COMPUTED BY: Y. J. ANORD	DATE: 10-28-13
CHECKED BY: T. L. SNELL	DATE: 11-13-13

PROJECT REFERENCE NO.	SHEET NO.
R-3620	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EARTHWORK SUMMARY
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
-L- 12+00.00	-L- 14+50.00	13	348	1,034	1,032	359
-L- 14+50.00	-L- 18+00.00		188	2,159	2,159	188
-L- 18+00.00	-L- 22+00.00			7,326	7,326	
-L- 22+00.00	-L- 35+50.00			25,117	25,117	
SUBTOTAL 1:		13	536	35,636	35,634	547
-Y- 10+40.00	-Y- 15+15.03		181	4,572	4,572	181
-L- 35+50.00	-L- 65+50.00	6	42	40,643	40,637	42
SUBTOTAL 2:		6	223	45,215	45,209	223
-L- 65+50.00	-L- 96+00.00		260	31,448	31,448	260
SUBTOTAL 3:			260	31,448	31,448	260
-L- 96+00.00	-L- 126+50.00		519	51,284	51,284	519
SUBTOTAL 4:			519	51,284	51,284	519
-L- 126+50.00	-L- 157+00.00	1,366	124	40,437	39,228	281
SUBTOTAL 5:		1,366	124	40,437	39,228	281
-L- 157+00.00	-L- 180+50.00	14	78	37,038	37,024	78
SUBTOTAL 6:		14	78	37,038	37,024	78
-Y1- 12+50.00	-Y1- 19+80.01	617	935	3,275	3,275	1,552
-Y2- 10+00.00	-Y2- 16+51.09	506	665	3,545	3,545	1,171
SUBTOTAL 7:		1,123	1,600	6,820	6,820	2,723
-L- 180+50.00	-L- 188+00.00	43	691	2,919	2,876	691
-Y1- 20+23.17	-Y1- 28+70.00	478	1,974	6,240	6,240	2,452
SUBTOTAL 8:		521	2,665	9,159	9,116	3,143
PROJECT SUBTOTALS:		3,043	6,005	257,037	255,763	7,774
MATERIAL FOR SHOULDER CONSTRUCTION				13,455	13,455	
SELECT MATERIAL IN LIEU OF BORROW				-9,107	-9,107	
ADDITIONAL UNDERCUT PER GEOTECH RECS.			1,000			1,000
PROJECT TOTALS		3,043	7,005	261,385	260,111	8,774
EST. 5% FOR REPL. TOPSOIL ON BORROW PIT					13,006	
GRAND TOTALS		3,043	7,005		273,117	
SAY		3,100	7,100		273,200	

DDE = 17,450 CY

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-L-	14+50.00	16+00.00	CL	346.99
-L-	17+88.49	21+80.03	RT	638.74
-L-	36+60.87	38+95.30	RT	139.28
-L-	39+28.85	45+17.30	RT	1,149.74
-L-	45+61.72	49+34.94	RT	531.02
-L-	52+18.95	-Y- 12+91.54	LT	771.91
-Y1-	15+94.63	-L- 181+08.68	LT	3,394.16
-Y1-	24+84.87	25+01.68	LT	6.64
-Y1-	24+23.57	-L- 181+00.00	LT	2,803.81
-Y2-	10+59.81	12+48.19	LT	348.56
			TOTAL:	10,130.85
			SAY:	10,140

SUMMARY OF BREAKING EXISTING ASPHALT PAVEMENT
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-L-	16+00.00	19+50.01	LT/RT	603.65
-L-	20+43.50	49+56.86	LT/RT	4,615.43
-L-	49+56.86	52+71.71	LT/RT	633.22
-Y-	12+10.09	13+39.23	RT	143.49
-Y1-	14+76.15	17+79.85	LT	662.28
-Y1-	23+12.66	24+35.00	LT	226.50
-L-	179+98.37	181+84.62	LT	171.59
-L-	180+66.76	181+04.30	LT	41.98
-L-	181+61.45	182+11.69	RT	26.20
-Y2-	10+00.00	11+42.64	LT	53.49
			TOTAL:	7,177.84
			SAY:	7,180

SUMMARY OF SHOULDER BERM GUTTER
IN LINEAR FEET

SURVEY LINE	STATION	STATION	LENGTH (LF)
-L- (LT)	146+80.00	157+97.00	1,117.00
		TOTAL:	1,117.00
		SAY:	1,120

SUMMARY OF WOVEN WIRE FENCE, 47" FABRIC

SURVEY LINE	LOCATION	STATION	STATION	FABRIC L. F.	4" POSTS	5" POSTS
-L-	LT	12+00	35+35	2,311.08	150	28
-L-	LT	35+95	52+49.69	1,673.96	107	23
-Y-	RT/LT	10+40	-L- 52+49.69	623.44	40	8
-Y-	LT	10+40	-L- 56+50	375.95	22	8
-L-	LT	56+50	148+69.82	9,271.27	610	95
-L-	LT	149+10.99	175+08.11	2,618.78	165	41
-Y1-	RT/LT	15+40	-L- 175+08.11	314.36	18	8
-Y1-	LT	15+40	-L- 180+79.45	727.35	43	16
-L-	RT	12+00	21+10	913.63	58	13
-L-	RT	21+70	38+70	1,717.79	111	22
-L-	RT	39+30	44+73.26	543.26	33	10
-L-	RT	45+80	51+05	510.36	31	10
-L-	RT	51+65	148+33.61	9,625.51	636	95
-L-	LT	148+73.44	175+08.11	2,679.66	169	41
-L-	RT	175+08.11	-Y1- 24+00	352.95	21	8
-Y1-	RT	-Y1- 22+61.14	24+00	196.56	10	7
-L-	RT	179+64.18	180+79.45	138.70	6	7
			GRAND TOTALS:	34,594.61	2,231	440
			SAY:	34,600	2,240	440

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	STATION	STATION	AGGREGATE TYPE* (ASU/AST)	AGGREGATE THICKNESS (INCHES)	SHALLOW UNDERCUT (CY)	CLASS IV SUBGRADE STABILIZATION (TONS)	GEOTEXTILE FOR SOIL STABILIZATION (SY)
		CONTINGENCY:	ASU		1000	1900	15,300
				TOTAL CY/TONS/SY:	1000	1900	15,300

*ASU = AGGREGATE SUBGRADE
*AST = AGGREGATE STABILIZATION

SUMMARY OF SUBSURFACE DRAINAGE

LINE	STATION	STATION	LOCATION LT/RT/CL	DRAIN TYPE* UD/BD/SD	LF
			CONTINGENCY:	SD	500
				TOTAL LF:	500

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	TES	EA	G	NG				
-L-	146+19.82	158+57.32	LT	1,237.50'			155+00.00	148+69.82	8.00'	11.00'	50'	50'	1	1			2													
-L-	145+46.11	158+58.61	RT	1,312.50'			148+33.61	158+50.00	8.00'	11.00'	50'	50'	1	1			2													
-Y2-	13+50	13+60	LT	37.50'																			2							
	LESS ANCHOR DEDUCTIONS		GRAU 350 4 @ 50.00' =	- 200.00'																										
			TOTAL	2,387.50'													4						2							
	ADDITIONAL GUARDRAIL POST = 5 EACH		PROJECT TOTAL	2,387.50'													4						2							

12/06/07

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