COMPUTED BY:	BRC	DATE:	1/26/16
CHECKED BY:	BJH	DATE:	8/22/16

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-2915C	3D-4

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 %	Side Drain Pipe (RCP, CSP, CAAP, or HDPE) 15	18	24	30	36	48	DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC
		1006	1008		3021.2	3020.2										
L 337+00	197 RT	1007														
		1007	1006		3086.7	3021.2			136					X		
L 339+00	61 RT	1008		3025.6												
		1008	1016		3019.7	3015.6										
L 339+06	173 RT	1009														
		1009	1008		3079.2	3022.6			112					X		
L 342+25	44 LT	1010		3025.7												
		1010	OUT		3015.4	2999.2	2.1		52					X	X	X
L 335+70	56 LT	1011		3024.7												
		1011	1004		3021.9	3018.1										
L 342+25	61 RT	1012		3022.9												
		1012	1010		3015.9	3015.4	0.3									
L 343+75	61 RT	1013		3019.7												
		1013	1012		3016.9	3016.2										
		IN	1014		3005.6	3003.1										
L 332+70	37 RT	1014		3007.4												
		1014	1002		3003.1	2954.1										
L 336+81	208 LT	1015														
L 338+91	0 CL	1016		3019.3												
		1016	OUT		3015.6	3008.7										
L 347+05	71 LT	1101		3009.0												
		1101	1118		3001.4	2973.2										
L 348+49	87 LT	1118		2978.0												
		1118	OUT		2973.2	2972.9										
L 346+84	49 LT	1102														
		1102	1101		3001.5	3001.4										
L 346+33	5 RT	1103		3011.3												
L 346+33	61 RT	1104		3014.0												
		1104	1103		3009.5	3006.5										
L 346+33	90 RT	1105														
		1105	1104		3019.0	3009.5						28		X		
L 349+00	11 RT	1106		3009.8												
		1106	1108		3007.1	3004.8										
L 350+50	44 LT	1107		3005.4												
		1107	1108		3002.7	3002.4										
L 350+50	11 RT	1108		3007.5												
		1108	1111		3002.4	3001.7										
		IN	1109		3007.8	3003.5		120							X	X
L 350+50	68 RT	1109		3006.3												
		1109	1120		3003.5	2960.0	2.3	92						X	X	X
L 351+86	44 LT	1110		3004.7												
		1110	1112		3001.4	2999.7	0.4									
L 351+86	11 RT	1111		3006.9												
		1111	1110		3001.7	3001.4	0.3									
L 352+50	64 LT	1112		3002.4												
		1112	OUT		2999.4	2998.0										
L 353+01	5 LT	1113		3006.8												
		1113	1112		3003.6	2999.7										
L 354+25	71 RT	1114		3005.5												
SHEET TOTALS								212	300			28				

FROM	TO	C. S. PIPE 15 (.064)	18 (.064)	24 (.064)	30 (.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
1006	1008									196									
1007																			
1007	1006																		
1008																			
1008	1016										60								
1009																			
1009	1008																		
1010																			
1010	OUT																		
1011																			
1011	1004																168		
1012																			
1012	1010									104									
1013																			
1013	1012								148										
IN	1014											52							
1014																			
1014	1002																		
1015																			
1016																			
1016	OUT																		
1101																			
1101	1118												140						
1118																			
1118	OUT												28						
1102																			
1102	1101												28						
1103																			
1104																			
1104	1103												56						
1105																			
1105	1104																		
1106																			
1106	1108																148		
1107																			
1107	1108																56		
1108																			
1108	1111																136		
IN	1109																		
1109																			
1109	1120																		
1110																			
1110	1112																64		
1111																			
1111	1110																56		
1112																			
1112	OUT									36									
1113																			
1113	1112																76		
1114																			
SHEET TOTALS									148	336	60	52	252				704		

FROM	TO	15" WELDED STEEL PIPE 0.28" THICK, GRADE B IN SOIL	15" WELDED STEEL PIPE 0.28" THICK, GRADE B NOT N SOIL	18" WELDED STEEL PIPE 0.31" THICK, GRADE B IN SOIL	18" WELDED STEEL PIPE 0.31" THICK, GRADE B NOT IN SOIL	24" WELDED STEEL PIPE 0.38" THICK, GRADE B IN SOIL	24" WELDED STEEL PIPE 0.38" THICK, GRADE B NOT IN SOIL	30" WELDED STEEL PIPE 0.47" THICK, GRADE B IN SOIL	30" WELDED STEEL PIPE 0.47" THICK, GRADE B NOT IN SOIL	36" WELDED STEEL PIPE 0.53" THICK, GRADE B IN SOIL	36" WELDED STEEL PIPE 0.53" THICK, GRADE B NOT IN SOIL	6" PVC PIPE (SPRING BOX)	6" DUCTILE IRON PIPE (SPRING BOX)	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) 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.
1006	1008																
1007																	
1007	1006																
1008															1	0.9	
1008	1016																
1009																	
1009	1008																
1010															1	5.0	0.4
1010	OUT																
1011															1		
1011	1004																
1012															1	2.0	
1012	1010																
1013															1		
1013	1012																
IN	1014																
1014															1		
1014	1002							89	89								
1015												30			1		
1016															1		
1016	OUT					50	50										
1101															1	2.6	
1101	1118																
1118															1		
1118	OUT																
1102																	
1102	1101																
1103															1		
1104															1		
1104	1103																
1105																	
1105	1104																
1106															1		
1106	1108																
1107															1		
1107	1108																
1108															1	0.1	
1108	1111																
IN	1109																
1109															1		
1109	1120																
1110															1		
1110	1112																
1111															1	0.2	
1111	1110																
1112															1		
1112	OUT																
1113															1		
1113	1112																
1114															1		
SHEET TOTALS						50	50	89	89			30			21	10.8	0.4

FROM	TO	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.06	CONCRETE TRANSITIONAL SECTION G.D.I. (SEE DETAIL SHEET 2C-2)	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. TYPE "D" STD. 840.19 OR STD. 840.28	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. FLAT) FRAME W/ 2 GRATES STD. 840.29
1006	1008												
1007													
1007	1006												
1008								1				1	
1008	1016												
1009													
1009	1008												
1010								1		1			
1010	OUT												
1011								1		1			
1011	1004												
1012								1				1	
1012	1010												
1013								1				1	
1013	1012												
IN	1014												
1014													
1014	1002												
1015													
1016													
1016	OUT												
1101							1					1	
1101	1118												
1118													
1118	OUT												
1102													
1102	1101												
1103													
1104								1				1	
1104	1103												
1105													
1105	1104												
1106			1							1			
1106	1108												
1107								1		1			
1107	1108												
1108			1							1			
1108	1111												
IN	1109												
1109								1				1	
1109	1120												
1110								1		1			
1110	1112												
1111			1							1			
1111	1110												
1112								1				1	
1112	OUT												
1113		1			1	1							
1113	1112												
1114								1				1	
SHEET TOTALS		1	3		1	1	1	11		7		8	

FROM	TO	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34 OR STD. 840.46	T.B.D.I. STD. 840.35 OR STD. 840.46	T.B. 2GI SPECIAL DESIGN	T.B. 3GI SPECIAL DESIGN	SPRING BOX STD. 840.41	15" PARALLEL PIPE END SECTION STD. 310.02	CONVERT EXIST. DI TO 3GI SPECIAL DESIGN	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO D.I.	CONVERT EXISTING T.B.J.B. TO 2GI	CONVERT TB2GI TO TBJB W/ SLAB LID
1006	1008												
1007													
1007	1006												
1008													
1008	1016												
1009													
1009	1008												
1010													
1010	OUT												
1011													
1011	1004												
1012													
1012	1010												
1013													
1013	1012												
IN	1014												
1014			1										
1014	1002												
1015							1						
1016		1											
1016	OUT												
1101													
1101	1118												
1118		1											
1118	OUT												
1102													
1102	1101												
1103		1											
1104													
1104	1103												
1105													
1105	1104												
1106				1									
1106	1108												
1107													
1107	1108												
1108				1									
1108	1111												
IN	1109							1					
1109													
1109	1120												
1110													
1110	1112												
1111				1									
1111	1110												
1112													
1112	OUT												
1113													
1113	1112												
1114													
SHEET TOTALS		3	1	3			1	1					

FROM	TO	15" SIDE DRAIN PIPE ELBOW	18" SIDE DRAIN PIPE ELBOW	24" SIDE DRAIN PIPE ELBOW	36" SIDE DRAIN PIPE ELBOW	18" C.S. ELBOW	30" C.S. ELBOW	BERM DITCH OUTLET (PER EACH)	PREFORMED SCOUR HOLE (PER EACH)	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
1006	1008													
1007								1						18" BDO STD. 850.10
1007	1006		1											
1008														
1008	1016													
1009								1						18" BDO STD. 850.10
1009	1008		1											
1010														
1010	OUT		2											
1011														
1011	1004													
1012														
1012	1010													
1013														
1013	1012													
IN	1014													
1014														
1014	1002													
1015														
1016														
1016	OUT													
1101														
1101	1118													
1118														
1118	OUT													
1102											0.7640			
1102	1101													
1103														
1104														
1104	1103													
1105								1						36" BDO Special Design, See Detail Sheet 2C-3
1105	1104				1									
1106														
1106	1108													
1107														
1107	1108													
1108														
1108	1111													
IN	1109													
1109														
1109	1120	2												
1110														
1110	1112													
1111														
1111	1110													
1112														
1112	OUT								1					
1113														
1113	1112													
1114														
SHEET TOTALS		2	4		1			3	1		0.7640			

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

RALD071