GENERAL NOTES:

- Work this Standard with Index Nos. 21601, 21620 and 22530.

STRUCTURAL STEEL:
- Steel Plates and Bolts: Sharma 42TM4 and Grade 36.
- Pipe piles shall be ASTM A252 Grade 2, F_y = 35 ksi.

RODS, Lag Screws and Threaded Rods (Studs):
- Furnish high-strength bolts in accordance with ASTM A325. Furnish Threaded Studs in accordance with ASTM A257. Furnish steel washers and nuts compatible with bolts, Threaded Studs and Lag Screws.

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

BACKWALL BENT PILES:
- Timber Flex:
  - 10 Maximum Embedment into compacted backfill into soil having a blue count greater than 6 (0.6%).
  - Ultimate Capacity greater than 18 tons.
- Steel Piles:
  - 10 Maximum Embedment into compacted backfill into soil having a blue count greater than 6 (0.6%).
  - Ultimate Capacity greater than 28 tons.
- Shims are advisable between backwall and cap.
- Test piles are not required for backwall/pile.

EXPANSION DEVICES:
- Inspect the PTFE (Teflon) layer and stainless steel plate prior to installation.
- Do not use bearings that have a severely damaged or uninstalled 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 polished surface.

DISTRIBUTING BEAMS:
- Longitudinal beams resembling the distributing beam may be lengthened or shortened to center the distributing beam bearing on the cap beam.
- The longitudinal beams are to be on the distributing beam and frame.

EXPANSION JOINT SETTING:
- 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:
- Commercial:
  - FDOT Statewide Aluminum Shop
  - 2590 Camp Rd.
  - Dade, FL
  - 407-977-4250

For shipping weights and dimensions of Temporary Bridge elements:

WEIGHTS AND DIMENSIONS:

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Width</th>
<th>Weight (Lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cur 1/2</td>
<td>3'</td>
<td>6'-5''</td>
<td>800</td>
</tr>
<tr>
<td>Cur 1'</td>
<td>6'-5''</td>
<td>1420</td>
<td></td>
</tr>
<tr>
<td>Cur 10'</td>
<td>6'-5''</td>
<td>2500</td>
<td></td>
</tr>
<tr>
<td>Cur 20'</td>
<td>6'-5''</td>
<td>2800</td>
<td></td>
</tr>
<tr>
<td>NonCur 1/2</td>
<td>3'</td>
<td>5'-1''</td>
<td>650</td>
</tr>
<tr>
<td>NonCur 10'</td>
<td>5'-1''</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>NonCur 15'</td>
<td>5'-1''</td>
<td>1600</td>
<td></td>
</tr>
<tr>
<td>NonCur 20'</td>
<td>5'-1''</td>
<td>2100</td>
<td></td>
</tr>
</tbody>
</table>

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

INSTRUCTIONS 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 and incorporating the Double Wide Light Transom as shown in the "Arrow 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 the end span length to the adjacent span shall not be less than 10 to prevent the shorter span from lifting off its bearing due to load.
  - Limit continuous length of bridge to 350'.

- 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 details 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 "Arrow Panel Bridging, Series 300, Technical Handbook" for temporary bridge dimensions and capacities.
- These Standards are based on the FDOT current inventory of temporary bridge elements which are manufactured in accordance with Arrow Series 300 Double Wide design.
- The Approach span and Ramp span are to be simple spans, each 5'-0" in length, to eliminate Live Load uplift at backwall and grade beam support.
- Do not replace the temporary bridge on a vertical curve. A constant grade is acceptable.
- Refer to "Arrow 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 = 1.55

SERVICE LEVEL LOADS:
- Calculate reactions using superstructure dead load unit weight = 1.20 Kip/Ft.
- Include a concentrated dead load of 250 Lbs per frass plate at abutments. This load accounts for all end post and 1 bearing per truss plate.
- Calculate wind force on superstructure using basic wind force of 0.45 Kip/FT.
- Ratio the above loading using wind pressures in Table 3.1.2.2.1-4 of AASHTO LRFD Bridge Design Specifications.
  - Example:
    - For wind slice of 30°
      - W (Lateral) = 0.45 (0.055/0.755) = 0.39 Kip/FT
      - W (Longitudinal) = 0.45 (0.028/0.755) = 0.17 Kip/FT

Plans for temporary bridge shall, as a minimum, include the following:
1. General Note Sheet
2. Simple span bearing details if noncontinuous spans are selected.
3. Grade change details at the extremities of the bridge.
4. Plan and elevation sheets with span lengths, abutments, alignment, grade and bearing details.
5. Foundation layout sheets including pile spacing & bent location.
6. Tile data showing pile type, size, cut off elevations, capacity & estimated lengths.

2010 FDOT Design Standards
TEMPORARY DETOUR BRIDGE
GENERAL NOTES AND DETAILS
1 of 7
TYPICAL PLAN VIEW OF DETOUR BRIDGE
(TIMBER PILE SHOWN, STEEL H PILES AND STEEL PIPE PILES SIMILAR)
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)
Grade Beam Details

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

Section A-A

21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.

2010 FDOT Design Standards

Temporary Detour Bridge
General Notes and Details

Sheet No. 21600

7 of 7

Last

07/01/06

Revision

Sheet No.

Index No.