

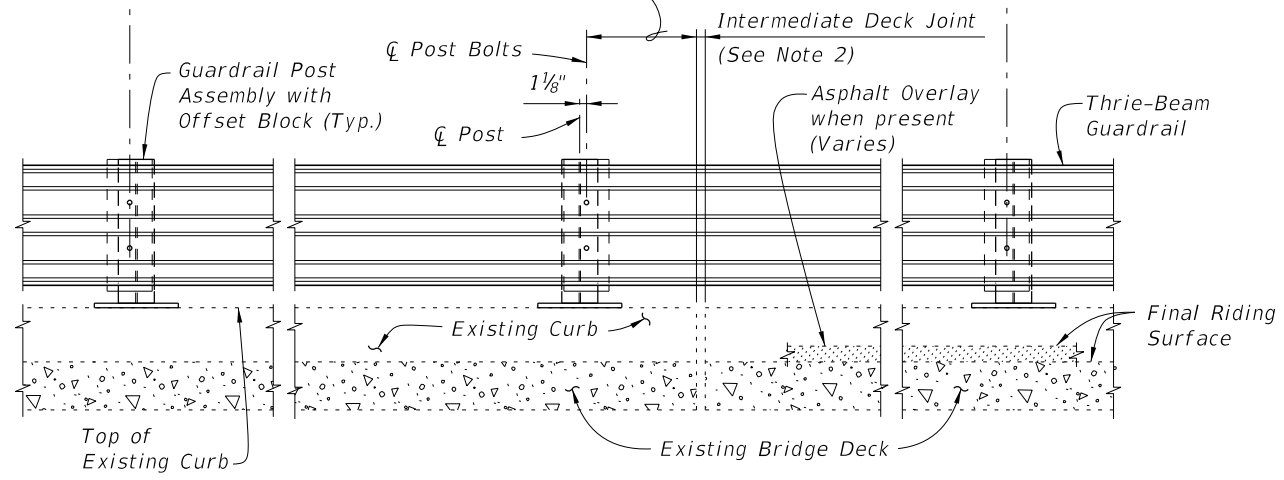
PARTIAL PLAN OF RAILING

☐ Post Bolts and Match Line (Trailing End) (See Sheets 3 and 4)

☐ Post Bolts and Match Line (Approach End) (See Sheets 3 and 4)

6'-3" spacing (Typ. except as noted along Bridge, see Note 2)

1'-6" Min. for non skewed joints. For treatment of skewed Intermediate Deck Joints see Skew Detail Index 460-470, Sheet 2 (Typ.)



PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Traffic Railing not shown for clarity)

==== TYPICAL TREATMENT OF RAILING ALONG BRIDGE ====

NOTES:

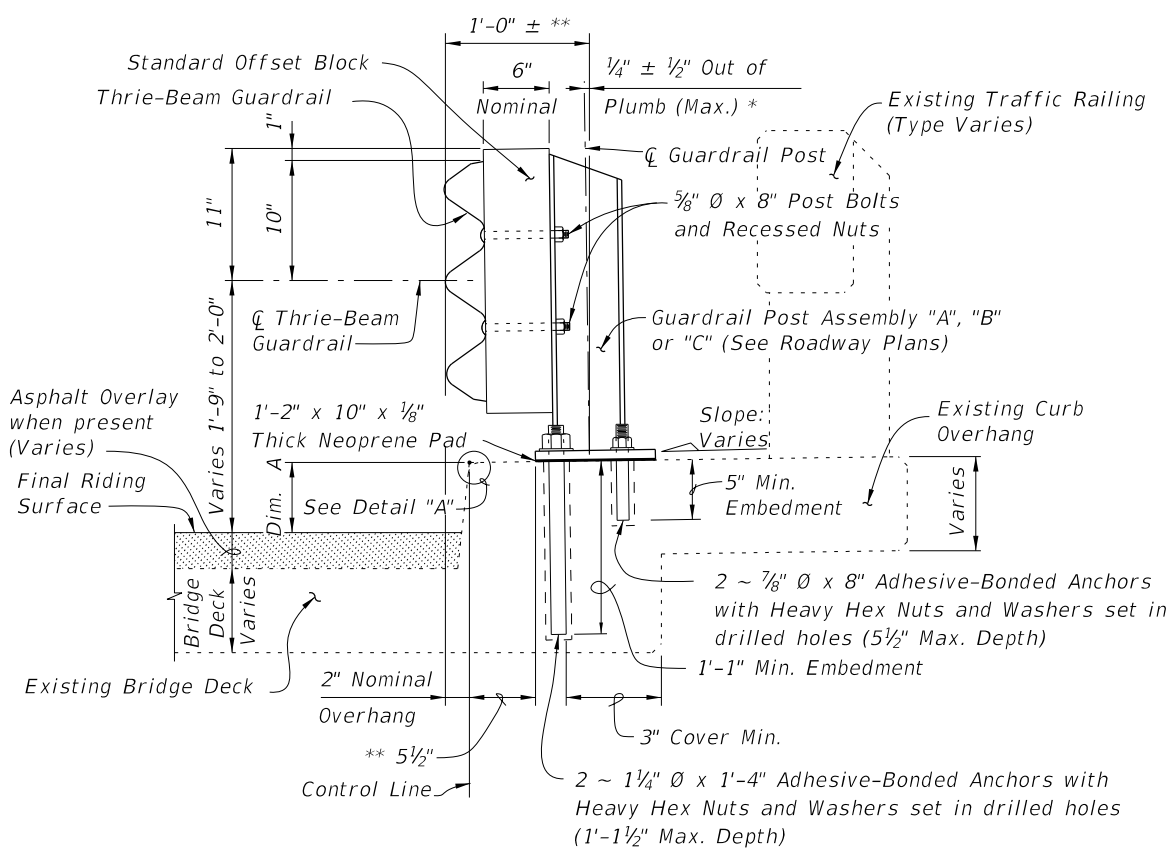
1. On approach end provide Index 536-002 (as shown) or other site specific treatment, see Roadway Plans. For treatment of trailing end see Roadway Plans.
2. Actual joint dimension and orientation vary. For Intermediate Deck Joints use the Modified Post Spacing at Intermediate Deck Joints Detail, Index 460-470, Sheet 2, as required.
3. Areas where existing structure has been removed shall match adjoining areas and shall be finished flat by grouting or grinding as required. Exposed existing reinforcing steel shall be burned off 1" below existing concrete and grouted over.

CROSS REFERENCES:

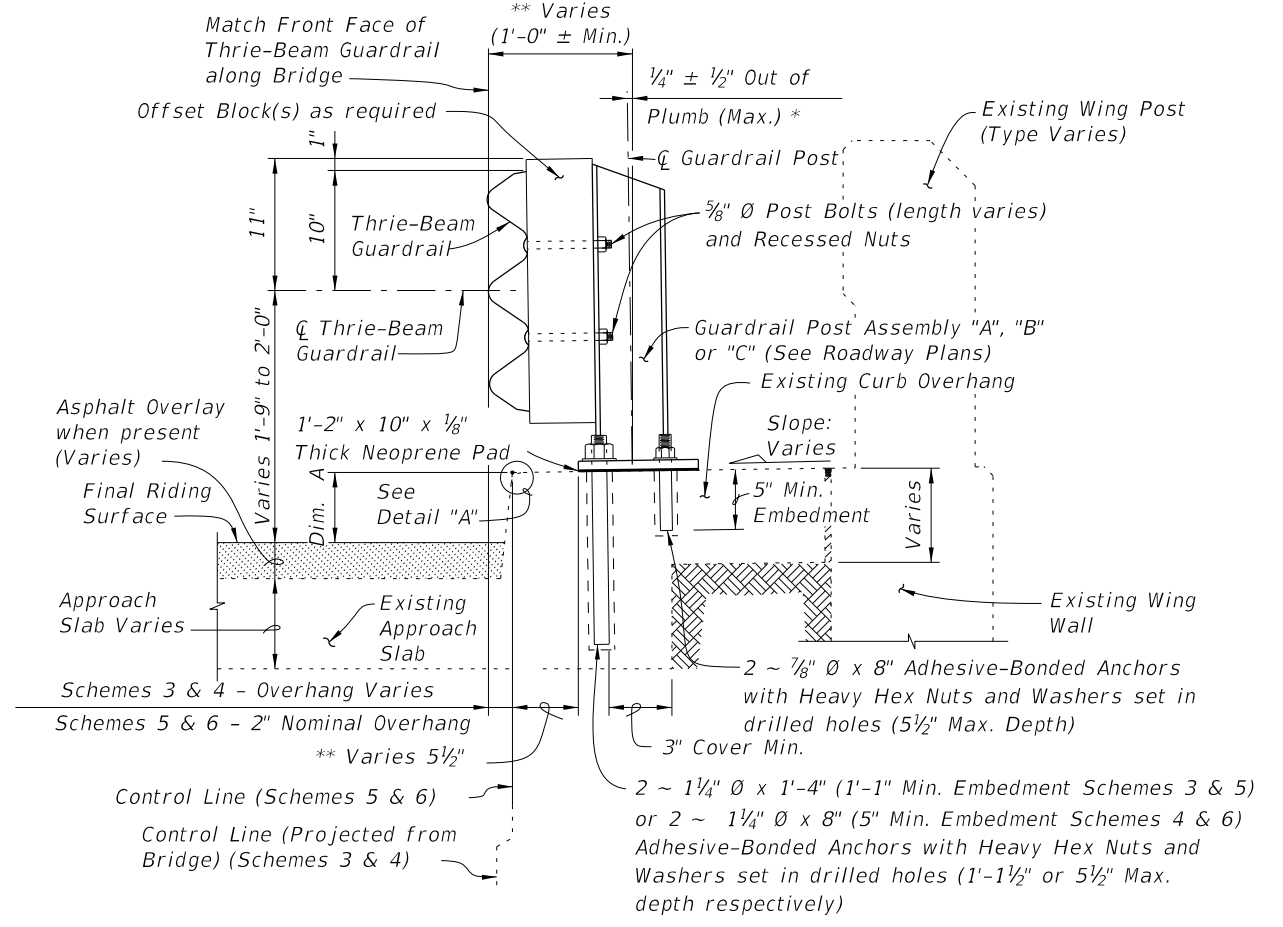
For Section A-A see Sheet 2.
For Traffic Railing Notes and Details see Index 460-470.

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LAST REVISION 01/01/08	REVISION	DESCRIPTION:	 FY 2018-19 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE STRONG CURB TYPE 1	INDEX 460-472	SHEET 1 of 4
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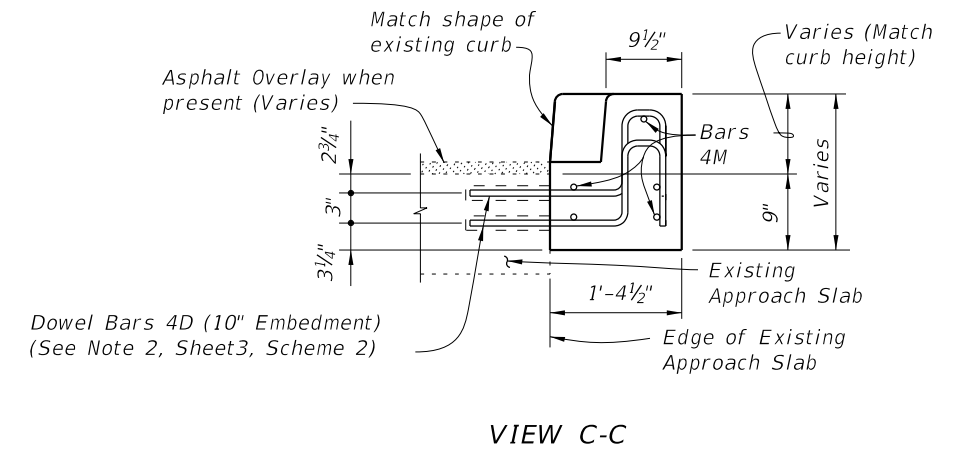
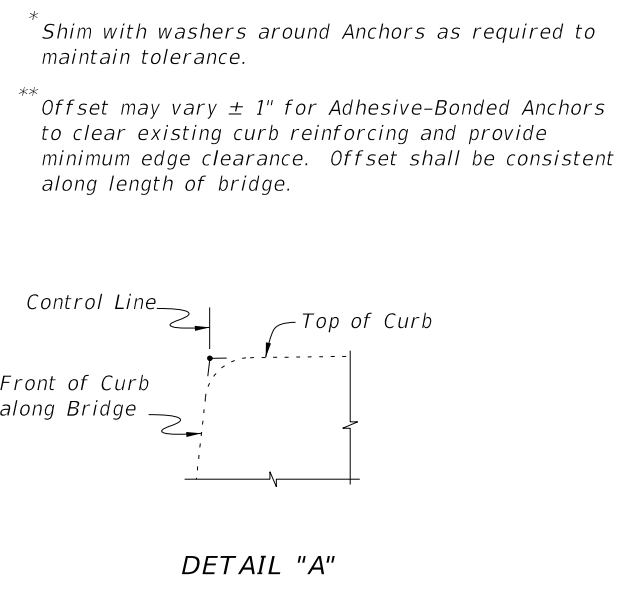
SECTION A-A
TYPICAL SECTION THRU RAILING ON BRIDGE DECK



SECTION B-B
TYPICAL SECTION THRU RAILING ALONG APPROACH SLAB
(SCHEMES 5 AND 6 SHOWN, SCHEMES 3 AND 4 SIMILAR)

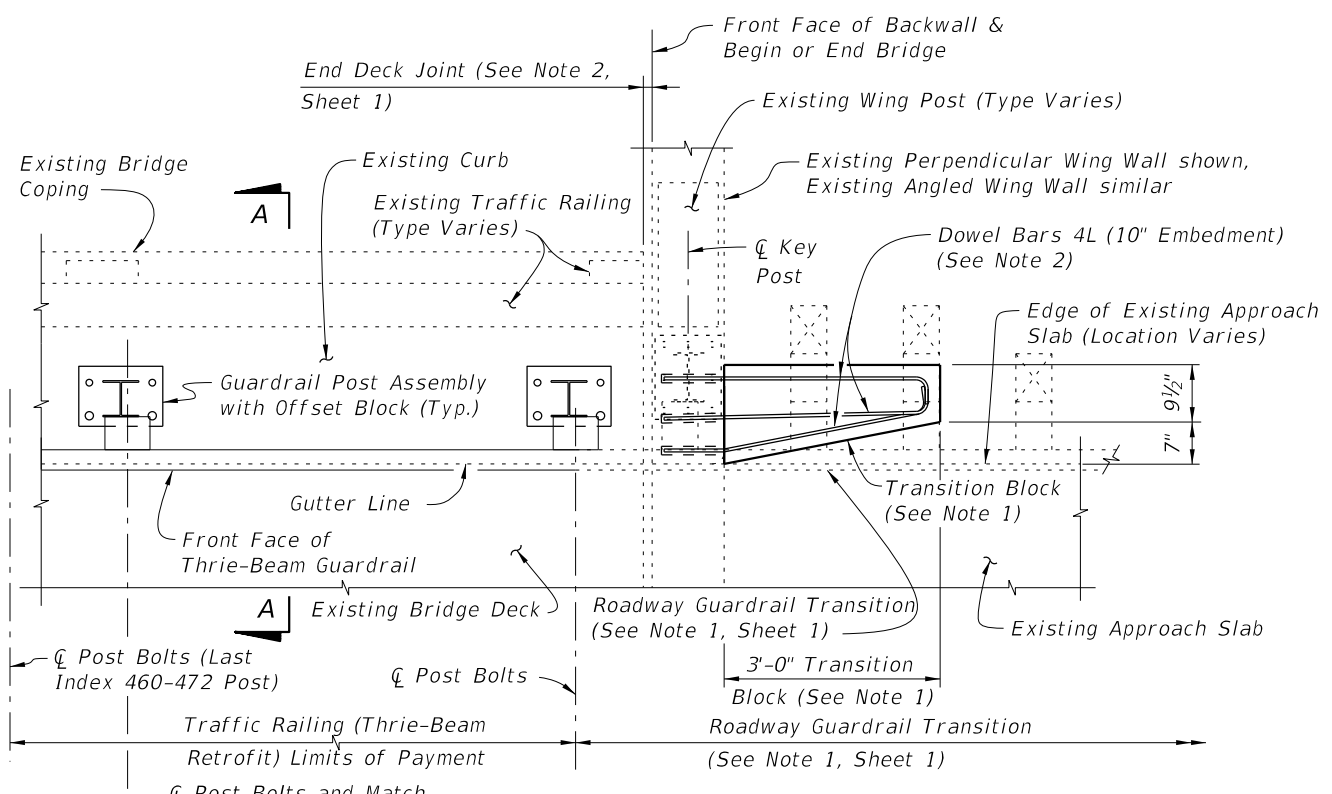
BILL OF REINFORCING STEEL			BAR BENDING DIAGRAMS	
MARK	SIZE	LENGTH		
D	4	3'-7"		DOWEL BAR 4D
L	4	4'-1"		DOWEL BAR 4L
M	4	2'-8"		BAR 4M

NOTE: All bar dimensions are out to out.

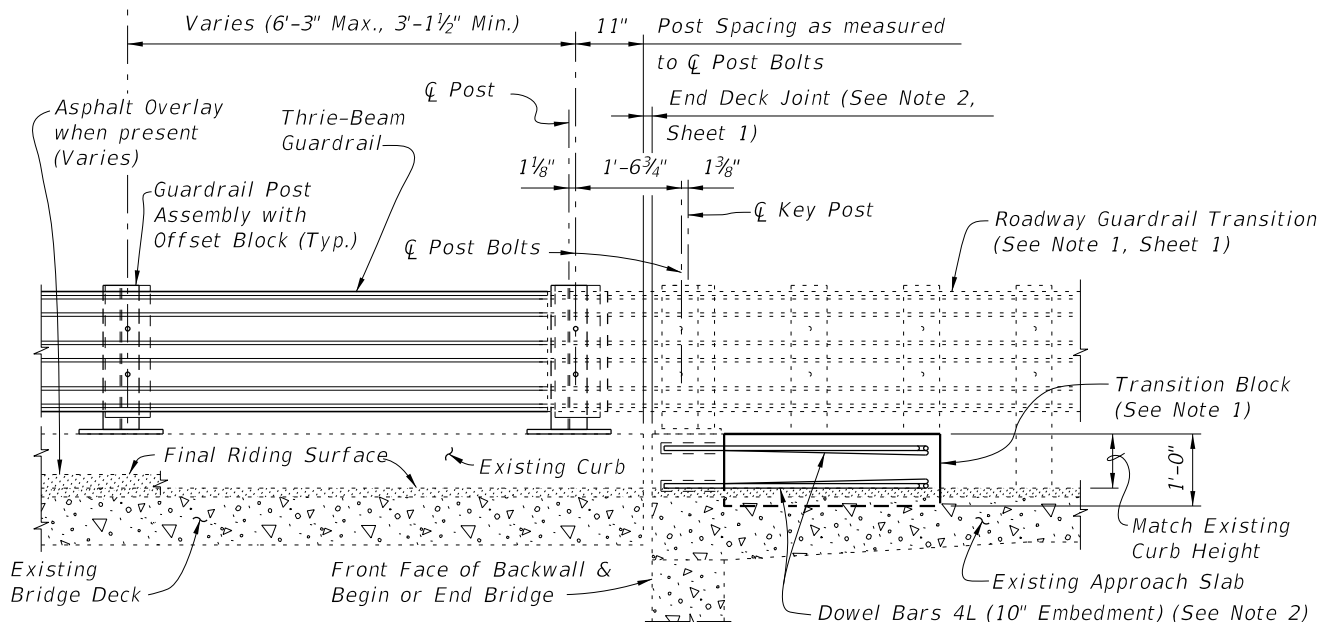


CROSS REFERENCES:
 For location of Section A-A see Sheets 1, 3 & 4.
 For location of Section B-B see Sheet 4.
 For location of View C-C see Sheet 3.
 For application of Dim. A see Post Dimension Table on Index 460-470, Sheet 3.

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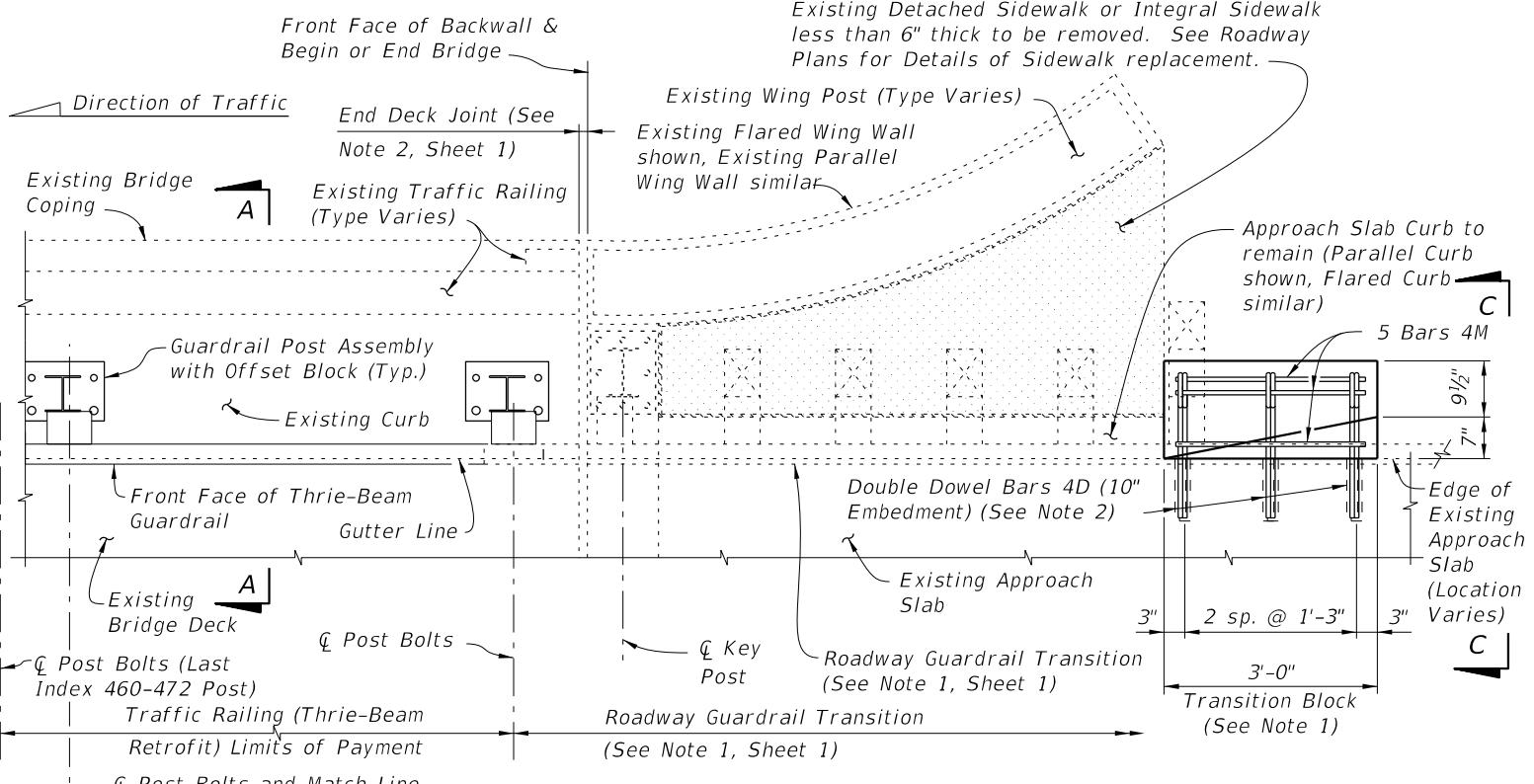
PARTIAL PLAN OF RAILING



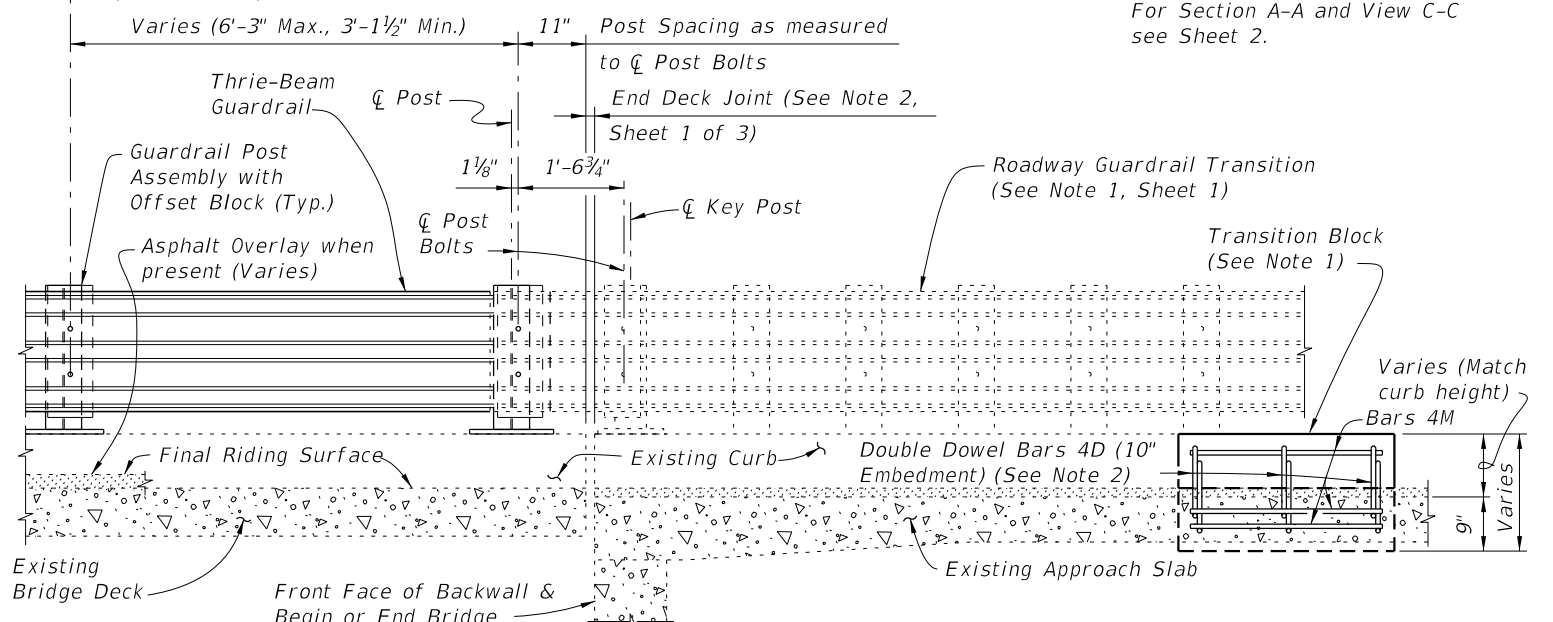
PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Wing Post and Traffic Railing not shown for clarity)

SCHEME 1
RAILING END TREATMENT FOR PERPENDICULAR OR ANGLED WING WALLS

- SCHEME 1 NOTES:**
1. Provide Transition Block (as shown) or Curb if existing Approach Slab does not have a curb, see Roadway Plans. Shape and height of Transition Block or Curb shall match existing bridge curb. Transition Block may be omitted on trailing ends with no opposing traffic.
 2. Field bend Dowel Bars 4L within Transition Block as required to maintain 2" top and side clearance and 3" bottom clearance.



PARTIAL PLAN OF RAILING



PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Wing Post and Traffic Railing not shown for clarity)

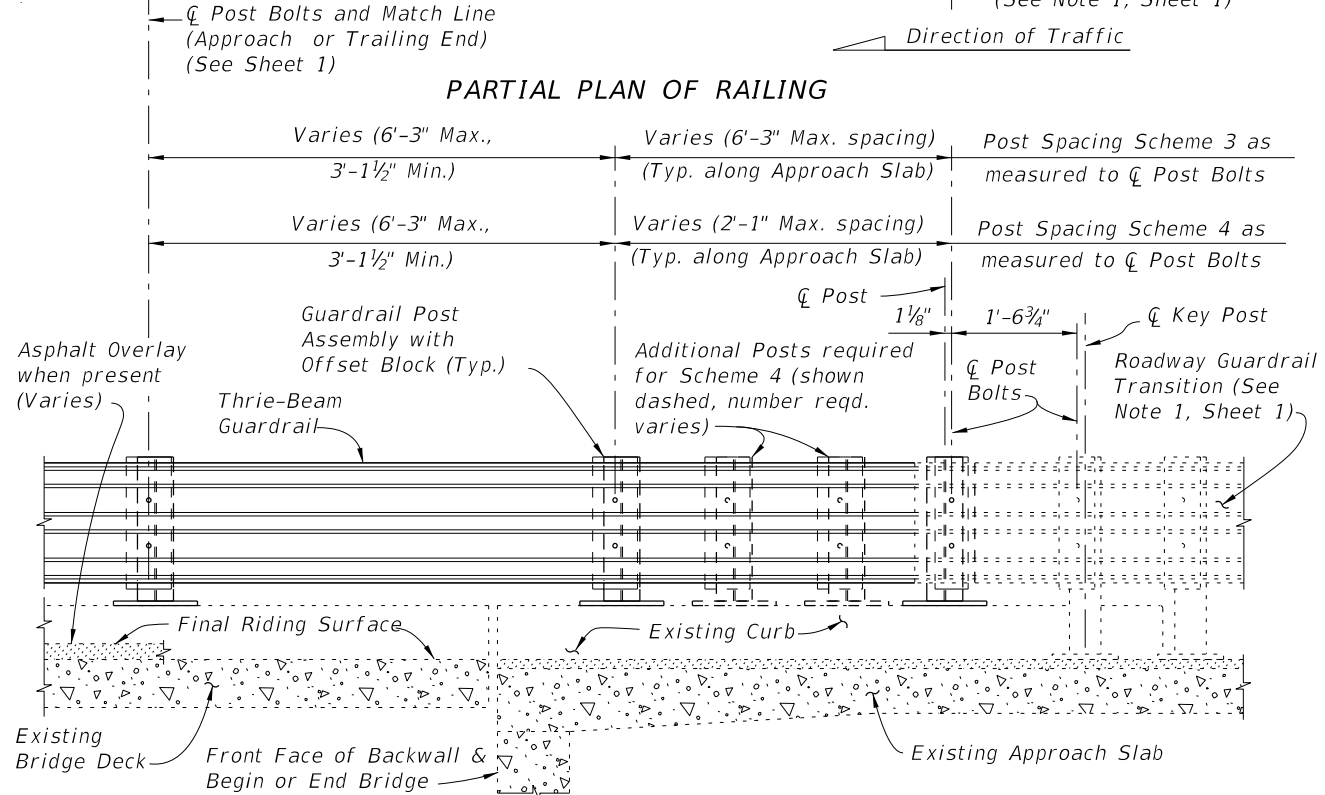
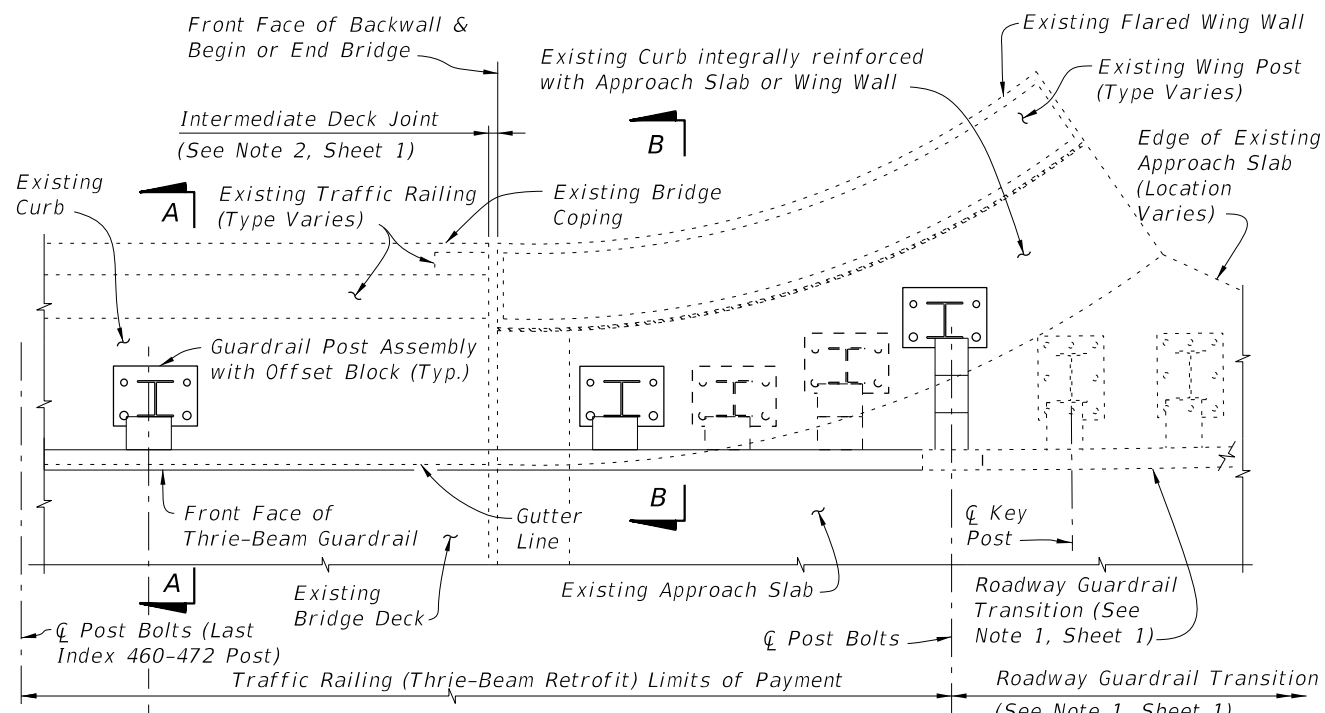
SCHEME 2
RAILING END TREATMENT FOR PARALLEL OR FLARED CURBS WITH DETACHED SIDEWALKS OR INTEGRAL SIDEWALKS LESS THAN 6" THICK

- SCHEME 2 NOTES:**
1. Provide Transition Block (as shown) or Curb if existing Approach Slab Curb does not extend to end of Approach Slab. Shape and height of Transition Block or Curb shall match existing bridge curb. Transition Block may be omitted on trailing ends with no opposing traffic and on bridges with flared Approach Slab Curbs.
 2. Field bend or tilt Dowel Bars 4D and Bars 4M within Transition Block as required to maintain 2" top and side clearance and 3" bottom clearance.

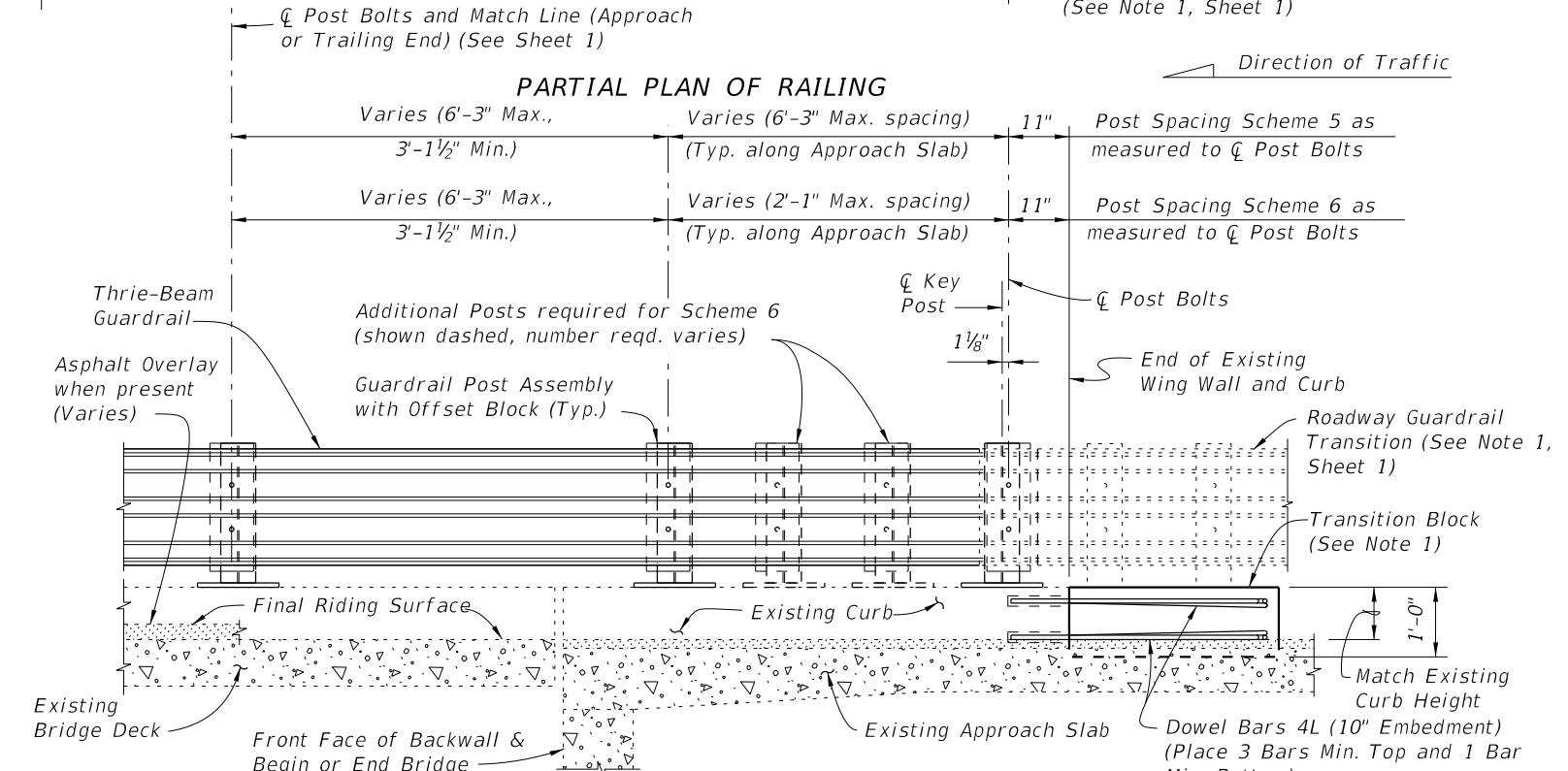
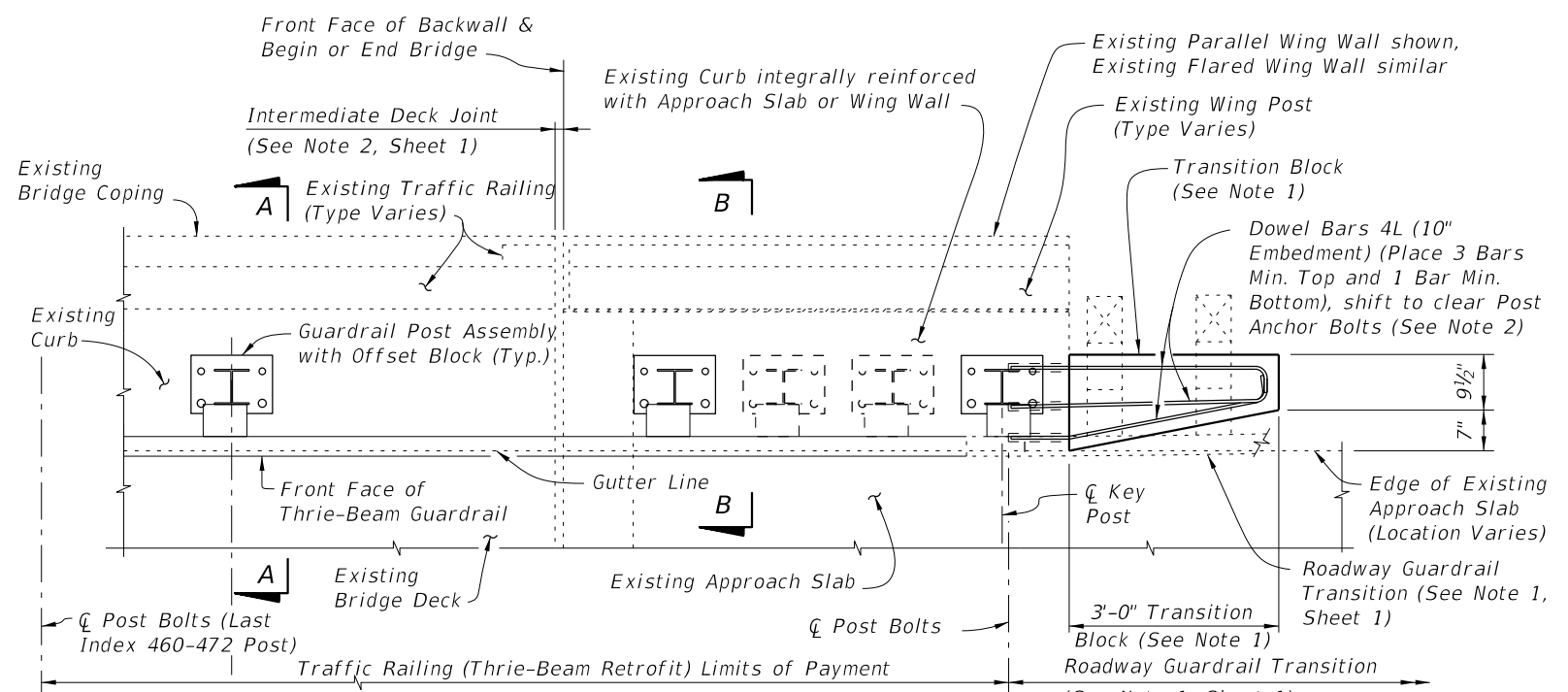
CROSS REFERENCES:
For Section A-A and View C-C see Sheet 2.

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LAST REVISION 01/01/08	DESCRIPTION:	 FY 2018-19 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE STRONG CURB TYPE 1	INDEX 460-472	SHEET 3 of 4
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PARTIAL PLAN OF RAILING
 Varies (6'-3" Max., 3'-1 1/2" Min.)
 Varies (6'-3" Max. spacing) (Typ. along Approach Slab)
 Post Spacing Scheme 3 as measured to ϕ Post Bolts
 Varies (6'-3" Max., 3'-1 1/2" Min.)
 Varies (2'-1" Max. spacing) (Typ. along Approach Slab)
 Post Spacing Scheme 4 as measured to ϕ Post Bolts
 Guardrail Post Assembly with Offset Block (Typ.)
 Additional Posts required for Scheme 4 (shown dashed, number reqd. varies)
 ϕ Post 1 1/8"
 1'-6 3/4"
 ϕ Key Post
 Roadway Guardrail Transition (See Note 1, Sheet 1)
 ϕ Post Bolts
PARTIAL ELEVATION OF INSIDE FACE OF RAILING
 (Existing Wing Post and Traffic Railing not shown for clarity)
SCHEMES 3 AND 4
RAILING END TREATMENT FOR FLARED INTEGRAL CURBS



PARTIAL PLAN OF RAILING
 Varies (6'-3" Max., 3'-1 1/2" Min.)
 Varies (6'-3" Max. spacing) (Typ. along Approach Slab)
 11"
 Post Spacing Scheme 5 as measured to ϕ Post Bolts
 Varies (6'-3" Max., 3'-1 1/2" Min.)
 Varies (2'-1" Max. spacing) (Typ. along Approach Slab)
 11"
 Post Spacing Scheme 6 as measured to ϕ Post Bolts
 Additional Posts required for Scheme 6 (shown dashed, number reqd. varies)
 Guardrail Post Assembly with Offset Block (Typ.)
 ϕ Key Post
 End of Existing Wing Wall and Curb
 Roadway Guardrail Transition (See Note 1, Sheet 1)
 Transition Block (See Note 1)
 Final Riding Surface
 Existing Curb
 Existing Approach Slab
 Front Face of Backwall & Begin or End Bridge
 Existing Bridge Deck
 Existing Approach Slab
 Roadway Guardrail Transition (See Note 1, Sheet 1)
 Transition Block (See Note 1)
 Dowel Bars 4L (10" Embedment) (Place 3 Bars Min. Top and 1 Bar Min. Bottom)
 Match Existing Curb Height
PARTIAL ELEVATION OF INSIDE FACE OF RAILING
 (Existing Wing Post and Traffic Railing not shown for clarity)
SCHEMES 5 AND 6
RAILING END TREATMENT FOR PARALLEL INTEGRAL CURBS

SCHEMES 5 AND 6 NOTES:
 1. Provide Transition Block (as shown) or Curb if existing Approach Slab Curb does not extend to end of Approach Slab. Shape and height of Transition Block or Curb shall match existing bridge curb. Transition Block may be omitted on trailing ends with no opposing traffic.
 2. Field bend Dowel Bars 4L within Transition Block as required to maintain 2" top and side clearance and 3" bottom clearance.

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