RD278038

COMPUTED BY: MTP DATE: 9/4/14

CHECKED BY: SCL DATE: 9/12/14

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-4903	3D-1

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 %	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	DO NOT USE PVC
L 37+00	RT	0501		126.2																
		0501	0502		124.2	115.6	1.0													
L 37+00	RT	0502		120.3																
		0502	0622		115.6	107.8	0.9													
L 37+00	RT	0503		125.5																
		0503	0502		115.8	115.6	0.3													
L 35+00	LT	0504		121.8																
		0504	0505		118.8	116.5	0.5													
L 37+00	LT	0505		119.5																
		0505	0503		116.0	115.8														
Y01 42+70	LT	0506		125.0																
		0506	0507		121.4	119.8														
L 28+52	LT	0508		121.8																
		0508	0511		119.6	118.9														
L 28+90	RT	0509		126.6																
		0509	0508		123.4	119.9														
L 26+00	LT	0511		122.0																
		0511	0510		118.4	118.0														
Y02 281+00	LT	0603		126.5																
		0603	0605		123.8	121.5														
Y02 278+02	LT	0604		126.3																
		0604	0655		123.5	123.4														
LPD 11+45	LT	0605		124.3																
		0605	0606		121.5	117.2														
LPD 12+75	LT	0606		120.4																
		0606	0607		117.2	113.0														
LPD 13+65	LT	0607		116.2																
		0607	0608		113.0	108.9														
LPD 14+50	LT	0608		112.1																
		0608	0657		108.1	100.0	0.3		84							X	X		X	X
LPD 15+80	LT	0609		105.8																
		0609	0610		101.3	98.6														
LPD 16+90	LT	0610		101.7																
		0610	0611		98.6	96.8														
LPD 17+84	LT	0611		100.0																
		0611	0615		96.8	96.7														
LPD 18+80	RT	0612		99.7																
		0612	0616		91.0	89.6														
RMPD 20+45	LT	0613		104.3																
		0613	0609		101.6	101.3														
RMPD 22+97	LT	0614		100.1																
		0614	0612		96.7	96.5														
RMPD 22+64	LT	0615		100.6																
		0615	0614		96.7	96.7														
RMPD 23+39	RT	0616		95.8																
		0616	0715		89.6	83.8														
L 51+00	RT	0618		98.3																
		0618	0612		91.4	91.0														
L 45+50	RT	0619		126.0																
		0619	0662		123.9	101.4	3.0													
SHEET TOTALS									84											

LINE & 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
L 37+00	0501																									
	0501	0502				28																				
L 37+00	0502																									
	0502	0622																				432				
L 37+00	0503																									
	0503	0502																				36				
L 35+00	0504																									
	0504	0505																			196					
L 37+00	0505																									
	0505	0503																				52				
Y01 42+70	0506																									
	0506	0507														88										
L 28+52	0508																									
	0508	0511																			248					
L 28+90	0509																									
	0509	0508																		80						
L 26+00	0511																									
	0511	0510																				104				
Y02 281+00	0603																									
	0603	0605																		192						
Y02 278+02	0604																									
	0604	0655										36														
LPD 11+45	0605																									
	0605	0606																		120						
LPD 12+75	0606																									
	0606	0607																		84						
LPD 13+65	0607																									
	0607	0608																		76						
LPD 14+50	0608																									
	0608	0657																								
LPD 15+80	0609																									
	0609	0610																		100						
LPD 16+90	0610																									
	0610	0611																		92						
LPD 17+84	0611																									
	0611	0615																		28						
LPD 18+80	0612																									
	0612	0616																							64	
RMPD 20+45	0613																									
	0613	0609																		32						
RMPD 22+97	0614																									
	0614	0612																		52						
RMPD 22+64	0615																									
	0615	0614																		32						
RMPD 23+39	0616																									
	0616	0715															420									
L 51+00	0618																									
	0618	0612																							64	
L 45+50	0619																									
	0619	0662			76																					
SHEET TOTALS					76	28						36				88	420			888	444	624			128	

LINE & STATION	FROM	TO	##" R.C. PIPE CULVERTS, CONTRACTOR DESIGN		15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	QUANTITIES FOR DRAINAGE STRUCTURES 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	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
L 37+00	0501																						
	0501	0502																					
L 37+00	0502								1												1		
	0502	0622																					
L 37+00	0503								1	4.7		1			1		1						
	0503	0502																					
L 35+00	0504								1													1	
	0504	0505																					
L 37+00	0505								1													1	
	0505	0503																					
Y01 42+70	0506							3.400															
	0506	0507																					
L 28+52	0508								1														1
	0508	0511																					
L 28+90	0509								1							1			1	1			
	0509	0508																					
L 26+00	0511								1														1
	0511	0510																					
Y02 281+00	0603								1														
	0603	0605																					
Y02 278+02	0604								1														
	0604	0655																					
LPD 11+45	0605								1														
	0605	0606																					
LPD 12+75	0606								1			1			1								
	0606	0607																					
LPD 13+65	0607								1			1			1								
	0607	0608																					
LPD 14+50	0608								1			1			1								
	0608	0657																					
LPD 15+80	0609								1			1			1								
	0609	0610																					
LPD 16+90	0610								1			1			1								
	0610	0611																					
LPD 17+84	0611								1			1			1								
	0611	0615																					
LPD 18+80	0612								1	3.7						1			1	1			
	0612	0616																					
RMPD 20+45	0613								1													1	
	0613	0609																					
RMPD 22+97	0614								1							1			1	1			
	0614	0612																					
RMPD 22+64	0615								1							1			1	1			
	0615	0614																					
RMPD 23+39	0616								1	1.3											1		
	0616	0715																					
L 51+00	0618								1	2.0											1		
	0618	0612																					
L 45+50	0619																						
	0619	0662																					
SHEET TOTALS								3.400	22	11.7		7			7	4	1		4	4	3	3	2

NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

LINE & STATION	FROM	TO	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	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. 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	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	ADJUST 2GI	15" DRAINAGE PIPE ELBOW				MODIFIED CONC. FLUME		CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 37+00	0501																											
	0501	0502																										
L 37+00	0502							1																				
	0502	0622																										
L 37+00	0503																											
	0503	0502																										
L 35+00	0504							1																				
	0504	0505																										
L 37+00	0505							1																				
	0505	0503																										
Y01 42+70	0506																										64	HW FOR 36" RCP, REMOVE 2-15" RCP
	0506	0507																										
L 28+52	0508							1																				
	0508	0511																										
L 28+90	0509																											
	0509	0508																										
L 26+00	0511							1																				
	0511	0510																										
Y02 281+00	0603									1			1															
	0603	0605																										
Y02 278+02	0604									1			1															
	0604	0655																										
LPD 11+45	0605			1									1															
	0605	0606																										
LPD 12+75	0606																											
	0606	0607																										
LPD 13+65	0607																											
	0607	0608																										
LPD 14+50	0608																											
	0608	0657																										12" CAAP
LPD 15+80	0609																											
	0609	0610																										
LPD 16+90	0610																											
	0610	0611																										
LPD 17+84	0611																											
	0611	0615																										
LPD 18+80	0612																											
	0612	0616																										
RMPD 20+45	0613					1																						
	0613	0609																										
RMPD 22+97	0614																											
	0614	0612																										
RMPD 22+64	0615																											
	0615	0614																										
RMPD 23+39	0616							1																				
	0616	0715																										
L 51+00	0618							1																				
	0618	0612																										
L 45+50	0619																											
	0619	0662																										
SHEET TOTALS				1		1		7		2			3														64	

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