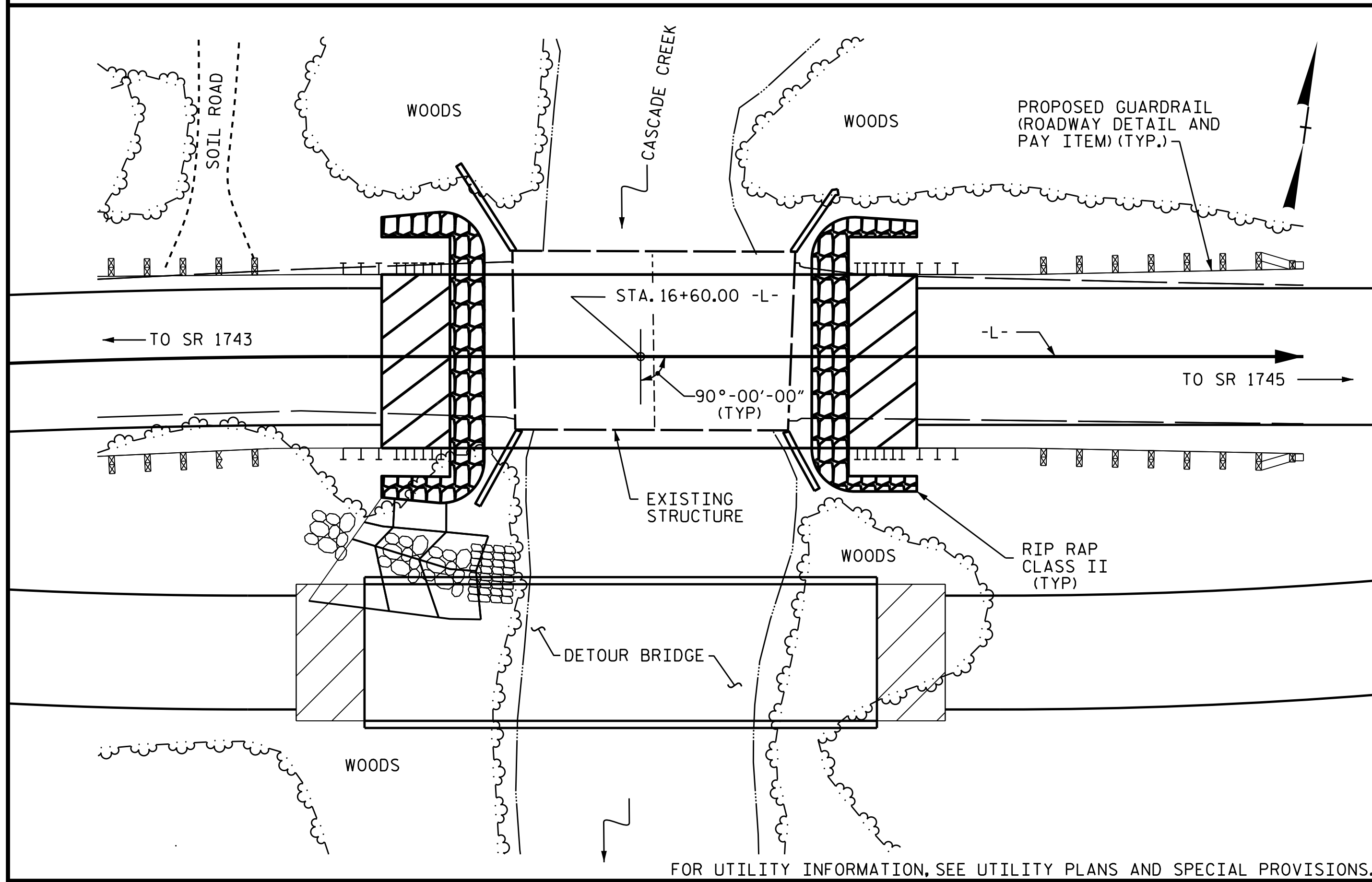


BM# 1: 60 NAIL IN BASE OF 24" OAK LOCATED AT STA. 15+85.58 -L-, 177.96' LT., EL.=490.42'



LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.  
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.  
 THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.  
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.  
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."  
 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 16+60.00 -L-."  
 THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 42 FT LEFT SIDE, AND 31 FT RIGHT SIDE OF CENTERLINE ROADWAY AT END BENT 1 AND 36 FT LEFT SIDE AND 30 FT RIGHT SIDE OF CENTERLINE ROADWAY AT END BENT 2 AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.  
 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 16+60.00 -L-.

THE EXISTING STRUCTURE CONSISTING OF 2 SPANS: 2 @ 25'-0" WITH A CLEAR ROADWAY OF 28'-0", WITH A 7" ASPHALT WEARING SURFACE AND CONCRETE DECK ON I-BEAMS, ON CONCRETE ABUTMENTS WIDENED WITH CONCRETE CAPS, AND INTERIOR BENT WITH CONCRETE CAPS AND MASS CONCRETE PIER AT THE PROPOSED STRUCTURE SITE SHALL BE REMOVED, EXCEPT RETAIN ABUTMENT 1 AND ABUTMENT 2 UP TO ELEVATION 481.4. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT.  
 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.  
 REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.  
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.  
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.  
 FOR GROUT FOR STRUCTURES, 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 CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STA. 16+60.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.  
 FOR CONCRETE WEARING SURFACE, SEE SPECIAL PROVISIONS.  
 FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.  
 AT THE CONTRACTOR'S OPTION, PRESTRESSED CONCRETE END BENT CAPS MAY BE SUBSTITUTED IN PLACE OF THE CAST-IN-PLACE CAPS. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER TO RECEIVE REVISED PLANS AND DETAILS FROM THE STRUCTURES MANAGEMENT UNIT. THE REDESIGN AND ANY ADDITIONAL MATERIALS NEEDED WILL BE AT NO ADDITIONAL COST TO THE CONTRACTOR.

HYDRAULIC DATA

DESIGN DISCHARGE = 3500 CFS  
 FREQUENCY OF DESIGN FLOOD = 10 YR.  
 DESIGN HIGH WATER ELEVATION = 488.9  
 DRAINAGE AREA = 34.3 SQ.MI.  
 BASE DISCHARGE (Q100) = 6300 CFS  
 BASE HIGH WATER ELEVATION = 490.38

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 3560 CFS  
 FREQUENCY OF OVERTOPPING FLOOD = 10+ YR.  
 OVERTOPPING FLOOD ELEVATION = 489.23

TOTAL BILL OF MATERIAL

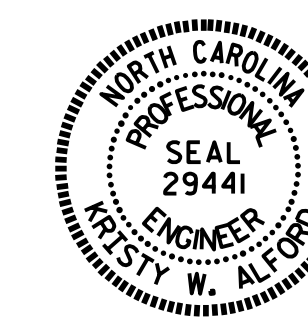
	CONSTRUCTION, MAINTENANCE & REMOVAL OF TEMP STRUCTURE	CONSTRUCTION, MAINTENANCE & REMOVAL OF TEMP ACCESS	REMOVAL OF EXISTING STRUCTURE	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	UNCLASSIFIED STRUCTURE EXCAVATION	CONCRETE WEARING SURFACE	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS
	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM
SUPERSTRUCTURE							2,135	2,531		
END BENT 1				31	39				21.8	
END BENT 2				35	35				21.8	
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	66	74	LUMP SUM	2,135	2,531	43.6	LUMP SUM

	REINFORCING STEEL	HP 12 X 53 STEEL PILES	STEEL PILE POINTS	TWO BAR METAL RAIL	1'-2" X 2'-11/4" CONCRETE PARAPET	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLABS	ASBESTOS ASSESSMENT		
	LBS.	NO.	LIN. FT.	EA.	LIN. FT.	LIN. FT.	TON	SQ. YD.	LUMP SUM	NO.	LIN. FT.	LUMP SUM
SUPERSTRUCTURE					125.00	140.00			LUMP SUM	11	770	LUMP SUM
END BENT 1	2588	7	70	7			190	210				
END BENT 2	2588	7	70	7			190	210				
TOTAL	5176	14	140	14	125.00	140.00	380	420	LUMP SUM	11	770	LUMP SUM

PROJECT NO. B-5343  
ROCKINGHAM COUNTY  
 STATION: 16+60.00 -L-

SHEET 3 OF 3



DocuSigned by:  
 W. Alford  
 9/21/2016

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING**  
 BRIDGE OVER CASCADE CREEK  
 ON NC 770 (BERRY HILL ROAD)  
 BETWEEN SR 1743 AND SR 1745

DRAWN BY : H. B. DESAI DATE : 9/3/15  
 CHECKED BY : E. I. OMILE DATE : 9/9/15

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS 18
2			4			