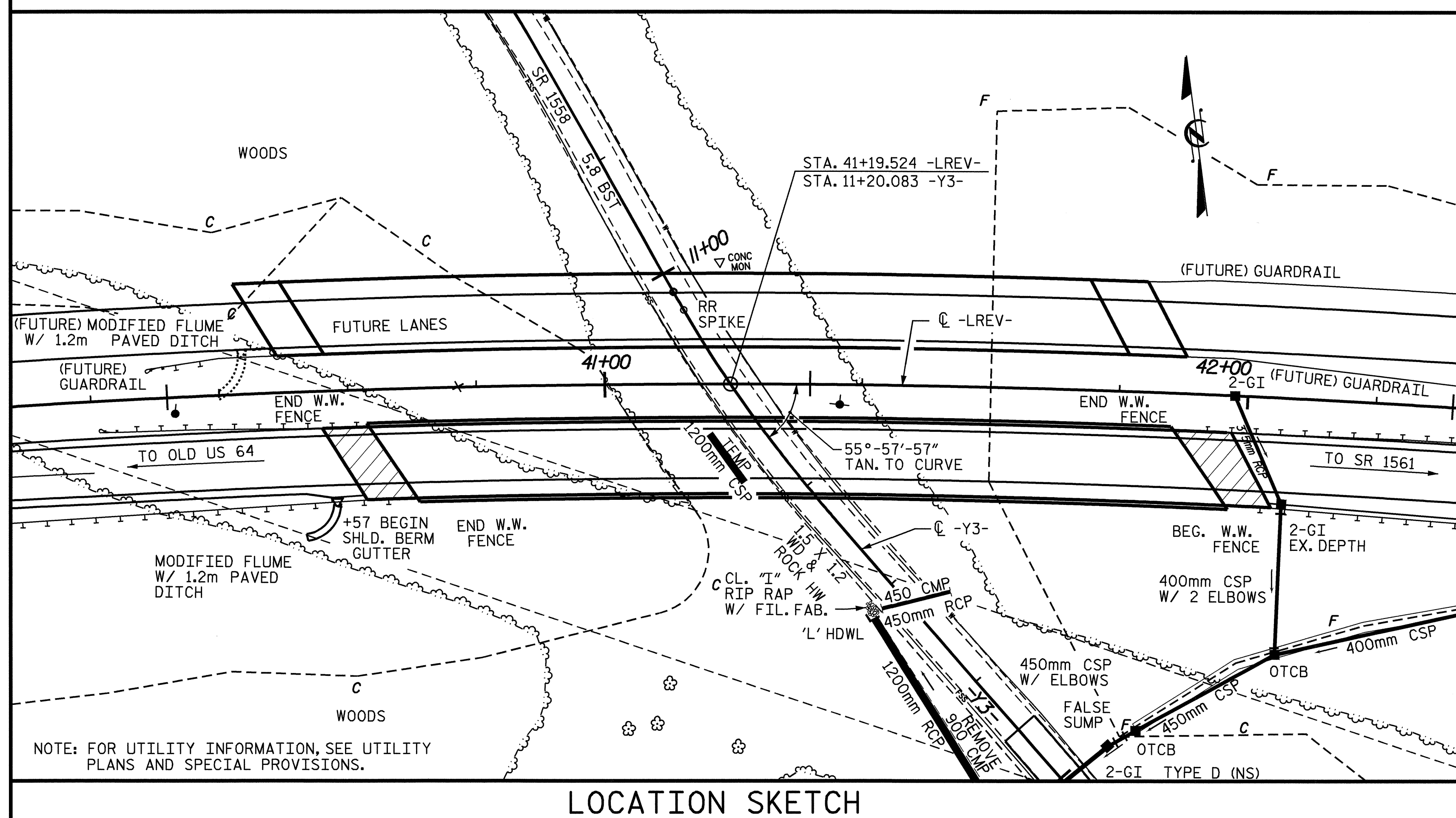


BM#11 : TOP OF CUT OFF POWER POLE LT. SIDE OF ROAD 9.5m LT. FROM EDGE OF PAVEMENT OF HARSHAW ROAD 115.4m LT. OF STA. 40+16.299-L- ELEVATION = 481.273



LOCATION SKETCH

TOTAL BILL OF MATERIAL

	FOUNDATION EXCAVATION @ END BENT	1828mm DIA DRILLED PIERS IN SOIL	1828mm DIA DRILLED PIERS NOT IN SOIL	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL
	LUMP SUM	METERS	METERS	EACH	METERS	CU. METERS	SQ. METERS	SQ. METERS	CU. METERS	LUMP SUM	kg
SUPERSTRUCTURE							1529.5	1351.4		LUMP SUM	
END BENT 1	LUMP SUM					23			47.8		3275
BENT 1		1.1	8.0	1	63.3				123.5		14118
BENT 2		11.0	7.0	1	117.0	635			106.6		15268
END BENT 2									37.1		3026
TOTAL	LUMP SUM	12.1	15.0	2	180.3	658	1529.5	1351.4	315.0	LUMP SUM	35687
	SPIRAL COLUMN REINFORCING STEEL	STRUCTURAL STEEL	HP 310 X 79 STEEL PILES	2 BAR METAL RAIL	CONCRETE BARRIER RAIL	355mm X 760mm CONCRETE PARAPET	100mm SLOPE PROTECTION	POT BEARINGS	EVAZOTE JOINT SEALS	EXPANSION JOINT SEALS	
	kg	APPROX. kg	NO.	METERS	METERS	METERS	SQ. METERS	LUMP SUM	LUMP SUM	LUMP SUM	
SUPERSTRUCTURE		296,100			120.874	123.800		LUMP SUM	LUMP SUM	LUMP SUM	
END BENT 1							710.0				
BENT 1	3957										
BENT 2	3727										
END BENT 2			12	156.0			865.0				
TOTAL	7684	296,100	12	156.0	120.874	123.800	1575.0	LUMP SUM	LUMP SUM	LUMP SUM	

DRAWN BY : T.A. WALTER DATE : 11/29/04  
 CHECKED BY : L.E. SUTTON DATE : 11/29/04

10-JAN-2005 10:51  
 W:\Squad\l\0977a\str4\twalter\R0977A.sd.GD\_04.dgn  
 lsutton

NOTES

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

ALL ELEVATIONS ARE IN METERS.

ASSUMED LIVE LOAD = MS 18 OR ALTERNATE LOADING.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SNSM.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 345W AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-7 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

FOR HEAT CURVING GIRDERS FOR BRIDGES AT STA. 41+19.524 -LREV-, SEE SPECIAL PROVISIONS.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY B.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 360,000 kg OF REINFORCING STEEL, ONE 760mm SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 360,000 kg OF REINFORCING STEEL, TWO 760mm SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

FOR FALSEWORK OVER OR ADJACENT TO TRAFFIC, SEE SPECIAL PROVISIONS.

THE USE OF NEEDLE BEAMS TO SUPPORT THE DECK WILL ONLY BE ALLOWED IN THE ACUTE CORNERS OF THE SLAB.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 1.7m LT. AND 10.7m RT. OF ROADWAY CONTROL LINE AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE MEASURED AND PAID FOR AS UNCLASSIFIED STRUCTURE EXCAVATION.

FOR METRIC STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL OBSERVE A ONE MONTH WAITING PERIOD BEFORE BEGINNING ANY WORK FOR END BENT 2 CONSTRUCTION AFTER COMPLETION OF THE EMBANKMENT AT END BENT 2. THE CONTRACTOR MAY BEGIN THE REINFORCED BRIDGE APPROACH FILL CONSTRUCTION AFTER COMPLETION OF END BENT 2 INCLUDING WINGWALLS.

THE REQUIRED BEARING CAPACITY OF THE SPREAD FOOTING AT END BENT NO.1 IS 480 kPa. THE REQUIRED BEARING CAPACITY SHALL BE VERIFIED.

FOOTINGS SHALL BE KEYED AT LEAST 300mm INTO ROCK WITH A MINIMUM THICKNESS AS SHOWN ON PLANS.

PILES FOR END BENT NO.2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 530 kN EACH.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

THE DRILLED PIERS AT BENT NO.1 AND BENT NO.2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 2900 kPa.

THE REQUIRED TIP BEARING CAPACITY AT BENT NO.1 AND BENT NO.2 SHALL BE VERIFIED.

DRILLED PIERS FOR BENT NO.1 AND BENT NO.2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 5050 kN EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT BENT NO.1 AND BENT NO.2.

DRILLED PIERS AT BENT NO.1 AND BENT NO.2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 482.0 AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 300mm BELOW THE GROUND LINE.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1 AND BENT NO.2.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NO.1 AND BENT NO.2.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NO.1 AND BENT NO.2. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.

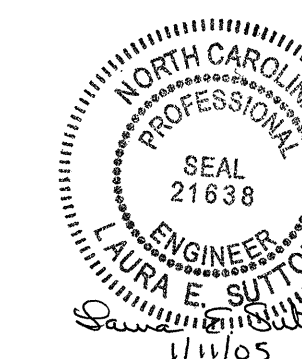
PROJECT NO. R-0977A  
CHEROKEE COUNTY

STATION: 41+19.524-LREV-  
11+20.083-Y3-

SHEET 4 OF 4

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE ON US 64  
 OVER SR 1558 BETWEEN  
 OLD US 64 AND SR 1561



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-126
2			4			230

STR.#4