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TGSZJR-LAPTOP

COMPUTED BY: Zachary Richard, PE DATE: 10/12/2022

CHECKED BY: David Petty, PE DATE: 2/20/2026

PROJECT NO.	SHEET NO.
A-0009CD	3D-1

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 %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 15	18	24	30	36	42	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
Y2 94+10	20	RT	4410		2036.4													
			4410	4411		2033.2	2033.0		20									
Y2 95+89	20	RT	4412		2030.3													
			4412	4413		2027.1	2026.9		28							X	X	
Y2 92+00	20	RT	4414		2044.0													
			4414	4415		2040.8	2036.0		28						X			
Y2 91+07	22	LT	4416		2048.4													
Y2 91+14	41	LT	4417															
			4417	4418		2039.0	2038.9			8								
Y2 97+80	20	RT	4501		2025.4													
			4501	4502		2022.2	2022.0		28							X	X	
Y3 12+00	2	LT	4503			2030.0	2029.4											
Y3 13+31	3	LT	4504			2016.9	2016.5											
Y2 102+47	20	RT	4505		2016.7													
			4505	4506		2013.5	2013.2		48							X	X	
Y2 101+50	20	LT	4507		2018.5													
			4507	4508		2015.3	2013.7											
Y2 102+35	20	LT	4508		2016.9													
			4508	4527		2013.7	2011.5											
Y2 103+93	20	LT	4510		2013.9													
			4510	4511		2010.7	2009.4											
Y2 104+62	20	LT	4511		2012.6													
			4511	4514		2009.4	2008.1											
Y2 104+62	20	RT	4512		2012.6													
			4512	4513		2008.8	2007.0			32						X	X	
Y2 105+30	20	LT	4514		2011.3													
			4514	4515		2008.1	2006.8											
Y2 106+00	20	LT	4515		2010.0													
			4515	4516		2006.8	2004.8											
Y2 107+06	20	LT	4516		2008.0													
			4516	4517		2004.8	2003.2	0.4										
Y2 107+94	20	LT	4517		2006.4													
			4517	4518		2003.2	2000.9	0.6										
Y2 109+12	20	LT	4518		2004.1													
			4518	4520		2000.9	1999.3	0.9										
Y2 109+81	20	LT	4520		2002.8													
Y2 107+06	20	RT	4521		2008.0													
			4521	4522		2004.8	2004.5		32							X	X	
Y2 109+12	20	RT	4523		2004.1													
Y2 100+50	20	LT	4525		2020.4													
			4525	4526		2017.4	2017.0		72							X	X	
Y2 103+50	20	LT	4527		2014.7													
			4527	4528		2011.2	2010.9											
Y2 103+50	20	RT	4528		2014.7													
			4528	4512		2010.9	2008.8											
Y2 111+14	20	RT	4601		2000.3													
			4601	4602		1997.1	1996.9		20							X	X	
Y2 111+31	20	LT	4604		2000.0													
Y2 111+85	37	LT	4605		1999.5													
			4605	4606		1998.0	1995.7			20					X			
								SHEET TOTALS	276	60								

FROM	TO	C. S. PIPE 15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)	R. C. PIPE CLASS III 18	24	30	36	42	48	R. C. PIPE CLASS IV 15	18	24	30	36	42	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY
4410																					
4410	4411																				
4412																					
4412	4413																				
4414																					
4414	4415																				
4416																					
4417																					
4417	4418																				
4501																					
4501	4502																				
4503																56					
4504											80										
4505																					
4505	4506																				
4507																					
4507	4508														84						
4508																					
4508	4527														116						
4510																					
4510	4511														68						
4511																					
4511	4514														68						
4512																					
4512	4513																				
4514																					
4514	4515														68						
4515																					
4515	4516														104						
4516																					
4516	4517														88						
4517																					
4517	4518														116						
4518																					
4518	4520														68						
4520																					
4521																					
4521	4522																				
4523																					
4525																					
4525	4526																				
4527																					
4527	4528															40					
4528																					
4528	4512															112					
4601																					
4601	4602																				
4604																					
4605																					
4605	4606																				
SHEET TOTALS											80				780	208					

FROM	TO	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	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "B" STD. 840.18, 840.27, OR 840.45	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	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. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36
4410		1			1		1														
4410	4411																				
4412		1			1		1														
4412	4413																				
4414		1			1		1														
4414	4415																				
4416																					
4417																					
4417	4418																				
4501		1			1		1														
4501	4502																				
4503																					
4504																					
4505		1			1		1														
4505	4506																				
4507		1			1			1													
4507	4508																				
4508		1			1			1													
4508	4527																				
4510		1			1			1													
4510	4511																				
4511		1			1			1													
4511	4514																				
4512		1			1		1														
4512	4513																				
4514		1			1			1													
4514	4515																				
4515		1			1			1													
4515	4516																				
4516		1			1			1													
4516	4517																				
4517		1			1			1													
4517	4518																				
4518		1			1			1													
4518	4520																				
4520								1													
4521		1			1		1														
4521	4522																				
4523		1			1		1														
4525		1			1			1													
4525	4526																				
4527		1			1			1													
4527	4528																				
4528		1			1		1														
4528	4512																				
4601		1			1		1														
4601	4602																				
4604								1													
4605																					
4605	4606																				
SHEET TOTALS		21			21		10	13													

FROM	TO	TEMP STEEL PLATE COVER SEE SHEET 2D-1	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	TB PRECAST DRAINAGE STRUCTURE STD. 840.46	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO C.B. SEE SHT 2D-2	CONVERT EXISTING D.I. TO C.B. SEE SHT 2D-2	ADJUST D.I.	ADJUST M.H.	ADJUST C.B.	15" C.S. ELBOW, 0.064" THICK	18" C.S. ELBOW, 0.064" THICK	15" ELBOW	18" ELBOW	BERM DRAINAGE OUTLET STD. 850.10 (SY)	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
4410																							
4410	4411																						
4412																							
4412	4413																						
4414																							
4414	4415																						
4416												1											Adjust MH Top up to 2048.4.
4417																				0.4465			18" Pipe Collar
4417	4418																						
4501																							
4501	4502																						
4503																							
4504																							Bury 0.5'
4505																							
4505	4506																						
4507		1																					See Sheet 2D-1
4507	4508																						
4508																							
4508	4527																						
4510																							
4510	4511																						
4511																							
4511	4514																						
4512																							
4512	4513																						
4514																							
4514	4515																						
4515																							
4515	4516																						
4516																							
4516	4517																						
4517																							
4517	4518																						
4518																							
4518	4520																						
4520									1														Convert J.B. to CB-G See Sheet 2D-2
4521																							
4521	4522																						
4523																							
4525		1																					See Sheet 2D-1
4525	4526																						
4527																							
4527	4528																						
4528		1																					See Sheet 2D-1
4528	4512																						
4601																							
4601	4602																						
4604									1														Convert J.B. to CB-G See Sheet 2D-2
4605																							
4605	4606																						Tie into existing CB
SHEET TOTALS		3							2			1								0.4465			

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