

CONTRACT: DM00254 TIP PROJECT: SS-4913CT

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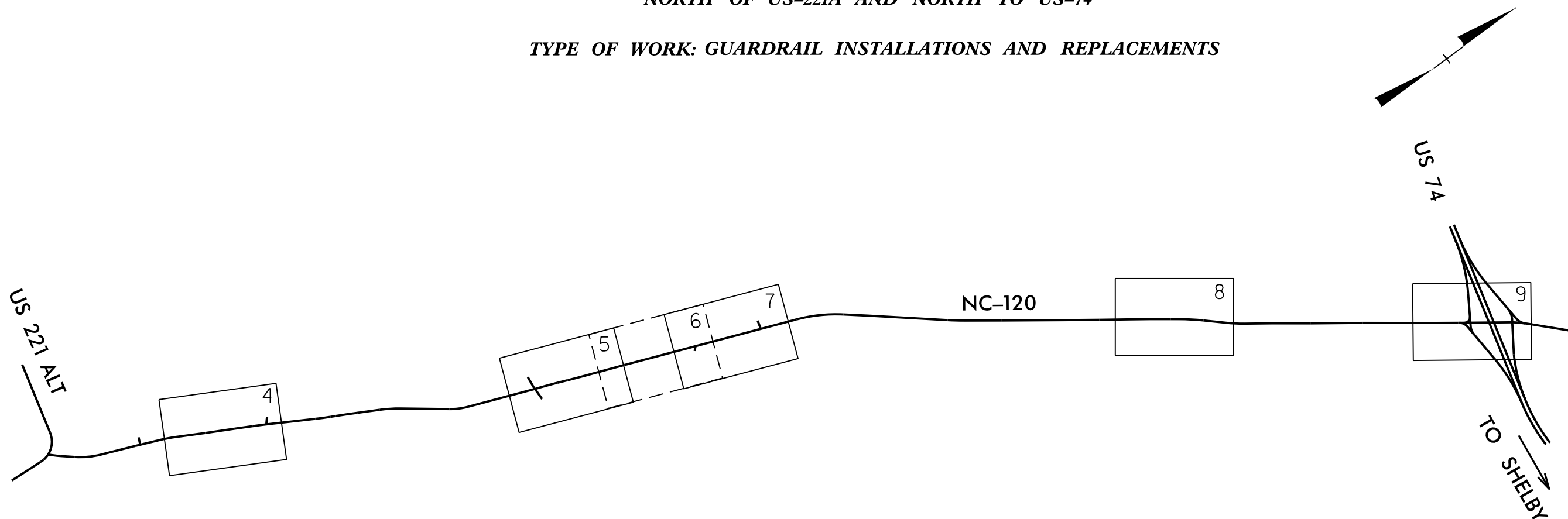
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**RUTHERFORD COUNTY**

LOCATION: NC-120 FROM APPROXIMATELY 0.45 MILES  
NORTH OF US-221A AND NORTH TO US-74

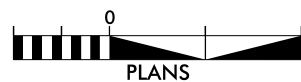
TYPE OF WORK: GUARDRAIL INSTALLATIONS AND REPLACEMENTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SS-4913CT	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47844.3.1	N/A	CONST.	



**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

PROJECT LENGTH

Prepared in the Office of:  
**DIVISION 13**

55 Orange Street, Asheville, NC 28801

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:  
JULY 18, 2018

PROJECT ENGINEER

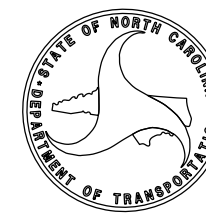
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

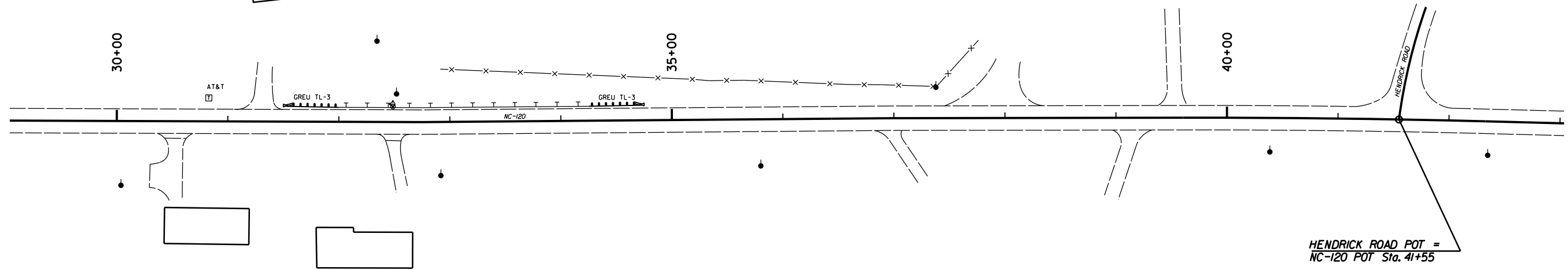
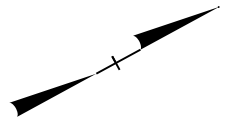
SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.



PROJECT REFERENCE NO. <i>SS-4913CT</i>	SHEET NO. <i>04</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



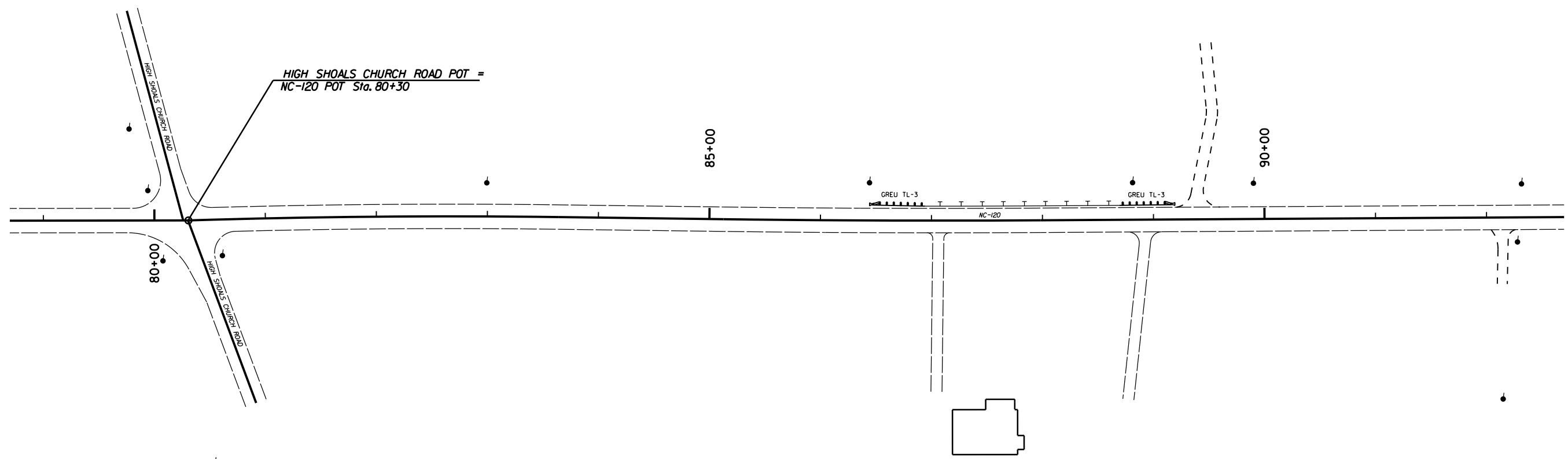
LOCATION 1: APPROXIMATELY 0.45 MILES NORTH OF US-22 1A  
 225 LF STEEL BEAM GUARDRAIL  
 2 EA GUARDRAIL END UNITS, TYPE TL-3

REVISIONS

8/17/99

27-JUN-2018 08:24

PROJECT REFERENCE NO. <i>SS-4913CT</i>	SHEET NO. <i>05</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



HIGH SHOALS CHURCH ROAD POT =  
NC-120 POT Sta. 80+30

LOCATION 2: APPROXIMATELY 1.45 MILES NORTH OF US-22 1A

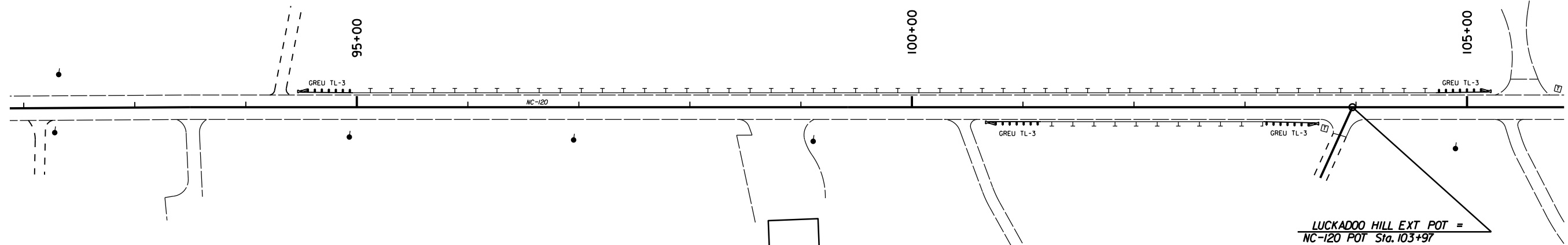
175 LF STEEL BEAM GUARDRAIL  
2 EA GUARDRAIL END UNITS, TYPE TL-3

REVISIONS

8/17/99

27-JUN-2018 08:24

PROJECT REFERENCE NO. <i>SS-4913CT</i>	SHEET NO. <i>06</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



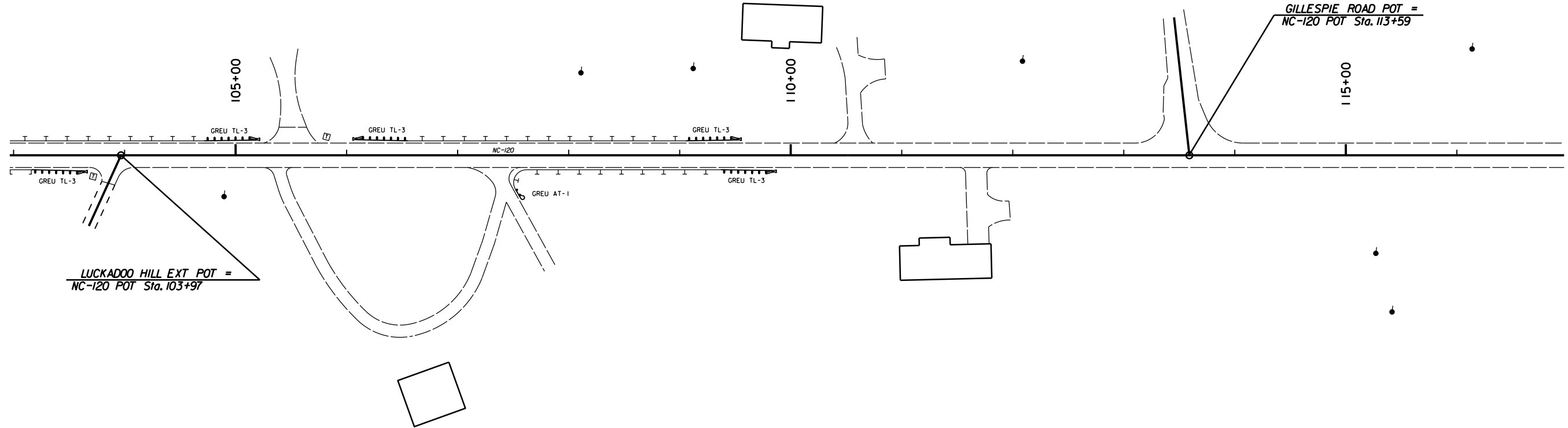
LOCATION 3: APPROXIMATELY 1.70 MILES NORTH OF US-221A  
 1175 LF STEEL BEAM GUARDRAIL  
 4 EA GUARDRAIL END UNITS, TYPE TL-3

REVISIONS

8/17/99

27-JUN-2018 08:24

PROJECT REFERENCE NO. <i>SS-4913CT</i>	SHEET NO. <i>07</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



LOCATION 4: APPROXIMATELY 1.80 MILES NORTH OF US-22 1A

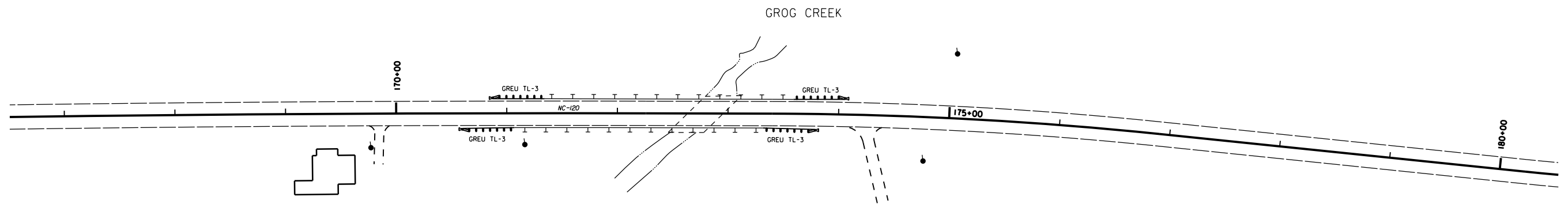
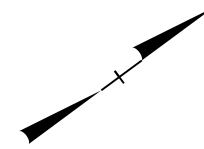
- 425 LF STEEL BEAM GUARDRAIL
- 3 EA GUARDRAIL END UNITS, TYPE TL-3
- 25 LF STEEL BEAM GUARDRAIL, SHOP CURVED
- 1 EA GUARDRAIL END UNITS, TYPE AT-1

REVISIONS

8/17/99

27-JUN-2018 08:24

PROJECT REFERENCE NO. <i>SS-4913CT</i>	SHEET NO. <i>08</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



LOCATION 5: APPROXIMATELY 3.06 MILES NORTH OF US-221A

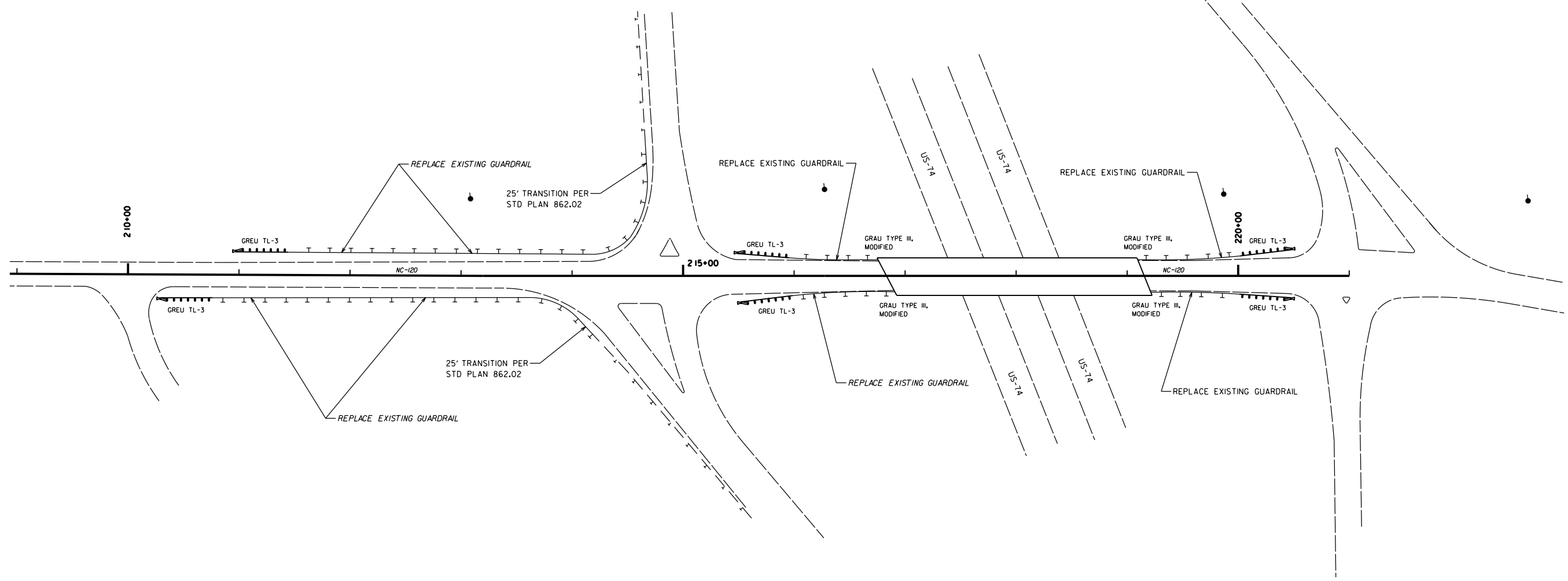
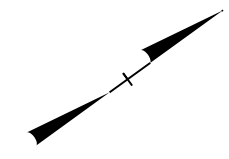
- 450 LF STEEL BEAM GUARDRAIL
- 4 EA GUARDRAIL END UNITS, TYPE TL-3
- 12 EA GUARDRAIL POST BOX CULVERT ANCHOR UNIT

REVISIONS

8/17/99

27-JUN-2018 08:24

PROJECT REFERENCE NO. <b>SS-4913CT</b>	SHEET NO. <b>09</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



LOCATION 6: APPROXIMATELY 3.80 MILES NORTH OF US-221A

- 613 LF STEEL BEAM GUARDRAIL
- 2 EA GUARDRAIL END UNITS, TYPE TL-3
- 150 LF STEEL BEAM GUARDRAIL, SHOP CURVED
- 863 LF REMOVE EXISTING GUARDRAIL

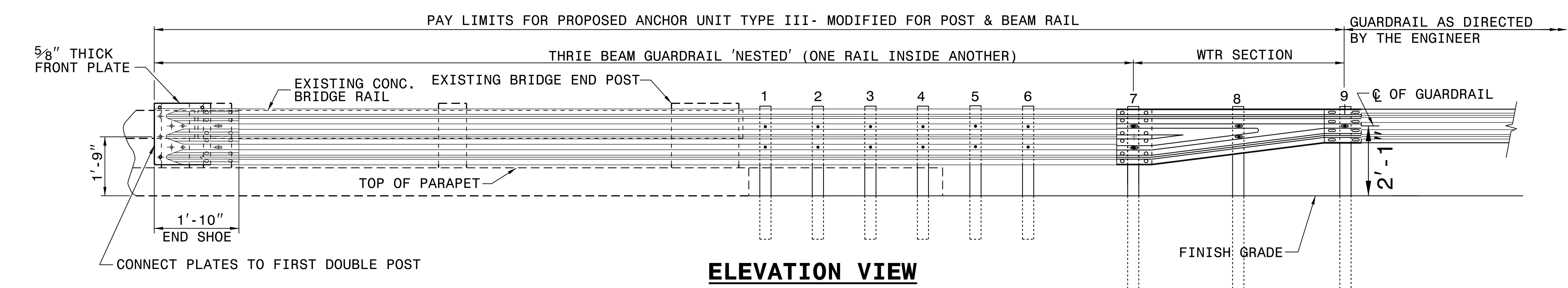
LOCATION 7: APPROXIMATELY 3.90 MILES NORTH OF US-221A

- 275 LF STEEL BEAM GUARDRAIL
- 4 EA GUARDRAIL END UNITS, TYPE TL-3
- 4 EA GUARDRAIL ANCHOR UNITS, TYPE III MODIFIED
- 600 LF REMOVE EXISTING GUARDRAIL

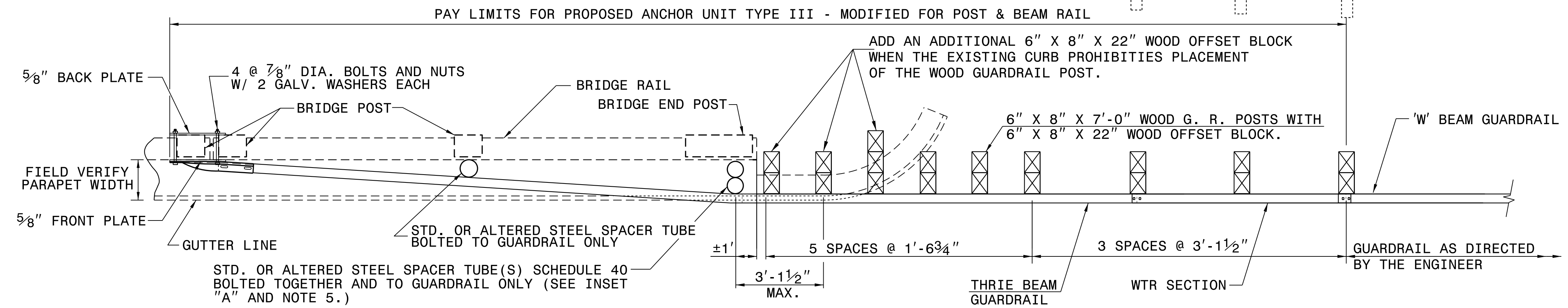
REVISIONS

8/17/99

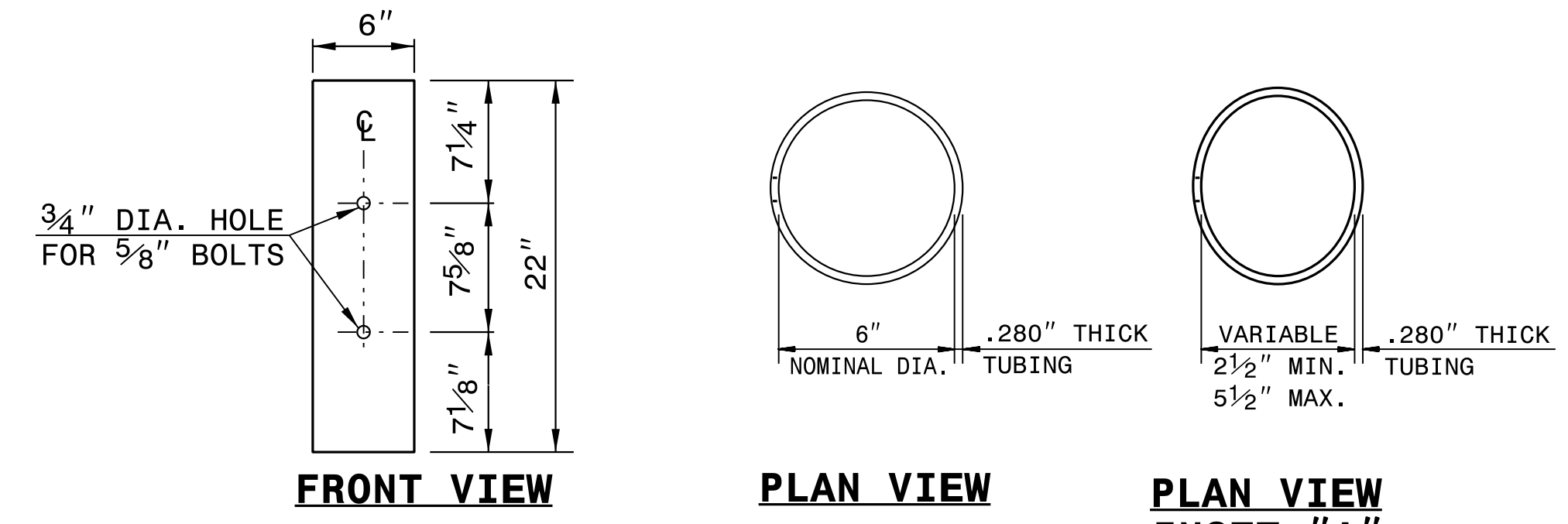
27-JUN-2018 08:24



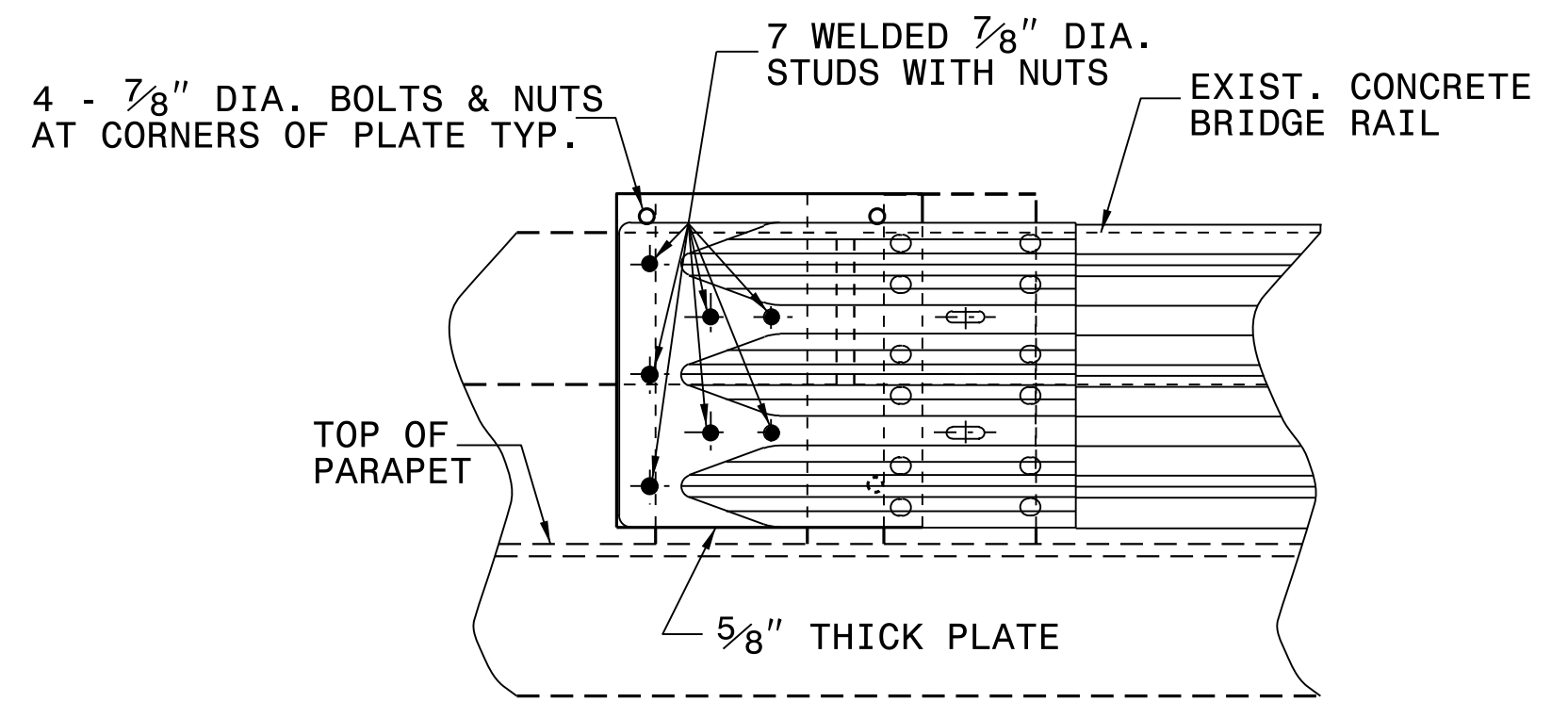
**ELEVATION VIEW**



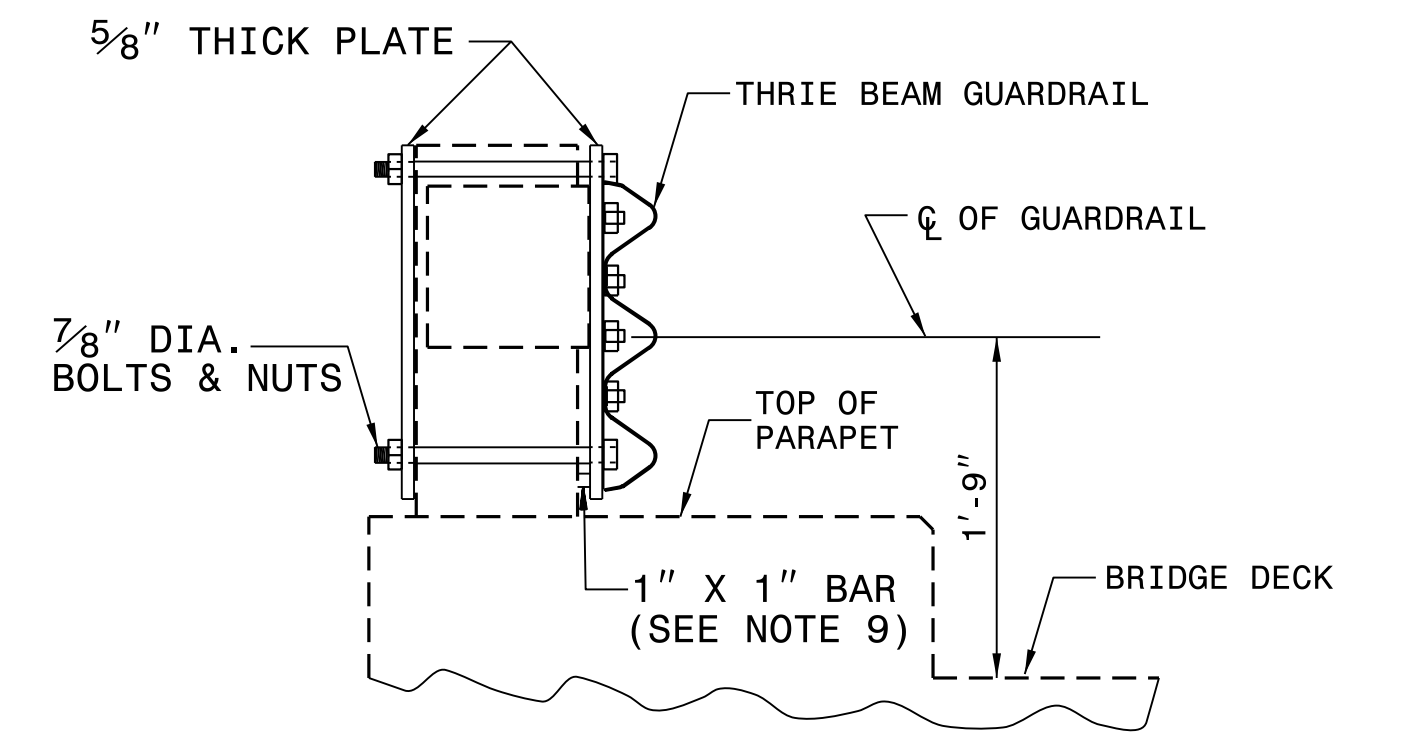
**PLAN VIEW**



**STEEL SPACER TUBE**

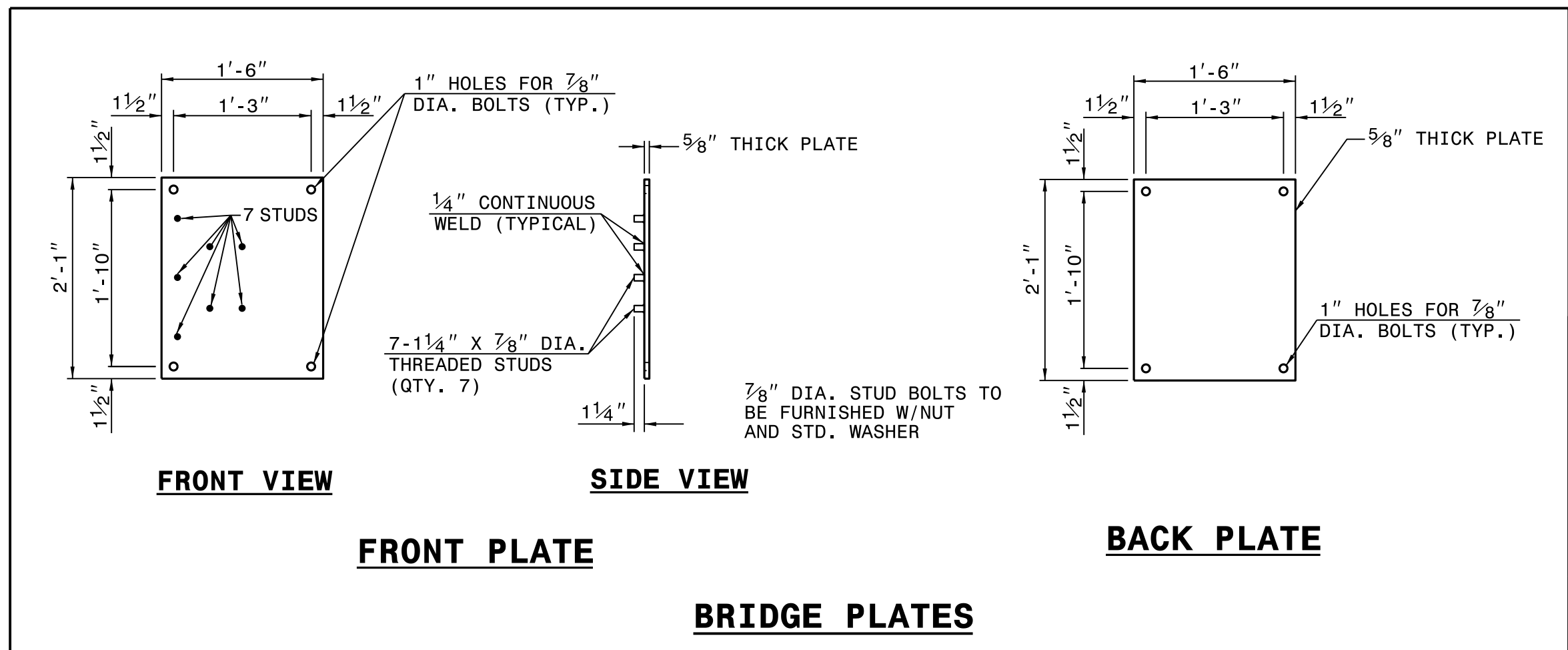


**ELEVATION VIEW**



**SECTION VIEW**

- GENERAL NOTES:**
1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
  2. TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
  3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
  4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
  5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
  6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
  7. USE THIS DETAIL ONLY FOR BRIGES WITH POST AND BEAM TYPE RAIL.
  8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
  9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
  10. PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
  11. LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
  12. SEE ROADWAY STANDARD DRAWING 862.03 SHEET 3 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT



**FRONT VIEW**

**SIDE VIEW**

**FRONT PLATE**

**BACK PLATE**

**BRIDGE PLATES**



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119

**TYPE III MODIFIED FOR POST AND BEAM RAIL**

ORIGINAL BY: E.E. WARD DATE: 01-03  
MODIFIED BY: JS Howerton DATE: 01-18  
CHECKED BY: DATE:  
FILE SPEC.: s:\details\stand\bpii original.dgn

24-JAN-2018 14:51 S:\Contracts\Stand\stand\bp\_iii original.dgn J:\power\ton AT\_CSD-292595