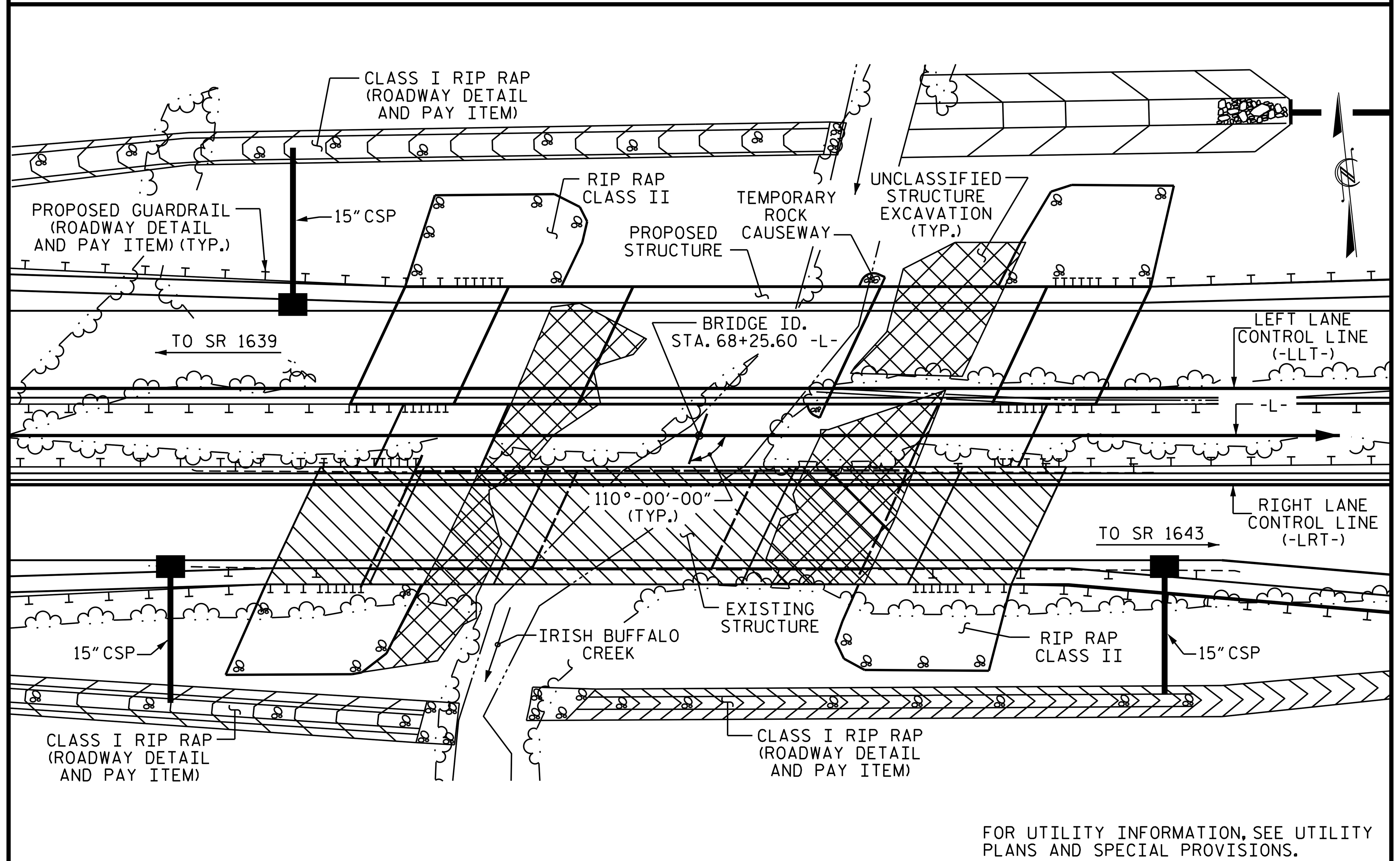
BM #8: 41.02′ RIGHT OF STA. 68+67.09 -L-, EL. 667.83



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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, 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 68+25.60 -L-.

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.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

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

FOR PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.

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

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

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

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.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 30 FT. LEFT AND 11.75 FT. RIGHT OF LEFT LANE CONTROL LINE AT END BENT 1 AND A DISTANCE OF 49 FT. LEFT OF LEFT LANE CONTROL LINE 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 SPECIFICATION. EXCAVATION AREA SHOULD BE SLOPED 2% TOWARDS CREEK.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

HYDRAULIC DATA

DESIGN DISCHARGE	= 4,700 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 665.4
DRAINAGE AREA	= 16.4 SQ.MI.
BASE DISCHARGE (Q100)	= 5,200 C.F.S.
BASE HIGH WATER ELEVATION	= 665.86

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 13,200 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 500+ YRS.
OVERTOPPING FLOOD ELEVATION	= 670.5

TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS	3′-6″ DIA. DRILLED PIERS IN SOIL	3′-6″ DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3′-6″ DIA. DRILLED PIER	SID INSPECTIONS	SPT TESTING	CSL TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL
	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.
SUPERSTRUCTURE									5,124	4,930		LUMP SUM	
END BENT 1											39.0		4,920
BENT 1		9.5	50.0		2	4					30.5		8,430
BENT 2		58.0	26.0	39.1	2	4					33.6		11,122
END BENT 2											39.6		4,922
TOTAL	LUMP SUM	67.5	76.0	39.1	4	8	2	LUMP SUM	5,124	4,930	142.7	LUMP SUM	29,394

TOTAL BILL OF MATERIAL

	SPIRAL COLUMN REINFORCING STEEL	45″ PRESTRESSED CONCRETE GIRDERS		HP 12X53 STEEL PILES		THREE BAR METAL RAIL	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2′-0″ THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS
	LBS.	NO.	LIN. FT.	NO.	LIN. FT.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM
SUPERSTRUCTURE		12	502.667			120.32	128.22			LUMP SUM
END BENT 1				6	120			175	195	
BENT 1	1,479									
BENT 2	2,237									
END BENT 2				6	240			170	185	
TOTAL	3,716	12	502.667	12	360	120.32	128.22	345	380	LUMP SUM

PROJECT NO. U-3440

CABARRUS COUNTY

STATION: 68+25.60 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE OVER IRISH BUFFALO CREEK ON NC 3 BETWEEN SR 1639 AND SR 1643

(LEFT LANE)

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031480 DONALD R. SMITH, JR.

DocuSigned by: Donald R. Smith, Jr
8/17/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS								SHEET NO.
NO.	BY:	DATE:		NO.	BY:	DATE:		S1-3
1				3				TOTAL SHEETS
2				4				37

STR. #1

DRAWN BY : H. B. DESAI DATE : 4/7/16
CHECKED BY : R. P. PATEL DATE : 4/26/16
DESIGN ENGINEER OF RECORD: T. R. PETERSON DATE : 6/20/16

17-AUG-2016 09:24
R:\Structures\Plans\Str01\U3440_SD_GD_01.dgn
jdhawk