RALL207

COMPUTED BY:	Allen Hodges, P.E.	DATE:	9/29/2021
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5021	3D-6

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) 12	15	18	24	30	36	42	48	DO NOT USE PVC	C. S. PIPE 12	15	18	24	30	36		DUCTILE IRON PIPE 15	18	24	30		R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
THICKNESS OR GAUGE																	.064	.064	.064	.064	.079	.079														
Y7 10+89	25 RT	1908		45.2																																
		1908	1909		37.3	37.1																														60
Y7 10+88	37 LT	1909		45.1																																
		1909	1912		37.1	37.0									100	X																				
LREV 266+00	63 LT	1910		45.0																																
		1910	1910OUT		38.5	35.9																											288			
LREV 257+03	8 RT	1911		49.3																																
		1911	1909		45.8	42.1																								80						
LREV 258+00	71 RT	1912		41.8																																
		1912	1909OUT		37.0	36.8									72	X																				
LREV 270+52	8 LT	2001		45.9																																
		2001	2002		42.8	42.5																								16						
LREV 270+52	8 RT	2002		45.9																																
		2002	2002OUT		42.5	35.4																								72						
LREV 271+90	6 LT	2003		46.1																																
		2003	2004		42.9	42.8																								32						
LREV 272+18	8 RT	2004		46.1																																
		2004	2004OUT		42.8	35.2																								112						
LREV 290+45	84 RT	2101																																		
		2101	OUT		33.2	33.1									64	X																				
LREV 300+19	96 RT	2201																																		
		2201	2212												84	X																				
LREV 301+80	8 RT	2202		41.4																																
		2202	2202OUT		36.4	29.5																								80						
LREV 301+80	8 LT	2203		41.4																																
		2203	2202		38.3	36.4																								16						
LREV 305+35	86 RT	2204		33.0																																
		2204	2205		28.2	27.9									80	X																				
LREV 306+12	67 RT	2205		34.3																																
		2205	2205OUT		27.9	27.5									112	X																				
		2205IN	2205		31.0	27.9				44						X																				
LREV 305+50	83 LT	2211																																		
		2211	2216		28.8	28.3																														124
LREV 301+00	66 RT	2212		36.5																																
		2212	OUT		29.8	29.6									52	X																				
LREV 306+70	55 LT	2216		38.4																																
		2216	2213		28.3	27.6																														268
LREV 308+32	55 LT	2213		37.4																																
		2213	2215		27.6	26.8																														
LREV 310+18	55 LT	2215		38.3																																
		2215	2315		26.8	26.2																														164
LREV 311+22	14 LT	2301		36.2																																
		2301	2302		33.5	32.0																								128						
LREV 312+53	14 LT	2302		34.7																																
		2302	2302OUT		32.0	25.6																								96						
LREV 316+83	46 LT	2305		29.7																																
		2305	2305OUT		24.1	23.0																								36						
LREV 316+20	14 RT	2306		31.3																																
		2306	2306OUT		25.4	19.0																								84						
LREV 316+83	14 RT	2307		31.1																																
SHEET TOTALS										44					564															752			288			616

LINE & STATION	STRUCTURE NUMBER FROM	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
Y7 10+89	1908					1	2.9		1		1																			
	1908	1909																												
Y7 10+88	1909					1	2.9		1			1																		
	1909	1912																												
LREV 266+00	1910		6.200																											
	1910	1910OUT																												
LREV 257+03	1911					1																1								
	1911	1909																												
LREV 258+00	1912					1														1				1						
	1912	1909OUT																												
LREV 270+52	2001					1								1								1								
	2001	2002																												
LREV 270+52	2002					1								1								1								
	2002	2002OUT																												
LREV 271+90	2003					1								1								1								
	2003	2004																												
LREV 272+18	2004					1								1								1								
	2004	2004OUT																												
LREV 290+45	2101		6.000																											
	2101	OUT																												
LREV 300+19	2201		6.000																											
	2201	2212																												
LREV 301+80	2202					1								1								1								
	2202	2202OUT																												
LREV 301+80	2203					1								1								1								
	2203	2202																												
LREV 305+35	2204		6.000																											
	2204	2205																												
LREV 306+12	2205					1	1.4																							
	2205	2205OUT																												
	2205IN	2205																												
LREV 305+50	2211		6.000																											
	2211	2216																												
LREV 301+00	2212					1	1.7																							
	2212	OUT																												
LREV 306+70	2216					1	5.0	0.2	1			1																		
	2216	2213																												
LREV 308+32	2213					1	4.8		1			1																		
	2213	2215																												
LREV 310+18	2215					1	5.0	1.5	1			1																		
	2215	2315																												
LREV 311+22	2301					1																								
	2301	2302																												
LREV 312+53	2302					1																								
	2302	2302OUT																												
LREV 316+83	2305					1	0.6												1			1								
	2305	2305OUT																												
LREV 316+20	2306					1																								
	2306	2306OUT																												
LREV 316+83	2307					1																								
SHEET TOTALS			30.200			20	24.3	1.7	5		1	4		6					1	1		8		1						

LINE & STATION	STRUCTURE NUMBER FROM	TO	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
Y7 10+89	1908																											
	1908	1909																										
Y7 10+88	1909																											
	1909	1912																										
LREV 266+00	1910																											Endwalls on both ends of the pipes.
	1910	1910OUT																										2 @ 144'
LREV 257+03	1911					1																		1				
	1911	1909																									57	Remove 24" RCP
LREV 258+00	1912																											
	1912	1909OUT																										
LREV 270+52	2001					1																		1				
	2001	2002																										
LREV 270+52	2002					1																		1				
	2002	2002OUT																										
LREV 271+90	2003					1																		1				
	2003	2004																										
LREV 272+18	2004					1																		1				
	2004	2004OUT																										
LREV 290+45	2101																											
	2101	OUT																									32	Remove 42" RCP
LREV 300+19	2201																											
	2201	2212																									33	Remove 42" RCP
LREV 301+80	2202					1																		1				
	2202	2202OUT																										
LREV 301+80	2203					1																		1				
	2203	2202																										
LREV 305+35	2204																											
	2204	2205																									40	Remove 48" CMP
LREV 306+12	2205		1							1																		
	2205	2205OUT																									45	Remove 48" CMP
	2205IN	2205																										
LREV 305+50	2211																											
	2211	2216																										
LREV 301+00	2212		1																									Use Slab Lid
	2212	OUT																										
LREV 306+70	2216																											
	2216	2213																										
LREV 308+32	2213																											
	2213	2215																										
LREV 310+18	2215																											
	2215	2315																										
LREV 311+22	2301						1	1																				
	2301	2302																									25	Remove 36" CMP
LREV 312+53	2302						1	1																				
	2302	2302OUT																										
LREV 316+83	2305																											
	2305	2305OUT																										
LREV 316+20	2306						1	1																				
	2306	2306OUT																										
LREV 316+83	2307						1	1																				
SHEET TOTALS			2			7	4	4		1														7			232	

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