

Origination Form

Proposed Revisions to a Standard Plans Index

Originator:	Turley, Joshua	Index Number:	460-475
Date:	5/15/2024	Sheet Number(s):	1-4
E-mail:	Joshua.Turley@dot.state.fl.us	Index Title:	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE CURB TYPE 1

Summary of the changes:

Sheets 1-4: Added a note to the details captioning what is shown is the Adhesive anchor option.

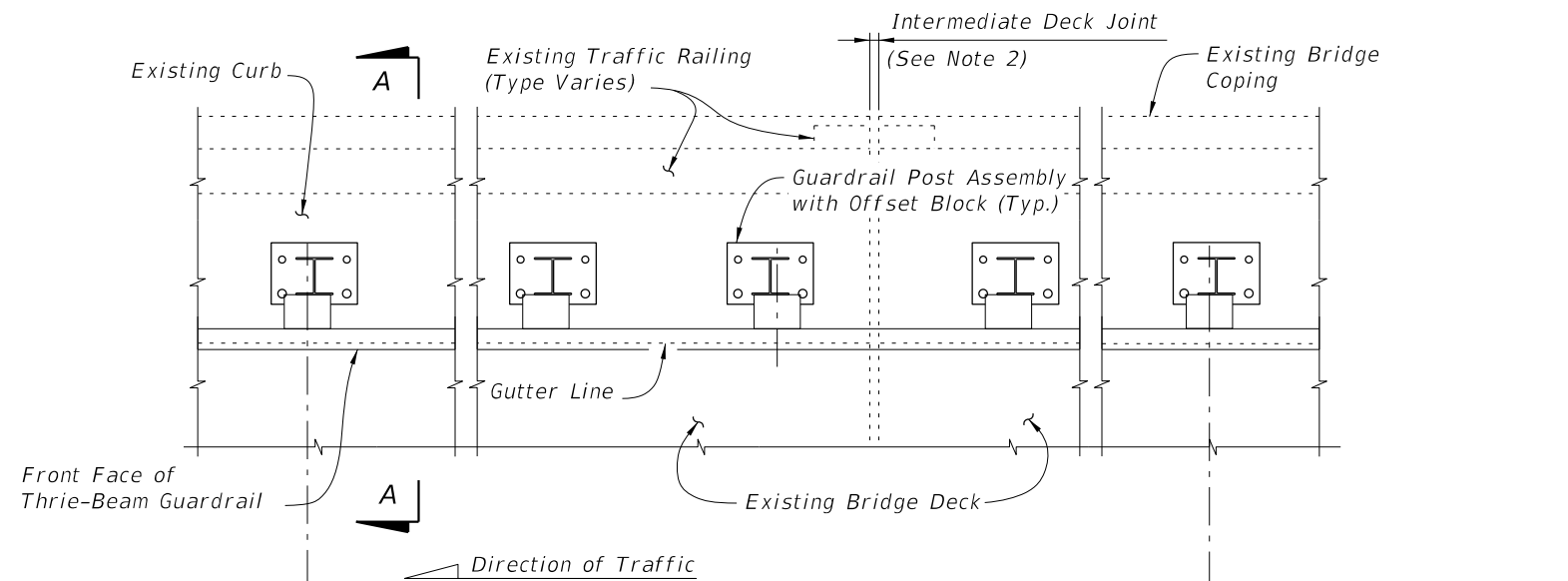
Commentary/Background:

We have recently finished research into screw anchors and are now allowing them as an option on this Standard and we needed to add a note clarifying that that is the case. Otherwise the user might think that what is shown is the only option.

Other Affected Documents/Offices	Person Contacted	Affected (Yes/No)
Other Standard Plans		No
FDOT Design Manual		No
Standard Specifications		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No

Implementation

["FY-Standard Plans (Next Release)"]



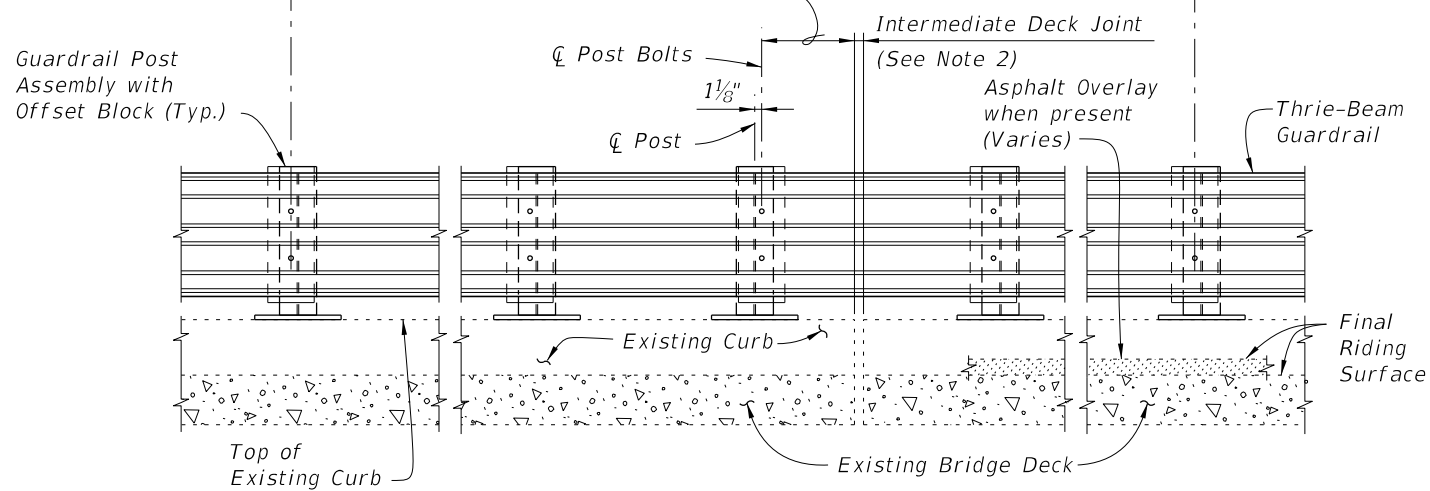
- NOTES:
1. On approach end provide Index 536-002 (as shown) or other site specific treatment, see Roadway Plans. For treatment of trailing end see Roadway Plans.
 2. Actual joint dimension and orientation vary. For Intermediate Deck Joints use the Modified Post Spacing at Intermediate Deck Joints Detail, 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.

PARTIAL PLAN OF RAILING
(Adhesive Anchor Option shown, Screw Anchor Option similar)

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

3'-1½" spacing (Typ. except as noted along Bridge, see Note 2)

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




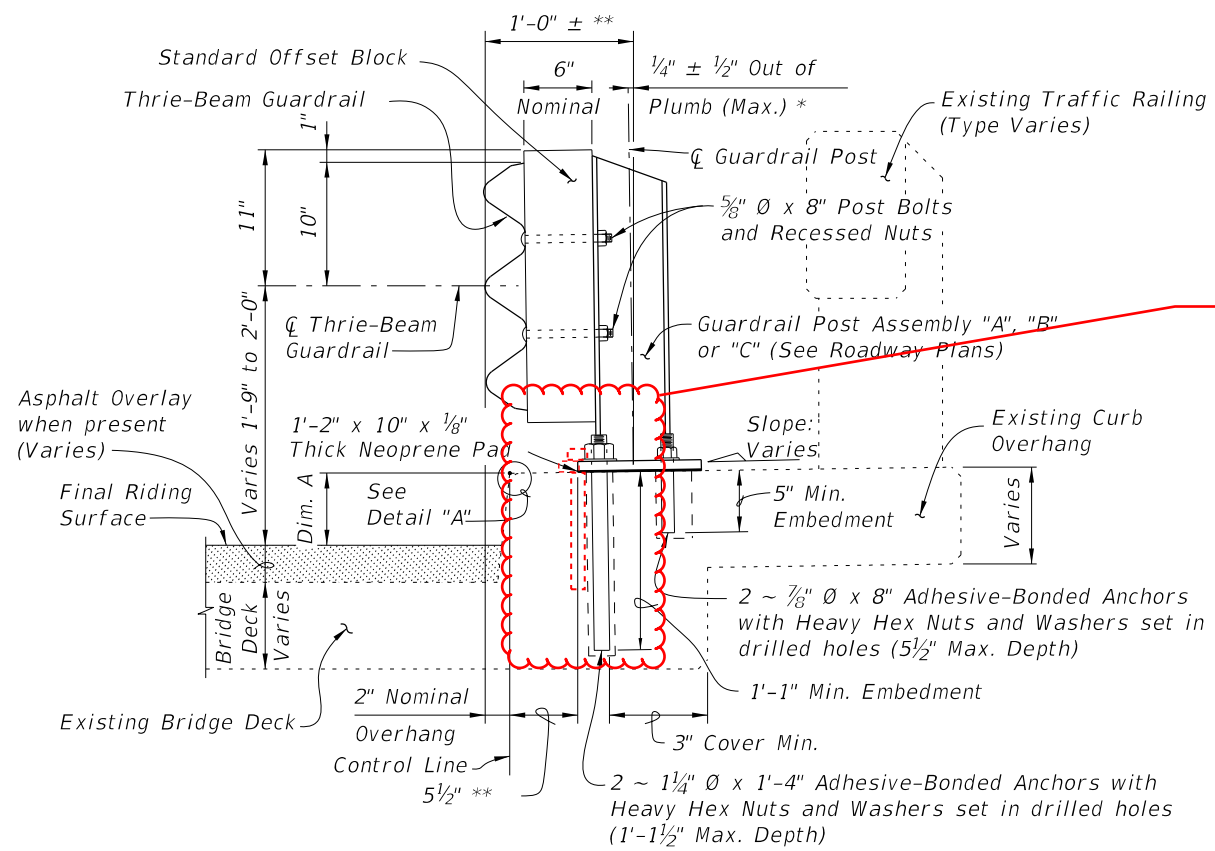
PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Traffic Railing not shown for clarity)

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

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

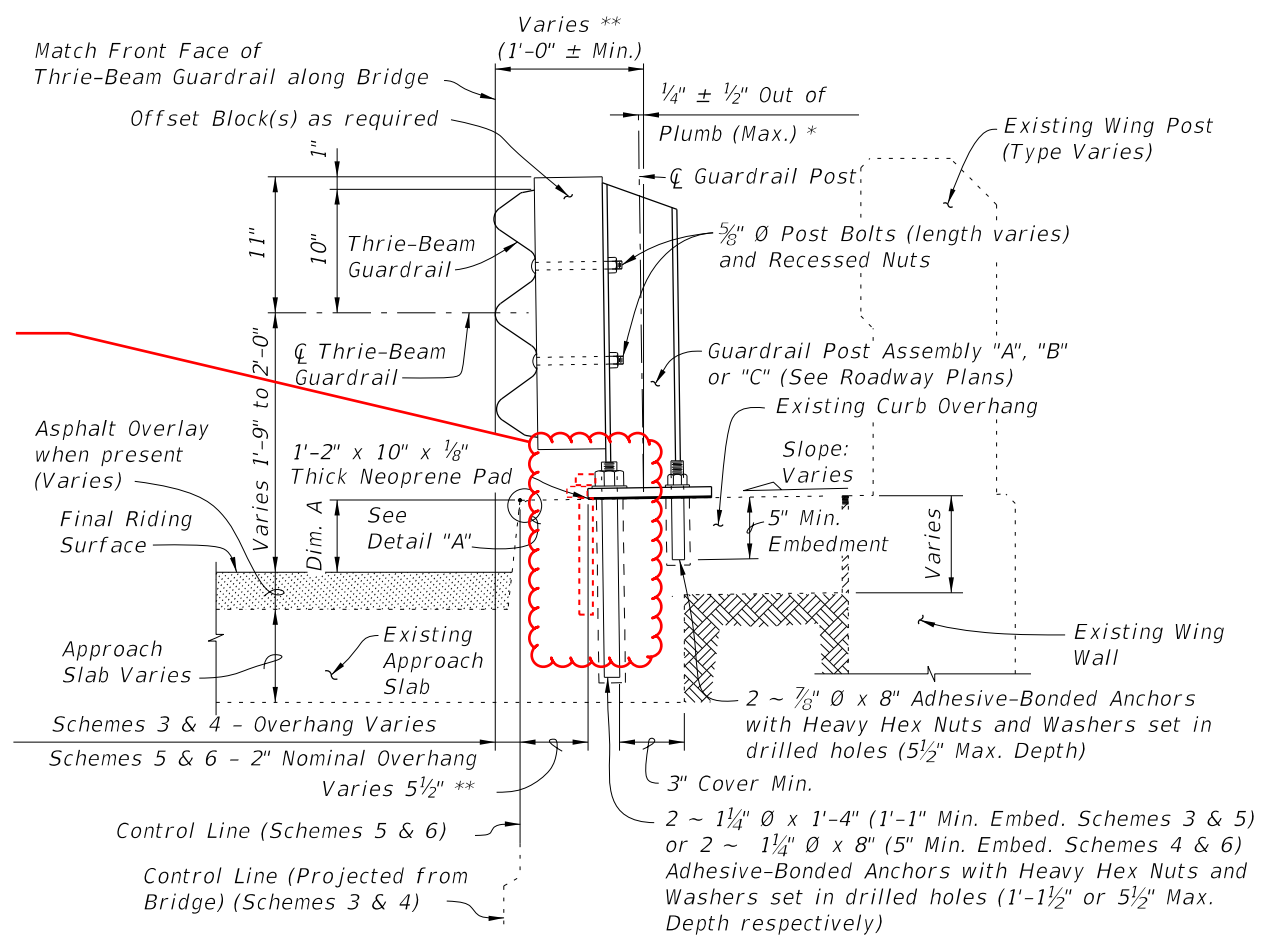
10/6/2022 11:15:41 AM

LAST REVISION	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE CURB TYPE 1	INDEX	SHEET
01/01/08 11/01/24				460-475	1 of 4



SECTION A-A
TYPICAL SECTION THRU RAILING ON BRIDGE DECK
*(Adhesive Anchor Option shown solid,
 Screw Anchor Option shown dashed)*

ADDED: Screw Anchor Detail

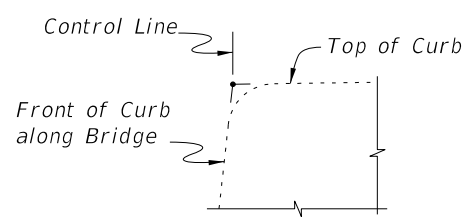


SECTION B-B
TYPICAL SECTION THRU RAILING ALONG APPROACH SLAB
(SCHEMES 5 AND 6 SHOWN, SCHEMES 3 AND 4 SIMILAR)
*(Adhesive Anchor Option shown solid,
 Screw Anchor Option shown dashed)*

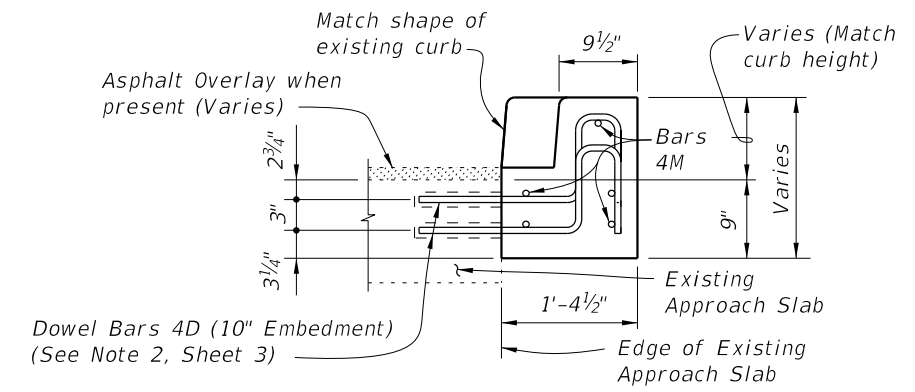
BILL OF REINFORCING STEEL			BAR BENDING DIAGRAMS	
MARK	SIZE	LENGTH		
D	4	3'-7"		DOWEL BAR 4D
L	4	4'-1"		DOWEL BAR 4L
M	4	2'-8"		BAR 4M

NOTE: All bar dimensions are out to out.

* Shim with washers around Anchors as required to maintain tolerance.
 ** Offset may vary ± 1" for Adhesive-Bonded Anchors to clear existing curb reinforcing and provide minimum edge clearance. Offset shall be consistent along length of bridge.



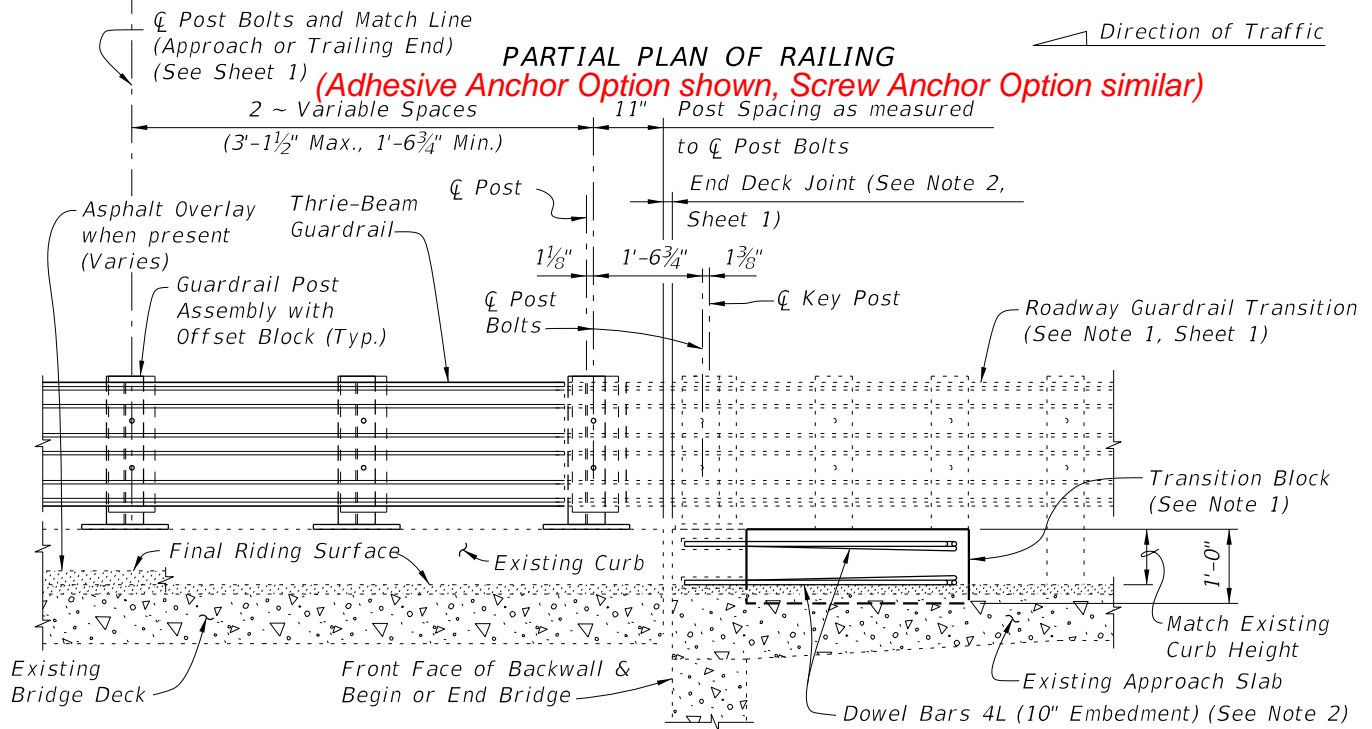
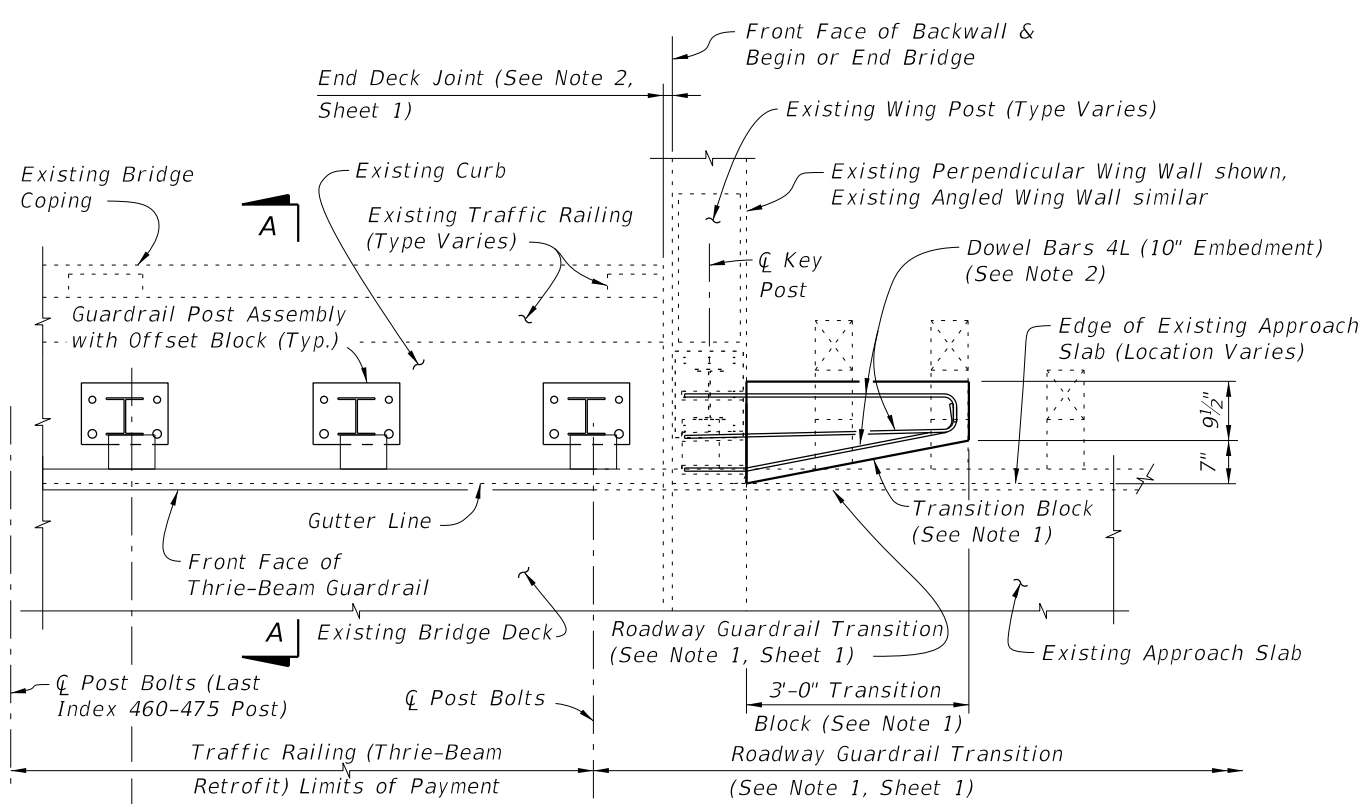
DETAIL "A"



VIEW C-C

CROSS REFERENCES:
 For location of Section A-A see Sheet 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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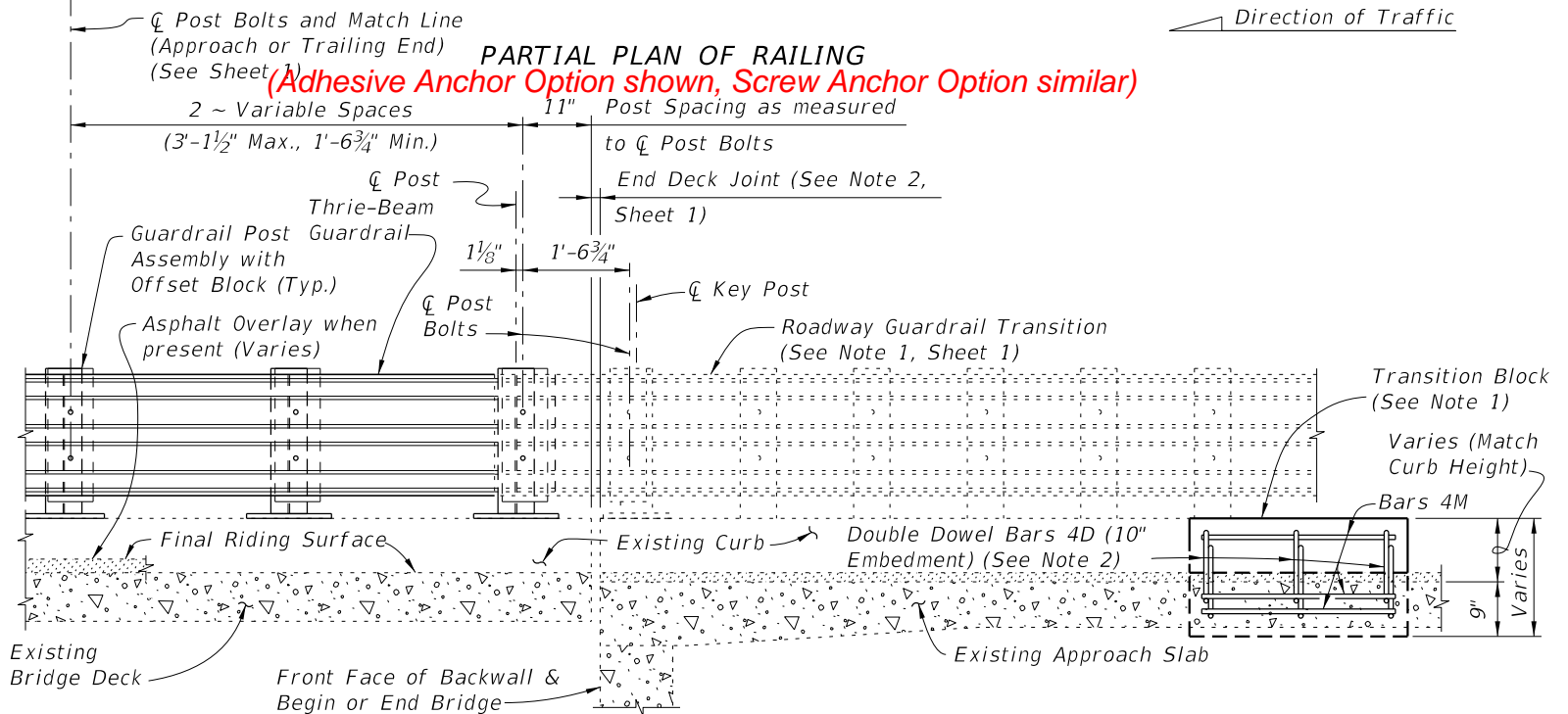
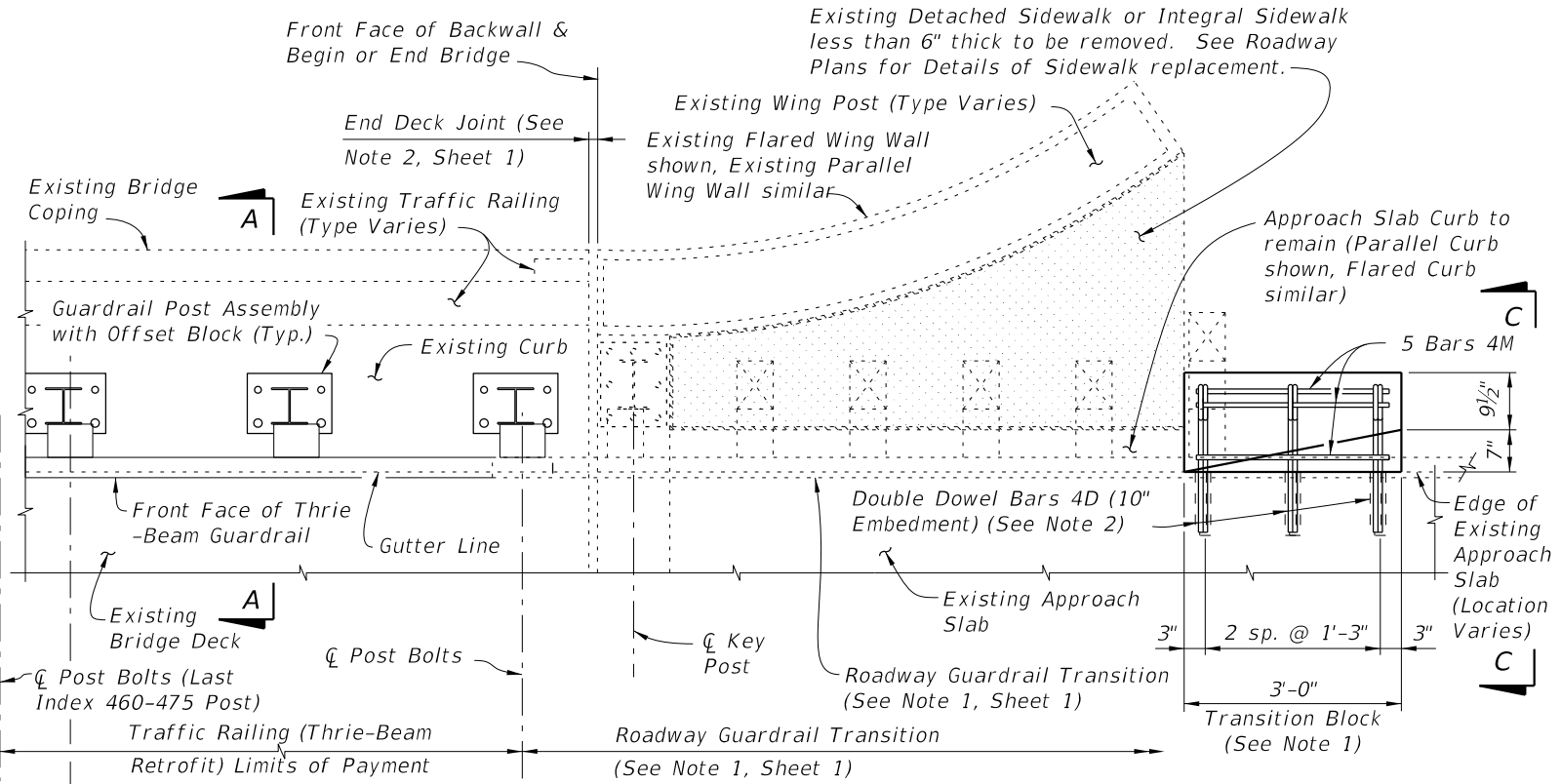


PARTIAL ELEVATION OF INSIDE FACE OF RAILING
 (Existing Wing Post and Traffic Railing not shown for clarity)

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

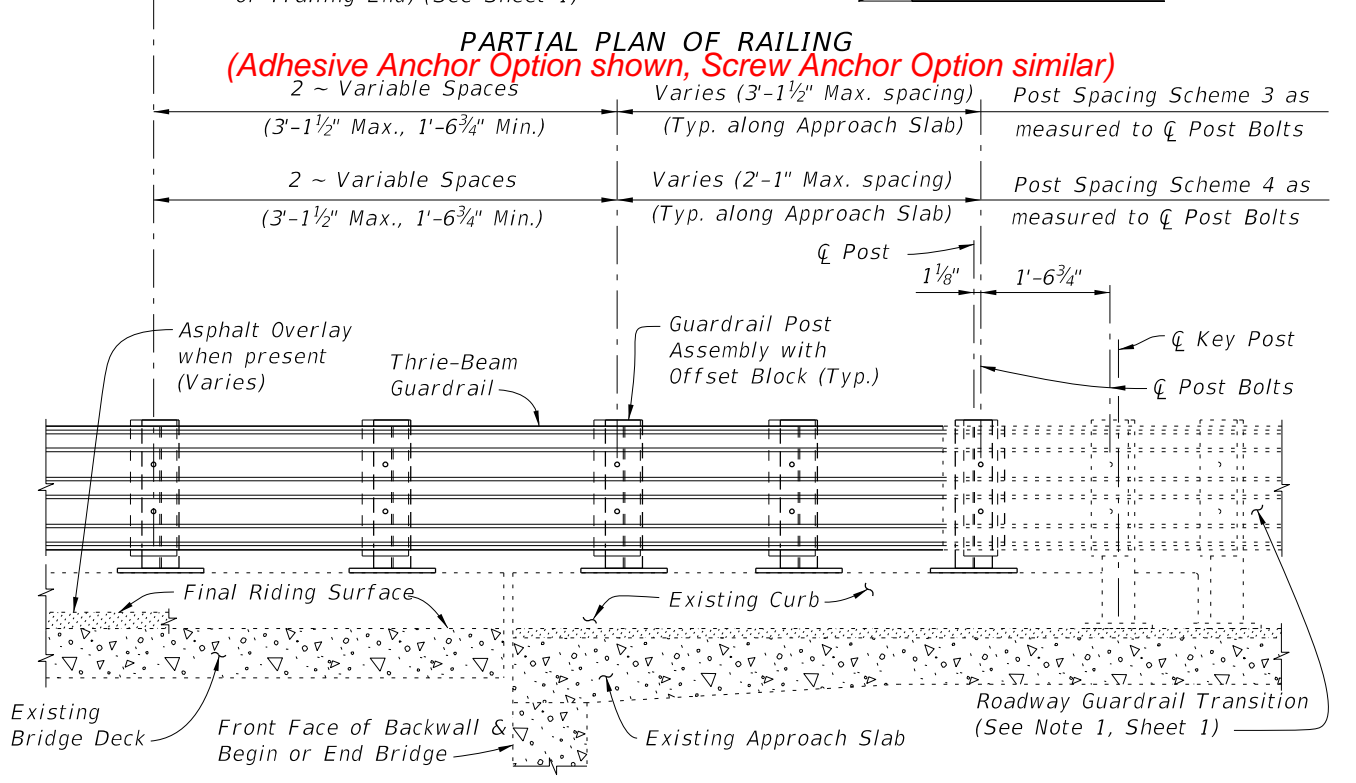
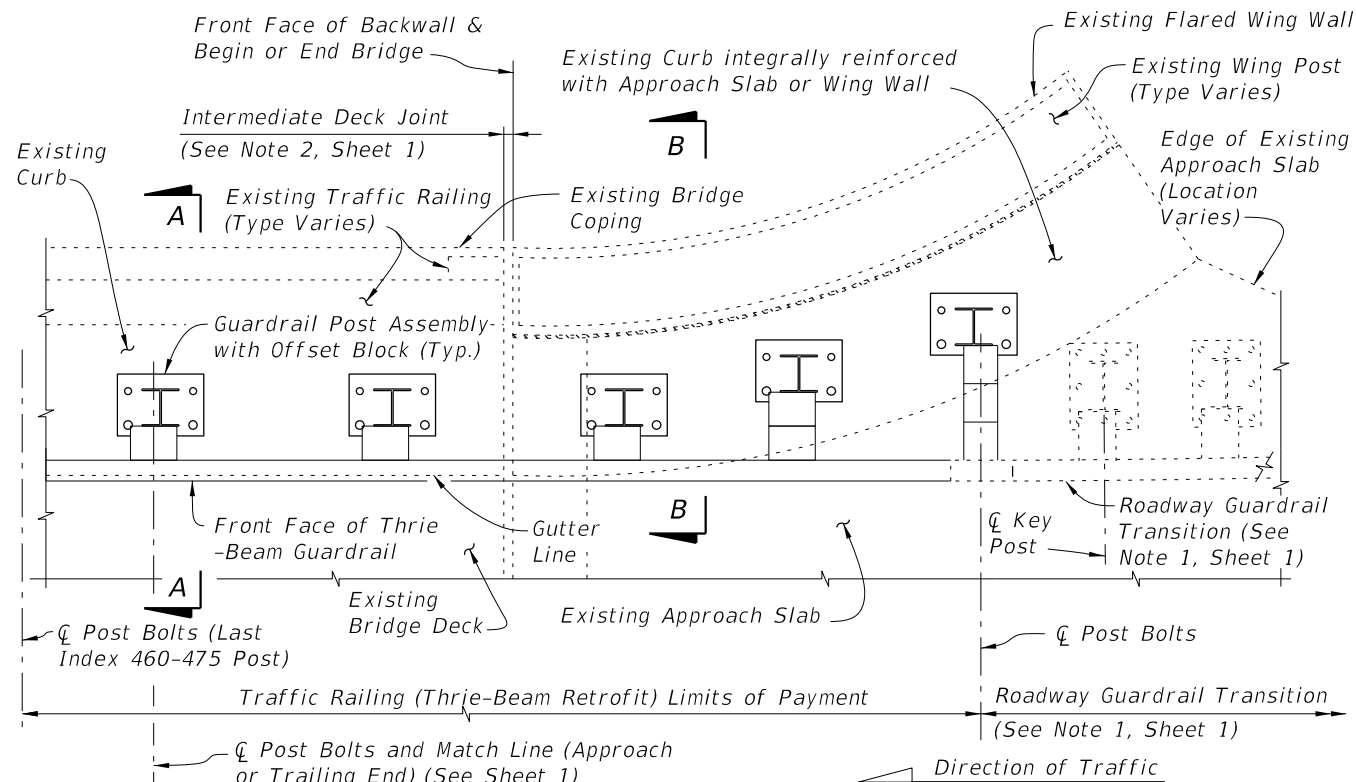
SCHEME 2

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.

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LAST REVISION 01/01/08 11/01/24	DESCRIPTION:	 FY 2023-24 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE CURB TYPE 1	INDEX 460-475	SHEET 3 of 4
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PARTIAL PLAN OF RAILING
(Adhesive Anchor Option shown, Screw Anchor Option similar)

2 ~ Variable Spaces
 (3'-1½" Max., 1'-6¾" Min.)

Varies (3'-1½" Max. spacing)
 (Typ. along Approach Slab)

Post Spacing Scheme 3 as measured to ϕ Post Bolts

2 ~ Variable Spaces
 (3'-1½" Max., 1'-6¾" Min.)

Varies (2'-1" Max. spacing)
 (Typ. along Approach Slab)

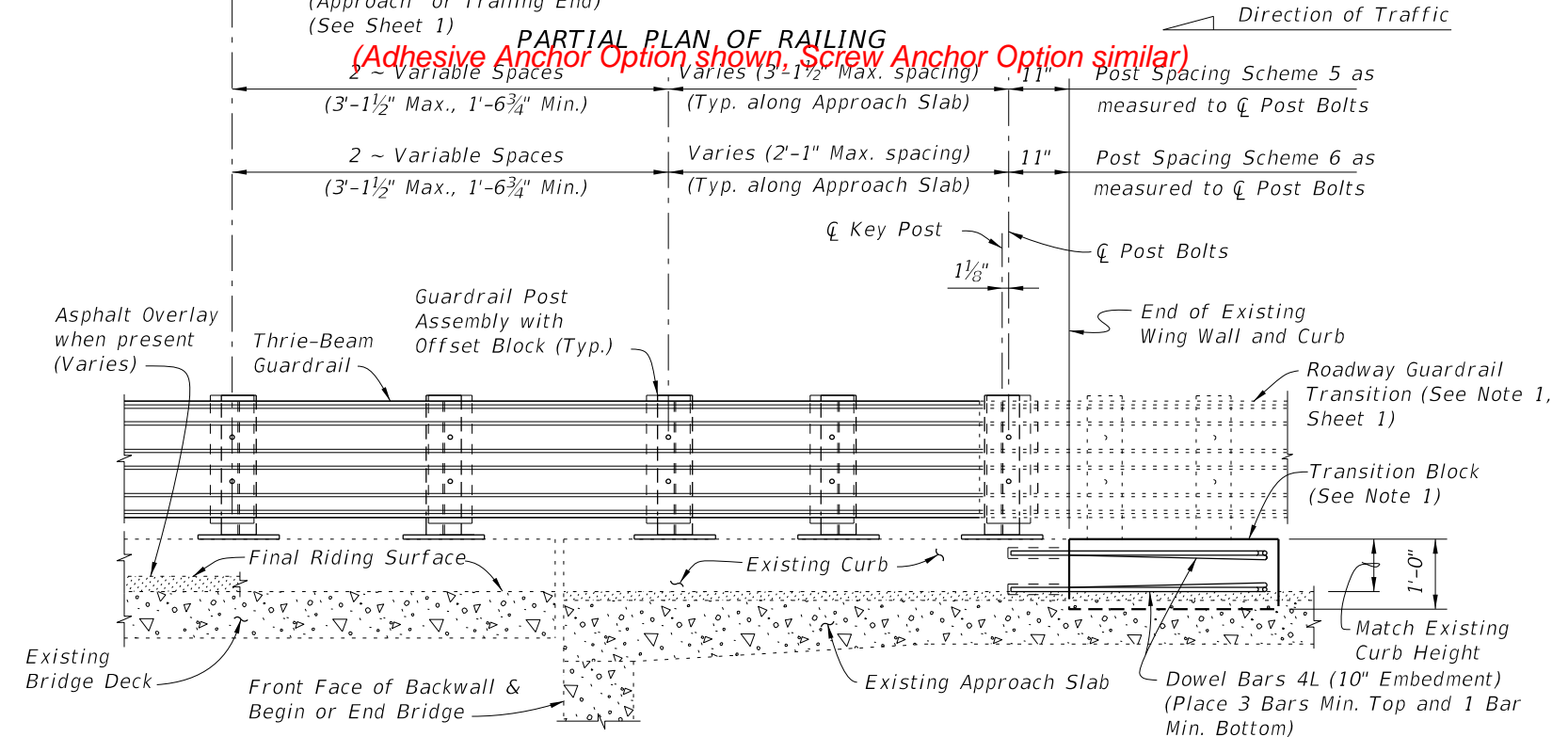
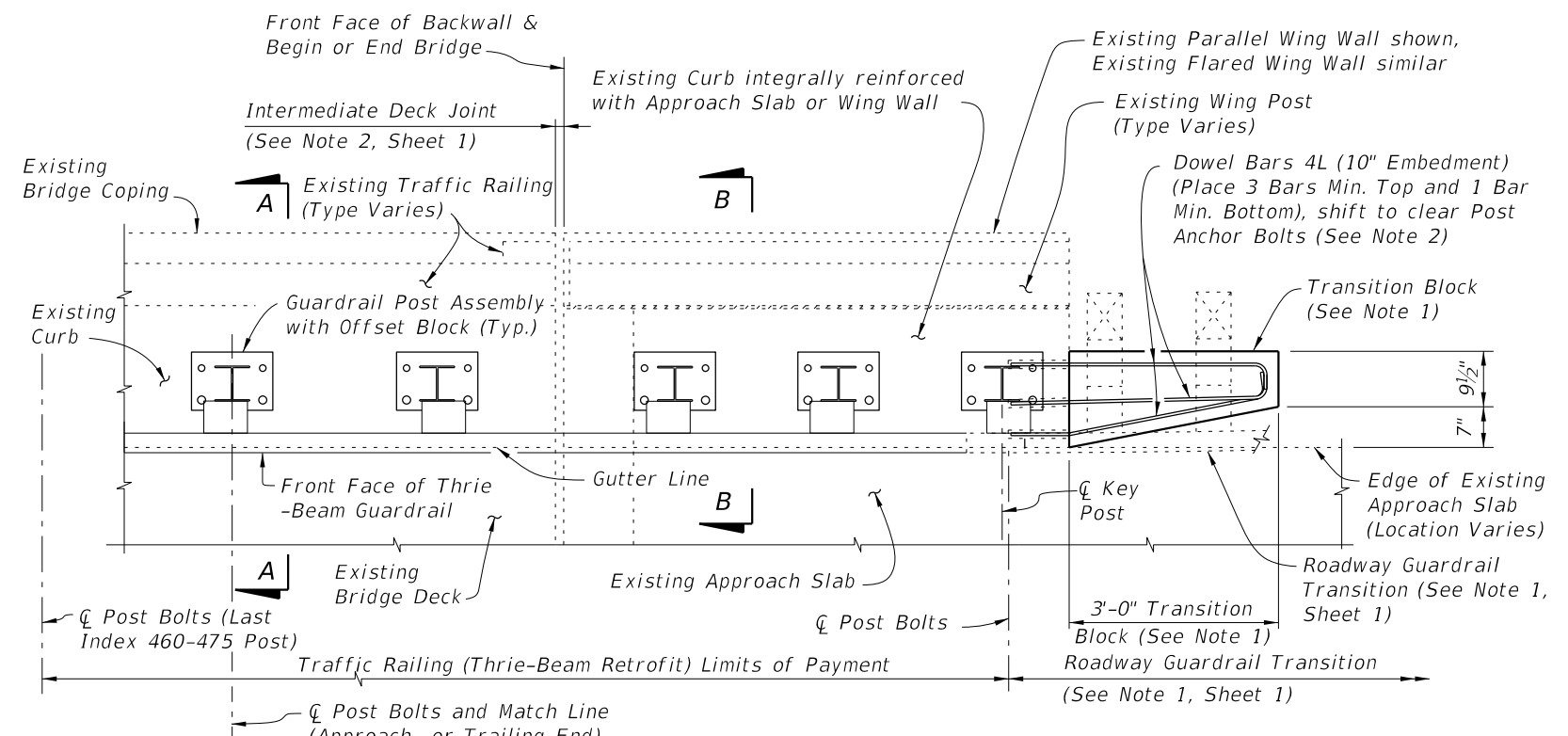
Post Spacing Scheme 4 as measured to ϕ Post Bolts

ϕ Post Bolts and Match Line (Approach or Trailing End) (See Sheet 1)

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
(Adhesive Anchor Option shown, Screw Anchor Option similar)

2 ~ Variable Spaces
 (3'-1½" Max., 1'-6¾" Min.)

Varies (3'-1½" Max. spacing)
 (Typ. along Approach Slab)

Post Spacing Scheme 5 as measured to ϕ Post Bolts

2 ~ Variable Spaces
 (3'-1½" Max., 1'-6¾" Min.)

Varies (2'-1" Max. spacing)
 (Typ. along Approach Slab)

Post Spacing Scheme 6 as measured to ϕ Post Bolts

ϕ Post Bolts and Match Line (Approach or Trailing End) (See Sheet 1)

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

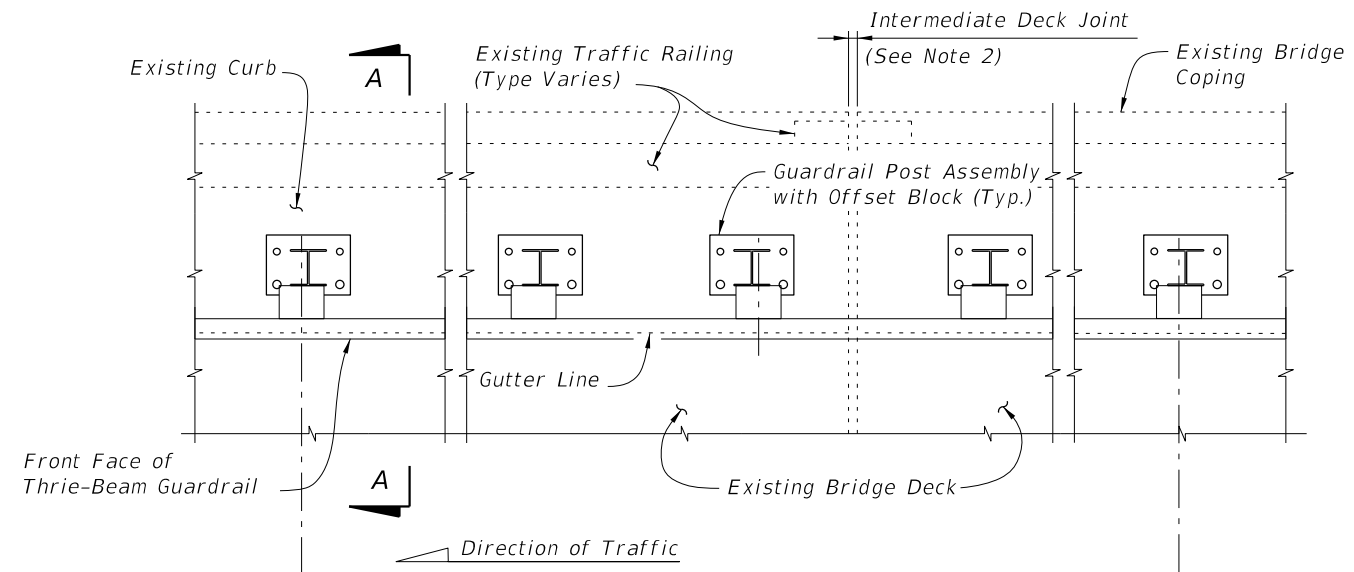
SCHEMES 5 AND 6 NOTES:

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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01/01/08 11/01/24	



PARTIAL PLAN OF RAILING
(Adhesive Anchor Option shown, Screw Anchor Option similar)

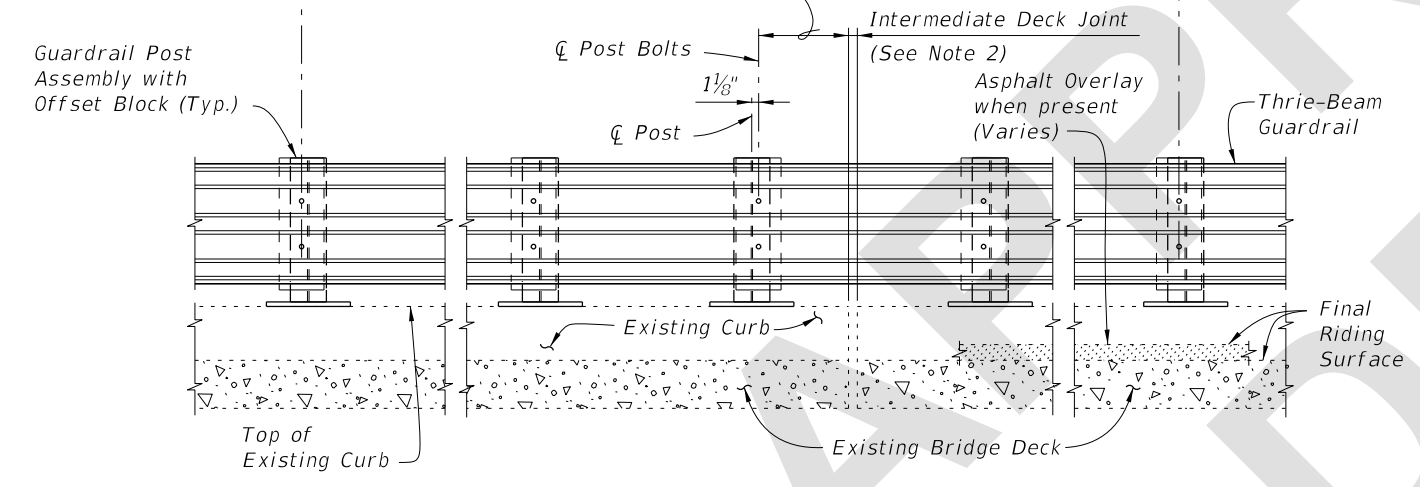
- NOTES:**
1. On approach end provide Index 536-002 (as shown) or other site specific treatment, see Roadway Plans. For treatment of trailing end see Roadway Plans.
 2. Actual joint dimension and orientation vary. For Intermediate Deck Joints use the Modified Post Spacing at Intermediate Deck Joints 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.

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

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

3'-1 1/2" spacing (Typ. except as noted along Bridge, see Note 2)

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




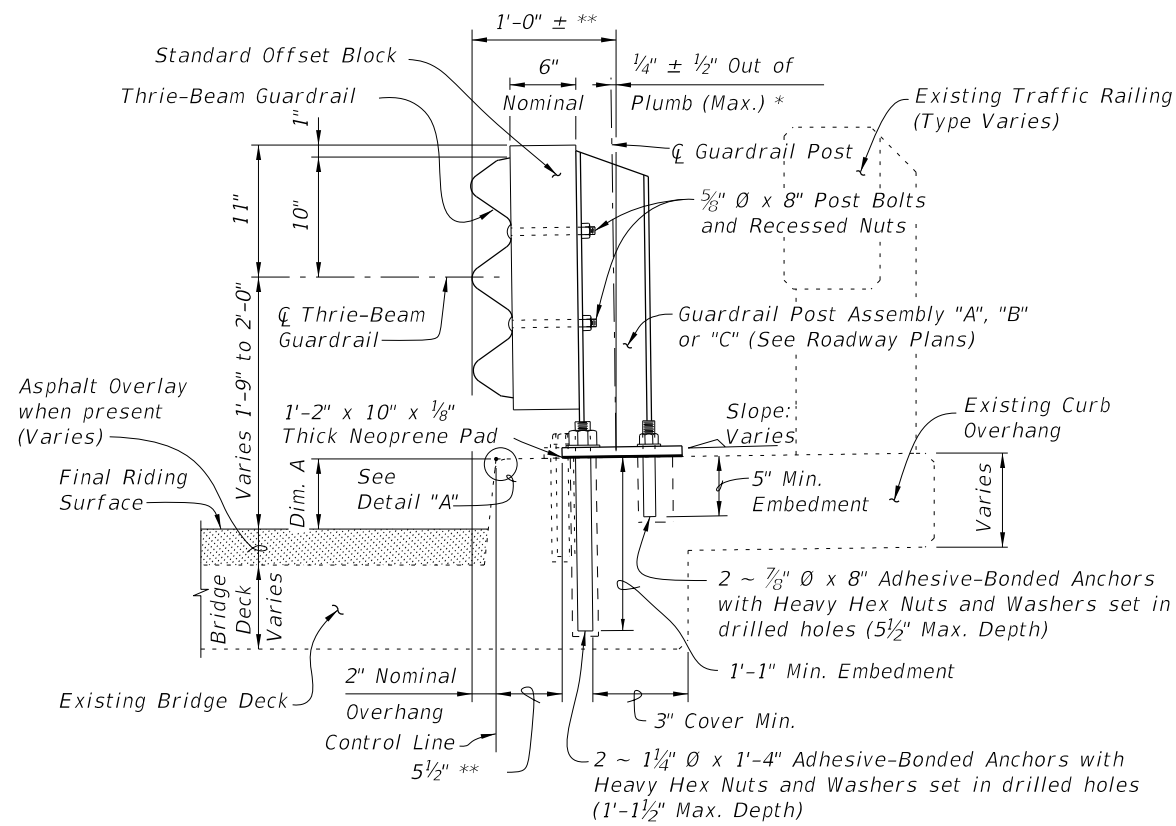
PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Traffic Railing not shown for clarity)

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

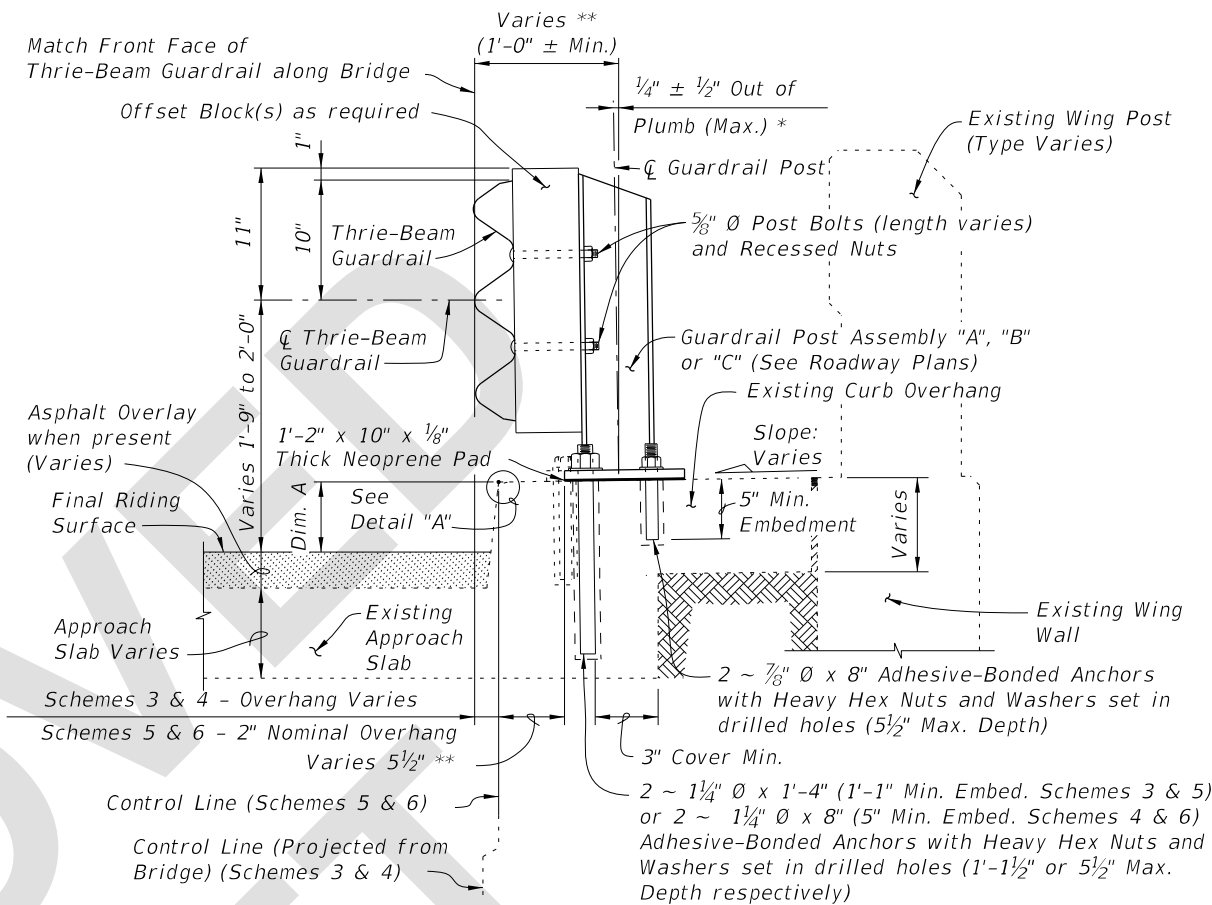
===== TYPICAL TREATMENT OF RAILING ALONG BRIDGE =====

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LAST REVISION 11/01/24	REVISION	DESCRIPTION:	 FY 2025-26 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE CURB TYPE 1	INDEX 460-475	SHEET 1 of 4
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SECTION A-A
TYPICAL SECTION THRU RAILING ON BRIDGE DECK
 (Adhesive Anchor Option shown solid, Screw Anchor Option shown dashed)

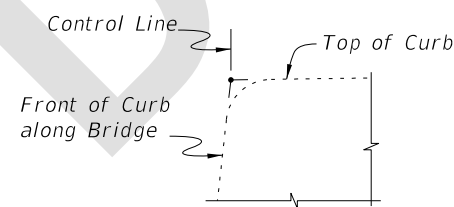


SECTION B-B
TYPICAL SECTION THRU RAILING ALONG APPROACH SLAB
 (SCHEMES 5 AND 6 SHOWN, SCHEMES 3 AND 4 SIMILAR)
 (Adhesive Anchor Option shown solid, Screw Anchor Option shown dashed)

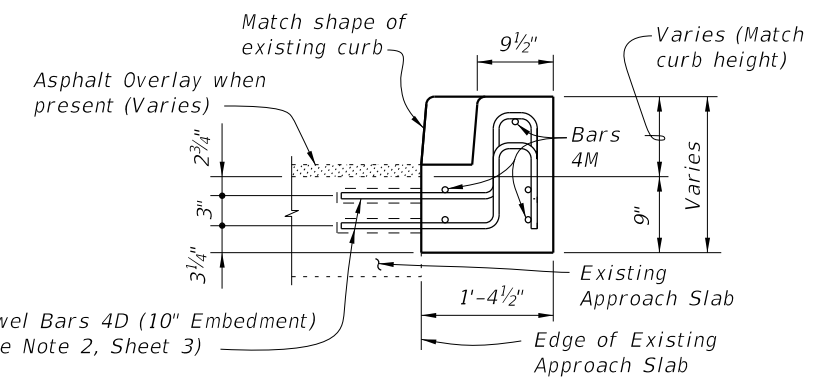
BILL OF REINFORCING STEEL			BAR BENDING DIAGRAMS	
MARK	SIZE	LENGTH		
D	4	3'-7"		
L	4	4'-1"		
M	4	2'-8"		

NOTE: All bar dimensions are out to out.

* Shim with washers around Anchors as required to maintain tolerance.
 ** Offset may vary ± 1 " for Adhesive-Bonded Anchors to clear existing curb reinforcing and provide minimum edge clearance. Offset shall be consistent along length of bridge.



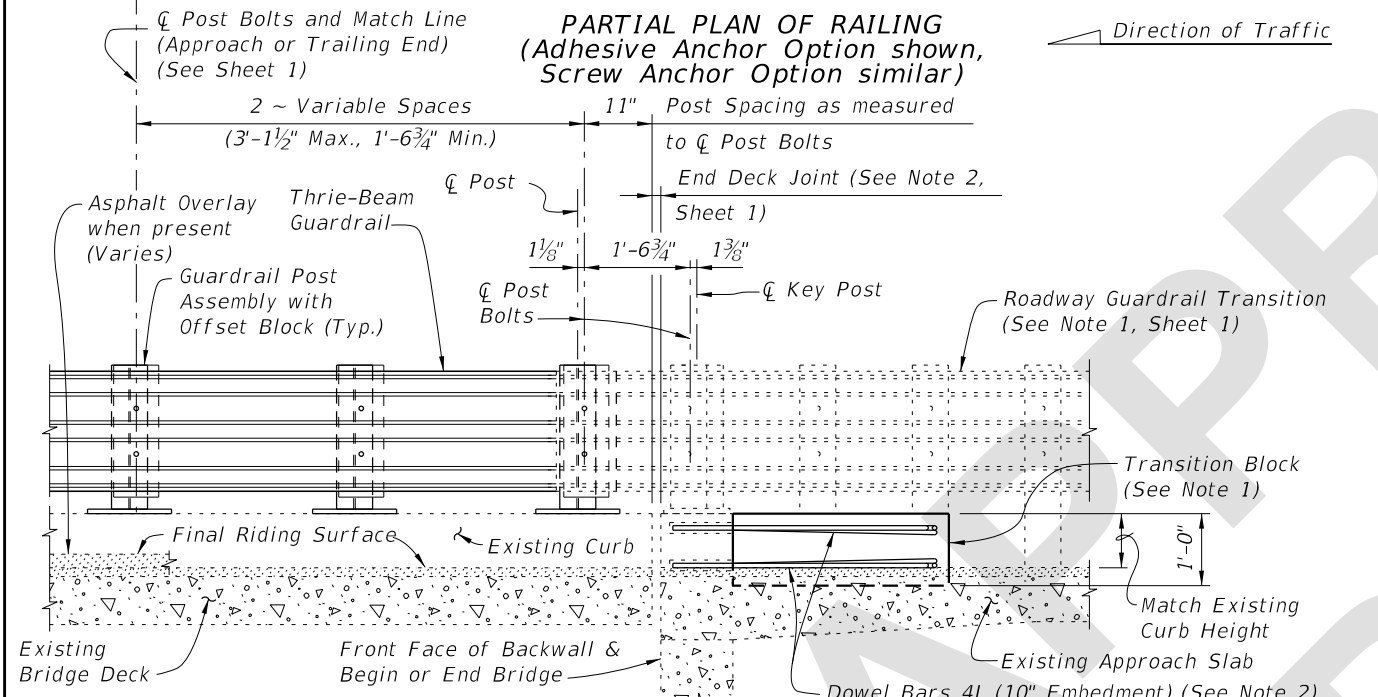
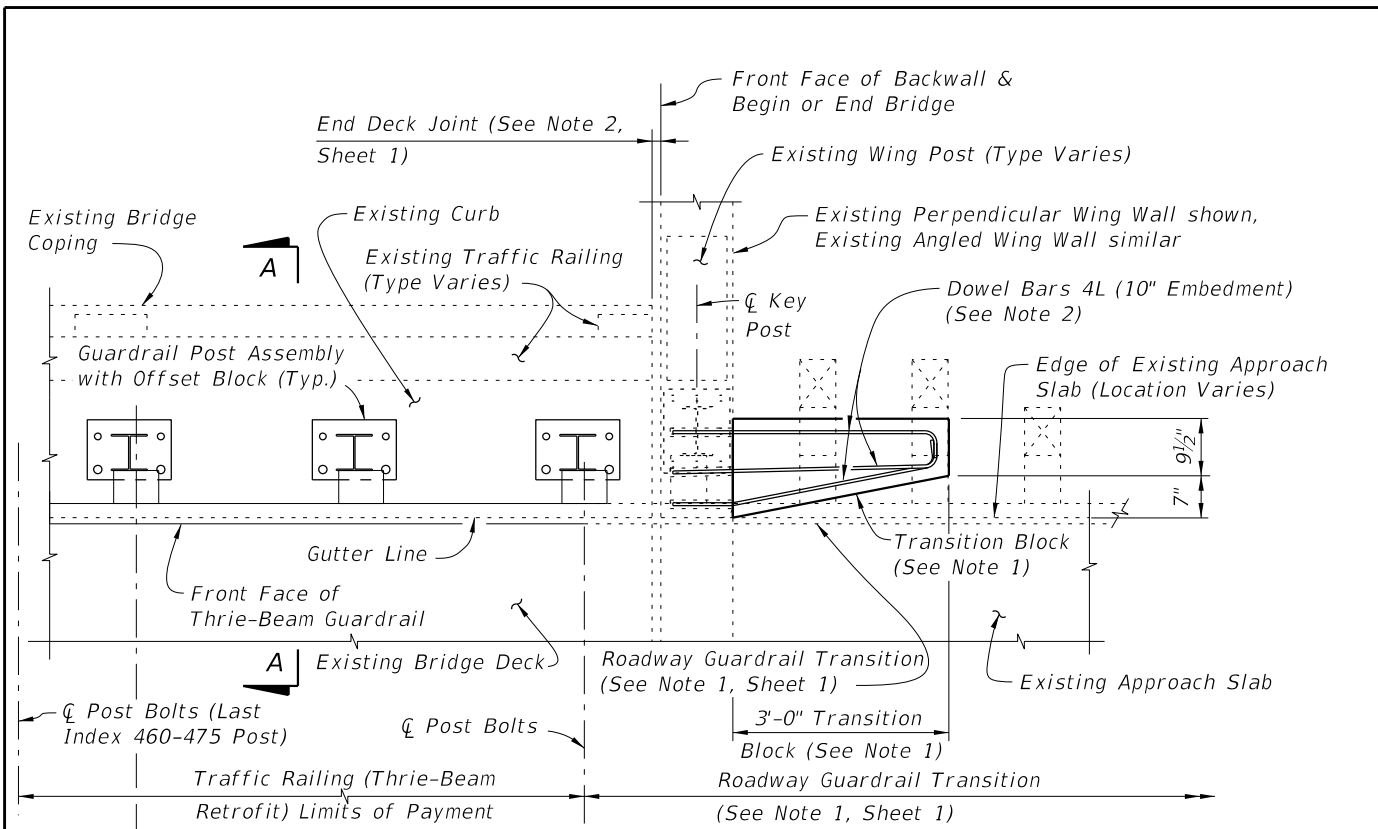
DETAIL "A"



VIEW C-C

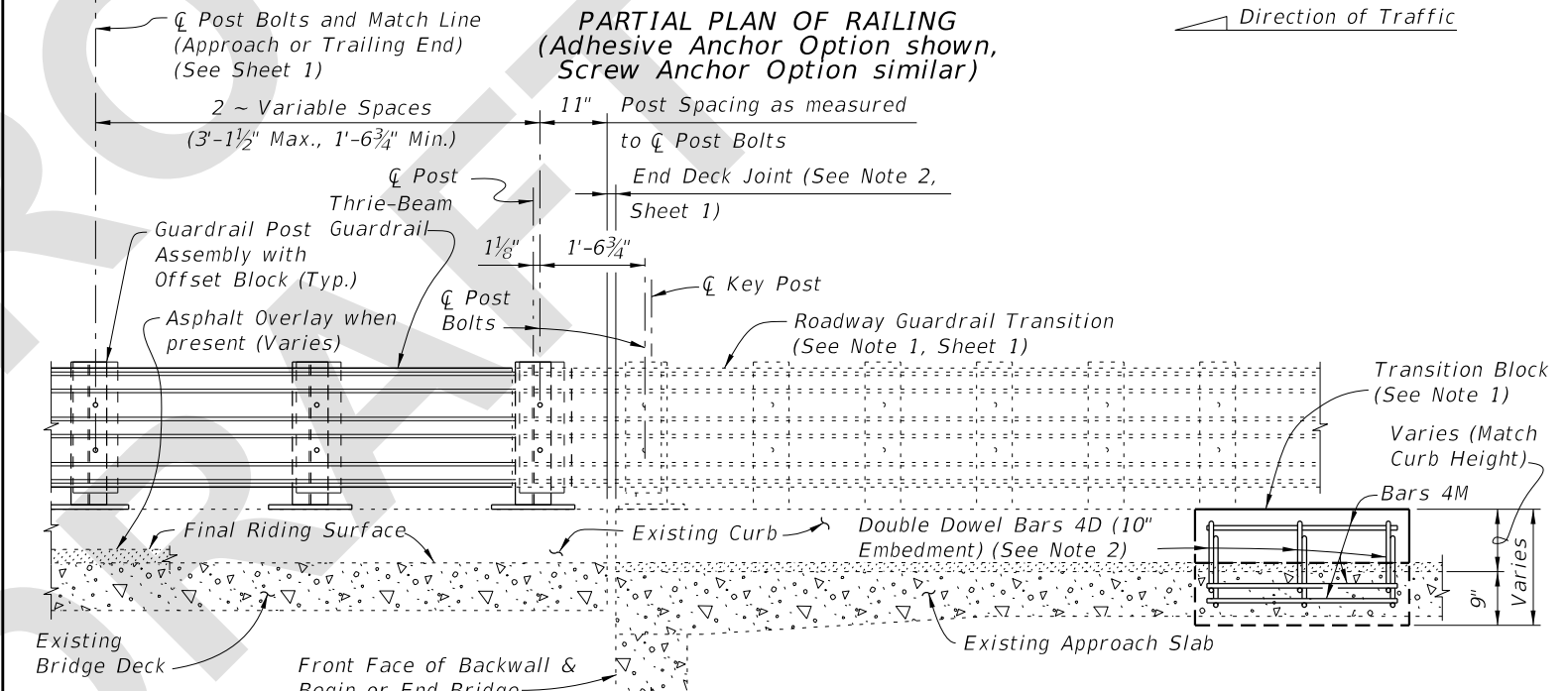
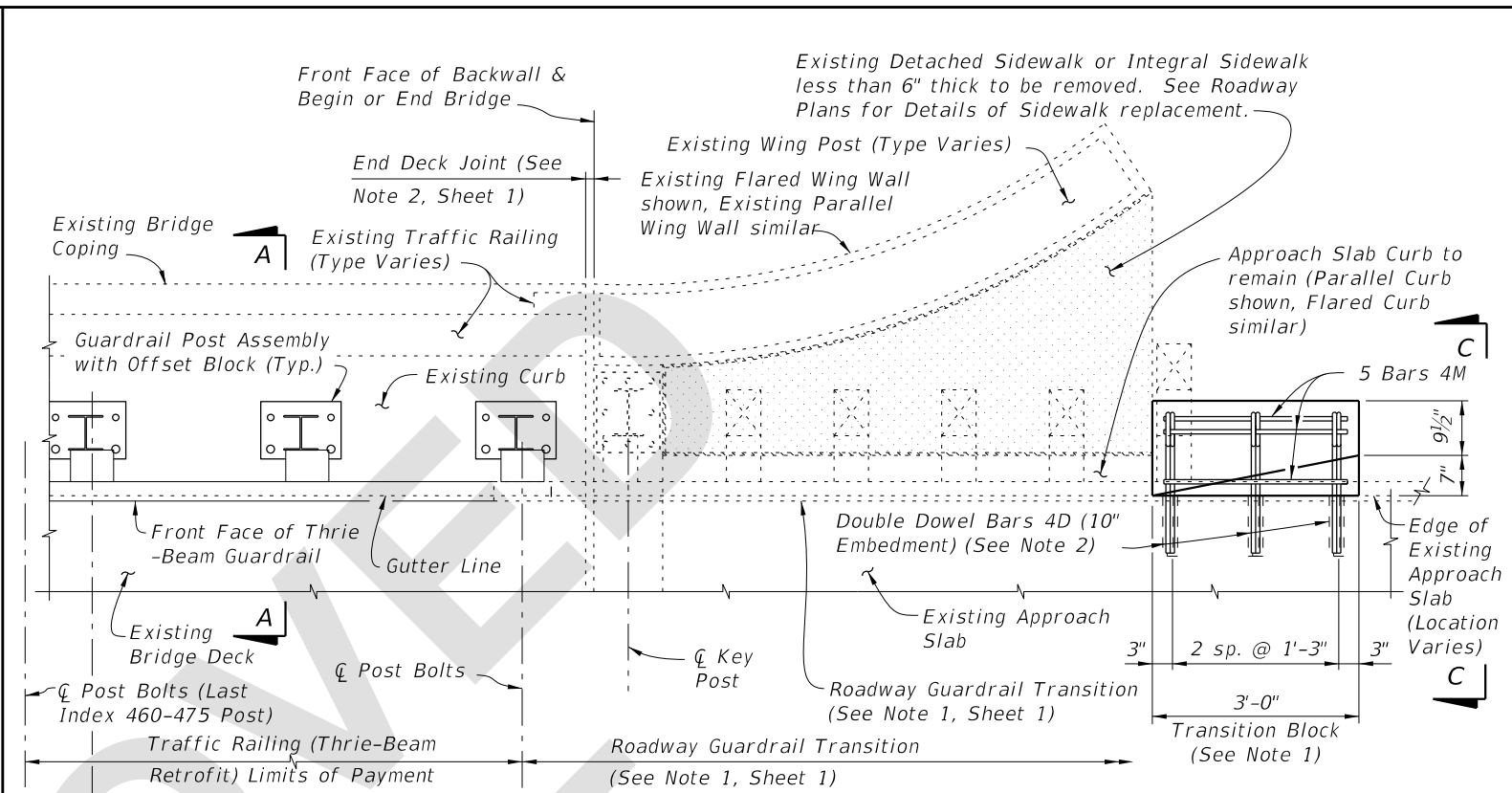
CROSS REFERENCES:
 For location of Section A-A see Sheet 1, 3 & 4.
 For location of Section B-B see Sheet 4.
 For location of View C-C see Sheet 3.
 For application of Dim. A see Post Dimension Table on Index 460-470, Sheet 3.

5/13/2024 10:00:27 AM



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.

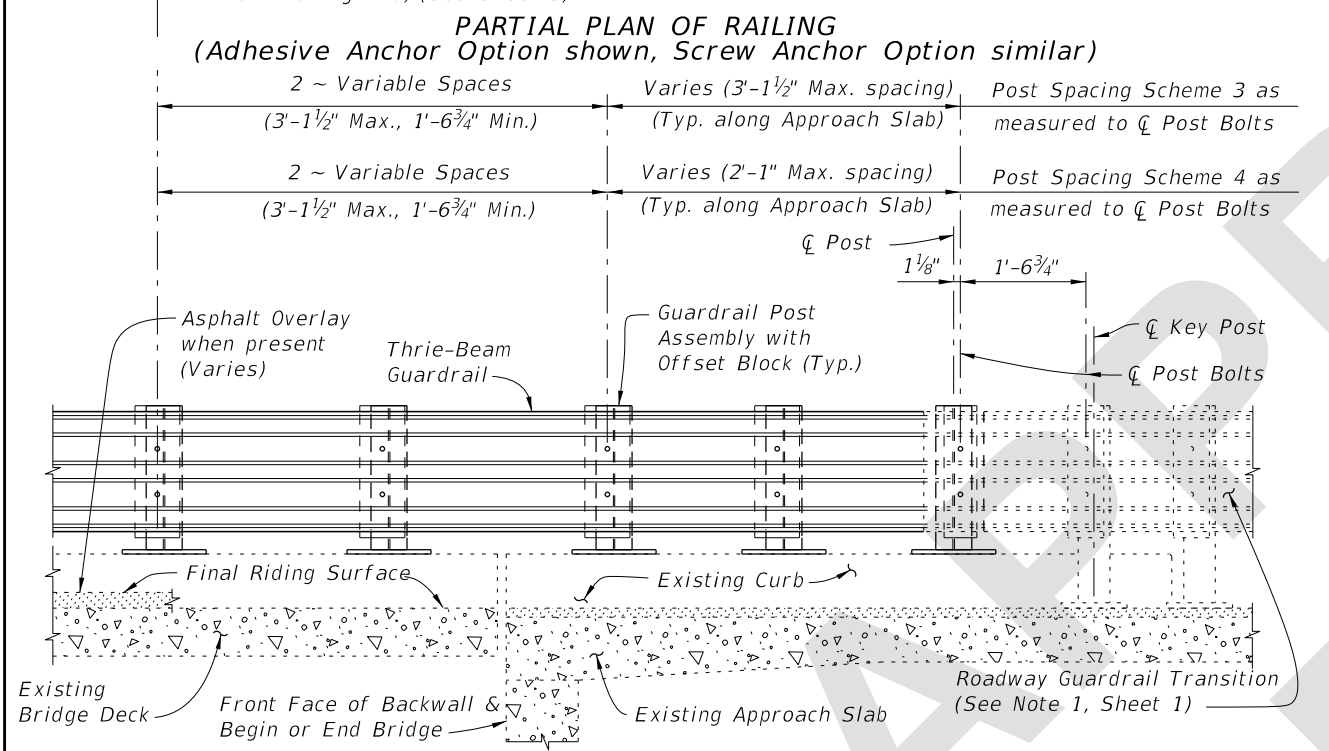
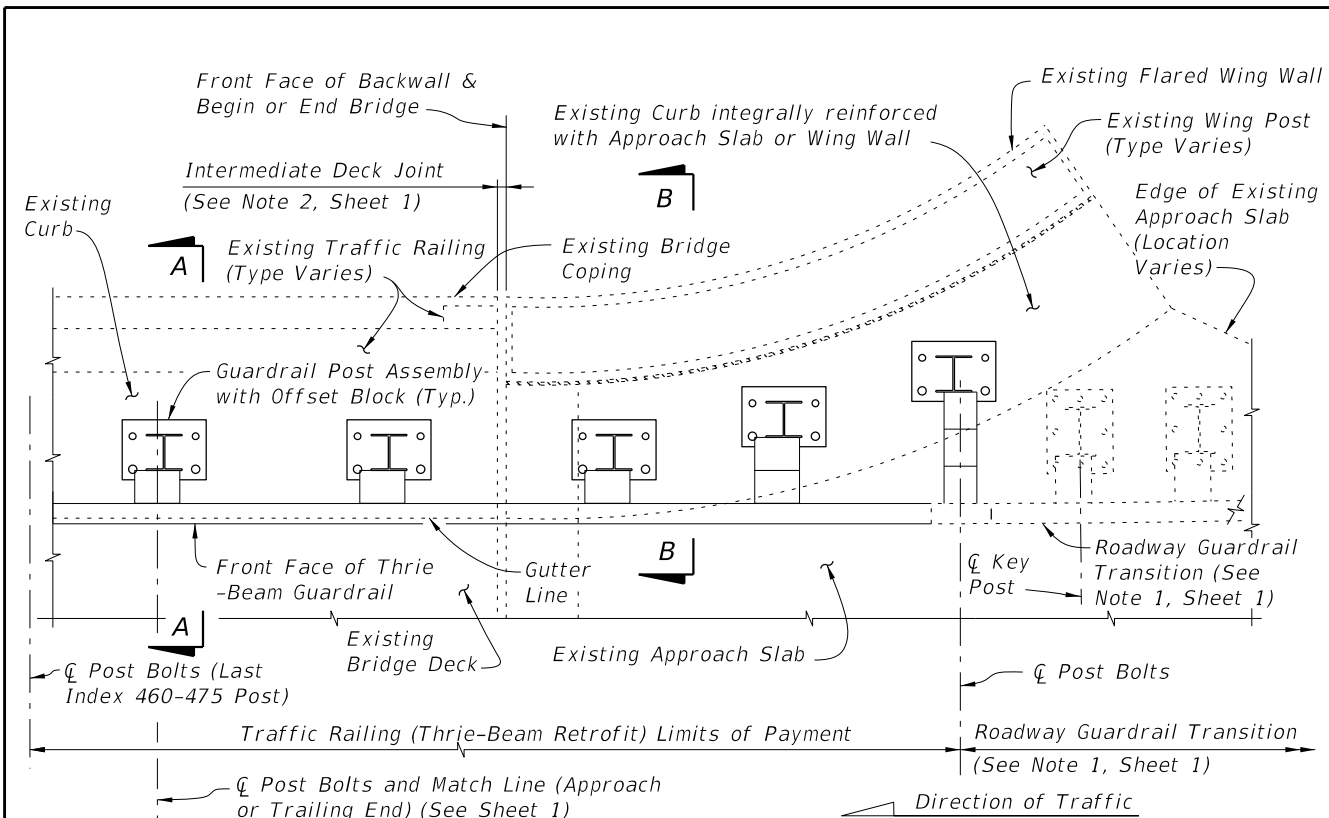


PARTIAL ELEVATION OF INSIDE FACE OF RAILING
 (Existing Wing Post and Traffic Railing not shown for clarity)
SCHEME 2
RAILING END TREATMENT FOR PARALLEL OR FLARED CURBS WITH DETACHED SIDEWALKS OR INTEGRAL SIDEWALKS LESS THAN 6" THICK

- 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.

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LAST REVISION	11/01/24	DESCRIPTION:	 FY 2025-26 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE CURB TYPE 1	INDEX	SHEET
					460-475	3 of 4



PARTIAL PLAN OF RAILING
(Adhesive Anchor Option shown, Screw Anchor Option similar)

2 ~ Variable Spaces
(3'-1 1/2" Max., 1'-6 3/4" Min.)

Varies (3'-1 1/2" Max. spacing)
(Typ. along Approach Slab)

Post Spacing Scheme 3 as measured to ϕ Post Bolts

2 ~ Variable Spaces
(3'-1 1/2" Max., 1'-6 3/4" Min.)

Varies (2'-1" Max. spacing)
(Typ. along Approach Slab)

Post Spacing Scheme 4 as measured to ϕ Post Bolts

ϕ Post 1 1/8" 1'-6 3/4"

ϕ Key Post

ϕ Post Bolts

Asphalt Overlay when present (Varies)

Thrie-Beam Guardrail

Guardrail Post Assembly with Offset Block (Typ.)

Final Riding Surface

Existing Curb

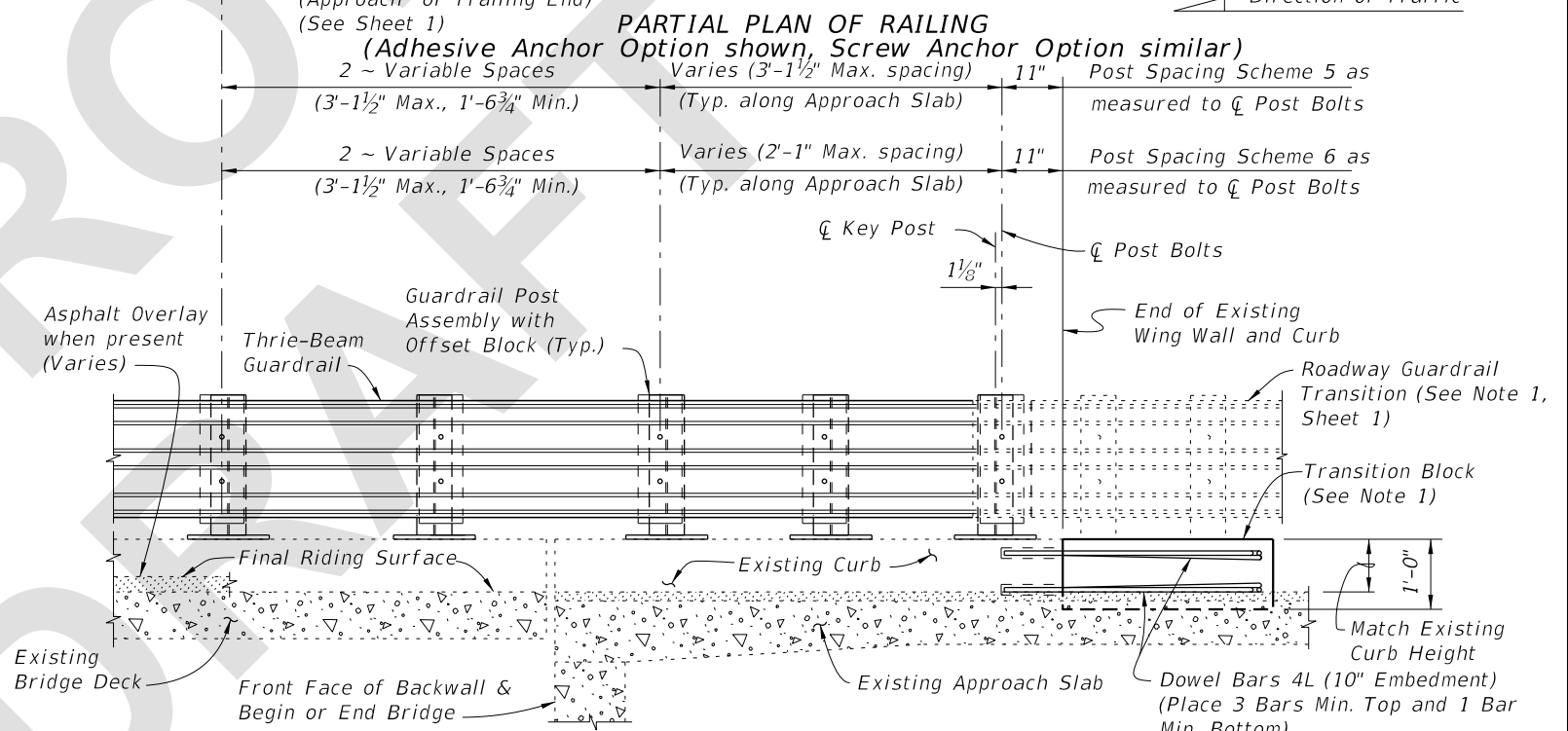
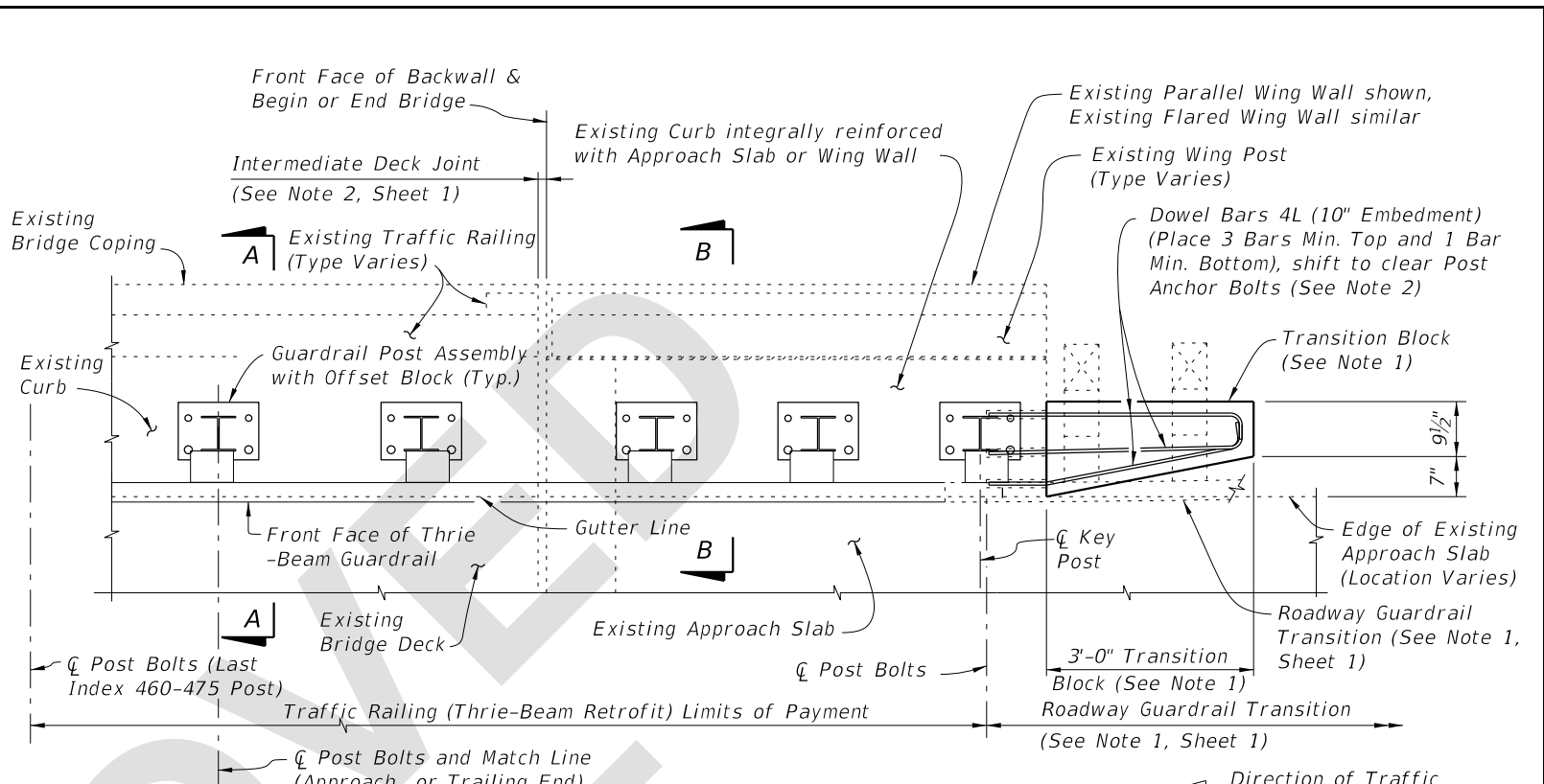
Existing Bridge Deck

Front Face of Backwall & Begin or End Bridge

Existing Approach Slab

Roadway Guardrail Transition (See Note 1, Sheet 1)

SCHEMES 3 AND 4
RAILING END TREATMENT FOR FLARED INTEGRAL CURBS



PARTIAL PLAN OF RAILING
(Adhesive Anchor Option shown, Screw Anchor Option similar)

2 ~ Variable Spaces
(3'-1 1/2" Max., 1'-6 3/4" Min.)

Varies (3'-1 1/2" Max. spacing)
(Typ. along Approach Slab)

Post Spacing Scheme 5 as measured to ϕ Post Bolts

2 ~ Variable Spaces
(3'-1 1/2" Max., 1'-6 3/4" Min.)

Varies (2'-1" Max. spacing)
(Typ. along Approach Slab)

Post Spacing Scheme 6 as measured to ϕ Post Bolts

ϕ Key Post 11" 11"

ϕ Post Bolts

Asphalt Overlay when present (Varies)

Thrie-Beam Guardrail

Guardrail Post Assembly with Offset Block (Typ.)

Final Riding Surface

Existing Curb

Existing Bridge Deck

Front Face of Backwall & Begin or End Bridge

Existing Approach Slab

Roadway Guardrail Transition (See Note 1, Sheet 1)

Transition Block (See Note 1)

Match Existing Curb Height 1'-0"


Dowel Bars 4L (10" Embedment)
(Place 3 Bars Min. Top and 1 Bar Min. Bottom)

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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LAST REVISION 11/01/24	DESCRIPTION:	 FY 2025-26 STANDARD PLANS	TRAFFIC RAILING - (THRIE-BEAM RETROFIT) WIDE CURB TYPE 1	INDEX 460-475	SHEET 4 of 4
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