



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

April 11, 2018

**Addendum No. 1**

RE: Contract # C203615

WBS # 34437.3.7

STATE FUNDED

**Richmond County (R-2501C)**

US-1 From North Of SR-1606 (Fox Road) To South Of SR-1001

**April 17, 2018 Letting**

To Whom It May Concern:

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the plans:

Sheet No.	Revisions
3B-2	Unclassified Excavation and Waste have increased in the 1 <sup>st</sup> Alternate
X-1A thru X-1D	Revised to add earthwork quantities for some missing station ranges and the rows have been adjusted down

Please void the above listed sheets in your plans and staple the revised sheets thereto.

The Earthwork Balance Sheets for the ABC alternate have been revised to reflect the above change to the earthwork and cross sections. The Earthwork Balance Sheets for the Asphalt alternate has been reposted because we had an old one posted before. These have also been posted to the web.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 04-11-2018".

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
CONTRACT STANDARDS AND DEVELOPMENT  
1591 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900  
Fax: (919) 250-4127  
Customer Service: 1-877-368-4968

Location:  
1020 BIRCH RIDGE DR.  
RALEIGH, NC 27610

Website: [www.ncdot.gov](http://www.ncdot.gov)

Page No.	Revisions
R-2	Revised the project special provision entitled " 54 Inch Welded Steel Pipe Under The Tracks Of CSXT Railroad" to add a paragraph concerning requirements to follow if the Contractor should pursue installing a temporary crossing of the railroad tracks

Please void the Proposal Cover and Page No. R-2 in your proposal and staple the revised pages thereto.

On the item sheets the following new pay items have been added:

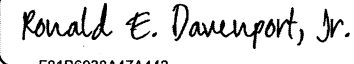
<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
151-451000000-N-1190	Law Enforcement	NEW ITEM	24 HR
152-468700000-E-1205	Thermoplastic Pavement Marking Lines (4", 240 MILS)	NEW ITEM	1,440 LF

The Contractor's bid must include the new pay items.

The Expedite File has been updated to reflect these revisions. Please download the Expedite Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:  
  
 F81B6038A47A442...

Ronald E. Davenport, Jr., PE  
 State Contract Officer

RED/jag  
 Attachments

cc: Mr. Lamar Sylvester, PE  
 Mr. Brandon Jones, PE  
 Mr. Ron Hancock, PE  
 Mr. Jon Weathersby, PE  
 Mr. Ken Kennedy, PE  
 Ms. Lori Strickland  
 Project File (2)

Mr. Ray Arnold, PE  
 Ms. Theresa Canales, PE  
 Mr. Mike Gwyn  
 Ms. Jaci Kincaid  
 Ms. Penny Higgins  
 Mr. Mitchell Dixon

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 04-11-2018**

DATE AND TIME OF BID OPENING: **APRIL 17, 2018 AT 2:00 PM**

CONTRACT ID C203615

WBS 34437.3.7

FEDERAL-AID NO. STATE FUNDED

COUNTY RICHMOND

T.I.P. NO. R-2501C

MILES 3.564

ROUTE NO. US 1

LOCATION US-1 FROM NORTH OF SR-1606 (FOX RD) TO SOUTH OF SR-1001.

TYPE OF WORK GRADING, DRAINAGE, AND PAVING.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING, REGARDLESS OF FUNDING SOURCES.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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**Measurement and Payment**

Where the material has been obtained from an authorized stockpile or from a borrow source and *Borrow Excavation* is not included in the contract, no direct payment will be made for this work, as the cost of this work will be part of the work being paid at the contract lump sum price for *Grading*. If *Borrow Excavation* is included in this contract and the material has been obtained from an authorized stockpile or from a borrow source, measurement and payment will be as provided in Section 230 of the *2018 Standard Specifications for Borrow Excavation*.

**54" WELDED STEEL PIPE UNDER THE TRACKS OF CSXT RAILROAD:**

The 54" welded steel pipe required under the tracks of CSXT Railroad shall conform with Section 330 of the *Standard Specifications*. The minimum thickness of the wall shall be 0.750".

The pipe shall be installed by dry boring and jacking under the tracks as shown in the plans. The pipe shall be carefully dry bored true to the line and grade given. The bore shall be held to a minimum to insure that there will be no settlement. Pipe which has been damaged due to the Contractor's operation shall be removed and replaced at the Contractor's expense. All voids around the outside of the pipe shall be completely filled to the satisfaction of the Engineer.

The Contractor shall notify Randy Koonce, Resource Mgr, Const Mgr, CSXTT PP CE&I Coordinator, T: 919 854 1282 | M: 919 357 8777 (Primary Contact), [randy.koonce@arcadis.com](mailto:randy.koonce@arcadis.com) 15 days before any work is begun on the railroad's right of way. This will enable them to have a representative present, if they so desire, while the work is being performed to determine if the work is being performed in accordance with the approved plans and Special Provisions. The railroad will advise the Contractor when the work is to be done between trains and provide a flagman, if required.

If the Contractor desires to construct a temporary crossing of the railroad at this location, he shall coordinate with Mr. Randy Koonce as shown above to obtain the approval of the plan for such. All costs other than flagging associated with the temporary crossing will be incidental to the price bid for the *54" Welded Steel Pipe*. The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required.

The quantity of pipe to be paid for will be the actual number of linear feet of pipe which has been incorporated in the completed and accepted work. Measurement will be made by counting the number of joints used and multiplying by the length of the joint. Where partial joints are used, measurement will be made along the longest length of the partial joint to the nearest inch.

The quantity of pipe measured as provided for above will be paid for at the contract unit price per linear foot for *54" Welded Steel Pipe, 0.750" Thick, Grade B, (Under RR)*. Such price and payment will be full compensation for all work described herein including dry boring, jacking, tools, materials, labor, workmanship and all other incidentals necessary to complete the work.

The Contractor shall submit two (2) sets of detailed plans and a written description of his proposed method of pipe installation for approval by the Engineer and the Railway Company. Plans should include the size and location of any required jacking pits and shoring for support of the railroad roadbed if necessary.

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0015000000-N	205	SEALING ABANDONED WELLS	3 EA		
0004	0036000000-E	225	UNDERCUT EXCAVATION	4,250 CY		
0005	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUB-BING	2 ACR		
0006	0134000000-E	240	DRAINAGE DITCH EXCAVATION	3,500 CY		
0007	0141000000-E	240	BERM DITCH CONSTRUCTION	1,100 LF		
0008	0192000000-N	260	PROOF ROLLING	12 HR		
0009	0195000000-E	265	SELECT GRANULAR MATERIAL	6,250 CY		
0010	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	2,300 SY		
0011	0255000000-E	SP	GENERIC GRADING ITEM HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	200 TON		
0012	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	1,340 TON		
0013	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	4,210 SY		
0014	0342000000-E	310	*** SIDE DRAIN PIPE (30")	156 LF		
0015	0342000000-E	310	*** SIDE DRAIN PIPE (48")	48 LF		
0016	0343000000-E	310	15" SIDE DRAIN PIPE	1,124 LF		
0017	0344000000-E	310	18" SIDE DRAIN PIPE	340 LF		
0018	0345000000-E	310	24" SIDE DRAIN PIPE	284 LF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0019	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	556 LF		
0020	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	992 LF		
0021	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	524 LF		
0022	0384000000-E	310	30" RC PIPE CULVERTS, CLASS III	228 LF		
0023	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	3,712 LF		
0024	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	2,244 LF		
0025	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	1,072 LF		
0026	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	668 LF		
0027	0448600000-E	310	36" RC PIPE CULVERTS, CLASS IV	272 LF		
0028	0588000000-E	310	18" CS PIPE CULVERTS, 0.064" THICK	314 LF		
0029	0974000000-E	SP	*** WELDED STEEL PIPE, ***** THICK, GRADE B, (UNDER RR) (54", 0.750")	88 LF		
0030	0995000000-E	340	PIPE REMOVAL	2,561 LF		
0031	1099500000-E	505	SHALLOW UNDERCUT	333 CY		
0032	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	632 TON		
0033	1110000000-E	510	STABILIZER AGGREGATE	1,000 TON		
0034	1220000000-E	545	INCIDENTAL STONE BASE	1,000 TON		
0035	1275000000-E	600	PRIME COAT	155 GAL		
0036	1330000000-E	607	INCIDENTAL MILLING	300 SY		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0037	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	24,900 TON		
0038	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	27,000 TON		
0039	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	200 TON		
0040	2000000000-N	806	RIGHT-OF-WAY MARKERS	76 EA		
0041	2020000000-N	806	CONTROL-OF-ACCESS MARKERS	5 EA		
0042	2022000000-E	815	SUBDRAIN EXCAVATION	168 CY		
0043	2033000000-E	815	SUBDRAIN FINE AGGREGATE	84 CY		
0044	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	500 LF		
0045	2070000000-N	815	SUBDRAIN PIPE OUTLET	1 EA		
0046	2077000000-E	815	6" OUTLET PIPE	6 LF		
0047	2253000000-E	840	PIPE COLLARS	0.447 CY		
0048	2275000000-E	SP	FLOWABLE FILL	32 CY		
0049	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	54 EA		
0050	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	7.2 LF		
0051	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	4 EA		
0052	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	10 EA		
0053	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	3 EA		
0054	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	17 EA		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0055	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	20 EA		
0056	2451000000-N	852	CONCRETE TRANSITIONAL SECTION FOR DROP INLET	3 EA		
0057	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	4,470 LF		
0058	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	12,470 LF		
0059	2556000000-E	846	SHOULDER BERM GUTTER	230 LF		
0060	2577000000-E	846	CONCRETE EXPRESSWAY GUTTER	1,300 LF		
0061	2612000000-E	848	6" CONCRETE DRIVEWAY	200 SY		
0062	2619000000-E	850	4" CONCRETE PAVED DITCH	93 SY		
0063	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	150 SY		
0064	3030000000-E	862	STEEL BEAM GUARDRAIL	700 LF		
0065	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0066	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	3 EA		
0067	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	3 EA		
0068	3503000000-E	866	WOVEN WIRE FENCE, 47" FABRIC	30,500 LF		
0069	3509000000-E	866	4" TIMBER FENCE POSTS, 7'-6" LONG	1,825 EA		
0070	3515000000-E	866	5" TIMBER FENCE POSTS, 8'-0" LONG	660 EA		
0071	3565000000-E	866	DOUBLE GATES, *** HIGH, *** WIDE, *** OPENING (47", 10', 20')	2 EA		
0072	3628000000-E	876	RIP RAP, CLASS I	46 TON		



County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0073	3649000000-E	876	RIP RAP, CLASS B	450 TON		
0074	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	1,775 SY		
0075	4054000000-E	902	PLAIN CONCRETE SIGN FOUNDATIONS	1 CY		
0076	4060000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	352 LB		
0077	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	1,511 LF		
0078	4096000000-N	904	SIGN ERECTION, TYPE D	3 EA		
0079	4102000000-N	904	SIGN ERECTION, TYPE E	57 EA		
0080	4108000000-N	904	SIGN ERECTION, TYPE F	24 EA		
0081	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)	2 EA		
0082	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (E)	3 EA		
0083	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (F)	12 EA		
0084	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	81 EA		
0085	4192000000-N	907	DISPOSAL OF SUPPORT, U-CHANNEL	8 EA		
0086	4238000000-N	907	DISPOSAL OF SIGN, D, E OR F	6 EA		
0087	4360000000-N	SP	GENERIC SIGNING ITEM DISPOSAL OF SIGN SYSTEM ON SPAN WIRE	1 EA		
0088	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	923 SF		
0089	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	320 SF		
0090	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	510 SF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0091	4415000000-N	1115	FLASHING ARROW BOARD	2 EA		
0092	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	4 EA		
0093	4430000000-N	1130	DRUMS	342 EA		
0094	4435000000-N	1135	CONES	72 EA		
0095	4445000000-E	1145	BARRICADES (TYPE III)	792 LF		
0096	4455000000-N	1150	FLAGGER	464 DAY		
0097	4480000000-N	1165	TMA	2 EA		
0098	4516000000-N	1180	SKINNY DRUM	200 EA		
0099	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	1,931 EA		
0100	4721000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)	8 EA		
0101	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	138 EA		
0102	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	557,061 LF		
0103	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	6,201 LF		
0104	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	7,040 LF		
0105	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	622 LF		
0106	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	16 EA		
0107	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	376 EA		
0108	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	48,715 LF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0109	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES, 12", 90 MILS (HRM)	1,075 LF		
0110	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES, 24", 120 MILS (HRM)	186 LF		
0111	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES, 4", 120 MILS (HRM)	55,687 LF		
0112	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES, 4", 90 MILS (HRM)	32,310 LF		
0113	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES, 8", 120 MILS (HRM)	722 LF		
0114	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES, 8", 90 MILS (HRM)	2,298 LF		
0115	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	87 EA		
0116	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	1,107 EA		
0117	6000000000-E	1605	TEMPORARY SILT FENCE	17,800 LF		
0118	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	900 TON		
0119	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	5,600 TON		
0120	6012000000-E	1610	SEDIMENT CONTROL STONE	2,050 TON		
0121	6015000000-E	1615	TEMPORARY MULCHING	83.5 ACR		
0122	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	5,300 LB		
0123	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED- ING	26.5 TON		
0124	6024000000-E	1622	TEMPORARY SLOPE DRAINS	550 LF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0125	6029000000-E	SP	SAFETY FENCE	800 LF		
0126	6030000000-E	1630	SILT EXCAVATION	8,870 CY		
0127	6036000000-E	1631	MATTING FOR EROSION CONTROL	48,000 SY		
0128	6037000000-E	SP	COIR FIBER MAT	100 SY		
0129	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	1,000 SY		
0130	6042000000-E	1632	1/4" HARDWARE CLOTH	1,600 LF		
0131	6071012000-E	SP	COIR FIBER WATTLE	4,600 LF		
0132	6071020000-E	SP	POLYACRYLAMIDE (PAM)	2,850 LB		
0133	6071030000-E	1640	COIR FIBER BAFFLE	1,660 LF		
0134	6084000000-E	1660	SEEDING & MULCHING	70 ACR		
0135	6087000000-E	1660	MOWING	30 ACR		
0136	6090000000-E	1661	SEED FOR REPAIR SEEDING	850 LB		
0137	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	2.25 TON		
0138	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	1,800 LB		
0139	6108000000-E	1665	FERTILIZER TOPDRESSING	54 TON		
0140	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0141	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	25 EA		
0142	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	9 EA		

\*\*\*\*\* BEGIN SCHEDULE AA \*\*\*\*\*  
 \*\*\*\*\* ( 2 ALTERNATES ) \*\*\*\*\*

0143	0043000000-N	226	GRADING	Lump Sum	L.S.	
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AA1

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0144	1121000000-E	520	AGGREGATE BASE COURSE	58,500		
	<b>AA1</b>			TON		
0145	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	1,600		
	<b>AA1</b>			TON		
0146	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	2,860		
	<b>AA1</b>			TON		
*** OR ***						
0147	0043000000-N	226	GRADING	Lump Sum	L.S.	
	<b>AA2</b>					
0148	1121000000-E	520	AGGREGATE BASE COURSE	3,000		
	<b>AA2</b>			TON		
0149	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	25,700		
	<b>AA2</b>			TON		
0150	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	3,920		
	<b>AA2</b>			TON		
***** END SCHEDULE AA *****						
0151	4510000000-N	1190	LAW ENFORCEMENT	24		
				HR		
0152	4687000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 240 MILS)	1,440		
				LF		
<p>1055/Apr11/Q1072702.897/D479974962000/E152 <span style="float: right;">Total Amount Of Bid For Entire Project :</span></p>						

## SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
PHASE 1					
FROM -LTIEN- 1132+30 TO -LTIEN- 1141+50	1,267		48		1,219
FROM -L- 1141+50 LT TO -L- 1160+00 LT	7,716		3,373		4,343
FROM -L- 1184+00 LT TO -L- 1214+00 LT	4,113		3,934		179
FROM -L- 1214+00 LT TO -L- 1244+00 LT	3,016		3,150	134	
FROM -L- 1244+00 LT TO -L- 1274+00 LT	7,991		2,760		5,231
FROM -L- 1274+00 LT TO -L- 1284+33 LT	14,441		175		14,266
FROM -L- 1286+50 LT TO -L- 1304+00 LT	10,463		7		10,456
FROM -L- 1304+00 LT TO -L- 1329+67.03 LT	6,302		1,896		4,406
FROM -L- 1185+00 RT TO -L- 1215+00 RT	19,935		1,866		18,069
FROM -L- 1215+00 RT TO -L- 1245+00 RT	2,069		2,626	557	
FROM -L- 1245+00 RT TO -L- 1259+00 RT	316		3,636	3,320	
FROM -L- 1289+00 RT TO -L- 1319+00 RT	11,516		1,136		10,380
FROM -L- 1319+00 RT TO -L- 1329+67.03 RT	3,270		74		3,196
FROM -DETOUR- 10+00.00 TO -DETOUR- 35+15.70	17,002		3,984		13,018
FROM -RAMPD- 11+45 TO -RAMPD- 12+50	109		547	438	
FROM -Y2- 10+00 TO -Y2- 13+00	133		268	135	
FROM -Y3- 10+00 TO -Y3- 11+00	283		226		57
SUBTOTAL	109,942		29,706	4,583	84,819
PHASE 2					
FROM -L- 1141+50 RT TO 1145+50 RT	123		356	233	
FROM -L- 1160+00 LT TO 1184+00 LT	6,421		12,726	6,305	
SUBTOTAL	6,544		13,082	6,538	
PHASE 3 (INCLUDES DETOUR REMOVAL)					
FROM -L- 1143+50 RT TO -L 1173+50 RT	10,867		11,348	481	
FROM -L- 1173+50 RT TO -L 1185+50 RT	9,032		3,425		5,607
FROM -L- 1284+33 LT TO -L- 1286+50 LT	3,322		0		3,322
FROM -Y- 10+00 TO -Y2- 11+75	164		52		112
FROM -Y1 10+00 TO -Y1- 13+50	711		4		707
FROM -Y4- 10+00 TO -Y4- 12+50	1,874		0		1,874
SUBTOTAL	25,970		14,828	481	11,623
PHASE 4					
FROM -L- 1144+50 (MED) TO -L- 1166+50 (MED)	243		2,104	1,861	
FROM -L- 1259+00 RT TO -L- 1266+00 RT	369		1,094	725	
FROM -L- 1280+00 RT TO -L- 1289+00 RT	12,941		7		12,934
FROM -Y3- 11+75 TO -Y3- 16+00 **	2,142		116		2,026
SUBTOTAL	15,695		3,321	2,586	14,959
TOTAL	158,151		60,937	14,188	111,401
LOSS DUE TO CLEAR & GRUB.	-4,033				-4,033
WASTE IN LIEU OF BORROW				-14,188	-14,188
GRAND TOTAL	154,118		60,937	0	93,180
SAY	160,000				
-L- PAVEMENT STRUCTURE VOLUME = 22,100 CY					
NOTE: VOLUMES REFLECT ABC PAVEMENT DESIGN.					
EST. DDE 3500 CY					
EST. SHOULDER BORROW 8,400 CY					
EST. UNDERCUT 4250 CY (PER GEOTECH)					
EST. SHALLOW UNDERCUT 333 CY (PER GEOTECH)					
EST. CLASS IV SUBGRADE STABILIZATION 632 TONS (PER GEOTECH)					
EST. SELECT GRANULAR MATERIAL 6250 CY (PER GEOTECH)					
** EARTHWORK RUN FROM -Y3- 11+75 TO -Y3- 16+00 INCLUDES -RAMPD- STA. 10+00 TO -RAMPD- 11+45					

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
SUMMARY TOTALS	158,151		60,937	14,188	111,401
ADJ. FOR ALT PAVEMENT DESIGN	-14,218		-286	3,932	-9,999
ADJUSTED TOTALS	143,933		60,651	18,120	101,402
LOSS DUE TO CLEAR & GRUB.	-4,033				-4,033
WASTE IN LIEU OF BORROW				-18,120	-18,120
GRAND TOTAL	139,900		60,651	0	79,249
SAY	145,000				
-L- PAVEMENT STRUCTURE VOLUME = 13,500 CY					
EST. SHOULDER BORROW 7,000 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.

**NOTE:** Note: Approximate quantities only. Unclassified Excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, Removal of Existing Asphalt Pavement, and Removal of Existing Concrete Pavement will be paid for at the contract lump sum price for "Grading."

**STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS**

PROJ. REFERENCE NO. R-2501C	SHEET NO. X-1A
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NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

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

NOTE: THE CROSS SECTIONS REFLECT THE AGGREGATE BASE COURSE ALTERNATE.

**CROSS-SECTION SUMMARY**

Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt
PHASE 4			PHASE 1			PHASE 1			PHASE 1			PHASE 1			PHASE 1		
LTIEIN	(cu. yd.)	(cu. yd.)	L, LT	(cu. yd.)	(cu. yd.)	L, LT	(cu. yd.)	(cu. yd.)	L, LT	(cu. yd.)	(cu. yd.)	L, LT	(cu. yd.)	(cu. yd.)	L, LT	(cu. yd.)	(cu. yd.)
1132+50.00	0	0	1156+50.00	0	180	1204+50.00	140	0	1229+00.00	10	61	1253+50.00	9	31	1278+50.00	922	0
1133+00.00	38	2	1157+00.00	0	159	1205+00.00	142	0	1229+50.00	7	73	1254+00.00	7	37	1279+00.00	949	0
1133+50.00	36	0	1157+50.00	0	159	1205+50.00	153	3	1230+00.00	6	80	1254+50.00	6	48	1279+50.00	944	0
1134+00.00	34	0	1158+00.00	0	155	1206+00.00	87	59	1230+50.00	7	88	1255+00.00	5	62	1280+00.00	900	0
1134+50.00	49	0	1158+50.00	0	156	1206+50.00	9	117	1231+00.00	8	84	1255+50.00	3	74	1280+50.00	439	0
1135+00.00	68	0	1159+00.00	0	150	1207+00.00	8	121	1231+50.00	9	76	1256+00.00	3	80	1281+00.00	398	0
1135+50.00	77	0	1159+50.00	3	118	1207+50.00	9	102	1232+00.00	8	68	1256+50.00	4	71	1281+50.00	908	0
1136+00.00	86	0	1160+00.00	14	68	1208+00.00	9	77	1232+50.00	8	58	1257+00.00	6	55	1282+00.00	1119	0
1136+50.00	89	0				1208+50.00	5	71	1233+00.00	10	48	1257+50.00	8	44	1282+50.00	1223	0
1137+00.00	79	4	Station	Uncl. Exc.	Embt	1209+00.00	1	57	1233+50.00	11	33	1258+00.00	7	46	1283+00.00	1202	0
1137+50.00	52	10	PHASE 1			1209+50.00	0	40	1234+00.00	14	19	1258+50.00	4	59	1283+50.00	1144	0
1138+00.00	32	10	L, LT	(cu. yd.)	(cu. yd.)	1210+00.00	0	39	1234+50.00	12	17	1259+00.00	4	51	1284+00.00	556	0
1138+50.00	35	6	1184+00.00	0	0	1210+50.00	9	33	1235+00.00	7	26	1259+50.00	10	31	Station	Uncl. Exc.	Embt
1139+00.00	39	2	1184+50.00	119	5	1211+00.00	46	20	1235+50.00	7	30	1260+00.00	43	12	PHASE 1		
1139+50.00	50	1	1185+00.00	268	0	1211+50.00	55	7	1236+00.00	12	28	1260+50.00	69	1	L, LT	(cu. yd.)	(cu. yd.)
1140+00.00	58	1	1185+50.00	336	0	1212+00.00	28	1	1236+50.00	17	25	1261+00.00	58	3	1286+50.00	0	0
1140+50.00	85	1	1186+00.00	281	0	1212+50.00	23	0	1237+00.00	19	23	1261+50.00	53	7	1287+00.00	229	0
1141+00.00	156	1	1186+50.00	171	0	1213+00.00	34	0	1237+50.00	19	23	1262+00.00	55	12	1287+50.00	442	0
1141+50.00	204	2	1187+00.00	92	1	1213+50.00	43	0	1238+00.00	17	22	1262+50.00	53	14	1288+00.00	411	0
			1187+50.00	41	4	1214+00.00	22	0	1238+50.00	15	24	1263+00.00	59	11	1288+50.00	384	0
Station	Uncl. Exc.	Embt	1188+00.00	37	4				1239+00.00	14	29	1263+50.00	72	6	1289+00.00	358	0
PHASE 1			1188+50.00	41	1	Station	Uncl. Exc.	Embt	1239+50.00	11	42	1264+00.00	89	8	1289+50.00	330	0
L, LT	(cu. yd.)	(cu. yd.)	1189+00.00	37	0	PHASE 1			1240+00.00	7	57	1264+50.00	117	9	1290+00.00	293	1
1141+50.00	0	0	1189+50.00	35	0	L, LT	(cu. yd.)	(cu. yd.)	1240+50.00	7	52	1265+00.00	152	4	1290+50.00	262	2
1142+00.00	186	3	1190+00.00	37	1	1214+50.00	26	0	1241+00.00	9	45	1265+50.00	166	34	1291+00.00	248	1
1142+50.00	142	11	1190+50.00	40	4	1215+00.00	150	0	1241+50.00	9	62	1266+00.00	135	72	1291+50.00	225	0
1143+00.00	135	35	1191+00.00	35	11	1215+50.00	318	0	1242+00.00	9	64	1266+50.00	126	66	1292+00.00	215	1
1143+50.00	154	37	1191+50.00	18	19	1216+00.00	424	0	1242+50.00	9	40	1267+00.00	281	42	1292+50.00	232	1
1144+00.00	278	11	1192+00.00	14	12	1216+50.00	440	0	1243+00.00	6	49	1267+50.00	426	21	1293+00.00	228	0
1144+50.00	463	2	1192+50.00	18	0	1217+00.00	382	0	1243+50.00	2	68	1268+00.00	554	5	1293+50.00	207	0
1145+00.00	597	4	1193+00.00	41	0	1217+50.00	310	1	1244+00.00	1	35	1268+50.00	726	0	1294+00.00	189	0
1145+50.00	634	6	1193+50.00	67	0	1218+00.00	252	2				1269+00.00	757	0	1294+50.00	206	0
1146+00.00	527	7	1194+00.00	89	0	1218+50.00	184	1	Station	Uncl. Exc.	Embt	1269+50.00	599	2	1295+00.00	221	0
1146+50.00	353	10	1194+50.00	109	0	1219+00.00	75	14	PHASE 1			1270+00.00	347	15	1295+50.00	217	0
1147+00.00	236	16	1195+00.00	109	0	1219+50.00	14	26	L, LT	(cu. yd.)	(cu. yd.)	1270+50.00	227	30	1296+00.00	227	0
1147+50.00	183	29	1195+50.00	81	4	1220+00.00	14	30	1244+50.00	0	47	1271+00.00	198	42	1296+50.00	233	0
1148+00.00	139	49	1196+00.00	36	22	1220+50.00	8	39	1245+00.00	0	88	1271+50.00	183	65	1297+00.00	244	0
1148+50.00	101	73	1196+50.00	16	56	1221+00.00	7	56	1245+50.00	0	77	1272+00.00	274	59	1297+50.00	244	0
1149+00.00	71	90	1197+00.00	15	90	1221+50.00	4	74	1246+00.00	0	62	1272+50.00	432	43	1298+00.00	244	0
1149+50.00	58	84	1197+50.00	18	66	1222+00.00	4	69	1246+50.00	0	52	1273+00.00	574	45	1298+50.00	263	0
1150+00.00	91	40	1198+00.00	73	17	1222+50.00	6	54	1247+00.00	0	53	1273+50.00	668	39	1299+00.00	324	0
1150+50.00	196	3	1198+50.00	166	5	1223+00.00	6	49	1247+50.00	0	59	1274+00.00	349	17	1299+50.00	413	0
1151+00.00	385	2	1199+00.00	232	3	1223+50.00	7	55	1248+00.00	0	70	Station	Uncl. Exc.	Embt	1300+00.00	495	0
1151+50.00	619	4	1199+50.00	219	2	1224+00.00	11	58	1248+50.00	0	81	PHASE 1			1300+50.00	564	0
1152+00.00	780	5	1200+00.00	118	16	1224+50.00	10	66	1249+00.00	0	77	L, LT	(cu. yd.)	(cu. yd.)	1301+00.00	553	0
1152+50.00	721	6	1200+50.00	34	108	1225+00.00	6	76	1249+50.00	2	59	1274+50.00	236	50	1301+50.00	465	0
1153+00.00	447	8	1201+00.00	11	247	1225+50.00	5	78	1250+00.00	6	39	1275+00.00	388	51	1302+00.00	352	0
1153+50.00	165	74	1201+50.00	10	417	1226+00.00	5	89	1250+50.00	9	27	1275+50.00	347	2	1302+50.00	239	0
1154+00.00	34	191	1202+00.00	9	565	1226+50.00	5	98	1251+00.00	10	26	1276+00.00	388	1	1303+00.00	238	0
1154+50.00	4	251	1202+50.00	43	466	1227+00.00	5	89	1251+50.00	12	26	1276+50.00	439	21	1303+50.00	259	0
1155+00.00	0	222	1203+00.00	58	256	1227+50.00	7	67	1252+00.00	12	26	1277+00.00	527	21	1304+00.00	209	0
1155+50.00	0	192	1203+50.00	33	110	1228+00.00	11	43	1252+50.00	11	28	1277+50.00	619	0			
1156+00.00	0	201	1204+00.00	83	19	1228+50.00	13	42	1253+00.00	11	30	1278+00.00	793	0			

**STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS**

PROJ. REFERENCE NO. R-2501C  
SHEET NO. X-1B

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT  
NOTE: THE CROSS SECTIONS REFLECT THE AGGREGATE BASE COURSE ALTERNATE.

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

**CROSS-SECTION SUMMARY**

Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt
PHASE 1			PHASE 1			PHASE 1			PHASE 1			PHASE 1			PHASE 1		
L, LT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)
1304+00.00	0	0	1185+50.00	90	1	1212+00.00	63	16	1236+00.00	9	43	1289+00.00	0	0	1315+50.00	75	35
1304+50.00	73	0	1186+00.00	161	4	1212+50.00	141	4	1236+50.00	18	13	1289+50.00	126	23	1316+00.00	85	35
1305+50.00	135	0	1186+50.00	155	5	1213+00.00	175	3	1237+00.00	23	10	1290+00.00	112	43	1316+50.00	116	23
1305+50.00	113	0	1187+00.00	171	6	1213+50.00	179	3	1237+50.00	26	11	1290+50.00	96	54	1317+00.00	169	11
1306+00.00	102	3	1187+50.00	213	9	1214+00.00	147	3	1238+00.00	23	24	1291+00.00	116	52	1317+50.00	239	3
1306+50.00	92	8	1188+00.00	271	6	1214+50.00	106	6	1238+50.00	13	57	1291+50.00	140	45	1318+00.00	290	0
1307+00.00	78	12	1188+50.00	304	1	1215+00.00	103	5	1239+00.00	20	67	1292+00.00	147	43	1318+50.00	274	0
1307+50.00	74	14	1189+00.00	314	0				1239+50.00	29	47	1292+50.00	147	42	1319+00.00	192	0
1308+00.00	84	16	1189+50.00	315	1	Station	Uncl. Exc.	Embt	1240+00.00	15	62	1293+00.00	137	44			
1308+50.00	80	22	1190+00.00	313	3	PHASE 1			1240+50.00	4	102	1293+50.00	130	46	Station	Uncl. Exc.	Embt
1309+00.00	63	30	1190+50.00	277	4	L, RT	(cu. yd.)	(cu. yd.)	1241+00.00	3	96	1294+00.00	136	43	PHASE 1		
1309+50.00	62	28	1191+00.00	246	10	1215+00.00	0	0	1241+50.00	4	64	1294+50.00	145	34	L, RT	(cu. yd.)	(cu. yd.)
1310+00.00	112	11	1191+50.00	226	13	1215+50.00	44	0	1242+00.00	11	41	1295+00.00	161	22	1319+00.00	0	0
1310+50.00	167	0	1192+00.00	186	13	1216+00.00	104	5	1242+50.00	10	32	1295+50.00	178	11	1319+50.00	29	1
1311+00.00	244	0	1192+50.00	175	13	1216+50.00	107	10	1243+00.00	7	34	1296+00.00	194	5	1320+00.00	46	3
1311+50.00	402	0	1193+00.00	251	10	1217+00.00	98	11	1243+50.00	6	47	1296+50.00	207	1	1320+50.00	50	3
1312+00.00	569	0	1193+50.00	360	6	1217+50.00	115	18	1244+00.00	0	82	1297+00.00	203	1	1321+00.00	97	1
1312+50.00	660	0	1194+00.00	456	3	1218+00.00	141	19	1244+50.00	0	116	1297+50.00	197	1	1321+50.00	68	0
1313+00.00	593	0	1194+50.00	551	3	1218+50.00	135	6	1245+00.00	0	65	1298+00.00	221	0	1322+00.00	121	0
1313+50.00	409	0	1195+00.00	614	4	1219+00.00	60	35				1298+50.00	261	0	1322+50.00	255	4
1314+00.00	217	0	1195+50.00	571	3	1219+50.00	4	92	Station	Uncl. Exc.	Embt	1299+00.00	323	0	1323+00.00	299	5
1314+50.00	82	27	1196+00.00	354	7	1220+00.00	3	123	PHASE 1			1299+50.00	407	0	1323+50.00	328	1
1315+00.00	25	81	1196+50.00	102	85	1220+50.00	3	129	L, RT	(cu. yd.)	(cu. yd.)	1300+00.00	463	0	1324+00.00	315	0
1315+50.00	22	122	1197+00.00	5	205	1221+00.00	5	92	1245+50.00	0	63	1300+50.00	453	0	1324+50.00	268	0
1316+00.00	22	141	1197+50.00	6	139	1221+50.00	7	54	1246+00.00	0	121	1301+00.00	385	0	1325+00.00	203	0
1316+50.00	22	131	1198+00.00	181	16	1222+00.00	8	40	1246+50.00	0	119	1301+50.00	327	0	1325+50.00	134	7
1317+00.00	28	88	1198+50.00	473	4	1222+50.00	11	26	1247+00.00	0	130	1302+00.00	295	0	1326+00.00	92	13
1317+50.00	49	30	1199+00.00	547	3	1223+00.00	14	23	1247+50.00	0	164	1302+50.00	267	0	1326+50.00	73	14
1318+00.00	70	1	1199+50.00	577	2	1223+50.00	19	23	1248+00.00	0	207	1303+00.00	237	0	1327+00.00	81	8
1318+50.00	62	3	1200+00.00	572	1	1224+00.00	25	21	1248+50.00	0	211	1303+50.00	204	0	1327+50.00	117	0
1319+00.00	52	5	1200+50.00	446	0	1224+50.00	22	24	1249+00.00	0	167	1304+00.00	175	2	1328+00.00	172	0
1319+50.00	92	2	1201+00.00	396	2	1225+00.00	29	18	1249+50.00	3	88	1304+50.00	140	5	1328+50.00	213	1
1320+00.00	169	0	1201+50.00	329	13	1225+50.00	55	7	1250+00.00	25	20	1305+00.00	114	9	1329+00.00	183	1
1320+50.00	210	0	1202+00.00	138	81	1226+00.00	85	4	1250+50.00	50	0	1305+50.00	103	14	1329+50.00	126	0
1321+00.00	194	0	1202+50.00	16	265	1226+50.00	101	2	1251+00.00	45	3	1306+00.00	99	16			
1321+50.00	156	1	1203+00.00	18	232	1227+00.00	101	1	1251+50.00	26	14	1306+50.00	85	18	Station	Uncl. Exc.	Embt
1322+00.00	122	3	1203+50.00	78	38	1227+50.00	102	17	1252+00.00	17	19	1307+00.00	60	25	PHASE 1		
1322+50.00	94	4	1204+00.00	191	2	1228+00.00	88	2	1252+50.00	16	15	1307+50.00	48	33	DETOUR (L)	(cu. yd.)	(cu. yd.)
1323+00.00	55	12	1204+50.00	369	2	1228+50.00	65	2	1253+00.00	19	13	1308+00.00	48	34	1162+50.00	0	0
1323+50.00	24	29	1205+00.00	656	2	1229+00.00	50	3	1253+50.00	15	26	1308+50.00	46	35	1163+00.00	474	10
1324+00.00	15	57	1205+50.00	954	2	1229+50.00	37	8	1254+00.00	6	64	1309+00.00	41	35	1163+50.00	706	7
1324+50.00	12	91	1206+00.00	1176	3	1230+00.00	27	13	1254+50.00	2	123	1309+50.00	46	32	1164+00.00	927	1
1325+00.00	12	117	1206+50.00	1262	3	1230+50.00	20	18	1255+00.00	1	180	1310+00.00	67	22	1164+50.00	1046	0
1325+50.00	15	125	1207+00.00	1181	1	1231+00.00	18	21	1255+50.00	1	211	1310+50.00	120	9	1165+00.00	1001	0
1326+00.00	16	121	1207+50.00	952	2	1231+50.00	19	18	1256+00.00	0	230	1311+00.00	219	1	1165+50.00	831	0
1326+50.00	14	113	1208+00.00	675	1	1232+00.00	21	15	1256+50.00	0	208	1311+50.00	314	0	1166+00.00	557	0
1327+00.00	18	76	1208+50.00	434	12	1232+50.00	22	14	1257+00.00	0	150	1312+00.00	393	0	1166+50.00	338	0
1327+50.00	37	33	1209+00.00	250	37	1233+00.00	22	16	1257+50.00	0	119	1312+50.00	448	0	1167+00.00	240	13
1328+00.00	76	11	1209+50.00	143	58	1233+50.00	19	23	1258+00.00	0	129	1313+00.00	399	0	1167+50.00	203	15
1328+50.00	102	5	1210+00.00	105	61	1234+00.00	22	29	1258+50.00	45	154	1313+50.00	289	0	1168+00.00	147	12
1329+00.00	75	4	1210+50.00	99	51	1234+50.00	15	50	1259+00.00	45	82	1314+00.00	198	1	1168+50.00	259	10
1329+50.00	31	3	1211+00.00	75	39	1235+00.00	2	80				1314+50.00	125	12	1169+00.00	462	0
			1211+50.00	41	28	1235+50.00	3	79				1315+00.00	84	27	1169+50.00	529	0



**STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS**

PROJ. REFERENCE NO.  
R-2501C

SHEET NO.  
X-1C

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT  
NOTE: THE CROSS SECTIONS REFLECT THE AGGREGATE BASE COURSE ALTERNATE.

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

**CROSS-SECTION SUMMARY**

Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt
PHASE 1			PHASE 2			PHASE 2			PHASE 3			PHASE 3			PHASE 4		
DETOUR (L)	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	L, LT	(cu. yd.)	(cu. yd.)	L (MED)	(cu. yd.)	(cu. yd.)
1170+00.00	576	0	1141+50.00	0	0	1181+00.00	26	87	1164+50.00	148	555	1284+33.00	0	0	1152+00.00	19	54
1170+50.00	608	0	1142+00.00	35	27	1181+50.00	17	49	1165+00.00	209	600	1284+50.00	527	0	1152+50.00	18	53
1171+00.00	580	0	1142+50.00	37	53	1182+00.00	5	33	1165+50.00	244	533	1285+00.00	978	0	1153+00.00	11	59
1171+50.00	517	0	1143+00.00	25	59	1182+50.00	7	36	1166+00.00	273	371	1285+50.00	847	0	1153+50.00	6	71
1172+00.00	472	0	1143+50.00	6	50	1183+00.00	9	45	1166+50.00	339	243	1286+00.00	683	0	1154+00.00	6	81
1172+50.00	437	0	1144+00.00	9	58	1183+50.00	13	38	1167+00.00	302	213	1286+50.00	287	0	1154+50.00	5	81
1173+00.00	605	0	1144+50.00	11	50	1184+00.00	18	18	1167+50.00	169	197				1155+00.00	5	74
1173+50.00	843	0							1168+00.00	93	149	Station	Uncl. Exc.	Embt	1155+50.00	5	69
1174+00.00	998	0	Station	Uncl. Exc.	Embt	Station	Uncl. Exc.	Embt	1168+50.00	142	199	PHASE 3			1156+00.00	5	71
1174+50.00	1114	0	PHASE 2			PHASE 3			1169+00.00	258	299	Y	(cu. yd.)	(cu. yd.)	1156+50.00	5	69
1175+00.00	1017	0	L, RT	(cu. yd.)	(cu. yd.)	L, RT	(cu. yd.)	(cu. yd.)	1169+50.00	333	320	10+50.00	0	0	1157+00.00	5	68
1175+50.00	714	0	1160+50.00	28	13	1144+00.00	83	60	1170+00.00	370	337	11+00.00	48	40	1157+50.00	5	67
1176+00.00	409	0	1161+00.00	77	26	1144+50.00	225	83	1170+50.00	388	356	11+50.00	116	3	1158+00.00	5	62
1176+50.00	218	2	1161+50.00	108	23	1145+00.00	239	51	1171+00.00	460	330				1158+50.00	5	59
1177+00.00	106	25	1162+00.00	66	108	1145+50.00	161	40	1171+50.00	525	272	Station	Uncl. Exc.	Embt	1159+00.00	6	58
1177+50.00	36	108	1162+50.00	10	234	1146+00.00	114	33	1172+00.00	529	227	PHASE 3			1159+50.00	6	54
1178+00.00	3	238	1163+00.00	3	283	1146+50.00	102	49	1172+50.00	519	200	Y1	(cu. yd.)	(cu. yd.)	1160+00.00	6	49
1178+50.00	0	320	1163+50.00	0	502	1147+00.00	101	45	1173+00.00	523	313	10+50.00	0	0	1160+50.00	7	49
1179+00.00	0	284	1164+00.00	8	878	1147+50.00	97	34	1173+50.00	267	215	11+00.00	248	0	1161+00.00	7	52
1179+50.00	5	196	1164+50.00	8	1126	1148+00.00	61	35				11+50.00	171	0	1161+50.00	7	50
1180+00.00	11	154	1165+00.00	0	1109	1148+50.00	30	59	Station	Uncl. Exc.	Embt	12+00.00	121	0	1162+00.00	6	42
1180+50.00	6	181	1165+50.00	0	1019	1149+00.00	27	76	PHASE 3			12+50.00	88	0	1162+50.00	5	36
1181+00.00	0	268	1166+00.00	0	1050	1149+50.00	36	65	L, RT	(cu. yd.)	(cu. yd.)	13+00.00	54	1	1163+00.00	3	30
1181+50.00	0	346	1166+50.00	0	1073	1150+00.00	83	55	1174+00.00	343	263	13+50.00	29	2	1163+50.00	2	24
1182+00.00	0	334	1167+00.00	0	1006	1150+50.00	153	48	1174+50.00	698	545				1164+00.00	1	19
1182+50.00	1	278	1167+50.00	0	653	1151+00.00	217	69	1175+00.00	661	548	Station	Uncl. Exc.	Embt	1164+50.00	1	17
1183+00.00	1	237	1168+00.00	5	316	1151+50.00	249	88	1175+50.00	523	423	PHASE 3			1165+00.00	0	15
1183+50.00	0	186	1168+50.00	34	217	1152+00.00	246	85	1176+00.00	419	240	Y4	(cu. yd.)	(cu. yd.)	1165+50.00	0	11
1184+00.00	5	95	1169+00.00	84	117	1152+50.00	212	83	1176+50.00	291	137	10+50.00	0	0	1166+00.00	0	11
			1169+50.00	128	41	1153+00.00	148	88	1177+00.00	186	80	11+00.00	843	0	1166+50.00	0	14
Station	Uncl. Exc.	Embt	1170+00.00	178	8	1153+50.00	75	105	1177+50.00	298	29	11+50.00	535	0			
PHASE 1			1170+50.00	330	0	1154+00.00	41	124	1178+00.00	432	12	12+00.00	323	0	Station	Uncl. Exc.	Embt
-RAMPD-	(cu. yd.)	(cu. yd.)	1171+00.00	343	21	1154+50.00	43	135	1178+50.00	475	24	12+50.00	173	0	PHASE 4		
11+50.00	0	0	1171+50.00	240	21	1155+00.00	44	124	1179+00.00	464	34	L, RT	(cu. yd.)	(cu. yd.)	1259+00.00	0	0
12+00.00	24	254	1172+00.00	253	1	1155+50.00	65	89	1179+50.00	402	65	Station	Uncl. Exc.	Embt	1259+50.00	34	116
12+50.00	85	202	1172+50.00	289	0	1156+00.00	88	82	1180+00.00	381	111	PHASE 4			1260+00.00	0	87
			1173+00.00	347	0	1156+50.00	92	90	1180+50.00	383	117	L (MED)	(cu. yd.)	(cu. yd.)	1260+50.00	47	98
Station	Uncl. Exc.	Embt	1173+50.00	385	0	1157+00.00	84	87	1181+00.00	406	87	1144+50.00	0	0	1261+00.00	78	107
PHASE 1			1174+00.00	433	0	1157+50.00	69	87	1181+50.00	467	46	1145+00.00	1	33	1261+50.00	83	104
Y2	(cu. yd.)	(cu. yd.)	1174+50.00	487	0	1158+00.00	71	82	1182+00.00	486	21	1145+50.00	3	28	1262+00.00	69	83
10+50.00	0	0	1175+00.00	500	0	1158+50.00	76	76	1182+50.00	437	22	1146+00.00	4	15	1262+50.00	36	57
11+00.00	6	143	1175+50.00	475	0	1159+00.00	62	74	1183+00.00	361	25	1146+50.00	5	12	1263+00.00	19	48
11+50.00	27	80	1176+00.00	404	0	1159+50.00	50	74	1183+50.00	285	13	1147+00.00	6	11	1263+50.00	2	47
12+00.00	44	0	1176+50.00	285	2	1160+00.00	55	72	1184+00.00	172	0	1147+50.00	6	11	1264+00.00	1	41
12+50.00	38	0	1177+00.00	201	9	1160+50.00	73	68	1184+50.00	107	4	1148+00.00	6	12	1264+50.00	0	42
13+00.00	18	0	1177+50.00	169	23	1161+00.00	98	70	1185+00.00	160	5	1148+50.00	5	13	1265+00.00	0	53
			1178+00.00	138	41	1161+50.00	156	68	1185+50.00	195	3	1149+00.00	5	12	1265+50.00	0	29
Station	Uncl. Exc.	Embt	1178+50.00	110	45	1162+00.00	257	64				1149+50.00	5	12			
PHASE 1			1179+00.00	85	33	1162+50.00	214	50				1150+00.00	5	11			
Y3	(cu. yd.)	(cu. yd.)	1179+50.00	58	48	1163+00.00	152	100				1150+50.00	7	16			
10+50.00	0	0	1180+00.00	33	116	1163+50.00	181	246				1151+00.00	9	40			
11+00.00	283	188	1180+50.00	24	137	1164+00.00	146	415				1151+50.00	14	57			



# Earthwork Balance Sheet

Volumes in Cubic Yards

PROJECT R-2501C

COUNTY: Richmond

DATE: 1/3/2018; REV: 3/29/18

COMPILED BY: ROY H. TELLIER, PE

SHEET 1 OF 2 SHEETS

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
PHASE 1															
-LTIEIN- 1132+30	-LTIEIN- 1141+50	1,267				1,267	40	40	48				1,219	1,219	
-L- 1141+50 LT	-L- 1160+00 LT	7,716				7,716	2,811	2,811	3,373				4,343	4,343	
-L- 1184+00 LT	-L- 1214+00 LT	4,113				4,113	3,278	3,278	3,934				179	179	
-L- 1214+00 LT	-L- 1244+00 LT	3,016				3,016	2,625	2,625	3,150	134					
-L- 1244+00 LT	-L- 1274+00 LT	7,991				7,991	2,300	2,300	2,760				5,231	5,231	
-L- 1274+00 LT	-L- 1284+33 LT	14,441				14,441	146	146	175				14,266	14,266	
-L- 1286+50 LT	-L- 1304+00 LT	10,463				10,463	6	6	7				10,456	10,456	
-L- 1304+00 LT	-L- 1329+67.03 LT	6,302				6,302	1,580	1,580	1,896				4,406	4,406	
-L- 1185+00 RT	-L- 1215+00 RT	19,935				19,935	1,555	1,555	1,866				18,069	18,069	
-L- 1215+00 RT	-L- 1245+00 RT	2,069				2,069	2,188	2,188	2,626	557					
-L- 1245+00 RT	-L- 1259+00 RT	316				316	3,030	3,030	3,636	3,320					
-L- 1289+00 RT	-L- 1319+00 RT	11,516				11,516	947	947	1,136				10,380	10,380	
-L- 1319+00 RT	-L- 1329+67.03 RT	3,270				3,270	62	62	74				3,196	3,196	
-DETOUR- 10+00.00	-DETOUR- 35+15.70	17,002				17,002	3,320	3,320	3,984				13,018	13,018	
-RAMPD- 11+45	-RAMPD- 14+33	109				109	456	456	547	438					
-Y2- 10+00	-Y2- 13+00	133				133	223	223	268	135					
-Y3- 10+00	-Y3- 11+00	283				283	188	188	226				57	57	
<b>SUBTOTAL</b>		109,942				109,942	24,755	24,755	29,706	4,583			84,819	84,819	
PHASE 2															
-L- 1141+50 RT	-L- 1144+50 RT	123				123	297	297	356	233					
-L- 1160+00 LT	-L- 1184+00 LT	6,421				6,421	10,605	10,605	12,726	6,305					
<b>SUBTOTAL</b>		6,544				6,544	10,902	10,902	13,082	6,538					
<b>SHEET TOTAL</b>		116,486				116,486	35,657	35,657	42,788	11,121			84,819	84,819	

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.

## Earthwork Balance Sheet

Volumes in Cubic Yards

PROJECT: R-2501C

COUNTY: Richmond

DATE: 1/3/2018; REV: 3/29/18

COMPILED BY: ROY H TELLIER, PE

SHEET 2 OF 2 SHEETS

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
PHASE 3 (INCLUDES DETOUR REMOVAL)															
-L- 1143+50 RT	-L- 1173+50 RT	10,867				10,867	9,457		9,457	11,348	481				
-L- 1173+50 RT	-L- 1185+50	9,032				9,032	2,854		2,854	3,425			5,607	5,607	
-L- 1284+33 LT	-L- 1286+50 LT	3,322				3,322							3,322	3,322	
-Y- 10+00	-Y- 11+75	164				164	43		43	52			112	112	
-Y1- 10+00	-Y1- 13+50	711				711	3		3	4			707	707	
-Y4- 10+00	-Y4- 12+50	1,874				1,874							1,874	1,874	
	<b>SUBTOTAL</b>	25,970				25,970	12,357		12,357	14,828	481		11,623	11,623	
PHASE 4															
-L- 1144+50 (MED)	-L- 1166+50 (MED)	243				243	1,753		1,753	2,104	1,861				
-L- 1259+00 RT	-L- 1266+00 RT	369				369	912		912	1,094	725				
-L- 1280+00 RT	-L- 1289+00 RT	12,941				12,941	6		6	7			12,934	12,934	
-Y3- 11+75 (SEE NOTE)	-Y3- 16+00 (SEE NOTE)	2,142				2,142	97		97	116			2,026	2,026	
	<b>SUBTOTAL</b>	15,695				15,695	2,768		2,768	3,321	2,586		14,959	14,959	
	<b>TOTALS FROM SHEET 1</b>	116,486				116,486	35,657		35,657	42,788	11,121		84,819	84,819	
	<b>TOTAL</b>	158,151				158,151	50,782		50,782	60,937	14,188		111,401	111,401	
LOSS DUE TO CLEARING & GRUBBING		-4,033				-4,033							-4,033	-4,033	
ADDITIONAL UNDERCUT															
ROCK WASTE TO REPLACE BORROW															
ADJUST FOR ROCK WASTE															
WASTE IN LIEU OF BORROW											-14,188		-14,188	-14,188	
	<b>PROJECT TOTAL</b>	154,118				154,118	50,782		50,782	60,937			93,180	93,180	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT															
	<b>GRAND TOTAL</b>					154,118	50,782		50,782	60,937			93,180	93,180	
	<b>SAY</b>					160,000									

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.

NOTE: VOLUMES REFLECT ABC PAVEMENT DESIGN.

NOTE: EARTHWORK RUN FROM -Y3- 11+75 TO -Y3- 16+00 INCLUDES -RAMPD- STA. 10+00 TO -RAMPD- 11+45

-L- PAVEMENT STRUCTURE VOLUME = 22,100 CY

EST. DDE = 3,500 CUBIC YARDS

EST. SHOULDER BORROW = 8,400 CY

EST. SHALLOW UNDERCUT 333 CY (PER GEOTECH)

CLASS IV SUBGRADE STABILIZATION 632 TONS (PER GEOTECH)

EST. SELECT GRANULAR MATERIAL 6250 CY (PER GEOTECH)

PER GEOTECH RECOMMENDATION, ESTIMATED 4,250 CUBIC YARDS OF UNDERCUT TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER.

BALANCE EARTHWORK CHECK			
TOTAL UNCL. EXC:	154,118	EMB + %:	60,937
UNDERCUT EXC:		TOTAL WASTE:	93,180
BORROW EXC:			
<b>TOTAL:</b>	<b>154,118</b>	<b>TOTAL:</b>	<b>154,117</b>

# Earthwork Balance Sheet

Volumes in Cubic Yards

PROJECT R-2501C

COUNTY: Richmond

DATE: 8/18/2014

COMPILED BY: Monica DuVal

SHEET 1 OF 2 SHEETS

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
-L_TIEIN- STA 1132+30	-L_TIEIN STA 1141+50	816				816	247		247	296			520		520
-L- STA 1141+50	-L- STA 1171+50	17,342				17,342	19,712		19,712	23,654	6,312				
-L- STA 1162+50	-L_DETOUR- STA 20+67.63	10,177				10,177	68		68	82			10,095		10,095
-Y- STA 10+35.00	-Y- STA 11+75.00	206				206	53		53	64			142		142
<b>SUBTOTAL</b>		28,541				28,541	20,080		20,080	24,096	6,312		10,757		10,757
-L- STA 1171+50	-L- STA 1201+50	25,105				25,105	4,107		4,107	4,928			20,177		20,177
-L_DETOUR- STA 20+67.63	-L- STA 1184+00	7,003				7,003	3,245		3,245	3,894			3,109		3,109
-Y1- STA 10+35.40	-Y1- STA 13+50	752				752	3		3	4			748		748
<b>SUBTOTAL</b>		32,860				32,860	7,355		7,355	8,826			24,034		24,034
-L- STA 1201+50	-L- STA 1231+50	14,339				14,339	6,579		6,579	7,895			6,444		6,444
<b>SUBTOTAL</b>		14,339				14,339	6,579		6,579	7,895			6,444		6,444
-L- STA 1231+50	-L- STA 1261+50	495				495	9,574		9,574	11,489	10,994				
-Y2- STA 10+32	-Y2- STA 12+25	88				88	248		248	298	210				
<b>SUBTOTAL</b>		583				583	9,822		9,822	11,787	11,204				
-L- STA 1261+50	-L- STA 1291+50	36,210				36,210	2,083		2,083	2,500			33,710		33,710
-Y3- STA 10+33.29	-Y3- STA 16+70.00	3,575				3,575	564		564	677			2,898		2,898
-RAMP D- STA 11+50	-RAMP D- STA 12+50	186				186	658		658	790	604		1,793		1,793
-Y4- STA 10+32	-Y4- STA 13+00	1,793				1,793			0						
<b>SUBTOTAL</b>		41,764				41,764	3,305		3,305	3,967	604		38,401		38,401
-L- STA 1291+50	-L- STA 1321+50	22,278				22,278	2,366		2,366	2,839			19,439		19,439
-L- STA 1321+50	-L- STA 1329+67.03	3,568				3,568	1,034		1,034	1,241			2,327		2,327
<b>SUBTOTAL</b>		25,846				25,846	3,400		3,400	4,080			21,766		21,766
<b>SHEET TOTAL</b>		143,933				143,933	50,541		50,541	60,651	18,120		101,402		101,402

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.

# Earthwork Balance Sheet

Volumes in Cubic Yards

PROJECT: R-2501C

COUNTY: Richmond

DATE: 8/18/2014

COMPILED BY: Monica DuVal

SHEET 2 OF 2 SHEETS

STATION	STATION	EXCAVATION					EMBANKMENT				(-) BORROW	WASTE (+)			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
	TOTAL FROM SHEET 1	143933				18120	50541		50541	60651	18120		101402		101402
	TOTAL FROM SHEET 2														
	TOTAL FROM SHEET 3														
	TOTAL FROM SHEET 4														
	TOTAL FROM SHEET 5														
<b>TOTAL</b>															
		143,933				18,120	50,541		50,541	60,651	18,120		101,402		101,402
	MATERIAL FOR SHOULDER CONSTRUCTION LOSS DUE TO CLEARING & GRUBBING	-4,033											-4,033		-4,033
	ADDITIONAL UNDERCUT														
	ROCK WASTE TO REPLACE BORROW														
	ADJUST FOR ROCK WASTE														
<b>PROJECT TOTAL</b>															
		139,900				18,120	50,541		50,541	60,651			79,249		79,249
	EST. 5% TO REPLACE TOP SOIL ON BORROW PIT														
<b>GRAND TOTAL</b>															
		139,900				18,120	50,541		50,541	60,651			79,249		79,249
	<b>SAY</b>	145,000													
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.															
NOTE: VOLUMES REFLECT ASPHALT PAVEMENT DESIGN.															
NOTE: EARTHWORK RUN FROM -Y3- 11+75 TO -Y3- 16+00 INCLUDES -RAMPD- STA. 10+00 TO -RAMPD- 11+45															
-L- PAVEMENT STRUCTURE VOLUME = 13,500 CY															
EST. DDE = 3,500 CUBIC YARDS															
EST. SHOULDER BORROW = 7,000 CY															
EST. SHALLOW UNDERCUT 333 CY (PER GEOTECH)															
CLASS IV SUBGRADE STABILIZATION 632 TONS (PER GEOTECH)															
EST. SELECT GRANULAR MATERIAL 6250 CY (PER GEOTECH)															
PER GEOTECH RECOMMENDATION, ESTIMATED 4,250 CUBIC YARDS OF UNDERCUT TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER.															

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.