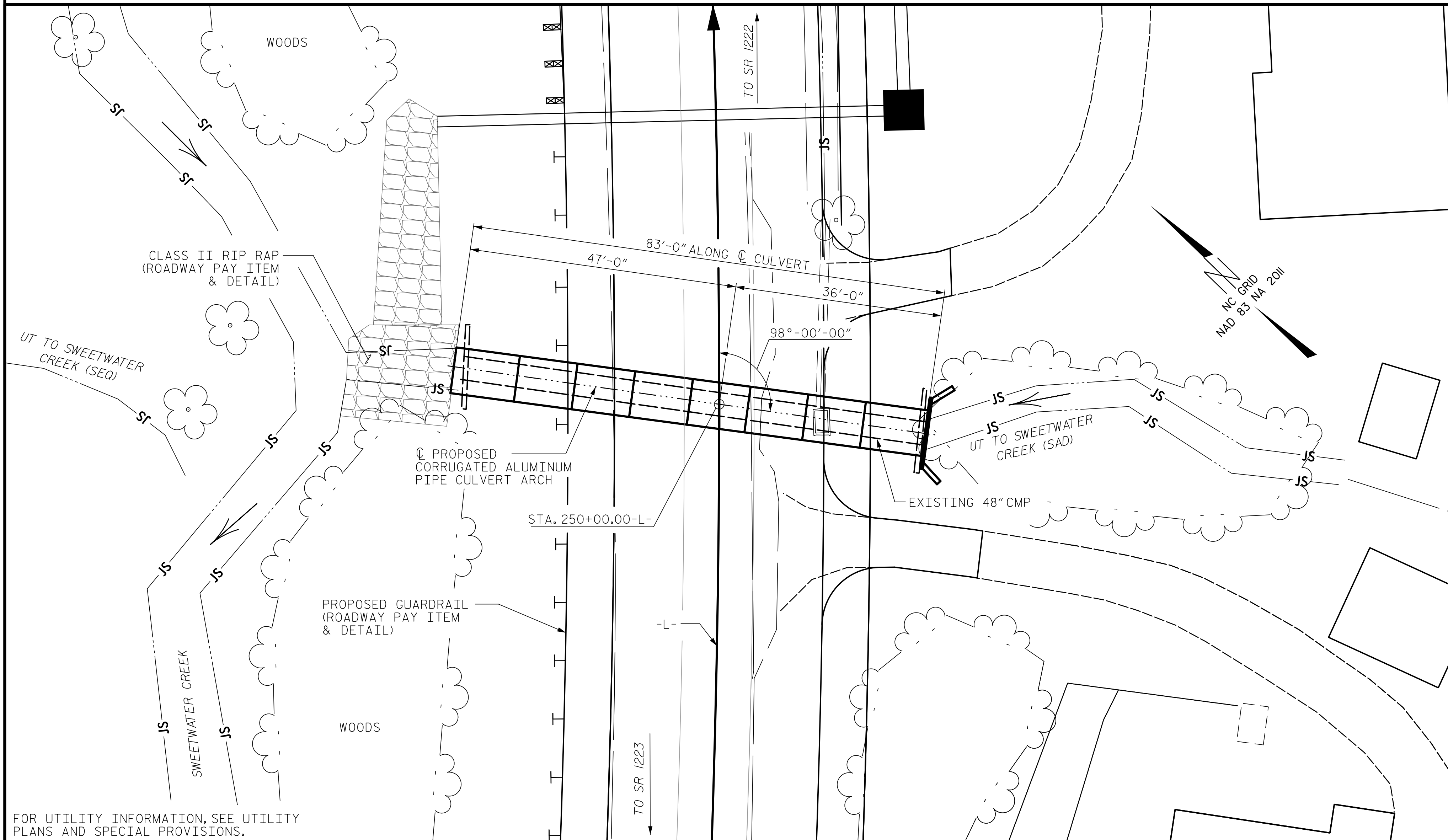


BENCH MARK #13: SPIKE NAIL SET IN 24" POPLAR; 56' LT. OF STA. 259+29.00 -L-; ELEV. 2313.25

F.A. PROJECT NO. : 0129008



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

NOTES:

- ASSUMED LIVE LOAD - HL-93 OR ALTERNATE.
- FOR OTHER DESIGN DATA AND NOTES, SEE STANDARD NOTES SHEET.
- THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF THE CULVERT BEFORE CONSTRUCTION TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.
- DESIGN FILL ----- 3.0' MAX.
- EXCAVATE AT LEAST 1 FOOT BELOW THE CULVERT AND REPLACE EXCAVATED MATERIAL WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414-4 OF THE STANDARD SPECIFICATIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- 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 SPICED 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.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- THE ENTIRE AREA OF THE ALUMINUM PIPES IN CONTACT WITH THE CONCRETE HEADWALL SHALL BE THOROUGHLY COATED WITH NEOPRENE SEALANT FOR CORROSION PROTECTION AT THE DIRECTION OF THE ENGINEER. THE COST OF THE NEOPRENE SEALANT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CORRUGATED ALUMINUM PIPE ARCH CULVERT.
- FOR CORRUGATED ALUMINUM PIPE ARCH CULVERT, SEE SPECIAL PROVISIONS.

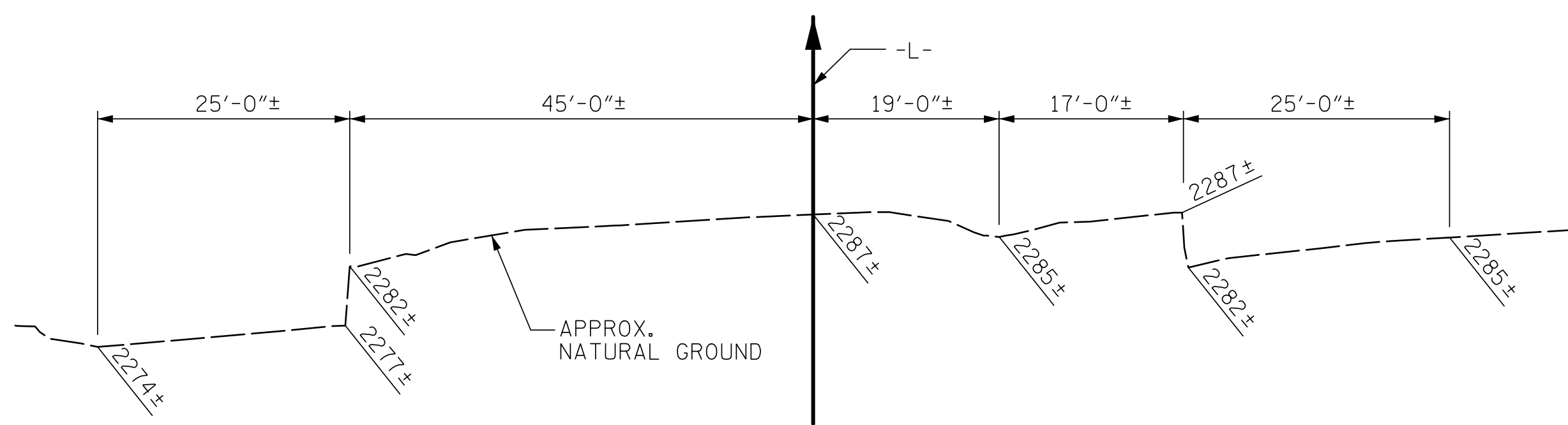
SAMPLE BAR REPLACEMENT	
SIZE	LENGTH
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"
#8	12'-0"
#9	13'-2"
#10	14'-6"
#11	15'-10"

TOTAL STRUCTURE QUANTITIES	
CORRUGATED ALUMINUM PIPE ARCH CULVERT	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	69 TONS

NOTE:
SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPLICE LENGTHS AND f_s = 60ksi.

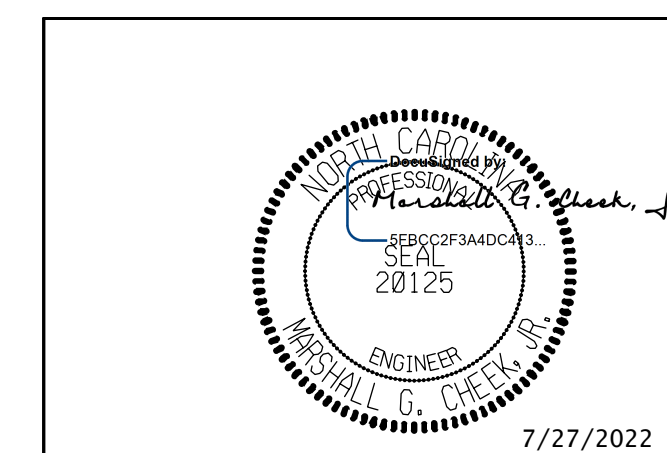
PROJECT NO. A-0009CB
GRAHAM COUNTY
STATION: 250+00.00 -L-

SHEET 1 OF 3



PROFILE ALONG CULVERT

ROADWAY DATA	
GRADE POINT ELEV. @ STA. 250+00.00-L-	= 2287.60'
BED ELEV. @ STA. 250+00.00-L-	= 2278.90'
ROADWAY SLOPES	= 4:1
HYDRAULIC DATA	
DESIGN DISCHARGE	= 230 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YRS
DESIGN HIGH WATER ELEVATION	= 2287.7'
DRAINAGE AREA	= 0.22 SQ. MI.
BASE DISCHARGE (Q100)	= 290 CFS
BASE HIGH WATER ELEVATION	= N/A
OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= 270 CFS
FREQUENCY OF OVERTOPPING FLOOD	= 50+ YRS
OVERTOPPING FLOOD ELEVATION	= 2288.5'



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
7'-11" X 5'-7"
CORRUGATED ALUMINUM
PIPE ARCH CULVERT
98° SKEW

DRAWN BY : ZCS DATE : 4/22
CHECKED BY : MGC DATE : 5/22

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED						REVISIONS			SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:				
1			3			C1-1			
2			4			TOTAL SHEETS 3			