12/06/07

COMPUTED BY: JCH	DATE: 8/23/16
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WETHERILL ENGINEERING
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Raleigh, N.C. 27606
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
R-5769	3B-1

SUMMARY OF EARTHWORK

(IN CUBIC YARDS)

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
-L- 10+75.00	-L- 32+61.98 (BEGIN BRIDGE)	1747	61606	61121	1262
SUBTOTALS:		1747	61606	61121	1262
-L- 33+75.48 (END BRIDGE)	-L- 43+05.00	1560	63271	63204	1493
-L1- 10+00.00	-L1- 14+53.08				
-L2- 10+25.00	-L2- 11+20.00	0	1065	1065	
SUBTOTALS:		1560	64336	64269	1493
-Y1REV- 10+50.00	-Y1REV- 23+17.31	360	2044	1813	129
SUBTOTALS:		360	2044	1813	129
TOTAL:		3667	127986	127203	2884
LOSS DUE TO CLEARING & GRUBBING					
PROJECT TOTALS:		3667	127986	127203	2884
5% TO REPLACE TOP SOIL ON BORROW PIT				6360	
GRAND TOTALS:		3667		133563	
SAY:		3800		140000	

PER GEOTECH RECOMMENDATIONS, ESTIMATE CLASS IV SUBGRADE STABILIZATION = 400 TON
PER GEOTECH RECOMMENDATIONS, ESTIMATE SHALLOW UNDERCUT BY STATIONS = 300 CY
PER GEOTECH RECOMMENDATIONS, ESTIMATE SHALLOW UNDERCUT CONTINGENCY = 200 CY
TOTAL SHALLOW UNDERCUT = 500 CY

NOTE: 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.

PARCEL INDEX

PARCEL NO.	PROPERTY OWNERS NAMES	SHEET NO.
1	NOVO NORDISK PHARMACEUTICAL INDUSTRIES, INC.	4 - 8
2	CLAUDIA GONZALEZ SANTILLAN JOSE GUADALUPE ROCHA SAUCEDO	4
3	BETTY C WOODALL	7
4	BETTY L. MITCHELL	7,8
5	NEW BETHEL CHURCH	5,8

SHOULDER BERM GUTTER SUMMARY

SURVEY LINE	STATION	STATION	LOCATION	LENGTH (FT)
-L-	32+00.00	BEGIN APP. SLAB	LT	47.81
-L-	END APP. SLAB	34+60.00	LT	70.35
-L-	32+00.00	BEGIN APP. SLAB	RT	47.81
-L-	END APP. SLAB	34+60.00	RT	70.35
			TOTAL:	236.32
			SAY:	237

"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 SHOUL. 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	TYPE III	GRAU 350 TL-3	M-350	B-77	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
-L-	23+75.00	32+61.98	LT.	887.50'				24+50.00	8'-0"	11'-0"		50'-0"		1'-0"			1		1											
-L-	23+75.00	32+61.98	RT.	887.50'			24+50.00		8'-0"	11'-0"	50'-0"		1'-0"				1		1											
-L-	33+75.48	40+56.73	LT.	681.25'			39+80.00		8'-0"	11'-0"	50'-0"		1'-0"				1		1											
-L-	33+75.48	13+24.91 (-L1-)	RT.	887.50'				12+50 (-L1-)	8'-0"	11'-0"									1	1										
			PROJECT SUBTOTAL	3343.75'													3		4	1										
		LESS ANCHOR DEDUCTIONS		(-)231.25'												GUARDRAIL ANCHOR DEDUCTIONS														
			PROJECT TOTAL	3112.50'												TYPE B-77 = 4 @ 18.75' = 75'														
																GRAU-350 TL-3 = 3 @ 50' = 150'														
			SAY	3112.50'												CAT-1 = 1 @ 6.25' = 6.25'														
						ADDITIONAL GUARDRAIL POSTS = 5 EACH										TOTAL DEDUCTIONS = 231.25'														

8/23/2016
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USER: gsp