

TIP PROJECT: W-5713S

CONTRACT: DM00277

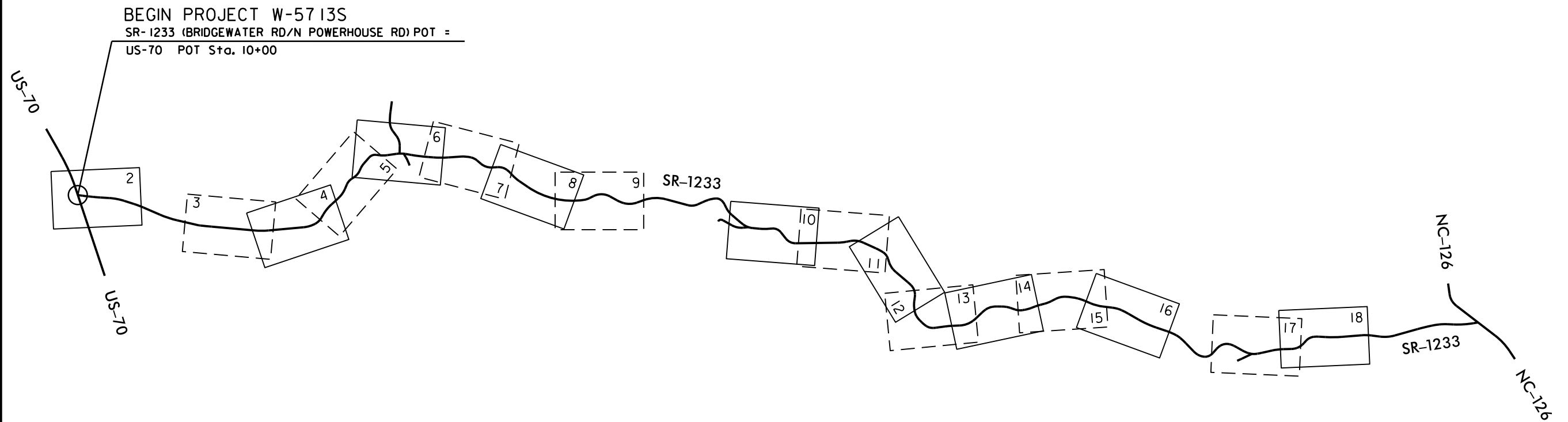
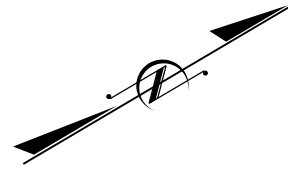
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BURKE COUNTY

LOCATION: SR-1233 (BRIDGEWATER RD/NORTH POWERHOUSE RD)
FROM US-70 TO 0.49 MILES SOUTH OF NC-126

TYPE OF WORK: GUARDRAIL INSTALLATION AND REPLACEMENT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5713S	1	19
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44861.1.19	HSIP-1233(010)	PE	
44861.3.19	HSIP-1233(010)	CONST.	



Prepared in the Office of:
NCDOT DIVISION 13
55 Orange St., Asheville NC, 28801

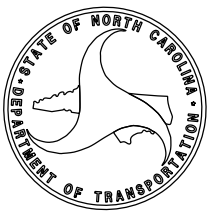
2018 STANDARD SPECIFICATIONS

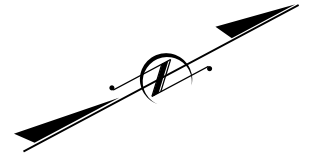
RIGHT OF WAY DATE:

PROJECT ENGINEER

LETTING DATE:
FEBRUARY 20, 2019

PROJECT DESIGN ENGINEER





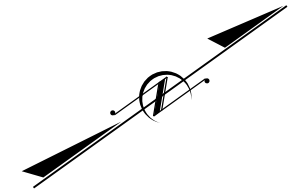
NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.

PROPOSED GUARDRAIL LOCATION IA

350 LF STEEL BEAM GUARDRAIL
 1 EA GUARDRAIL END UNITS, TYPE TL-3
 1 EA GUARDRAIL ANCHOR UNITS, TYPE III, MODIFIED
 417 LF REMOVE EXISTING GUARDRAIL

PROPOSED GUARDRAIL LOCATION IC

50 LF STEEL BEAM GUARDRAIL
 1 EA GUARDRAIL END UNITS, TYPE TL-3
 1 EA GUARDRAIL ANCHOR UNITS, TYPE III, MODIFIED
 114 LF REMOVE EXISTING GUARDRAIL



PROPOSED GUARDRAIL LOCATION IB

425 LF STEEL BEAM GUARDRAIL
 1 EA GUARDRAIL END UNITS, TYPE TL-3
 1 EA GUARDRAIL ANCHOR UNITS, TYPE III, MODIFIED
 400 LF REMOVE EXISTING GUARDRAIL

PROPOSED GUARDRAIL LOCATION ID

87.5 LF STEEL BEAM GUARDRAIL
 1 EA GUARDRAIL END UNITS, TYPE TL-3
 1 EA GUARDRAIL ANCHOR UNITS, TYPE III, MODIFIED
 156 LF REMOVE EXISTING GUARDRAIL

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 2

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



PROPOSED GUARDRAIL LOCATION 3

- 125 LF STEEL BEAM GUARDRAIL
- 50 LF STEEL BEAM GUARDRAIL, SHOP CURVED
- 2 EA GUARDRAIL END UNITS, TYPE AT-1

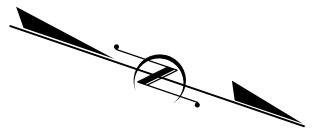
PROPOSED GUARDRAIL LOCATION 4A

- 600 LF STEEL BEAM GUARDRAIL
- 25 LF STEEL BEAM GUARDRAIL, SHOP CURVED
- 1 EA GUARDRAIL END UNITS, TYPE TL-3
- 1 EA GUARDRAIL END UNITS, TYPE AT-1
- 253 LF REMOVE EXISTING GUARDRAIL

PROPOSED GUARDRAIL LOCATION 4B

- 1012.5 LF STEEL BEAM GUARDRAIL
- 2 EA GUARDRAIL END UNITS, TYPE TL-3
- 132 LF REMOVE EXISTING GUARDRAIL

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



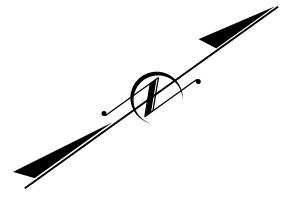
MATCH LINE STA 60+00 SEE SHEET 4

MATCH LINE STA 73+00 SEE SHEET 6

PROPOSED GUARDRAIL LOCATION 5

- 887.5 LF STEEL BEAM GUARDRAIL
- 100 LF STEEL BEAM GUARDRAIL, SHOP CURVED
- 2 EA GUARDRAIL END UNITS, TYPE TL-3

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 6

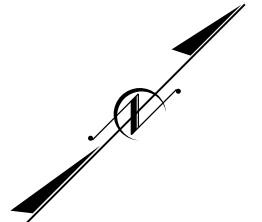
- 125 LF STEEL BEAM GUARDRAIL
- 100 LF STEEL BEAM GUARDRAIL, SHOP CURVED
- 2 EA GUARDRAIL END UNITS, TYPE TL-3



MATCH LINE STA 73+00 SEE SHEET 5

MATCH LINE STA 86+00 SEE SHEET 7

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.

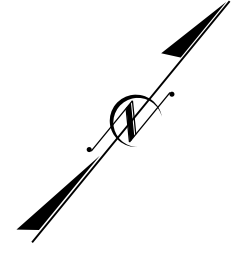


PROPOSED GUARDRAIL LOCATION 8
 400 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3



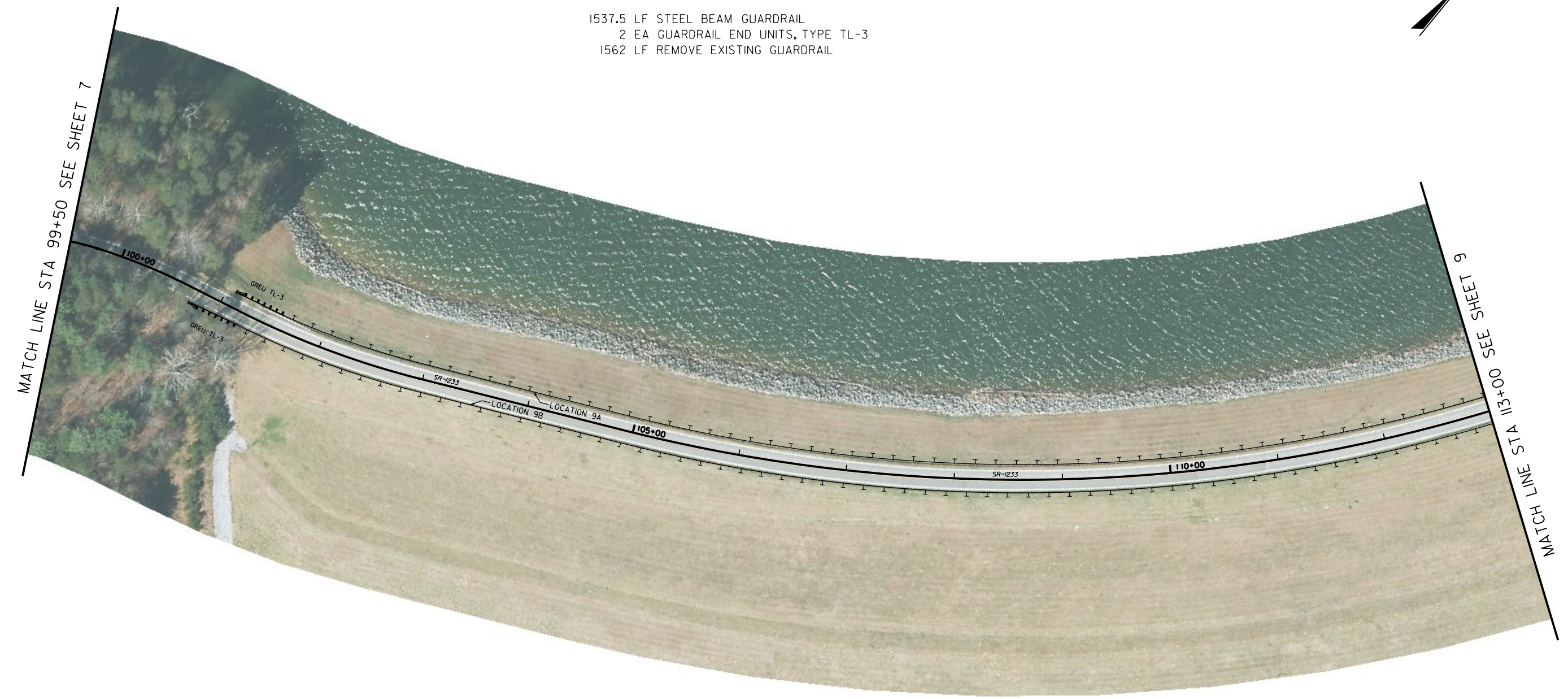
PROPOSED GUARDRAIL LOCATION 7
 425 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 9A

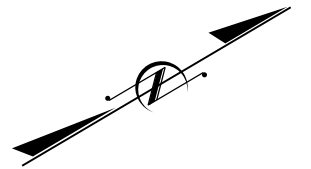
1537.5 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3
 1562 LF REMOVE EXISTING GUARDRAIL



PROPOSED GUARDRAIL LOCATION 9B

1512.5 LF STEEL BEAM GUARDRAIL
 1 EA GUARDRAIL END UNITS, TYPE TL-3
 1538 LF REMOVE EXISTING GUARDRAIL

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 9C

- 362.5 LF STEEL BEAM GUARDRAIL
- 1 EA GUARDRAIL END UNITS, TYPE TL-3
- 243 LF REMOVE EXISTING GUARDRAIL

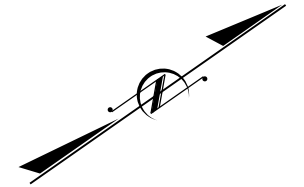
NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.

PROPOSED GUARDRAIL LOCATION 11A

25 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-2
 75 LF REMOVE EXISTING GUARDRAIL

PROPOSED GUARDRAIL LOCATION 11C

1462.5 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3
 1463 LF REMOVE EXISTING GUARDRAIL



PROPOSED GUARDRAIL LOCATION 10

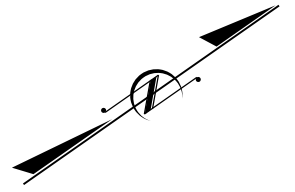
125 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3

PROPOSED GUARDRAIL LOCATION 11B

1250 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3
 1312.5 LF REMOVE EXISTING GUARDRAIL

MATCH LINE STA 164+00 SEE SHEET 11

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 12
 50 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3



MATCH LINE STA 164+00 SEE SHEET 10

MATCH LINE STA 177+00 SEE SHEET 12

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.

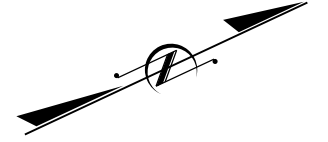


PROPOSED GUARDRAIL LOCATION 13

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



NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



MATCH LINE STA 189+00 SEE SHEET 12



PROPOSED GUARDRAIL LOCATION 14
175 LF STEEL BEAM GUARDRAIL
2 EA GUARDRAIL END UNITS, TYPE TL-3

MATCH LINE STA 202+50 SEE SHEET 14

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 16

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

MATCH LINE STA 202+50 SEE SHEET 13



MATCH LINE STA 217+00 SEE SHEET 15

PROPOSED GUARDRAIL LOCATION 17

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

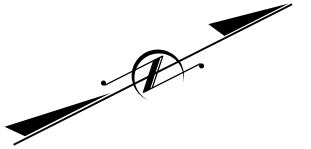
PROPOSED GUARDRAIL LOCATION 15

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

PROPOSED GUARDRAIL LOCATION 18

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

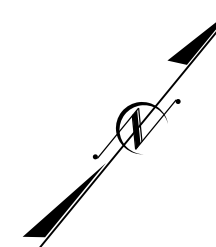
NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



MATCH LINE STA 217+00 SEE SHEET 14

MATCH LINE STA 230+00 SEE SHEET 16

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.

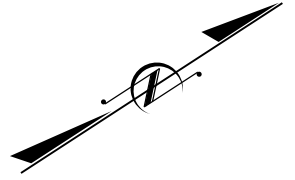


MATCH LINE STA 230+00 SEE SHEET 15

PROPOSED GUARDRAIL LOCATION 19

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

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



PROPOSED GUARDRAIL LOCATION 20

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

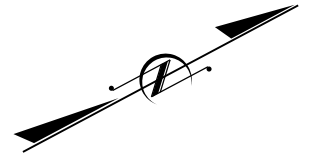


PROPOSED GUARDRAIL LOCATION 21

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

NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.

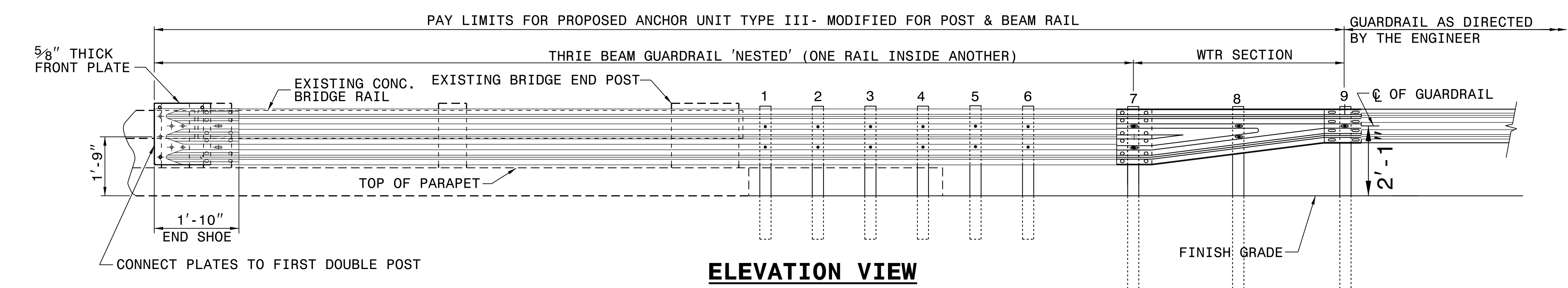
PROPOSED GUARDRAIL LOCATION 23
 200 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3



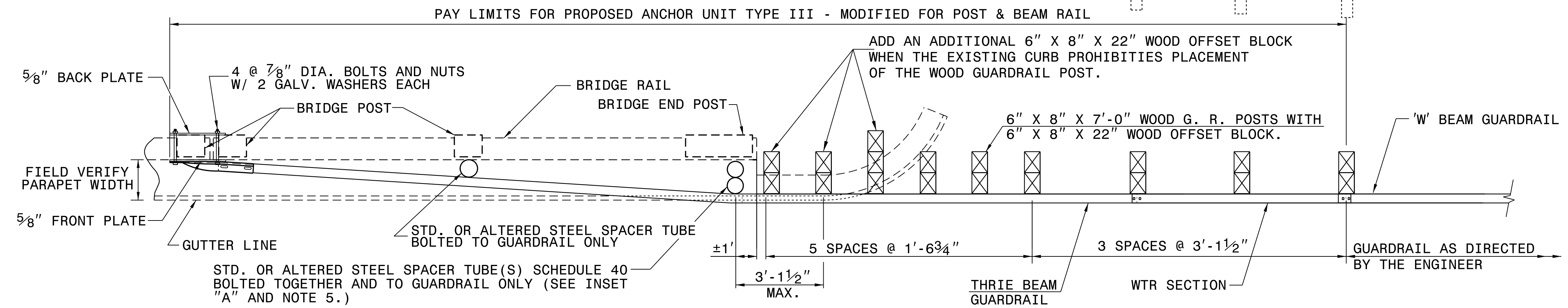
MATCH LINE STA 271+50 SEE SHEET 17

PROPOSED GUARDRAIL LOCATION 22
 350 LF STEEL BEAM GUARDRAIL
 2 EA GUARDRAIL END UNITS, TYPE TL-3

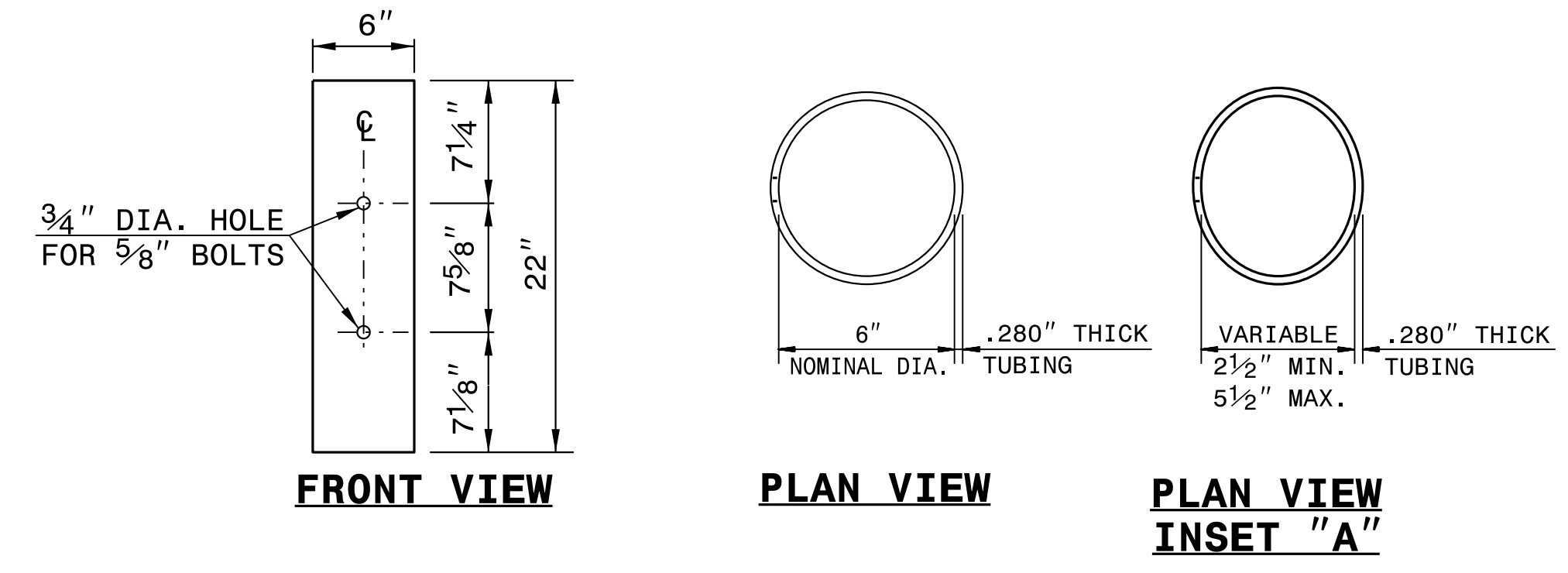
NOTE: ALIGNMENT AND STATIONING IS FOR REFERENCE PURPOSES ONLY.



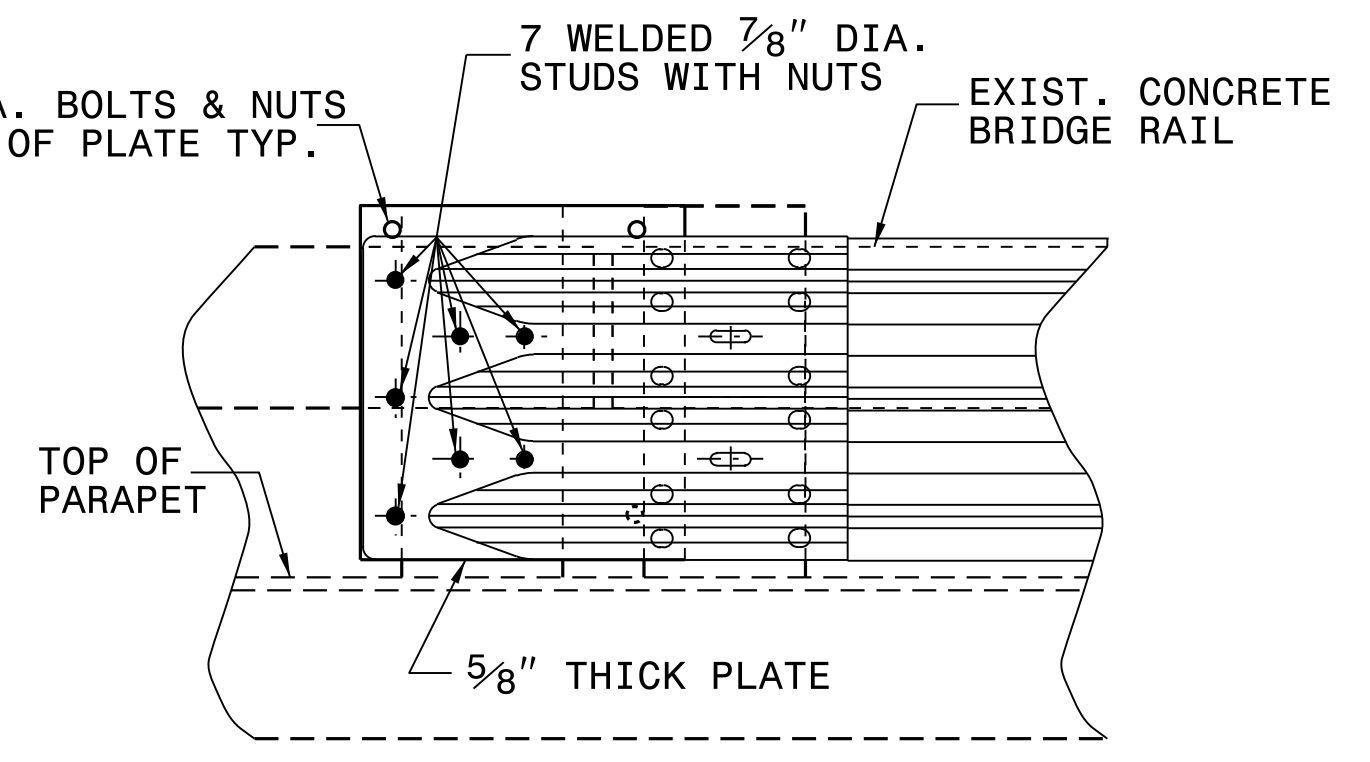
ELEVATION VIEW



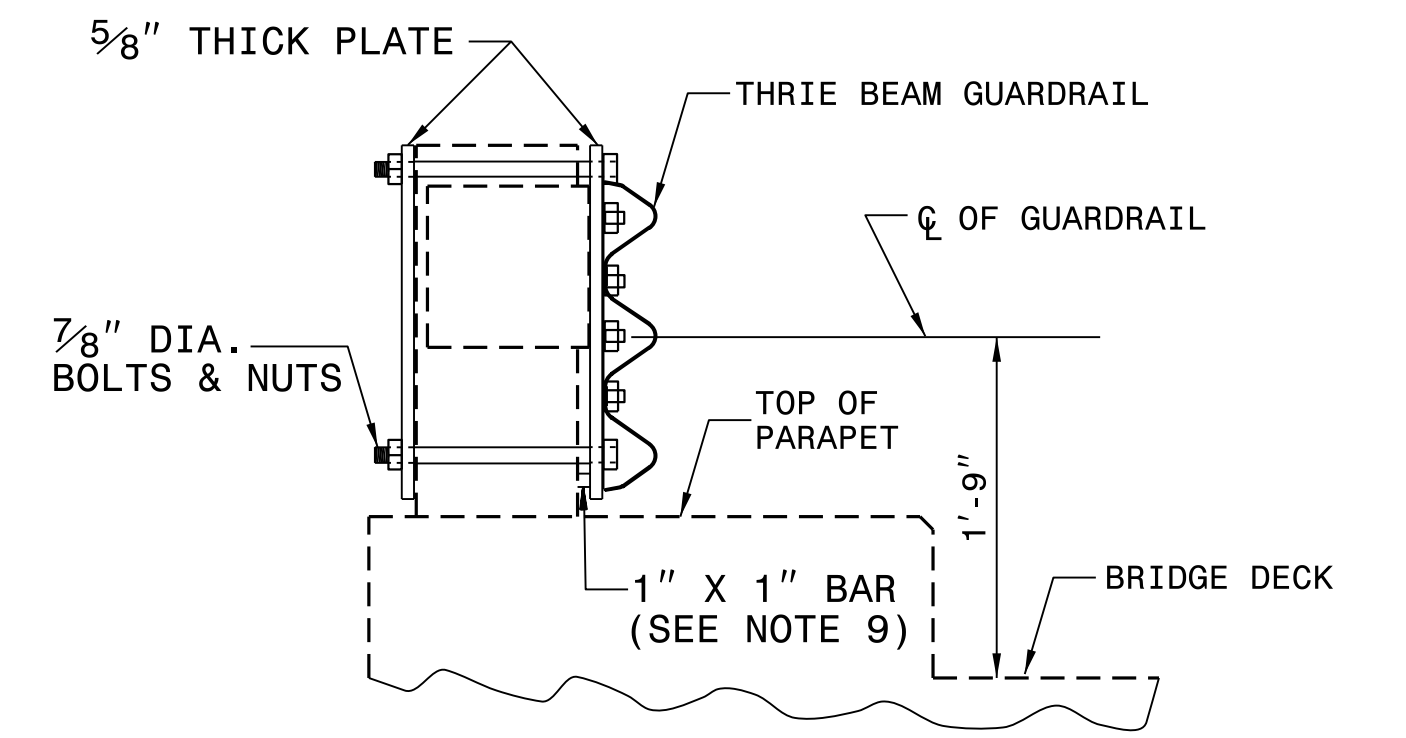
PLAN VIEW



STEEL SPACER TUBE

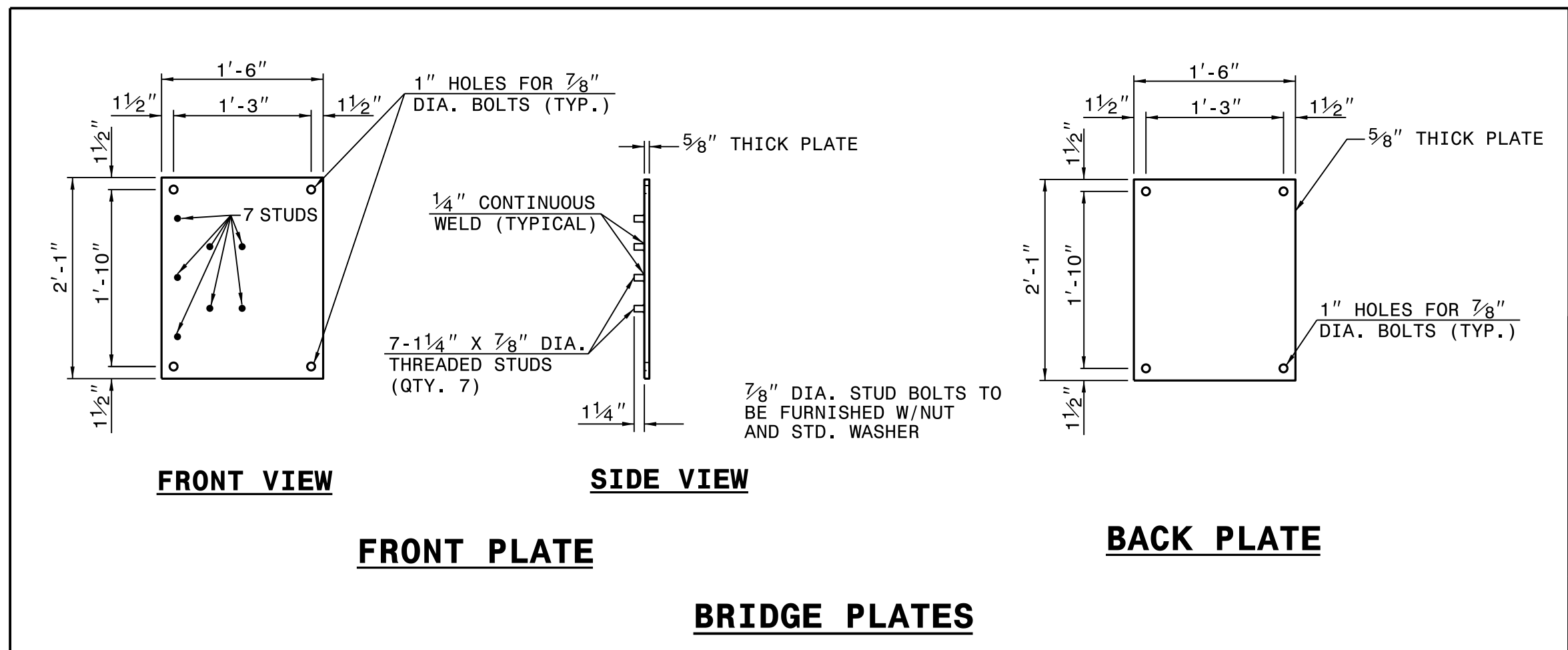


ELEVATION VIEW



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