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## ORIGINATION FORM

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### Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

**Contact Information:**

Date: March 22, 2023

Originator: Joshua Turley

Phone: (850) 414-4475

Email: [joshua.turley@dot.state.fl.us](mailto:joshua.turley@dot.state.fl.us)

**Standard Plans:**

Index Number: 450-511

Sheet Number (s): Sheet 1 of 2

Index Title: BEARING PLATES (TYPE 1) - PRESTRESSED  
FLORIDA-I AND AASHTO TYPE II BEAMS

**Summary of the changes:**

Sheet 1: Changed Dimension L to account for the skew angle; Added Dimension L on plan; Added note clarifying negative dimension for AASHTO Beam anchor studs.

**Commentary / Background:**

We got an email in noting that dimension L was called out incorrectly not accounting for the skew. They also asked what a negative dimension meant for the AASHTO Beam anchor studs. We decided to add clarity for the negative dimension whose purpose was to have the anchor studs in a single row for the AASHTO Beam Type 2 although in plan its shown as multiple rows for the sake of using one detail for multiple configurations.

**Other Affected Offices / Documents: (Provide name of person contacted)**

- | Yes                      | No                                  |                             |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans –      |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual –        |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications –   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List –     |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction –              |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance –               |

**Origination Package Includes:** (Submit package to Rick Jenkins)

- | Yes                                 | N/A                      |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups                                    |
| <input type="checkbox"/>            | <input type="checkbox"/> | Revised or Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/>            | <input type="checkbox"/> | Other Support Documents                             |

**Implementation:**

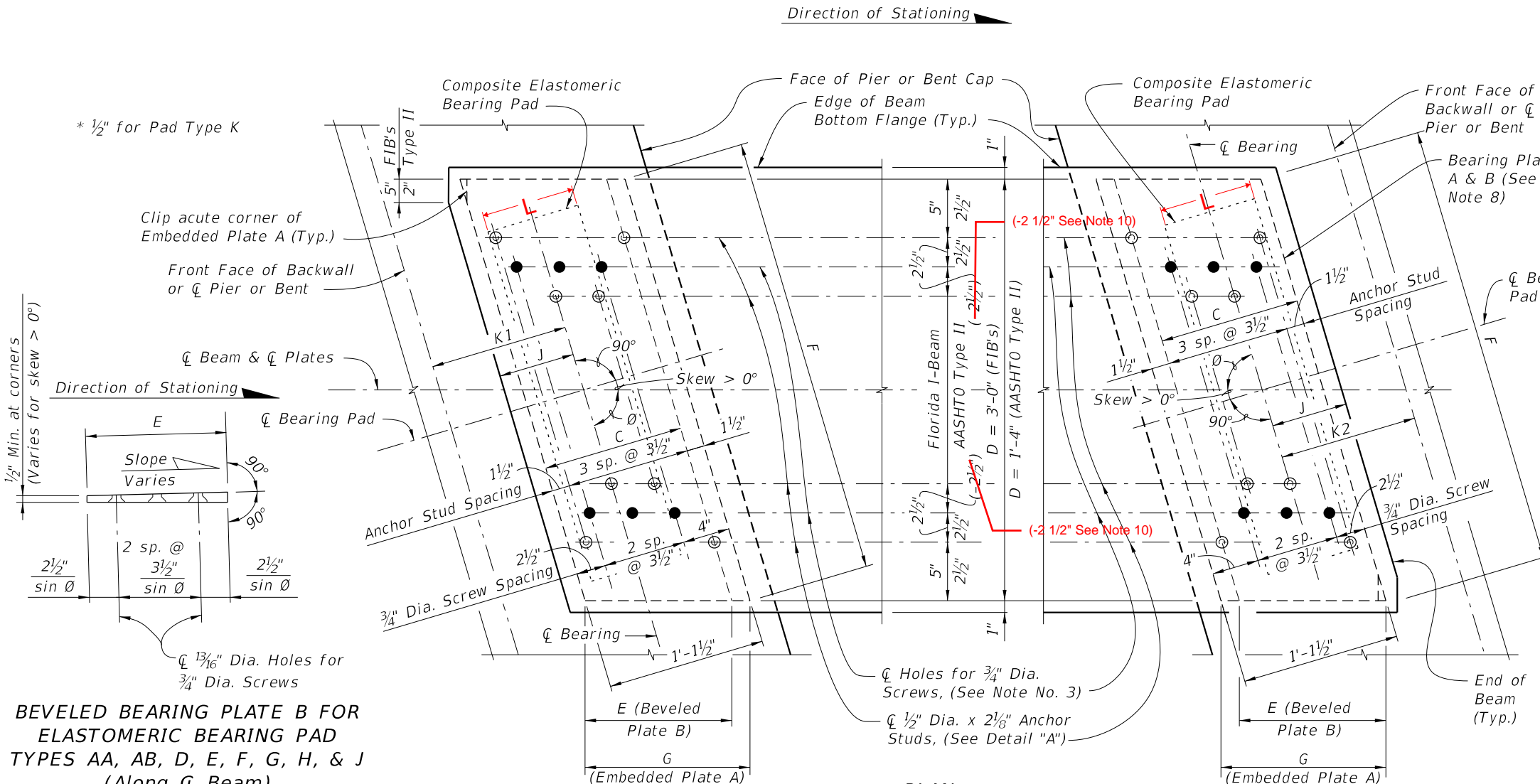
- |                                     |                                  |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/>            | Design Bulletin (Interim)        |
| <input type="checkbox"/>            | DCE Memo                         |
| <input type="checkbox"/>            | Program Mgmt. Bulletin           |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

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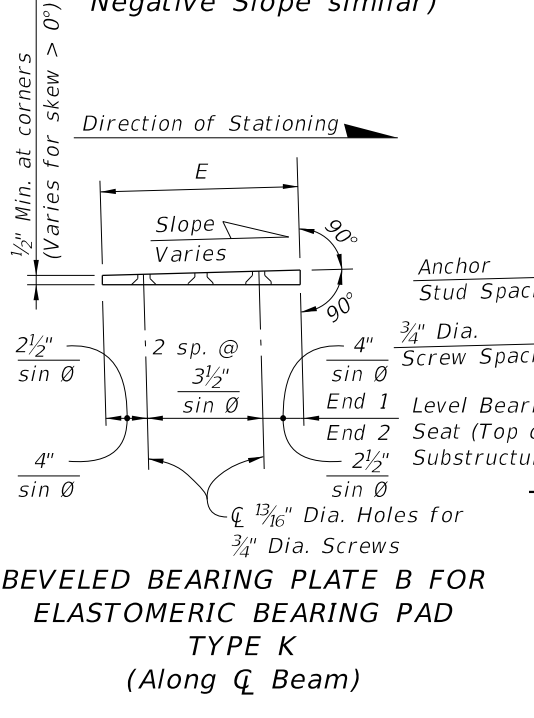
Contact the Roadway Design Office for assistance in completing this form

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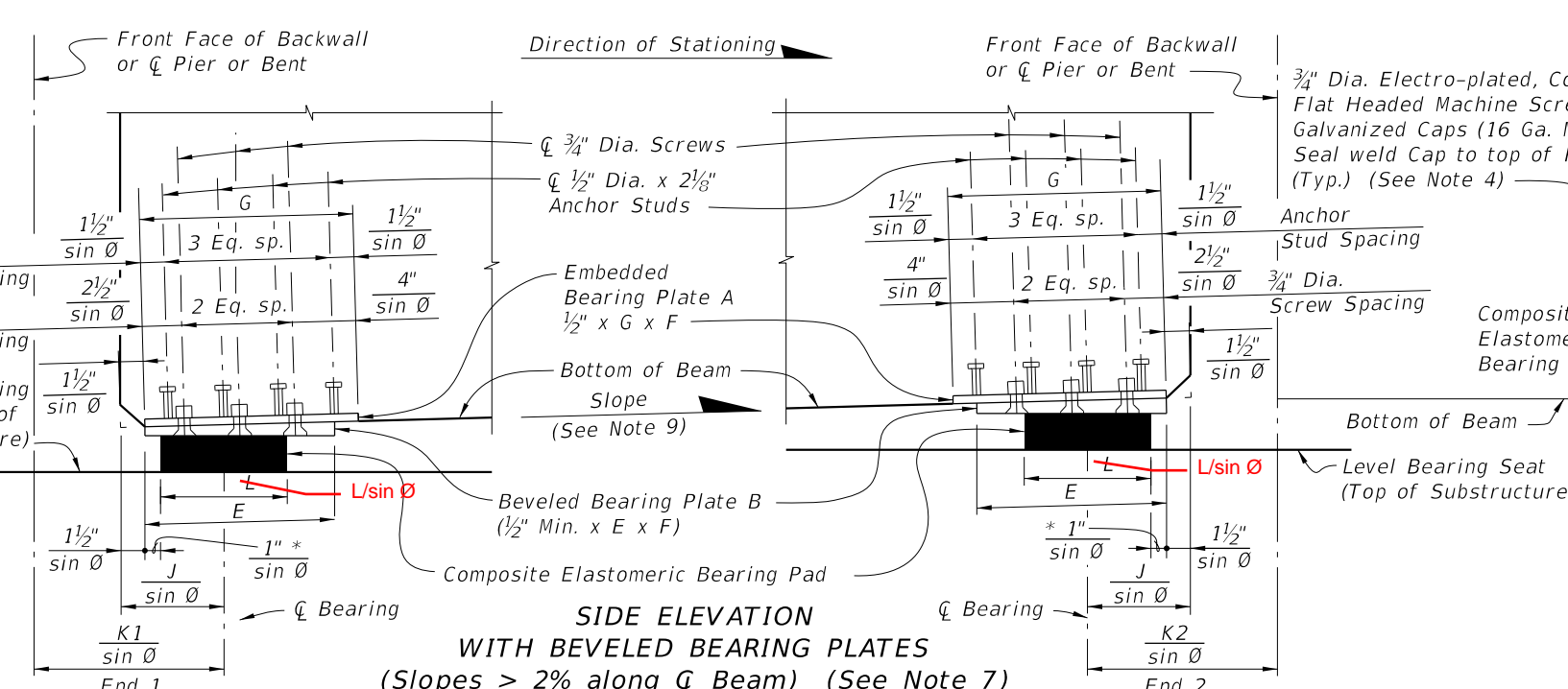
Email to: Rick Jenkins [rick.jenkins@dot.state.fl.us](mailto:rick.jenkins@dot.state.fl.us) and Darren Martin [darren.martin@dot.state.fl.us](mailto:darren.martin@dot.state.fl.us)



**PLAN**  
 (0° < Skew ≤ 45° FIB Shown, Skew = 0° and AASHTO Type II Similar)

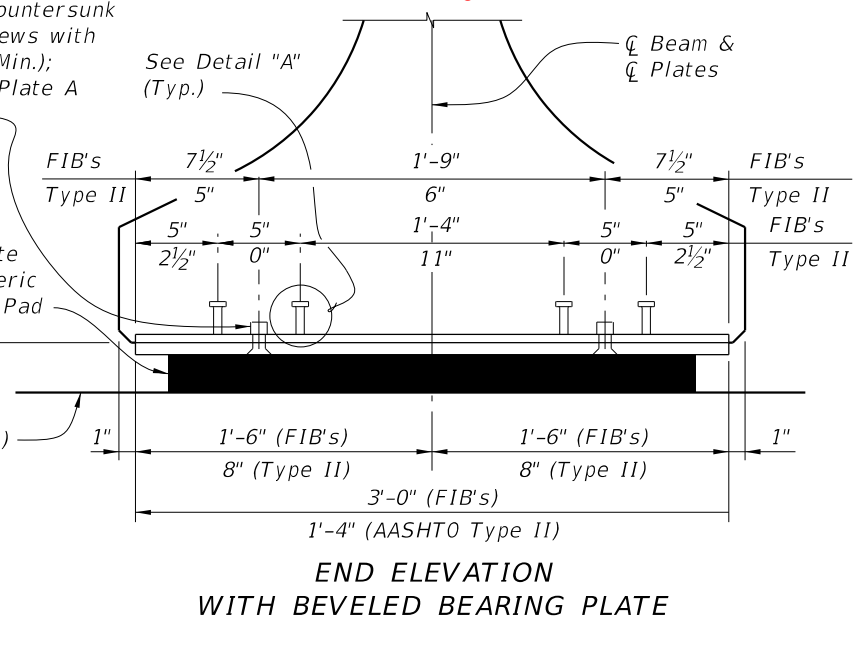


**BEVELED BEARING PLATE B FOR ELASTOMERIC BEARING PAD TYPES AA, AB, D, E, F, G, H, & J (Along  $\bar{C}$  Beam)**  
 (Positive Slope shown; Negative Slope similar)



**SIDE ELEVATION WITH BEVELED BEARING PLATES**  
 (Slopes > 2% along  $\bar{C}$  Beam) (See Note 7)

- NOTES:**
1. Work this sheet with Index 400-510 - Composite Elastomeric Bearing Pads, and the 'BEARING PLATE DATA TABLE' in the Structures Plans.
  2. Embedded Bearing Plates A are required for all Florida-I beams. Beveled Bearing Plates B with Embedded Bearing Plates A are required for beams as scheduled in the 'BEARING PLATE DATA TABLE' in the Structures Plans.
  3. Bearing plate material shall conform to ASTM A36 or ASTM A709 (Grade 36 or 50). Headed Concrete Anchor Studs shall conform to Specification Section 502. Hot-dip galvanize Bearing Plates A & B after fabrication except that Galvanized Caps may be welded in place after hot-dip galvanizing. Drill Bearing Plates A and B as an assembled unit, thread Bearing Plate A only. Holes are not required in Plate A when Plate B is not required. Drill and thread holes perpendicular to Embedded Plate A and prior to plates being galvanized (ASTM A 123).
  4. Provide Electroplated, Flat Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B633, SC 2, Type 1. Provide screws long enough to maintain a 3/4" minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide steel Galvanized Caps with 1/2" Min. to 1 1/2" Max. height and nominal 1" inside diameter.
  5. Include the cost of Bearing Plates in the pay item for Prestressed Beams.
  6. For Pad Type and Dimensions C, D, E, F and G, see the 'BEARING PLATE DATA TABLE' in the Structures Plans. For Dimensions J, K1 and K2, see 'TABLE OF BEAM VARIABLES' in the Structures Plans.
  7. All details and dimensions shown are along  $\bar{C}$  Beam, except for dimensions to 3/4" Dia. Screws and 1/2" Dia. x 2 1/8" Anchor Studs, which are along  $\bar{C}$  Screws or  $\bar{C}$  Anchor Studs. Positive Slope shown, Negative Slope similar.
  8. When Skew = 0°, F = D = 3'-0" (Florida-I Beams) or 1'-4" (AASHTO Type II Beams) E = C, and G = 1'-1 1/2".
  9. Slope is determined along  $\bar{C}$  Beam at  $\bar{C}$  Bearing. See 'BEARING PLATE DATA TABLE' in the Structures Plans for Slope and Angle  $\theta$ .
- CROSS REFERENCE:** See Sheet 2 for Detail "A".
- 10. For AASHTO Type II Beams negative dimensions indicate anchor studs are in a single line in the outside row.**



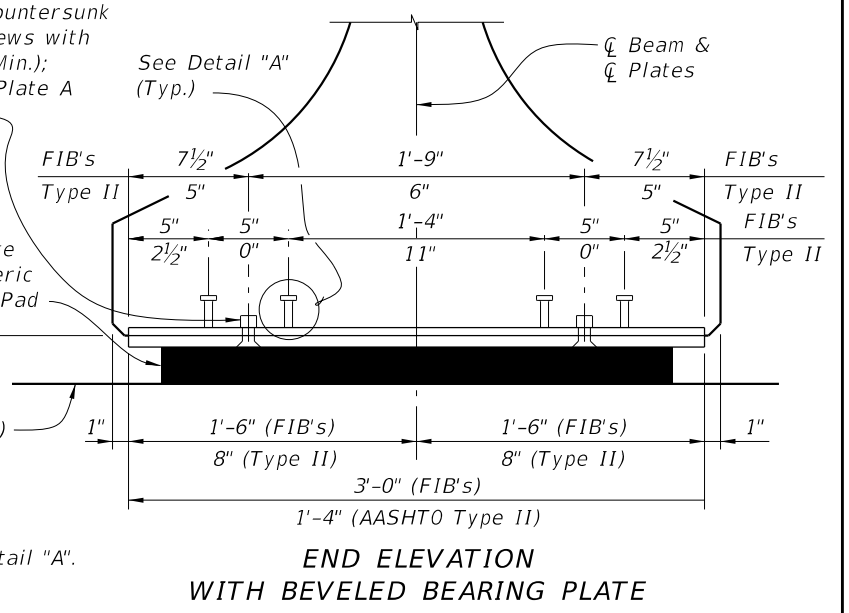
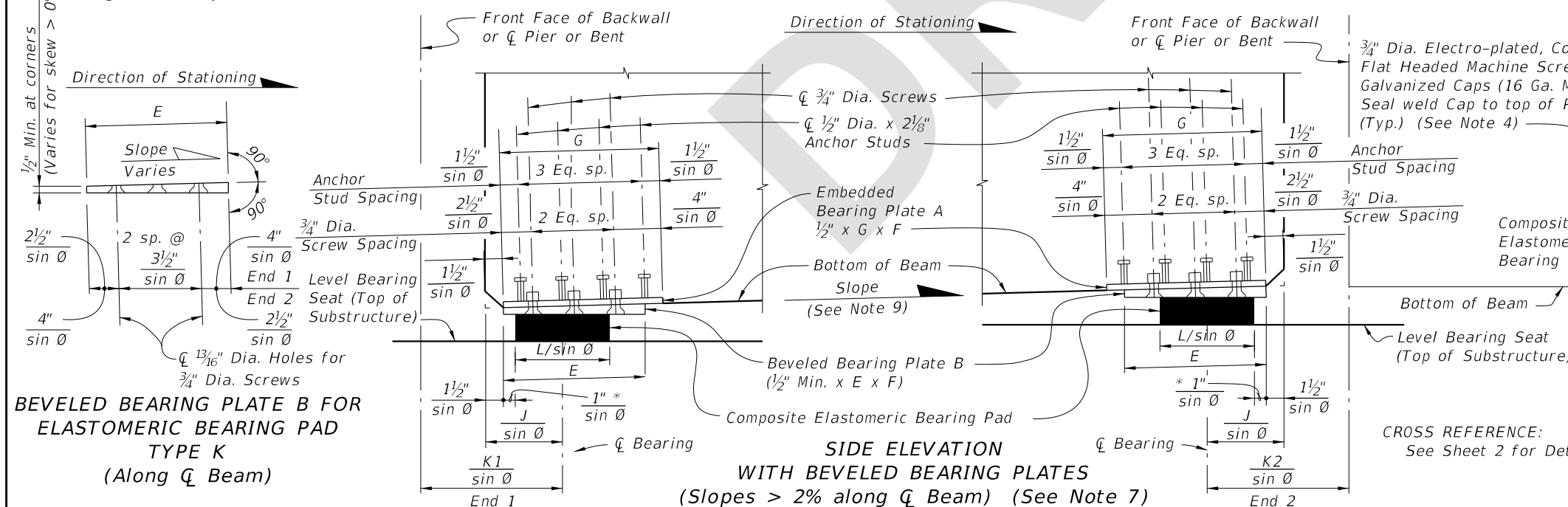
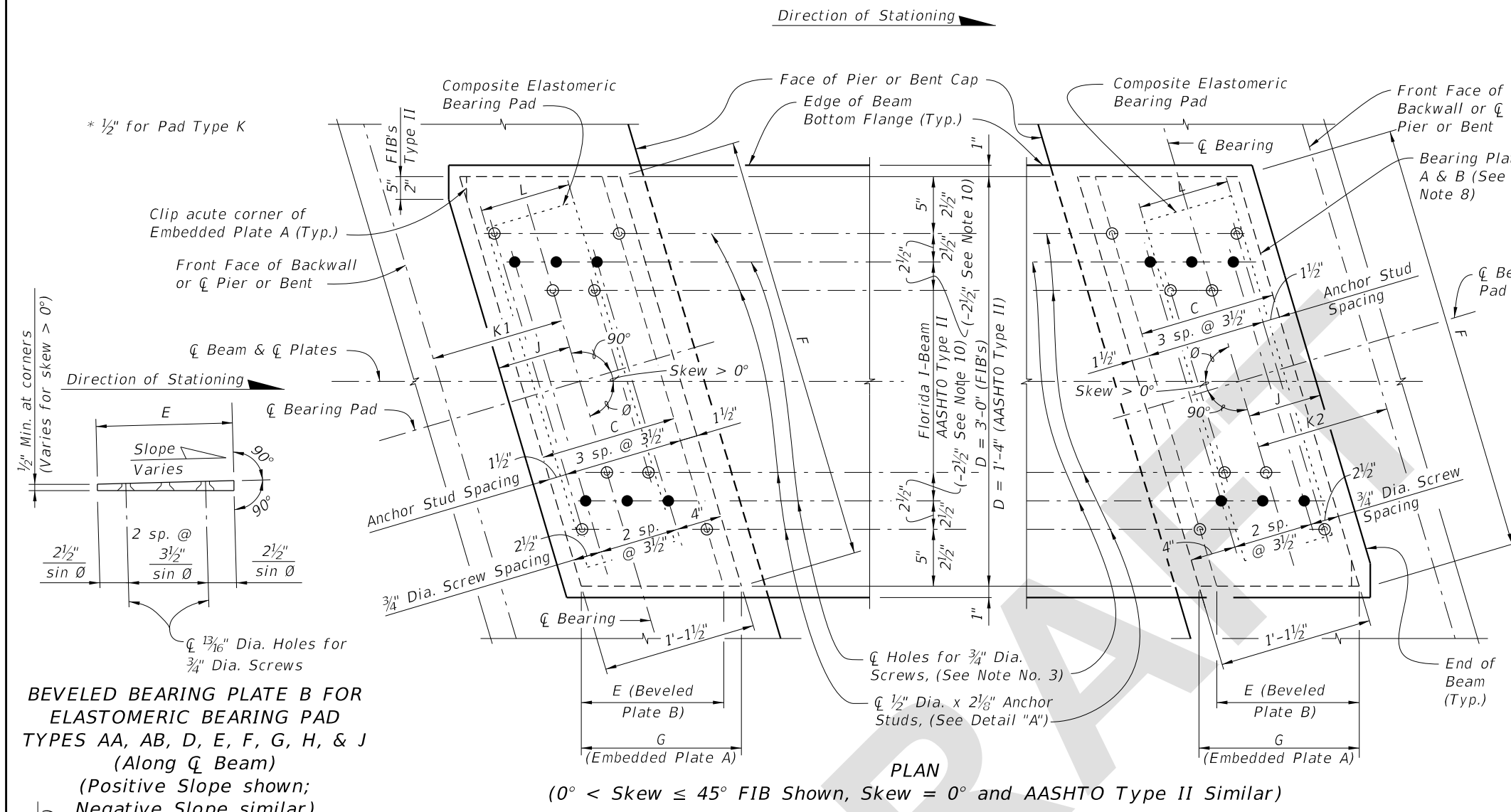
**END ELEVATION WITH BEVELED BEARING PLATE**

10/16/2022 11:02:20 AM

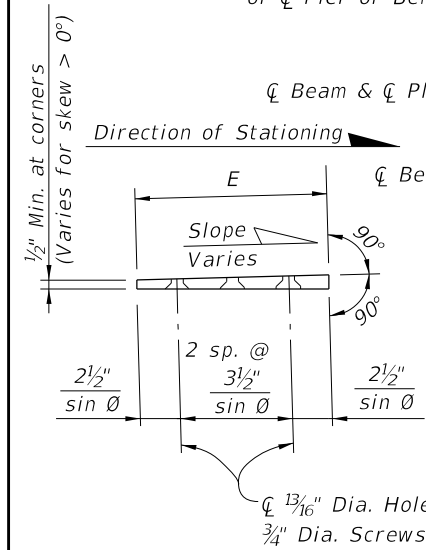
LAST REVISION 07/01/14	REVISION	DESCRIPTION:		FY 2023-24 STANDARD PLANS	BEARING PLATES (TYPE 1) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAMS	INDEX 450-511	SHEET 1 of 2
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NOTES:

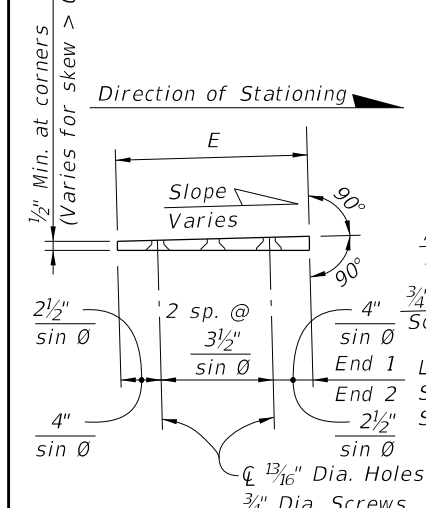
1. Work this sheet with Index 400-510 - Composite Elastomeric Bearing Pads, and the 'BEARING PLATE DATA TABLE' in the Structures Plans.
2. Embedded Bearing Plates A are required for all Florida-I beams. Beveled Bearing Plates B with Embedded Bearing Plates A are required for beams as scheduled in the 'BEARING PLATE DATA TABLE' in the Structures Plans.
3. Bearing plate material shall conform to ASTM A36 or ASTM A709 (Grade 36 or 50). Headed Concrete Anchor Studs shall conform to Specification Section 502. Hot-dip galvanize Bearing Plates A & B after fabrication except that Galvanized Caps may be welded in place after hot-dip galvanizing. Drill Bearing Plates A and B as an assembled unit, thread Bearing Plate A only. Holes are not required in Plate A when Plate B is not required. Drill and thread holes perpendicular to Embedded Plate A and prior to plates being galvanized (ASTM A 123).
4. Provide Electroplated, Flat Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B633, SC 2, Type 1. Provide screws long enough to maintain a  $\frac{3}{4}$ " minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide steel Galvanized Caps with  $\frac{1}{2}$ " Min. to  $1\frac{1}{2}$ " Max. height and nominal 1" inside diameter.
5. Include the cost of Bearing Plates in the pay item for Prestressed Beams.
6. For Pad Type and Dimensions C, D, E, F and G, see the 'BEARING PLATE DATA TABLE' in the Structures Plans. For Dimensions J, K1 and K2, see 'TABLE OF BEAM VARIABLES' in the Structures Plans.
7. All details and dimensions shown are along  $\bar{C}$  Beam, except for dimensions to  $\frac{3}{4}$ " Dia. Screws and  $\frac{1}{2}$ " Dia. x  $2\frac{1}{8}$ " Anchor Studs, which are along  $\bar{C}$  Screws or  $\bar{C}$  Anchor Studs. Positive Slope shown, Negative Slope similar.
8. When Skew = 0°, F = D = 3'-0" (Florida-I Beams) or 1'-4" (AASHTO Type II Beams) E = C, and G = 1'-1 $\frac{1}{2}$ ".
9. Slope is determined along  $\bar{C}$  Beam at  $\bar{C}$  Bearing. See 'BEARING PLATE DATA TABLE' in the Structures Plans for Slope and Angle  $\theta$ .
10. For AASHTO Type II Beams negative dimensions indicate anchor studs are in a single line in the outside row.



\*  $\frac{1}{2}$ " for Pad Type K



**BEVELED BEARING PLATE B FOR ELASTOMERIC BEARING PAD TYPES AA, AB, D, E, F, G, H, & J (Along  $\bar{C}$  Beam)**  
(Positive Slope shown; Negative Slope similar)



**BEVELED BEARING PLATE B FOR ELASTOMERIC BEARING PAD TYPE K (Along  $\bar{C}$  Beam)**

CROSS REFERENCE:  
See Sheet 2 for Detail "A".

9:46:30 AM  
7/11/2023

LAST REVISION 11/01/23	DESCRIPTION:	 FY 2024-25 STANDARD PLANS	BEARING PLATES (TYPE 1) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAMS	INDEX 450-511	SHEET 1 of 2
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