AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
AGG	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALIGN	ALIGNMENT
AP	ANGLE POINT
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AV	AIR VENT
BC	BEGIN CURVE
BLDG	BUILDING
BM	BENCHMARK
BTM	BOTTOM
C	CHANNEL
CA	CALIFORNIA
CFS	CUBIC FEET PER SECOND
CIP	CAST IRON PIPE
CIP	CAST-IN-PLACE
℄	CENTERLINE
CL	CLASS
CLF	CHAIN LINK FENCE
CLR	CLEAR, CLEARANCE
CMLC	CEMENT MORTAR LINED & COATED
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONST	CONSTRUCT / CONSTRUCTION
CONT	CONTINUOUS
CP	CONTROL POINT
CSJWCD	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT
CY	CUBIC YARDS
Db	BAR DIAMETER
DEG	DEGREE
DEMO	DEMOLISH / DEMOLITION
DIA, D, Ø	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
D/S	DOWNSTREAM
DWG	DRAWING
(E)	EXISTING
EA	EACH
EC	END CURVE
EF	EACH FACE
EG	EXISTING GRADE
ELEC	ELECTRIC
EL, ELEV	ELEVATION
ELL, ELB	ELBOW
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EW	EACH WAY
FB	FLAT BAR
FF	FINISHED FLOOR
FG	FINISHED GRADE
F&I	FURNISH & INSTALL
FIPT	FEMALE IRON PIPE THREAD
FL	FLOW LINE
FNC	FENCE
FT	FEET/FOOT
FTL	FEE TITLED LAND
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GPM	GALLONS PER MINUTE
GUY	GUY WIRE
HD	HEAD
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HWL	HIGH WATER LEVEL
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IN	INCH
INV	INVERT
IP	IRON PIPE
IRR	IRRIGATION
L	ANGLE
LB/LBS	POUND/POUNDS
LC	LENGTH OF CURVE
LCW	LONG CRESTED WEIR
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIL	THOUSANDTHS OF AN INCH
MIN	MINIMUM
MIPT	MALE IRON PIPE THREAD
MISC	MISCELLANEOUS
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
NO., #	NUMBER
NRCS	NATURAL RESOURCES CONSERVATION SERVICE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
O&M	OPERATIONS AND MAINTENANCE
OP	OPERATING
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
(P)	PROPOSED
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	PERMANENT EASEMENT
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
PL	PROPERTY LINE / PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
POC	POINT ON CURVE
POL	POINT ON LINE
POT	POINT ON TANGENT
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RAD, R	RADIUS
RC	RADIUS OF CURVE
RCP	REINFORCED CONCRETE PIPE
RE	REFERENCE
REQD	REQUIRED
REV	REVISION
RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
RGS	RIGID GALVANIZED STEEL
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAILROAD
RT	RIGHT

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT

ABBREVIATIONS

APPROVED: _____ 9/17/26

JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — DATE

SCALE: NOT TO SCALE

DATE: SEPTEMBER 2026

STANDARD DETAIL
STD-0-01
SHEET 1 OF 2

RTU	REMOTE TERMINAL UNIT
S	SLOPE
SCH	SCHEDULE
SCP	STANDARD CONCRETE PIPE
SEC	SECTION
SF	SQUARE FEET/FOOT
SP	SERVICE POLE
SQ	SQUARE
SS	STAINLESS STEEL
ST	STRUCTURAL TUBING
STA	STATION
STD	STANDARD
STWL	STILLING WELL
SWL	SWALE
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
TB	TOP OF BANK
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TELE	TELEPHONE
TL	TOP OF LINING
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF SLOPE
TP	TELEPHONE POLE
TR	TELEPHONE RISER
TRANS	TRANSFORMER
TS	TOP OF STRUCTURE
TWL	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UP	UTILITY POLE
U/S	UPSTREAM
VERT	VERTICAL
W/	WITH
WL	WATER LEVEL
W/O	WITHOUT
YD	YARD
@	AT

1. THE SIGNATURE OF THE CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT (CSJWCD) ON DRAWINGS CONSTITUTES CSJWCD'S APPROVAL OF THE SAME AS TO THE ENGINEERING ASPECTS THEREOF ONLY AND DOES NOT AUTHORIZE, EXPRESSLY OR IMPLICITLY THE CONSTRUCTION OF ANY ASPECT HEREOF OR THE INTERFERENCE WITH ANY PROPERTY, EQUIPMENT, OR INTEREST OF THE CSJWCD. NO SUCH CONSTRUCTION OR INTERFERENCE SHALL OCCUR UNTIL CSJWCD HAS OBTAINED, BY SEPARATE AGREEMENT SUCH AGREEMENTS AS CSJWCD DEEMS NECESSARY FOR THE PROTECTION OF ITS FACILITIES.

2. ALL CONSTRUCTION WITHIN THE CSJWCD RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED DRAWINGS AND THE CURRENT EDITION OF CSJWCD STANDARDS AND/OR STANDARD SPECIFICATIONS OF OTHER GOVERNING AGENCIES, AS APPLICABLE.

3. CONSTRUCTION WITHIN THE CSJWCD RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS WILL NOT BE ALLOWED DURING THE IRRIGATION SEASON UNLESS APPROVED BY CSJWCD (IRRIGATION SEASON TYPICALLY MARCH 1 TO OCTOBER 31).

4. CONTRACTOR SHALL PROVIDE AN ALTERNATE STORM WATER BYPASS DURING CONSTRUCTION UNLESS DIRECTED OTHERWISE BY CSJWCD ENGINEER. BYPASS PLAN SHALL BE SUBMITTED FOR CSJWCD ENGINEER APPROVAL PRIOR TO BEGINNING CONSTRUCTION.

5. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS, BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

6. CSJWCD STANDARD DETAILS MAY REQUIRE MODIFICATIONS BASED ON SITE SPECIFIC FIELD CONDITIONS. SUCH MODIFICATIONS SHALL BE REVIEWED AND PRE-APPROVED IN WRITING BY CSJWCD ENGINEER PRIOR TO CONSTRUCTION.

7. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

8. CAL-OSHA SAFETY REQUIREMENTS SHALL BE IN EFFECT DURING ALL CONSTRUCTION. SPECIAL SAFETY PRECAUTIONS SHALL BE TAKEN WHEN WORKING IN THE VICINITY OF GAS, OIL, OR ELECTRICAL LINES.

9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH CALIFORNIA GOVERNMENT CODE 4216, AS APPLICABLE. TO OBTAIN A DIG ALERT IDENTIFICATION NUMBER, CALL 811 AT LEAST 2 WORKING DAYS BEFORE DIGGING UNDERGROUND.

10. CSJWCD WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF APPROVED PLANS. ALL CHANGES TO THE PLANS MUST BE OBTAINED IN WRITING FROM CSJWCD ENGINEER, AND MUST BE APPROVED BY THE PREPARER OF THE PLANS.

11. CONTRACTOR SHALL BE REQUIRED TO HAVE A PRE-CONSTRUCTION CONFERENCE WITH CSJWCD ENGINEER, PRIOR TO STARTING ANY WORK WITHIN THE CSJWCD RIGHT OF WAY.

12. BACKFILL AND SUBGRADES SHALL BE COMPACTED TO MINIMUM 90% RELATIVE DENSITY PER ASTM D-1557 WITHIN THE RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS, UNLESS DIRECTED OTHERWISE BY CSJWCD ENGINEER. SEE CSJWCD STANDARD STD-05-01 FOR ADDITIONAL BACKFILL REQUIREMENTS.

13. A SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.

14. THE CONTRACTOR SHALL EXERCISE DUE CAUTION IN PROTECTING EXISTING FACILITIES. THE CONTRACTOR SHALL GIVE PARTICULAR CARE TO PROTECTING EXISTING PIPELINES DURING CONSTRUCTION. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS AND STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE. ANY DAMAGES TO CSJWCD FACILITIES DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED IN A MANNER APPROVED BY CSJWCD ENGINEER AT THE SOLE COST OF THE CONTRACTOR.

15. ANY WORK WITHIN THE CSJWCD RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS SHALL NOT BE DEEMED COMPLETE UNTIL THE CSJWCD ENGINEERING DEPARTMENT HAS BEEN PROVIDED WITH A SET OF RECORD DRAWINGS IN HARD COPY AND PDF OR AS DIRECTED BY CSJWCD ENGINEER.

	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	GENERAL NOTES	
	APPROVED: _____ 9/17/26 JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-0-02 SHEET 1 OF 2

16. CONTACT CSJWCD AT LEAST TWO (2) WORKING DAYS PRIOR TO ANY CONSTRUCTION AND/OR NECESSARY INSPECTIONS. WORK WITHIN THE CSJWCD RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS SHALL PROCEED IN A CONTINUOUS MANNER ONCE STARTED. CSJWCD ENGINEER SHALL BE NOTIFIED OF ANY WORK STOPPAGES. WHENEVER WORK IS TO RESTART, CSJWCD ENGINEER SHALL REQUIRE AN ADDITIONAL TWO (2) WORKING DAYS NOTICE. CSJWCD ENGINEER SHALL ALSO BE CONTACTED A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO ALL CONSTRUCTION SCHEDULED ON A HOLIDAY OR WEEKEND. PHONE: 209-466-7952.

17. UNLESS OTHERWISE STATED, ALL STATIONS INDICATED ON THE PLANS ARE IN REFERENCE TO THE CENTERLINE OF THE PROPOSED STRUCTURE.

18. CSJWCD ENGINEER SHALL AT ALL TIMES HAVE ACCESS TO THE WORK WHEREVER IT IS IN PREPARATION AND PROGRESS.

19. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY CSJWCD ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES, WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. CSJWCD ENGINEER'S INTERPRETATION OR CORRECTION THEREOF SHALL BE CONCLUSIVE. CSJWCD ENGINEER WILL HAVE AUTHORITY TO REJECT WORK WHICH DOES NOT CONFORM TO THE PLANS AND SPECIFICATIONS.

20. THE CONTRACTOR SHALL NOT LEAVE "IN USE" CSJWCD PIPELINE PROJECTS INCOMPLETE FOR MORE THAN TWO (2) WEEKS. WHEN CONDITIONS REQUIRE, AND DETERMINED SOLELY BY CSJWCD ENGINEER, CONTRACTOR SHALL PROVIDE A TEMPORARY DIVERSION SYSTEM TO PROVIDE FOR IRRIGATION WATER DELIVERY OR STORM WATER REMOVAL.

21. ASTM C-361 RUBBER GASKETED REINFORCED CONCRETE PIPE (RGRCP) WITH APPROPRIATE WALL THICKNESS FOR THE PRESSURE AND TRAFFIC LOADS IS REQUIRED FOR CSJWCD CONCRETE PIPELINES. CONTRACTOR SHALL SUBMIT FACTORY TEST DATA TO CSJWCD ENGINEER, VERIFYING THAT PIPE JOINTS CONFORM TO NO LEAKAGE AT HYDROSTATIC PRESSURES UP TO TWENTY-FIVE (25) FEET. FIELD TESTS, IF REQUIRED, SHALL BE PERFORMED IN THE PRESENCE OF CSJWCD ENGINEER.

22. POLYVINYL CHLORIDE (P.V.C.) PIPE SHALL BE A MINIMUM OF 100 PSI PIP WITHIN LIMITS OF CSJWCD RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS, OR AS DIRECTED BY THESE STANDARDS OR CSJWCD ENGINEER.

23. 30 INCHES MINIMUM COVER SHALL BE PROVIDED OVER ALL PIPELINES UNLESS DIRECTED BY CSJWCD ENGINEER.

24. DIMENSIONS, ELEVATIONS, PIPE SIZES, AND STRUCTURE LOCATIONS SHALL BE DETERMINED BY CSJWCD.

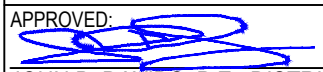
25. ALL DIMENSIONS ARE TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO COMMENCING WORK OR FABRICATION. IF ANY CONDITION EXISTS NOT AS SHOWN ON THE DRAWINGS, CSJWCD ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

26. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DRAWINGS. CONTRACTOR SHALL VERIFY DIMENSIONS AND MEASUREMENTS AT SITE.

27. ALL WORK SHALL BE PERFORMED USING MATERIALS AND METHODS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CURRENT INTERNATIONAL BUILDING CODE (IBC), CALIFORNIA BUILDING CODE (CBC), ACI 318, LOCAL CODES AND ORDINANCES. REPORT ALL DISCREPANCIES TO CSJWCD ENGINEER IMMEDIATELY.

28. ANY CHANGES TO THE APPROVED SET OF PLANS WITHOUT NOTIFYING CSJWCD ENGINEER PRIOR TO SUCH CHANGES ABSOLVES SAID ENGINEER FROM ANY AND ALL RESPONSIBILITY WITH RESPECT TO THE LIABILITY, DAMAGE OR EXTRA WORK RESULTING FROM SAID CHANGES.

29. BUILDING PERMITS, IF REQUIRED, MUST BE OBTAINED BEFORE STARTING CONSTRUCTION.

	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	GENERAL NOTES	
	APPROVED:  9/17/26 JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-0-02 SHEET 2 OF 2

1. ENCROACHMENT PERMITS ARE REQUIRED FOR ANY EXISTING ENCROACHMENTS OR PROPOSED IMPROVEMENTS WITHIN THE CURRENT OR REQUESTED CSJWCD RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND. APPLICANT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ANY AND ALL CONDITIONS IN THE ENCROACHMENT PERMIT, INCLUDING FULL COMPLIANCE WITH ANY AND ALL ENVIRONMENTAL PERMITTING AS MAY BE REQUIRED.

2. CSJWCD MAY REQUIRE THAT ITS RIGHTS OF WAY, EASEMENTS, OR FEE TITLE LANDS BE FENCED TO CSJWCD STANDARDS. THE NEED FOR FENCING WILL BE EVALUATED ON A CASE BY CASE BASIS. THE COST OF FENCING SHALL BE BORNE BY THE DEVELOPER/LANDOWNER.

3. ACCESS GATES AND FENCING THAT CROSSES THE CSJWCD RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND THAT DOES NOT IMPACT CSJWCD OPERATIONS AND MAINTENANCE AND ARE NOT BURDENSOME ON CSJWCD MAY BE PERMITTED UNDER AN ENCROACHMENT PERMIT UPON APPROVAL BY CSJWCD ENGINEER.

4. EXISTING CSJWCD FACILITIES WITHIN A PUBLIC ROAD RIGHT OF WAY SHALL BE RELOCATED INTO A RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND DEDICATED SOLELY TO CSJWCD AT THE COST OF THE DEVELOPER.

5. STANDARD RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND WIDTHS FOR CSJWCD FACILITIES SHALL BE:

MAIN CANALS	100 FT	CENTERED ON CANAL
CANALS/DRAINS	60 FT	CENTERED ON CANAL/DRAIN
PIPELINES	30 FT	CENTERED ON PIPELINE
PIPELINES ADJACENT TO ROADWAYS	20 FT	
PIPELINES ADJACENT TO PUE	15 FT	
PUMP SITES	40 FT	SQUARE CENTERED ON PUMP

6. STANDARD ROADWAY WIDTHS SHALL BE 16' MINIMUM.

7. RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND WIDTHS FOR JOINT PROJECTS SHALL MEET THE ABOVE MINIMUM WIDTHS PLUS ANY ADDITIONAL WIDTH THAT MAY BE REQUIRED BASED ON THE SPECIFIC PROJECT USES OR AS APPROVED BY THE BOARD OF DIRECTORS.

8. IF AN EXISTING CSJWCD FACILITY IS NOT CENTERED ON THE PROPERTY BOUNDARY BETWEEN TWO (2) CSJWCD PROPERTIES, CSJWCD MAY REQUIRE A RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND WIDTH BASED ON THE DISTANCE TO THE CENTERLINE OF THE CSJWCD FACILITY.

	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	EASEMENTS, RIGHTS OF WAY, FEE TITLE LANDS AND ENCROACHMENTS	
	APPROVED: _____ 9/17/26 JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-0-03 SHEET 1 OF 1

CAST-IN-PLACE CONCRETE NOTES

1. UNLESS DIRECTED OTHERWISE BY CSJWCD ENGINEER, MINIMUM CONCRETE 28 DAY COMPRESSUVE STRENGTH SHALL BE 3,000 PSI. CEMENT SHALL BE ASTM TYPE II PORTLAND CEMENT AND BE FREE OF LUMPS AND PARTIALLY SET MASSES, AND PROPORTIONED TO INCLUDE NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.50. WATER SHALL BE FREE FROMA CID, ALKALI, OILS OR ORGANIC MATTER. AGGREGATE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND FREE FROM DIRT AND OTHER SUBSTANCES DELETERIOUS TO CONCRETE. THE FINE AND COARSE AGGREGATES SHALL BE A WELL GRADED MIX APPROVED BY CSJWCD ENGINEER. THE MAXIMUM SIZE OF AGGREGATE SHALL NOT EXCEED 3/4 INCH AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-33.

2. CONSISTENCY OF THE CONCRETE SHALL ALLOW IT TO BE WORKED INTO PLACE WITHOUT SEGREGATION. SLUMP SHALL BE 4 INCHES MAXIMUM. FORMS SHALL BE BRACED AND/OR TIED TOGETHER SO AS TO MAINTAIN POSITION AND SHAPE AND BE SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORTAR.

3. ALL VERTICAL CONCRETE SURFACES SHALL BE POURED AGAINST FORMS IN ALL CASES. CONCRETE SHALL NOT BE DROPPED MORE THAN 5 FEET VERTICALLY UNLESS SUITABLE EQUIPMENT IS USED TO PREVENT SEGREGATION AND SHLL BE VIBRATED IN 18 INCH, HORIZONTAL LIFTS. CONCRETE SHALL NOT BE MOVED DISTANCES OF OVER 5 FEET HORIZONTALLY USING A VIBRATOR. CONSOLIDATION OF CONCRETE SHALL BE ACCOMPLISHED BY MEANS OF INTERNAL TYPE MECHANICAL VIBRATORS, OR AS PRE-APPROVED BY CSJWCD ENGINEER EQUIVALENT METHOD.

4. CONSTRUCTION JOINTS SHALL BE PLACED AS SHOWN ON THE PLANS OR AS PRE-APPROVED BY CSJWCD ENGINEER ONLY. ENTIRE SURFACE UNDER WALL TO BE ROGUHENED WHILE WET, TO 1/8 INCH MINIMUM AMPLITUDE/DEPTH. JOINTS SHALL BE THOROUGH;Y CLEANED AND ALL LAITANCE REMOVED BEFORE EACH NEW POUR IS MADE. EACH JOINT SHALL BE WETTED IMMEDIATELY BEFORE THE PLACEMENT OF NEW CONCRETE.

5. ALL CAST-IN-PLACE CONCRETE STRUCTURES SHALL BE FORMED INSIDE AND OUT AND CONCRETE VIBRATED SUFFICIENTLY TO PROVIDE FOR SMOOTH SURFACED WALLS/FLOORS WITHOUT VOIDS AND HONEYCOMBS.

6. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH STRUCTURE DETAILS AND NOTES.

7. GUIDELINES FOR CONCRETING IN HOT AND COLD WEATHER AS SET FORTH IN NRCS CONSTRUCTION SPECIFICATION 901 SHALL BE FOLLOWED.

8. ALL SLABS SHALL BE SLOPED TO ALLOW DRAINAGE OF RUNOFF WATER TO PREVENT PONDING.

9. CONCRETE SHALL BE PREVENTED FROM PREMATURE DRYING FOR A CURING PERIOD OF AT LEAST SEVEN DAYS AFTER IT IS PLACED. EXPOSED SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR THE ENTIRE PERIOD. IN LIEU OF WATER CURING, THE CONCRETE SHALL BE PROTECTED BY SPRAYING WITH A CURING COMPOUND PRE-APPROVED BY CSJWCD ENGINEER. ALL SURFACES SHALL BE KEPT MOIST UNTIL THE COMPOUND IS APPLIED.

REINFORCING STEEL NOTES

1. ALL REBAR SHALL BE GRADE 60.

2. SPLICES AND HOOKS MADE IN REINFORCING STEEL SHALL BE STAGGERED AND LAPPED IN ACCORDANCE WITH ACI-318.

3. SLAB REINFORCING IS TO BE LOCATED IN THE CENTER OF THE SLAB, UNLESS NOTED OTHERWISE.

4. ALL BARS SHALL BE FREE OF EXCESSIVE RUST, MUD, OIL, AND GREASE.

GENERAL NOTES

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2. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DRAWINGS. CONTRACTOR SHALL VERIFY DIMENSIONS AND MEASUREMENTS AT SITE.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		CONCRETE NOTES
APPROVED: _____ JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-1-01 SHEET 1 OF 2

GENERAL NOTES (CONT.)

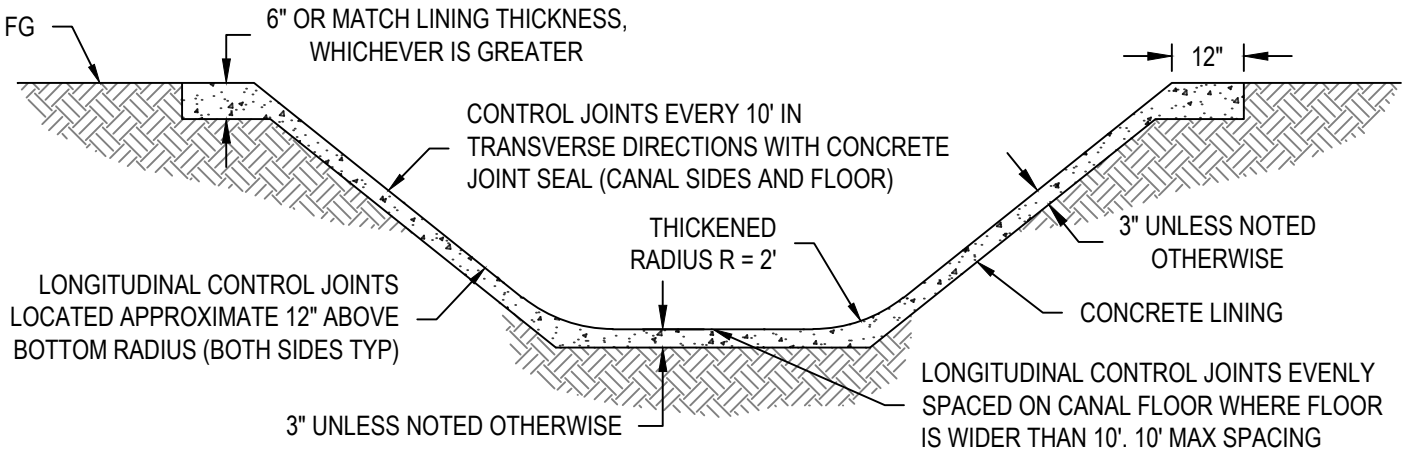
3. ALL WORK SHALL BE PERFORMED USING MATERIALS AND METHODS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE (IBC), CALIFORNIA BUILDING CODE (CBC), LOCAL CODES AND ORDINANCES. REPORT ALL DISCREPANCIES TO CSJWCD ENGINEER IMMEDIATELY.

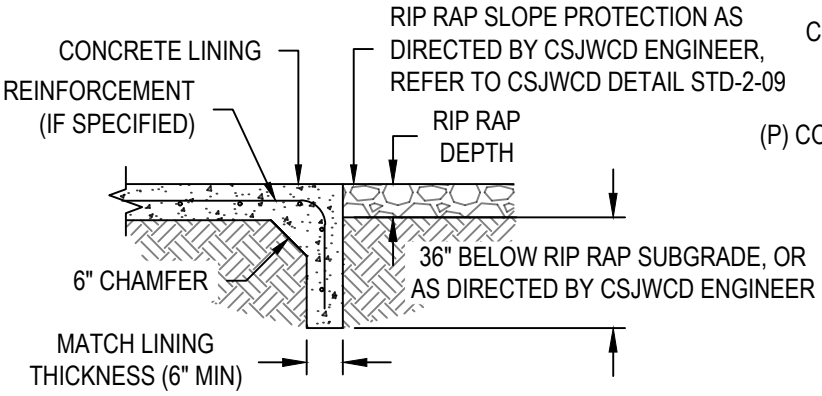
4. ANY CHANGES TO THE APPROVED SET OF PLANS WITHOUT NOTIFYING THE CSJWCD ENGINEER PRIOR TO SUCH CHANGES ABSOLVED SAID ENGINEER FROM ANY AND ALL SUCH RESPONSIBILITY WITH RESPECT TO THE LIABILITY, DAMAGE OR EXTRA WORK RESULTING FROM SAID CHANGES.

5. BUILDING PERMITS, IF REQUIRED, MUST BE OBTAINED BEFORE STARTING CONSTRUCTION.

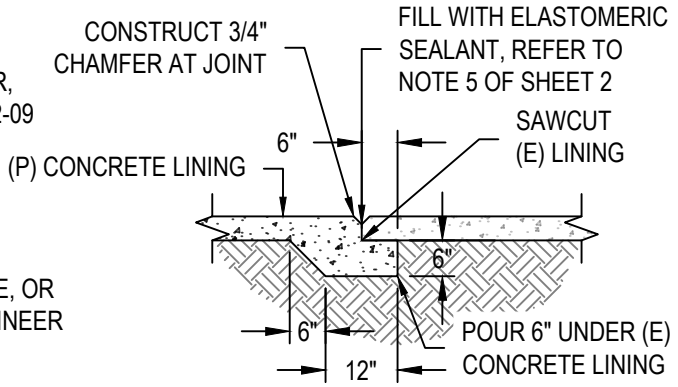
6. ALL STRUCTURE SUBGRADES AND STEEL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY CSJWCD ENGINEER PRIOR TO CONCRETE PLACEMENT OR BACKFILL. BACKFILL SHALL NOT OCCUR UNTIL 7 DAYS AFTER COCNRETE PLACEMENT.

	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	CONCRETE NOTES
	APPROVED: _____ 9/17/26 JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
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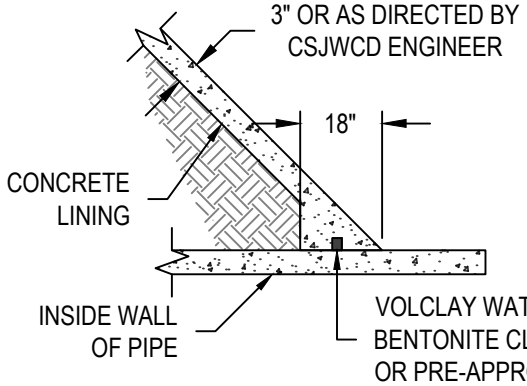




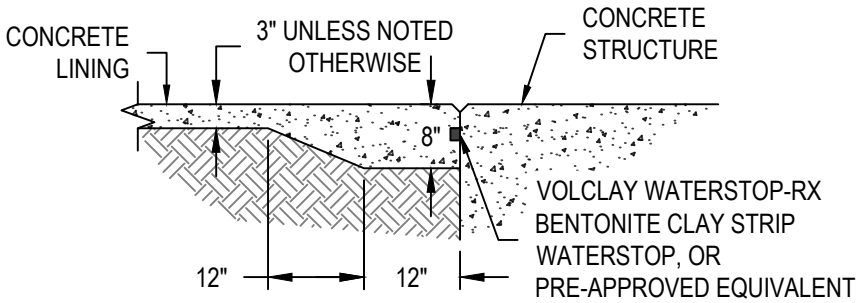
CUTOFF WALL



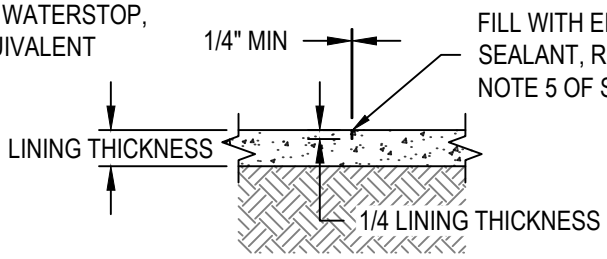
CONNECTION TO EXISTING LINING



PIPE TO CONCRETE LINING CONNECTION



STRUCTURE TO CONCRETE LINING CONNECTION



CONTROL JOINT

CONSTRUCTION NOTE

BENTONITE CLAY STRIP WATERSTOP SHALL HAVE MINIMUM 3 INCHES CONCRETE COVER ALL SIDES

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		CONCRETE LINING
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-1-05 SHEET 1 OF 2

1. BACKFILL AND SUBGRADES SHALL BE COMPACTED TO MINIMUM 90% RELATIVE DENSITY PER ASTM D-1557 AND SHALL BE MANUALLY COMPACTED A MINIMUM OF 12 INCHES OVER TOP OF PIPE OR AS DIRECTED BY CSJWCD ENGINEER.

2. CONTROL JOINT DEPTH SHALL BE MINIMUM 1/4 OF LINING THICKNESS AND 1/4 INCH WIDE AS SHOWN IN THE CONTROL JOINT DETAIL AND SHALL BE LOCATED EVERY 10 FEET IN THE TRANSVERSE DIRECTION AND LONGITUDINALLY APPROXIMATE 12 INCHES ABOVE THE BOTTOM RADIUS ON BOTH SIDES.

3. TRANSITIONS
   A. CONCRETE LINED CANALS:
      SAWCUT EXISTING LINING AT A LOCATION APPROVED BY AND AS DIRECTED BY CSJWCD ENGINEER. UNDERLAP EXISTING LINING A MINIMUM OF 6 INCHES UNDER THE SAWCUT EDGE (BOTH SIDES AND BOTTOM) AS SHOWN IN THE CONNECTION TO EXISTING LINING DETAIL. DAMAGE TO THE EXISTING CONCRETE LINING WILL REQUIRE REPAIR OR REPLACEMENT AS DIRECTED BY CSJWCD ENGINEER.

   B. EARTHEN CANAL:
      NEW LINING SIDE SLOPES SHALL MATCH EXISTING CANAL SIDE SLOPES, OR AS DIRECTED BY CSJWCD ENGINEER. SIDE SLOPES SHALL BE NO STEEPER THAN 1-1/2 HORIZONTAL TO 1 VERTICAL UNLESS PRE-APPROVED BY CSJWCD ENGINEER. SIDE SLOPES SHALL BE FEATHERED BACK TO MATCH THE EXISTING CANAL BANKS FOR 10 LINEAR FEET UPSTREAM AND DOWNSTREAM OF THE CONCRETE LINING TRANSITION, OR AS DIRECTED BY CSJWCD ENGINEER. RIP RAP OR CONCRETE LINING SLOPE PROTECTION SHALL BE INSTALLED AS DIRECTED BY CSJWCD ENGINEER. REFER TO CSJWCD DETAIL STD-2-09, RIP RAP SLOPE PROTECTION.

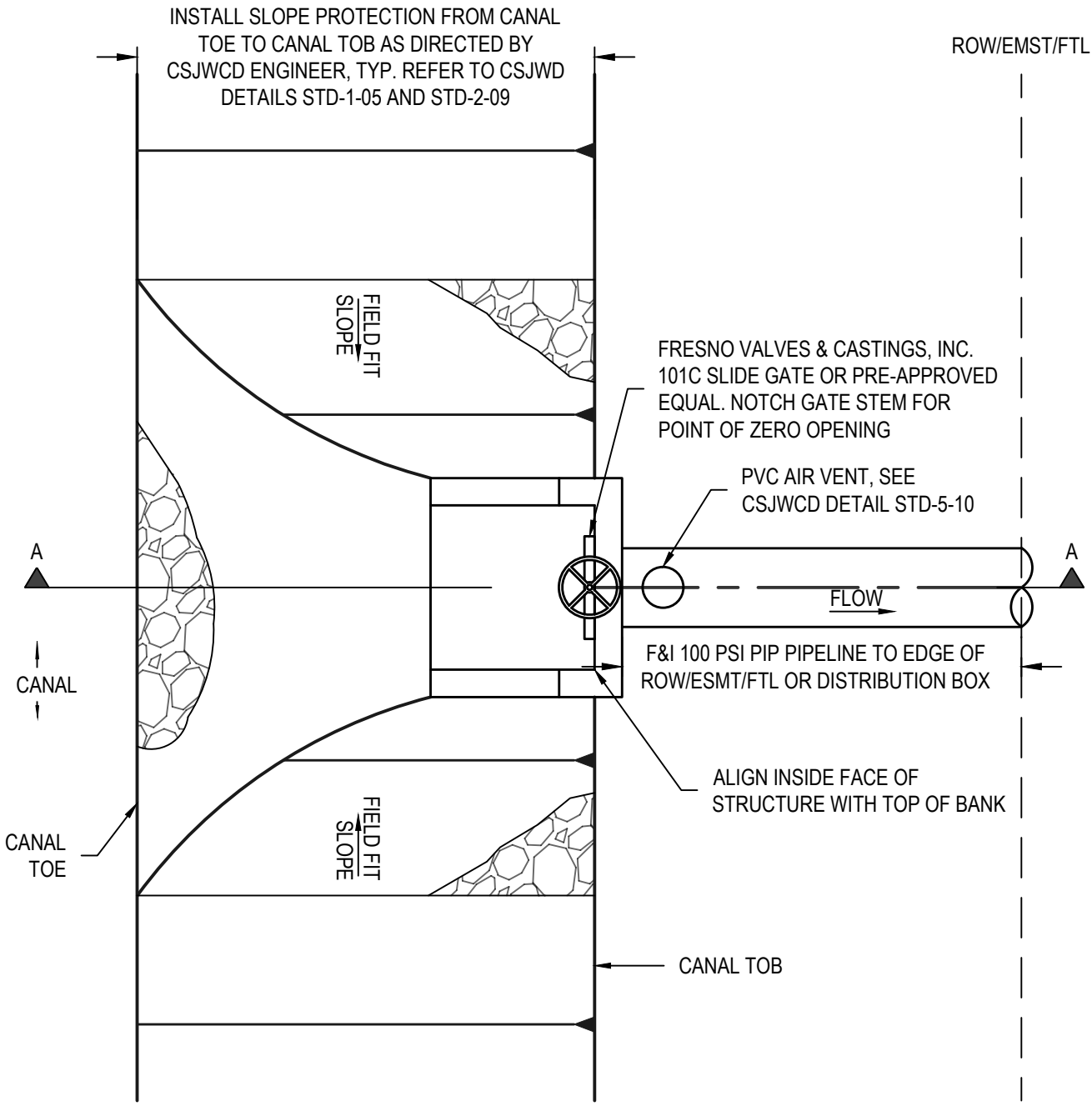
4. CONCRETE LINING SHALL BE POURED IN PLACE, AT MINIMUM 3 INCHES THICK. CEMENT SHALL BE TYPE II PORTLAND CEMENT. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI. SLUMP SHALL BE MAXIMUM OF 4 INCHES. CONCRETE SHALL BE PREVENTED FROM DRYING FOR A CURING PERIOD OF AT LEAST 7 DAYS AFTER IT IS PLACED. EXPOSED SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR THE ENTIRE PERIOD, OR A PRE-APPROVED CURING COMPOUND SHALL BE APPLIED AFTER FINISHING AT A RATE OF ONE GALLON PER 150 SQUARE FEET. REINFORCEMENT SHALL BE EITHER FIBERMESH "MD" AT 2.0 POUNDS PER CUBIC YARD OF CONCRETE OR 6"x6"-W2.1xW2.1 WELDED WIRE FABRIC AS DIRECTED BY CSJWCD ENGINEER.

5. ALL COLD JOINT INTERFACES BETWEEN CONCRETE SURFACES SHALL BE FILLED WITH SIKAFLEX 1A ELASTOMERIC SEALANT OR PRE-APPROVED EQUIVALENT. CONCRETE SHALL CURE FOR AT LEAST 72 HOURS PRIOR TO SEALANT PLACEMENT. CLEAN OUT GAP PRIOR TO SEALANT PLACEMENT AND APPLY ACCORDING TO PRODUCT MANUFACTURER REQUIREMENTS. SEALANT SHALL FILL JOINT COMPLETELY.

6. SHOTCRETE LINING MAY BE INSTALLED AS AN ALTERNATIVE TO CONCRETE LINING. DESIGN MIX SHALL BE PRE-APPROVED BY CSJWCD ENGINEER.

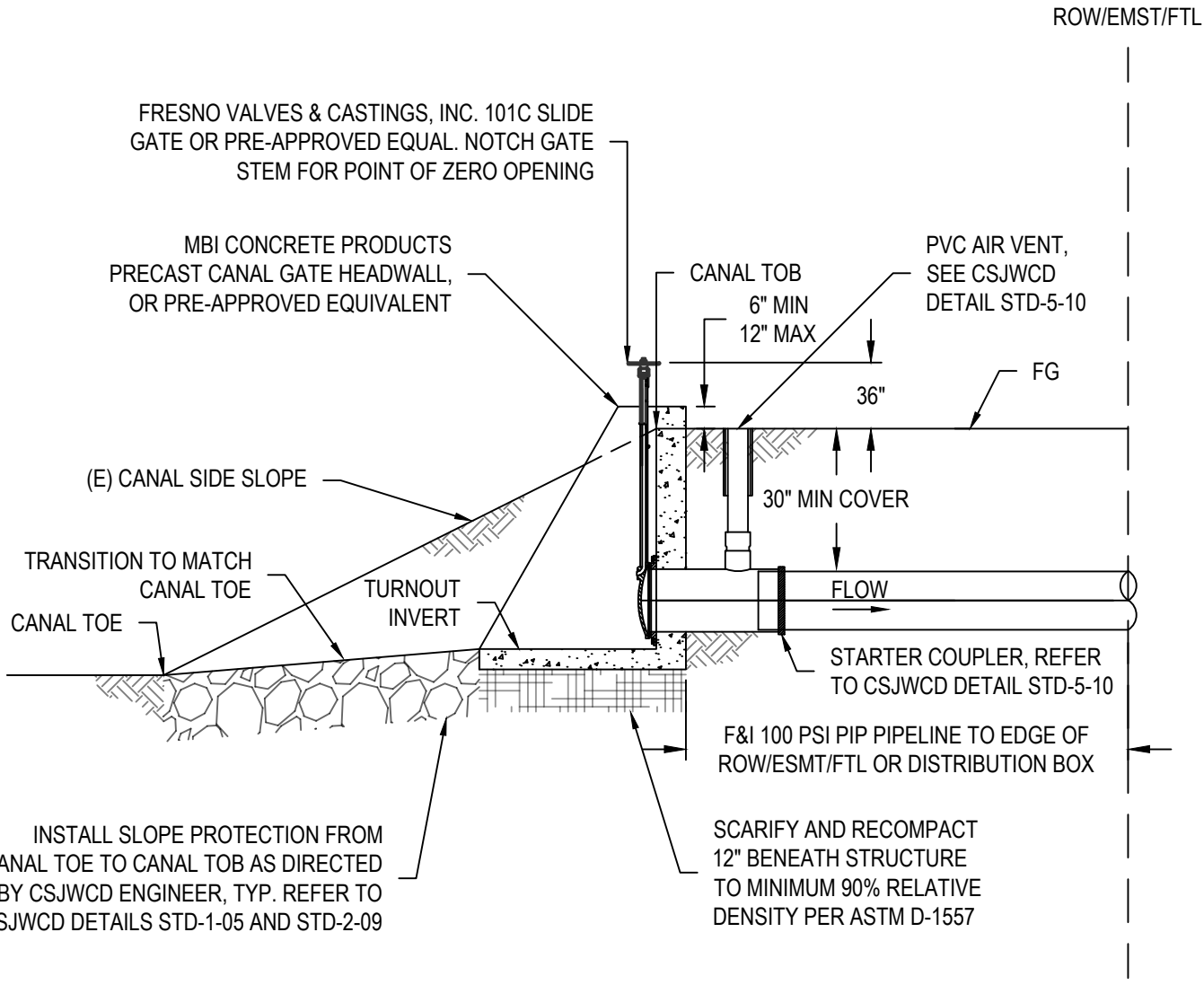
7. STRUCTURE TO LINING CONNECTIONS MAY REQUIRE REBAR DOWELS AS DIRECTED BY CSJWCD ENGINEER.

	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	CONCRETE LINING
	APPROVED: _____ 9/17/26 JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-1-05 SHEET 2 OF 2



PLAN

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		PRECAST TURNOUT	
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-1-07 SHEET 1 OF 3

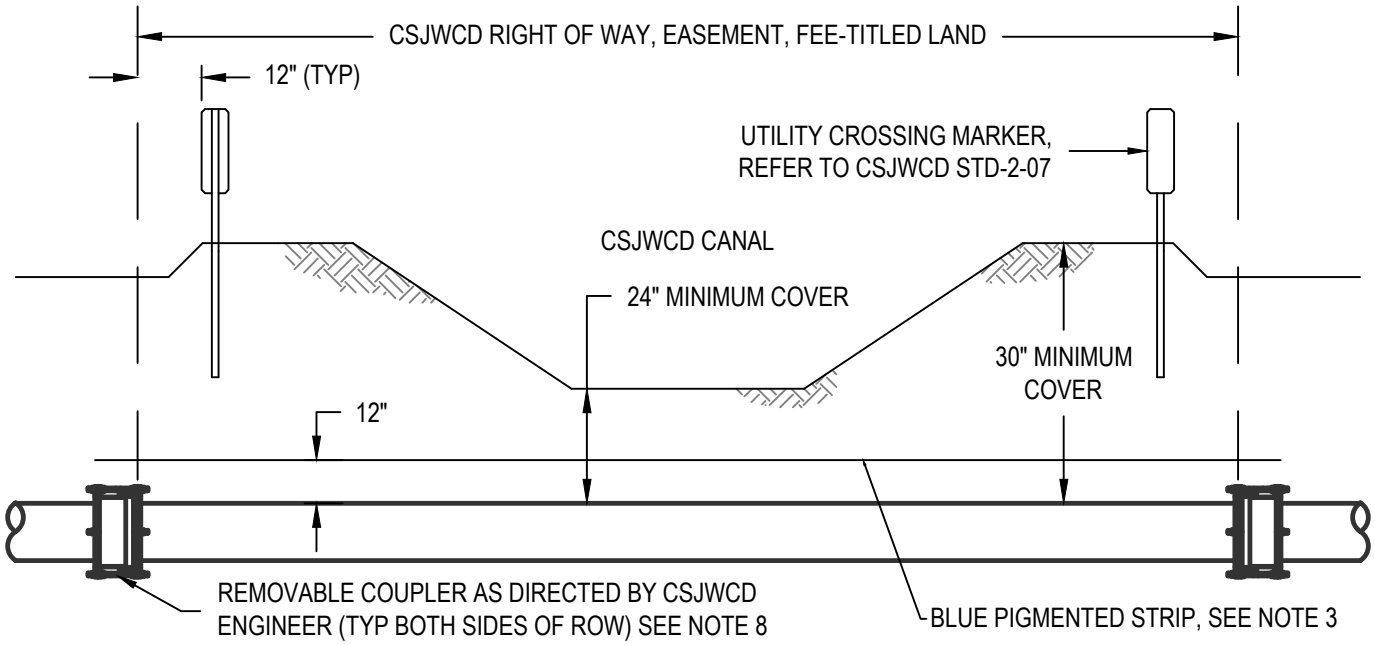


SECTION A-A

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		PRECAST TURNOUT	
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-1-07 SHEET 2 OF 3

1. BACKFILL AND SUBGRADES SHALL BE COMPACTED TO MINIMUM 90% RELATIVE DENSITY PER ASTM D-1557 AND SHALL BE MANUALLY COMPACTED A MINIMUM OF 12 INCHES OVER TOP OF PIPE OR AS DIRECTED BY CSJWCD ENGINEER.
2. TURNOUT SHALL BE SUPPLIED WITH PVC PIPE STARTER COUPLER, REFER TO CSJWCD DETAIL STD-5-10, PVC AIR VENT FOR PVC PIPELINE.
3. DIMENSIONS, ELEVATIONS, PIPE SIZES, AND STRUCTURE LOCATION SHALL BE DETERMINED BY CSJWCD ENGINEER.
4. GATE FRAME SHALL BE SECURELY BOLTED TO CONCRETE STRUCTURE WITH STAINLESS STEEL BOLTS. TOP ANCHORS SHALL BE INSTALLED WITHIN 6 INCHES OF TOP OF CONCRETE WALL.
5. ALL SLIDE GATES SHALL HAVE STOP NUT, GALVANIZED FRAME AND STAINLESS STEEL RISING STEM.
6. SITE CONDITIONS MAY REQUIRE ADDITIONAL CUTOFF WALLS AND/OR COLLARS TO PREVENT SEEPAGE OR SLIDING, AS DIRECTED BY CSJWCD ENGINEER.
7. STANDARD FLOW METER CONFIGURATION AND INSTALLATION REQUIRED PER CSJWCD DETAIL STD-4-01.
8. ALL PRIVATE INFRASTRUCTURE TO BE INSTALLED OUTSIDE OF CSJWCD RIGHT OF WAY, EASEMENT, OR FEE TITLE LAND. REFER TO CSJWCD DETAIL STD-0-03.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		PRECAST TURNOUT
APPROVED: _____ JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-1-07 SHEET 3 OF 3



CONSTRUCTION NOTES

1. THIS STANDARD APPLIES TO OPEN CUT CANAL SECTIONS AND IRRIGATION WATER PIPELINE CROSSINGS ONLY. THE CSJWCD ENGINEER RESERVES THE RIGHT TO DETERMINE THE APPLICATION OF THIS STANDARD.

2. THIS DRAWING IS INTENDED TO SHOW THE PIPELINE CANAL CROSSING DETAILS ONLY. ADDITIONAL VALVES AND APPURTENANCES MAY BE REQUIRED FOR PROPER SYSTEM DESIGN AS PRE-APPROVED BY CSJWCD ENGINEER.

3. FOR IRRIGATION PIPELINES, PROVIDE A BLUE PIGMENTED WARNING STRIP PLACED ALONG THE CENTER AND 12 INCHES ABOVE THE TOP OF ANY PIPE.

4. IRRIGATION PIPELINE SHALL BE SEAMLESS WELDED STEEL PIPE (MINIMUM GAUGE 10, 0.135 INCH WALL THICKNESS), DUCTILE IRON (MINIMUM DIP CLASS 50), OR POLYVINYL CHLORIDE 100 PSI PIP THROUGH THE ENTIRE CSJWCD RIGHT OF WAY, EASEMENT, OR FEE-TITLED LAND. STEEL OR DIP PIPE SHALL BE COATED WITH 2 COATS OF BITUMINOUS MATERIAL WHERE BURIED. BITUMINOUS COATING SHALL BE ALLOWED TO DRY BEFORE BACKFILL. ALL JOINTS SHALL BE WATER TIGHT.

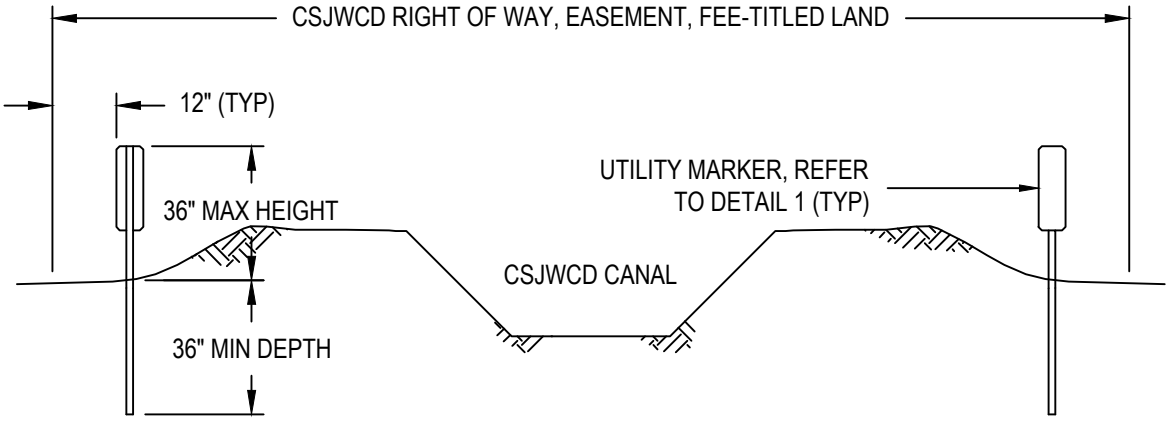
5. PIPE SHALL HAVE MINIMUM 30 INCHES OF COVER OVER TOP OF PIPE THROUGH CANAL BANKS AND CSJWCD RIGHT OF WAY, EASEMENT, OR FEE-TITLED LAND AND MINIMUM 24 INCHES OF COVER UNDER CANAL INVERTS. IF PIPE IS ENCASED, CASING SHALL BE MINIMUM 10 GAUGE, WELDED STEEL PIPE.

6. BACKFILL AND SUBGRADES SHALL BE COMPACTED TO MINIMUM 90% RELATIVE DENSITY PER ASTM D-1557, AND SHALL BE MANUALLY COMPACTED A MINIMUM DEPTH OF 12 INCHES OVER TOP OF PIPE OR AS DIRECTED BY CSJWCD ENGINEER. THE MAXIMUM LAYER THICKNESS SHALL BE 8 INCHES BEFORE COMPACTION. REFER TO TYPICAL PIPE TRENCH.

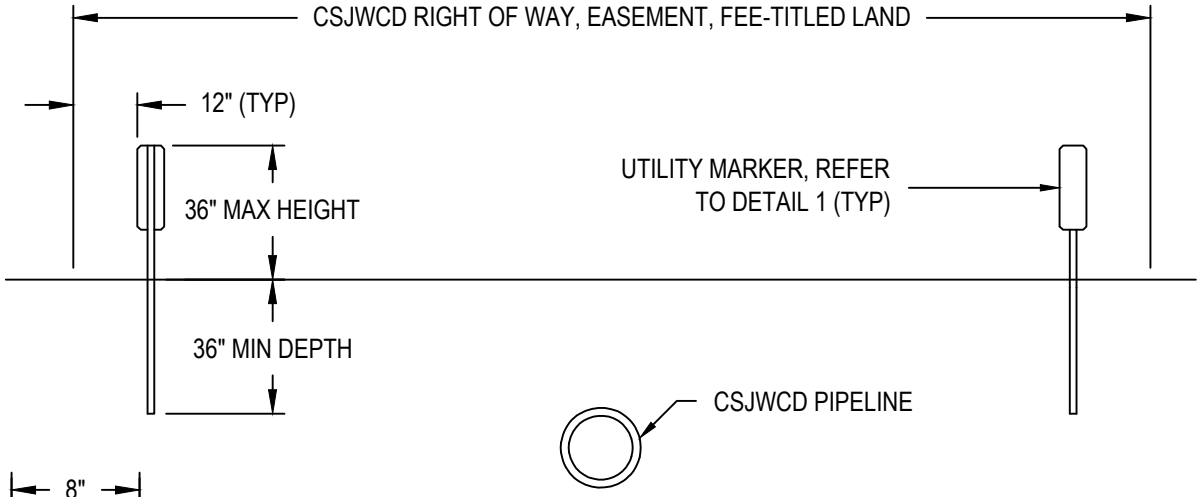
7. PIPE SHALL NOT BE ENCASED IN CONCRETE SLURRY UNLESS DIRECTED BY CSJWCD ENGINEER.

8. IF PIPE CHANGES SIZE OR MATERIAL UPON LEAVING CSJWCD RIGHT OF WAY, A REMOVABLE COUPLE SHALL BE INSTALLED. REMOVABLE COUPLE SHALL BE STEEL BODY GASKETED SLEEVE TYPE, DRESSER STYLE 38, OR PRE-APPROVED EQUIVALENT. ALL NUTS, BOLTS, AND WASHERS USED TO SECURE UNDERGROUND FITTINGS SHALL BE STAINLESS STEEL. AFTER INSTALLATION, ALL HARDWARE SHALL BE COATED WITH RUST PREVENTATIVE, WRAPPED IN 4 MIL POLYETHYLENE SHEETING, AND SECURED WITH PVC TAPE.

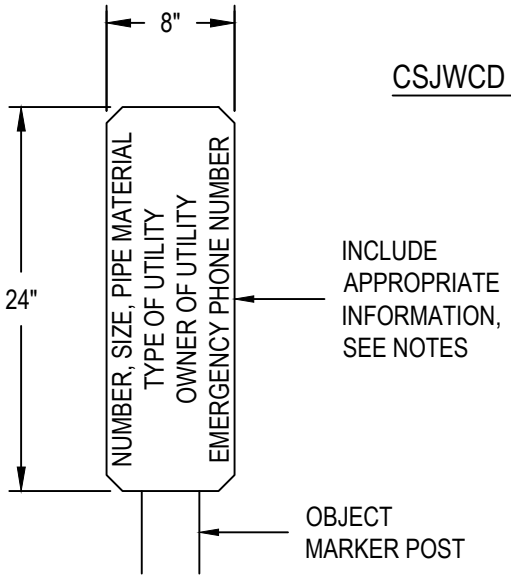
	CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	IRRIGATION PIPELINE CROSSING UNDER CSJWCD CANAL
APPROVED: _____ JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-2-01 SHEET 1 OF 1



CSJWCD CANAL UTILITY MARKER LOCATION



CSJWCD PIPELINE UTILITY MARKER LOCATION

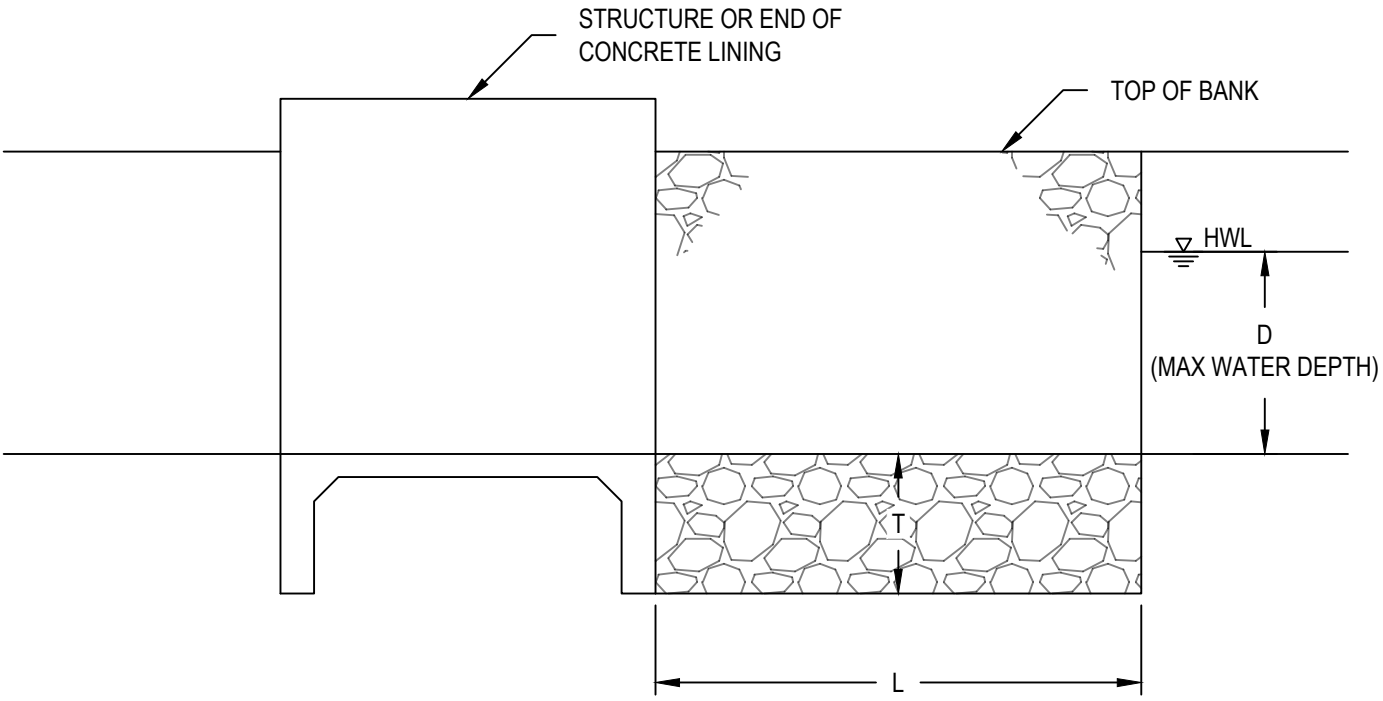


DETAIL 1

CONSTRUCTION NOTES

1. IRRIGATION UTILITY MARKER AND POST SHALL BE PLACED 12 INCHES INSIDE OF CSJWCD RIGHT OF WAY, EASEMENT, FEE-TITLED LAND.
2. UTILITY MARKER POSTS SHALL BE STANDARD 6 FOOT GALVANIZED OBJECT MARKER POSTS WITH 8 INCH x 24 INCH TYPE "A" OBJECT MARKER BOLTED TO OBJECT MARKER POST IN MINIMUM 2 LOCATIONS.
3. UTILITY MARKER SHALL SHOW THE FOLLOWING INFORMATION: NUMBER OF PIPES, PIPE SIZES, PIPE MATERIAL, TYPE OF UTILITY, OWNER OF UTILITY, AND EMERGENCY PHONE NUMBER. INFORMATION SHALL BE PERMANENTLY ATTACHED TO THE MARKER BY SILKSCREENING, ENGRAVING, OR OTHER SUITABLE METHOD, AS PRE-APPROVED BY CSJWCD ENGINEER. EMERGENCY NOTIFICATION TELEPHONE NUMBER 911 IS NOT ACCEPTABLE.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		UTILITY CROSSING MARKER
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-2-07 SHEET 1 OF 1

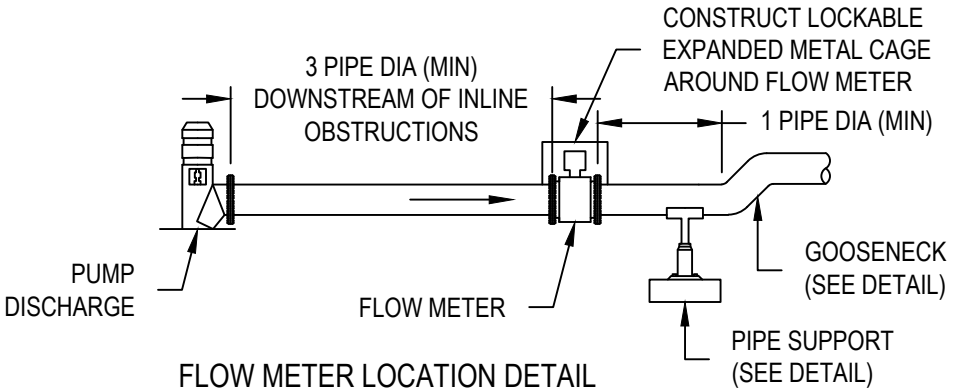


ELEVATION

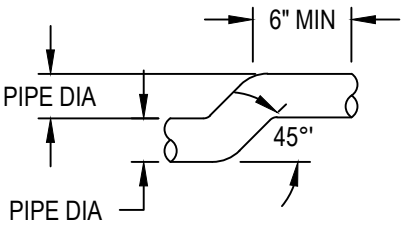
CONSTRUCTION NOTES

1. RIP RAP TRANSITION SHALL BE CONSTRUCTED UPSTREAM AND DOWNSTREAM OF STRUCTURES AND CONCRETE LINING TRANSITIONS IN EARTHEN CHANNELS, AS WELL AS AREAS DISTURBED DURING CONSTRUCTION OR AS DIRECTED BY CSJWCD ENGINEER.
2. RIP RAP GRADATION SHALL BE 12 INCH TO 18 INCH ANGULAR ROCK, OR AS DIRECTED BY CSJWCD ENGINEER.
3. RIP RAP THICKNESS "T" SHALL BE 1.5 x MAX STONE SIZE, OR AS DIRECTED BY CSJWCD ENGINEER.
4. RIP RAP TRANSITION LENGTH "L" SHALL BE 4 x MAX WATER DEPTH (5 FEET MINIMUM), OR AS DIRECTED BY CSJWCD ENGINEER.
5. TOP OF RIP RAP SLOPE PROTECTION SHALL BE PLACED AT LEAST 12" ABOVE HIGH WATER LEVEL.
6. RIP RAP SHALL BE PLACED ON TOP OF GEOTEXTILE FABRIC (MIRAFI 140 OR PRE-APPROVED EQUAL).

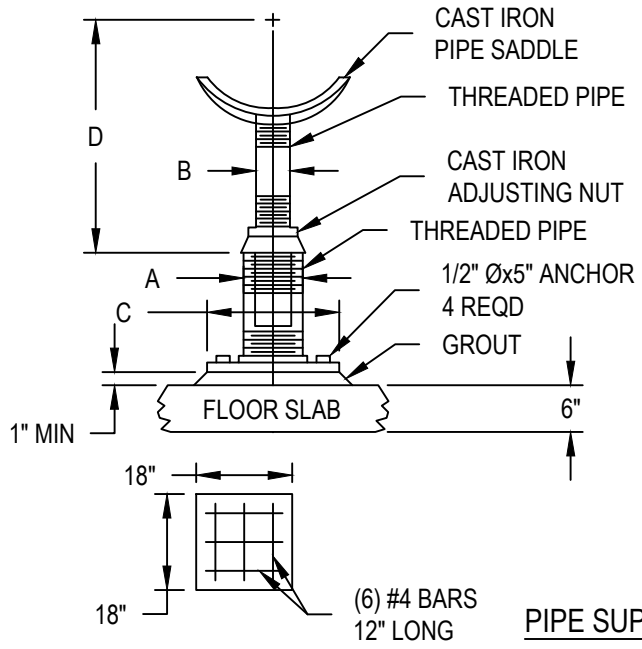
CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		RIP RAP SLOPE PROTECTION
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-2-09 SHEET 1 OF 1



FLOW METER LOCATION DETAIL



GOOSENECK DETAIL



PIPE SUPPORT DETAIL

DIMENSIONS					
PIPE SIZE	"A"	"B"	"C"	"D"	
				MIN	MAX
2-1/2"	2-1/2"	1-1/2"	9"	8"	13"
3"	2-1/2"	1-1/2"	9"	8-1/4"	13-1/4"
4"	3"	2-1/2"	9"	9-1/4"	14"
6"	3"	2-1/2"	9"	10-1/2"	15-1/4"
8"	3"	2-1/2"	9"	11-3/4"	16-1/2"
10"	3"	2-1/2"	9"	13-1/2"	18-1/4"
12"	3"	2-1/2"	9"	15"	19-3/4"

PIPE SUPPORT NOTE

FOR SUPPORTS IN AREAS OUTSIDE OF FLOOR SLAB, CONSTRUCT 18"x18"x6" PAD UNDER PIPE SUPPORT.

CONSTRUCTION NOTES

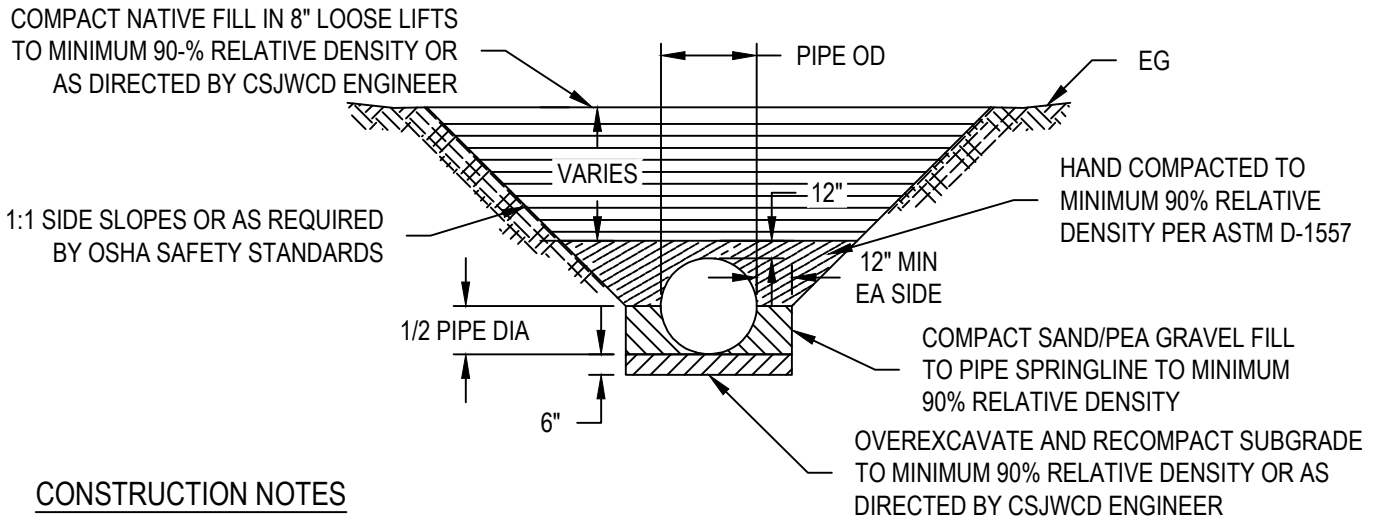
1. THIS DRAWING IS ONLY INTENDED TO SHOW THE FLOW METER LOCATION ON THE PUMP DISCHARGE. IT IS NOT TO BE USED TO SELECT A PUMP OR STAND PIPE CONFIGURATION. ADDITIONAL VALVES AND APPURTENANCES MAY BE NEEDED FOR PROPER SYSTEM DESIGN.

2. FLOW METER SHALL BE SEAMETRICS OR PRE-APPROVED EQUIVALENT, MODEL AG3000, HAVE AN INDICATOR-TOTALIZER ATTACHED THAT MEASURES INSTANTANEOUS FLOW IN CUBIC FEET PER SECOND (CFS), CUMULATIVE VOLUME IN ACRE-FEET, 4-20 mA OUTPUT, HAVE A TEST DIAL AND SHALL BE PRE-APPROVED BY CSJWCD ENGINEER. CSJWCD WILL CHECK METER ACCURACY UPON MINIMUM 72 HOUR NOTICE, PRIOR TO FIRST IRRIGATION.

3. FLOW METER SHALL BE SIZED AND INSTALLED ACCORDING TO MANUFACTURER INSTRUCTIONS AND SPECIFICATIONS. METER SHALL BE CALIBRATED TO EXACT INSIDE PIPE DIAMETER AND ANTICIPATED FLOW RANGES. METER LOCATION SHALL BE AS DIRECTED BY CSJWCD ENGINEER, SUCH THAT THE PIPE SHALL FLOW FULL, AND WITH NO VALVES OR PIPE BENDS WITHIN THE MINIMUM DISTANCES SHOWN. FLOW METER SHALL BE INSTALLED ABOVE GROUND, IN AN ACCESSIBLE LOCATION, AND OUTSIDE THE LIMITS OF CSJWCD'S RIGHT OF WAY, EASEMENT, OR FEE-TITLED LAND.

4. AFTER INSTALLATION, CSJWCD WILL ASSUME ALL MAINTENANCE, OPERATION, AND REPLACEMENT COSTS FOR THE FLOW METER GOING FORWARD.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		PUMP DISCHARGE FLOW METER
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — 9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-4-01 SHEET 1 OF 1



CONSTRUCTION NOTES

1. BACKFILL AND SUBGRADES SHALL BE COMPACTED TO MINIMUM 90% RELATIVE DENSITY PER ASTM D-1557 AND SHALL BE MANUALLY COMPACTED A MINIMUM DEPTH OF 12 INCHES OVER TOP OF PIPE OR AS DIRECTED BY CSJWCD ENGINEER. THE MAXIMUM LAYER THICKNESS SHALL BE 8 INCHES BEFORE COMPACTION.

2. BACKFILL SHALL BE SELECT NATIVE MATERIAL, CONTAIN NO MATERIAL OVER 3 INCHES IN DIAMETER OR LENGTH, AND SHALL BE COMPACTED AGAINST UNDISTURBED EARTH. FILL MATERIAL SHALL CONTAIN NO SOD, BRUSH, ROOTS, OR OTHER ORGANIC OR OTHERWISE UNSUITABLE MATERIAL.

3. PIPELINE SHALL BE INSTALLED ACCORDING TO MANUFACTURER INSTRUCTIONS AND SPECIFICATIONS. MINIMUM DEPTH OF COVER SHALL BE 30 INCHES OR AS DIRECTED BY CSJWCD ENGINEER.

4. COMPACTION TESTS SHALL BE AT THE LANDOWNER OR DEVELOPER EXPENSE. ANY RETESTS SHALL BE PAID BY THE CONTRACTOR. FREQUENCY AND LOCATION OF THE TESTS SHALL BE AS DIRECTED BY CSJWCD ENGINEER.

5. DEWATERING DUE TO HIGH GROUNDWATER OR CANAL SEEPAGE MAY BE REQUIRED. DEWATERING METHODS SHALL BE PRE-APPROVED BY CSJWCD ENGINEER PRIOR TO COMMENCEMENT OF DEWATERING.

6. TRENCH WIDTHS SHALL BE AS SHOWN UNLESS THE PIPELINE SIZE IS 4 INCHES OR SMALLER, WHERE THE TRENCH SHALL HAVE A 12 INCH MINIMUM WIDTH.

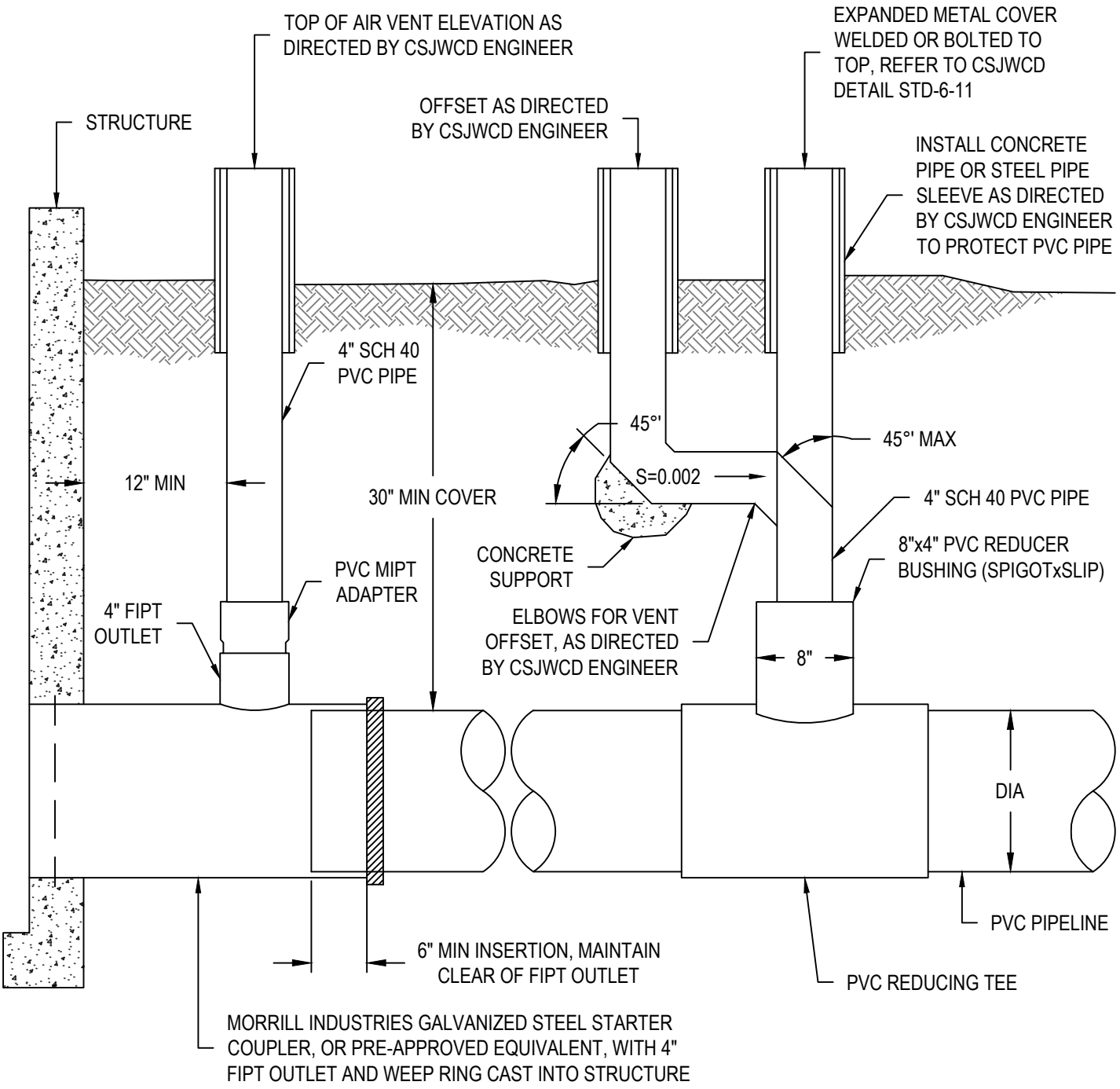
7. BEDDING, IF REQUIRED SHALL BE MINIMUM 4 INCHES AS DIRECTED BY CSJWCD ENGINEER. BEDDING SHALL CONFORM TO THE SPECIFICATIONS BELOW. SOIL TYPES SHALL BE AS DETERMINED BY CSJWCD ENGINEER.

   A. ON SANDY SOIL (BEDDING & HAUNCHING):
   NATIVE MATERIAL, IF SUITABLE, OR SAND AS DIRECTED BY CSJWCD ENGINEER.

   B. ON CLAY SOIL (BEDDING & HAUNCHING):
   SAND OR NATIVE MATERIAL AS PRE-APPROVED BY CSJWCD ENGINEER SHALL BE PLACED IN 8 INCH LIFTS.

8. WATER PACKING OR JETTING SHALL ONLY BE USED ON SOILS PRE-APPROVED BY CSJWCD ENGINEER. WHEN WATER PACKING OR JETTING IS USED, THE AMOUNT OF WATER SHALL BE CONTROLLED TO ENSURE THAT POOLING OF EXCESS WATER DOES NOT OCCUR. THE WETTED FILL MUST BE ALLOWED TO REACH OPTIMUM MOISTURE AND THEN MECHANICALLY COMPACTED TO MEET MINIMUM 90% RELATIVE DENSITY PER ASTM D-1557 BEFORE ADDITIONAL BACKFILLING IS DONE. CARE MUST BE EXERCISED TO PREVENT PIPE FLOTATION DURING WATER PACKING OR JETTING. MEASURES MUST BE PRE-APPROVED BY CSJWCD ENGINEER. THIS ITEM DOES NOT APPLY TO PVC OR HDPE PIPELINES.

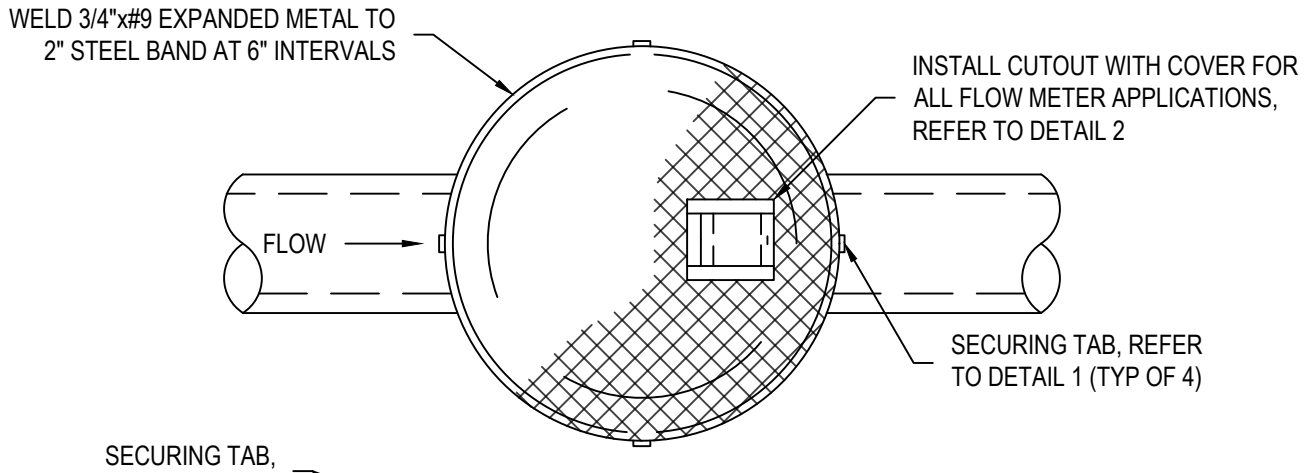
CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		TYPICAL PIPE TRENCH
APPROVED: _____ JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-5-01 SHEET 1 OF 1



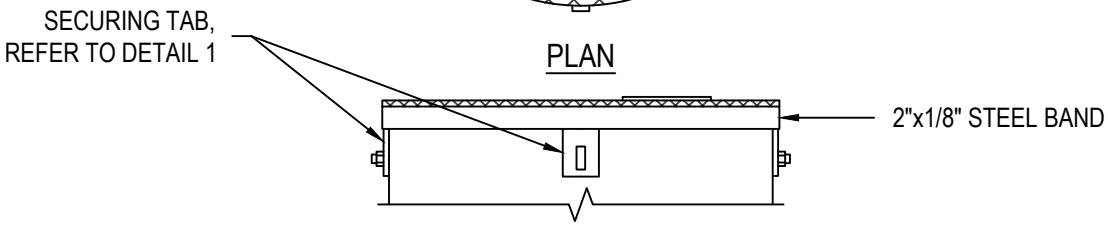
CONSTRUCTION NOTE

1. VENTS SHALL BE INSTALLED AT APPROXIMATE 500 FOOT INTERVALS, AT PIPELINE GRADE CHANGES, AT HIGH POINTS, AND IMMEDIATELY DOWNSTREAM OF ANY INLET STRUCTURES. VENTS SHALL BE OFFSET AS DIRECTED BY CSJWCD ENGINEER.
2. AIR VENT SIZE SHALL BE 4 INCH DIAMETER OR AS DIRECTED BY CSJWCD ENGINEER.

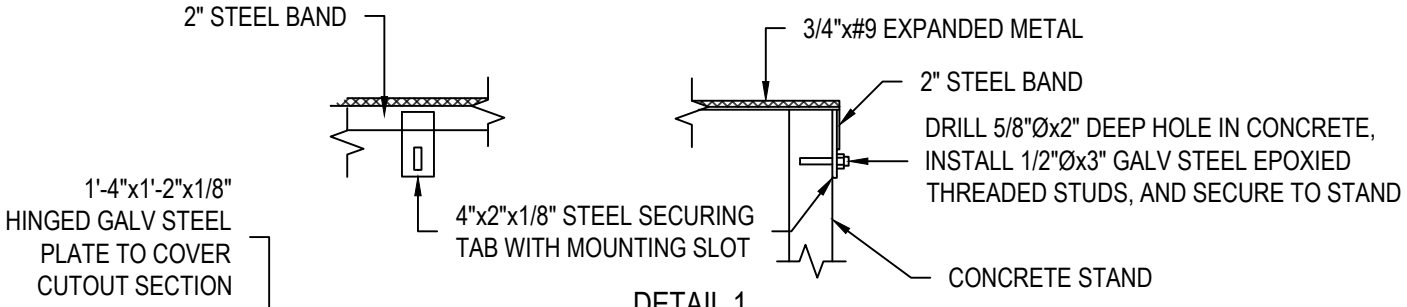
CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT	PVC AIR VENT FOR PVC PIPELINE	
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER — 9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026	STANDARD DETAIL STD-5-10 SHEET 1 OF 1



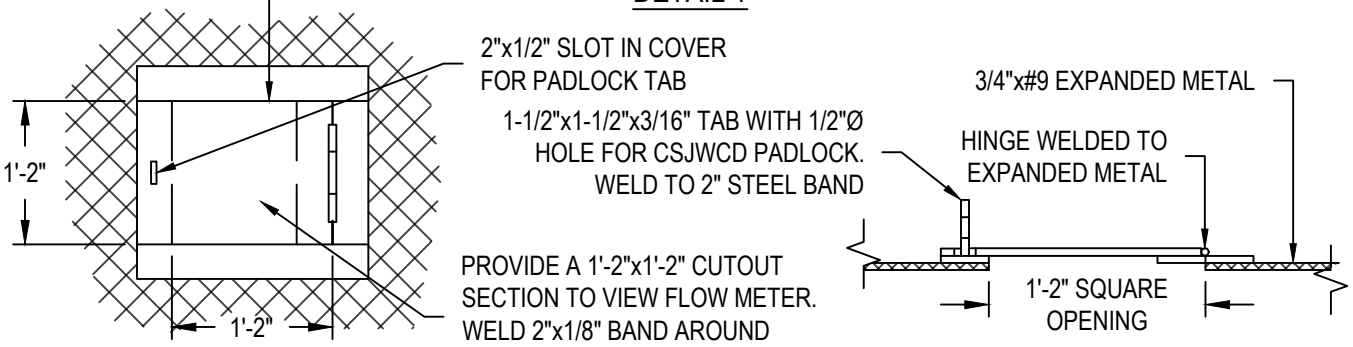
PLAN



ELEVATION



DETAIL 1



PLAN

ELEVATION

DETAIL 2

CONSTRUCTION NOTE

1. CLEARANCE BETWEEN EDGE OF STAND AND COVER SHALL BE MINIMUM 1/4 INCH AND MAXIMUM 1/2 INCH ALL SIDES.
2. ANY CHANGES OR DEVIATIONS REQUIRED BY FIELD CONDITIONS SHALL BE PRE-APPROVED BY CSJWCD ENGINEER.
3. UNLESS OTHERWISE NOTED, ALL STEEL SURFACES SHALL BE HOT DIP GALVANIZED OR BRUSH PAINTED WITH ONE COAT RED RUST-OLEUM PRIMER, SECOND COAT GREEN RUST-OLEUM, FINAL COAT SAND OR TAN EXTERIOR GLOSS FINISH, OR PRE-APPROVED EQUIVALENT.

CENTRAL SAN JOAQUIN WATER CONSERVATION DISTRICT		EXPANDED METAL COVER
APPROVED: JOHN B. DAVIDS, P.E., DISTRICT ENGINEER	9/17/26 DATE	SCALE: NOT TO SCALE DATE: SEPTEMBER 2026
		STANDARD DETAIL STD-6-11 SHEET 1 OF 1