COMPUTED BY: M. Hussey   DATE: 3/2016
CHECKED BY: J. Teague   DATE: 4/2016

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUARDRAIL SUMMARY

"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

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	GRAU 350	TYPE III	TEMP W-BEAM	XIII	CAT-1	VI MOD	BIC	AT-1	IMPACT ATTEN. EA	IMPACT ATTEN. G	IMPACT ATTEN. NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	20+47.76	21+29.01 (BRIDGE)	RT	81.25			21+29.01 (BRIDGE)		6.5	9.5	50		1		1	1											28		
-L-	20+61.04	21+42.29 (BRIDGE)	LT	81.25				21+42.29 (BRIDGE)	6	9		50		1	1	1											28		
-L-	22+81.53 (BRIDGE)	23+62.78	RT	81.25				22+81.53 (BRIDGE)	6.5	9.5		50		1	1	1											28		
-L-	22+94.81 (BRIDGE)	24+38.56	LT	143.75			22+94.81 (BRIDGE)		6	9	50		1		1	1											40		
-L-	24+87.50	29+12.50	LT	425.00			28+50.00	25+00.00	6	9	50	50	1	1	2														
TEMPORARY TRAFFIC CONTROL																													
-L-	20+35.00 +/-	21+40.00 +/-	RT														1												
-L-	22+58.00 +/-	23+67.00 +/-	RT														1												
TOTAL				812.50											6	4	2										124		
DEDUCTIONS FOR ANCHORS:																													
4 TYPE III'S AT 18.75' EA.=				75'																									
6 TYPE GRAU 350'S @ 50' EA.=				300'																									
TOTAL DEDUCTION =				375'																									
TOTAL STEEL BEAM GUARDRAIL =				437.50'																									
SAY =				450.00'											6	4	2										124		
ADDITIONAL GUARDRAIL POSTS =				5 EA																									

★ ASPHALT PAVEMENT REMOVAL SUMMARY
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD²
-L-	14+50.96	20+13.29	RT	991.95
-L-	20+25.29	21+38.37	RT	207.30
-L-	22+58.47	23+16.53	RT	96.24
-L-	23+18.75	23+89.46	RT	55.29
Temp. Pavement				
-L-	20+35.00	21+40.00	LT	70.00
-L-	22+58.00	23+67.00	LT	72.67
Inside Slope Stakes				
-L-	11+50.00	17+81.88	RT	1,183.16
-L-	19+23.00	21+38.37	RT	141.02
-L-	22+79.52	29+50.00	RT	1,630.67
			TOTAL:	4,448.30
			SAY:	4,450

SHOULDER BERM GUTTER SUMMARY
IN LINEAR FEET

SURVEY LINE	STATION	STATION	LENGTH (FT)
-L- (RT)	21+00.00	21+29.00	29.00
		TOTAL:	29.00
		SAY:	29.00

★ Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Asphalt Pavement will be paid for at the contract lump sum price for "Grading".

★ SUMMARY OF EARTHWORK
IN CUBIC YARDS

LINE	STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
PHASE I						
-L-	11+00.00	21+35.74 (BRIDGE)	157	4,888	4,731	
-L-	22+88.26 (BRIDGE)	30+00.00		6,210	6,210	
-DR1-	10+16.89	11+66.00		1,248	1,248	
		SUBTOTAL 1:	157	12,346	12,189	
PHASE II						
-L-	11+00.00	16+00.00	80	160	80	
-L-	16+50.00	21+35.74	188	7		181
-L-	23+50.00	29+00.00	157	312	155	
-DR2-	10+00.00	11+19.17	16	170	154	
		SUBTOTAL 2:	441	649	389	181
		TOTAL	598	12,995	12,578	181
EARTH WASTE TO REPLACE BORROW					-181	-181
		PROJECT TOTALS:	598	12,995	12,397	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					620	
		GRAND TOTAL:	598		13,018	
		SAY:	600		13,100	

Estimated Undercut Excavation = 300 C.Y. (Per Geotechnical Unit's Letter January 4, 2016)
Estimated Select Granular Material = 300 C.Y. (Per Geotechnical Unit's Letter January 4, 2016)
Estimated DDE = 40 C.Y.
Estimated Shallow Undercut = 100 C.Y. (Per Geotechnical Unit's Letter January 4, 2016)
Estimated Class IV Subgrade Stabilization = 200 Tons (Per Geotechnical Unit's Letter January 4, 2016)

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.