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TGSBEN-LAPTOP

COMPUTED BY:	BAC	DATE:	04-20-21
CHECKED BY:	BJH	DATE:	04-20-21

PROJECT NO.	SHEET NO.
15614.1075010	3D-4

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	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE (ALUMINIZED TYPE 2) 12 (0.079)	C.S. 15 (0.079)	C.S. 18 (0.079)	C.S. 24 (0.109)	C.S. 30 (0.138)	C.S. 36 (0.138)	C.S. 42 (0.168)	C.S. 48 (0.168)	R. C. PIPE CLASS IV 12	R.C. 15	R.C. 18	R.C. 24	R.C. 30	R.C. 36	R.C. 42	R.C. 48
I26 484+20	71 RT	0714																					
		0714	0719																				
I26 486+51	59 LT	0715																					
		0715	0716																				
I26 486+20	0 CL	0716		1807.0																			
		0716	0712		1791.9	1781.5	0.5															216	
I26 483+45	3 RT	0717		1796.5																			
		0717	0710																				
I26 481+51	96 RT	0718																					
		0718	0711		1783.5	1778.8	0.8				32												
I26 483+52	10 RT	0719		1785.1																			
		0719	0717		1781.1	1780.4													8				
I26 489+24	59 LT	0801																					
		0801	0802																				
I26 489+07	1 LT	0802		1819.3																			
		0802	0716		1805.0	1792.4	0.5														284		
I26 489+30	71 RT	0803																					
		0803	0802																				
I26 491+63	0 CL	0804		1829.7																			
		0804	0802		1820.8	1805.5	0.3													252			
I26 491+87	71 RT	0805																					
		0805	0804																				
I26 494+71	59 LT	0806																					
		0806	0807																				
I26 494+53	1 RT	0807		1838.8																			
		0807	0804		1831.4	1820.8														288			
I26 494+98	71 RT	0808																					
		0808	0807																				
I26 497+20	59 LT	0809																					
		0809	0810																				
I26 497+24	1 RT	0810		1846.0																			
		0810	0807		1838.1	1831.4														268			
I26 497+71	71 RT	0811																					
		0811	0810																				
HGR 37+28	796 LT	0902		1151.0																			
		0902	0901		1137.4	1135.6	4.3					32											
HGR 36+45	660 LT	0903		1184.3																			
		0903	0902		1175.9	1143.2	4.3					164											
HGR 36+04	624 LT	0904		1209.2																			
		0904	0903		1201.9	1177.9	4.3					64											
HGR 35+11	461 LT	0905		1277.7																			
		0905	0910		1267.5	1241.0	4.3					68											
HGR 34+33	331 LT	0906		1318.2																			
		0906	0912		1310.2	1296.6	4.3					72											
HGR 34+96	245 LT	0907		1345.9																			
		0907	0906		1338.6	1313.0	4.3					108											
HGR 35+60	158 LT	0908		1358.7																			
		0908	0907		1350.7	1339.6	4.3					108											
HGR 35+54	589 LT	0909		1226.4																			
		0909	0904		1217.1	1202.9	4.3					64											
							SHEET TOTALS				32	680							8	808	284	216	

FROM	TO	15" PIPE REHABILITAION CIPP LINER	18" PIPE REHABILITAION CIPP LINER	18" PIPE REHABILITATION SMOOTH WALL STEEL SLIP LINER (0.5" THICK)	24" PIPE REHABILITAION CIPP LINER	30" PIPE REHABILITAION CIPP LINER	36" PIPE REHABILITAION CIPP LINER	42" PIPE REHABILITAION CIPP LINER	42" PIPE REHABILITAION SOLID WALL THERMOPLASTIC SLIP LINER	18" WELDED STEEL PIPE 0.5" THICK, GRADE B IN SOIL	18" WELDED STEEL PIPE 0.5" THICK, GRADE B NOT IN SOIL	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 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	F	G
0714																			
0714	0719				92														
0715																			
0715	0716		68																
0716													1	5.0	5.1				
0716	0712																		
0717													1	5.0	7.6				
0717	0710							140											
0718																			
0718	0711																		
0719													1						
0719	0717																		
0801																			
0801	0802				60														
0802													1	5.0	4.3				
0802	0716																		
0803																			
0803	0802				76														
0804													1	3.9					
0804	0802																		
0805																			
0805	0804				76														
0806																			
0806	0807		64																
0807													1	2.4					
0807	0804																		
0808																			
0808	0807		72																
0809																			
0809	0810				60														
0810													1	2.9					
0810	0807																		
0811																			
0811	0810		84																
0902													1	5.0	3.6				
0902	0901																		
0903													1	3.4					
0903	0902																		
0904													1	2.3					
0904	0903																		
0905													1	5.0	0.2				
0905	0910																		
0906													1	3.0					
0906	0912																		
0907													1	2.3					
0907	0906																		
0908													1	3.0					
0908	0907																		
0909													1	4.3					
0909	0904																		
SHEET TOTALS			288		364			140					15	52.5	20.8				

FROM	TO	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	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/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND VENTED M.H. GRATE
0714																								
0714	0719																							
0715																								
0715	0716																							
0716														1										
0716	0712																							
0717																						1	1	
0717	0710																							
0718																								
0718	0711																							
0719																				1				
0719	0717																							
0801																								
0801	0802																							
0802														1										
0802	0716																							
0803																								
0803	0802																							
0804								1						1										
0804	0802																							
0805																								
0805	0804																							
0806																								
0806	0807																							
0807								1						1										
0807	0804																							
0808																								
0808	0807																							
0809																								
0809	0810																							
0810								1						1										
0810	0807																							
0811																								
0811	0810																							
0902																								1
0902	0901																							
0903																								1
0903	0902																							
0904																								2
0904	0903																							
0905																								1
0905	0910																							
0906																								1
0906	0912																							
0907																								2
0907	0906																							
0908																								1
0908	0907																							
0909																								1
0909	0904																							
SHEET TOTALS								3						5						1		1	1	10

FROM	TO	ENERGY DISSIPATOR J.B. SEE DETAIL 2D-1	SPITTER BOX SEE DETAIL 2D-4	SPECIAL DESIGN J.B. W/ MH SEE DETAIL 2D-8	HINGED GRATE	G.D.I. TYPE "A" EXTRA DEPTH, SEE DETAIL 2D-12	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	SPEC. DSN. PIPE CONNECTION, SEE DETAIL 2D-11	BERM DITCH OUTLET STD. 850.11 (PER EACH)	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
0714																							
0714	0719																						RETAIN AND LINE W/ CIPP
0715																							
0715	0716																						RETAIN AND LINE W/ CIPP
0716						1																	2GI-A SPECIAL DESIGN
0716	0712																						
0717																							MH (6' DIA.) STD. 840.52 (PRECAST)
0717	0710																						RETAIN AND LINE W/ CIPP
0718					1																		FOREBAY #5, SEE DETAIL 2D-29
0718	0711												1			1							ROD & LUG W/ GASKETS & ELBOW, 12 GAGE SPC. DSN. PIPE CONNECTION - 0711
0719																							TRAFFIC BEARING JB W/ SLAB LID
0719	0717																						
0801																							
0801	0802																						RETAIN AND LINE W/ CIPP
0802						1																	2GI-A SPECIAL DESIGN
0802	0716																						
0803																							
0803	0802																						RETAIN AND LINE W/ CIPP
0804																							
0804	0802																						
0805																							
0805	0804																						RETAIN AND LINE W/ CIPP
0806																							
0806	0807																						RETAIN AND LINE W/ CIPP
0807																							
0807	0804																						
0808																							
0808	0807																						RETAIN AND LINE W/ CIPP
0809																							
0809	0810																						RETAIN AND LINE W/ CIPP
0810																							
0810	0807																						
0811																							
0811	0810																						RETAIN AND LINE W/ CIPP
0902				1																			SPECIAL DESIGN JB W/ VENTED MH (BOLTED)
0902	0901															1							ROD & LUG W/ GASKETS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0902
0903				1																			SPECIAL DESIGN JB W/ VENTED MH (BOLTED)
0903	0902															2							ROD & LUG W/ GASKETS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0903 & 0902
0904		1																					ENERGY DISSIPATOR JB, VENTED MH'S (BOLTED)
0904	0903													2		2							ROD & LUG W/ GASKETS & 2 ELBOWS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0904 & 0903
0905				1																			SPECIAL DESIGN JB W/ VENTED MH (BOLTED)
0905	0910													2		2							ROD & LUG W/ GASKETS & 2 ELBOWS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0905 & 0910
0906				1																			SPECIAL DESIGN JB W/ VENTED MH (BOLTED)
0906	0912															2							ROD & LUG W/ GASKETS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0906 & 0912
0907		1																					ENERGY DISSIPATOR JB, VENTED MH'S (BOLTED)
0907	0906															2							ROD & LUG W/ GASKETS,10 GAGE SPC. DSN. PIPE CONNECTION - 0907 & 0906
0908				1																			SPECIAL DESIGN JB W/ VENTED MH (BOLTED)
0908	0907															2							ROD & LUG W/ GASKETS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0908 & 0907
0909				1																			SPECIAL DESIGN JB W/ VENTED MH (BOLTED)
0909	0904															2							ROD & LUG W/ GASKETS, 10 GAGE SPC. DSN. PIPE CONNECTION - 0909 & 0904
SHEET TOTALS		2		6	1	2							1	4		16							

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