COMPUTED BY: KCBE DATE: 6/29/2016

CHECKED BY: RAM DATE: 9/6/2016

PROJECT NO.	SHEET NO.
R-3100A	3D-6

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.

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
		1407	1408		933.3	938													
L 156+31	LT	1410																	
L 159+24	RT	1411			921.9	920													
L 159+87	LT	1412																	
Y20 12+12	RT	1413																	
Y20 12+08	LT	1414																	
L 160+75	CL	1501																	
L 164+06	LT	1502		913.8															
		1502	1503		910.7	907.4													
L 165+00	LT	1504		912															
		1504	1505		907.8	908													
		1504	1506		907.8	907.4			92										
L 165+00	RT	1505		912															
L 165+91	LT	1506		911.7															
		1506	1507		907.4	907.6													
		1506	1509		907.4	907.2			84										
L 165+91	RT	1507		912.4															
		1507	1508		907.6	907.7													
L 165+91	RT	1508		911.7															
L 166+75	LT	1509		912															
		1509	1510		907.2	899.6			28							X			
		1509	1511		907.2	908.7			88										
L 167+61	LT	1511		912.9															
		1511	1512		908.7	908.9													
L 167+61	RT	1512		912.9															
L 170+11	LT	1513		915.8															
		1513	1514		911.1	910.8					96								
		1513	1515		911.8	914.5				36									
L 170+50	LT	1515		918.5															
		1515	1516		914.5	917.5				72									
L 171+27	LT	1516		921.5															
		1516	1517		917.5	921.9													
		1516	1518		917.5	920.5			72										
L 171+27	LT	1517		924.6															
L 172+05	LT	1518		924.5															
		1518	1601		920.5	928.5			216										
L 172+30	RT	1519		925.4															
		1519	1520		923.7	923.3			68							X			
L 174+23	LT	1601		932.5															
		1601	1606		928.5	931.6			140										
L 174+95	RT	1602		938.6															
		1602	1603		935.5	934.8													
SHEET TOTALS									788	108	96								

STATION	FROM	TO	C.S. PIPE 12" (.064)	15" (.064)	18" (.064)	24" (.064)	30" (.079)	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)	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE
	1407	1408																						152							
L 156+31	1410																													24	
L 159+24	1411																				140										
L 159+87	1412																													20	
Y20 12+12	1413																													28	
Y20 12+08	1414																													28	
L 160+75	1501																														
L 164+06	1502																														
	1502	1503																		60											
L 165+00	1504																														
	1504	1505																		84											
	1504	1506																													
L 165+00	1505																														
L 165+91	1506																														
	1506	1507																		48											
	1506	1509																													
L 165+91	1507																														
	1507	1508																		36											
L 165+91	1508																														
L 166+75	1509																														
	1509	1510																													
	1509	1511																													
L 167+61	1511																														
	1511	1512																		84											
L 167+61	1512																														
L 170+11	1513																														
	1513	1514																													
	1513	1515																													
L 170+50	1515																														
	1515	1516																													
L 171+27	1516																														
	1516	1517																		52											
	1516	1518																													
L 171+27	1517																														
L 172+05	1518																														
	1518	1601																													
L 172+30	1519																														
	1519	1520																													
L 174+23	1601																														
	1601	1606																													
L 174+95	1602																														
	1602	1603																		56											
SHEET TOTALS																				420	140			152						100	

STATION	FROM	TO	ENDWALLS STD. 838.01, 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	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 STD. 852.06		D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME WITH TWO 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. (W.S. FLAT) FRAME WITH TWO GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME WITH TWO GRATES STD. 840.22	G.D.I. (W.S. SAG) FRAME WITH GRATE STD. 840.22	G.D.I. (N.S. FLAT) FRAME WITH TWO GRATES STD. 840.29
	1407	1408	3.4																			
L 156+31	1410																					
L 159+24	1411																					
L 159+87	1412																					
Y20 12+12	1413																					
Y20 12+08	1414																					
L 160+75	1501																					
L 164+06	1502				1							1		1	1							
	1502	1503																				
L 165+00	1504				1												1		1			
	1504	1505																				
	1504	1506																				
L 165+00	1505				1												1		1			
L 165+91	1506				1												1		1			
	1506	1507																				
	1506	1509																				
L 165+91	1507				1							1		1	1							
	1507	1508																				
L 165+91	1508				1												1		1			
L 166+75	1509				1												1		1			
	1509	1510																				
	1509	1511																				
L 167+61	1511				1												1		1			
	1511	1512																				
L 167+61	1512				1												1		1			
L 170+11	1513				1											1				1	1	
	1513	1514																				
	1513	1515																				
L 170+50	1515				1											1				1	1	
	1515	1516																				
L 171+27	1516				1											1				1	1	
	1516	1517																				
	1516	1518																				
L 171+27	1517				1							1		1	1							
L 172+05	1518				1											1				1	1	
	1518	1601																				
L 172+30	1519				1												1			1		
	1519	1520																				
L 174+23	1601				1											1				1	1	
	1601	1606																				
L 174+95	1602				1							1		1	1							
	1602	1603																				
SHEET TOTALS			3.4		17							4		4	4	5	8		7	6	5	

STATION	FROM	TO	OPEN THROAT C.B. STD. 840.04 OR STA. 840.05	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	J.B. STD. 840.31 OR 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	G.D.I. (N.S. SAG) FRAME WITH TWO GRATES STD. 840.24	BERM DRAINAGE OUTLET STD. 850.10	BERM DRAINAGE OUTLET STD. 850.11	CONC. TRANSTIONAL SECTION FOR DI (EA) [SEE DETAIL 2C-2]	CONVERT EXISTING D.I. TO J.B. WITH M.H.	PARALLEL PIPE END SECTION STD. 310.02 15"	18"	24"	C.S. ELBOWS 15"	18"	24"	PREFORMED SCOUR HOLE	FLOWABLE FILL	CONC. AND BRICK PIPE PLUG (C.Y.) STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
	1407	1408																					80	
L 156+31	1410													1									40	
L 159+24	1411																						72	
L 159+87	1412													1										
Y20 12+12	1413													1									24	
Y20 12+08	1414													1									32	
L 160+75	1501																						28	
L 164+06	1502																							
	1502	1503																		1				
L 165+00	1504																							
	1504	1505																						
	1504	1506																						
L 165+00	1505																							
L 165+91	1506																							
	1506	1507																						
	1506	1509																						
L 165+91	1507																							
	1507	1508																						
L 165+91	1508																							
L 166+75	1509																							
	1509	1510																		1				
	1509	1511																						
L 167+61	1511																							
	1511	1512																						
L 167+61	1512																							
L 170+11	1513																							
	1513	1514																					20	
	1513	1515																					20	
L 170+50	1515																							
	1515	1516																						
L 171+27	1516																							
	1516	1517																						
	1516	1518																					20	
L 171+27	1517																							
L 172+05	1518																							
	1518	1601																					32	
L 172+30	1519																							
	1519	1520																		1			20	
L 174+23	1601																							
	1601	1606																						
L 174+95	1602																							
	1602	1603																						
SHEET TOTALS														4						3			388	

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