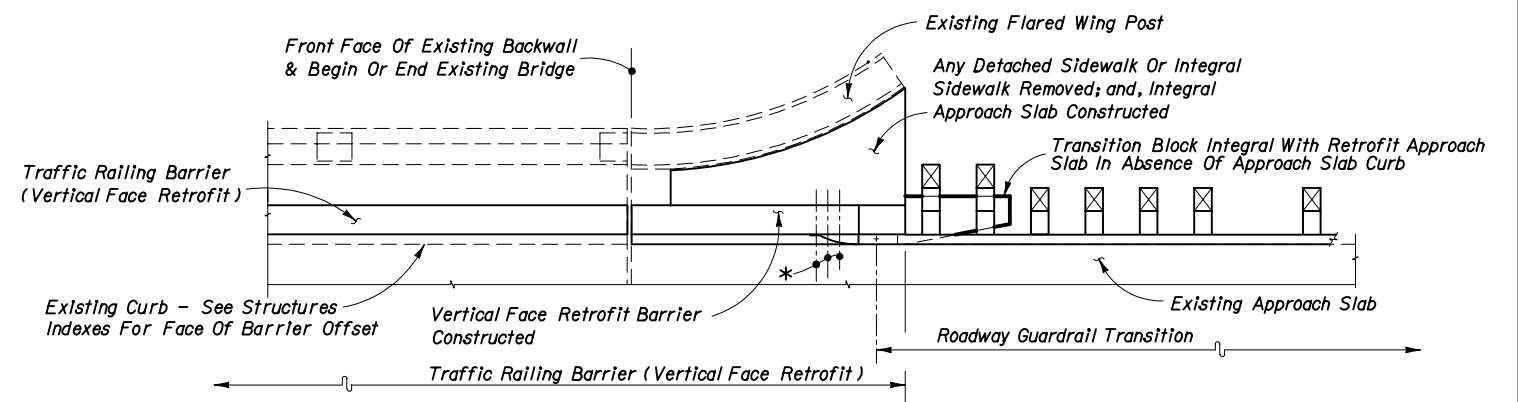
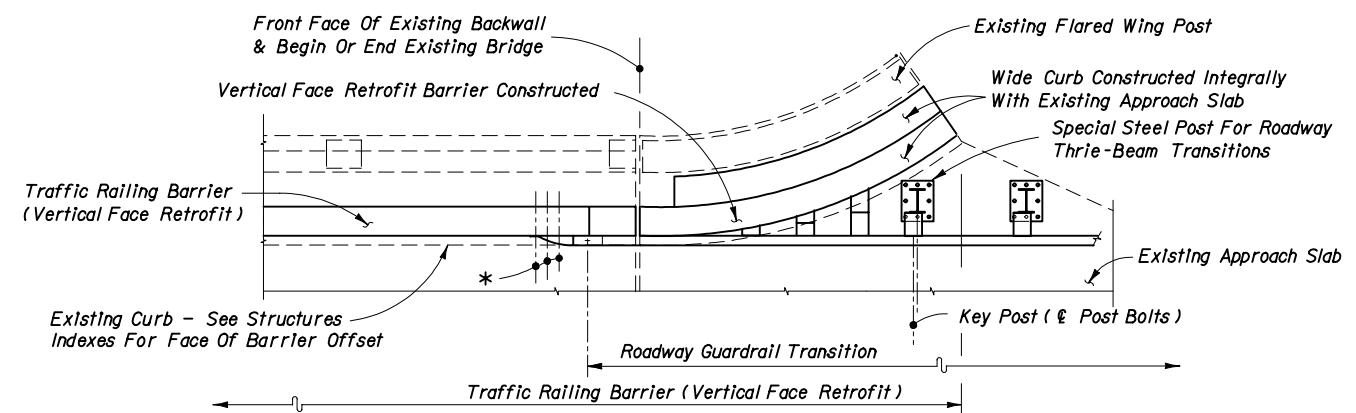


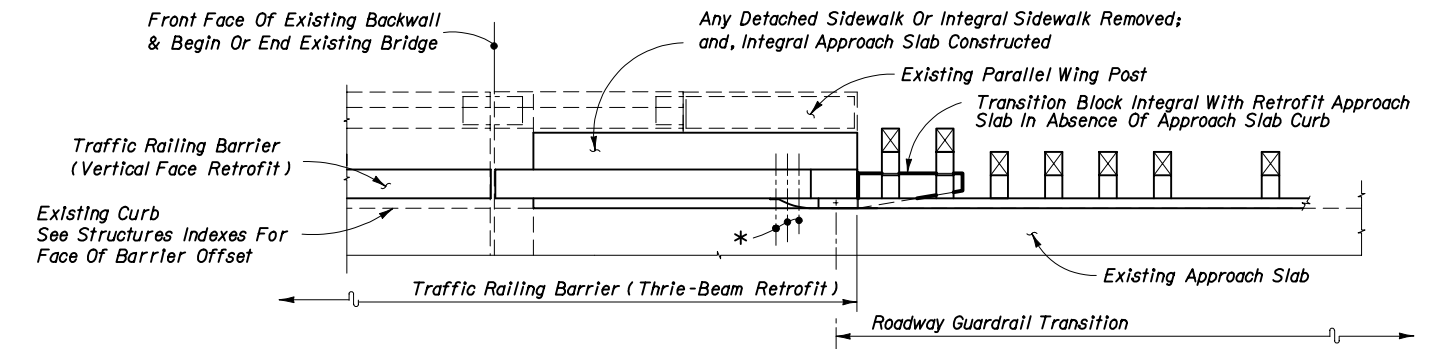
SEE STRUCTURES INDEX NO. 784 - SCHEME 1



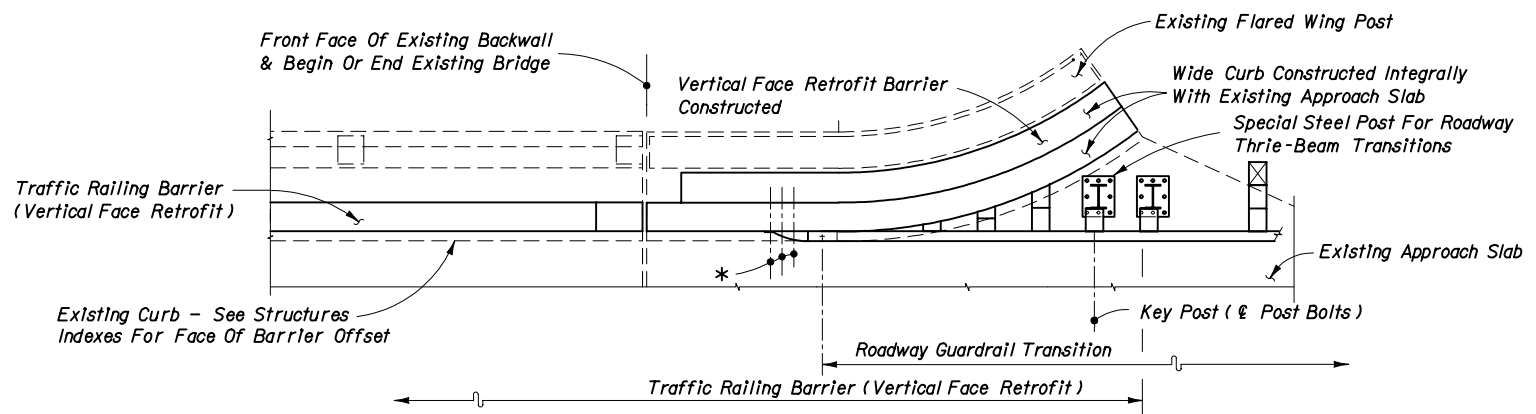
SEE STRUCTURES INDEX NO. 784 - SCHEME 3



SEE STRUCTURES INDEX NO. 784 - SCHEME 2



SEE STRUCTURES INDEX NO. 784 - SCHEME 3

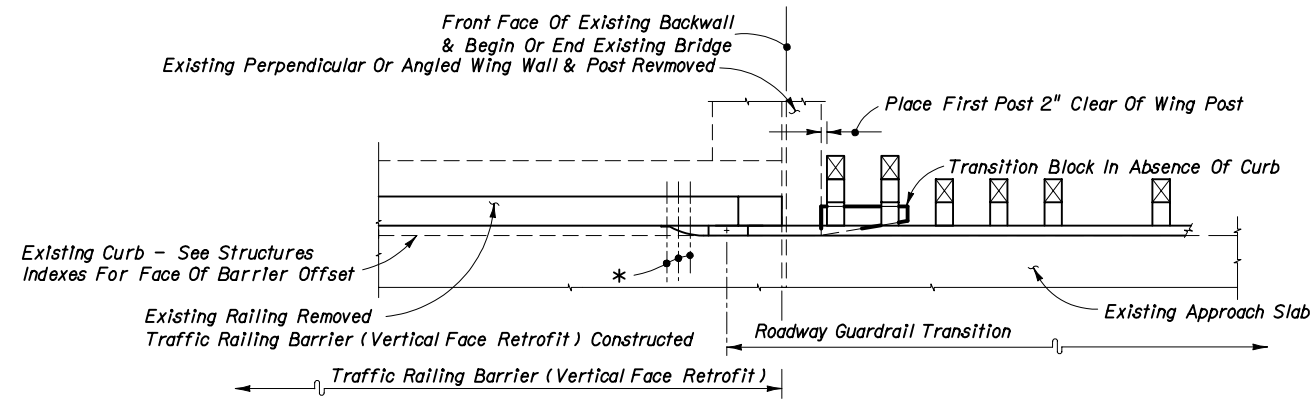


SEE STRUCTURES INDEX NO. 784 - SCHEME 2

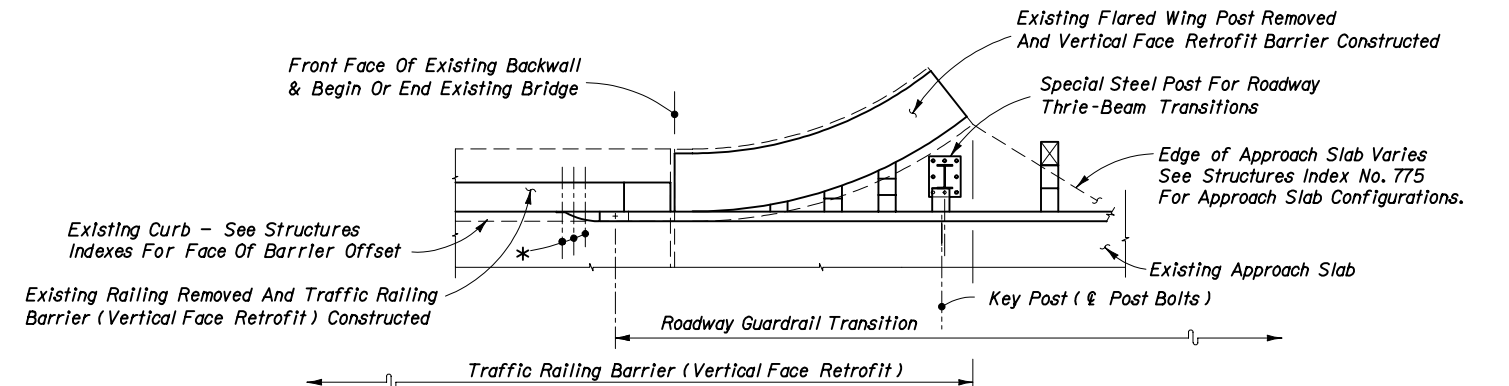
Note:
 *21"x12"x 5/8" Thrie-Beam Terminal Connector Plate (Back-Up Plate), And 7/8"Ø x 12" Long
 HS Hex Bolts And Nuts (5 Req'd.) With 2 1/4" OD Plain Round Washers Under Heads And Nuts

PARTIAL PLAN VIEWS OF TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

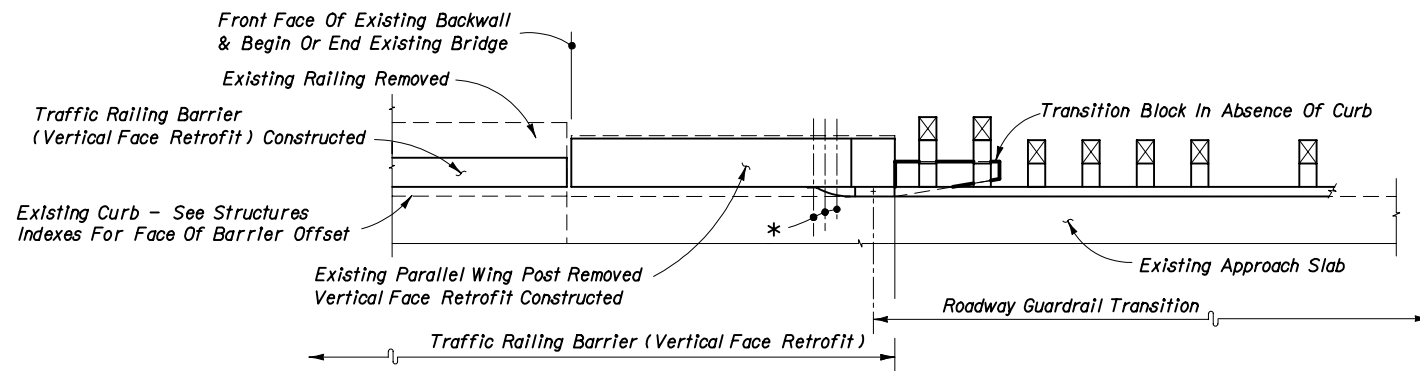
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|---|---------|-------|--|------------------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | | |
| GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES | | | | |
| Designed By | JVG/CBE | 12/02 | Approved By <i>Lamar D. Mill</i> Roadway Design Engineer | |
| Drawn By | HSD/SBC | 12/02 | Revision | Sheet No. |
| Checked By | JVG/JAM | 12/02 | 04 | 14 of 26 |
| | | | | Index No. 402 |



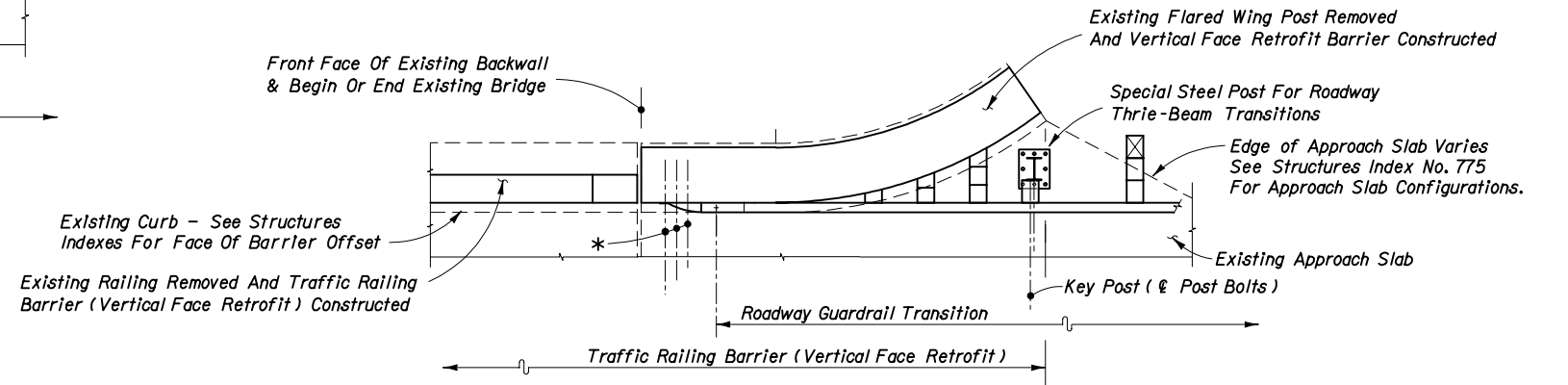
SEE STRUCTURES INDEX NO. 785 - SCHEME 1



SEE STRUCTURES INDEX NO. 785 - SCHEME 3



SEE STRUCTURES INDEX NO. 785 - SCHEME 2



SEE STRUCTURES INDEX NO. 785 - SCHEME 3


Note:

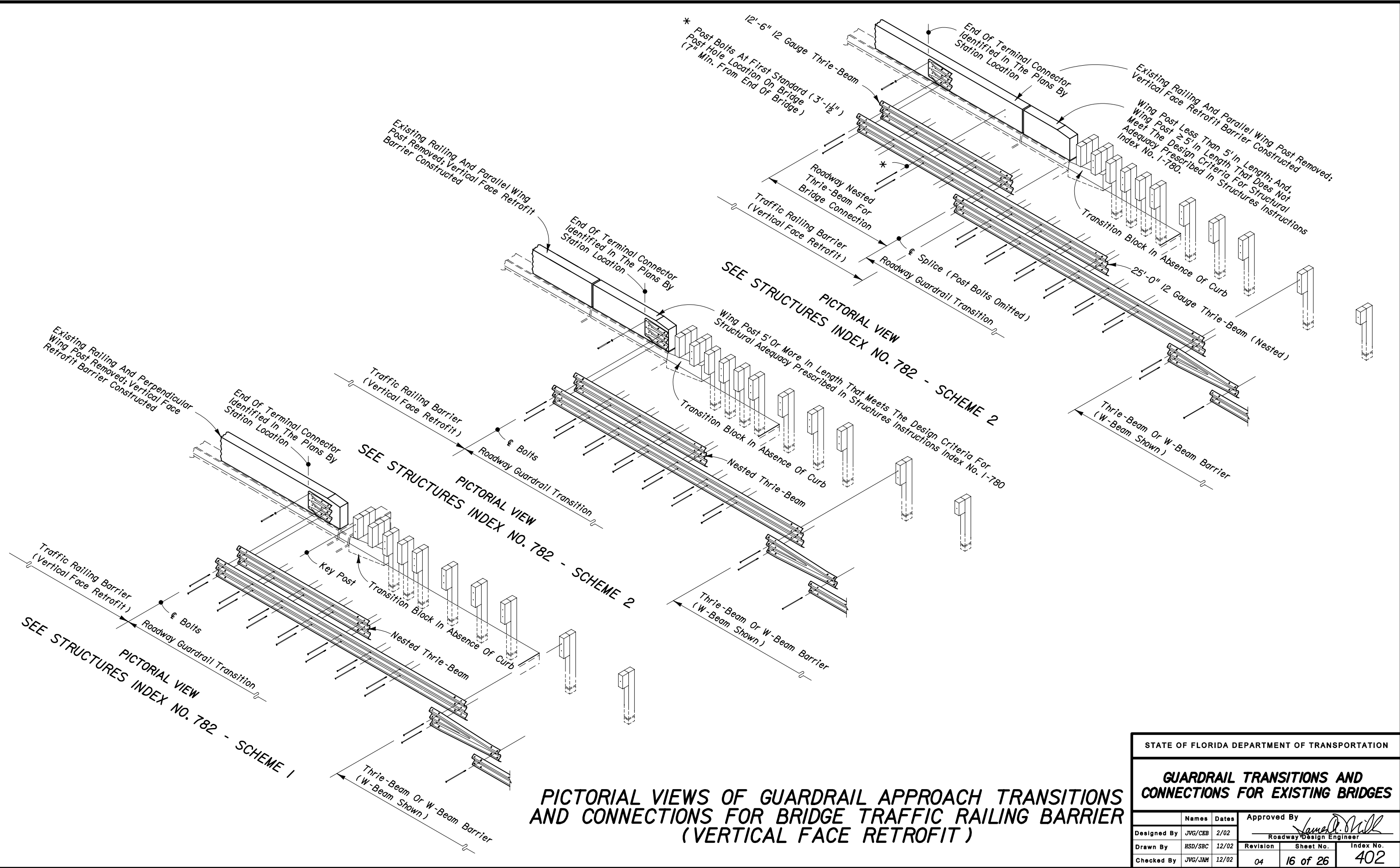
*2"x12"x 5/8" Thrie-Beam Terminal Connector Plate (Back-Up Plate), And 7/8" HS Hex Bolts And Nuts (12" Long For Scheme 1 And Length To Fit For Schemes 2 And 3) (5 Req.) With 2 1/4" OD Plain Round Washers Under Heads And Nuts

PARTIAL PLAN VIEWS OF TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

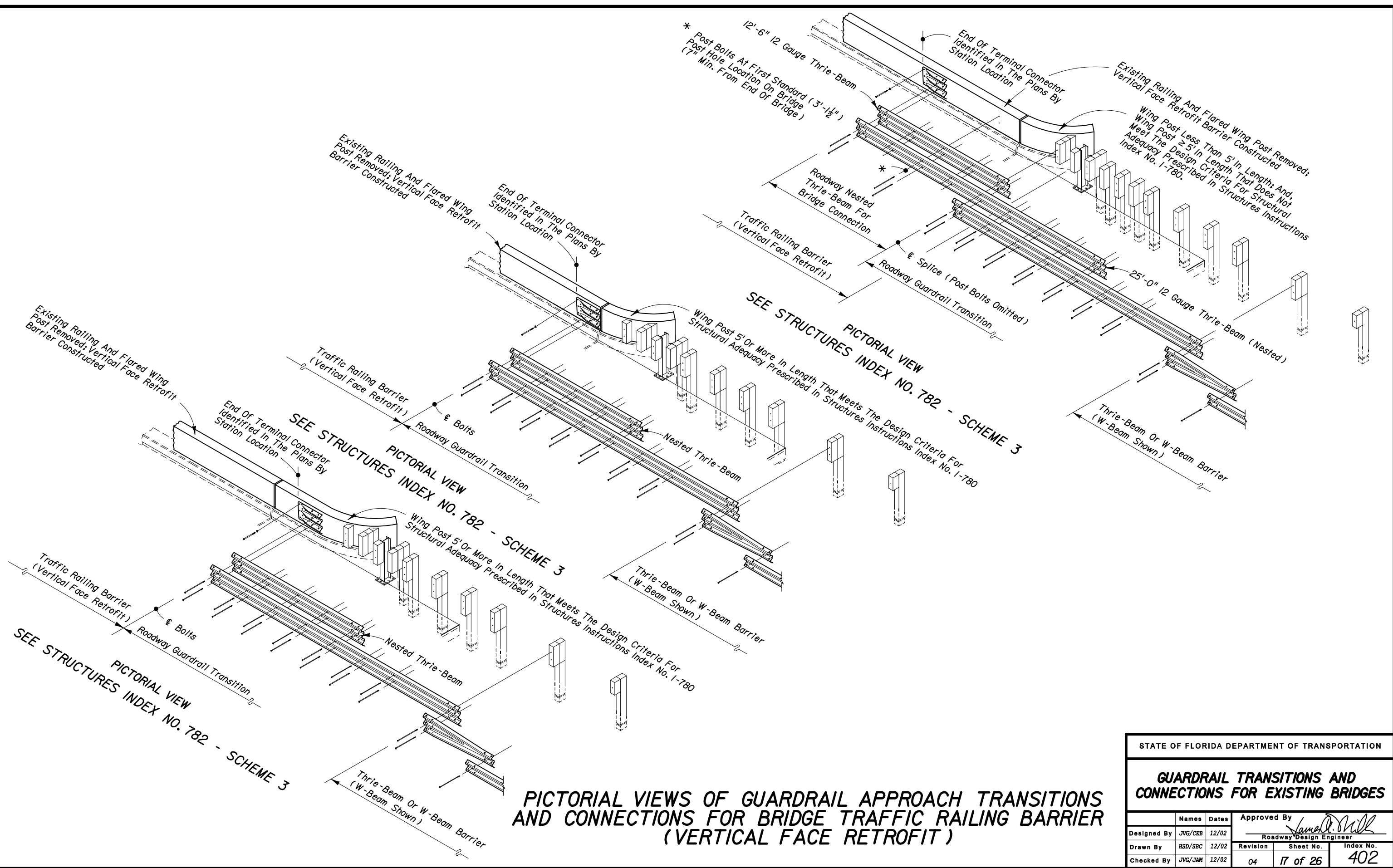
GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

| Names | | Dates | Approved By | | |
|-------------|---------|-------|---|-----------|-----------|
| Designed By | JVG/CEB | 12/02 |  Raymond D. Hill Roadway Design Engineer | | |
| Drawn By | HSD/SBC | 12/02 | | | |
| Checked By | JVG/JAM | 12/02 | Revision | Sheet No. | Index No. |
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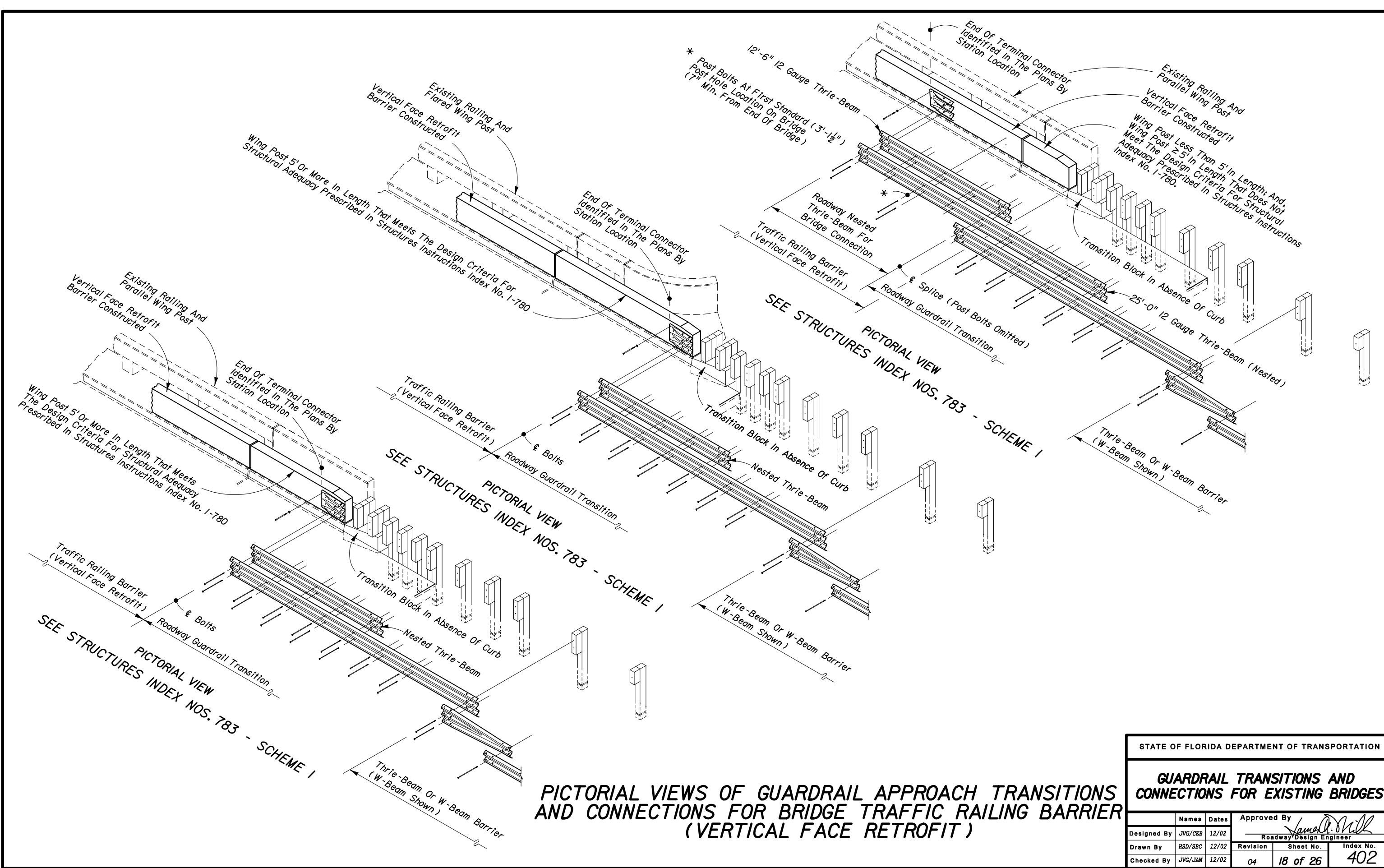
PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | | |
| GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES | | | | |
| Names | Dates | Approved By <i>Jamell D. Mill</i> | | |
| Designed By | JVG/CEB 2/02 | Roadway Design Engineer | | |
| Drawn By | HSD/SBC 12/02 | Revision | Sheet No. | Index No. |
| Checked By | JVG/JAM 12/02 | 04 | 16 of 26 | 402 |



PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)


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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | | |
| GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES | | | | |
| Names | Dates | Approved By <i>Jamuel D. Mill</i> | | |
| Designed By JVG/CGB | 12/02 | Roadway Design Engineer | | |
| Drawn By HSD/SBC | 12/02 | Revision | Sheet No. | Index No. |
| Checked By JVG/JAM | 12/02 | 04 | 17 of 26 | 402 |

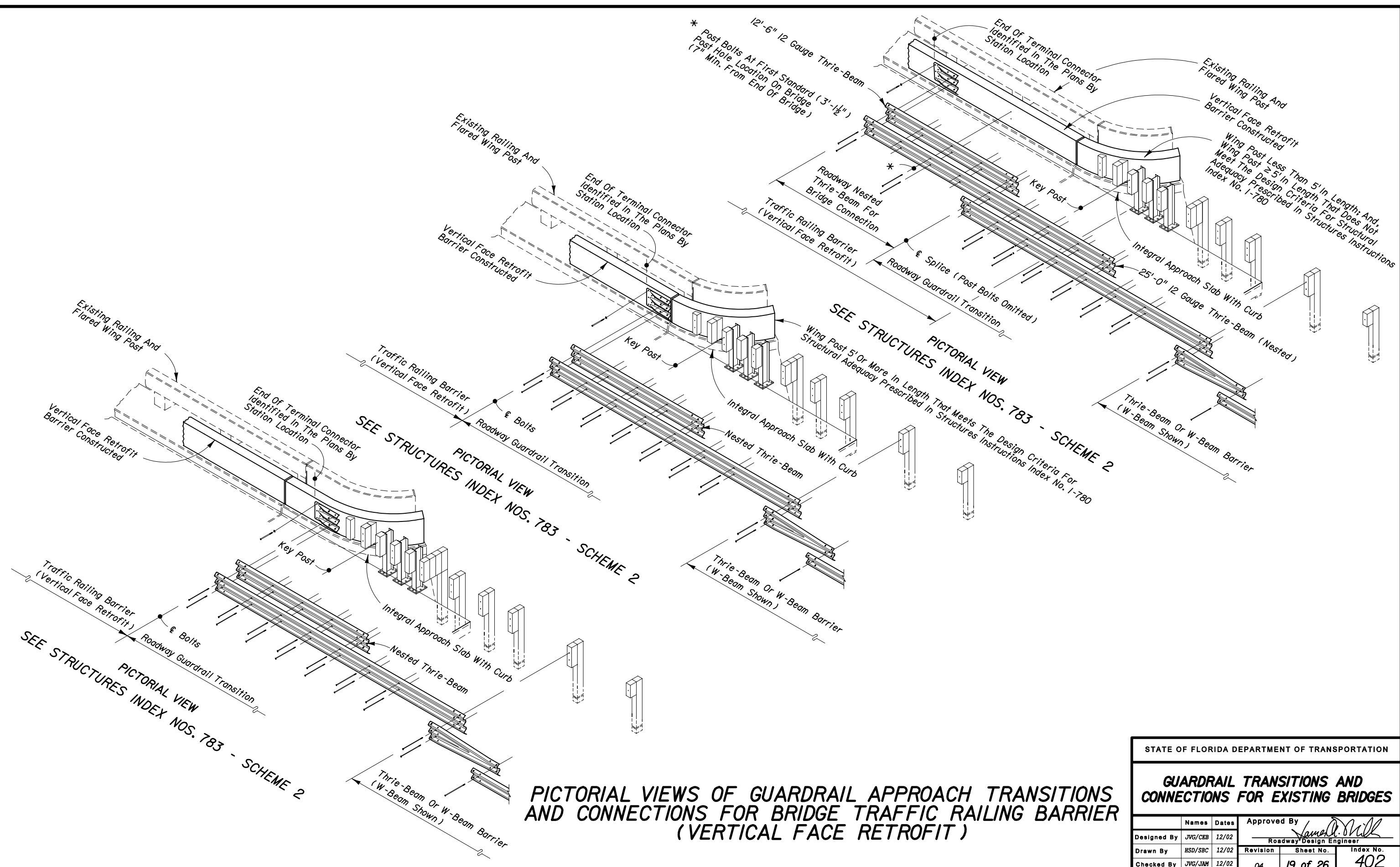


PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

| Names | Dates | Approved By | | |
|-------------|---------------|--|-----------|-----------|
| Designed By | JVG/CGB 12/02 |  Roadway Design Engineer | | |
| Drawn By | HSD/SBC 12/02 | | | |
| Checked By | JVG/JAM 12/02 | Revision | Sheet No. | Index No. |
| | | 04 | 18 of 26 | 402 |

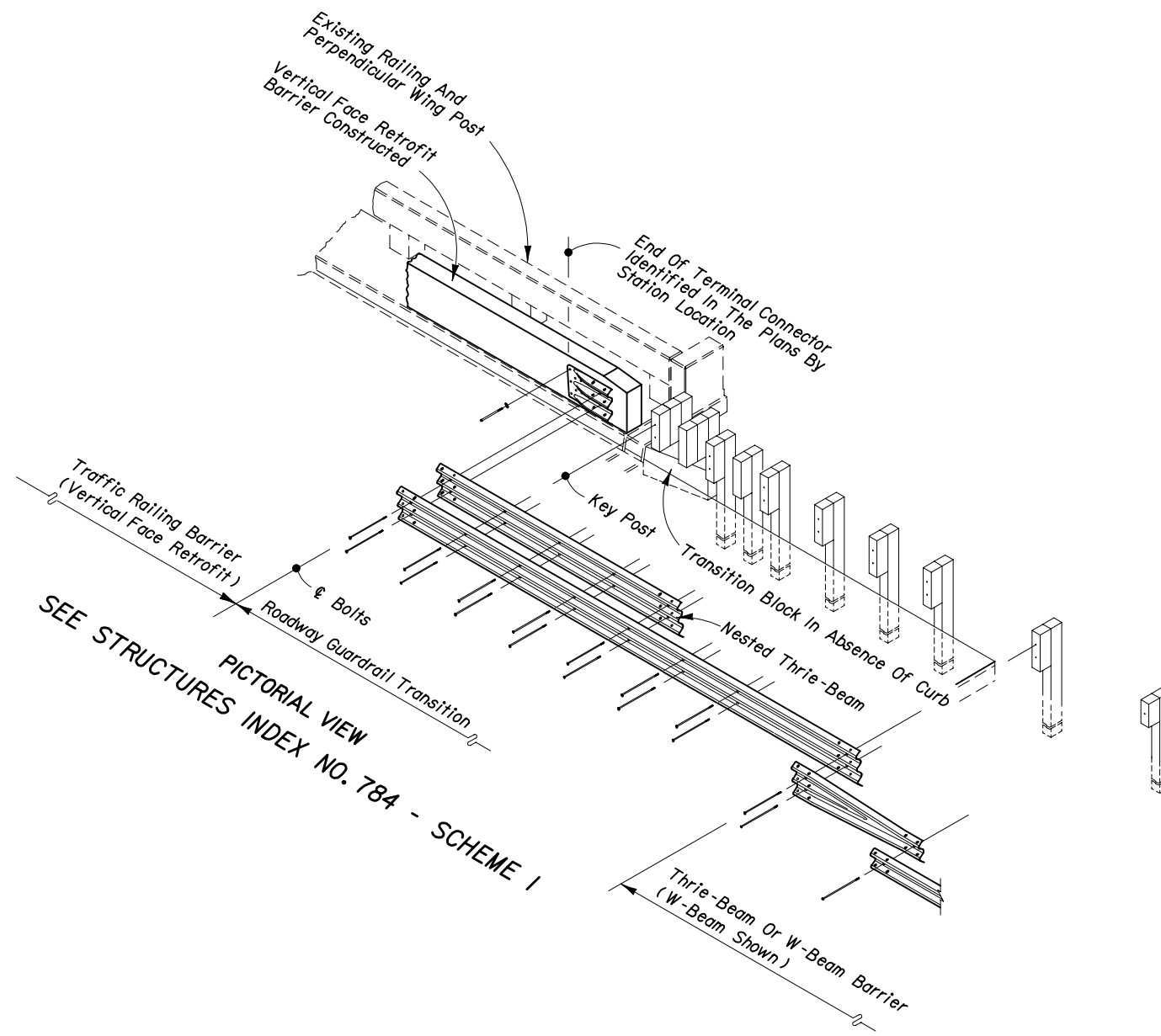


PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

| | | | | | |
|-------------|---------|-------|---|-----------|-----------|
| Designed By | JVG/CEB | 12/02 | Approved By <i>Jamell D. Mill</i> Roadway Design Engineer | | |
| Drawn By | HSD/SBC | 12/02 | Revision | Sheet No. | Index No. |
| Checked By | JVG/JAM | 12/02 | 04 | 19 of 26 | 402 |

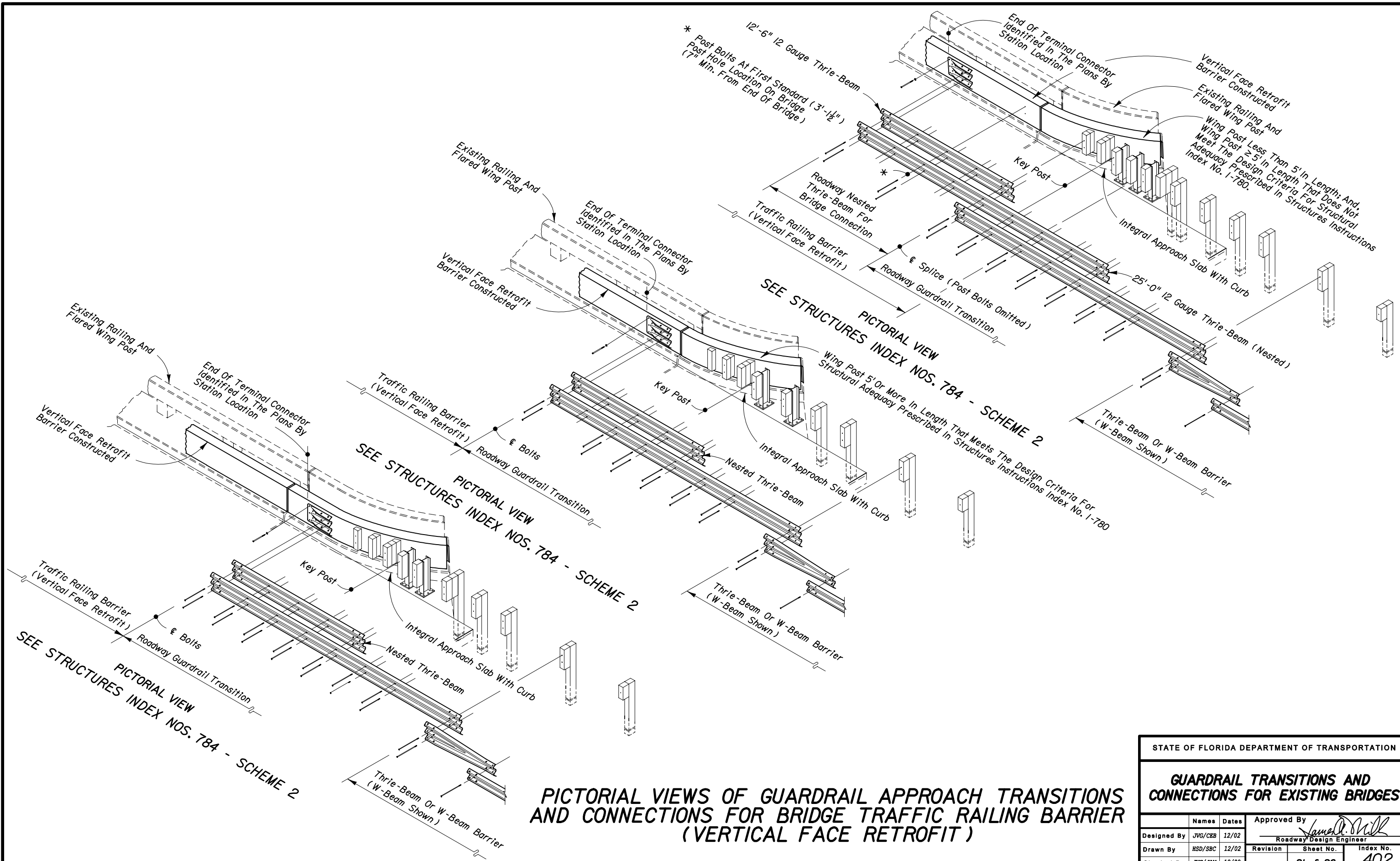


PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES


| | | | Approved By <i>Jamell D. Mill</i> | | |
|-------------|---------|-------------------------|-----------------------------------|-----------|-----------|
| Names | Dates | Roadway Design Engineer | | | |
| Designed By | JVG/CEB | 12/02 | Revision | Sheet No. | Index No. |
| Drawn By | HSD/SBC | 12/02 | 04 | 20 of 26 | 402 |
| Checked By | JVG/JAM | 12/02 | | | |

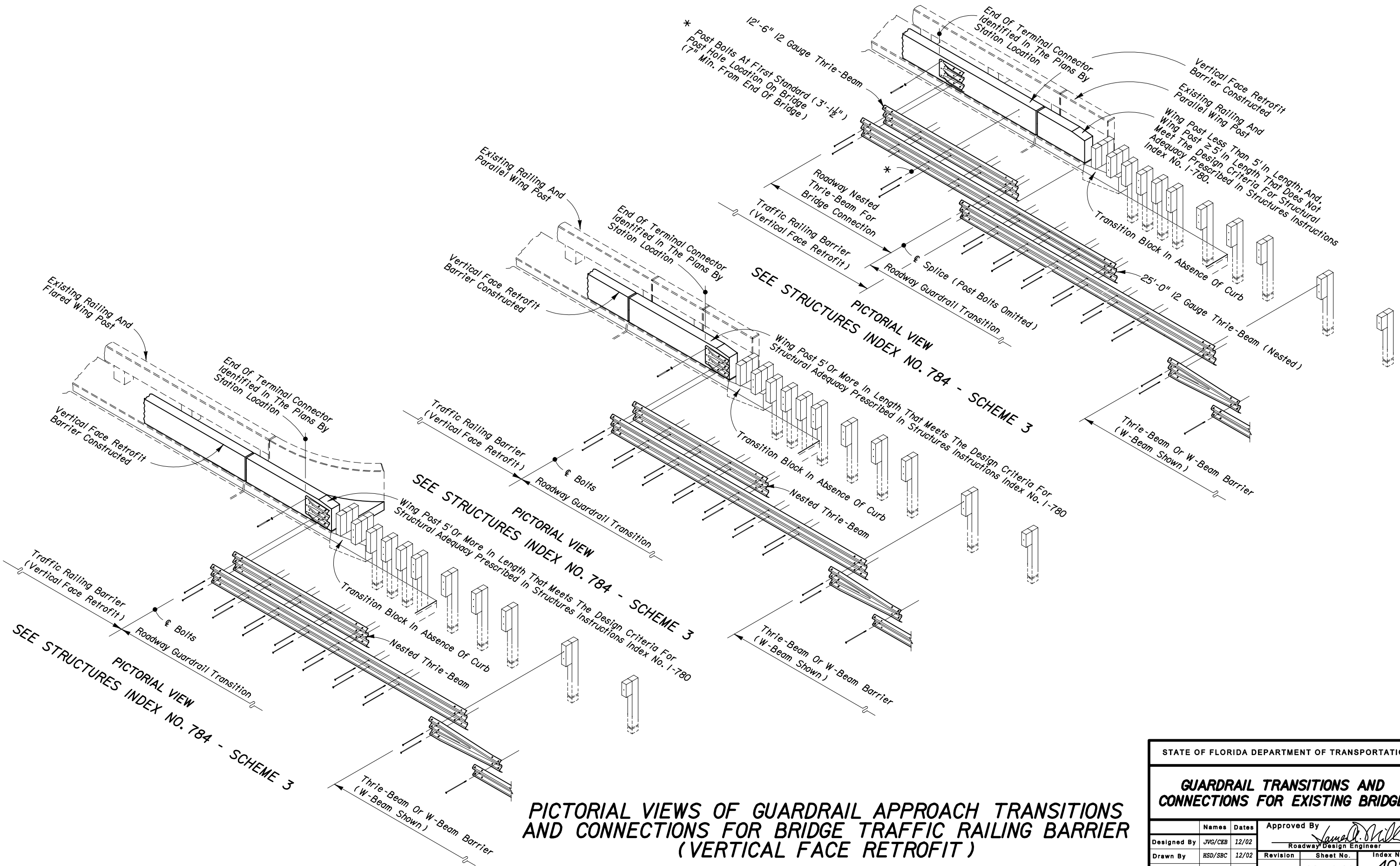


PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

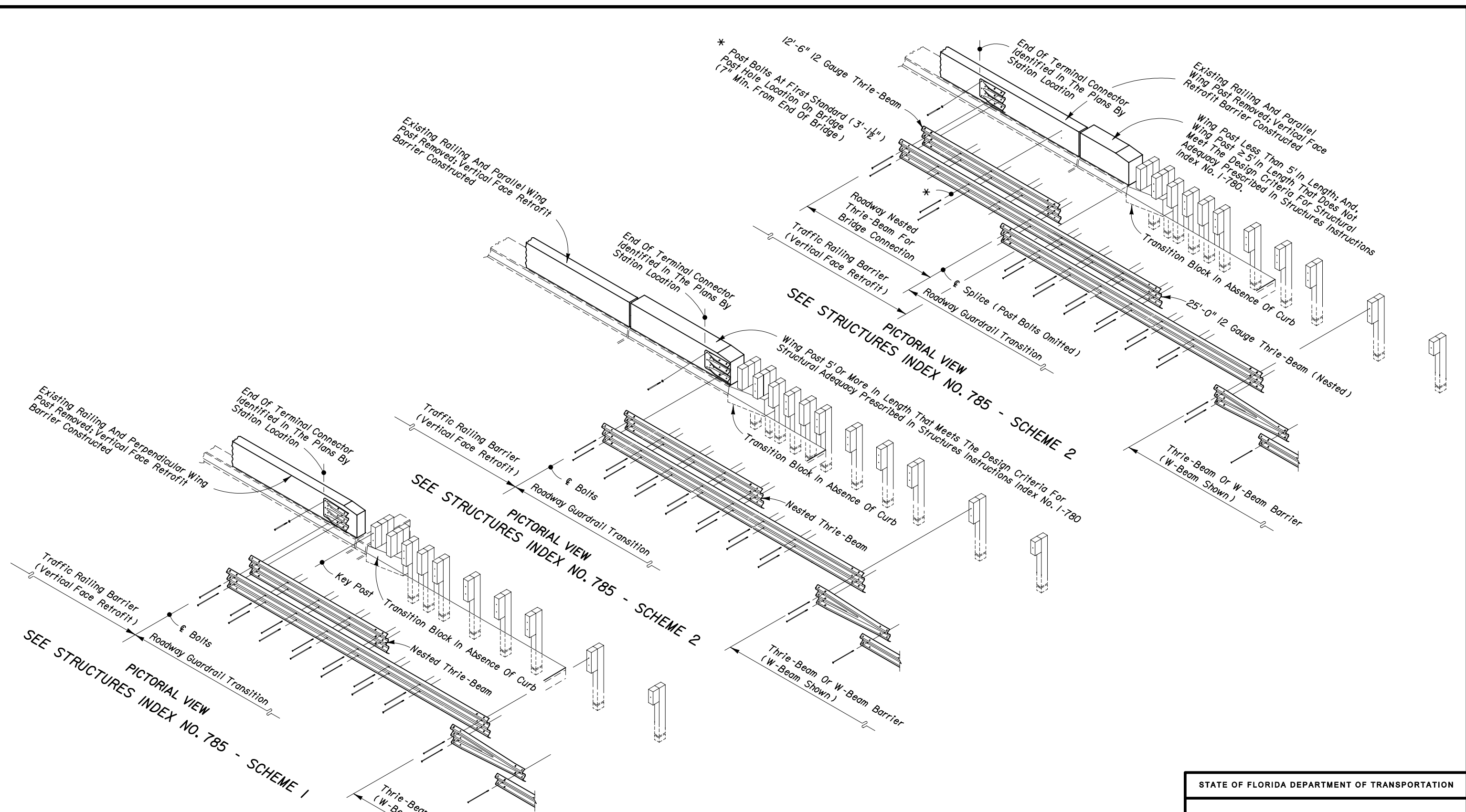
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

| Names | | | Dates | | | Approved By | | |
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| Designed By | JVG/CEB | 12/02 |  Roadway Design Engineer | | | Revision | Sheet No. | Index No. |
| Drawn By | HSD/SBC | 12/02 | | | | 04 | 21 of 26 | 402 |
| Checked By | JVG/JAM | 12/02 | | | | | | |
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | | |
| GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES | | | | |
| Names | Dates | Approved By <i>Lamed D. Milk</i> | | |
| Designed By JVG/CGB | 12/02 | Roadway Design Engineer | | |
| Drawn By HSD/SBC | 12/02 | Revision | Sheet No. | Index No. |
| Checked By JVG/JAM | 12/02 | 04 | 22 of 26 | 402 |

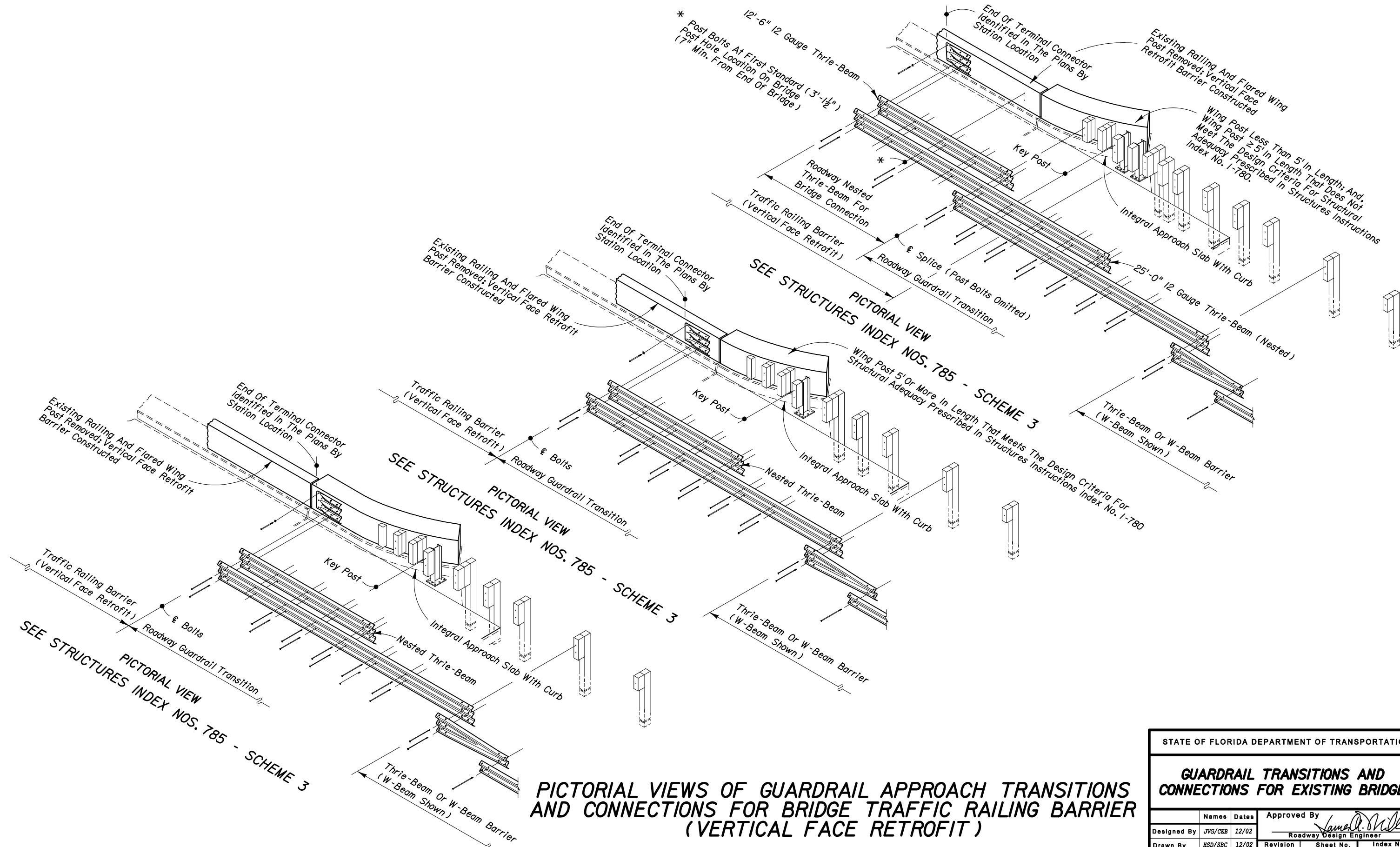


PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

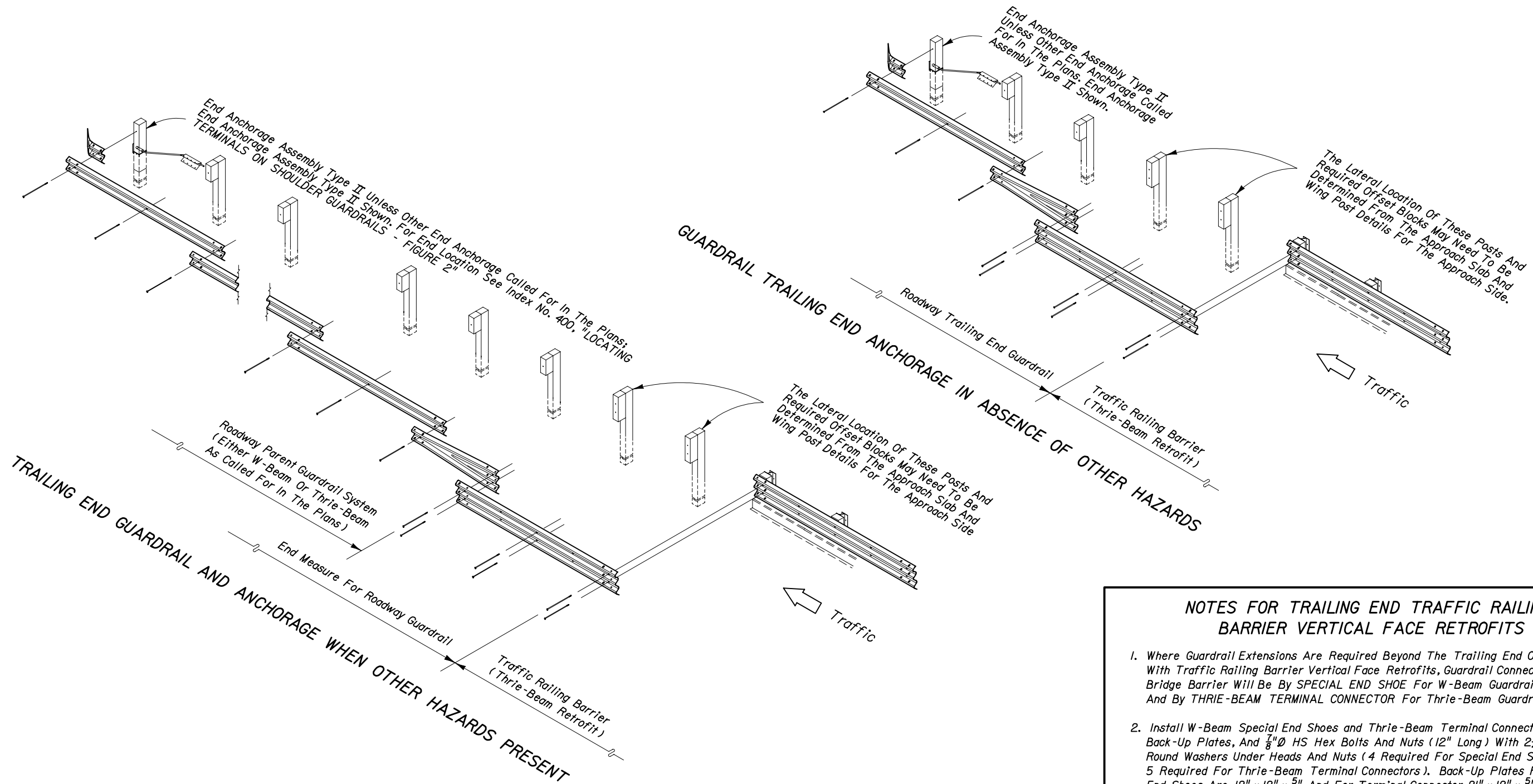
GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

| Names | | | Approved By | | |
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| Designed By | JVG/CEB | 12/02 |  Roadway Design Engineer | | |
| Drawn By | HSD/SBC | 12/02 | | | |
| Checked By | JVG/JAM | 12/02 | Revision | Sheet No. | Index No. |
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PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING BARRIER (VERTICAL FACE RETROFIT)

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|---|-------|--------------------------------|-----------|-----------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | | |
| GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES | | | | |
| Names | Dates | Approved By <i>[Signature]</i> | | |
| Designed By JVG/CGB | 12/02 | Roadway Design Engineer | | |
| Drawn By HSD/SBC | 12/02 | Revision | Sheet No. | Index No. |
| Checked By JVG/JAM | 12/02 | 04 | 24 of 26 | 402 |



TRAILING END GUARDRAIL AND ANCHORAGE FOR BRIDGE TRAFFIC RAILING BARRIER THRIE-BEAM RETROFITS

THRIE-BEAM RETROFIT NOTES

1. See Structures indexes for bridge thrie-beam traffic railing barrier retrofits.
2. Trailing end guardrail to be paid for under the contract unit price for the parent roadway guardrail; end measure includes length of end anchorage assembly; additional payment made for end anchorage assembly. No additional payment for connecting roadway thrie-beam to bridge thrie-beam retrofit.

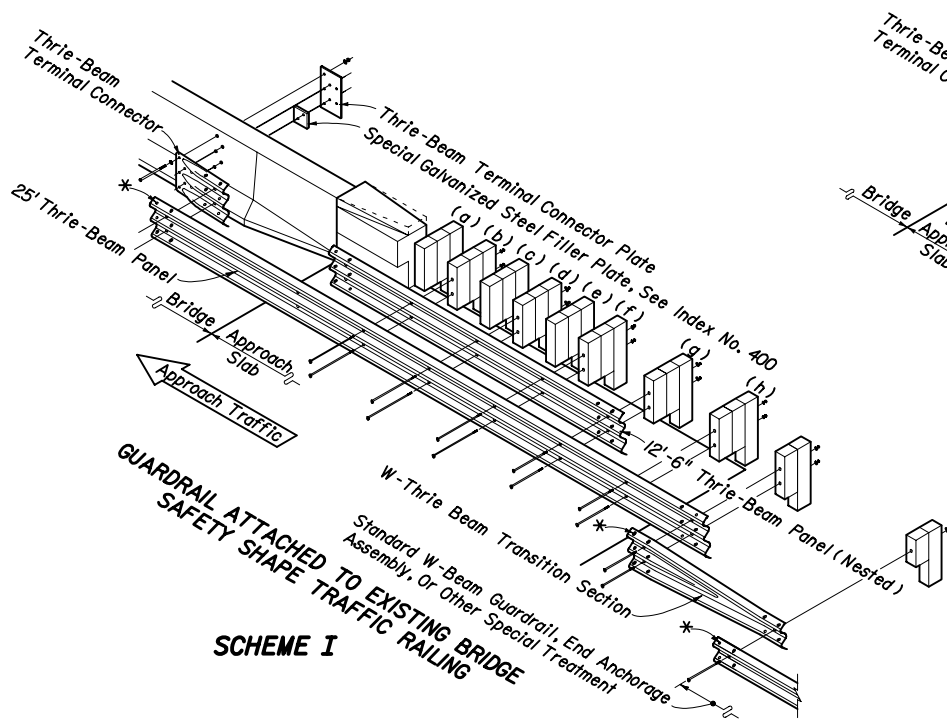
- NOTES FOR TRAILING END TRAFFIC RAILING BARRIER VERTICAL FACE RETROFITS**
1. Where Guardrail Extensions Are Required Beyond The Trailing End Of Bridges With Traffic Railing Barrier Vertical Face Retrofits, Guardrail Connections To The Bridge Barrier Will Be By SPECIAL END SHOE For W-Beam Guardrail Extensions And By THRIE-BEAM TERMINAL CONNECTOR For Thrie-Beam Guardrail Extensions.
 2. Install W-Beam Special End Shoes and Thrie-Beam Terminal Connectors With Back-Up Plates, And $\frac{7}{8}$ " \varnothing HS Hex Bolts And Nuts (12" Long) With $2\frac{1}{4}$ " OD Plain Round Washers Under Heads And Nuts (4 Required For Special End Shoes And 5 Required For Thrie-Beam Terminal Connectors). Back-Up Plates For Special End Shoes Are 12" x 12" x $\frac{5}{8}$ " And For Terminal Connector 21" x 12" x $\frac{5}{8}$ ".
 3. Payment For Connecting Trailing End Special End Shoes And Thrie-Beam Terminal Connectors To Traffic Railing Barrier Vertical Face Retrofits Will Be Made Under The Contract Unit Price For Guardrail Bridge Anchorage Assembly, EA..

TRAILING END GUARDRAIL AND ANCHORAGE FOR BRIDGE TRAFFIC RAILING BARRIER RETROFITS

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

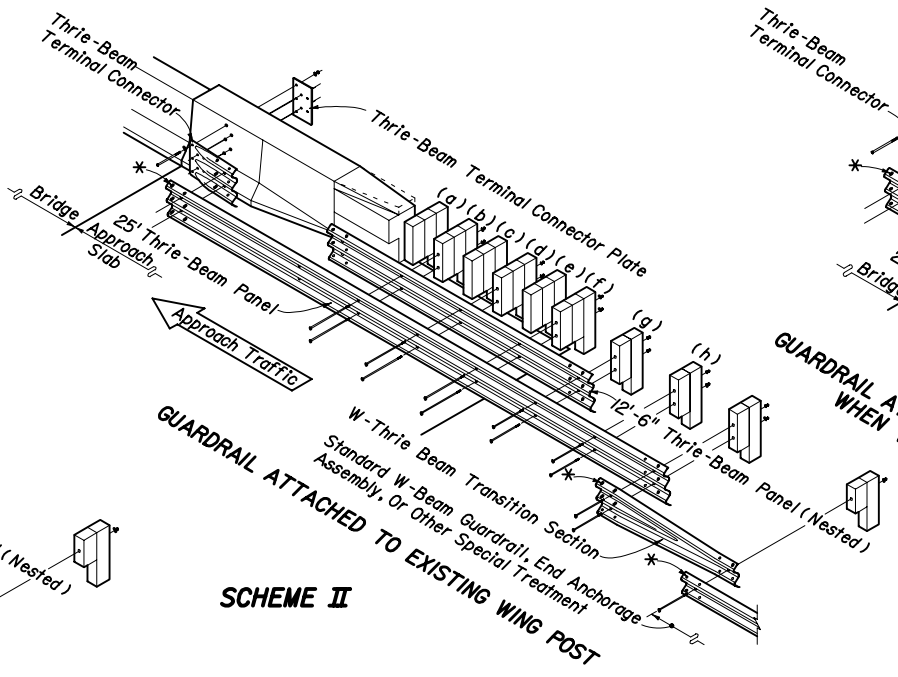
GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

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| Designed By | JVG/CGB | 12/02 | Approved By <i>Jamell D. Mill</i> Roadway Design Engineer | | |
| Drawn By | HSD/SBC | 12/02 | Revision | Sheet No. | Index No. |
| Checked By | JVG/JAM | 12/02 | 04 | 25 of 26 | 402 |



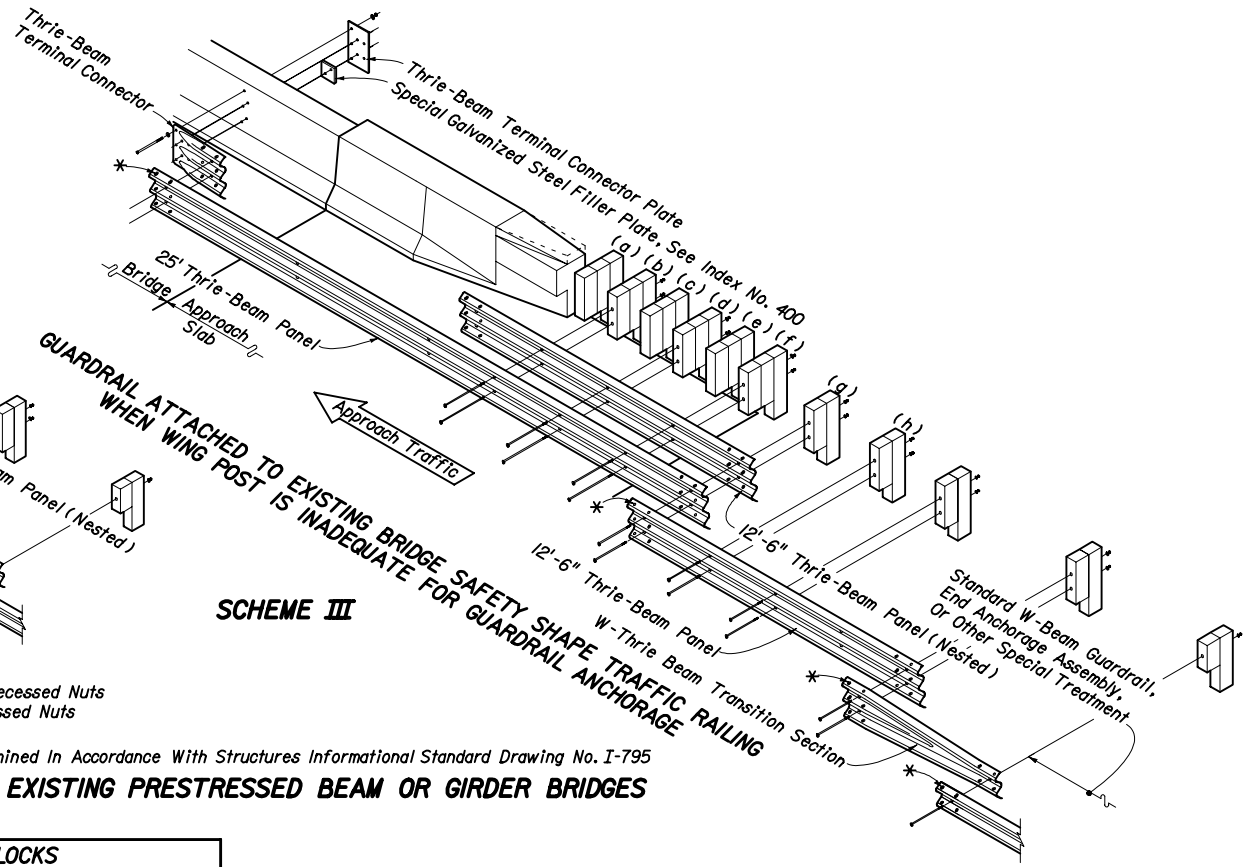
SCHEME I

Use Of Scheme I Shall Be Determined In Accordance With Structures Informational Standard Drawing No. I-790
GUARDRAIL TRANSITION TO EXISTING FLAT SLAB BRIDGES



SCHEME II

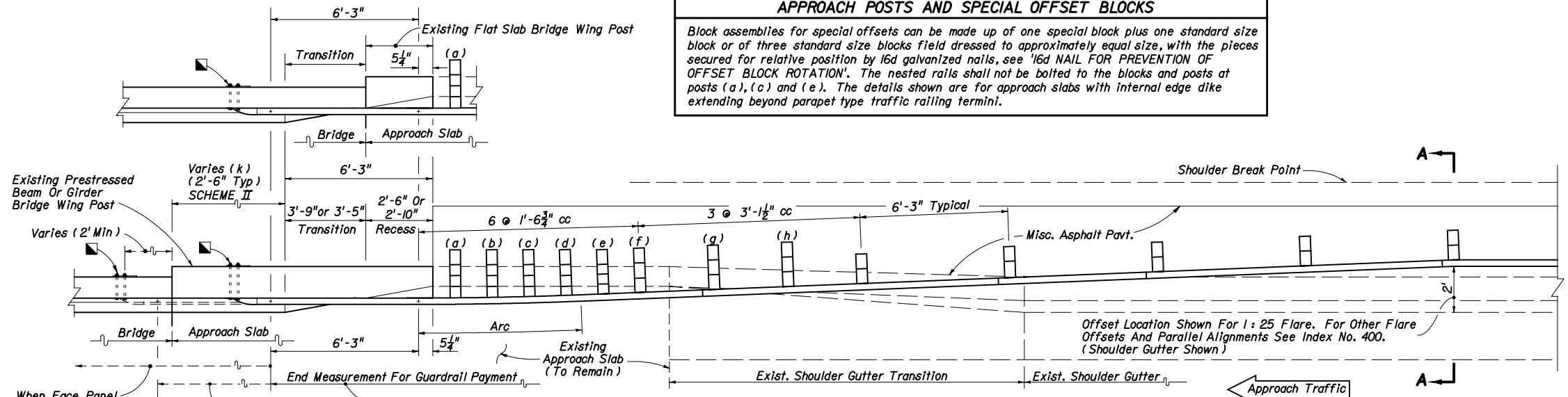
Use Of Schemes II And III Shall Be Determined In Accordance With Structures Informational Standard Drawing No. I-795
GUARDRAIL TRANSITIONS TO EXISTING PRESTRESSED BEAM OR GIRDER BRIDGES



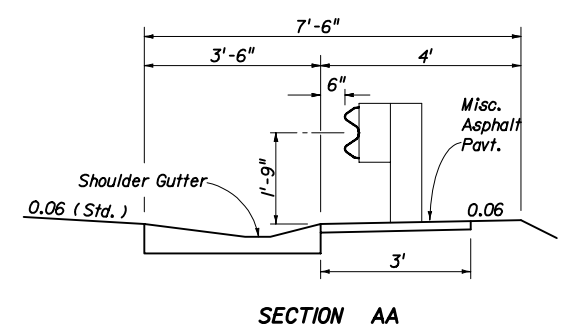
SCHEME III

* Splice Locations: Thrie-Beam - 12 Guardrail Splice Bolts And Recessed Nuts
 W-Beam - 8 Guardrail Splice Bolts And Recessed Nuts

APPROACH POSTS AND SPECIAL OFFSET BLOCKS
 Block assemblies for special offsets can be made up of one special block plus one standard size block or of three standard size blocks field dressed to approximately equal size, with the pieces secured for relative position by 16d galvanized nails, see '16d NAIL FOR PREVENTION OF OFFSET BLOCK ROTATION'. The nested rails shall not be bolted to the blocks and posts at posts (a), (c) and (e). The details shown are for approach slabs with internal edge dike extending beyond parapet type traffic railing termini.



PLAN



SECTION AA

When Face Panel Adjustment Exceeds 6'-3" Add Single Panels As Required - SCHEME III
 Varies (2' Min)
 Varies (k) (2'-6" Typ) SCHEME II
 Varies (3'-1 1/2" Min., 6'-3" Max. With Face Panels Adjusted Forward) SCHEME III
 Guardrail Transition Cost To Be Included In The Contract Unit Price For The Approaching Guardrail System; No Additional Payment For Thrie-Beam Panels, Nested Panels, W-Thrie Beam Transition Panel, and Accessories.

NOTES FOR GUARDRAIL TRANSITIONS TO SAFETY SHAPE TRAFFIC RAILING BARRIERS ON EXISTING BRIDGES

1. When the existing wing post is to be replaced with a bridge traffic railing barrier in accordance with Structure Standard Drawings No. I-790 or No. I-795, the thrie-beam guardrail connection shall be in accordance with Detail J of Index No. 400.
2. When retrofitting thrie-beam guardrail to existing wing posts or existing bridge safety shape traffic railing, attachment construction to be paid for under the contract unit price for Guardrail Bridge Anchorage Assembly, EA., and shall be full compensation for bolt hole construction, terminal connector, terminal connector plate(s) and bolts, nuts and washers.

21" x 12" x 5/8" Thrie-Beam Terminal Connector Plate (Back-Up Plate), And 7/8" Ø x 18" Long [15" Long With 3 1/2" Min. Thread Length For Bridge Safety Shape Railing] HS Hex Bolts And Nuts (5 Reqd.) With 2 1/4" OD Plain Round Washers Under Heads And Nuts. [When Attaching Guardrail To Existing Wing Posts Or Bridge Rails, Care Should Be Exercised To Avoid Damaging Conduits And Their Utilities That May Be Routed Through Wing Posts Or Bridge Rails. When Conduits And Their Utilities Are Encountered, At Least Five 5/8" HS Hex Bolts Shall Be Installed In Any Of The Seven Holes Provided In The Thrie-Beam Terminal Connector.]

GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR EXISTING FLAT SLAB, PRESTRESSED BEAM AND GIRDER BRIDGES WITH SAFETY SHAPE TRAFFIC RAILING BARRIER EXTENDING LESS THAN FULL APPROACH SLAB LENGTH

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES

| | | | | | |
|-------------|-------|-------|-------------|-----------|-----------|
| Designed By | Names | Dates | Approved By | | |
| Drawn By | JKH | 9-98 | Revision | Sheet No. | Index No. |
| Checked By | JVG | 9-98 | 04 | 26 of 26 | 402 |