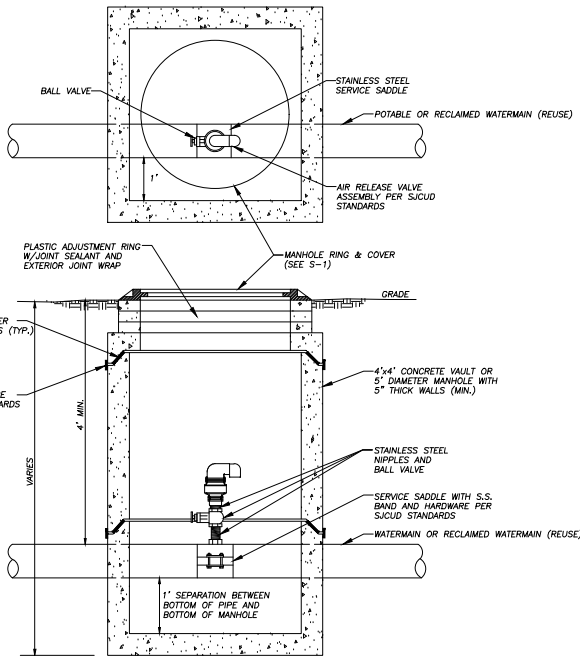


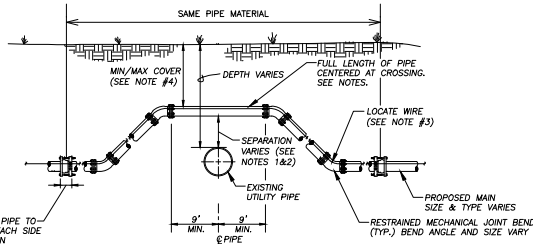
**NOTES:**

1. INSTALL ABOVE GROUND UTILITY MARKER ADJACENT TO EXISTING VALVES AS SHOWN IN THIS EXAMPLE.
2. VALVES LOCATED IN PAVEMENT DO NOT REQUIRE AN ABOVE GROUND MARKER.
3. FIRE HYDRANTS DO NOT REQUIRE ABOVE GROUND MARKERS IF ISOLATION VALVE IS WITHIN 5' OF HYDRANT. BLUE PAVEMENT REFLECTORS SHALL MARK EXISTING FIRE HYDRANTS.



**NOTE:**

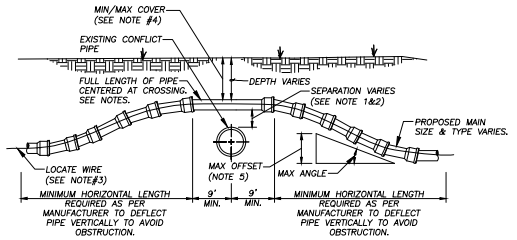
1. VALVE ASSEMBLIES TO BE LOCATED OUTSIDE OF ROADWAY PAVING.
2. PIPE PENETRATIONS SHALL BE WITH A FLEXIBLE MANHOLE SLEEVE.
3. PIPE PENETRATIONS SHALL BE OFF CENTER SO EDGE OF PIPE IS 1 FOOT FROM INSIDE WALL.
4. LID SHALL SPECIFY "ARV" AND "WATER" OR "REUSE".
4. WHERE EVER POSSIBLE, THESE ASSEMBLIES SHOULD BE LOCATED ABOVE GRADE, AS SHOWN IN G-16.



**TYPE "A" CROSSING  
FITTING CROSSING**

**NOTE:**

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE SHEET GN-1.
3. LOCATING WIRE REQUIRED: SEE DETAIL G-8.
4. THE COVER FOR PIPING 12" OR LESS SHALL BE 30" MIN./36" MAX. IN UNPAVED AREAS AND 36" MIN./42" MAX. IN PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. THE COVER FOR PIPING 16" OR LARGER SHALL BE 42" MIN./54" MAX. IN UNPAVED AND PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. SEE SECTION 2.2.10 OF STANDARDS MANUAL.



**TYPE "A" CROSSING  
PIPE DEFLECTION CROSSING**

**NOTE:**

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE SHEET GN-1.
3. LOCATING WIRE REQUIRED: SEE DETAIL G-8.
4. THE COVER FOR PIPING 12" OR LESS SHALL BE 30" MIN./36" MAX. IN UNPAVED AREAS AND 36" MIN./42" MAX. IN PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. THE COVER FOR PIPING 16" OR LARGER SHALL BE 42" MIN./54" MAX. IN UNPAVED AND PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. SEE SECTION 2.2.10 OF STANDARDS MANUAL.
5. SJCD ONLY ALLOWS 50% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTIONS. ALL OFFSETS ARE BASED ON MINIMUM 20LF OF PIPE LENGTH.

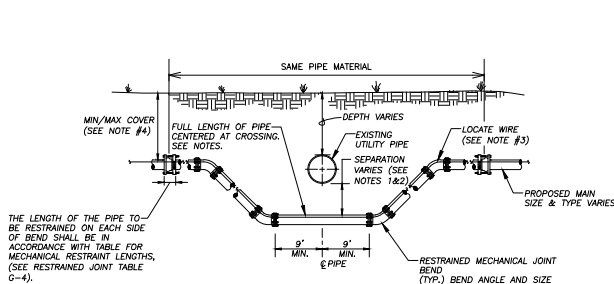
PVC PIPE SIZE	MAX OFFSET (20LF JOINT)
4"	19"
6"	13"
8"	10"
10"	8"
12"	7"
16" & LARGER	5"

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	TYPICAL ABOVE GROUND UTILITY MARKERS INSTALLATION	PLATE: G-9
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
2025 REVISION 2			
2020 REVISION 1			

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	AIR VALVE ASSEMBLY WITH MANHOLE	PLATE: G-10
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
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2020 REVISION 1			

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	TYPE "A" PIPE CROSSING WITH FITTINGS	PLATE: G-11
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
2025 REVISION 2			
2020 REVISION 1			

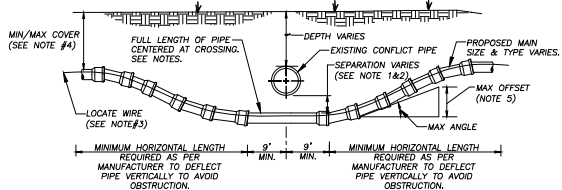
REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	TYPE "A" PIPE CROSSING WITH DEFLECTION	PLATE: G-12
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
2025 REVISION 2			
2020 REVISION 1			



**TYPE "B" CROSSING  
FITTING CROSSING**

**NOTE:**

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE SHEET GN-1.
3. LOCATING WIRE REQUIRED: SEE DETAIL G-8.
4. THE COVER FOR PIPING 12" OR LESS SHALL BE 30" MIN./36" MAX. IN UNPAVED AREAS AND 36" MIN./42" MAX. IN PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. THE COVER FOR PIPING 16" OR LARGER SHALL BE 42" MIN./54" MAX. IN UNPAVED AND PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. SEE SECTION 2.2.10 OF STANDARDS MANUAL.

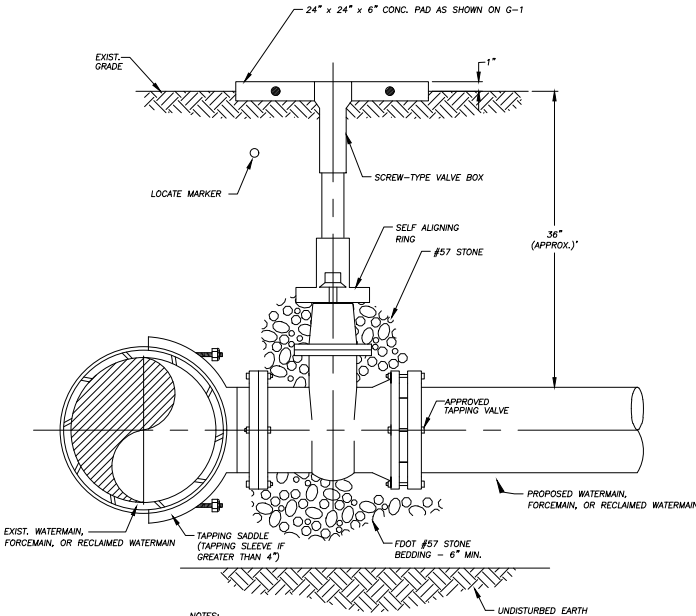


**TYPE "B" CROSSING  
PIPE DEFLECTION CROSSING**

**NOTE:**

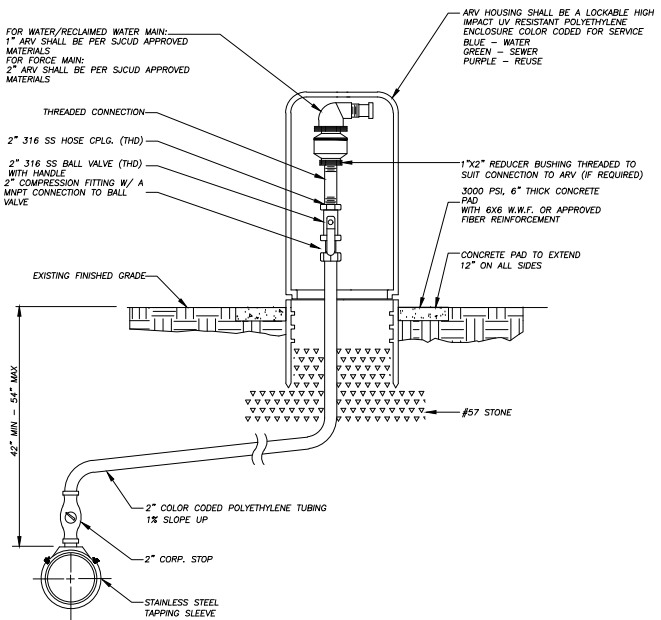
1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE SHEET GN-1.
3. LOCATING WIRE REQUIRED: SEE DETAIL G-8.
4. THE COVER FOR PIPING 12" OR LESS SHALL BE 30" MIN./36" MAX. IN UNPAVED AREAS AND 36" MIN./42" MAX. IN PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. THE COVER FOR PIPING 16" OR LARGER SHALL BE 42" MIN./54" MAX. IN UNPAVED AND PAVED AREAS, UNLESS PRE-APPROVED BY SJCD. SEE SECTION 2.2.10 OF STANDARDS MANUAL.
5. SJCD ONLY ALLOWS 50% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTIONS. ALL OFFSETS ARE BASED ON MINIMUM 20LF OF PIPE LENGTH.

PVC PIPE SIZE	MAX OFFSET (20LF JOINT)
4"	19"
6"	13"
8"	10"
10"	8"
12"	7"
16" & LARGER	5"



**NOTES:**

1. TAPPING SADDLE SHALL BE 304 STAINLESS STEEL.
2. SELF-CENTERED ALIGNMENT RING.
3. PRESSURE CONNECTIONS OF 4" OR LARGER MUST HAVE ALL EMERGENCY REPAIR MATERIALS (TWO SLEEVES AND A FULL PIECE OF PIPE) ON-SITE PRIOR TO PERFORMING A WET TAP.



**NOTE:**

1. FINAL ENCLOSURE LOCATION SHALL BE COORDINATED WITH AND APPROVED BY SJCD.
2. ARV TO BE SUPPLIED WITH INSECT SCREENS.
3. ARV SHALL BE LABELED FOR SERVICE TYPE USING STAINLESS STEEL, ENGRAVED VALVE TAGS.
4. ARV HOUSING SHALL BE SIZED ACCORDING TO SERVICE TYPE AND LOCATION.

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	TYPE "B" PIPE CROSSING WITH FITTINGS	PLATE: G-13
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
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REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	TYPE "B" PIPE CROSSING WITH DEFLECTION	PLATE: G-14
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
2025 REVISION 2			
2020 REVISION 1			

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	TAPPING SADDLE & TAPPING VALVE DETAIL	PLATE: G-15
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
2025 REVISION 2			
2020 REVISION 1			

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT	ABOVE GROUND AIR RELEASE VALVE	PLATE: G-16
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702	SCALE: N.T.S.	
2025 REVISION 2			
2020 REVISION 1			

NO.	BY	DATE	SYMBOL	REVISIONS
1.	SJCUD	2020		REVISION 1
2.	SJCUD	2025		REVISION 2

DESIGNER:	DESIGN ENGINEER
DRAWN BY:	
CHECKED BY:	FLORIDA REGISTRATION NO.
DATE:	

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702
2025 REVISION 2	
2020 REVISION 1	

REVISIONS	SJC ST. JOHNS COUNTY UTILITY DEPARTMENT
Date	1205 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 • Fax (904) 209-2702
2025 REVISION 2	
2020 REVISION 1	

**GENERAL DETAILS**

NO. SHEETS
SHEET NO.
DRAWING NO. D-02