

TUSCARAWAS RIVER

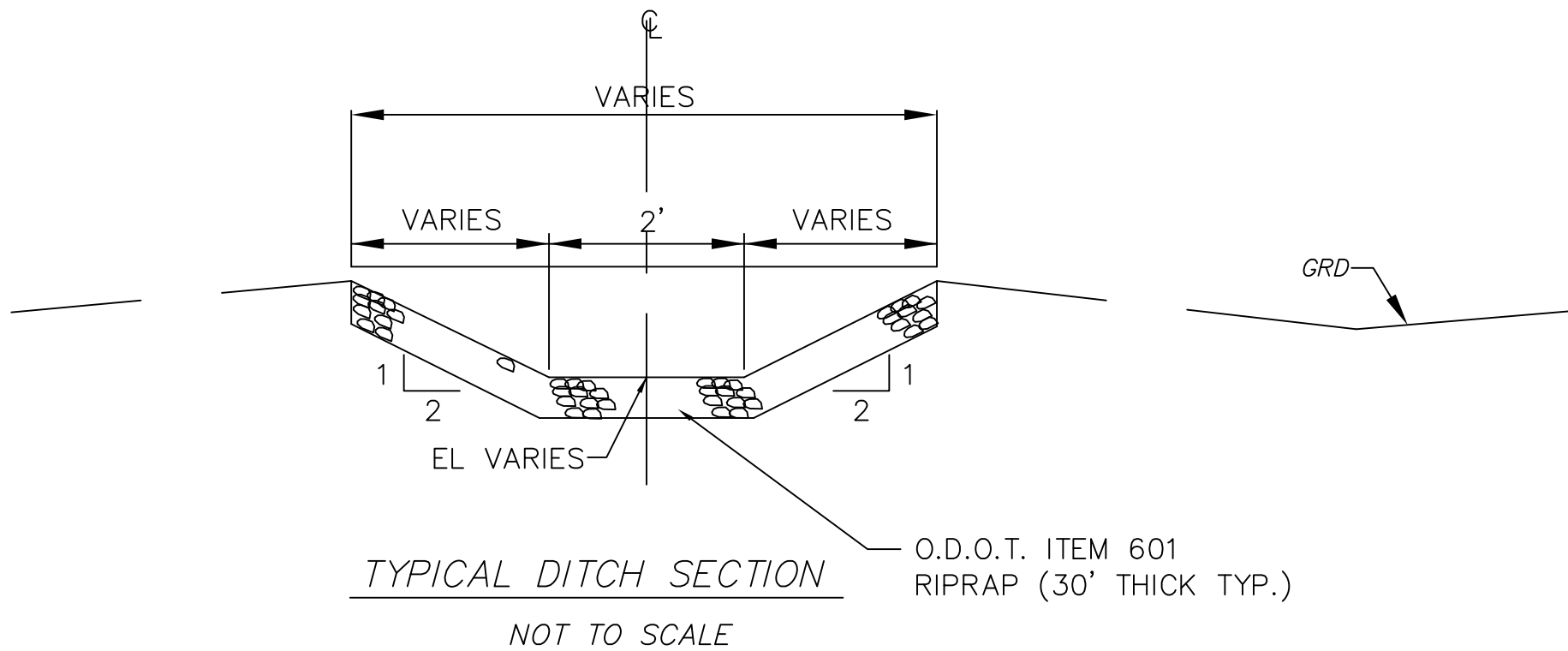
ODOT NO 1 HEADWALL
STA. 608+54.00
N 403924.6879
E 2239279.2013

FOR PROFILE NO 1
SEE SHEET C35

ODOT NO 1 HEADWALL
STA. 607+10.00
N 403811.2779
E 2239368.4129

18" STORM SEWER

CB 5
STA. 606+10.00
N 403731.2320
E 2239428.3514



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DESIGNED BY				REVISIONS			
NO.	DESCRIPTIONS	DATE	BY	APP'D	DATE	BY	APP'D
1	ADDENDUM NO. 2	9/21	AJP	WAD			

ENVIRONMENTAL, INC.
ENGINEERS IN WATER AND EARTH SCIENCES
UNIONTOWN, OHIO

CITY OF MASSILLON, OHIO
WWTP UPGRADE 2000
STORM SEWER
OUTFALL PLAN

JOB NO. E9031
DATE 9/21/01
SCALE 1" = 20'
SHEET C36

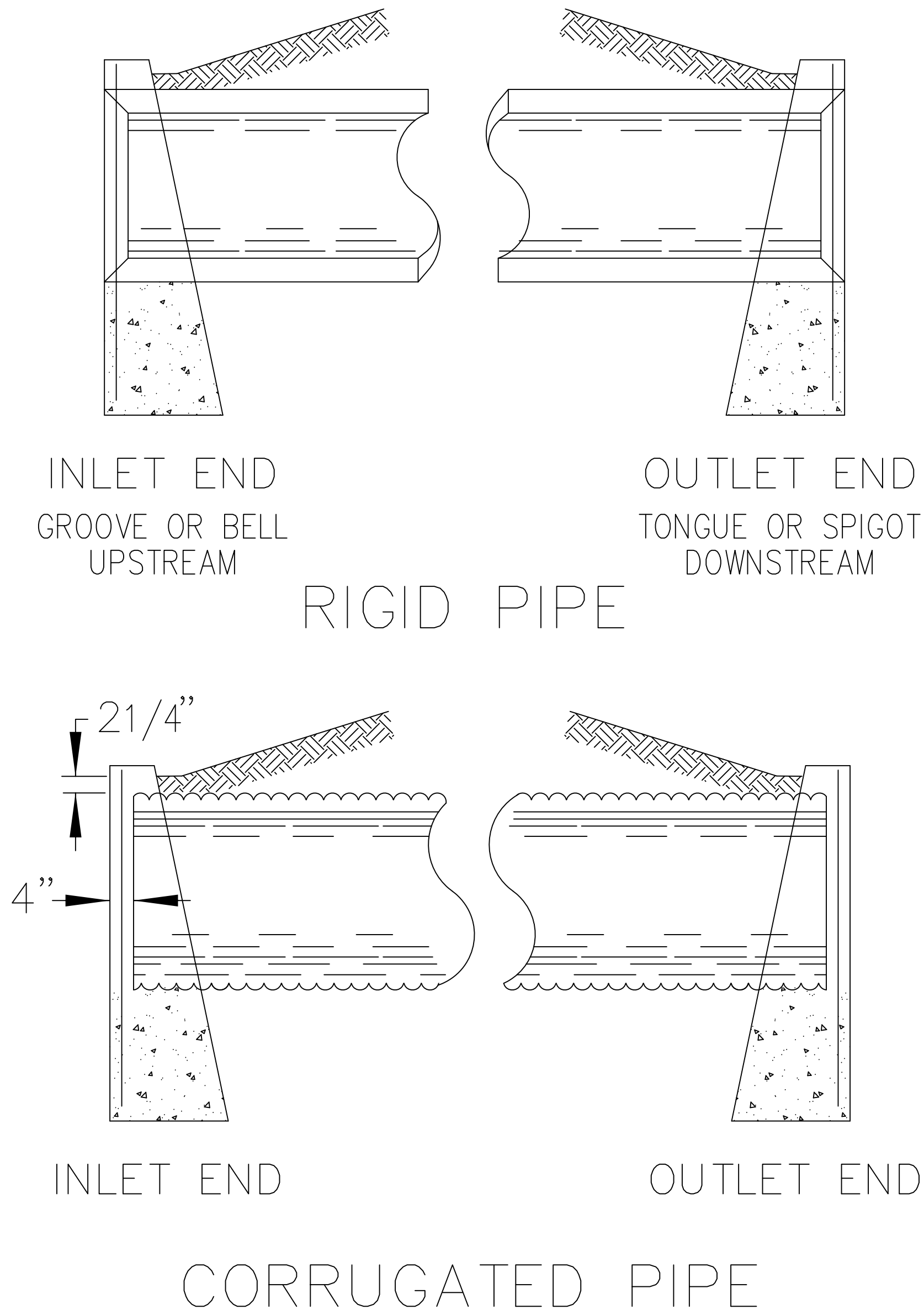
DIMENSIONS			QUANTITIES ONE HEADWALL	
DIAMETER	H	L	CONCRETE CU. YDS.	REINFORCING STEEL LBS.
15"	5'-2"	7'-0"	1.7	41
18"	5'-5"	8'-4"	2.2	57
21"	5'-8"	9'-8"	2.8	62
24"	5'-11"	11'-0"	3.3	69
30"	6'-5"	13'-8"	4.7	92
36"	7'-0"	16'-4"	6.5	105

L CIRCULAR SECTIONS = $5D + Rt$
L ELLIPTICAL OR PIPE-ARCH = $4R + 4t + 3$
H CIRCULAR SECTIONS = $D + t + 44"$
H ELLIPTICAL OR PIPE-ARCH = $R + t + 44"$

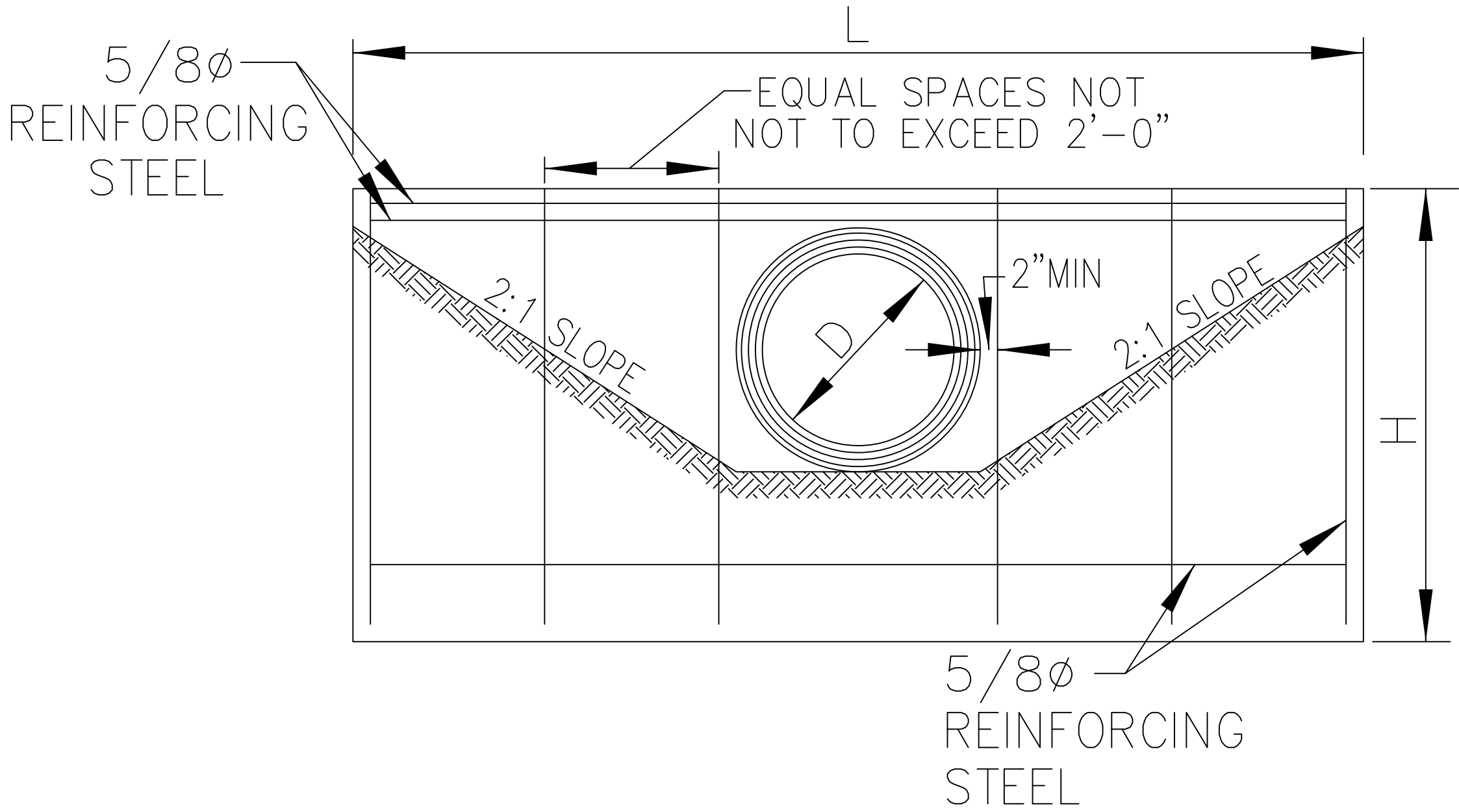
D= DIAMETER OF PIPE
R= RISE OF PIPE
S= SPAN OF PIPE
T= THICKNESS OF BARREL
L= LENGTH OF HEADWALL
H= HEIGHT OF HEADWALL

NOTES
No. 1 HEADWALL Where required will be provided for nonskewed culverts having a diameter or rise of 36 inches or less.
CONCRETE shall be Class "C"
REINFORCING STEEL BARS shall be 5/8 inch round.
DIMENSIONS 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.

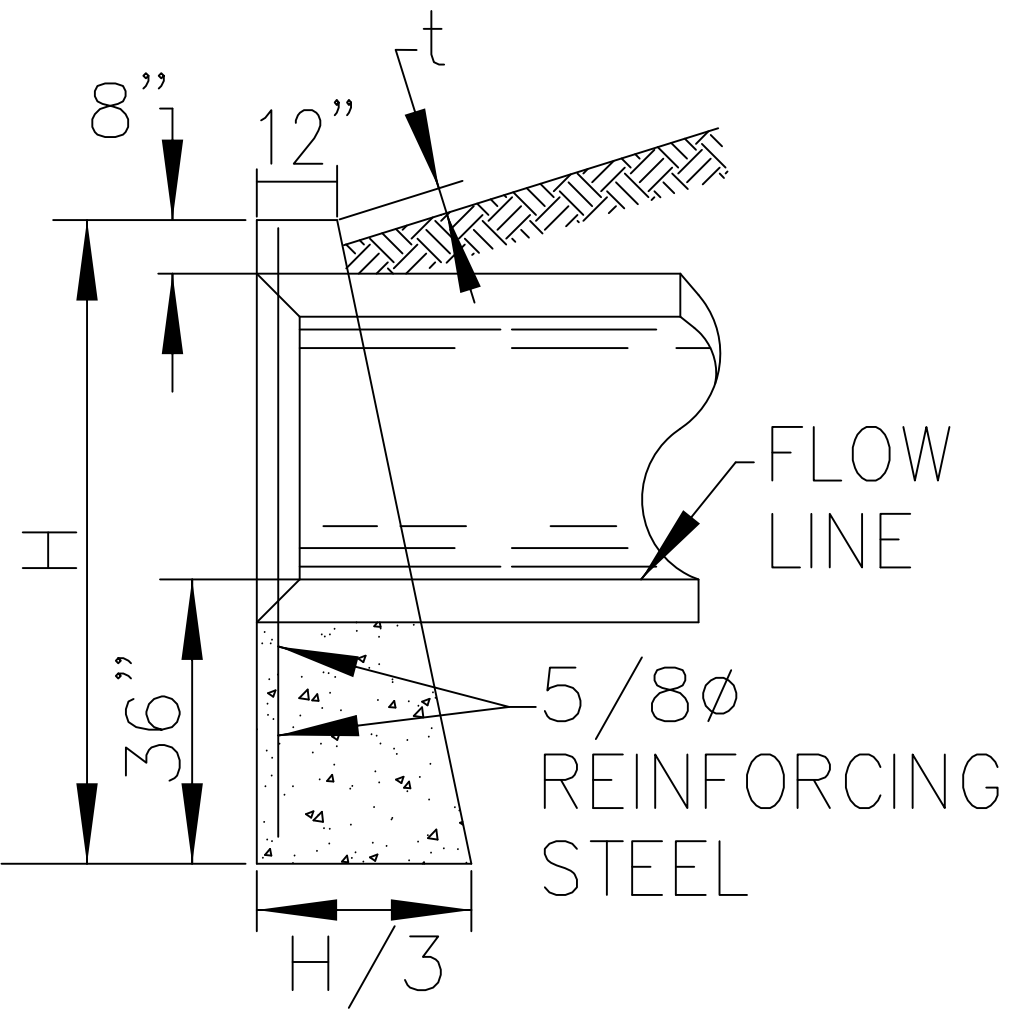
FOUNDATION. Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot, it will be necessary to increase the width of the base.



END TREATMENT AT HEADWALL



ELEVATION



SECTION A-A

STANDARD No. 1 HEADWALL