



NOTES:

1. HEADWALL WHERE REQUIRED WILL BE PROVIDED FOR NONSKewed CULVERTS HAVING A DIAMETER OR RISE OF 36" OR LESS.
2. REINFORCING STEEL SHALL BE #5 BAR.
3. DIMENSIONS AND QUANTITIES ARE SHOWN FOR CIRCULAR SECTIONS ONLY. CALCULATE REINFORCEMENT FOR ELLIPTICAL CONCRETE OR CORRUGATED PIPE IN ACCORDANCE WITH EQUATIONS LISTED BELOW.
4. CONCRETE SHALL BE CLASS "C".
5. FOUNDATION: INCREASE WIDTH OF BASE WHERE SOIL BORINGS INDICATE A BEARING CAPACITY LESS THAN 2600 LBS. PER SQ. FT. IT WILL BE NECESSARY TO INCREASE THE WIDTH OF THE BASE.
6. WHEN SLOPES OTHER THAN 2:1 ARE USED ADJUST LENGTH "L" AND HEIGHT "H" AS REQUIRED.

DIMENSIONS			QUANTITIES*	
DIAMETER	H	L	CONCRETE CU. YD.	REINF. STEEL LBS.
8"~12"	4'-9"	5'-8"	1.3	32
15"	5'-2"	7'-0"	1.7	41
18"	5'-5"	8'-4"	2.2	57
21"	5'-8"	9'-8"	2.8	62
24"	5'-11"	11'-0"	3.3	69
30"	6'-5"	13'-8"	4.7	92
36"	7'-0"	16'-4"	6.5	105

LEGEND

D = DIAMETER OF PIPE
R = RISE OF PIPE
S = SPAN OF PIPE
t = THICKNESS OF BARREL
L = LENGTH OF HEADWALL
H = HEIGHT OF HEADWALL

EQUATIONS:

L CIRCULAR SECTIONS = 5D+4t
L ELLIPTICAL OR PIPE ARCH = 4R+t+S
H CIRCULAR SECTIONS = D+t+44"
H ELLIPTICAL OR PIPE ARCH = R+t+44"

* ONE WALL

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

John J. Newson

SSES MANAGER

CAST-IN-PLACE
PIPE HEADWALLS
8" TO 36" DIAMETER

STANDARD DRAWING
AA-S166

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