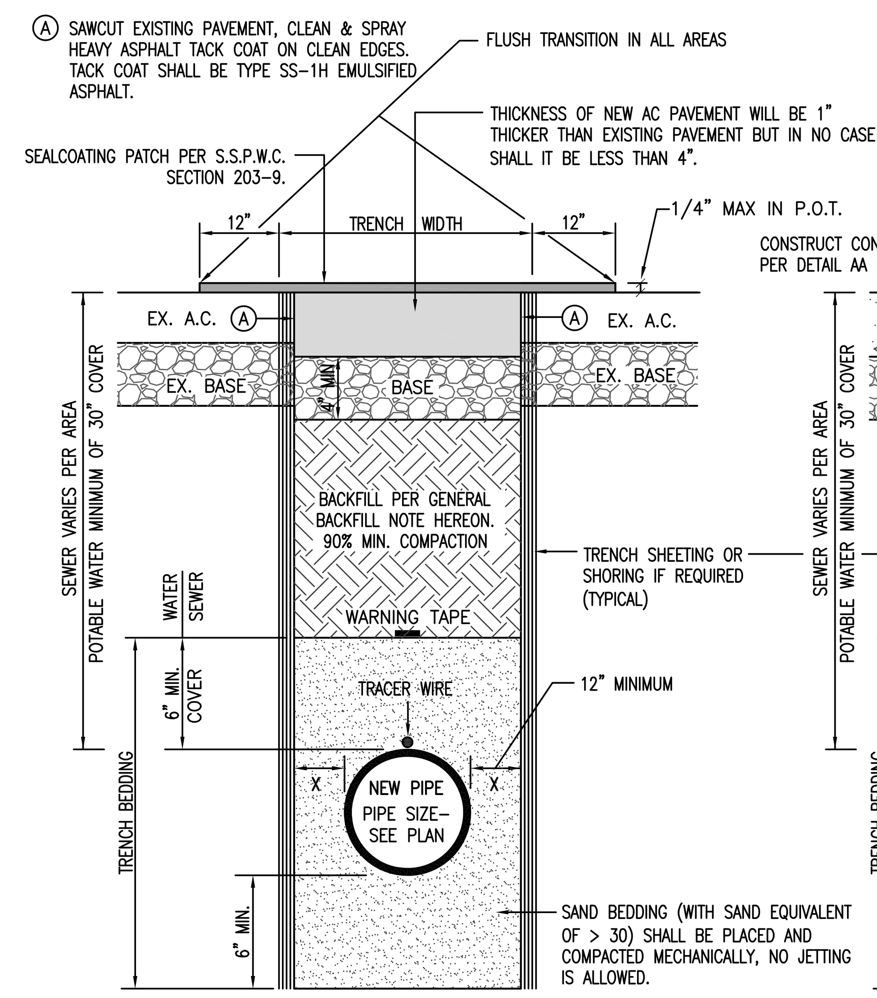
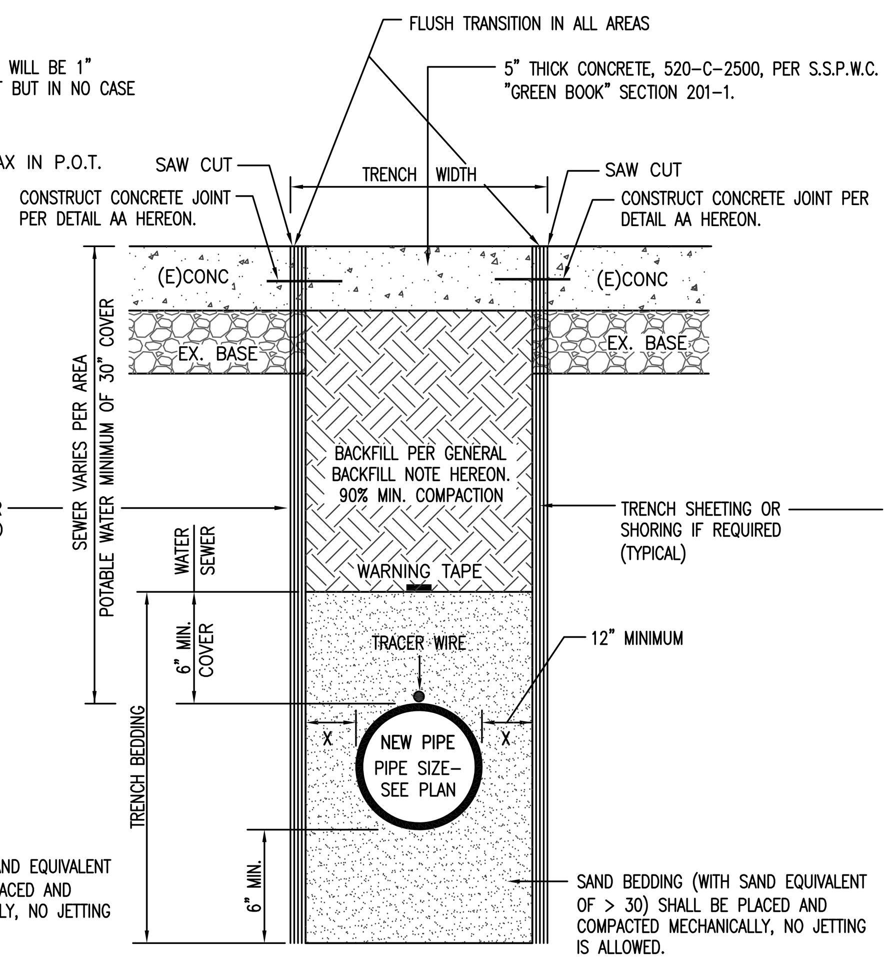
# UTILITY TRENCHING DETAILS

NOT TO SCALE




EXISTING ASPHALT AREAS

N.T.S.




EXISTING CONCRETE AREAS

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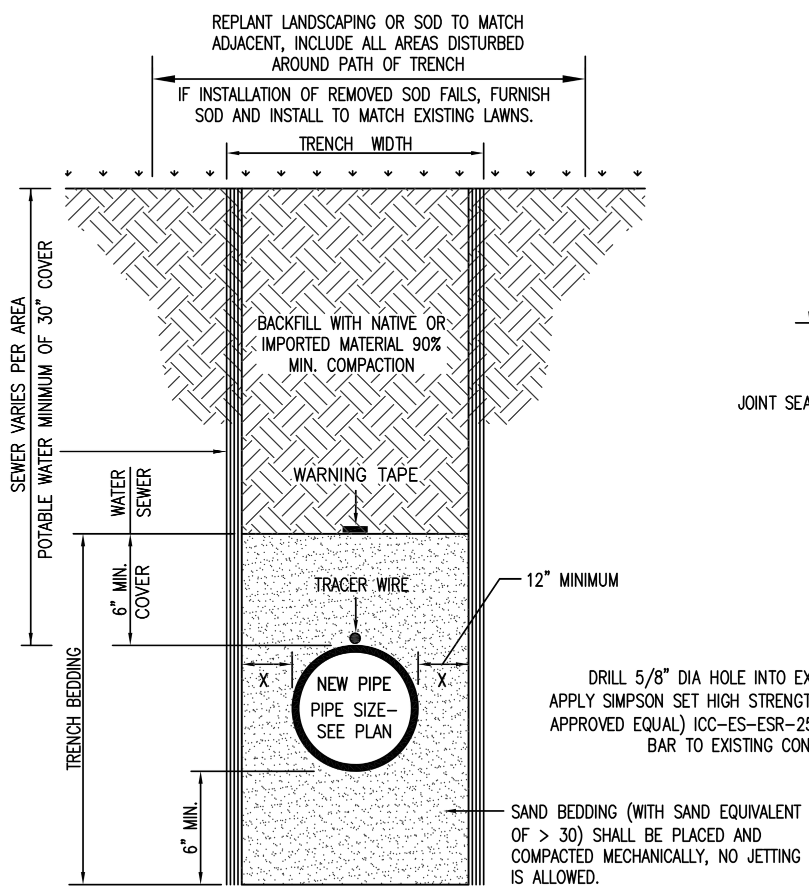
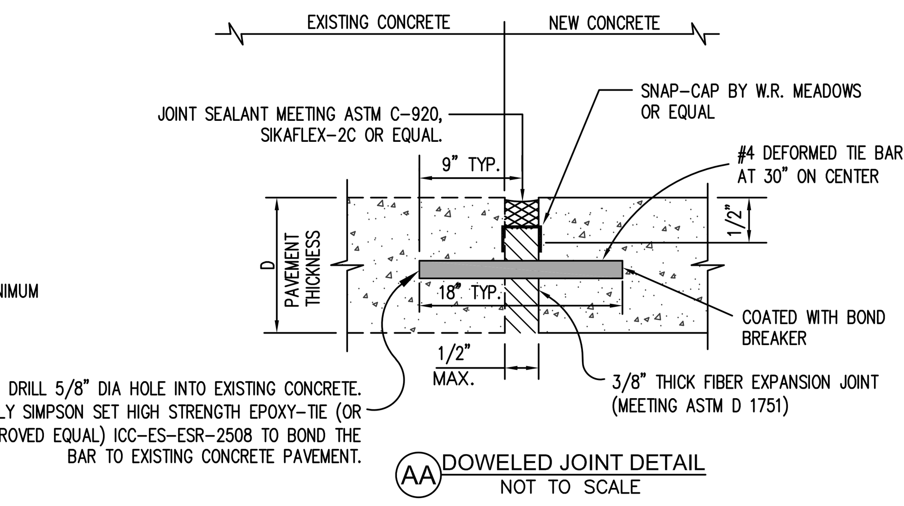



NEW OR EXISTING LANDSCAPED AREAS

N.T.S.




(AA) DOWELED JOINT DETAIL

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## TRENCH EXCAVATION, BEDDING, & BACKFILL NOTES:

EXCAVATION NOTE: THE 2019 CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH REGULATIONS (CAL/OSHA) WILL REQUIRE A PERMIT FOR THE CONSTRUCTION OF TRENCHES OR EXCAVATIONS WHICH ARE FIVE (5) FEET OR DEEPER AND INTO WHICH A PERSON IS REQUIRED TO DESCEND. FOR PERMIT PURPOSES, "DESCEND" MEANS TO ENTER ANY PART OF THE TRENCH OR EXCAVATION ONCE THE EXCAVATION HAS ATTAINED A DEPTH OF 5 FEET OR MORE. FOR REGULATIONS RELATING TO PERMITS FOR EXCAVATIONS AND TRENCHES, REFER TO THE CALIFORNIA CODE OF REGULATIONS TITLE 8, CHAPTER 3.2, ARTICLE 2, SECTION 341 OF THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH REGULATIONS (CAL/OSHA)

THE CONTRACTOR SHALL SUBMIT A DETAIL SHOWING THE DESIGN OR SHORING; BRACING SLOPING OR OTHER PROVISIONS TO BE MADE FOR WORKER PROTECTION FROM THE HAZARDS OF CAVING GROUND DURING THE EXCAVATION. THE PLAN SUBMITTED SHALL BE SIGNED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER CERTIFIED THAT THE PLAN COMPLIES WITH ALL OSHA CONSTRUCTION SAFETY ORDERS.

BEDDING MATERIAL SHALL BE COARSE SAND WITH SAND EQUIVALENT OF 30 OR GREATER. NO ANGULAR STONES OR PEA GRAVELS WILL BE ALLOWED IN PIPE BEDDING.

COMPACTION METHODS: ALL BEDDING & BACKFILL COMPACTION SHALL BE BY HAND-OPERATED, PLATE-TYPE, VIBRATORY, OR OTHER SUITABLE HAND-TAMPERS IN AREAS NOT ACCESSIBLE TO LARGER ROLLERS OR COMPACTERS. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO CONDUITS, PIPES, AND ANY APPURTENANCES. WATER DENSIFICATION BY INUNDATION OR JETTING SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM CIVIL ENGINEER.

SHEETING: WHEN EXCAVATION DEPTHS OR SOIL CONDITIONS REQUIRE SHORING OR USE OF A TRENCH BOX, THE BOTTOM OF THE SHORING OR TRENCH BOX SHOULD BE PLACED NO LOWER THEN THE TOP OF THE PIPE. THIS PREVENTS DISRUPTION OF THE BACKFILL ENVELOPE WHEN REMOVING THE SHORING OR TRENCH BOX. IF THIS PRACTICE CANNOT BE FOLLOWED, CONSIDERATION SHOULD BE GIVEN TO LEAVING THE SHORING IN PLACE.

## GENERAL BACKFILL NOTES:

EXCAVATED TRENCH MATERIAL TO BE INSTALLED FOR BACKFILLING SHALL BE CLEAN, FREE OF LARGE CLODS AND STONES LARGER THAN 3-INCHES IN ANY DIMENSION. INSTALL BACKFILL MATERIALS IN LAYERS NOT TO EXCEED 8 TO 10-INCHES IN THICKNESS AND COMPACT TO A MINIMUM 90% OF THE MAXIMUM DENSITY. IN LIEU OF USING NATIVE MATERIAL IN PAVED AREAS, THE USE OF A SLURRY BACKFILL MAY BE SUBSTITUTED. SAND SLURRY SHALL CONSIST OF 1 SACK PORTLAND CEMENT (CLASS 100-E-100) PER CUBIC YARD OF SAND SLURRY MIX. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ANY EXCESS BACKFILL MATERIAL FROM THE SITE.

## WARNING TAPE NOTES (POTABLE WATER):

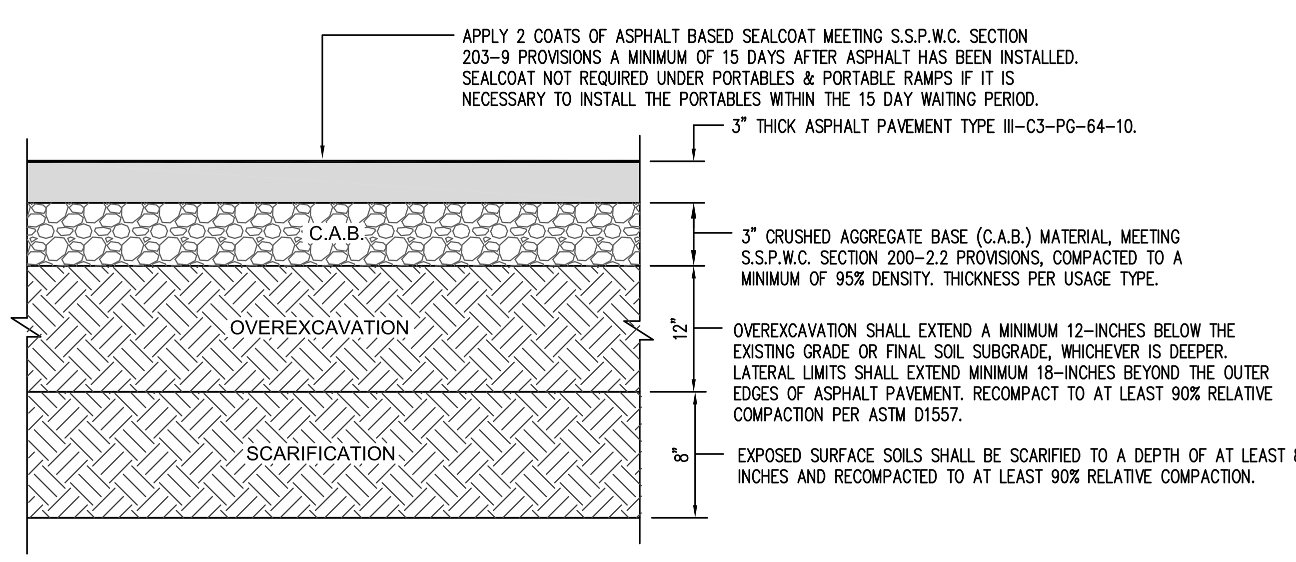
A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED WATER LINE BELOW", IN POLYETHYLENE FILM COLOR BLUE, INSTALLED ABOVE PIPE, MINIMUM 2" WIDE.

## WARNING TAPE NOTES (SANITARY SEWER):

A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED SEWER LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN, INSTALLED ABOVE PIPE, 6" WIDE.

## TRACER WIRE NOTES:

COPPER TRACER WIRE SHALL BE INSTALLED ON ALL NON-METALLIC PIPELINES, 2" AND GREATER, JUST ABOVE THE HORIZONTAL CENTERLINE OF THE PIPE. THE COPPER WIRE SHALL BE TYPE THWN #12 AWG GAUGE FOR SEWER, STORM & POTABLE WATER, #14 AWG GAUGE FOR IRRIGATION PIPES AND #18 AWG GAUGE FOR POLYETHYLENE GAS LINES. ALL TRACER WIRE SHALL HAVE HEAT AND MOISTURE RESISTANT INSULATION.

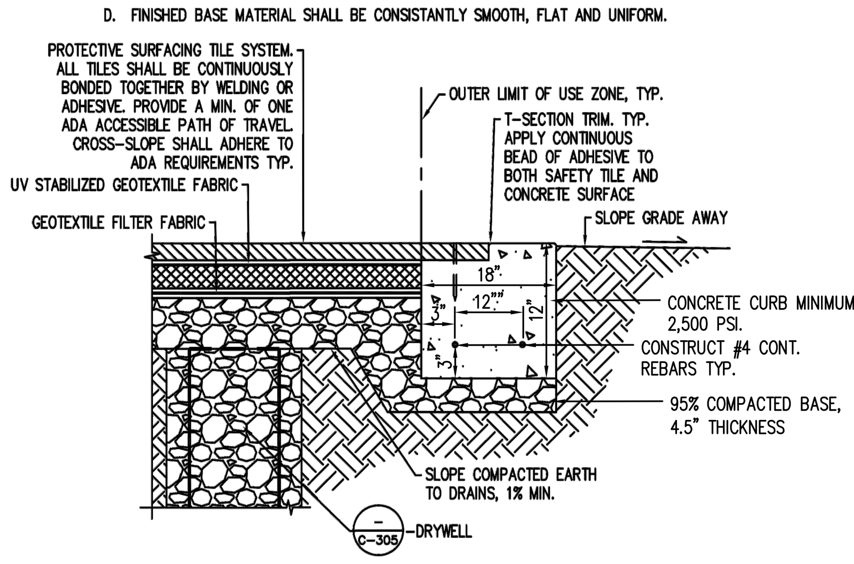



(2) ASPHALT PAVEMENT DETAIL

NOT TO SCALE

NOTES:

1. PROVIDE CONCRETE CURB EXPANSION JOINTS AT 30' O.C. MAXIMUM.
2. BASE FOR SAFETY TILE SHALL CONSIST OF A 95% COMPACTION CLASS A BASE, ACHIEVED BY THE FOLLOWING PROCEDURE:
   A. SLOPE COMPACTED EARTH TO DRAINS AT A MINIMUM SLOPE OF 1%.
   B. APPLY 2" LAYER OF BASE MATERIAL AND COMPACT WITH A SOIL COMPACTOR.
   C. REPEAT ABOVE STEP TO OBTAIN REQUIRED THICKNESS OF MATERIAL.
   D. FINISHED BASE MATERIAL SHALL BE CONSISTANTLY SMOOTH, FLAT AND UNIFORM.



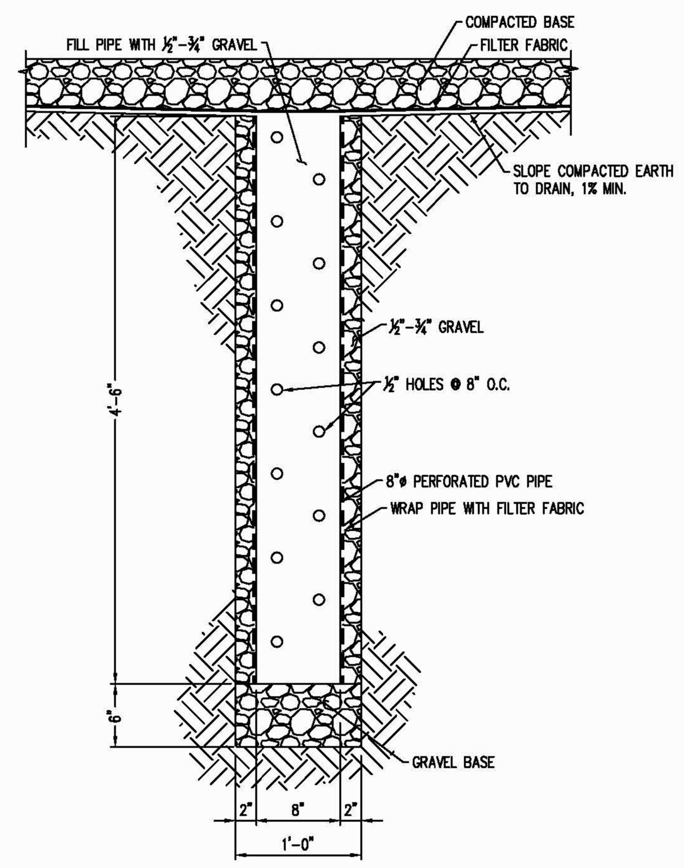

DRAINAGE OPTION NO. 2:
DRYWELL IS ACCEPTABLE WHERE GEOTECHNICAL REPORT INDICATES A MINIMUM SOIL PERCOLATION RATE OF 0.5 INCH PER HOUR AND SOIL HAS NO POTENTIAL FOR LIQUEFACTION, LOCATE DRYWELL AT LOWEST POINT OF DEPRESSION AND NOT LESS THAN 10 FEET FROM STRUCTURES, PROPERTY LINES, WATER TABLE OR SIGNIFICANT SLOPES.

(7) PLAYGROUND STRUCTURE MAT @ CONCRETE CURB DETAIL

NOT TO SCALE

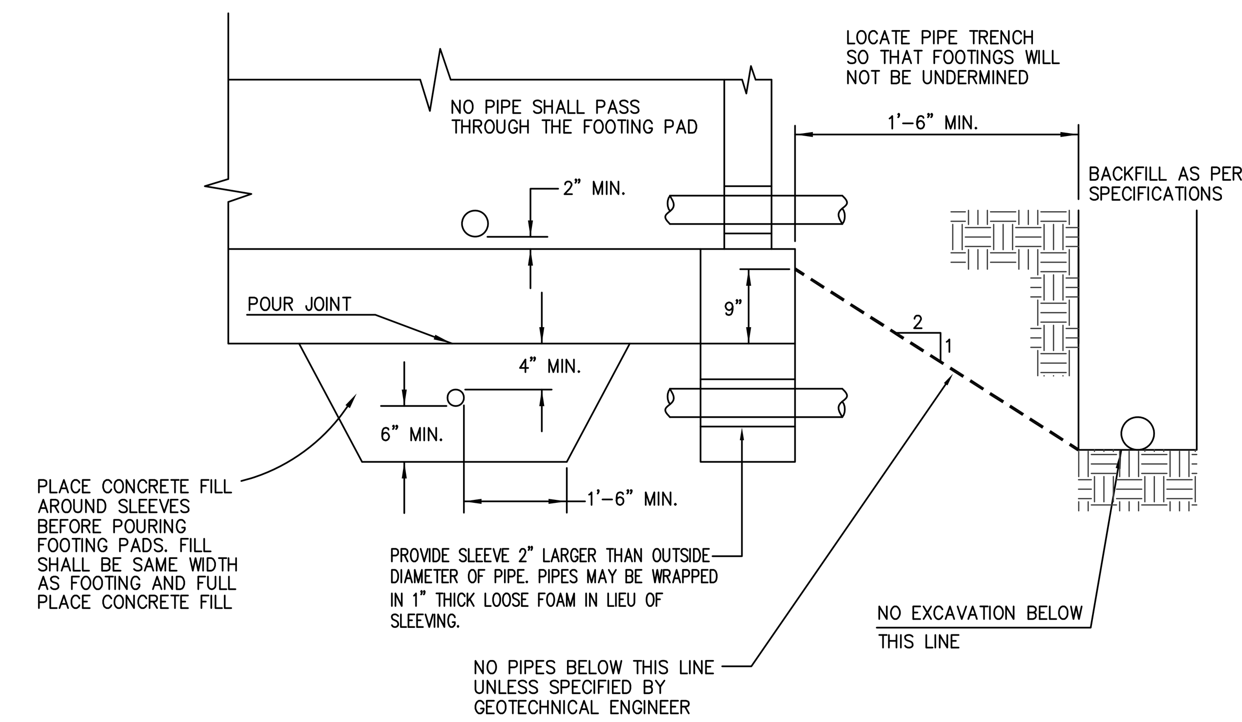
NOTES:

1. DRYWELL SHOULD ONLY BE USED WHEN THE GEOTECHNICAL REPORT INDICATES A MINIMUM SOIL PERCOLATION RATE OF 0.5 INCH PER HOUR AND SOIL HAS NO POTENTIAL FOR LIQUEFACTION.
2. LOCATE DRYWELL AT LOWEST POINT OF DEPRESSION AND NOT LESS THAN 10 FEET FROM STRUCTURES, PROPERTY LINES, WATER TABLE AND SIGNIFICANT SLOPES.




(7) (C-305) PLAYGROUND DRYWELL

NOT TO SCALE




ALL TRENCH EXCAVATIONS TO BE ABOVE 2:1 PLANE AS SHOWN PER 2019 CBC SECTION 1809A.14.

TYPICAL PIPE TRENCH / FOOTING DETAIL

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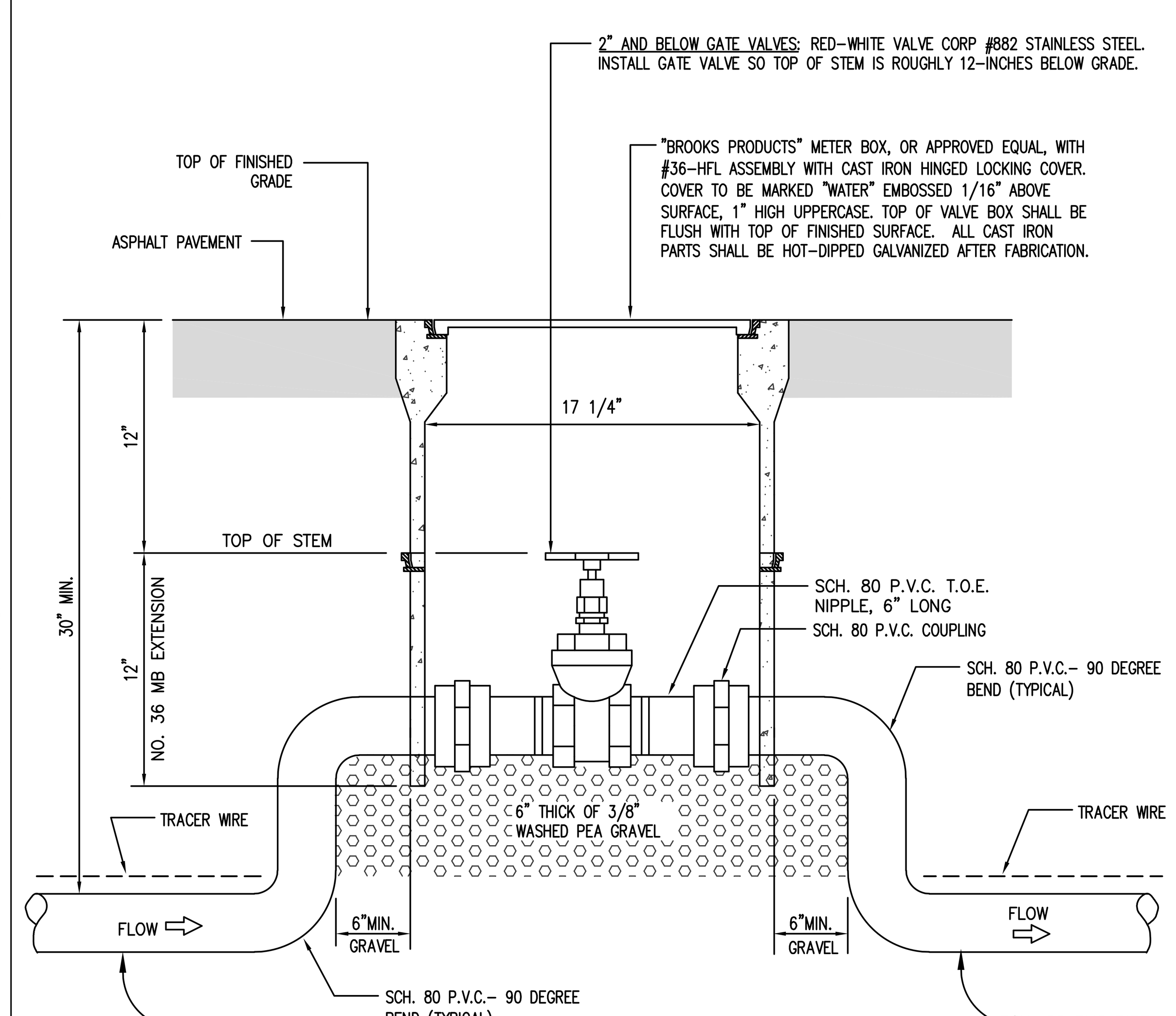


(W9) SHUT-OFF VALVE IN YARDBOX 2-INCHES AND BELOW

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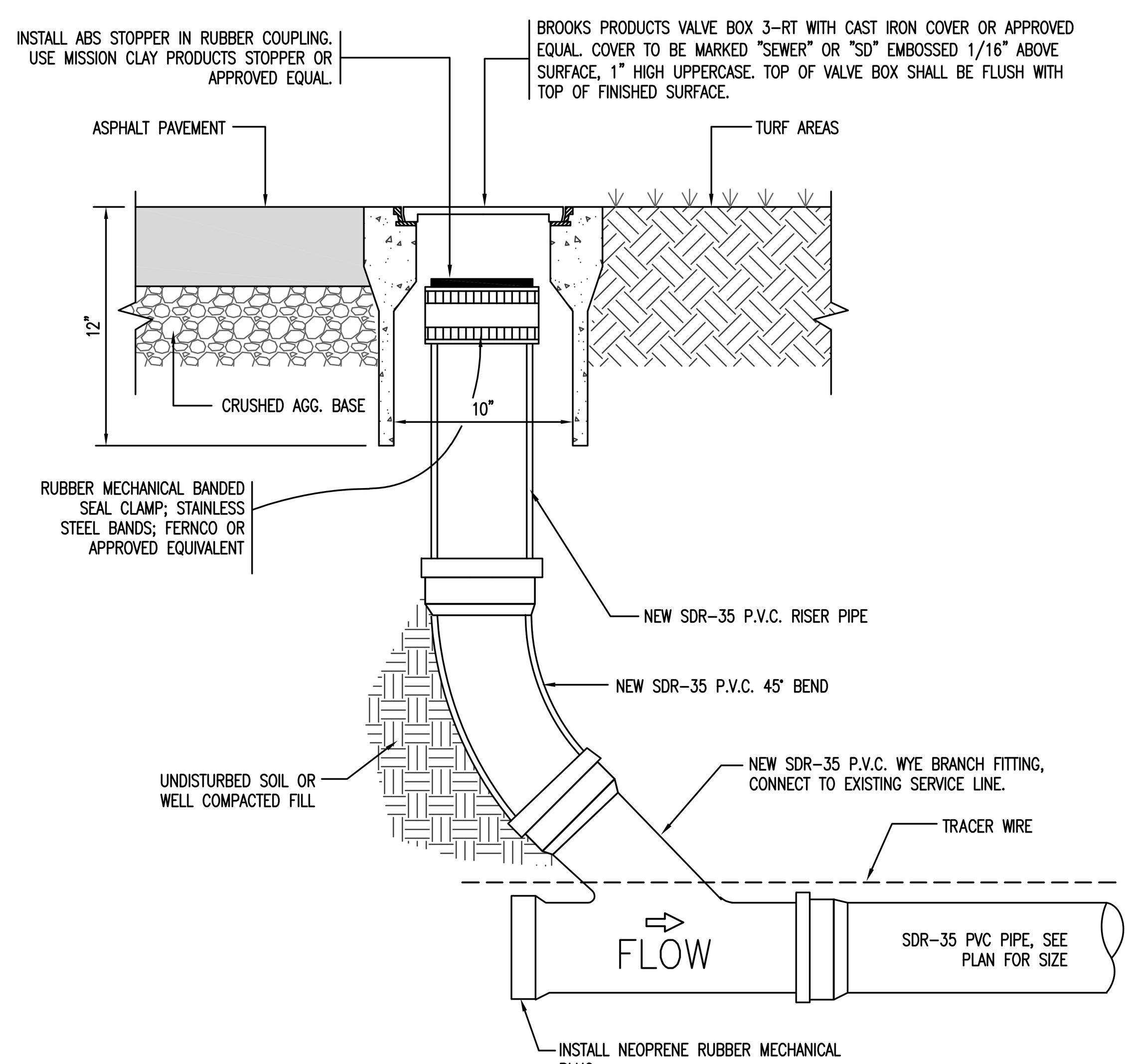


(S2) CLEAN OUT & YARD BOX DETAIL

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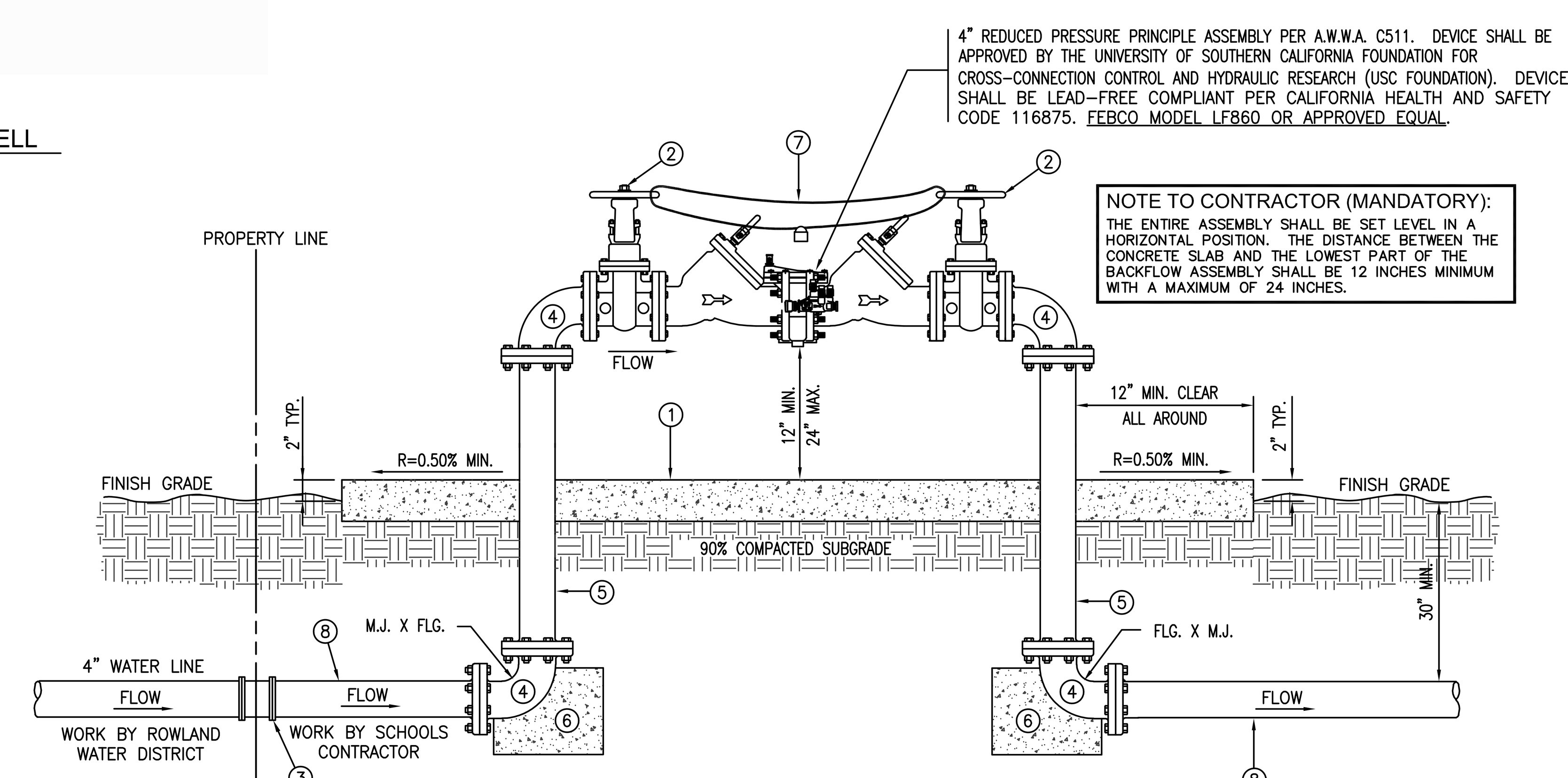


(W1) 4" REDUCED PRESSURE PRINCIPLE ASSEMBLY

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## BACKFLOW DEVICE NOTES TO CONTRACTOR:

1. CONTRACTOR TO VERIFY CONDITION OF CONNECTION POINTS PRIOR TO CONSTRUCTION AND REPORT ALL DISCREPANCIES TO DESIGN ENGINEER.
2. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316 PER ASTM F593 GRADE G OR H AND NUTS AND WASHERS SHALL BE STAINLESS STEEL TYPE 316 PER ASTM F594 GRADE G OR H.
3. ALL GASKETS SHALL BE NITRILE OR STYRENE BUTADIENE GASKETS.
4. ALL NEWLY INSTALLED BACKFLOW PREVENTION ASSEMBLIES MUST BE TESTED IN ACCORDANCE WITH APPLICABLE REGULATIONS PRIOR TO BEING PUT IN SERVICE. COPIES OF TEST RESULTS SHALL BE SUBMITTED TO ROWLAND WATER DISTRICT PRIOR TO ACTIVATION.
5. PAINT ABOVE GROUND PIPING AND VALVES WITH ONE COAT OF BLUE OXIDE PRIMER AND TWO COATS OF HIGH VISIBILITY EPOXY BLUE ENAMEL.
6. DEVICES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
7. MAINTAIN 3' WIDE CLEARANCE AREA AROUND ENTIRE DEVICE FOR MAINTENANCE.

## REDUCED PRESSURE PRINCIPLE ASSEMBLY CONSTRUCTION NOTES:

(1) 4" THICK CONCRETE SLAB, MIN. CLASS 560-C-3250, EXACT LOCATION TO BE VERIFIED IN THE FIELD.
(2) 4" NON-RISING STEM GATE VALVE.
(3) CONTRACTOR POINT OF CONNECTION SHALL BE DOWNSTREAM OF WATER METER (SUPPLIED BY ROWLAND WATER DISTRICTS CONTRACTOR) NEAR THE PROPERTY LINE. PLUMBING CONNECTION BETWEEN METER AND BACKFLOW ASSEMBLY SHALL BE MADE BY THE SCHOOLS CONTRACTOR AFTER THE BACKFLOW ASSEMBLY IS INSTALLED. CONTRACTOR TO INSTALL EBAA IRON INC. SERIES 3800 RESTRAINED COUPLING (OR APPROVED EQUAL).
(4) 4" CLASS 350, 90° DUCTILE IRON BEND, CEMENT LINED.
(5) 4" X FIELD LENGTH DUCTILE IRON SPOOL, FLG. X FLG.
(6) CONSTRUCT CONCRETE THRUST BLOCK PER DETAIL W8 ON SHEET C1.01.
(7) CONTRACTOR TO SUPPLY HOT DIPPED GALVANIZED CHAIN AND LOCK, LOCK HANDWHEEL ON N.R.S. VALVES IN THE OPEN POSITION, PADLOCK SHALL BE BREAKAWAY TYPE.
(8) 4" A.W.W.A. C900 P.V.C. CLASS 150 PIPE.


PLANS PREPARED BY:
FPL and Associates
Traffic • Transportation • Civil
30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1688



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-121846 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2021


PBK WLC

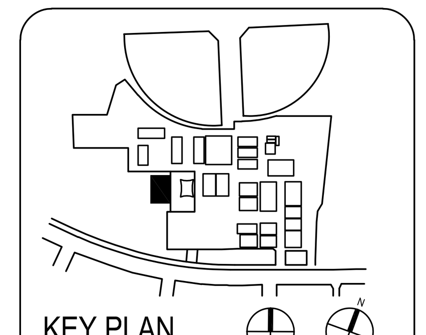

ARCHITECT PBK Architects, Inc.
SOUTHERN CALIFORNIA PBK.com
8163 Rochestser Avenue, Suite 100
Rancho Cucamonga
California 91730-0729
909-987-0909 P


**Wedgeworth ES Portable Relocation**

16949 WEDGEWORTH DR.
HACIENDA HEIGHTS, CA 91745

CONSTRUCTION DOCUMENTS

DSA APPL. NO.: 03-121846 DSA FILE NO.: 19-38



KEY PLAN

NORTH: PLAN TRUE

CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER ALAN WING-CHI LEE No. C 34971 Exp. 09-30-23 CIVIL STATE OF CALIFORNIA

| CLIENT | |
|---|---|
| HACIENDA LA PUENTE USD | |
| DATE 10/12/2021 | PROJECT NUMBER P2127100AR |

DRAWING HISTORY

| No. | Description | Date |
|---|---|---|
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CONSTRUCTION DOCUMENTS

**DETAIL SHEET**

# C1.03

Plot Date: 10/12/2021 9:05:56 AM Last Save By: ron.canedy Login: Ron Canedy S:\Jobs\2777 - PBK\2777n - Wedgeworth ES\Civil\Relocated Portables\Wedgeworth ES Relocated Portables C1.03 Detail Sheet.dwg