COMPUTED BY: Henry Bare DATE: 2/13/2015

CHECKED BY: David Fuh DATE: 2/13/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-2413CA	3D-2

NC10480

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 1200mm & UNDER)

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE	375	450	600	750	900	1050	1200	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
THICKNESS OR GAUGE																			
-LREV_SB- 90+90	LT	0814		277.10	276.26														
-LREV_SB- 90+90	LT	0814	0815		276.26	274.35		13.2								X			
-NC68_SB- 13+54	LT	0816		265.67	264.83														
-NC68_SB- 13+54	LT	0816	0817		264.83	264.81	X	6.0											
-NC68_SB- 13+69	LT	0818		267.80	266.96														
-NC68_SB- 13+69	LT	0819		267.79	266.95														
-NC68_SB- 13+69	LT	0818	0819		266.96	266.95	X	2.4											
-NC68_SB- 13+69	LT	0819	0820		266.95	266.80	X	18.0											
-LREV_NB- 91+10	LT	0821																	
-LREV_NB- 91+12	LT	0822																	
-LREV_NB- 91+10	LT	0821	0822		265.39	265.37													
-LREV_NB- 91+40	LT	0823		265.25	264.41														
-LREV_NB- 91+36	RT	0824		265.07	264.23														
-LREV_NB- 91+37	RT	0825		265.30	263.00														
-LREV_NB- 91+40	LT	0823	0825		264.41	263.00													
-LREV_NB- 91+36	RT	0824	0825		264.23	264.19	X	2.4											
-LREV_NB- 92+60	RT	0826		262.30	261.39														
-LREV_NB- 92+62	RT	0829		263.40	261.30														
-LREV_NB- 92+60	RT	0826	0829		261.39	261.30			4.8										
-LREV_SB- 91+69	RT	0827		276.38	275.54														
-LREV_SB- 91+69	RT	0827	0828		275.54	266.05		30.0								X		X	X
-LREV_SB- 93+02	CL	0830			261.70	259.64													
-NC68_SB- 16+42	LT	0831		266.84	266.25														
-NC68_SB- 16+42	LT	0832		267.57	266.03														
-NC68_SB- 16+42	LT	0831	0832	266.25	266.03			6.0											
-LREV_NB- 95+03	LT	0901		269.71	269.13		X												
-LREV_NB- 95+03	LT	0902		270.30	269.11														
-LREV_NB- 99+20	CL	1001		272.90	272.06														
-LREV_NB- 99+62	CL	1002		273.32	271.83														
-LREV_NB- 95+03	LT	0901	0902	269.13	269.11		X	3.6											
-LREV_END- 99+20	CL	1001	1002		272.06	271.83	X												
-LREV_END- 99+45	RT	1003			272.11	271.92	X	37.2											
-LREV_END- 100+60	CL	1004		272.79	271.82														
-LREV_END- 100+60	LT	1004	1005		271.82	270.72													
-LREV_END- 101+78	RT	1101	1102		270.90	270.85													
-LREV_END- 101+82	RT	1102																	
-LREV_END- 103+20	LT	1103		271.42	270.45														
-LREV_END- 103+32	CL	1104		271.54	270.27														
-LREV_END- 103+20	LT	1103	1104		270.45	270.27													
-LREV_END- 105+25	RT	1201		270.33	269.36														
-LREV_END- 105+69	RT	1202		269.38	267.40														
-LREV_END- 105+25	RT	1201	1202		269.36	267.40		44.4											
SHEET 3D-2 TOTALS								163.2	4.8										

STATION	CS PIPE SIZE	400	450	600	800	900	1000	1200	R.C. PIPE CLASS III SIZE	300	375	450	600	750	900	1050	1200	R.C. PIPE CLASS IV SIZE	300	375	450	600	750	900	1050	1200	600mm (24") R.C. PIPE, MAX FILL > 12.2m (40ft), USE LRFD DIRECT DESIGN METHOD (CONTRACTOR DESIGN)
THICKNESS OR GAUGE		1.63	1.63	1.63	2.01	2.01	2.01	2.01																			
-LREV_SB- 90+90																											
-LREV_SB- 90+90																											
-NC68_SB- 13+54																											
-NC68_SB- 13+54																											
-NC68_SB- 13+69																											
-NC68_SB- 13+69																											
-NC68_SB- 13+69																											
-NC68_SB- 13+69																											
-LREV_NB- 91+10																											3.4
-LREV_NB- 91+12																											
-LREV_NB- 91+10																4.8											
-LREV_NB- 91+40																											
-LREV_NB- 91+36																											
-LREV_NB- 91+37																											
-LREV_NB- 91+40											26.4																
-LREV_NB- 91+36																											
-LREV_NB- 92+60																											
-LREV_NB- 92+62																											
-LREV_NB- 92+60																											
-LREV_SB- 91+69																											
-LREV_SB- 91+69																											
-LREV_SB- 93+02																											94.8
-NC68_SB- 16+42																											
-NC68_SB- 16+42																											
-NC68_SB- 16+42																											
-LREV_NB- 95+03																											
-LREV_NB- 95+03																											
-LREV_NB- 99+20																											
-LREV_NB- 99+62																											
-LREV_NB- 95+03																											
-LREV_END- 99+20																		42.0									
-LREV_END- 99+45																											
-LREV_END- 100+60																											
-LREV_END- 100+60																		24.0									
-LREV_END- 101+78												3.6															
-LREV_END- 101+82																											
-LREV_END- 103+20																											
-LREV_END- 103+32																											
-LREV_END- 103+20																		12.0									
-LREV_END- 105+25																											
-LREV_END- 105+69																											
-LREV_END- 105+25																											
SHEET 3D-2 TOTALS											26.4	3.6				4.8		78.0									94.8

STATION	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. METERS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL METERS FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL. "B") METERS A: 1.5 THRU 3.0	B: 3.0 AND ABOVE	PER EACH (0 THRU 1.50)	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	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 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH TWO GRATES STD. 840.20	G.D.I. FRAME WITH ONE GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	T.B.D.I. STD. 840.35	TEMP. COVER W/ STEEL PLATE SEE SHT. 2C-3	TEMPORARY CONCRETE LID	CONVERT JB TO 2 GI SEE SHT. 2C-4	CONVERT DI TO 3 GI	J.B. STD. 840.31 OR 840.32	M.H. FRAME AND COVER STD. 840.54	T.B.J.B. STD. 840.34	CONVERT DI TO JB SEE SHT. 2C-2	O.T.C.B. STD. 840.04 OR 840.05	CONVERT DI TO TBJB	375 SIDE DRAIN PIPE ELBOWS W/ 1.63 MM THICKNESS	450 SIDE DRAIN PIPE ELBOWS W/ 1.63 MM THICKNESS	600 SIDE DRAIN PIPE ELBOWS W/ 1.63 MM THICKNESS	900 SIDE DRAIN PIPE ELBOWS W/ 2.01 MM THICKNESS	CONC. & BRICK PIPE PLUG, M^3 STD. 840.71	CONC. COLLARS CL. "B" M^3 STD. 840.72	PIPE REMOVAL (METERS)	REMARKS
-LREV_SB- 90+90					1										1			1																								
-LREV_SB- 90+90																																										
-NC68_SB- 13+54					1										1			1																								
-NC68_SB- 13+54																																										
-NC68_SB- 13+69					1										1			1																								
-NC68_SB- 13+69					1										1			1																								
-NC68_SB- 13+69																																										
-NC68_SB- 13+69																																										
-LREV_NB- 91+10	3.4																																									
-LREV_NB- 91+12																																							0.65		REMOVE HW	
-LREV_NB- 91+10																																										
-LREV_NB- 91+40					1										1			1																								
-LREV_NB- 91+36					1										1			1																								
-LREV_NB- 91+37																										1		1														
-LREV_NB- 91+40																																										
-LREV_NB- 91+36																																										
-LREV_NB- 92+60					1										1			1																								
-LREV_NB- 92+62																										1		1												28	REMOVE DI	
-LREV_NB- 92+60																																										
-LREV_SB- 91+69					1										1			1																								
-LREV_SB- 91+69																																		2								
-LREV_SB- 93+02																																										
-NC68_SB- 16+42					1									1				1																								
-NC68_SB- 16+42																										1		1														
-NC68_SB- 16+42																																										
-LREV_NB- 95+03					1									1				1																								
-LREV_NB- 95+03																										1		1														
-LREV_NB- 99+20					1										1			1																								
-LREV_NB- 99+62					1																					1	1															
-LREV_NB- 95+03																																										
-LREV_END- 99+20																																										
-LREV_END- 99+45																																										
-LREV_END- 100+60					1					1		1	1																													
-LREV_END- 100+60																																										
-LREV_END- 101+78																																										
-LREV_END- 101+82																																							0.33			
-LREV_END- 103+20					1					1		1	1																													
-LREV_END- 103+32																										1		1														
-LREV_END- 103+20																																										
-LREV_END- 105+25					1					1		1	1																													
-LREV_END- 105+69					1										1			1																								
-LREV_END- 105+25																																										
SHEET 3D-2 TOTALS	3.4				16					3		3	3		10	2		12								6	1	5					2					0.98	28		

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX