GENERAL NOTES:

This Standard is only applicable to the current FDOT inventory of temporary bridge components which are manufactured in accordance with Acrow Series 300, Double Wide design. Work this Standard with Index Nos. 21610, 21620, 21630 and 21640.

STRUCTURAL STEEL:
Steel Plates and Rolled Sections shall be ASTM A572 Grade 50.

Pipe piles shall be ASTM A252 Grade 2, Fy = 35 ksi.

BOLTS, SCREWS AND THREADED BOLT STOCK:
Furnish high strength bolts in accordance with ASTM A325. Furnish Threaded Stock in accordance with ASTM A66. 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:
11. 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. Do not use bearings that have a severely damaged or unbonded PTFE layer. Clean Stainless steel plate of all grit and grime prior to installation and finish to a smooth buffer 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 be 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.

STORAGE FACILITY:
Contact

FDOT Statewide Aluminum Shop
2590 Camp Rd
Orlando, FL
407-977-6530

For shipping weights and dimensions of Temporary Bridge elements.

SHIPPING WEIGHTS AND DIMENSIONS:

Decking Sizes:

<table>
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<tr>
<th>Type</th>
<th>Length</th>
<th>Width</th>
<th>Weight (lbs)</th>
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<tr>
<td>Curb</td>
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<td>5'-3&quot;</td>
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</table>

Shipping weights and dimensions of other bridge components can be referenced in "Arrow Panel Bridgeing, Series 300, Technical Handbook".

TRAFFIC RAILING NOTES:
See Index 400 for component details, geometric layouts and associated notes not fully detailed herein.

CONCRETE: Concrete for Transition Blocks shall be Class II (Bridge Deck)

THREE-BEAM PANEL: Steel Three-Beam Elements shall meet the requirements of AASHTO M180. Plate Washers shall be in accordance with ASTM A36 or ASTM A709 Grade 36. Do not drill Temporary Bridge components to attach Guardrail. Guardrail Bolts shall be placed between Truss members as shown in Index 21640.

COATINGS: All Nuts, Bolts, Anchors, Washers and Backer Plates shall be hot-dip galvanized in accordance with the Specifications.

WOOD BLOCKS: All wood blocks, including required wedge shaped blocks shall be Pressure Treated lumber in accordance with Specifications Section 953. Bolt holes in blocks to be centered ±1/4".

PAYMENT:
Temporary Detour Bridge is to be paid for under Contract Unit Price for Special Detour. If a temporary bridge system other than that shown herein is used, the Contractor is responsible for renting or purchasing their own system. Payment for Temporary Guardrail work and Transition Block will be made under Pay Item Temporary Guardrail, LF.

Furnish and install Bridge Three-Beam Panels and all associated hardware as shown. Payment will be made in accordance with the Temporary Detour Bridge under the Pay Item Special Detour, LF. Turn over Bridge Three-Beam Panels and all associated hardware to the Department with the Detour Bridge components per Specifications Section 102-6.
AB306 Transom DW (Typ.)

1'-6" 25'-6"

24'-0" Clear Roadway Width

TYPICAL PLAN VIEW OF DETOUR BRIDGE
(TIMBER PILES SHOWN, STEEL H PILES AND STEEL PIPE PILES SIMILAR)

(Thrie-Beam Panel not shown for clarity, See Index 21640)

* or Flatter

AB306 Transom DW (Typ.)

AB7 & AB8 Bearings
(Expansion Bearing Shown Fixed Bearing Similar) (Typ.)

Begin or End Detour Bridge

Approach Roadway

Grade Beam

4" x 10" Timber Lagging with Filter Fabric

End Bent

AB3 Bracing Frame (Typ.)

AB1 Truss Panels (Typ.)
End Span 30'-0" Min. (30'-4½" to ξ Bearing); 60'-0" Max. (60'-4½" to ξ Bearing)
Intermediate Span 30'-0" Min.; 60'-0" Max. (ξ Bearing to ξ Bearing)

**ELEVATION VIEW**

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

(Thrie-Beam Panel not shown for clarity, See Index 21640)

**GENERAL NOTES AND DETAILS**

07/01/15

21600 3 of 7
Timber bent shown for illustration purposes, see plans for actual bent designs, including pile sizes and spacing, bent cap and bracing requirements.

AB22 Distributing Beams with AB23 Distributing Beam End Frame (Typ.)
AB306 Transom DW (Typ.)
AB13 Swaybrace Standard (Typ.)

AB505C Distributing Beam Stop (Typ.)
AB51 Panel Pins (Top & Bottom Typ.)
AB3 Bracing Frame (Typ.)

Steel Grid Deck & Curb

AB7 & AB8 Bearings (Expansion Bearing shown, fixed bearing similar) (Typ.)
AB1 Truss Panels (Typ.)
AB2 Raker Bar

Offset Block

TYPICAL SECTION THRU DETOUR BRIDGE AT INTERIOR BENTS (TYPICAL SECTION AT END BENTS SIMILAR WITHOUT DISTRIBUTING BEAMS) (TIMBER PILES SHOWN, STEEL H PILES AND STEEL PIPE PILES SIMILAR)
ELEVATION VIEW OF DISTRIBUTING BEAM
(FIXED BEARING SHOWN, EXPANSION BEARING SIMILAR)
(Timber Intermediate Bent shown, Steel Intermediate Bents similar)

Note:
± Distributing Beam, ± Bearing from ± Truss Pins to ± Trusses to allow for pile placement tolerances.

ABS05C Distributing Beam Stop (Typ.)
Truss Retainer Plates (location, number and type vary)

ABS84 Chord Bolts

END VIEW A-A
DISTRIBUTING BEAM END FRAME DETAIL
**GRADE BEAM DETAILS**

**DETAILED DESCRIPTION:**

- **Grade Beam Straps:**
  - Typ. Grade Beam Straps (Typ.)
  - 3 x 2 x 10" (Typ.)
  - 5 x 5 x 12'-3"

- **Deck Hold Down Tabs:**
  - Typ. both ends A
  - 1/2 x 1/2 x 4" Deck Hold Down Tabs
  - 5/8 x 5/8" Lag Screws (Typ.)
  - 1/2" Ø x 6" Lag Screws (Typ.)

- **Steel Grid Deck Unit:**
  - (shown dashed)
  - Typ. both ends L
  - 5/8" Ø Holes for 1/2" Ø Lag Screws

- **Cap Plate Lengths:**
  - 10" x 10" (Nominal) Grade Beam Timbers
  - 3 x 2 x 10" (Typ.)

**GENERAL NOTES AND DETAILS:**

- **Approach Asphalt Pavement:**
  - 10" x 10" (Nominal) Grade Beam Timbers

- **Detour Bridge:**
  - 2 x 10" x 12'-3" Cap B

**OPTIONAL THROUGH BOLT DETAIL:**

- May be used in lieu of straps

**TYPICAL DETAIL:**

- 1/2" Anchor Plate (see detail)

- 5/8" Ø Threaded Bar placed @ Strap Locations, Torque to 25 lb-ft.
Backwall Bent Details

**Elevation View**

- **12" Ø Timber Piles**: Typ.
- **4" x 10" Timber Lagging**: 19'-2"
- **Filter Fabric**: Limits of Fabric shown shaded

**Plan View**

- **Deck Hold Down Strap (Typ.):** 1'-1"
- **1'-11" x 12" x 12" Timber Cap**: 2'-9"
- **1'-11" x 3' x 3" Strap**: ø (both sides of cap Typ.)
- **Deck Hold Down Strap (Typ.):** ø 3 x 2 on ø Top Cap ø

**End View**

- **12" Ø Timber Piles**: Typ.
- **4" x 10" Timber Lagging**: 16'-0"
- **Filter Fabric**: Top of Berm or Existing Ground

**Temporary Detour Bridge Details**

- **Timber Pile Foundations**
- **07/01/06**
- **21610**
Steel Bent Cap

\( \frac{3}{8} \times \frac{1}{2} \) Fixed Bearing Keeper Bar (Typ.)
(to bear on face of 1'-0" x 1'-2" Bearing Plate)

Steel Bent Cap

**FIXED BEARING KEEPER BAR DETAIL**

Steel Bent Cap

\( \frac{3}{8} \times \frac{1}{2} \) Expansion Bearing Keeper Bar (Typ.)
(to bear on face of 1'-0" x 1'-2" Bearing Plate)

Steel Bent Cap

**EXPANSION BEARING KEEPER BAR DETAIL**

Steel Bent Cap

\( \frac{3}{8} \) AB7 Bearing shown dashed

Steel Bent Cap

**EXPANSION BEARING DETAILS**
TEMPORARY DETOUR BRIDGE DETAILS

STEEL H PILE FOUNDATIONS

2016 DESIGN STANDARDS

INDEX NO. 21620

SHEET NO. 2 of 2
Typ. 90° 1" Pile Tip Seal Plate (Tight fit)

Typ. 1" Pile Tip Stiffener Plates (Tight fit)

Typ. 90° 1" Strut Connector Plate (see Detail)

HP 12 x 74 (Strut Beam)

Steel Pipe Pile

FIELD (Steel Pipe Cap Plate)

Steel Pipe Pile Cap Assembly

24" Ø x 1'-10" x 1" ℅ (Stiffener Plates)

Typ. 2" Ø Heavy Hex Bolt, Nut and Washers

Typ. 1" Strut Connector Plate (see Detail)

Typ. 1" Pile Tip Stiffener Plates (Tight fit)

Typ. 4" x 1'-10" x 9/16" 8 (Stiffener Plate)

Typ. 2" x 103/8 x 3/8" 8 (Stiffener Plates)

Typ. 1" Hole (Typ.) 3/8" Ø Slotted Hole in HP 12 x 74 Strut Beam (Typ. each end)

Typ. 1" Pile Tip Seal Plate (Tight fit)
Note:
Use Shim Plates as required to provide equal bearing seat elevations across the bent. Vary thickness of Shim Plate across the pile cap plate to provide a level bearing area in the transverse direction.
Note: Use Shim Plates as required to provide equal bearing seat elevations across the bent. Vary thickness of Shim Plate across the pile cap plate to provide a level bearing area in the transverse direction.

Partial Elevation View

Expansion Bearing Assembly shown dashed

Expansion Bearing Keeper Bar (Typ.)

Typ. both legs

Steel Pipe Pile Cap

Steel Pipe Pile

Abutment and Intermediate Expansion Bearing Details
Temporary Detour Bridge

Thrie-Beam Guardrail

- Limits of Payment for Thrie-Beam Panels on Bridge:
  - End Span: 2'-6" ±
  - Approach Span: 5'-0" ±

- Limits of Payment for Temporary Guardrail:
  - Traffic Railing - Class B (10 Gauge)
  - Thrie-Beam Panels: Two 17'-0" - Class A (12 Gauge)
  - Thrie-Beam Guardrail Panels (Nested): 17'-0" - Class A (12 Gauge) Thrie-Beam Panel
  - 6'-3" Class A (12 Gauge) W-Beam to W-Beam Guardrail See Index 400

- 6'-3" Post Spacing

- Ramp Span: 5'-0"

- Shoulder Line (See Plans for width requirements)

- Approach Span: 5'-0"

- Steel Grid Deck

- Grade Beam

- Backwall Bent

- Transition Block (see Sheet No. 6 of 6)

- Transition Block

- Grade Beam

- Face of Thrie-Beam Guardrail

- Approach Roadway

- Thrie-Beam Panels on Bridge

- Thrie-Beam Transition (W-Beam to W-Beam Guardrail See Index 400)

- Partial Plan - Approach Transition

- Partial Elevation - Approach Transition

- Limits of Payment for Thrie-Beam Panels on Bridge

- Limits of Payment for Temporary Guardrail

- Approach Span: 5'-0"

- End Span: 2'-6"

- Grade Beam

- Backwall Bent

- Transition Block

- Thrie-Beam Guardrail

- Thrie-Beam Panels

- Thrie-Beam Transition

- Thrie-Beam Panels on Bridge

- Thrie-Beam Transition (W-Beam to W-Beam Guardrail See Index 400)

- Limits of Payment for Thrie-Beam Panels on Bridge

- Limits of Payment for Temporary Guardrail

- Approach Span: 5'-0"

- End Span: 2'-6"

- Grade Beam

- Backwall Bent

- Transition Block

- Thrie-Beam Guardrail

- Thrie-Beam Panels

- Thrie-Beam Transition (W-Beam to W-Beam Guardrail See Index 400)
TEMPORARY DETOUR BRIDGE
THREE-BEAM GUARDRAIL

LIMITS OF PAYMENT FOR THREE-BEAM PANELS ON BRIDGE

W-BEAM GUARDRAIL SEE INDEX 400

6'-3" CLASS A

THREE-BEAM PANELS

6'-3" POST SPACING (Typ.)

BEGIN OR END DETOUR BRIDGE

THREE-BEAM TRANSITION

END TRANSITION APPLICATION DETAILS

TWO-WAY TRAFFIC

ONE-WAY TRAFFIC
PARTIAL PLAN - APPROACH TRANSITION SHOWN (TRAILING END SIMILAR)

Limits of Payment for Temporary Barrier Wall

Three-Beam Panels on Bridge

End Span 2'-6" 5'-0" Approach Span

Traffic Railing - Class B

Two 12'-6" - Class A (12 Gauge)

(10 Gauge) Three-Beam Guardrail Panels (Nested)

1-6½" 2 Sp. @ 1'-6½"

Begin or End Detour Bridge

 lame Bearing

Grade Beam

Terminal Connector (Typ.)

Type K Barrier Unit

KEY:

☑ Staked
☒ Not Staked

PARTIAL ELEVATION - APPROACH TRANSITION SHOWN (TRAILING END SIMILAR)

Grade Beam

$ End Bent

$ Backwall Bent

Type K Barrier Unit

(See Index 414 for details)
Thrie-Beam Panel Connection Spacing

Thrie-Beam Guardrail

Typical Intermediate Bent

Top of Steel Grid Deck

2'-1"

2'-6"

Thrie-Beam Expansion Panel (See Detail)

Top Bolt

Top Bolt

Field Drill

Field Drill

\( \frac{3}{8} \times 2\frac{1}{2} \) Bolt Slots (Typ. Ea. End)

\( \frac{3}{8} \times 1\frac{2}{3} \) Splice Bolt Slots (Typ. Ea. End)

Partial Elevation showing typical
Thrie-Beam panel arrangement

Partial Elevation showing Thrie-Beam Panels at Expansion Joint

Thrie-Beam Expansion Panel Detail

11'-6"

\( \frac{3}{8} \times 2\frac{1}{2} \) Bolt Slots (Typ. Ea. End)

\( \frac{3}{8} \times 1\frac{2}{3} \) Splice Bolt Slots (Typ. Ea. End)
PLAN VIEW OF TRANSITION BLOCK
(GUARDRAIL NOT SHOWN FOR CLARITY)

ELEVATION OF TRANSITION BLOCK
(GUARDRAIL AND POSTS NOT SHOWN FOR CLARITY)

ESTIMATED QUANTITIES

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<tr>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<tbody>
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<tr>
<td>Reinforcing Steel</td>
<td>LB</td>
<td>61</td>
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<tr>
<td>Guardrail (Reset)</td>
<td>LF</td>
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NOTES:

REINFORCING STEEL: Reinforcing steel shall be ASTM A615, Grade 60.

ANCHOR RODS: Steel Anchor Rods shall be ASTM A36, ASTM A709 Grade 36 or ASTM A615 Grade 60 hot-dip galvanized in accordance with Specification Section 962.