Z1501

COMPUTED BY: VHB DATE: 8/24/2021

CHECKED BY: VHB DATE: 8/24/2021

PROJECT NO.	SHEET NO.
U-4405A	3D-1

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)

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

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 %	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	C. S. PIPE 12 (.064)	15 (.064)	18 (.064)		R. C. PIPE CLASS III 12	15	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	30" WELDED STEEL PIPE 0.5" THICK, GRADE B IN SOIL	30" WELDED STEEL PIPE 0.5" THICK, GRADE B NOT IN SOIL	36" WELDED STEEL PIPE 0.5" THICK, GRADE B IN SOIL	36" WELDED STEEL PIPE 0.5" THICK, GRADE B NOT IN SOIL	15" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY
L1 111+50	71	LT	0401		215.7																																					
			0401	0402		213.0	212.9			20																																
L1 111+50	52	LT	0402		217.4																																					
			0402	4B08		209.8	209.4																											120								
L1 110+28	72	LT	4B07		215.4																																					
			4B07	4B08		212.7	212.6			20																																
L1 110+28	53	LT	4B08		217.1																																					
			4B08	4B06		209.4	209.0																											140								
L1 108+88	64	LT	4B06		216.1																																					
			4B06	4B04		209.0	208.7																											120								
L1 107+74	71	LT	4B05		213.5																																					
			4B05	4B04		210.8	210.7			20																																
L1 107+69	53	LT	4B04		216.1																																					
			4B04	4B03		208.7	207.5																											372								
L1 104+00	53	LT	4B03		214.6																																					
			4B03	4B02		207.5	204.4																											308								
L1 101+00	57	LT	4B02		209.1																																					
			4B02	4B01		204.4	204.0																											60								
L1 96+64	95	LT	4A06		189.2																																					4.900
			4A06	4A05		185.2	185.1																					12														
L1 96+56	86	LT	4A05		190.1	185.1																																				
L1 96+55	95	LT	4A04		189.2																																					4.900
			4A04	4A03		185.2	185.1																					8														
L1 96+51	91	LT	4A03		190.1	185.1																																				
L1 96+06	74	LT	4A01		195.8																																					
			4A01	4A02		192.8	192.5			28																																
L1 112+73	52	LT	0403		217.7																																					
			0403	0402		210.2	209.8																											120								
L1 112+81	62	LT	0404		216.3																																					
			0404	0403		214.3	213.7	0.3	12																																	
L1 113+73	71	LT	0406		216.0																																					
			0406	0407		213.8	213.7			20																																
L1 113+74	53	LT	0407		217.8																																					
			0407	0403		210.5	210.2																											100								
L1 115+00	70	LT	0408		215.4																																					
			0408	0409		212.7	212.6			20																																
L1 115+00	52	LT	0409		217.9																																					
			0409	0407		211.3	211.0																										124									
L 16+06	69	LT	0410			215.0																																				
			0410	0423		215.0	214.3	0.7				20																														
L 17+50	0	CL	0411		219.6																																					
			0411	0405		213.5	212.7																									380										
L 17+50	53	RT	0412		218.8																																					
			0412	0411		214.4	214.3																							52												
L 17+50	52	LT	0413		218.6																																					
			0413	0411		215.6	214.3																								52											
L 17+70	6	LT	0414		219.5																																					
			0414	0411		214.1	214.0																								20											
L 19+00	6	LT	0415		220.0																																					
			0415	0414		214.7	214.4																							128												
							SHEET TOTALS		12	128		20																20		180	72	380	124	1340								9.800

STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	QUANTITIES FOR DRAINAGE STRUCTURES 0' THRU 5' EACH	5' THRU 10' (A) LIN. FT.	10' AND ABOVE (B) 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	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	15" SLOTTED DRAIN	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	T.B.G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING D.I. TO J.B.	ADJUST C.B.	ADJUST D.I.	ADJUST JB W/MH	15" C.S. ELBOW	18" C.S. ELBOW	12" DRAINAGE PIPE ELBOW	15" DRAINAGE PIPE ELBOW	24" DRAINAGE PIPE ELBOW	30" DRAINAGE PIPE ELBOWS	48" DRAINAGE PIPE ELBOW	PIPE CLEAN OUT CY	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
0401		1														1			1																										
0401	0402																																												
0402		1	2.6		1		1																																						
0402	4B08																																												
4B07		1														1			1																										
4B07	4B08																																												
4B08		1	2.7		1		1																																						
4B08	4B06																																												
4B06		1	2.1		1		1																																						
4B06	4B04																																												
4B05		1														1			1																										
4B05	4B04																																												
4B04		1	2.5		1		1																																						
4B04	4B03																																												
4B03		1	2.1		1		1																																						
4B03	4B02																																												
4B02		1			1		1																																						
4B02	4B01																																												
4A06																																													
4A06	4A05																																												
4A05																																									1.0126			
4A04																																													
4A04	4A03																																												
4A03																																									1.0126			
4A01		1			1	1																																							
4A01	4A02																																												
0403		1	2.6		1		1																																						
0403	0402																																												
0404																																									0.3528			
0404	0403																																												
0406		1											1	1																															
0406	0407																																												
0407		1	2.3		1		1																																						
0407	0403																																												
0408		1														1			1																										
0408	0409																																												
0409		1	1.6		1		1																																						
0409	0407																																												
0410																																													OEP
0410	0423																																												
0411		1	1.1																			1					1																		
0411	0405																																												
0412		1			1			1																																					
0412	0411																																												
0413		1			1		1																																						
0413	0411																																												
0414		1	0.4							1			1	1																															
0414	0411																																												
0415		1	0.2										1	1																															
0415	0414																																												
SHEET TOTALS		20	20.2		12	1	10	1		1			3	3		4			4			1					1															2.3780			