



DIMENSIONS			QUANTITIES ONE HEADWALL	
DIAMETER	H	L	CONCRETE CU. YDS.	REINFORCING STEEL LBS.
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

NOTES

No. 1 headwall, where required, will be provided for nonskewed culverts having a diameter or rise of 36" or less.

Concrete shall be class "C".

Reinforcing steel bars shall be 5/8" round.

Dimension and quantities are shown for circular sections only. It will be necessary to determine dimensions for the No. 1 headwall required for reinforced elliptical concrete pipe or corrugated metal pipe arches in accordance with the equations listed on this drawing.

Chamfer all exposed corners 3/4 of an inch.

Foundation. Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot, it will be necessary to increase the width of the base.

All cast in place headwalls shall have a cement wash.

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

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

1	1/7/04	DAH	General Revisions - Re-Issue
REV No.	DATE	BY	DESCRIPTION
CITY OF WESTLAKE, OHIO DEPARTMENT OF ENGINEERING			
STANDARD No. 1 HEADWALL			
SCALE: AS NOTED			
DATE:		DRWN BY:	