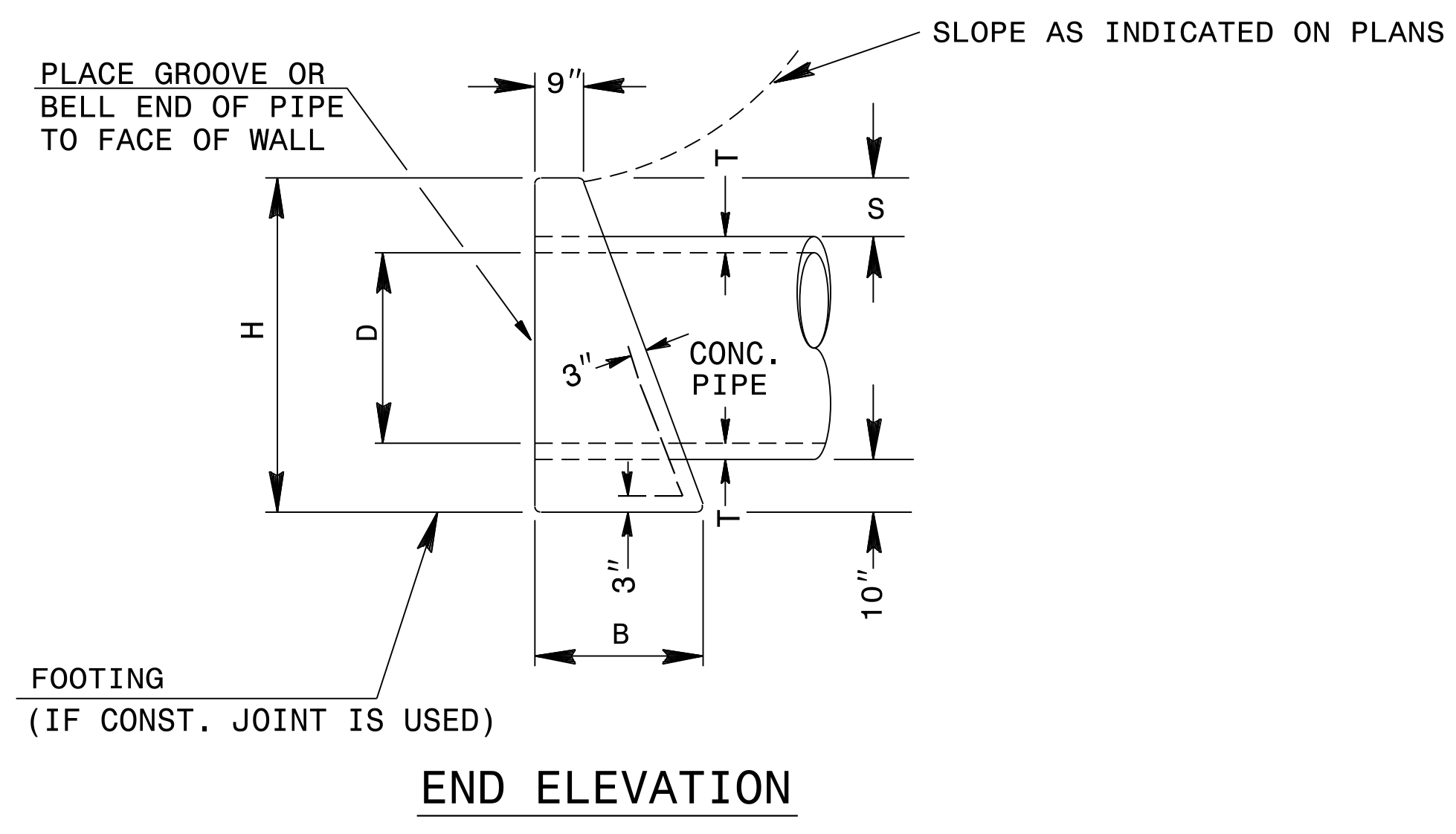
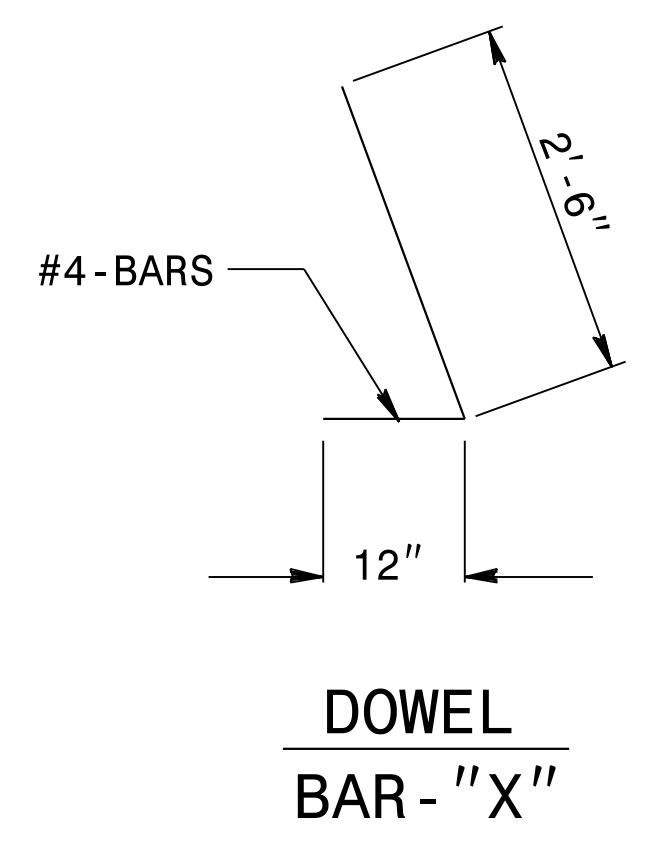
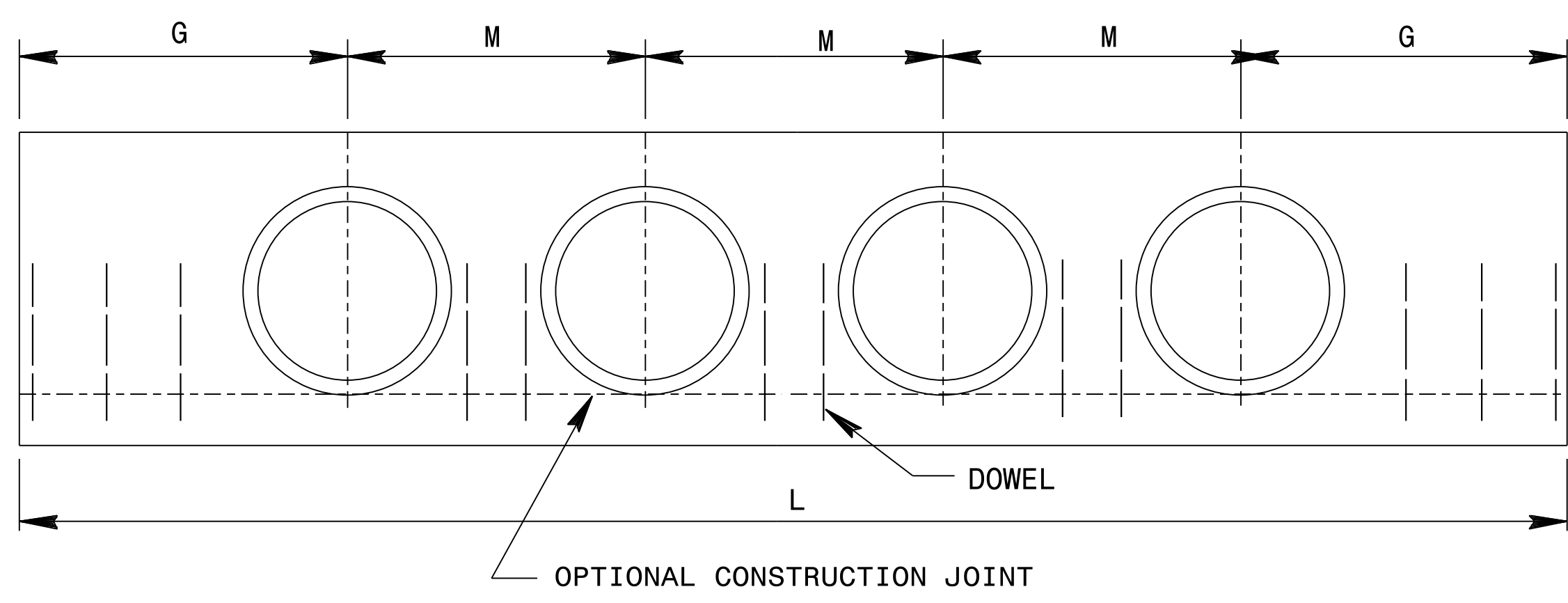
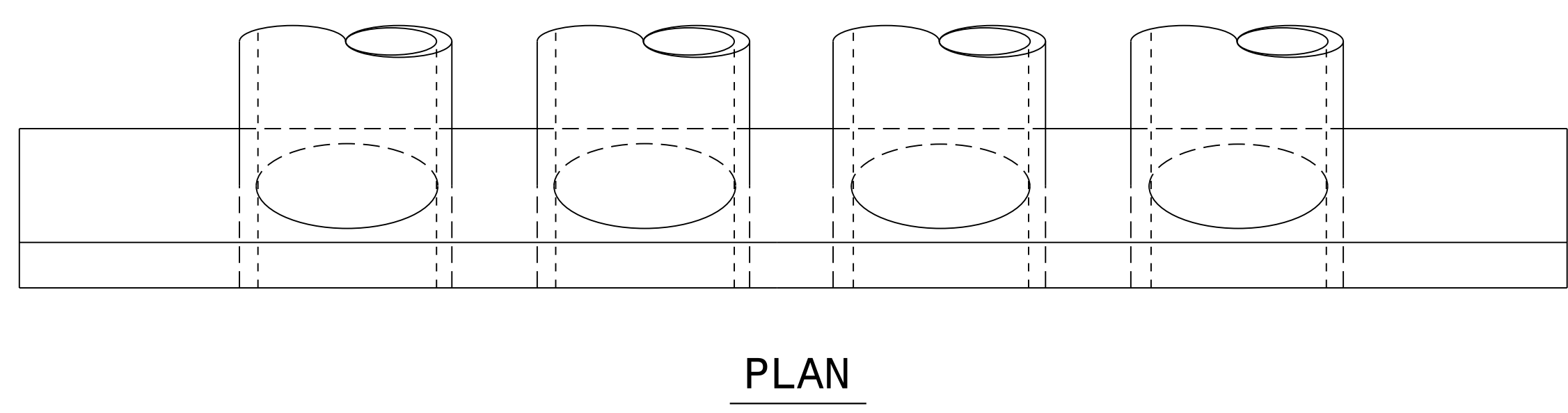


STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

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

SHEET 1 OF 3
838D01



DIMENSIONS AND CONCRETE QUANTITIES										
USING CONCRETE PIPE										
D	COMMON DIMENSIONS					TRIPLE PIPE		QUADRUPLE PIPE		
	H	B	G	T	S	L	YD ³	L	YD ³	M
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

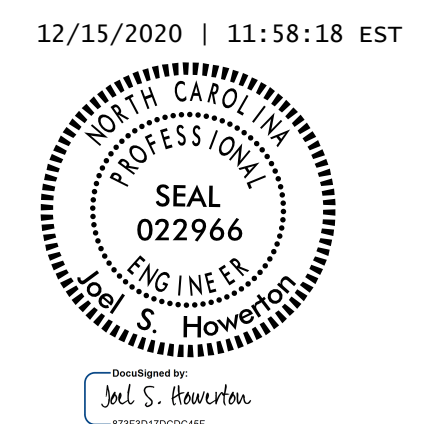
DOWELS IN ENDWALL WITH REINFORCED CONCRETE PIPE																	
LOC.	PIPE DIA.	TRIPLE PIPE						QUADRUPLE PIPE									
		15"	18"	24"	30"	36"	42"	15"	18"	24"	30"	36"	42"	48"			
	BARS	"X"	"X"	"X"	"X"	"X"	"X"	Y*	"X"	Y*	"X"	"X"	"X"	"X"	Y*	"X"	Y*
G	QTY.	2	2	3	3	4	4		5		2	2	3	3	4	4	5
M(s)	QTY.	2	2	4	4	4	4	2	6	2	3	3	6	6	6	6	9
G	QTY.	2	2	3	3	4	4		5		2	2	3	3	4	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

03-MAY-2018 11:22
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