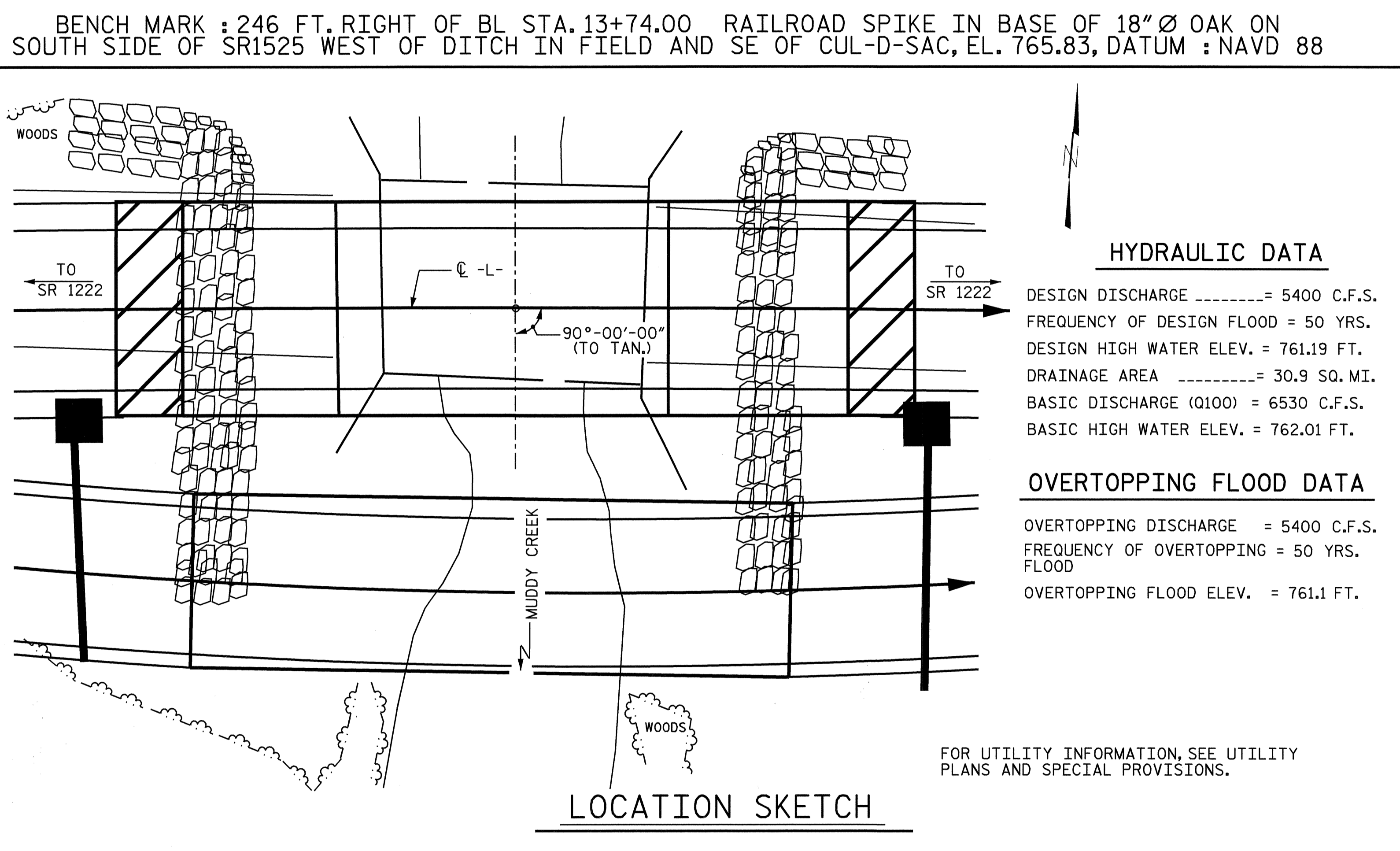


TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE	CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	3'-6" Ø DRILLED PIERS IN SOIL	3'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIER	SPT TESTING	CROSSHOLE SONIC LOGGING	CSL TUBES	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	HP 12 x 53 STEEL PILES	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" x 1'-9" PRESTRESSED CONCRETE CORED SLABS		
	LUMP SUM	LUMP SUM	LUMP SUM	CU. YDS.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	NO.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN. FT.
SUPERSTRUCTURE														LUMP SUM				195.50				LUMP SUM	45	1462.50
END BENT 1				290									15.2		2437		7	245		160	177			
BENT 1							97.5	18.0	31.5	1	1	492	22.9		13243	3053								
BENT 2							75.0	24.0	27.0	1	1	426	24.6		12736	2857								
END BENT 2				257	25.0	20.0							15.2		2437		7	210		193	214			
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	547	25.0	20.0	172.5	42.0	58.5	2	2	918	77.9	LUMP SUM	30853	5910	14	455	195.50	353	391	LUMP SUM	45	1462.50



ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

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

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH 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.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1, OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 20+93.00 -L-."

FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS, SEE SPECIAL PROVISIONS.

AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIP RAP USED IN THE CAUSEWAY MAY BE PLACED AS RIP RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 20+93.00 -L-.

PILES FOR END BENT NO. 1 AND NO. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

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

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 1 FT. BELOW THE GROUND LINE.

THE DRILLED PIERS AT BENT NO. 1 AND NO. 2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 25 TONS/FT².

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

DRILLED PIERS FOR BENT NO. 1 AND NO. 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 200 TONS EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENT NO. 1 AND NO. 2. IF REQUIRED, THE CASING SHALL NOT EXTEND BELOW ELEVATION 740 FT. WITHOUT THE ENGINEER'S PERMISSION, THE NEED FOR PERMANENT STEEL CASING WILL BE DETERMINED BY THE ENGINEER.

FOR PERMANENT STEEL CASING, SEE SPECIAL PROVISIONS FOR DRILLED PIERS.

DRILLED PIERS AT BENT NO. 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN ELEVATION 712 FT. AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN ELEVATION 720 FT. (LEFT SIDE) AND 714 FT. (RIGHT SIDE AND CENTER), AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.

THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 AND NO. 2 IS ELEVATION 732 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

SPT TESTING IS REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO. 1 AND NO. 2. SEE DRILLED PIERS SPECIAL PROVISION.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

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

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

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT WEATHERED ROCK LAYER WAS FOUND IN THE SUBSURFACE INVESTIGATION AT END BENT NO. 2 (LEFT SIDE) FROM ELEVATION 755 FT. TO ELEVATION 750 FT. IT MAY BE NECESSARY TO UTILIZE PILE EXCAVATION TO ELEVATION 750 FT. TO INSTALL THE PILES TO THE MINIMUM REQUIRED TIP ELEVATION.

FOR PILE EXCAVATION, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

NOTES

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 42'-0", WITH 8" OF ASPHALT WEARING SURFACE ON 3 LINES OF 18" X 34" REINFORCED CONCRETE DECK GIRDERS WIDENED EACH SIDE WITH A REINFORCED CONCRETE DECK ON 2 LINES OF 24" I-BEAMS, ON REINFORCED CONCRETE ABUTMENTS (FULL HEIGHT), WITH A CLEAR ROADWAY WIDTH OF 28'-0" LOCATED AT THE SAME LOCATION AS THE PROPOSED STRUCTURE, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. ~~SEE SPECIAL PROVISION FOR REMOVAL OF EXISTING STRUCTURE AT STATION 20+93.00 -L-~~

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE MEASURED AND PAID FOR AS UNCLASSIFIED STRUCTURE EXCAVATION.

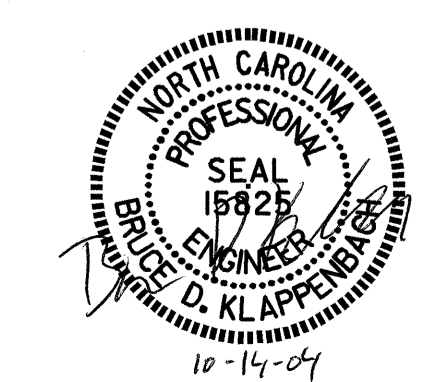
THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STA. 20+93.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PROJECT NO. B-3454
 FORSYTH COUNTY
 STATION: 20+93.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING FOR
 BRIDGE OVER MUDDY
 CREEK ON SR 1525
 BETWEEN SR 3210 AND
 SR 1393



REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

TOTAL SHEETS: 27

DRAWN BY : M. G. SHAKIH DATE : 01-23-03
 CHECKED BY : D. A. GLADDEN DATE : 01-23-03