THE SEMINOLE IMPROVEMENT DISTRICT



CONSTRUCTION DETAILS

CAULFIELD & WHEELER, INC.



CIVIL ENGINEERING - LAND PLANNING LANDSCAPE ARCHITECTURE - SURVEYING 7900 GLADES ROAD - SUITE 100 BOCA RATON, FLORIDA 33434 PHONE (561)-392-1991 / FAX (561)-750-1452

REVISED: APRIL 20, 2021

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LATEST REVISION DATE: 04/13/2021



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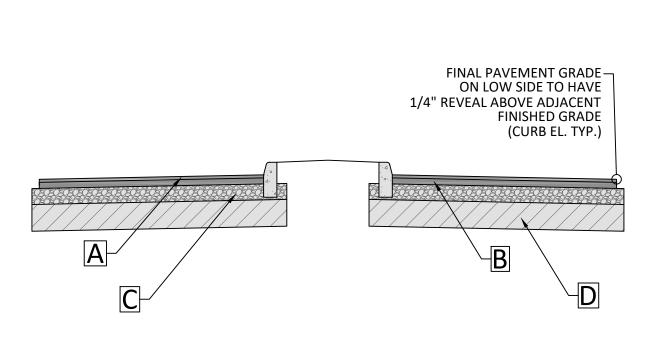
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PROPOSED PAVEMENT SECTION FOR RIGHT-OF-WAY WIDTHS OF 80-ft AND GREATER:

- A. 1" TYPE FC-9.5 FRICTION COURSE [SN = 0.44]
- B. 1.5" TYPE SP STRUCTURAL COURSE (TRAFFIC LEVEL A) [SN = 0.66]
- *C. FDOT OPTIONAL BASE GROUP 08 (WITH PRIME COAT) [SN = 1.53]
- D. 12" STABILIZED SUBGRADE (MIN. LBR 40) COMPACTED TO AT LEAST 98% MAX. DENSITY PER AASHTO T-180 [SN = 0.96]

[TOTAL SN = 3.59]

*IF THE ROADWAY IS INTERNAL TO A RESIDENTIAL POD, ITEM #C CAN BE REDUCED TO FDOT OPTIONAL BASE GROUP 03 [SN = 0.99] AND THE TOTAL STRUCTURAL NUMBER (SN) CAN BE REDUCED TO 3.05.

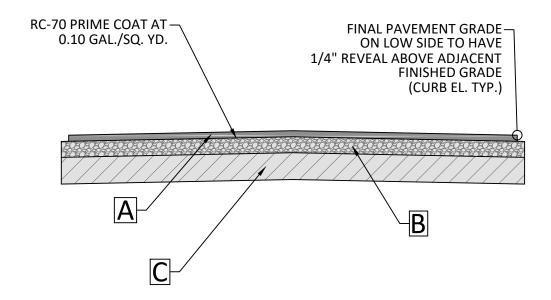
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NOT TO SCALE



S.I.D. COLLECTOR ROAD PAVEMENT SECTION





PROPOSED PAVEMENT SECTION FOR RIGHT-OF-WAY WIDTHS UP TO 60-ft:

- A. 1.5" TYPE SP STRUCTURAL COURSE (TRAFFIC LEVEL A) [SN = 0.66]
- B. FDOT OPTIONAL BASE GROUP 08 (w/ PRIME COAT) [SN = 1.65]
- *C. 12" COMPACTED SUBGRADE COMPACTED TO AT LEAST 98% MAX. DENSITY PER AASHTO T-180 [SN = 0.0]
- *[TOTAL SN = 2.31]
- *SUBGRADE TYPE AND TOTAL STRUCTURAL NUMBER (SN) TO MEET THE GREATER OF THESE SPECIFICATIONS AND THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR THE PROJECT SITE.

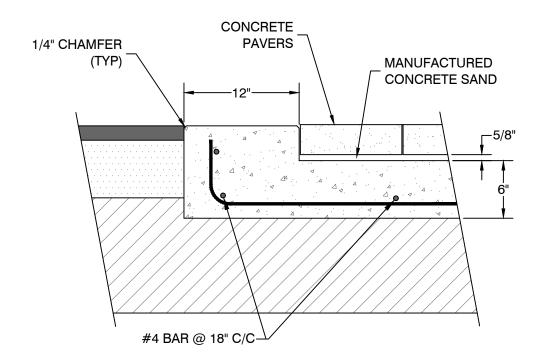
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S.I.D. LOCAL ROAD PAVEMENT SECTION





- 1. PAVER BASE SHALL BE CONSTRUCTED AFTER PLACEMENT OF THE PAVEMENT AND LIMEROCK BASE FOR ROADWAY.
- 2. ALIGN PAVERS PER MANUFACTURER'S RECOMMENDATIONS OR AS SPECIFIED ON DRAWINGS.

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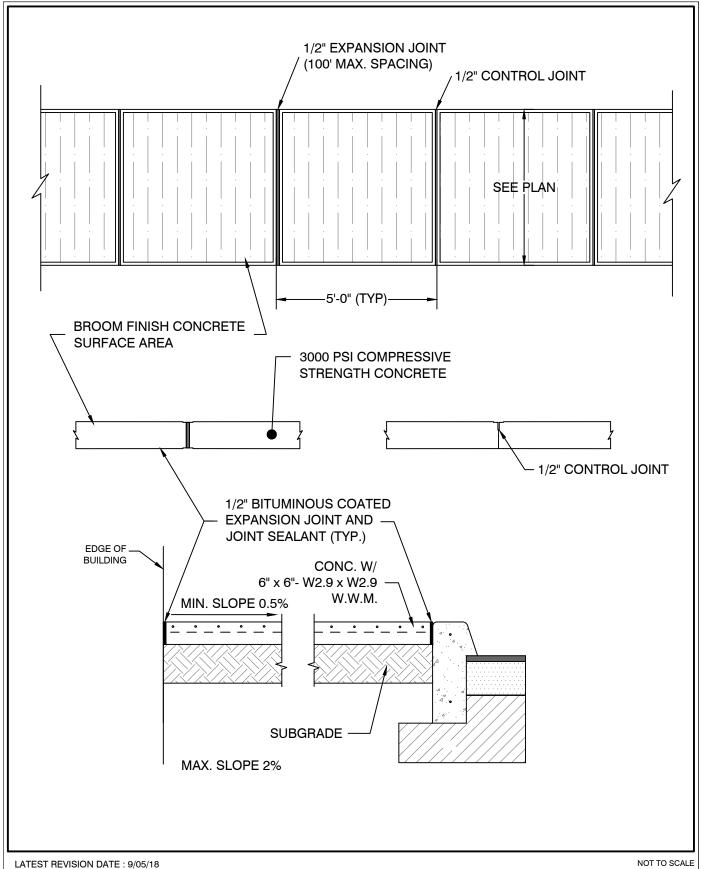


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BRICK PAVER DETAIL

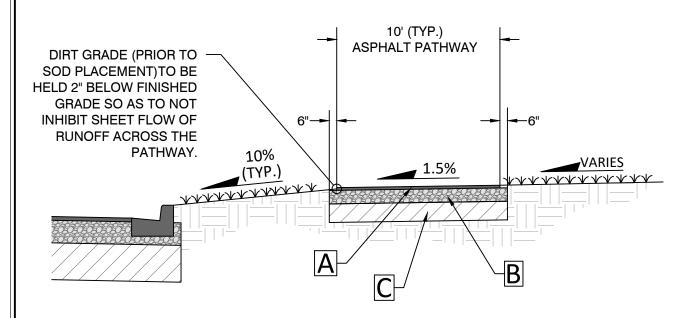






TYPICAL CONCRETE SIDEWALK DETAIL





PROPOSED PAVEMENT SECTION FOR ASPHALT PATHWAY:

- A. 1.5" TYPE SP STRUCTURAL COURSE
- B. 4" LIMEROCK BASE [MIN. LBR 100] (w/ PRIME COAT) COMPACTED TO AT LEAST 98% MAX. DENSITY PER AASHTO T-180
- C. 12" COMPACTED SUBGRADE COMPACTED TO AT LEAST 98% MAX. DENSITY PER AASHTO T-180

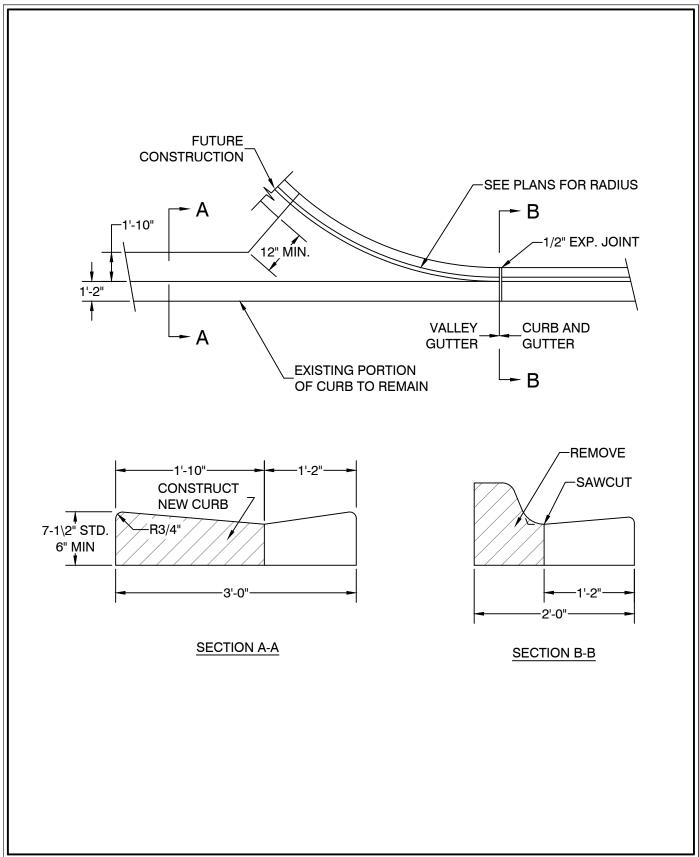
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ASPHALT PATHWAY DETAIL



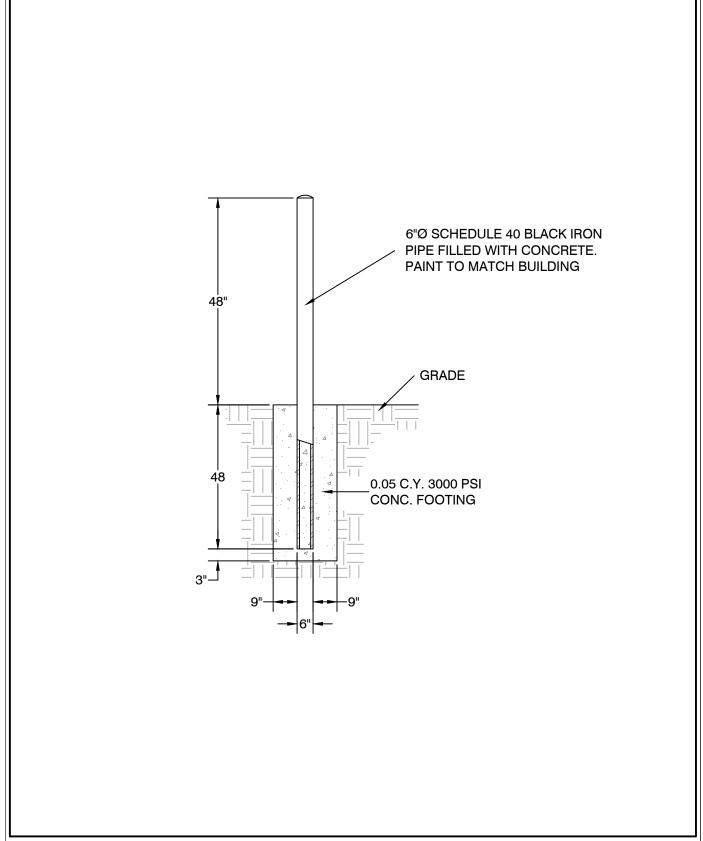


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DRIVEWAY CONSTRUCTION DETAIL





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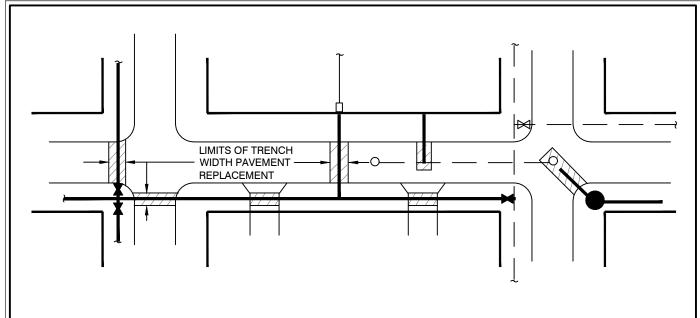
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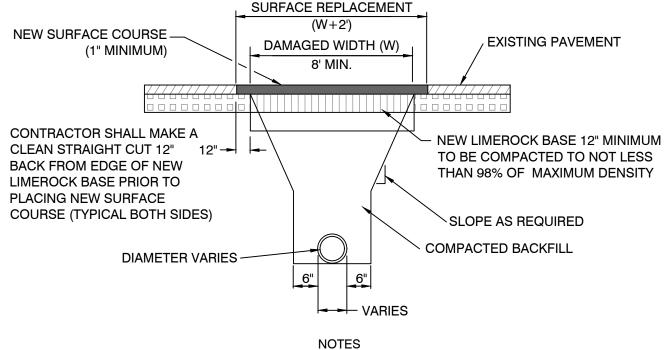
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PIPE BOLLARD DETAIL



R-07





- 1. PAVEMENT SHALL BE REMOVED TO NEATLY SAWED STRAIGHT EDGES. SAWCUTS SHALL BE MADE TO MIN DEPTH OF 1-1/2"(INCHES).
- 2. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
- 3. THE TYPE AND THICKNESS OF THE NEW SURFACE MATERIAL SHALL BE CONSISTENT WITH THAT OF THE EXISTING SURFACE BUT IN ALL CASES SHALL MEET THE MINIMUM STANDARDS ESTABLISHED BY THE PLANS AND SPECIFICATONS.

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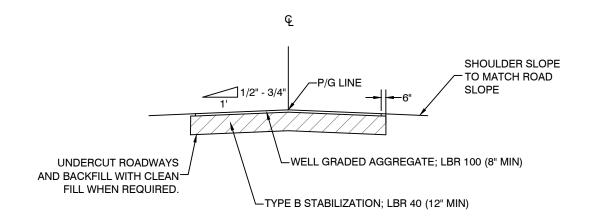


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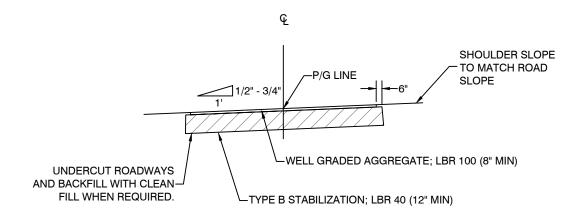
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PAVEMENT REPAIR DETAIL





TYPICAL GRAVEL ROAD CROWN SECTION



TYPICAL GRAVEL ROAD SLOPING SECTION

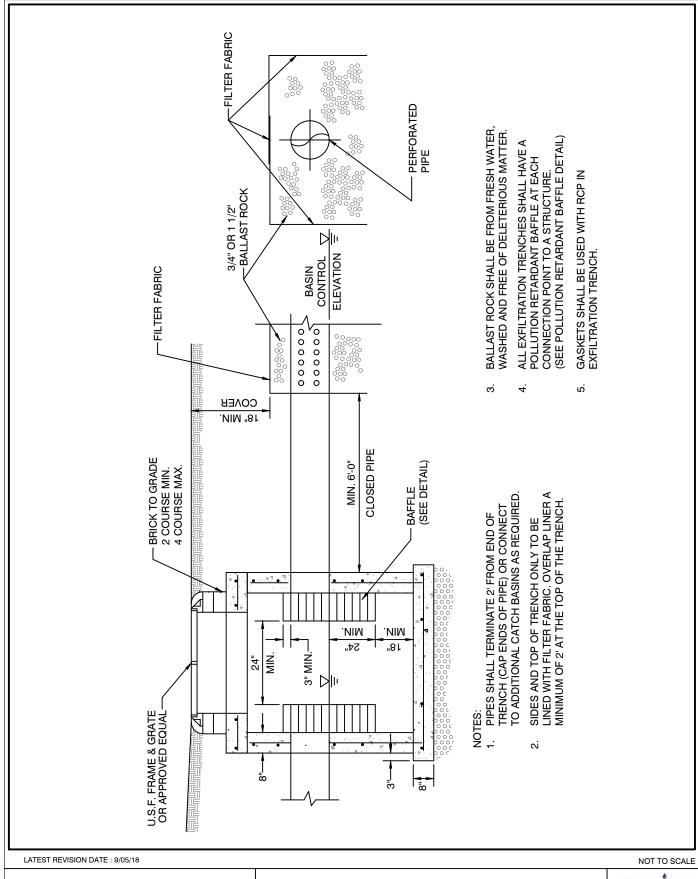
NOTE: PROVIDE APPROPRIATE TRANSITIONS FROM CONNECTING ROAD TO ACCOMODATE DRAINAGE.

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TYPICAL SECTION (LOCAL GRAVEL ROAD)

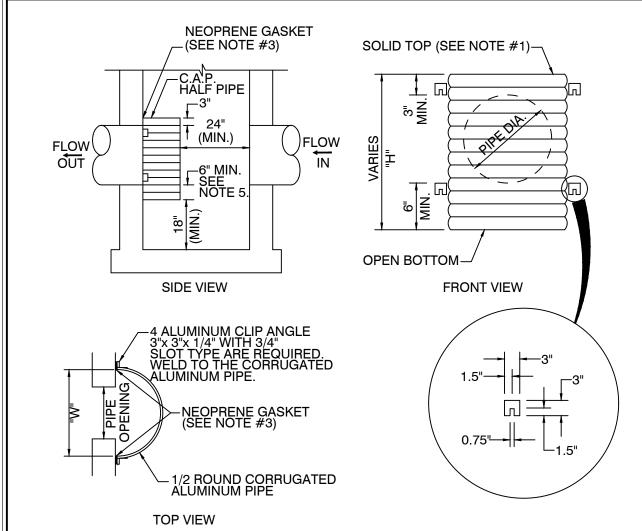






EXFILTRATION TRENCH DETAIL





GENERAL NOTES:

- 1. ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE OPENING AT THE TOP.
- 2. BAFFLE SHALL BE AS MANUFACTURED BY SOUTHERN CULVERT OR ENGINEER'S APPROVED EQUAL.
- 3. NEOPRENE GASKET (3/8" X 2") SHALL BE INSTALLED AT ALL BAFFLES ON THE SIDES AND AT THE TOP.
- 4. POLLUTION RETARDENT BAFFLE TO BE ATTACHED TO STRUCTURE WITH 3/8" X 4" STAINLESS STEEL 'RED HEADS'.
- 5. MINIMUM INVERT ELEVATION ON POLLUTION RETARDENT BAFFLE TO BE 2' BELOW CONTROL ELEVATION.
- 6. ALL EXFILTRATION TRENCHES SHALL HAVE A POLLUTION RETARDENT BAFFLE AT EACH CONNECTION POINT TO A STRUCTURE (SEE EXFILTRATION TRENCH DETAIL).
- 7. FIBERGLASS BAFFLES ARE NOT PERMITTED.

PIPE DIA.	W¹ (IN)	W ² (IN)	T (GAUGE)	H (IN)
15"	21"	24"	16	VARIES
18"	24"	30"	16	VARIES
21"	30"	30"	16	VARIES
24"	30"	36"	16	VARIES
30"	36"	42"	14	VARIES
36"	42"	48"	14	VARIES
42"	48"	54"	14	VARIES
48"	54"	60"	14	VARIES
54"	60"	66"	14	VARIES

- 1.RECTANGULAR STRUCTURE
- 2. ROUND STRUCTURE

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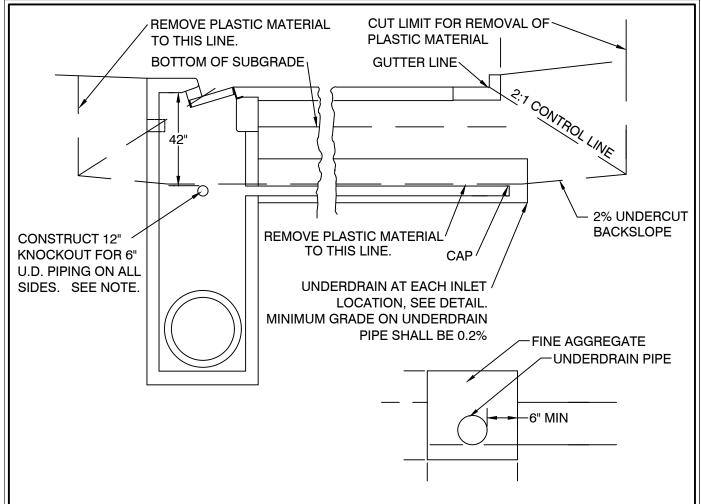


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POLLUTION RETARDENT BAFFLE DETAIL





GENERAL NOTES:

TYPE I - UNDERDRAIN DETAIL

- 1. THE UNDERDRAIN PIPE SHALL BE EITHER 5" SMOOTH INTERIOR EQUIVALENT OR 6" CORRUGATED INTERIOR TUBING UNLESS OTHERWISE SHOWN IN THE PLANS.
- 2.FINE AGGREGATE SHALL BE QUARTZ SAND MEETING THE REQUIREMENTS OF FLA D.O.T. SECTIONS 902-4 OF THE STANDARD SPECIFICATIONS.
- 3.THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT CONTAMINATION OF THE TRENCH WITH SILT AND FOREIGN MATERIALS.
- 4.UNDERDRAIN TYPE I,II,III AND V SHALL BE IN ACCORDANCE WITH THE FLA D.O.T. SECTION 440.
- 5. FILTER FABRIC SHALL BE TYPE D-3 (SEE FLA D.O.T. INDEX 199).
- 6. WHEN CORRUGATED POLYETHYLENE TUBING WITH SLOTS OR 360° PERFORATIONS IS USED IN CONJUNCTION WITH FINE AGGREGATE, A FILTER FABRIC SOCK MEETING FLA D.O.T. SECTION 948-5 IS REQUIRED.
- 7. ALL FILTER FABRIC JOINTS SHALL OVERLAP A MINIMUM OF ONE (1) FOOT.
- 8. ALL STORM STRUCTURES TO BE CONSTRUCTED WITH TYPICAL KNOCKOUT FOR UNDERDRAIN CONNECTION. KNOCKOUTS SHALL BE LOCATED 42" MIN. FROM TOP OF STRUCTURE. KNOCKOUT LOCATION SHALL BE CONSTRUCTED SUCH THAT UNDERDRAINS RUNNING PARALLEL TO ROAD CAN BE CONNECTED TO STORM STRUCTURE.

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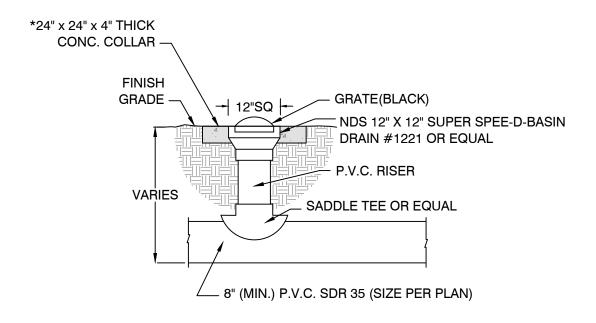


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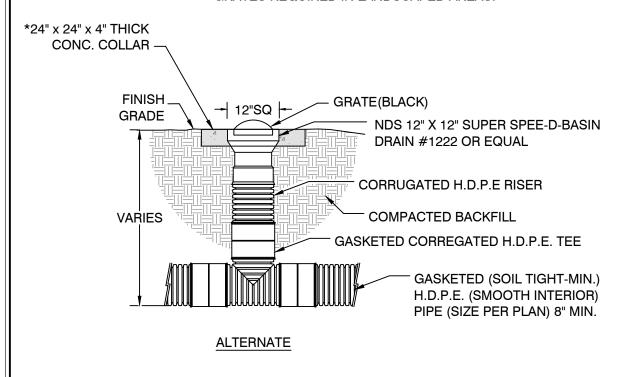
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ROADWAY UNDERCUT DETAIL





NOTE: GRATES TO BE FLAT IN GRASS AREAS. ATRIUM GRATES REQUIRED IN LANDSCAPED AREAS.



* CONCRETE COLLARS REQUIRED WHEN INSTALLED WITHIN S.I.D. RIGHT-OF-WAY AND/OR DRAIN IS TO BE TURNED OVER TO S.I.D.

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YARD DRAIN DETAIL



STORM DRAIN PIPE IS REQUIRED TO COMPLY WITH THE FOLLOWING STANDARDS

1. ROAD CROSS DRAIN PIPE

- A. ACCEPTABLE TYPES-REINFORCED CONCRETE, GALVANIZED, CORRUGATED METAL, CORRUGATED ALUMINUM, HDPE, A2000 PVC, OR OTHER FDOT APPROVED MATERIALS
- B. MINIMUM SIZE-FIFTEEN (15) INCHES DIAMETER OR EQUAL.
- C. ENDWALL, INLET, MANHOLE OR MITERED END SECTION WITH CONCRETE COLLAR REQUIRED AT EACH END. PROTRUDING, SUBMERGED PIPES ARE ACCEPTABLE BUT SHALL HAVE A MINIMUM OF 2' OF WATER ABOVE THE CROWN OF PIPE AND SHALL EXTEND NO LESS THAN 2' BEYOND THE LAKE SLOPE (INTO THE WATER). THE PROTRUDING PIPE SHALL BE CMP WITH A CONCRETE COLLAR CONNECTION TO RCP/HDPE.

2. ROAD SIDE-DRAIN PIPE

- A. ACCEPTABLE TYPES-REINFORCED CONCRETE, GALVANIZED, CORRUGATED METAL, CORRUGATED ALUMINUM, HDPE, A2000 PVC, OR OTHER FDOT APPROVED MATERIALS
- B. MINIMUM SIZE-15 (15) INCHES DIAMETER OR EQUAL.

3. STORM SEWER PIPE

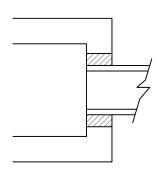
- A. ACCEPTABLE TYPES-REINFORCED CONCRETE, GALVANIZED, CORRUGATED METAL, CORRUGATED ALUMINUM, HDPE, A2000 PVC, OR OTHER FDOT APPROVED MATERIALS
- B. MINIMUM SIZE-15 (15) INCHES DIAMETER OR EQUAL.
- C. INLET OR MANHOLE REQUIRED AT EACH CHANGE OF ALIGNMENT OR GRADE

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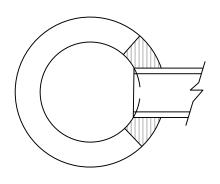


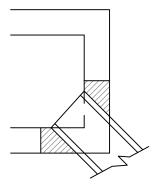
STORM DRAIN PIPE MATERIALS





PIPES ENTERING SQUARE STRUCTURES PERPENDICULAR TO WALLS SHOULD BE CUT OFF FLUSH AND NOT PROTRUDE INTO STRUCTURE - NO FILLET.





PIPES ENTERING SQUARE STRUCTURES AT ODD ANGLES AND PIPES ENTERING ROUND STRUCTURES SHOULD BE CUT OFF SO THAT THE MID POINT OF THE PIPE IS FLUSH WITH THE WALL - THESE WOULD HAVE SMALL FILLETS ABOVE AND BELOW THE PIPE.

1 OF 2

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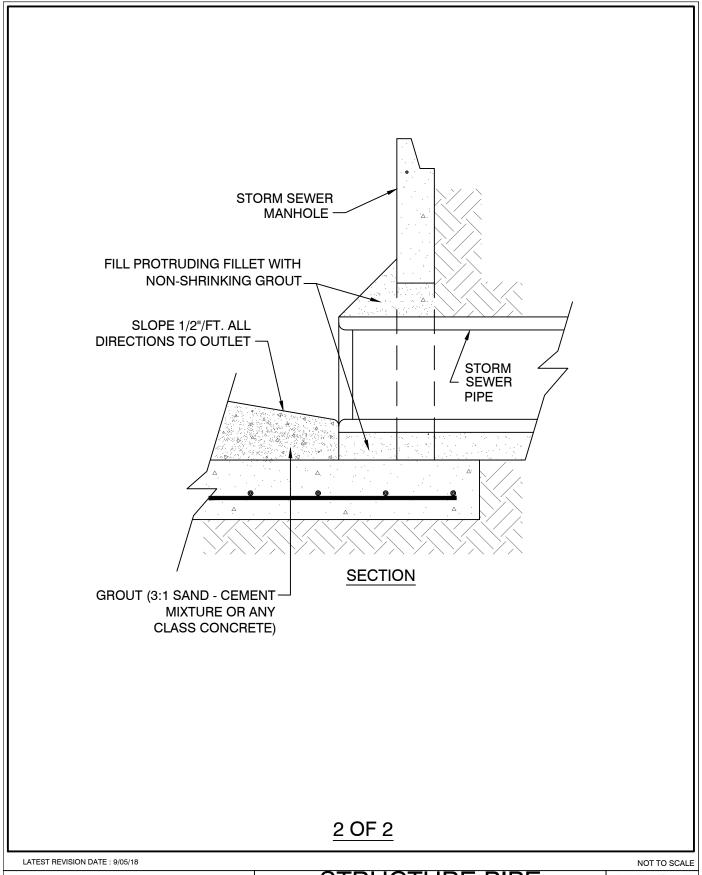


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STRUCTURE PIPE **GROUTING DETAIL** (1 of 2)





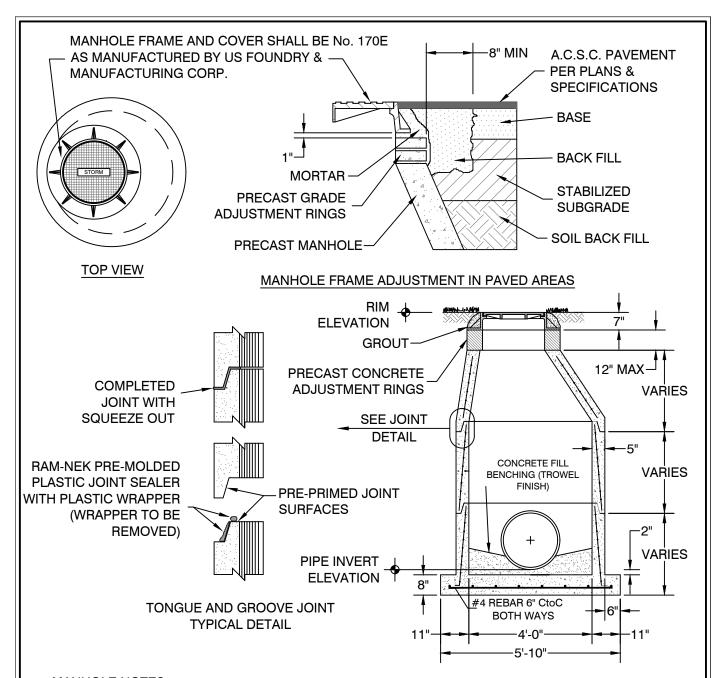


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STRUCTURE PIPE **GROUTING DETAIL** (2 of 2)





MANHOLE NOTES:

- 1. SEAL ALL PIPE OPENINGS IN PRECAST MANHOLE WITH "EMBECO" NON-SHRINK GROUT OR APPROVED EQUAL (BOTH INSIDE & OUTSIDE).
- 2. MANHOLE COVERS SHALL BE CLEANED AND PAINTED WITH BLACK RUST-INHIBITING PAINT.
- 3. SET COVERS FLUSH IN PAVED AREAS. 0.1' ABOVE GRADE IN UNPAVED AREAS, AND 0.75' BELOW GRADE IN GRADED AREAS.

ALTERNATE PRECAST MANHOLE TOPS:

- 1. APPROVE CONCENTRIC CONE DESIGN MAY BE USED AS AN ALTERNATIVE.
- 2. APPROVED FLAT SLAB TOP MAY BE USED AS AN ALTERNATE.

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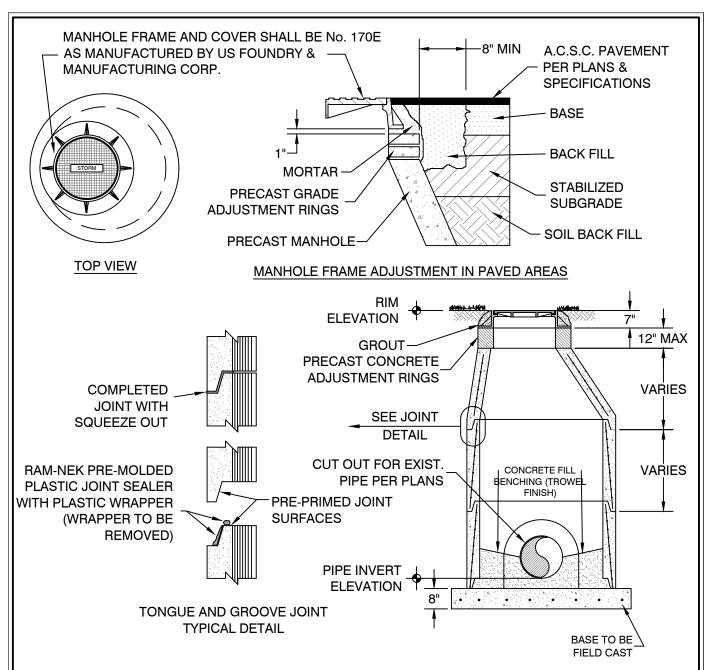


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STORM SEWER MANHOLE DETAIL





MANHOLE NOTES:

- 1. SEAL ALL PIPE OPENINGS IN PRECAST MANHOLE WITH "EMBECO" NON-SHRINK GROUT OR APPROVED EQUAL (BOTH INSIDE & OUTSIDE).
- 2. MANHOLE COVERS SHALL BE CLEANED AND PAINTED WITH BLACK RUST-INHIBITING PAINT.
- 3. SET COVERS FLUSH IN PAVED AREAS. 0.1' ABOVE GRADE IN UNPAVED AREAS, AND 0.75' BELOW GRADE IN GRADED AREAS.

ALTERNATE PRECAST MANHOLE TOPS:

- 1. APPROVE CONCENTRIC CONE DESIGN MAY BE USED AS AN ALTERNATIVE.
- 2. APPROVED FLAT SLAB TOP MAY BE USED AS AN ALTERNATE.

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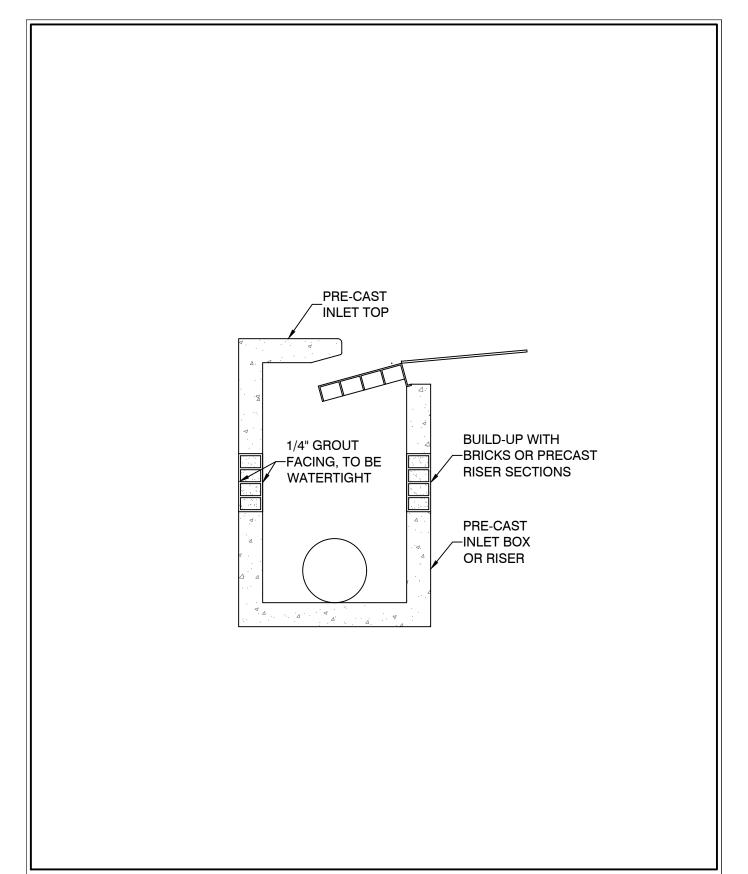


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STORM SEWER DOGHOUSE MANHOLE DETAIL





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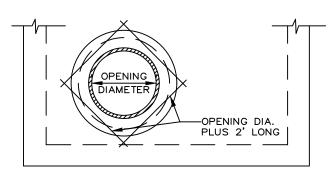


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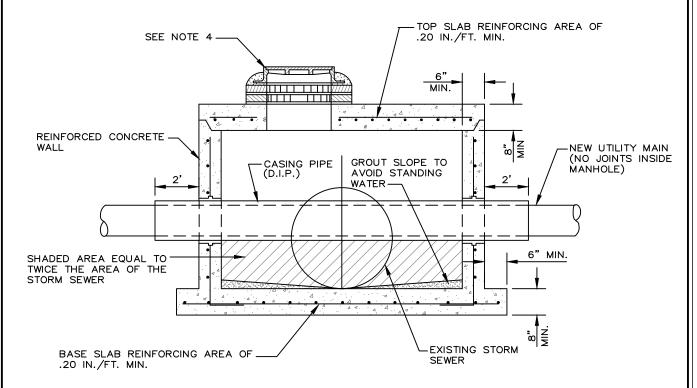
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PRECAST INLET TOP **ADJUSTMENT DETAIL**





PARTIAL PLAN



NOTES:

- WHERE CONDITIONS PERMIT THE LOWEST POINT OF CONFLICT MAIN AT OR ABOVE CENTER LINE OF STORM SEWER.
- 2. CONFLICT MANHOLES WILL BE ALLOWED WHERE DESIGN PROBLEMS AND ECONOMICS PROVE THEM TO BE THE ONLY VIABLE SOLUTION AS APPROVED BY S.I.D.
- CONFLICT MANHOLES WILL NOT BE ALLOWED FOR WATER MAINS CROSSING GRAVITY WASTEWATER SYSTEMS.
- 4. USF RING WITH SELF SEALING COVER MODEL USF 663—AB—M.
 FOR WATER MAIN APPILICATIONS, "WATER" TO BE CAST IN COVER
 FOR WASTEWATER APPILICATIONS, "SEWER" TO BE CAST IN COVER
- 5. ALL OPENINGS AND PIPING ENTERING / EXITING STRUCTURE SHALL BE SEALED WITH WATERPROOF NON SHRINKING GROUT.

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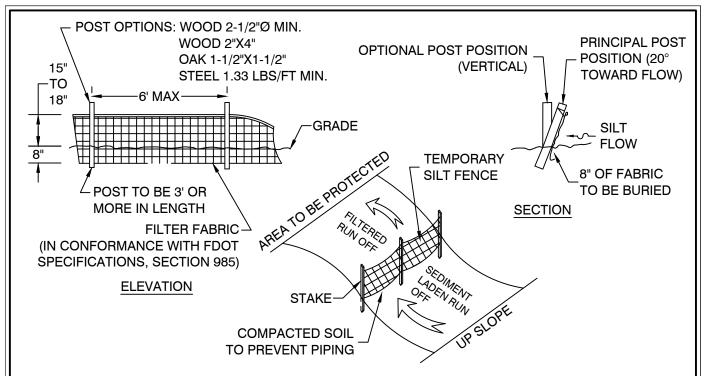


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CONFLICT MANHOLE DETAIL





- 1. THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.
- 2. TEMPORARY EROSION CONTROL TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY THE ENGINEER OR AREAS ON SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY THE ENGINEER.
- 3. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.
- 4. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.
- 5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.
- 6. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.
- 7. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
- 8. MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.
- 9. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

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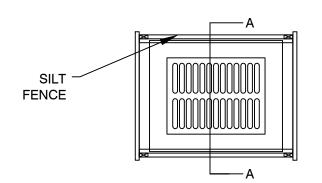


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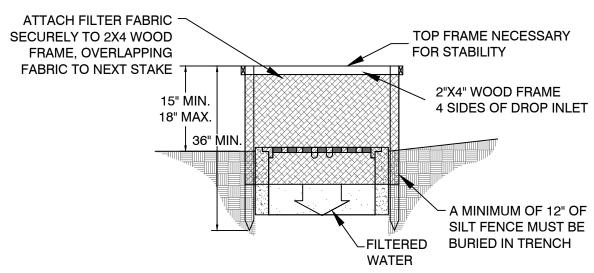
SILT FENCE AND EROSION CONTROL DETAIL



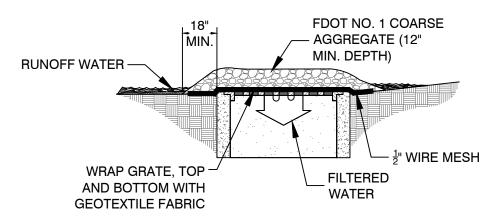


NOTES:

- 1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL NEARLY LEVEL DRAINAGE AREAS (LESS THAN 5%).
- 2. USE 2"X4" WOOD OR EQUIVALENT METAL STAKES (3 FT. MIN. LENGTH).
- 3. INSTALL 2"X4" WOOD FRAME TO ENSURE STABILITY.
- 4. SEE EROSION CONTROL PLAN FOR LOCATIONS AND APPLICABILITY.



SECTION A-A OPTION 1 SILT FENCE BARRIER



OPTION 2 GRAVEL AND WIRE MESH FILTER

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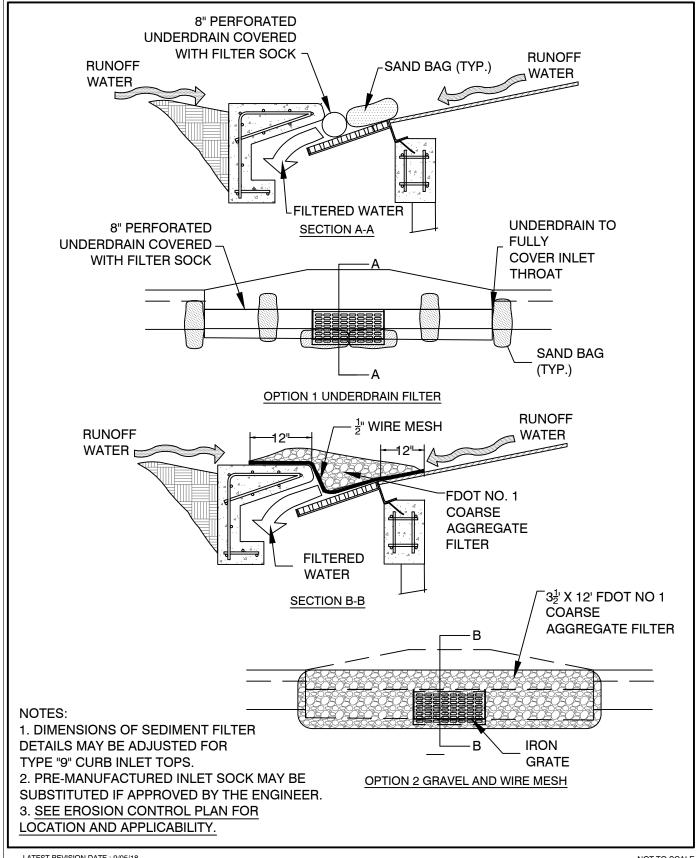


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DROP INLET SEDIMENT FILTER DETAIL





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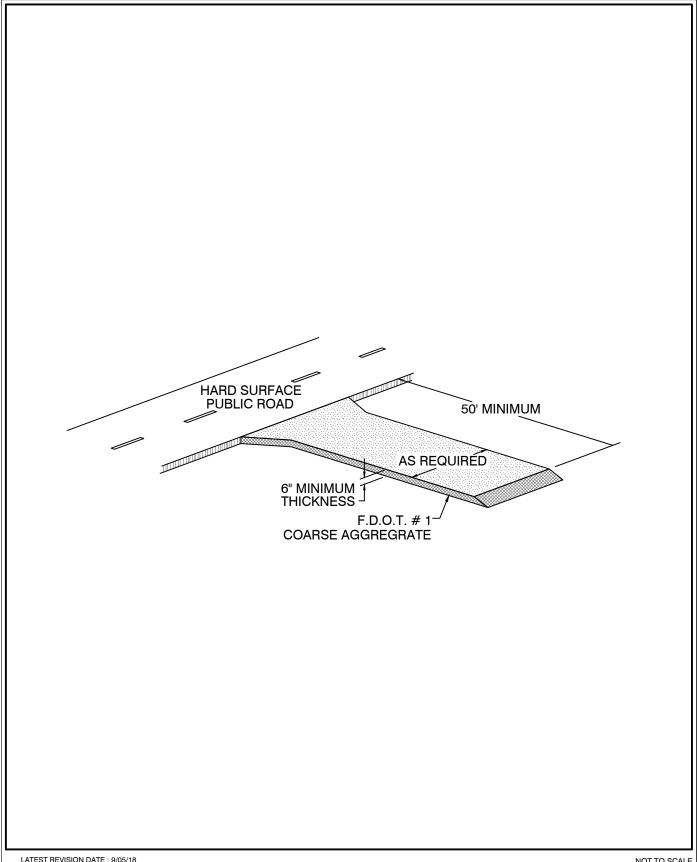


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CURB INLET SEDIMENT FILTER DETAIL





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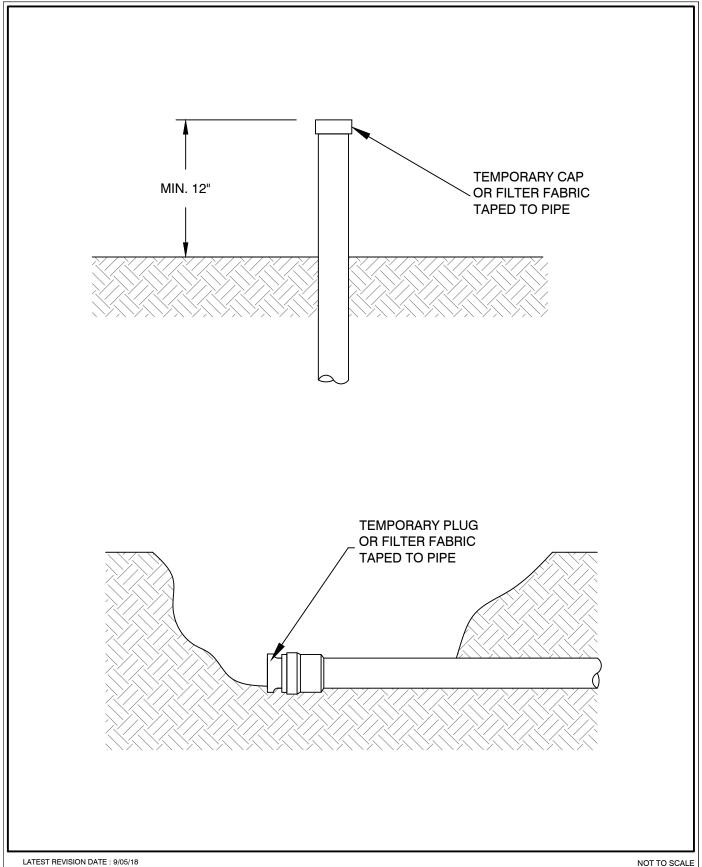


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GRAVEL CONSTRUCTION ENTRANCE DETAIL







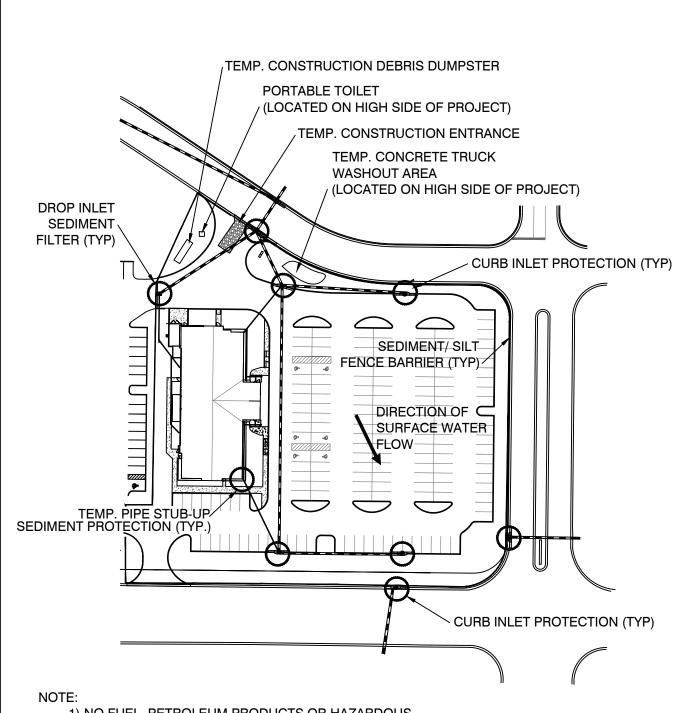


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TEMPORARY PIPE END SEDIMENT PROTECTION DETAIL





- 1) NO FUEL, PETROLEUM PRODUCTS OR HAZARDOUS WASTE TO BE STORED ON-SITE.
- 2) ALL EROSION & SEDIMENT PROTECTION MUST BE INSPECTED WEEKLY OR AFTER EACH 1/2" RAINFALL. ANY MEASURE NOT FUNCTIONING PROPERLY SHALL BE IMMEDIATELY REPAIRED OR REPLACED. RECORDS OF ALL INSPECTIONS MUST BE KEPT ON-SITE.

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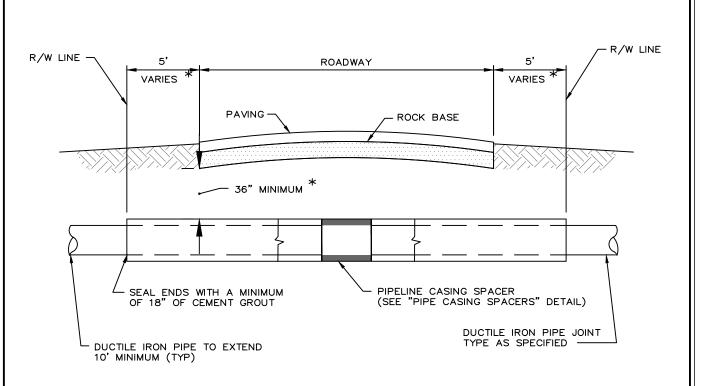


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SAMPLE EROSION AND SEDIMENT CONTROL PLAN **DETAIL**





NOMINAL PIPE SIZE	* STEEL CASING	* THICKNESS SCHEDULE
4"	12" 16" 18"	.375
6"	16"	.375
8"	18"	.375
10"	20"	.375
12"	24"	.375
14"	24" 30" 30"	.375
16"	30"	.375
18"	30"	.375
20" 24"	36" 42"	l .375
24"	42"	.500
30"	48"	.500
36"	54"	.500
42"	60"	.500
48"	72"	.500

INDICATES A MINIMUM TO BE INCREASED TO SUIT D.O.T. AND RAILROAD PERMIT REQUIREMENTS OR TYPE OF RESTRAINED JOINT TO BE USED.

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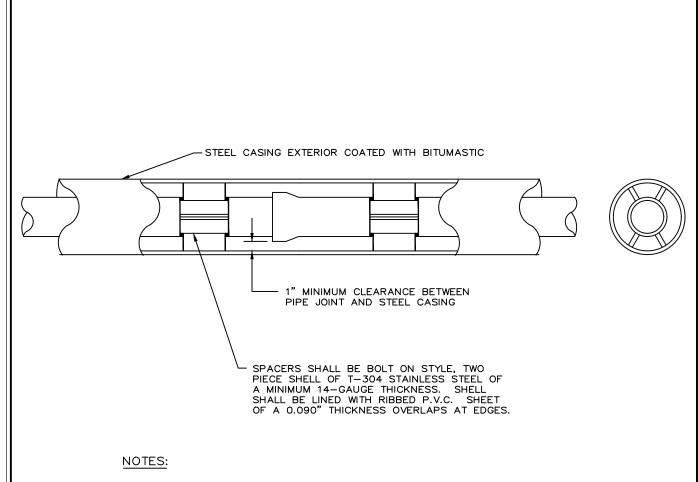


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CASING INSTALLATION DETAIL





- 1. U.S. PIPE FIELD LOK, AMERICAN LOK—FAST OR EBAA IRON MEGA—LUG SHALL BE USED FOR 4" THRU 12" DIAMETER PIPE. RESTRAINED MECHANICAL JOINTS SHALL BE USED FOR PIPE 14" DIAMETER AND ABOVE AND SHALL BE USPIPE TR FLEX OR AMERICAN LOK—RING.
- 2. FOR PIPE 4" THRU 48" IN DIAMETER, TWO (8") STAINLESS STEEL PIPE CASING SPACERS PER PIPE JOINT (CASCADE MFG. CO. OR APPROVED EQUAL) SHALL BE REQUIRED.
- 3. PROVIDE ADDITIONAL CASING SPACER @ 24" FROM EACH END.
- 4. THE CARRIER PIPE SHALL BE CENTERED WITHIN THE CASING AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

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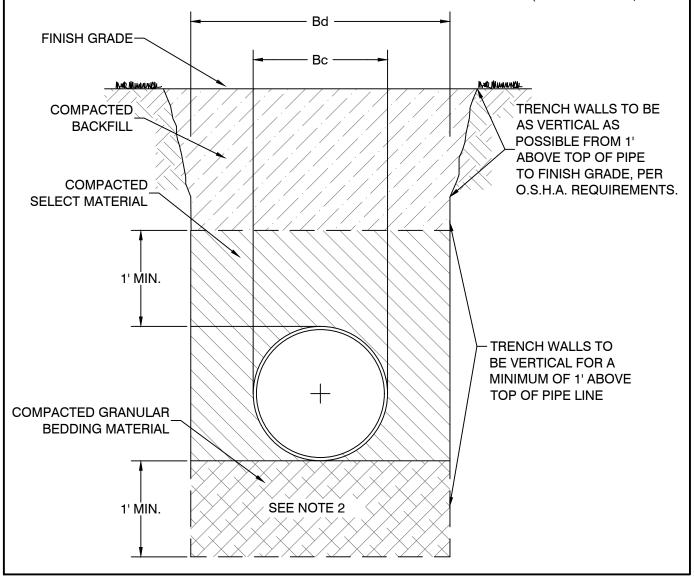
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PIPE CASING SPACERS **DETAIL**



NOTES: FOR BEDDING AND TRENCHING

- 1. Dimension Bc = Pipe O.D.
 - Dimension Bd = Trench Width at Top of Pipe
 - Maximum Bd = Bc + 30"
 - Minimum Bd = Maximum Dimension of Bell + 8" (Unsheeted Trench)
- 2. DEPTH FOR REMOVAL FOR UNSUITABLE MATERIAL SHALL BE AS REQUIRED TO REACH SUITABLE FOUNDATION. FOR ROCK OR OTHER NON-CUSHIONING MATERIAL, DEPTH SHALL BE 12" BELOW BOTTOM OF UTILITY.
- 3. ALL BACKFILL AND SELECT MATERIAL UNDER ALL ROADWAYS, DRIVES (INCLUDING DIRT DRIVES), AND PARKING AREAS SHALL BE COMPACTED TO 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. (AASHTO T-180). BACKFILL AND SELECT MATERIAL UNDER ALL OTHER AREAS SHALL BE COMPACTED AS FOLLOWS: FROM BOTTOM OF TRENCH TO 12" ABOVE TOP OF PIPE 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180). FROM 12" ABOVE TOP OF PIPE TO TOP OF BACKFILL 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180)



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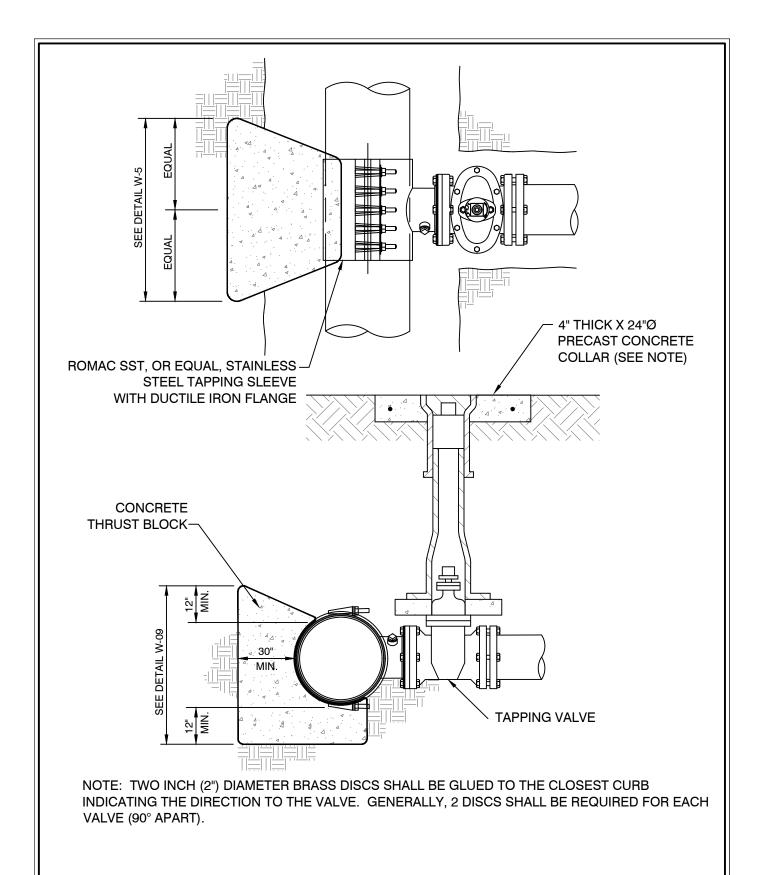
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STANDARD PIPE BEDDING DETAIL





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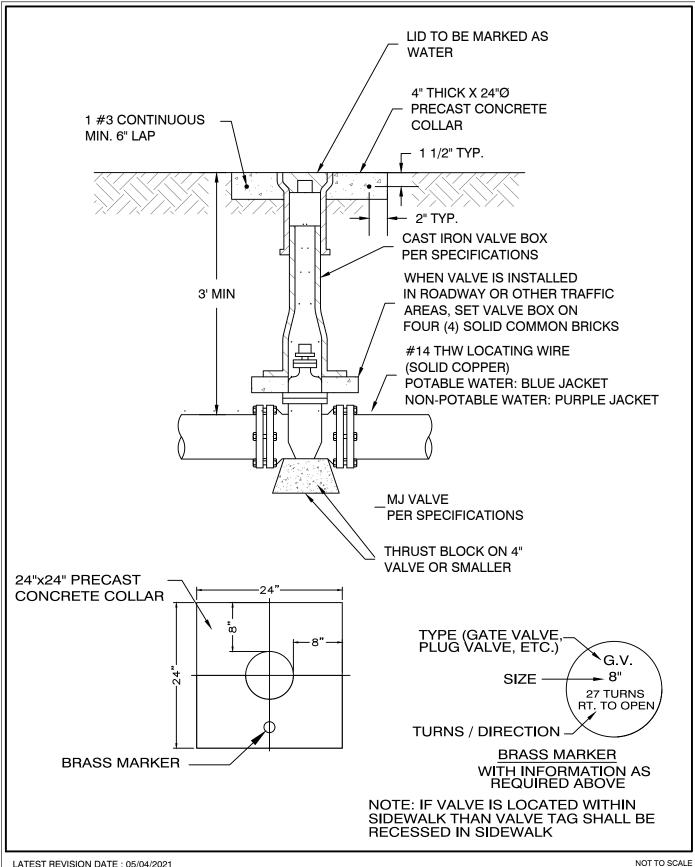


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TAPPING SLEEVE & VALVE DETAIL





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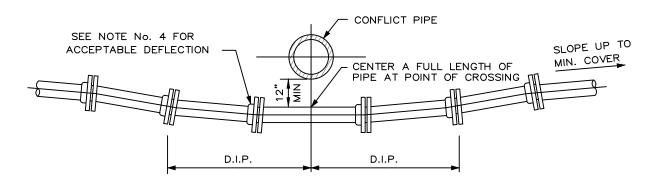


PRESSURE MAIN **GATE VALVE & BOX DETAIL**



FINISHED GRADE COVER 5/8" TIE RODS (TYP.) DUCTILE IRON PRESSURE PIPE (SEE NOTE 2) CONFLICT PIPE **4**8 ₹12 22-1/2° (PREFERRED) OR 45° ELBOW 10'-0" 10'-0" NO JOINTS BETWEEN FITTINGS

FITTING TYPE



DEFLECTION TYPE

NOTES:

- THESE METHODS ARE TO BE USED WHEN INSUFFICIENT COVER EXISTS TO ALLOW PRESSURE PIPE TO CROSS ABOVE CONFLICT PIPE WITH 6" VERTICAL SEPARATION AND MAINTAIN 30" COVER TO FINISHED GRADE.
- 2. FITTINGS SHALL BE RESTRAINED WITH MECHANICAL RESTRAINTS OR TIE RODS.
- 3. THE DEFLECTION TYPE CROSSING IS PREFERRED.
- DO NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION.
- MECHANICALLY RESTRAIN ALL FITTINGS, AS PER MANUFACTURERS RECOMMENDATION.
- 36" MIN IN STATE ROAD R/W AND UNDER ASPHALT

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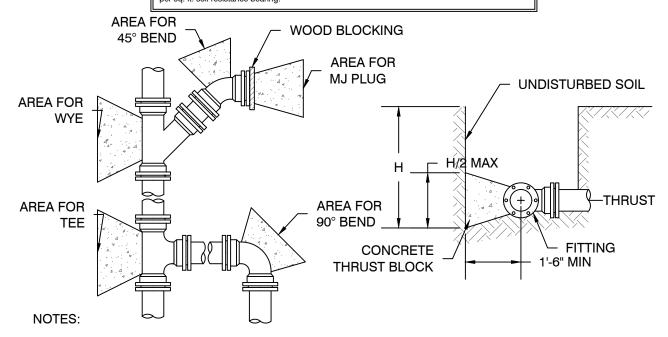
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PRESSURE PIPE **CONFLICT DETAIL**



SCHEDULE FOR THRUST BLOCK AREAS							
PIPE SIZE (inches)	90° BEND (Sq. Ft.)	45° BEND (Sq. Ft.)	22 ¹ / ₂ BEND (Sq. Ft.)	11 ¹ / ₄ ° BEND (Sq. Ft.)	TEE & PLUG (Sq. Ft.)	DESIGN PRESSURE (P.S.I.)	
4	2.0	1.0	0.5	0.25	1.4	150	
6	4.0	2.2	1.1	0.6	2.9	150	
8	7.0	3.9	1.9	0.9	5.0	150	
10	11.4	6.2	3.2	1.6	8.1	150	
12	16.3	8.8	4.5	2.3	11.5	150	

NOTE: Thrust block areas computed on basis of 2000 lbs. per sq. ft. soil resistance bearing.



- 1. THRUST BLOCK BEARING AREAS SHALL BE POURED AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND TO UNDISTURBED MATERIAL.
- 2. EXTEND THRUST BLOCK FOR FULL LENGTH OF FITTING. PLACE WOOD BLOCKING IN FRONT OF PLUGS BEFORE POURING CONCRETE. THE JOINTS OF FITTINGS SHALL NOT BE COVERED IN CONCRETE.
- 3. ALL JOINTS SHALL BE WRAPPED IN PLASTIC FILM BOND BREAKER BEFORE CONCRETE IS PLACED.
- 4. ROUGH BLOCKING FORMS SHALL BE USED ALONG THE SIDES OF THRUST BLOCKS.
- 5. THRUST BLOCKS SHALL BE USED IN COMBINATION, AS REQUIRED, TO SUIT THE SPECIFIC FITTING ARRANGEMENT.
- 6. ALTERNATE DESIGN RESTRAINING SYSTEMS SHALL BE PROVIDED WHERE STANDARD THRUST BLOCKING IS NOT SUITABLE.
- 7. ALL WOOD BLOCKING SHALL BE PRESSURE TREATED FOR GROUND CONTACT.

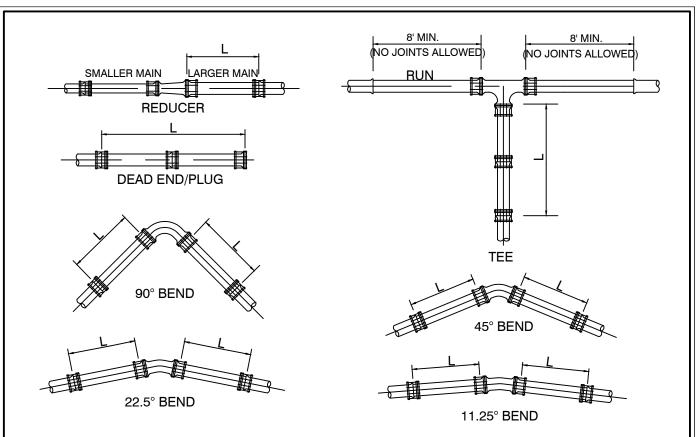
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PIPE JOINT THRUST **RESTRAINT DETAIL (1 of 2)**





THRUST RESTRAINT DETAILS

FITTINGS (LENGTH IN FEET)								
(3-FT. COVER: 200 PSI TEST PRESSURE)								
PIPE SIZE (INCHES)	90° BEND	45° BEND	22.5 BEND	11.25 BEND	DEAD END & PLUG	DESIGN PRESSURE PSI.		
	P.V.C. (L)	P.V.C. (L)	P.V.C. (L)	P.V.C. (L)	P.V.C. (L)	P.V.C. (L)		
4	40'	20'	20'	20'	40'	150		
6	60'	40'	20'	20'	60'	150		
8	80'	40'	20'	20'	80'	150		
10	80'	40'	20'	20'	80'	150		
12	100'	40'	20'	20'	100'	150		

NOTE: PROVIDE RESTRAINED JOINTS AT CHANGES IN DIRECTION OF ALL WATER MAINS. RESTRAIN ALL PIPE JOINTS WITHIN THE DISTANCES SHOWN IN THE FOLLOWING TABLE. DISTANCES APPLY TO LENGTHS OF PIPE ON EACH SIDE OF THE FITTING. TEES AND DEAD ENDS VALVED OR CAPPED ARE CONSIDERED EQUIVALENT TO 90 DEG. BENDS. (LENGTHS ARE BASED ON SOIL OF "TYPE 2 CLAY" BACKFILL AND UP TO 200 PSI TEST PRESSURE.) JOINT RESTRAINTS SHALL BE MEGA-LUG.

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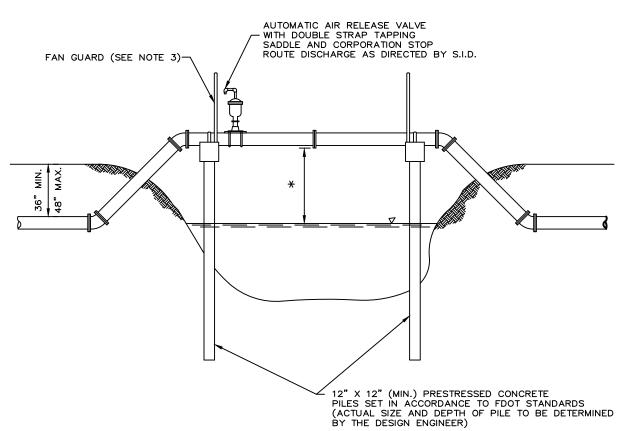


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PIPE JOINT THRUST RESTRAINT DETAIL (2 of 2)





NOTES:

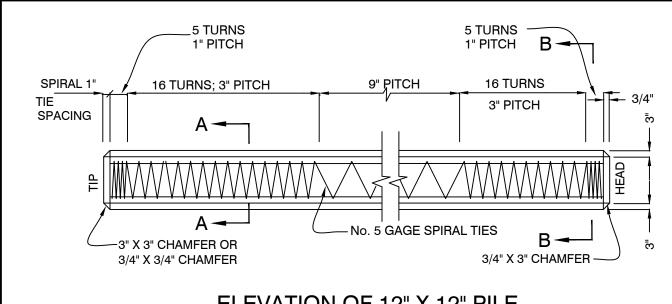
- ALL EXPOSED PIPE SHALL BE DUCTILE IRON WITH FLANGED FITTINGS. RETAINER GLANDS AND UNIFLANGE TYPE FITTINGS ARE NOT ALLOWED. 0—RING GASKETS ARE REQUIRED FOR FLANGED FITTINGS AND JOINTS.
- SPAN LENGTHS AS REQUIRED BY PERMITTING AGENCY AND IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATION.
- FAN GUARDS ARE REQUIRED. LOCATION OF FAN GUARD ON PIPE REQUIRES S.I.D. APPROVAL PRIOR TO PLACEMENT. SEE "TYPICAL FAN GUARD" DETAIL.
- 4. PIPE SHALL BE CRADLED ON NEOPRENE, 1/2" THICK MINIMUM.
- TIE-DOWN STRAPS SHALL FIT PROPERLY AND SECURE PIPE IN CRADLE.
- 6. SHOW ULTIMATE CANAL SECTION AND RELEVANT ELEVATIONS AND DISTANCES ON THIS DETAIL.
- STAINLESS STEEL (316) REQUIRED FOR ALL STRAPS, SADDLES, FLANGE BOLTS, NUTS AND OTHER HARDWARE FOR INSTALLATIONS OVER ALL WATER BODIES (ANTI-GALL COMPOUND TO BE USED WHEN ASSEMBLING STAINLESS STEEL NUTS AND BOLTS).
- 8. LENGTH OF SPAN WILL DETERMINE NUMBER OF PILES REQUIRED.
- 9. THE S.I.D. WILL DETERMINE WHETHER A SINGLE OR DOUBLE PILE CAP WILL BE UTILIZED.
- ALL ABOVE GRADE PIPING AND APPURTENANCES (EXCEPT FOR THE FAN GUARD) SHALL BE COATED IN ACCORDANCE WITH S.I.D. STANDARDS.
 - * PER REGULATORY AGENCY REQUIREMENTS

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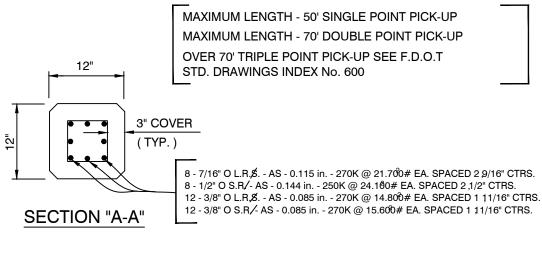


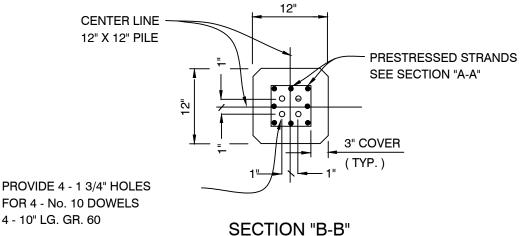
CANAL CROSSING DETAIL (AERIAL)





ELEVATION OF 12" X 12" PILE





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CONCRETE PILE DETAIL (1 of 2)



NOTES:

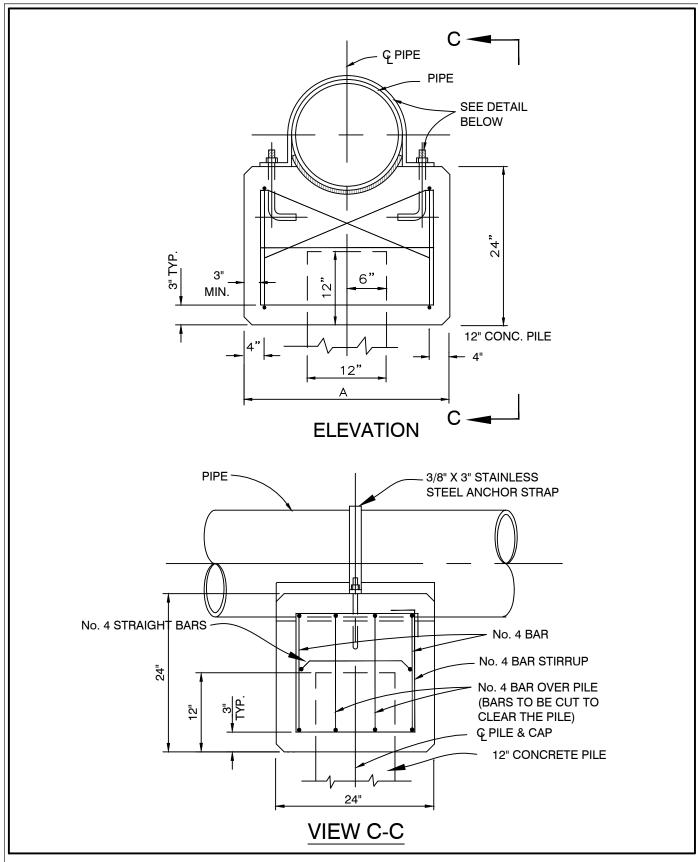
- 1. PILE BUILD-UP, WHEN REQUIRED, SHALL BE ACCOMPLISHED WITH 4 #10 DOWEL 3" LONG SET IN 1 3/4" DIA. DRILLED HOLES WITH EPOXY MORTAR. PROVIDE 4 #5 LONGITUDINAL BARS AS LONGITUDINAL REINFORCING. SPIRAL TIES SHALL BE #5 CONTINUOUS. SPIRALS SHALL BE TIED TO AT LEAST TWO LONGITUDINAL BARS FOR EACH WRAP.
- 2. PILING AS PER F.D.O.T. STANDARD SPECIFICATION SECTION 455.
- 3. SPIRAL TIES: EACH WRAP OF SPIRALS SHALL BE TIED TO AT LEAST TWO CORNER STRANDS. ONE TURN REQUIRED FOR SPIRAL SPLICES. SPIRALS MAY BE MANUFACTURED FROM STOCK MEETING REQUIREMENTS OF ANY GRADE OF REINFORCING STEEL OR HARD DRAWN STEEL.
- 4. CONCRETE CLASS: CONCRETE FOR ALL PILES SHALL BE CLASS V (SPECIAL)
 CLASS V (SPECIAL) CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR
 CLASS V CONCRETE EXCEPT FOR THE 28 DAY STRENGTH AS NOTED BELOW.
- 5. CONCRETE STRENGTH: THE CYLINDER STRENGTH SHALL BE 6,000 p.s.i. MINIMUM AT 28 DAYS AND 4,000 p.s.i. MINIMUM AT TRANSFER OF THE PRESTRESSING FORCE.
- 6. PILES SHALL BE MARKED AT PICK-UP POINTS TO INDICATE PROPER POINTS FOR ATTACHING HANDLING LINE.
- 7. REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE EITHER GRADE 40 OR 60. UNLESS OTHERWISE NOTED. SEE ENVIRONMENTAL REQUIREMENTS NOTE FOR SPLICE REINFORCING ONLY (SPIRAL TIES AND PRESTRESSING STRAND ARE UNCOATED FOR ALL ENVIRONMENTAL CLASSES).
- 8. STRAND NOMENCLATURE: S.R. = STRESS RELIEVED STRAND L.R.S = LOW-RELAXATION STRAND

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CONCRETE PILE DETAIL (2 of 2)





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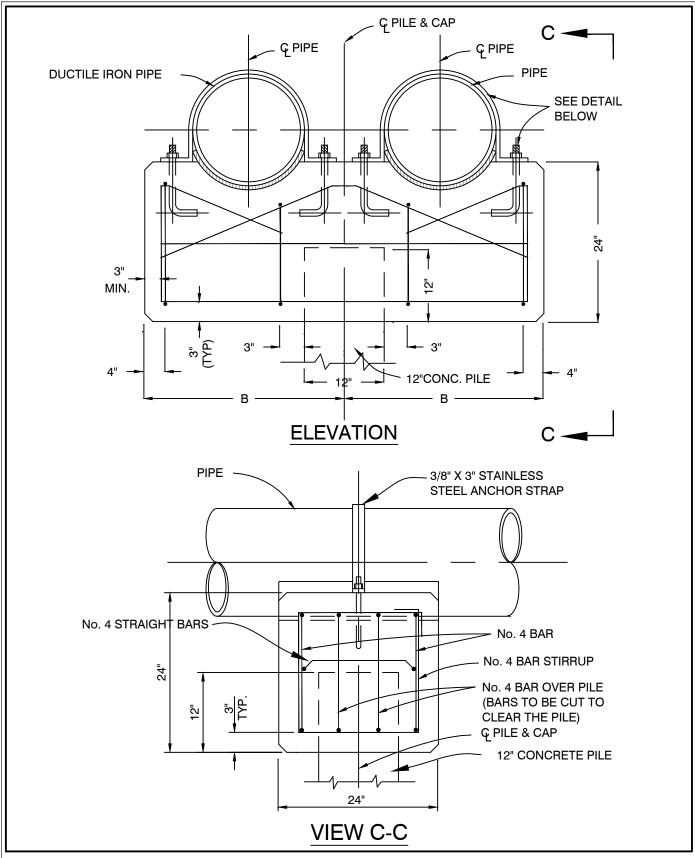


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LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
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SINGLE PILE CAP SUPPORT DETAIL





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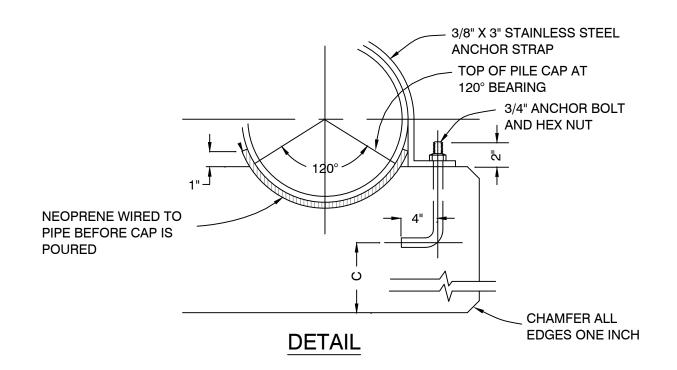


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DUAL PILE CAP SUPPORT DETAIL





PIPE	PILE	DIMENSIONS			
DIA.	SIZE	Α	В	С	
4"	12"x12"	24"	16"	16"	
8"	12"x12"	24"	20"	16"	
12"	12"x12"	26"	26"	14"	
16"	12"x12"	30"	30"	16"	

NOTE:

ALL REINF. STEEL SHALL BE No. 4 BARS

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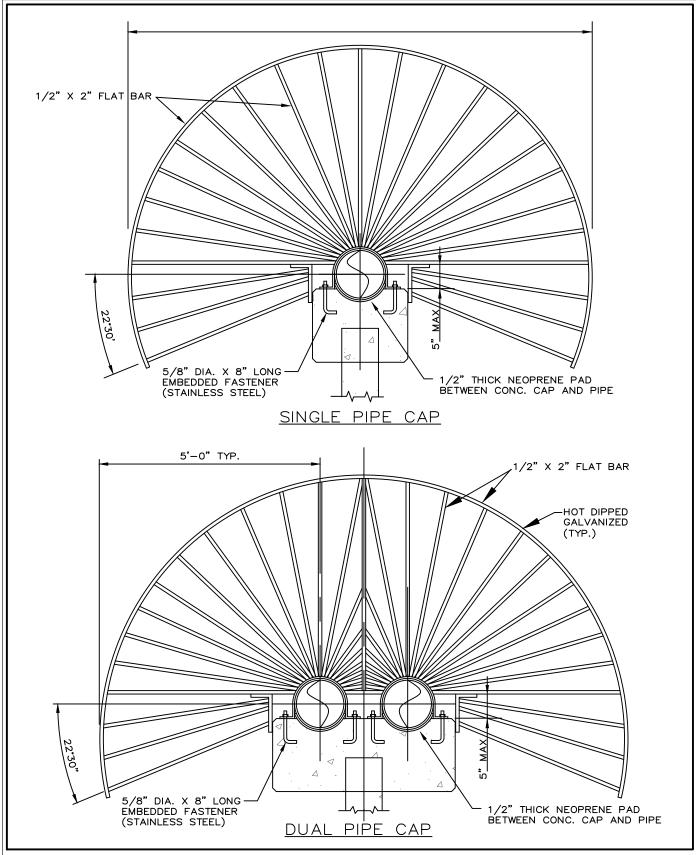


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PILE CAP SUPPORT DETAIL





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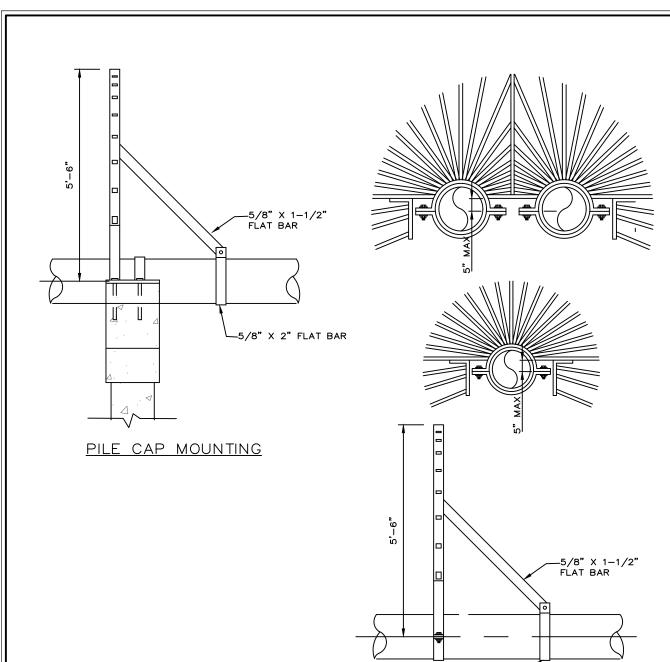


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TYPICAL FAN GUARD (1 of 2)





ALTERNATE PIPE MOUNTING

NOTES

- 1. FAN GUARDS SHALL BE PLACED AT EACH END OF CANAL CROSSING OVER WATER.
- 2. FAN GUARD AND ALL MOUNTING BRACKETS TO BE HOT DIPPED GALVANIZED AND MOUNTING HARDWARE TO BE STAINLESS STEEL.
- 3. 1/2" THICK NEOPRENE PAD TO INSULATE PIPE FROM CONTACT WITH ALL MOUNTING HARDWARE, FAN GUARD HARDWARE, AND CONCRETE SURFACES.

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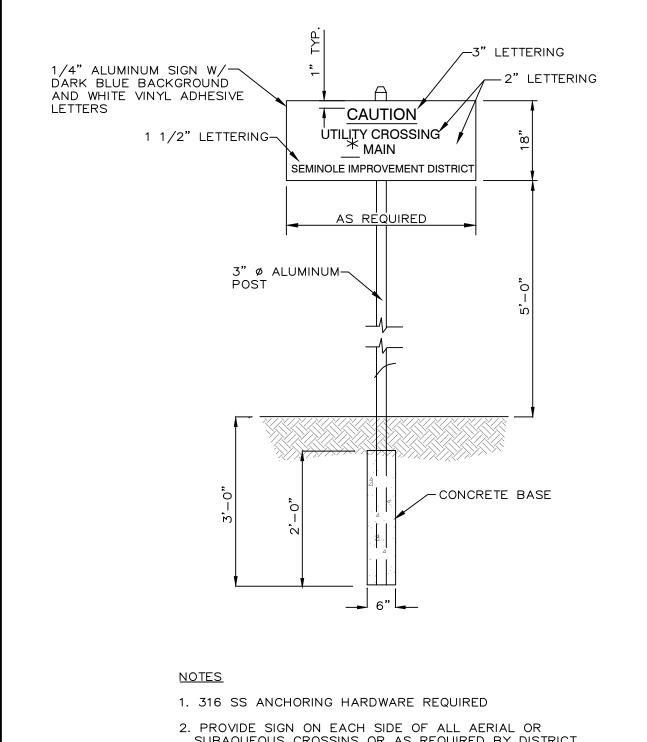
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TYPICAL FAN GUARD (2 of 2)

5/8" X 2" FLAT BAR-





- 2. PROVIDE SIGN ON EACH SIDE OF ALL AERIAL OR SUBAQUEOUS CROSSINS OR AS REQUIRED BY DISTRICT
- * WATER, FORCE OR RECLAIMED, AS APPROPRIATE

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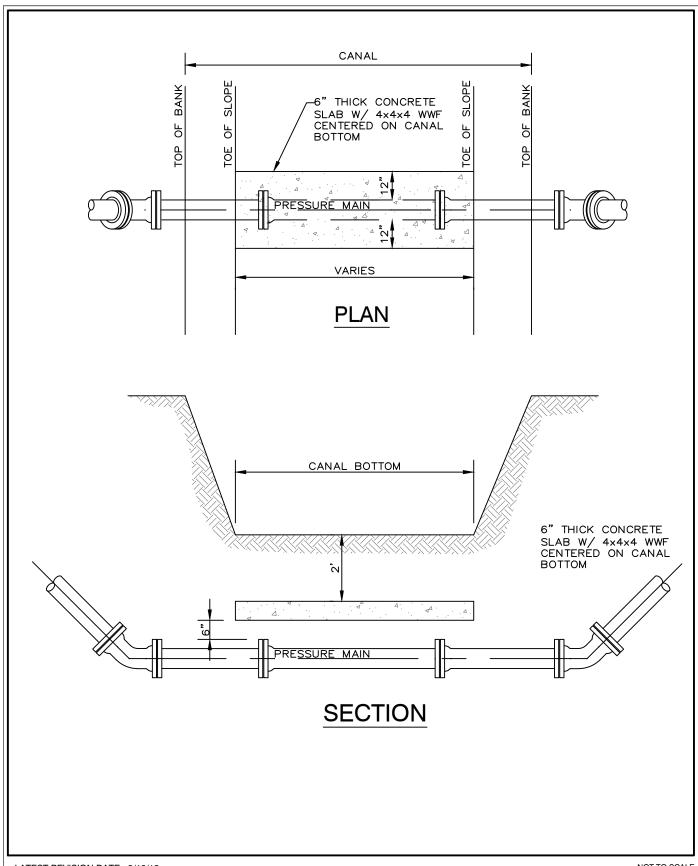


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CAUTION SIGN DETAIL





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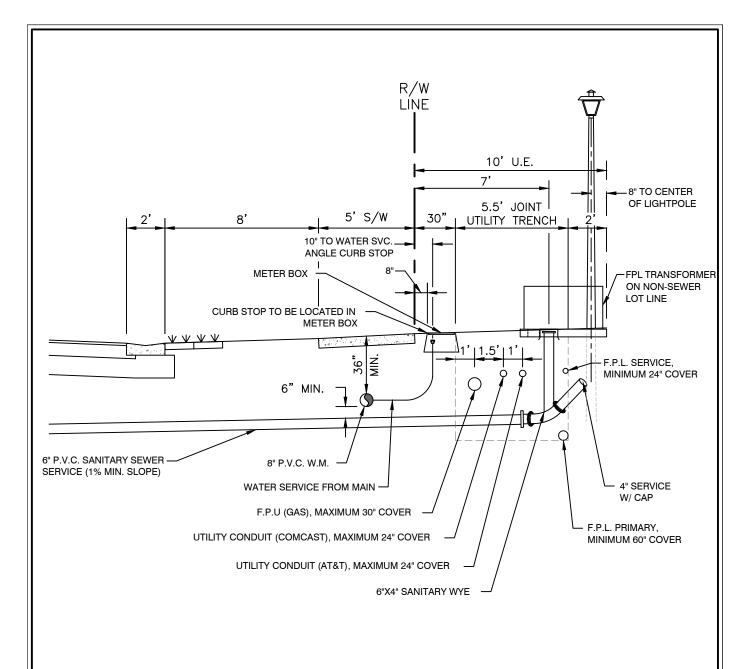


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CONCRETE CAP OVER SUBAQUEOUS PIPE





REVISED AUGUST 2018.

NOTES:

- 1. BACKFILL TO BE COMPACTED TO 98% RELATIVE DENSITY IN ACCORDANCE WITH AASHTO T-180.
- 2. AT&T, COMCAST, FPU, AND FPL CONTRACTORS ARE REQUIRED TO SCHEDULE AND ATTEND A PRECONSTRUCTION MEETING WITH THE SEMINOLE IMPROVEMENT DISTRICT AT LEAST TWO (2) WEEKS PRIOR TO UNDERGROUND UTILITY INSTALLATION.

LATEST REVISION DATE: 05/04/2021

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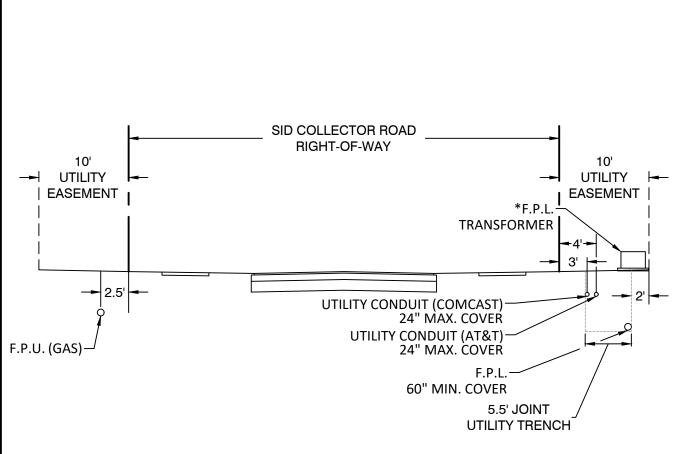


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TYPICAL UTILITY TRENCH LOCAL ROADS





* SWITCH CABINETS TO BE SET BACK BEHIND ROADSIDE U.E. IN ADDITIONAL **BUMP-OUT EASEMENTS**

REVISED AUGUST 2018.

NOTES:

- BACKFILL TO BE COMPACTED TO 98% RELATIVE DENSITY IN ACCORDANCE WITH AASHTO T-180.
- AT&T, COMCAST, FPU, AND FPL CONTRACTORS ARE REQUIRED TO SCHEDULE AND ATTEND A PRECONSTRUCTION MEETING WITH THE SEMINOLE IMPROVEMENT DISTRICT AT LEAST TWO (2) WEEKS PRIOR TO UNDERGROUND UTILITY INSTALLATION.

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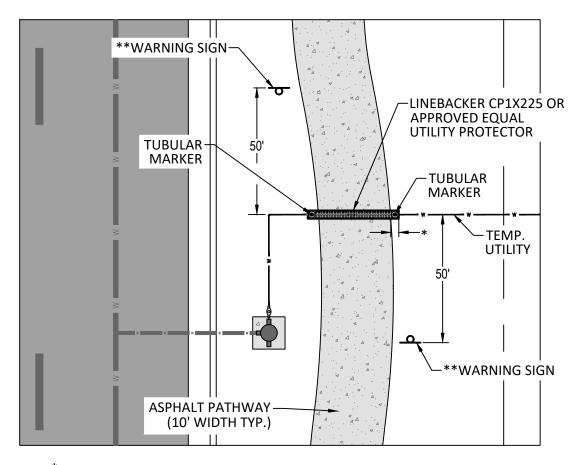


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TYPICAL UTILITY TRENCH S.I.D. COLLECTOR ROADS





- * UTILITY PROTECTOR SHALL EXTEND A MIN. OF 6" BEYOND PATHWAY ON EACH SIDE.
- ** WARNING SIGNS TO READ "PATH BUMP AHEAD" UNLESS OTHERWISE APPROVED BY S.I.D. THE SIGN PANEL SHALL BE ALUMINUM OR OTHER CORROSION-RESISTANT MATERIAL AND SHALL BE MOUNTED ON A 2" GALVANIZED SQUARE OR U-SHAPED POST.

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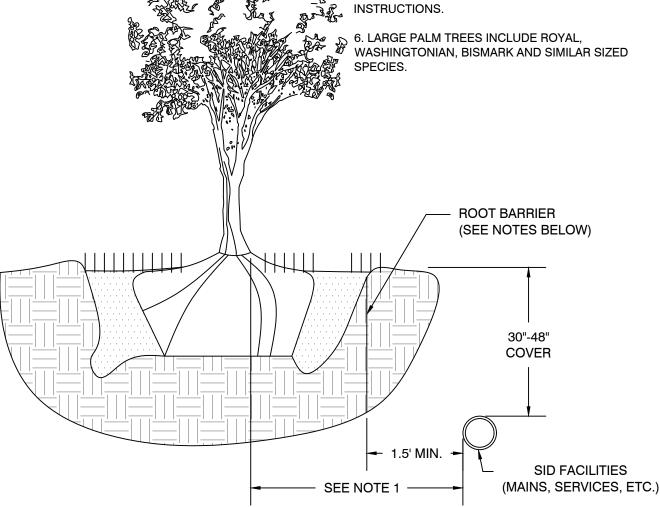
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CIVIL ENGINEERING - LAND PLANNING
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NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- 1. THIS DISTANCE SHALL BE 5' MINIMUM WITH ROOT BARRIER AND 10' MINIMUM IF NO ROOT BARRIER IS USED.
- 2. ALL ROOT BARRIERS SHALL BE 1.5' MINIMUM FROM ALL SID FACILITIES.
- 3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SID AND INSPECTED BY SID PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
- 4. ROOT BARRIERS SHALL BE MINIMUM 60" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
- 5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.



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TYPICAL LARGE TREE OR PALM WITH ROOT BARRIER



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS) 1. THIS DISTANCE SHALL BE 3' MINIMUM WITH ROOT BARRIER AND 5' MINIMUM IF NO ROOT BARRIER IS USED. 2. ALL ROOT BARRIERS SHALL BE 1.5' MINIMUM FROM ALL SID FACILITIES. 3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SID AND INSPECTED BY SID PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE. 4. ROOT BARRIERS SHALL BE MINIMUM 60" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER. 5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. OR LESS AT MATURITY **ROOT BARRIER** (SEE NOTES BELOW) 30"-48" **COVER** 1.5' MIN. SID FACILITIES SEE NOTE 1 (MAINS, SERVICES, ETC.)

LATEST REVISION DATE: 05/04/2021

NOT TO SCALE

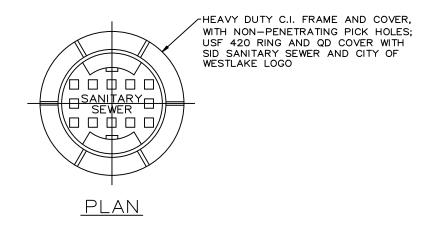


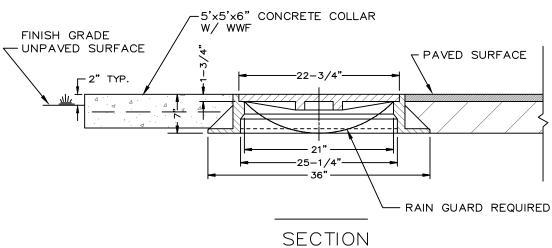
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TYPICAL SMALL TREE OR PALM WITH ROOT BARRIER







NOTES:

- 1. A WATER-TIGHT MANHOLE SELF SEALING LID SHALL BE INSTALLED IN ALL MANHOLES.
- 2. DETAIL TYPICAL TO SANITARY MANHOLES. SEE APPROPRIATE DETAIL FOR OTHER STRUCTURES

LATEST REVISION DATE: 04/21/2021 NOT TO SCALE

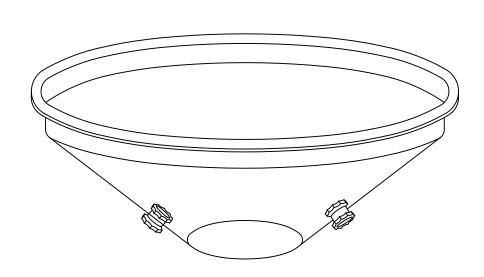


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STANDARD MANHOLE FRAME AND COVER





NOTE:

1. SEWER RAIN GUARDS SHALL BE INSTALLED ON ALL MANHOLES.

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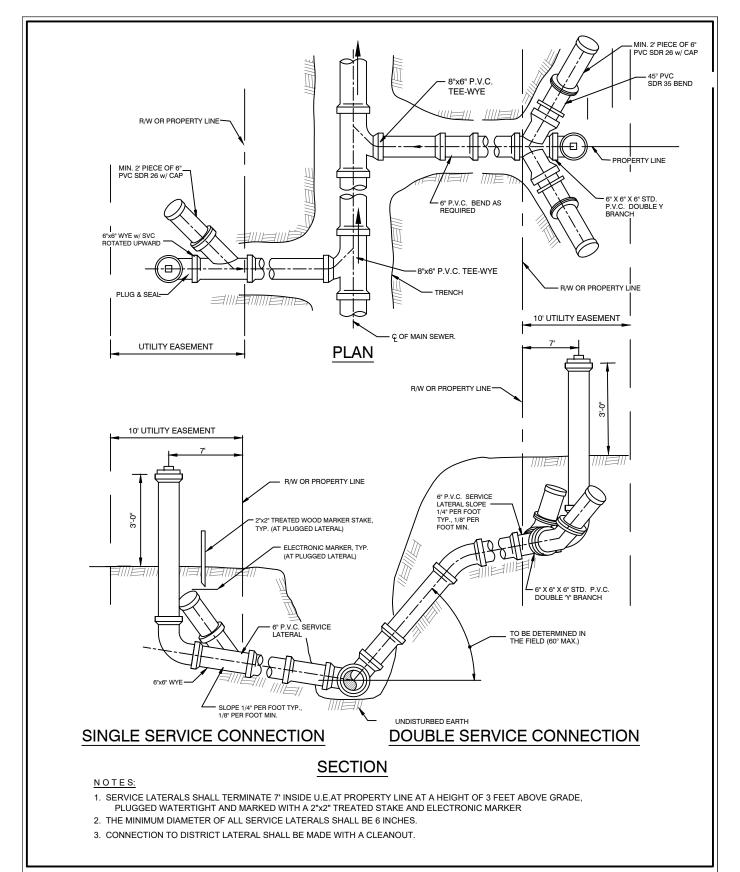


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MANHOLE RAIN GUARD





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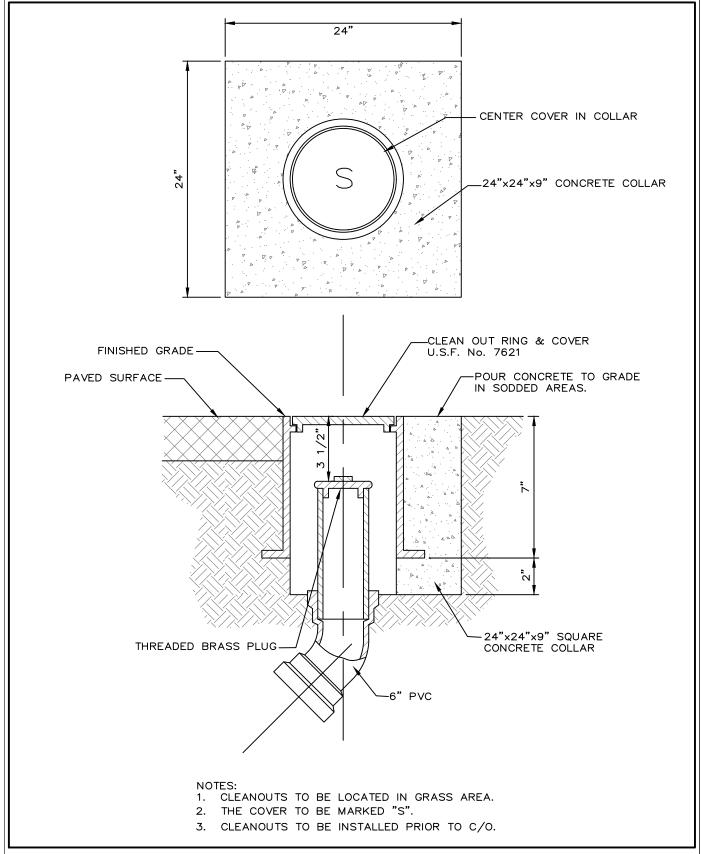


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TYPICAL SEWER SERVICE CONNECTION



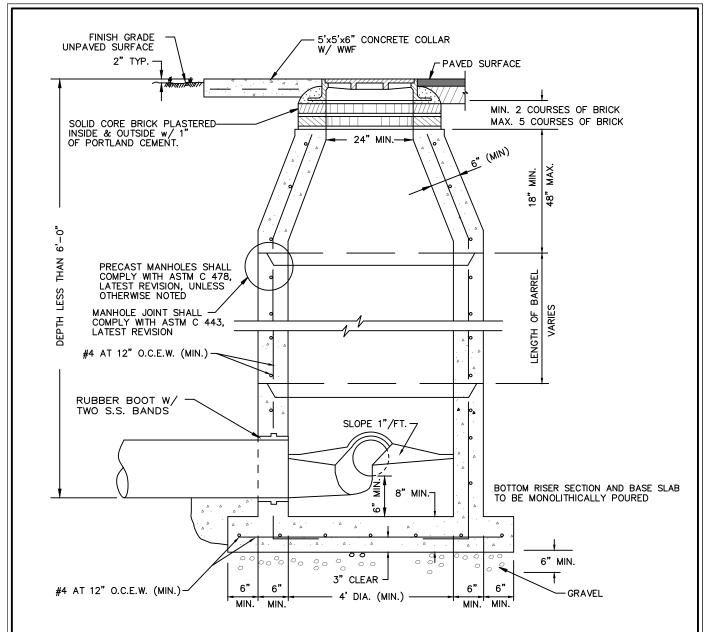


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TYPICAL CLEANOUT





NOTES:

- 1. PRECAST CONCRETE TYPE II 4000 P.S.I.
- 2. "RAMNEK" OR EQUAL AT ALL RISER JOINTS (1/2" THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS) WITH GROUT INSIDE AND OUTSIDE.
- ALL OPENINGS AND PIPING ENTERING OR EXITING MANHOLE SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
- 4. FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO FLOW STREAM (SEE DETAIL).
- 5. LIFT HOLES ARE PERMITTED AND SHALL BE SEALED AFTER PLACEMENT OF RISER.
- 6. ALL PIPE HOLES SHALL BE PRECAST OR CORE-DRILLED.
- 7. APPROVED PRECAST RUBBER BOOTS MUST BE USED WITH PVC PIPE.
- 8. INSIDE DROPS SHALL NOT EXCEED 2.0 FEET.
- 9. COAT INTERIOR & EXTERIOR WITH 2 COATS COAL TAR EPOXY, 8 mil. MIN. DRY FILM THICKNESS EACH COAT.
- 10. 5'x5'x6" CONCRETE COLLAR AND RAIN GUARD IS REQUIRED WHEN MANHOLE IS OUT OF PAVEMENT
- 11. WHEN MANHOLE IS CORE DRILLED, ALL PIPING SHALL BE D.I.P.

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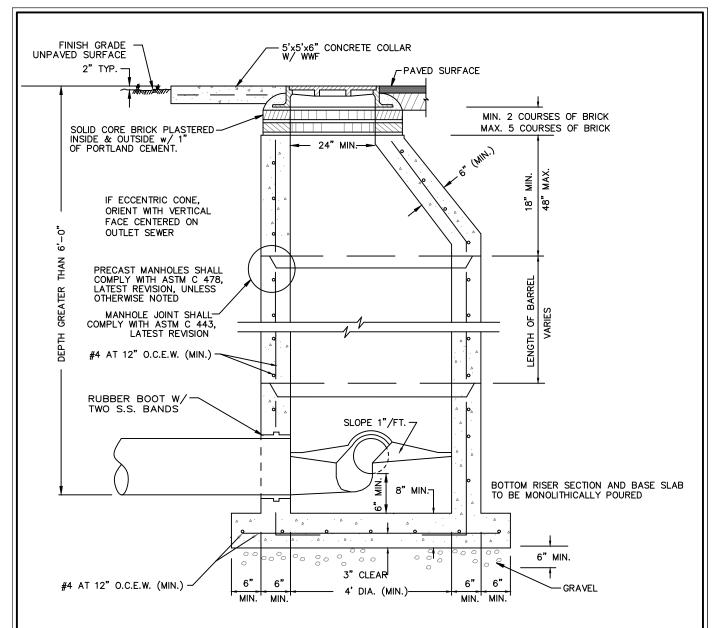


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STANDARD MANHOLE (CONCENTRIC CONE)





NOTES:

- 1. PRECAST CONCRETE TYPE II 4000 P.S.I.
- "RAMNEK" OR EQUAL AT ALL RISER JOINTS (1/2" THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS) WITH GROUT INSIDE AND OUTSIDE.
- ALL OPENINGS AND PIPING ENTERING OR EXITING MANHOLE SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
- 4. FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO FLOW STREAM (SEE DETAIL).
- 5. LIFT HOLES ARE PERMITTED AND SHALL BE SEALED AFTER PLACEMENT OF RISER.
- 6. ALL PIPE HOLES SHALL BE PRECAST OR CORE-DRILLED.
- 7. APPROVED PRECAST RUBBER BOOTS MUST BE USED WITH PVC PIPE.
- 8. INSIDE DROPS SHALL NOT EXCEED 2.0 FEET.
- 9. COAT INTERIOR & EXTERIOR WITH 2 COATS COAL TAR EPOXY, 8 mil. MIN. DRY FILM THICKNESS EACH COAT.
- 10. 5'x5'x6" CONCRETE COLLAR AND RAIN GUARD IS REQUIRED WHEN MANHOLE IS OUT OF PAVEMENT
- 11. WHEN MANHOLE IS CORE DRILLED, ALL PIPING SHALL BE D.I.P.

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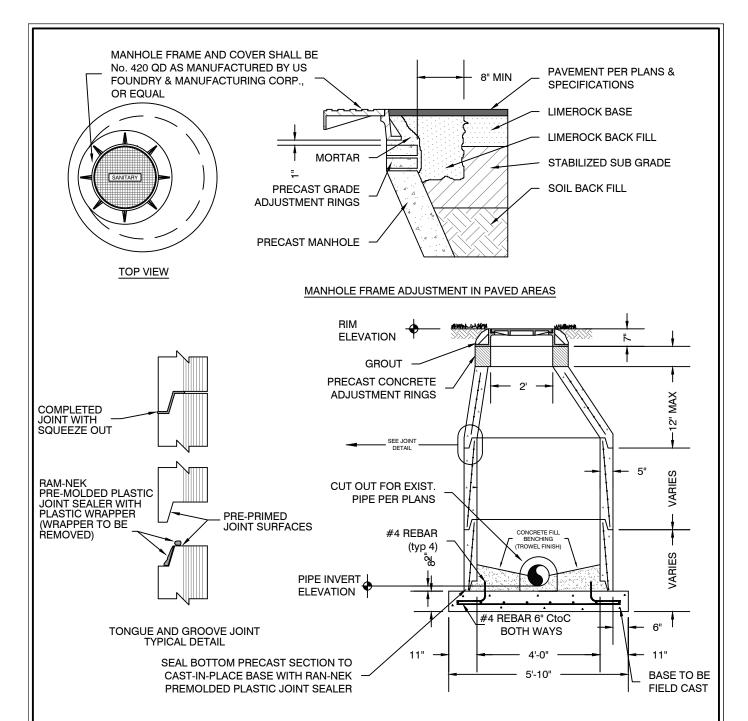


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STANDARD MANHOLE (ECCENTRIC CONE)





- MANHOLE NOTES 1. SEAL ALL PIPE OPENINGS IN PRE CAST MANHOLE WITH NON-SHRINK GROUT (BOTH INSIDE & OUTSIDE).
- 2. MANHOLE COVERS SHALL BE CLEANED AND PAINTED WITH BLACK RUST-INHIBITING PAINT.
- 3. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE.
- 4. DROP PIPE AND FITTINGS SHALL BE THE SAME SIZE AS THE INFLUENT SEWER.
- 5. SET COVERS FLUSH IN PAVED AREAS. 0.1' ABOVE GRADE IN UNPAVED AREAS.
- 6. INTERIOR AND EXTERIOR OF MANHOLE SHALL BE COATED WITH TWO (2) COATS OF COAL TAR EPOXY PER SPECIFICATIONS.
- ALTERNATE PRECAST MANHOLE TOPS 1. APPROVED CONCENTRIC CONE DESIGN MAY BE USED AS AN ALTERNATIVE. 2. APPROVED FLAT SLAB TOP MAY BE USED AS AN ALTERNATE.

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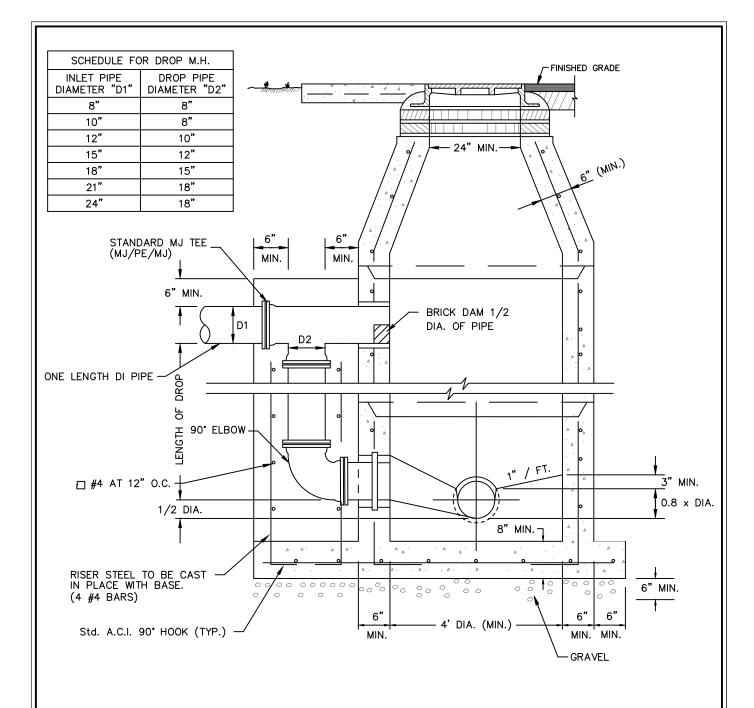


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STANDARD PRECAST 'DOGHOUSE' MANHOLE DETAIL





NOTES:

- ALL DETAILS AND SPECIFICATIONS FOR STANDARD MANHOLES ARE APPLICABLE EXCEPT FOR REFERENCES
 TO DROP ASSEMBLY.
- 2. THE PRECAST BASE SHALL EXTEND FULLY UNDER THE DROP ASSEMBLY.
- 3. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT INVERT IS LOCATED 2.5 FEET OR MORE ABOVE THE MAIN CHANNEL INVERT.
- 4. DROP TO BE CONSTRUCTED OUT OF DIP INCLUDING ONE FULL LENGTH OF DIP EXITING MANHOLE.
- 5. 5'x5'x6" CONCRETE COLLAR WITH WWF AND RAIN GUARD IS REQUIRED WHEN MANHOLE IS OUT OF PAVEMENT

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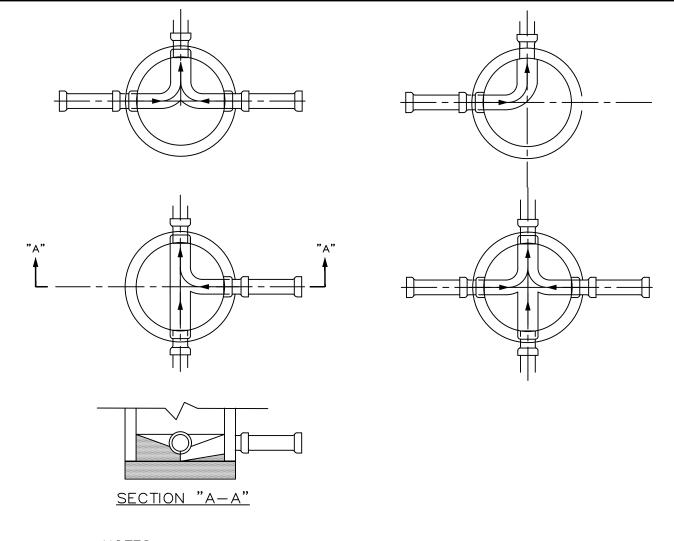


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DROP CONNECTION FOR STANDARD MANHOLE





NOTES:

- INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
- SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.
- 3. CHANNELS FOR FUTURE CONSTRUCTION (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
- SLOPE MANHOLE WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
- 5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.
- 6. NO INSIDE DROP LARGER THAN 6" SHALL BE ALLOWED WITH 3 OR 4 INVERTS AND MANHOLES WITH A CHANGE OF DIRECTION OF FLOW OF MORE THAN 45 DEGREES.
- THE MINIMUM ANGLE BETWEEN PIPES ENTERING A MANHOLE SHALL BE 90° DEGREES RELATIVE TO THE DIRECTION OF FLOW.

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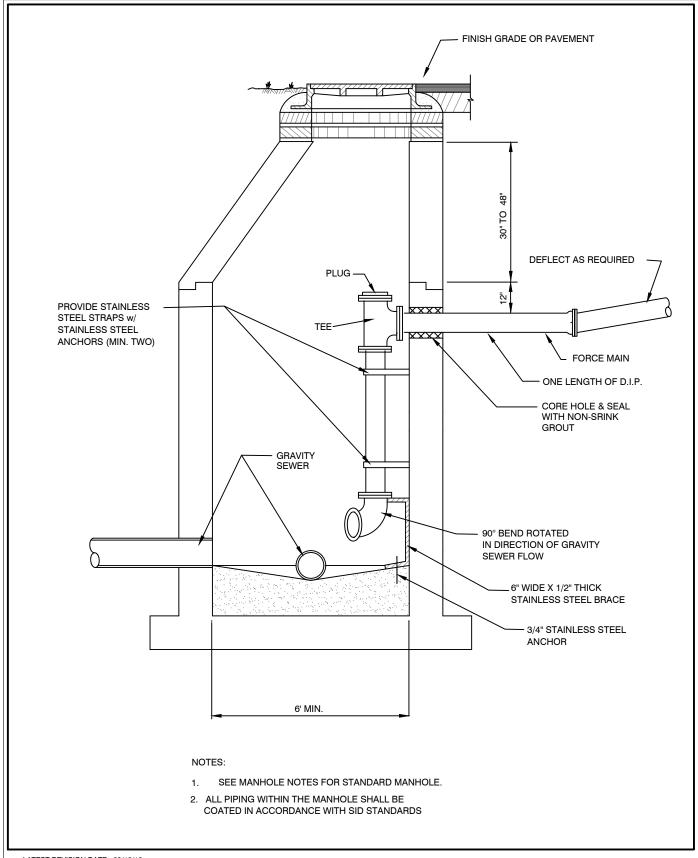


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FLOW PATTERNS FOR MANHOLE INVERTS





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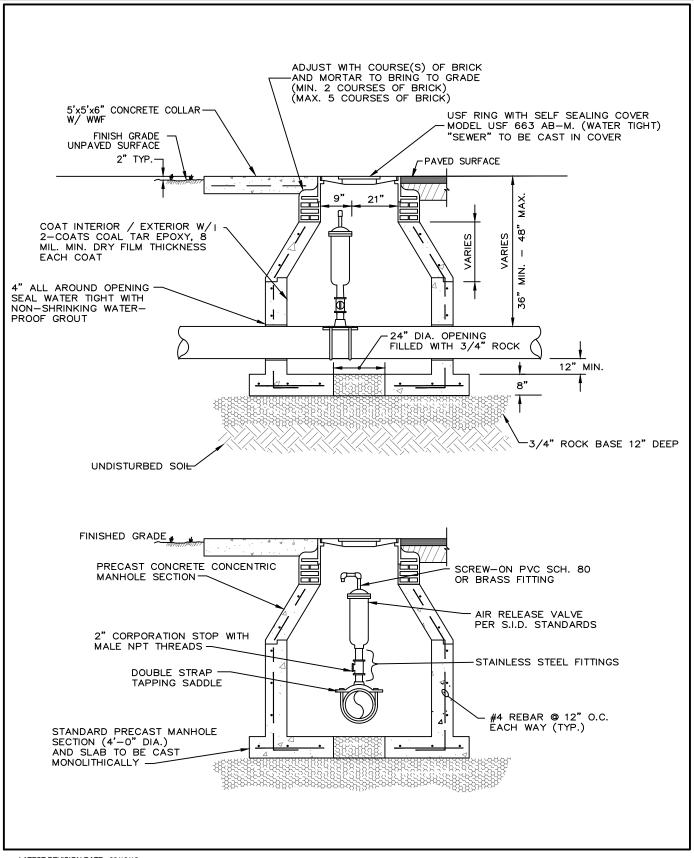


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FORCE MAIN TIE-IN AT **MANHOLE**





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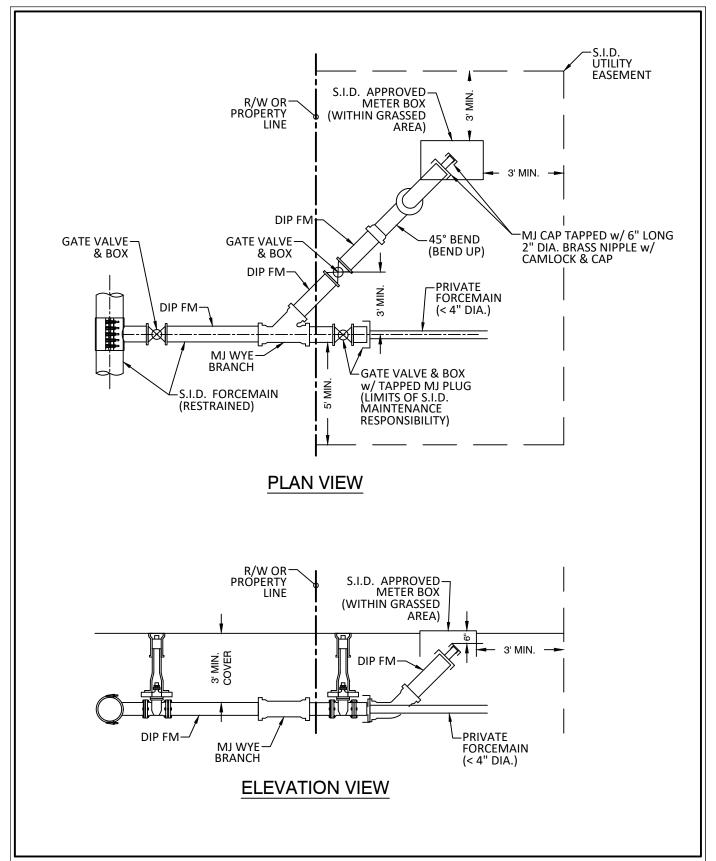


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AIR RELEASE VALVE (UNDERGROUND FORCE MAIN)





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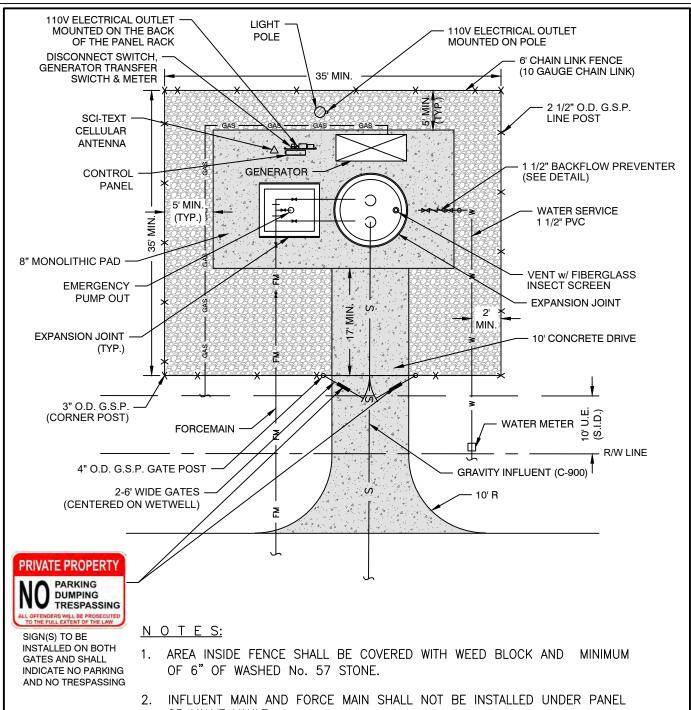


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FORCEMAIN FLUSHING CONNECTION





- OR VALVE VAULT.
- ACCESS DRIVE SHALL BE 6" 3000 PSI CONCRETE W/ 6x6 W2.9xW2.9 WWF, AND 12" COMPACTED SUBGRADE, COMPACTED TO NOT LESS THAN 98% AASHTO T-180.
- AN EMERGENCY GENERATOR SHALL BE PROVIDED IN ACCORDANCE WITH SID STANDARDS.

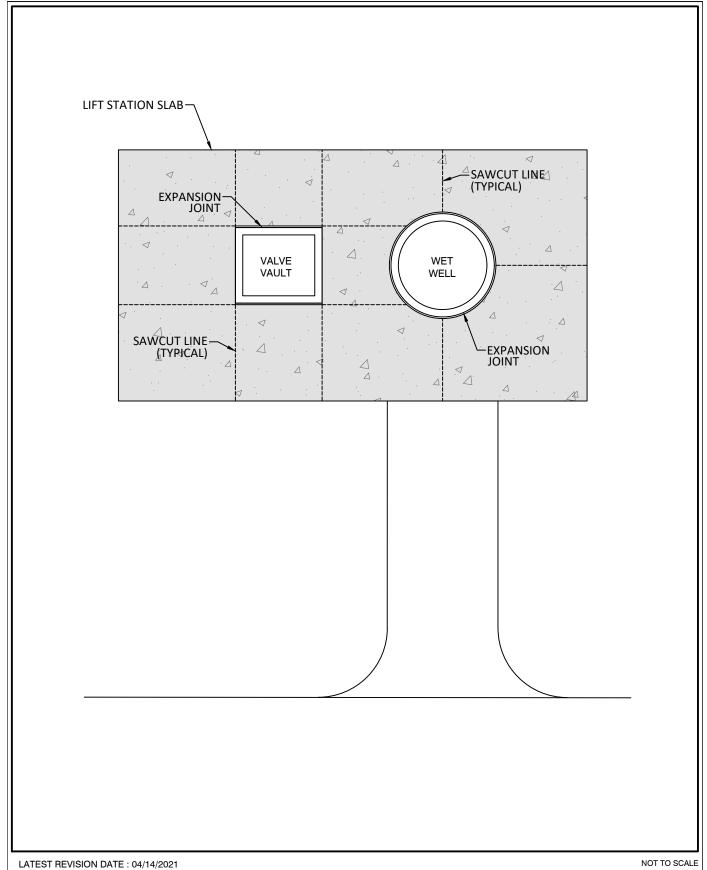
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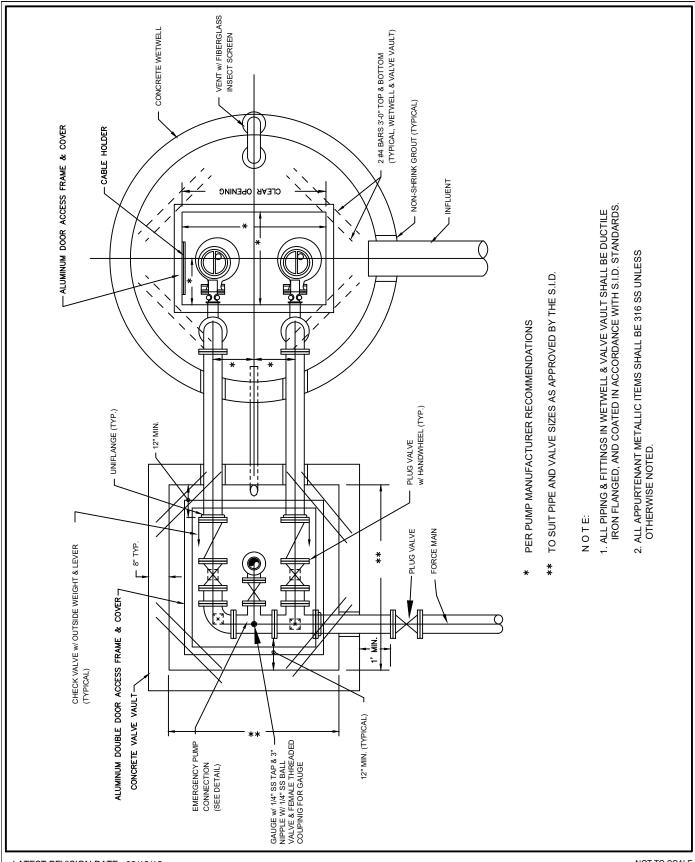
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LIFT STATION SLAB **SAWCUT DIAGRAM**



LS-02



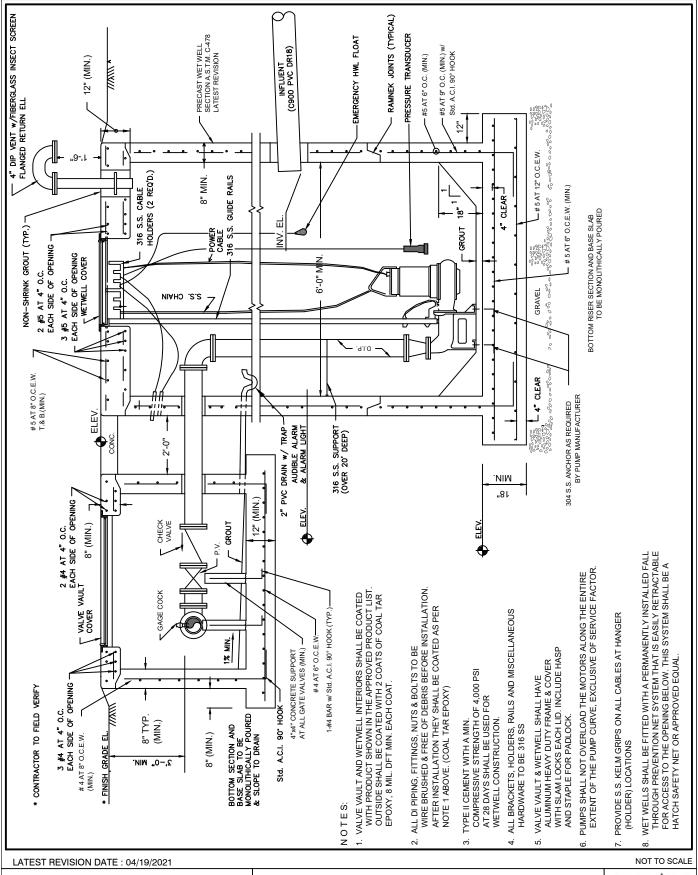
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TYPICAL LIFT STATION (PLAN)





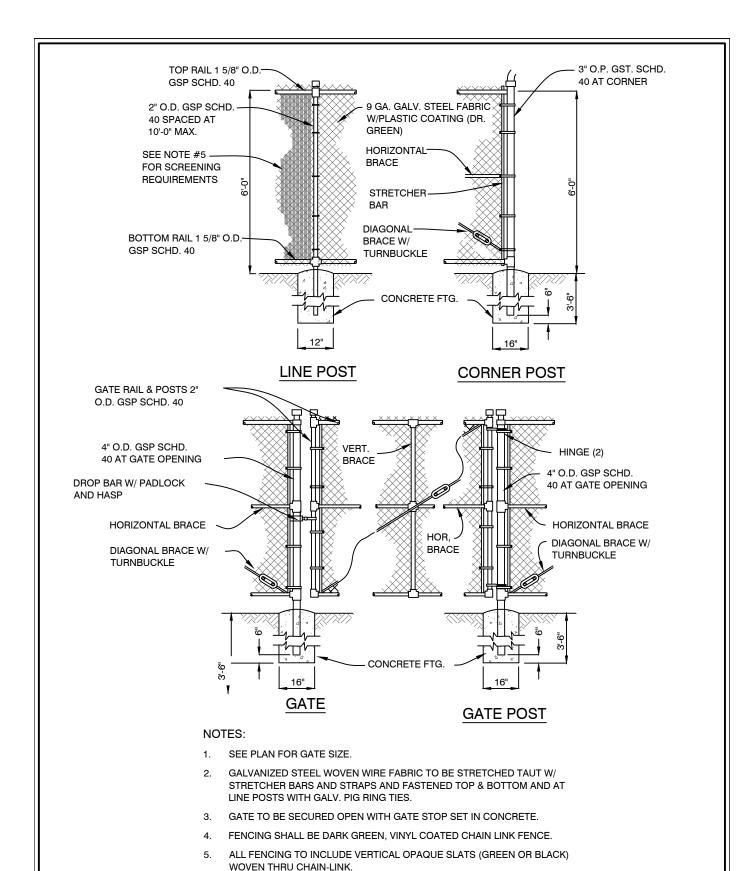




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7900 GLADES ROAD - SUITE 100

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LATEST REVISION DATE : 04/21/2021

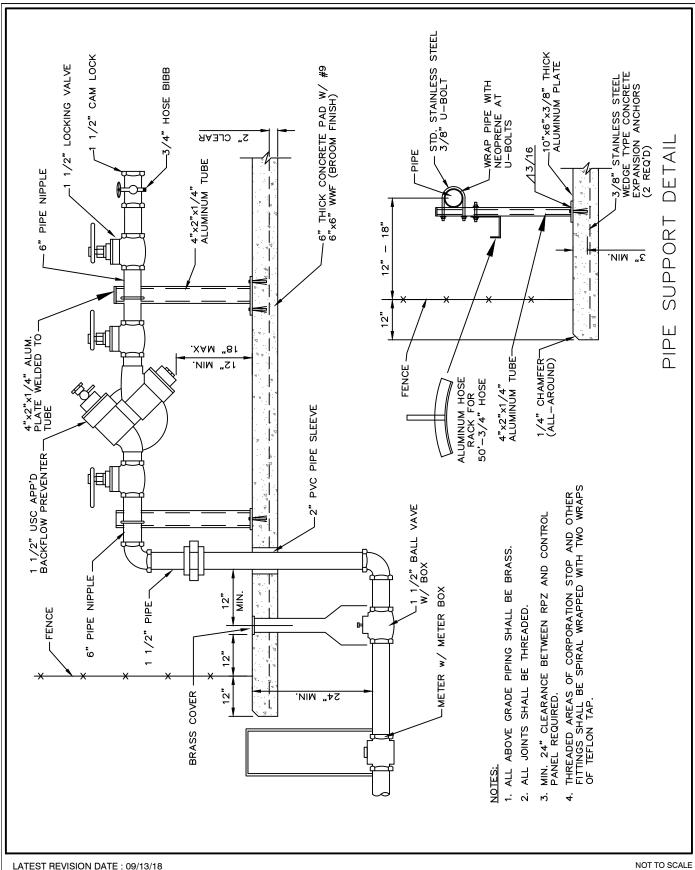
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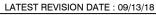
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LANDSCAPE ARCHITECTURE - SURVEYING
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LIFT STATION FENCING DETAIL



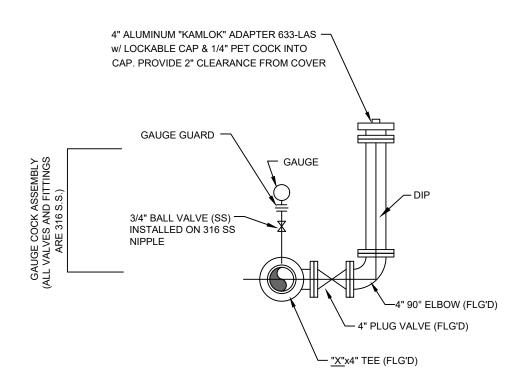




WATER CONNECTION **DETAIL AT LIFT STATION**



LS-06



NOTE:

- 1. "X" EQUALS DISCHARGE PIPING SIZE
- 2. GAUGE SHALL BE GRADE 2A, 3-INCH, STAINLESS STEEL CASE WITH DIAPHRAGM SEAL

LATEST REVISION DATE: 09/13/18

NOT TO SCALE

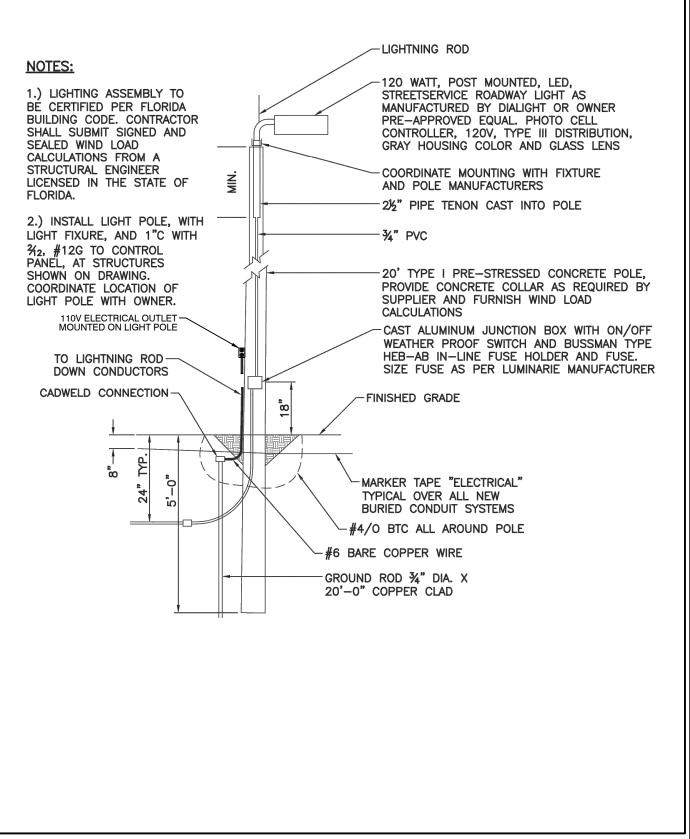


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LIFT STATION **EMERGENCY PUMP OUT** CONNECTION





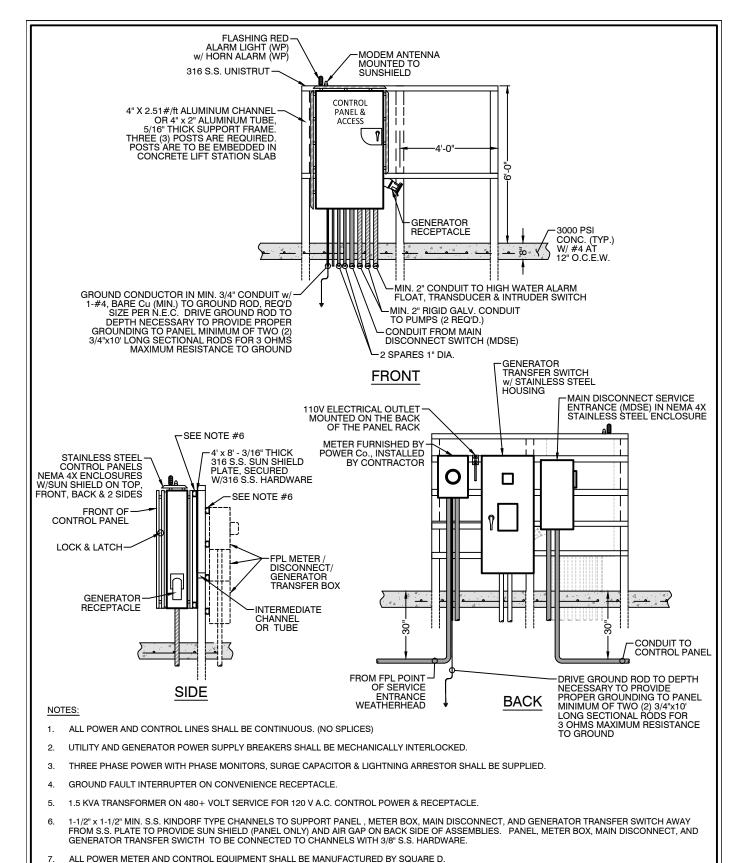
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LIFT STATION LIGHT POLE DETAILS





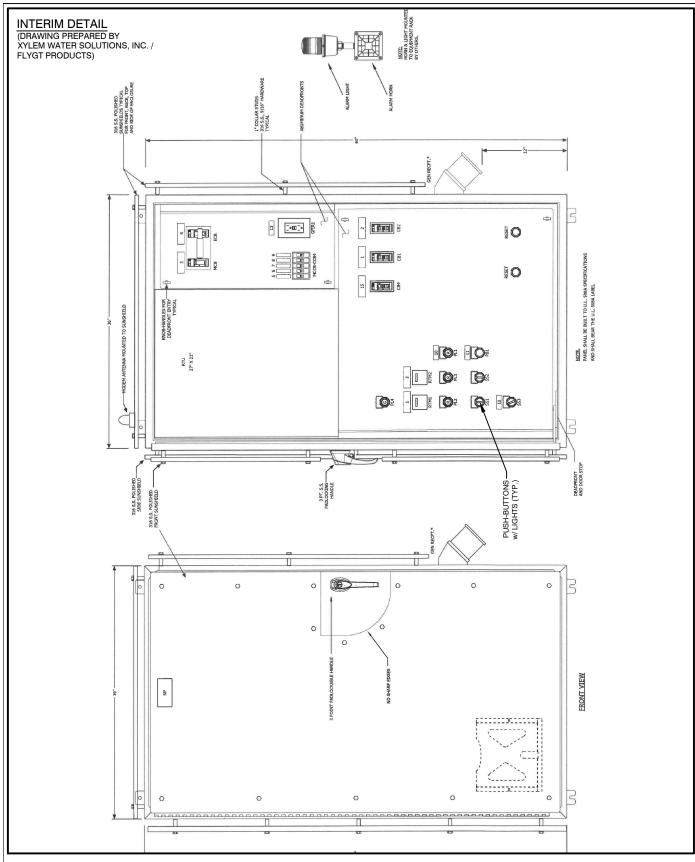


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LIFT STATION CONTROL PANEL DETAILS (1 of 3)





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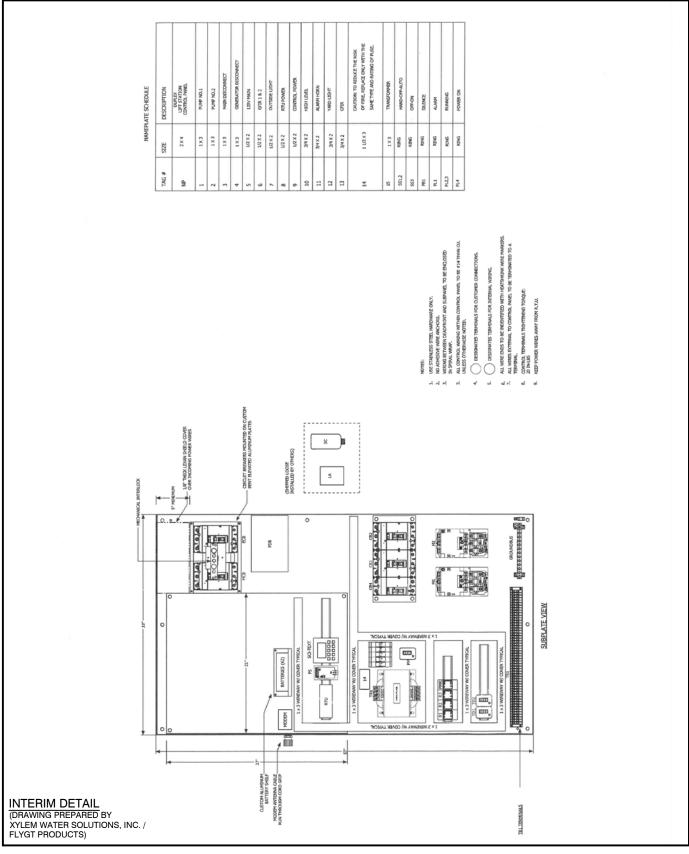


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LIFT STATION **CONTROL PANEL DETAILS** (2 of 3)





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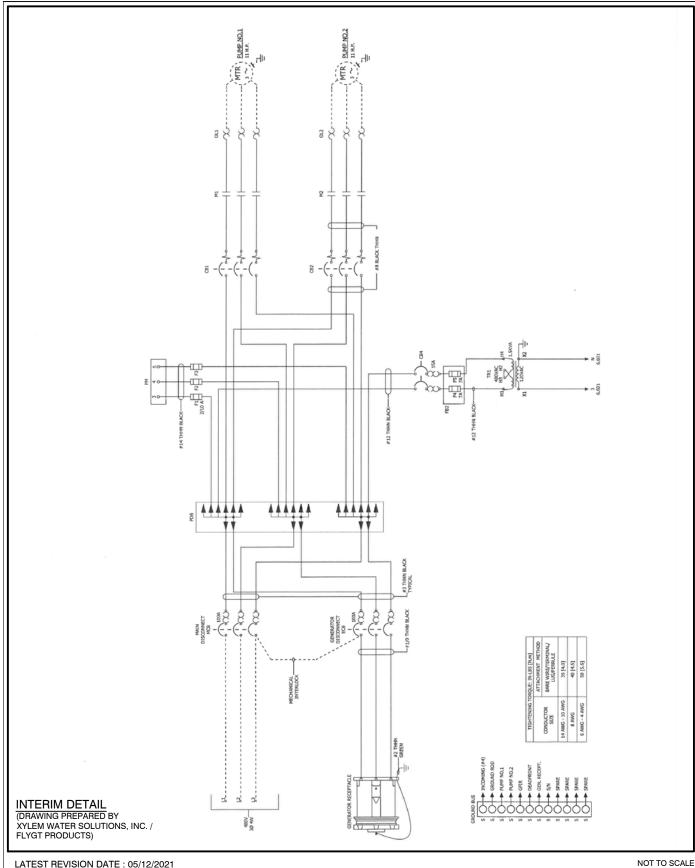


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LIFT STATION **CONTROL PANEL DETAILS** (3 of 3)





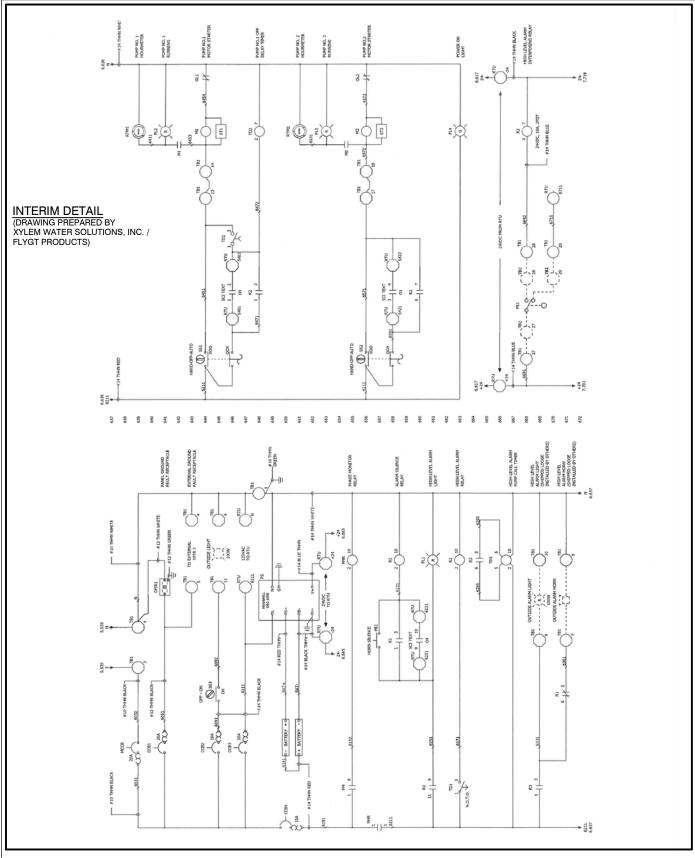


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LIFT STATION CONTROL PANEL ELEC. SCHEMATIC (1 of 3)





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LIFT STATION CONTROL PANEL ELEC. SCHEMATIC (2 of 3)



INTERIM DETAIL
(DRAWING PREPARED BY
XYLEM WATER SOLUTIONS, INC. /
FLYGT PRODUCTS) LATEST REVISION DATE: 05/12/2021 NOT TO SCALE

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LIFT STATION CONTROL PANEL ELEC. SCHEMATIC (3 of 3)



GENERAL WATER NOTES

- 1. WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, TESTED, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555, FLORIDA ADMINISTRATIVE CODE.
- 2. ALL PIPE SHALL BEAR THE "NSF" SEAL FOR POTABLE WATER.
- 3. WATER MAINS SHALL BE BLUE PVC CONFORMING TO AWWA C-900, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION FOR LAYING, SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST RECOMMENDATIONS.
- 4. DEPTH OF WATER LINES FROM CROWN OF PIPE TO FINISHED GRADE SHALL BE 36".
- 5. WATER MAINS TO BE LOCATED 3' FROM RIGHT OF WAY, UNLESS OTHERWISE NOTED.
- 6. WHEN POOL EQUIPMENT IS TO BE INSTALLED AN AIR-GAP OF 3" MINIMUM SHALL BE MAINTAINED BETWEEN EQUIPMENT AND WATER AND SANITARY SYSTEMS.
- 7. ALL POTABLE WATER MAINS THAT ARE NOT BLUE PVC SHALL BE INSTALLED WITH IDENTIFIER TAPE LOCATED ON TOP OF PIPE & SECURED TAPE SHALL BE 3" VINYL BLUE IN COLOR WITH LETTERING INDICATING "POTABLE WATER" AT TWO FOOT INTERVALS ALONG TAPE.

LATEST REVISION DATE : 04/14/2021

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POTABLE WATER NOTES (1 of 3)



POTABLE WATER CLEARANCE REQUIREMENTS

HORIZONTAL SEPARATION: BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAIN, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

- 1. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST FIVE FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- 2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE HORIZONTAL DISTANCE OF TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
- 3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO FIVE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST TWELVE INCHES ABOVE THE TOP OF THE SEWER.
- 4. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6002, F.A.C.
- 5. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN OTHER PIPELINE:
 - A. USE OF PRESSURE-RATED PIPE CONFORMING TO THE AMERICAN WATER WORKS ASSOCIATION STANDARDS INCORPORATED INTO RULE 62-555.330, F.A.C., FOR THE OTHER PIPELINE IF IT IS GRAVITY-OR VACUUM-TYPE PIPELINE;
 - B. USE WELDED, FUSED OR OTHERWISE RESTRAINED JOINTS FOR EITHER WATER MAIN OR THE OTHER PIPELINE; OR
 - C. USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER THE WATER MAIN OR THE OTHER PIPELINE.

LATEST REVISION DATE: 9/05/18

NOT TO SCALE

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POTABLE WATER NOTES (2 of 3)



POTABLE WATER CLEARANCE REQUIREMENTS

<u>VERTICAL SEPARATION:</u> BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAIN, RECLAIMED WATER PIPELINES.

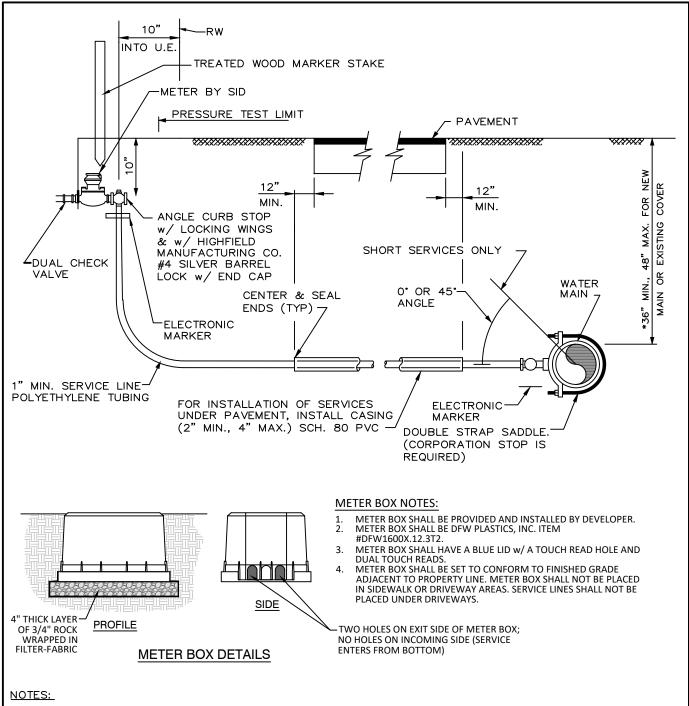
- 1. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST TWELVE INCHES, AND PREFERABLY EIGHTEEN INCHES, ABOVE OR AT LEAST EIGHTEEN INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- 2. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST EIGHTEEN INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- 3. AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS 1 AND 2 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORMSEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- 4. SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES.
 - A. NO WATER MAIN SHALL PASS THROUGH, OR COME IN CONTACT WITH, ANY PART OF A SANITARY MANHOLE.
 - B. WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.
- 5. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND IS BEING LAID LESS THAN THE REQUIRED MINIMUM VERTICAL DISTANCE FROM THE OTHER PIPELINE:
 - A. USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN: AND
 - B. USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHEST THICK FOR THE OTHER PIPELINE IF IT IS NEW AND IS CONVEYING WASTEWATER OR RECLAIMED WATER.

LATEST REVISION DATE: 9/05/18



POTABLE WATER NOTES (3 of 3)





- 1. SUCCESSIVE TAPS INTO A WATER MAIN SHALL BE SPACED A MINIMUM OF 18" APART (OPPOSING SIDES). SUCCESSIVE TAPS INTO THE SAME SIDE OF A WATER MAIN SHALL BE SPACED A MINIMUM 10' APART.
- 2. TUBING SHALL BE POLYETHYLENE, DR 9
- 3. ALL 5/8" & 1" METERS REQUIRE A 1" LOCKING METER VALVE RESPECTIVELY
- 4. MAXIMUM SERVICE LENGTH IS 100' TO METER.
- 5. ELECTRONIC MARKERS SHALL BE SCOTCHMARK ELECTRONIC MARKER No. 1253 (BLUE)
- * 36" MIN. IN STATE ROAD R/W & UNDER ASPHALT

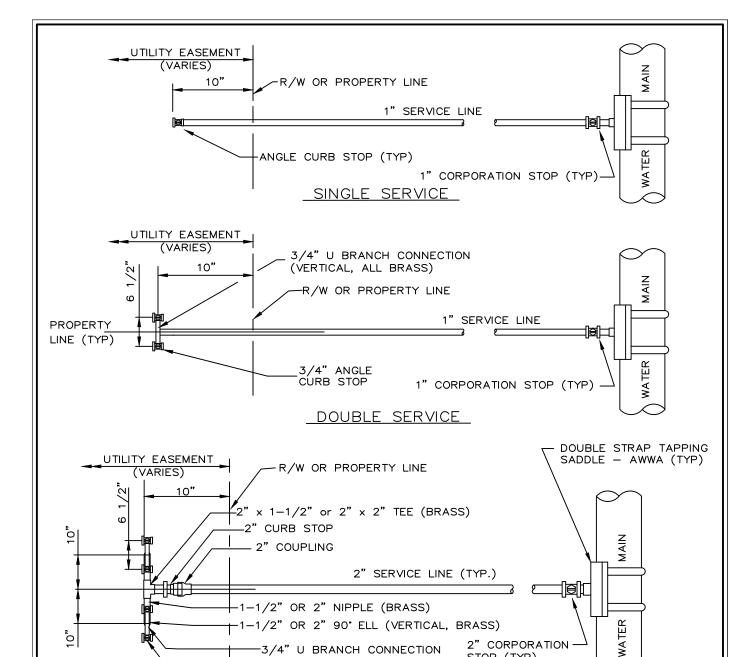
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TYPICAL SERVICE CONNECTION FOR 5/8", 1", OR 2" METER





QUADRUPLE SERVICE

NOTES:

ô

- SERVICE LINE MATERIAL SHALL BE POLYETHYLENE TUBING, DR 9 1.
- 2. A MAXIMUM OF EIGHT (8) 5/8" METERS, OR FOUR (4) 1" METERS, OR TWO (2) 5/8" & TWO (2) 1" METERS MAY BE SERVED OFF OF A SINGLE 2" SERVICE LINE.
- SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE APPROVED ON AN INDIVIDUAL BASIS, 3. SUBJECT TO APPROVAL OF THE DISTRICT

3/4" U BRANCH CONNECTION

-3/4" ANGLE CURB STOP

(VERTICAL, BRASS)

NO FITTINGS SHALL BE INSTALLED BETWEEN CORP. STOP & "U" BRANCH FOR MULTIMETER INSTALLATIONS.

LATEST REVISION DATE: 04/12/2021

NOT TO SCALE



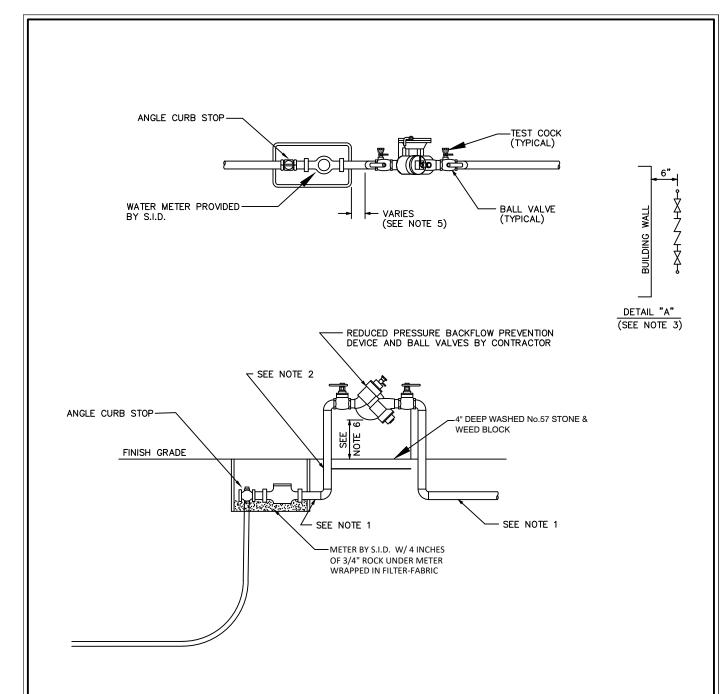
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TYPICAL SINGLE SERVICE AND MULTIPLE **SERVICES**

2" CORPORATION

STOP (TYP)





NOTES:

- 1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
- 2. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS "SWEAT" FITTINGS AND ADAPTERS. ONLY LEAD FREE SOLDER AND FLUX SHALL BE PERMITTED.
- 3. WHEN THE DEVICE IS INSTALLED PARALLEL TO A BUILDING WALL THERE SHALL BE A MIN. OF 6" BETWEEN THE EDGE OF THE DEVICE AND THE BUILDING WALL.
- 4. BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES IN LIEU OF GATE VALVES.
- 5. BACKFLOW PREVENTOR MUST BE INSTALLED AS CLOSE TO SOURCE OF SUPPLY AS POSSIBLE.
- 6. 18" MIN./30" MAX. TO CLOSEST PART OF BACKFLOW PREVENTER DEVICE.

LATEST REVISION DATE: 05/04/2021

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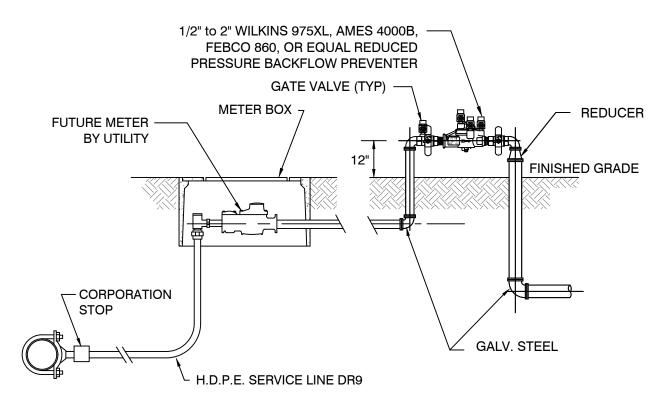


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TYPICAL COMMERCIAL METER, BACKFLOW PREVENTION DETAIL





NOTE: SEE APPROPRIATE ASSEMBLY DETAILS FOR ADDITIONAL INFORMATION

TO BE USED FOR HIGHER RISK FACILITIES ONLY, SUCH AS:

COMMERCIAL CAR WASH, COMMERCIAL LAUNDRIES, PHOTO PROCESSING FACILITIES, PEST CONTROL COMPANIES, COOLING TOWERS, HOSPITALS, MEDICAL & DENTAL OFFICES, ASSISTED LIVING/NURSING FACILITIES, VETERINARIAN CLINICS, WASTEWATER LIFT STATIONS (IF SERVED BY POTABLE WATER), WASTEWATER TREATMENT PLANT, MAINTENANCE FACILITY (GOLF, LANDSCAPE, ETC.), GROCERY STORE, BEAUTY SALON/SPA, HOME IMPROVEMENT/HARDWARE, FUNERAL HOME AND EYE CARE CLINICS.

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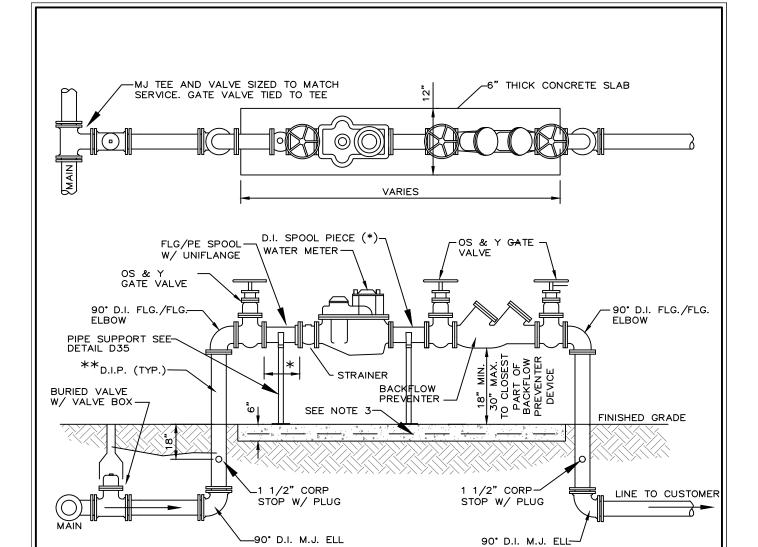


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BACKFLOW PREVENTER ASSEMBLY DETAIL





NOTES:

- ALL PIPE AND FITTINGS SHALL BE CLASS 53 DUCTILE IRON CEMENT LINED.
- MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNIFLANGES PERMITTED.
- CONCRETE PAD W/ WWF IS REQUIRED AS SHOWN ON COMPACTED SUBGRADE WITH PIPE SUPPORTS, SUPPORT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY S.I.D.
- 4. BACKFLOW PREVENTION DEVICES AND ASSOCIATED VALVES SHALL BE SUPPLIED BY THE CONTRACTOR.
- ALL WATER METERS ARE REQUIRED TO HAVE A STRAINER PRIOR TO THE METER OR INTEGRAL TO THE METER ASSEMBLY.
- AT A MINIMUM, A SPOOL PIECE LENGTH OF FIVE (5) PIPE DIAMETERS WILL BE PROVIDED PRIOR TO THE STRAINER (UPSTREAM) AND THREE (3) PIPE DIAMETERS DOWNSTREAM
- st riser pipe must be one continuous piece from bottom bend to top bend.

LATEST REVISION DATE: 09/13/18

NOT TO SCALE

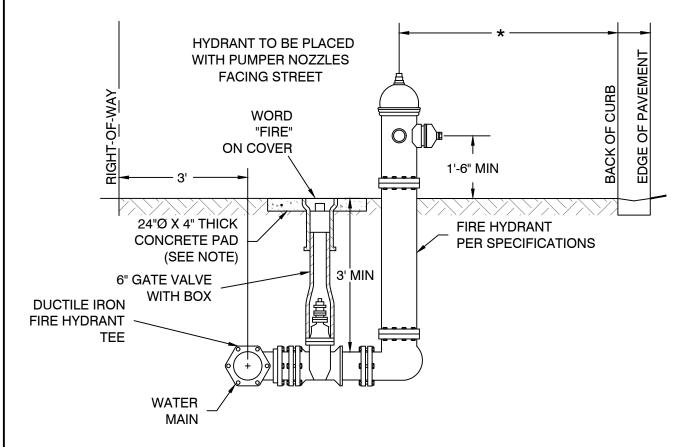


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3" TO 4" METER; **BACKFLOW ASSEMBLY**



* FIRE HYDRANTS TO BE LOCATED NO LESS THAN 5' FROM EDGE OF PAVEMENT BEHIND RAISED CURB, NO LESS THAN 6' FROM EDGE OF PAVEMENT WITHOUT RAISED CURB, AND IN EITHER CASE, NO MORE THAN 12' FROM EDGE OF PAVEMENT.



SPECIFICATIONS

- 1. AWWA SPECIFICATIONS C-502
- 2. TWO 2-1/2" HOSE NOZZLE DISCHARGE
- 3. ONE 4-1/2" PUMPER NOZZLE DISCHARGE
- 4. ONE 1-1/2" OPERATING NUT, LEFT

NOTE: TWO INCH (2") DIAMETER BRASS DISCS SHALL BE GLUED TO THE CLOSEST CURB INDICATING THE DIRECTION TO THE VALVE. GENERALLY, 2 DISCS SHALL BE REQUIRED FOR EACH VALVE (90° APART).

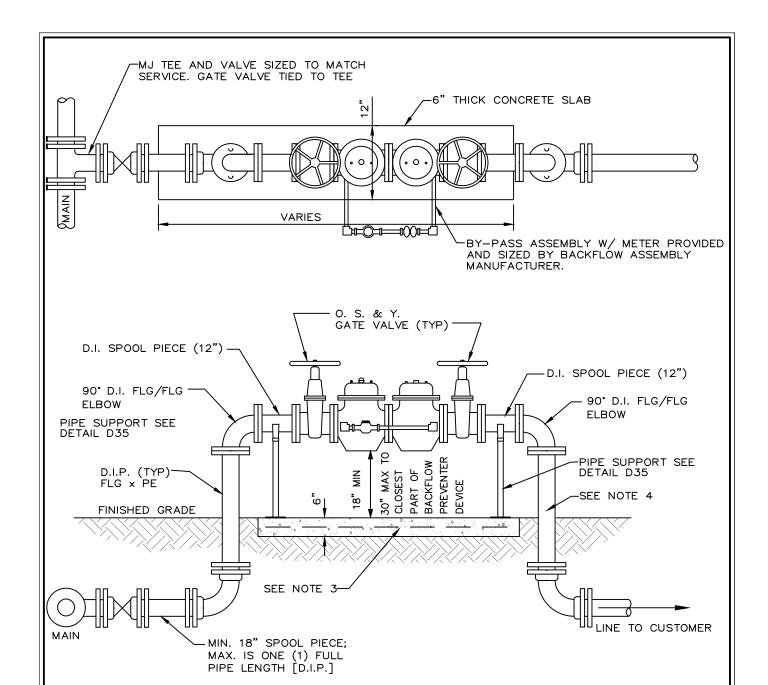
LATEST REVISION DATE: 04/14/2021

NOT TO SCALE



FIRE HYDRANT ASSEMBLY DETAIL





NOTES:

- 1. ALL PIPE AND FITTINGS SHALL BE CLASS 53 DUCTILE IRON CEMENT LINED.
- 2. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE. ALL MJ FITTINGS SHALL BE MECHANICALLY RESTRAINED.
- 3. CONCRETE PAD W/ WWF IS REQUIRED AS SHOWN ON COMPACTED SUBGRADE WITH PIPE SUPPORTS, SUPPORT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY S.I.D.
- 4. RISER PIPE MUST BE ONE CONTINUOUS PIECE FROM BOTTOM BEND TO TOP BEND.

LATEST REVISION DATE: 09/13/18

NOT TO SCALE

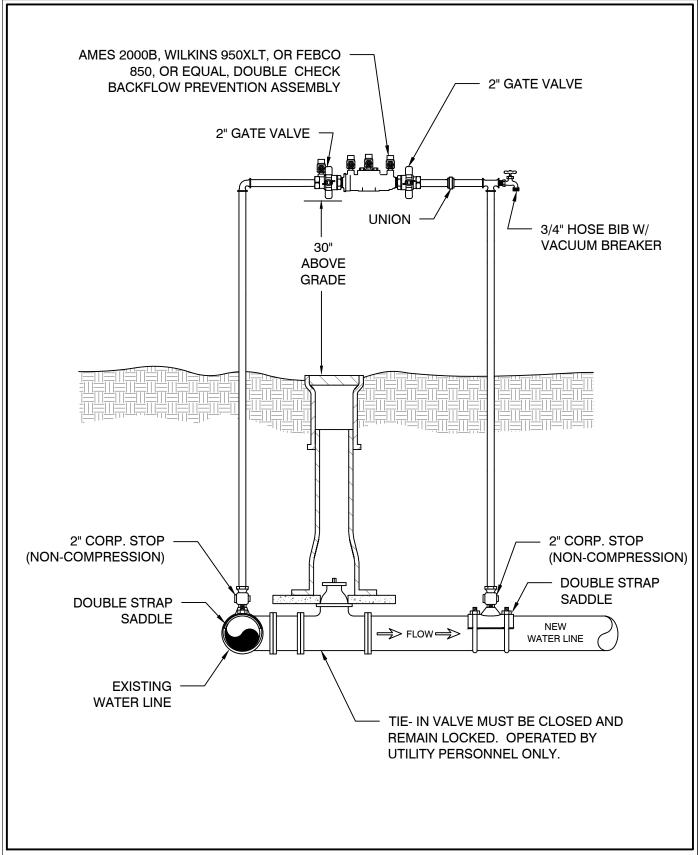


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FIRE LINE BACKFLOW





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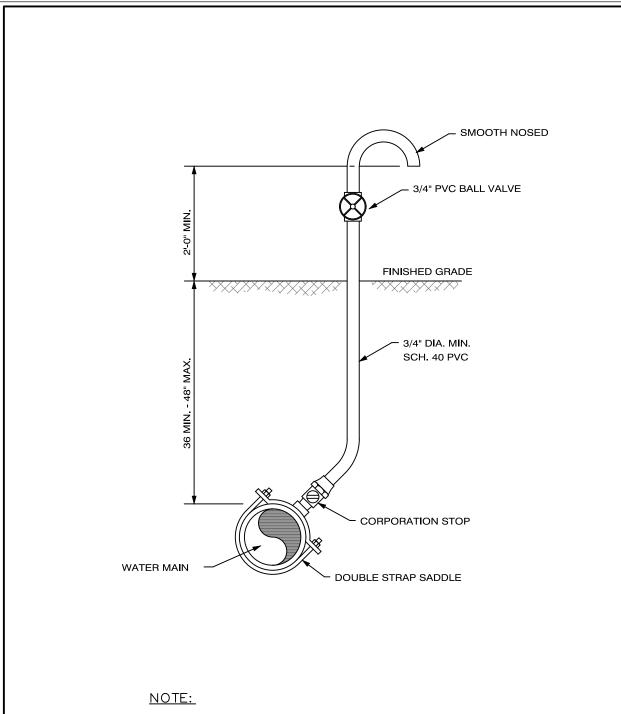


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TEMPORARY JUMPER DETAIL





SAMPLE POINTS SHALL BE REMOVED DOWNSTREAM OF THE CORP STOP AT THE CONCLUSION OF CONSTRUCTION

LATEST REVISION DATE: 09/13/18

NOT TO SCALE

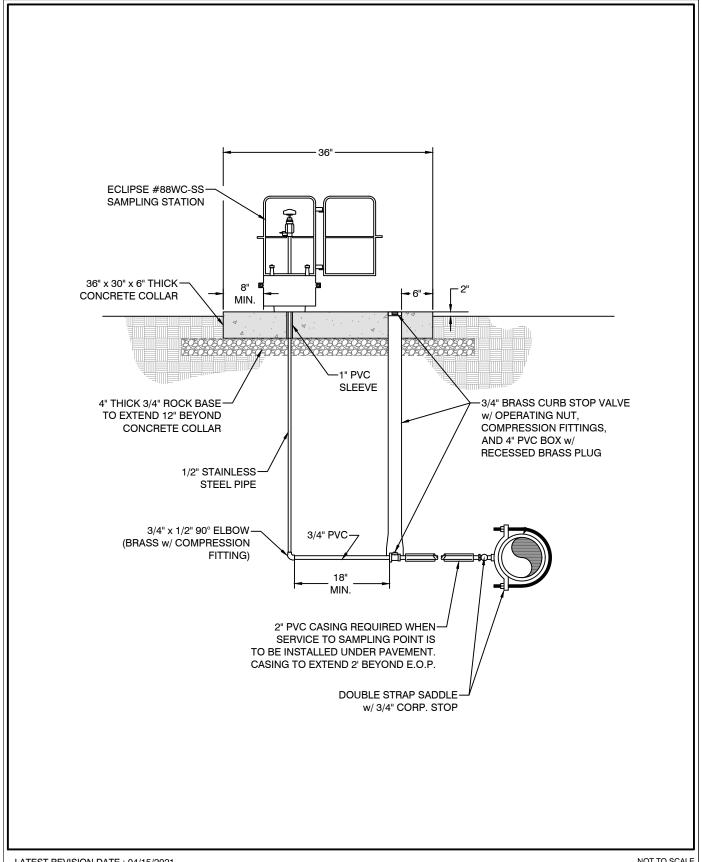


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TEMPORARY **SAMPLING POINT** (ON MAIN)





NOT TO SCALE

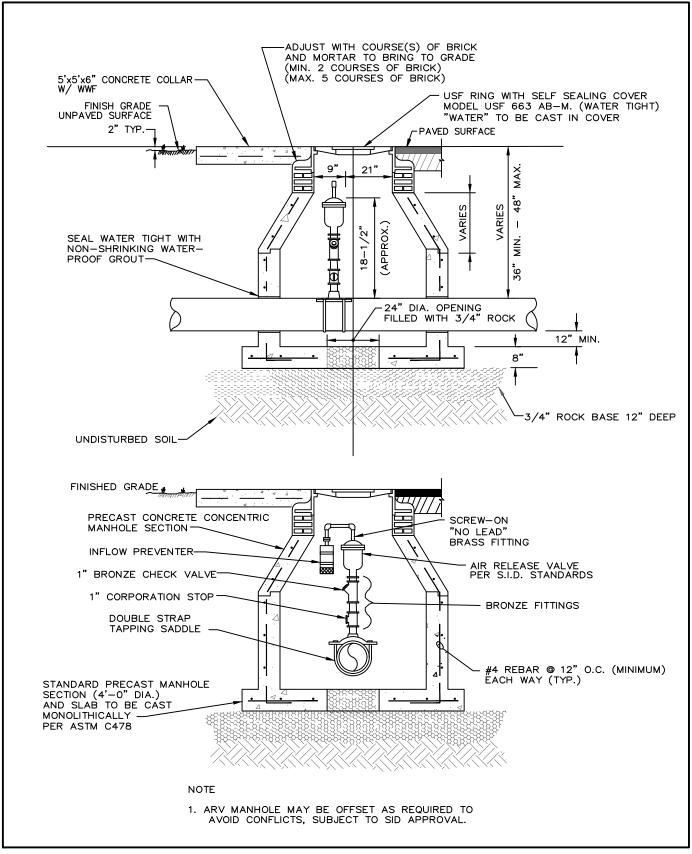


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PERMANENT SAMPLING POINT





LATEST REVISION DATE: 04/08/2020

NOT TO SCALE

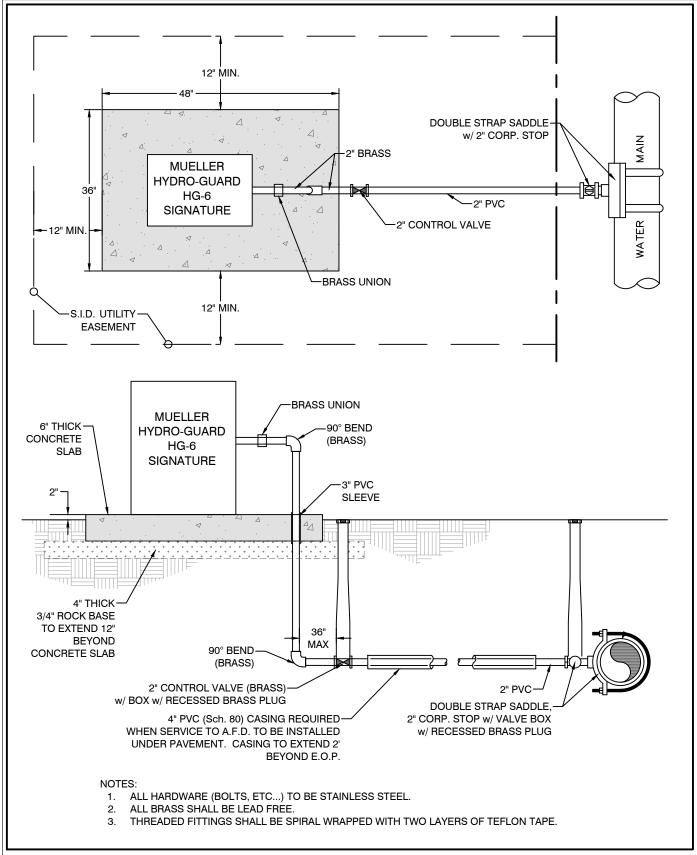


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AIR RELEASE VALVE (UNDERGROUND WATER MAIN)





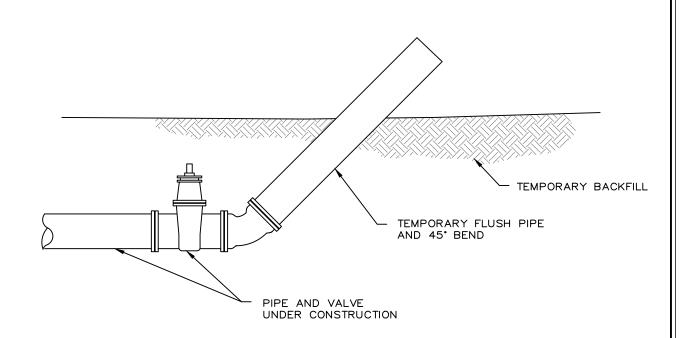
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7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

AUTOMATIC FLUSHING DEVICE





NOTES:

- 1. UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAINS SHALL BE CANNON FLUSHED TO REMOVE DIRT AND ANY OTHER FOREIGN MATTER BY ACHIEVING A MINIMUM VELOCITY OF 2.5 FEET PER SECOND IN THE PIPE. MAINS MAY BE EITHER TEMPORARILY LAID ABOVE GRADE OR TEMPORARY FITTINGS, PIPE ETC. MAY BE USED TO FACILITATE CANNON FLUSHING.
- 2. INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLICT PROPERTY DAMAGE.
- 3. BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE FLUSHED.
- 4. PRIOR TO THE ACTUAL LINE FLUSHING OPERATION. THE CONTRACTOR SHALL PROPERLY NOTIFY THE S.I.D. INSPECTOR OF SUCH INTENDED WATER USE.
- 5. NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED S.I.D. PERSONNEL.
- 6. FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE S.I.D. INSPECTOR.
- 7. AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.
- 8. ALL PIPING SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH S.I.D. STANDARDS. THE NUMBER OF PIPE LENGTHS TO BE RESTRAINED SHALL BE PER MANUFACTURERS RECOMMENDATION.

LATEST REVISION DATE: 09/13/18

NOT TO SCALE

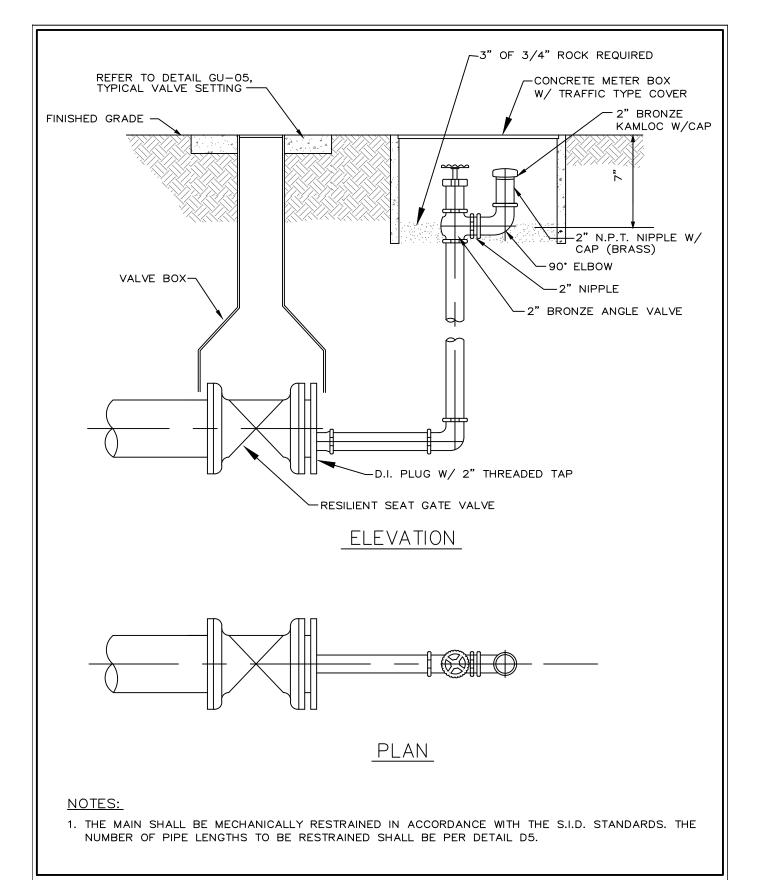


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CIVIL ENGINEERING - LAND PLANNING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

POTABLE WATER MAIN CANNON FLUSHING DETAIL





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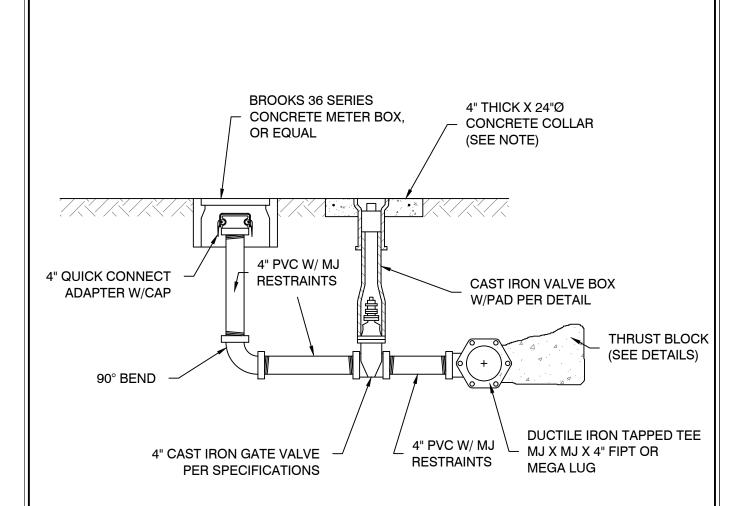


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TYPICAL TERMINAL END WITH 2" BLOWOFF





NOTE: TWO INCH (2") DIAMETER BRASS DISCS SHALL BE GLUED TO THE CLOSEST CURB INDICATING THE DIRECTION TO THE VALVE. GENERALLY, 2 DISCS SHALL BE REQUIRED FOR EACH VALVE (90° APART).

LATEST REVISION DATE: 9/05/18 NOT TO SCALE



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4 IN. BLOW-OFF DETAIL



GENERAL REUSE AND NON-POTABLE IRRIGATION NOTES

- 1. ALL REUSE AND NON-POTABLE IRRIGATION PIPING TO BE A SOLID PURPLE COLOR.
- 2. REUSE MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S LATEST RECOMMENDATIONS.
- 3. DEPTH OF REUSE AND NON-POTABLE IRRIGATION LINES TO BE 48" BELOW FINISHED GRADE.
- 4. ALL REUSE AND NON-POTABLE IRRIGATION MAINS THAT ARE NOT PURPLE PVC SHALL BE INSTALLED WITH IDENTIFIER TAPE LOCATED ON TOP OF PIPE & SECURED TAPE SHALL BE 3" VINYL PURPLE IN COLOR WITH LETTERING INDICATING "REUSE" OR "NON-POTABLE IRRIGATION" AT TWO FOOT INTERVALS ALONG TAPE.

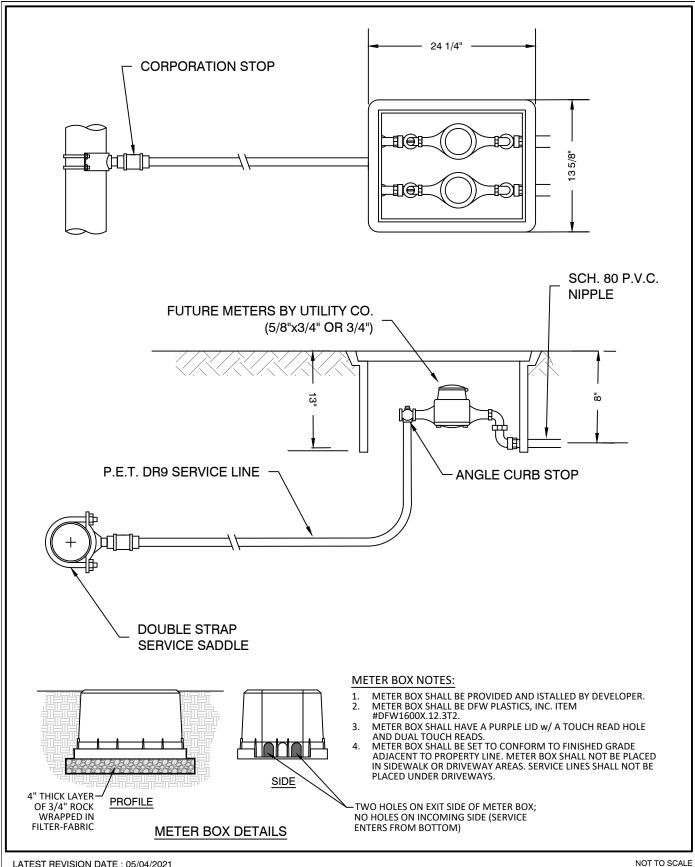
LATEST REVISION DATE: 09/05/18 NOT TO SCALE



RECLAIMED WATER NOTES



RW-01



NOT TO SCALE

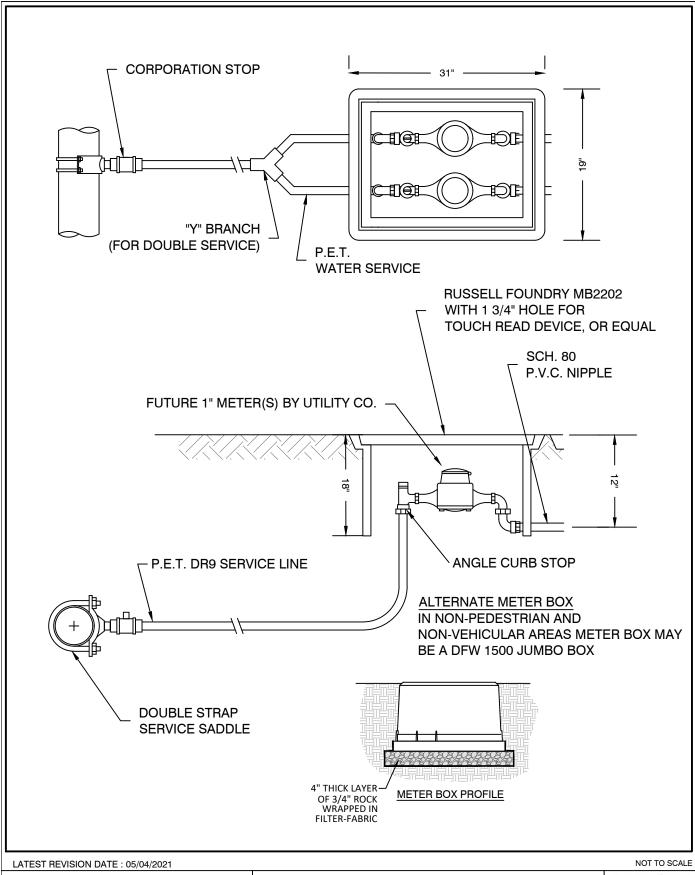


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RECLAIMED WATER METER ASSEMBLY DETAIL







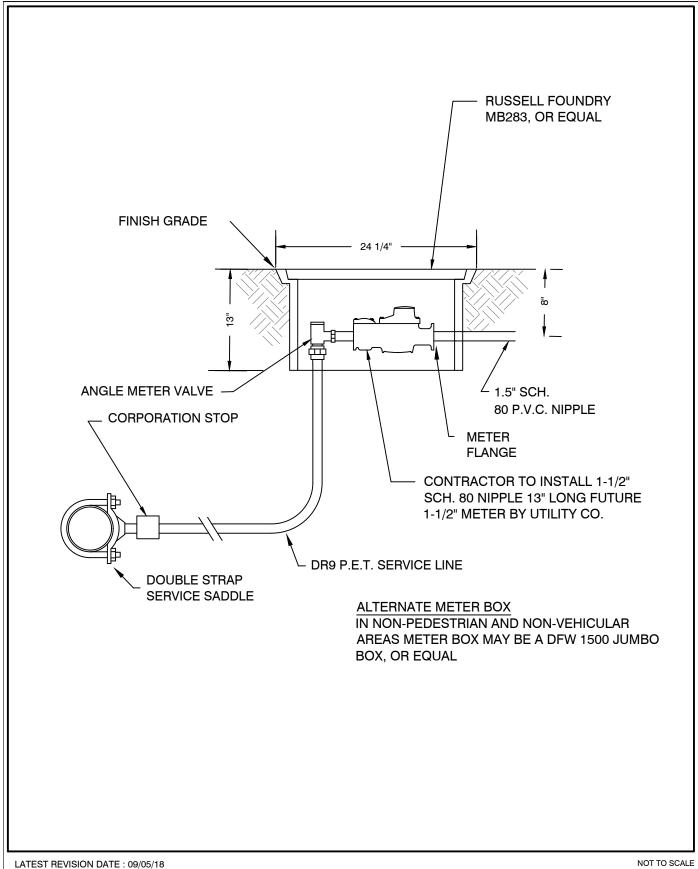
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LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100 BOCA RATON, FLORIDA 33434 PHONE (561)-392-1991 / FAX (561)-750-1452

1 IN. RECLAIMED WATER METER ASSEMBLY DETAIL



RW-03



NOT TO SCALE

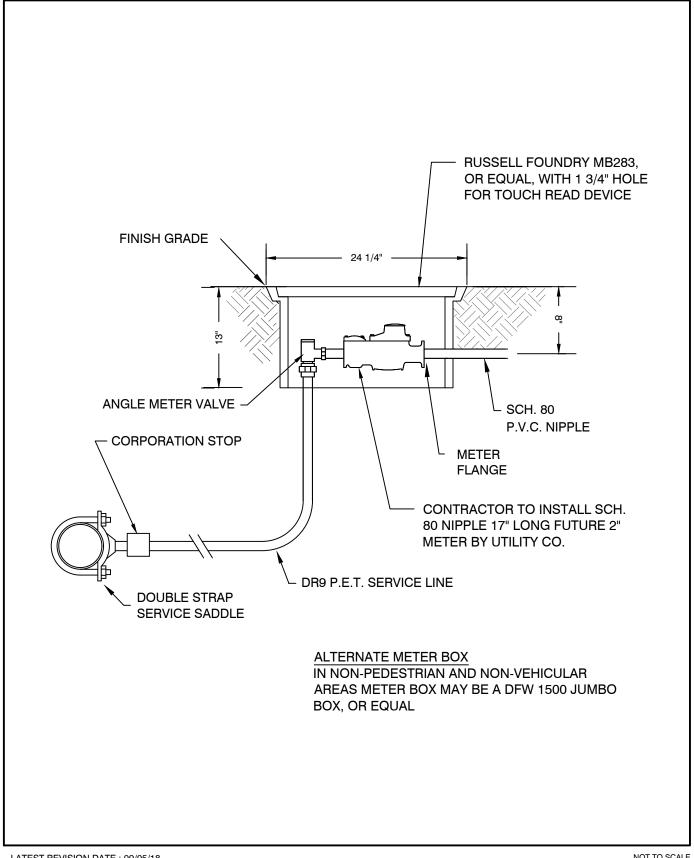


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1.5 IN. RECLAIMED WATER METER ASSEMBLY DETAIL







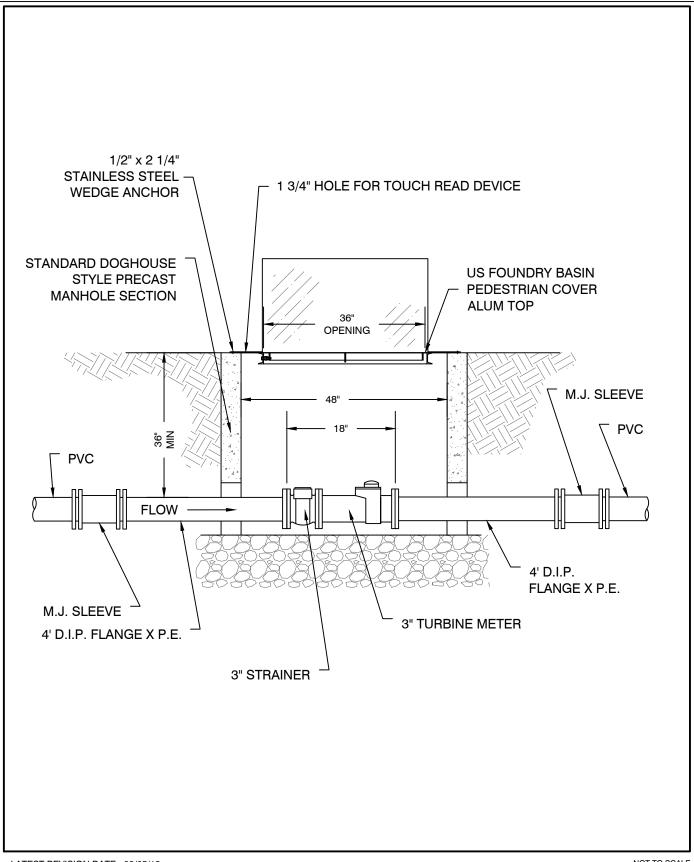
CAULFIELD & WHEELER, INC.

CIVIL ENGINEERING - LAND PLANNING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100 BOCA RATON, FLORIDA 33434 PHONE (561)-392-1991 / FAX (561)-750-1452

2 IN. RECLAIMED WATER METER ASSEMBLY DETAIL



RW-05





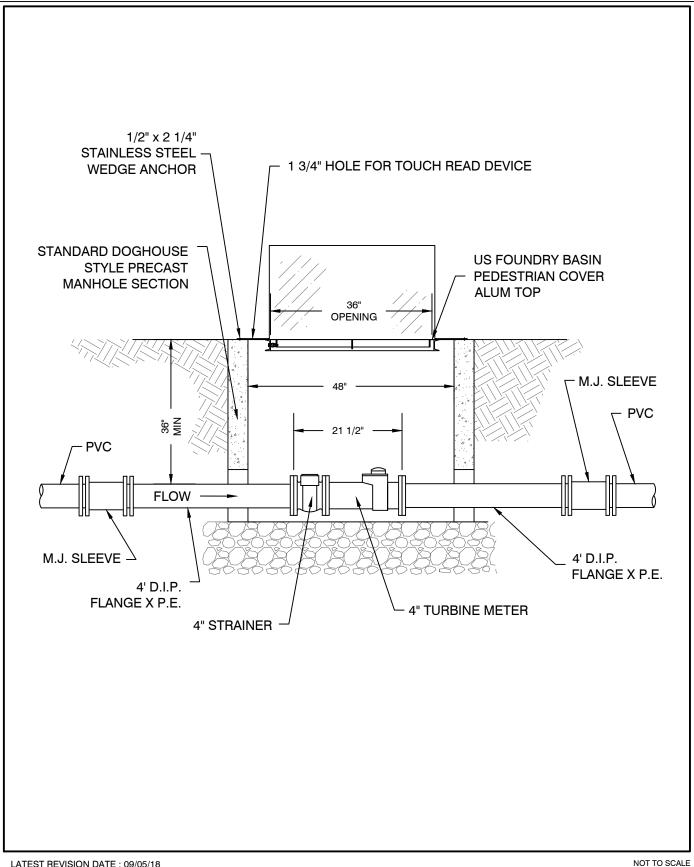
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7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 334,344
PHONE (561)-392-1991 / FAX (561)-750-1452

3 IN. RECLAIMED WATER METER ASSEMBLY DETAIL



RW-06



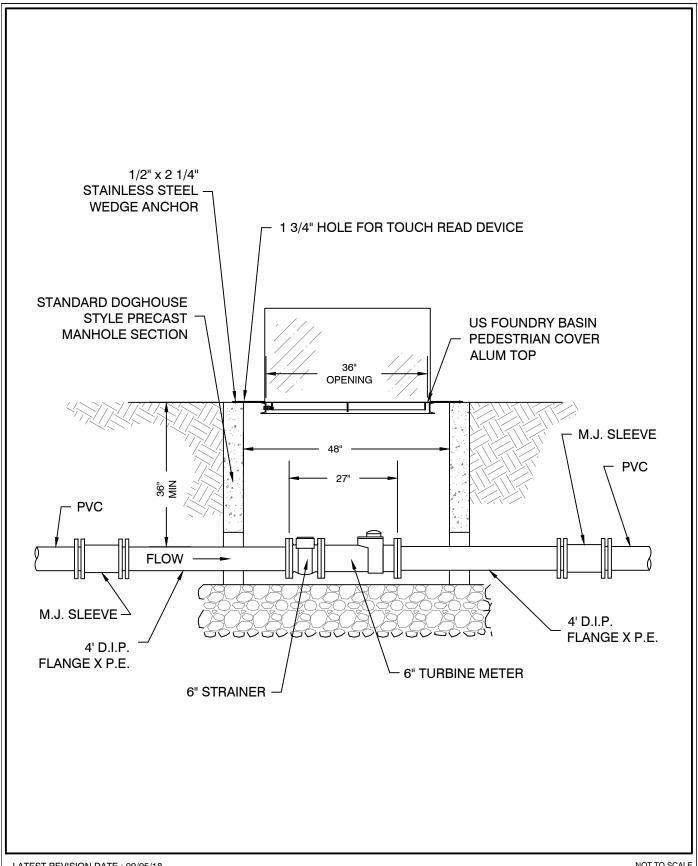


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4 IN. RECLAIMED WATER METER ASSEMBLY DETAIL







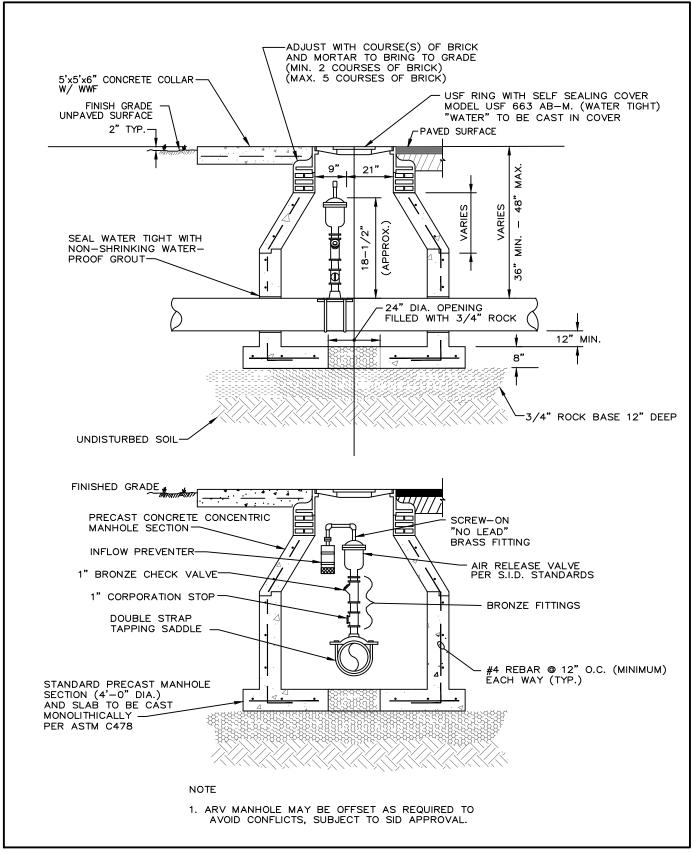
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CIVIL ENGINEERING - LAND PLANNING
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6 IN. RECLAIMED WATER METER ASSEMBLY DETAIL



RW-08



LATEST REVISION DATE: 04/08/2020

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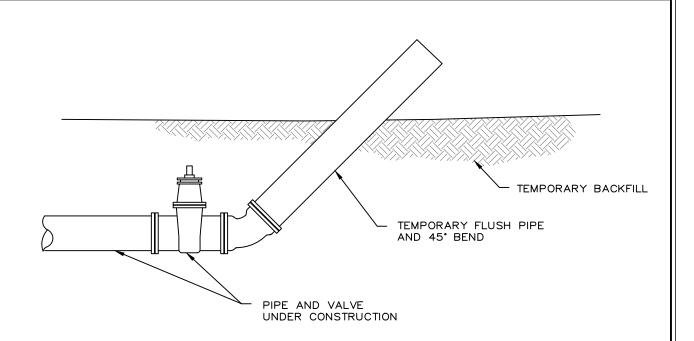


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7900 GLADES ROAD - SUITE 100 BOCA RATON, FLORIDA 33434 PHONE (561)-392-1991 / FAX (561)-750-1452

AIR RELEASE VALVE (UNDERGROUND RECLAIMED WATER MAIN)





NOTES:

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- INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLICT PROPERTY DAMAGE.
- BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE 3. FLUSHED.
- PRIOR TO THE ACTUAL LINE FLUSHING OPERATION. THE CONTRACTOR SHALL PROPERLY NOTIFY THE S.I.D. INSPECTOR OF SUCH INTENDED 4. WATER USE.
- 5. NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED S.I.D. PERSONNEL.
- FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL 6. PRESENCE OF THE S.I.D. INSPECTOR.
- AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS 7. SPECIFIED.
- ALL PIPING SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH S.I.D. STANDARDS. THE NUMBER OF PIPE LENGTHS TO BE RESTRAINED SHALL BE PER MANUFACTURERS RECOMMENDATION. 8.

LATEST REVISION DATE: 09/13/18

NOT TO SCALE



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RECLAIMED WATER MAIN **CANNON FLUSHING** DETAIL

