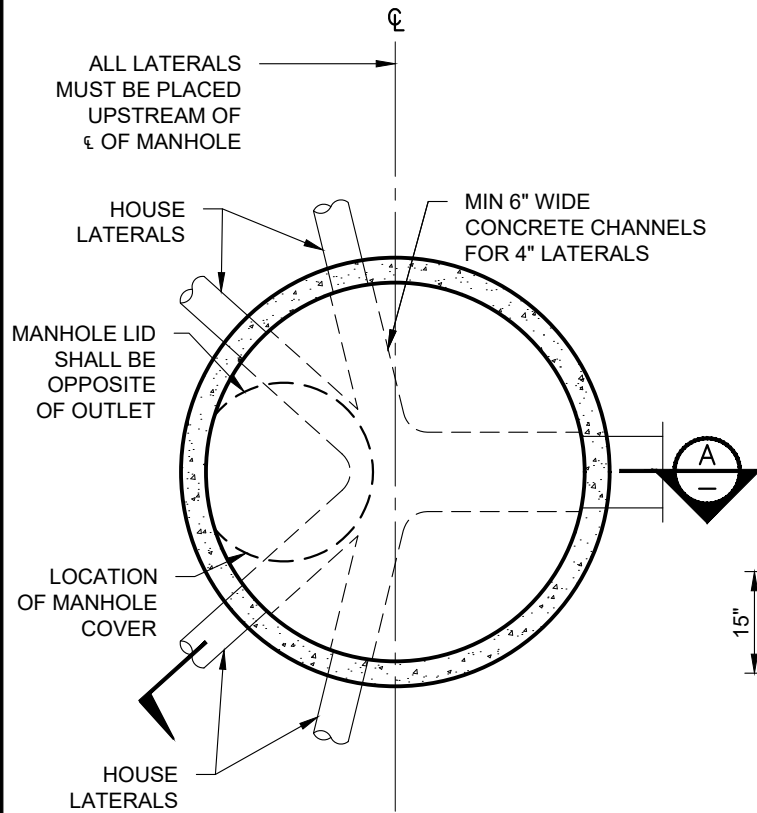
(PLAN MANHOLE BASE)

REVISION	BY	APPR	DATE
DIMS AND NOTES	AK	JZ	04-01-24

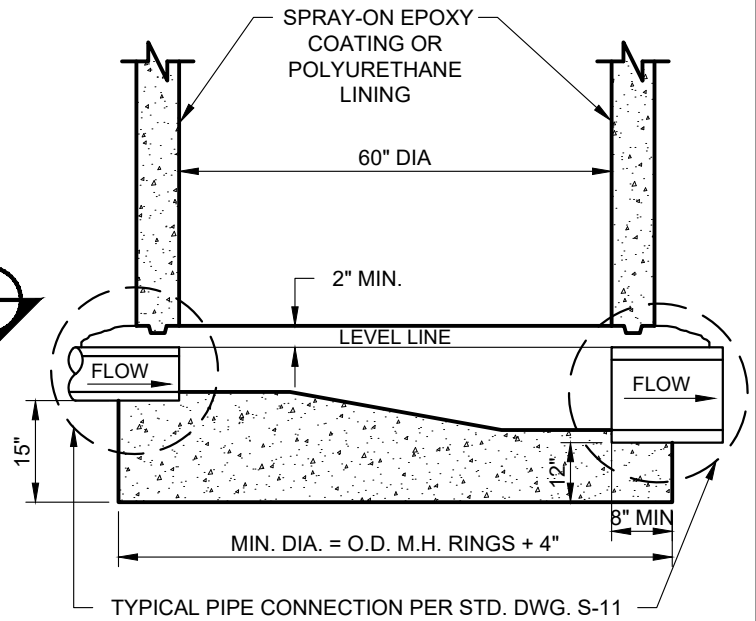
06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**5' DIA. MANHOLE
 WITH CAST IN PLACE BASE**

STD. DWG. NO.
S-5



PLAN
 TERMINUS MANHOLE
 WITH HOUSE LATERALS



SECTION A-A

NOTES:

1. REFER TO STANDARD DRAWINGS OF MANHOLES FOR DETAILS PERTAINING TO MANHOLES ONLY.
2. THE MAXIMUM NUMBER OF LATERALS INTO A TERMINUS MANHOLE SHALL BE LIMITED TO FOUR.
3. THE MAXIMUM NUMBER OF LATERALS INTO A KNUCKLE MANHOLE SHALL BE LIMITED TO TWO.
4. ALL LATERAL CONNECTIONS SHALL BE ORIENTED SUCH THAT THEY WILL NOT BE IN LINE WITH ANY OF THE CONNECTING SEWER MAINS.
5. ALL LATERAL CONNECTIONS IN A KNUCKLE MANHOLE SHALL NOT CONNECT OPPOSING THE DIRECTION OF FLOW IN THE MANHOLE.
6. REFER TO STD DWG S-5 FOR MANHOLE DETAILS.
7. CONCRETE CHANNELS FOR 4" LATERALS SHALL BE 6" WIDE OR MORE TO ALLOW USE OF SCREW PLUGS FOR TESTING.

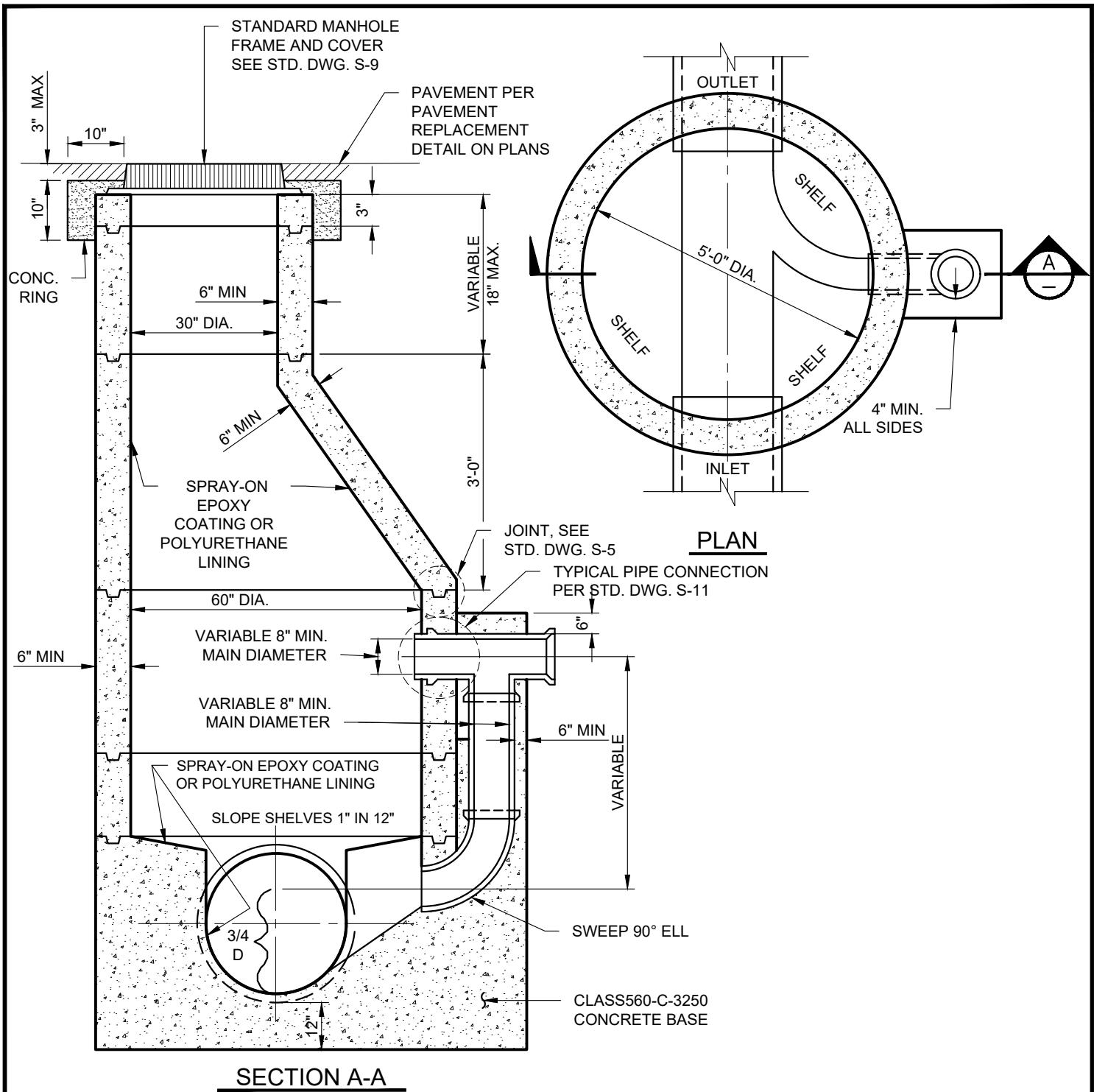
REVISION	BY	APPR	DATE

ELSINORE VALLEY
 MUNICIPAL WATER DISTRICT

Parag Kalaria
 06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**MANHOLES AT
 STREET KNUCKLE OR
 END OF CUL-DE-SAC**

STD. DWG. NO.
S-6



SECTION A-A

NOTE:

1. THIS STD. DWG. TO BE USED ONLY WITH WRITTEN APPROVAL FROM EVMWD ENGINEERING DEPARTMENT.
2. EXCEPT AS INDICATED HEREON OR ON THE PROJECT PLANS, MANHOLES SHALL CONFORM TO STD. DWG. S-8
3. MANHOLES AT INTERSECTIONS SHALL HAVE STUB OUTS IN THE OTHER TWO DIRECTIONS WITH RESPECT TO THE INLET AND OUTLET. SEE SECTION 2.04B OF THE STANDARD DESIGN REQUIREMENTS.
4. SEE SECTION 2.04B OF THE STANDARD DESIGN REQUIREMENTS FOR INLET AND OUTLET PIPE OF DIFFERENT SIZES.
5. DROP ACROSS MANHOLE SHALL BE 0.1' MIN. SEE STANDARD DESIGN REQUIREMENTS SECTION 2.04B-5B FOR SPECIFIC DIRECTIONS.

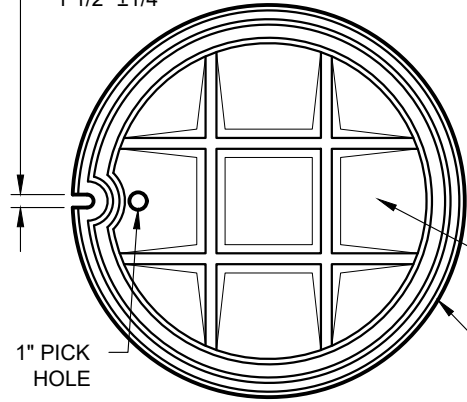
REVISION	BY	APPR	DATE

PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

**PRECAST CONCRETE
DROP MANHOLE**

STD. DWG. NO.
S-8

SIDE PRY HOLE
1 1/2" ±1/4"



COVER-BOTTOM VIEW

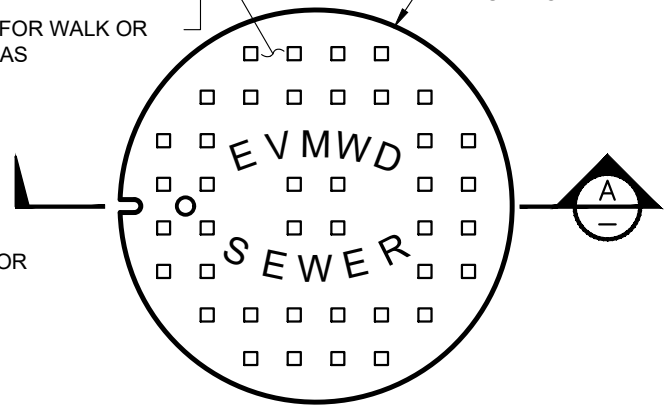
RAISED SQUARE BLOCK TREAD
FOR ASPHALT TRAFFIC AREAS

DIAMOND TREAD FOR WALK OR
PEDESTRIAN AREAS

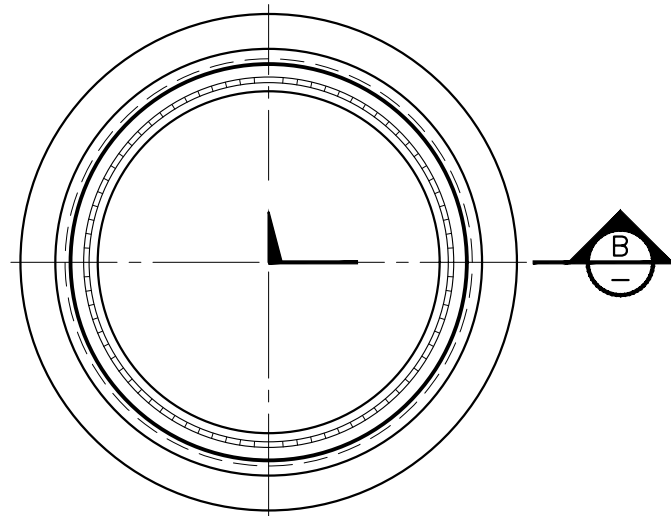
MACHINED EDGE
SURFACE

ASPHALT COATING OR
BAKED-ON ENAMEL

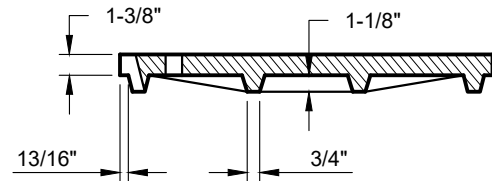
MACHINED EDGE
SURFACE



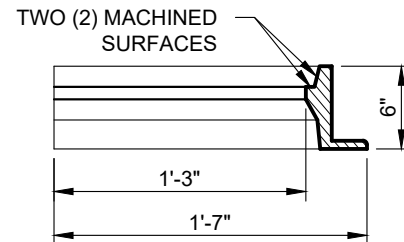
COVER-TOP VIEW



RING PLAN



SECTION A-A



SECTION B-B

TYPICAL INSTALLATION NOTES:

1. FRAME AND COVER SHALL BE MACHINED TO PROVIDE A NON-ROCKING SURFACE. MACHINED TOLERANCE BETWEEN FRAME AND COVER SHALL BE ±1/8" TOTAL. FRAME AND COVER TO BE SELECTED FROM APPROVED MATERIALS LIST.
2. GRAY CAST IRON SHALL CONFORM TO A.S.T.M. A48, CLASS 30B.
3. MANHOLE COVERS 36" DIAMETER AND GREATER SHALL BE OF 2-PIECE CONSTRUCTION WITH INSERT NOT SMALLER THAN 24" IN DIAMETER.
4. THE 30" MANHOLE FRAME AND COVER WEIGHT SHALL CONFORM TO A.S.T.M. A48, CLASS 30B.
5. THE MARKING LETTERS SHALL BE CAST IN THE COVER AND SHALL BE A MINIMUM 2 1/2" HIGH.
6. CASTINGS TO BE ASPHALT DIPPED PRIOR TO INSTALLATION.

BOLT-DOWN COVER INSTALLATION NOTES:

1. WATER PROOF, BOLT DOWN LIDS WITH S.S. BOLTS REQUIRED FOR COVERS NOT IN PUBLIC STREETS/ALLEYS.
 - A. SIDE PRY AND PICK HOLE SHALL BE REPLACED WITH A CLOSED PICK HOLE.
 - B. GASKET MATERIAL SHALL BE 1/2" x 1/2" NEOPRENE GASKET.
 - C. BOLTS SHALL BE 1 1/2" x 1/2" S.S. TYPE 307, SIX EQUALLY SPACED WITH ISOLATING WASHERS.
 - D. BOLT DOWN LIDS SHALL BE SELECTED FROM APPROVED MATERIALS LIST.

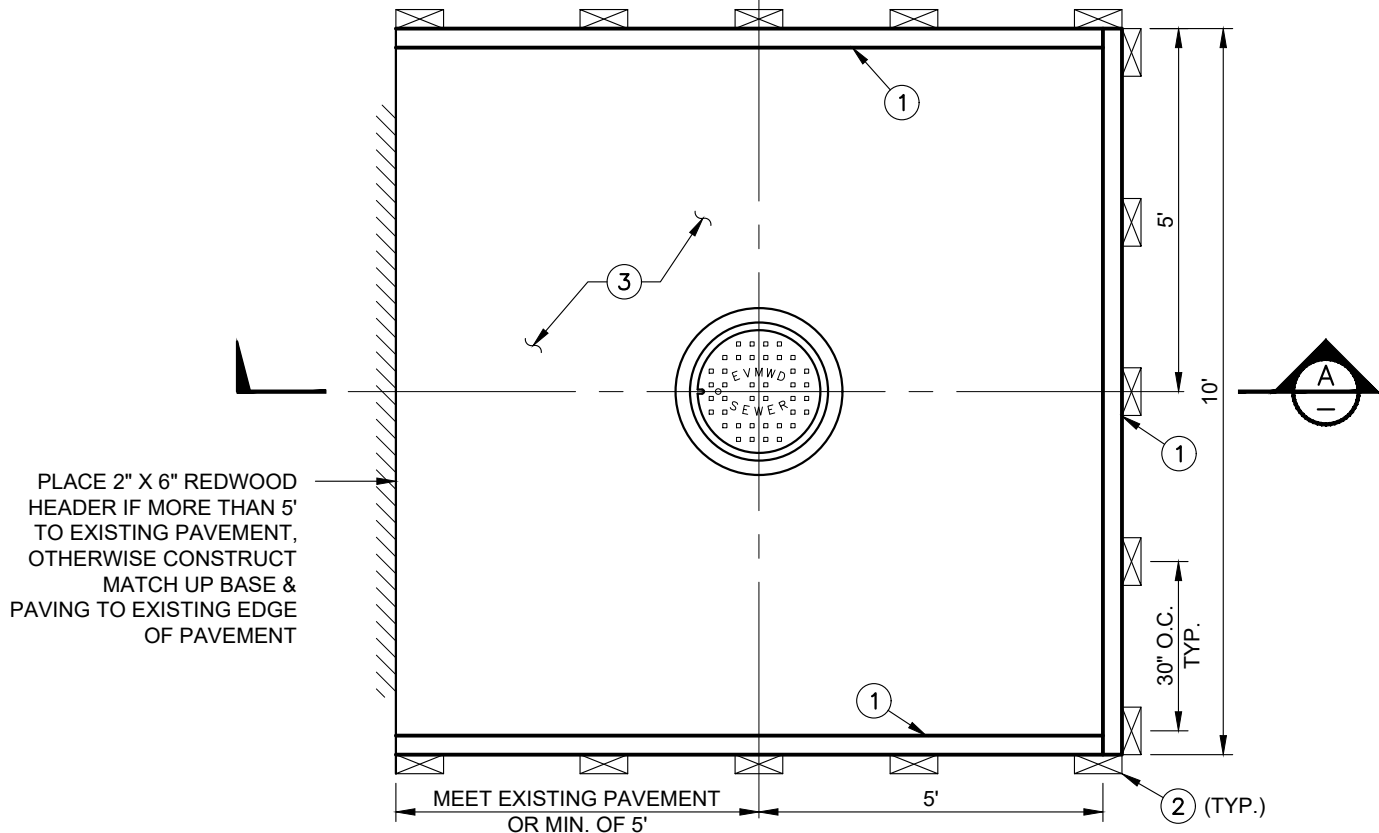
REVISION	BY	APPR	DATE

ELSORNO VALLEY
MUNICIPAL WATER DISTRICT

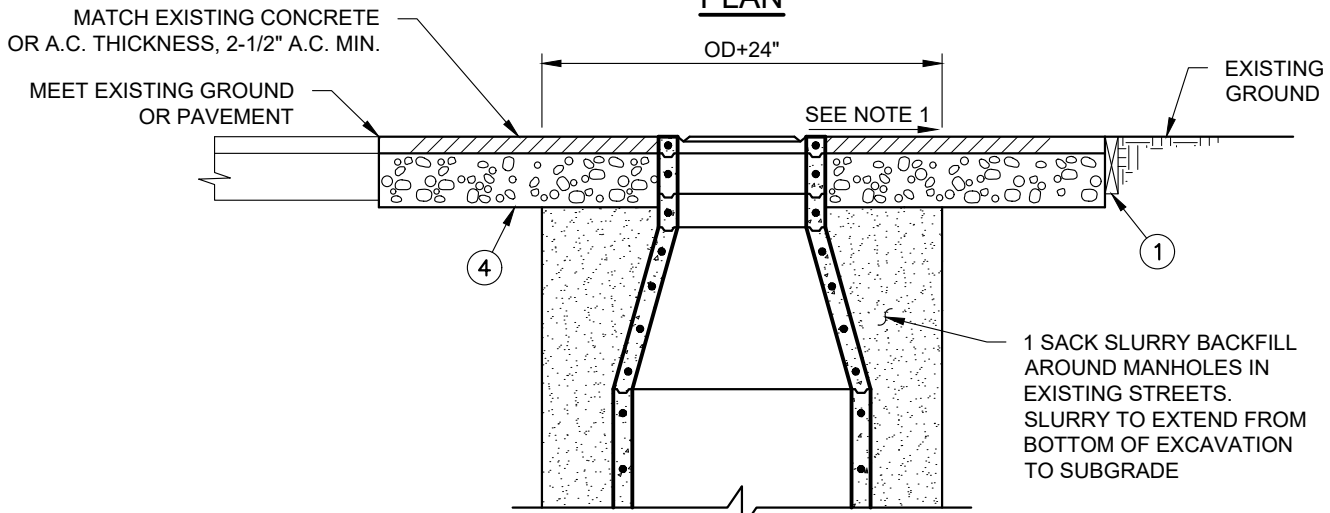
PARAG KALARIA R.C.E. 83927 DATE

**MANHOLE FRAME
AND COVER**

STD. DWG. NO.
S-9



PLAN



SECTION A-A

NOTES:

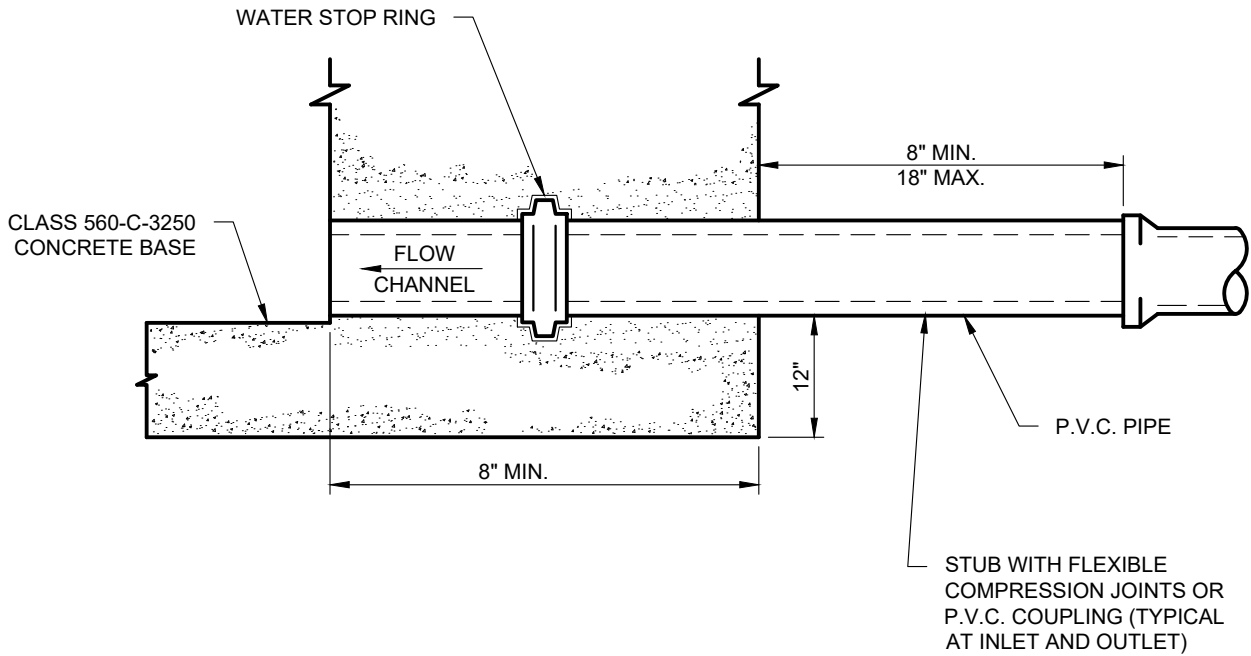
1. SLOPE WILL CONFORM TO RIVERSIDE COUNTY ROAD IMPROVEMENTS STANDARDS AND SPECIFICATIONS, OR MEET EXISTING CONDITIONS AS DIRECTED BY ENGINEER.
2. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

ITEM	DESCRIPTION
①	2"x6" REDWOOD HEADERS IF REQUIRED BY ENGINEER OR AS DIRECTED
②	2"x4"x18" STAKES (3 PER SIDE) AT 30" O.C.
③	AREA TO BE PAVED
④	6" OF 3/4" CLASS 2 CRUSHED AGGREGATE BASE

REVISION	BY	APPR	DATE

**PAVING DETAIL
AROUND MANHOLES**

STD. DWG. NO.
S-10



NOTE:

1. SEE STD. NO. S-5 FOR MANHOLE.
2. SEE APPROVED MATERIALS LIST FOR WATER STOP.
3. SEE STANDARD SPECIFICATION SECTION 03460 FOR ADDITIONAL REQUIREMENTS.

DETAIL OF WATER STOP RING WITH P.V.C. PIPE

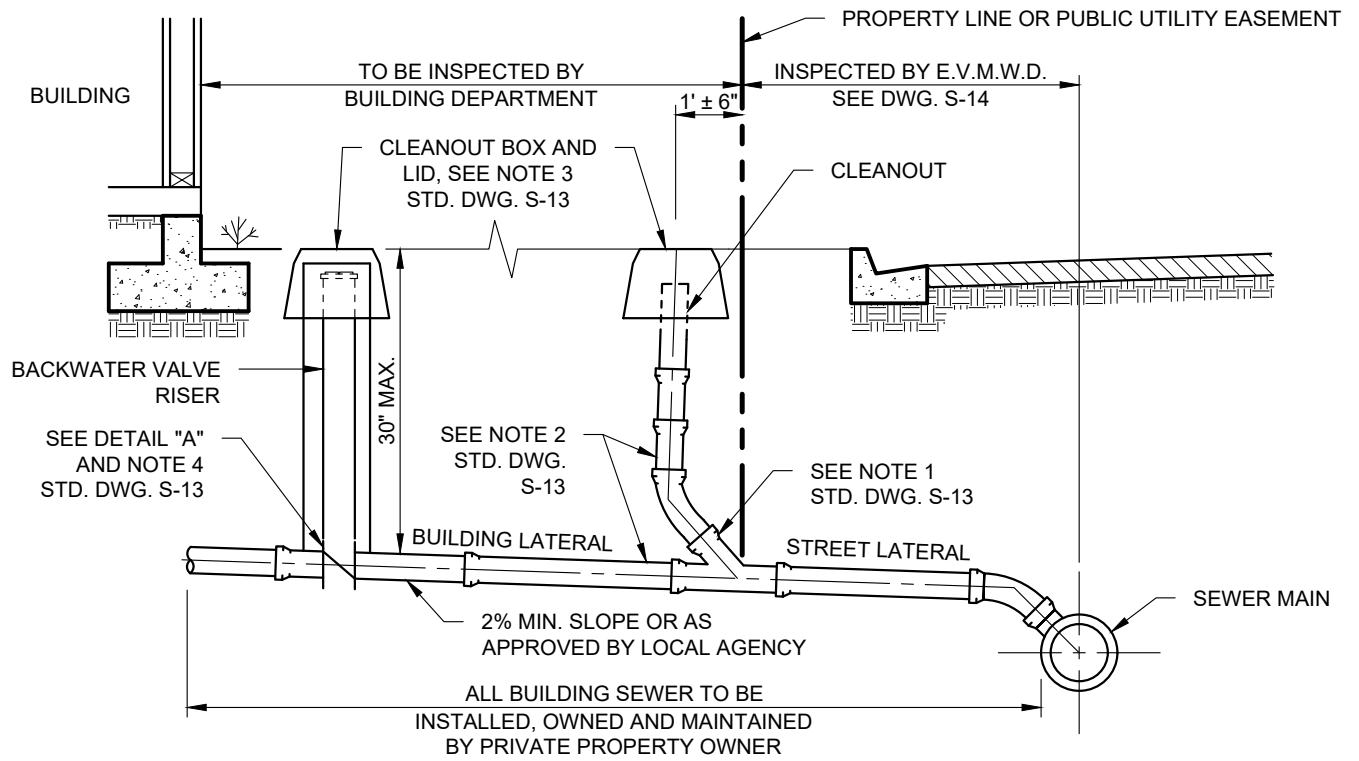
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

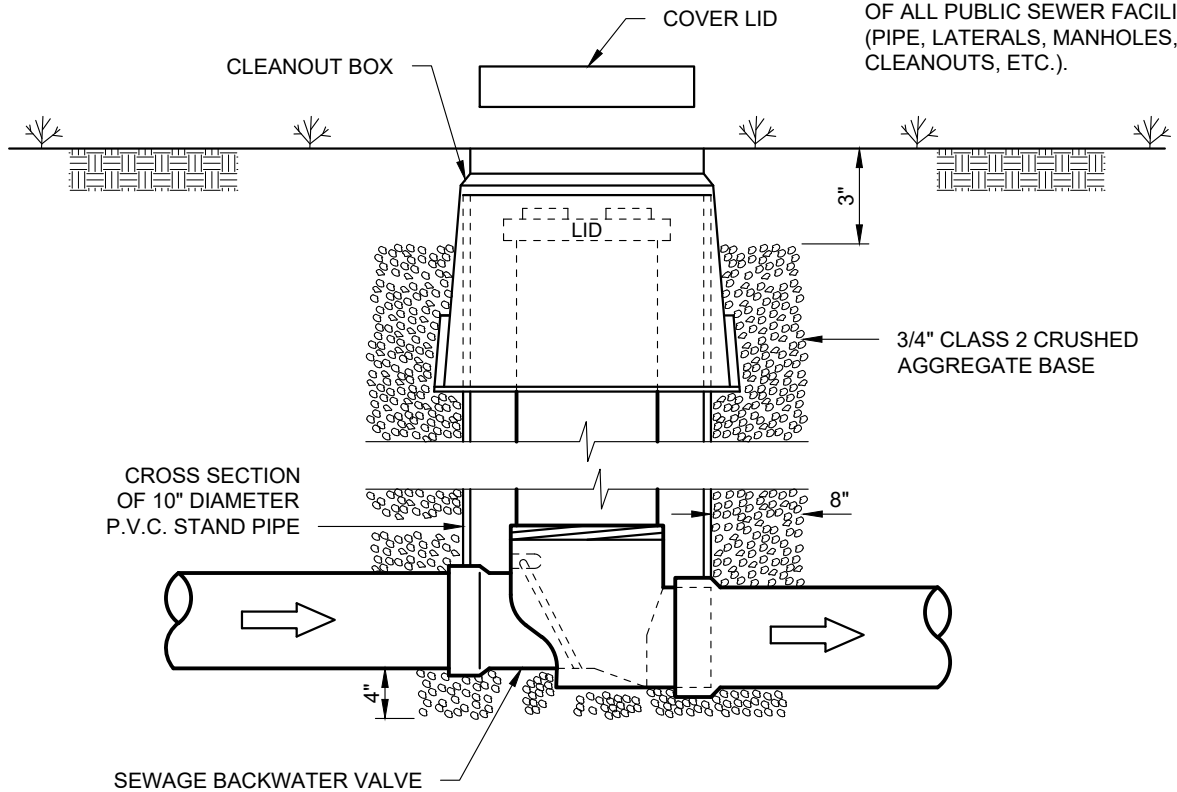
**PIPE CONNECTION DETAILS
FOR CAST-IN-PLACE
CONCRETE BASE**

STD. DWG. NO.
S-11



TYPICAL LATERAL ASSEMBLY

NOTE: NO TREES OR LARGE SHRUBS SHALL BE LOCATED WITHIN 10 FEET OF ALL PUBLIC SEWER FACILITIES (PIPE, LATERALS, MANHOLES, CLEANOUTS, ETC.).



DETAIL "A" - SEWAGE BACKWATER VALVE ASSEMBLY

REVISION	BY	APPR	DATE
CLEANOUT SETBACK	AK	JZ	01-22-24

06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

TYPICAL LATERAL ASSEMBLY & BACKWATER VALVE

STD. DWG. NO.
S-12


NOTES:

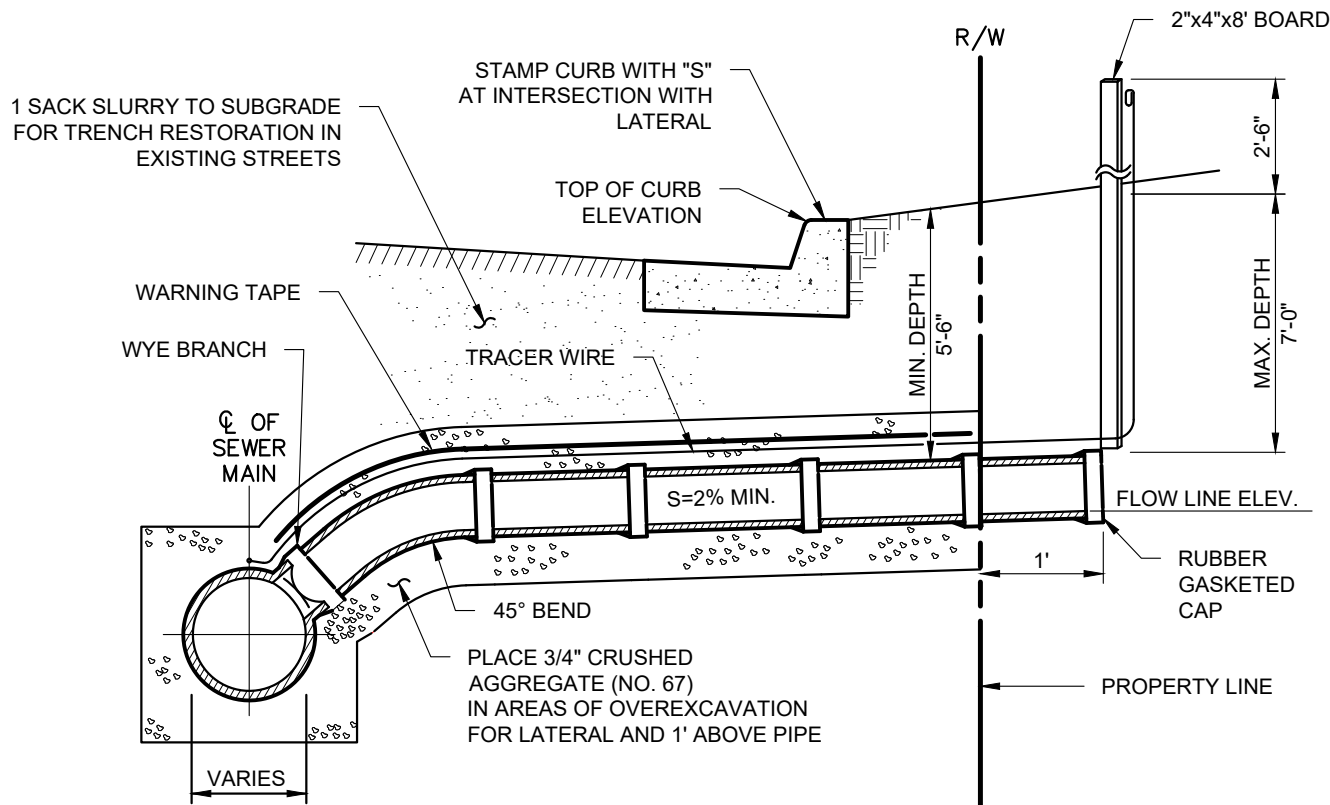
1. A 45 DEGREE BEND AND STANDARD WYE BRANCH CONNECTION SHALL BE USED. THE 45 DEGREE BEND AND WYE BRANCH CONNECTION SHALL BE THE SAME DIAMETER AS THE SEWER LATERAL ENTERING FROM THE STREET AND SHALL BE SUPPORTED BY THE RECOMPACTION OF THE EXISTING SOIL IN THE TRENCH.
2. THE BUILDING LATERAL SHALL BE CONSTRUCTED USING IAPMO LISTED MATERIALS (I.E. A.B.S. OR PVC PIPE). THE MINIMUM DIAMETER SHALL BE PER PLUMBING CODE STANDARDS, THE CLEANOUT STAND PIPE (4" DIA. MIN.) SHALL BE THE SAME DIAMETER AS THE LATERAL ENTERING FROM THE STREET. THE STAND PIPE SHALL BE CONSTRUCTED USING IAPMO LISTED MATERIALS (I.E. A.B.S. OR PVC PIPE). THE MINIMUM SLOPE OF THE LATERAL SHALL BE 2% OR AS PERMITTED BY LOCAL AGENCY.
3. A PLASTIC CLEANOUT BOX AND LID IS REQUIRED OVER THE CLEANOUT STACK (AND BACKWATER VALVE, IF USED) WHEN LOCATED IN NON-VEHICULAR TRAFFIC AREAS.
4. SEWER LATERALS ARE NOT PERMITTED IN VEHICULAR TRAFFIC AREAS (I.E. DRIVEWAYS) UNLESS OTHERWISE APPROVED BY THE DISTRICT. IN THE EVENT A CLEANOUT IS REQUIRED IN A VEHICULAR TRAFFIC AREA, A CONCRETE CLEANOUT BOX WITH CAST IRON LID IS REQUIRED.
5. IF HOUSE SLAB DRAINAGE ELEVATION IS BELOW THE NEAREST UPSTREAM MANHOLE LID, A SEWAGE BACKFLOW VALVE ASSEMBLY WILL BE REQUIRED, IN ACCORDANCE WITH THE LATEST EDITION OF THE U.P.C., CHAPTER 7, SECTION 710.0 PARAGRAPH 710.1. READS:

SECTION 710.0: DRAINAGE OF FIXTURES LOCATED BELOW THE NEXT UPSTREAM MANHOLE OR BELOW THE MAIN SEWER LEVEL. FOR ASSISTANCE CALL E.V.M.W.D.

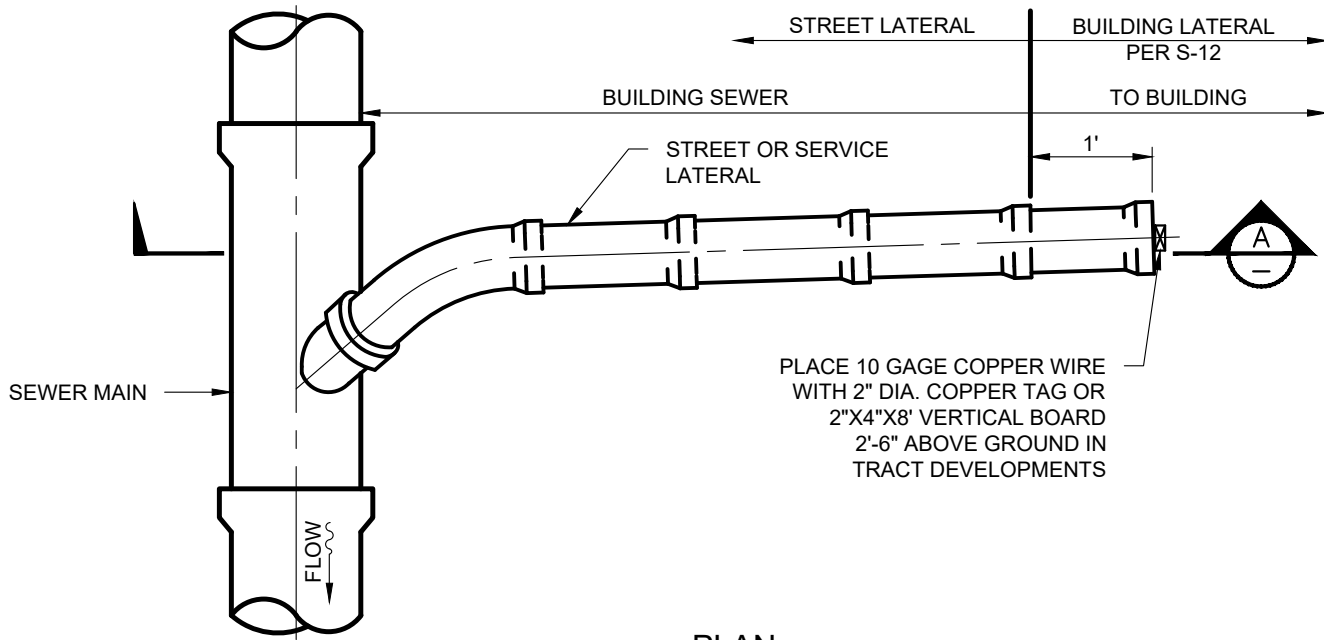
(710.1): "DRAINAGE PIPING SERVING FIXTURES WHICH HAVE FLOOD LEVEL RIMS LOCATED BELOW THE ELEVATION OF THE NEXT UPSTREAM MANHOLE COVER OF THE PUBLIC SEWER SERVING SUCH DRAINAGE PIPING SHALL BE PROTECTED FROM BACKFLOW OF SEWAGE BY INSTALLING AN ACCEPTABLE TYPE BACKWATER VALVE. FIXTURES ABOVE SUCH ELEVATION SHALL NOT DISCHARGE THROUGH THE BACKWATER VALVE."

6. THE BACKWATER VALVES SHALL BE LOCATED SO ACCESS FOR MAINTENANCE IS NOT IMPAIRED.
7. MATERIAL SHALL BE SELECTED FROM APPROVED MATERIALS LIST.

REVISION	BY	APPR	DATE	 ELSINORE VALLEY MUNICIPAL WATER DISTRICT <small>06/22/2023</small> PARAG KALARIA R.C.E. 83927 DATE	STD. DWG. NO.
					<p style="text-align: center;">TYPICAL LATERAL ASSEMBLY NOTES</p>



SECTION A-A



PLAN

NOTES:

1. MINIMUM SEWER LATERAL SIZE (UNLESS OTHERWISE SHOWN ON PLANS) SHALL BE:
 6" FOR MULTI-UNIT RESIDENTIAL, COMMERCIAL, SCHOOLS AND INDUSTRIAL ZONED AREAS
 4" FOR SINGLE FAMILY DWELLING UNITS
2. SEE STANDARD SPECIFICATIONS FOR 3/4" CRUSHED AGGREGATE NO. 67.

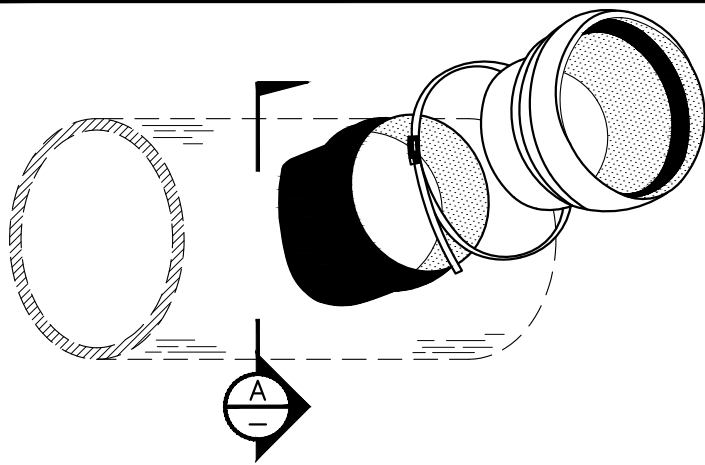
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

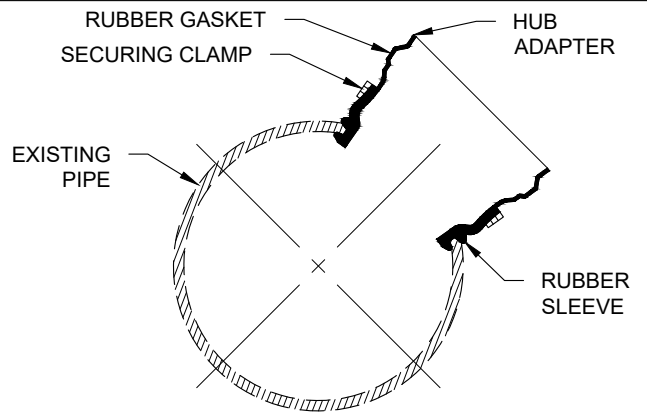
PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

STREET SEWER LATERAL

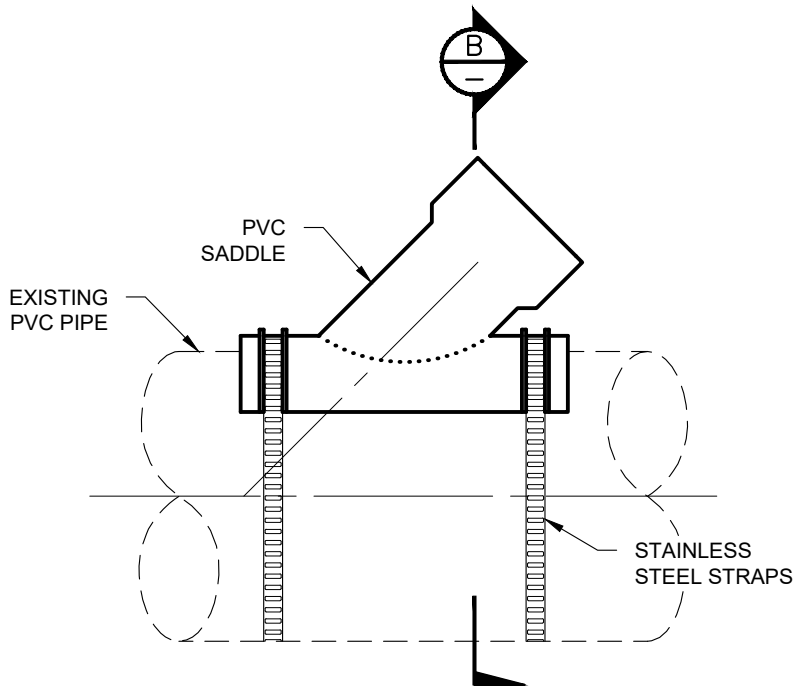
STD. DWG. NO.
S-14



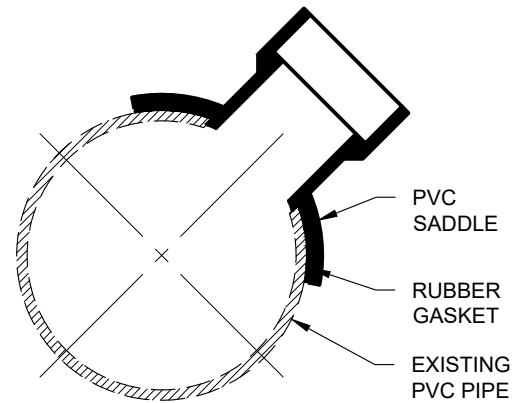
INSERT STYLE DETAIL



SECTION A-A



WYE STYLE DETAIL



SECTION B-B

NOTES:

1. GASKETED BELL SADDLE SHALL BE IN ACCORDANCE WITH APPROVED MATERIALS LIST.
2. THE INSTALLATION OF GASKETED BELL SADDLES SHALL COMPLY WITH THE MANUFACTURER'S INSTALLATION GUIDELINES.
3. THE HOLE FOR THE GASKETED BELL SADDLE FITTING SHALL BE MADE WITH A TAPPING MACHINE OR PROPERLY SIZED CORE DRILL. THE HOLE SHALL BE CLEANLY MACHINED AND IF NECESSARY WORKED BY HAND WITH A RASP OR SANDED TO ACCOMPLISH A TRUE AND NEAT OPENING FOR THE COLLAR WYE.
4. THE CONTRACTOR SHALL KEEP ALL CHIPS, DIRT, AND OTHER FOREIGN MATTER OUT OF THE SEWER LATERAL CONNECTION AND SHALL PERFORM A CLEANING AND BALLING OF THE REACH LATERAL CONNECTION IF DIRECTED TO DO SO BY THE INSPECTOR.
5. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED PIPE AS DIRECTED BY THE INSPECTOR AT CONTRACTOR'S COST.
6. THE CONTRACTOR SHALL CONTACT THE GASKETED BELL SADDLE MANUFACTURER AND SPECIFY THE SEWER MAIN SIZE AND MATERIAL FOR THE CORRECT SEWER PIPE CONNECTION MODEL.
7. WHEN INSTALLING LATERALS ON 10" AND SMALLER SEWER PIPE USE MANUFACTURED PVC SADDLE WITH INTEGRAL GASKETS & STAINLESS STEEL STRAPS.

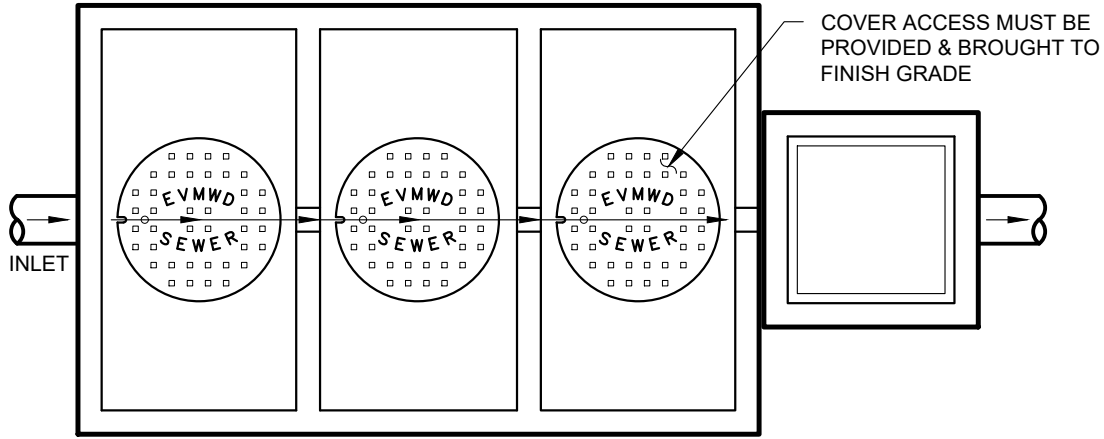
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

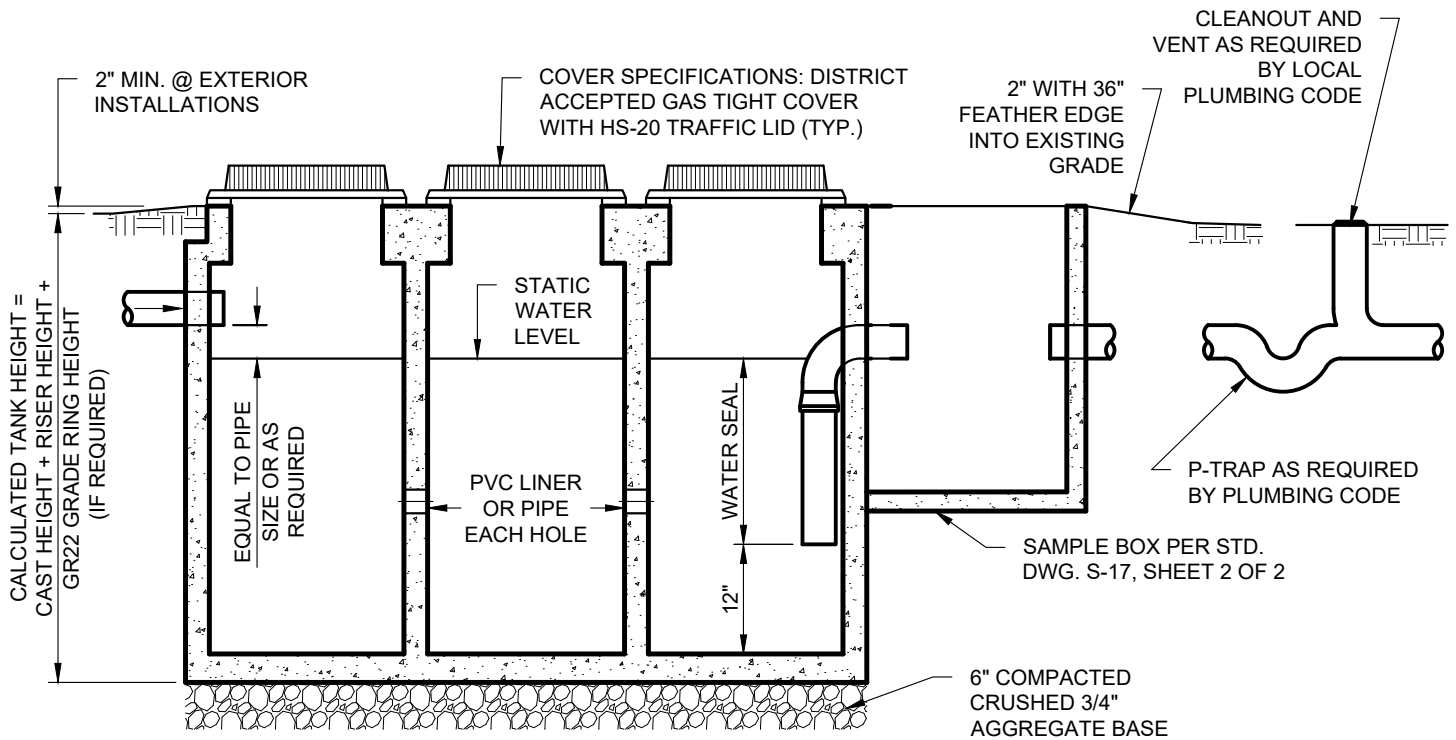
Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

TYPICAL SEWER LATERAL CONNECTION TO EXISTING SEWER MAIN

STD. DWG. NO.
S-15



PLAN - 3 CHAMBERED INTERCEPTOR



SECTION

NOTES:

1. ALL INTERCEPTORS SHALL HAVE A MINIMUM LIQUID CAPACITY OF 750 GALLONS.
2. EACH INSTALLATION IS SUBJECT TO REVIEW BY EVMWD FOR ADEQUATE CAPACITY PRIOR TO CONSTRUCTION. CONTACT PRETREATMENT@EVMWD.NET
3. NO RESTROOM WASTE SHALL PASS THROUGH THE INTERCEPTOR.
4. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE INTERCEPTOR.
5. EXTERNAL PLUMBING PER LOCAL PLUMBING CODE.

REVISION	BY	APPR	DATE

06/22/2023
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SAND/OIL SEPARATOR

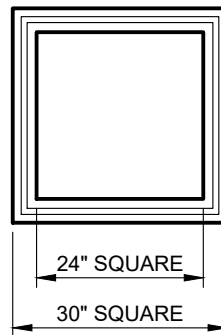
STD. DWG. NO.
S-16A

CONSTRUCTION NOTES

1. INTERCEPTOR SYSTEM SHALL BE DESIGNED TO RETAIN MAXIMUM AMOUNTS OF GREASE, SAND, CHEMICALS, AND OTHER INDUSTRIAL WASTES FROM ENTRANCE INTO THE SEWER SYSTEM.
2. INTERCEPTORS AND GRADE RING MANHOLES SHALL BE PRECAST CONCRETE CLASS 560-C-3250, VIBRATED FOR DENSITY, REINFORCED DEFORMED STEEL BARS CONFORMING TO ASTM SPEC. A615 GRADE 60. ALL CONTINUOUS MONOLITHIC CONST.
3. COMPONENTS SHALL BE IN ACCORDANCE WITH APPROVED MATERIALS LIST.

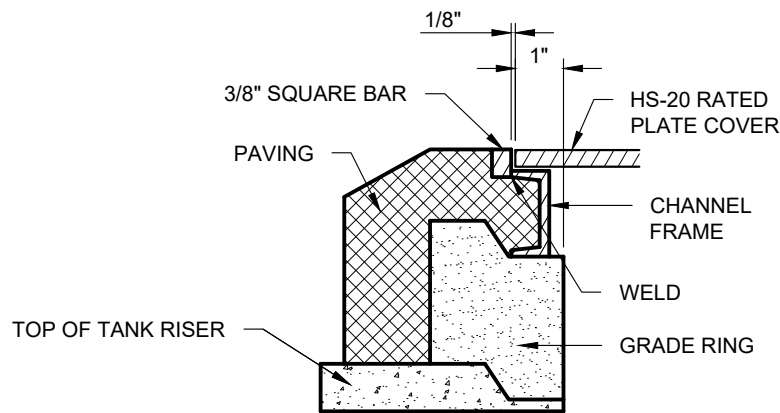
INSTALLATION NOTES

1. PRIOR TO INSTALLATION, CONTACT PRETREATMENT@EVMWD.NET FOR REQUIRED TANK SIZE AND/OR SPECIAL INSTALLATION REQUIREMENTS.
2. ALL CONNECTIONS / INTERNAL PLUMBING MUST BE INSPECTED BY EVMWD PRIOR TO BACK FILLING.
3. INTERCEPTORS REQUIRE A 24HRS WATER TEST AND INSPECTION BY EVMWD PRIOR TO BACKFILLING.
4. ALL SURFACE WATER SHALL DRAIN AWAY FROM INTERCEPTOR EXCLUDING RAIN WATER FROM THE SEWER SYSTEM. WASTES ENTER THROUGH INLET PIPE ONLY.
5. TRAFFIC LOCATION INSTALLATIONS WILL REQUIRE THE TOP OF THE INTERCEPTOR TO BE PLACED BELOW THE PAVING. INSPECTION MANHOLES MUST BE BROUGHT TO THE SURFACE WITH A GRADE RING OF 8" MAXIMUM HEIGHT.
6. INTERCEPTOR SHALL REST ON FIRM LEVEL GROUND (6" CRUSHED AGGREGATE BASE) TO AVOID SETTLING.



GR-22 GRADE RING
WITH OR WITHOUT STEEL FRAME.
SIZES 3", 4", 5", 6" (HIGH)

PLAN



TRAFFIC AREA

TYPICAL MANHOLE DETAILS

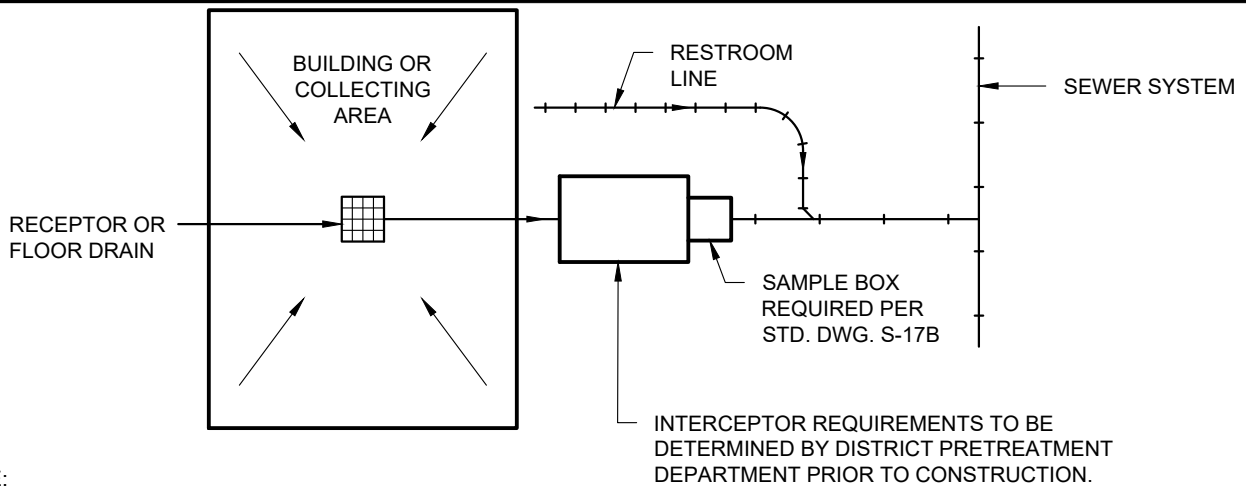
REVISION	BY	APPR	DATE

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**SAND/OIL SEPARATOR
AND COVER PLATE DETAIL**

STD. DWG. NO.

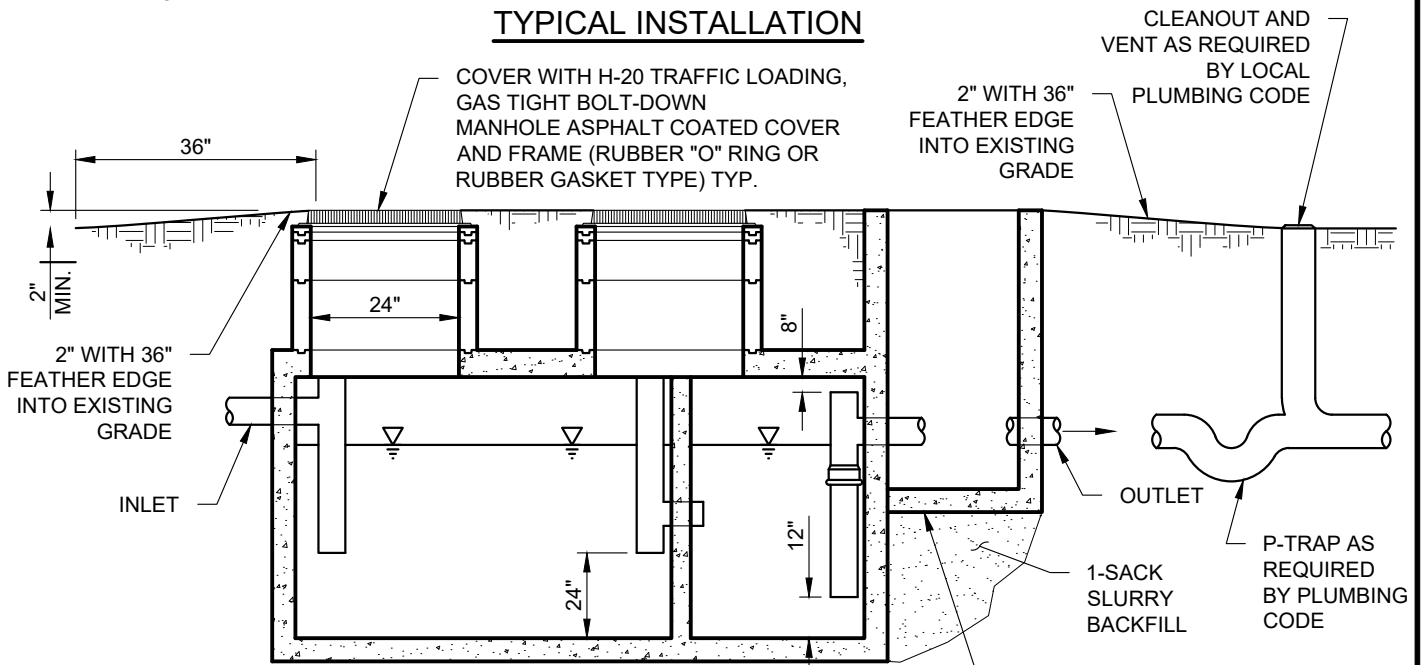
S-16B



NOTE:

1. SPACING OF SURFACE ACCESS POINTS TO INTERCEPTOR (RAISED MANHOLE COVERS) SHALL BE PROVIDED AT NOT LESS THAN 15' INTERVALS.
2. INTERCEPTOR SYSTEMS LARGER THAN 1500 GALLONS WILL REQUIRE 3 MAINTENANCE COVERS MINIMUM, EXCLUDING THE SAMPLE BOX.

TYPICAL INSTALLATION



2 CHAMBER INTERCEPTOR

NOTES:

1. ALL INTERCEPTORS SHALL HAVE A MINIMUM LIQUID CAPACITY OF 750 GALLONS.
2. EACH INSTALLATION SHALL BE SUBJECT TO REVIEW BY EVMWD FOR ADEQUATE CAPACITY PRIOR TO CONSTRUCTION. CONTACT PRETREATMENT@EVMWD.NET
3. ALL INTERCEPTORS SHALL BE UPC/IAPMO ACCEPTED.
4. NO RESTROOMS WASTE SHALL PASS THROUGH THE INTERCEPTOR SYSTEM.
5. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE INTERCEPTOR.
6. EXTERNAL PLUMBING PER LOCAL PLUMBING CODE.
7. ALL CONNECTION / INTERNAL PLUMBING MUST BE INSPECTED BY EVMWD PRIOR TO BACKFILLING. CONTACT PRETREATMENT@EVMWD.NET
8. INTERCEPTORS REQUIRE A 24HR WATER TEST AND INSPECTION BY EVMWD PRIOR TO BACKFILLING.
9. CONCRETE MEMBER THICKNESS AND REINFORCEMENT SHALL BE DETERMINED BY A REGISTERED DESIGN PROFESSIONAL AND SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF STANDARD SPECIFICATION SECTION 03310

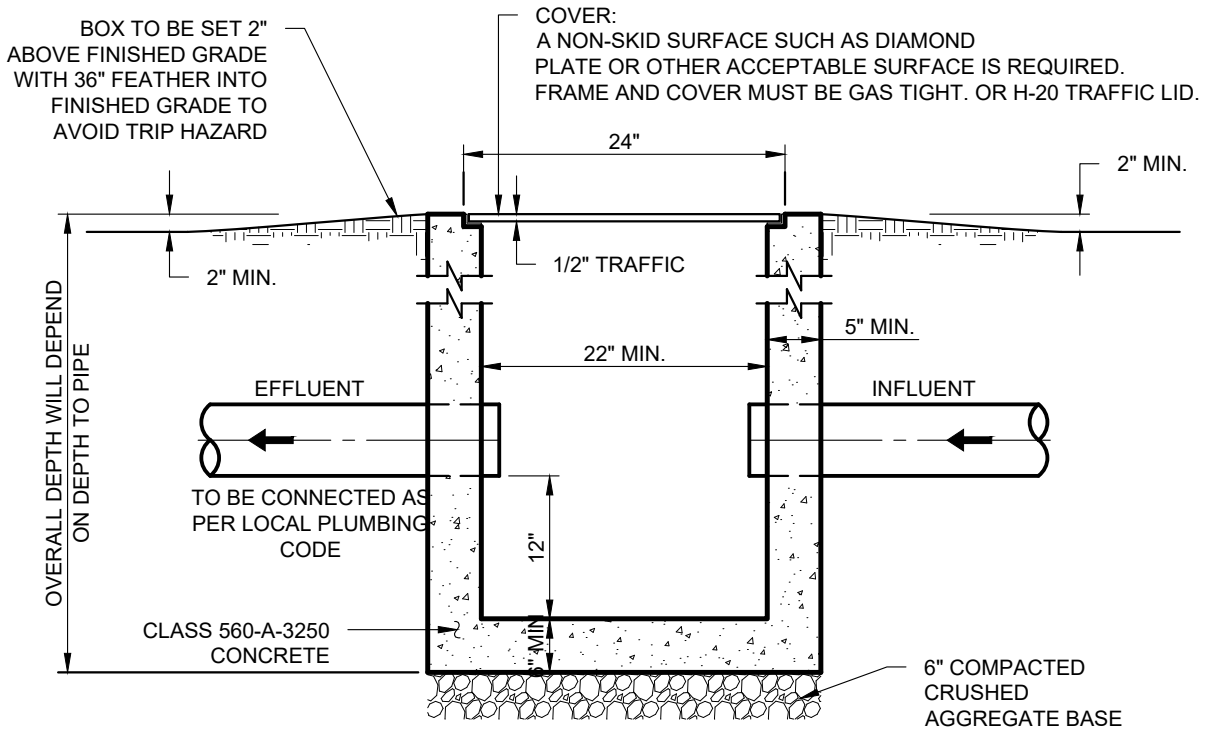
REVISION	BY	APPR	DATE

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MUNICIPAL WATER DISTRICT

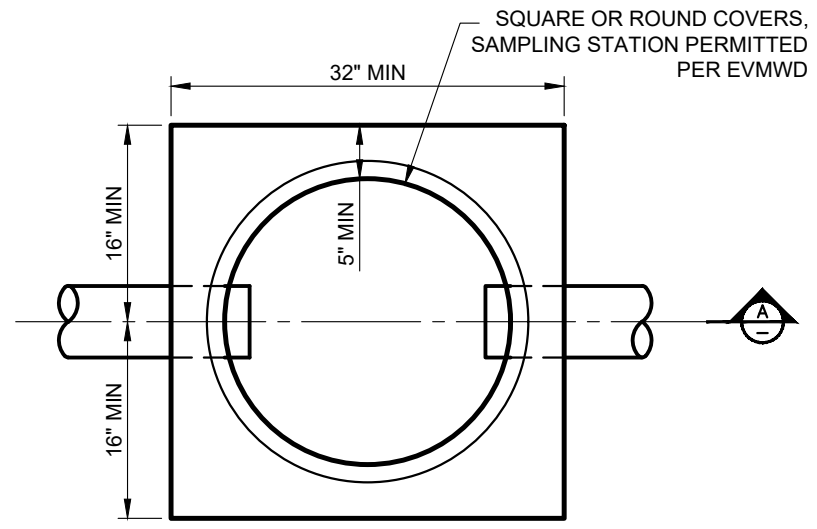
06/22/2023
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GREASE INTERCEPTOR

STD. DWG. NO.
S-17A



SECTION A-A



PLAN

NOTES:

1. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE SAMPLE BOX.
2. LID AND ANGLE IRON THICKNESS WILL DEPEND ON TRAFFIC IN SAMPLE BOX AREA.
3. INSTALLATION TO BE IN ACCORDANCE WITH ALL LOCAL PLUMBING CODES.
4. ALL CONNECTIONS / INTERNAL PLUMBING MUST BE INSPECTED BY EVMWD PRIOR TO BACKFILLING. CONTACT PRETREATMENT@EVMWD.NET
9. CONCRETE MEMBER THICKNESS AND REINFORCEMENT SHALL BE DETERMINED BY A REGISTERED DESIGN PROFESSIONAL AND SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF STANDARD SPECIFICATION SECTION 03310

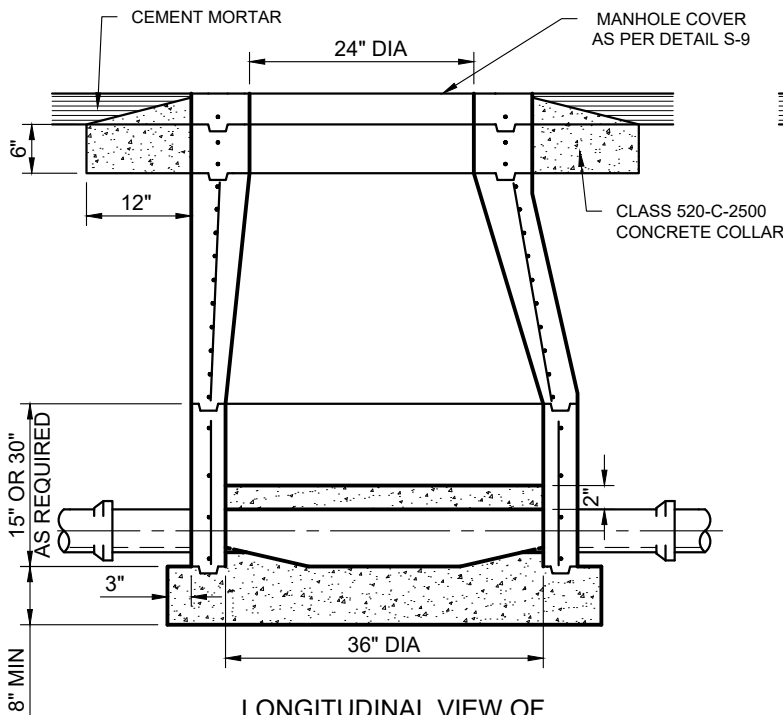
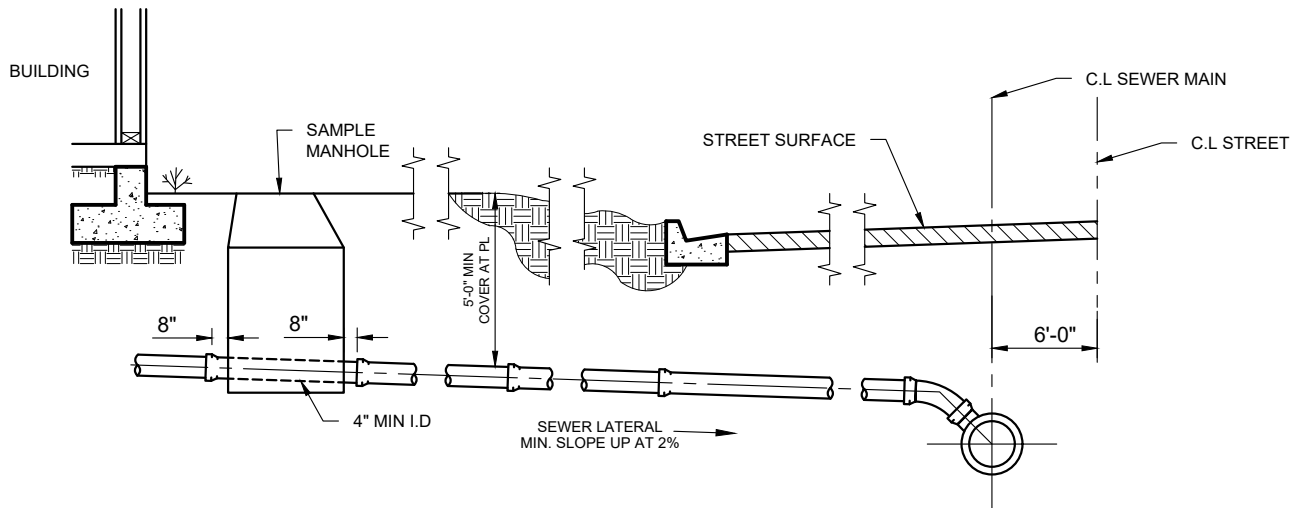
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

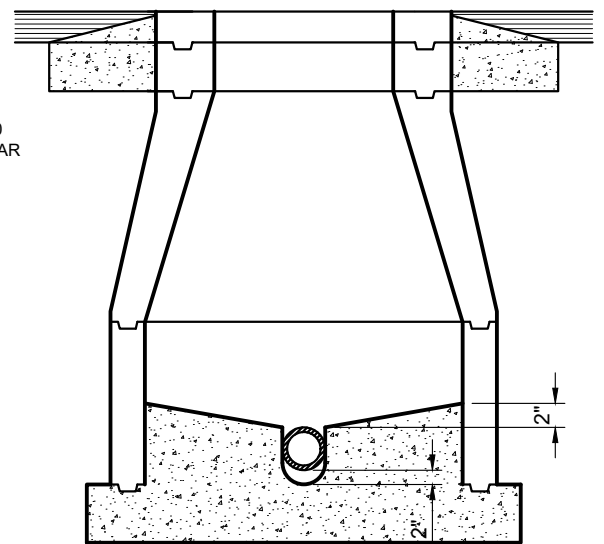
Parag Kalaria
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**COMMERCIAL / INDUSTRIAL
SAMPLE BOX DETAIL**

STD. DWG. NO.
S-17B



LONGITUDINAL VIEW OF SAMPLING MAHOLE



SECTIONAL VIEW OF SAMPLING MAHOLE

NOTES:

1. MANHOLE TO BE INSTALLED ON BUILDING SEWER AND LOCATED SUCH THAT THE MANHOLE WILL BE ACCESSABLE AT ALL TIMES.
2. PRECAST REINFORCED CONCRETE MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478, LATEST, AND SHALL BE DESIGNED FOR HS-20 LOADING.
3. WHERE NO BUILDING SET-BACK IS AVAILABLE, SET MANHOLE IN PARKWAY AREA; WHERE MANHOLE MUST BE SET IN CONCRETE WALK, PLUG PICK-HOLE FLUSH, LOCATE MANHOLE TO CLEAR OTHER UTILITIES.
4. CONCRETE BASE SHALL BE CLASS 560-C-3250 CONCRETE AND PLACED IN ONE OPERATION. CONCRETE INVERTS SHALL BE TRUE TO GRADE AND ALIGNMENT, AND FINISHED WITH A SMOOTH SURFACE. SPECIAL CARE SHALL BE USED IN FORMING ALL CHANNELS TO FACILITATE THE FLOW OF SEWAGE.
5. ALL MANHOLE TOPS SHALL BE INSTALLED WITH THE MANHOLE COVER OVER THE DOWNSTREAM INLET, EXCEPT AS OTHER SPECIFIED.
6. SEE DWG. S-9 & S-10 FOR DETAILS AND INSTALLATION OF MANHOLE AND FRAME.
7. GRADE RINGS SHALL BE 24" I.D. EXCEPT AS OTHERWISE NOTED.
8. JOINTS SHALL BE 1/2" THICKNESS CEMENT MORTAR NEATLY STRUCK AND POINTED. ALL JOINTS SHALL HAVE A PREFORMED BUTYL JOINT SEALANT. SEE STD. DTL S-5.
9. ALL SAMPLING MANHOLES MUST HAVE PROVISIONS FOR POWER AND COMPOSITE SAMPLER IN LOCKABLE CABINET.
10. OVER-EXCAVATE A MINIMUM 1-FOOT BELOW MANHOLE BASE AND BACKFILL WITH 3/4-INCH CRUSHED ROCK.
11. SEE STD. DTL S-5 FOR INFORMATION NOT SHOWN.

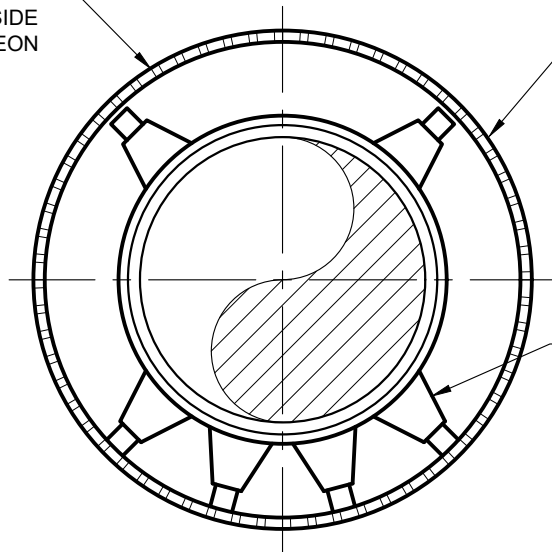
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**36" I.D.
 SAMPLING MANHOLE**

STD. DWG. NO.
S-17C

STEEL PIPE WITH MINIMUM PLATE THICKNESS AND MINIMUM INSIDE DIAMETER PER SCHEDULE HEREON



ANY VOIDS CREATED BY BORING, JACKING OR TUNNELING SHALL BE FILLED WITH PRESSURE GROUT

1. FOR PVC OR HDPE CARRIER PIPE, USE POLYETHYLENE CASING INSULATORS WITH POLYETHYLENE SKIDS.
2. FOR DUCTILE IRON CARRIER PIPE, USE STAINLESS STEEL BAND SPACERS AND INSULATORS WITH GLASS FILLED POLYMER PLASTIC RUNNERS.
3. ALL CASING INSULATORS SHALL BE DESIGNED BY THE MANUFACTURER FOR APPLICATION GIVEN THE PARTICULAR CARRIER PIPE O.D. AND CASING PIPE I.D.
4. ALL BOLTS AND BANDS SHALL BE TYPE 304 STAINLESS STEEL.
5. FILL ANNULAR SPACE AROUND CARRIER PIPE WITH AIR BLOWN SAND (SE 30 OR GREATER).

CASING SCHEDULE

NOMINAL PIPE SIZE	MINIMUM CASING SIZE	MIN. WALL
8"	16" I.D.	1/4"
10"	18" I.D.	1/4"
12"	20" I.D.	5/16"
15"	24" I.D.	5/16"
18"	30" I.D.	3/8"
21"	33" I.D.	3/8"
24"	36" I.D.	3/8"
27"	39" I.D.	1/2"
30"	42" I.D.	1/2"
36"	48" I.D.	5/8"
42"	54" I.D.	3/4"

NOTES:

1. SPACING BETWEEN THE CASING INSULATORS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS EXCEPT THAT THERE SHALL BE AT LEAST 4 CASING INSULATORS PER PIPE SECTION, ONE 12" FROM EACH JOINT AND ONE CENTERED. ADDITIONALLY, ONE INSULATOR SHALL BE INSTALLED 12" FROM EACH END OF THE CASING.
2. BOTH ENDS OF THE CASING BETWEEN THE CASING AND CARRIER PIPE MUST BE SEALED WATERTIGHT USING AN END SEAL, SELECTED FROM APPROVED MATERIALS LIST. BANDS SHALL BE TYPE 304 STAINLESS STEEL.
3. ALL STEEL CASING PIPE JOINTS SHALL BE WELDED FULL CIRCUMFERENCE.
4. ABOVE CASING THICKNESS ARE FOR OPEN TRENCH ONLY. FOR JACKED CASING SEE STANDARD SPECIFICATIONS FOR PUBLIC CONSTRUCTION SECTION 307, MOST RECENT EDITION.
5. HDPE CASING MAY BE USED IF MEETS ADEQUATE STRENGTH FOR GEOTECHNICAL CONDITIONS AND WITH WRITTEN APPROVAL FROM THE DIRECTOR OF ENGINEERING.

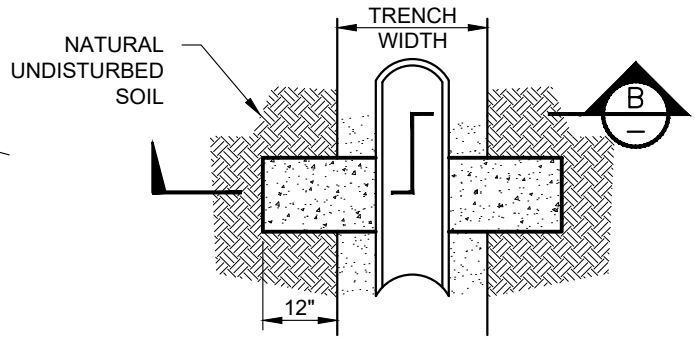
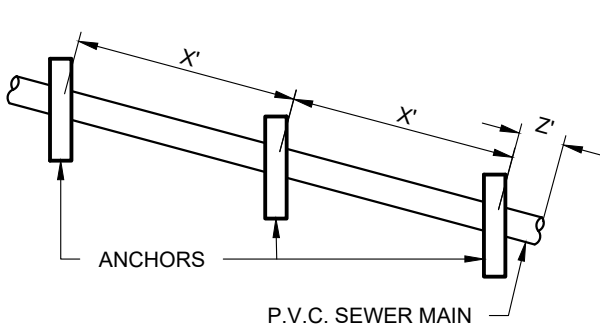
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ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

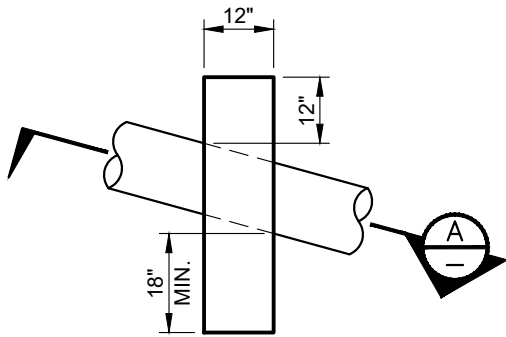
Parag Kalaria
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PARAG KALARIA R.C.E. 83927 DATE

STEEL CASING FOR SEWER MAINS

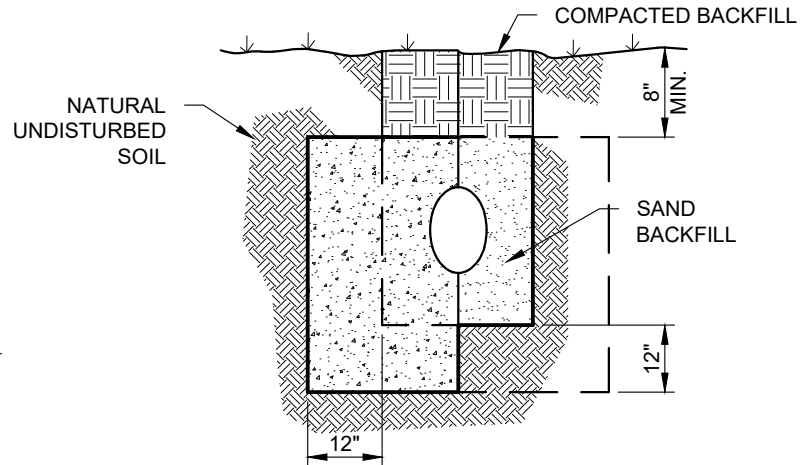
STD. DWG. NO.
S-19



SECTION A-A

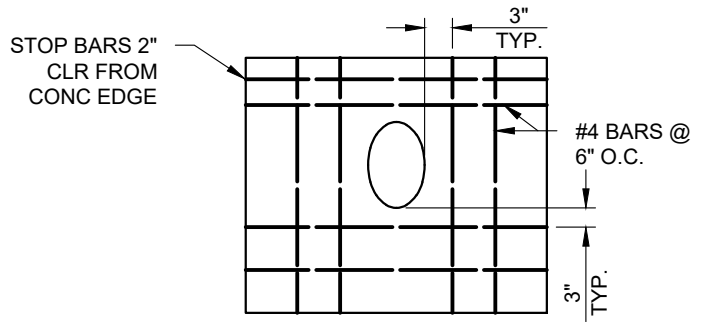


ANCHOR DETAIL



SECTION B-B

PIPE SLOPE	PIPE SLOPE	X DISTANCE	Z DISTANCE
100%	1:1	12'	4'
66.6%	1-1/2:1	14'	8'
50%	2:1	16'	12'
40%	2-1/2:1	18'	18'
33.3%	3:1	20'	20'



REINFORCING STEEL PATTERN

NOTES:

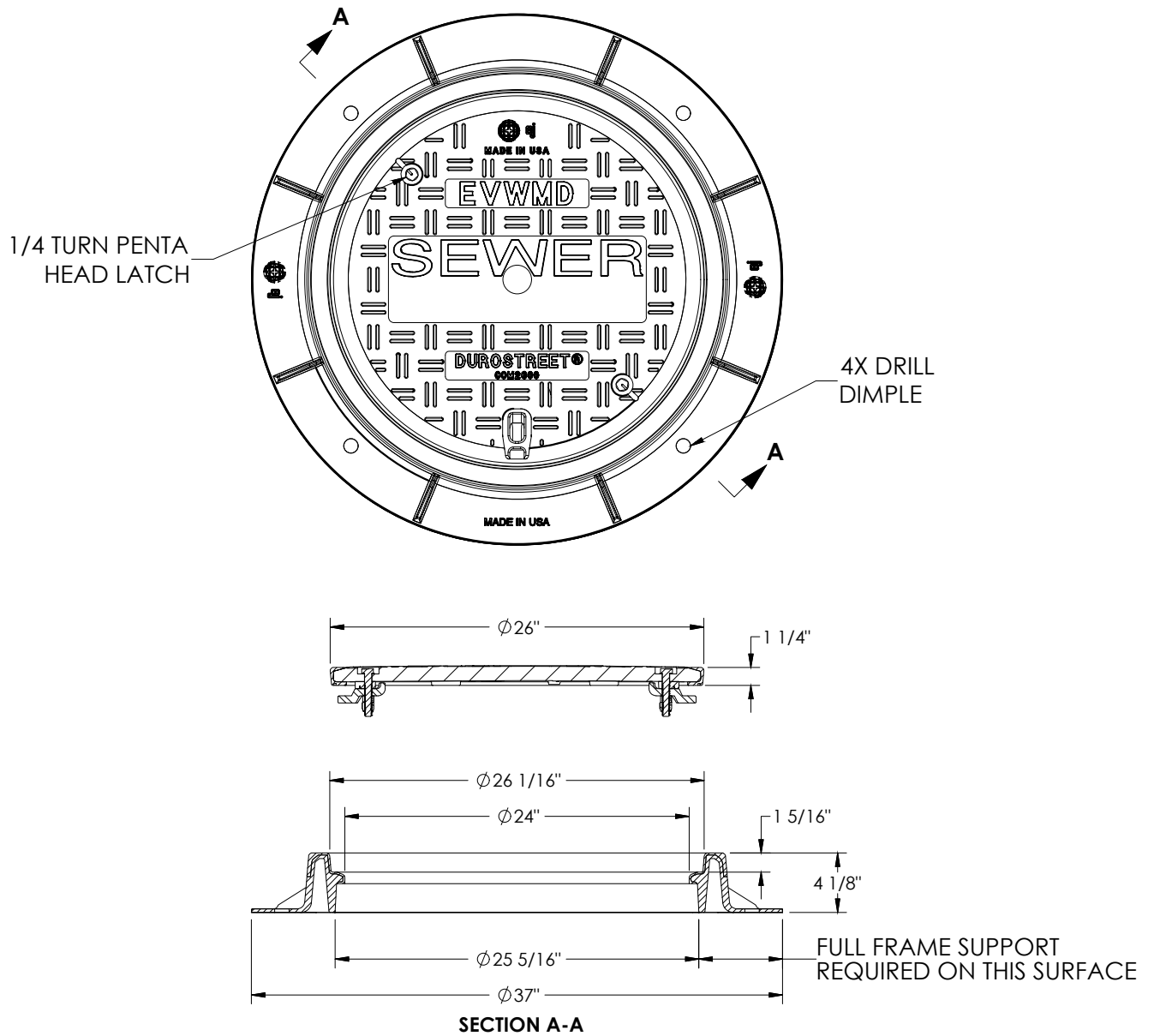
1. PIPE ANCHORS REQUIRED ON ALL SLOPES OF 3:1 OR GREATER.
2. ANCHOR SHALL EXTEND 12" INTO NATURAL UNDISTURBED SOIL.
3. CONCRETE SHALL BE 560-C-3250 PER STANDARD SPECIFICATION SECTION 03310.
4. ANCHORS FOR TRAPEZOIDAL TRENCH SECTIONS WILL CONFORM TO TRENCH CROSS SECTION AND EXTEND 12" INTO UNDISTURBED SOIL.
5. DESIGN REQUIREMENTS FOR TRENCH DRAIN SUBDRAIN OR CANYON DRAIN SHALL BE IN ACCORDANCE WITH PROJECT GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

REVISION	BY	APPR	DATE

PARAG KALARIA R.C.E. 83927 DATE

CONCRETE SLOPE ANCHORS

STD. DWG. NO.
S-20



TYPICAL INSTALLATION NOTES:

1. FRAME AND COVER SHALL BE MACHINED TO PROVIDE A NON-ROCKING SURFACE. MACHINED TOLERANCE BETWEEN FRAME AND COVER SHALL BE $\pm 1/8"$ TOTAL. FRAME AND COVER TO BE SELECTED FROM APPROVED MATERIALS LIST.
2. COMPOSITE MANHOLE FRAME AND COVERS SHALL BE USED EXCLUSIVELY OUTSIDE OF THE RIGHT-OF-WAY OR WHERE APPROVED BY THE DISTRICT.
3. THE MARKING LETTERS SHALL BE CAST IN THE COVER AND SHALL BE A MINIMUM 2 1/2" HIGH.

REVISION	BY	APPR	DATE

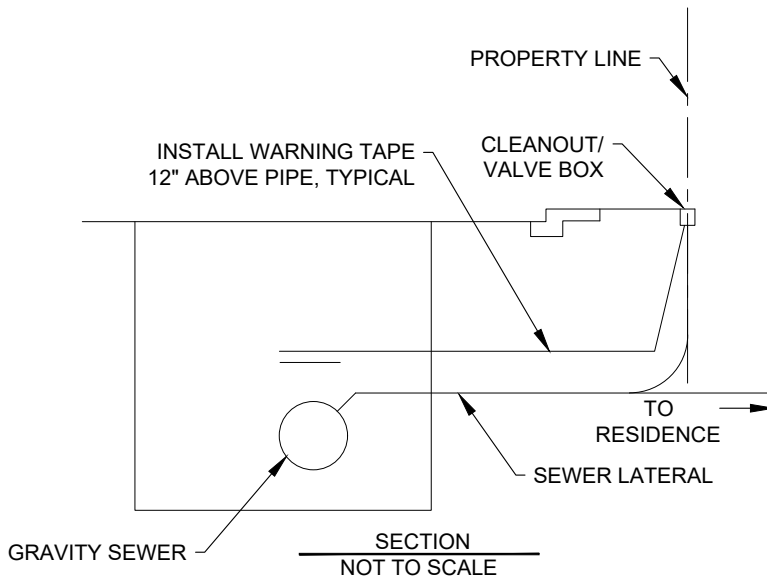
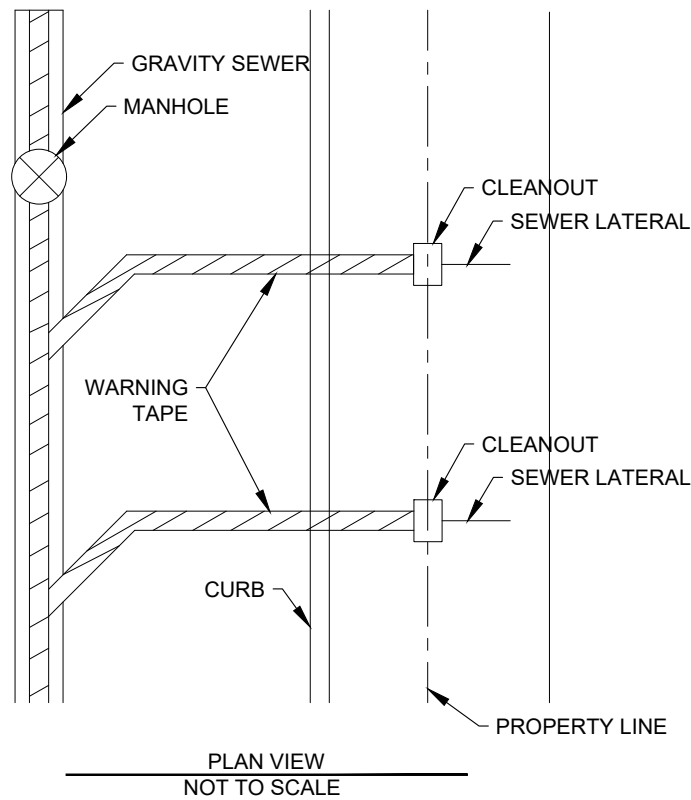
ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
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PARAG KALARIA R.C.E. 83927 DATE

MANHOLE FRAME AND COVER (COMPOSITE)

STD. DWG. NO.

S-21



NOTES:

1. USE CAST IRON COVER OVER LABELED WATER, SEWER, RECYCLED VALVE COVERS. COLORS PER APPROVED MATERIALS LIST.
2. WARNING TAPE SHALL BE PLACED 1 FT ABOVE THE LOCATOR WIRE.
3. WARNING TAPE SHALL BE INSTALLED 12" ABOVE THE PIPE AND RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF THE PIPE AND ALL RELATED APPURTENANCES.

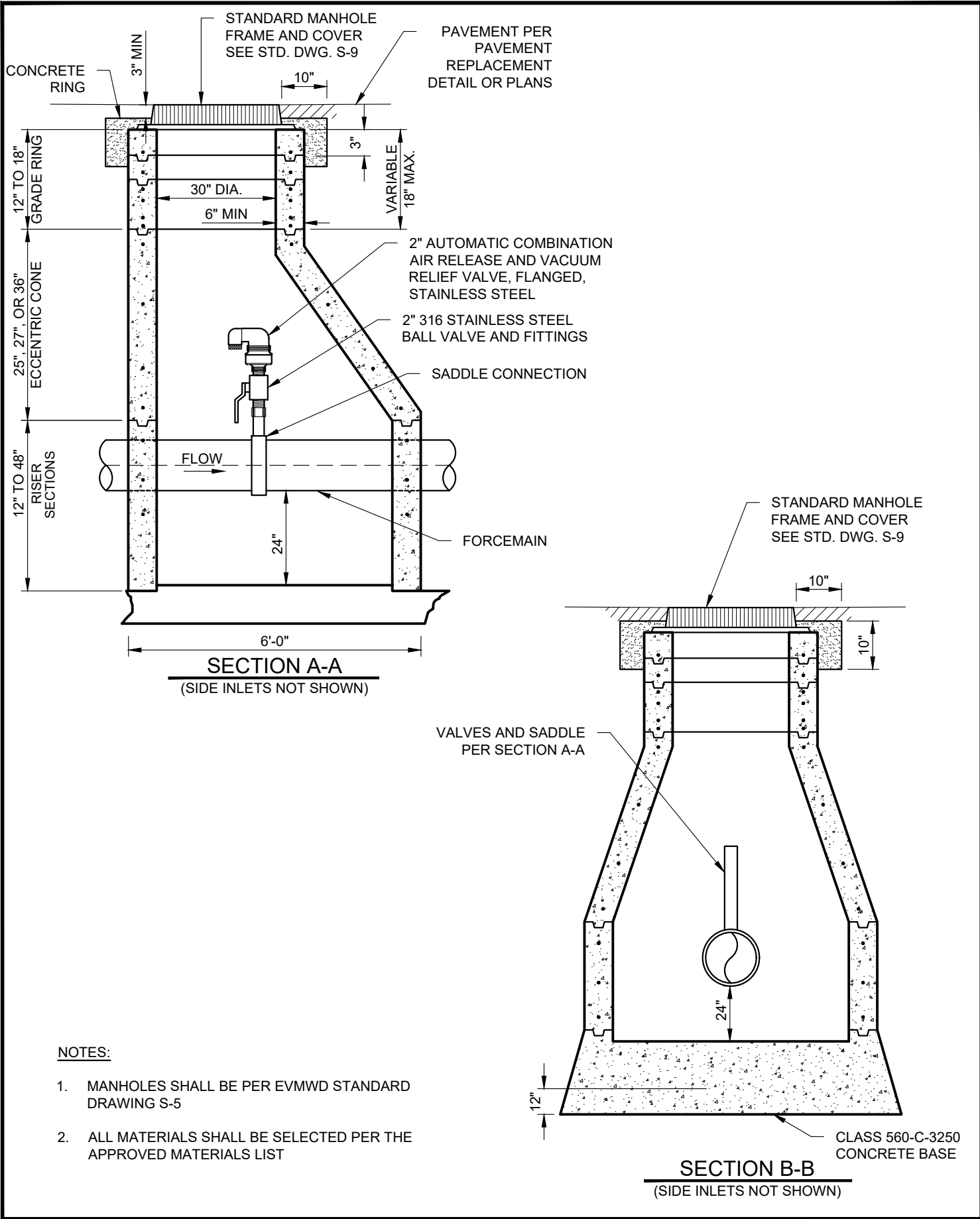
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 MUNICIPAL WATER DISTRICT

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**GRAVITY SEWER BURY TAPE
 INSTALLATION**

STD. DWG. NO.
S-22



NOTES:

1. MANHOLES SHALL BE PER EVMWD STANDARD DRAWING S-5
2. ALL MATERIALS SHALL BE SELECTED PER THE APPROVED MATERIALS LIST

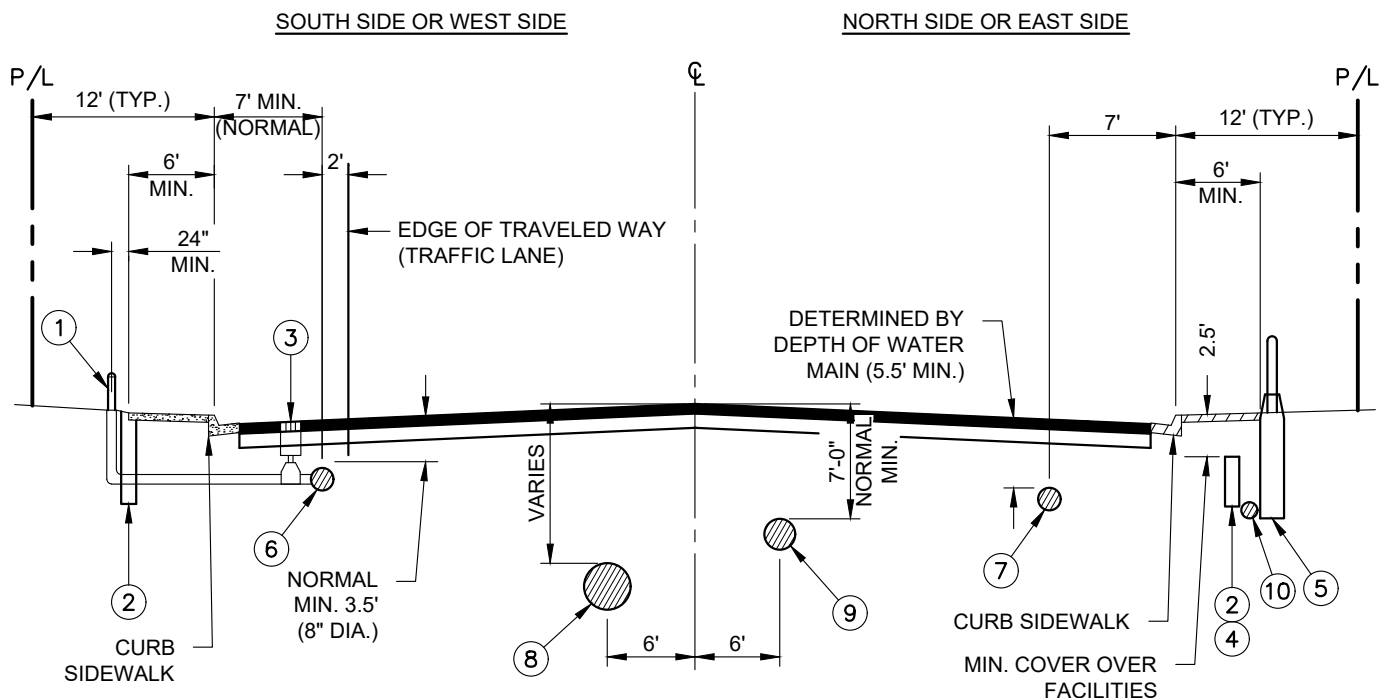
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 MUNICIPAL WATER DISTRICT
 PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

**AIR/VAC AND MANHOLE FOR
 SEWER FORCEMAIN**

STD. DWG. NO.
S-23

CONFORMS TO RIVERSIDE COUNTY STANDARD NO. 817



NOTES:

1. LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE ROAD DEPARTMENT FOR APPROVAL.
2. CHANGES MAY BE PERMITTED BY EVMWD IN CASES OF CONFLICTING FACILITIES.
3. FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED 18" BEHIND SIDEWALK. HYDRANTS SHALL NOT BE LOCATED IN SIDEWALKS.
4. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

ITEM	DESCRIPTION
1	FIRE HYDRANT, LOCATE IN ACCORDANCE WITH EVMWD STANDARDS
2	JOINT UTILITIES TRENCH
3	VALVE BOX
4	STREET LIGHTING CONDUIT IN TRENCH
5	STREET LIGHT BASE
6	DOMESTIC WATER MAIN
7	RECLAIMED WATER MAIN
8	STORM DRAIN
9	SEWER MAIN
10	GAS MAIN

REVISION	BY	APPR	DATE

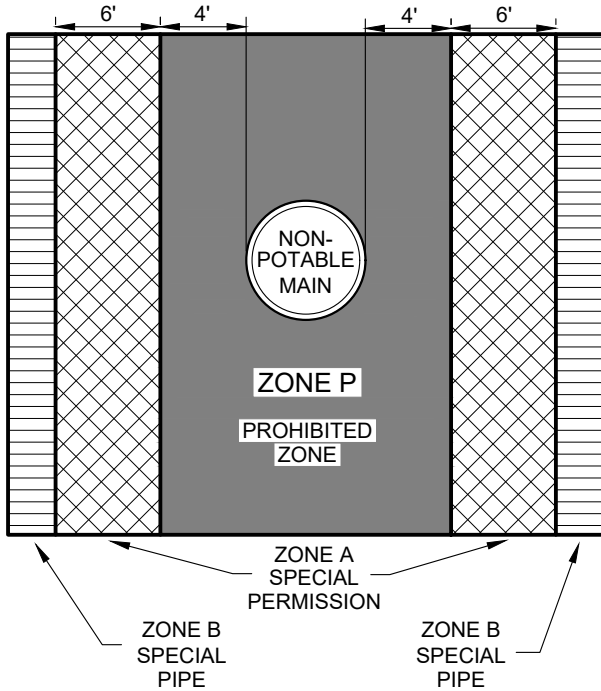
ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

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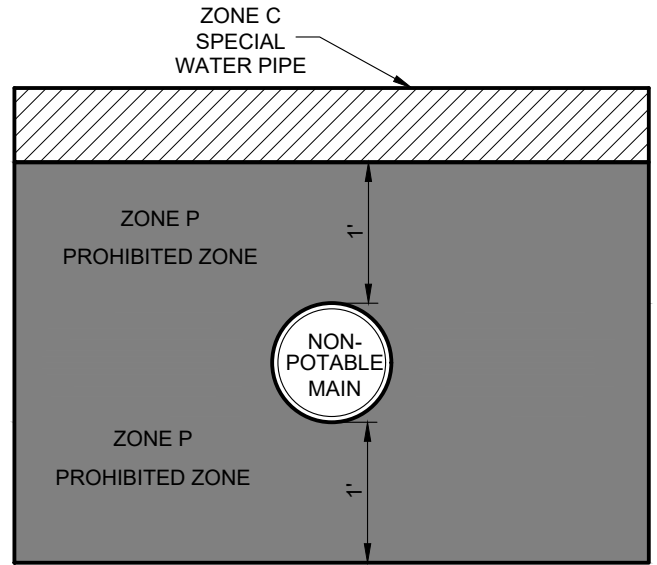
NORMAL UTILITY LOCATION

STD. DWG. NO.
W-1

**PARALLEL
CONSTRUCTION**



**PERPENDICULAR
CONSTRUCTION**



NOTES:

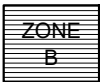
1. WATER MAINS ARE NOT PERMITTED WITHIN THE PROHIBITED ZONE UNLESS APPROVED BY THE STATE WATER RESOURCE CONTROL BOARD (STATE BOARD). IF APPROVAL IS REQUIRED, THE ENGINEER OF RECORD SHALL SUBMIT A WATERWORKS STANDARDS MAIN SEPARATION ALTERNATIVE REQUEST CHECKLIST TO THE DISTRICT. THE DISTRICT WILL COORDINATE THE APPROVAL WITH STATE BOARD ON THE DEVELOPER'S BEHALF.
2. SEPARATION OF WATER MAIN FROM SEWER AND OTHER NON-POTABLE FLUIDS SHALL BE IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATION (CCR), TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 OR MOST RECENT UPDATE.
3. DIMENSIONS ARE FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER OR NON-POTABLE FLUID PIPELINES.

ZONE

SPECIAL SEWER CONSTRUCTION REQUIREMENTS



NO SANITARY SEWER MAINS PARALLEL TO WATER OR NON-POTABLE FLUID MAINS SHALL BE CONSTRUCTED WITHOUT PRIOR WRITTEN APPROVAL FROM THE CALIFORNIA DDW



SPECIAL SEWER PIPE - RUBBER GASKETED PVC SEWER PIPE (ASTM 3034) OR EQUIVALENT; OR HDPE PIPE WITH FUSION WELDED JOINTS.



NO JOINTS IN SEWER MAIN - SPECIAL SEWER PIPE MAY BE REQUIRED.



CONSTRUCTION PROHIBITED IN THIS AREA.

REVISION	BY	APPR	DATE

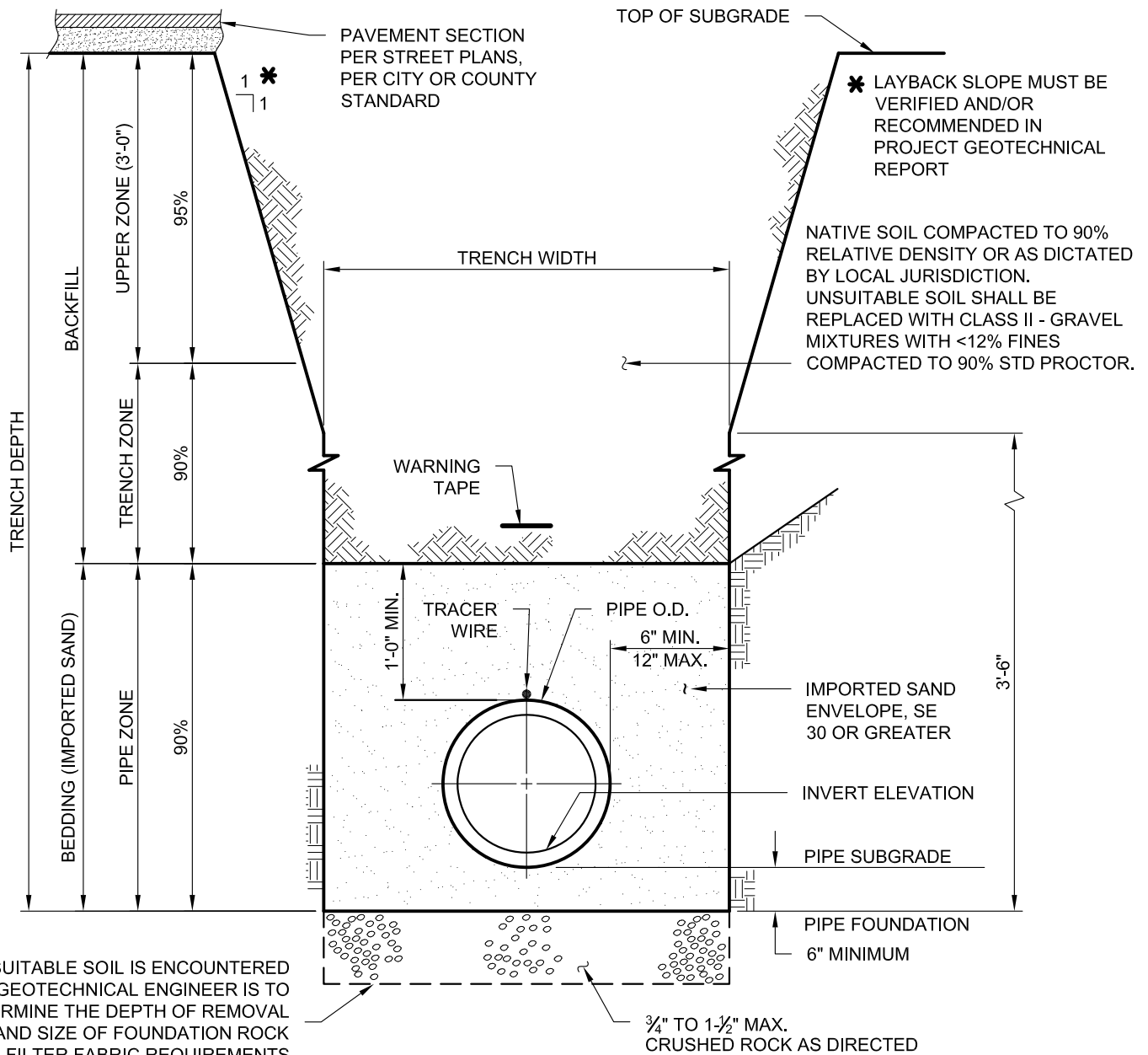
ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**PIPELINE SEPARATION
REQUIREMENTS**

STD. DWG. NO.

W-2



NOTES:

1. PAVING DICTATED BY LOCAL JURISDICTION.
2. 95% MAXIMUM DENSITY MINIMUM AS DETERMINED BY ASTM D1557.
3. TRENCHES GREATER THAN 5' DEPTH REQUIRE CAL/OSHA EXCAVATION PERMIT.
4. CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TRENCHING AND EXCAVATION IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8.
5. EXCAVATION, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
6. FULL TIME SOILS TECHNICIAN MUST BE ON-SITE DURING BACKFILLING AND COMPACTION AS DETERMINED BY EVMWD.
7. IF TRENCH DEPTH IS GREATER THAN 30- FEET TRENCH BACKFILL SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
8. PIPE ZONE MATERIAL SHALL BE MOISTURE CONDITIONED AND MECHANICALLY DENSIFIED AS REQUIRED.
9. MAXIMUM ROCK SIZE (GREATEST DIMENSION) FOR TRENCH BACKFILL SHALL BE 3".

REVISION	BY	APPR	DATE
TRENCH ZONE BACKFILL	AK	JZ	01-24-24

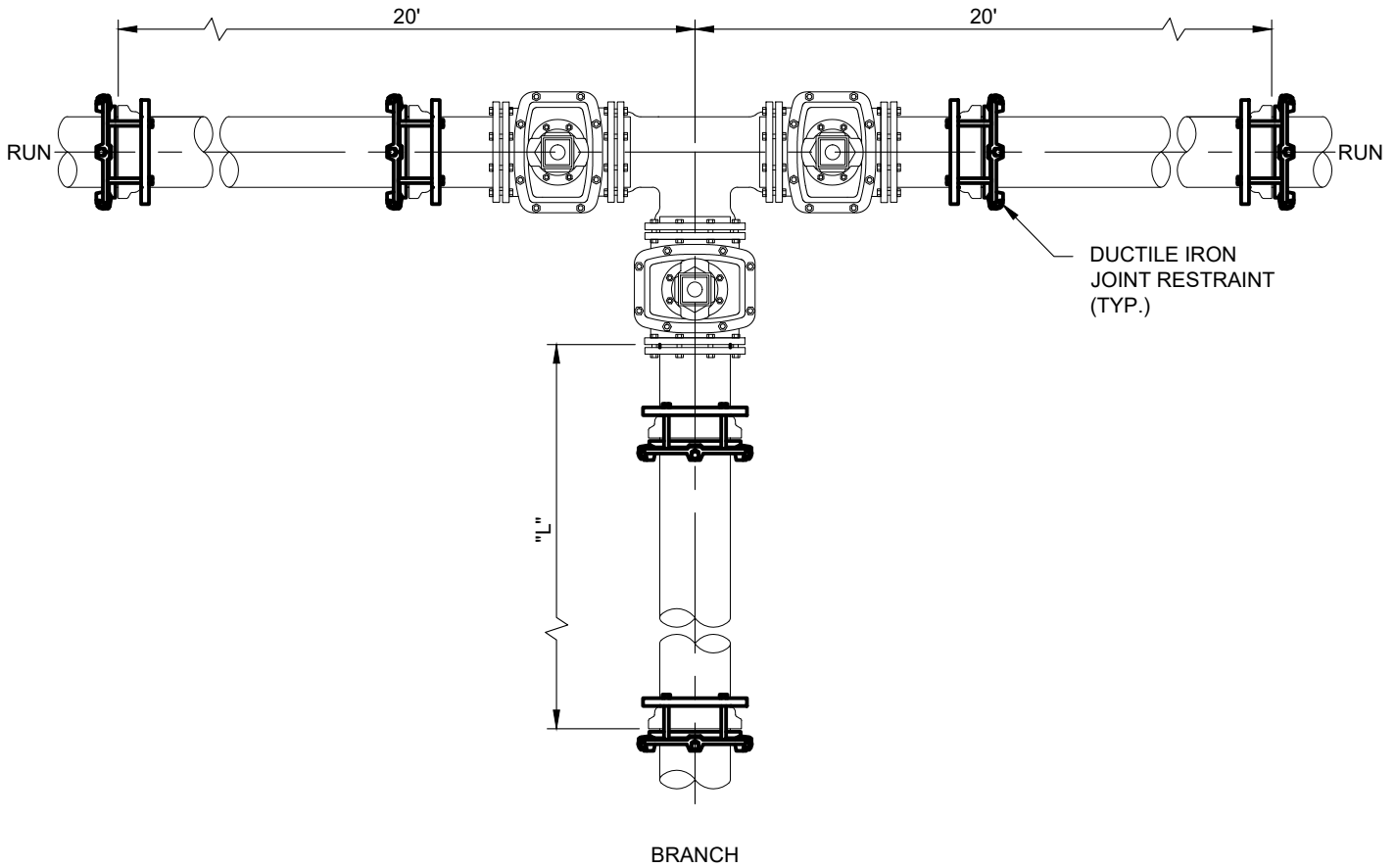
ELSI N ORE VALLEY
MUNICIPAL WATER DISTRICT

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

WATER PIPE BEDDING AND TRENCH BACKFILL

STD. DWG. NO.

W-3



		PIPE SIZE (RUN)							
		4	6	8	12	16	18	20	24
PIPE SIZE (BRANCH)	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8			191	169	169	169	169	169
	12				240	240	240	240	240
	16					309	309	309	309
	18						342	342	342
	20							374	374
	24								438

RESTRAINED LENGTHS "L" IN FEET

TEE

NOTES:

- ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED. INSTALL A FULL LENGTH OF PIPE ON EACH SIDE OF THE BRANCH AND A RESTRAIN JOINT ON BOTH ENDS OF THE RUN. THE FOLLOWING ASSUMPTIONS APPLY FOR THE RESTRAINED PIPE LENGTH:
 - TEST PRESSURE: 225 PSI
 - TYPE 4 LAYING CONDITION
 - A SAFETY FACTOR OF 2
 - SAND/SILT SOIL CONDITION
 - POLYETHYLENE WRAP

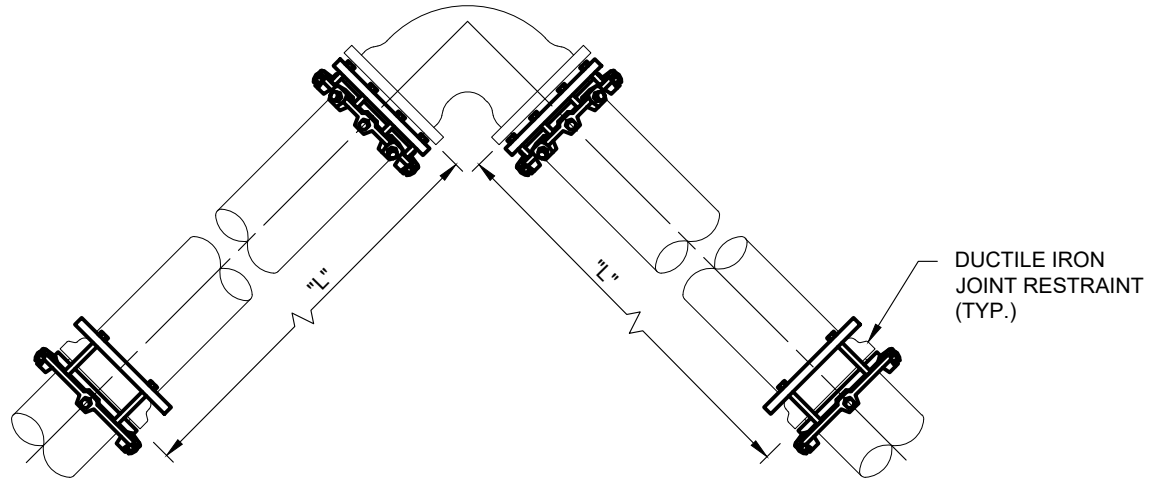
REVISION	BY	APPR	DATE

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 PARAG KALARIA R.C.E. 83927 DATE

STANDARD RESTRAINT FOR
DUCTILE IRON AND PVC PIPE

STD. DWG. NO.

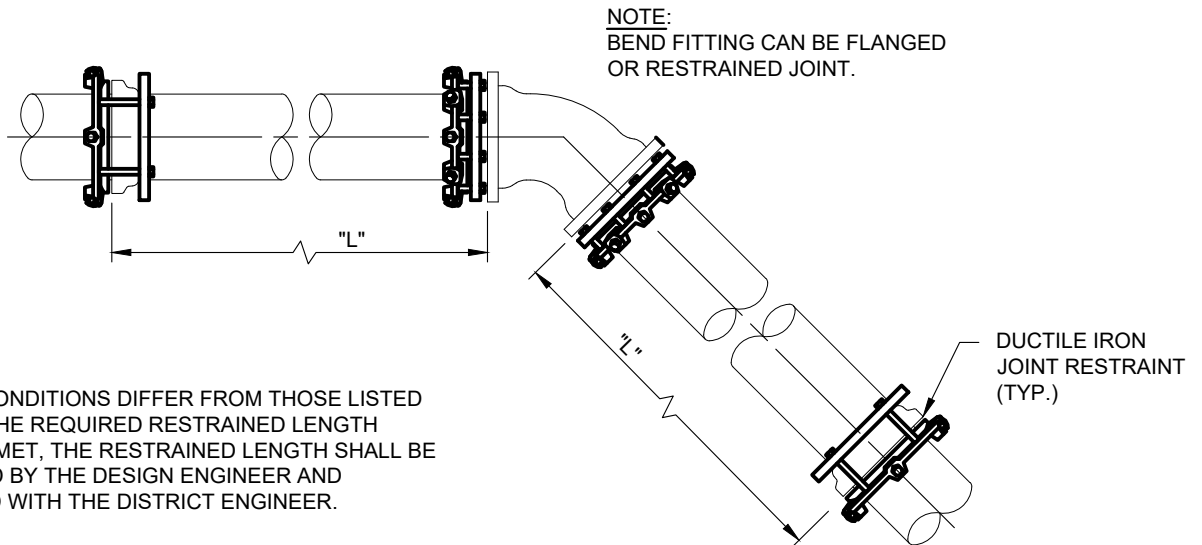
W-4A



PIPE SIZE		4	6	8	12	16	18	20	24
BEND ANGLE	11.25°	3	5	6	7	9	10	11	13
	22.5°	7	9	12	15	19	21	23	26
	45°	14	19	25	31	39	43	47	54
	90°	33	46	59	74	94	104	113	131

RESTRAINED LENGTHS "L" IN FEET (SEE NOTE 1 FOR LIMITS ON USE)

HORIZONTAL BEND



NOTES:

- IF ACTUAL CONDITIONS DIFFER FROM THOSE LISTED ABOVE OR THE REQUIRED RESTRAINED LENGTH CANNOT BE MET, THE RESTRAINED LENGTH SHALL BE DETERMINED BY THE DESIGN ENGINEER AND CONCURRED WITH THE DISTRICT ENGINEER.

PIPE SIZE		4	6	8	12	16	18	20	24
BEND ANGLE	11.25°	10	15	19	24	30	34	37	43
	22.5°	21	29	38	48	61	68	74	87
	45°	43	61	79	100	128	142	155	181

RESTRAINED LENGTHS "L" IN FEET (SEE NOTE 1 FOR LIMITS ON USE)

VERTICAL BEND

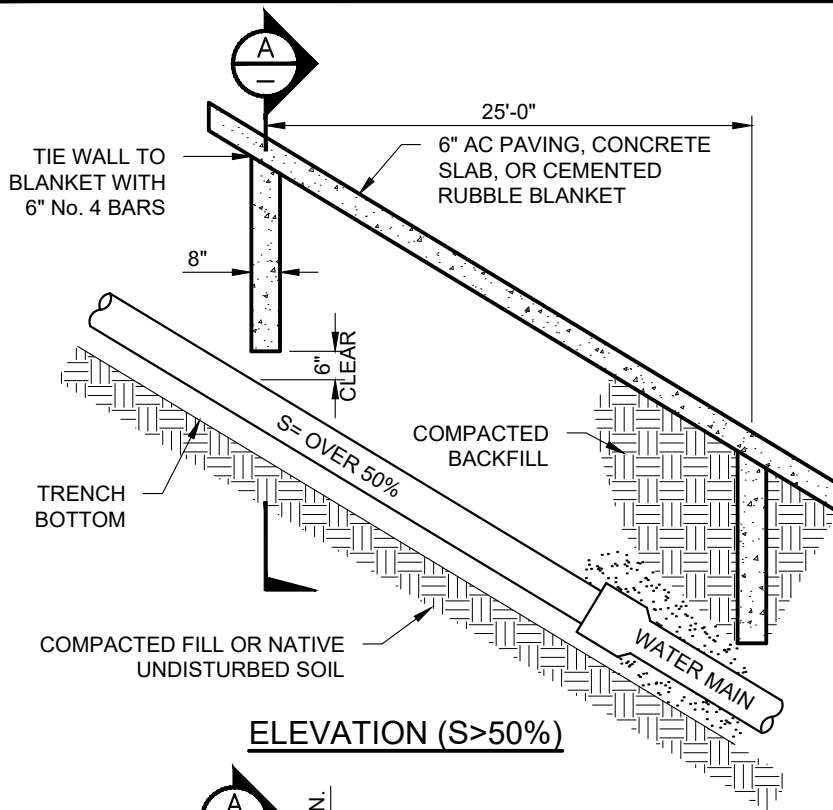
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

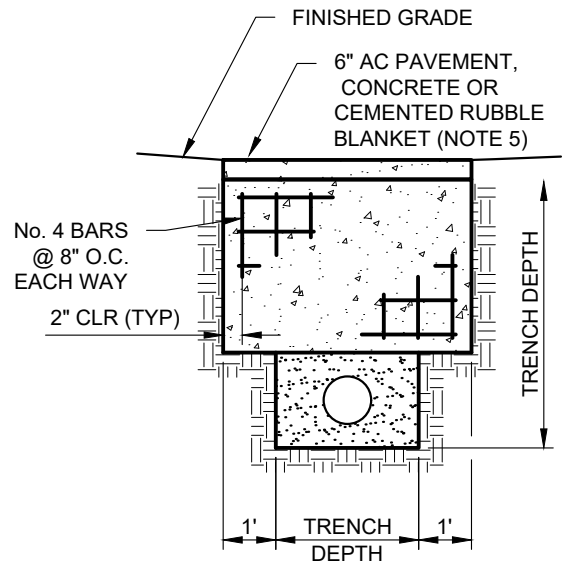
Parag Kalaria
06/22/2023
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**STANDARD RESTRAINT FOR
DUCTILE IRON AND PVC PIPE**

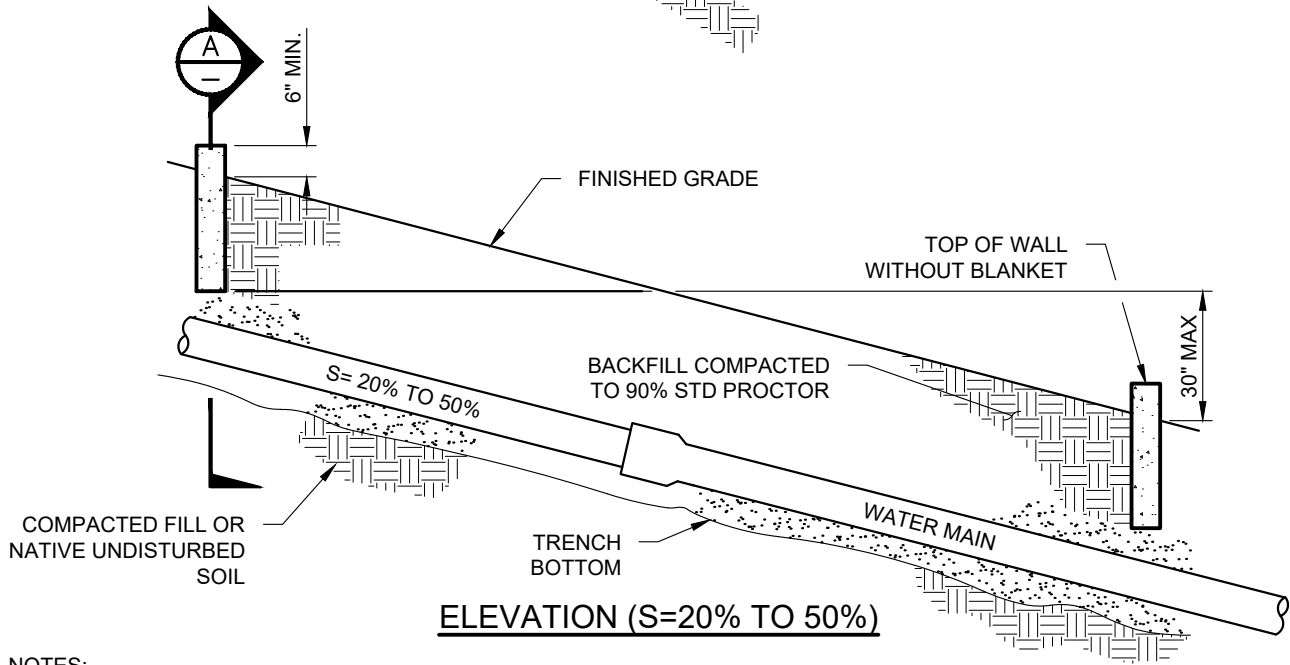
STD. DWG. NO.
W-4B



ELEVATION (S>50%)



SECTION A-A



ELEVATION (S=20% TO 50%)

NOTES:

1. PRIOR CONCURRENCE OF THE DISTRICT ENGINEER REQUIRED FOR USE, SUBMITTALS WILL BE REQUIRED.
2. WALL SHALL BE REINFORCED CONCRETE, SEE SPECIFICATIONS.
3. CONCRETE WALLS SHALL BE PLACED AGAINST FIRM MATERIAL.
4. FOR GRADES OVER 50%, SLOPE PROTECTION SHALL ALSO INCLUDE AC PAVING, CONCRETE SLAB OR GUNITE BLANKET PLACED OVER THE PIPELINE ALIGNMENT.
5. 4" GUNITE BLANKET WITH 6" SQUARE x 10 GAGE WIRE FABRIC AT THE ENGINEERS DISCRETION.
6. CONCRETE SHALL BE 560-C-3250.

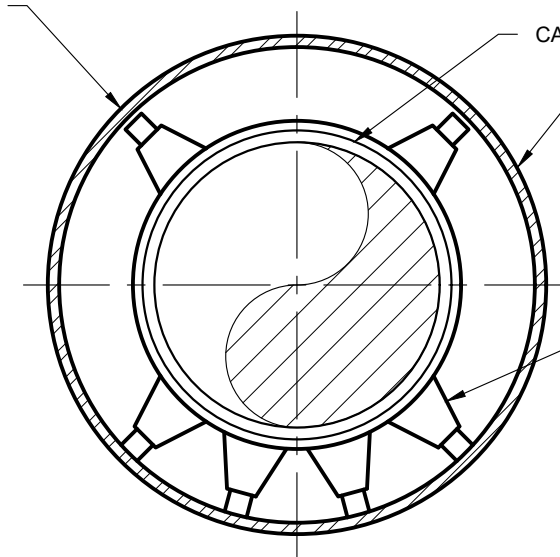
REVISION	BY	APPR	DATE

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SLOPE ANCHOR DETAILS

STD. DWG. NO.
W-5

STEEL PIPE WITH MINIMUM PLATE THICKNESS AND MINIMUM INSIDE DIAMETER PER SCHEDULE HEREON



CARRIER PIPE CENTERED IN CASING

ANY VOIDS CREATED BY BORING, JACKING OR TUNNELING SHALL BE FILLED WITH PRESSURE GROUT

1. FOR PVC OR HDPE CARRIER PIPE, USE POLYETHYLENE CASING INSULATORS WITH POLYETHYLENE SKIDS.
2. FOR DUCTILE IRON CARRIER PIPE, USE STAINLESS STEEL BAND SPACERS AND INSULATORS WITH GLASS FILLED POLYMER PLASTIC RUNNERS.
3. ALL CASING INSULATORS SHALL BE DESIGNED BY THE MANUFACTURER FOR APPLICATION GIVEN THE PARTICULAR CARRIER PIPE O.D. AND CASING PIPE I.D.
4. ALL BOLTS AND BANDS SHALL BE TYPE 304 STAINLESS STEEL.
5. FILL ANNULAR SPACE AROUND CARRIER PIPE WITH AIR BLOWN SAND (SE30 OR GREATER).

CASING SCHEDULE

NOMINAL PIPE SIZE	MINIMUM CASING SIZE	MIN. WALL
8"	16" I.D.	1/4"
12"	20" I.D.	5/16"
16"	30" I.D.	3/8"
18"	32" I.D.	3/8"
20"	36" I.D.	3/8"
24"	42" I.D.	1/2"
30"	48" I.D.	1/2"
36"	56" I.D.	5/8"
42"	60" I.D.	3/4"

NOTES:

1. SPACING BETWEEN THE CASING INSULATORS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS EXCEPT THAT THERE SHALL BE AT LEAST 4 CASING INSULATORS PER PIPE SECTION, ONE 12" FROM EACH JOINT AND ONE CENTERED. ADDITIONALLY, ONE INSULATOR SHALL BE INSTALLED 12" FROM EACH END OF THE CASING.
2. BOTH ENDS OF THE CASING BETWEEN THE CASING AND CARRIER PIPE MUST BE SEALED WATERTIGHT USING AN END SEAL, SELECTED FROM APPROVED MATERIALS LIST. BANDS SHALL BE TYPE 304 STAINLESS STEEL.
3. ALL STEEL CASING PIPE JOINTS SHALL BE WELDED FULL CIRCUMFERENCE.
4. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
5. ABOVE CASING THICKNESS ARE FOR OPEN TRENCH ONLY. FOR JACKED CASING SEE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 307, MOST RECENT EDITION.
6. HDPE CASING MAY BE USED IF MEETS ADEQUATE STRENGTH FOR GEOTECHNICAL CONDITIONS AND WITH WRITTEN APPROVAL FROM THE DIRECTOR OF ENGINEERING.

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ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

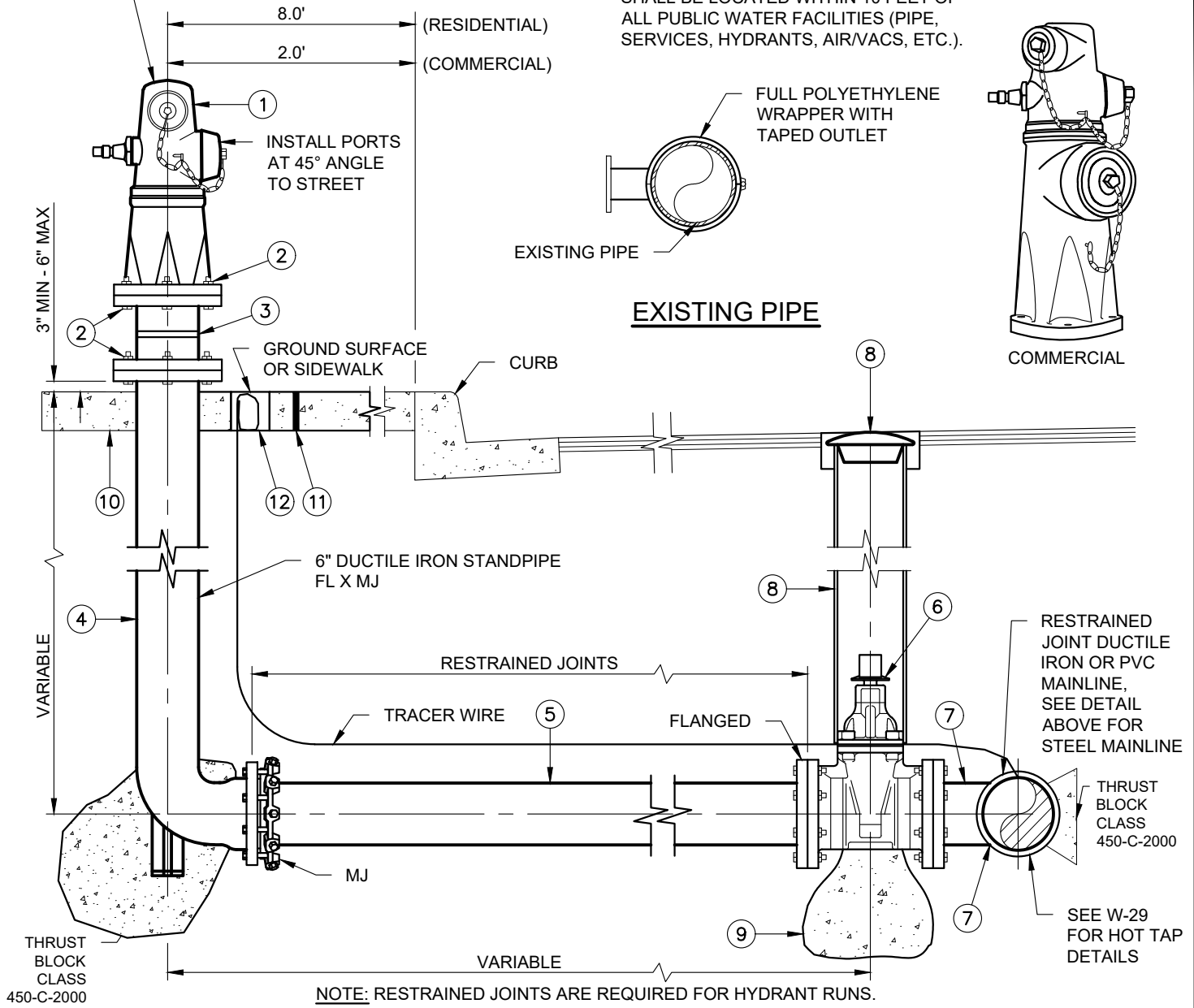
Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

STEEL CASING FOR WATER MAINS

STD. DWG. NO.
W-6

MAINTAIN 3' CLEARANCE ALL AROUND,
AND NOT TO BE IN A SIDEWALK.

NOTE: NO TREES OR LARGE SHRUBS
SHALL BE LOCATED WITHIN 10 FEET OF
ALL PUBLIC WATER FACILITIES (PIPE,
SERVICES, HYDRANTS, AIR/VACS, ETC.).



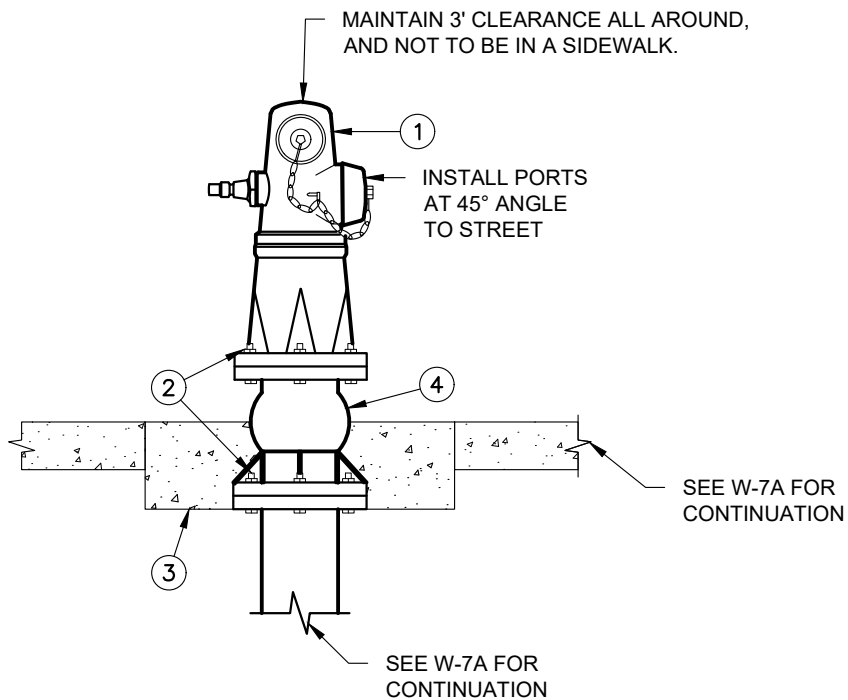
ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	6" FIRE HYDRANT	2 OUTLET RES., 3 OUTLET COMMERCIAL	6 HOLE FL, SEE PAINT SPECS.
②	AS REQ'D	BOLTS WITH NUTS ON TOP OF FLANGE	5/8"x3" HEX HEAD ZINC PLATED W/ SOLID BODY	DUCTILE IRON HYDRANT.
③	1	GROOVED BREAK-OFF SPOOL	FLxFL, 6 HOLE, 6" OR 8"	SPOOL ABOVE SURFACE.
④	1	FIRE HYDRANT BURY	6 HOLES FLxMJ	VARIABLE HEIGHT.
⑤	1	6" HYDRANT RUN PIPE	DUCTILE IRON OR PVC C900	FLxPE OR FLxFL, CANNOT CROSS STREET C
⑥	1	6" RESILIENT WEDGE GATE VALVE	FLxFL	INCLUDES VALVE SUPPORT BLOCK
⑦	1	TEE W/ 6" OR 8" OUTLET	FL OUTLET	CUT IN TEE SIMILAR TO W-34 IF EXISTING MAIN
⑧	1	8" VALVE WELL, CAP AND SLIP CAN	STD. DWG. NO. W-13	
⑨	-	VALVE SUPPORT BLOCK	STD. DWG. NO. W-15	
⑩	1	3' X 3' X 6"THK CONCRETE SPLASH PAD	STANDARD SPEC SECTION 03310	CLASS 560-C-3250 CONCRETE
⑪	1	COLD JOINT STRIP	STANDARD SPEC SECTION 03310	
⑫	1	TRACER WIRE BOX	SEE APPROVED MATERIALS LIST	

REVISION	BY	APPR	DATE

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FIRE HYDRANT / BLOW-OFF ASSEMBLY

STD. DWG. NO.
W-7A



REQUIRED IF:

1. FIRE HYDRANT IS LOCATED WITHIN 50' HORIZONTAL OF OVERHEAD POWER LINES.
2. FIRE HYDRANT IS NEAR FREEWAY, AS DIRECTED BY THE ENGINEER.
3. FIRE HYDRANT VALVE IS LESS THAN 10' FROM FIRE HYDRANT.
4. SPECIFIED ON THE PLANS, OR AS OTHERWISE REQUIRED BY THE ENGINEER.

NOTE: NO TREES OR LARGE SHRUBS SHALL BE LOCATED WITHIN 10 FEET OF ALL PUBLIC WATER FACILITIES (PIPE, SERVICES, HYDRANTS, AIR/VACS, ETC.).

ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	6" FIRE HYDRANT	2 OUTLET RES., 3 OUTLET COMMERCIAL	6 HOLE FL, SEE PAINT SPECS.
②	AS REQ'D	BOLTS WITH NUTS ON TOP OF FLANGE	5/8"x3" HEX HEAD ZINC PLATED W/ SOLID BODY	DUCTILE IRON HYDRANT.
③	1	8" THICK CONCRETE COLLAR, 1' FROM FIRE HYDRANT EDGE TO OUTSIDE EDGE	FINISH SURFACE SHALL BE BELOW CONNECTING BOLTS/NUTS.	CLASS 560-C-3250 CONCRETE
④	1	BREAK OFF CHECK VALVE	PER APPROVED MATERIALS LIST	

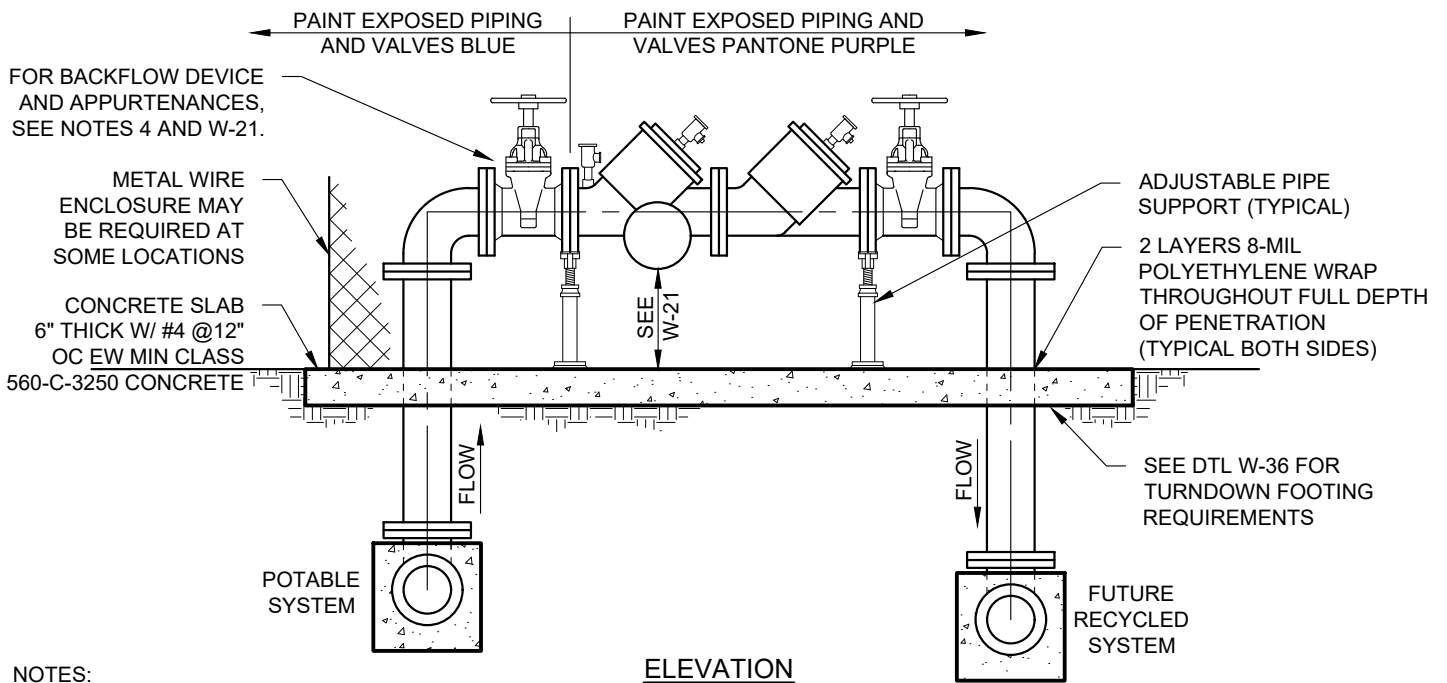
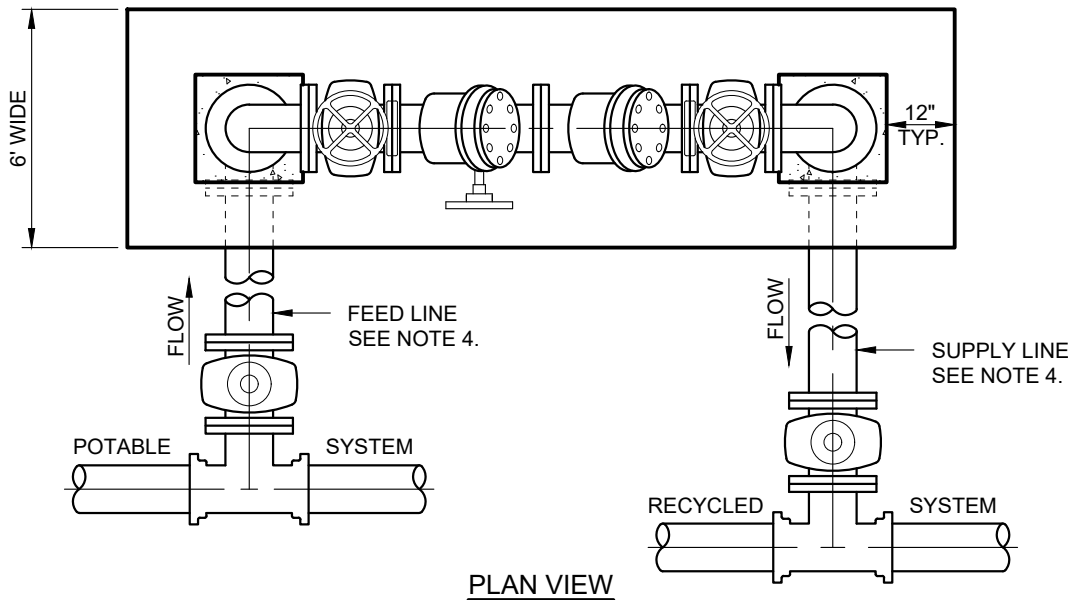
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ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**FIRE HYDRANT / BLOW-OFF
ASSEMBLY WITH CHECK VALVE**

STD. DWG. NO.
W-7B



NOTES:

1. REFER TO NOTES ON STANDARD DRAWING W-21A.
2. REFER TO STANDARD DRAWING W-21B FOR IDENTIFICATION OF MATERIALS AND OPENINGS.
3. INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON W-21A.
4. THE FEED PIPE DIAMETER SHALL BE A MINIMUM (6"), OR LARGER AS REQUIRED, TO MATCH BACKFLOW PREVENTER. THE SUPPLY LINE MAY BE REDUCED FOR INSTALLATIONS REQUIRING PIPE OF LESS THAN 6" IN DIAMETER.
5. PAINTING SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, COLOR SHALL BE PURPLE PER APPROVED MATERIALS LIST.
6. TESTING SHALL BE CONDUCTED AS CALLED FOR IN THE STANDARD SPECIFICATIONS PRIOR TO ACCEPTANCE BY THE DISTRICT.
7. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
8. IDENTIFICATION PLATE AND TEST VALVES ON THE BACKFLOW ASSEMBLY SHALL NOT BE PAINTED.

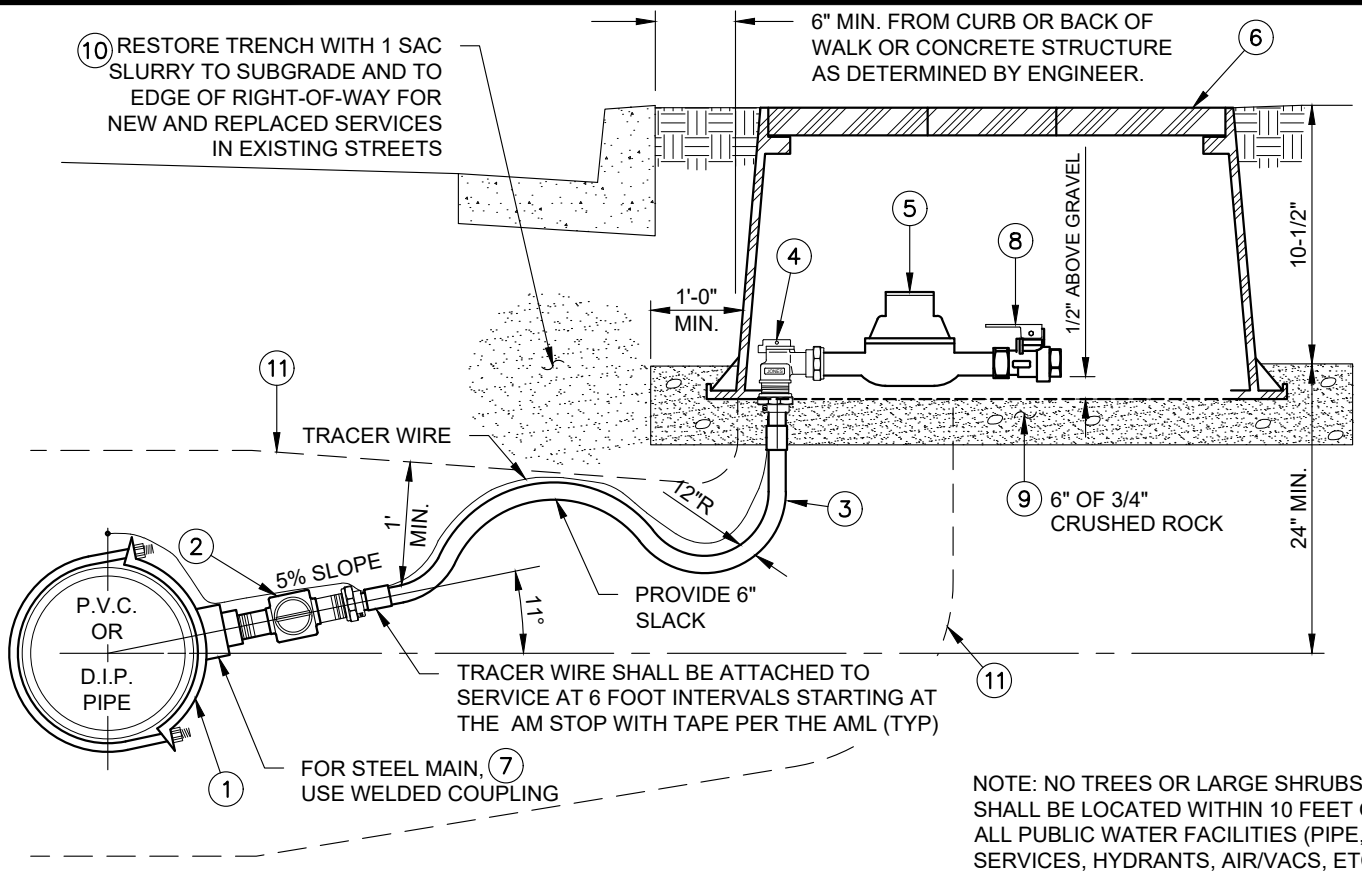
REVISION	BY	APPR	DATE

ELSORNE VALLEY
MUNICIPAL WATER DISTRICT

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**TEMPORARY POTABLE WATER
TO RECYCLED WATER
INTER-CONNECTION**

STD. DWG. NO.
W-8



NOTES:

1. RANGE SADDLES NOT ALLOWED.
2. FOR RESIDENTIAL FIRE SPRINKLER SERVICE, PIPE AND MATERIAL SHOULD BE NSF61 APPROVED.
3. IT IS RECOMMENDED THAT THE HOME BUILDER INSTALL A 1.5" PIPE FROM THE METER TO THE LOCATION WHERE THE PIPE SPLITS TO GO INTO THE CEILING FOR FIRE SPRINKLERS AND TO THE APPLIANCES AND FIXTURES.
4. NO WATER METER BOXES SHALL BE INSTALLED IN DRIVEWAYS OR SIDEWALKS. METER BOXES SHALL BE SET AT HIGH GRADE TO ELIMINATE WATER RUNOFF. INSTALL REDUCED PRESSURE PRINCIPLE OR BACK FLOW DEVICE AFTER IRRIGATION METER. INSTALL PRESSURE REDUCING VALVES IF THE PRESSURE IS OVER 80 PSI. A PRESSURE REGULATOR SHALL BE INSTALLED DOWN STREAM OF WATER METER AND PRIOR TO ENTERING THE HOUSE/BUILDING PLUMBING PER W-21.

✘ SEE APPROVED MATERIALS LIST

ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	SERVICE SADDLE	STRAP TO BE S.S.	SEE APPROVED MATERIALS LIST
②	1	1" BRONZE CORP. STOP	I.P. X C.T.S. COMPRESSION✘	
③	1	TUBING	1" TYPE K, SOFT SEAMLESS PRESLEEVED.	ONE PIECE ONLY, NO SPLICES
④	1	1" ANGLE METER STOP (BALL VALVE)	1" C.T.S. COMPRESSION x METER FL.✘ LOCK WING W/ 1/8" THK CLOTH INSERTED DROP IN GASKET	PAINT ANGLE STOP PURPLE FOR RECYCLED WATER SERVICE ONLY
⑤	1	WATER METER	1" OR 3/4"	SUPPLIED & INSTALLED BY DISTRICT
⑥	1	WATER METER BOX	COLOR: GREEN, SEE W-11✘	SUPPLIED & INSTALLED BY DEVELOPER
⑦	1	STD. BLACK PIPE COUPLING	1" I.P. THREADED, WELDED ON	COAT COUPLING W/ SAME MATERIAL AS PIPE
⑧	1	BRONZE BALL VALVE 1" I.P. X C.T.S. COMPRESSION	SUPPLIED BY DEVELOPER & INSTALLED BY DISTRICT FOR RESIDENTIAL. SUPPLIED & INSTALLED BY DISTRICT FOR NON-RESIDENTIAL.	
⑨	1	WATER METER & BOX PAD	42" x 35" x 6" 3/4" CRUSHED ROCK	PAD FOR METER AND BOX
⑩	1	SLURRY BACKFILL	1 SAC	FOR NEW SERVICES IN EXISTING STREETS
⑪	1	TRENCH WITH SAND ENVELOPE	IMPORTED WITH SE > 30	12" MIN. & 24" MAX. TRENCH WIDTH

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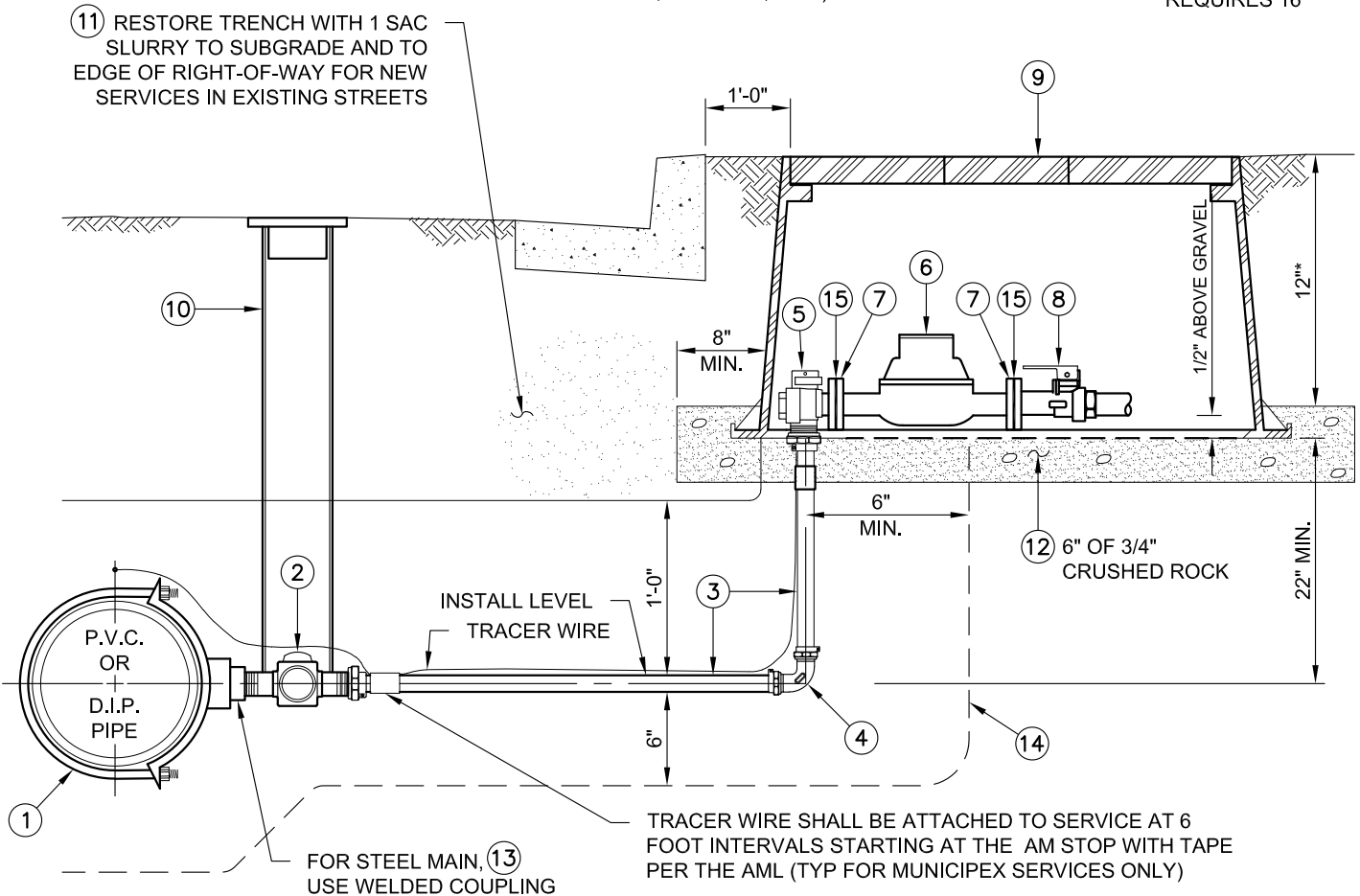
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

1" WATER SERVICE CONNECTION FOR 1" OR 3/4" METER

STD. DWG. NO.
W-9


NOTE: NO TREES OR LARGE SHRUBS SHALL BE LOCATED WITHIN 10 FEET OF ALL PUBLIC WATER FACILITIES (PIPE, SERVICES, HYDRANTS, AIR/VACS, ETC.).

* COMPOUND METER REQUIRES 16"



ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	C-90 BRONZE SERVICE SADDLE	STRAP TO BE S.S.	SEE APPROVED MATERIALS LIST
②	1	BRONZE CORP. STOP	2" I.P. X C.T.S. COMPRESSION	
③	2	TUBING	2" TYPE K, SOFT SEAMLESS TUBING	TWO PIECES ONLY, NO BENDS
④	1	ELBOW	2" C.T.S. COMPRESSION	
⑤	1	ANGLE METER STOP (BALL VALVE)	2" C.T.S. COMPRESSION x METER FL, LOCK WING W/ 1/8" THK CLOTH INSERTED DROP IN GASKET	PAINT ANGLE STOP PURPLE FOR RECYCLED WATER SERVICE ONLY
⑥	1	WATER METER	3/4" TO 2" PER CALCULATIONS	SUPPLIED & FURNISHED BY DISTRICT
⑦	1	BRONZE WATER METER FLANGE	2" F.I.P. THREADS WITH 1/8" THK CLOTH INSERTED DROP IN GASKET	
⑧	1	BRONZE BALL VALVE	2" FLG. X F.I.P BALL VALVE	SUPPLIED & FURNISHED BY DISTRICT
⑨	1	WATER METER BOX	COLOR: GREEN, SEE W-11	
⑩	1	6" VALVE WELL / SLIP CAN / 6" LID	W-13 MODIFIED TO 6" DIA.	SIMILAR TO 8" ON STD. DWG. W-13
⑪	1	SLURRY BACKFILL	1 SAC	FOR NEW SERVICES IN EXISTING STREETS
⑫	1	WATER METER & BOX PAD	56" x 43" x 6" CRUSHED ROCK	PAD FOR METER AND BOX
⑬	1	STD. BLACK PIPE COUPLING	2" I.P. THREADED, WELDED ON	COAT COUPLING W/ SAME MATERIAL AS PIPE
⑭	1	TRENCH WITH SAND ENVELOPE	IMPORTED WITH SE > 30	12" MIN. & 24" MAX. TRENCH WIDTH
⑮	2	DROP IN GASKET	1/8" THK CLOTH INSERTED GASKET	AT BOTH METER FLANGES, SUPPLIED & FURNISHED BY DISTRICT

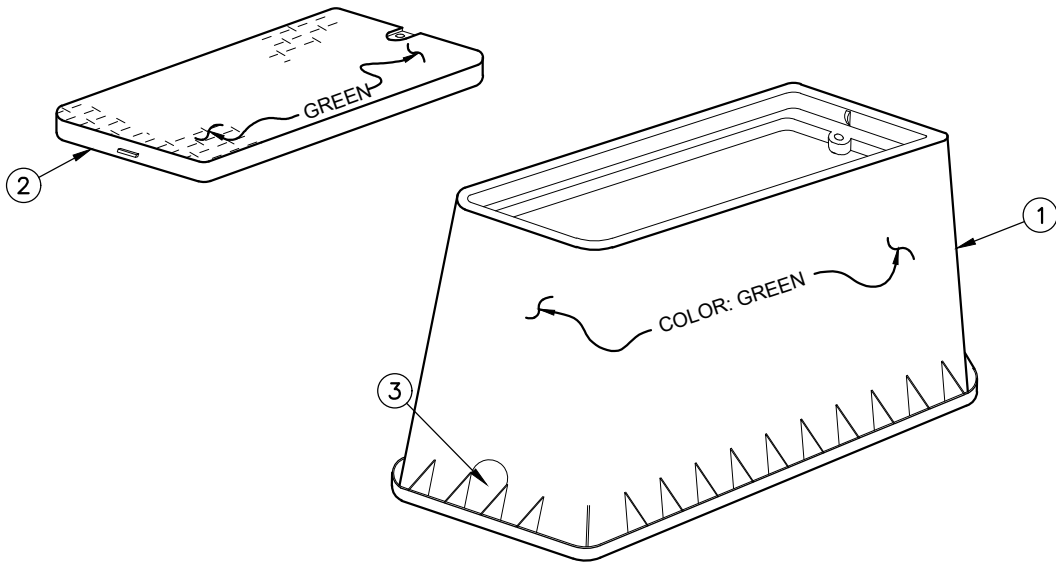
REVISION	BY	APPR	DATE
NOTE 6 METER SIZE	AK	JZ	04/12/24
MUNICIPEX REFERENCE	AK	JZ	04/15/24


ELSINORE VALLEY
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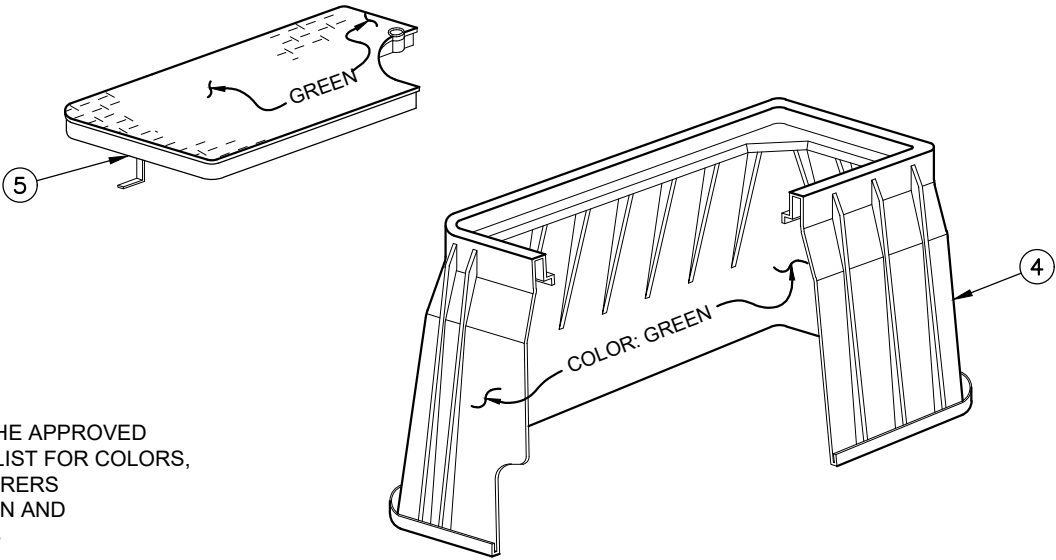
2" WATER SERVICE CONNECTION

STD. DWG. NO.

W-10



3/4" TO 1" METERS



2" METERS

NOTES:

1. REFER TO THE APPROVED MATERIALS LIST FOR COLORS, MANUFACTURERS INFORMATION AND DIMENSIONS

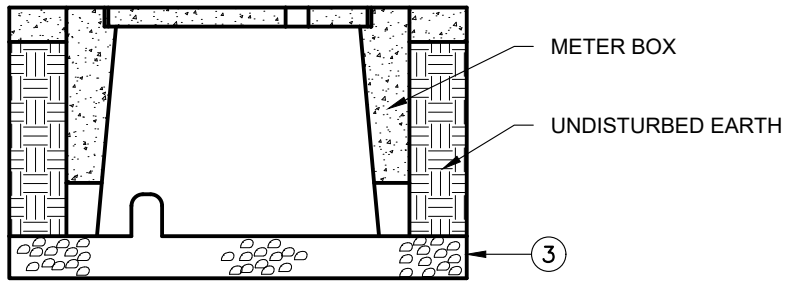
ITEM	DESCRIPTION
①	METER BOX - (METER READING BOLT DOWN)
②	METER BOX LID - (BOLT DOWN)
③	3" x 4" KNOCK OUTS (OPTIONAL - 2 PLACES)
④	METER BOX - (METER READING CAPTIVE L-BOLT DOWN)
⑤	METER BOX LID - (CAPTIVE L-BOLT LOCK)

REVISION	BY	APPR	DATE

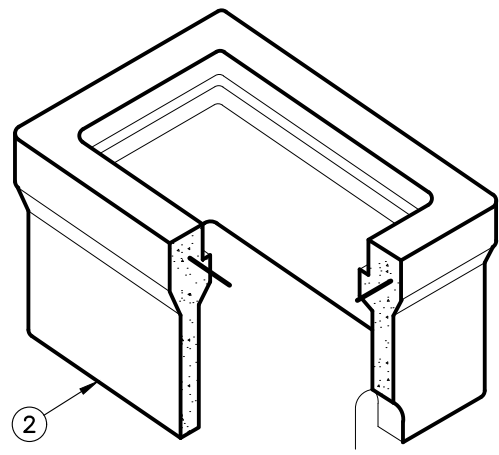
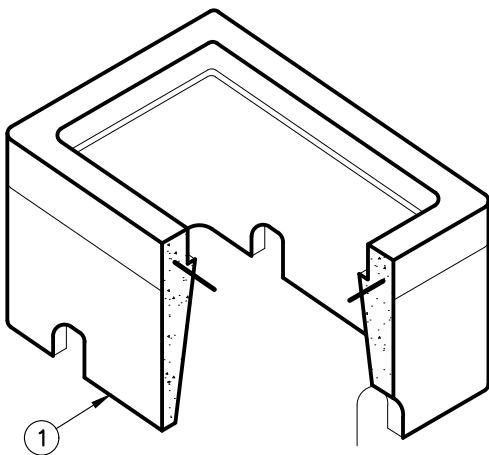
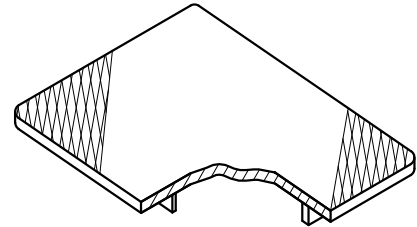
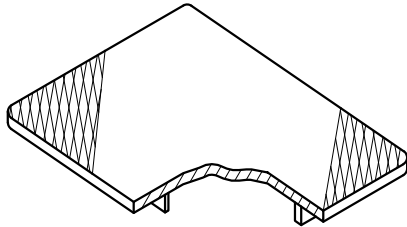
PARAG KALARIA R.C.E. 83927 DATE

STANDARD METER BOX

STD. DWG. NO.
W-11



TYPICAL METER BOX INSTALLATION



3/4" TO 1" SERVICE

2" SERVICE

NOTES:

1. ALL TRAFFIC AREA LIDS SHALL BE REINFORCED FIBERGLASS. SEE APPROVED MATERIALS LIST.
2. REFER TO THE APPROVED MATERIALS LIST FOR COLORS, MANUFACTURERS INFORMATION, AND DIMENSIONS.

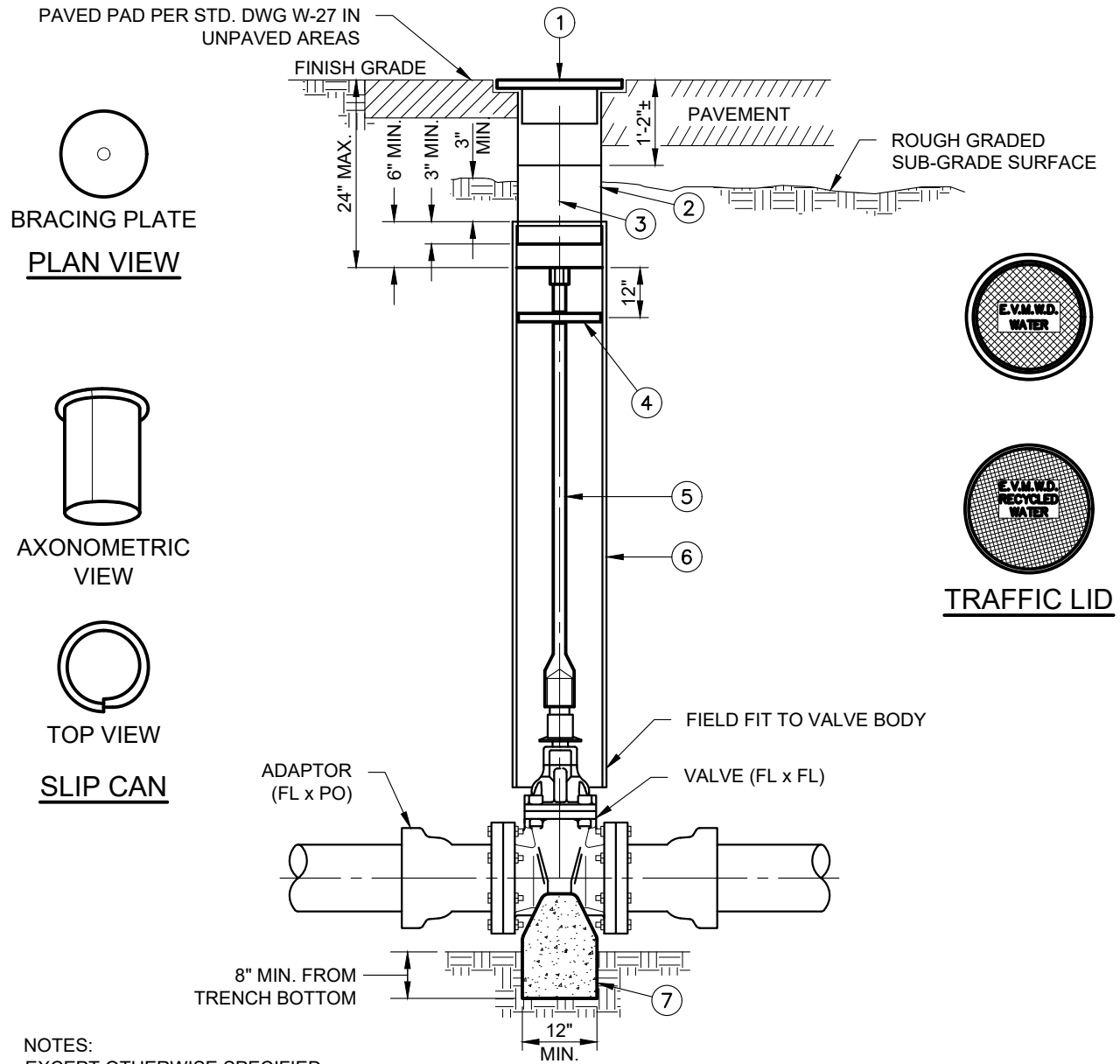
ITEM	DESCRIPTION
①	METER BOX - HIGH DENSITY POLYMER COMPOSITE OR EQUAL
②	METER BOX - HIGH DENSITY POLYMER COMPOSITE OR EQUAL (FOR TRAFFIC AREA)
③	PAD TO BE 8" CLASS 2 BASE

REVISION	BY	APPR	DATE

PARAG KALARIA R.C.E. 83927 DATE

METER BOXES FOR EXISTING
SIDEWALK AREAS ONLY

STD. DWG. NO.
W-12



NOTES:
EXCEPT OTHERWISE SPECIFIED

1. CONTRACTOR SHALL RAISE SLIP CAN TO GRADE AFTER STREET IS PAVED WHERE PAVING IS PROPOSED.
2. ALL VALVE CANS SHALL BE EXPOSED AT ALL TIMES DURING CONSTRUCTION UNLESS BURIAL FOR GRADING IS AUTHORIZED BY THE INSPECTOR.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. WELL CAPS FOR RECYCLED WATER SHALL BE PURPLE, AND MARKED "EVMWD RECYCLED WATER".

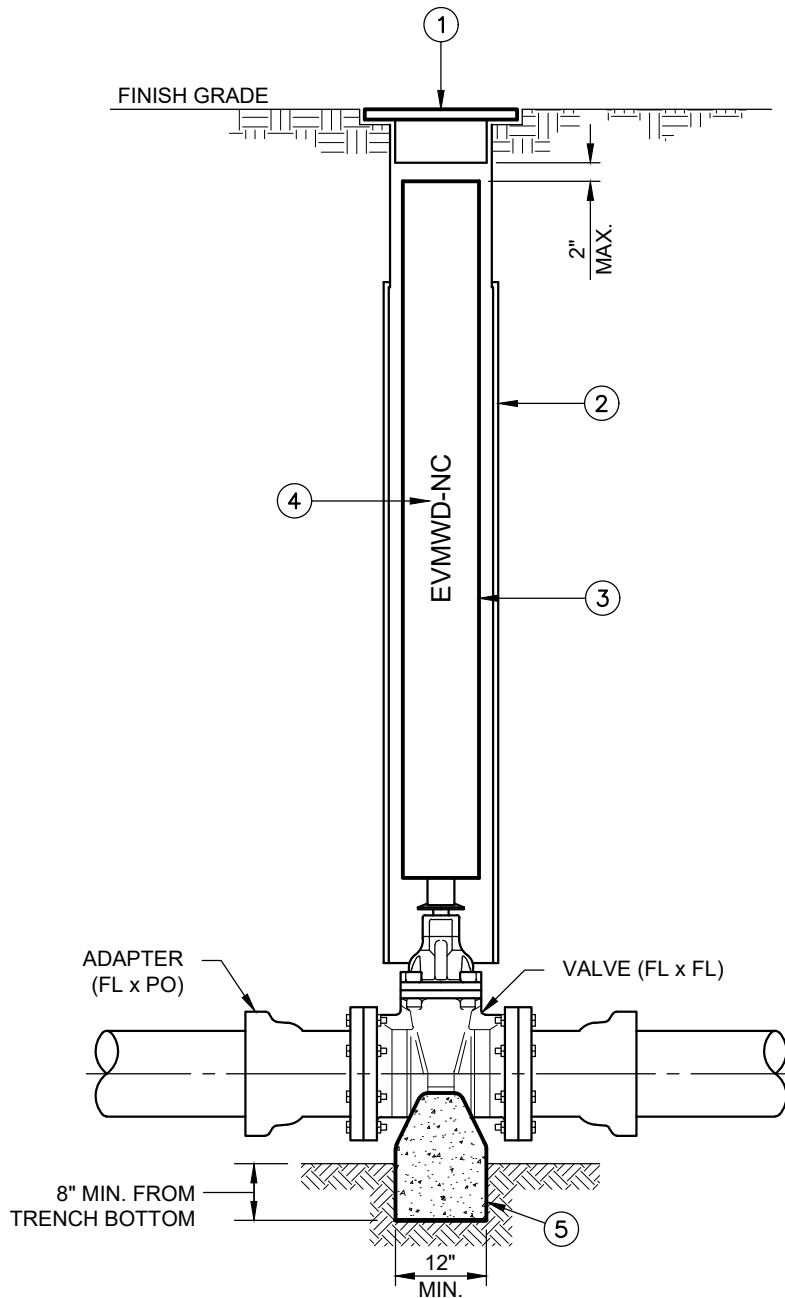
ITEM	DESCRIPTION
①	8" VALVE WELL CAP W/ 4" SKIRT PAINTED BLUE ENAMEL & PRIMER, & MARKED "E.V.M.W.D. WATER" ON CAP
②	8" O.D.x18 GA. SPLIT VALVE CAN TOP SECTION, GALVANIZED FOR SLIP CAN, SLIP CAN LENGTH 12", 18" OR 24" AS REQ'D
③	4"x4" REDWOOD POST IF VALVE HAS BLIND FLANGE PER STD. DWG. NO. W-14
④	1/8" + 1/32" SOLID DISC 7-3/4" DIA. AT 5' INTERVALS TACKWELD BRACING PLATE TO STEM
⑤	PROVIDE 316 STAINLESS STEEL VALVE STEM EXTENSION WHERE DEPTH TO OPERATOR NUT EXCEEDS 5'
⑥	8" PVC, SDR-35 OR C-900 FOR GATE VALVES 3" AND LARGER, 6" PVC FOR GATE VALVES LESS THAN 3" DIAMETER
⑦	VALVE SUPPORT BLOCK PER STD. DWG. NO. W-15

REVISION	BY	APPR	DATE
REV 1	MC		

PARAG KALARIA R.C.E. 83927 DATE

VALVE WELL AND RISER DETAIL

STD. DWG. NO.
W-13



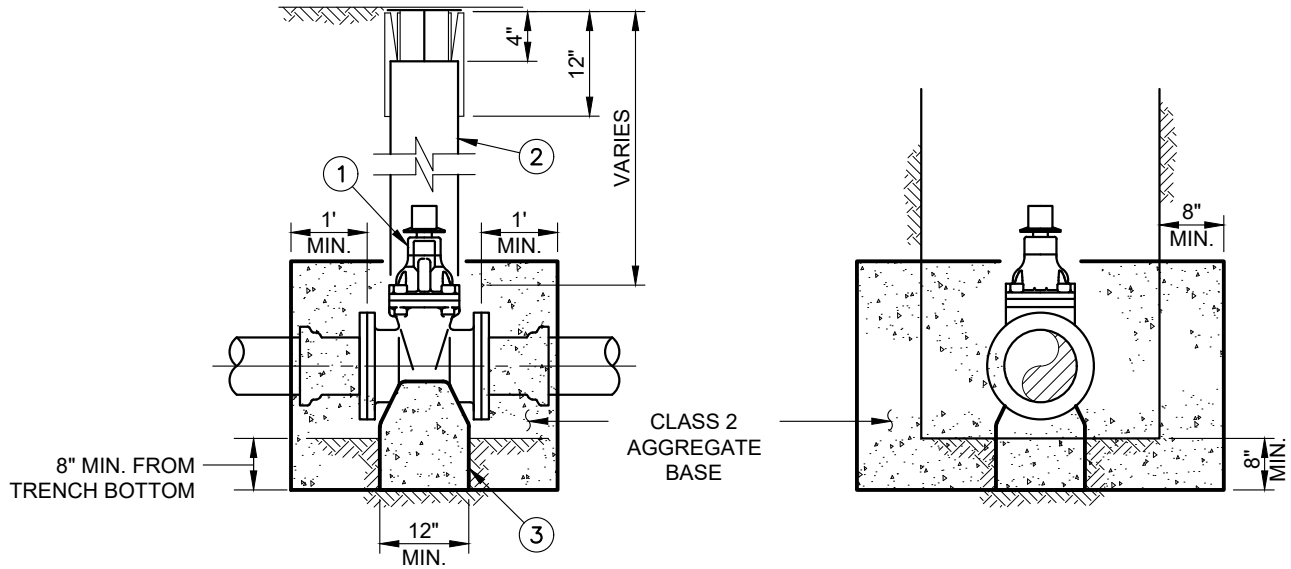
ITEM	DESCRIPTION
①	CAN AND COVER ASSEMBLY PER STD. DWG. W-13, PAINTED RED.
②	VALVE CAN
③	4"x4" REDWOOD POST
④	ENGRAVED INITIALS "EVMWD-NC" FOR (NORMALLY CLOSED) ALL SIDES, TOP AND BOTTOM IN 1-1/2" HIGH LETTERS, 1/2" DEEP, CLEARLY LEGIBLE
⑤	VALVE SUPPORT BLOCK PER STD. DWG. W-15

REVISION	BY	APPR	DATE

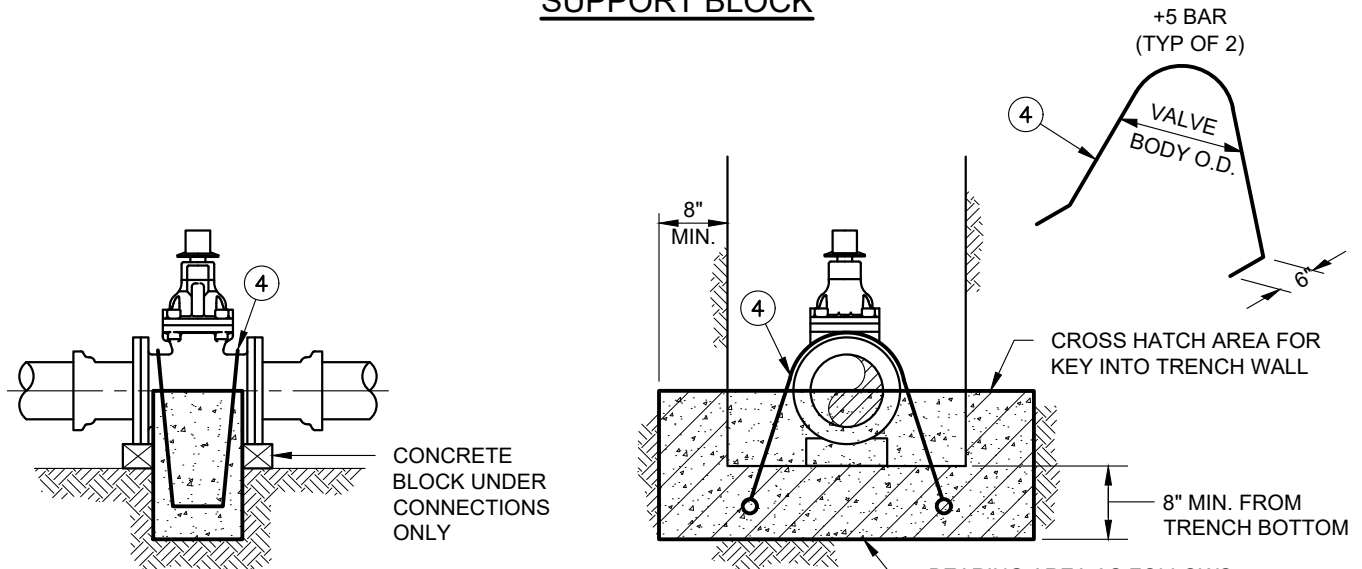
Elsinore Valley
 MUNICIPAL WATER DISTRICT
 PARAG KALARIA R.C.E. 83927 DATE

**NORMALLY CLOSED
 VALVE CAN DETAIL**

STD. DWG. NO.
W-14



SUPPORT BLOCK



BEARING AREA AS FOLLOWS:

VALVE SIZE	BEARING AREA
4"-6"	4 S.F.
8"	7 S.F.
10"	10 S.F.
12"	15 S.F.

NOTES:

1. CONCRETE SHALL BE CLASS 500-C-2500 MINIMUM.
2. SUPPORT IS REQUIRED ON VALVES OVER 3 INCHES IN SIZE.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

CONCRETE ANCHOR BLOCK

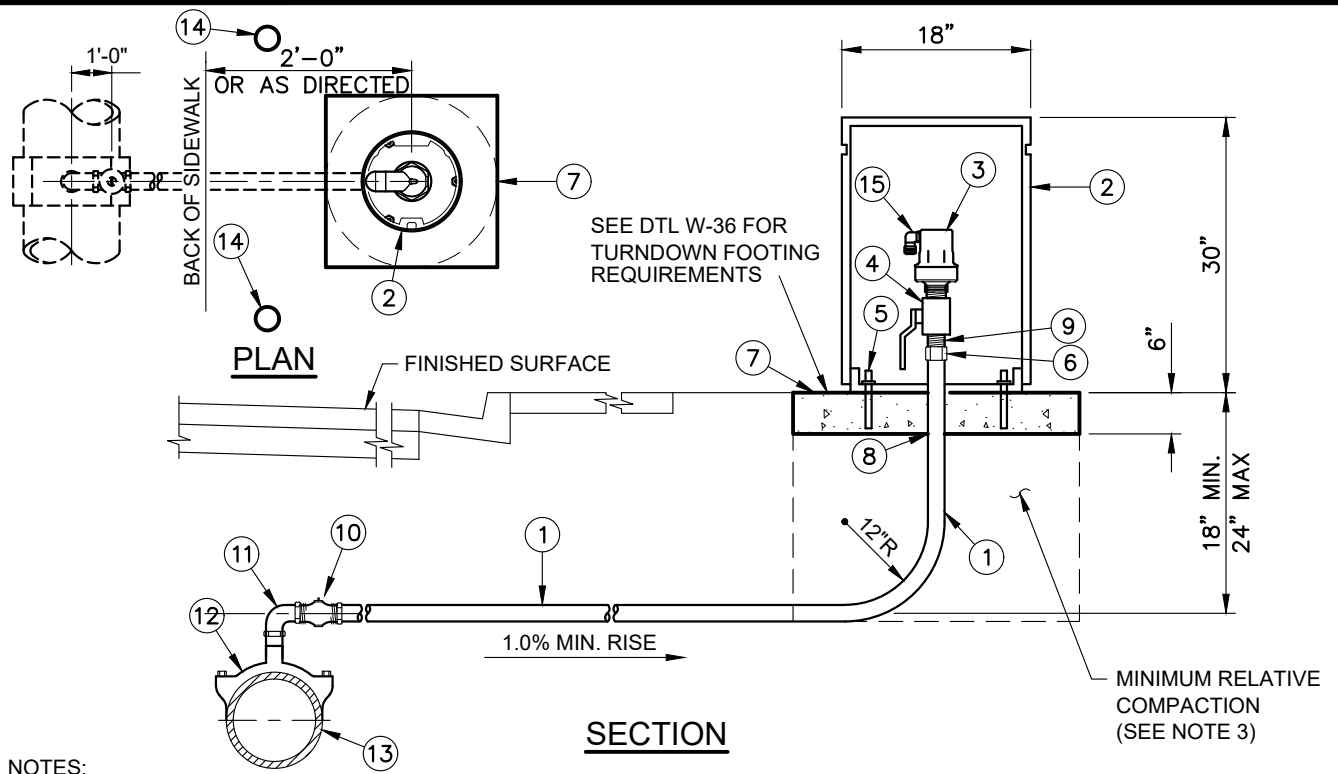
ITEM	DESCRIPTION
①	VALVE (FLG x FLG)
②	VALVE CAP, WELL AND RISER PER E.V.M.W.D. STD. DWG. W-13
③	CONCRETE SUPPORT BLOCK SHALL BE POURED WITH FORMS TO AVOID CONTACT WITH VALVE CONNECTIONS
④	ANCHOR = 5/8 DIA. REINF. BARS, COAT WITH 20 MILS. MIN. OF BITUMASTIC PER APPROVED MATERIALS GUIDELINE

REVISION	BY	APPR	DATE

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VALVE SUPPORT AND ANCHOR BLOCKING DETAIL

STD. DWG. NO.
W-15



NOTES:

1. VALVE PLACEMENT AND CIRCULAR CONCRETE PAD ON RURAL ROADWAYS WHERE CURB AND GUTTER AND SIDEWALKS ARE NOT PRESENT WILL BE AT THE DISCRETION OF THE FIELD INSPECTOR.
2. AIR AND VACUUM VALVES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN THE STANDARD SPECIFICATIONS.
3. COMPACTION UNDER CONCRETE PAD SHALL BE 95% OR GREATER, FROM THE BOTTOM OF THE PAD TO THE BOTTOM OF THE SERVICE LINE TRENCH.
4. ENCLOSURE FOR POTABLE WATER MAINS SHALL BE COLORED YELLOW, FOR RECYCLED WATER COLOR SHALL BE PURPLE.
5. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

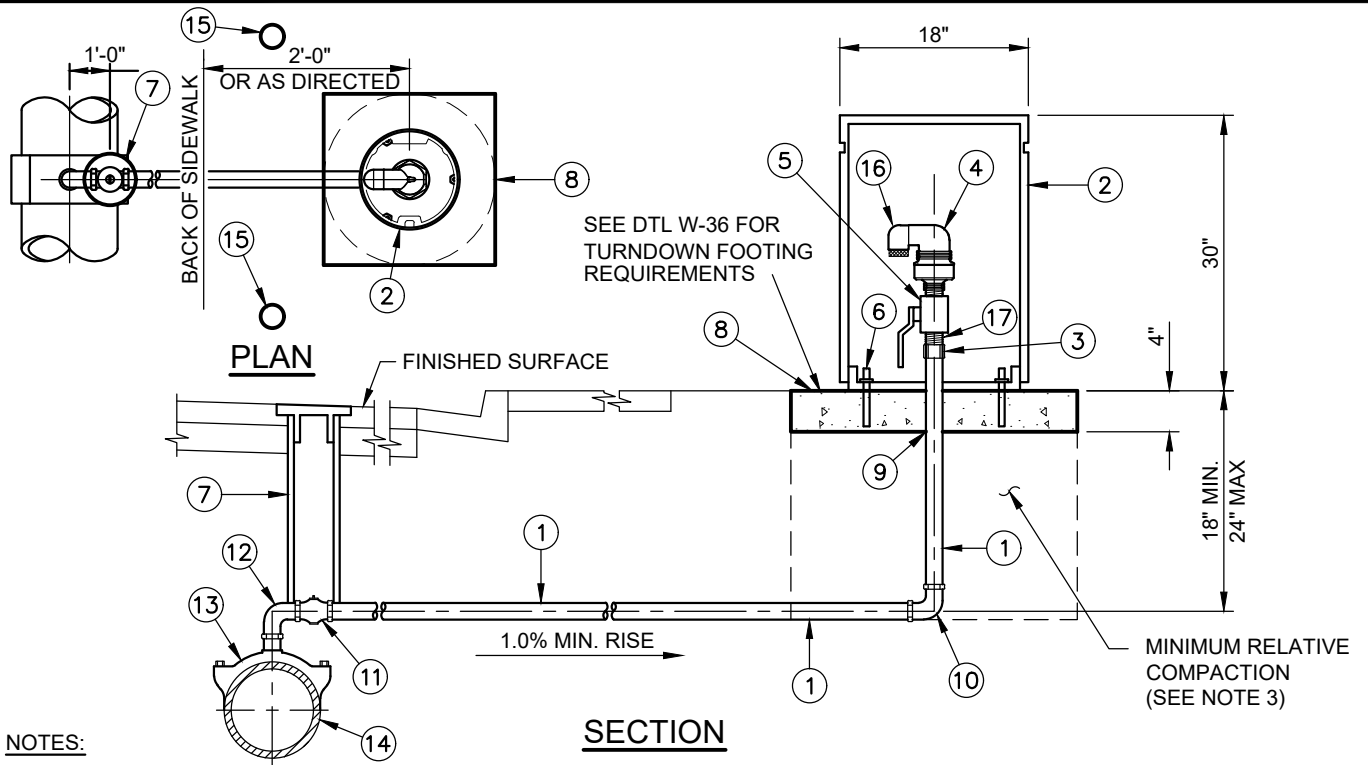
ITEM	DESCRIPTION
①	REQUIRED LENGTH COPPER PIPE TYPE "K" (SOFT)
②	VALVE ENCLOSURE PER EVMWD STANDARD DRAWING W-18
③	1" AUTOMATIC COMBINATION AIR RELEASE AND VACUUM RELIEF VALVE WITH INSECT SCREEN
④	BRONZE BALL VALVE WITH FIPT, WITH BRONZE HANDLE
⑤	1/2" X 3" STAINLESS STEEL POST-INSTALLED ANCHORS (3 EA. @ 120° APART)
⑥	COMPRESSION X FIPT ADAPTER
⑦	2'-6" X 2'-6" X 6" THICK CONCRETE SLAB W/ #4 @ 12" OC EW MIN. CONCRETE SHALL BE CLASS 560-C-3250.
⑧	2 LAYERS 10-MIL POLYETHYLENE TAPE - THROUGHOUT FULL DEPTH OF PENETRATION.
⑨	1" BRASS CLOSE PIPE NIPPLE
⑩	1" BRONZE CORP STOP MIP x MIP
⑪	90° BRONZE FIPT X MIP STREET ELL
⑫	SERVICE SADDLE PER APPROVED MATERIALS LIST, STRAPS TO BE S.S.
⑬	WATER MAIN
⑭	GUARD POST PER EVMWD STANDARD DRAWING W-26 (WHEN NO SIDEWALK OR CURB IS PRESENT)
⑮	STAINLESS STEEL SCREEN TO VENT OUTLET

REVISION	BY	APPR	DATE

06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**1" COMPACT STYLE
 AIR RELEASE & VACUUM RELIEF
 VALVE INSTALLATIONS**

STD. DWG. NO.
W-16A



NOTES:

1. VALVE PLACEMENT AND CIRCULAR CONCRETE PAD ON RURAL ROADWAYS WHERE CURB AND GUTTER AND SIDEWALKS ARE NOT PRESENT WILL BE AT THE DISCRETION OF THE FIELD INSPECTOR.
2. AIR AND VACUUM VALVES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN THE STANDARD SPECIFICATIONS.
3. COMPACTION UNDER CONCRETE PAD SHALL BE 95% OR GREATER, FROM THE BOTTOM OF THE PAD TO THE BOTTOM OF THE SERVICE LINE TRENCH.
4. ENCLOSURE FOR POTABLE WATER MAINS SHALL BE COLORED YELLOW, FOR RECYCLED WATER COLOR SHALL BE PURPLE.
5. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

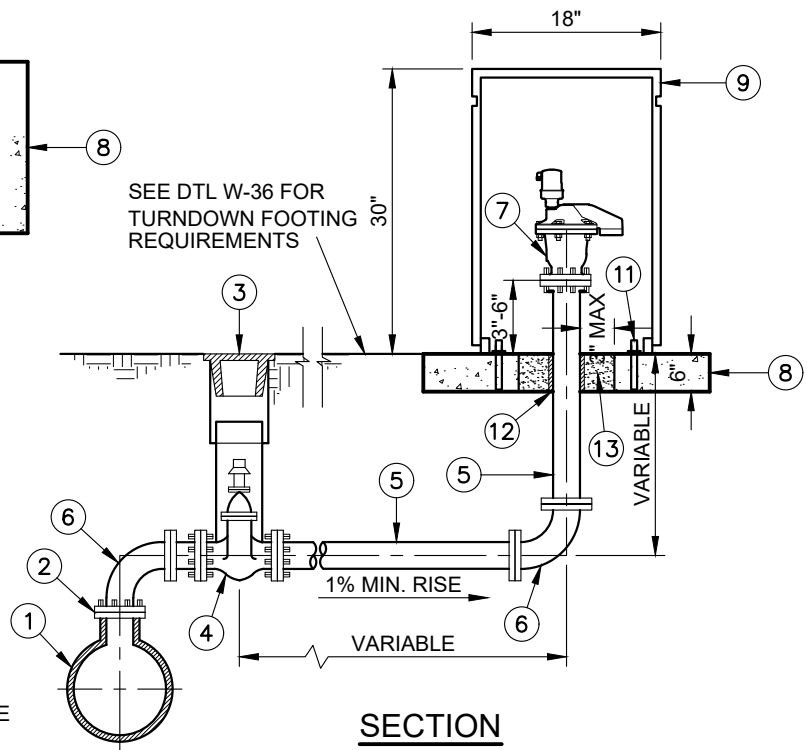
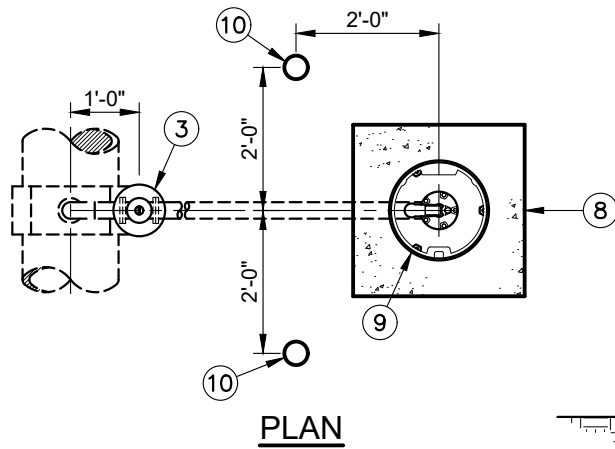
ITEM	DESCRIPTION
①	REQUIRED LENGTH COPPER PIPE TYPE "K" (SOFT)
②	VALVE ENCLOSURE PER EVMWD STANDARD DRAWING W-18
③	2" COMPRESSION X FIPT ADAPTER
④	2" AUTOMATIC COMBINATION AIR RELEASE AND VACUUM RELIEF VALVE WITH INSECT SCREEN
⑤	2" BRONZE BALL VALVE WITH FIPT, WITH BRONZE HANDLE
⑥	1/2" X 3" STAINLESS STEEL POST-INSTALLED ANCHORS (3 EA. @ 120° APART)
⑦	6" SDR 35 SEWER PIPE GATE WELL WITH CAP AND SLIP CAN
⑧	2'-6" X 2'-6" X 6" THICK CONCRETE SLAB W/ #4 @ 12" OC EW MIN. CONCRETE SHALL BE CLASS 560-C-3250.
⑨	2 LAYERS 10-MIL POLYETHYLENE TAPE - THROUGHOUT FULL DEPTH OF PENETRATION.
⑩	90° BRONZE COMPRESSION ELL
⑪	COMPRESSION BALL VALVE WITH TEE HEAD
⑫	90° BRONZE FIPT X MIPT STREET ELL
⑬	SERVICE SADDLE PER APPROVED MATERIALS LIST, STRAPS TO BE S.S.
⑭	WATER MAIN
⑮	GUARD POST PER EVMWD STANDARD DRAWING W-26 (WHEN NO SIDEWALK OR CURB IS PRESENT)
⑯	STAINLESS STEEL SCREEN TO VENT OUTLET
⑰	2" BRASS CLOSE PIPE NIPPLE

REVISION	BY	APPR	DATE

06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**2" COMPACT STYLE
 AIR RELEASE & VACUUM RELIEF
 VALVE INSTALLATIONS**

STD. DWG. NO.
W-16B



SEE DTL W-36 FOR
TURNDOWN FOOTING
REQUIREMENTS

NOTES:

1. PAINT EXPOSED SECTIONS YELLOW (POTABLE WATER MAINS) OR PURPLE (RECYCLED WATER MAINS).
2. ALL MATERIALS FURNISHED TO BE OF PIPE PRESSURE CLASS CALLED FOR ON PLANS, BUT NOT LESS THAN CLASS 200 WORKING PRESSURE (MIN).
3. THE FLANGES SHALL BE 125 LB. FLANGES.
4. BURIED APPURTENANCES, DUCTILE IRON PIPING AND FITTINGS TO BE POLY WRAPPED AND TAPED.
5. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
6. A REDUCING ELBOW OR REDUCER MAY BE NEEDED ON LARGE DIAMETER PIPES BETWEEN ITEM NOS. 1 AND 2.
7. VALVE PLACEMENT AND CIRCULAR CONCRETE PAD ON RURAL ROADWAYS WHERE CURB AND GUTTER AND SIDEWALKS ARE NOT PRESENT WILL BE AT THE DISCRETION OF THE FIELD INSPECTOR.

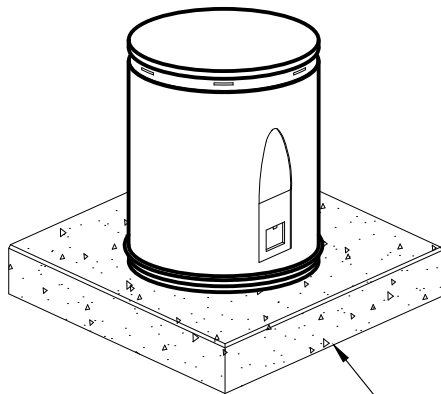
ITEM	DESCRIPTION
①	WATER MAIN
②	E.V.M.W.D. ACCEPTED SADDLE OR FLANGED OUTLET ON D.I. TEE
③	8" GATE VALVE CAP AND RISER PER STD. W-13
④	4"/6" RESILIENT WEDGE GATE VALVE
⑤	4"/6" FLANGED DUCTILE IRON PIPE (CLASS 52)
⑥	4"/6" FLANGED D.I. 90° ELBOW
⑦	4"/6" FLANGED AIR-VAC AND VACUUM RELEASE VALVE
⑧	2'-6" X 2'-6" X 6" THICK CONCRETE SLAB W/ #4 @12" OC EW MIN. CONCRETE SHALL BE CLASS 560-C-3250.
⑨	VALVE ENCLOSURE PER STD. DWG. W-18
⑩	GUARD POST PER E.V.M.W.D. STD. DWG. W-26 (WHEN NO SIDEWALK OR CURB IS PRESENT)
⑪	1/2" X 3" STAINLESS STEEL POST-INSTALLED ANCHORS (3 EA. @ 120° APART)
⑫	2 LAYERS 10-MIL POLYETHYLENE TAPE - THROUGHOUT FULL DEPTH OF PENETRATION.
⑬	EPOXY GROUT

REVISION	BY	APPR	DATE

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

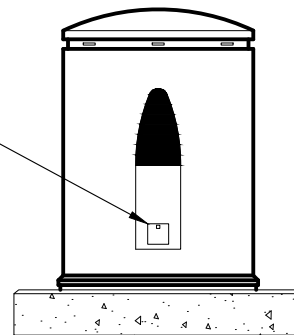
**4" AND 6" COMPACT STYLE
AIR RELEASE & VACUUM RELIEF
VALVE INSTALLATIONS**

STD. DWG. NO.
W-17



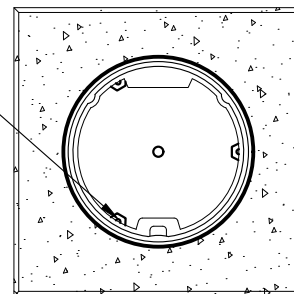
2'-6" x 2'-6" x 4"
CONCRETE PAD
W/ #4 @ 12" OC
EW MIN. CLASS
560-C-3250
CONCRETE

STAINLESS STEEL
PADLOCK BACKING
PLATE



SEE DTL W-36 FOR
TURNDOWN FOOTING
REQUIREMENTS


3/8" PLASTIC SHEILDS
W/ 1-1/2" x 3/8"
STAINLESS STEEL LAG BOLTS



NOTES:

1. 18" DIA. x 30" TALL VALVE ENCLOSURE. ENCLOSURE TO HAVE A BOLT DOWN BASE WITH REMOVABLE COVER. COVER & BASE TO BE MANUFACTURED FROM 3/16" WALL POLYETHYLENE WITH UV INHIBITORS. COVER SHALL LOCK TO BASE WITH INTEGRAL AUTO-LATCH AND PADLOCK HASP.
2. ENCLOSURE FOR POTABLE WATER MAINS SHALL BE YELLOW, FOR RECYCLED WATER COLOR SHALL BE PURPLE.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. PADLOCK TO BE SUPPLIED BY DISTRICT

REVISION	BY	APPR	DATE



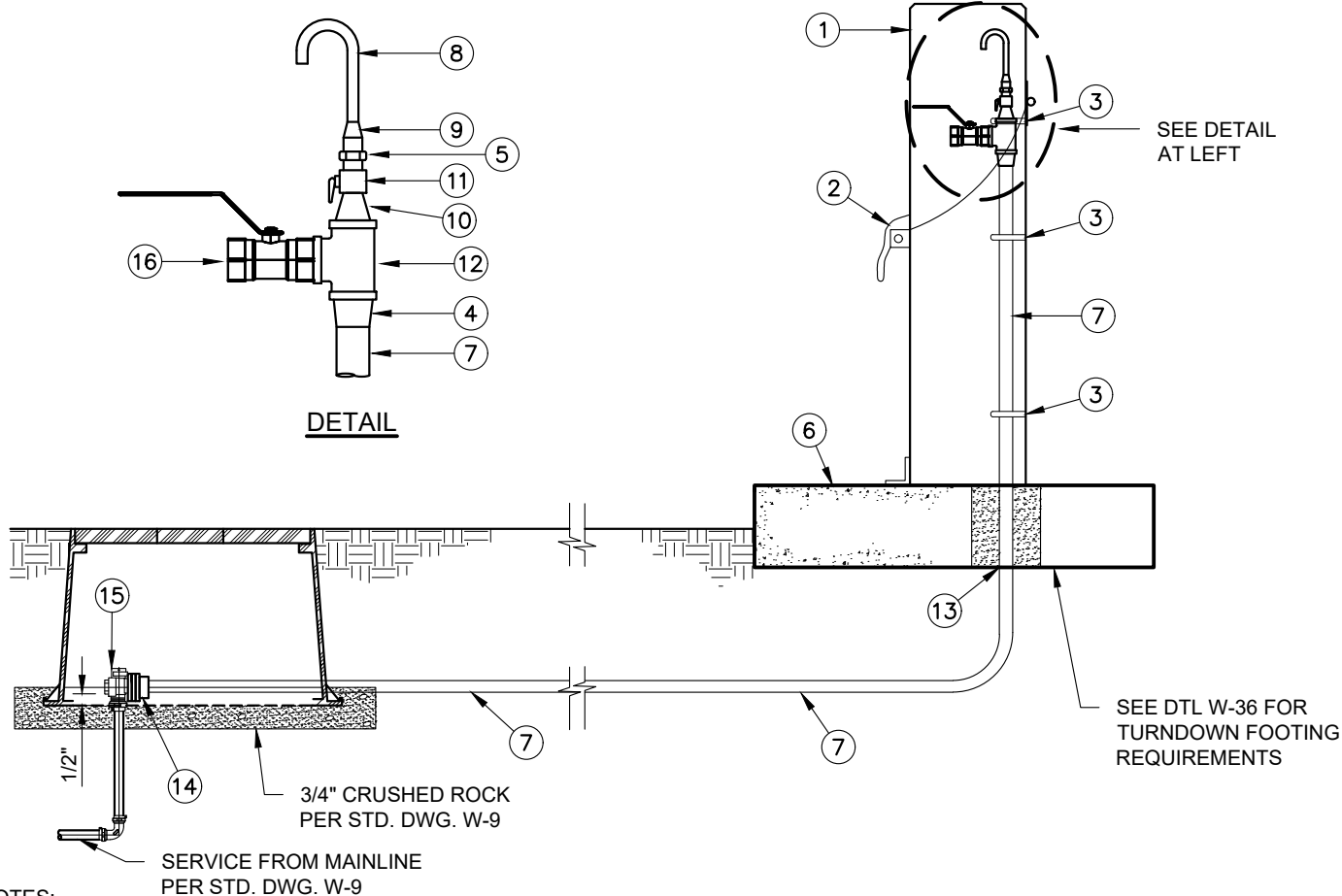
ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**AIR RELEASE & VACUUM RELIEF
LOW DENSITY POLYETHYLENE
ENCLOSURE ASSEMBLY**

STD. DWG. NO.

W-18



NOTES:

1. BOX SHOULD BE LOCATED NEAR A STATIONARY OBJECT, SUCH AS A POWER POLE, FOR PROTECTION, OR PLACE SUFFICIENT CONCRETE AROUND RISER OR BELOW GROUND.
2. LOCATIONS AND NUMBERS OF SAMPLING POINT WILL BE DESIGNATED BY E.V.M.W.D. IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA ADMINISTRATIVE CODE TITLE 22 DEPARTMENT OF HEALTH.
3. PIPE GLUE OR TEFLON TAPE USED IN THE PLUMBING ASSEMBLY SHOULD BE COMPRISED OF PFAS FREE MATERIALS, OR ASSEMBLED IN A MANNER SO PIPE GLUE/TAPE HAS NO CONTACT WITH THE WATER SAMPLE IN THE ASSEMBLY.
4. BRASS FITTINGS USED IN THE ASSEMBLY SHALL HAVE A LOW LEAD CONTENT.
5. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

ITEM	DESCRIPTION
①	WATER SAMPLING POINT ASSEMBLY, PER APPROVED MATERIALS LIST, INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
②	LOCK-HATCH
③	U BOLT (STAINLESS STEEL)
④	1" C x M.I.P BRASS ADAPTER FITTING
⑤	1/2" COPPER NIPPLE
⑥	CONCRETE PAD 3' x 3' x 6" W/ #4 @ 12" OC EW MIN. CONCRETE SHALL BE CLASS 560-C-3250.
⑦	1" COPPER TUBING
⑧	3/8" COPPER TUBING
⑨	3/8" M.I.P. x 1/2 M.I.P. THREADED REDUCER
⑩	1" SLIP x 1/2" M.I.P OR 1" F.I.P x 1/2" M.I.P REDUCER WITH 1/2" CLOSE PIPE NIPPLE
⑪	1/2" BALL VALVE F.I.P. X F.I.P.
⑫	1" F.I.P BRASS TEE FITTING
⑬	2 LAYERS 10-MIL POLYETHYLENE TAPE - THROUGHOUT FULL DEPTH OF PENETRATION.
⑭	1" BRASS ADAPTER I.P. x COMP
⑮	1" BRASS ANGLE STOP
⑯	1" BALL VALVE M.I.P. X F.I.P.

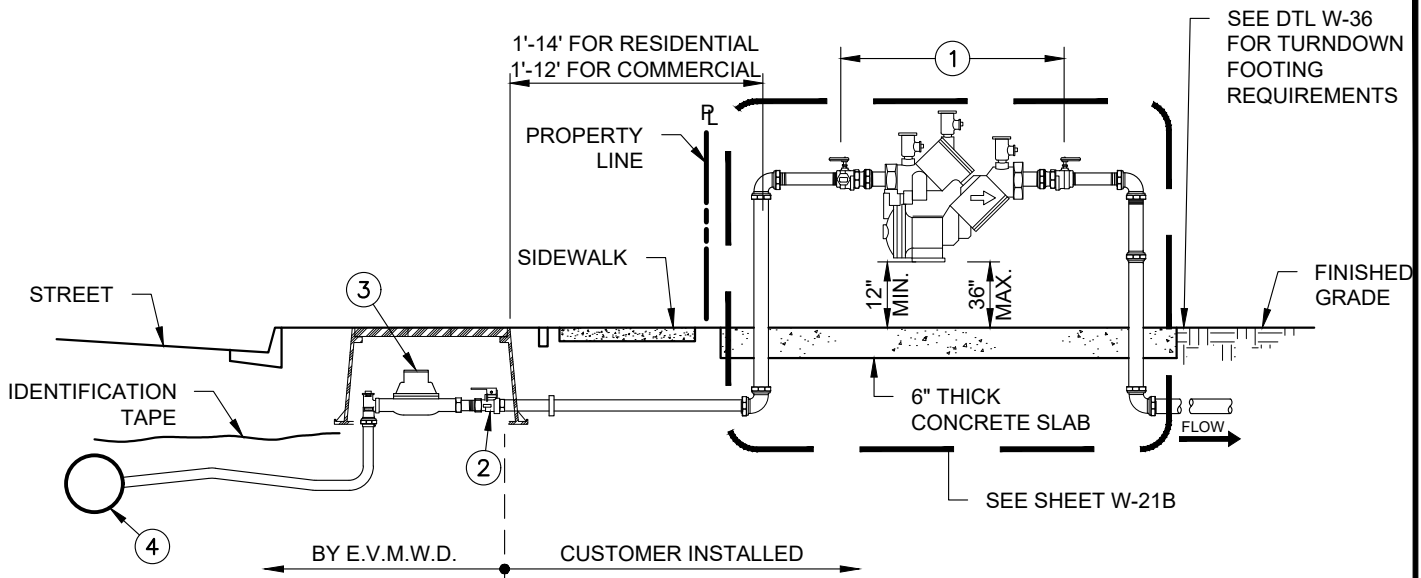
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**TYPICAL SAMPLING POINT
INSTALLATION**

STD. DWG. NO.
W-20



NOTES:

1. ALL DOMESTIC BACKFLOW AND PLUMBING SHALL BE LEAD-FREE.
2. LOCATE THE ASSEMBLY A MINIMUM 1' PAST THE METER BOX. OTHER LOCATIONS MUST BE APPROVED BY THE DISTRICT INSPECTOR PRIOR TO INSTALLATION.
3. THE BACKFLOW PREVENTER ASSEMBLY SHALL CONSIST OF AN APPROVED REDUCED PRESSURE OR DOUBLE DETECTOR CHECK VALVE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE ASSEMBLIES SHALL BE SUITABLE FOR SUPPLY PRESSURES.
4. THE BACKFLOW ASSEMBLY SHALL BE OF BRONZE CONSTRUCTION WITH ALL CONNECTIONS ON THE UNIT TO BE THREADED BRASS OR SWEATED COPPER MATERIAL FOR 3/4" THROUGH 2"; 2 1/2" AND ABOVE SHALL HAVE FLANGED FITTINGS TOGETHER WITH STAINLESS STEEL NUTS AND BOLTS.
5. LOCATION AND INSTALLATION SHALL BE PER PLAN AS SUBMITTED TO AND ACCEPTED BY THE DISTRICT.
6. ALL ASSEMBLIES 2 1/2" AND LARGER TO BE INSTALLED SHALL BE EQUIPPED WITH RESILIENT WEDGE GATE VALVES.
7. CLEARANCES ARE SHOWN, EXCEPT THAT LATERAL CLEARANCES SHALL BE 12-INCHES MINIMUM EACH DIRECTION.
8. ASSEMBLIES SHALL NOT BE LOCATED IN AREAS SUBJECT TO FLOODING.
9. ONLY SECURITY ENCLOSURES PROVIDING ADEQUATE CLEARANCES AND FULL VIEW OF ASSEMBLY SHALL BE PERMITTED.
10. LANDSCAPING OR CONSTRUCTION AROUND ASSEMBLY SHALL PERMIT AN UNOBSTRUCTED VIEW FROM AT LEAST ONE PUBLIC VANTAGE POINT.
11. FINAL INSPECTION AND ACCEPTANCE TEST SHALL BE PROVIDED BY DISTRICT BACKFLOW INSPECTOR.
12. NO CONNECTIONS OR TEES ARE PERMITTED BETWEEN METER AND BACKFLOW PREVENTER.
13. SIZES 3" AND LARGER SHALL HAVE ADDITIONAL PIPE SUPPORT.
14. SIZES 3/4" THROUGH 2" SHALL HAVE (1) UNION PLACED ON DOWNSTREAM CUSTOMER PIPING.
15. BACKFLOW ASSEMBLY TO BE THE SAME SIZE OR ONE SIZE LARGER THAN METER.
16. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
17. BRASS PLUGS ARE TO BE USED.
18. CONCRETE SHALL HAVE #4 @ 12" OC EW MIN. CONCRETE SHALL BE CLASS 560-C-3250.

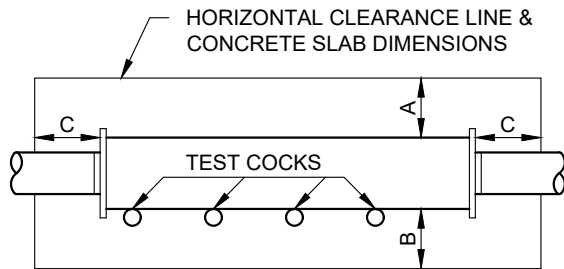
ITEM	DESCRIPTION
①	ACCEPTED BACKFLOW PREVENTION ASSEMBLY
②	BALL VALVE (CUSTOMER SERVICE VALVE)
③	SERVICE METER
④	WATER MAIN

REVISION	BY	APPR	DATE
REV 1	MC		

06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**BACKFLOW PREVENTION
 ASSEMBLY ABOVE GROUND
 INSTALLATION**

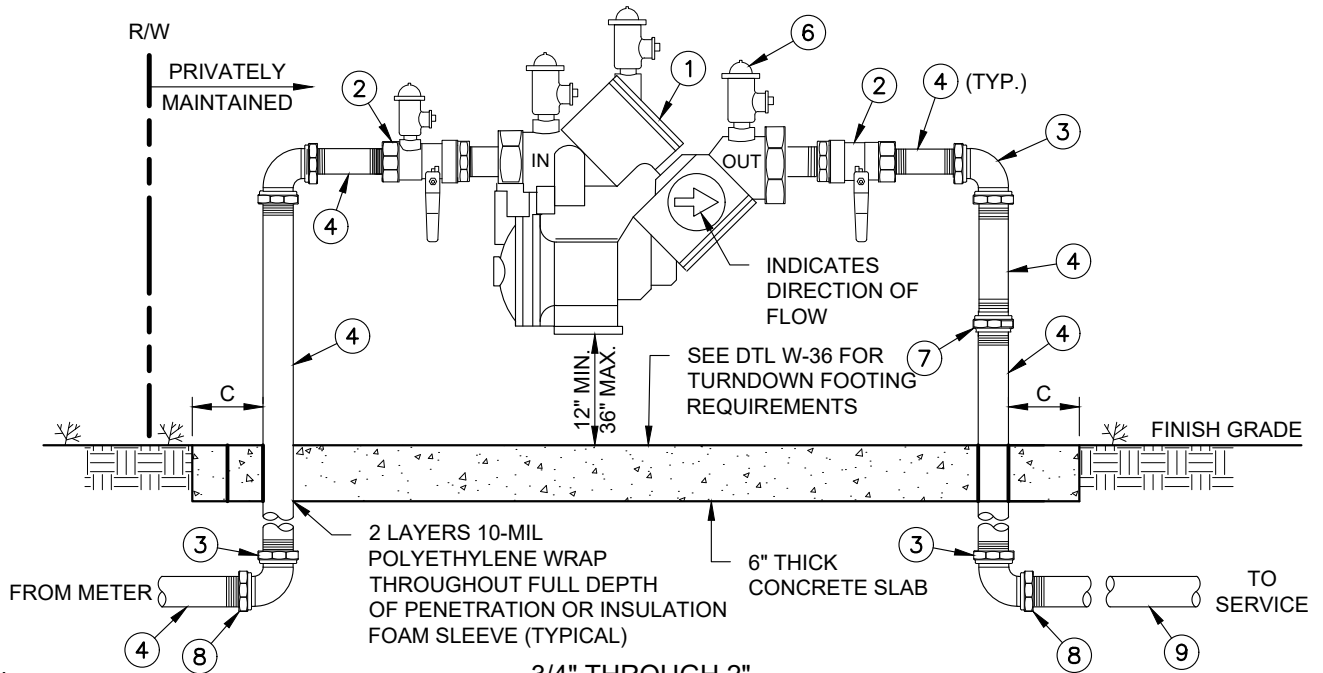
STD. DWG. NO.
W-21A



ADEQUATE CLEARANCE MUST BE PROVIDED TO PERMIT TESTING AND REPAIR WORK

MINIMUM CLEARANCE			
SIZE	A	B	C
1"-3"	12"	18"	12"
4"& UP	24"	24"	12"

REQUIRED MIN. 2 FEET CLEARANCE WITH BLOCK WALL



NOTES:

3/4" THROUGH 2"

1. ALL DOMESTIC BACKFLOW AND PLUMBING SHALL BE LEAD-FREE
2. LOCATED THE ASSEMBLY A MINIMUM 1' PAST THE METER BOX. OTHER LOCATIONS MUST BE APPROVED BY THE DISTRICT INSPECTOR PRIOR TO INSTALLATION.
3. BOTTOM OF UNIT SHALL BE NO LESS THAN 12-INCHES AND NO MORE THAN 36-INCHES ABOVE FINISHED GRADE OF THE SURROUNDING GROUND.
4. THE DEVICE MUST BE INSPECTED AND TESTED IMMEDIATELY AFTER INSTALLATION. CONTACT DISTRICT FOR INSPECTION & TESTING.
5. CONCRETE THRUST BLOCK AND/OR ABOVE GROUND SLAB REQUIRE INSPECTION BEFORE CONCRETE IS POURED.
6. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
7. USE ONLY TEFLON TAPE FOR PIPE THREADS.
8. PIPING SHALL BE PAINTED PER THE APPROVED MATERIALS LIST.
9. BRASS PLUGS ARE TO BE USED.
10. CONCRETE SHALL HAVE #4 @ 12" OC EW MIN. CONCRETE SHALL BE CLASS 560-C-3250.

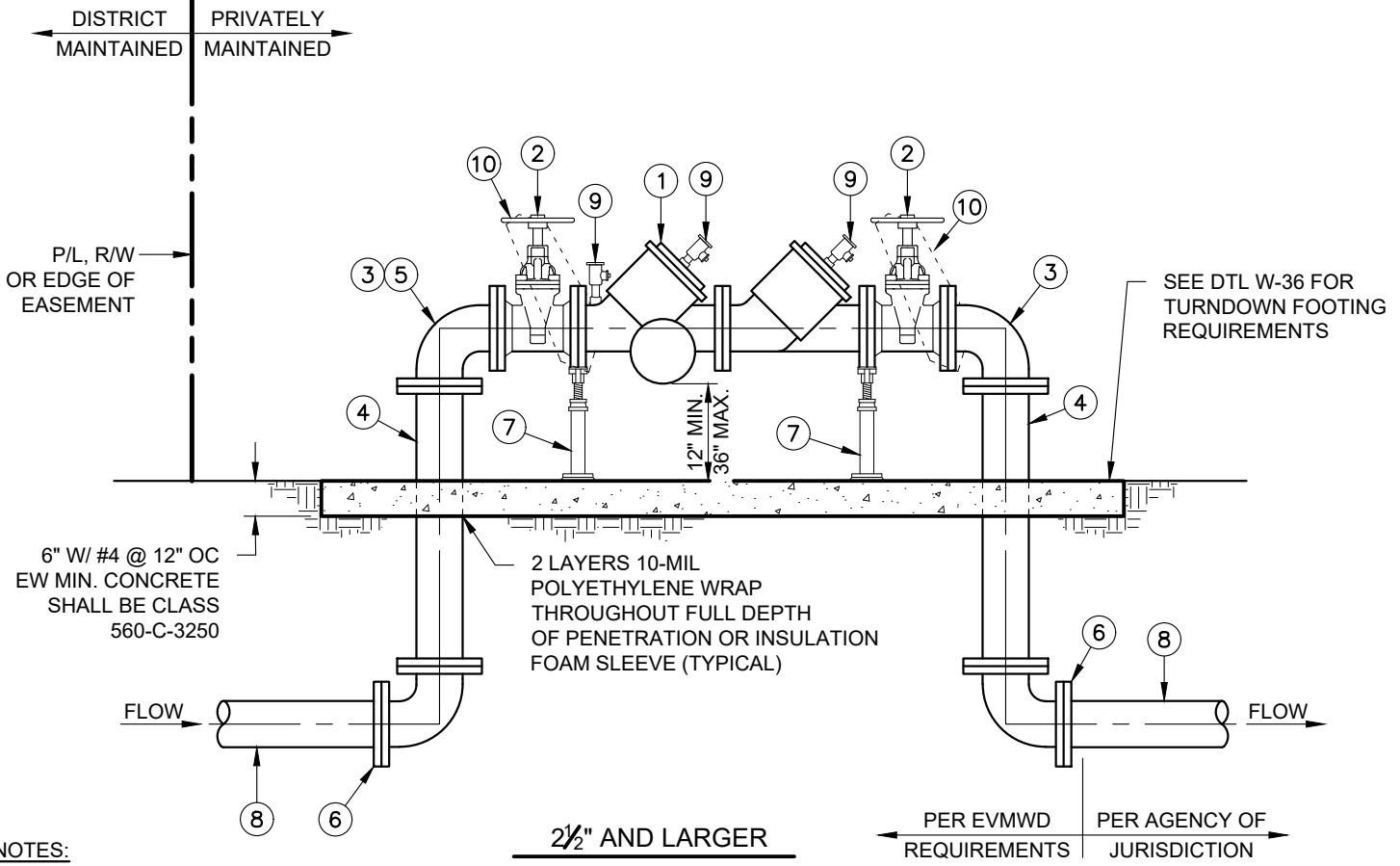
ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE	PER STANDARD TECHNICAL SPECIFICATIONS	MUST BE STATE & UPC APPROVED TYPE
②	2	BALL VALVE	BRONZE INTERNAL	UPC APPROVED (BALL VALVE)
③	4	90° ELBOW, BRASS OR COPPER	THREADED BRASS	COPPER TYPE L, HARD
④	2	RISER AND NIPPLES, BRASS OR COPPER	THREADED BRASS	WITH THREADED BRASS UNIONS
⑥	1	BRASS PLUG / TEST PORT		
⑦	1	THREADED BRASS UNION OR COPPER UNION		
⑧	2	BRASS OR COPPER MALE ADAPTOR		FEMALE THREADED x MALE SLIP
⑨	1	P.V.C. PIPING		SCHEDULE AS REQUIRED

REVISION	BY	APPR	DATE

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**BACKFLOW PREVENTION
ASSEMBLY (3/4" THROUGH 2")
ABOVE GROUND INSTALLATION**

STD. DWG. NO.
W-21B



NOTES:

1. ALL DOMESTIC BACKFLOW AND PLUMBING SHALL BE LEAD-FREE.
2. LOCATE THE ASSEMBLY A MINIMUM 1' PAST THE METER BOX. OTHER LOCATIONS MUST BE APPROVED BY THE DISTRICT INSPECTOR PRIOR TO INSTALLATION.
3. PLACE BOTTOM OF UNIT A MINIMUM OF 12-INCHES AND NOT MORE THAN 36-INCHES ABOVE FINISH GRADE OF THE SURROUNDING GROUND.
4. THE DEVICE MUST BE INSPECTED AND TESTED IMMEDIATELY AFTER INSTALLATION. CONTACT DISTRICT FOR INSPECTION & TESTING.
5. CONCRETE THRUST BLOCK AND/OR ABOVE GROUND SLAB REQUIRE INSPECTION BEFORE CONCRETE IS POURED. CONCRETE SLAB DIMENSION SHALL BE IN ACCORDANCE WITH CLEARANCE REQUIREMENTS ON W-21B.
6. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
7. PIPING SHALL BE PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECYCLED WATER.

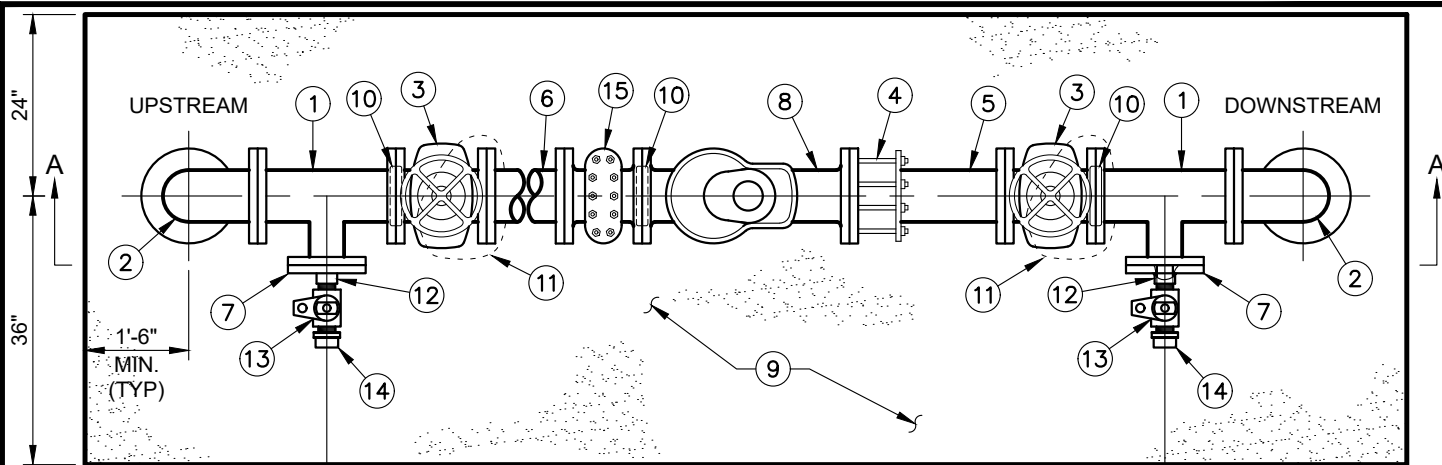
ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	DOUBLE DETECTOR CHECK 2" - 10"	PER STANDARD TECHNICAL SPECIFICATIONS	MUST BE STATE & UPC APPROVED TYPE
②	2	FLANGED RESILIENT WEDGE GATE VALVE	PER STANDARD TECHNICAL SPECIFICATIONS	SEE APPROVED MATERIALS LIST
③	2	90° ELBOW	PER STANDARD TECHNICAL SPECIFICATIONS	DUCTILE IRON
④	2	FLANGED RISER PIPE	PER STANDARD TECHNICAL SPECIFICATIONS	DUCTILE IRON SPOOLS
⑤	1	ANGLE PRESSURE REDUCING VALVE	SEE APPROVED MATERIALS LIST	FOR PRESSURE IN EXCESS OF 100 PSI
⑥	2	FLG x FLG 90° ELBOW	PER STANDARD TECHNICAL SPECIFICATIONS	DUCTILE IRON
⑦	2	ADJUSTABLE PIPE SUPPORT	SEE APPROVED MATERIALS LIST	
⑧	L.F.	P.V.C. OR DUCTILE IRON PIPING	PER STANDARD TECHNICAL SPECIFICATIONS	SIZE AS REQUIRED
⑨	3	BRASS PLUGS		AS REQUIRED BY DISTRICT
⑩	2	1 3/8" ZINC PLATED CHAIN	LENGTH AS REQUIRED	TO SECURE VALVE

REVISION	BY	APPR	DATE

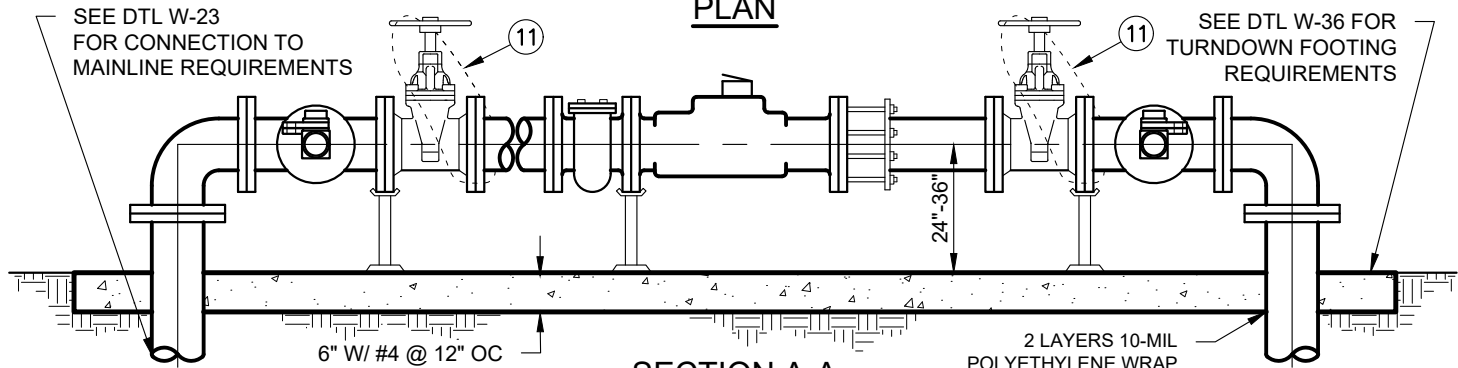
06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**BACKFLOW PREVENTION
 ASSEMBLY (2 1/2" AND LARGER)
 ABOVE GROUND INSTALLATION**

STD. DWG. NO.
W-21C



PLAN



SECTION A-A

NOTES:

6" W/ #4 @ 12" OC
EW MIN. CONCRETE
SHALL BE CLASS 560-C-3250

2 LAYERS 10-MIL
POLYETHYLENE WRAP
THROUGHOUT FULL DEPTH
OF PENETRATION OR INSULATION
FOAM SLEEVE (TYPICAL)

1. METER SHALL BE INSTALLED IN THE HORIZONTAL PLANE.
2. VALVES IMMEDIATELY UPSTREAM OF THE METER SHALL BE FULL-OPEN BUTTERFLY OR RESILIENT WEDGE GATE VALVES, DEPENDING ON WATER MAIN SIZE.
3. FOR PROTECTION OF THE METER FROM DEBRIS AND TO CONTAIN INCOMING FLOWS FROM UPSTREAM DISTURBANCES, A STRAINER SHALL BE INSTALLED IMMEDIATELY UPSTREAM OF THE METER.
4. APPURTENANCES, FITTINGS, ETC. (EXCEPTING STRAINER) SHALL NOT BE INSTALLED WITH LESS THAN THE UPSTREAM AND DOWNSTREAM CLEARANCES SHOWN BELOW.

METER TYPE	DIA. UPSTREAM	DIA. DOWNSTREAM
COMPOUND	2 1/2	2 1/2 (12" MIN.)
TUBE, SADDLE	5	2 1/2 (12" MIN.)
TURBO	2 1/2	2 1/2 (12" MIN.)

5. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST AND SHALL BE PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECYCLED WATER.

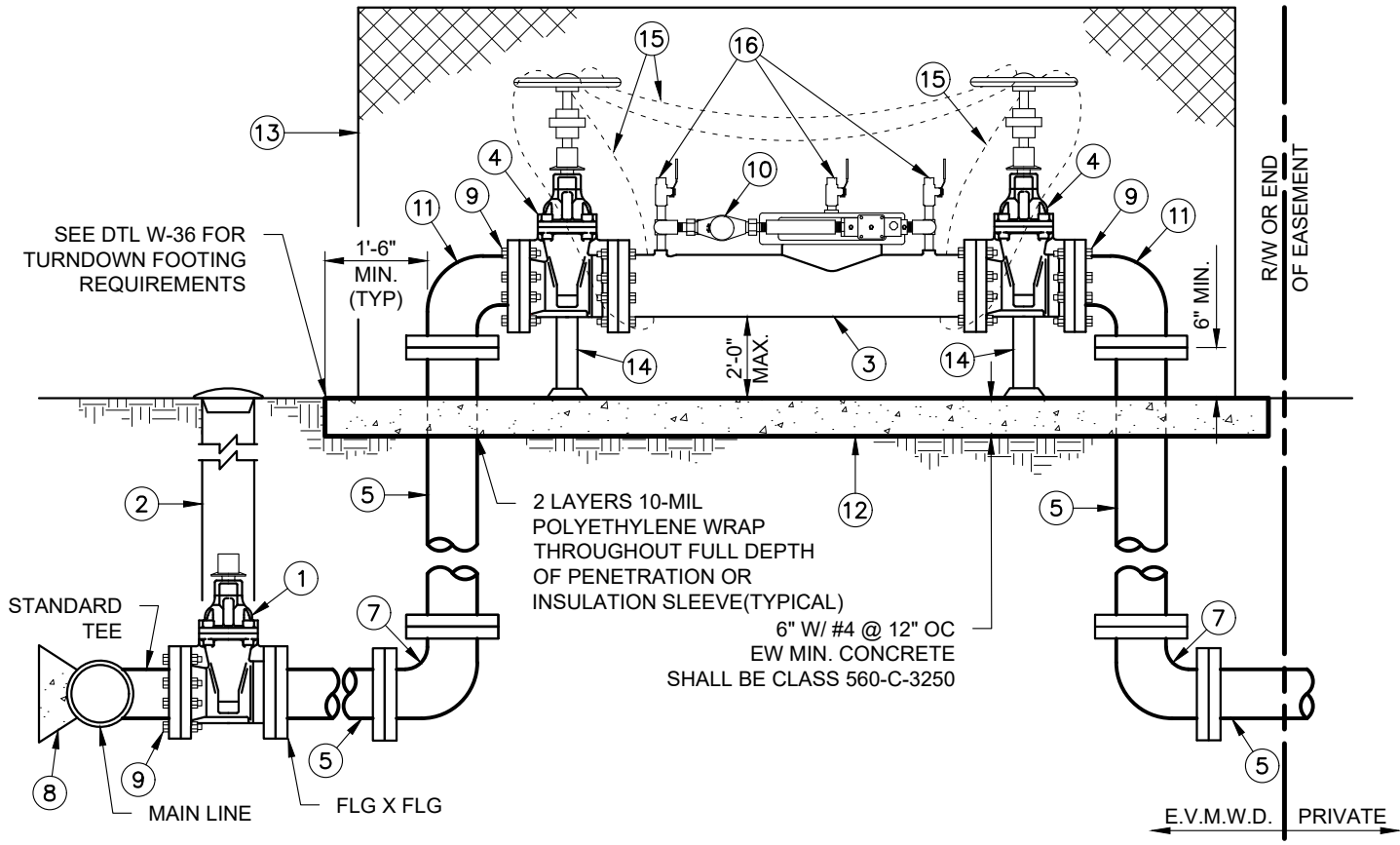
ITEM	DESCRIPTION	SPEC.	REMARKS
①	FL D.I. REDUCING TEE	PER STANDARD TECHNICAL SPECIFICATIONS	
②	FL x FL D.I. 90° BEND	PER STANDARD TECHNICAL SPECIFICATIONS	
③	FL X FL RESILIENT WEDGE GATE VALVE OR BUTTERFLY VALVE	PER STANDARD TECHNICAL SPECIFICATIONS	
④	FLANGE COUPLING ADAPTER	PER STANDARD TECHNICAL SPECIFICATIONS	
⑤	FL x PLAIN END D.I. SPOOL	PER STANDARD TECHNICAL SPECIFICATIONS	LENGTH AS REQUIRED
⑥	FL DUCTILE IRON SPOOL	PER STANDARD TECHNICAL SPECIFICATIONS	LENGTH AS REQUIRED (1' MIN.)
⑦	FLANGE x 2" F.I.P. HOLE		
⑧	WATER METER	AS APPROVED BY DISTRICT	DISTRICT TO SUPPLY
⑨	4" MINIMUM THICKNESS CONCRETE PAD (5' WIDE)	PER STANDARD TECHNICAL SPECIFICATIONS	
⑩	PIPE SUPPORTS		
⑪	1 3/8" ZINC PLATED CHAIN	LENGTH AS REQUIRED	TO SECURE VALVE
⑫	2" HALF COUPLING, 3000# FS N.P.T	PER STANDARD TECHNICAL SPECIFICATIONS	
⑬	2" BALL VALVE WITH LOCKING RINGS M.I.P. x M.I.P.	PER STANDARD TECHNICAL SPECIFICATIONS	TO SECURE VALVE
⑭	2" BRASS F.I.P. END CAP		
⑮	STRAINER (SEE NOTE 3)	PER STANDARD TECHNICAL SPECIFICATIONS	

REVISION	BY	APPR	DATE
MAIN CONNECTION NOTE	VPH	JZ	3/12/2024

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

LARGE METER INSTALLATION (3" AND LARGER)

STD. DWG. NO.
W-22



NOTES:

1. RESTRAINED CONNECTIONS FROM MAIN TO FIRST JOINT BEYOND OUTLET VALVE MINIMUM.
2. ABOVE GROUND INSTALLATION WHENEVER POSSIBLE (IN FENCED COMPOUND).
3. FIRE SERVICE SHALL BE INSTALLED IN A PUBLIC RIGHT-OF-WAY OR AN EASEMENT DEDICATED TO THE DISTRICT.
4. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST AND SHALL BE PAINTED RED PER STANDARD APPROVED MATERIALS LIST.

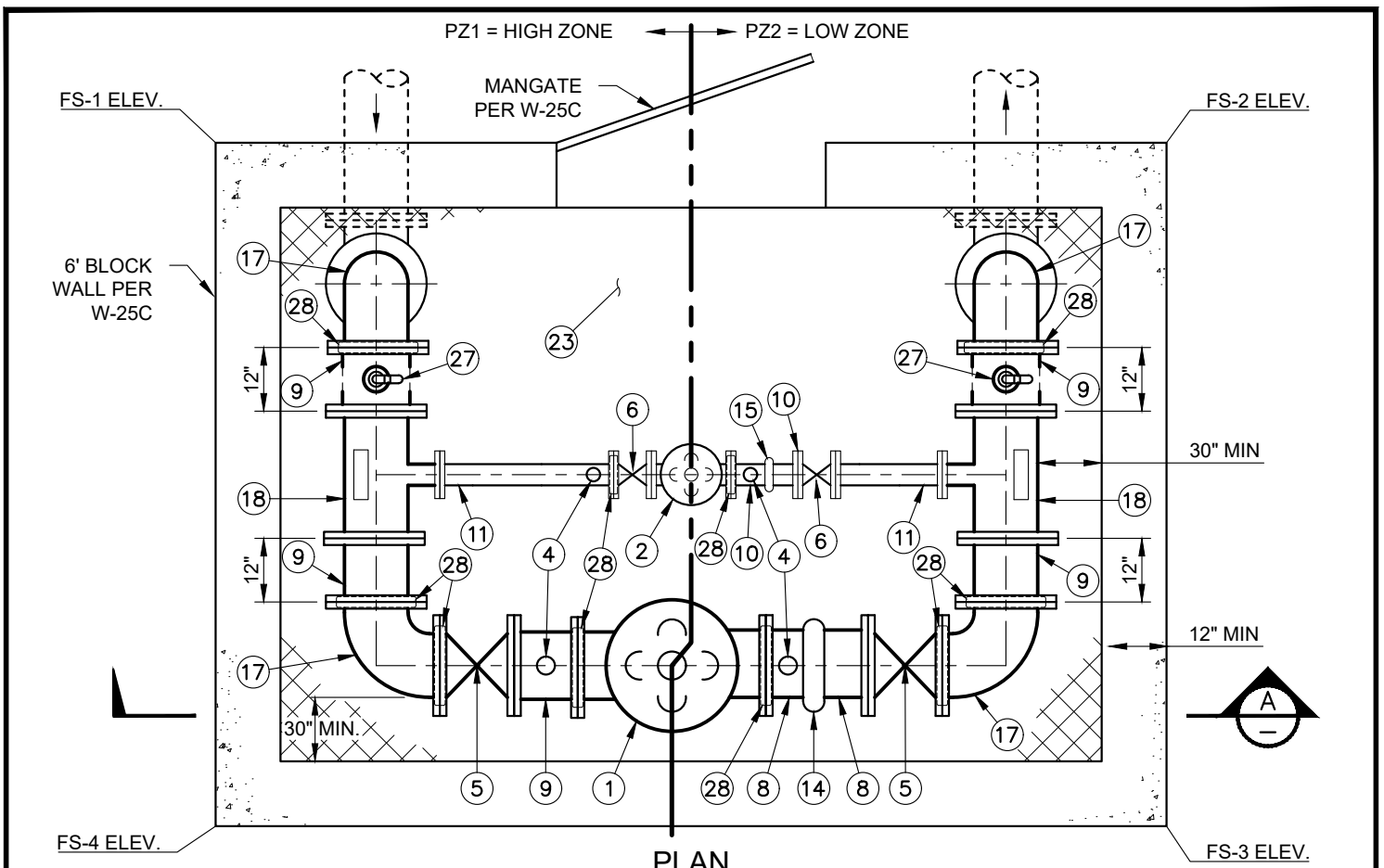
ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	GATE VALVE RESILIENT WEDGE FLGxFLG	SEE STD. DWG. W-14 & W-15	BRONZE INTERNAL, NON-RISING RESILIENT WEDGE
②	1	8" VALVE WELL	STD. DWG. W-13	
③	2	REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE	PER STANDARD TECHNICAL SPECIFICATIONS	L.A. PATTERN OR N PATTERN
④	2	FLANGED OS&Y GATE VALVE RESILIENT WEDGE	BRONZE INTERNAL, RISING STEM	
⑤		PVC OR DI PIPE	PER STANDARD TECHNICAL SPECIFICATIONS	ALL JOINTS RESTRAINED
⑥		NOT USED		
⑦	2	FLGxFLG 90° BEND	PER STANDARD TECHNICAL SPECIFICATIONS	
⑧	2	CONCRETE THRUST BLOCK		SIZE AS REQUIRED, SUBMIT
⑨		HEX. HEAD MACHINE BOLTS W/ NUTS & WASHERS	PER STANDARD TECHNICAL SPECIFICATIONS	APPLY ANTI-SEIZE COMPOUND
⑩	2	3/4" TO 2" BYPASS METER	DISTRICT APPROVED WITH ANGLE CHECK	DISTRICT TO SUPPLY
⑪	2	FLGxFLG 90° BEND	PER STANDARD TECHNICAL SPECIFICATIONS	
⑫	1	CONCRETE SLAB (6" THICK x 5' WIDE)	PER STANDARD TECHNICAL SPECIFICATIONS	
⑬	1	ENCLOSURE (OPTIONAL)		
⑭	2	PIPE SUPPORT		
⑮	3	3/8" ZINC PLATED CHAIN	LENGTH AS REQUIRED	TO SECURE VALVE
⑯	3	BRASS PLUGS		

REVISION	BY	APPR	DATE

PARAG KALARIA R.C.E. 83927 DATE

FIRE DOUBLE DETECTOR CHECK METER INSTALLATION

STD. DWG. NO.
W-23



PLAN

NOTE:

1. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
2. FINISH SURFACE (FS) ELEVATIONS SHALL BE SHOWN ON THE PLANS.
3. PIPING SHALL BE PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECYCLED WATER.
4. (D1) = LARGE DIA. (D2) = SMALL DIA.
5. SIZE OF PRESSURE REDUCING VALVE SHALL BE DETERMINED BY EVMWD

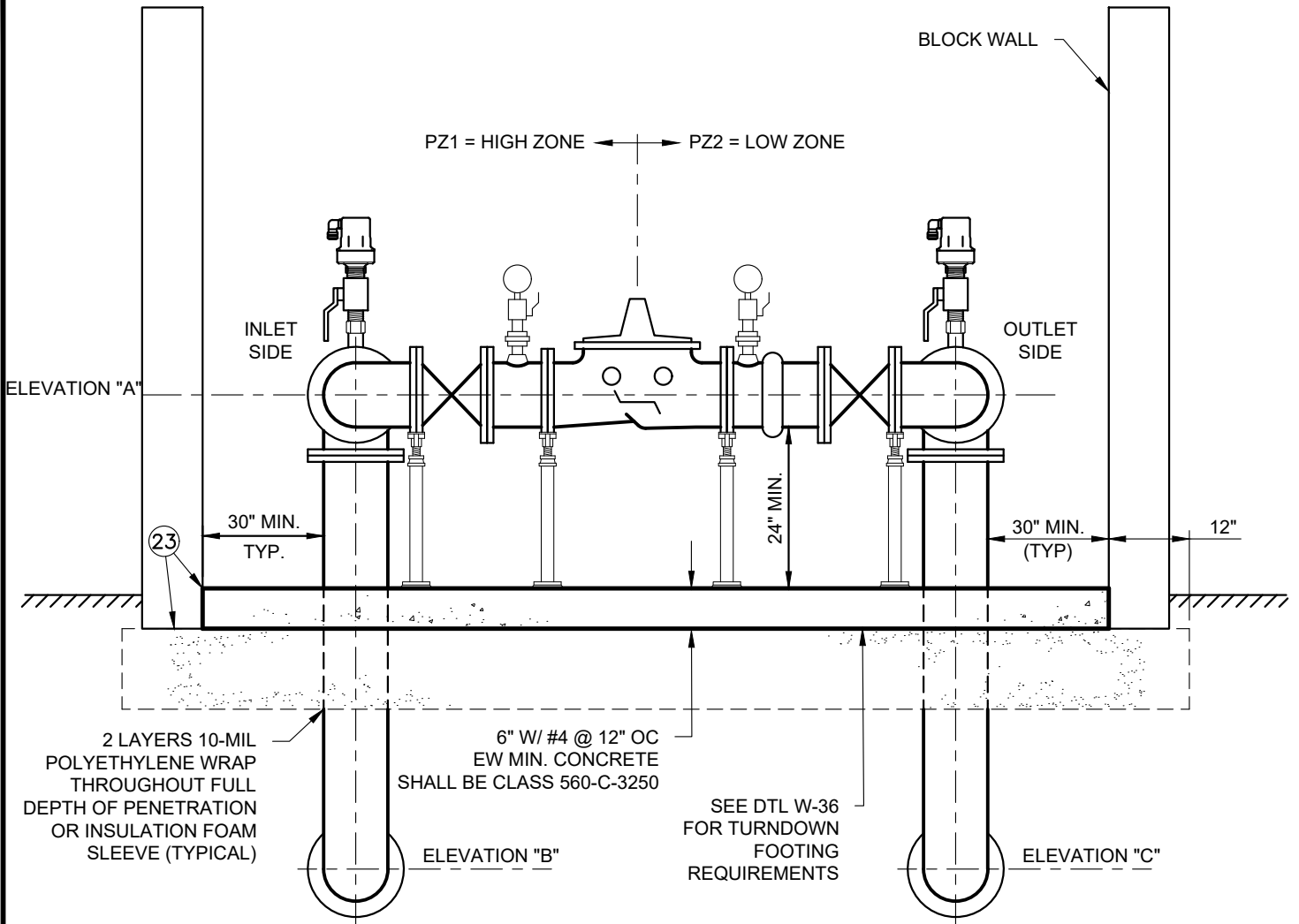
ITEM	DESCRIPTION	ITEM	DESCRIPTION
①	(D1) PRESSURE REDUCER VALVE, FLG	⑮	(D2) VICTAULIC COUPLING, GROOVED
②	(D2) PRESSURE REDUCER VALVE, FLG, SEE NOTE 5	⑯	NOT USED
③	NOT USED	⑰	(D1) 90° ELBOW
④	3-1/2" LIQUID FILLED PRESSURE GAUGE (0-160 PSI) ASSEMBLY	⑱	(D1) x (D2) FL D.I. TEE
⑤	(D1) GATE VALVE RESILIENT WEDGE TYPE	⑲	NOT USED
⑥	(D2) GATE VALVE RESILIENT WEDGE TYPE	⑳	NOT USED
⑦	NOT USED	㉑	NOT USED
⑧	(D1) FL x GROOVED D.I. SPOOL (LENGTH AS REQ'D)	㉒	NOT USED
⑨	(D1) FL x FL D.I. SPOOL	㉓	4" CONCRETE PAD OVER 12" AGGREGATE BASE
⑩	(D2) FL x GROOVED D.I. SPOOL (LENGTH AS REQ'D)	㉔	NOT USED
⑪	(D2) FL x FL D.I. SPOOL	㉕	NOT USED
⑫	NOT USED	㉖	NOT USED
⑬	NOT USED	㉗	AUTOMATED COMB. AIR RELEASE/VACUUM RELIEF VALVE
⑭	(D1) VICTAULIC COUPLING, GROOVED	㉘	PIPE SUPPORT

REVISION	BY	APPR	DATE

PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

P.R.V. STATION DETAIL

STD. DWG. NO.
W-25A



SECTION A-A

NOTE:

1. CONTRACTOR SHALL CLEARLY AND PERMANENTLY LABEL THE PRESSURE ZONES ON THE INLET AND OUTLET PIPES. METHOD TO BE APPROVED BY THE E.V.M.W.D. INSPECTOR. USE 2" MIN. HIGH NUMERALS AND LETTERS.
2. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
3. FOR LIST OF MATERIALS, SEE STD. DWG. NO. W-25A.
4. PLANS SHALL CALLOUT ELEVATIONS "A", "B" AND "C".
5. FOR PIPE SUPPORT LOCATIONS, SEE CONSTRUCTION NOTE 28 ON STD. DWG. NO. W-25A.

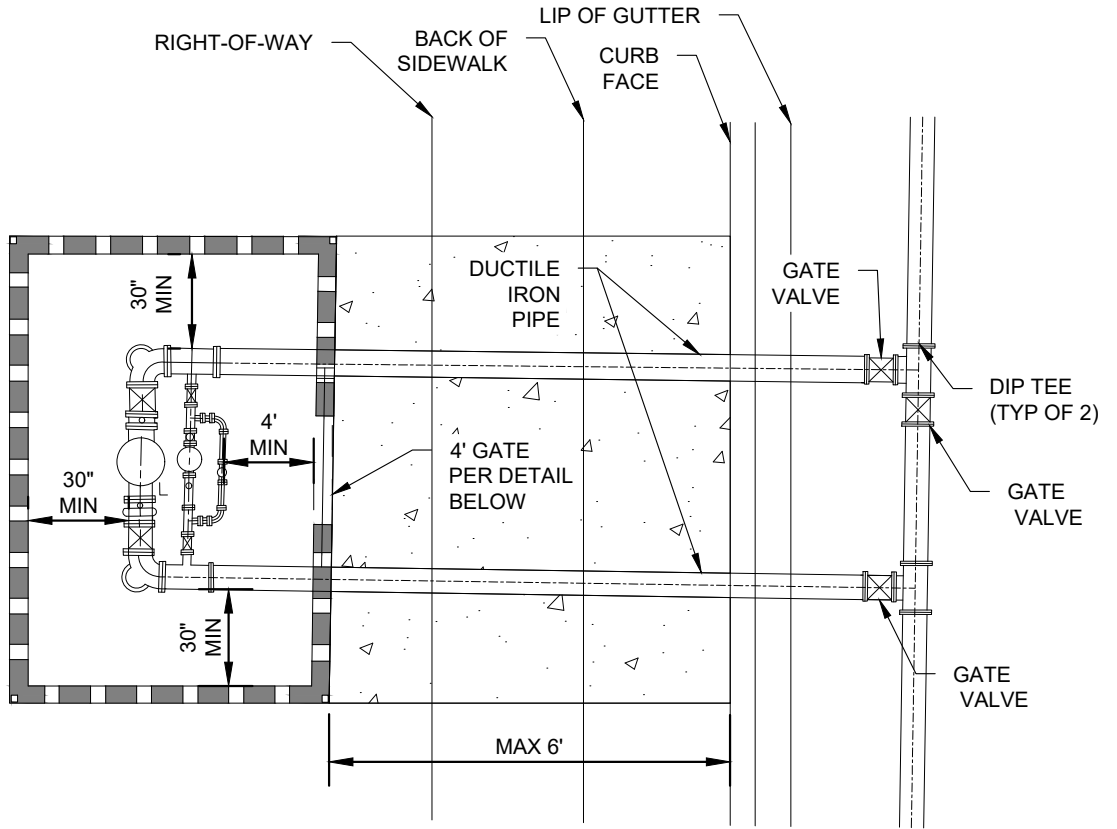
REVISION	BY	APPR	DATE

ELSOR VALLEY
MUNICIPAL WATER DISTRICT

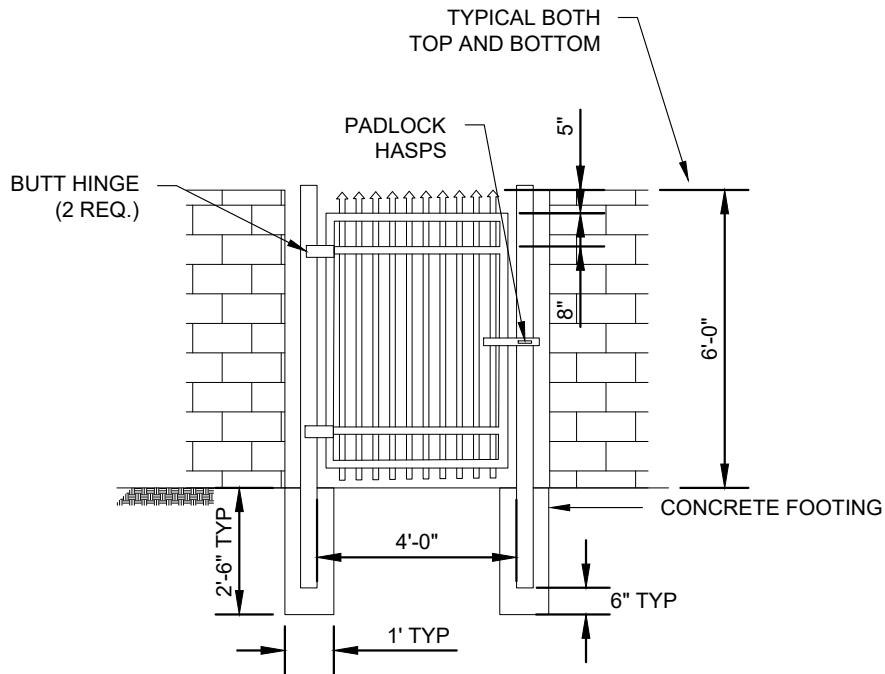
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

P.R.V. STATION DETAIL

STD. DWG. NO.
W-25B



PLAN VIEW OF P.R.V. STATION
NOT TO SCALE



MAN-GATE DETAIL
NOT TO SCALE

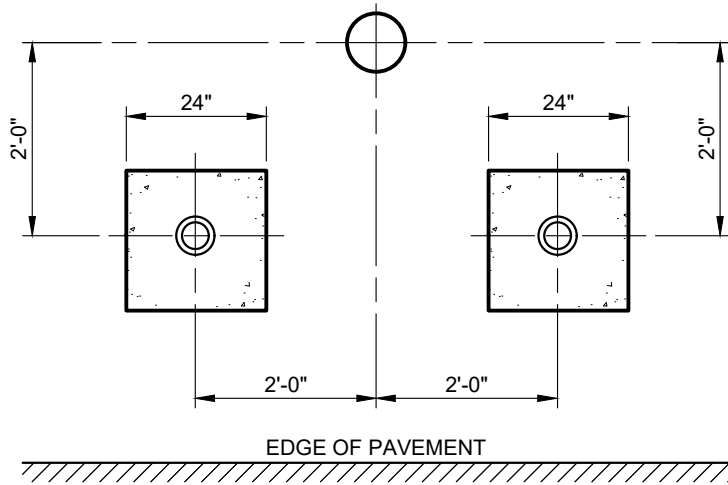
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

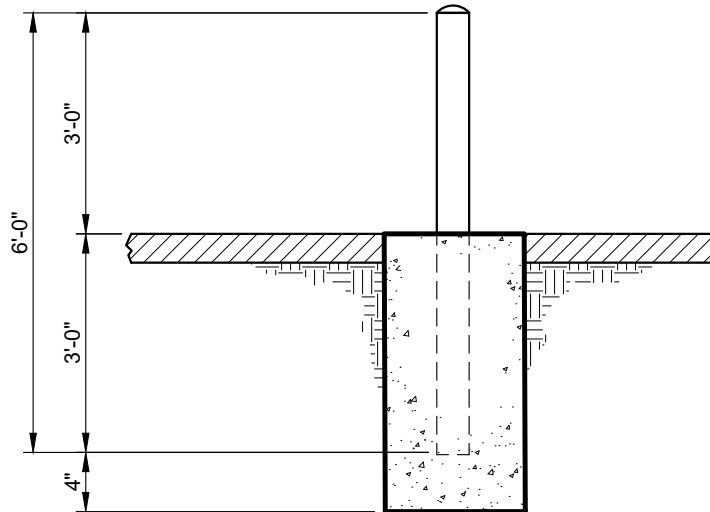
Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

P.R.V. WALL AND GATE

STD. DWG. NO.
W-25C



PLAN



ELEVATION

NOTES:

1. FOR ABOVE GROUND FACILITIES ADJACENT TO STREETS WITHOUT CURB AND GUTTER PROTECTION.
2. GUARD POST SHALL BE PAINTED "OSHA" YELLOW.
3. SOLID GUARD POST WITH STANDARD 15,000-LB RESISTANCE LIMIT AND 50 MPH CRASH SPEED.
4. ADDITIONAL GUARD POSTS MAY BE REQUIRED AT THE DISCRETION OF EVMWD.

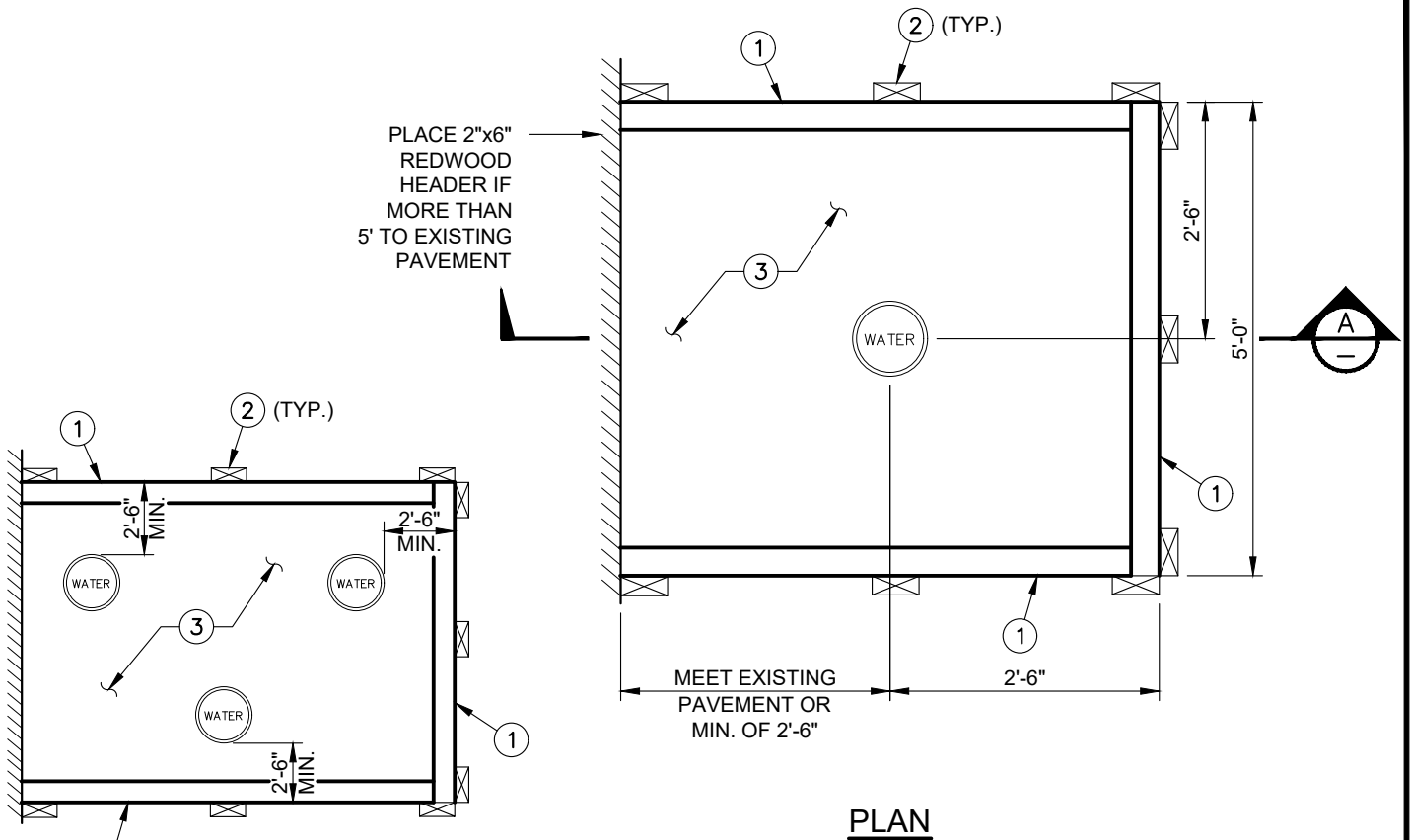
ITEM	DESCRIPTION
	6" DIA. STD. STEEL PIPE GUARD POST, MORTAR FILLED
	1/2" MIN. MORTAR CROWN
	ABOVE GROUND FACILITY TO BE PROTECTED

REVISION	BY	APPR	DATE
DIMS; NOTES	AK	MC	03-28-24

PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

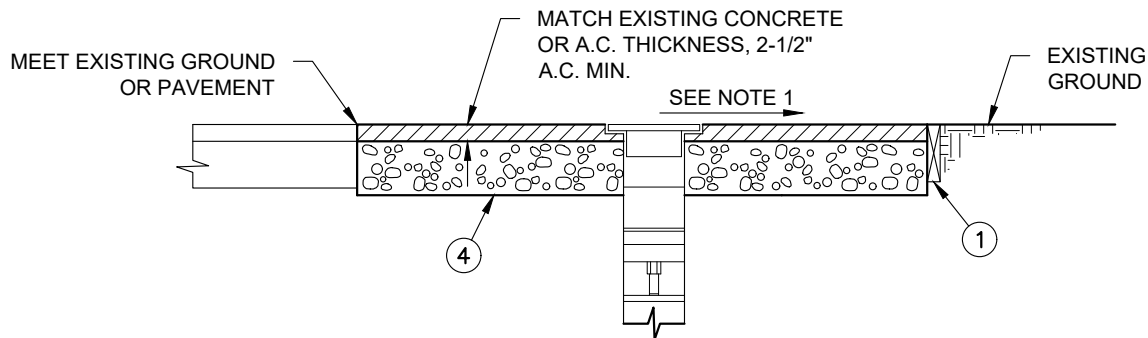
**PERMANENT GUARD POST
DETAIL**

STD. DWG. NO.
W-26



PLAN
(VALVE CLUSTER
CONDITION)

PLAN



SECTION A-A

NOTES:

1. SLOPE WILL CONFORM TO RIVERSIDE COUNTY ROAD IMPROVEMENTS STANDARDS AND SPECIFICATIONS, OR MEET EXISTING CONDITIONS AS DIRECTED BY ENGINEER. PAD SHALL BE SLOPED AWAY FROM VALVE LID.
2. VALVES LOCATED IN LANDSCAPED AREAS SHALL HAVE A 2'x2' CONCRETE PAD INSTALLED.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

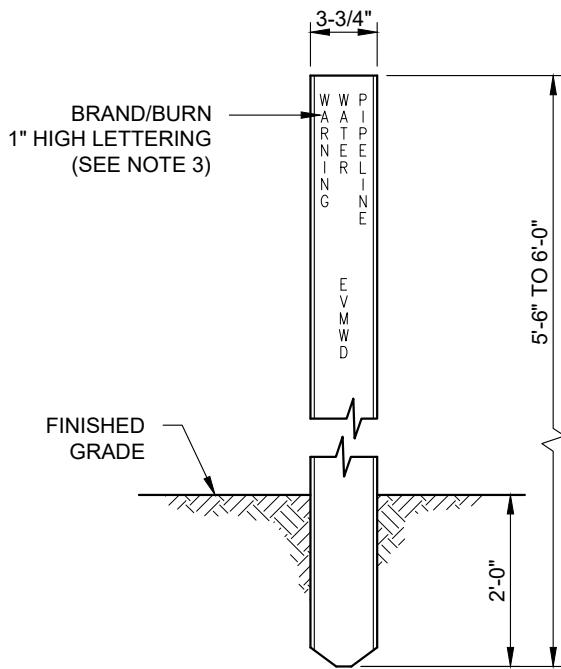
ITEM	DESCRIPTION
①	2"x6" REDWOOD HEADERS IF REQUIRED BY ENGINEER OR AS DIRECTED
②	2"x4"x18" STAKES (3 PER SIDE) AT 30" O.C.
③	AREA TO BE PAVED
④	6" OF 3/4" CLASS 2 CRUSHED AGGREGATE BASE

REVISION	BY	APPR	DATE

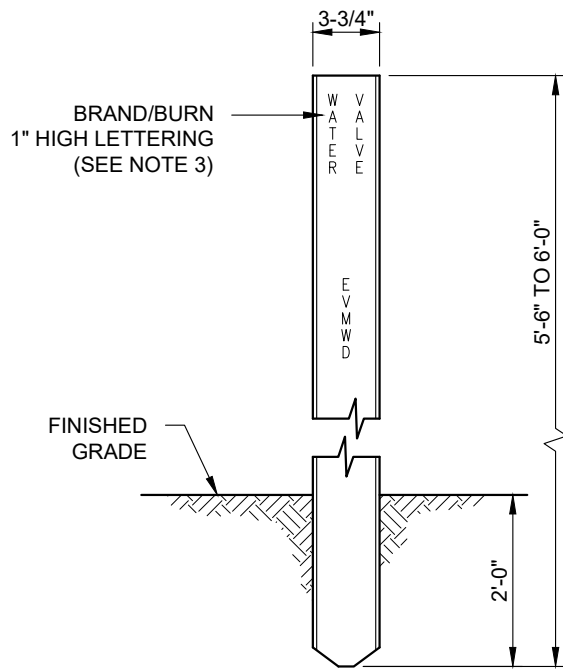
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**PAVING DETAIL
AROUND VALVES
(NOT IN PAVEMENT)**

STD. DWG. NO.
W-27



FIBERGLASS MARKER POST
PIPELINE MARKER



FIBERGLASS MARKER POST
VALVE MARKER

COLOR	MARKER POSTS USED FOR:
BLUE	POTABLE WATER MAINS
GREEN	SEWER MAINS
PURPLE	RECYCLED WATER MAINS
WHITE	GATE WELL

UTILITY MARKER COLOR TABLE

NOTES:

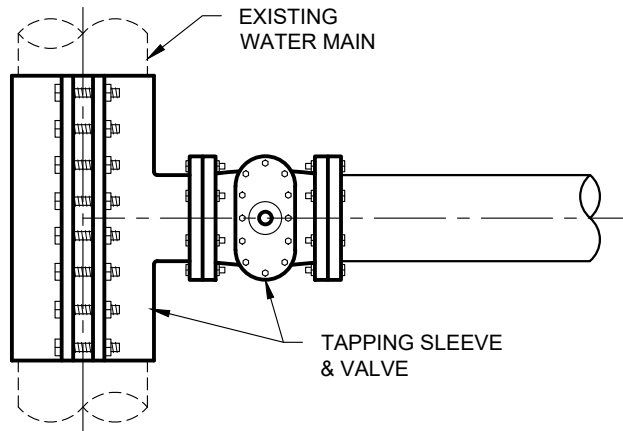
1. WATERLINE MARKER POST SHALL BE INSTALLED WHERE CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SPACING SHALL BE APPROXIMATELY 200' BETWEEN MARKERS. CURVED ALIGNMENTS LESS THAN 800' IN LENGTH SHALL HAVE A MINIMUM OF FOUR MARKERS TO DEFINE THE CURVE.
2. WATERLINE MARKER POST SHALL BE INSTALLED 12" TO THE SOUTH AND WEST OF THE UTILITY.
3. MARKER SHALL INCORPORATE 1" HIGH LETTERING BRANDED/BURNED INTO PADDLE. LETTERING SHALL INCLUDE EVMWD ALONG WITH THE UTILITY IDENTIFIED. THE COLOR OF THE PADDLE SHALL BE AS SHOWN IN THE TABLE ABOVE.
4. LETTERING SHALL BE WHITE FOR PIPELINES AND BLACK FOR GATE WELLS.

REVISION	BY	APPR	DATE

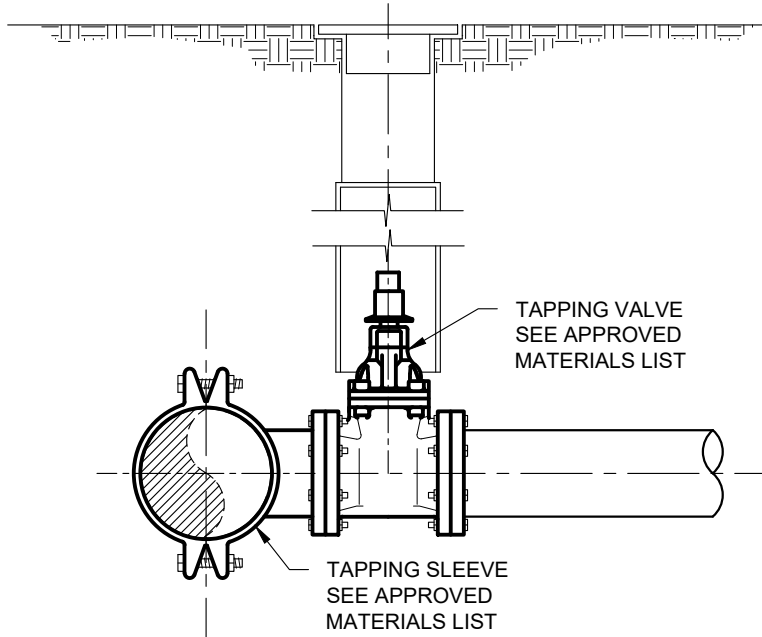
PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

PIPELINE MARKER POST
INSTALLATION

STD. DWG. NO.
W-28



PLAN



SIDE VIEW

NOTES:

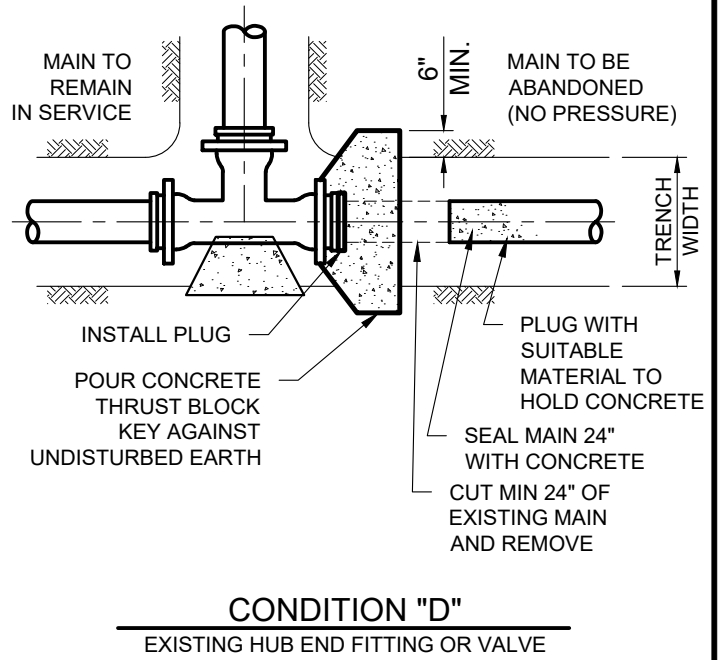
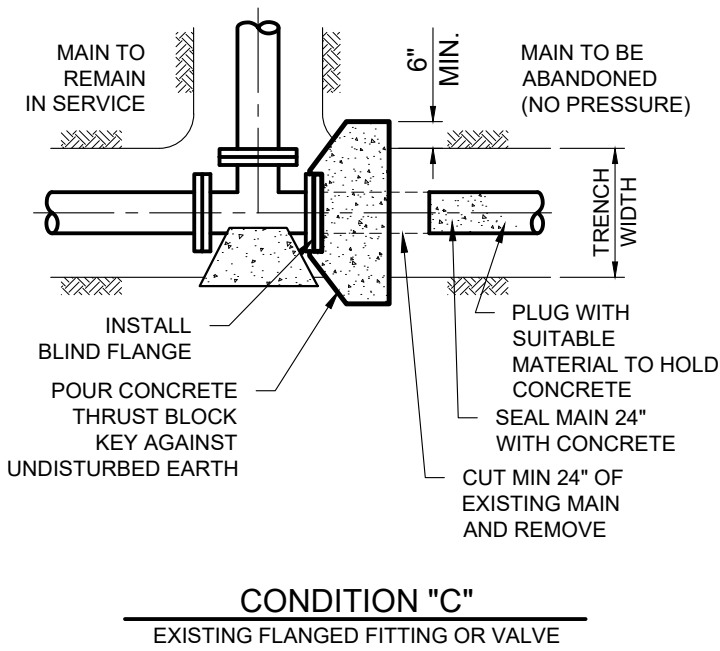
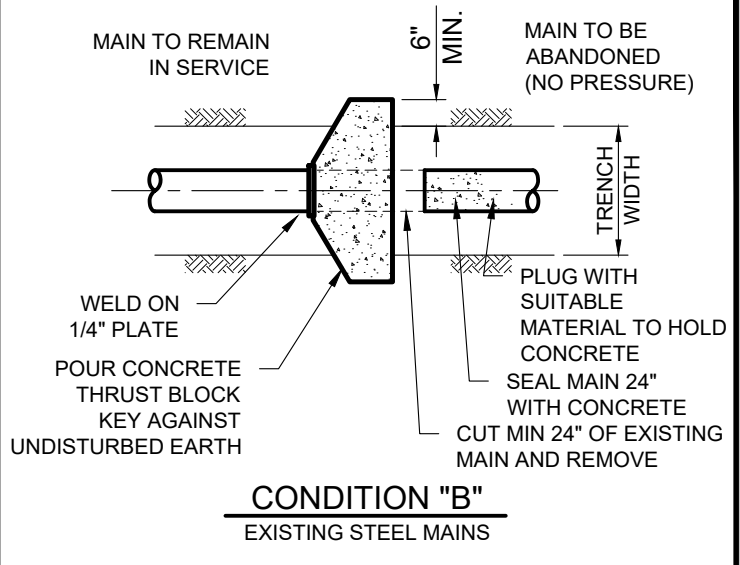
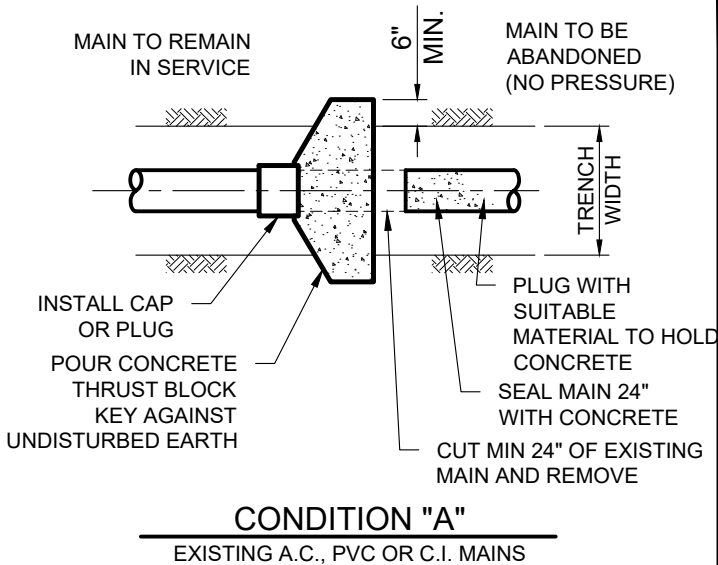
1. TAPPING SLEEVE TO BE STAINLESS STEEL PER APPROVED MATERIALS LIST.
2. TAPPING SLEEVE AND VALVE ARE TO BE COMPLETELY WRAPPED WITH 8 MIL POLYETHYLENE ENCASEMENT.
3. TAPPING SLEEVE SHALL BE TESTED AT A MINIMUM OF 150 PSI FOR A MINIMUM OF 15 MINUTES WITH NO VISIBLE LEAKAGE.
4. TAPPING SLEEVE SHALL HAVE A FULL LENGTH & WIDTH GASKET. O-RING GASKETS ARE NOT ACCEPTABLE.
5. DIAMETER OF THE HOT TAP SHALL NOT EXCEED 75% OF MAIN LINE DIAMETER.
6. HOT TAPPING MAY ONLY BE USED UPON WRITTEN AUTHORIZATION BY DISTRICT.
7. TAPPING VALVE SHALL HAVE A FLANGE INSULATION KIT BETWEEN DUCTILE IRON VALVE AND STAINLESS STEEL TAPPING SLEEVE

REVISION	BY	APPR	DATE

06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**TAPPING SLEEVE AND VALVE
 DETAIL**

STD. DWG. NO.
W-29



NOTES:

1. BEARING AREA AGAINST UNDISTURBED SOIL SHALL BE SAME AS FOR DEAD-ENDS.
2. WHEN CALLED OUT ON PLANS, INSTALL BLOW-OFF.
3. THRUST BLOCKS AND CONCRETE TO PLUG WATERMAINS SHALL BE CLASS 560-C-3250 CONCRETE, UNLESS OTHERWISE SPECIFIED.
4. ALL BURIED BOLTS SHALL BE COATED PER THE APPROVED MATERIALS LIST.
5. IF ACP PIPE IS ENCOUNTERED DURING PIPE ABANDONMENT, IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LEGALLY DISPOSE OF ALL MATERIAL TO BE REMOVED.
6. EXISTING MAINS TO BE CUT AND PLUGGED SHALL BE PLUGGED AT INTERVALS OF 200' OR AS DIRECTED BY THE DESIGN ENGINEER.
7. DISTRICT APPROVAL IS REQUIRED PRIOR TO CUTTING AND PLUGGING WATERMAINS.

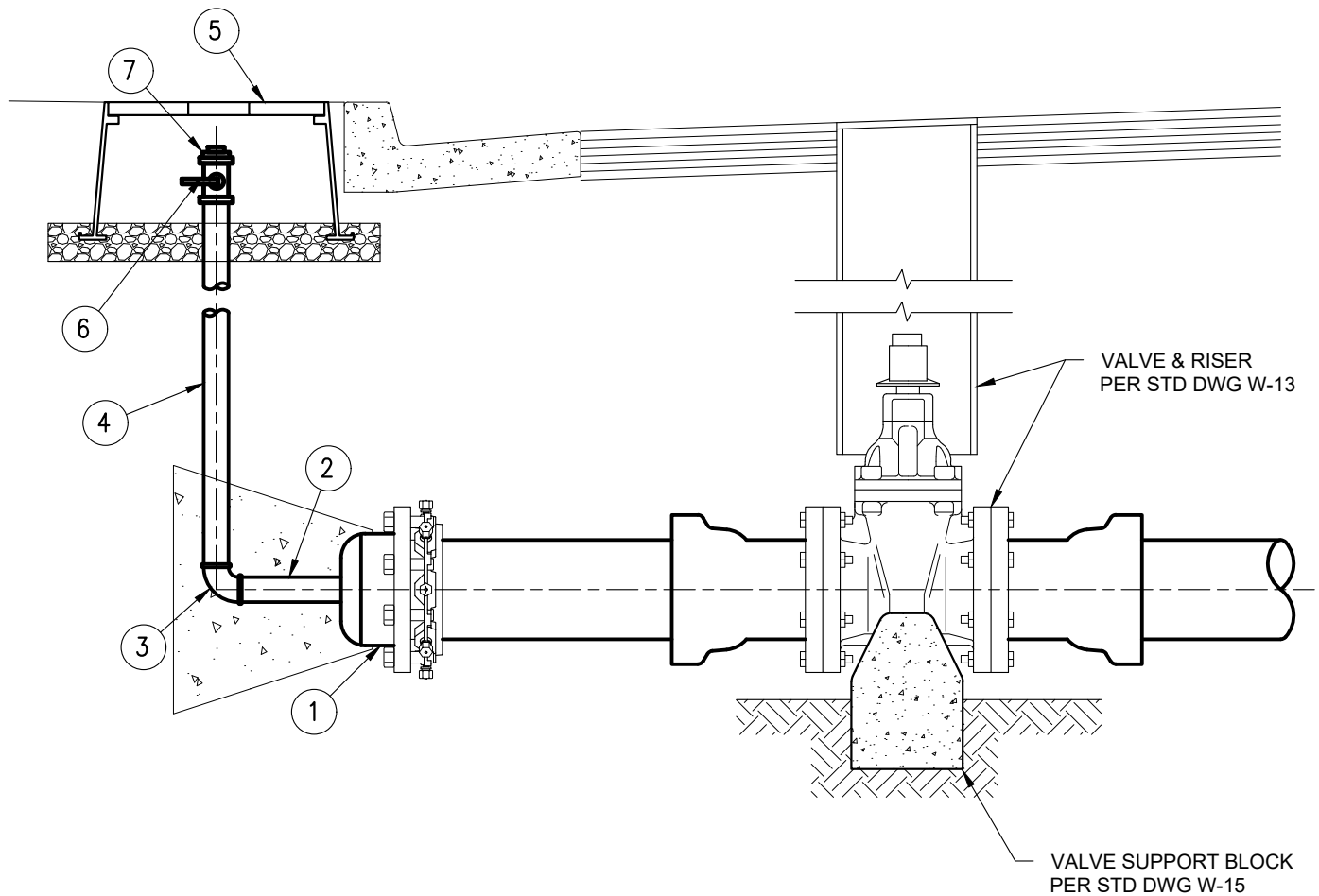
REVISION	BY	APPR	DATE

ELSIKORE VALLEY
MUNICIPAL WATER DISTRICT

06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

**CUTTING & PLUGGING
WATER, RECYCLED WATER, AND
SEWER MAINS**

STD. DWG. NO.
W-32




NOTES:

1. METER BOX FOR BALL VALVE TO BE LOCATED ADJACENT TO AND BEHIND CURB, UNLESS OTHERWISE NOTED ON PLANS.
2. IF END OF MAIN IS IN STREET, INSTALL 2" BRASS PIPE LEVEL TO BEHIND CURB. USE ADDITIONAL 2" 90° BRASS ELBOW.
3. WHEN BLOW-OFF IS LOCATED BEHIND A ROLLED CURB & GUTTER, OR WHERE NO CURB EXISTS USE TRAFFIC STYLE BOX AND LID.

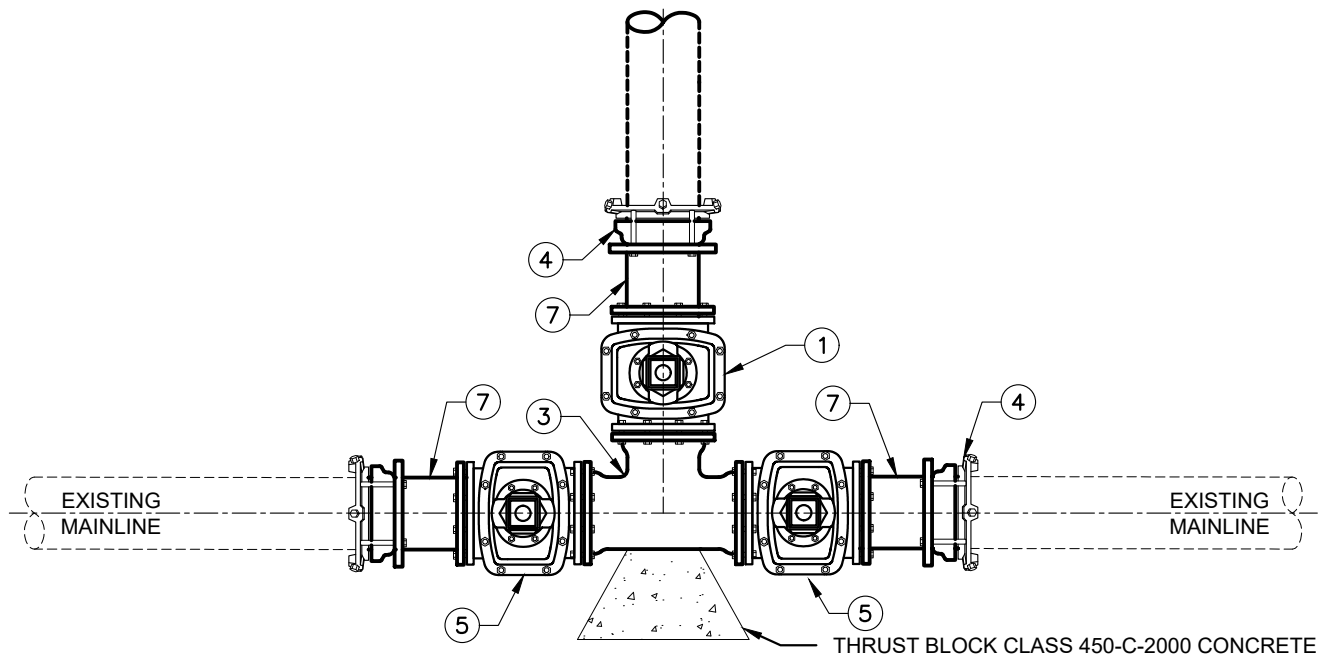
ITEM	DESCRIPTION
①	MAIN x 2" MJ TAPPED END CAP
②	2" x 6" BRASS NIPPLE
③	2" 90° BRASS ELBOW
④	2" BRASS PIPE
⑤	METER BOX PER STANDARD DETAIL W-11
⑥	2" BALL VALVE PER APPROVED MATERIALS LIST
⑦	2" BRASS PLUG

REVISION	BY	APPR	DATE

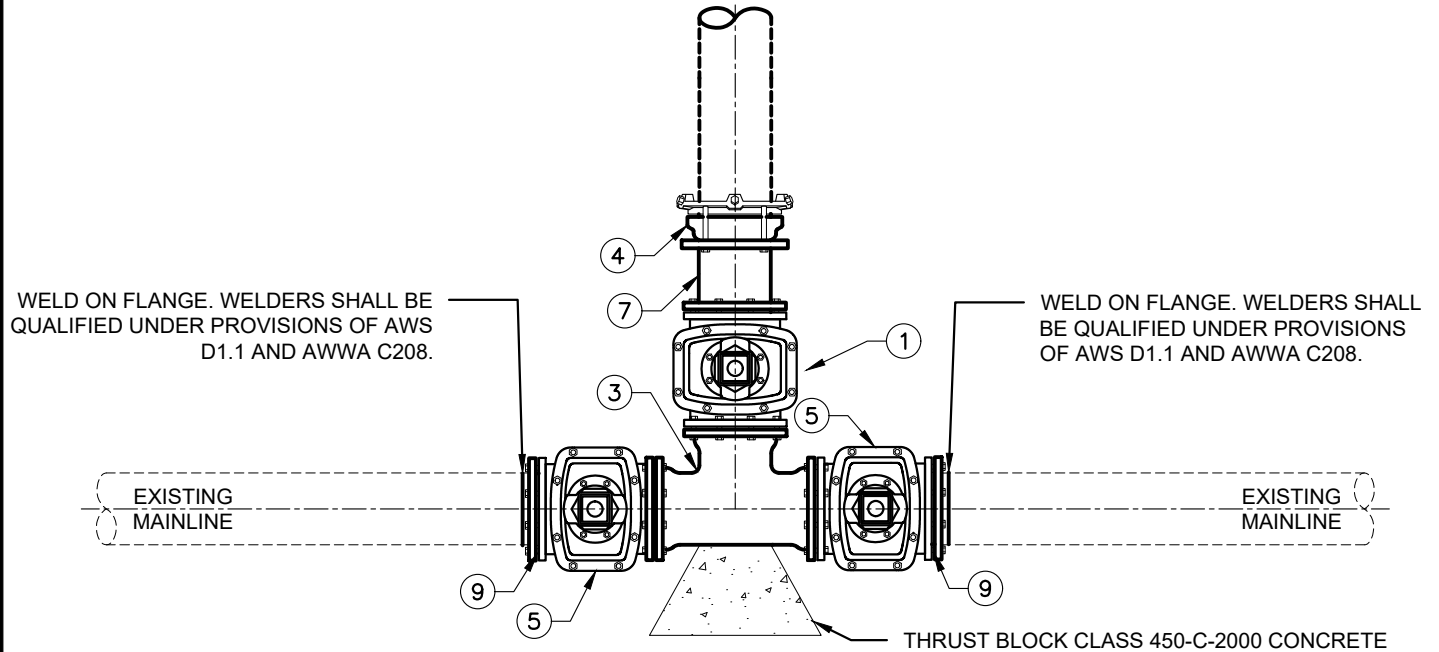

ELSINORE VALLEY
 MUNICIPAL WATER DISTRICT
PARAG KALARIA R.C.E. 83927 DATE

2" TEMPORARY BLOW-OFF ASSEMBLY

STD. DWG. NO.
W-33



EXISTING PVC, DIP, AND ACP WATER MAIN



EXISTING CML&C STEEL WATER MAIN

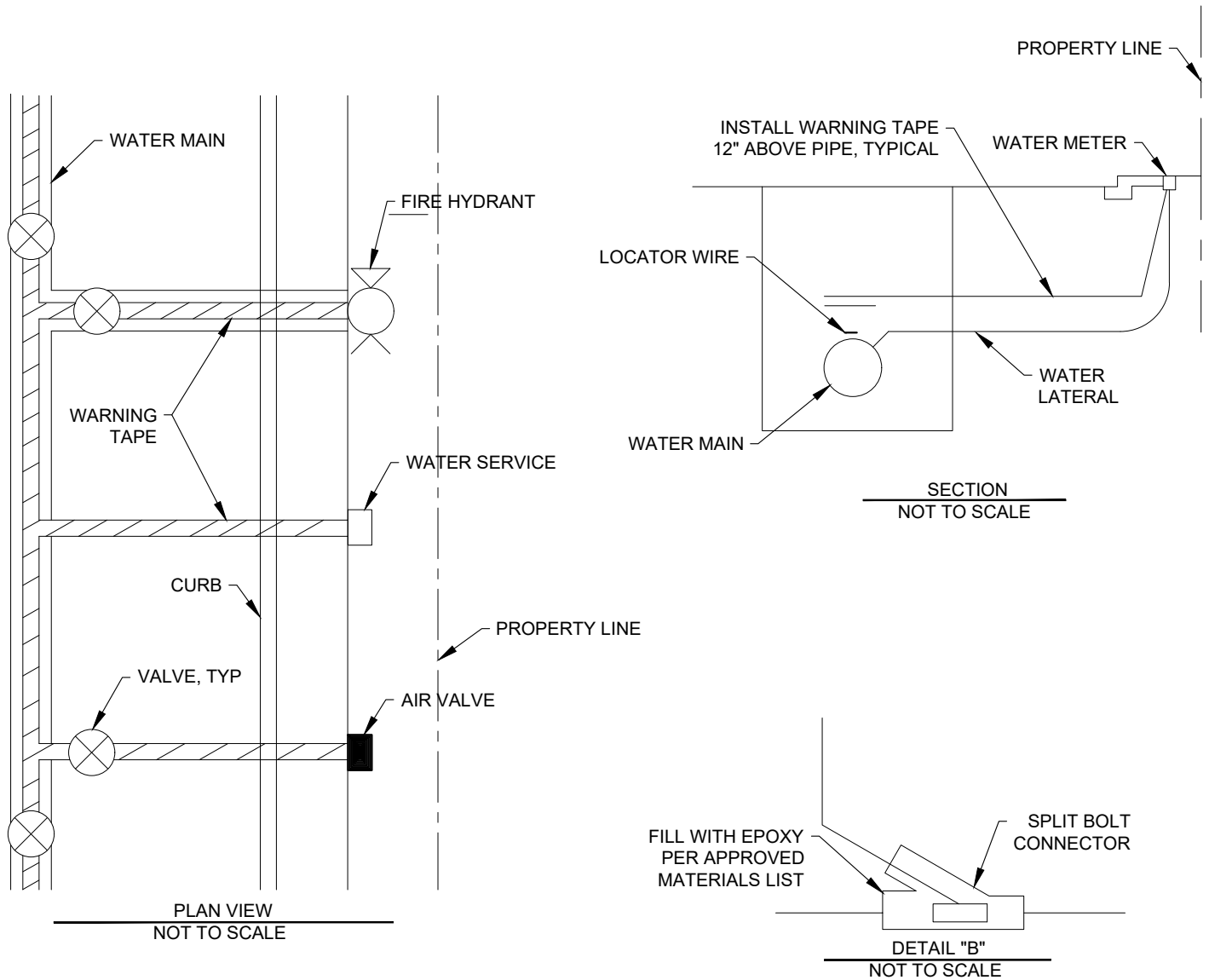
ITEM	DESCRIPTION
①	GATE VALVE PER APPROVED MATERIALS LIST
②	NOT USED
③	FL DIP TEE PER APPROVED MATERIALS LIST
④	JOINT RESTRAINT ASSEMBLY PER APPROVED MATERIALS LIST
⑤	FL GATE VALVE TO BE INSTALLED UNLESS OTHERWISE DIRECTED
⑥	NOT USED
⑦	FLANGE x MECHANICAL JOINT ADAPTER PER APPROVED MATERIALS LIST
⑧	NOT USED
⑨	CATHODIC PROTECTION INSULATION KIT PER STD. DWG. CP-1

REVISION	BY	APPR	DATE
REV 1	MC		

06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

**CUT-IN TEE
DETAIL**

STD. DWG. NO.
W-34



NOTES:

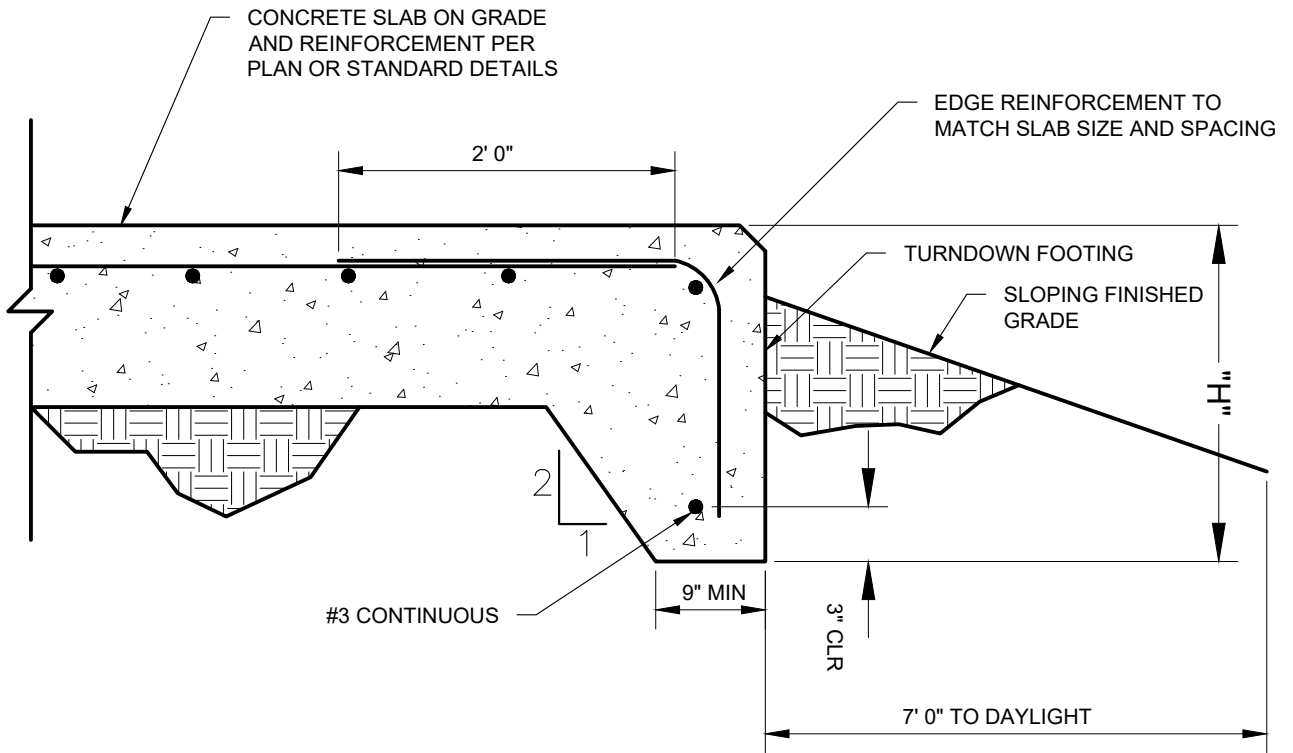
1. LOCATOR WIRE TO BE 10 GAUGE SOLID COPPER WIRE UF, THWN, OR THHN.
2. LOCATOR WIRE SHALL BE BROUGHT TO THE SURFACE AT 660 FT OC MAX BY FIRE HYDRANTS OR INSTALL EVMWD MARKER POSTS (B-665). GIVE STATIONS AT VALVE BOXES. (FOR TRACT CONSTRUCTION CHISEL "LW" IN FACE OF CURB IN LIEU OF MARKER POSTS).
3. LOOP 2 FEET OF WIRE IN VALVE BOX WITHIN 2 FEET OF FIRE HYDRANT OR EVMWD MARKER POST.
4. LOCATOR WIRE TO RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF POTABLE WATERLINES, RECYCLED WATERLINES, GRAVITY SEWERS AND FORCEMAINS. WIRE SHALL BE SECURED TO THE PIPE AND MAINTAINED ON PIPE CENTERLINE DURING TRENCH BACKFILL.
5. LOCATOR WIRE SHALL BE INSTALLED OVER ALL WATERLINES, RECYCLED WATERLINES AND FORCEMAINS WHETHER OR NOT TELEMETRY WIRE IS BURIED WITH THE PIPE.
6. USE CAST IRON COVER OVER LABELED WATER, SEWER, RECYCLED VALVE COVERS. COLORS PER APPROVED MATERIALS LIST.
7. FOR PIPE DEPTHS GREATER THAT 8 FEET LOCATOR WIRE SHALL BE PLACED ABOVE PIPE AT MAX 8 FEET DEPTH. WARNING TAPE SHALL BE PLACED 1 FT ABOVE THE LOCATOR WIRE.
8. A LOCATABILITY TEST IS TO BE PERFORMED ON ALL LOCATOR WIRES.
9. SPLICES TO BE DONE WITH A CRIMPABLE BUTT CONNECTOR. WIRE SPLICES SHALL BE SILICONE FILLED TYPE. DIRECT BURY SPLICE KIT OF HEAT-SHRINK TYPE UNDERGROUND SPLICE KIT.
10. WARNING TAPE SHALL BE INSTALLED 12" ABOVE THE PIPE AND RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH OF THE PIPE AND ALL RELATED APPURTENANCES.
11. FOR FIRE HYDRANT INSTALLATIONS SEE DRAWING W-7.

REVISION	BY	APPR	DATE

EL SINORE VALLEY
 MUNICIPAL WATER DISTRICT
 PARAG KALARIA R.C.E. 83927 DATE 06/22/2023

LOCATOR WIRE INSTALLATION



STD. DWG. NO.
W-35



NOTES:

1. ALL SLAB-ON-GRADE CONCRETE FOUNDATIONS SHALL BE MODIFIED WITH A STANDARD TURNDOWN FOOTING AT SLAB EDGES WHERE SLOPING GRADES DO NOT PROVIDE 7'0" TO DAYLIGHT AS MEASURED FROM THE BOTTOM OF THE SLAB.
2. REFER TO STANDARD SPECIFICATION SECTION 03310 FOR ADDITIONAL REQUIREMENTS.
3. WHERE DIMENSION "H" EXCEEDS 3'0", ADDITIONAL PROJECT SPECIFICATION DESIGN SHALL BE PERFORMED BY A REGISTERED DESIGN PROFESSIONAL TO DETERMINE ADDITIONAL CONCRETE AND REINFORCEMENT REQUIREMENTS.

REVISION	BY	APPR	DATE


ELSINORE VALLEY
 MUNICIPAL WATER DISTRICT
 06/22/2023
 PARAG KALARIA R.C.E. 83927 DATE

SLAB-ON-GRADE TURNDOWN FOOTING

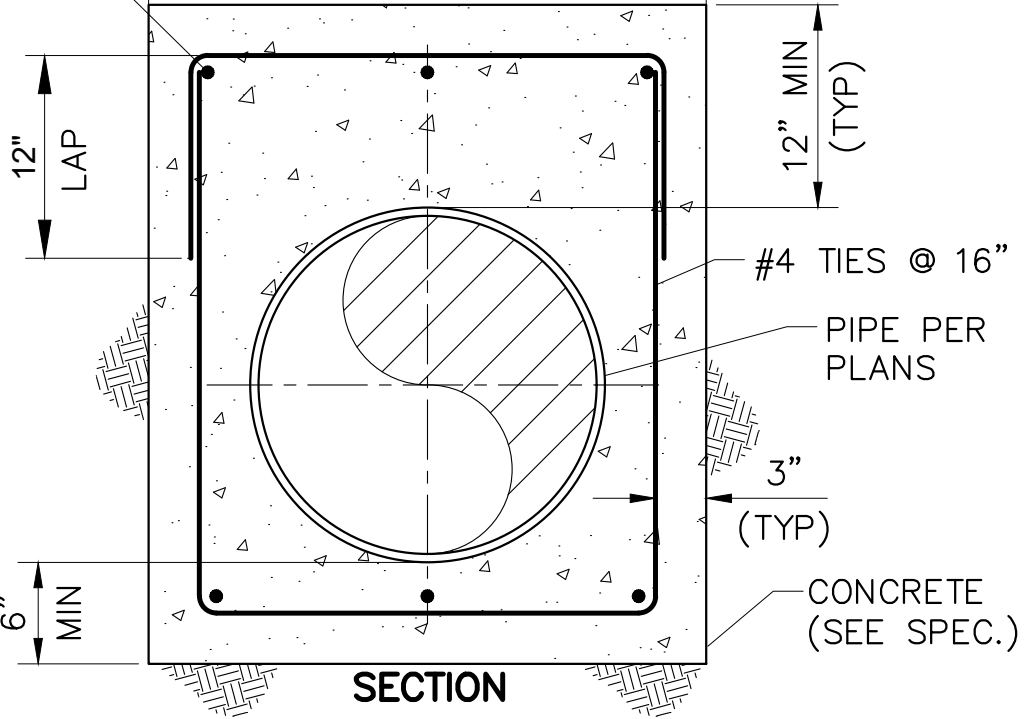
STD. DWG. NO.
W-36

BACKFILL TRENCH
AND MATCH EXIST
AC PAVEMENT

TRENCH WIDTH
MIN.-PIPE O.D.+12"

MAX.-PIPE O.D.+20"
BACKFILL
(SEE SPEC.)

#5 CONT.
AS SHOWN



SECTION

#4 TIES @ 16"

PIPE PER
PLANS

3"

(TYP)

CONCRETE
(SEE SPEC.)

6"
MIN

12"
LAP

12" MIN
(TYP)

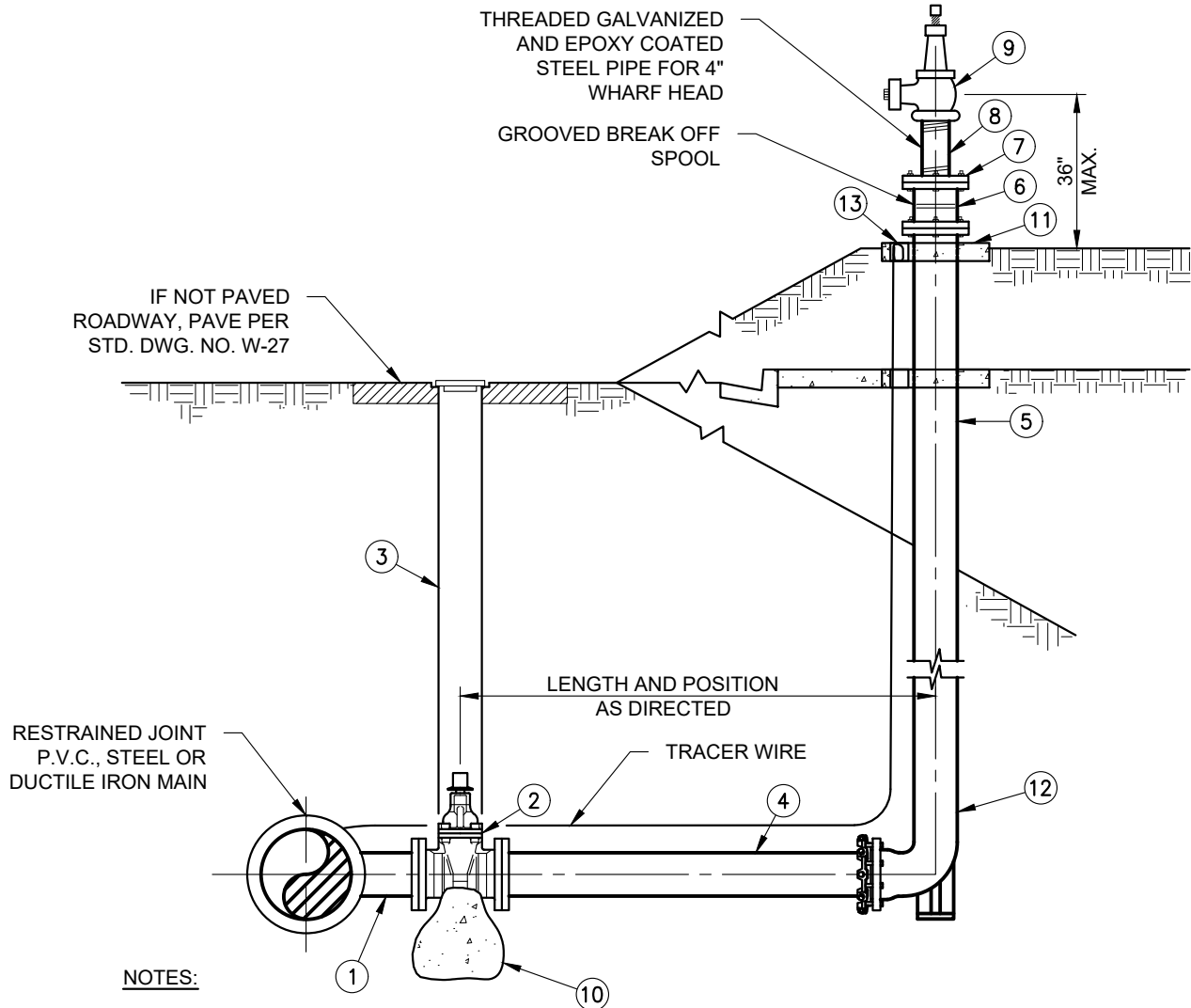
REVISION	BY	APPR	DATE

PARAG KALARIA R.C.E. 83927 DATE

CONCRETE PIPE ENCASEMENT

STD. DWG. NO.

W-37




NOTES:

1. RESTRAINED JOINTS ARE REQUIRED.
2. BLOW-OFF (WHARF HEAD BODY) TO BE PAINTED PURPLE DESCRIPTION

ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	STD. 6" TEE BRANCH	D.I. FLG ON 6" BRANCH	
②	1	6" GATE VALVE	SEE W-13 AND W-14	RESILIENT WEDGE, FLGxFLG
③	1	8" VALVE WELL AND CAP	SEE W-13 (LABELED RECYCLED WATER)	PAINTED PURPLE
④	1	6" PIPE BLOWOFF RUN	STD. DWG. W-7	RESTRAINED JOINT
⑤	1	6" STD. FIRE HYDRANT BURY 6" SPOOL FL x FL (DI)		6 HOLE FLG x FLG (VARIABLE HEIGHT)
⑥	1	6" GROOVED BREAK OFF SPOOL	6", 6 HOLE, FLxFL, SEE W-7	SPOOL ABOVE SURFACE, PAINTED, NUTS ON TOP OF FLANGE, DAMAGE 2 OPPOSITE FACING THREADED ENDS TO ENSURE INABILITY OF REMOVAL
⑦	1	6"x4" COMPANION FLANGE	6", 6 HOLE, FLxFL	BLACK IRON COMPANION FLANGE, PAINTED
⑧	1	4" PIPE WITH INTERIOR EPOXY LINED COATED	GALVANIZED, 4" M.I.P. x M.I.P.	PAINTED PURPLE
⑨	1	4" ANGLE FIRE PLUG VALVE	4" x 2 1/2"	PAINTED PURPLE (WHARF HEAD)
⑩	-	VALVE SUPPORT BLOCK	STD. DWG. W-15	
⑪	1	560 C3250 CONCRETE PAD	4'x4'x4"DEEP	
⑫	1	6" DIA. 90° BASE ELBOW, SHORT RADIUS	FLxMJ OR FLxFL	VARIABLE HEIGHT.
⑬	1	TRACER BOX	SEE APPROVED MATERIALS LIST	

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ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

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RECYCLED WATER BLOW-OFF ASSEMBLY

STD. DWG. NO.
RW-1



SPECIFICATIONS

- SIZE: 4"x8"
- MATERIAL: "DURACAST" PLASTIC WITH NO-SLIP SURFACE.
- COLOR: PURPLE WITH WHITE LETTERS AND SYMBOL.
- PLACEMENT: SURFACE MOUNT ON CONCRETE CURB OR SIDEWALK USING ADHESIVE. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR APPLICATION OF ADHESIVE.

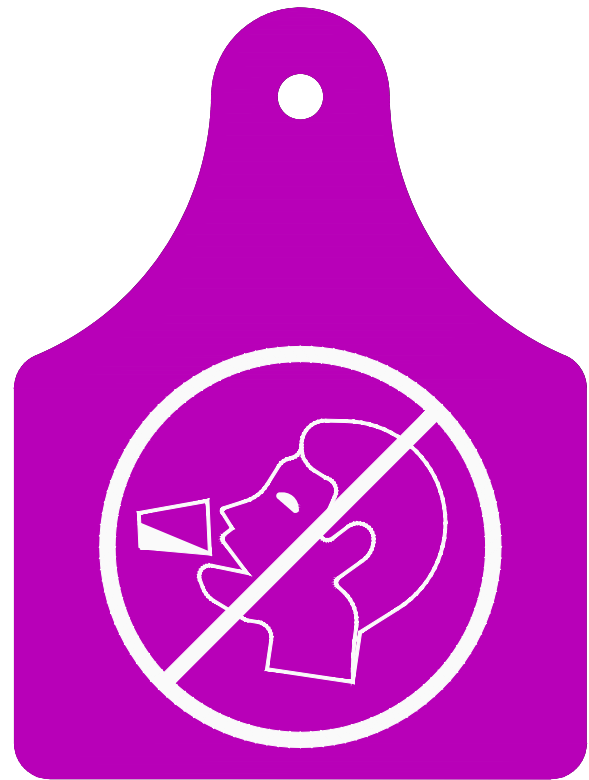
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
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PARAG KALARIA R.C.E. 83927 DATE

RECYCLED WATER SIGN
SPECIFICATIONS



STD. DWG. NO.
RW-2



ACTUAL SIZE
WHEN PRINTED ON 8.5" X 11" PAPER

SPECIFICATIONS:

1. THE TAG SHALL BE WEATHERPROOF PLASTIC 3"x4", RECYCLED WATER PURPLE COLOR WITH PERMANENT BLACK STAMPED LETTERING.
2. ADDITIONAL NUMBERING, SYMBOLS OR WORDING MAY BE USED WITH PRIOR WRITTEN APPROVAL. HOWEVER, THE ABOVE WORDING AND SYMBOL MUST BE USED.
3. THE TAG SHOULD BE ATTACHED TO THE VALVE STEM OR SOLENOID WIRE DIRECTLY, OR USING SELF-LOCKING PLASTIC TIE.

REVISION	BY	APPR	DATE	 ELSINORE VALLEY MUNICIPAL WATER DISTRICT	RECYCLED WATER VALVE TAG SPECIFICATION	STD. DWG. NO.
						 PARAG KALARIA R.C.E. 83927 DATE

In Order to
Conserve Water ...

RECYCLED WATER IRRIGATION

DO NOT
DRINK



NO TOME
EL AGUA

WASH HANDS AFTER CONTACTING
LAVESE SUS MANOS DESPUES DE USAR

SPECIFICATIONS

SIZE: 18"x18" WITH STANDARD RADIUS CORNERS.

MATERIAL: 0.063 ALUMINUM WITH 3M ENG. GRADE REFLECTIVE SHEETING
AND ANTI-GRAFFITI PROTECTIVE COATING.

COLOR: PURPLE WITH WHITE LETTERS AND BLACK SYMBOL.

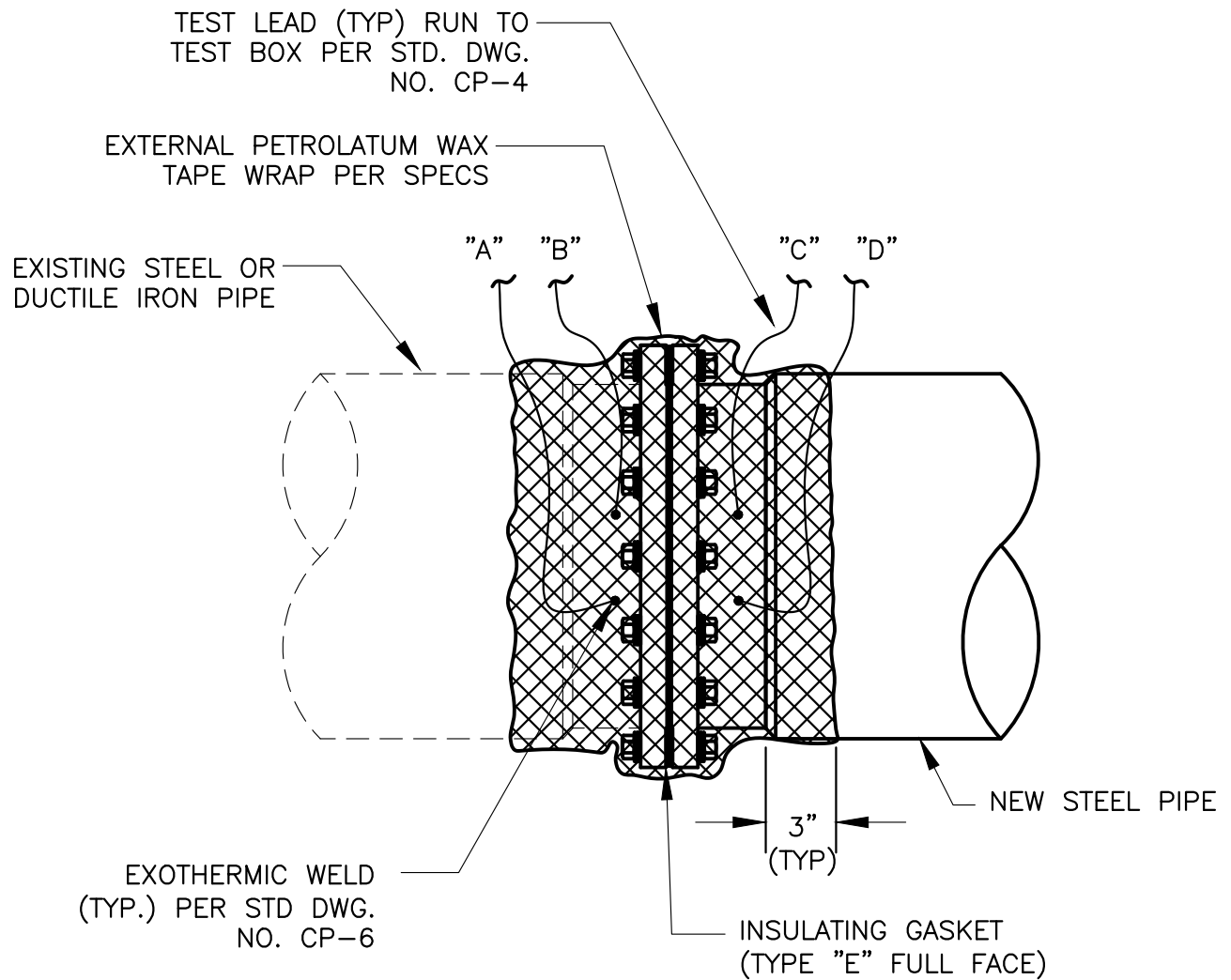
PLACEMENT: INSTALL AT A MINIMUM OF 7' FROM BOTTOM OF SIGN TO GRADE.
INSTALL USING 2" SQ. METAL POSTS OR ATTACH TO LIGHT POSTS.
FOLLOW ALL LOCAL CODES FOR SIGN PLACEMENT AND INSTALLATION.

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RECYCLED WATER SIGN
SPECIFICATIONS

STD. DWG. NO.
RW-4



NOTES:

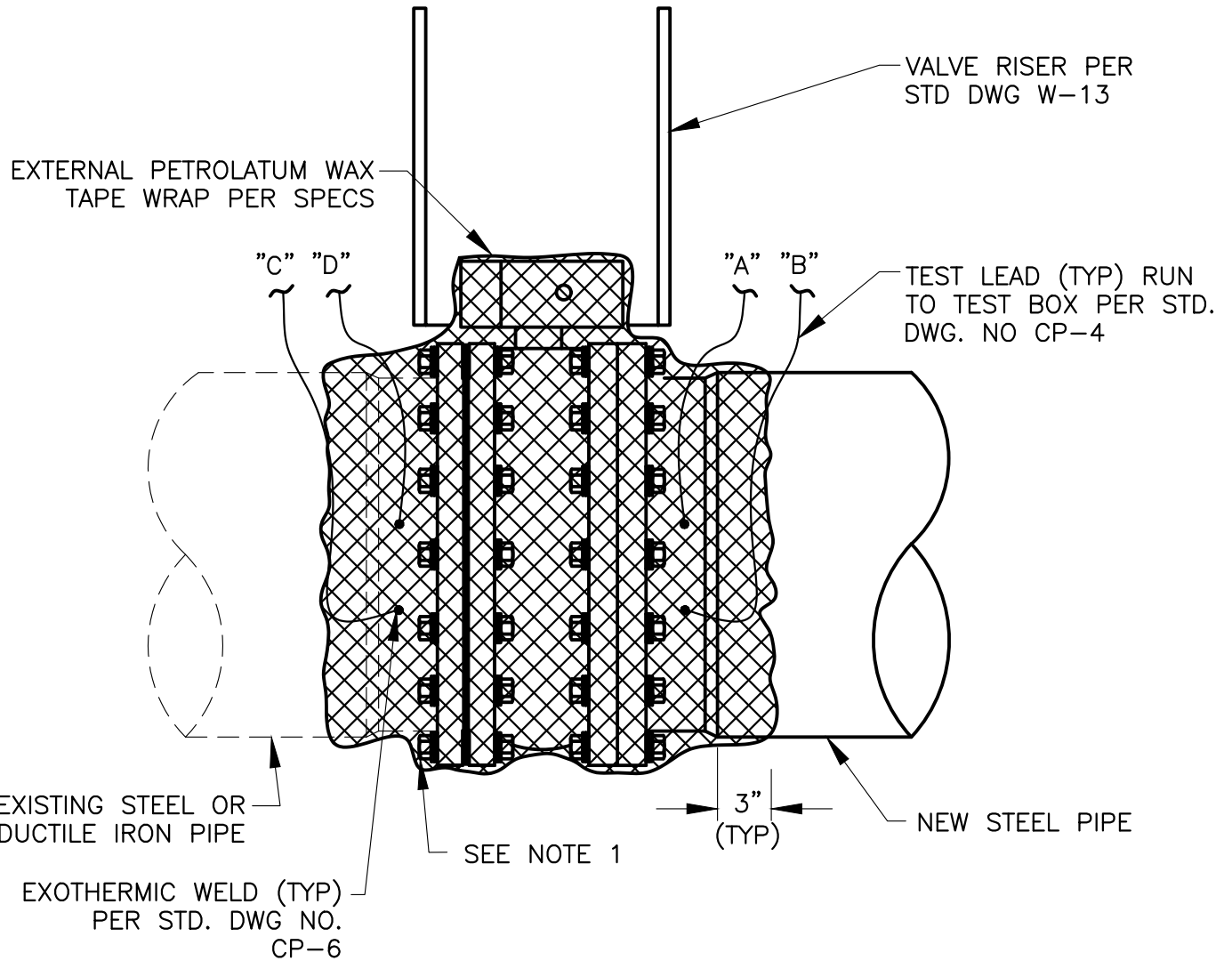
1. FULL LENGTH INSULATING SLEEVES REQUIRED AT ALL THRU-FLANGE BOLTS OR STUDS. HALF LENGTH SLEEVES REQUIRED AT THREADED BOLT HOLES AT VALVE BONNET AND BASE.
2. NO TEST STATION REQUIRED ON BLOW-OFF INSULATORS.

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BURIED INSULATING FLANGE

STD. DWG. NO.
CP-1



NOTES:

1. FULL LENGTH INSULATING SLEEVES REQUIRED AT ALL THRU-FLANGE BOLTS OR STUDS. HALF LENGTH SLEEVES REQUIRED AT THREADED BOLT HOLES AT VALVE BONNET AND BASE.
2. NO TEST STATION REQUIRED ON BLOW-OFF INSULATORS.

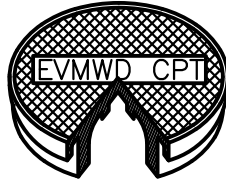
REVISION	BY	APPR	DATE

ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

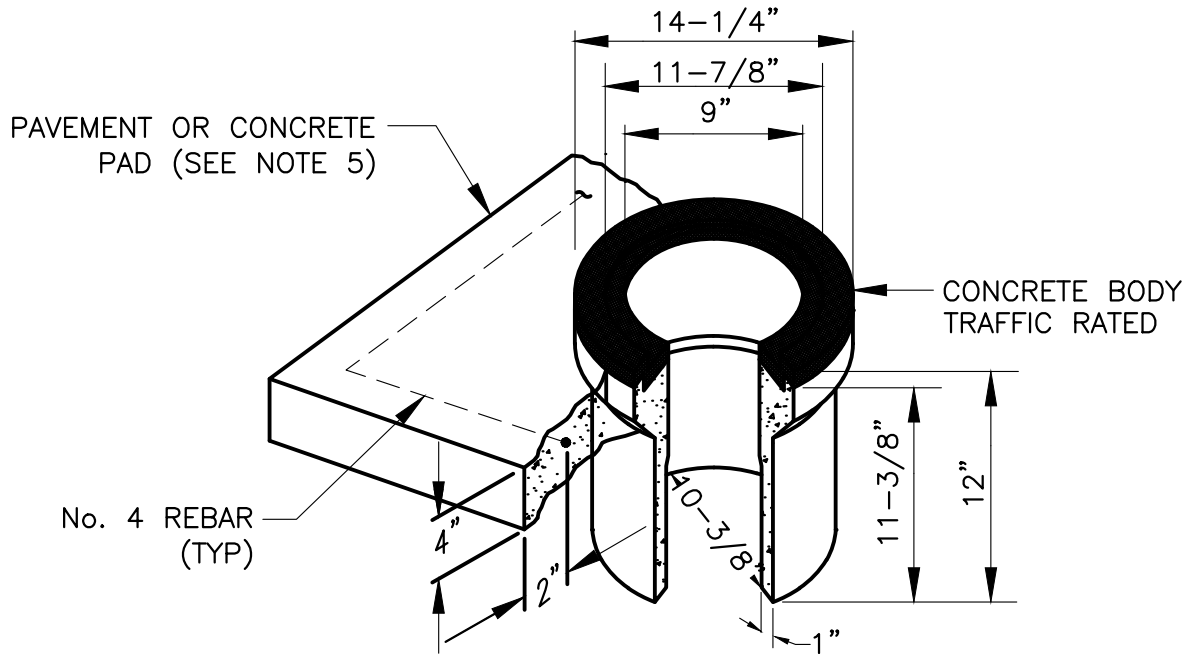
Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

BURIED INSULATING FLANGE AT VALVE

STD. DWG. NO.
CP-2



CAST IRON TRAFFIC COVER
 MARKED "EVMWD CPT"
 (WEIGHT=10 LBS.)



NOTES:

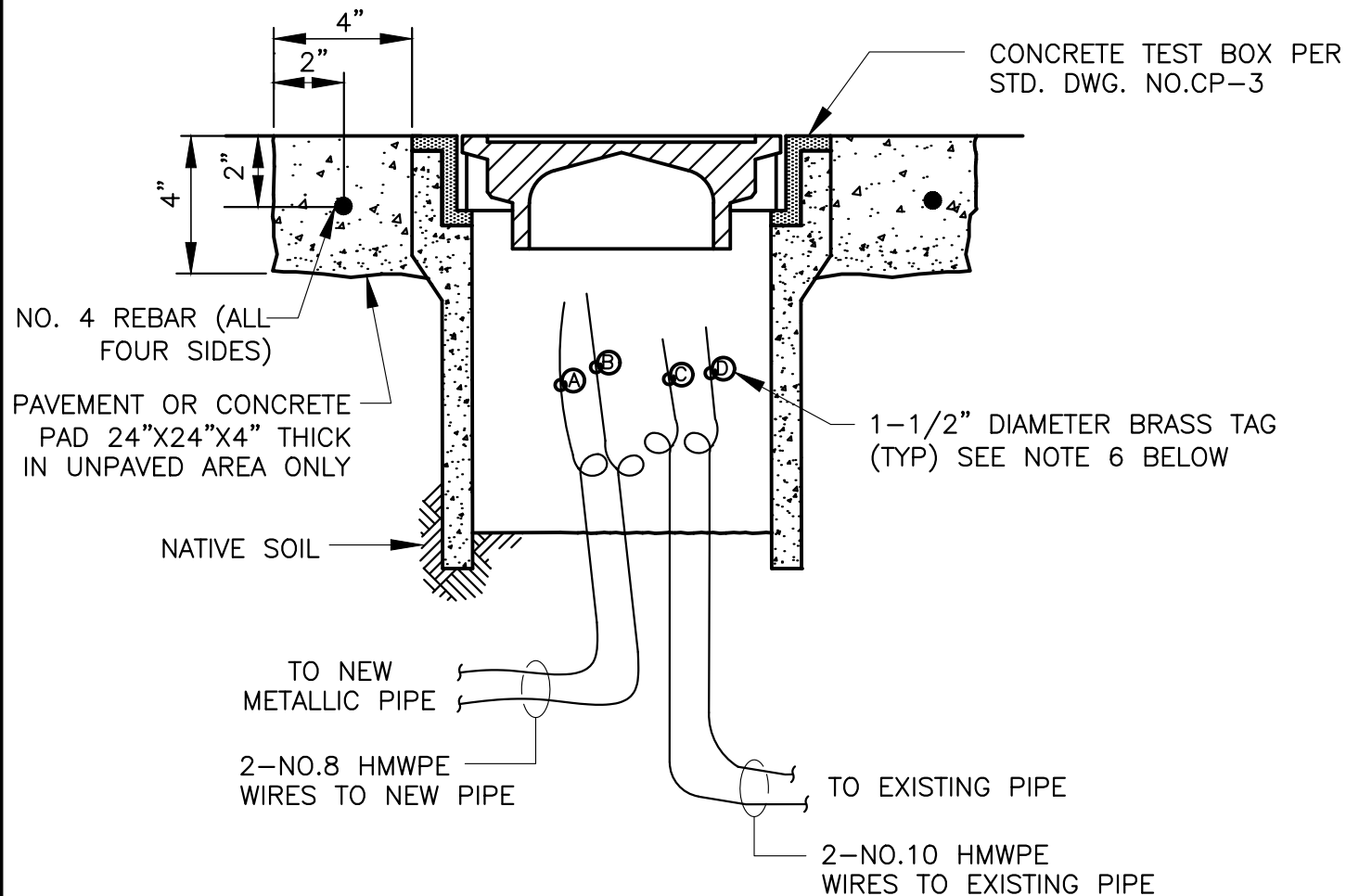
1. CONCRETE BODY, H-20 TRAFFIC RATED-CHRISTY NO.G5.
2. ALL WIRES SHALL HAVE 18" MIN. SLACK IN BOX.
3. BOTTOM OF TEST BOX SHALL BE NATIVE SOIL. DO NOT PLACE ROCK, GRAVEL OR SAND IN TEST BOX.
4. TEST BOX SHALL BE LOCATED BEHIND SIDEWALK. IF NO SIDEWALK EXISTS, THEN INSTALL BEHIND THE CURB.
5. PROVIDE 24"X24"X4" THICK REINFORCED SQUARE CONCRETE PAD AROUND TEST BOXES AT UNPAVED SITES.

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AT-GRADE TEST BOX

STD. DWG. NO.
CP-3



NOTES:

1. TOP OF TEST BOX SHALL BE SET FLUSH WITH GRADE.
2. ALL WIRES SHALL HAVE 18" MIN. SLACK IN BOX.
3. BOTTOM OF TEST BOX SHALL BE NATIVE SOIL. DO NOT PLACE ROCK, GRAVEL, OR SAND IN TEST BOX.
4. TEST BOX SHALL BE LOCATED BEHIND SIDEWALK. IF NO SIDEWALK EXISTS, THEN INSTALL BEHIND THE CURB..
5. PROVIDE 24"x24"x4" THICK REINFORCED SQUARE CONCRETE PAD AROUND TEST BOXES AT UNPAVED SITES.
6. BRASS TAGS SHALL BE STAMPED WITH 1/4" HIGH CHARACTERS AND SHALL IDENTIFY PIPE SIZE, MATERIAL, SERVICE AND DIRECTION.

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 MUNICIPAL WATER DISTRICT
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**INSULATING FLANGE
 TEST STATION**

STD. DWG. NO.
CP-4

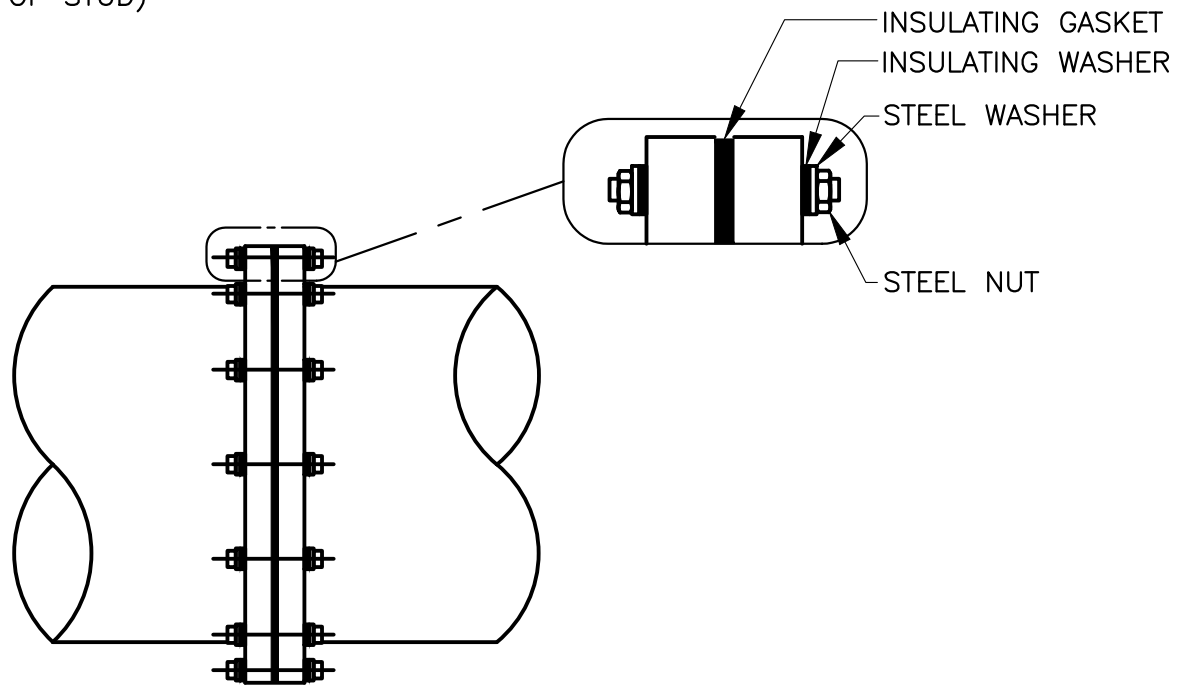
INSULATING SLEEVE (FULL WIDTH OF MATED FLANGES – SEE NOTE 1)

STEEL NUT (2 EA. TYP.)

STEEL WASHER (BOTH ENDS OF STUD)

INSULATING WASHER (BOTH ENDS OF STUD)

STEEL THREADED STUD



INSULATING GASKET

INSULATING WASHER

STEEL WASHER

STEEL NUT

NOTES:

1. USE HALF WIDTH SLEEVES AT THREADED FLANGE BOLTS
2. INSULATING MATERIALS:
 - GASKET– 12” AND GREATER–TYPE “E” FULLFACED NEOPRENE WITH RECTANGULAR NITRILE OR VITON–O–RING SEAL. (PSI LINEBACKER OR EQUAL).
 - 12” OR LESS–TYPE “E” FULLFACED NEOPRENE FACED PHENOLIC
 - SLEEVE– 1/32–INCH THICK, FULL LENGTH TUBE, LAMINATED G–10 GLASS
 - WASHER– 1/8–INCH THICK LAMINATED G–10 GLASS.
3. ALIGN FLANGE PROPERLY AND FOLLOW GASKET MANUFACTURER BOLT TIGHTENING SEQUENCE INSTRUCTIONS.
4. DO NOT PAINT OUTER SURFACE OF FLANGE WITH METALLIC PIGMENTED OR CONDUCTIVE PAINTS.
5. TEST MATED FLANGE WITH GAS ELECTRONICS MODEL 601 INSULATION CHECKER (OR EQUIVALENT). PRIOR TO ACCEPTANCE. SEE STD. SPEC. 15310.

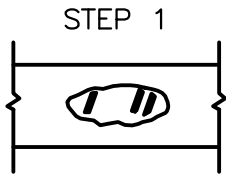
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MUNICIPAL WATER DISTRICT

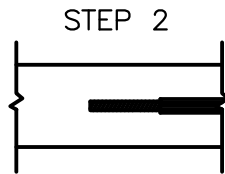
Parag Kalaria
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**INSULATING FLANGE KIT
MATERIALS**

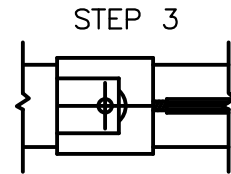
STD. DWG. NO.
CP-5



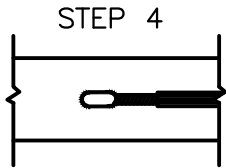
FILE SURFACE TO BRIGHT METAL AND CLEAN



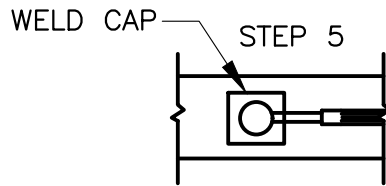
STRIP INSULATION FROM WIRE



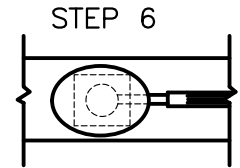
HOLD WELDER FIRMLY WITH OPENING AWAY FROM OPERATOR AND IGNITE STARTING POWDER



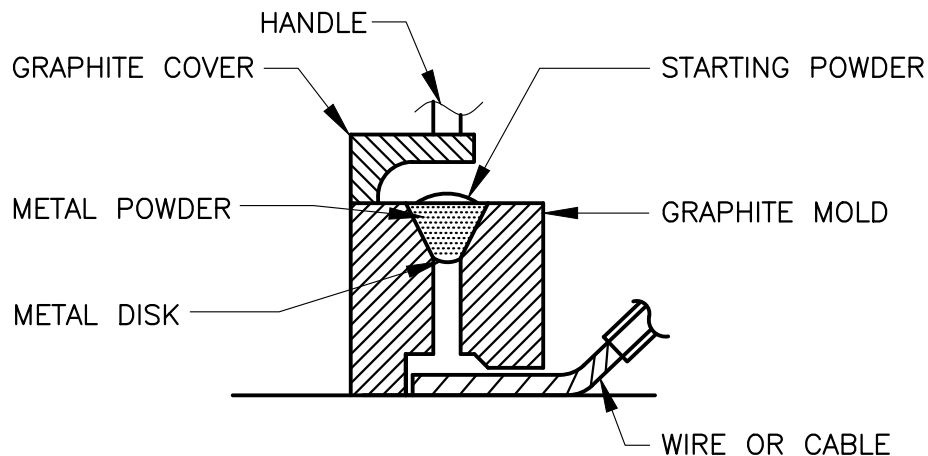
REMOVE SLAG FROM CONNECTION (SEE NOTE 4)



APPLY 2 COATS PRIMER AND COVER CONNECTION WITH PRE-FORMED WELD CAP



COVER COMPOUND WITH BITUMINOUS COMPOUND



WELDER SECTION A-A

NOTES:

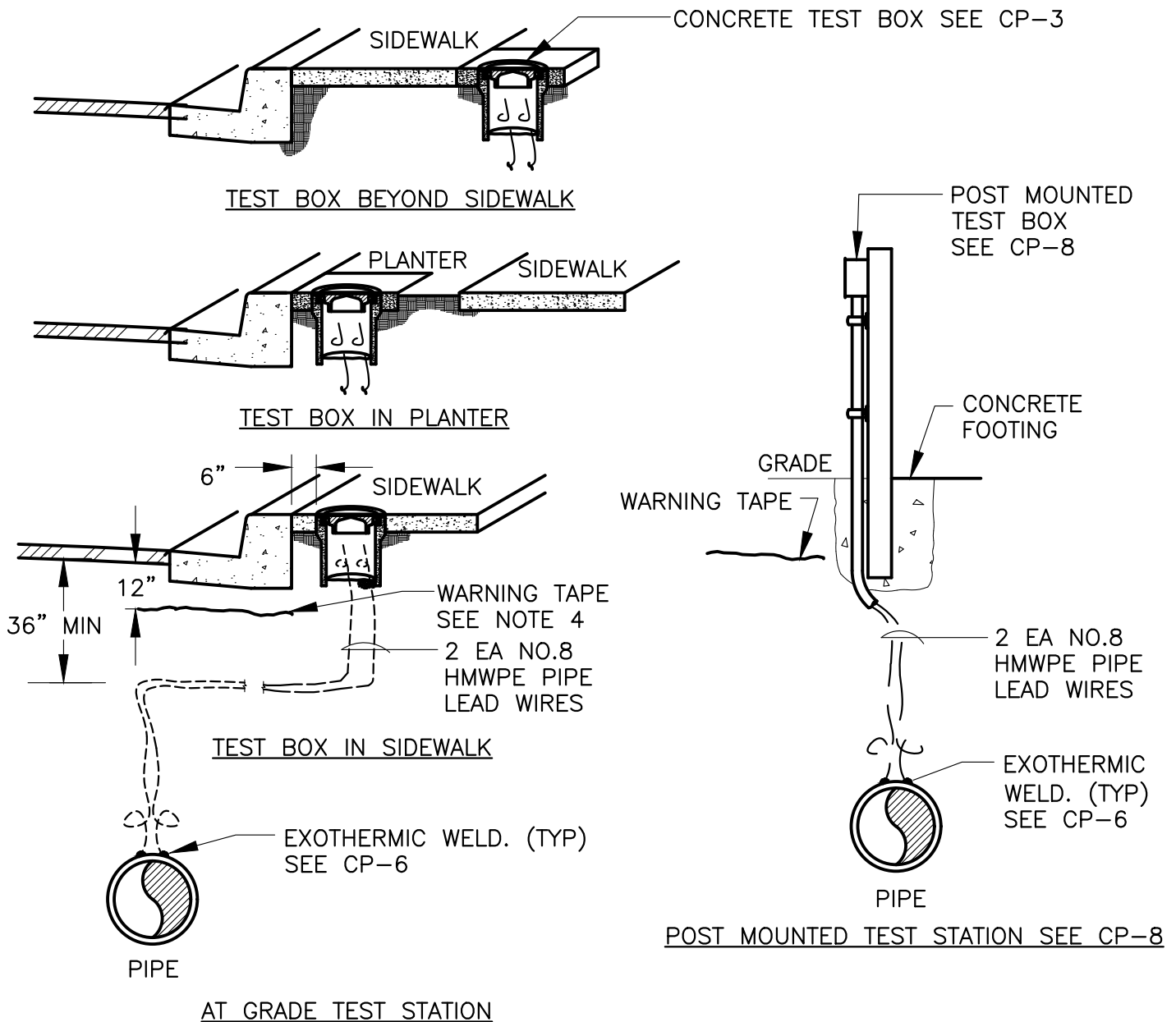
1. WELDER SHOWN IS FOR HORIZONTAL SURFACES. FOR VERTICAL SURFACES, SIDEWELDER IS REQUIRED.
2. ATTACH ONE (1) WIRE PER WELD. ALL WIRE WELDS SHALL BE 3" APART MINIMUM.
3. ALL EXPOSED METAL (STRUCTURE, WIRE AND WELD) SHALL BE COVERED WITH TWO (2) COATS OF PRIMER AND AN ELASTOMERIC WELD CAP, THEN OVER-COATED WITH BITUMINOUS COMPOUND OVERLAPPING PIPE COATING BY 2" MINIMUM.
4. ALL WELDS SHALL BE TESTED BY STRIKING THE WELD WITH A TWO (2) POUND HAMMER WHILE PULLING FIRMLY ON THE WIRE. ANY WELDS BROKEN OR LOOSENED SHALL BE RE-WELDED AND RE-TESTED. THE SURFACE MUST BE RE-GROUND AND CLEAN BEFORE RE-WELDING. ALL WELD SLAG SHALL BE REMOVED FROM THE WELD.

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EXOTHERMIC WELD

STD. DWG. NO.
CP-6



NOTES:

1. PLACE AT GRADE CTS AT ONE OF THE THREE LOCATIONS SHOWN PER DRAWINGS OR PER DIRECTION FROM DISTRICT'S REPRESENTATIVE. FOR ROAD WITHOUT CURB PLACE AT-GRADE CTS BEYOND PAVEMENT OUT OF TRAFFIC LANES BUT WITHIN EASEMENT.
2. USE POST-MOUNTED CTS IN UNDEVELOPED SITES. PLACE DIRECTLY OVER PIPE WHERE POSSIBLE, OR AS DIRECTED BY DISTRICT'S REPRESENTATIVE.
3. PROVIDE SAND BEDDING AND BACKFILL IN WIRE TRENCHES. SEE STD SPEC.
4. WARNING TAPE SHALL BE 6" WIDE, 4 MIL. THICK INERT PLASTIC WARNING TAPE PRINTED WITH "CAUTION: CATHODIC PROTECTION CABLE BELOW"
5. USE SIMILAR MOUNTING FOR MULTI-WIRE CTS.

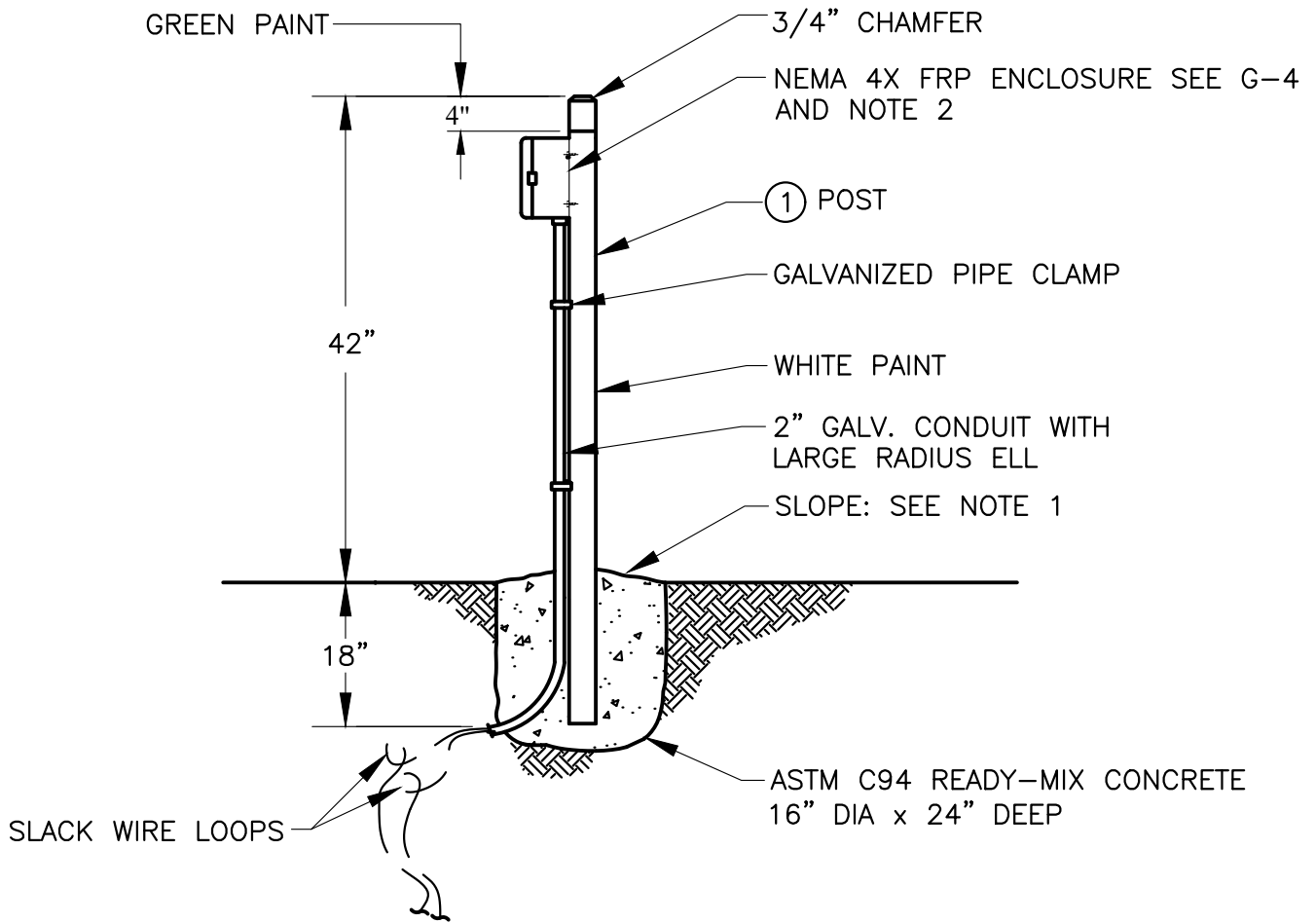
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**2-WIRE CATHODIC TEST STATION
(CTS)**


STD. DWG. NO.
CP-7

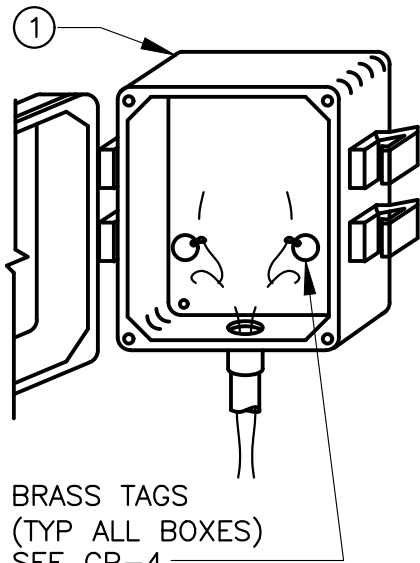


NOTES:

1. SLOPE CONCRETE SLIGHTLY TO PREVENT WATER FROM POOLING NEXT TO POST.
2. ATTACH FRP BOX TO POST WITH 1-1/2" NO. 10 WOOD SCREWS.

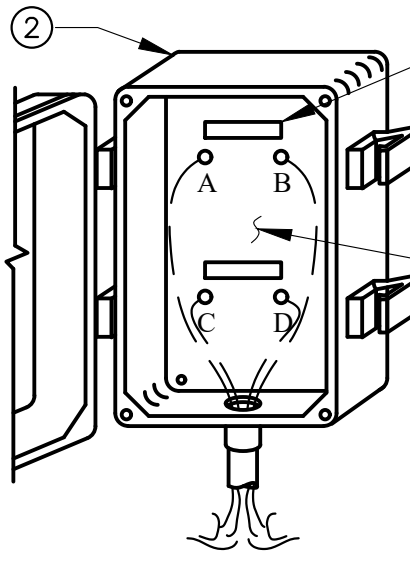
ITEM	DESCRIPTION	SPEC/DWG
1	CONSTRUCTION HEART REDWOOD 4"x4"x5' LONG	

REVISION	BY	APPR	DATE		STD. DWG. NO.	
				 <p>ELSINORE VALLEY MUNICIPAL WATER DISTRICT</p> <p><i>Parag Kalaria</i> 06/22/2023 PARAG KALARIA R.C.E. 83927 DATE</p>	<p style="font-size: 24px; font-weight: bold;">POST MOUNTED TEST BOX</p>	<p style="font-size: 24px; font-weight: bold;">CP-8</p>



BRASS TAGS
(TYP ALL BOXES)
SEE CP-4

2-WIRE CTS

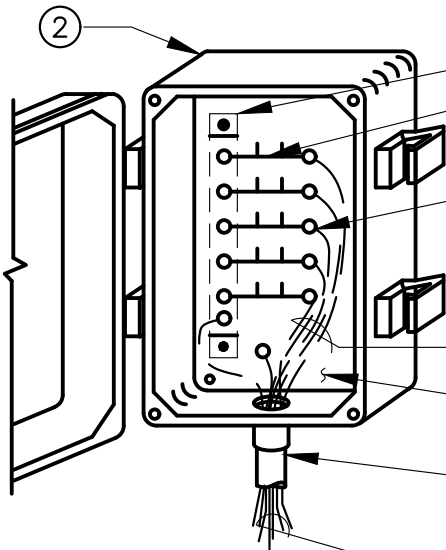


DYMO LABEL W/PIPE SIZE,
MATL. AND DIRECTION
(EXAMPLE:
24" CML&C NORTH)

BACK PANEL
(OFFSET)

4-WIRE CTS

(2 PIPE INSULATOR OR CASING (CTS))



1/8" X 1" Cu BUS BAR

0.01 OHM SHUNT (TYP.)
(HOLLOWAY TYPE RS)

BRASS LUGS (TYP)

NO. 8 HMWPE ANODE LEADS

BACK PANEL (OFFSET)

2" PVC (TYP)

NO.8 HMWPE PIPE/TEST LEADS (TYP)

1 TO 5 ANODE CTS

NOTES:

1. FIX TO POST WITH 1-1/2" NO.10 WOOD SCREWS SEE G-3.

ITEM	DESCRIPTION	SPEC/DWG
1	HOFFMAN 4X FRP ENCLOSURE (A-645JFGQRR) 6"x4"x5"	
2	HOFFMAN 4X FRP ENCLOSURE (A-1287JFGQRR) 12"x8"x7"	

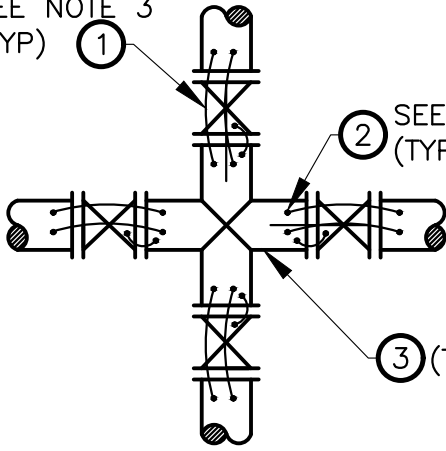
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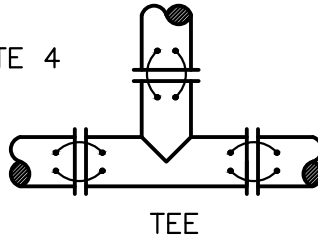
**WIRING IN
POST-MOUNTED TEST BOX**

STD. DWG. NO.
CP-9

SEE NOTE 3
(TYP) ①

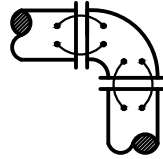


SEE NOTE 4
(TYP) ②



TEE

③ (TYP)

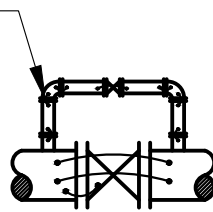


BEND



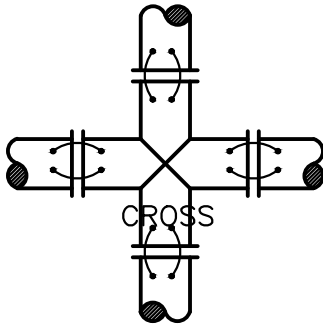
ADAPTER

SEE NOTE 5



VALVE WITH BYPASS

VALVE CROSSING



CROSS

MATERIAL LIST:

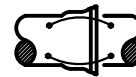
- ① BOND WIRE: AWG #4 STRANDED COPPER WITH HMWPE INSULATION
- ② EXOTHERMIC WELD OR PIN BRAZE PER CP-6
- ③ METALLIC PIPE



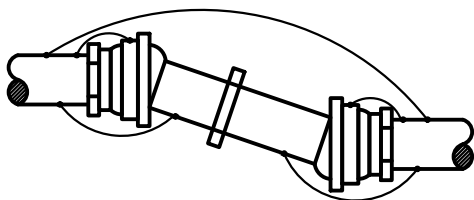
FLANGE



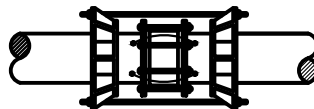
VICTAULIC COUPLING



PUSH ON RUBBER GASKET PIPE JOINT



FLEXIBLE JOINT



RESTRAINED SLEEVE COUPLING



SLEEVE COUPLING

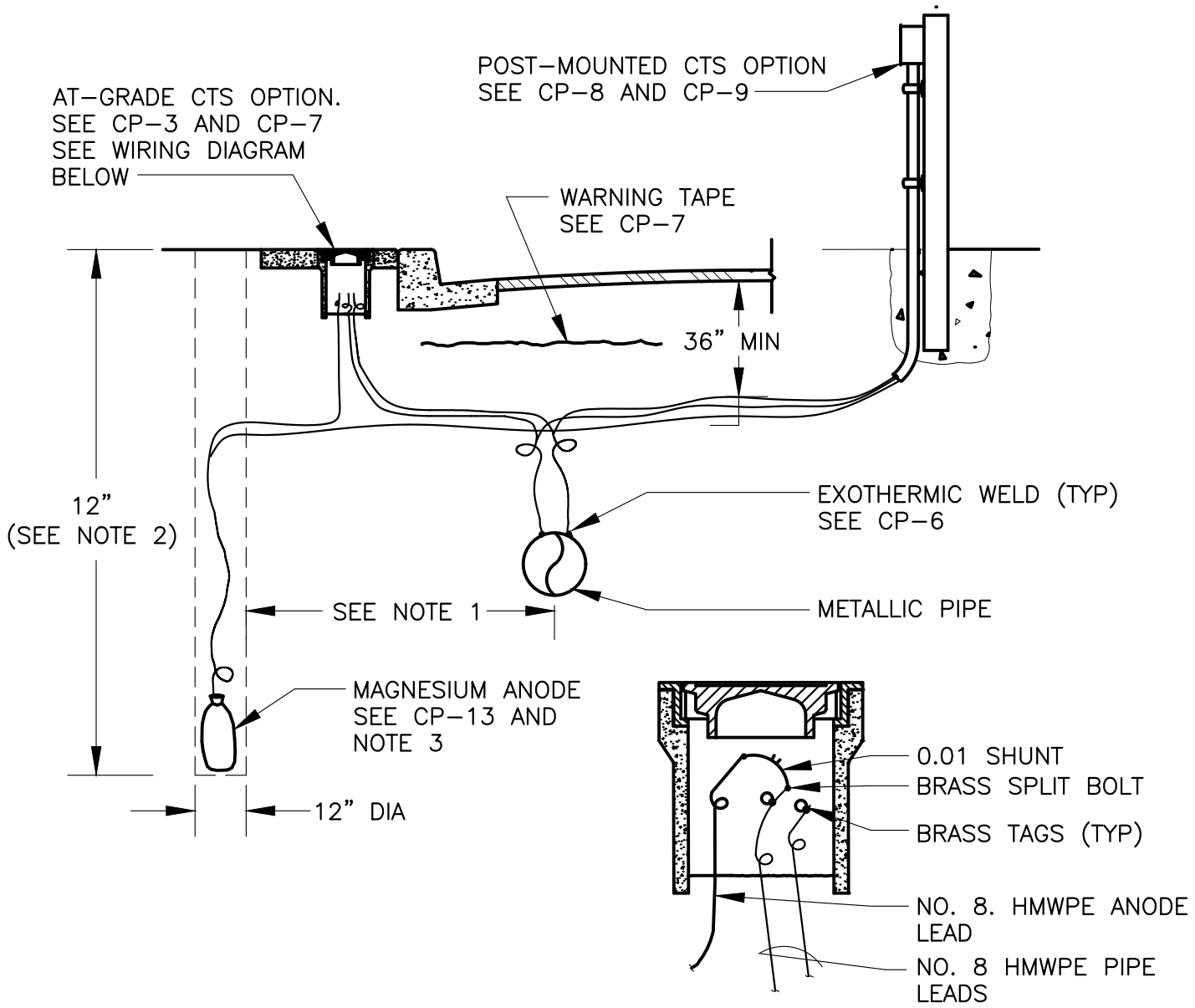
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MUNICIPAL WATER DISTRICT

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JOINT BONDING OF NON-WELDED PIPE JOINTS & FITTINGS

STD. DWG. NO.
CP-10



AT-GRADE CTS WIRING
(SEE CP-7 AND CP-3)

NOTES:

1. HORIZONTAL ANODE DISTANCE FROM PIPE SHALL BE MAXIMUM ALLOWABLE WITHIN EVMWD RIGHT-OF-WAY OR AS INDICATED IN THE DRAWINGS. DO NOT INSTALL ANODE SUCH THAT A FOREIGN METALLIC PIPELINE EXISTS BETWEEN ANODE AND PIPE. MINIMUM OFFSET IS 8' UNLESS OTHERWISE SPECIFIED ON DRAWINGS.
2. DEPTH IS 12' UNLESS OTHERWISE INDICATED ON DRAWINGS.
3. LOCATE ANODE AND TEST BOX PER DRAWINGS OR DISTRICT REPRESENTATIVE'S DIRECTION.
4. INSTALL EITHER AT-GRADE CTS OR POST-MOUNTED CTS AS DEFINED ON DRAWINGS.

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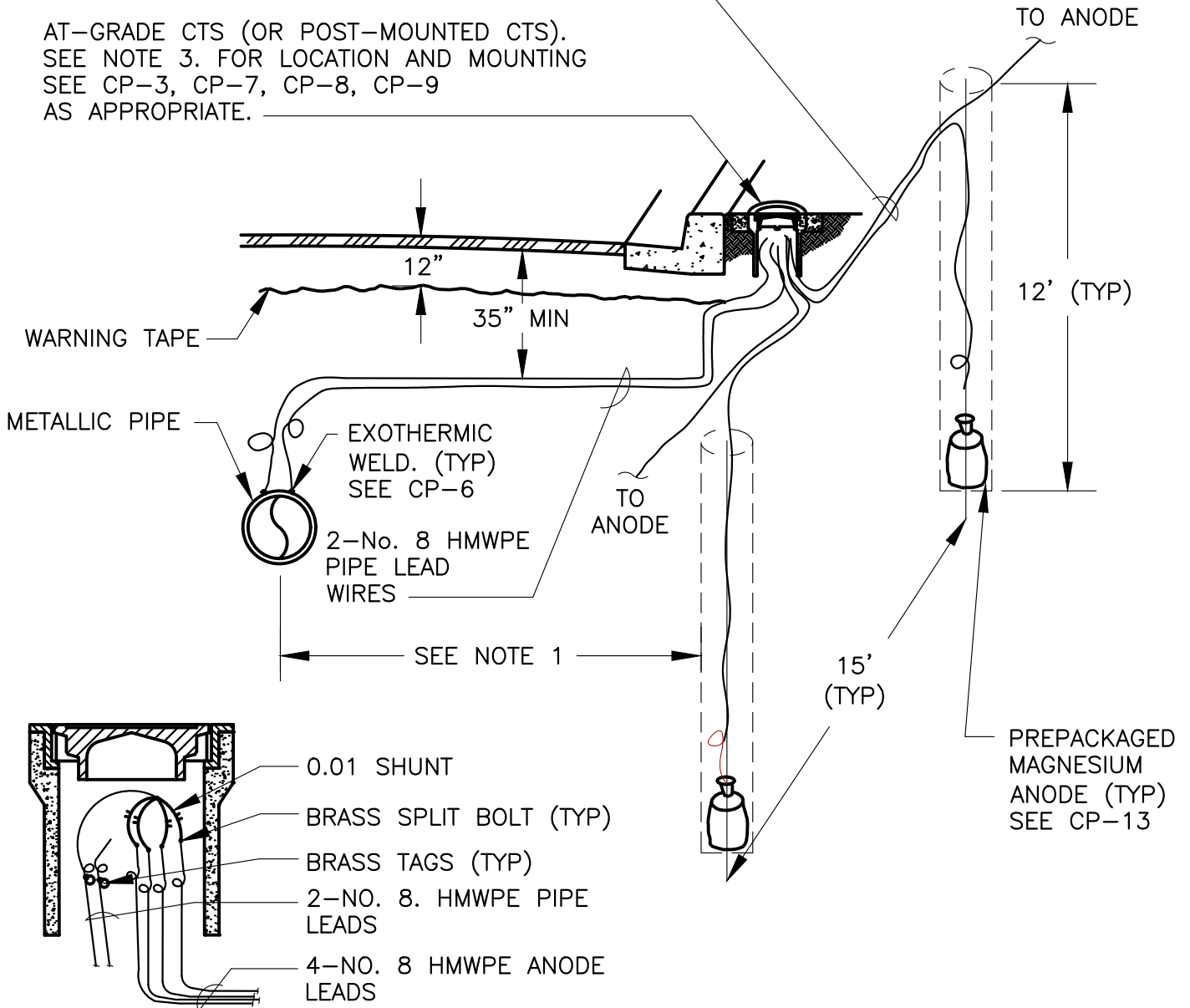
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SINGLE ANODE INSTALLATION

STD. DWG. NO.
CP-11

NO.8 HMWPE ANODE LEAD WIRES

AT-GRADE CTS (OR POST-MOUNTED CTS).
 SEE NOTE 3. FOR LOCATION AND MOUNTING
 SEE CP-3, CP-7, CP-8, CP-9
 AS APPROPRIATE.



AT-GRADE CTS WIRING
 4 ANODES (SEE NOTE 2)

NOTES:

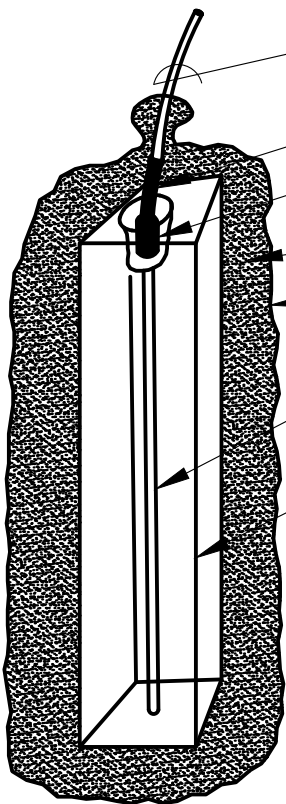
1. HORIZONTAL ANODE DISTANCE FROM PIPE SHALL BE MAXIMUM ALLOWABLE WITHIN EVWWD RIGHT-OF-WAY OR AS INDICATED IN THE DRAWINGS. DO NOT INSTALL ANODE SUCH THAT A FOREIGN METALLIC PIPELINE EXISTS BETWEEN ANODE AND PIPE. MINIMUM OFFSET IS 8' UNLESS OTHERWISE SPECIFIED ON DRAWINGS.
2. WIRING FOR 4 ANODES SHOWN. USE SIMILAR WIRING FOR 2 TO 5 ANODES.
3. INSTALL EITHER AT-GRADE CTS OR POST-MOUNTED CTS AS DEFINED ON DRAWINGS.

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MULTIPLE ANODE INSTALLATION

STD. DWG. NO.
 CP-12



- ANODE LEAD NO. 8 AWG WITH HMWPE INSULATION
- HEAT SHRINKABLE SLEEVE
- SILVER SOLDER OR BRAZE CONNECTION
- ANODE BACKFILL. SEE TABLE 1.
- CLOTH BAG
- GALVANIZED STEEL CORE
- MAGNESIUM INGOT. SEE TABLE 2.
17LB, 32LB, OR 48LB AS INDICATED IN DRAWINGS


NOTES:

1. SEE SPEC SECTION 15310 FOR ANODE SOAKING AND INSTALLATION REQUIREMENTS.
2. USE HIGH POTENTIAL ANODES UNLESS STANDARD POTENTIAL ANODES ARE REQUIRED ON DRAWINGS.
3. SEE DRAWINGS FOR ANODE WEIGHT.

TABLE 1		BACKFILL COMPOSITION	
		75% GYPSUM	
		20% BENTONITE	
		5% SODIUM SULFATE	

TABLE 2		MAGNESIUM ANODE ALLOY COMPOSITION	
		HIGH & STANDARD POTENTIALS	
<u>Element</u>	HIGH POTENTIAL <u>Weight %</u>	STANDARD POTENTIAL <u>Weight %</u>	
Al	0.01 Max	5.3 to 6.7	
Mn	0.5 to 1.3	0.15 to 0.70	
Zn	0.002 Max	2.5 to 3.5	
Cu	0.02 Max	0.02 Max	
Ni	0.001 Max	0.002 Max	
Fe	0.03 Max	0.003 Max	
Si	0.05 Max	0.10 Max	
Others	0.05 Max each	0.3 Max	
Mg	Balance	Balance	

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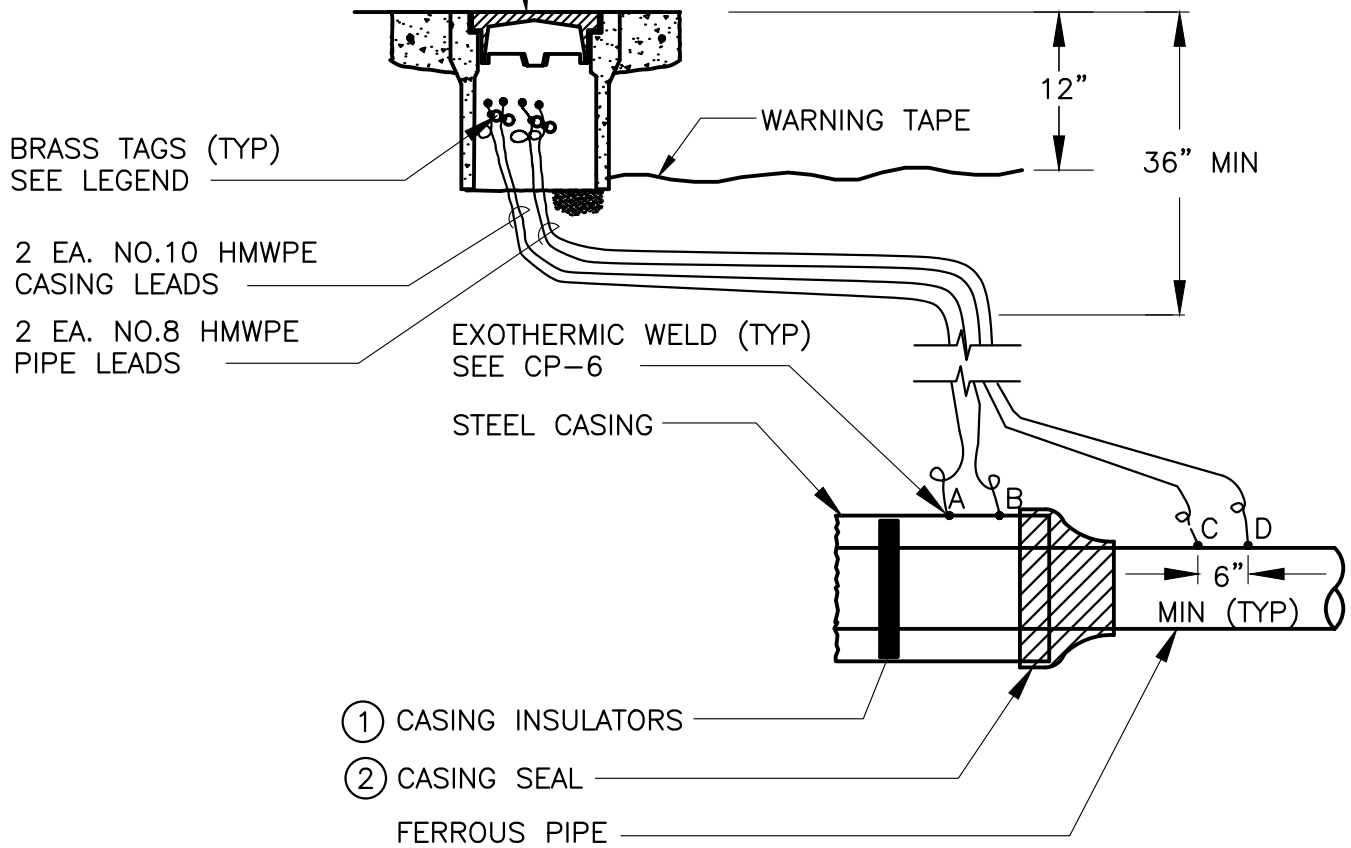
ELSINORE VALLEY
MUNICIPAL WATER DISTRICT

Parag Kalaria
06/22/2023
PARAG KALARIA R.C.E. 83927 DATE

MAGNESIUM ANODE

STD. DWG. NO.
CP-13

AT-GRADE CTS (OR POST MOUNTED CTS).
SEE NOTE 2. FOR LOCATION AND MOUNTING
SEE CP-3, CP-7, CP-8, CP-9 AS APPROPRIATE



- ① CASING INSULATORS
- ② CASING SEAL
- FERROUS PIPE

BRASS TAG LEGEND



WIRE	SIZE	ID STAMP
A	NO. 10 HMWPE	CASING
B	NO. 10 HMWPE	CASING
C	NO. 8 HMWPE	EVMWD, SIZE, SERVICE
D	NO. 8 HMWPE	EVMWD, SIZE, SERVICE

NOTES:

1. PROVIDE ELECTRICAL/METALLIC ISOLATION BETWEEN THE CASING AND THE CARRIER PIPE.
2. INSTALL EITHER AT-GRADE CTS OR POST-MOUNTED CTS AS DEFINED ON DRAWINGS.

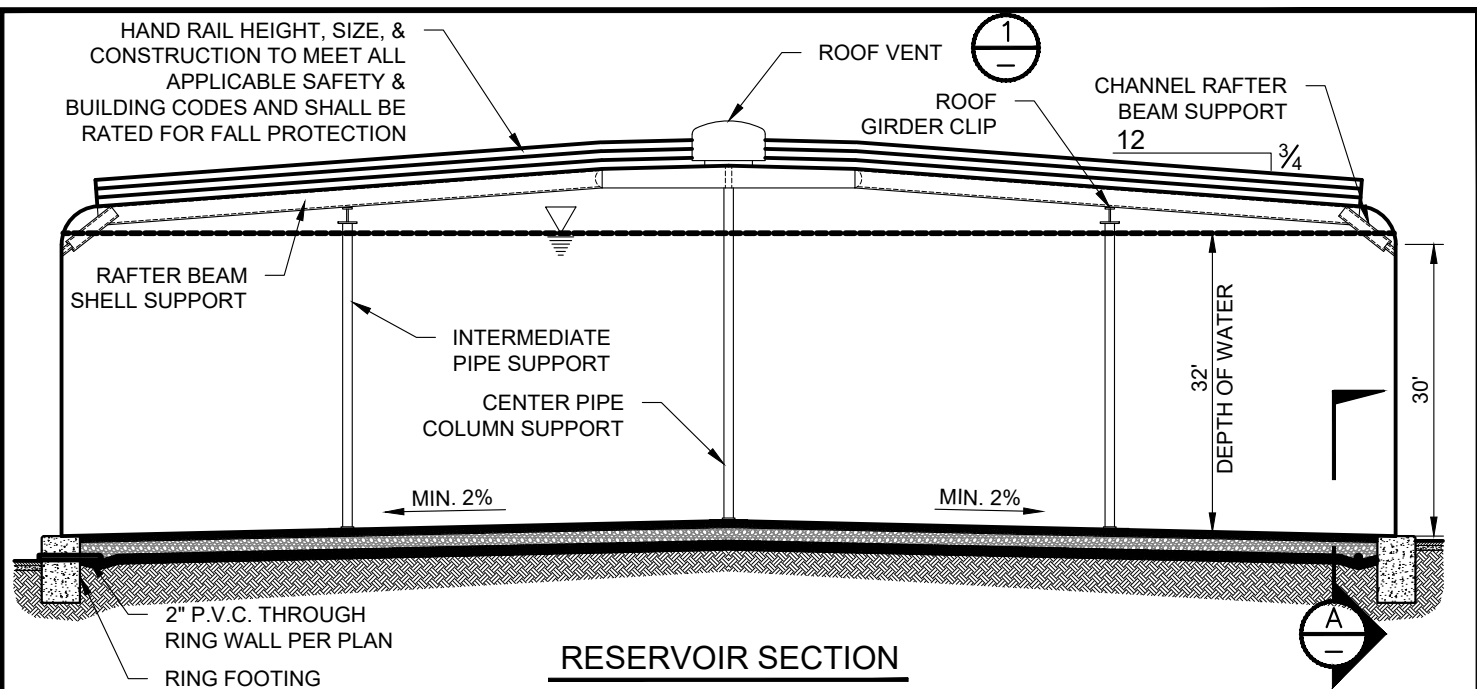
ITEM	DESCRIPTION	SPEC/DWG
1	PSI MODEL A12 G-2 OR EQUAL	
2	HEAT SHRINK OR MECH LINK TYPE	

REVISION	BY	APPR	DATE


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**4-WIRE TEST STATION
FOR PIPE CASING**

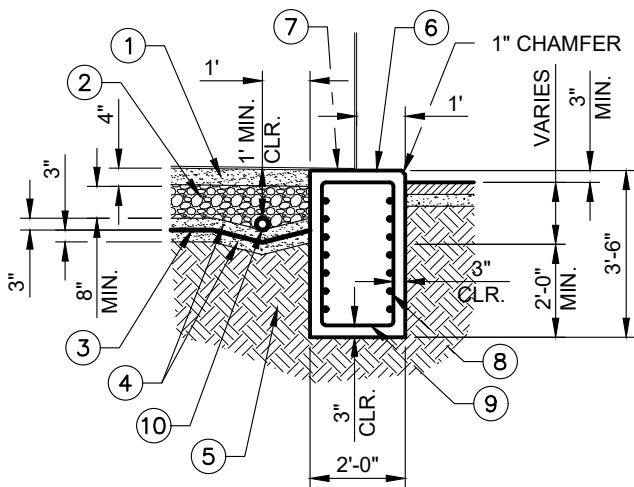
STD. DWG. NO.
CP-14



RESERVOIR SECTION

LIST OF MATERIALS

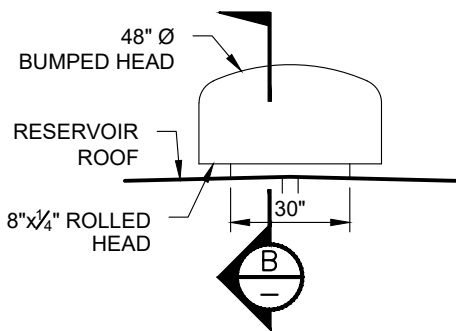
- ① — COMPACTED OIL SAND w/6 - 8 lbs. OF SC-800 LIQUID ASPHALT PER 100 lbs. OF SAND
- ② — 3/8" DRAIN ROCK
- ③ — IMPERMEABLE MEMBRANE (1% MIN. SLOPE TO LEAK DETECTION DRAIN; LAP A MIN. OF 3" ON CONC. FOOTING)
- ④ — SAND (SE 30)
- ⑤ — SELECT GRANULAR MATERIAL PER SOILS ENGINEER RECOMMENDATIONS
- ⑥ — STEEL TROWEL FINISH TOP (TO BE LEVEL WITHIN 1/8" IN ANY 30' & 1/4" OVERALL)
- ⑦ — CONTINUOUS CANE FIBER JOINT FILLER
- ⑧ — #8 BAR (@ EACH FACE; LAP 5' STAGGERED)
- ⑨ — #5 BAR (@ 18" O.C.)
- ⑩ — 2" SCH 40 PVC, PERFORATED AND WRAPPED IN FILTER FABRIC



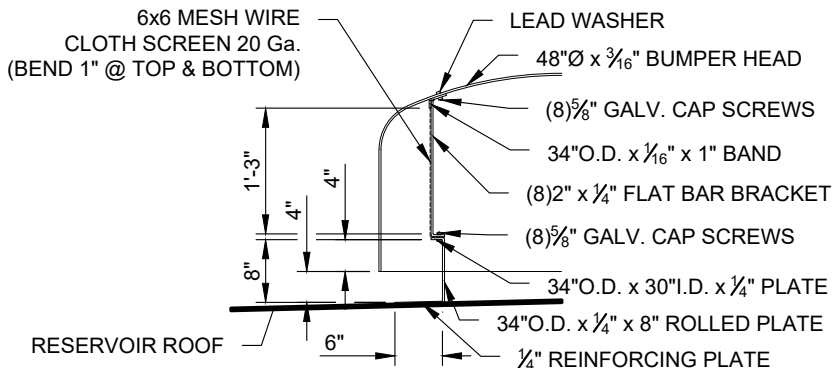
A RING FOOTING SECTION
NOT TO SCALE

NOTES:

1. A COMPLETE SET OF STRUCTURAL DESIGN CALCULATIONS FOR THE TANK AND FOUNDATION SHALL BE PREPARED AND CERTIFIED BY CALIFORNIA REGISTERED CIVIL OR STRUCTURAL ENGINEER AND SHALL BE SUBMITTED TO EVMWD.



1 ROOF VENT
NOT TO SCALE



B ROOF VENT SECTION
NOT TO SCALE

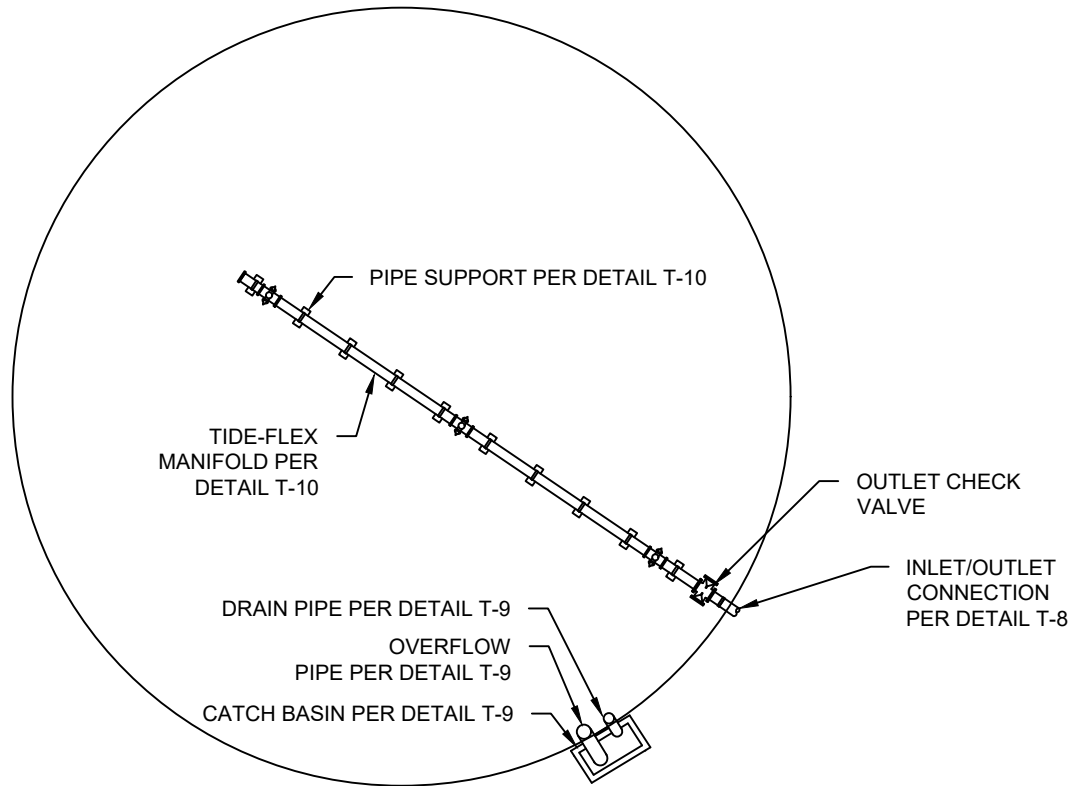
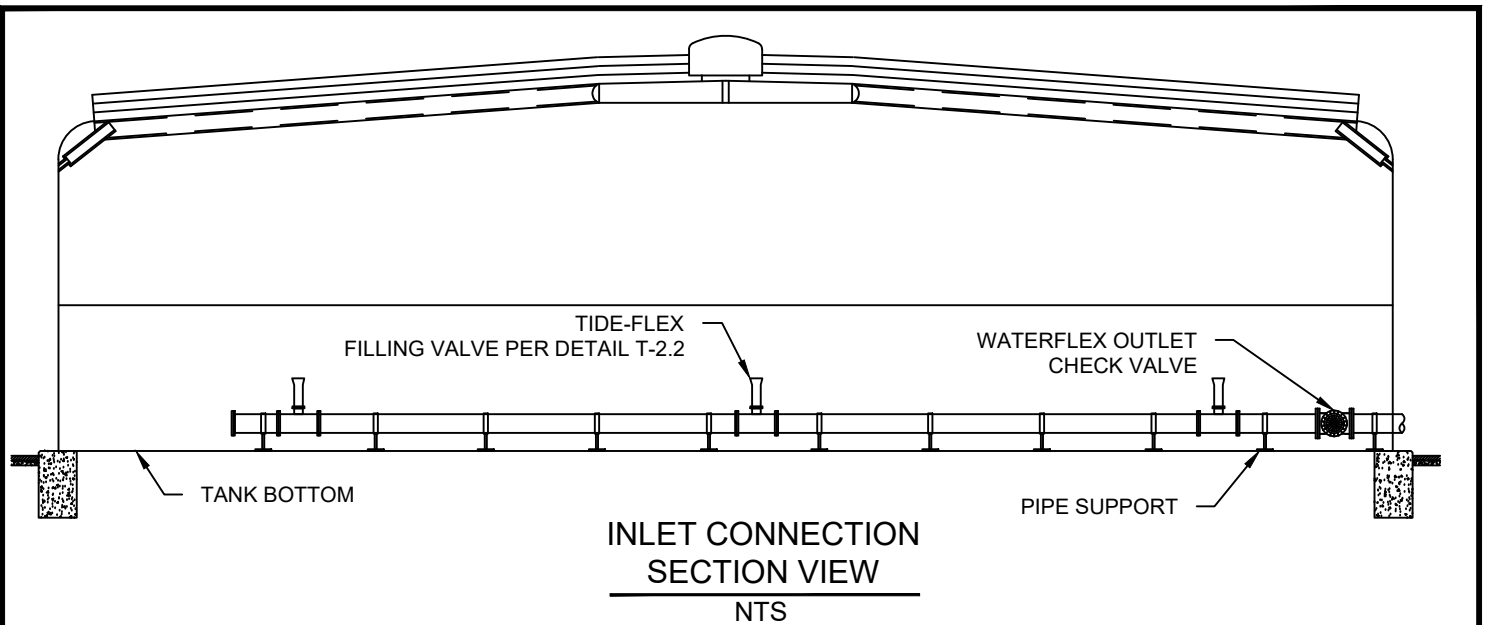
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**WELDED STEEL RESERVOIR
TYPICAL SECTION VIEW**

STD. DWG. NO.

T-1



NOTES:

1. A COMPLETE SET OF DESIGN CALCULATIONS FOR THE TANK AND FOUNDATION INCLUDING PIPE SUPPORTS SHALL BE PREPARED AND CERTIFIED BY CALIFORNIA REGISTERED CIVIL OR STRUCTURAL ENGINEER AND SHALL BE SUBMITTED TO EVMWD.

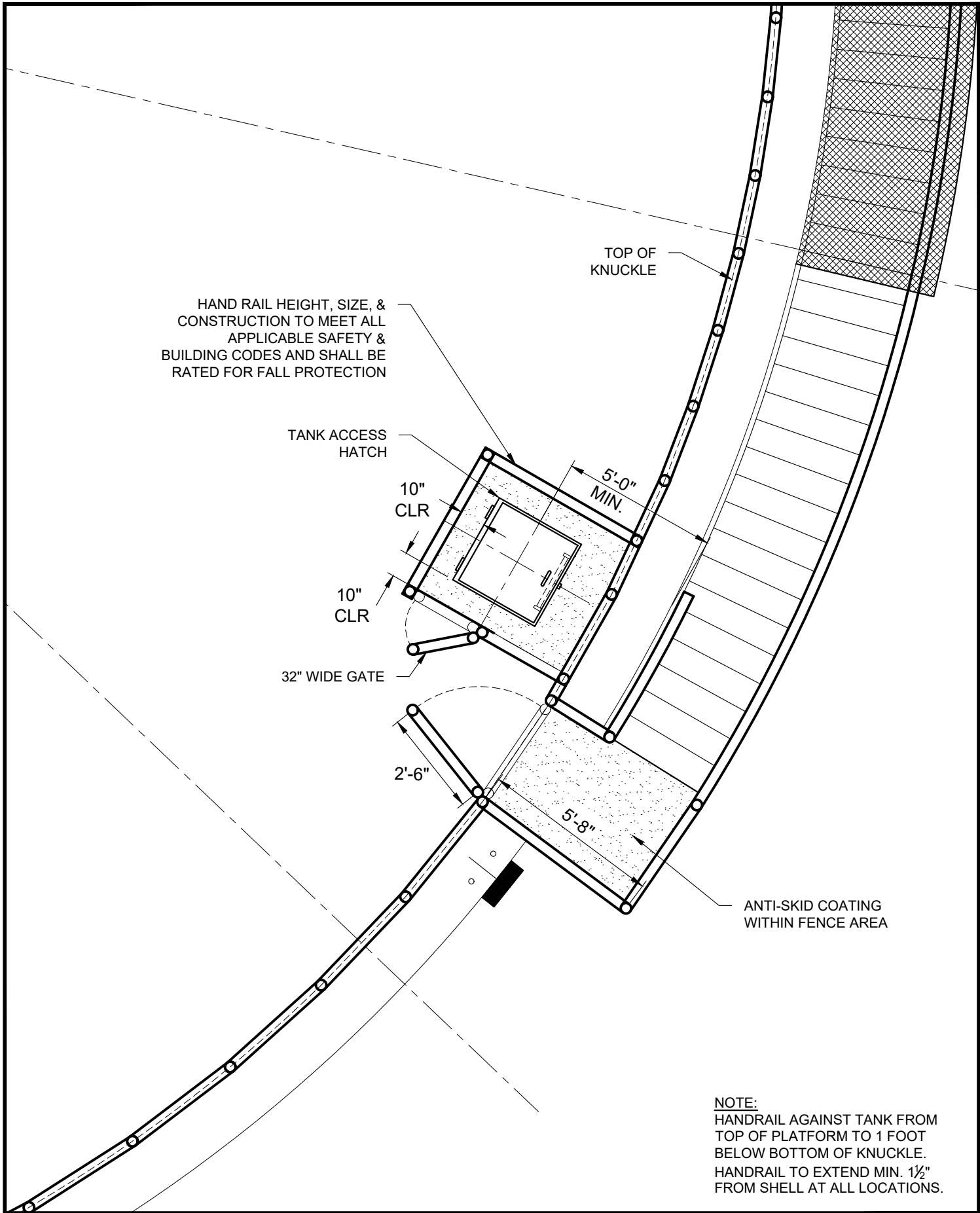
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**WELDED STEEL RESERVOIR
INLET CONNECTION**

STD. DWG. NO.
T-2



HAND RAIL HEIGHT, SIZE, & CONSTRUCTION TO MEET ALL APPLICABLE SAFETY & BUILDING CODES AND SHALL BE RATED FOR FALL PROTECTION

TOP OF KNUCKLE

TANK ACCESS HATCH

10" CLR

5'-0" MIN.

10" CLR

32" WIDE GATE


2'-6"

5'-8"

ANTI-SKID COATING WITHIN FENCE AREA

NOTE:
 HANDRAIL AGAINST TANK FROM TOP OF PLATFORM TO 1 FOOT BELOW BOTTOM OF KNUCKLE.
 HANDRAIL TO EXTEND MIN. 1½" FROM SHELL AT ALL LOCATIONS.

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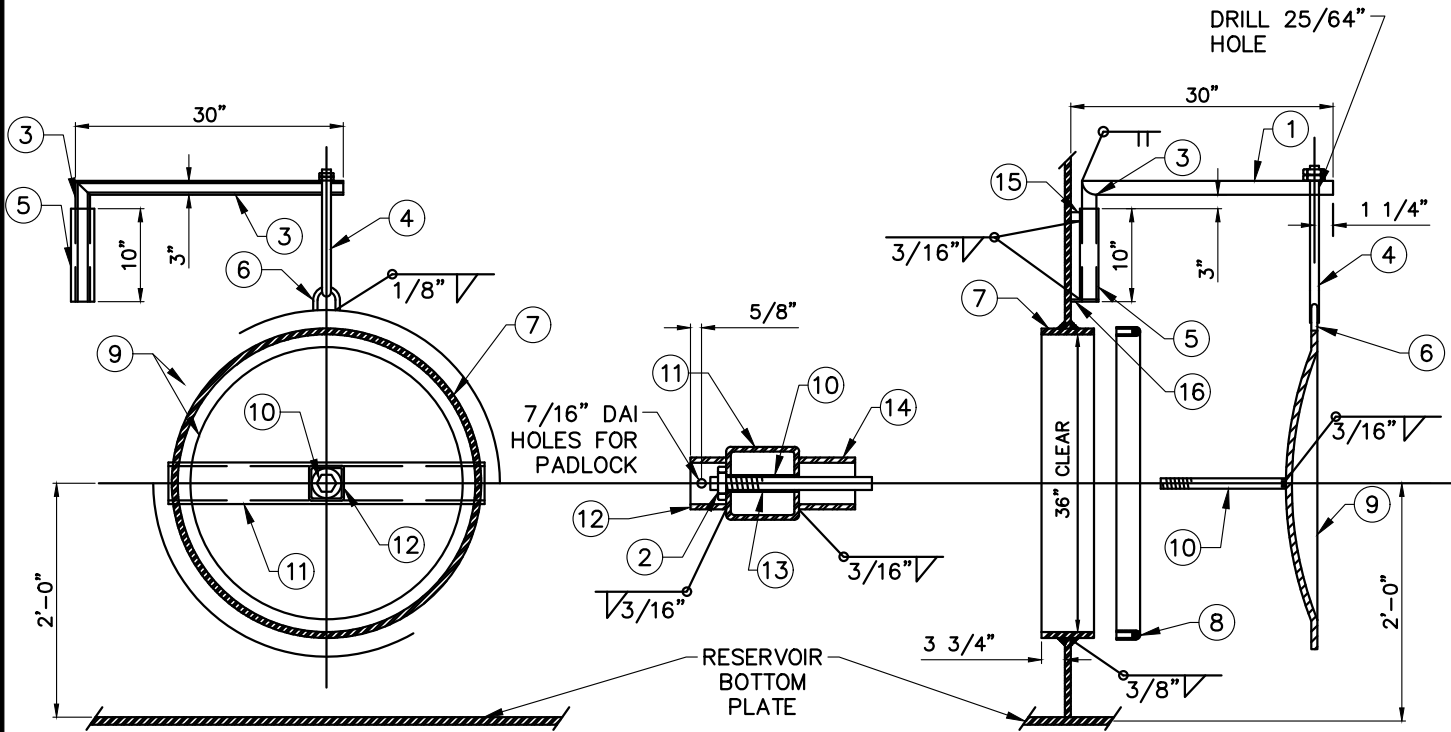


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WELDED STEEL RESERVOIR STAIRWAY AND ROOF HANDRAIL

STD. DWG. NO.
T-3



ACCESS WAY ELEVATION
NTS

ACCESS WAY SECTION
NTS

MATERIAL LIST (36" ACCESS MANWAY)	
ITEM	DESCRIPTION
1	1-1/2" STD WT PIPE x 2'-3" LG MITER & WELD AS SHOWN
2	3/4" HEAVY HEX NUT & WASHER
3	1-1/2" STD WT PIPE x 13" LG MITER & WELD AS SHOWN
4	3/8" x 8" EYE BOLT & 2 NUTS
5	2" SCH 80 STEEL PIPE x 10" LG.
6	3/8" HALF LINK
7	1" THICK x 8 1/8" WIDE x 8'-2 7/16" LG PL ROLLED TO 36" ID
8	1/4" C RING GASKET x 29" ID 50 DURO-HARD
9	3/8"x34" ID x 40" OD x 8" RAD HAT HEAD
10	3/4" DIA ROUND BAR x10-1/2" LG W/2" NC TOE
11	TS 3"x3"x1/4"x39" LG
12	TS 2-1/2"x2-1/2"x3/16"x2-1/2", LG W/ 7/16" DIA HOLES
13	3/4" STD WT PIPE x 3" LG
14	TS 2-1/2"x2-1/2"x3/16"x3"LG WITH 7/16" DIA HOLES
15	1-1/4"x1-1/2"x1-13/16" FB
16	1-1/4"x1-1/2"x4" FB

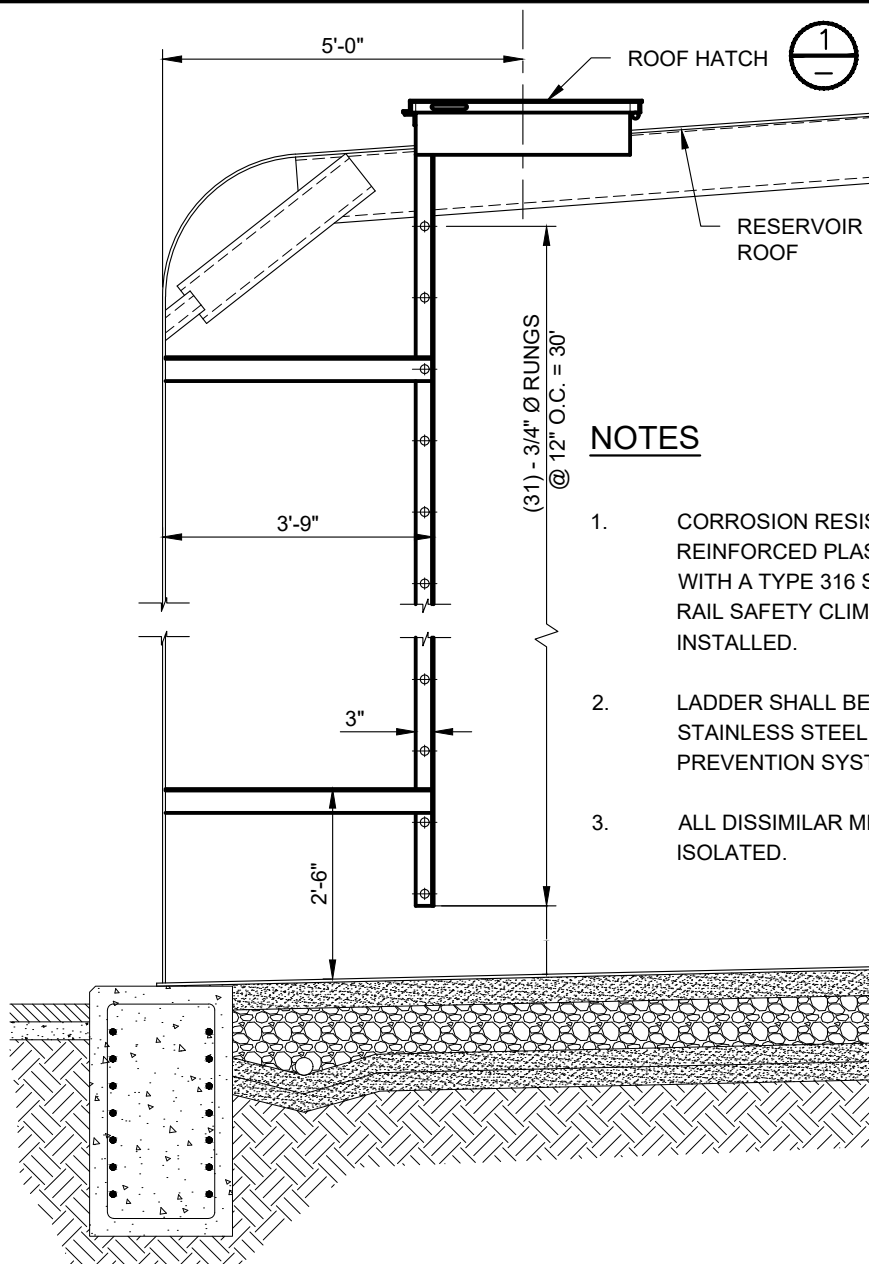
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**36" HINGED ACCESS WAY
DETAIL & SECTION VIEW**

STD. DWG. NO.

T-4

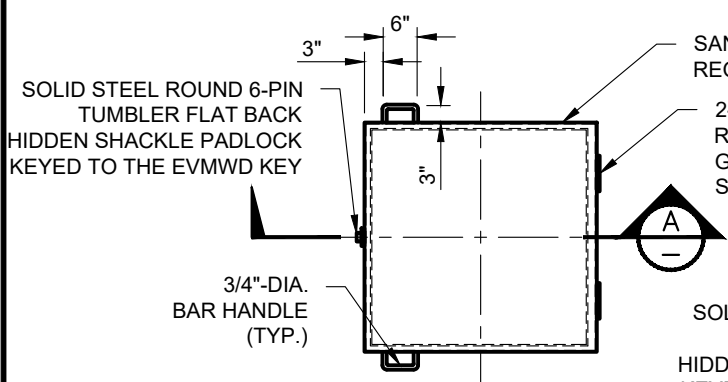


NOTES

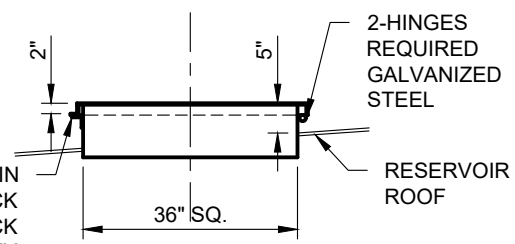
1. CORROSION RESISTANT FIBER REINFORCED PLASTIC INTERIOR LADDER WITH A TYPE 316 STAINLESS STEEL GUIDE RAIL SAFETY CLIMB SYSTEM SHALL BE INSTALLED.
2. LADDER SHALL BE EQUIPPED WITH 316 STAINLESS STEEL SAF-T-CLIMB FALL PREVENTION SYSTEM.
3. ALL DISSIMILAR METALS SHALL BE ISOLATED.

INTERNAL LADDER

NOT TO SCALE



1 **36" HINGED ROOF HATCH**
NOT TO SCALE



A **ROOF HATCH SECTION**
NOT TO SCALE

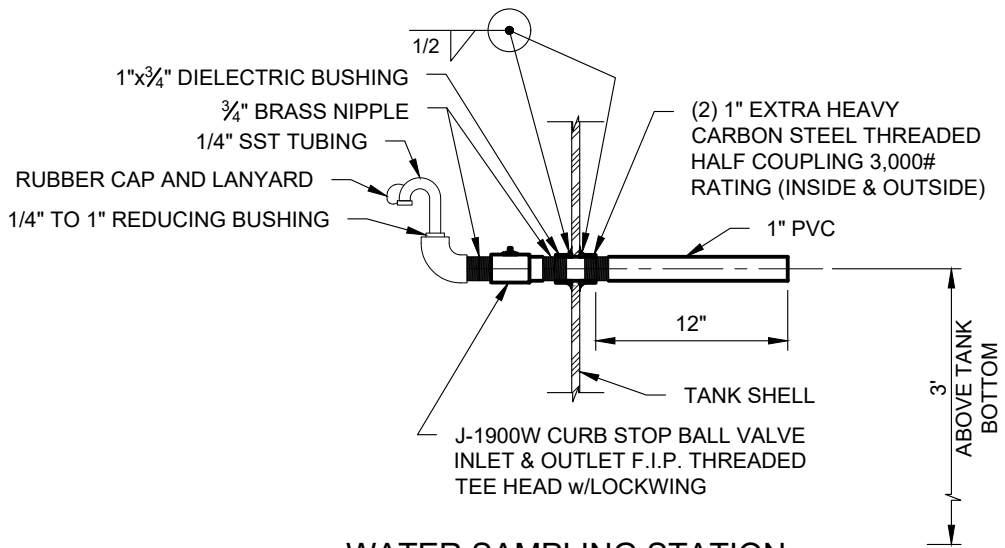
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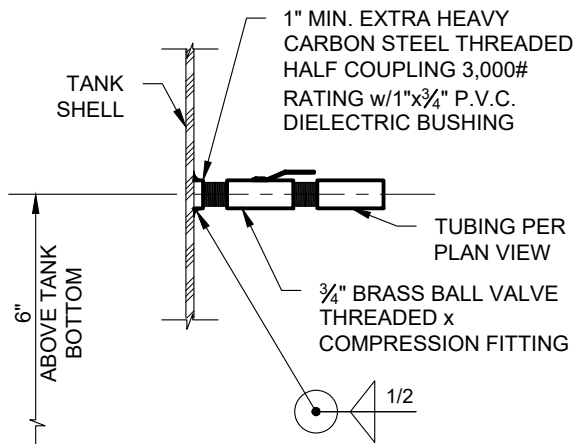
WELDED STEEL RESERVOIR LADDER AND ROOF HATCH

STD. DWG. NO.
T-5



WATER SAMPLING STATION

NOT TO SCALE



SENSING LINE CONNECTION

NOT TO SCALE

NOTES

- 1. SENSING LINE ONLY REQUIRED FOR RESERVOIRS WITH ALTITUDE VALVES.

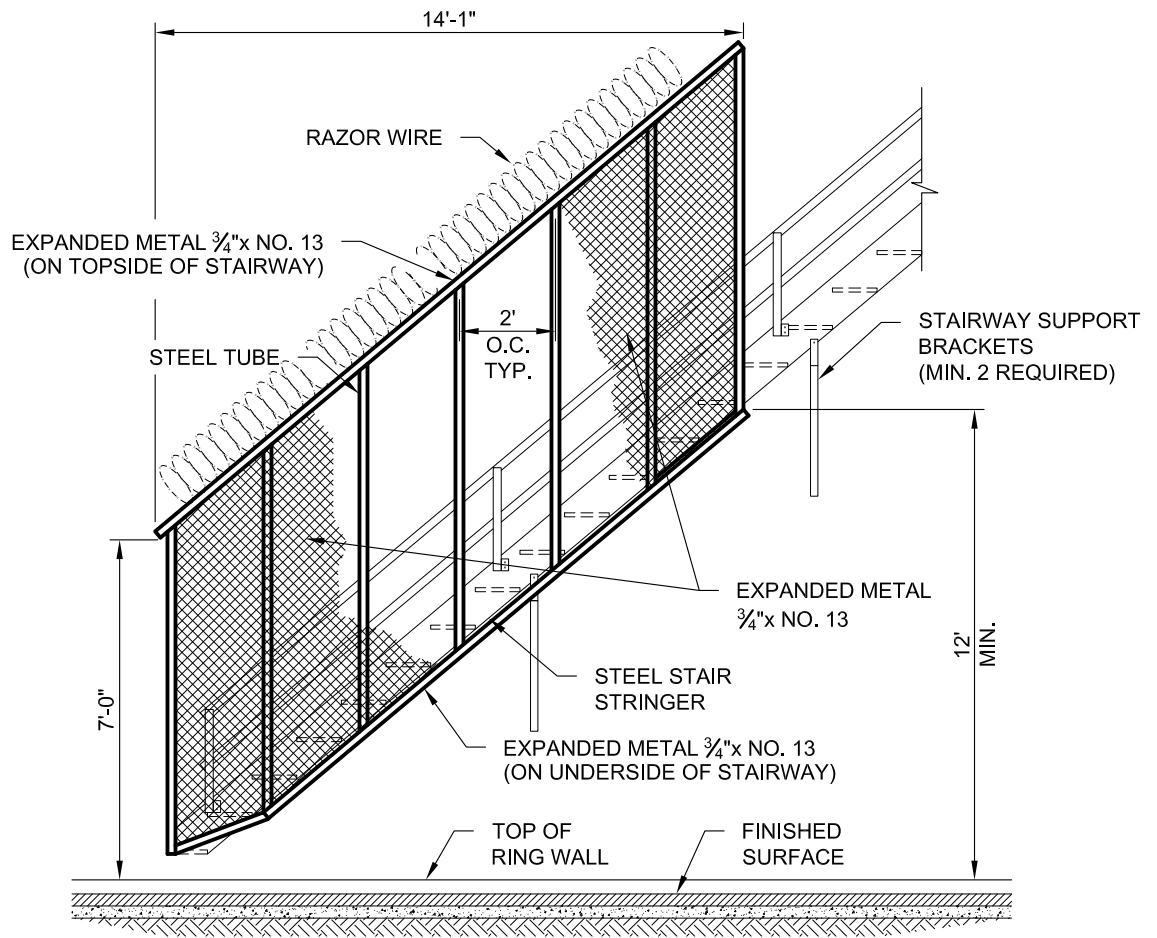
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**WELDED STEEL RESERVOIR
 WATER SAMPLING STATION
 SENSING LINE CONNECTION**

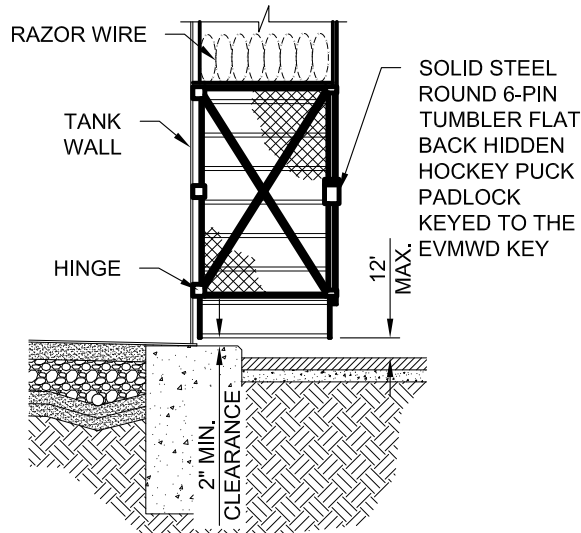
STD. DWG. NO.

T-6



ANTI-CLIMB STAIRWAY CAGE

NOT TO SCALE



ANTI-CLIMB STAIRWAY GATE

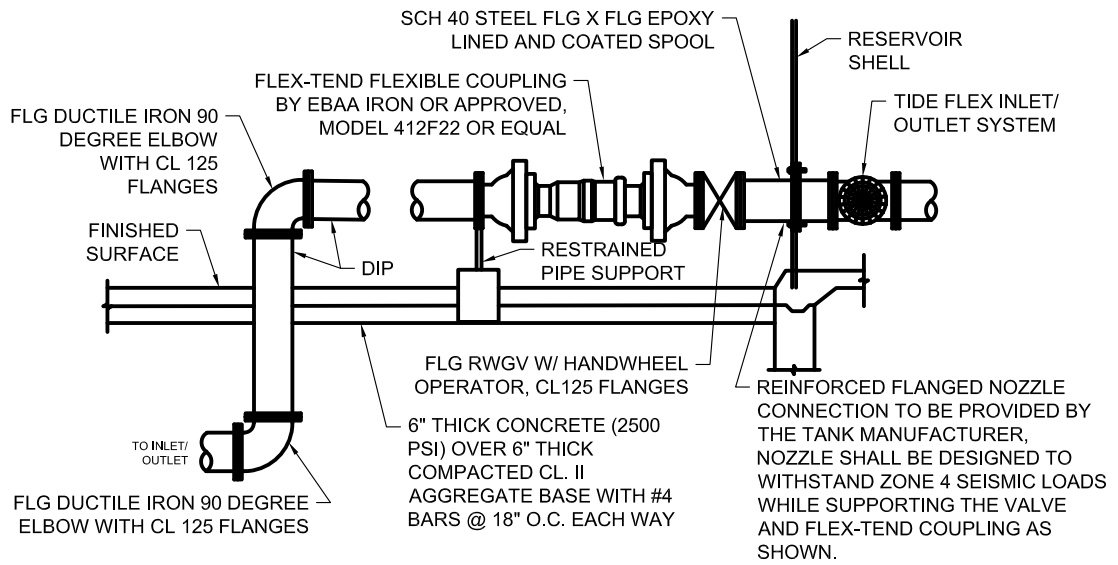
NOT TO SCALE

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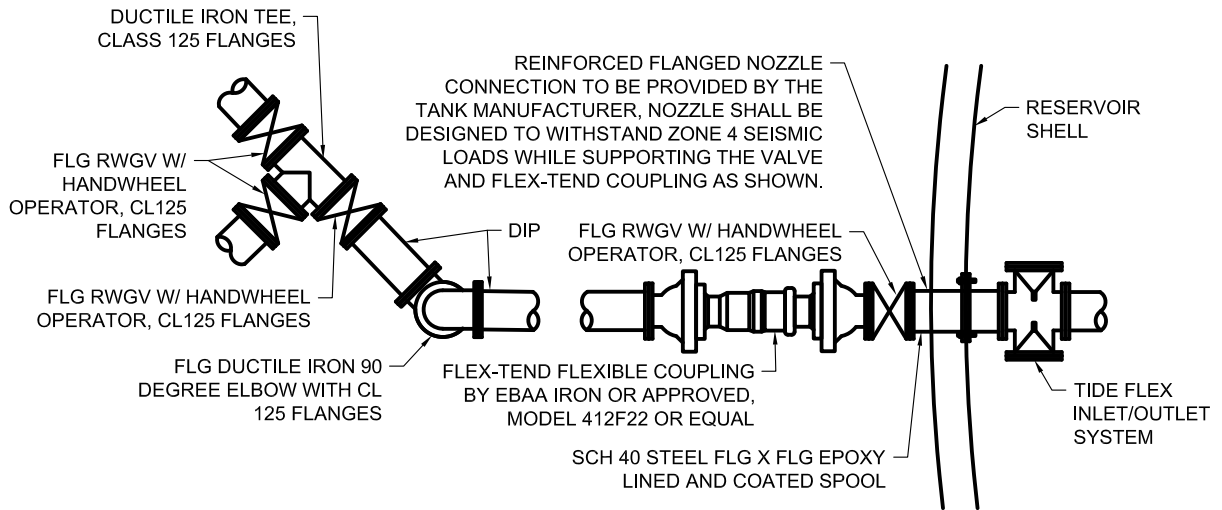
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**WELDED STEEL RESERVOIR
 STAIRWAY & ANTI-CLIMB CAGE**

STD. DWG. NO.
T-7



INLET/OUTLET CONNECTION PROFILE VIEW
NTS



INLET/OUTLET CONNECTION PLAN VIEW
NTS

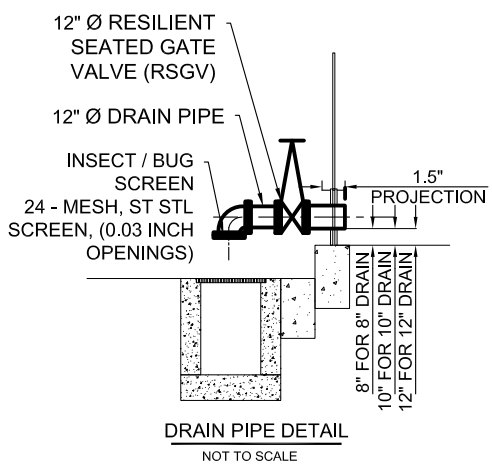
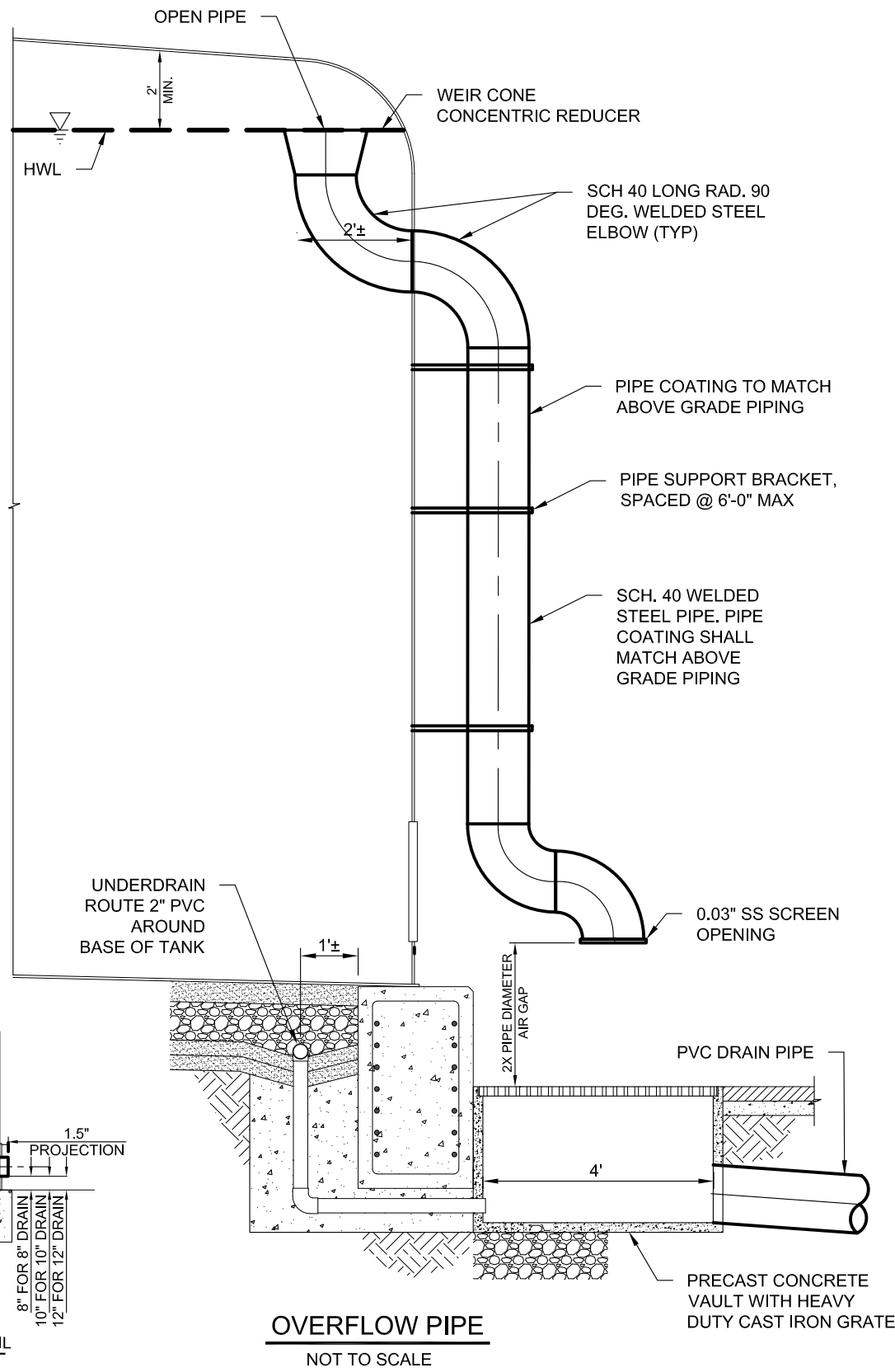
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**WELDED STEEL RESERVOIR
INLET/OUTLET CONNECTION**

STD. DWG. NO.
T-8



OVERFLOW PIPE
NOT TO SCALE

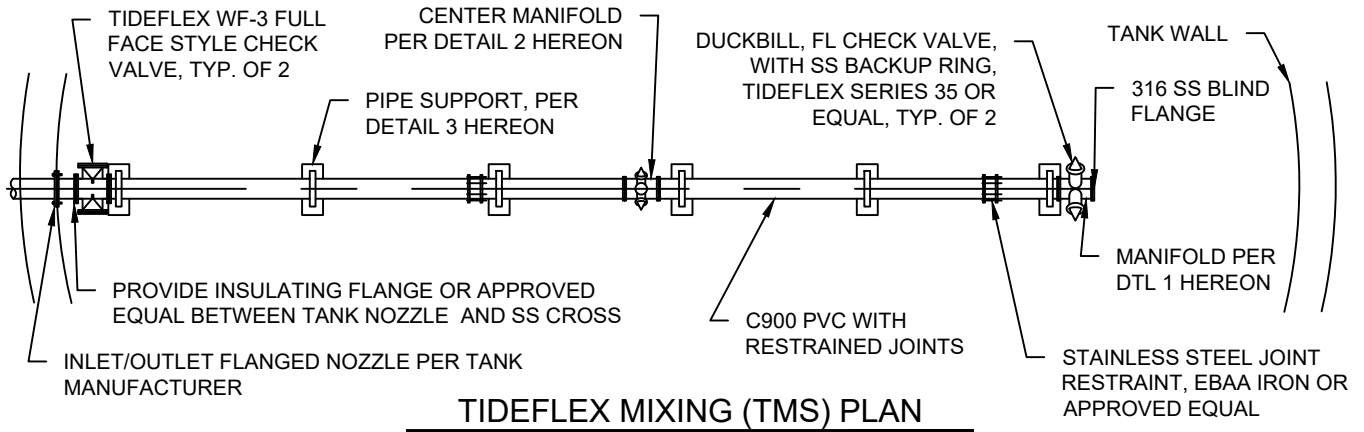
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**WELDED STEEL RESERVOIR
FLOOR DRAIN
& OVERFLOW PIPE**

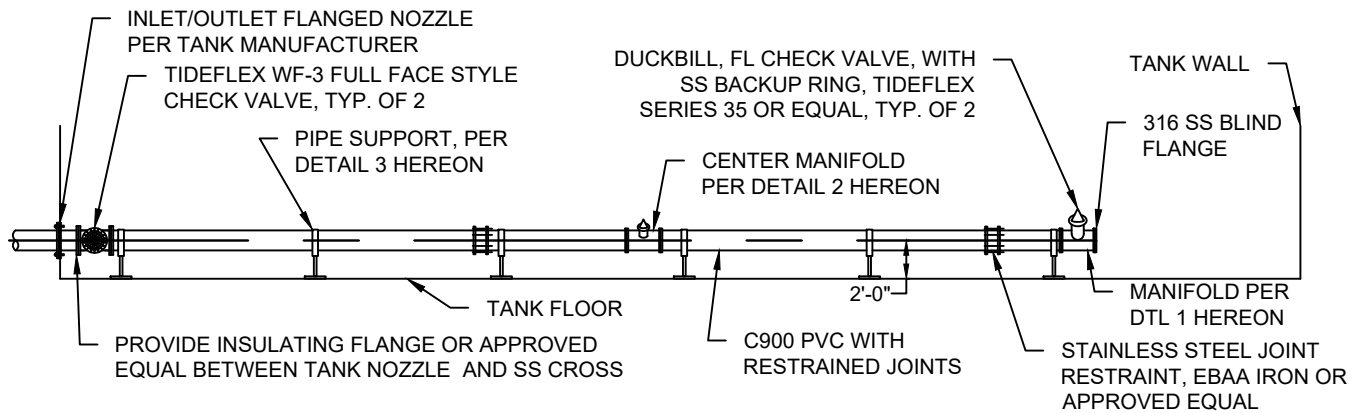
STD. DWG. NO.
T-9

NOTE: SYSTEM TO BE DESIGNED BY TIDEFLEX FOR EACH RESERVOIR APPLICATION



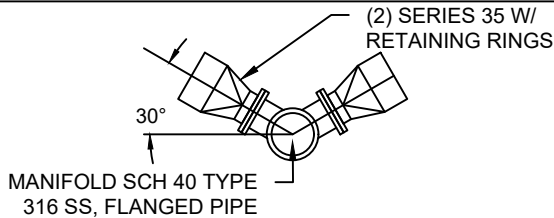
TIDEFLEX MIXING (TMS) PLAN

NTS

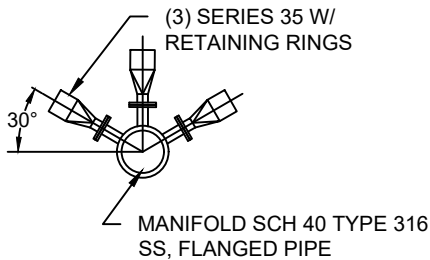


TIDEFLEX MIXING (TMS) ELEVATION

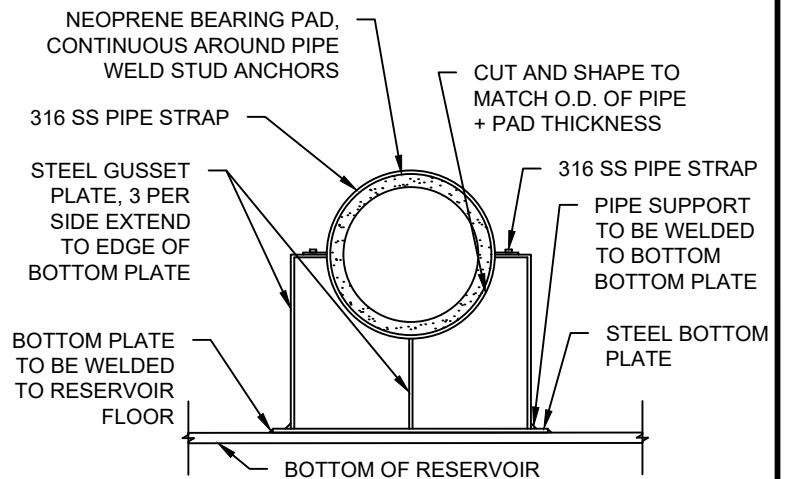
NTS



1 END MANIFOLD DETAIL
NOT TO SCALE



2 CENTER MANIFOLD DETAIL
NOT TO SCALE



3 PIPE SUPPORT DETAIL
NOT TO SCALE

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TIDEFLEX MIXING SYSTEM DETAILS

STD. DWG. NO.
T-10