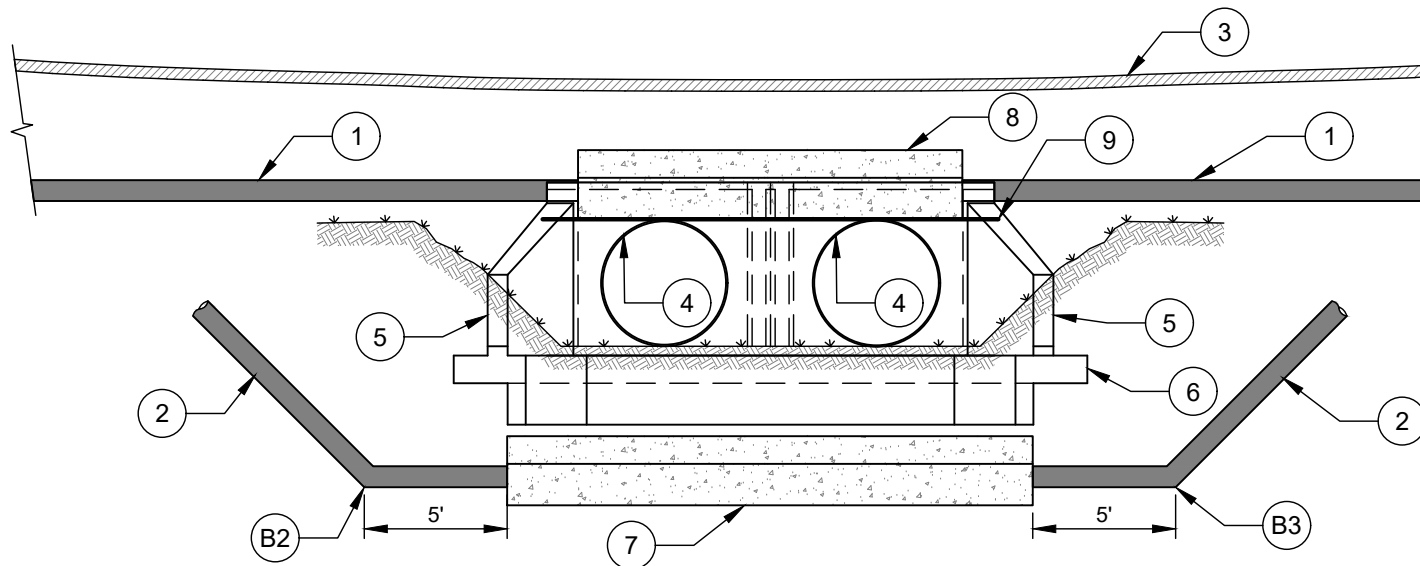
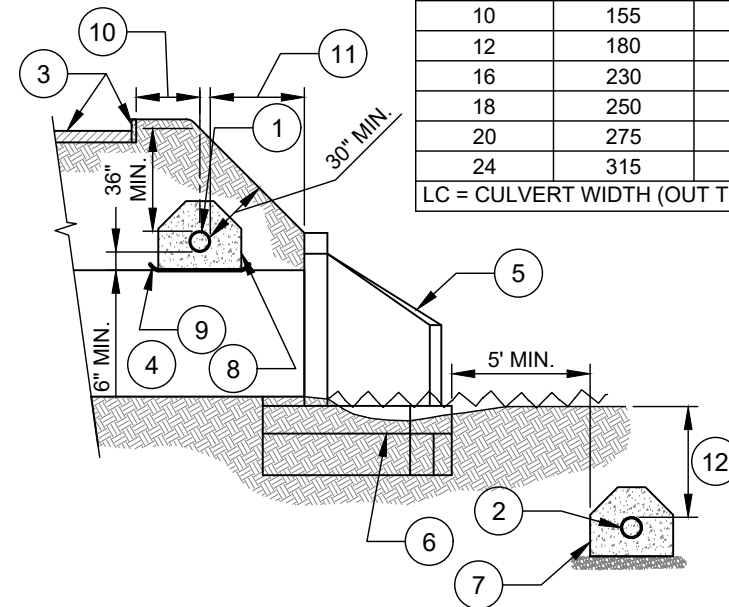


TYPICAL PLAN VIEW



TYPICAL ELEVATION VIEW



SECTION VIEW

NO. DESCRIPTION:

1. PROPOSED RJ DIP WATER MAIN - PREFERRED LOCATION.
2. PROPOSED RJ DIP WATER MAIN - OPTIONAL LOCATION.
3. ROAD WITH CURB AND GUTTER OR EDGE OF PAVEMENT.
4. CULVERT - PIPE OR BOX.
5. CULVERT WING WALL (CULVERT AND HEADWALL).
6. CULVERT FOOTING.
7. CONCRETE ENCASEMENT - SEE STANDARD DETAIL - REQUIRED.
8. CONCRETE ENCASEMENT - SEE STANDARD DETAIL - REQUIRED WHEN 30" COVER ON PIPE CAN NOT BE MAINTAINED L_c (MIN.) OR AS DETERMINED BY THE ENGINEER.
9. 8 MILS HDPE PLASTIC FILM (HDCLPE PER ASTM C105-4MILS EACH LAYER) - SEPARATE CONCRETE ENCASEMENT FROM CULVERT AND HEADWALL.
10. DISTANCE AS INDICATED ON CONSTRUCTION PLANS.
11. PIPE MAY BE LOCATED TO 12" OF HEADWALL - CONCRETE ENCASEMENT SHALL NOT BOND TO CULVERT OR HEADWALL - SEE NO. 9.
12. 5' MINIMUM BELOW CREEK BED.
- Bx. BENDS - AS REQUIRED.

NOTES:

- A. ALL PIPE SHALL BE RESTRAINED JOINT DUCTILE IRON PIPE FROM BEND B1 TO B4.
- B. RESTRAINED LENGTHS LB1 AND LB4 SHALL BE DETERMINED BY THE ENGINEER.
- C. CONCRETE ENCASEMENT NO. 8 MAY NOT BE REQUIRED WHEN MINIMUM COVERS ARE PROVIDED AS SHOWN IN SECTION VIEW.

MINIMUM RESTRAINED LENGTH FOR PREFERRED LOCATION #1		
PIPE DIAMETER (INCHES)	LR (FEET)	TOTAL RESTRAINED LENGTH (FEET)
6	100	200 + LC
8	125	250 + LC
10	155	310 + LC
12	180	360 + LC
16	230	460 + LC
18	250	500 + LC
20	275	550 + LC
24	315	630 + LC

LC = CULVERT WIDTH (OUT TO OUT) - FEET

WATER MAIN LOCATIONS AT CULVERTS USING
 CONCRETE ENCASEMENT
 6-INCH THROUGH 24-INCH MAINS

CHARLOTTE WATER
 A CITY OF CHARLOTTE DEPARTMENT
 STANDARD DETAILS
 WATER

NO SCALE

VERSION 1.0

DATE 04/2024

DETAIL 10.10.3