KCI-2M663X2

COMPUTED BY:	Will Hines, Jr., PE	DATE:	4/12/2018
CHECKED BY:	Joshua G. Dalton, PE	DATE:	4/12/2018

PROJECT NO.	SHEET NO.
R-5020B	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

Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC); column header rows: LINE & STATION / SIZE / THICKNESS OR GAUGE

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	4	15	18	24	30	36	42	48	4 Irrigation Conduit	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
L 179+59	40 LT	0406		64.6																	
		0406	0407		60.1	58.4						32						X	X		
L 179+28	47 LT	0407		65.0																	
		0407	0409		57.9	57.6	0.5						92					X	X		
L 178+36	53 LT	0408		63.1																	
		0408	0409		60.6	59.6			12									X	X		
L 178+36	40 LT	0409		62.8																	
		0409	0414		57.6	57.2															
L 179+28	40 RT	0410		64.2																	
		0410	0425		60.9	60.7															
Y17 15+16	18 LT	0411		59.3																	
		0411	0423		56.1	56.0															
		0412	0413		58.1	58.0															
L 177+00	51 RT	0412		61.6																	
L 177+00	8 RT	0413		63.0																	
		0413	0427		58.0	57.9															
		0414	0415		57.2	57.1															
L 176+99	40 LT	0414		61.9																	
L 176+85	60 LT	0415		61.8																	
		0415	0417		57.1	55.4															
L 175+58	39 RT	0416		62.9																	
		0416	0428		55.7	55.5															
L 175+58	51 LT	0417		62.6																	
		0417	0418		55.4	55.0															
L 174+55	40 LT	0418		64.9																	
		0418	0419		55.0	53.8								56				X	X		
Y17 12+03	19 LT	0420		58.8																	
		0420	0451		56.5	56.5															
Y17 12+03	19 RT	0421		58.8																	
		0421	0452		56.1	56.0															
Y17 15+16	17 RT	0423		59.5																	
		0423	0416		56.0	55.7			92									X	X		
TIE 15+21	116 LT	0424												16				X	X		
L 179+28	8 LT	0425		65.2																	
		0425	0407		60.8	59.6															
L 178+48	8 LT	0426		64.1																	
		0426	0409		60.8	59.4															
L 176+99	8 LT	0427		62.9																	
		0427	0414		57.9	57.8															
L 175+58	8 LT	0428		63.9																	
		0428	0417		55.5	55.4															
L 176+09	6 RT	0429		63.4																	
		0429	0428		60.1	55.5															
TIE 12+05	15 LT	0456		81.7																	
		0456	0457		78.4	78.4															
TIE 12+05	15 RT	0457		81.7																	
		0457	0458		78.4	77.2															
TIE 12+72	22 RT	0458		80.4																	
		0458	0459		77.2	52.6			80								X	X				
							SHEET TOTALS		184			32	92	72							

R. C. PIPE CLASS III; R. C. PIPE CLASS IV; DUCTILE IRON PIPE TYPE 3 SEALED PIPE SYSTEM SEE SPECIAL PROVISIONS; QUANTITIES FOR SEALED DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

FROM	TO	RC III 15	RC III 18	RC III 24	RC III 30	RC III 36	RC III 42	RC III 48	RC IV 15	RC IV 18	RC IV 24	RC IV 30	RC IV 36	RC IV 42	RC IV 48	DIP 30	DIP 36 CLASS 150	DIP 42 CLASS 150	DIP 48		0' THRU 5'	5' THRU 10' (A)	10' & ABOVE (B)	BOOTS	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY
0406																											
0406	0407																										
0407																											
0407	0409																										
0408																											
0408	0409																										
0409																											
0409	0414												136														
0410																											
0410	0425								44																		
0411																											
0411	0423								32																		
0412	0413								40																		
0412																											
0413																											
0413	0427								16																		
0414	0415																24										
0414																											
0415																					1			2			
0415	0417																124										
0416																											
0416	0428								48																		
0417																											
0417	0418													104													
0418																											
0418	0419																										
0420																											
0420	0451								20																		
0421																											
0421	0452								20																		
0423																											
0423	0416																										
0424																											
0425																											
0425	0407								40																		
0426																											
0426	0409								32																		
0427																											
0427	0414								32																		
0428																											
0428	0417								44																		
0429																											
0429	0428								56																		
0456																											
0456	0457								28																		
0457																											
0457	0458								64																		
0458																											
0458	0459																										
SHEET TOTALS									516				136	104			148				1			2			

QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)); FRAME, GRATES, AND HOOD STD. 840.03 (GRATE TYPE); CONCRETE TRANSITIONAL SECTION

FROM	TO	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	E	F	G		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. (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	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 C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	SLUICE GATE (DRY DETENTION BASIN)	ADJUST D.I.	15" DRAINAGE PIPE ELBOW		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
0406		1			1		1																																			
0406	0407																																									
0407		1	1.3																							1				1												
0407	0409																																									
0408		1											1	1																												
0408	0409																																									
0409		1	0.2		1		1																																			
0409	0414																																									
0410		1			1			1																																		
0410	0425																																									
0411		1			1			1																																		
0411	0423																																									
0412	0413																																									
0412		1			1	1																																				
0413		1								1			1	1																												
0413	0427																																									
0414	0415																																									
0414		1			1	1																																				See Special Detail 2C-6
0415													1	1																												Sealed System
0415	0417																																									
0416		1	2.2		1		1																																			
0416	0428																																									
0417		1	2.2		1			1																																		
0417	0418																																									
0418		1	4.9		1			1																																		
0418	0419																																									
0420		1			1		1																																			
0420	0451																																									
0421		1			1			1																																		See Special Detail 2C-6
0421	0452																																									
0423		1			1		1																																			
0423	0416																																									
0424																																										
0425		1								1			1	1																												
0425	0407																																									
0426		1								1			1	1																												
0426	0409																																									
0427		1								1			1	1																												
0427	0414																																									
0428		1	3.4																								1			1												
0428	0417																																									
0429		1								1			1	1																												
0429	0428																																									
0456		1																							1			1														
0456	0457																																									
0457		1																							1			1														
0457	0458																																									
0458		1																							1			1														
0458	0459																																			2						
SHEET TOTALS		23	14.2		12	2	5	5		5			7	7											3	1	1	3		2						2						