COMPUTED BY: BROOK ANDERSON DATE: 1/17/2014

CHECKED BY: C. H. LEE DATE: 11/10/2014

PROJECT NO.	SHEET NO.
B-4565	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 / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48		DO NOT USE RCP	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	36 .079			42 .109	48 .109	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	R. C. PIPE CLASS V 12	15	18	24	42	48	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	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. (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	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34		M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54		15" C.S. ELBOW	PIPE REMOVAL LIN. FT.	REMARKS
L 15+00	44 LT	0402		38.5																																												1			1		1																								
		0402	0403		35.5	33.7																																					128																																				
L 13+70	46 LT	0403		36.3																																												1			1		1																								
		0403	0404		33.7	33.1																																					124																																				
L 12+50	46 LT	0404		35.7																																												1			1		1																								
		0404	0405		33.1	32.4																																					144																																				
L 11+07	46 LT	0405		34.9																																												1			1		1																								
		0405	0406		32.4	32.3																																						40																																			
L 10+73	65 LT	0406		34.8																																												1			1		1																								
		0406	0407		32.3	31.7																																						144																																			
L 10+07	192 LT	0407		34.8																																												1			1		1																								
		0407	0408		31.7	31.7	0.3																																					8																																			REMOVE CB, 15" RCP, AND 2GI
L 10+13	194 LT	0408		33.9																																												1															1				1												
L 17+42	40 LT	0410		43.0																																												1			1		1																								
		0410	0411		40.0	39.9																																					36																																				
L 17+42	4 LT	0411		43.9																																												1								1				1	1																		
		0411	0412		39.9	39.8																												44																																																
L 17+00	3 LT	0412		43.2																																												1								1				1	1																		
		0412	0413		39.8	39.3																												172																																																
L 15+30	4 RT	0413		40.1																																												1	1.5							1				1	1																		
		0413	0414		33.6	33.5																													32																																															
L 15+30	36 RT	0414		40.4																																												1	1.9		1			1																								
		0414	0415		33.5	33.4																					36																																																								
L 16+08.33	75 RT	0416																											100																																																								
L 22+94	4 LT	0431		44.0																																												1								1				1	1																		
		0431	0433		39.6	39.5																																																																												
L 23+12	39 LT	0432		42.8																																												1			1			1																								
		0432	0431		39.8	39.6																																					40																																				
L 22+94	31 RT	0433		44.5																																												1			1		1																								
		0433	0430		39.5	25.6	0.8													56																																																												2		
L 13+75	9 RT	0434		37.6																																												1								1				1	1																		
		0434	0435		34.4	34.3																																					32																																				
L 14+05	10 RT	0435		38.0																																												1								1				1	1																		
		0435	0436		34.3	34.2																												32																																																
L 14+35	8 RT	0436		38.5																																												1								1				1	1																		
		0436	0413		34.2	33.9																												96																																																
L 11+45	8 RT	0437		36.6																																												1								1				1	1																		
		0437	0438		33.4	33.0																																					36																																				
L 11+61	40 RT	0438		35.8																																												1								1				1	1																		
		0438	0441		33.0	32.9																				20																																																										
Y1 11+82	60 LT	0439		35.7																																												1			1		1																								
		0439	0444		33.1	33.0																																					48																																				
L 12+88	42 RT	0440		36.2																																												1			1			1																								
		0440	0444		33.2	33.0																																					72																																				
L 11+74	52 RT	0441		35.3																																												1								1				1	1																		
		0441	0443		32.7	32.6	0.4																																					36																																			
L 13+75	40 RT	0442		37.5																																												1			1			1																								
		0442	0440		34.5	33.2																																					88																																				
Y1 11+30	38 LT	0443		36.2																																												1																								1			1			17	REMOVE 18" RCP
L 12+24	73 RT	0444		35.2																																												1			1	1																											
							SHEET TOTALS													56							56	136							344	32							748	228				26	3.4		14	1	9	4		10				10	10		1				1					1			1		2	17	

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

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