COMPUTED BY:	SMB	DATE:	04/21/2021
CHECKED BY:	DM	DATE:	04/21/2021

PROJECT NO.	SHEET NO.
R-2233BB	3D-7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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 (%)	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 15	Drainage Pipe 18	Drainage Pipe 24	Drainage Pipe 30	Drainage Pipe 36	Drainage Pipe 42	Drainage Pipe 48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C.S. Pipe 12 (.064)	C.S. Pipe 15 (.064)	C.S. Pipe 18 (.064)	C.S. Pipe 24 (.064)	C.S. Pipe 30 (.079)	C.S. Pipe 36 (.079)	C.S. Pipe 42 (.109)	R.C. Pipe Class III 12	R.C. Pipe Class III 15	R.C. Pipe Class III 18	R.C. Pipe Class III 24	R.C. Pipe Class III 30	R.C. Pipe Class III 36	R.C. Pipe Class III 42	R.C. Pipe Class III 48	R.C. Pipe Class IV 12	R.C. Pipe Class IV 18	R.C. Pipe Class IV 30	R.C. Pipe Class IV 36
L3 824+15	0 CL	1001		986.4																																		
		1001	1020		973.6	968.6	1.1																							64								
L3 824+15	72 RT	1002		985.2																																		
		1002	1001		980.5	973.6	1.0																							72								
L3 824+15	93 RT	1003		988.0																																		
		1003	1002		984.0	980.5	3.5																	24														
L3 823+55	157 RT	1004		997.0																																		
		1004	1003		993.5	984.0	2.7																	88														
L3 822+28	92 LT	1006		978.5																																		
		1006	1005		967.8	967.0	0.4				144					X	X																					
L3 827+78	56 LT	1008		997.9																																		
		1008	1007		989.7	945.0	1.5															128																
L3 827+78	0 CL	1009		993.6																																		
		1009	1008		990.3	989.7	1.0																					56										
L3 827+78	56 RT	1010		994.9																																		
		1010	1009		991.3	990.3																						56										
L3 827+88	56 RT	1011		995.0																																		
		1011	1010		992.3	992.2		8								X	X																					
L3 830+59	210 LT	1012		974.0																																		
		1012	1013		969.0	959.0	1.6																	68														
L3 830+19	155 LT	1013		964.0																																		
		1013	1021		959.0	939.0	2.4																		156													
L3 831+47	135 LT	1015		976.5																																		
		1015	1013		972.0	959.0	2.3																	132														
L3 832+37	176 RT	1016		966.0																																		
		1016	1017		954.0	951.5	3.5				20				X																							
L3 831+80	191 RT	1018		967.6																																		
		1018	1019		955.6	951.0	4.2	24							X																							
L3 824+15	66 LT	1020		973.0																																		
		1020	1000		968.6	967.0	1.1			44						X	X																					
L3 828+69	180 LT	1021		943.5																																		
		1021	1014		939.0	938.0	2.6																		32													
L3 833+00	151 RT	1022		961.0																																		
		1022	1016		961.0	955.0					68																											
L3 836+46	90 RT	1023	1024		989.5	973.0																																
L3 826+10	58 LT	1025		994.5																																		
		1025	1026		989.5	973.0															48																	
L3 833+50	69 LT	1027		1009.5																																		
		1027	1028		1004.5	986.4															60																	
Y3 20+49	5 LT	1102		1065.1																																		
		1102	1101		1062.0	1054.0																						84										
Y3 21+75	39 LT	1103		1063.1																																		
		1103	1104		1060.0	1052.5																						172										
RPA 24+00	15 LT	1106		1046.6																																		
RPA 16+09	39 RT	1107		1016.3																																		
		1107	1108		1013.3	1011.7																							72									
RPA 16+09	33 LT	1108		1018.9																																		
		1108	1127		1011.7	1010.7	1.0																							92								
Y3 25+00	8 RT	1109		1063.2																																		
		1109	1110		1060.2	1056.5																						64										
SHEET TOTALS								32		44	232										108	128	312	188				432	72	228								
PROJECT TOTALS								2484	1796	1328	1036	264	32								2012	2360	784	648	672	588		14496	6076	4800	3316	1700	1256	544		172	272	36

From	To	42" WELDED STEEL PIPE 0.625" THICK, GRADE B IN SOIL	36" WELDED STEEL PIPE 0.500" THICK, GRADE B NOT IN SOIL	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) (CY)	DRAINAGE STRUCTURE MASONRY (CY)	Quantities for Drainage Structures 0' THRU 5' (EACH)	A 5' THRU 10' (LIN. FT.)	B 10' AND ABOVE (LIN. FT.)	C.B. STD. 840.01 OR STD. 840.02	Frame, Grates, and Hood STD. 840.03 Grate Type E	Grate Type F	Grate Type G	Concrete Transitional Section D.I. STD. 852.04 OR STD. 852.06	Concrete Transitional Section C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29
1001						1	5.0	2.8										1						1			
1001	1020																										
1002						1												1						1			
1002	1001																										
1003						1									1												
1003	1002																										
1004						1										1	1										
1004	1003																										
1006						1	5.0	0.7																			
1006	1005																										
1008						1	3.2												1			1					
1008	1007																										
1009						1													1					1			
1009	1008																										
1010						1													1			1					
1010	1009																										
1011						1													1			1					
1011	1010																										
1012						1									1												
1012	1013																										
1013						1									1												
1013	1021																										
1015						1									1												
1015	1013																										
1016						1	5.0	2.0																			
1016	1017																										
1018						1	5.0	2.0							1												
1018	1019																										
1020						1																					
1020	1000																										
1021						1									1												
1021	1014																										
1022				2.300																							
1022	1016																										
1023	1024					1																					
1025						1													1			1					
1025	1026																										
1027						1													1			1					
1027	1028																										
1102						1																					
1102	1101																										
1103						1																					
1103	1104																										
1106						1							1			1	1										
1107						1													1					1			
1107	1108																										
1108						1	2.3											1						1			
1108	1127																										
1109						1																					
1109	1110																										
SHEET TOTALS				2.300		25	25.5	7.5					1		6	2	2	3	7			5		5			
PROJECT TOTALS		552	692	41.400		435	546.7		75	6	42	27	34		28	54	54	37	176	3		39		172		7	1

From	To	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	8" SLUICE GATE	8" HDPE SPRING BOX PIPE (LIN. FT)	SPRING BOX STD. 840.41	M.H. STD 840.51, STD 840.52, OR STD 840.53	M.H. FRAME AND COVER STD. 840.54	15" C.S. ELBOW	18" C.S. ELBOW	BERM DRAIN OUTLET STD. 850.10 (CY)	BERM DRAIN OUTLET STD. 850.11 (CY)	ENERGY DISSIPATION BASIN	PIPE CLEANOUT (EA)	FLOWABLE FILL (CY)	CONCRETE COLLARS CL. "B" STD. 840.72 (CY)	CONCRETE AND BRICK PIPE PLUG STD. 840.71 (CY)	PIPE REMOVAL (LIN. FT.)	REMARKS
1001																						
1001	1020																					
1002																						
1002	1001																					
1003																						
1003	1002																					
1004																						
1004	1003																					
1006		1									1											
1006	1005																					
1008																						
1008	1007												1									
1009																						
1009	1008																					
1010																						
1010	1009																					
1011																						
1011	1010																					
1012																						
1012	1013																					
1013																						
1013	1021																					
1015																						
1015	1013																					
1016		1									1											
1016	1017																					
1018																						
1018	1019																					
1020		1									1											
1020	1000															1						
1021																						
1021	1014																					
1022																						
1022	1016																					
1023	1024							44	1													
1025																						
1025	1026											1										
1027																						
1027	1028											1										
1102					1	1																SEE SHEET 2C DETAILS
1102	1101																					
1103					1	1																SEE SHEET 2C DETAILS
1103	1104																					
1106																						
1107																						
1107	1108																					
1108																						
1108	1127																					
1109					1	1																SEE SHEET 2C DETAILS
1109	1110																					
SHEET TOTALS		3			3	3		44	1		3	2	1			1						
PROJECT TOTALS		42	1	3	15	15	2	44	1		40	16	14	44	93	15	4	137	6.4125	0.624	4653	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.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

PC0U60HU