

TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	3'-6" Ø DRILLED PIERS IN SOIL	3'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIERS	CROSSHOLE SONIC LOGGING	CSL TUBES	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	STRUCTURAL STEEL	HP 12 X 53 STEEL PILES	STEEL PILE POINTS	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS	
	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	LIN. FT.	SQ. FT.	SQ. FT.	CU. YD.	LUMP SUM	LBS.	LBS.	APPROX. LBS.	NO.	LIN. FT.	EACH	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE								10624	9195		LUMP SUM			238,000			779.77				LUMP SUM	LUMP SUM
END BENT 1										16.5		2969			7	105	7		210	235		
BENT 1			14.00	20.00		1	156.00			15.1		4345	1165									
BENT 2			6.67	18.00	2.67	1	118.67			17.1		4277	1138									
BENT 3			37.00	26.00	11.42	1	272.00			16.5		5636	1883									
BENT 4			13.00	24.00		1	168.00			14.6		4383	1182									
END BENT 2										16.5		2969			7	105	7		205	230		
TOTAL	LUMP SUM	LUMP SUM	70.67	88.00	14.09	4	714.67	10624	9195	96.3	LUMP SUM	24579	5368	238,000	14	210	14	779.77	415	465	LUMP SUM	LUMP SUM

NOTES

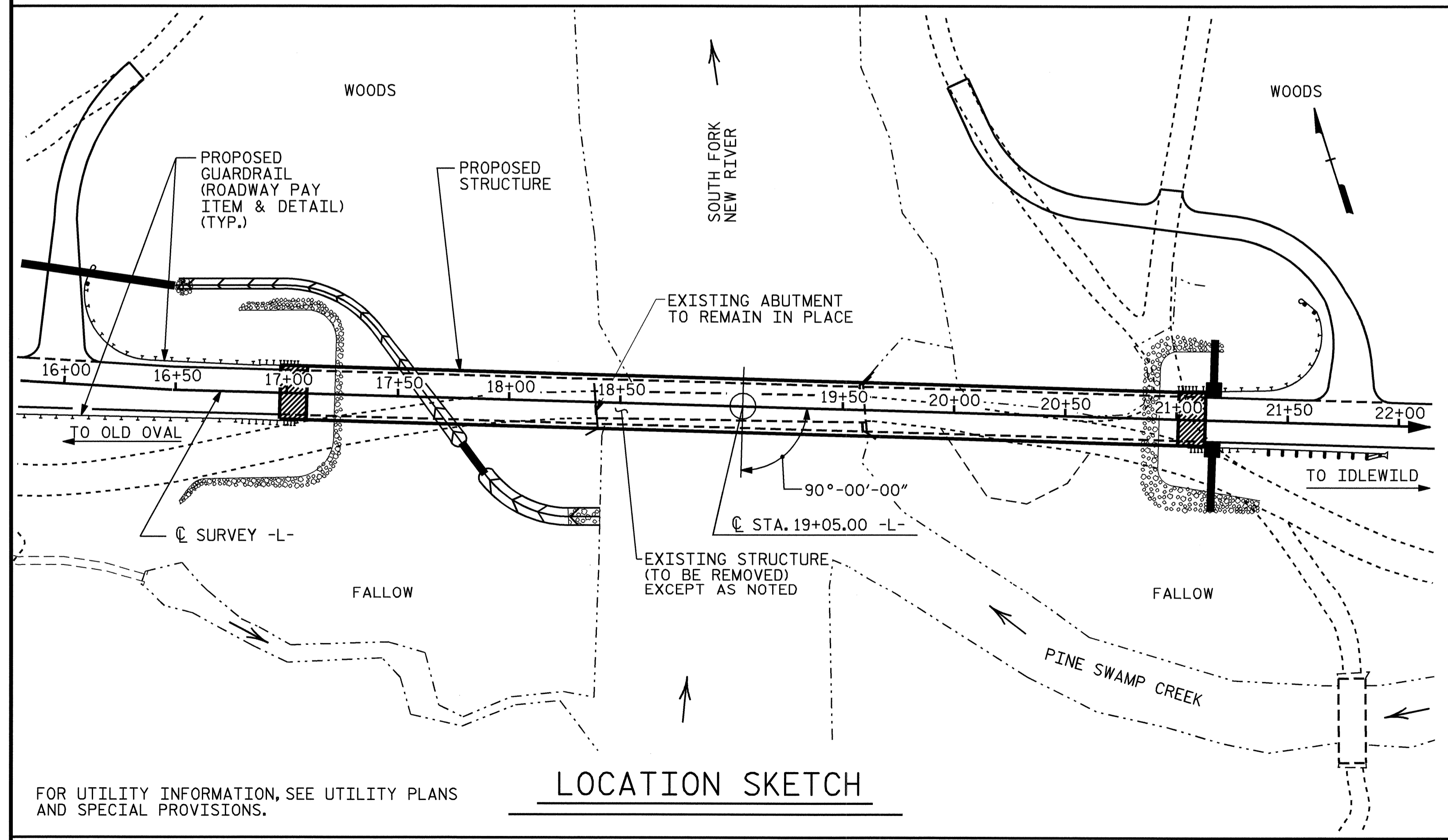
ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.
 ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-7 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
 REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.
 THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS AT BENT 1 AND 4 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 EXISTING ROADBED WITHIN THE AREA OF THE END BENT PILES SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 2'-0".
 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 WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
 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.
 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 STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.
 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 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 REPLACED 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 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.
 NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 PILES FOR END BENTS NO.1 AND NO.2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.
 DRILLED PIERS FOR BENT NO.1 THROUGH BENT NO.4 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 190 TONS EACH AT THE TOP OF THE COLUMN.
 FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

DRILLED PIERS AT BENT NO.1, BENT NO.2, BENT NO.3, AND BENT NO.4 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN ELEV. 2807', ELEV. 2807', ELEV. 2788', AND ELEV. 2803', RESPECTIVELY, AND SATISFY THE REQUIRED TIP BEARING CAPACITY.
 DRILLED PIERS AT BENT NO.1 THROUGH BENT NO.4 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IF 20 TSF.
 THE REQUIRED TIP BEARING CAPACITY AT BENT NO.1 THROUGH BENT NO.4 SHALL BE VERIFIED.
 PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NO.2 AND BENT NO.3 AND THE CASING SHALL NOT EXTEND BELOW ELEV. 2816' AND ELEV. 2808', RESPECTIVELY, WITHOUT THE ENGINEER'S PERMISSION.
 FOR PERMANENT STEEL CASING, SEE SPECIAL PROVISIONS FOR DRILLED PIERS.
 PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT BENT NO.1 AND BENT NO.4.
 SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1 THROUGH BENT NO.4.
 SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT. SEE DRILLED PIERS SPECIAL PROVISIONS.
 THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 AND BENT NO.2 IS ELEV. 2813' AND BENT NO.3 IS ELEV. 2801' AND BENT NO.4 IS ELEV. 2810'. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
 SID INSPECTIONS MAY BE REQUIRED TO INSPECT THE BOTTOM CLEANLINESS OF THE DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. SEE DRILLED PIERS SPECIAL PROVISIONS.
 FOR CROSSHOLE SONIC LOGGING, SEE SPECIAL PROVISIONS.
 STEEL PILE POINTS ARE REQUIRED FOR PILES AT END BENT NO.1 AND END BENT NO.2. SEE SPECIAL PROVISION FOR STEEL PILE POINTS.
 THE EXISTING 4 SPAN STRUCTURE (1 @ 30'-10", 2 @ 30', 1 @ 30'-10") CONSISTING OF A TIMBER FLOOR WITH A 1/4" ASPHALT WEARING SURFACE ON STEEL I-BEAMS WITH A CLEAR ROADWAY WIDTH OF 11.2', ON A SUBSTRUCTURE CONSISTING OF REINFORCED CONCRETE ABUTMENTS AND PIERS AND LOCATED AT THE SITE OF THE PROPOSED BRIDGE SHALL BE REMOVED, EXCEPT AS NOTED IN THE SPECIAL PROVISIONS. SEE SPECIAL PROVISION FOR REMOVAL OF EXISTING STRUCTURE.
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

HYDROGRAPHIC DATA
 DESIGN DISCHARGE 10,300 C.F.S.
 FREQUENCY OF DESIGN FLOOD 25 YRS.
 DESIGN HIGH WATER ELEVATION 2829.36
 DRAINAGE AREA 159.00 mi²
 BASIC DISCHARGE (Q100) 23,631 C.F.S.
 BASIC HIGH WATER ELEVATION 2836.10
OVERTOPPING FLOOD DATA
 OVERTOPPING DISCHARGE 17,723 C.F.S.
 FREQUENCY OF OVERTOPPING FLOOD 50 YRS.
 OVERTOPPING FLOOD ELEVATION 2833.33

BM#3: 8" SPIKE IN ROOT OF 20" FORKED YAHOO TREE 4.81' LT. OF STA. 24+66.20 -L-, ELEV. = 2840.670



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

DRAWN BY: M.GOINS/CRY DATE: 01/05
 CHECKED BY: M.G.CHEEK DATE: 01/05

PROJECT NO. B-2905
ASHE COUNTY
 STATION: 19+05.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON SR 1179
 OVER SOUTH FORK NEW RIVER
 BETWEEN OLD OVAL
 AND IDLEWILD

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

S-3
 TOTAL SHEETS 35

