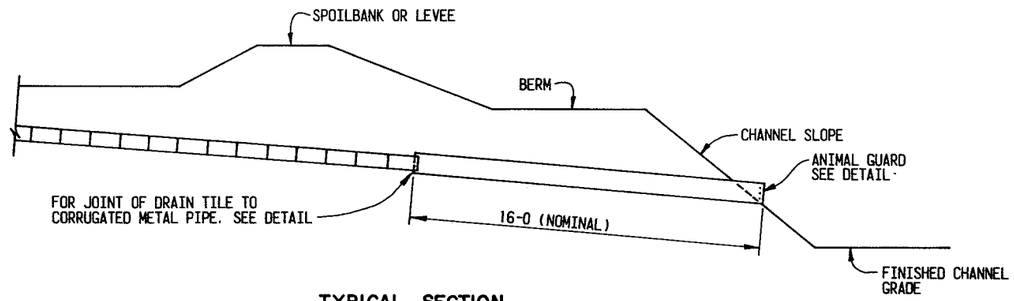
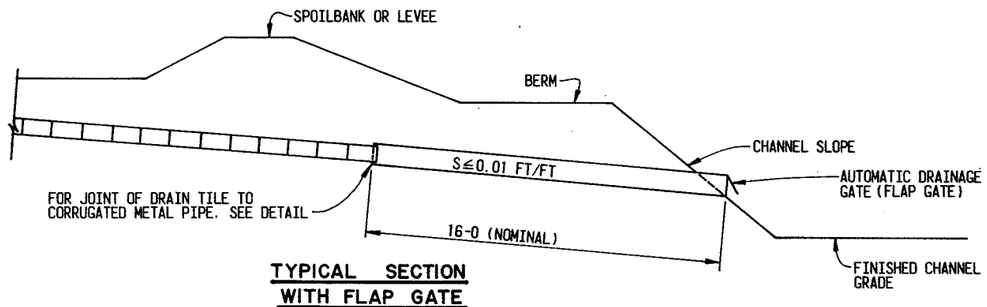
SCHEDULE FOR TILE AND TILE OUTLET PIPES								
Structure No.	Station	Bank	Existing Tile Diam.	Approx. Lin. ft. of Tile Needed To Extend	C.M. Pipe Diam. to be Installed	Outlet: F=Flap Gate A=Animal Guard		



TYPICAL SECTION WITH ANIMAL GUARD



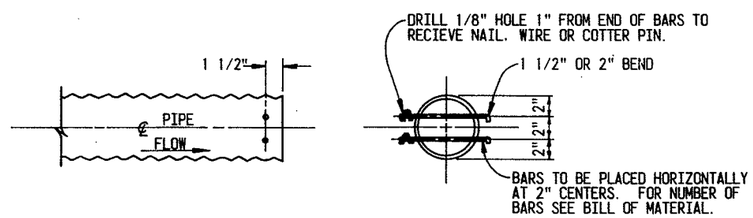
TYPICAL SECTION WITH FLAP GATE

NOTES:

1. TILE OUTLETS SHALL BE PROVIDED ON ALL TILES EXPOSED DURING CONSTRUCTION OPERATIONS. TILE OUTLETS LISTED ON THE SCHEDULE ARE THOSE FOUND DURING THE DETAIL PLANNING. AND IS NOT NECESSARILY A COMPLETE LIST OF ALL TILE OUTLETS TO BE INSTALLED.
2. EXISTING TILE LINES WILL BE EXTENDED WHERE NECESSARY WITH THE SAME SIZE TILE AS DIRECTED BY THE ENGINEER.
3. GRADE WILL BE SPECIFIED BY THE ENGINEER.
4. THE ENGINEER WILL SPECIFY OUTLET INVERT ELEVATIONS.
5. CORRUGATED METAL PIPE. SHALL BE MADE OF ALUMINUM OR ZINC COATED IROM OR STEEL AND SHALL BE SHAPE 1. CLASS I OR II.
6. ANIMAL GUARDS AND DRAINAGE GATES SHALL BE OF THE SAME MATERIAL AS THE PIPE.

BILL OF MATERIAL FOR ANIMAL GUARD			
C.M. Pipe Diam.	Bar Size	Number of Bars	Length
6"	#3 OR #4	2	1-0
8"	#3 OR #4	3	1-3
10"	#3 OR #4	4	1-6
15"	#3 OR #4	6	2-0

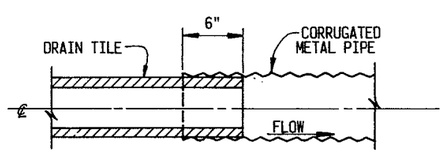
ALL HOLES IN PIPE TO RECEIVE BARS SHALL BE 9/16" DIAMETER.



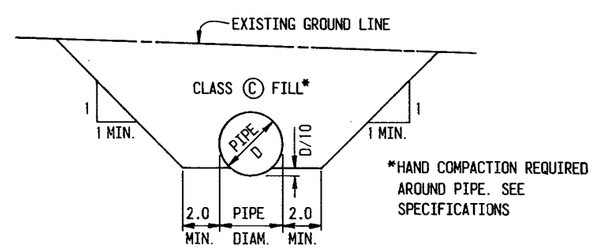
DETAILS OF ANIMAL GUARD

AT CONTRACTOR'S OPTION A COMMERCIAL ANIMAL GUARD ACCEPTABLE TO THE ENGINEER MAY BE INSTALLED IN LIEU OF THE ANIMAL GUARD SHOWN.

SIZE RELATIONSHIPS BETWEEN TILE AND TILE OUTLET	
Tile Size	C.M.P. Tile Outlet Size
4"	6"
5" OR 6"	8"
8"	10"
10"	12"
12"	15"



SECTION ON ℄ SHOWING DETAIL OF JOINT FOR DRAIN TILE AND C.M. PIPE



TYPICAL EXCAVATION AND BACKFILL FOR PIPE INSTALLATION

DETAILS OF TILE OUTLET PIPES FOR EXISTING DRAIN TILE

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed ____ Date ____ Approved by ____ Title ____
Drawn ____ Title ____
Traced ____ Sheet No. ____ of ____ Drawing No. ____
Checked ____

MICHIGAN ENGINEERING DESIGN SECTION
MICH. STANDARD DRWG. NO. SO-E-0040
SHEET 1 OF 1 DATE: 2/19/75