RALD071

COMPUTED BY:	Allen Hodges	DATE:	12/8/15
CHECKED BY:	Benton Carroll	DATE:	12/9/15

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-2524D	3D-5

**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 (%)
			0901	0967		788.3	784.2	
L 479+98	120	RT	0902		797.0			
			0902	0903		793.8	788.3	
L 480+50	103	RT	0903		791.3			
			0903	0904		788.3	787.8	
L 480+50	0	CL	0904		793.5			
			0904	0978		786.3	778.9	0.6
L 481+43	146	LT	0905		795.6			
			0905	0979		791.6	777.9	
RPCY8 01+33	86	RT	0966					
			0966	0906		784.4	778.4	
RPCY8 01+47	58	RT	0906		783.6			
			0906	0907		778.4	777.6	0.5
L 483+76	0	CL	0907		791.4			
			0907	0965		777.6	777.0	0.6
L 484+45	118	LT	0908		787.0			
			0908	0981		777.2	776.7	1.6
RPBY8 10+66	67	LT	0909		779.4			
			0909	0976		775.1	771.9	0.9
RPBY8 08+25	54	LT	0910		783.8			
			0910	0983		773.4	771.1	
LREV 489+64	124	LT	0911		786.9			
			0911	0982		776.3	771.0	1.1
LREV 489+65	0	CL	0912		797.4			
			0912	0911		794.7	784.1	1.4
LREV 491+02	0	CL	0913		800.1			
			0913	0912		797.3	794.7	1.1
LREV 491+02	70	LT	0914		802.6			
			0914	0913		799.8	797.3	
LREV 491+02	71	RT	0915		801.2			
			0915	0913		798.4	797.3	
SPCY8 00+79	53	RT	0916		777.0			
			0916	0968		772.5	765.3	1.2
RPCY8 10+56	38	LT	0917		775.8			
			0917	0916		773.1	772.5	0.4
RPBY8 10+68	49	LT	0918		778.3			
			0918	0909		775.5	775.4	
Y8 12+50	33	LT	0919		790.7			
			0919	0975		787.7	783.9	0.5
SPBY8 04+00	14	LT	0920		773.2			
			0920	0921		770.2	769.4	
			0921	0922		769.4	769.0	0.3
SPBY8 02+19	14	LT	0921		776.1			
SPBY8 02+03	64	RT	0922		772.9			
			0922	0984		769.0	767.4	
Y8 16+78	49	RT	0923		774.4			
			0923	0922		771.4	770.2	
Y8 15+00	37	LT	0924		780.9			
			0924	0925		777.9	773.2	1.3
SPAY8 04+00	14	RT	0925		776.2			

Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) and C. S. Pipe (size / thickness or gauge):

FROM	TO	Side Drain 15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C.S. 15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)
0901	0967																			
0902	0903		52						X			X	X							
0903	0904																			
0904	0978																			
0905	0979																	44		
0966	0906																32			
0906	0907																			
0907	0965																			
0908	0981																			
0909	0976		40									X	X							
0910	0983																			
0911	0982																			
0912	0911																			
0913	0912																			
0914	0913																			
0915	0913																			
0916	0968	96										X	X							
0917	0916																			
0918	0909																			
0919	0975																			
0920	0921																			
0921	0922																			
0922	0984																			
0923	0922																			
0924	0925																			
SHEET TOTALS		96	92														32	44		

R. C. Pipe:

FROM	TO	Class III 12	15	18	24	30	36	42	48	Class IV 12	15	18	24	30	36	42	48	Class V 12	15	18	24	30	36	42	48
0901	0967		44																						
0902	0903																								
0903	0904			104																					
0904	0978						96																		
0905	0979																								
0966	0906																								
0906	0907					140																			
0907	0965					88																			
0908	0981		4																						
0909	0976																								
0910	0983		24																						
0911	0982			52																					
0912	0911		124																						
0913	0912		132																						
0914	0913										72														
0915	0913										72														
0916	0968																								
0917	0916		124																						
0918	0909		16																						
0919	0975										100														
0920	0921										168														
0921	0922										80														
0922	0984			16																					
0923	0922										52														
0924	0925										112														
SHEET TOTALS			468	172		228	96				656														

Endwalls, Quantities for Drainage Structures (Note: Total Lin. Ft. for pay quantity shall be A + (1.3 X B)), Frame, Grates, and Hood Std. 840.03, Concrete Transitional Section:

LINE & STATION	STRUCTURE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) (CY)	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	GRATE TYPE E	F	G	D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05
L 479+98	0902		1								
L 480+50	0903		1								
L 480+50	0904		1	2.2							
L 481+43	0905		1								
RPCY8 01+33	0966										
RPCY8 01+47	0906		1	0.3							
L 483+76	0907		1	5.0	3.8						
L 484+45	0908		1	4.8							
RPBY8 10+66	0909		1								
RPBY8 08+25	0910		1	5.0	0.3						
LREV 489+64	0911		1	5.0	0.6						
LREV 489+65	0912		1								
LREV 491+02	0913		1								
LREV 491+02	0914		1								
LREV 491+02	0915		1								
SPCY8 00+79	0916		1								
RPCY8 10+56	0917		1								
RPBY8 10+68	0918		1								
Y8 12+50	0919		1			1			1		
SPBY8 04+00	0920		1			1		1			
SPBY8 02+19	0921		1	1.7		1	1				
SPBY8 02+03	0922		1								
Y8 16+78	0923		1			1		1			
Y8 15+00	0924		1			1			1		
SPAY8 04+00	0925		1			1			1		
SHEET TOTALS			24	24.0	4.7	6	1	2	3		

FROM	TO	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. (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/ 2 GRATES STD. 840.24	J.B. STD. 840.31 OR STD. 840.32	SPECIAL DESIGN JB (See Detail Sht.)	T.B.D.I. STD. 840.35	OPEN THROAT CATCH BASIN SPECIAL DESIGN	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 J.B.	ADJUST M.H.	15" SIDE DRAIN PIPE ELBOW	18" SIDE DRAIN PIPE ELBOW	15" C.S. ELBOW	18" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	BERM DITCH OUTLET STD. 850.10	BERM DITCH OUTLET STD. 850.11	30" SLUICE GATE 38.8" SIZE SLUICE GATE)	36" SLUICE GATE 46" SIZE SLUICE GATE)	FLOWABLE FILL (CY)	PIPE REMOVAL (LIN. FT.)	REMARKS
0901	0967																														
0902			1	1																											
0902	0903																			2											
0903						1			1																						
0903	0904																														
0904					1				1																						
0904	0978																														
0905			1	1																											
0905	0979																							2							
0966																										1					
0966	0906																						1								
0906					1			1	1																						
0906	0907																														
0907					1			1	1																						
0907	0965																														
0908					1			1	1																						
0908	0981																														
0909		1																													
0909	0976																														
0910						1			1																						
0910	0983																														
0911						1			1																						
0911	0982																														
0912						1			1																						REMOVE HWs
0912	0911																														
0913						1			1																						
0913	0912																														
0914						1	1																								
0914	0913																														
0915						1	1																								
0915	0913																														
0916						1			1																						
0916	0968																														
0917						1			1																						
0917	0916																														
0918						1			1																						
0918	0909																														
0919																															
0919	0975																														
0920																															
0920	0921																														
0921	0922																														
0921																															
0922						1			1																						
0922	0984																														
0923																															
0923	0922																														
0924																															
0924	0925																														
0925																															
SHEET TOTALS		1	2	2	4	11	2	3	13											2			1	2		1					

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