

# Cover Sheet

Document Title:	Fire Water Line Plans
Prepared By:	San Bernardino County
Date:	11/08/2024
Version:	Permit FUDG-2023-00068
Project Name:	PPHCSD Civic Center Phase 1
Client/Stakeholder:	PPHCSD
Confidentiality:	[Public/Internal/Confidential]

## Document Overview

This specification document outlines the requirements, standards, and key details for the project or product described above. The cover sheet provides a summary of essential information to identify and track the document throughout its lifecycle.

**"FOR REFERENCE ONLY"**  
**Note: These plans had received prior approval from the appropriate approving agency and are issued as "For Reference Only" documents for prospective bidders to review only. Bidders must bid the "BID SET" drawings as changes have been made since approvals. "Bid Set" drawings will be resubmitted for approval during the bidding period and issued as "FOR CONSTRUCTION DRAWINGS" AFTER OBTAINING APPROVALS FROM APPROPRIATE APPROVAL AGENCY.**

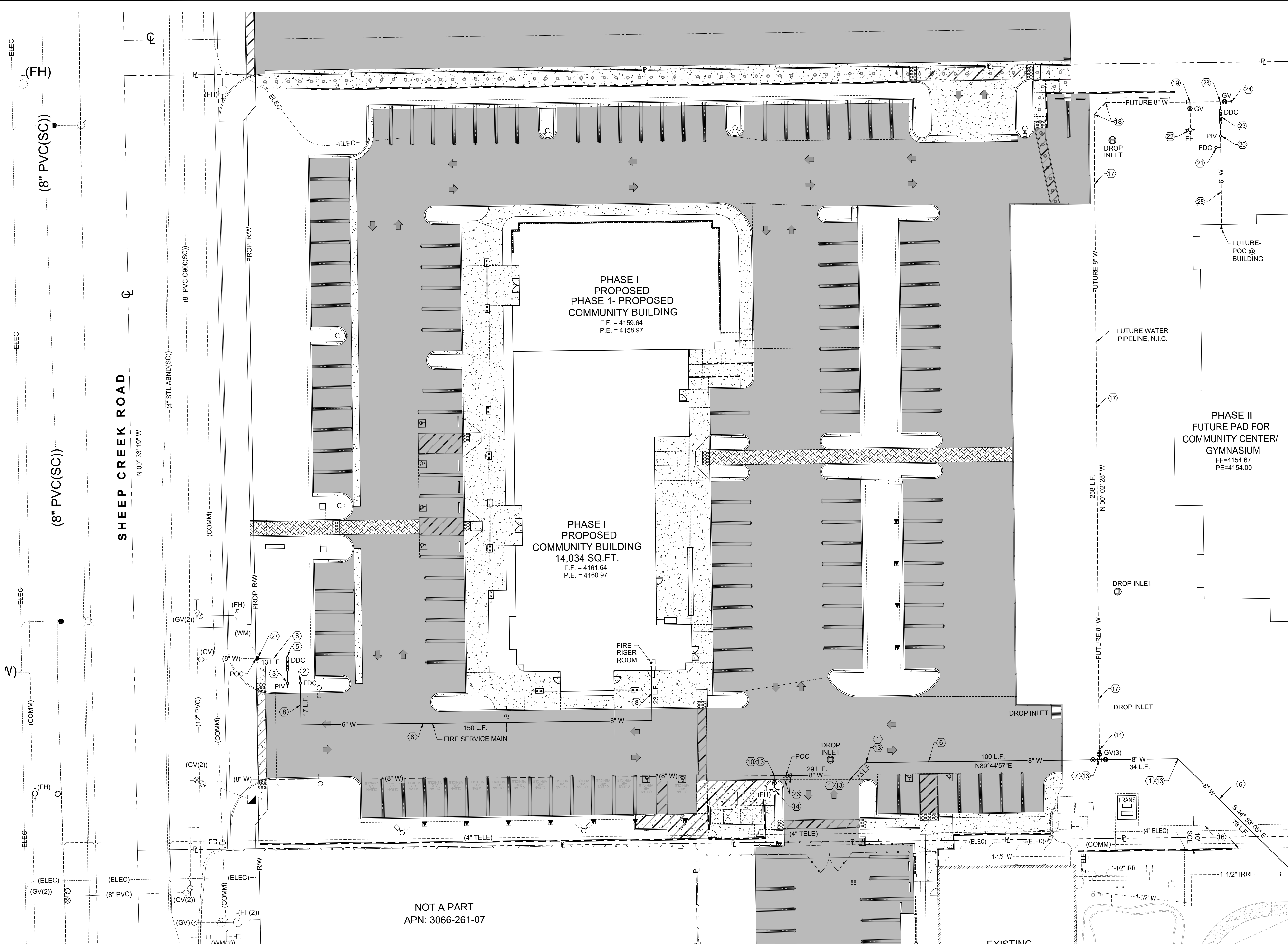
## Contact Information

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- Steeno Design Studio, Sophie Steeno 760-244-5001, [Sophie@steendodesign.com](mailto:Sophie@steendodesign.com) and Angie Allen [angie@steenodesign.com](mailto:angie@steenodesign.com)

## Revision History

Version	Date	Description	Author



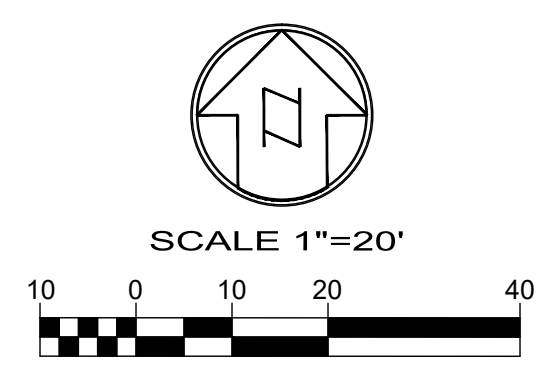


- ### FIRE WATER LINE NOTES
- 1. INSTALL 45° BEND.
  - 2. INSTALL SINGLE FIRE DEPARTMENT CONNECTION (FDC) PER SAN BERNARDINO COUNTY FIRE DEPARTMENT STD. F-4.
  - 3. INSTALL POST INDICATOR VALVE PER SBCO FIRE DEPT. F-4.
  - 4. INSTALL FIRE HYDRANT PER PPHCSD STDS. W-3.
  - 5. INSTALL 6" FIRE SERVICE REDUCED PRESSURE DETECTOR ASSEMBLY PER PPHCSD STANDARD STD. W-15.
  - 6. INSTALL 8" PVC C900, CLASS 200 WATER PIPELINE PER PPHCSD STDS.
  - 7. INSTALL 8" TEE WITH 3- VALVES PER PPHCSD STDS.
  - 8. INSTALL 6" DIA. C151/A21.51 PRESSURE CLASS 200 WATER PIPELINE WITH RESTRAINED JOINTS PER PPHCSD STDS. TO LIMITS SHOWN.
  - 9. INSTALL 8" VALVE.
  - 10. INSTALL 8" X8" X 6" TEE.
  - 11. INSTALL 8" VALVE WITH 5 LF OF 8" WATER LINE WITH END CAP. END OF WATER PIPELINE CONSTRUCTION PHASE 1.
  - 12. PROPOSED UTILITY CROSSING.
  - 13. MECHANICAL RESTRAINTS TO BE UTILIZED.
  - 14. EXISTING FIRE HYDRANT RELOCATED AS SHOWN, INSTALL PER PPHCSD STD. W-3.
  - 15. INSTALL 8" X 8" X 8" TEE.
  - 16. EXISTING 10' WIDE SOUTHERN CALIFORNIA EDISON (SCE) EASEMENT FOR UNDERGROUND PURPOSES.
  - 17. FUTURE- INSTALL 8" PVC C900, CLASS 200 WATER PIPELINE PER PPHCSD STDS.
  - 18. FUTURE- INSTALL 45° BEND.
  - 19. FUTURE- INSTALL 8" X8" X 6" TEE.
  - 20. FUTURE- INSTALL POST INDICATOR VALVE PER SBCO FIRE DEPT. F-4.
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  - 22. FUTURE- INSTALL FIRE HYDRANT PER PPHCSD STDS. W-3.
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  - 25. FUTURE- INSTALL 6" DIA. C151/A21.51 PRESSURE CLASS 200 WATER PIPELINE WITH RESTRAINED JOINTS PER PPHCSD STDS. TO LIMITS SHOWN.
  - 26. REMOVE AND DISPOSE EXISTING VALVES.
  - 27. INSTALL 8" X 6" REDUCER.
  - 28. FUTURE- INSTALL 8" X8" X 6" TEE WITH 8" GATE VALVE ON EAST OUTLET.

**ENGINEER'S NOTE:**

ALL WATER PIPELINES (6" AND 8") ARE TO BE INSTALLED WITH RESTRAINED JOINTS AND FITTINGS.

SEE SHEET UF-3 FOR CONTINUATION



WDID# 6B36C401591



**BENCHMARK:**  
U.S.G.S. BENCHMARK H 35, LOCATED 3.0 MI NORTH ALONG JOHNSON RD. FROM THE INTERSECTION OF PHELAN RD. 49 FT NORTHEAST OF THE CENTER OF THE INTERSECTION OF DUNCAN RD. 34 FT EAST OF THE CENTER LINE OF JOHNSON RD. 32.5 FT NORTH OF THE CENTER LINE DUNCAN RD. 6.6 FT WEST OF A FENCE. 6.3 FT NORTH OF A SECTION MARKER PIPE. 0.6 FT EAST OF A WITNESS POST. ABOUT 1 FT HIGHER THAN THE ROAD AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.4 FT ABOVE THE GROUND.  
ELEV= 3613.45'

NO.	REVISION	DATE	BY

Jerry L. Miles  
No. C 42593  
Civil  
STATE OF CALIFORNIA

JERRY L. MILES R.C.E. 42593 - EXP. 3/31/26

PLANS PREPARED BY:

**TRLS ENGINEERING Inc.**

10770 I AVENUE, SUITE 108

**For Reference Only**

**COUNTY OF SAN BERNARDINO  
DEPARTMENT OF PUBLIC WORKS**

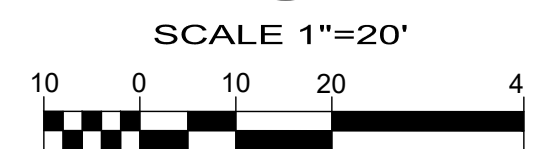
DESIGNED BY: TER	DRAWN BY: TER	CHECKED BY:	APPROVED BY:
RECOMMENDED/APPROVED BY:		ASST. DIRECTOR OF PUBLIC WORKS	
LAND DEVELOPMENT ENGINEER		DIRECTOR OF PUBLIC WORKS	
DATE	DATE	DATE	DATE

DRAWN BY: TRLS DATE: 09-04-2024	PHELAN PINON HILLS COMMUNITY SERVICES DISTRICT CIVIC CENTER DEVELOPMENT PHASE 1 9535 SHEEPCREEK RD. PHELAN, CA. 92329 (APN: 3066-261-10 & 3066-251-18)	SCALE: AS SHOWN
DESIGNED BY: TER DATE:	FIRE WATER PLAN	SHEET 2 OF 4
APPROVED BY: DATE:		SHEET UF-2

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- ③ INSTALL 45° BEND.
- ④ INSTALL SINGLE FIRE DEPARTMENT CONNECTION (FDC) PER SAN BERNARDINO COUNTY FIRE DEPARTMENT STD. F-4.
- ⑤ INSTALL POST INDICATOR VALVE PER SBSCO FIRE DEPT. F-4.
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<ul style="list-style-type: none"> <li>● GRAD-2021-00235</li> <li>● PRAA-2021-00040</li> <li>● DRNSTY-2021-00054</li> </ul>		<ul style="list-style-type: none"> <li>● SIP-2021-00031</li> <li>● NEWNR-2021-00230</li> <li>● WQMP-2021-00153</li> </ul>	
DRAWN BY: TRLS DATE: 09-04-2024	PHELAN PINON HILLS COMMUNITY SERVICES DISTRICT  CIVIC CENTER DEVELOPMENT PHASE 1  9535 SHEEPCREEK RD. PHELAN, CA. 92329 (APN: 3066-261-10 & 3066-251-18)		SCALE: AS SHOWN
			SHEET 3 OF 4
DESIGNED BY: TER DATE: -	FIRE WATER PLAN		SHEET UF-3
APPROVED BY:  DATE:			




PLANS PREPARED BY:

TRLS ENGINEERING Inc.

10770 1 AVENUE, SUITE 108

**For Reference Only**



COUNTY OF SAN BERNARDINO  
DEPARTMENT OF PUBLIC WORKS

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RECOMMENDED/APPROVED BY:			ASST. DIRECTOR OF PUBLIC WORKS
LAND DEVELOPMENT ENGINEER	DATE	DIRECTOR OF PUBLIC WORKS	DATE

DRAWN BY: TRLS DATE: 09-04-2024	PHELAN PINON HILLS COMMUNITY SERVICES DISTRICT CIVIC CENTER DEVELOPMENT
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PHASE 1  
9535 SHEEPCREEK RD. PHELAN, CA. 92329  
(APN: 3066-261-10 & 3066-251-18)

## FIRE WATER PLAN

SCALE:  
AS SHOWN

SHEET  
3 OF 4

SHEET  
UF-3



SAN BERNARDINO COUNTY FIRE DEPARTMENT  
COMMUNITY SAFETY DIVISION  
620 South 'E' Street  
San Bernardino, CA 92415-0179  
(909) 386-8400

**FIRE PREVENTION STANDARD**

POST INDICATOR VALVES AND FIRE DEPARTMENT CONNECTIONS

Standard Number  
**F-4**  
Revision Date:  
3-22-16



SAN BERNARDINO COUNTY FIRE DEPARTMENT  
COMMUNITY SAFETY DIVISION

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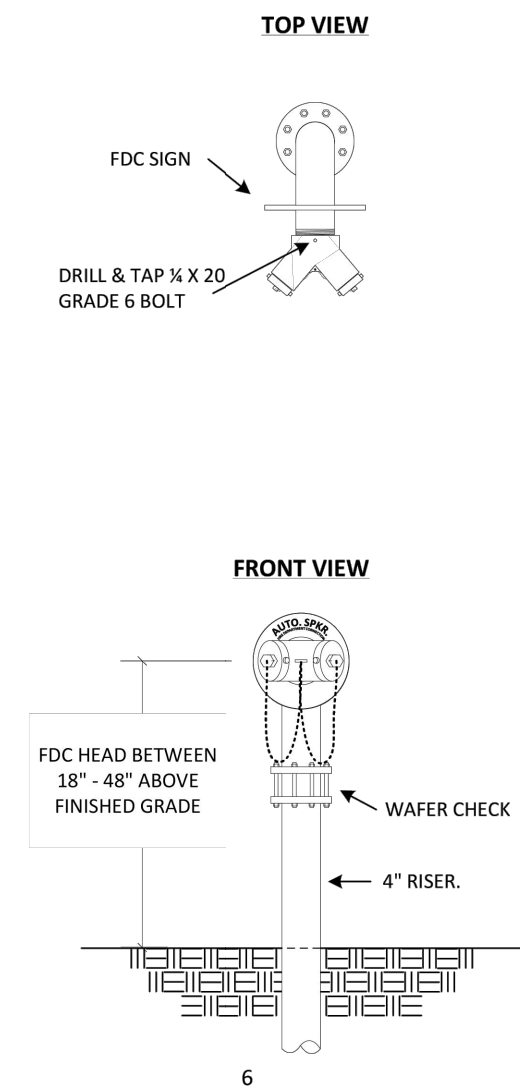
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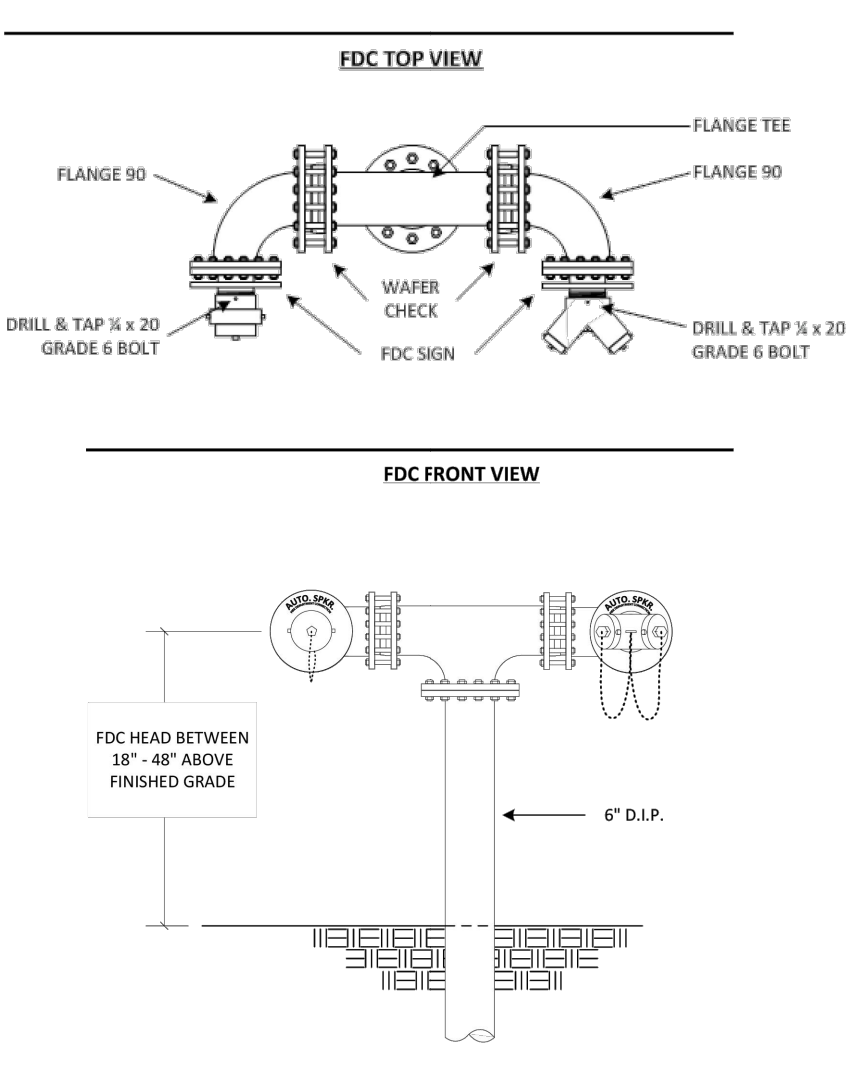
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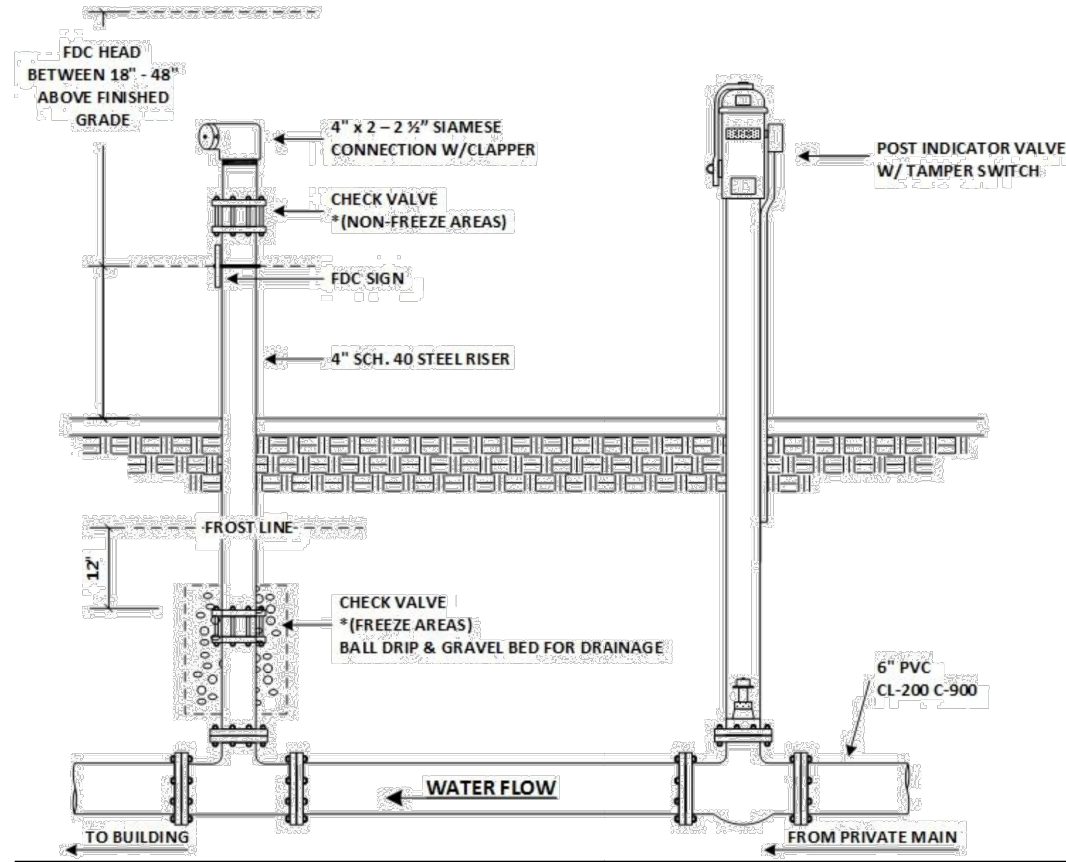
**DIAGRAM F-4.2: SINGLE 4" X 2 1/2" X 2 1/2" FDC DETAIL**



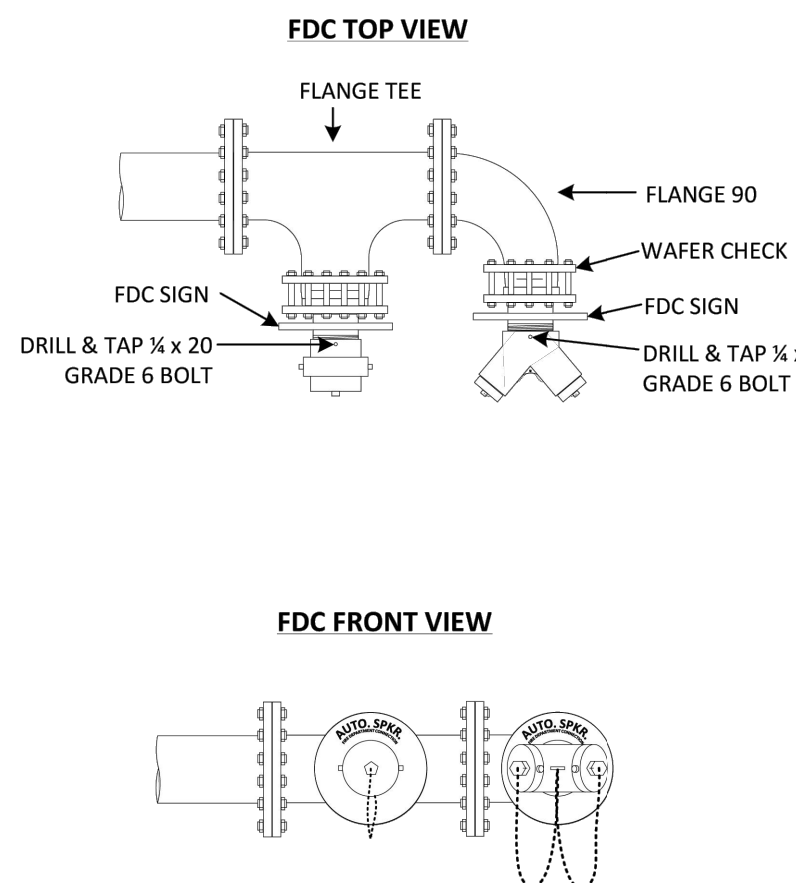
**DIAGRAM F-4.3: COMBINED 6" X 4" X 2 1/2" X 2 1/2" FDC DETAIL**



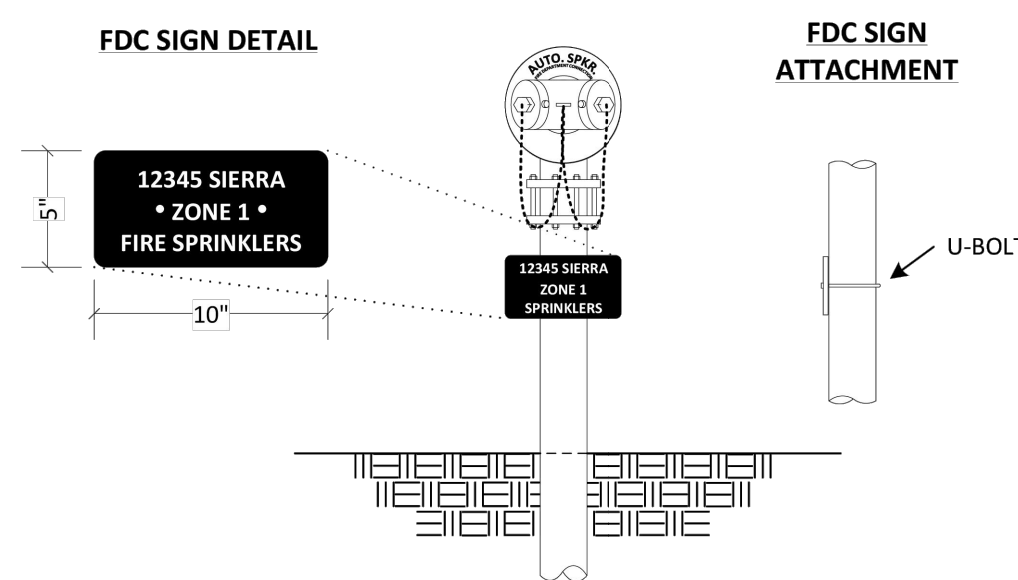
**DIAGRAM F-4.4: FDC CHECK VALVE DETAIL**



**DIAGRAM F-4.5: FDC ON DOUBLE DETECTOR CHECK VALVE ASSEMBLY**



**DIAGRAM F-4.6: FDC IDENTIFICATION SIGNAGE DETAIL**

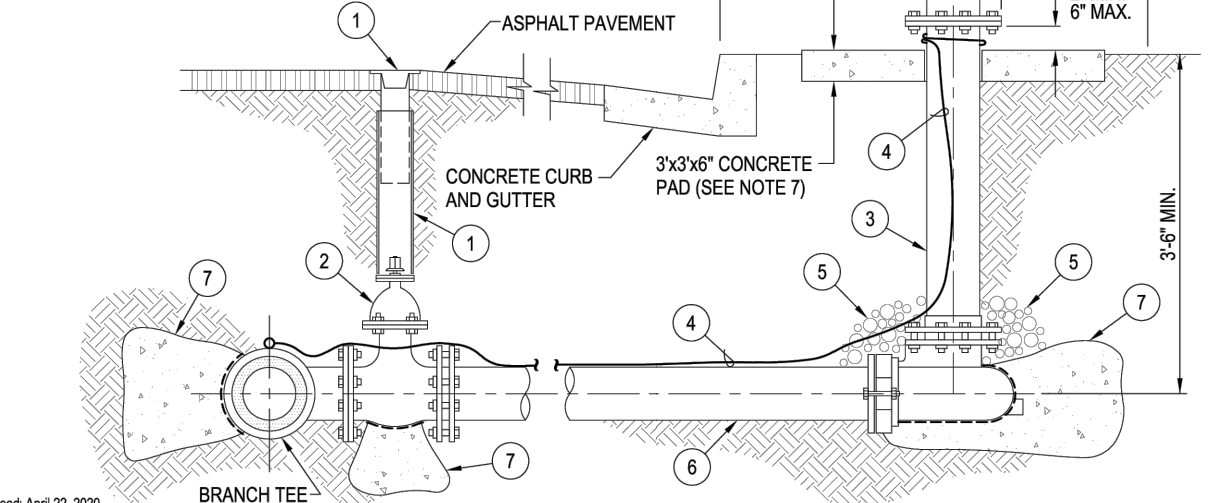


**GENERAL NOTES**

1. WRAP 8 MIL POLYETHYLENE AROUND PARTS REQUIRING THRUST BLOCK OR PIERS.
2. WEEP HOLE ON HYDRANT BARREL MUST BE CLEAR OF OBSTRUCTIONS.
3. CENTER OF HYDRANT IS TO BE PLACED AT PROPERTY LINE, AND 2' FROM RIGHT-OF-WAY WHERE CURB, GUTTER AND SIDEWALK IS NOT TO BE CONSTRUCTED. WHERE CURB, GUTTER AND SIDEWALK IS EXISTING OR TO BE CONSTRUCTED, CENTER OF HYDRANT IS TO BE LOCATED PER PHHSCD OR COUNTY REQUIREMENTS.
4. 6" PVC C900 CLASS 200 HYDRANT LATERAL LENGTH IS VARIABLE. TO BE SPECIFIED ON PLAN DRAWINGS. LATERAL MUST BE INSTALLED LEVEL, WITH NO DEFLECTIONS AT JOINTS ALLOWED. ALL JOINTS TO BE RESTRAINED.
5. ALL PVC HYDRANT LATERALS SHALL INCLUDE RESILIENT WEDGE VALVES (FLG x MJ) MUELLER A-2860-16 OR APPROVED EQUAL AND MECHANICAL JOINT (MJ) FIRE HYDRANT SHOES.
6. LOCATING WIRE TO RUN FROM MAIN, TIED IN WITH 3M CONNECTORS (3M DBR DIRECT BURY SPLICE KIT) ALONG HYDRANT LATERAL, UP TO, AND CONNECT WITH HYDRANT CAP CHAIN.
7. ELEVATION OF FIRE HYDRANT CONCRETE PAD SHALL BE DETERMINED BY PROPOSED CONSTRUCTION PLANS OR EXISTING GROUND ELEVATIONS IN PREVIOUSLY DEVELOPED AREAS.
8. 3-WAY HYDRANTS TO BE MUELLER SUPER CENTURION No. A-423, OR APPROVED EQUAL.
9. HYDRANT ASSEMBLY TO BE INSTALLED PLUMB, LATERAL TO BE INSTALLED LEVEL AND STRAIGHT.
10. HYDRANT SHALL BE PAINTED YELLOW (RED. No. 18655 OSHA YELLOW, HIGH VISIBILITY).
11. MECHANICAL JOINTS (MJ) TO BE EBBA IRON MEGALUG, ROMAC GRIP RING OR APPROVED EQUAL.
12. DEAD END LINES REQUIRE A FIRE HYDRANT AT THE END OF PIPE FOR OUL-DE-SAC'S. DEAD END LINES FOR MAIN LINE EXTENSIONS REQUIRE TEE AT FIRE HYDRANT LATERAL WITH INLINE VALVE, 5-FOOT STUB WITH END CAP.
13. HYDRANT SHALL NOT HAVE MORE THAN ONE (1) EXTENSION TO RAISE TO PROPER HEIGHT.
14. ALL MATERIALS SHALL BE NEW

**MATERIAL NOTES**

1. VALVE CAN AND COVER PER STD. DWG. No. W-5
2. RESILIENT WEDGE (FLG x MJ) UNLESS OTHERWISE SPECIFIED
3. FIRE HYDRANT BURY PER PHHSCD SPECIFICATIONS
4. 14-GAUGE INSULATED COPPER LOCATING WIRE
5. ONE (1) C.U. FOOT OF GRAVEL AT EACH WEEP HOLE
6. 6" PVC C900, CLASS 200 LATERAL WITH MECHANICAL JOINTS
7. THRUST BLOCK (TYP.) PER STD. DWG. No. W-7



Revised April 22, 2020

RECOMMENDED BY: REV. DATE BY  
Engineering: Date  
APPROVED BY: Date  
Operations: Date

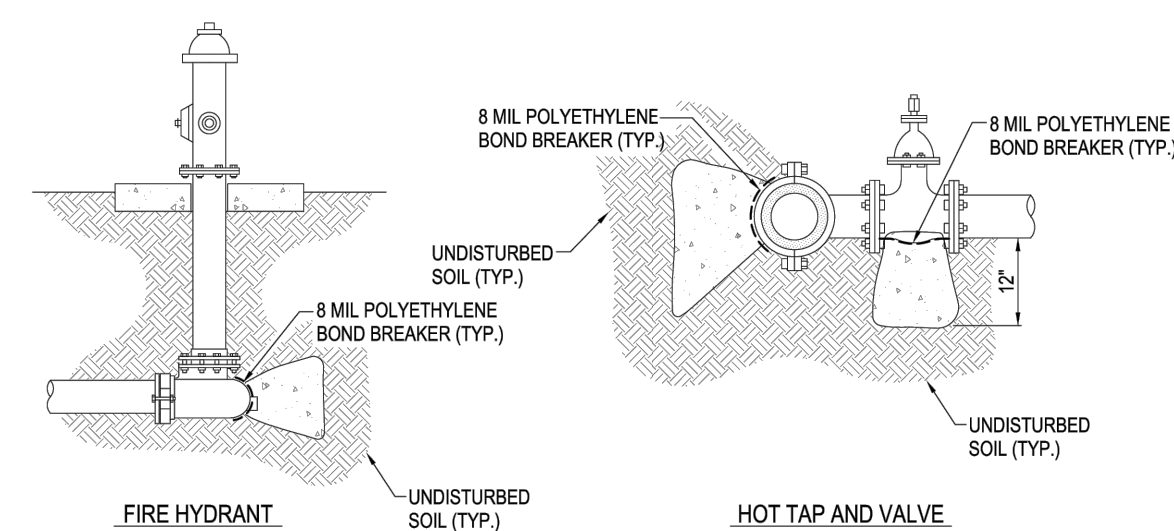
PHELAN PIÑON HILLS  
COMMUNITY SERVICES DISTRICT  
5-1/4" FIRE HYDRANT ASSEMBLY

STD. DWG. No. W-3

**GENERAL NOTES**

1. PIPE INSTALLED UNDER CONDITIONS DIFFERENT FROM THOSE NORMALLY ENCOUNTERED SHALL REQUIRE THRUST BLOCK DESIGNED FOR THOSE PARTICULAR CONDITIONS
2. ALL THRUST BLOCKS SHALL BE CLASS 5200-C-2000 CONCRETE AND PLACED AGAINST UNDISTURBED SOIL. PHHSCD WILL DETERMINE SIZES NOT SHOWN
3. THRUST BLOCKS ON CROSSES SHALL BE USED WHENEVER PIPE SIZES DIFFER OR WHEN ONE OR MORE OPENINGS ARE PLUGGED, OR AS DIRECTED BY PHHSCD
4. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS A15 AND A305 INTERMEDIATE GRADE
5. ALL FITTINGS TO BE WRAPPED WITH 8 MIL POLYETHYLENE, PER PHHSCD SPECIFICATIONS
6. ALL MATERIALS SHALL BE NEW

MINIMUM BEARING SURFACE AREA (SQ. FT.)					
PIPE SIZE	11 1/4"	22 1/2"	BENDS	45"	60"
8"	1.0	1.5	2.5	4.5	3.5
10"	1.5	2.5	4.5	8.0	5.5
12"	3.0	4.5	9.0	16.5	12.0



Revised April 22, 2020

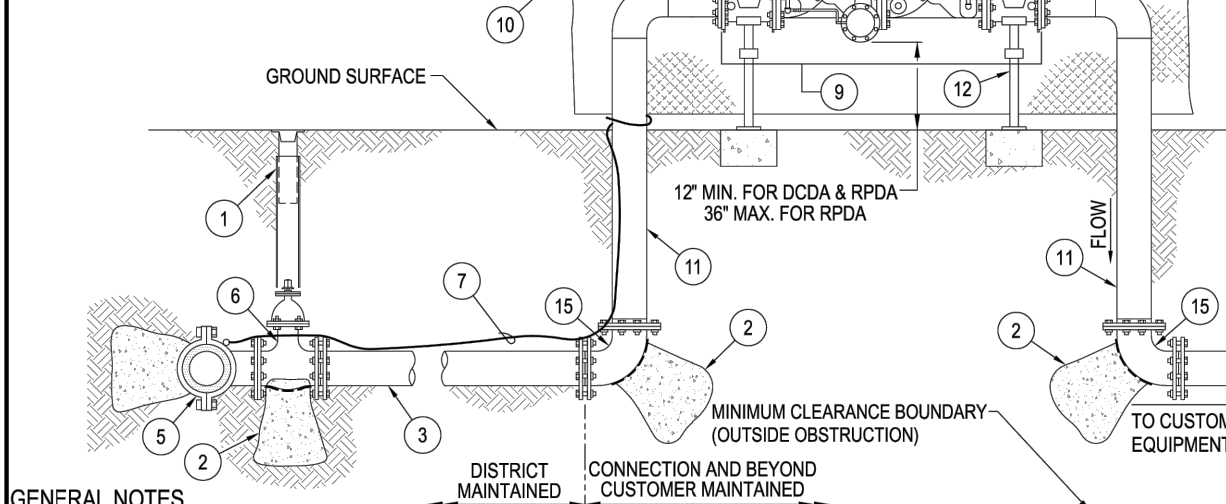
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PHELAN PIÑON HILLS  
COMMUNITY SERVICES DISTRICT  
CONCRETE THRUST BLOCK DETAILS

STD. DWG. No. W-7

**MATERIAL NOTES**

1. VALVE CAN AND COVER PER STD. DWG. No. W-5
2. THRUST BLOCK (TYP.) PER STD. DWG. No. W-7
3. C-900 PVC OR D.I.P. PIPE (LENGTH VARIES) WITH ADAPTOR FLANGES AND RESTRAINT COUPLINGS (EBBA ADAPTORS AND RESTRAINT COUPLINGS OR PHHSCD APPROVED EQUAL)
4. INSTALL CHAIN WITH BREAK AWAY LOCKS (YALE 196)
5. TAPPING SLEEVE PER STD. DWG. No. W-12
6. RESILIENT WEDGE GATE VALVE (FLG x MJ) MUELLER A-2860-16 OR APPROVED EQUAL
7. 14-GAUGE COATED COPPER LOCATING WIRE. CONNECT TO WATER MAIN LOCATING WIRE RUN ALONG FIRE SERVICE LATERAL. WRAP AROUND FIRST VALVE. ALL SPLICES TO THE LOCATING WIRE REQUIRES A 3M DBR SPLICE KIT.
8. STD. STEEL OR D.I.P. 90° ELBOW (WELDED OR FLANGED)
9. REDUCED PRESSURE DETECTOR ASSEMBLY (PER U.S.C. LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES) WITH OS AND Y VALVES AND TAMPER SWITCHES
10. THERMAL INSULATING COVER WITH RESISTANT/WEATHER-PROOF EXTERIOR, TEAR-PROOF INTERIOR, BACKFLOW BUDDY, BDI, OR APPROVED EQUAL
11. STD. STEEL PIPE, WELDED (FLG x PE OR FLG x FLG)
12. ADJUSTABLE PIPE SUPPORT (REQUIRED FOR 6" AND LARGER)
13. BY-PASS LINE ASSEMBLY WITH 3/4" METER (TO BE READ IN C.U. FT.) REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR REDUCED DETECTOR ASSEMBLY.
14. STD. STEEL SPOOL, 6" MIN. IN LENGTH, WELDED (FLG x PE OR FLG x FLG)
15. DUCTILE IRON 90° ELBOW (MJ x FLG)



**GENERAL NOTES**

1. REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE INSTALLED IN LOCATION APPROVED BY PHHSCD AND THE FIRE DEPARTMENT HAVING JURISDICTION
2. REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY SHALL BE INSTALLED HORIZONTAL AND PLUMB
3. ASSEMBLIES MUST BE USC AND COPH APPROVED
4. ALL ASSEMBLIES SHALL BE FLANGED
5. DETECTOR METER TO READ IN CUBIT FEET
6. GUARD POSTS (PER STD. DWG. No. W-17) REQUIRED IF INSTALLING WHERE ACCESSIBLE TO TRAFFIC
7. RESTRAIN ALL JOINTS
8. INSTALL THRUST BLOCK PER PHHSCD STD. DWG. No. W-7 AS REQUIRED
9. IT IS THE CUSTOMER'S RESPONSIBILITY TO PROTECT DEVICE FROM FREEZING TEMPERATURES AND TO PROVIDE ACCESS FOR TESTING
10. RPBD MUST BE TESTED BY A CERTIFIED BACKFLOW TESTER PRIOR TO WATER SERVICE BEING ACTIVATED. A COPY OF THE TEST MUST BE SUBMITTED TO THE INSPECTOR

Revised April 22, 2020

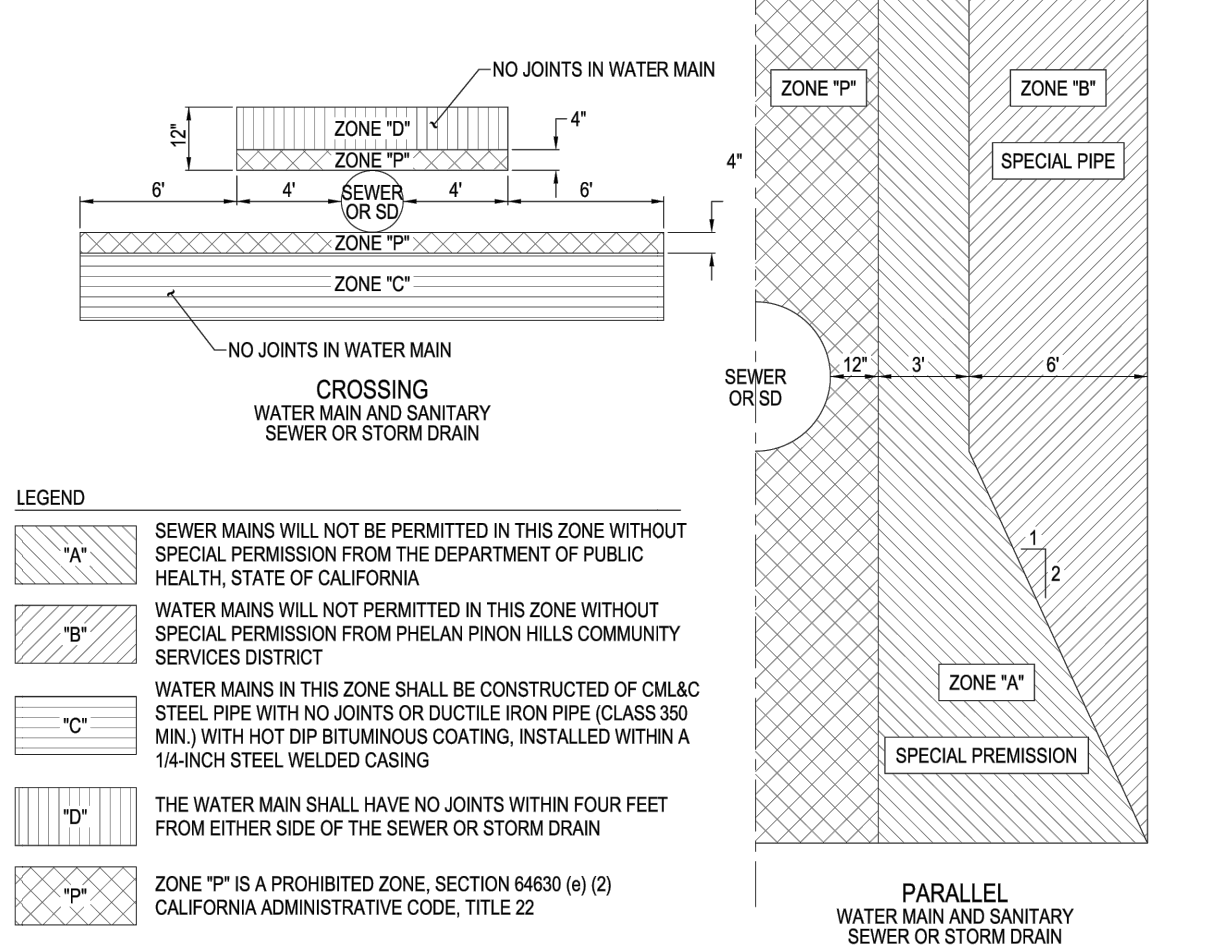
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Operations: Date

PHELAN PIÑON HILLS  
COMMUNITY SERVICES DISTRICT  
4" TO 10" FIRE SERVICE - REDUCED PRESSURE DETECTOR ASSEMBLY

STD. DWG. No. W-15

**GENERAL NOTES**

1. DIMENSIONS ARE FROM OUTSIDE OF WATER PIPE TO OUTSIDE OF SEWER OR STORM DRAIN (SD) PIPE
2. WATER SERVICE LATERALS SHALL BE INSTALLED 4" OR MORE ABOVE SEWER MAIN OR STORM DRAIN. IF THIS CONDITION CANNOT BE MET, SPECIAL CONSTRUCTION WILL BE REQUIRED



**LEGEND**

- A. SEWER MAINS WILL NOT BE PERMITTED IN THIS ZONE WITHOUT SPECIAL PERMISSION FROM THE DEPARTMENT OF PUBLIC HEALTH, STATE OF CALIFORNIA
- B. WATER MAINS WILL NOT BE PERMITTED IN THIS ZONE WITHOUT SPECIAL PERMISSION FROM PHELAN PIÑON HILLS COMMUNITY SERVICES DISTRICT
- C. WATER MAINS IN THIS ZONE SHALL BE CONSTRUCTED OF CM&C STEEL PIPE WITH NO JOINTS OR DUCTILE IRON PIPE (CLASS 350 MIN) WITH HOT DIP BITUMINOUS COATING, INSTALLED WITH A 1/4-INCH STEEL WELDED CASING
- D. THE WATER MAIN SHALL HAVE NO JOINTS WITHIN FOUR FEET FROM EITHER SIDE OF THE SEWER OR STORM DRAIN
- E. ZONE "E" IS A PROHIBITED ZONE. SECTION 64630 (e) (2) CALIFORNIA ADMINISTRATIVE CODE, TITLE 22

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PHELAN PIÑON HILLS  
COMMUNITY SERVICES DISTRICT  
SEPARATION CRITERIA FOR NEW WATER MAINS FROM EXISTING SEWER AND STORM DRAINS

STD. DWG. No. W-19



Know what's below.  
Call before you dig.

**BENCHMARK:**

U.S.G.S. BENCHMARK H 35, LOCATED 3.0 MI NORTH ALONG JOHNSON RD. FROM THE INTERSECTION OF PHELAN RD. 49 FT NORTHEAST OF THE CENTER OF THE INTERSECTION OF DUNCAN RD. 34 FT EAST OF THE CENTER LINE OF JOHNSON RD. 32.5 FT NORTH OF THE CENTER LINE DUNCAN RD. 6.6 FT WEST OF A FENCE. 6.3 FT NORTH OF A SECTION MARKER PIPE. 0.6 FT EAST OF A WITNESS POST. ABOUT 1 FT HIGHER THAN THE ROAD AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.4 FT ABOVE THE GROUND.  
ELEV= 3613.45'

NO.	REVISION	DATE	BY



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PLANS PREPARED BY:

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DEPARTMENT OF PUBLIC WORKS**

DESIGNED BY: TER  
DRAWN BY: TER  
CHECKED BY: TER  
APPROVED BY: TER  
RECOMMENDED/APPROVED BY: TER  
LAND DEVELOPMENT ENGINEER DATE

ASST. DIRECTOR OF PUBLIC WORKS  
DIRECTOR OF PUBLIC WORKS DATE

- GRAD-2021-00235
- PRAA-2021-00040
- DRNSTY-2021-00054

- SIP-2021-00031
- NEWNR-2021-00230
- WQMP-2021-00153

PHELAN PIÑON HILLS  
COMMUNITY SERVICES DISTRICT  
CIVIC CENTER DEVELOPMENT  
PHASE 1  
9535 SHEEPCREEK RD. PHELAN, CA. 92329  
(APN: 3066-261-10 & 3066-251-18)

**FIRE WATER DETAIL**

SCALE:  
AS SHOWN  
SHEET  
4 OF 4  
SHEET  
UF-4

WDID# 6B36C401591