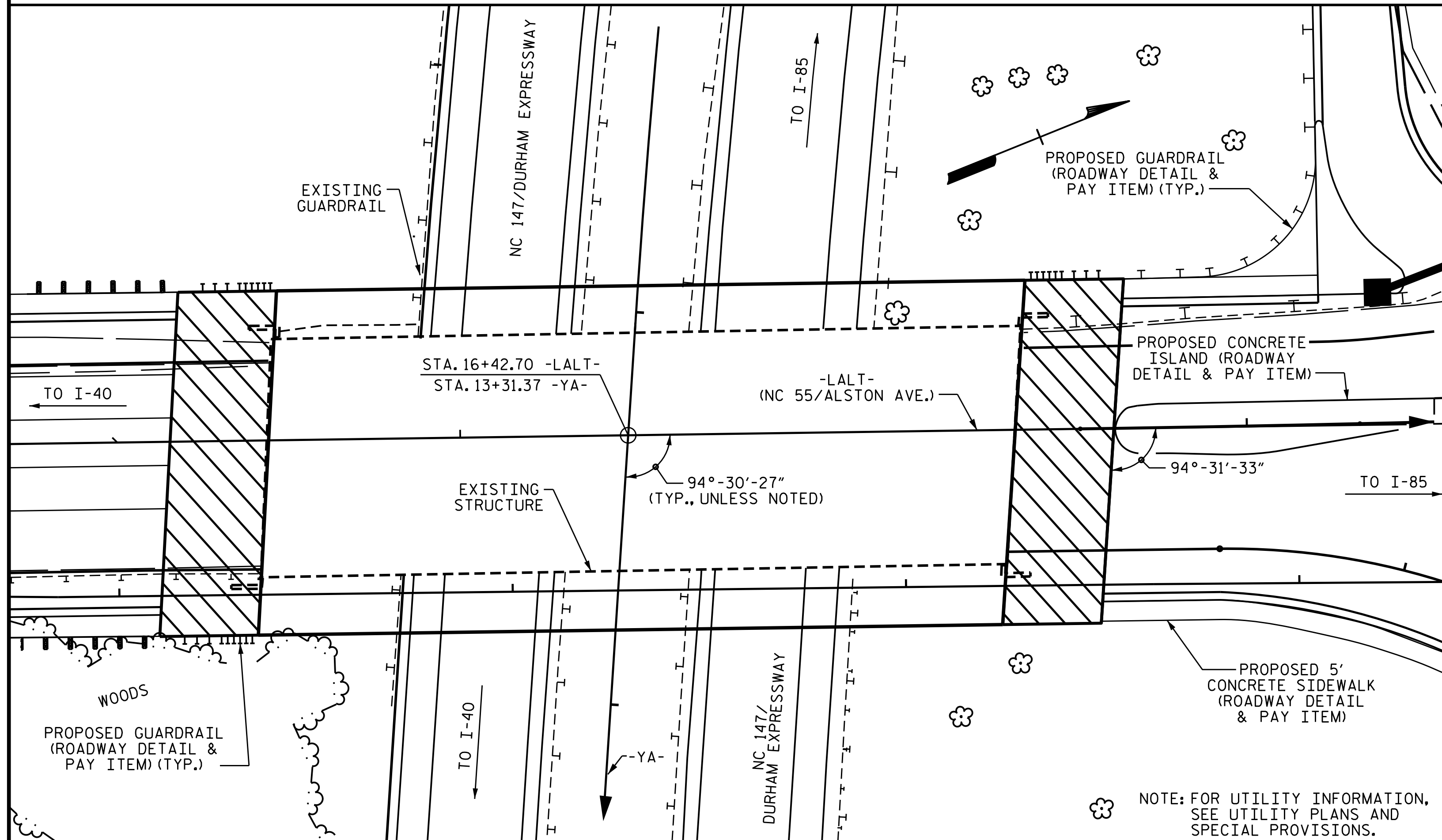


BM. #502: CUT SQUARE ON SE BENT, 37.66' RT. OF STA. 15+48.92 -LALT-, EL. 408.92



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.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.
- 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. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.
- THE ELEVATIONS AND CLEARANCES SHOWN ON THE PLANS AT THE POINTS OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATIONS ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.
- FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.
- 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.
- ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-8 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- 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.
- FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRANSPORTATION MANAGEMENT PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.
- EXISTING STRUCTURE CONSISTING OF 4 SPANS (1 @ 33'-0", 1 @ 66'-0", 1 @ 61'-9", AND 1 @ 29'-3") WITH A CLEAR ROADWAY WIDTH OF 52'-0" AND REINFORCED CONCRETE FLOOR ON I-BEAMS ON END BENTS OF REINFORCED CONCRETE CAP ON STEEL PILES AND BENTS OF REINFORCED CONCRETE POST & BEAM ON PILE FOOTINGS AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. SEE SPECIAL PROVISIONS FOR "REMOVAL OF EXISTING 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.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- 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 ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

THE BRIDGE DECK FOR THIS PROJECT IS INCLUDED IN NCDOT RESEARCH PROJECT RP 2016-06, "INTERNALLY CURED CONCRETE USING LIGHTWEIGHT AGGREGATE" AS THE DEMONSTRATION PROJECT FOR FIELD STUDY. SEE SPECIAL PROVISION FOR INTERNALLY CURED CONCRETE FIELD STUDY.

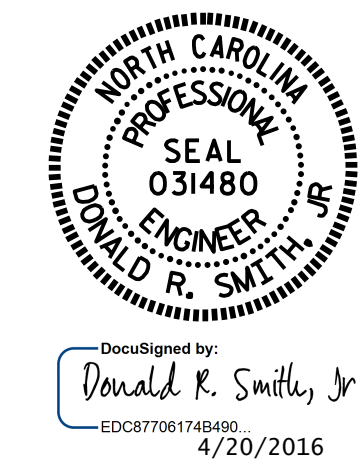
TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	3'-6" DIA. DRILLED PIERS IN SOIL	3'-6" DIA. DRILLED PIERS NOT IN SOIL	SID INSPECTIONS	CSL TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL
	LUMP SUM	LIN. FT.	LIN. FT.	EA.	EA.	SQ.FT.	SQ.FT.	CU.YDS.	LUMP SUM	LBS.
SUPERSTRUCTURE						16,139	17,827		LUMP SUM	
END BENT 1								84.0		11,783
BENT 1		63.90	42.00					91.5		23,931
END BENT 2								82.9		11,750
TOTAL	LUMP SUM	63.90	42.00	1	1	16,139	17,827	258.4	LUMP SUM	47,464

	SPIRAL COLUMN REINFORCING STEEL	STRUCTURAL STEEL	HP 12 X 53 STEEL PILES	1'-2 3/4" X 3'-0" CONCRETE PARAPET	84" CHAIN LINK FENCE	4" SLOPE PROTECTION	DISC BEARINGS	ELASTOMERIC BEARINGS	FOAM JOINT SEALS	ANODIZED 2 BAR METAL RAIL	ASBESTOS ASSESSMENT	
	LBS.	APPROX. LBS.	NO.	LIN. FT.	LIN. FT.	LIN. FT.	SO.YDS.	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LUMP SUM
SUPERSTRUCTURE		508,000			356.32	335.62		LUMP SUM	LUMP SUM	LUMP SUM	340.46	
END BENT 1			13	455			285					
BENT 1	4,041											
END BENT 2			13	585			330					
TOTAL	4,041	508,000	26	1,040	356.32	335.62	615	LUMP SUM	LUMP SUM	LUMP SUM	340.46	LUMP SUM

PROJECT NO. U-3308
DURHAM COUNTY
 STATION: 16+42.70-LALT-

SHEET 3 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE OVER NC 147
 (DURHAM EXPRESSWAY) ON
 NC 55 (ALSTON AVE.)

DRAWN BY : P.S. ADKINS DATE : 10/2/14
 CHECKED BY : K.D. LAYNE DATE : 11/15/14
 DESIGN ENGINEER OF RECORD: D.R. SMITH DATE : 11/22/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			47
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED