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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5799	3D-4

R024821

Note: Invert Elevations Indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
								THICKNESS OR GAUGE											
		0608	0607		2128.70	2128.40													
-L- 30+84	1 LT	0609		2134.35															
		0609	0608		2131.18	2128.80													
-L- 31+15	27 RT	0610		2134.59															
		0610	0607		2130.20	2128.40													
-L- 31+23	42 LT	0611		2136.07															
		0611	0609		2133.07	2131.28													
-L- 29+92	31 LT	0612		2133.11															
		0612	0608		2129.90	2128.80													
-Y5- 10+97	31 RT	0613		2132.93															
		0613	0616		2129.75	2129.50													
-Y5- 11+18	28 RT	0614		2133.24															
		0614	0613		2130.24	2130.10													
-Y5- 11+21	10 LT	0615		2134.00															
		0615	0616		2130.83	2130.09													
-Y5- 10+93	19 LT	0616		2133.26															
		0616	0617		2129.25	2129.00													
-Y4- 12+85	15 RT	0618		2123.58															
-L- 32+38	23 RT	0623		2137.55															
		0623	0610		2132.10	2130.30													
-L- 30+47	64 LT	0624		2136.22															
		0624	0612		2132.10	2130.00													
-L- 28+92	1 LT	0625		2134.00															
		0625	0629		2131.40	2131.10													
-Y5- 10+80	37 RT	0626		2132.93															
		0626	0613		2129.93	2129.85													
-L- 28+61	31 LT	0627		2134.00															
		0627	0625		2131.75	2131.50													
-L- 28+30	1 RT	0628		2134.00															
		0628	0629		2131.75	2131.50													
-L- 28+63	31 RT	0629		2134.00															
		0629	0602		2126.60	2124.00													
-Y2- 15+71	23 LT	0701		2128.70															
		0701	0702		2125.70	2125.50													
-Y2- 15+72	24 RT	0702		2128.70															
		0702	0708		2125.40	2124.60													
-Y2- 19+71	23 LT	0703		2128.30															
		0703	0704		2125.30	2125.00													
-Y2- 19+71	24 RT	0704		2128.30															
		0704	0709		2124.90	2123.50													
-Y2- 24+18	24 LT	0705		2128.00															
		0705	0706		2121.50	2121.20													
-Y2- 24+18	24 RT	0706		2128.00															
		0706	0710		2121.20	2118.40													
-Y2- 17+17	23 LT	0707		2129.19															
		0707	0708		2126.19	2125.90													
-Y2- 17+16	24 RT	0708		2129.19															
		0708	0711		2124.50	2119.00													
-Y2- 22+36	24 RT	0709		2128.60															
		0709	0706		2123.40	2122.50													
						SHEET TOTAL													

STRUCTURE NUMBER FROM	C.S. PIPE 12	15	18	24	30	36	42	48
THICKNESS OR GAUGE	0.064	0.064	0.064	0.064	0.079	0.079	0.109	0.109
0608								
0609								
0609								
0610								
0611								
0611								
0612								
0612								
0613								
0613								
0614								
0614								
0615								
0615								
0616								
0616								
0618								
0623								
0623								
0624								
0624								
0625								
0625								
0626								
0626								
0627								
0627								
0628								
0628								
0629								
0629								
0701								
0701								
0702								
0702								
0703								
0703								
0704								
0704								
0705								
0705								
0706								
0706				52				
0707								
0707								
0708								
0708				32				
0709								
0709								
SHEET TOTAL				84				

STRUCTURE NUMBER FROM	R.C. PIPE CLASS III 12	15	18	24	30	36	42	48
0608								
0609								
0609								
0610				120				
0611								
0611								
0612								
0612								
0613								
0613								
0614								
0614								
0615								
0615								
0616								
0616								
0618								
0623								
0623				124				
0624								
0624								
0625								
0625								
0626								
0626								
0627								
0627								
0628								
0628								
0629								
0629								
0701								
0701								
0702								
0702								
0703								
0703								
0704								
0704								
0705		48						
0705								
0706								
0706								
0707								
0707								
0708								
0708								
0709								
0709		180						
SHEET TOTAL		228		244				

STRUCTURE NUMBER FROM	R.C. PIPE CLASS IV 15	18	24	30	R.C. PIPE CLASS V 15	18	24	30
0608							32	
0609								
0609	92							
0610								
0611								
0611					56			
0612								
0612						28		
0613								
0613	48							
0614								
0614	20							
0615								
0615	28							
0616								
0616		20						
0618								
0623								
0623								
0624								
0624		68						
0625								
0625	44							
0626								
0626	16							
0627								
0627	44							
0628								
0628	44							
0629								
0629			180					
0701								
0701					44			
0702								
0702	144							
0703								
0703					44			
0704								
0704	264							
0705								
0705								
0706								
0706								
0707								
0707					48			
0708								
0708								
0709								
0709								
SHEET TOTAL	744	88	180		192	28	32	

STRUCTURE NUMBER FROM	ENDWALLS STD. 838.01 OR STD.838.11 (UNLESS OTHERWISE NOTED) CY	REINFORCED ENDWALLS CY	MASONRY DRAINAGE STRUCTURE CY	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.
0608							
0609							
0609							
0610							
0611							
0611							
0612							
0612							
0613							
0613							
0614							
0614							
0615							
0615							
0616							
0616							
0618							
0623							
0623							
0624							
0624							
0625							
0625							
0626							
0626							
0627							
0627							
0628							
0628							
0629							
0629							
0701							
0701							
0702							
0702							
0703							
0703							
0704							
0704							
0705							
0705							
0706							
0706							
0707							
0707							
0708							
0708							
0709							
0709							
SHEET TOTAL							

STRUCTURE NUMBER FROM	QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') PER EACH (0' THRU 5.0')	LIN.FT. A 5.0' THRU 10.0'	LIN.FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 3 GRATES STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	T.B. J.B. STD. 840.34	T.B.G.D.I. STD. 840.36	STEEL FRAME AND TWO GRATES STD. 840.37	STEEL FRAME AND GRATE STD. 840.37	M.H. STD. 840.51, STD. 840.52, OR STD.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO C.B.	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING J.B. TO J.B.	CONVERT EXISTING J.B. TO 2 G.I.	CONVERT C.B. TO D.I.	ADJUST EXISTING MANHOLE	ADJUST EXISTING C.B.	ADJUST D.I.	ADJUST 2GI	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	42" C.S. ELBOW	48" C.S. ELBOW	BERM DITCH OUTLET STD. 840.10 (PER EACH)	BERM DITCH OUTLET STD. 840.11 (PER EACH)	CONC. COLLARS CL. "B" C.Y. STD. 840.72	FLOWABLE FILL, C.Y.	CONC. & BRICK PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
0608																																																				
0609	1							1		1	1																																									
0609																																																					
0610	1	0.14		1			1																																													
0610																																																					
0611	1			1		1																																															
0611																																																					
0612	1			1	1																																																
0612																																																					
0613	1			1	1																																																80	REMOVE EXIST. D.I. (2), REMOVE EXIST JB, REMOVE EXIST. METAL GRATE, REMOVE 80 LF OF EXIST. 18" CMP
0613																																																					
0614	1			1			1																																														
0614																																																					
0615	1							1		1	1																																									
0615																																																					
0616	1							1		1	1																																									34	FIELD ADJ. D.I. FOR ISLAND AS NEEDED, REMOVE EXIST. CB, REMOVE 34 LF OF EXIST. 18" CMP
0616																																																					
0618	1									1	1																																									
0623	1	0.45		1			1																																													323	REMOVE EXIST. CB, REMOVE 323 LF OF EXIST. 24" RCP
0623																																																					
0624	1			1		1																																														143	REMOVE EXIST. CB, REMOVE 143 LF OF EXIST. 18" CMP
0624																																																					
0625	1									1	1																																									103	REMOVE EXIST. CB, REMOVE 103 LF OF EXIST. 24" RCP
0625																																																					
0626	1			1		1																																														
0626																																																					
0627	1									1	1																																									
0627																																																					
0628	1									1	1																																									
0628																																																					
0629	1									1	1																																									
0629																																																					
0701	1			1	1																																															88	REMOVE EXIST. HW, REMOVE 88 LF OF EXIST. 8" HDPE
0701																																																					
0702	1			1	1																																															34	REMOVE 34 LF OF EXIST. 8" HDPE
0702																																																					
0703	1			1	1																																															
0703																																																					
0704	1			1	1																																															
0704																																																					
0705	1	1.50		1	1																																															
0705																																																					
0706	1	2.05		1	1																																															
0706																																																					
0707	1			1			1																																														
0707																																																					
0708	1			1		1																																														12	REMOVE 12 LF OF EXIST. 8" HDPE
0708																																																					
0709	1	0.20		1		1																																														
0709																																																					
SHEET TOTAL	25	4.3		17	8	5	4	3		8	8																																								817	

ABBREVIATIONS

C.A.A - CORRUGATED ALUMINUM INLET
C.B - CATCH BASIN
C.S. - CORRUGATED STEEL
D.I. - DROP INLET
G.D.I. - GRATED DROP INLET
P.D.P.E. - HIGH DENSITY POLYETHYLENE
J.B. - JUNCTION BOX
M.H. - MANHOLE
N.S. - NARROW SLOT
P.V.C. - POLYVINYL CHLORIDE
R.C. - REINFORCED CONCRETE
T.B.D.I. - TRAFFIC BEARING DROP INLET
T.B.J.B. - TRAFFIC BEARING JUNCTION BOX
W.S. - WIDE SLOT