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BELAM-NEW

COMPUTED BY:	DJS	DATE:	04/19/2023
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PROJECT NO.	SHEET NO.
R-2707D	3D-14

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 %	PIPE REMOVAL LIN. FT.	REMARKS
Y2 30+87	20	RT							20	
SRVRD_5 20+19	42	RT							38	
SRVRD_5 20+19	44	RT							32	
RAMP_A 46+16	48	RT							37	
RAMP_A 45+19	8	RT							194	
RAMP_A 44+20	2	LT							42	
RAMP_A 46+20	5	RT							44	
Y5_EBL 33+79	31	LT							80	
RAMP_D 31+23	42	LT							14	
RAMP_D 25+26	63	RT							69	
RAMP_D 25+38	1	LT							53	
RAMP_D 25+46	64	LT							70	
RAMP_D 21+37	47	LT							68	
RAMP_D 20+99	108	LT							71	
RAMP_D 17+46	53	LT							69	
RAMP_D 14+34	25	LT							59	
RAMP_D 14+33	56	LT							35	
RAMP_D 12+55	34	LT							43	
SRVRD_3 18+70	7	RT							69	
L 846+20	58	RT							41	
SRVRD_3 17+43	30	LT							31	
L 846+85	31	RT							63	
SRVRD_1 15+11	26	RT							33	
SRVRD_4 19+47	0	CL							44	
SRVRD_4 19+65	20	LT							12	
SRVRD_4 18+23	19	RT							23	
L 667+25	49	LT							49	
L 677+00	110	LT							27	
Y4 19+89	6	LT							30	
SRVRD_4 14+13	26	RT							30	
L 757+88	74	RT							20	
Y5_EBL 40+51	24	RT							63	
Y5_WBL 40+07	3	LT							68	
Y4 21+55	31	LT							149	
Y5_WBL 39+49	57	RT							105	
Y4 19+07	11	LT							68	
Y4 10+01	17	LT							19	
Y5_WBL 35+73	1	RT							57	
SHEET TOTALS									2039	
R-2707E PROJECT TOTALS									2602	
R-2707D PROJECT TOTALS									3024	
PROJECT GRAND TOTALS									5626	

Side Drain Pipe (RCP, CSP, CAAP, HDPE, PVC, or PP PIPE) and C. S. PIPE

	15	18	24	30	36	42	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	C.S. 15 (.064)	C.S. 18 (.064)	C.S. 24 (.064)	C.S. 36 (.079)
R-2707E PROJECT TOTALS	1516	1192	136	216		204						176	116		
R-2707D PROJECT TOTALS	2408	792	848	392	472	128							108	300	228
PROJECT GRAND TOTALS	3924	1984	984	608	472	332						176	224	300	228

R. C. PIPE CLASS III, CLASS IV, CLASS V

	III 15	III 18	III 24	III 30	III 36	III 42	III 48	IV 15	IV 18	IV 24	IV 30	IV 36	IV 42	IV 48	V 30	V 48
R-2707E PROJECT TOTALS	1720	2660	880	328			72	1572	620	920			108	324		156
R-2707D PROJECT TOTALS	7472	4980	6216	3956	1472	16	40	2538	1008	276	136	284	1328	528	248	
PROJECT GRAND TOTALS	9192	7640	7096	4284	1472	16	112	4110	1628	1196	136	284	1436	852	248	156

	42" R.C. PIPE CULVERTS, CONTRACTOR DESIGN	48" R.C. PIPE CULVERTS, CONTRACTOR DESIGN	16" WELDED STEEL PIPE 0.281" THICK, GRADE B (50% IN SOIL, 50% NOT IN SOIL)	18" WELDED STEEL PIPE 0.312" THICK, GRADE B (50% IN SOIL, 50% NOT IN SOIL)	30" WELDED STEEL PIPE 0.500" THICK, GRADE B (50% IN SOIL, 50% NOT IN SOIL)	42" WELDED STEEL PIPE 0.625" THICK, GRADE B (50% IN SOIL, 50% NOT IN SOIL)	48" WELDED STEEL PIPE 0.688" THICK, GRADE B (50% IN SOIL, 50% NOT IN SOIL)	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY
R-2707E PROJECT TOTALS			356	156	172	196	420	21.000
R-2707D PROJECT TOTALS	332	348						57.400
PROJECT GRAND TOTALS	332	348	356	156	172	196	420	78.400

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

	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	GRATE TYPE E	GRATE TYPE F	GRATE TYPE G	
R-2707E PROJECT TOTALS	110	61.5	2.2	8	5		3	
R-2707D PROJECT TOTALS	257	136.6		2	1	1		
PROJECT GRAND TOTALS	367	200.9		10	6	1	3	

	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/ 2 GRATES STD. 840.24	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	SPRING BOX STD. 840.41
R-2707E PROJECT TOTALS	7	7	11	62	3	2	22	6	51	4	4	11	1	4	1
R-2707D PROJECT TOTALS	5	6	50	170	5		74		128	18	11	14		4	1
PROJECT GRAND TOTALS	12	13	61	232	8	2	96	6	179	22	15	25	1	8	2

	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO J.B. w/ MH	ADJUST D.I.	15" SIDE DRAIN PIPE ELBOW	18" SIDE DRAIN PIPE ELBOW	24" SIDE DRAIN PIPE ELBOW	30" SIDE DRAIN PIPE ELBOW	36" SIDE DRAIN PIPE ELBOW	18" SLUICE GATE (25" SIZE SLUICE GATE)	24" SLUICE GATE (32" SIZE SLUICE GATE)	30" SLUICE GATE (38.75" SIZE SLUICE GATE)	BERM DITCH OUTLET STD. 850.10	BERM DITCH OUTLET STD. 850.11	ENERGY DISSIPATION BASIN	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY
R-2707E PROJECT TOTALS	14	3	6	14	17		2					1			388	5.9212	
R-2707D PROJECT TOTALS	14	1	1	38	11	10	6	8	1	2	1	7	1	5	15		0.342
PROJECT GRAND TOTALS	28	4	7	52	28	10	8	8	1	2	1	8	1	5	403	5.9212	0.342

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