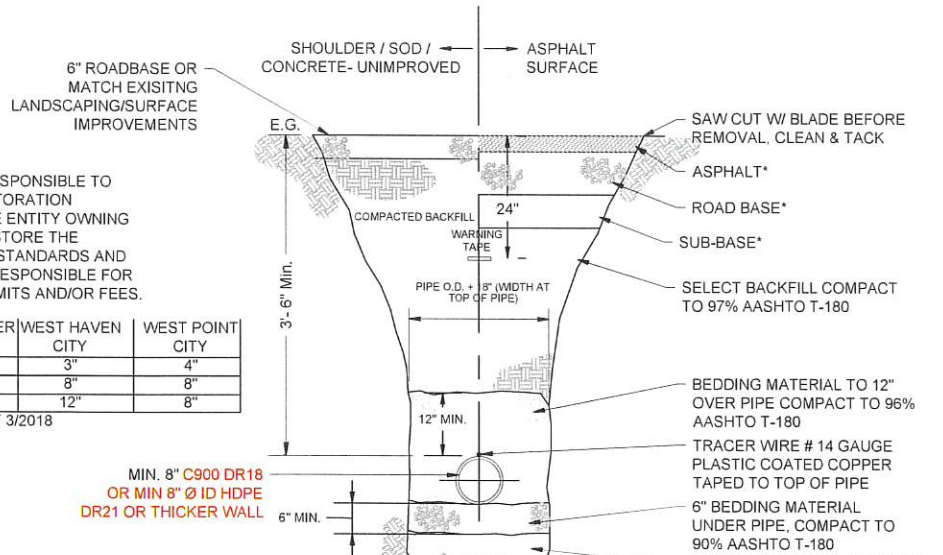


NOTE:
CONTRACTOR IS RESPONSIBLE TO MEET TRENCH RESTORATION STANDARDS OF THE ENTITY OWNING THE ROADWAY, RESTORE THE ROADWAY TO SAID STANDARDS AND SHALL BE SOLELY RESPONSIBLE FOR ALL ROADWAY PERMITS AND/OR FEES.

	HOOPER CITY	WEST HAVEN CITY	WEST POINT CITY
ASPHALT	4"	3"	4"
ROAD BASE	8"	8"	8"
SUB BASE	12"	12"	8"

*STANDARDS AS OF 3/2018

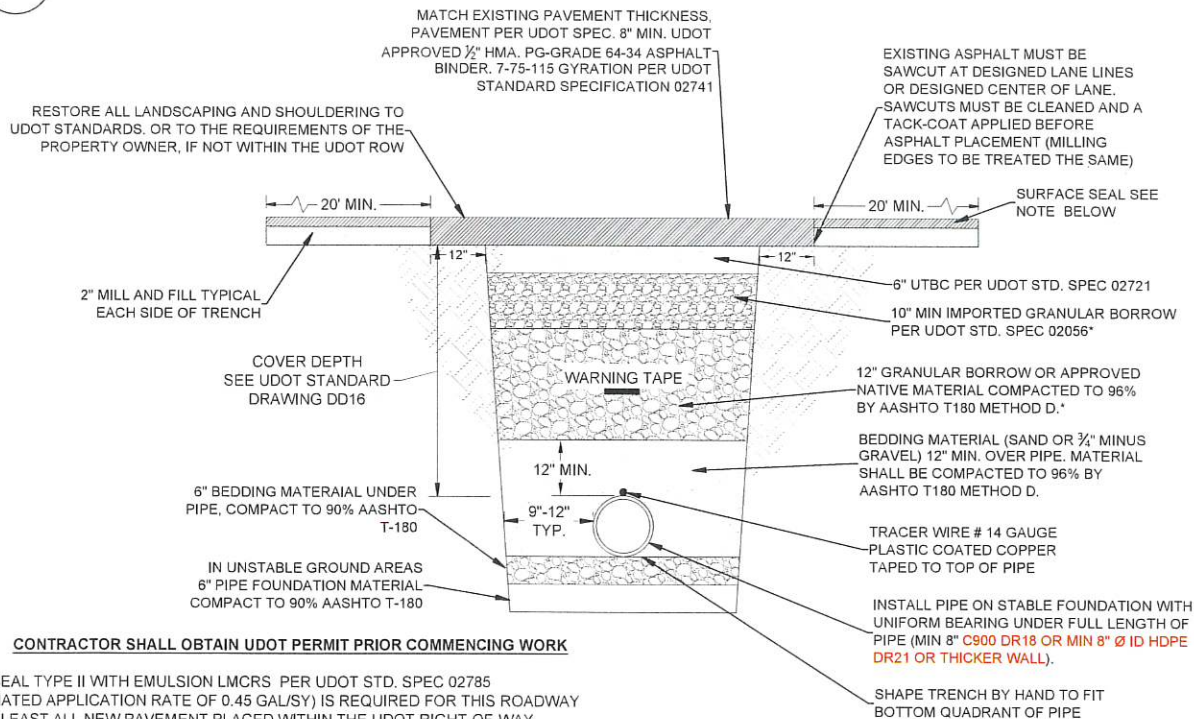


- NOTE:
- WATER & SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10 HORIZONTAL FEET FROM EACH OTHER.
 - WHERE A WATER MAIN AND A SEWER MAIN MUST CROSS, THE WATER MAIN SHALL BE AT LEAST 18\"
 - SEPARATION DISTANCES ARE TO BE MEASURED EDGE-TO-EDGE.
 - WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH WITH EITHER SEWER OR SECONDARY PIPES.
 - ALL NON-ROW WATERLINES INTENDED FOR PERPETUAL TRANSMISSION LINE W/O SERVICE TAPS SHALL BE MIN. 4\"
 - IF THESE STANDARDS CANNOT BE MET, CONTACT THE DISTRICT INSPECTOR, WHO MAY THEN CONTACT THE DISTRICT ENGINEER.

3A

TYPICAL TRENCH SECTION

NTS



NOTE: **CONTRACTOR SHALL OBTAIN UDOT PERMIT PRIOR COMMENCING WORK**

CHIP SEAL TYPE II WITH EMULSION LMCRS PER UDOT STD. SPEC 02785 (ESTIMATED APPLICATION RATE OF 0.45 GAL/SY) IS REQUIRED FOR THIS ROADWAY ON AT LEAST ALL NEW PAVEMENT PLACED WITHIN THE UDOT RIGHT-OF-WAY.

ALL CONSTRUCTION WITHIN THE UDOT RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT UDOT STANDARD DRAWING AND SPECIFICATIONS, FOUND AT UDOT.UTAH.GOV/GO/2017 STANDARDS.

* FLOWABLE FILL MAY BE REQUIRED BY UDOT PERMIT.

3B

UDOT CROSSING TRENCH DETAIL

NTS

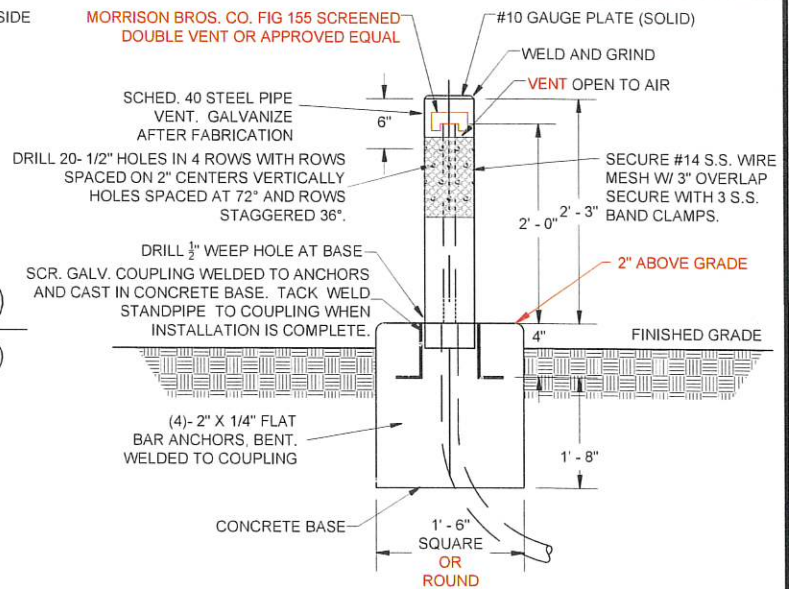
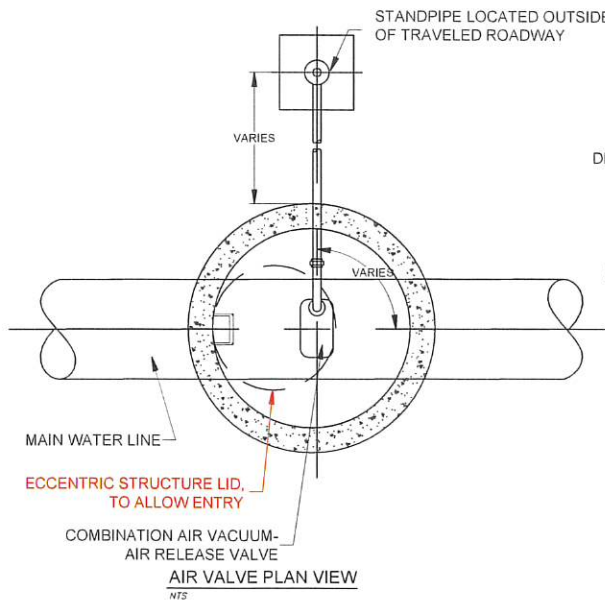
DRAFTED: RP	DEVIATIONS FROM STANDARDS MUST BE
DESIGNED: RP/MDD	APPROVED BY HOOPER WATER
CHECKED: MDD	IMPROVEMENT DISTRICT.
DATE: 07/22/2026	
REV REVISED FOR PIPE SPEC	
REV	
REV	



STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
TYPICAL TRENCH SECTION
UDOT CROSSING TRENCH DETAIL

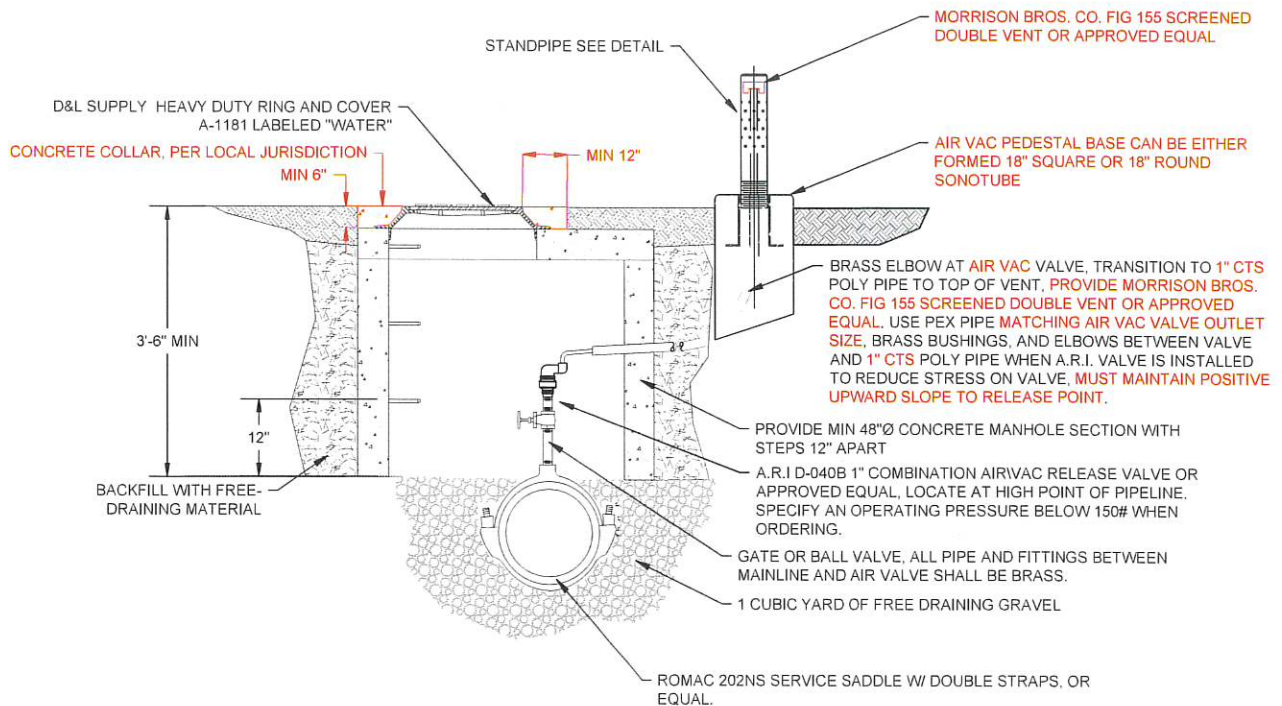
SHEET 2





NOTES:

1. LOCATE STANDPIPE WELL OUTSIDE TRAVELED ROADWAY OR AS DIRECTED BY THE ENGINEER. INSTALL 4" STEEL PIPE FOR A 1" AIR VAC/AIR RELEASE VALVE AND 6" STEEL PIPE FOR A 2" VALVE.



6

COMBINATION AIR/VAC VALVE DETAILS

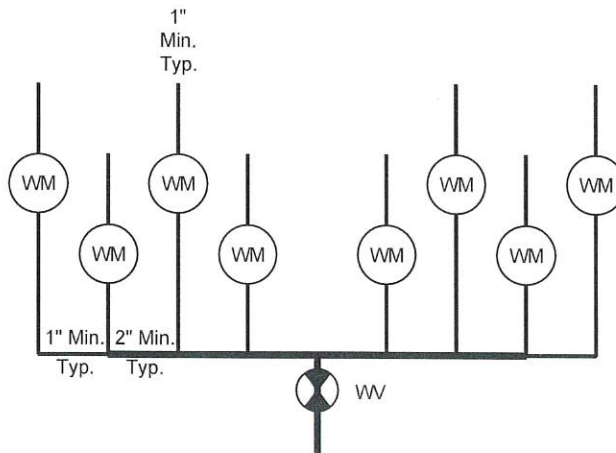
NTS

DRAFTED: RP	DEVIATIONS FROM STANDARDS MUST BE
DESIGNED: RP/MDD	APPROVED BY HOOPER WATER
CHECKED: MDD	IMPROVEMENT DISTRICT.
DATE: 07/22/2026	
REV REVISED FOR CONCRETE COLLAR, PLUMBING NOTE, VENT	
REV	
REV	



STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
COMBINATION AIR/VAC VALVE DETAIL
SHEET 4





2" from main line, serving
2-8 meters when approved
by District

SPECIFICATIONS FOR MULTIPLE METER MANIFOLDS:

1. All piping shall be SDR 9 CTS HDPE or brass.
2. Maintain right angles in piping through use of brass tees, crosses or 90s
3. 2" pipe when more than 1 meter is served, single service size beyond meter determined by home builder.
4. Stagger meter boxes as needed to enable proper compaction
5. Keep meter boxes near roadway
6. No meter boxes in roads or driveways.
7. Mark and wire a waterproof tag to each meter to identify which lot/unit is served by each meter.
8. 2" curb valve and valve box with concrete collar required. Locate in non-traffic area.
9. See also Detail 4 on Sheet 3.

8

MULTIPLE METER MANIFOLD

NTS

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DATE: 07/22/2026	
REV	
REV	
REV	



STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
SKewed SEWER CROSSING SHEET 6



IF IN TRAFFIC INSTALLATION RING AND LID SHALL BE COLLARED
PER LOCAL JURISDICTION MIN 12" BEYOND LID. MIN 6" THICK

30" MANHOLE RING & COVER. D&L SUPPLY #B - 5024.
WITH A 2" HOLE FOR TOUCH READ, STAMPED "WATER".

COPPER METER SETTER FOR 2" FLANGED
METERS 18" TALL, USE
FORD - 70 SERIES (VHH77-18B-11-77)
OR APPROVED EQUAL

ECCENTRIC
PRECAST MANHOLE
LID (H-20 RATED)
WITH STEPS

NEPTUNE 2" METER
PAID FOR BY CUSTOMER,
PURCHASED AND INSTALLED
BY DISTRICT

4' DIAMETER
PRECAST MANHOLE

2" MALE BY COMPRESSION
ADAPTER

FLOW DIRECTION

2" CTS SDR9 POLY.
NO COUPLINGS UNLESS
SPECIFICALLY APPROVED
BY INSPECTOR.

2" MALE BY COMPRESSION
ADAPTER

8" THICK - 1" WASHED ROCK

NOTES

1. SERVICE LINE COVER UNDER CURB AND GUTTER MUST BE ADJUSTED BETWEEN THE LIMITS OF 36" AND 48". COVER OF SERVICE LINE IN THE STREET MUST NOT BE GREATER THAN 48"

2. DISTRICT MANAGER OR FOREMAN MUST APPROVE LOCATION OF METER BOX IF DISTANCE FROM TOP BACK CURB & GUTTER EXCEEDS 1' - 0".

3. METER SETTER, CONSISTS OF 2 DUAL CHECK VALVES, 2 LOCKING KEY VALVES, FITTINGS & SPOOLS, COMPLETE.

4. ALL PIPING, VAULT, & MISCELLANEOUS ITEMS SHALL BE FURNISHED & INSTALLED BY THE CONTRACTOR, COMPLETE. COST OF METER SHALL BE BORNE BY SERVICED CUSTOMER.

5. ANY CHANGES MUST BE APPROVED BY DISTRICT MANAGER OR INSPECTOR.

6. IF SERVICE LINE IS NOT 2" CTS POLY THEN INSTALLER WILL HAVE TO INSTALL TRANSITION FITTINGS.

11

2" METER DETAIL

NTS

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DESIGNED: RP/MDD	APPROVED BY HOOPER WATER
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DATE: 07/22/2026	
REV	REVISED FOR CONCRETE COLLAR, STRUCTURE NOTE
REV	
REV	



STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
2" METER DETAIL
SHEET 8



Bill of Materials - 3" Meter

#	Qty	Item	Note
1	2	3" COUPLING	
2	2	FIELD FLANGE AND 1/4" STEEL THRUST PLATE	
3	2	CORED HOLE AND GROUT PACK	
4	2	3" PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
5	2	3" X 2" TEE	
6	2	2" FL X PE PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
7	2	2" 90° ELBOW	END CONNECTIONS AS NEEDED
8	1	2" GATE VALVE WITH HANDWHEEL	PROVIDE A STAINLESS STEEL CHAIN AND BRASS LOCK
9	2	3" GATE VALVE WITH HANDWHEEL	PROVIDE 1 ONLY STAINLESS STEEL CHAIN AND BRASS LOCK
		INTENTIONALLY BLANK	
11	1	3" ULTRASONIC METER	PROVIDE WITH REGISTER AND ANTENNA, ETC. (PAID FOR BY CUSTOMER, PURCHASED AND INSTALLED BY DISTRICT)
12	1	2" PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
13	1	2" UNION COUPLING	FITTING TO PROVIDE EASE OF MAINTENANCE ROMAC MACRO O.A.E.
14	1	3" PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
15	2	3" RESTRAINED FLANGE COUPLING ADAPTER	
16	1	3" CHECK VALVE	RESILIENT SEATED CHECK VALVE, AFC SERIES 2100 OR APPROVED EQUAL
17	4	ADJUSTABLE PIPE STAND	BOLT TO FLOOR WHEN ADJUSTMENTS COMPLETE, USE SS HARDWARE
18	1	CONCRETE UTILITY VAULT WITH RING AND COVER	PRECAST OR CAST IN PLACE VAULT WITH MIN INSIDE DIMENSIONS OF 5' X 10' X 6', H-20 LOADING, WATER TIGHT JOINTS

NOTES:

A STAINLESS STEEL CHAIN AND BRASS LOCK SHALL BE PROVIDED TO LOCK THE GATE VALVES IN POSITION.

ALL PIPE AND FITTINGS MUST BE EITHER DUCTILE IRON OR BRASS (FOR REFERENCE, PLUMBING AND VAULT ARE SHOWN TO SCALE USING DUCTILE IRON).

ALL CONNECTIONS WITHIN THE VAULT MUST BE RESTRAINED.

12B

3" WATER METER BOM

NTS

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DATE: 07/22/2026	
REV	
REV	
REV	



STANDARD WATER DETAILS	
HOOPER WATER IMPROVEMENT DISTRICT	
3" WATER METER BOM	SHEET 98



Bill of Materials - 4" Meter

#	Qty	Item	Note
1	2	4" COUPLING	
2	2	FIELD FLANGE AND 1/4" STEEL THRUST PLATE	
3	2	CORED HOLE AND GROUT PACK	
4	2	4" FL X PE PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
5	2	4" X 2" FL TEE	
6	2	2" FL X PE PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
7	2	2" 90° ELBOW	END CONNECTIONS AS NEEDED
8	1	2" FL GATE VALVE WITH HANDWHEEL	PROVIDE A STAINLESS STEEL CHAIN AND BRASS LOCK
9	2	4" FL GATE VALVE WITH HANDWHEEL	PROVIDE 1 ONLY STAINLESS STEEL CHAIN AND BRASS LOCK
10	1	4" FL X FL PIPE	
11	1	4" ULTRASONIC METER	WITH RADIO READ, ANTENNA MOUNTED IN VAULT (PAID FOR BY CUSTOMER, PURCHASED AND INSTALLED BY DISTRICT)
12	1	2" FL X PE PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
13	1	2" COUPLING	ROMAC MACRO HP OR APPROVED EQUAL
14	1	4" PE X PE PIPE	FIELD MEASURE AND CUT TO FINAL LENGTH
15	1	4" RESTRAINED FLANGE COUPLING ADAPTER	
16	1	4" CHECK VALVE	RESILIENT SEATED CHECK VALVE, AFC SERIES 2100 OR APPROVED EQUAL
17	4	ADJUSTABLE PIPE STAND	BOLT TO FLOOR WHEN ADJUSTMENTS COMPLETE, USE SS HARDWARE
18	1	5' X 10' CONCRETE UTILITY VAULT WITH RING AND COVER	AMCOR PRECAST, H-20 LOADING, WATER TIGHT JOINTS

NOTES:

A STAINLESS STEEL CHAIN AND BRASS LOCK SHALL BE PROVIDED TO LOCK THE GATE VALVES IN POSITION.

ALL PIPE AND FITTINGS MUST BE EITHER DUCTILE IRON OR BRASS (FOR REFERENCE, PLUMBING AND VAULT ARE SHOWN TO SCALE USING DUCTILE IRON).

ALL CONNECTIONS WITHIN THE VAULT MUST BE RESTRAINED.

13B 4" WATER METER BOM

NTS

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REV 1: 08/14/2023: ELIMINATE GSP, REQUIRE R.S. CHECK	
REV	
REV	



STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
4" WATER METER BOM
SHEET 10B



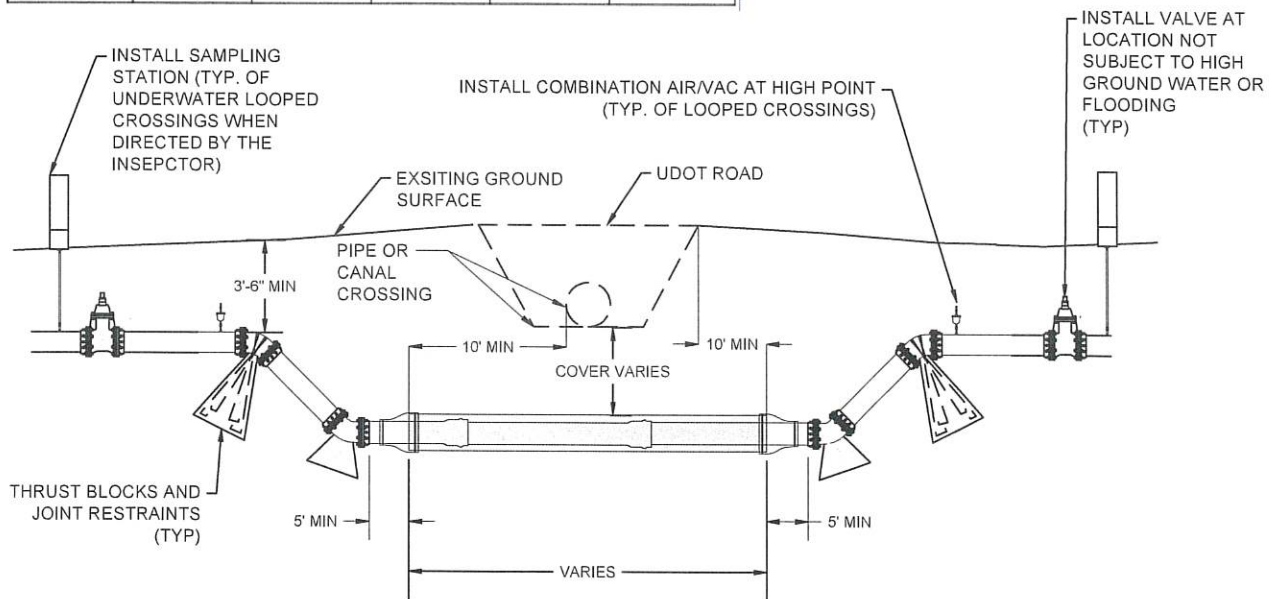
COVER (MIN.)

LAYTON CANAL	4'-0"
HOOPER CANAL	2'-0"
WILSON CANAL	2'-0"
SLOUGH	2'-0"
PIPE	1'-6"
UDOT ROAD	SEE TABLE 1

PIPE SIZE	CASING SIZE*
8"	16"
10"	18"
12"	24"
14"	30"
16"-20"	30"

* CASING WALL THICKNESS 0.375" FOR SINGLE 20' LENGTH
 * FOR DOUBLE 20' LENGTH CASINGS WALL THICKNESS TO BE .500"
 ALL LONGER CASING INSTALLATIONS WILL REQUIRE GEOTECH REPORT
 AND CONSIDERATION OF THE METHOD OF INSTALLATION TO DETERMINE
 WALL THICKNESS.
 SEE SPECIFICATIONS SEC 5.3.2.22 ON CASINGS

TABLE 1 MINIMUM DEPTH OF BURY TO TOP OF UTILITY (LONGITUDINAL AND CROSSING INSTALLATIONS)					
LOCATION	UNDER PAVEMENT	UNDER SIDEWALK	UNDER DITCH (NOTE 5)	LOCATION < 20 FT FROM EDGE OF PAVEMENT	LOCATION > 20 FT FROM EDGE OF PAVEMENT
DEPTH	4 FT BELOW TOP OF PAVEMENT	3 FT BELOW TOP OF SIDEWALK	3 FT BELOW FLOW LINE	5 FT BELOW NATURAL GRADE	3 FT BELOW NATURAL GRADE



NOTE:

- CASINGS REQUIRE CENTRALIZING SPACERS AND END SEALS W/ S.S. BAND CLAMPS SUBMITTED TO INSPECTOR FOR APPROVAL PRIOR TO INSTALLATION.
- PVC PIPE REQUIRES SELF- RESTRAINING GASKETS OR MECHANICAL PIPE RESTRAINTS ON ALL PIPE JOINTS INSIDE OF CASING AND PIPE JOINTS NOT FURTHER THAN 5 FT FROM CASING END.
- ISOLATION VALVE INSTALLATION IS REQUIRED ON EACH SIDE OF CASING.
- COMBINATION AIR/VAC VALVE INSTALLATION IS REQUIRED ON EACH SIDE OF LOOPED CROSSINGS.
- INSTALLATION OF A SAMPLING TAP OR OTHER ACCEPTABLE MEANS OF SAMPLING WILL BE REQUIRED TO ALLOW FOR REPRESENTATIVE WATER QUALITY TESTING ON THE UPSTREAM AND DOWNSTREAM SIDE OF THE CROSSING, IF THE DISTRICT INSPECTOR DETERMINES THAT ANOTHER MEANS OF SAMPLING DOES NOT EXIST NEAR THE GIVEN LOCATION.
- CROSSINGS SHALL BE COMMISSIONED AS AN INTEGRAL PART OF THE SURROUNDING PIPE SYSTEM (FLUSH, DISINFECT, PRESSURE TEST).
- CASING LENGTH IS TO BE A MINIMUM 10FT BEYOND CANAL TOP OF BANK/PIPE EDGE. WHEN TOP OF CASING DEPTH IS 6FT OR HIGHER SEPARATION IS 10FT, WHEN TOP OF CASING DEPTH IS LOWER THAN 6FT THE REQUIRED CASING LENGTH WILL BE 1FT LONGER SEPARATION FOR EVERY 1FT DEEPER FROM CANALS OR PIPES, I.E. 7FT IS 11FT SEPARATION, 8FT IS 12FT, 9FT IS 13FT AND SO ON.

15

CANAL/UDOT CROSSING DETAIL

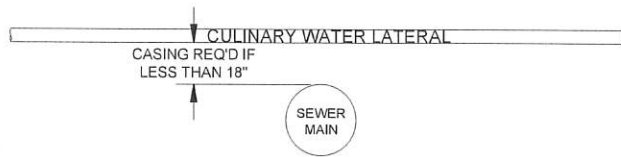
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DESIGNED: RP/MDD	APPROVED BY HOOPER WATER
CHECKED: MDD	IMPROVEMENT DISTRICT.
DATE: 07/22/2025	
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REV	



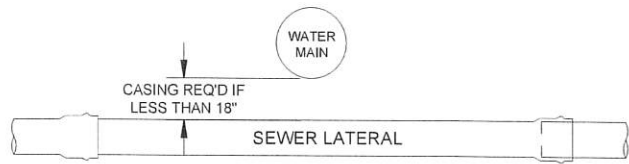
STANDARD WATER DETAILS	
HOOPER WATER IMPROVEMENT DISTRICT	
CANAL/UDOT CROSSING DETAIL	SHEET 12

GARDNER ENGINEERING
 CIVIL • LAND PLANNING
 MUNICIPAL • LAND SURVEYING
 1500 W 2100S, WEST HAVEN UT 84405
 P 801.476.0202 F 801.476.0066

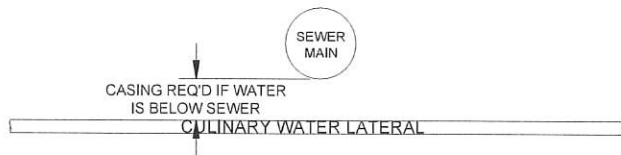
WATER LATERAL OVER SEWER MAIN



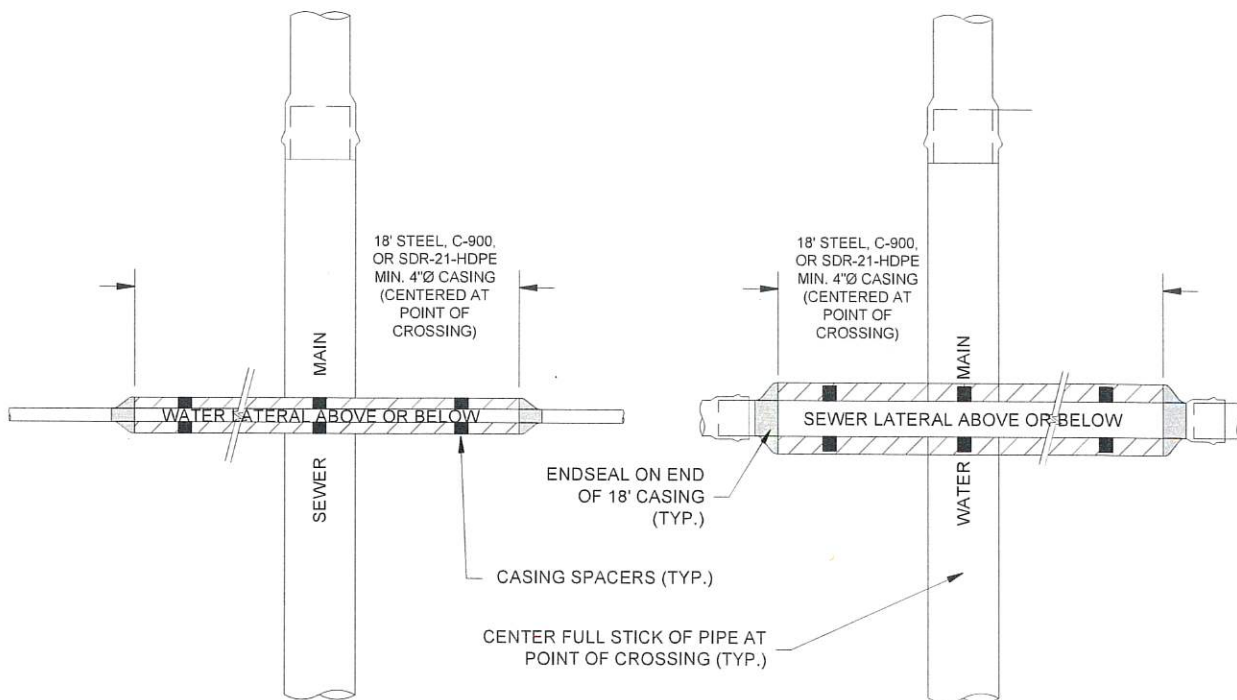
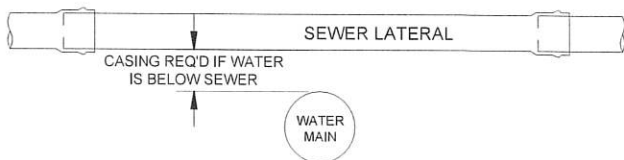
WATER MAIN OVER SEWER LATERAL



WATER LATERAL UNDER SEWER MAIN



WATER MAIN UNDER SEWER LATERAL



SEE SPECS 5.3.3.23 SLEEVES FOR ADDITIONAL DETAILS ON SLEEVE INSTALL AND REQUIREMENTS

17

SEWER/WATER VERTICAL SEPARATION EXCEPTION DETAIL

NTS

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STANDARD WATER DETAILS
HOOPER WATER IMPROVEMENT DISTRICT
SEWER/WATER CROSSING

SHEET 14

