COMPUTED BY:	LMJ	DATE:	3/9/2022
CHECKED BY:	WKJ	DATE:	5/4/2022

PROJECT NO.	SHEET NO.
I-5987A	3D-19

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.
See "Standard Specifications For Roads and Structures, Section 300-5".

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

LINE & STATION / SIZE / THICKNESS OR GAUGE	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, HDPE, or PVC) 15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C. S. PIPE 15 (0.064)	18 (0.064)	24 (0.064)	30 (0.079)	36 (0.079)	42 (0.109)	48 (0.109)	R. C. PIPE CLASS III 15	18	24	30	36	42	48	R. C. PIPE CLASS IV 15	18	24	30	36	42	48	16" WELDED STEEL PIPE 0.25" THICK, GRADE B IN SOIL	18" WELDED STEEL PIPE 0.25" THICK, GRADE B IN SOIL	24" WELDED STEEL PIPE 0.50" THICK, GRADE B IN SOIL	30" WELDED STEEL PIPE 0.50" THICK, GRADE B IN SOIL	36" WELDED STEEL PIPE 0.50" THICK, GRADE B IN SOIL	42" WELDED STEEL PIPE 0.625" THICK, GRADE B IN SOIL	48" WELDED STEEL PIPE 0.625" THICK, GRADE B IN SOIL	16" WELDED STEEL PIPE 0.25" THICK, GRADE B NOT IN SOIL	18" WELDED STEEL PIPE 0.25" THICK, GRADE B NOT IN SOIL	24" WELDED STEEL PIPE 0.50" THICK, GRADE B NOT IN SOIL	30" WELDED STEEL PIPE 0.50" THICK, GRADE B NOT IN SOIL	36" WELDED STEEL PIPE 0.50" THICK, GRADE B NOT IN SOIL	42" WELDED STEEL PIPE 0.625" THICK, GRADE B NOT IN SOIL	48" WELDED STEEL PIPE 0.625" THICK, GRADE B NOT IN SOIL	ENDWALLS STD. 838.01 OR STD.838.11 (UNLESS OTHERWISE NOTED) CY	REINFORCED ENDWALLS CY	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	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE 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 W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	J.B. STD. 840.31 OR 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 AND TWO GRATES STD. 840.37	M.H. STD. 840.51, STD. 840.52, OR STD.53	M.H. FRAME AND COVER STD. 840.54	TEMP STEEL PLATE COVER MASONARY DRAINAGE	15" C.S. ELBOW	15" SIDE DRAIN PIPE ELBOW	FLOWABLE FILL, C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
		2212	2214		147.10	146.80																																			36							36																																		6.0		
LA2 366+73	73 RT	2212		151.90																																																				1																					1	1								
		2213	2214		147.20	147.00																													32																																																			
LA2 366+38	5 LT	2213		151.30																																																				1																					1	1								
		2214	2215		146.80	145.20	.5		24																																																																															
LA2 366+73	2 RT	2214		151.20																																																				1																					1	1								
		2216	2217		150.30	146.00		28																																																																																
LA2 356+01	105 RT	2216		154.30																																																				1																					1	1								
	105 LT	2218	2219		149.70	145.10		36																																																																																
LA2 353+28		2218		153.80																																																				1																					1	1								
LA2 353+86	5 LT																																																																																					133	
LA2 353+93																																																																																						133	
	2 RT	2220	2221		149.80	149.70																													8																																																				
LA2 360+00		2220		153.80																																																				1																					1	1								
	5 LT	2221	2222		149.50	147.00																																				48							48																																				
LA2 360+00		2221		153.80																																																				1																					1	1								
	2 RT	2301	2302		147.50	147.20																																																																																				
LA2 379+26		2301		150.00																																																		2																															17.0		
	5 LT	2302	2304		147.20	147.00																									104																																																											
LA2 379+26		2302		156.10																																																				1	3.9																				1	1								
	2 RT	2303	2304		152.10	151.70																													8																																																				
LA2 378+20		2303		156.10																																																				1																					1	1								
	5 LT	2304	2305		147.00	146.70																									96																																																											
LA2 378+20		2304		155.70																																																				1	3.8																				1	1								T.B. PRECAST DRAINAGE STRUCTURE (STD. 840.46)
LA2 378+20	2 RT	2305		149.20																																																		2																																		
		2306	2307		150.50	150.30																													8																																																				
LA2 374+07	97 RT	2306		154.50																																																				1																					1	1								
	98 LT	2307	2308		150.00	146.00																																				52							52																																		6.0		
LA2 374+07		2307		154.30																																																				1																					1	1								
	5 LT	2309	2310		148.60	148.60																													8																																																				
LA2 369+15		2309		152.70																																																				1																					1	1								
	2 RT	2310	2312		148.60	147.60																													196																																																				
LA2 369+15		2310		152.60																																																				1																					1	1								
	73 RT	2311	2312		148.00	147.90																													8																																																				
LA2 367+17		2311		152.00																																																				1																					1	1								
	73 RT	2312	2212		147.60	147.40	.5																												44																																																				
LA2 367+17		2312		152.00																																																				1																					1	1								
	73 RT	2313	2214		147.20	147.00																													44																																																				
LA2 367+17		2313		151.30																																																				1																					1	1								
	2 RT	2401	2402		150.00	149.40																																										100							100																																11.0		
LA2 390+33		2401		154.00																																																		6																																		
LA2 390+33	5 LT	2402		153.40																																																		6																																		
	CL	2403	2404		155.60	155.00																													8																																																				
LA2 387+60	CL	2403		159.60																																																				1																					1	1								
		2404	2406		155.00	154.30																													120																																																					
LA2 387+60	2 RT	2404		159.00																																																				1																					1	1								
		2405	2406		151.40	151.10																																					48							48																																			10.0		
LA2 386+38	5 LT	2405		151.40																																																																																						
		2406	2407		151.10	151.10																					8																																																																
LA2 386+38	2 RT	2406		158.60																																																				1	2.5																				1	1								
							SHEET TOTAL	64	24																				8	200					484								136	48				100		136	48				100	17		20	10.2																				20	20						50.0	266	

ABBREVIATIONS

C.A.A - CORRUGATED ALUMINUM INLET
C.B - CATCH BASIN
C.S. - CORRUGATED STEEL
D.I. - DROP INLET
G.D.I. - GRATED DROP INLET
P.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