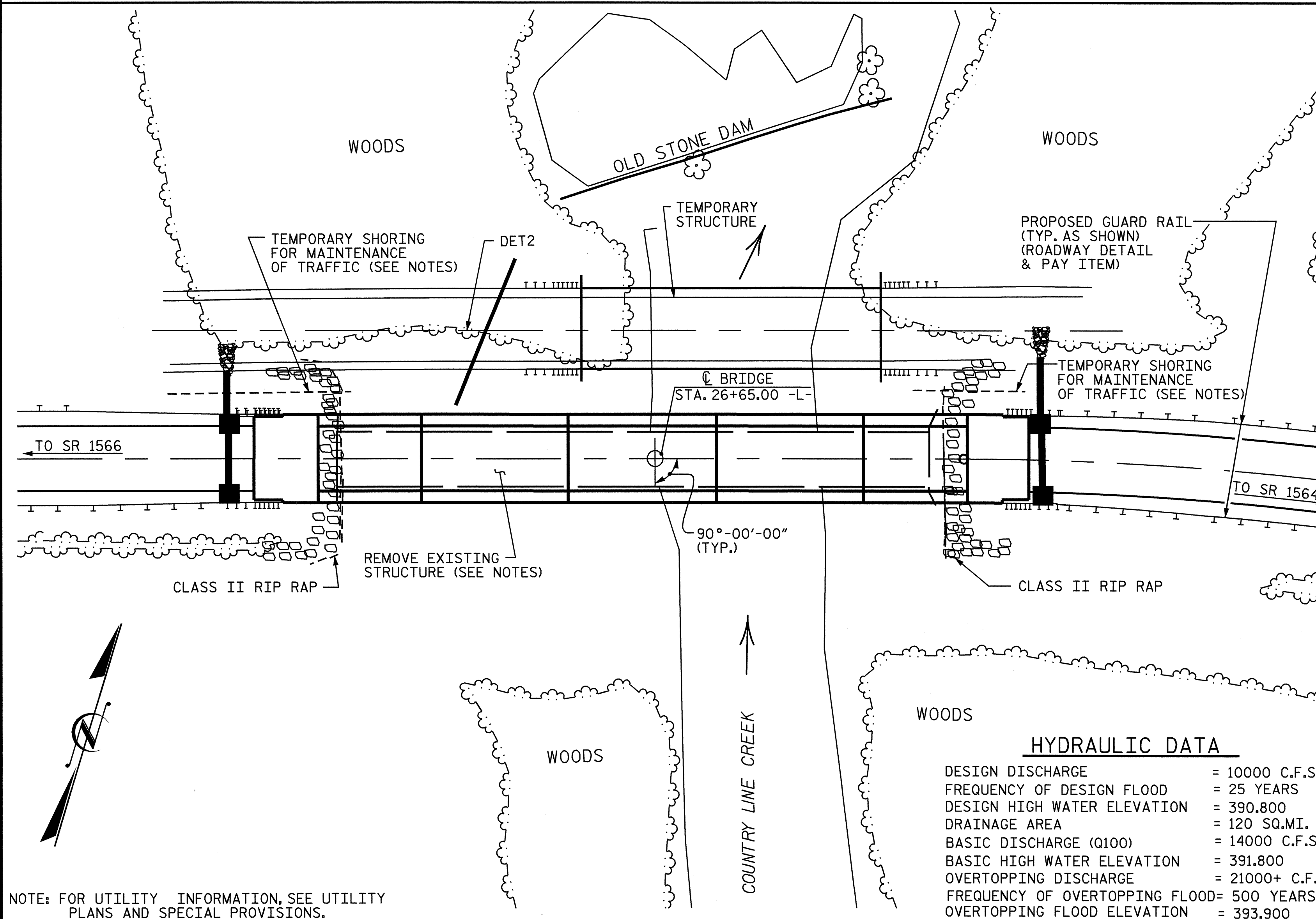


BM #3 -BL-STA. 22+00 274' RIGHT R/R SPIKE SET IN 16" OAK EL. 387.46'.

NOTES



HYDRAULIC DATA

DESIGN DISCHARGE	= 10000 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 25 YEARS
DESIGN HIGH WATER ELEVATION	= 390.800
DRAINAGE AREA	= 120 SQ.MI.
BASIC DISCHARGE (Q100)	= 14000 C.F.S.
BASIC HIGH WATER ELEVATION	= 391.800
OVERTOPPING DISCHARGE	= 21000+ C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 500 YEARS
OVERTOPPING FLOOD ELEVATION	= 393.900

LOCATION SKETCH

NOTE: FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 28 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. FOR UNCLASSIFIED STRUCTURE EXCAVATION, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STATION 26+65.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE.

FOR SAND SEAL, SEE SPECIAL PROVISION.

ASSUMED LIVE LOAD = HS20 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 A TIMBER DECK ON STEEL GIRDERS WITH 1 SPAN AT 40 FT. AND 8 SPANS AT 20 FT. AND WITH A CL. ROADWAY WIDTH OF 17.1 FT. AND SUPPORTED BY TIMBER AND STEEL BENTS AND LOCATED AT THE SITE 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.

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 SUBSTRUCTURE OF 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.

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

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 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 26+65.00 -LREV-".

PILES FOR END BENTS NO.1 AND 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 DRILLED PIERS AT BENT NO.1, 2, 3 AND 4 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 18 TONS PER SQUIRE FOOT.

THE REQUIRED TIP BEARING CAPACITY AT BENT NO.1, 2, 3 AND 4 SHALL BE VARIFIED.

DRILLED PIERS FOR BENT NO.1,2,3 AND 4 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 180 TONS EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NO.1. THE CASING SHALL NOT EXTEND BELOW ELEVATION 371.0 FEET WITHOUT THE ENGINEER'S PERMISSION.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NO.2. THE CASING SHALL NOT EXTEND BELOW ELEVATION 372.0 FEET WITHOUT THE ENGINEERS PERMISSION .

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NO.3. THE CASING SHALL NOT EXTEND BELOW ELEVATION 365.0 FEET WITHOUT THE ENGINEERS PERMISSION.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NO.4. THE CASING SHALL NOT EXTEND BELOW ELEVATION 369.3 FEET WITHOUT THE ENGINEERS PERMISSION

DRILLED PIERS AT BENT NO.1 AND BENT NO.2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 358.0 FEET, AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO.3 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 354.0 FEET, AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO.4 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 348.0 FEET, AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 IS ELEVATION 369.0 FEET. THE SCOUR CRITICAL ELEVATION IS FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.2 IS ELEVATION 370.0 FEET. THE SCOUR CRITICAL ELEVATION IS FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE

THE SCOUR CRITICAL ELEVATION FOR BENT NO.3 IS ELEVATION 362.5 FEET. THE SCOUR CRITICAL ELEVATION IS FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE

THE SCOUR CRITICAL ELEVATION FOR BENT NO.4 IS ELEVATION 363.3 FEET. THE SCOUR CRITICAL ELEVATION IS 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 NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1, 2, 3 AND 4.

SID INSPECTIONS ARE REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NO.1, 2, 3 AND 4. SEE DRILLED PIERS SPECIAL PROVISION.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NO.1, 2, 3 AND 4. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.

DRILLED PIERS WILL BE CONSTRUCTED WITH PERMANENT CASING. THE CONTRACTOR IS CAUTIONED THAT THE PERMANENT CASING MAY NOT EXCEED 42 INCHES IN DIAMETER.

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 FORM CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 26+65.00 -L-.

TOTAL BILL OF MATERIAL

	CONSTRUCTION MAINTENANCE & REMOVAL OF TEMPORARY STRUCTURE	CONSTRUCTION MAINTENANCE & REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	3'-0" DIA. DRILLED PIERS IN SOIL	3'-0" DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-0" DIA. DRILLED PIERS	SID INSPECTION	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	HP 12X53 STEEL PILES	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0"X1'-9" PRESTRESSED CONCRETE CORED SLAB		
	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LIN. FT.	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	LBS.	NO.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN. FT.	
SUPERSTRUCTURE										LUMP SUM		LUMP SUM				435.50			LUMP SUM	55	2389.75	
END BENT #1											11.7		1942		6	180	220	243				
BENT #1				38.1	23	35.1		1	264.5		20.6		8678	1050								
BENT #2				38.5	23	33.5	1		265.8		20.6		8629	1057								
BENT #3				43.8	26	47.8		1	297.9		20.6		9248	1196								
BENT #4				57.1	25	39.5	1		348.4		20.6		10166	1401								
END BENT #2											11.7		1942		6	180	170	190				
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	177.5	97	155.9	2	2	1176.6	LUMP SUM	105.8	LUMP SUM	40605	4704	12	360	435.50	390	433	LUMP SUM	55	2389.75

DRAWN BY : J. G. KHARVA DATE : 03-02-04
 CHECKED BY : W. A. DAVIS DATE : 05-27-04



PROJECT NO. B-3629
CASWELL COUNTY
 STATION: 26+65.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE OVER
 COUNTRY LINE CREEK
 ON SR 1565 BETWEEN
 SR 1566 AND SR 1564**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			26
2			4			

NCBDS