PROJECT REFERENCE NO.	SHEET NO.
B-5989	3D-1

Prepared in the Office of: SUMMIT DESIGN AND ENGINEERING SERVICES
NC FIRM LICENSE No: P-0339
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STATE OF NORTH CAROLINA
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" & UNDER)

STATION / SIZE / THICKNESS OR GAUGE	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"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C.S. PIPE (UNLESS NOTED OTHRWISE) 12" .064	15" .064	18" .064	24" .064	24"	30" .079	30"	36" .079	36"	42" .109	42"	48" .109	48"
17+43.79 -L-	LT	401		2047.5'	—	—																						
17+43.79 -L-	LT	401	402	—	2043.3'	2043.0'																						
13+04.95 -Y-	RT	402		2048.9'	—	—																						
13+04.95 -Y-	RT	402	403	—	2043.0'	2042.8'																						
12+66.70 -Y-	RT	403		2048.4'	—	—																						
12+66.70 -Y-	RT	403	404	—	2042.8'	2042.7'				24'																		
12+45.77 -Y-	RT	404		2047.9'	—	—																						
12+45.77 -Y-	RT	404	405	—	2042.7'	2035.0'				24'	X			X	X													
TOTALS										48'																		
TEMPORARY DRAINAGE																												
14+78.90 -DET-	LT	503		2048.4'																								
TOTALS																												
GRAND TOTAL										48'																		

STATION	CLASS III R.C. PIPE (UNLESS OTHERWISE NOTED) 12"	15"	18"	24"	30"	36"	42"	48"	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') PER EACH (0' THRU 5.0')	LIN. *FT. A 5.0' THRU 10.0'	LIN. *FT. 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
17+43.79 -L-														1						
17+43.79 -L-			56'																	
13+04.95 -Y-														1	0.9					
13+04.95 -Y-			48'																	
12+66.70 -Y-																				
12+66.70 -Y-																				
12+45.77 -Y-														1	0.2					
12+45.77 -Y-																				
TOTALS			104'											3	1.1					
TEMPORARY DRAINAGE																				
14+78.90 -DET-														1	0.6					
TOTALS														1	0.6					
GRAND TOTAL			104'											4	1.7					

STATION	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	M.H. FRAME AND COVER STD. 840.54	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 GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32 OR 840.45	G.D.I. FRAME (N.S. FLAT) W/2 STD. 840.29	T.B.D.I STD. 840.35 OR 840.46	T.B.D.I WITH FRAME & GRATE STD. 840.20	15" CORR. STEEL ELBOWS NO. & SIZE	18" DRAINAGE PIPE ELBOWS	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONVERT EXISTING D.I. TO J.B. W/MHC	PIPE REMOVAL LIN.FT.	REMARKS
17+43.79 -L-											1	1							501 RETAIN FROM DET CONST.
17+43.79 -L-																		78'	
13+04.95 -Y-											1	1							502 RETAIN FROM DET CONST.
13+04.95 -Y-																			
12+66.70 -Y-			1														1		503 RETAIN FROM DET CONST.
12+66.70 -Y-																			
12+45.77 -Y-			1							1									504 RETAIN FROM DET CONST.
12+45.77 -Y-															2				505 RETAIN FROM DET CONST.
TOTALS			2							1	2	2			2		1	78'	
TEMPORARY DRAINAGE																			
14+78.90 -DET-											1	1							RETAIN AND CONVERT FOR 403
TOTALS											1	1							
GRAND TOTAL			2							1	3	3			2		1	78'	

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.)	GRATED DROP INLET (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

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 54" & OVER)

STATION / SIZE / THICKNESS OR GAUGE	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) 54"	60"	66"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
13+87.75 -L-	RT/LT	406		—	2047.5'	2043.0									
TOTALS															
TEMPORARY DRAINAGE															
12+12.00 -DET-	RT/LT	506		—	2047.5'	2039.0'									
TOTALS															

STATION	C.S. PIPE 54" .109	54" .138	54" .168	54" SHOP ELON-GATED .138	54" SHOP ELON-GATED .168	60" .138	60" .168	66" .138	66" .168	72" .138	72" .168	STRUCTURAL PLATE PIPE 60" 12	60" 10	66" 12	66" 10	72" 12	72" 10
13+87.75 -L-																	
TOTALS																	
TEMPORARY DRAINAGE																	
12+12.00 -DET-	96'																
TOTALS	96'																

STATION	REINFORCED ENDWALLS WITH R.C. - C.Y.	WITH C.S. - C.Y.	MASONARY DRAINAGE STRUCTURES CUBIC YARDS	REINF. CONC. FLARED END SECTIONS NO. & SIZE	CORR. STEEL FLARED END SECTIONS NO. & SIZE	REINF. CONC. ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	PIPE REMOVAL LIN.FT.	REMARKS
13+87.75 -L-								44'	RETAIN 54" (REMOVE 44' IN FINAL STAGE)
TOTALS									
TEMPORARY DRAINAGE									
12+12.00 -DET-		5.2						47'	REMOVE EXIST. 42" CSP
TOTALS		5.2						91'	

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.)	GRATED DROP INLET (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