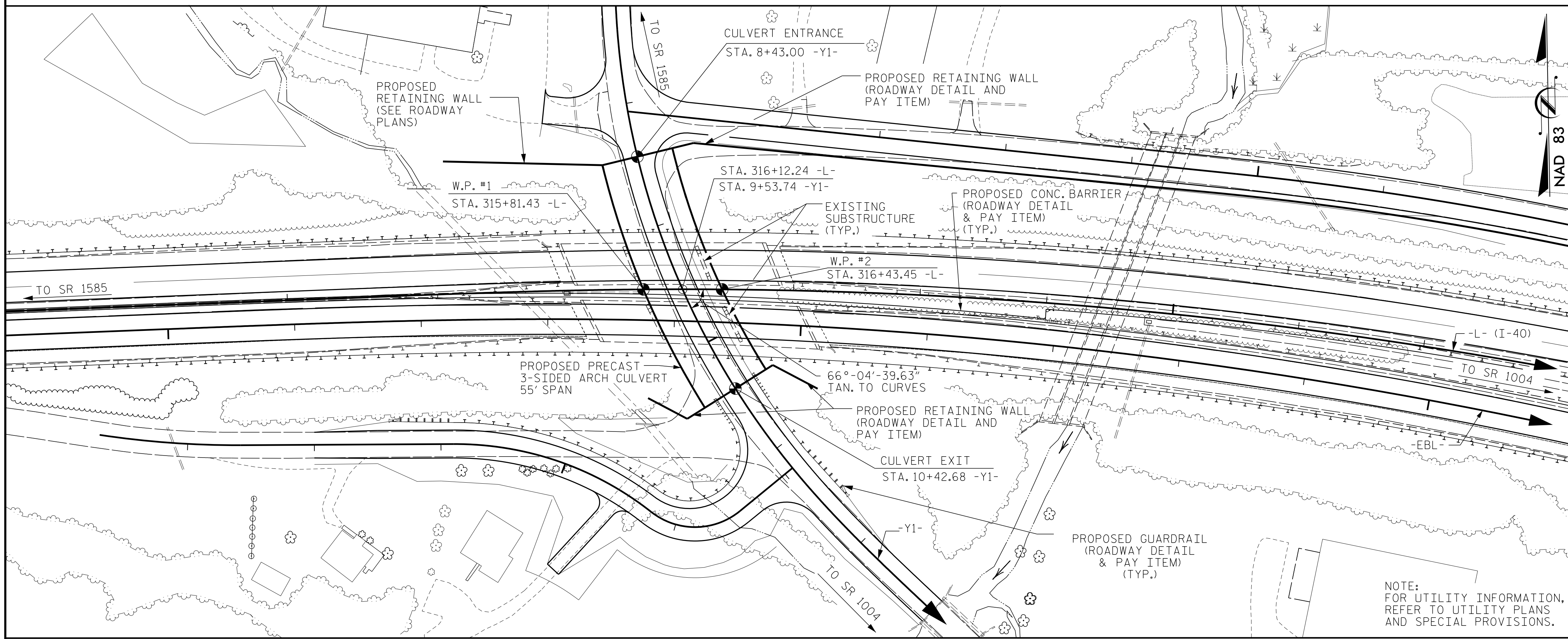


BM: RAIL ROAD SPIKE IN 18" OAK TREE, STA. 11+72 -L- 38' LT.; N149766, E2130326: EL. 33.26



LOCATION SKETCH

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
 THIS CULVERT HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
 THIS CULVERT IS LOCATED IN SEISMIC ZONE 1.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 NO CAST-IN-PLACE BARREL OPTION WILL BE ALLOWED.
 MIN. FILL = 2.6' * * = MEASURED TO TOP OF TOP SLAB @ CL Y1
 MAX. FILL = 6.4' *
 FOR PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT, SEE SPECIAL PROVISIONS.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 AFTER SERVING AS TEMPORARY STRUCTURES THE 2 EXISTING STRUCTURES CONSISTING OF 3 SPANS EACH AT 52', 61', 61' AND 51', 57', 56' WITH A CONCRETE DECK ON STEEL I-BEAM SUPERSTRUCTURE AND A CLEAR ROADWAY WIDTH OF 28' ON A SUBSTRUCTURE CONSISTING OF A CONCRETE CAP ON CONCRETE POST AND BEAM BENTS WITH SPREAD FOOTINGS AND LOCATED AT THE SITE OF THE PROPOSED CULVERT SHALL BE REMOVED. THE EXISTING BRIDGES ARE PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGES DETERIORATE DURING CONSTRUCTION OF THE PROPOSED CULVERT, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
 FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
 A CAST-IN-PLACE REINFORCED CONCRETE FOOTING IS REQUIRED FOR THE PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT FOUNDATION. THE CONTRACTOR SHALL PROVIDE THE FOOTING DESIGN TO THE ENGINEER FOR REVIEW AND APPROVAL.
 THE BOTTOM OF FOOTING ELEVATIONS MAY BE LOWERED IF NECESSARY TO ACHIEVE REQUIRED BEARING CAPACITY.
 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 STRUCTURES".
 THE PRECAST CULVERT SECTIONS SHALL BE DESIGNED TO HANDLE FULL DEPTH HYDROSTATIC PRESSURE IF WEEP HOLES ARE NOT UTILIZED. IF PROVIDED, WEEP HOLES SHALL BE LOCATED A MINIMUM HEIGHT OF 6 INCHES ABOVE THE 4" CIP CONCRETE AND HAVE A MAXIMUM SPACING OF 10 FEET.
 FOR ASBESTOS ASSESSMENT, 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.

TOTAL STRUCTURE QUANTITIES	
REMOVAL OF EXISTING STRUCTURES @ STA. 316+12.24 -L-	LUMP SUM
PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT @ STA. 316+12.24 -L-	LUMP SUM
CAST-IN-PLACE REINFORCED CONCRETE FOOTING FOR PRECAST CULVERT	LUMP SUM
UNCLASSIFIED STRUCTURE EXCAVATION @ STA. 316+12.24 -L-	LUMP SUM
ASBESTOS ASSESSMENT	LUMP SUM

FOUNDATION NOTES:

FOR CULVERT EXCAVATION, SEE SECTION 414 OF THE STANDARD SPECIFICATIONS.
 CULVERT WILL BE CONSTRUCTED IN 3 PHASES. EACH PHASE WILL HAVE SURCHARGE PLACEMENT AND REMOVAL AND SETTLEMENT MONITORING PRIOR TO CULVERT CONSTRUCTION. SEE SURCHARGE DRAWINGS FOR MORE INFORMATION.
 PRIOR TO CULVERT CONSTRUCTION VERIFY THE ESTIMATED BEARING RESISTANCE OF 9.0 KSF. IF LOWER BEARING CONDITIONS ARE ENCOUNTERED, CONTACT WRO OPERATION ENGINEER.
 THE FACTORED BEARING RESISTANCE FOR THE CULVERT FOOTING DESIGN IS 2 TSF.

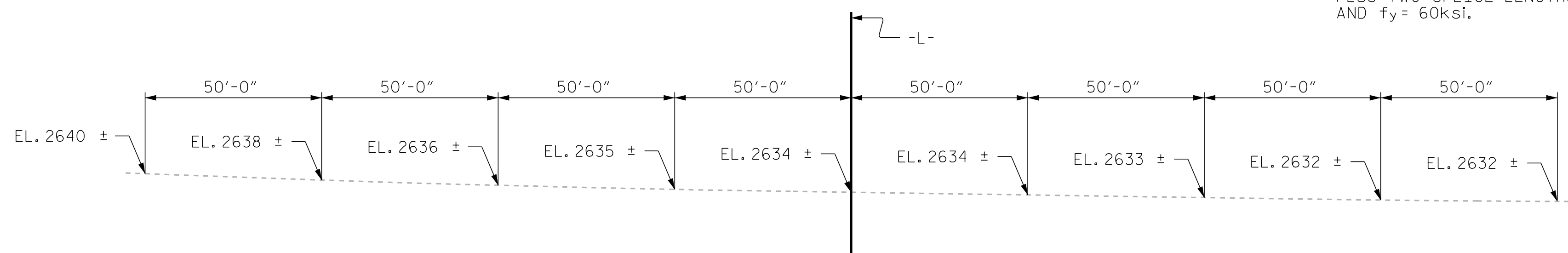
SAMPLE BAR REPLACEMENT	
SIZE	LENGTH
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"
#8	12'-0"
#9	13'-2"
#10	14'-6"
#11	15'-10"

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 SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

THE LOCATION 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.

CARE SHALL BE TAKEN DURING BACKFILL AND COMPACTION OPERATION TO MAINTAIN ALIGNMENT AND PREVENT DAMAGE TO THE JOINTS. UNITS WHICH BECOME MISALIGNED, SHOW EXCESSIVE SETTLEMENT, OR HAVE OTHERWISE BEEN DAMAGED BY THE CONTRACTOR'S OPERATION SHALL AT THE DISCRETION OF THE ENGINEER BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT OF TRANSPORTATION.

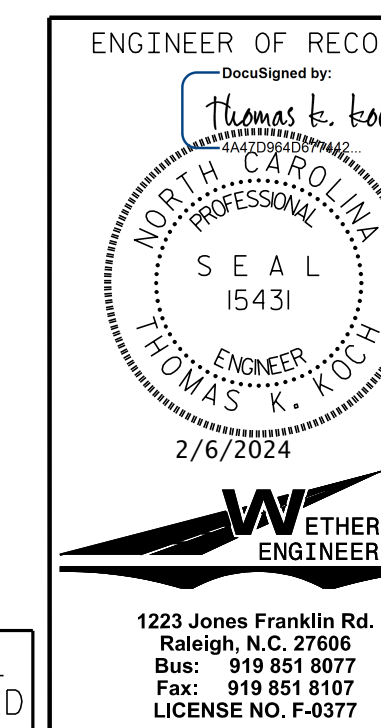
NOTE: SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPLICE LENGTHS AND $f_y = 60\text{ksi}$.



PROFILE ALONG -Y1- (EXISTING GRADE SHOWN)

PROJECT NO. HB-0002
HAYWOOD COUNTY
 STATION: 316+12.24 -L-

SHEET 2 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**PRECAST
 3-SIDED ARCH
 CULVERT
 55'-0" SPAN**

REVISIONS		SHEET NO.	
NO.	BY:	DATE:	SHEET NO.
1			S-2
2			TOTAL SHEETS 5

DRAWN BY: D. HODGE DATE: 9/22
 CHECKED BY: T. KOCH DATE: 10/22

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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