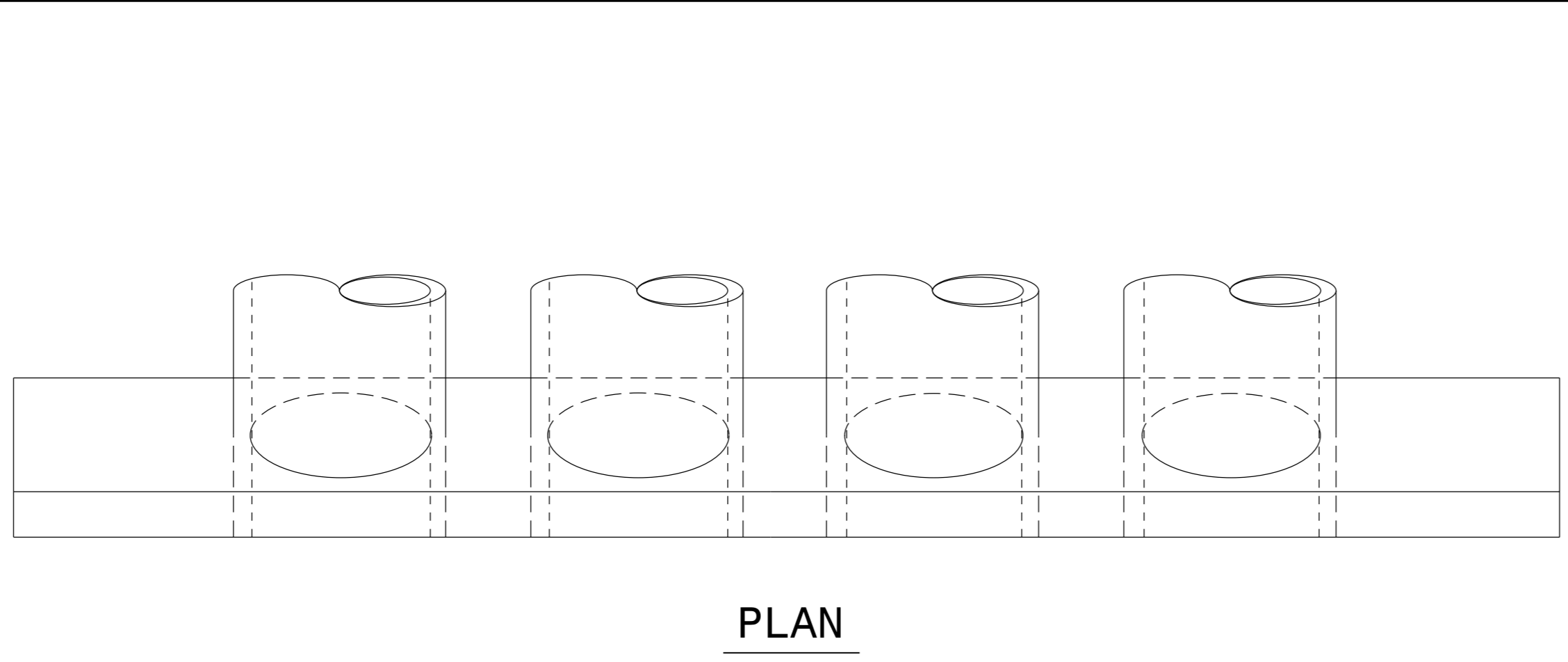


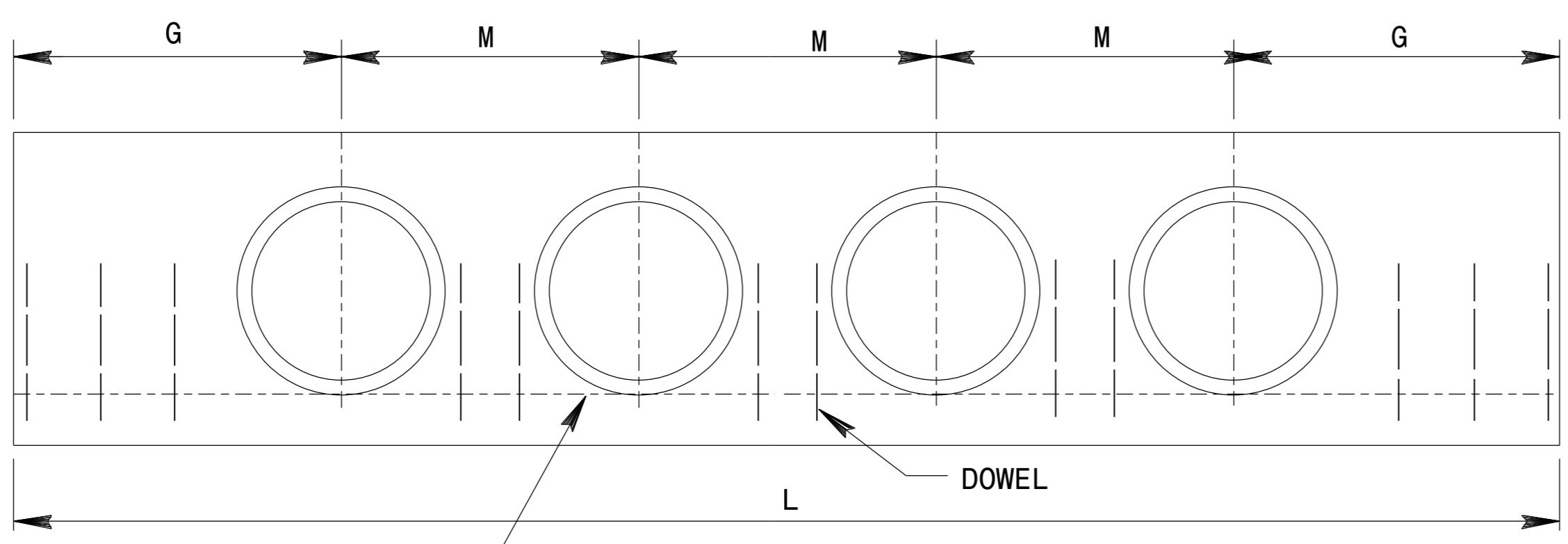
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**CONCRETE ENDWALL FOR TRIPLE AND  
QUADRUPLE PIPE CULVERTS**  
15" THRU 48" PIPE - 90° SKEW

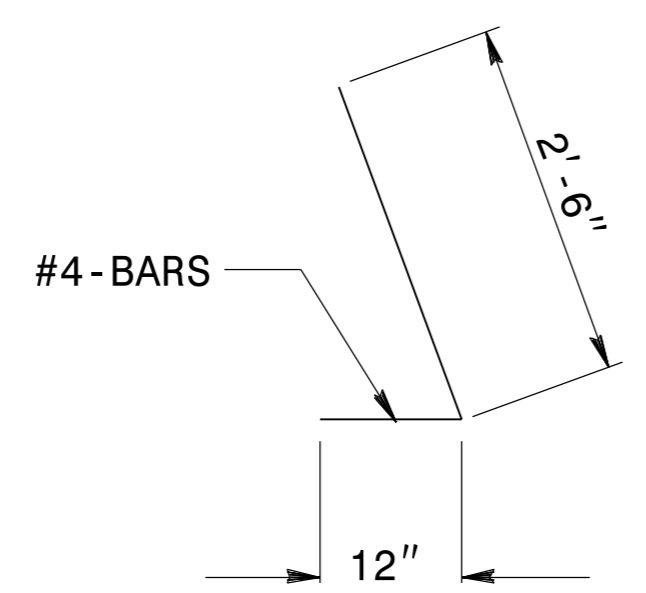
SHEET 1 OF 3  
**838D01**



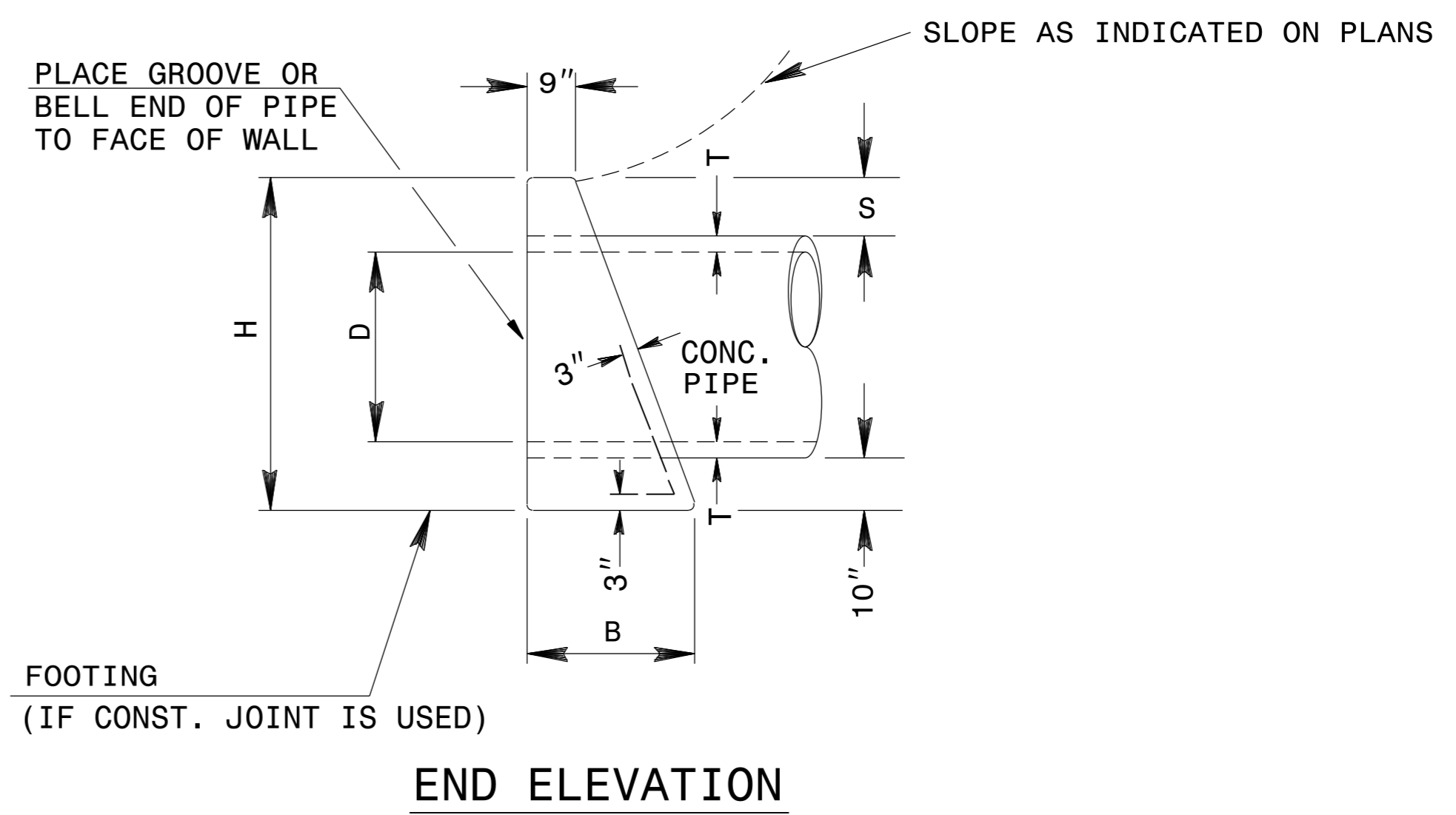
PLAN



ELEVATION



DOWEL  
BAR - "X"



END ELEVATION

DIMENSIONS AND CONCRETE QUANTITIES										
USING CONCRETE PIPE										
D	COMMON DIMENSIONS					TRIPLE PIPE		QUADRUPLE PIPE		M
	H	B	G	T	S	L	YD <sup>3</sup>	L	YD <sup>3</sup>	
15"	3'-3"	1'-8"	2'-9"	2 1/4"	9 1/2"	9'-10"	1.3	12'-0"	1.6	2'-2"
18"	3'-7"	1'-10"	3'-2"	2 1/2"	10"	11'-6"	1.6	14'-1"	1.9	2'-7"
24"	4'-2"	2'-1"	4'-0"	3"	10"	14'-10"	2.5	18'-3"	3.0	3'-5"
30"	5'-0"	2'-6"	4'-7"	4 1/4"	11 1/2"	17'-8"	3.9	21'-11"	4.7	4'-3"
36"	5'-8"	2'-8"	5'-6"	4 3/4"	12 1/2"	21'-0"	5.6	26'-0"	6.7	5'-0"
42"	6'-2"	3'-1"	6'-4"	5 1/4"	11 1/2"	24'-4"	7.5	30'-2"	9.0	5'-10"
48"	6'-9"	3'-5"	7'-2"	5 3/4"	11 1/2"	27'-8"	10.0	34'-4"	12.0	6'-8"

\* NOTE: SEE ROADWAY STANDARD DRAWING 838.01 SHEET 3 OF 3 FOR GENERAL NOTES

DOWELS IN ENDWALL WITH REINFORCED CONCRETE PIPE																
LOC.	PIPE DIA.	TRIPLE PIPE						QUADRUPLE PIPE								
		15"	18"	24"	30"	36"	42"	48"	15"	18"	24"	30"	36"	42"	48"	
G	BARS	"X"	"X"	"X"	"X"	"X"	Y*	"X"	Y*	"X"	"X"	"X"	"X"	Y*	"X"	Y*
G	QTY.	2	2	3	3	4	4	5	2	2	3	3	4	4	5	2
M(s)	QTY.	2	2	4	4	4	4	6	2	3	3	6	6	6	9	2
G	QTY.	2	2	3	3	4	4	5		2	2	3	3	4	5	
TOTAL LBS.		14	14	23	23	28	100	119		17	17	28	28	33	122	147

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15" THRU 48" PIPE - 90° SKEW

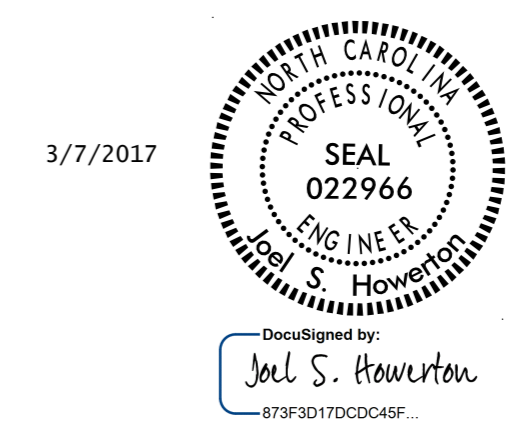
SHEET 1 OF 3  
**838D01**

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS  
AND DEVELOPMENT UNIT  
Office 919-707-6950 FAX 919-250-4119

**SEE PLATE FOR TITLE**

ORIGINAL BY: E.E. WARD DATE: \_\_\_\_\_  
MODIFIED BY: K.A. Kempf DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILE SPEC.: details/kkempf/english/838d0101.dgn



838D01.dwg  
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