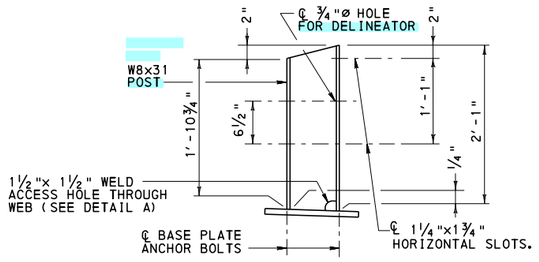
CHANGE 3

(Note: Change 2 revisions not highlighted)

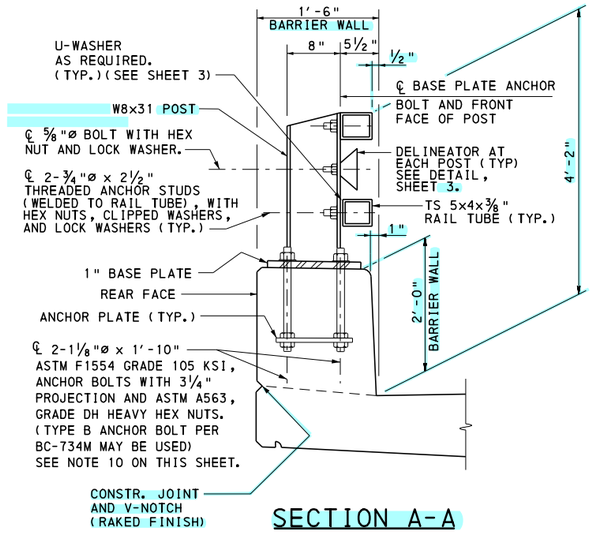
GENERAL NOTES:

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH PUBLICATION 408.
2. PROVIDE RAILING TUBES CONFORMING TO ASTM A500 GRADE B.
3. PROVIDE RAILING POSTS CONFORMING TO AASHTO M270 (ASTM A709) GRADE 50 OR 50W OR ASTM A992. PROVIDE BASE PLATES CONFORMING TO AASHTO M270 (ASTM A709) GRADE 50 OR 50W. PROVIDE ANCHOR PLATES CONFORMING TO AASHTO M270 (ASTM A709) GRADE 36.
4. ALL RAILING COMPONENTS SHALL BE GALVANIZED (AFTER FABRICATION) ACCORDING TO PUBLICATION 408, SECTION 1105.02(s) UNLESS OTHERWISE SHOWN ON THE PLANS. GALVANIZE POSTS, BASE PLATES, ANCHOR PLATES AND SPLICE SLEEVES ACCORDING TO ASTM A123. GALVANIZE RAIL TUBES ACCORDING TO ASTM A123, EXCEPT COATING ON THREADED STUDS AND NUTS USED WITH THE STUDS SHALL MEET THE REQUIREMENTS OF ASTM A153 FOR CLASS C MATERIAL. GALVANIZE ALL ANCHOR HARDWARE ACCORDING TO ASTM A153 OR ASTM B695.
5. THE RAILING TUBES ARE SHOP BENT OR FABRICATED TO FIT HORIZONTAL CURVE WHEN RADIUS IS LESS THAN 1,500 FEET.
6. STEEL TUBE TOLERANCES:
   A. STRAIGHTNESS: THE PERMISSIBLE VARIATION FOR STRAIGHTNESS SHALL BE 1/8" TIMES THE NUMBER OF FEET OF THE TOTAL LENGTH DIVIDED BY 5.
   B. TWIST: SPECIFIED DIMENSION OF THE LONGEST SIDE IN INCHES FROM OVER 4" TO 6" INCLUSIVE: 0.087" MAX TWIST IN THE FIRST 3 FEET AND IN EACH ADDITIONAL 3 FOOT.

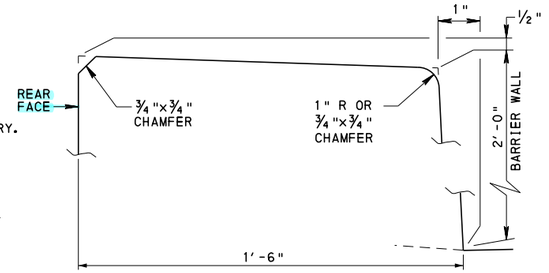
   NOTE - TWIST IS MEASURED BY HOLDING DOWN ONE END OF SQUARE OR RECTANGULAR TUBE ON A FLAT SURFACE PLATE WITH THE BOTTOM SIDE OF THE TUBE PARALLEL TO THE SURFACE PLATE AND NOTING THE HEIGHT DIFFERENCE BETWEEN THE TWO CORNERS AT THE OPPOSITE END OF THE BOTTOM SIDE OF THE TUBE.
7. MILL TO BEAR IS DEFINED AS FOLLOWS: A MINIMUM OF 25% OF THE POST WEB AND COMPRESSION FLANGE END AREA MUST FIT WITHIN 1/32" OF THE BASE PLATE WITH NO GAP MORE THAN 0.040" FOR THE REMAINING 75% OF THE END AREA.
8. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF AASHTO/AWS BRIDGE WELDING CODE D1.5, EXCEPT USE AASHTO/AWS BRIDGE WELDING CODE D1.1 FOR WELDING NOT COVERED IN D1.5.
9. FOR BARRIER RAIL TO POST CONNECTION AND SIDEWALK RAIL CONNECTION, USE AUTOMATIC WELDED THREADED ANCHOR STUDS CONFORMING TO ASTM A108. USE HEX NUTS CONFORMING TO ASTM A563. USE A 3/8" THICK PLATE LOCK WASHER ON EACH STUD AND A 3/8" THICK PLATE ASTM A709, GRADE 36 KSI WASHER. U-WASHERS CONFORMING TO ASTM A709, GRADE 36 KSI STEEL.
10. FOR ANCHOR BOLTS, USE 1 1/8" DIA BOLTS CONFORMING TO THE REQUIREMENTS OF ASTM F1554, GRADE 105 KSI, INCLUDING THE SUPPLEMENTARY REQUIREMENT, S5, FOR CHARPY IMPACT STRENGTH. USE ASTM A563, GRADE DH HEAVY HEX NUTS. USE ONE ASTM F436, 2 1/4" O.D. CLIPPED WASHER AT THE TOP OR ALTERNATIVELY USE A RECTANGULAR 3/8"X2"X3", ASTM A709, GRADE 36 KSI WASHER WITH 1 5/16" DIA HOLE.
11. BOLT TIGHTENING PROCEDURES ARE AS FOLLOWS:
   A. SNUG TIGHTEN ALL ANCHOR BOLTS. TIGHTEN THE NUTS AN ADDITIONAL 1/3 TURN USING A WRENCH.
   B. INSTALL RAILING PROVIDING A SMOOTH FACE TO TRAFFIC. INSTALL U-SHAPE WASHERS PROVIDING A SNUG-FIT CONNECTION BETWEEN THE RAIL AND POST. SNUG-TIGHTEN ALL THREADED ANCHOR STUDS. REFER TO SHEET 5 FOR U-WASHER DETAIL.
12. IF FLAME CUTTING OR PLASMA CUTTING IS USED TO CREATE SLOTTED HOLES, GRIND SMOOTH TO PROVIDE VERTICAL AND FLAT SURFACES ALONG THE HOLE.
13. THE OUT OF FLATNESS TOLERANCE FOR THE POST BASE PLATES IS 1/8" CHECKED BETWEEN EDGES OF THE PLATE IN ANY DIRECTION AFTER WELDING IS COMPLETED. THE CONTRACTOR MAY ELECT TO USE THICKER PLATE MATERIAL AND MILL THE BASE PLATE TO A THICKNESS OF NO LESS THAN 7/8" TO MEET THIS TOLERANCE.
14. THE CENTERLINE OF THE RAIL TUBE SPLICE TO A POST IS TO BE 1'-6" MINIMUM AND 2'-6" MAXIMUM FROM THE CENTERLINE OF THE RAILING POST.
15. ONE OR MORE 7'-6" MAX. POST SPACINGS MAY BE REDUCED TO 4'-0" MIN. IN ORDER TO MAINTAIN APPROPRIATE SPACING DIMENSIONS FROM THE END OF THE RAIL, EXPANSION JOINTS AND DRAINAGE SCUPPERS.
16. LOCATE RAIL SPLICES AT EXPANSION JOINTS AND AT OTHER LOCATIONS WHERE NECESSARY. PROVIDE RAILS AS LONG AS PRACTICAL, WITH A MINIMUM OF THREE POSTS BETWEEN SPLICES, UNLESS OTHERWISE REQUIRED FOR EXPANSION.
17. PROVIDE RAIL TUBES CONTINUOUS OVER NOT LESS THAN THREE RAILING POSTS. NO WELDED BUTT SPLICES WILL BE ALLOWED IN THE RAIL TUBE SECTIONS.
18. PLACE POST AND POST ANCHOR BOLTS NORMAL TO GRADE AND RAILS PARALLEL TO GRADE.
19. COAT ALL SURFACES OF THE BASE PLATE IN CONTACT WITH CONCRETE WITH CAULKING COMPOUND PRIOR TO ERECTION. AFTER ERECTION AND ALIGNMENT, SEAL OPENINGS BETWEEN THE METAL SURFACES AND THE CONCRETE WITH CAULKING COMPOUND CONFORMING TO PUBLICATION 408, SECTION 705.7(b).
20. THE PA BRIDGE BARRIER IS DESIGNATED AS MASH TL-5.
21. FOR GUIDE RAIL TRANSITION TO PA BRIDGE BARRIER, SEE RC-50M.
22. PROVIDE VERTICAL V-NOTCHES ON BARRIER WALL FRONT AND REAR FACES AT ALL POST ANCHOR BOLT LOCATIONS. SEE DETAIL THIS SHEET.



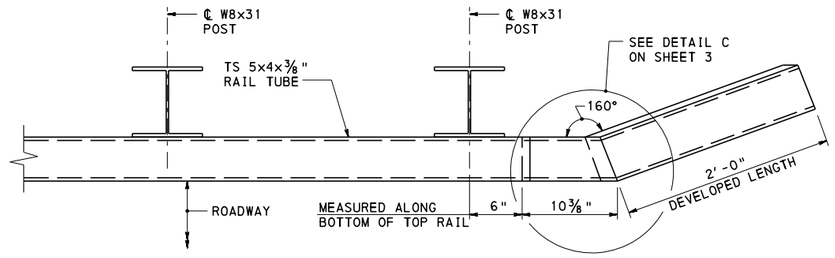
ELEVATION-POST



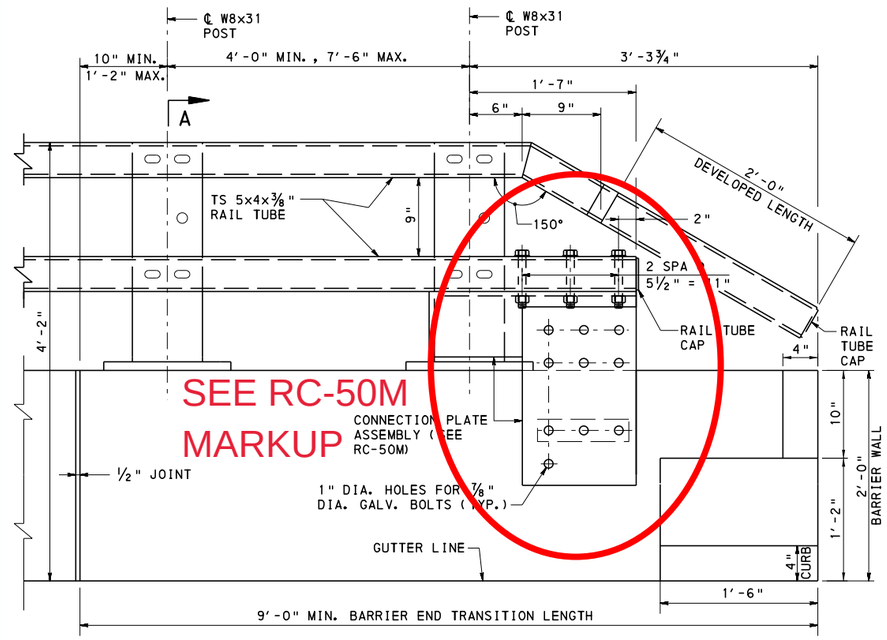
SECTION A-A
BARRIER SECTION



BARRIER WALL GEOMETRY DETAIL
(BASE PLATE AND ANCHOR BOLTS NOT SHOWN FOR CLARITY)

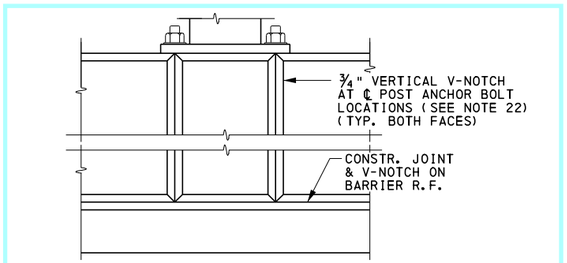


PLAN
(BARRIER WALL NOT SHOWN)

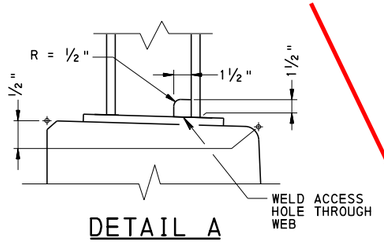


ELEVATION
PA BRIDGE BARRIER
(GUIDE RAIL AND ANCHOR BOLTS OMITTED FOR CLARITY)
(WITH CURB SHOWN, WITHOUT CURB SIMILAR)

see also BD610M



VERTICAL V-NOTCH DETAIL
(BARRIER REAR FACE SHOWN, FRONT FACE SIMILAR)



DETAIL A

BC-711M	ALUMINUM PROTECTIVE BARRIER
BC-720M	ALUMINUM OR STEEL BRIDGE HAND RAILING
BC-721M	ELECTRICAL DETAILS
BC-734M	ANCHOR SYSTEMS
BC-736M	REINFORCEMENT BAR FABRICATION DETAILS
BC-752M	CONCRETE DECK SLAB DETAILS
BC-762M	TOOTH EXPANSION DAM FOR PRESTRESSED CONCRETE & STEEL BEAM BRIDGES
BC-767M	NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES
BC-799M	MECHANICALLY STABILIZED EARTH RETAINING WALLS
RC-20M	CONCRETE PAVEMENT JOINTS
RC-50M	GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS

REFERENCE DRAWINGS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

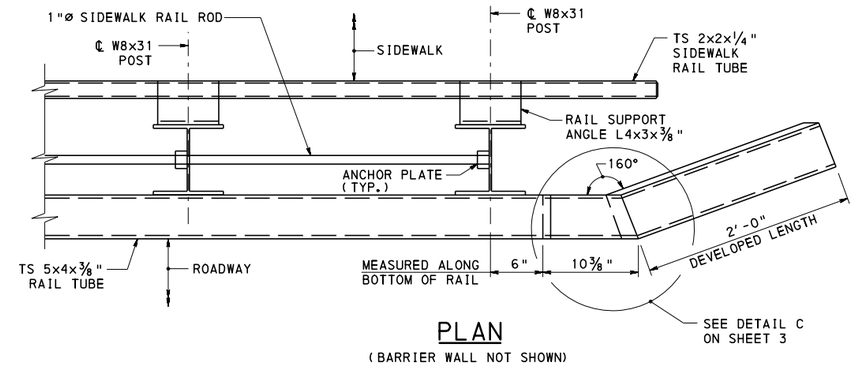
STANDARD
PA BRIDGE BARRIER
MISCELLANEOUS DETAILS

RECOMMENDED FEB. 19, 2021
Thomas P. Macioce
CHIEF BRIDGE ENGINEER

RECOMMENDED FEB. 19, 2021
Bruce E. Thompson
DIRECTOR, BUR. OF PROJECT DELIVERY

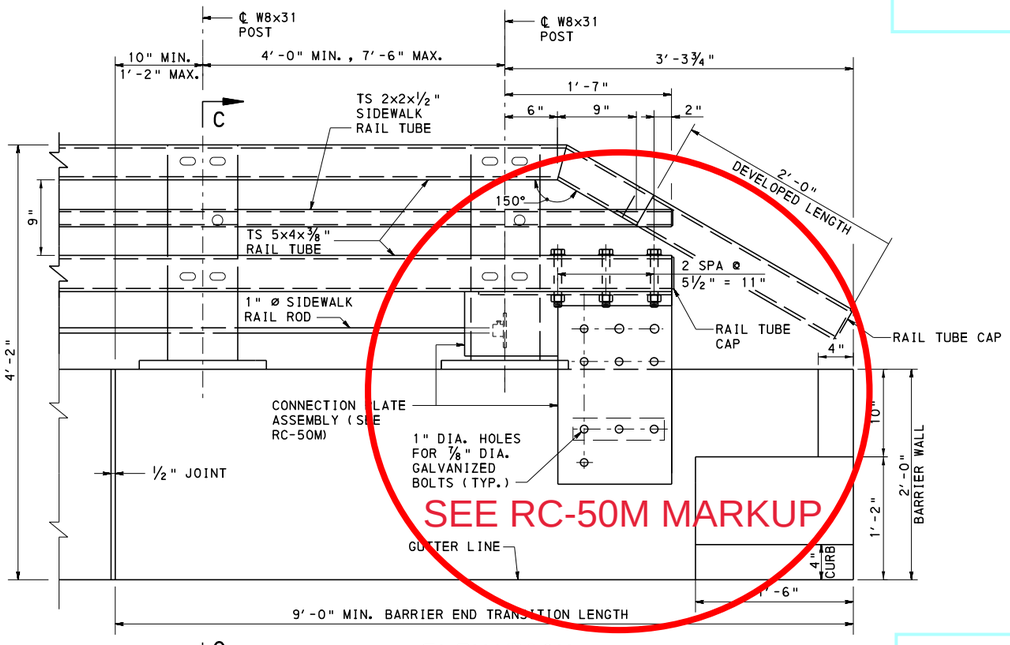
SHEET 1 OF 14

BC-713M



PLAN

(BARRIER WALL NOT SHOWN)

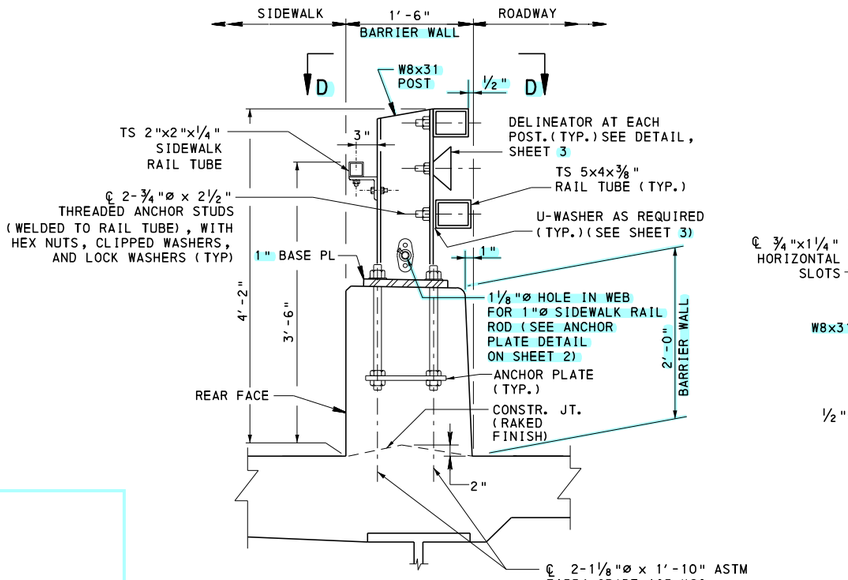


ELEVATION
PA BRIDGE BARRIER
TYPICAL SIDEWALK

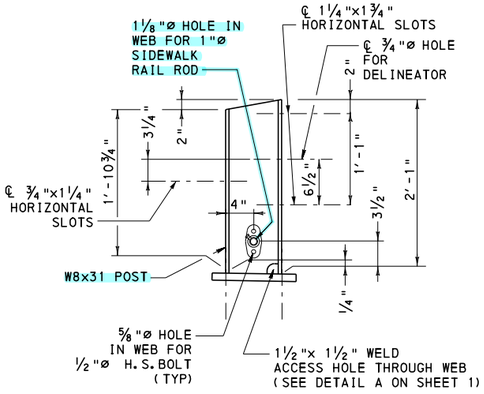
(GUIDE RAIL AND ANCHOR BOLTS OMITTED FOR CLARITY)
(WITH CURB SHOWN, WITHOUT CURB SIMILAR)

NOTES:

1. FOR NOTES, SEE SHEET 1.

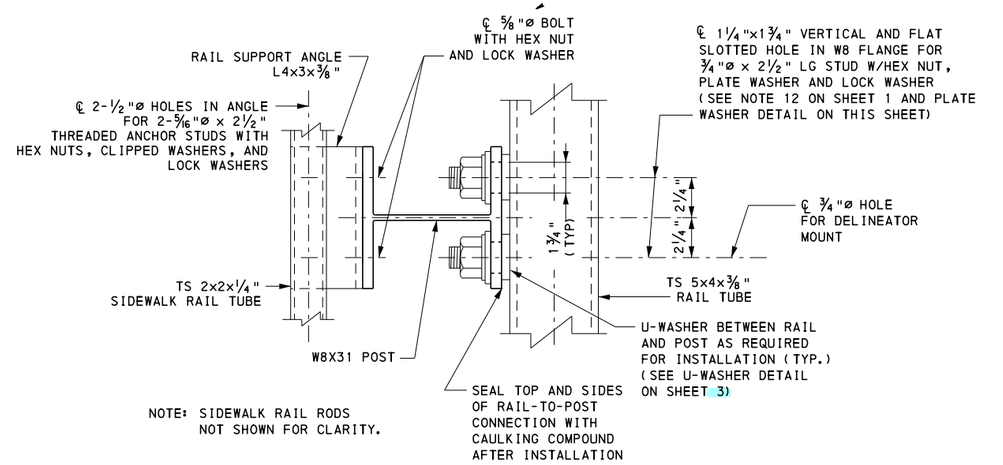


SECTION C-C
BARRIER SECTION



ELEVATION-POST

(AT TYPICAL SIDEWALK)



SECTION D-D

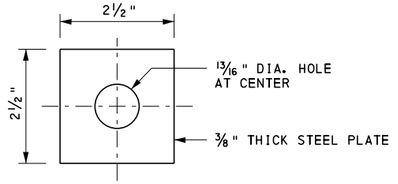


PLATE WASHER DETAIL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD
PA BRIDGE BARRIER
TYPICAL SIDEWALK DETAILS

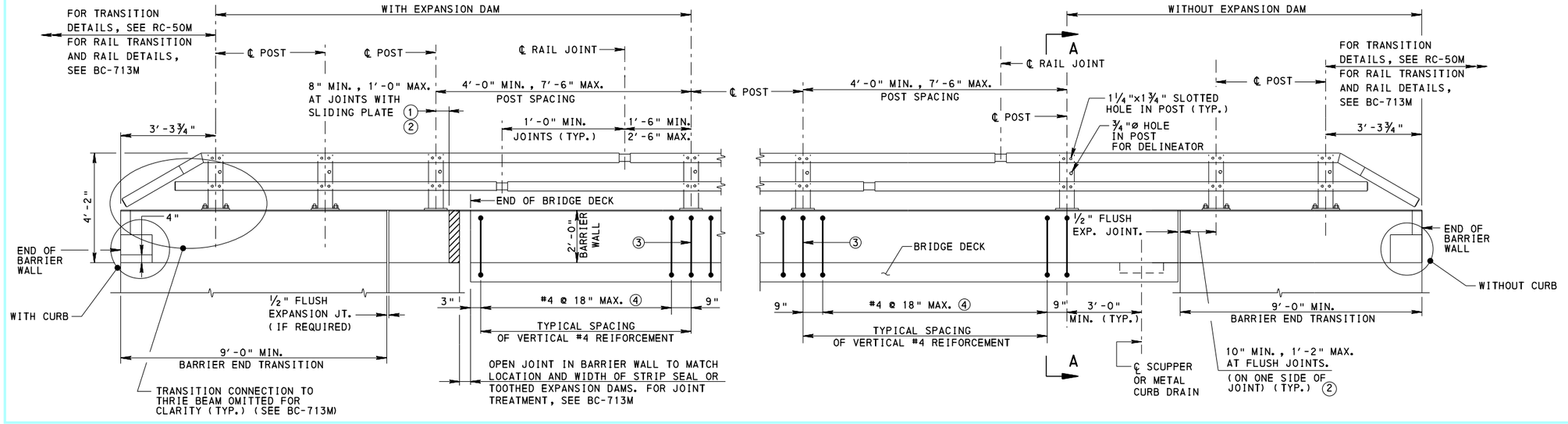
RECOMMENDED FEB. 19, 2021
Thomas P. Macioce
CHIEF BRIDGE ENGINEER

RECOMMENDED FEB. 19, 2021
Bruce E. Thompson
DIRECTOR, BUR. OF PROJECT DELIVERY

BC-713M

CHANGE 3

(Note: Change 1 and Change 2 revisions not highlighted)



TYPICAL PA BRIDGE BARRIER ELEVATION

LEGEND

① ℄ POST TO EDGE OF RECESS IN CONCRETE (SHOWN) OR ℄ POST TO EDGE OF FIXED END OF SLIDING PLATE

② NO POST REQUIRED ADJACENT TO FLUSH JOINTS AT WINGWALL. IF POSTS LOCATED AT EXPANSION JOINT

③ PLACE 1-#4 VERTICAL BAR AT ℄ POST.

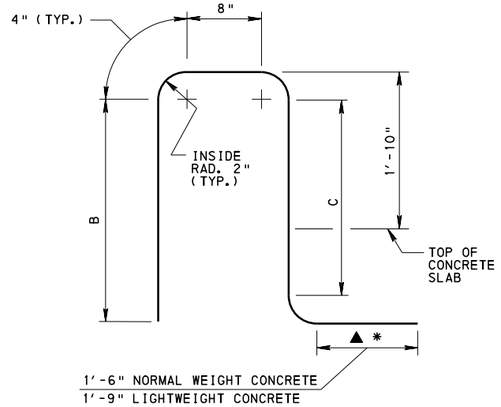
④ WITHIN 10'-0" ON BOTH SIDES OF AN OPEN JOINT IN THE BARRIER WALL, REDUCE SPACING OF REINFORCEMENT TO #4 @ 12" MAX. PLACE REINFORCEMENT 3" FROM ANY JOINT.

NOTES:

1. THE PA BRIDGE BARRIER IS DESIGNATED AS MASH TL-5.
2. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH PUBLICATION 408.
3. LOCATE RAIL SPLICES AT EXPANSION JOINTS AND AT OTHER LOCATIONS WHERE NECESSARY. PROVIDE RAILS AS LONG AS PRACTICAL, WITH A MINIMUM OF THREE POSTS BETWEEN SPLICES, UNLESS OTHERWISE REQUIRED FOR EXPANSION.
4. THE MAXIMUM JOINT MOVEMENT FOR THE PA BRIDGE BARRIER IS 9".
5. FOR LOCATION OF DRAIN HOLES IN RAIL TUBES, SEE BC-713M.
6. PROVIDE RAIL JOINTS IN ALL RAILS IN THE BAY ABOVE AN EXPANSION DAM. SEE BC-713M, SHEET 1, FOR RAIL JOINT DETAILS.
7. FOR DEAD LOAD CALCULATIONS, THE MASS OF FOUR TYPES OF PA BRIDGE BARRIER ARE AS FOLLOWS:

TYPICAL	500 LB./FT.
SIDEWALK	510 LB./FT.
RAISED SIDEWALK	510 LB./FT.
ALT. SIDEWALK	510 LB./FT.
(ALL CASES ASSUME	5'-9" POST SPACING)

8. USE f'c = 3.5 KSI CLASS AA CONCRETE FOR BARRIER WALL.
9. DETAILS ARE NOT SHOWN FOR NON-COMPOSITE ADJACENT BOX BEAMS, PRECAST BRIDGE SLABS, PLANK BEAMS, AND PRECAST CHANNEL BEAMS BECAUSE THEY CANNOT BE DESIGNED FOR A MASH TL-5 BARRIER RATING.
10. PROVIDE POST SPACINGS ON THE CONTRACT PLANS.
11. FOR DETAILS OF THE PA BRIDGE BARRIER ON SUBSTRUCTURE UNITS, SEE THE APPROPRIATE SUBSTRUCTURE DETAILS AND REINFORCEMENT IN BD-622M AND BD-624M. FOR DETAILS AT THE END OF BARRIER, SEE SHEETS 3 AND 4.
12. FOR SECTION A-A, SEE SHEET 2.
13. PROVIDE VERTICAL V-NOTCHES ON BARRIER WALL FRONT AND REAR FACES AT ALL POST ANCHOR BOLT LOCATIONS. SEE DETAIL SHEET 2.



VERTICAL REINFORCEMENT

(FOR DIMENSIONS B & C, SEE TABLE 1)

▲ WHEN THE DECK IS SLOPED AWAY FROM THE GUTTERLINE SLOPE LEG TO MATCH DECK CROSS-SLOPE. DESIGNER TO PROVIDE NECESSARY DIMENSIONS.

* FOR ALUMINUM PROTECTIVE BARRIER, ADD A SIMILAR 90° HOOK TO THE REAR LEG OF THE REINFORCEMENT.

TABLE 1		
B & C DIMENSIONS FOR PA BRIDGE BARRIER		
T	B	C
8.0"	2'-2½"	1'-11"
8.5"	2'-3"	1'-11½"
9.0"	2'-3½"	2'-0"
9.5"	2'-4"	2'-0½"
10.0"	2'-4½"	2'-1"
10.5"	2'-5"	2'-1½"
11.0"	2'-5½"	2'-2"
11.5"	2'-6"	2'-2½"

VERTICAL REINFORCEMENT DIMENSION TABLE

NOTE: T DESIGNATES DECK SLAB THICKNESS

REINFORCEMENT BAR NOTES:

1. REINFORCEMENT BAR DIMENSIONS ARE OUT TO OUT OF BAR.
2. DIMENSIONS ALONG CURVED PORTIONS OF BAR ARE MEASURED ALONG THE OUTSIDE EDGE.
3. EPOXY COAT ALL REINFORCEMENT STEEL IN ACCORDANCE WITH PUBLICATION 408, SECTION 709.1(c).
4. FOR DECK TOP REINFORCEMENT MAT: TRANSVERSE BARS SHOWN ON TOP, SIMILAR WHEN LONGITUDINAL BARS ON TOP.

SEE RC-50M MARKUP

REFERENCE DRAWINGS	
BC-701M	PROTECTIVE FENCE
BC-711M	ALUMINUM PROTECTIVE BARRIER
BC-713M	PA BRIDGE BARRIER
BC-716M	ALUMINUM PEDESTRIAN RAILING
BC-721M	ELECTRICAL DETAILS
BC-722M	LIGHTING POLE ANCHORAGE
BC-734M	ANCHOR SYSTEMS
BC-736M	REINFORCEMENT BAR FABRICATION DETAILS
BC-751M	BRIDGE DRAINAGE
BC-788M	TYPICAL WATERPROOFING AND EXPANSION DETAILS
BD-601M	CONCRETE DECK SLAB
BD-621M	REINFORCED CONCRETE ABUTMENTS
BD-622M	R.C. ABUTMENTS WITH BACKWALL
BD-624M	R.C. ABUTMENTS WITHOUT BACKWALL
BD-632M	R.C. BOX CULVERT
BD-657M	I-BEAM AND BOX BEAM BRIDGES
BD-658M	SHEAR BLOCK DETAILS AT PIER - PRESTRESSED CONCRETE I-BEAM AND BOX BEAM BRIDGES
BD-661M	BOX BEAM REINFORCEMENT DETAILS
BD-665M	CONTINUITY FOR LIVE LOAD DETAILS - BOX BEAM BRIDGES
BD-667M	INTEGRAL ABUTMENT
RC-50M	GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS
RC-51M	TYPE 31 STRONG POST GUIDE RAIL

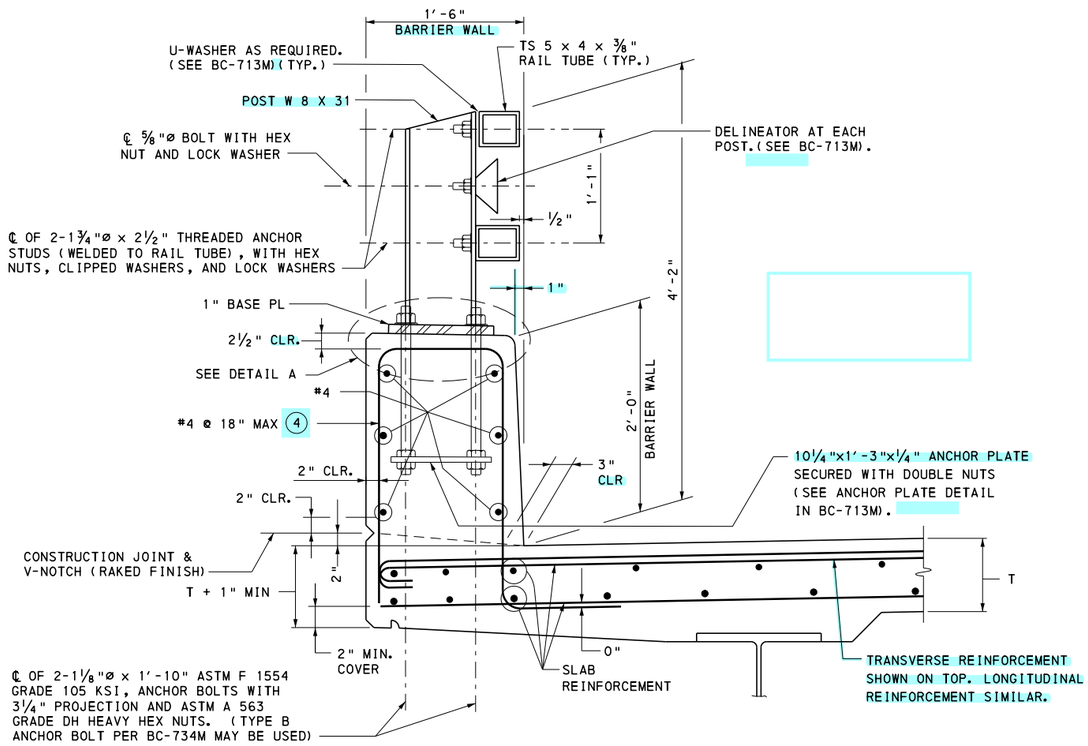
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD

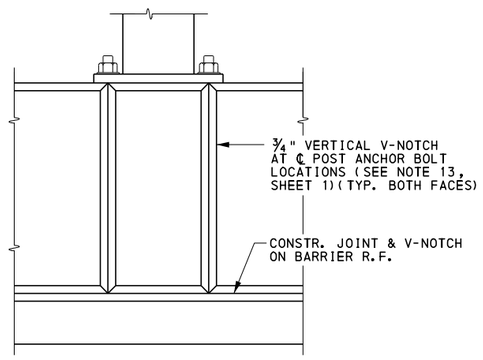
PA BRIDGE BARRIER

BARRIER DETAILS - 1

RECOMMENDED FEB. 19, 2021	RECOMMENDED FEB. 19, 2021	SHEET 1 OF 10
Thomas D. Macioce	Bruce E. Thomas	BD-610M
CHIEF BRIDGE ENGINEER	DIRECTOR, BUR. OF PROJECT DELIVERY	

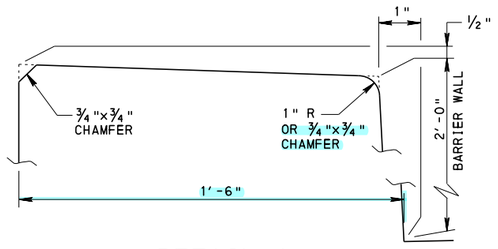


SECTION A-A



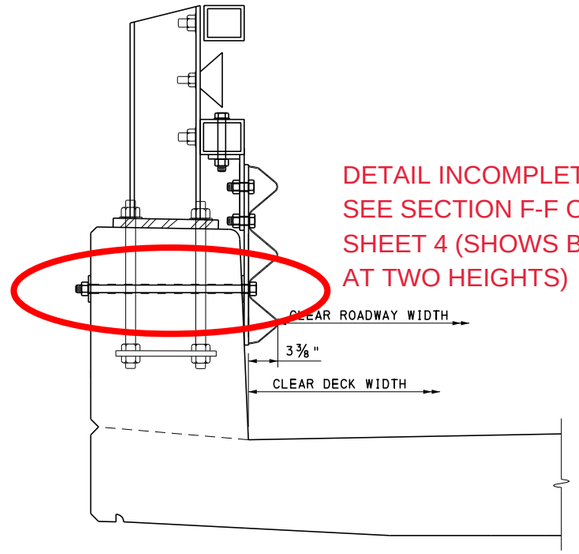
VERTICAL V-NOTCH DETAIL

(BARRIER REAR FACE SHOWN, FRONT FACE SIMILAR)



DETAIL A

(BASE PLATE AND ANCHOR BOLTS NOT SHOWN FOR CLARITY)



DETAIL INCOMPLETE; SEE SECTION F-F ON SHEET 4 (SHOWS BOLTS AT TWO HEIGHTS)

CLEAR ROADWAY WIDTH DETAIL

CLEAR DECK WIDTH INCLUDES CLEAR ROADWAY WIDTH PLUS 3 3/8" ON BOTH SIDES AT BARRIER FOR THRIE-BEAM TERMINAL CONNECTOR WIDTH.

LEGEND:

(4) WITHIN 10'-0" ON BOTH SIDES OF AN OPEN JOINT IN THE BARRIER WALL, REDUCE SPACING OF REINFORCEMENT TO #4 @ 12" MAX. PLACE REINFORCEMENT 3" FROM ANY JOINT.

NOTES:

1. FOR LOCATION OF SECTION A-A, SEE SHEET 1.
2. FOR ADDITIONAL NOTES, SEE SHEET 1.

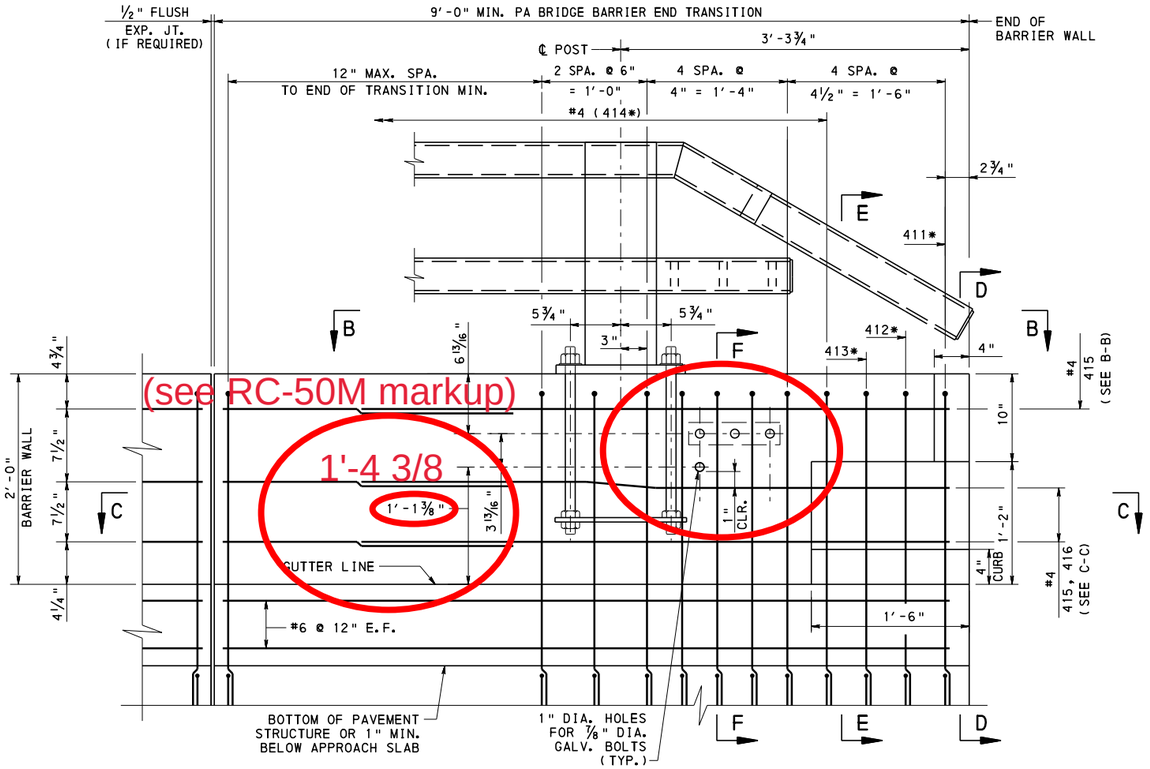
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD

PA BRIDGE BARRIER

BARRIER DETAILS - 2

RECOMMENDED FEB. 19, 2021	RECOMMENDED FEB. 19, 2021	SHEET 2 OF 10
Thomas P. Macioce	Bruce B. Thyssen	BD-610M
CHIEF BRIDGE ENGINEER	DIRECTOR, BUR. OF PROJECT DELIVERY	

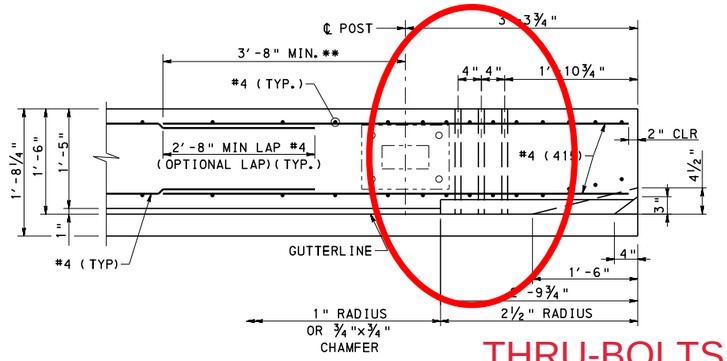


ELEVATION

* SEE VERTICAL REINFORCEMENT DETAIL, SHEET 4.
** REINFORCEMENT DETAILING SHOWN REPRESENTS A CONDITION WHERE AN EXPANSION JOINT IS NOT PRESENT.

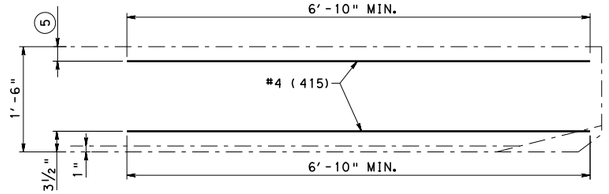
PA BRIDGE BARRIER END TRANSITION

(WITH CURB SHOWN, WITHOUT CURB SIMILAR)
(GUIDE RAIL, CONNECTION PLATE ASSEMBLY AND BOLTS OMITTED FOR CLARITY)

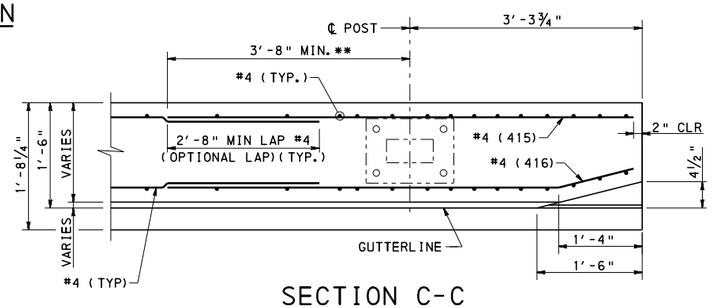


SECTION B-B

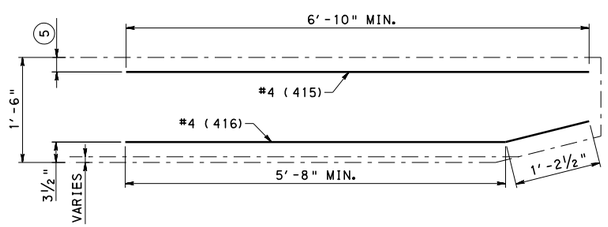
THRU-BOLTS TO BE USED FOR LANSING



HORIZONTAL REINFORCEMENT
(SEE NOTE 2)



SECTION C-C



HORIZONTAL REINFORCEMENT
(SEE NOTE 2)

LEGEND:

(5) 2½" FOR SAFETY WINGS, 3⅛" FOR U-WINGS.

NOTES:

1. FOR SECTION D-D, E-E AND F-F, SEE SHEET 4.
2. DIMENSIONS ALONG BARS ARE MEASURED ALONG THE OUTSIDE EDGE.
3. FOR ADDITIONAL NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD

PA BRIDGE BARRIER

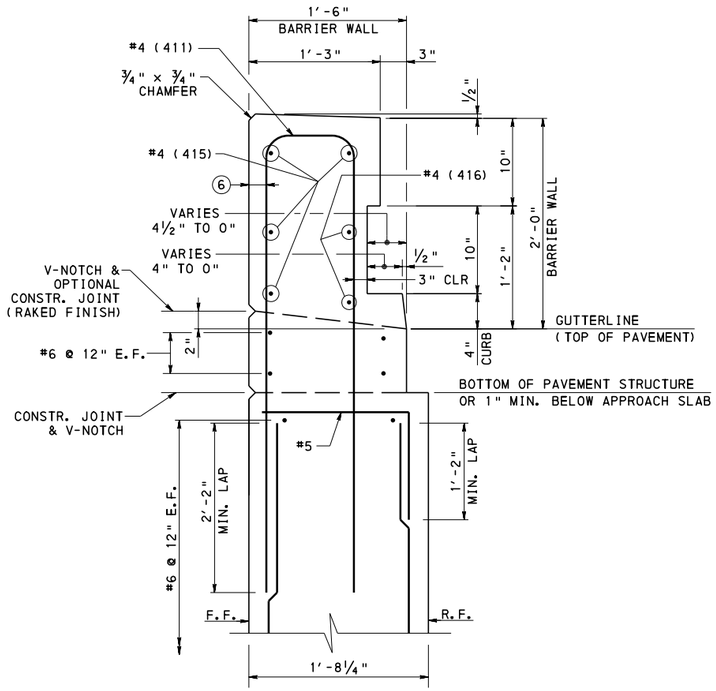
END OF BARRIER DETAILS - 1

RECOMMENDED FEB. 19, 2021
Thomas P. Macioce
CHIEF BRIDGE ENGINEER

RECOMMENDED FEB. 19, 2021
Bruce E. Thyagus
DIRECTOR, BUR. OF PROJECT DELIVERY

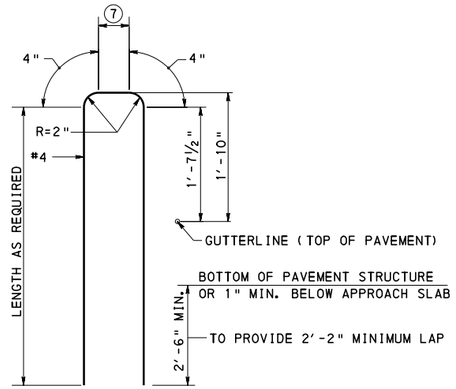
SHEET 3 OF 10

BD-610M

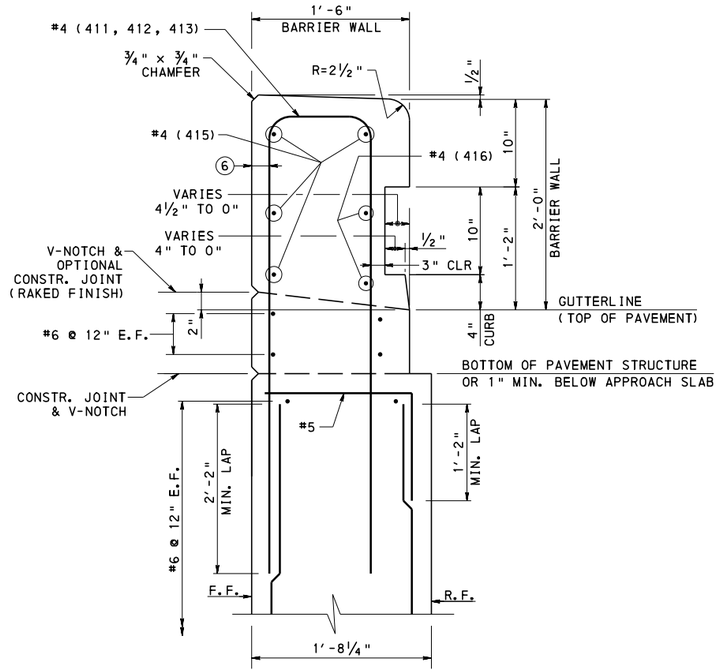


SECTION D-D (8)

(WITH CURB SHOWN, WITHOUT CURB SIMILAR)



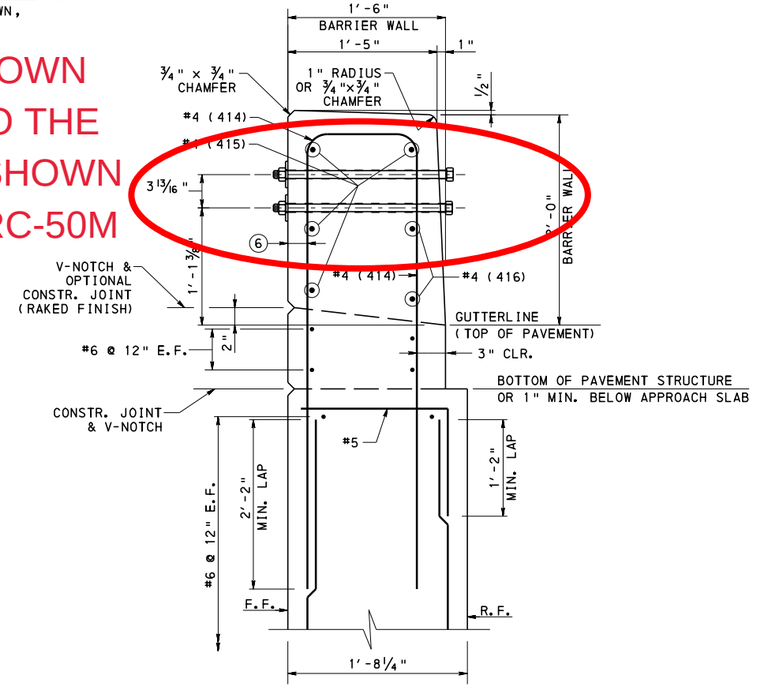
VERTICAL REINFORCEMENT



SECTION E-E (8)

(WITH CURB SHOWN, WITHOUT CURB SIMILAR)

THRU-BOLTS AS SHOWN ARE PREFERRED TO THE ANCHOR INSERTS SHOWN ON PENNDOT STD RC-50M



SECTION F-F (8)

LEGEND:

(6) 2" CLR. FOR SAFETY WINGS,
2⅝" CLR. FOR U-WINGS.

(7) FOR SAFETY WINGS:
4¼" (411)
5¼" (412)
6⅜" (413)
8" (414)

FOR U-WINGS:
3⅝" (411)
4⅝" (412)
5¾" (413)
7⅜" (414)

(8) REINFORCEMENT AND INFORMATION SHOWN FOR SAFETY WING. REINFORCEMENT IN U-WING BELOW 1′-6" WIDTH IS AS REQUIRED BY DESIGN.

NOTES:

1. FOR SECTION D-D, E-E AND F-F LOCATION, SEE SHEET 3.
2. FOR ADDITIONAL NOTES, SEE SHEET 1.

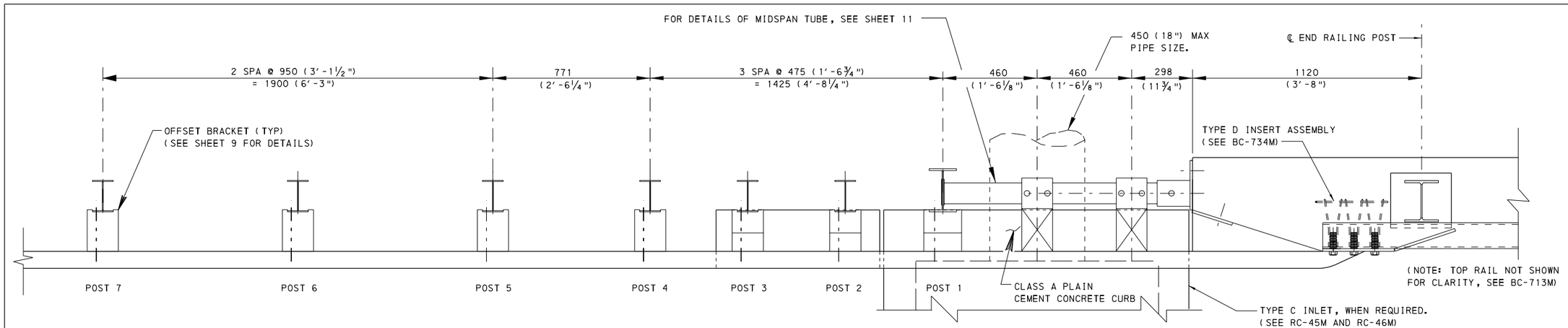
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

STANDARD

PA BRIDGE BARRIER

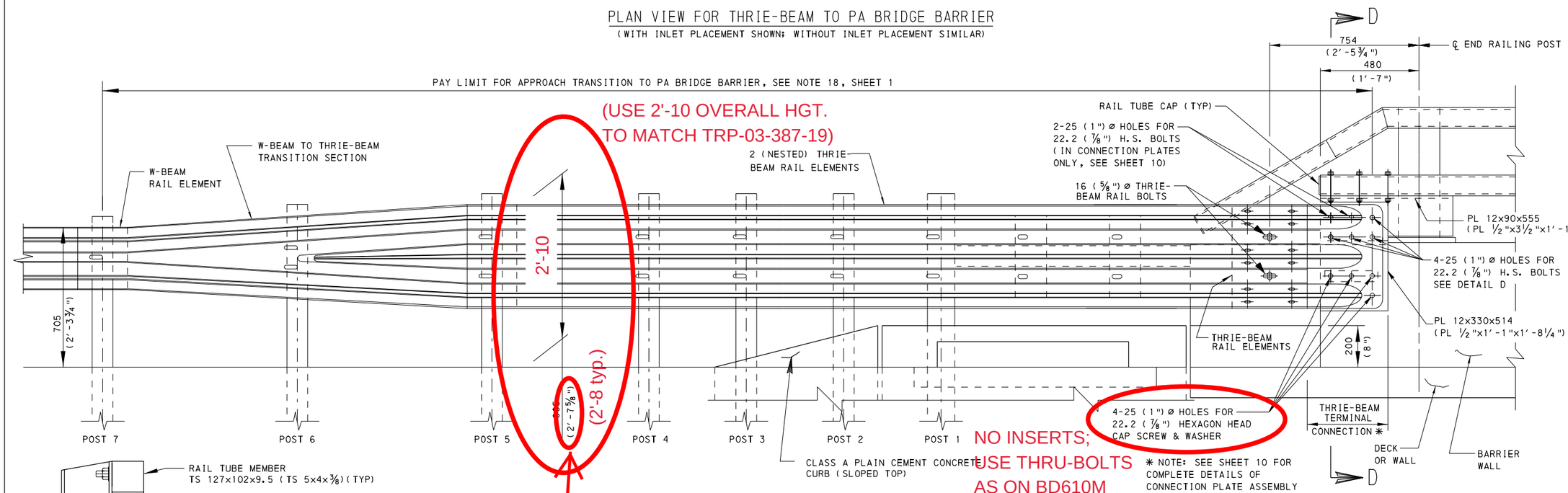
END OF BARRIER DETAILS - 2

RECOMMENDED FEB. 19, 2021	RECOMMENDED FEB. 19, 2021	SHEET 4 OF 10
Thomas P. Macioce	Bruce B. Thompson	BD-610M
CHIEF BRIDGE ENGINEER	DIRECTOR, BUR. OF PROJECT DELIVERY	



PLAN VIEW FOR THRIE-BEAM TO PA BRIDGE BARRIER

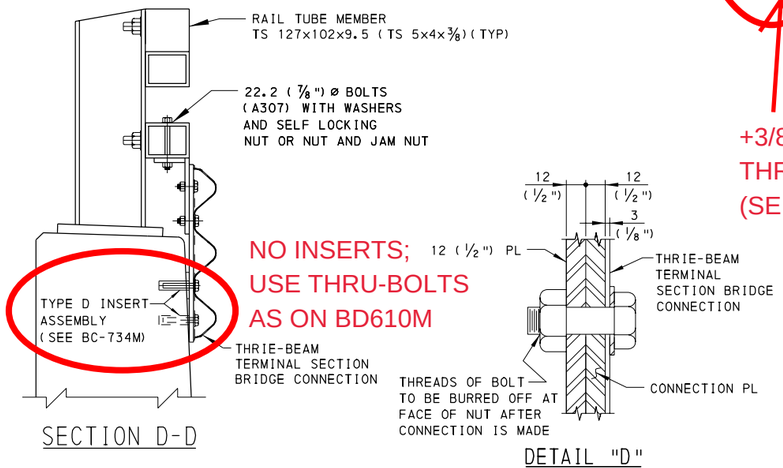
(WITH INLET PLACEMENT SHOWN; WITHOUT INLET PLACEMENT SIMILAR)



ELEVATION VIEW FOR THRIE-BEAM TO PA BRIDGE BARRIER

(WITH INLET PLACEMENT SHOWN; WITHOUT INLET PLACEMENT SIMILAR)

+3/8" MUST BE TRACED THRU CONNECTION PLATES (SEE SHEET 10)



SECTION D-D

DETAIL "D"

NOTES

1. W-BEAM RAIL ELEMENT, TRANSITION SECTION AND THRIE-BEAM RAIL ELEMENT ARE BOLTED TO ALL POSTS.
2. FOR APPROACH TRANSITION POST DETAILS, SEE SHEET 9.
3. FOR ADDITIONAL PA BRIDGE BARRIER NOTES, SEE SHEET 1.
4. SEE BC-712M AND BC-713M FOR PA BRIDGE BARRIER DETAILS AND HARDWARE NOT SHOWN.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

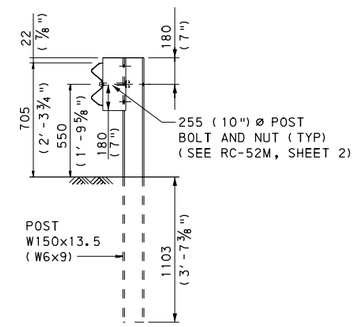
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS

THRIE-BEAM TO PA BRIDGE BARRIER

RECOMMENDED JUN. 1, 2010	RECOMMENDED JUN. 1, 2010	SHT 8 OF 16
CHIEF, HWY. QA DIVISION	DIRECTOR, BUREAU OF DESIGN	RC-50M

(TO BE ADJUSTED PER TRP-03-387-19 GUIDERAIL TRANSITION)

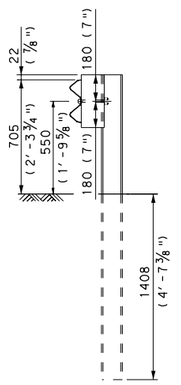


BEYOND POST 7

(AT W-BEAM RAIL ELEMENT)

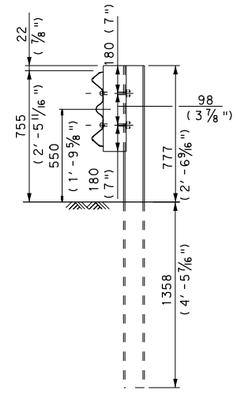
SEE NOTE 7, SHEET 1.

FOR POST DETAILS SEE RC-52M, SHEET 1.



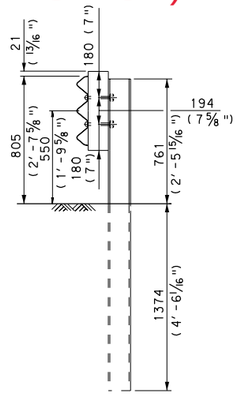
W150x13.5 (W6x9) STEEL POST
2135 (7'-0") LONG w/150x200x360
(6"x8"x1'-2") ROUTED OFFSET BRACKET

POST 7



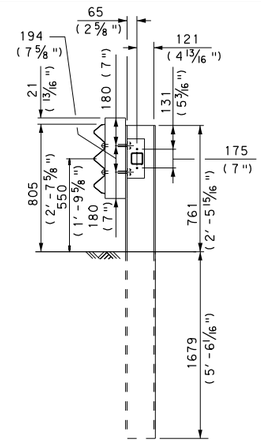
W150x13.5 (W6x9) STEEL POST
2135 (7'-0") LONG w/ 150x200x458
(6"x8"x1'-5 7/8") ROUTED OFFSET BRACKET

POST 6



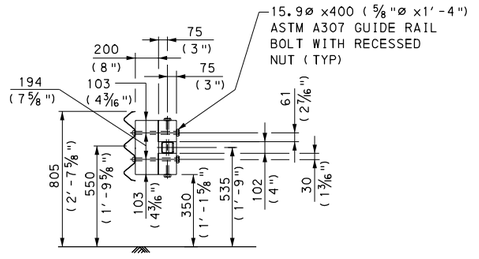
W150x13.5 (W6x9) STEEL POST
2135 (7'-0") LONG w/ROUTED OFFSET
BRACKET (SEE DETAIL)

POSTS 2 THRU 5



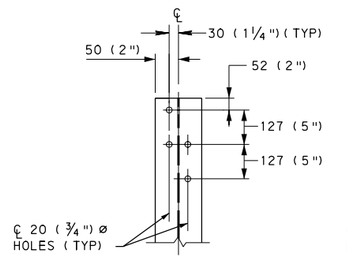
W200x31.3 (W8x21) STEEL POSTS
2440 (8'-0") LONG w/ROUTED OFFSET
BRACKET (SEE DETAIL)

POST 1

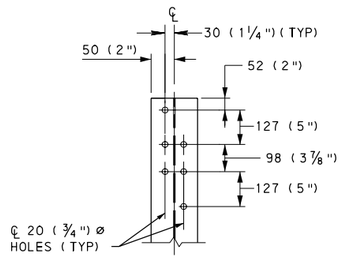


MIDSPAN TUBE SUPPORT

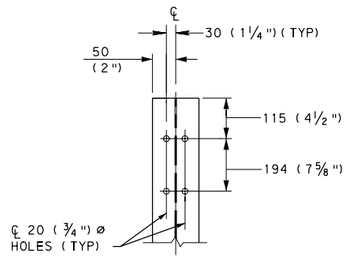
TWO 150x150x200 (6"x6"x8") WOOD BLOCKS
ATTACHED TO 100x100x8 (4"x4"x5/16") SQUARE TUBE
W/150x200x400 (6"x8"x1'-4") WOOD BRACKET



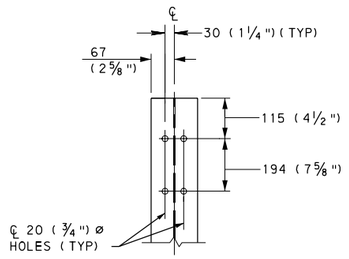
POST 7



POST 6



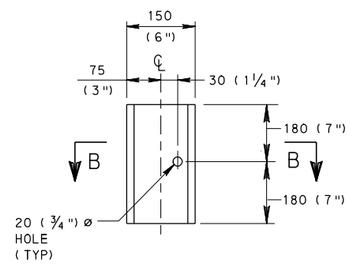
POSTS 2 THRU 5



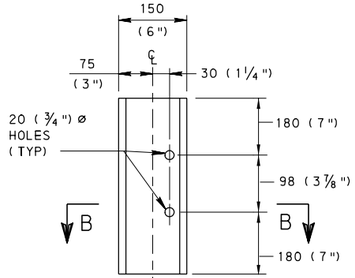
POST 1

POST DETAILS

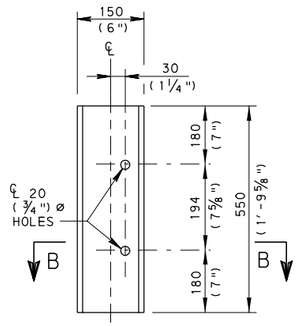
TABLE C		
POSTS	LENGTH	SIZE
1	2440 (8'-0")	W200x31.3 (W8x21)
2 THRU 7	2135 (7'-0")	W150x13.5 (W6x9)
BEYOND 7	1830 (6'-0")	W150x13.5 (W6x9)



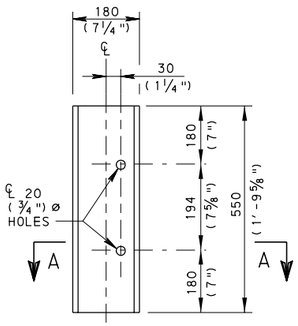
POST 7



POST 6

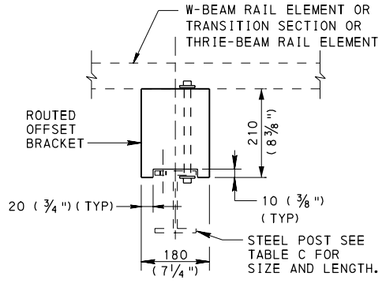


POSTS 2 THRU 5

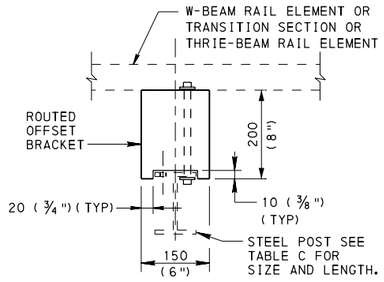


POST 1

ROUTED OFFSET BRACKET DETAILS



SECTION A-A



SECTION B-B

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

NOTES

1. FOR LOCATION OF POSTS, SEE SHEET 8.
2. FOR ADDITIONAL NOTES, SEE SHEET 1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS

THRIE-BEAM TO PA BRIDGE BARRIER

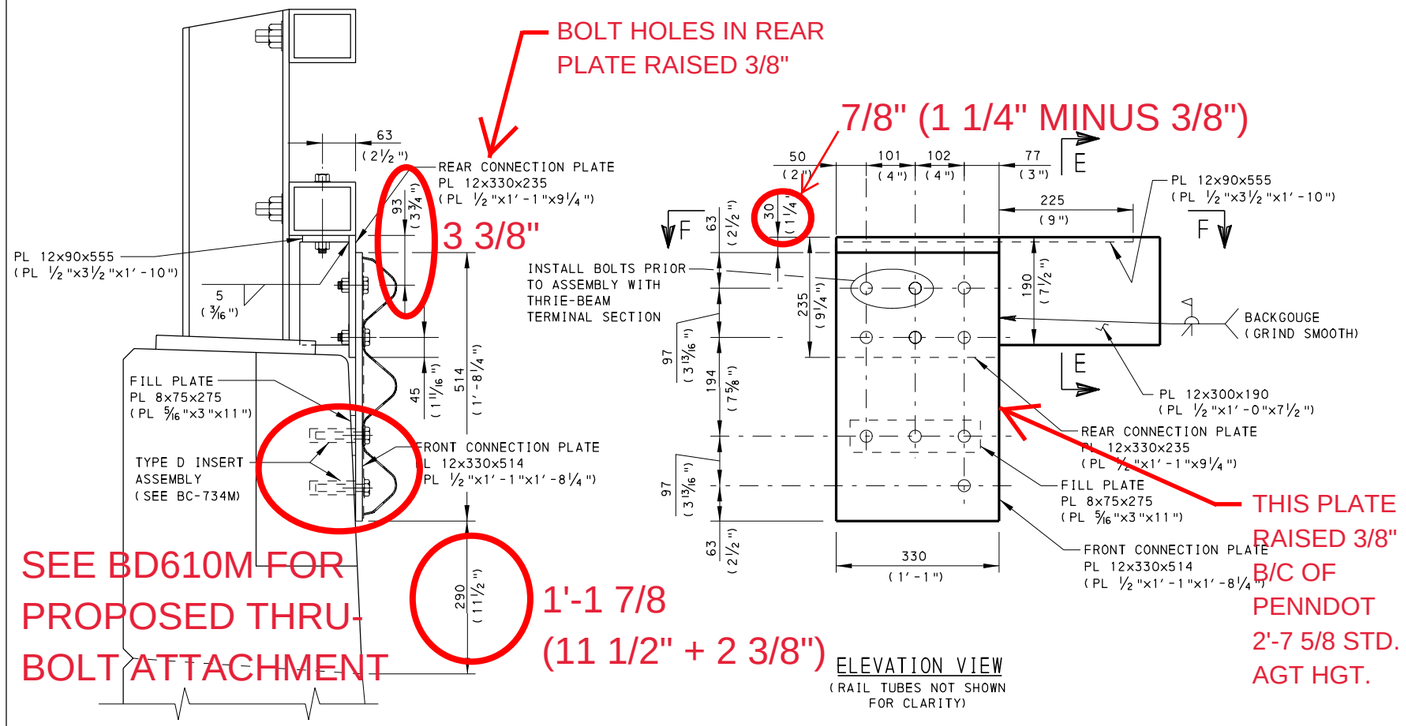
POST AND OFFSET BRACKET DETAILS

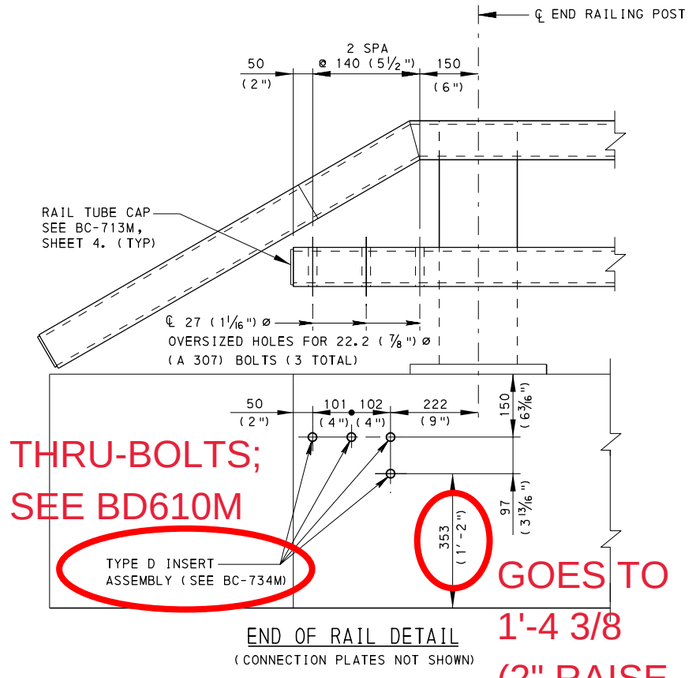
RECOMMENDED JUN. 1, 2010
R. Wood Willy
CHIEF, HWY. QA DIVISION

RECOMMENDED JUN. 1, 2010
DIRECTOR, BUREAU OF DESIGN

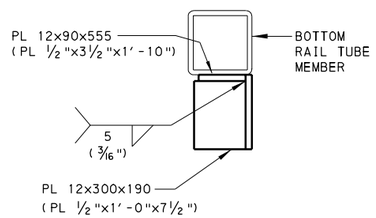
SHT 9 OF 16

RC-50M

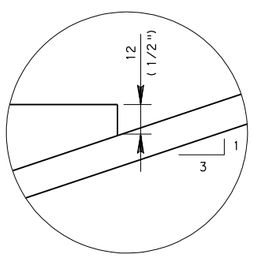




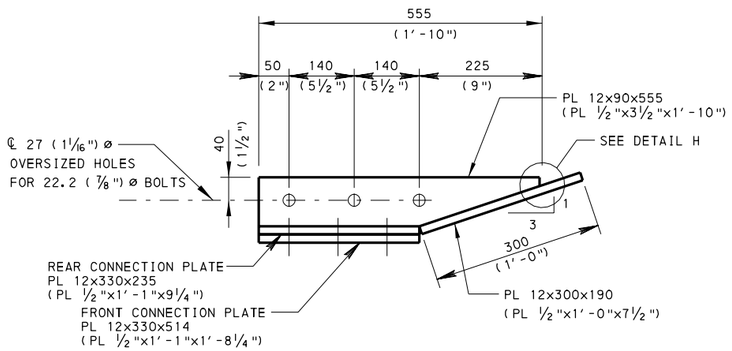
CONNECTION PLATE ASSEMBLY DETAILS



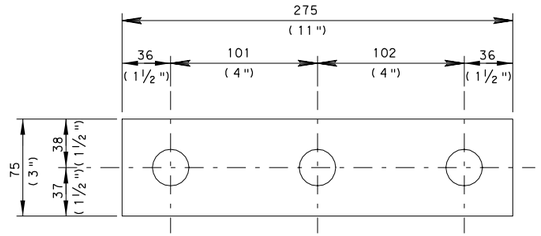
SECTION E-E



DETAIL H



SECTION F-F
(RAIL TUBES NOT SHOWN FOR CLARITY)



FILL PLATE DETAIL

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

NOTES

1. USE THIS SHEET WITH SHEET 8.
2. FOR ADDITIONAL NOTES, SEE SHEET 1 AND SHEET 8.
3. FOR BRIDGE BARRIER DETAILS AND DIMENSIONS, SEE BC-712M AND BC-713M.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS

THRIE-BEAM TO PA BRIDGE BARRIER CONNECTION PLATE DETAILS

RECOMMENDED JUN. 1, 2010
CHIEF, HWY. QA DIVISION

RECOMMENDED JUN. 1, 2010
DIRECTOR, BUREAU OF DESIGN

SHT 10 OF 16

RC-50M