RALL207

COMPUTED BY: Allen Hodges, P.E. DATE: 9/29/2021

CHECKED BY: Kase Schalois, P.E. DATE: 9/29/2021

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5021	3D-16

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 / SIZE / THICKNESS OR GAUGE	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) 12	15	18	24	30	36	42	48	DO NOT USE PVC	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	DUCTILE IRON PIPE 15	18	24	30	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
		3306	3305		45.8	44.4																						48						
YREV 23+75	5 RT	3307		49.8																														
		3307	3306		46.7	45.8																						40						
YD 11+99	14 LT	3308		50.4																														
		3308	3308-Out		41.3	41.2																								40				
YD 12+04	14 RT	3309		50.9																														
		3309	3308		41.3	41.3																								28				
YREV 26+12	5 RT	3310		58.2																														
		3310	3311		54.2	53.5																						32						
YREV 26+12	40 RT	3311		56.7																														
		3311	3311-Out		53.5	41.5												52																
YB 13+55	7 RT	3312		48.1																														
		3312	3315		44.8	44.5																						76						
YB 16+00	7 RT	3313		47.0																														
		3313	3313-Out		41.2	40.7																								84				
YB 16+00	52 RT	3314		43.9																														
		3314	3313		41.3	41.2																								48				
		3315IN	3315		40.8	40.5																								88				
YB 12+54	8 RT	3315		46.4																														
		3315	3315Out		40.5	38.9																								88				
YREV 23+13		3317	3315		40.8	40.5																								80				
YC 10+88	36 RT	3318		44.1																														
		3318	3303		39.8	39.6																									60			
YREV 19+00	70 RT	3319		41.9																														
		3319	3207		38.7	38.0																									232			
YB 14+25	7 RT	3320		48.2																						68						
		3320	3312		45.0	44.8																												
YREV 21+22	69 LT	3321	3321OUT																											52				
YREV 36+40	5 RT	3401		63.0																														
		3401	3402		59.8	56.2																						44						
YREV 36+40	52 RT	3402		61.2																														
		3402	3402-Out		56.2	48.7			40																									
YREV 39+51	7 LT	3404		56.1																														
		3404	3410		51.0	50.5																						84						
YA 19+95	5 LT	3405		54.6																														
		3405	3405-Out		51.0	49.9																						52						
YREV 42+60	40 LT	3406		53.3																														
		3406	3407		51.4	51.2																						44						
YREV 42+60	7 RT	3407		55.2																														
		3407	3407-Out		51.2	50.7																						64						
YREV 45+25	40 LT	3408		55.0																														
		3408	3409		51.8	51.5																						44						
YREV 45+25	7 RT	3409		56.7																														
		3409	3409-Out		51.5	51.1																						72						
YREV 38+50	7 RT	3410		57.0																														
		3410	3410-Out		50.5	50.2																						64						
YREV 41+35	7 LT	3411		55.0																														
		3411	3404		51.8	51.0																						180						
YAREV 22+61	47 RT	3413		53.3																														
		3413	3413Out		50.1	49.8																						76						
						SHEET TOTALS			40									52										988		508	292			

LINE & STATION	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY 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	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 "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	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO TB J.B.	CONVERT EXISTING D.I. TO TB J.B. (2C-13)	ADJUST MH	ADJUST C.B.	ADJUST D.I.	15" CSP ELBOW	18" CSP ELBOW	18" DIP ELBOW	24" DIP ELBOW	30" DIP ELBOW	BERM DITCH OUTLET STD. 850.10 (SY)	BERM DITCH OUTLET STD. 850.11 (SY)	PREFORMED SCOUR HOLE (PER EACH)	TEMP STEEL PLATE (SEE SHEET 2C-10)	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
	3306	3305																																																					
YREV 23+75	3307					1							1								1												1																		1				
	3307	3306																																																				
YD 11+99	3308					1	4.1		1		1																																											
	3308	3308-Out																																																				
YD 12+04	3309					1	4.5		1			1																																										
	3309	3308																																																				
YREV 26+12	3310					1							1								1												1																		1				
	3310	3311																																																				
YREV 26+12	3311					1												1			1																																		
	3311	3311-Out																																									2												15" CSP w/ Elbows
YB 13+55	3312					1							1								1												1																		1				
	3312	3315																																																				
YB 16+00	3313					1	0.8						1								1												1																		1				
	3313	3313-Out																																																				
YB 16+00	3314																																																					Open End Pipe
	3314	3313																																																				
	3315IN	3315																																																				
YB 12+54	3315					1	0.9						1								1												1																		1				
	3315	3315Out																																																				
YREV 23+13	3317	3315																																																				
YC 10+88	3318					1			1			1																																										
	3318	3303																																																				
YREV 19+00	3319					1													1								1																												
	3319	3207																																																				
YB 14+25	3320					1							1								1												1																						
	3320	3312																																																				
YREV 21+22	3321	3321OUT																																																				
YREV 36+40	3401					1							1								1												1																						
	3401	3402																																																				
YREV 36+40	3402					1	1.5											1			1																																		
	3402	3402-Out																																																				
YREV 39+51	3404					1	0.1						1														1						1																						
	3404	3410																																																				
YA 19+95	3405					1							1								1												1																						
	3405	3405-Out																																																				
YREV 42+60	3406					1												1			1																																		
	3406	3407																																																				
YREV 42+60	3407					1							1								1												1																						
	3407	3407-Out																																																				
YREV 45+25	3408					1												1			1																																		
	3408	3409																																																				
YREV 45+25	3409					1	0.2						1								1												1																						
	3409	3409-Out																																																				
YREV 38+50	3410					1	1.5						1														1						1																						
	3410	3410-Out																																																				
YREV 41+35	3411					1							1														1						1																						
	3411	3404																																																				
YAREV 22+61	3413					1									1	1																																							
	3413	3413Out																																																				
SHEET TOTALS						22	13.6		3		1	2	13		1	1		4	1		14						4						13										2								5				

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