GENERAL NOTES:

Work this Standard with Index Nos. 21610, 21620 and 21630.

STRUCTURAL STEEL:
  Steel Plates and Rolled Sections shall be ASTM A 709 Grade 36.
  Pipe piles shall be ASTM A 252 Grade 2, F_y = 35 ksi

BOLTS, LAG SCREWS AND THREADED BOLT STOCK:
  Furnish high strength bolts in accordance with ASTM A325. Furnish Threaded
  Stock in accordance with ASTM A36. Furnish Lag Screws in accordance with ASTM A307.
  Furnish steel washers and nuts compatible with Bolts, Threaded Stock and Lag Screws.

TIMBER AND LAGGING:
  Timber and Lagging shall be No. 1 Southern Yellow Pine

BACKWALL BENT PILES:
  Timber Piles:
    10' Minimum Embedment into compacted backfill or into soil having a blow count greater than 6 (N>6).
    Ultimate Capacity greater than 18 tons.
    Splices are not allowed on any timber piles

  H-Piles:
    12' Minimum Embedment into compacted backfill or into soil having a
    blow count greater than 6 (N>6).
    Ultimate Capacity greater than 18 tons.

  Shims admissible between backwall pile and cap
  Test piles are not required for backwall piles

EXPANSION BEARINGS:
  Inspect the PTFE (Teflon) layer and stainless steel plate prior to installation.
  Do not use bearings that have a severely damaged or unbonded PTFE layer.
  Clean PTFE of all grit and grime prior to installation.
  Clean Stainless steel plate of all grit and grime prior to installation and finish to a smooth
  buffed surface.

DISTRIBUTING BEAMS:
  Longitudinal stops restraining the distributing beams may be lengthened or shortened to
  center the distributing beam bearing on the cap beam.
  The longitudinal stops are to bear on the distributing beam end frame.

EXPANSION JOINT SETTINGS:
  Install the expansion joint considering the total continuous bridge length, location of
  fixed bearings and ambient temperature at the time of installation, assume a 1" expansion
  joint opening at 70 degrees F.

INSTRUCTION TO DESIGNER:

Establish temporary bridge length to accommodate project geometric needs,
environmental permits, drainage requirements, etc., using the following span length
and arrangement criteria. Details presented in this Standard are for a Double Single
configuration as shown in the "Acrow Panel Bridging Technical Handbook"

  Variation in span lengths in increments of 10'
  30' minimum span length
  60' maximum span length
  For continuous spans the ratio of adjacent span lengths shall not exceed 6:10 to
  prevent the shorter span from lifting off its bearings under live load
  Limit continuous length of bridge to 360'

Specify Distributing beams for all span lengths. Details presented assume use of
continuous spans.

Design the pile cap connection to pile assuming the truss reaction with a minimum of 3"
eccentricity. Design of this connection detail is the responsibility of the Engineer of Record.

Select the pile type considering the driving capacity requirements of the production piles
on the permanent bridge, free standing height, water levels if present and soil conditions.

Refer to "Acrow Panel Bridging Technical Handbook" for temporary bridge dimensions
and capacities.

These Standards are based on the FDOT current inventory of temporary bridge elements
which are the Double Wide Acrow 300 Series. Individual elements were manufactured by
either Acrow Corporation of America or Maybey Bridge and Shore, Inc. All FDOT owned
elements are interchangeable.

The Approach span and Ramp span are to be simple spans, each 5'-0" in length, to
eliminate Live Load uplift at backwall bent and grade beam support.

Do not place the temporary bridge on a vertical curve. A constant grade is acceptable.
Refer to "Acrow Panel Bridging Technical Handbook" for maximum grade and elevation
tolerance from constant grade (Bent to Bent and Cross-Slope) for final cap elevations.

The temporary bridge is to have a zero cross-slope. Provide asphalt buildup transitions
to a zero cross slope outside the limits of the temporary bridge.

Design the foundations according to current AASHTO LRFD Bridge Design
Specifications.

  For Substructure Design use the following:
    Dead Load Factor = 1.25
    Live Load Factor = 1.35

  SERVICE LEVEL LOADS:
    Calculate reactions using superstructure dead load unit weight = 1.26 K/FT.
    Include a concentrated dead load = 250 Lbs. per truss plane at abutments. This
    load accounts for 1 end post and 1 bearing per truss plane.

    Calculate wind force on superstructure using basic wind force of 0.45 K/FT.
    Ratio the above loading using wind pressures in Table 3.8.1.2.2-1 of AASHTO LRFD
    Bridge Design Specifications.
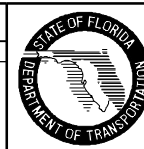
      Example-
        For wind skew of 30°
          W Lateral =   0.45 (0.065/0.075) = 0.39 K/FT
          W Longitudinal = 0.45 (0.028/0.075) = 0.17 K/FT

Plans for temporary bridge shall, as a minimum, cover the following:

  1. General Note Sheet.
  2. Simple span bearing details if non continuous spans are selected.
  3. Grade change details at the extremities of the bridge.
  4. Plan and elevation sheets with span lengths, stationing, alignment, grade and boring locations.
  5. Foundation layout sheet including pile spacing & bent stationing.
  6. Pile data table showing pile type, size, cut off elevations, capacity & estimated lengths.
  7. Bent detail sheet.

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Shoulder Line (see Plans for width requirements, Typ.)

℄ Detour Bridge

Approach Roadway

Grade Beam

1 : 1.5 (Max.)

Retainer Angles (Typ.)

5'-0" Approach Span

1 : 1.5 (Max.)

4" x 10" Laging with Filter Fabric

℄ Backwall Bent

AB5 or AB6 End Post (Typ.)

1 : 1.5 (Max.)

AB7 Bearing (Expansion Bearing Shown Fixed Bearing Similar)

℄ End Bent

5'-0" Ramp Span

1 : 1.5 (Max.)

1 : 1.5 (Max.)

Edge of Berm

AB13 Swaybrace Standard (Typ.)

1 : 1.5 (Max.)

Toe of Fill Slope

24'-0" Clear Roadway Width

AB3 Bracing Frame (Typ.)

AB306 Transom DW (Typ.)

AB1 Truss Panels (Typ.)

1'-6"

25'-6"

1'-6"
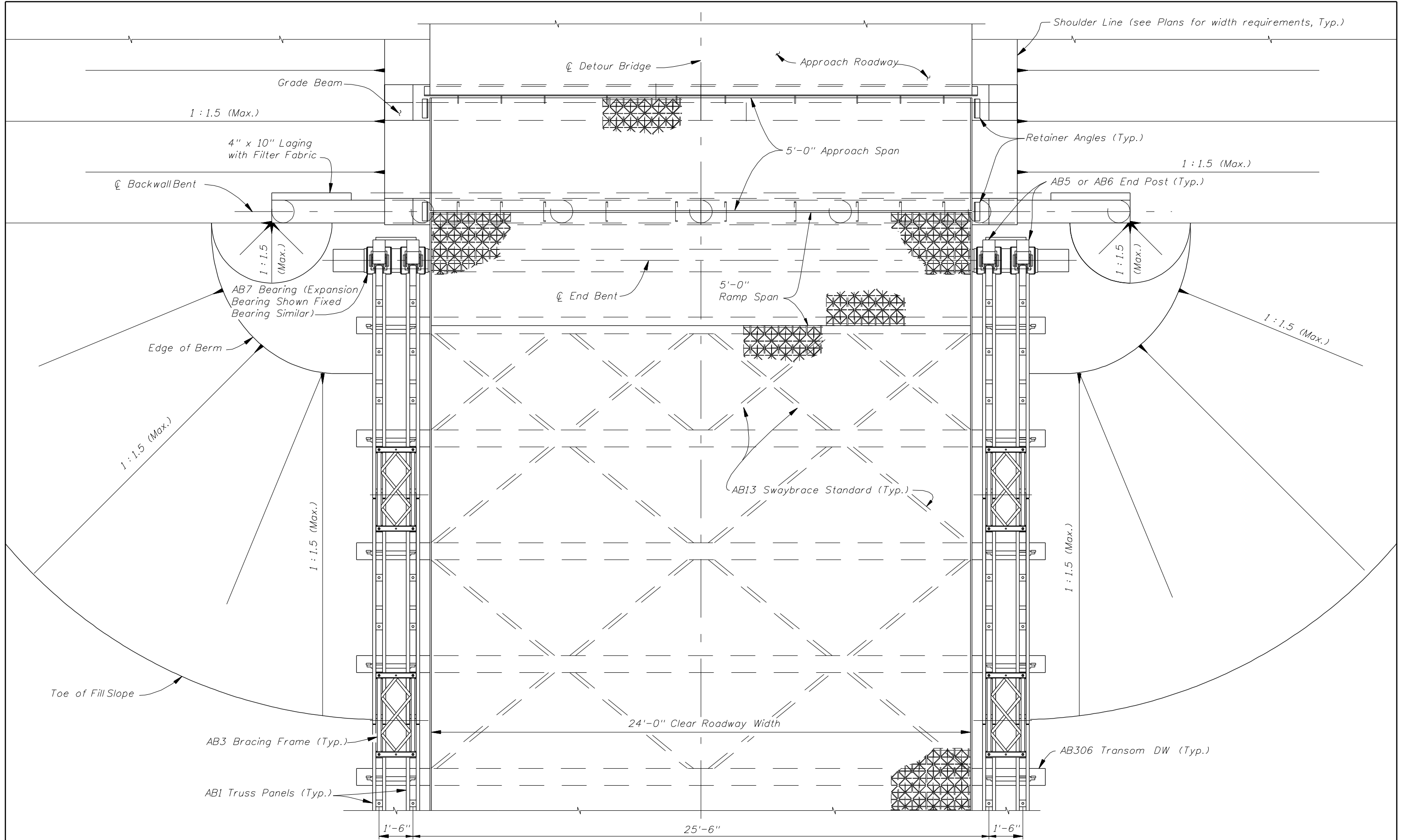
TYPICAL PLAN VIEW OF DETOUR BRIDGE
(TIMBER PILE SHOWN, STEEL H PILES AND STEEL PIPE PILES SIMILAR)

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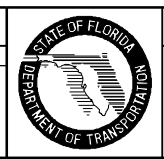
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**TEMPORARY DETOUR BRIDGE
GENERAL NOTES AND DETAILS**
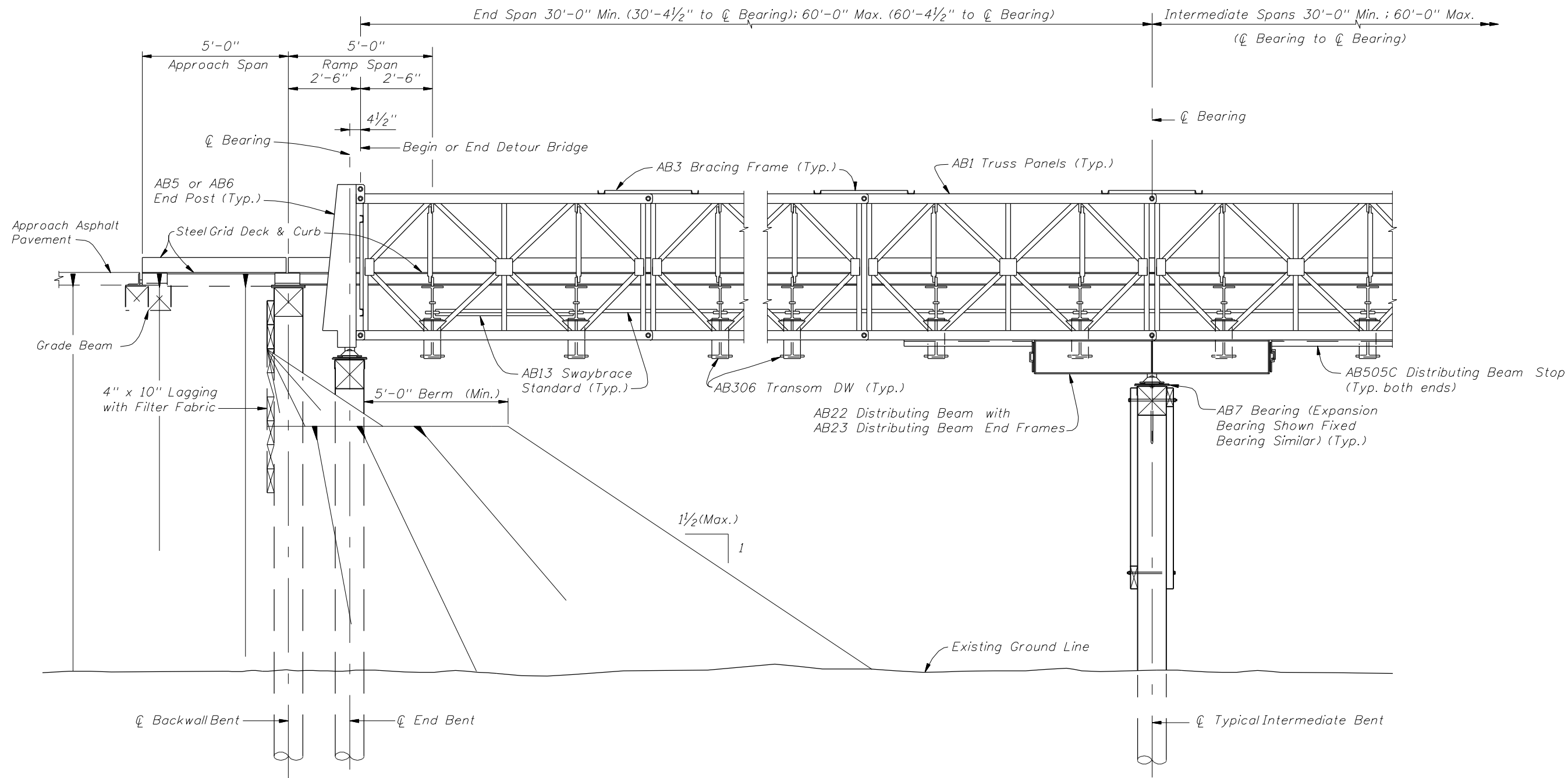
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End Span 30'-0" Min. (30'-4½" to ₵ Bearing); 60'-0" Max. (60'-4½" to ₵ Bearing)

Intermediate Spans 30'-0" Min. ; 60'-0" Max.
(₵ Bearing to ₵ Bearing)

5'-0"
Approach Span

5'-0"
Ramp Span
2'-6"   2'-6"

4½"

₵ Bearing

₵ Bearing

Begin or End Detour Bridge

AB3 Bracing Frame (Typ.)

AB1 Truss Panels (Typ.)

AB5 or AB6
End Post (Typ.)

Approach Asphalt
Pavement

Steel Grid Deck & Curb

Grade Beam

AB13 Swaybrace
Standard (Typ.)

AB306 Transom DW (Typ.)

AB505C Distributing Beam Stop
(Typ. both ends)

4" x 10" Lagging
with Filter Fabric

5'-0" Berm (Min.)

AB22 Distributing Beam with
AB23 Distributing Beam End Frames

AB7 Bearing (Expansion
Bearing Shown Fixed
Bearing Similar) (Typ.)

1½(Max.)
1

Existing Ground Line

₵ Backwall Bent

₵ End Bent

₵ Typical Intermediate Bent

ELEVATION VIEW
(TIMBER PILES SHOWN, STEEL H PILES AND STEEL PIPE PILES SIMILAR)

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28'-6"

1'-6"   12'-9"   12'-9"   1'-6"

24'-0" Clear Roadway

12'-0"   12'-0"

℄ Trusses &
℄ Bearings

℄ Trusses &
℄ Bearings

AB3 Bracing Frame (Typ.)

AB2 Raker Bar

℄ Detour Bridge

AB51 Panel Pins
(Top & Bottom Typ.)

AB1 Truss Panels (Typ.)

Steel Grid Deck & Curb

AB7 Bearing
(Expansion Bearing
shown, Fixed Bearing
similar, Typ.)

AB505C Distributing
Beam Stop (Typ.)

AB306 Transom DW (Typ.)

AB13 Swaybrace Standard (Typ.)

AB22 Distributing Beams with AB23
Distributing Beam End Frame (Typ.)

Timber Bent shown for illustration purposes,
See Plans for actual Bent Designs, including
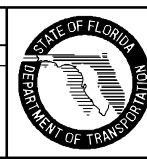Pile sizes and spacing, bent cap and bracing
requirements.
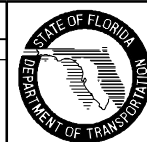
TYPICAL SECTION THRU DETOUR BRIDGE AT INTERIOR BENTS (TYPICAL SECTION AT END BENTS SIMILAR WITHOUT DISTRIBUTING BEAMS)
(TIMBER PILE SHOWN, STEEL H PILES AND STEEL PIPE PILE SIMILAR)

FDOT supplies Temporary Bridge Components,
including Fixed & Expansion Bearings

Contractor supplied foundations components, including
Bearing Saddle Plates, Keeper Bars & Shims.

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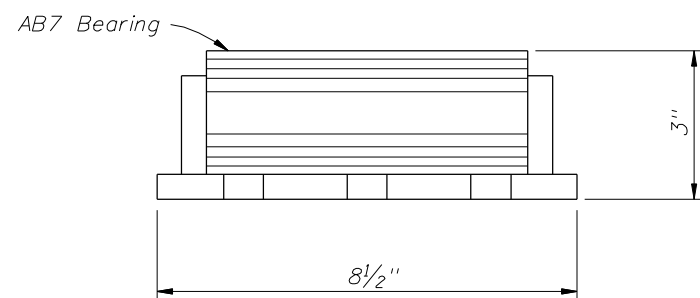
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TEMPORARY DETOUR BRIDGE
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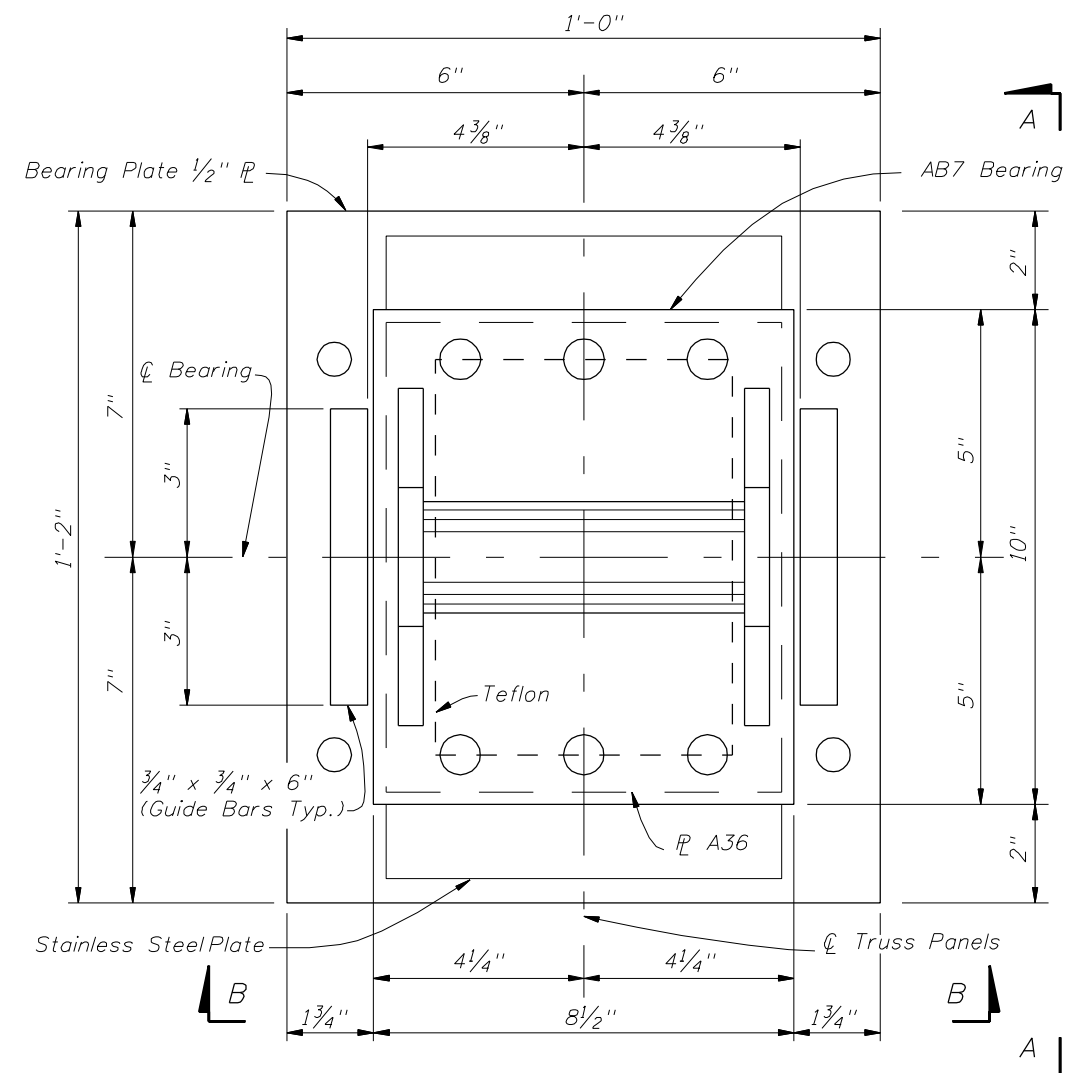Interim Date
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Left Side — Fixed Bearings

7/8" Ø Holes (Typ.)

AB7 Bearing

8½"

4¼" 4¼"

1"

4"

4"

1"

ℂ Bearing

ℂ Truss Panels

1¾" 2½" 2½" 1¾"

5"

10"

5"

PLAN VIEW

AB7 Bearing

3"

8½"

VIEW B-B

AB7 Bearing

3"

10"
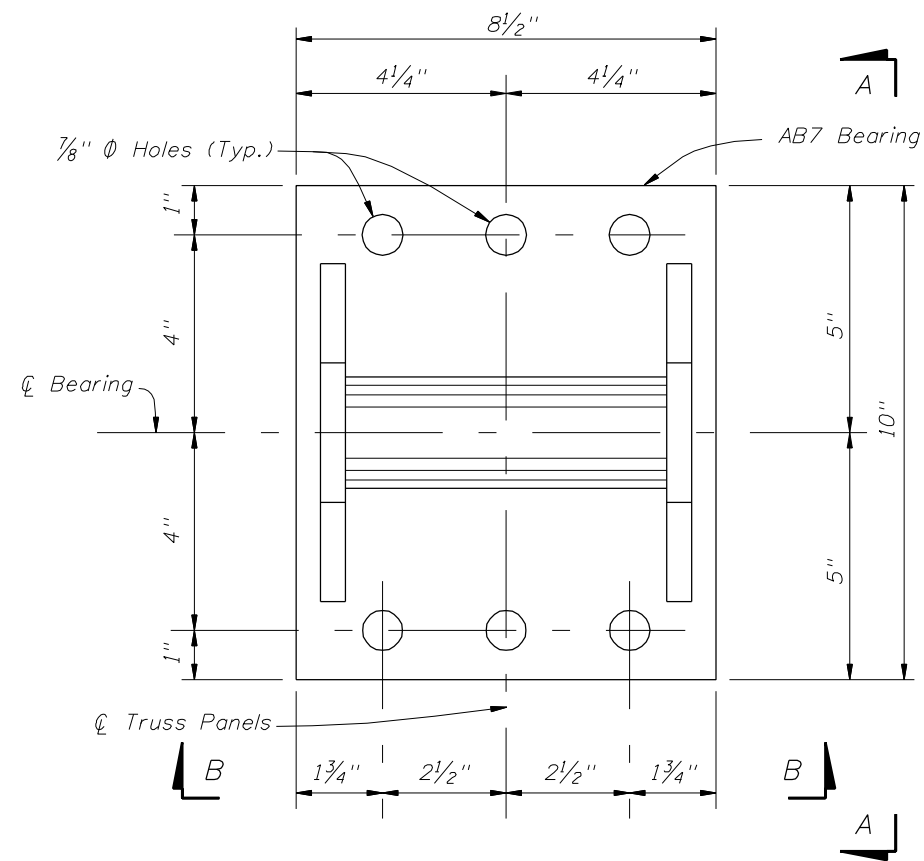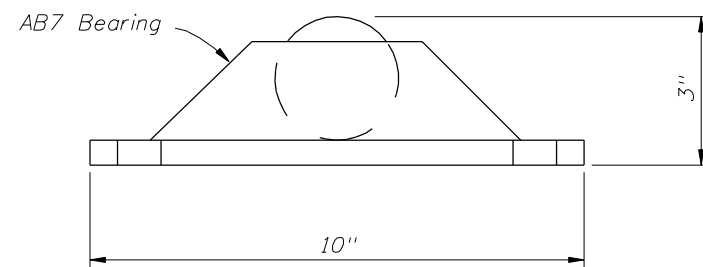
VIEW A-A

$=$ DETAILS FOR FDOT SUPPLIED FIXED BEARINGS $=$

Right Side — Expansion Bearings

1'-0"

6" 6"

4⅜" 4⅜"

Bearing Plate ½" ℙℒ

AB7 Bearing

2"

ℂ Bearing

7"

3"

1'-2"

3"

7"

2"

5"

10"

5"

Teflon

¾" x ¾" x 6"
(Guide Bars Typ.)

ℙℒ A36

Stainless Steel Plate

ℂ Truss Panels

1¾" 8½" 1¾"

4¼" 4¼"

PLAN VIEW

AB7 Bearing

¾" x ¾" x 6"
(Guide Bars Typ.)

Stainless Steel Plate

Bearing Plate ½" ℙℒ

Teflon (Bonded to A36 ℙℒ)

ℙℒ A36

VIEW B-B

AB7 Bearing

¾" x ¾" x 6"
(Guide Bars Typ.)

4" ±

Bearing Plate ½" ℙℒ
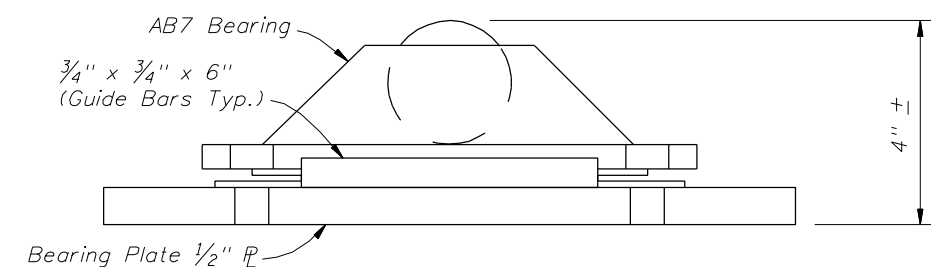
VIEW A-A

$=$ DETAILS FOR FDOT SUPPLIED EXPANSION BEARINGS $=$

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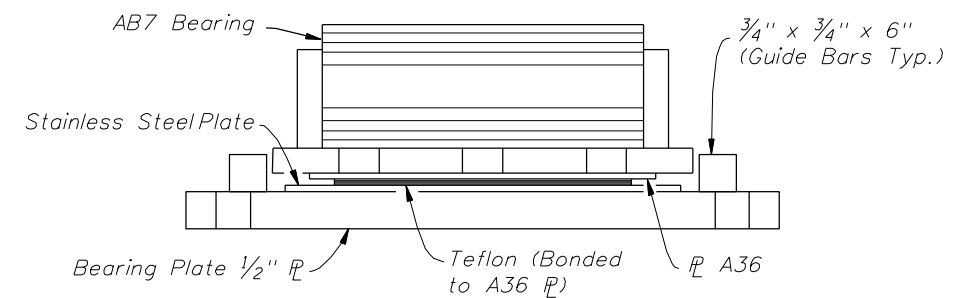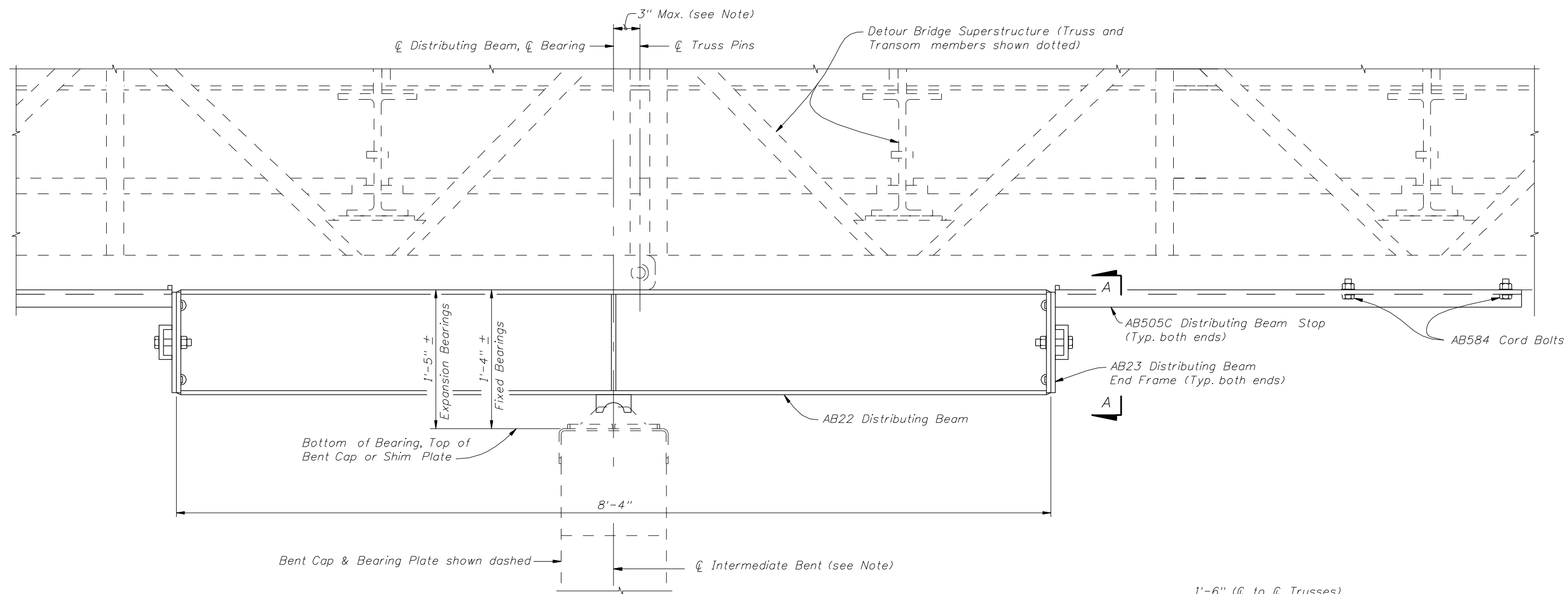Interim Date 07/01/06

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3" Max. (see Note)

℄ Distributing Beam, ℄ Bearing

℄ Truss Pins

Detour Bridge Superstructure (Truss and Transom members shown dotted)

AB505C Distributing Beam Stop (Typ. both ends)

AB584 Cord Bolts

AB23 Distributing Beam End Frame (Typ. both ends)

AB22 Distributing Beam

1'-5" ± Expansion Bearings

1'-4" ± Fixed Bearings

Bottom of Bearing, Top of Bent Cap or Shim Plate

8'-4"
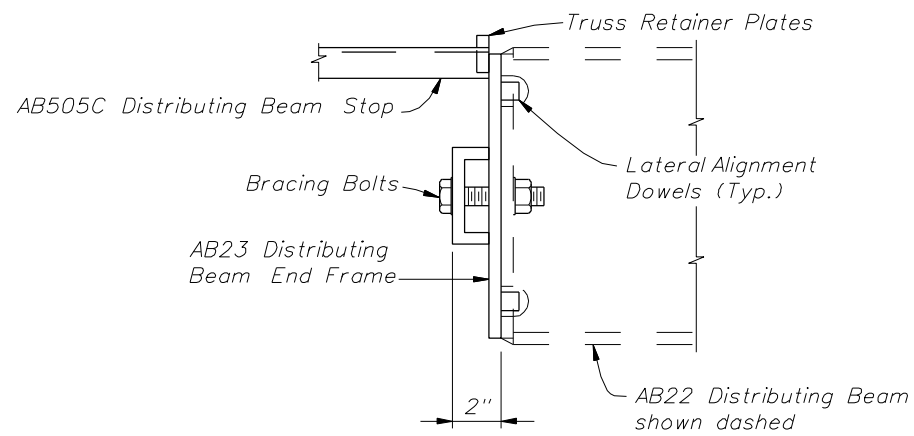
Bent Cap & Bearing Plate shown dashed
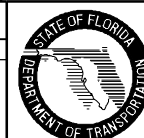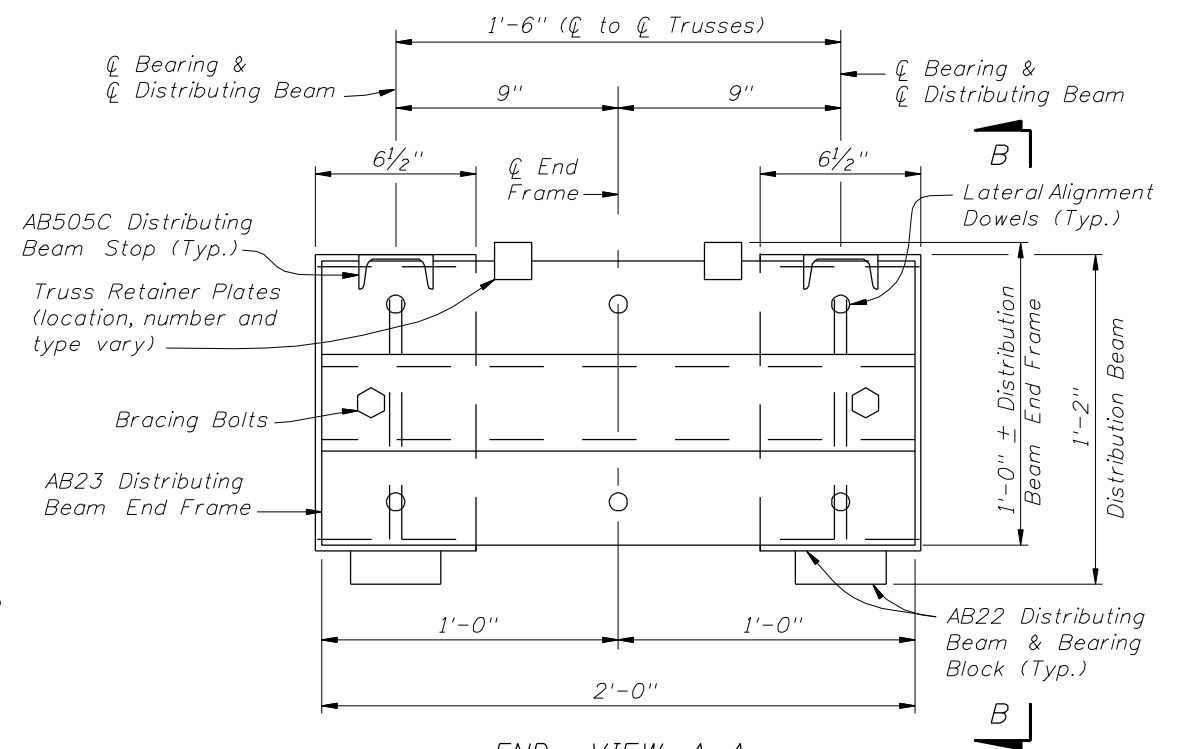
℄ Intermediate Bent (see Note)

ELEVATION VIEW OF DISTRIBUTING BEAM
(FIXED BEARING SHOWN, EXPANSION BEARING SIMILAR)
(Timber Intermediate Bent shown, Steel H Pile and
Steel Pipe Pile Intermediate Bents similar)

Note:
℄ Bearing may be shifted from ℄ Truss Pins
as shown; ℄ Intermediate Bent may be shifted
from ℄ Bearing an additional 3" to allow for
pile placement tolerances.

Truss Retainer Plates

AB505C Distributing Beam Stop

Bracing Bolts

Lateral Alignment Dowels (Typ.)

AB23 Distributing Beam End Frame

2"

AB22 Distributing Beam shown dashed

VIEW B-B

℄ Bearing & ℄ Distributing Beam

1'-6" (℄ to ℄ Trusses)

9"   9"

℄ Bearing & ℄ Distributing Beam

6½"   ℄ End Frame   6½"

AB505C Distributing Beam Stop (Typ.)

Lateral Alignment Dowels (Typ.)

Truss Retainer Plates (location, number and type vary)

Bracing Bolts

AB23 Distributing Beam End Frame

1'-0" ± Distribution Beam End Frame

1'-2" Distribution Beam

1'-0"   1'-0"

2'-0"

AB22 Distributing Beam & Bearing Block (Typ.)

END VIEW A-A
DISTRIBUTING BEAM END FRAME DETAIL

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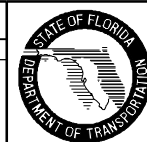
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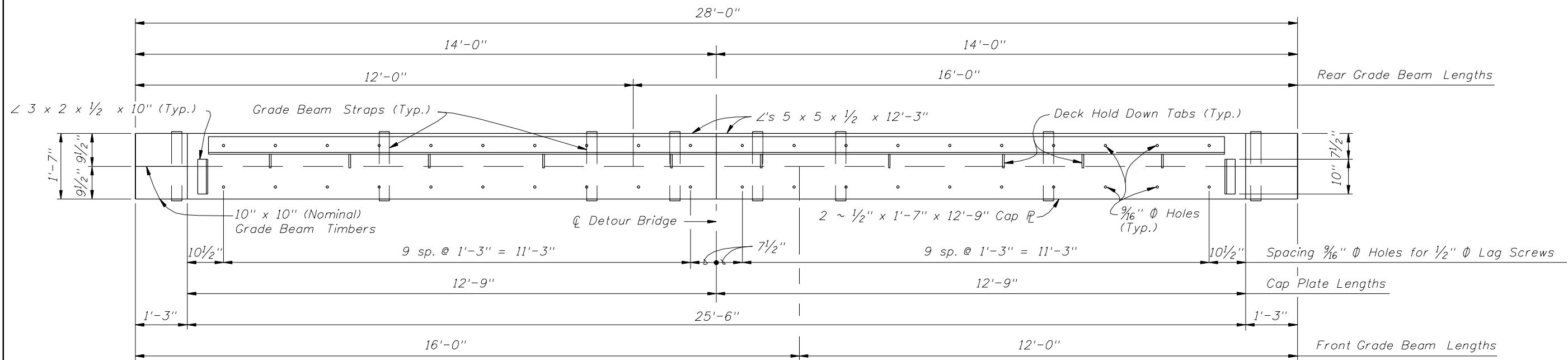
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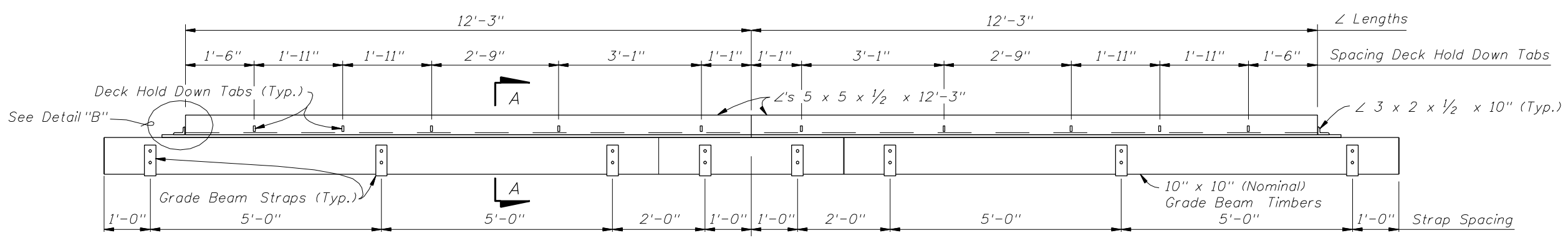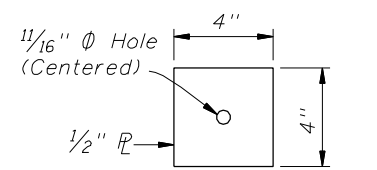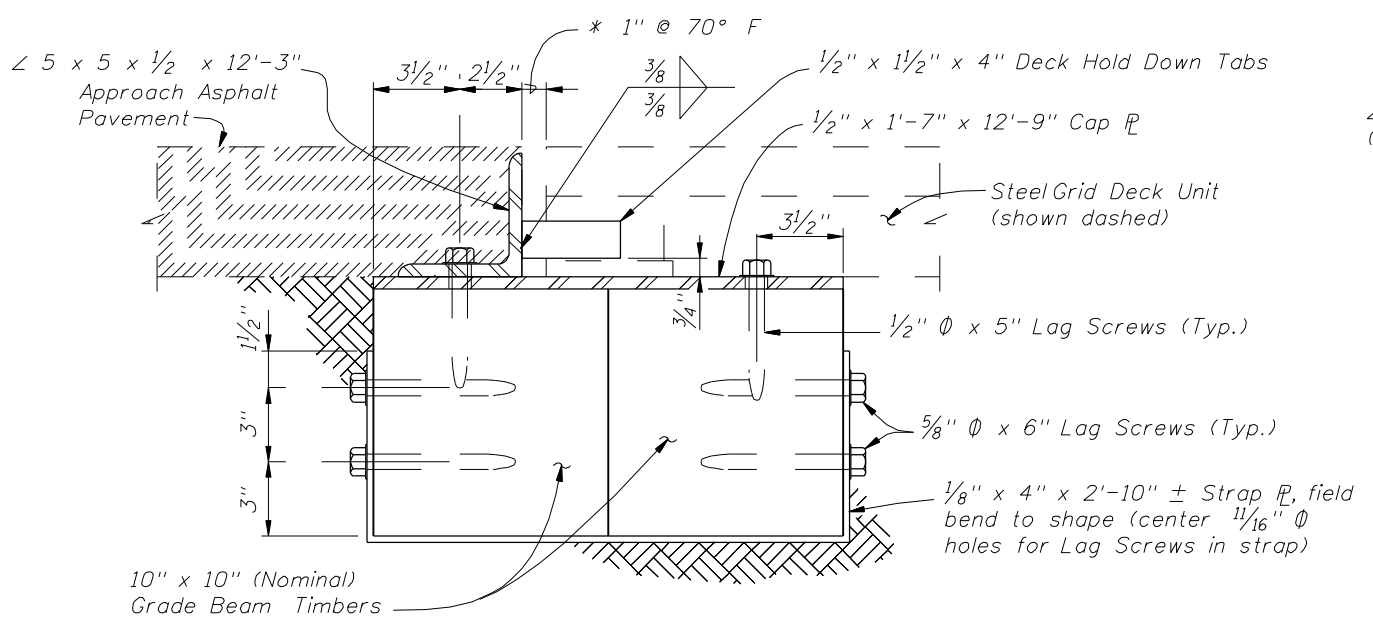## PLAN VIEW

28'-0"

14'-0" | 14'-0"

12'-0" | 16'-0" — Rear Grade Beam Lengths

∠ 3 x 2 x ½ x 10" (Typ.)

Grade Beam Straps (Typ.)

∠'s 5 x 5 x ½ x 12'-3"

Deck Hold Down Tabs (Typ.)

1'-7" 9½" 9½"

7½"

10"

10" x 10" (Nominal) Grade Beam Timbers

₵ Detour Bridge

2 ~ ½" x 1'-7" x 12'-9" Cap ℓ

⁹⁄₁₆" ∅ Holes (Typ.)

10½" | 9 sp. @ 1'-3" = 11'-3" | 7½" | 9 sp. @ 1'-3" = 11'-3" | 10½" — Spacing ⁹⁄₁₆" ∅ Holes for ½" ∅ Lag Screws

12'-9" | 12'-9" — Cap Plate Lengths

1'-3" | 25'-6" | 1'-3"

16'-0" | 12'-0" — Front Grade Beam Lengths

ELEVATION VIEW

12'-3" | 12'-3" — ∠ Lengths

1'-6" 1'-11" 1'-11" 2'-9" 3'-1" 1'-1" 1'-1" 3'-1" 2'-9" 1'-11" 1'-11" 1'-6" — Spacing Deck Hold Down Tabs

Deck Hold Down Tabs (Typ.)

See Detail "B"

A

∠'s 5 x 5 x ½ x 12'-3"

∠ 3 x 2 x ½ x 10" (Typ.)

A

Grade Beam Straps (Typ.)

10" x 10" (Nominal) Grade Beam Timbers

1'-0" 5'-0" 5'-0" 2'-0" 1'-0" 1'-0" 2'-0" 5'-0" 5'-0" 1'-0" — Strap Spacing

* See General Notes for setting widths other than 70° F.

ANCHOR PLATE DETAIL

4"

¹¹⁄₁₆" ∅ Hole (Centered)

½" ℓ

4"

SECTION A-A

∠ 5 x 5 x ½ x 12'-3"

Approach Asphalt Pavement

3½" 2½"

* 1" @ 70° F

³⁄₈ ³⁄₈

½" x 1½" x 4" Deck Hold Down Tabs

½" x 1'-7" x 12'-9" Cap ℓ

Steel Grid Deck Unit (shown dashed)

3½"

¾"

½" ∅ x 5" Lag Screws (Typ.)

1½"

3"

3"

⅝" ∅ x 6" Lag Screws (Typ.)

⅛" x 4" x 2'-10" ± Strap ℓ, field bend to shape (center ¹¹⁄₁₆" ∅ holes for Lag Screws in strap)

10" x 10" (Nominal) Grade Beam Timbers

DETAIL "B"

∠ 5 x 5 x ½ x 12'-3"

Steel Grid Deck Unit (shown dashed)

∠ 3 x 2 x ½ x 10" (placed against Grid Deck)

Typ. both ends ∠

¼

2"

OPTIONAL THROUGH BOLT DETAIL (MAY BE USED IN LIEU OF STRAPS)

10" x 10" (Nominal) Grade Beam Timbers

½" Anchor Plate (see Detail)

3"

⅝" ∅ Threaded Bar placed @ Strap locations, Torque to 25 lbs.-ft.

GRADE BEAM DETAILS