

# Welded Plate Girder Checklist

## Framing Plan

- Centerline Girder/Bridge Roadway/Bent/Pier/Field Splice
- Centerline Bearing at Abutment (other than cap-type abutments)
- Working Line/Construction Line Call-out
- Skew and Complement
- Girder/Stiffener Spacing
- Field Splice Locations
- Longitudinal Dimensions
- Curved Girder Radii
- RF Abutment/End of Girder Call-out
- Stiffener/Diaphragm/Cross Frame/Bottom Lateral Bracing Call-out
- Girder No./Diaphragm No./Field Splice No./Bottom Lateral Bracing No./  
Bay No./Longitudinal Stiffener No.
- Stiffeners and Diaphragms/Cross Frames Orientation
- See Detail X Call-outs
- Line Styles
- Longitudinal Dimensions (under title)

## Girder Elevation

- Detail Projected from an Interior Girder on Framing Plan
- Stiffeners Orientation
- Detail Stiffeners/Girder Ends/Holes Adjusted for Grade
- Centerline Bent/Pier/Field Splice/Girder End Holes
- Centerline Bearing at Abutment (other than cap-type abutments)
- Web Thickness and Depth/Top Flange Thickness and Width/  
Bottom Flange Thickness and Width (show steel grade if more than  
one grade is used in the girders)
- Shear Connector Spacing
- Girder Piece Lengths
- Field Splice Locations
- Longitudinal Dimensions
- Girder End Holes Spacings/Call-out
- RF Abutment/End of Girder Call-out
- Optional Shop Splice/Sole Plate/Longitudinal Stiffener Call-outs
- Stiffener Location No./Field Splice No./Longitudinal Stiffener No.
- Welds
- Line Styles
- Longitudinal Dimensions (under title)

### **Web Cutting Diagram**

- Centerline Abutment/Bent/Pier/Field Splice
- Centerline Bearing at Abutment (other than cap-type abutments)
- Ordinate Spacing Along Chord
- Level Dimensions
- Ordinate Dimensions Perpendicular to Chord
- Vertical Dimensions Between Chord and Level Line (blocking ordinate)
- Top of Web Call-out/Top and Bottom of Web Plate are Parallel
- Chord Between Blocking Ordinates Call-out
- Level Call-out
- End of Girder Call-out
- Line Styles
- Includes Dead Load Deflection and Grade (under title)

### **Longitudinal Stiffener Details**

- Centerline Girder/Stiffener/Bent/Pier/Field Splice
- Dimensions from End of Longitudinal Stiffeners to Centerline Transverse Stiffeners/Field Splices
- Bevel/Dimension at Ends
- Longitudinal Stiffener Call-out
- Optional Shop Splice Call-out
- Welds
- Line Styles/Patterning
- Number Required (under title)

### **Bottom Lateral Bracing Details**

#### **Typical Plan**

- Centerline Girder/Stiffener
- Gusset Plate Dimensions/Clip
- Hole Spacing/Location
- Bevels
- Bottom Lateral Bracing/Gusset Plate Call-outs
- Bottom Lateral Bracing No./Girder No.
- Welds
- Section Symbols
- Line Styles
- Number Required (under title)

### **Bottom Lateral Bracing Details (Cont'd)**

#### **Sections**

- Height above Bottom Flange
- Bevels
- Girder No./Stiffener No.
- Gusset Plate Call-outs
- Patterning

### **Diaphragm Details**

#### **Typical Sections**

- Centerline Girder/Bridge Roadway
- Girder Spacing
- Hole Spacing/Location
- Vertical Offset Between Girders
- Bent Plate Call-out w/Thickness, Width, and Length
- Line Styles/Patterning
- Section/Dimensions Orientation (under title)
- Number Required (under title)

#### **Typical Section Thru Bent Plate**

- Width/Depth/Radius Dimensions
- Bent Plate Call-out
- Patterning

#### **Diaphragm Elevation (for sloped diaphragms)**

- Vertical and Horizontal Dimensions
- Bent Plate Call-out

### **Cross Frame Details**

#### **Typical Sections**

- Centerline Girder/Bridge Roadway
- Girder Spacing
- Hole Spacing/Locations
- Offset Between Girders
- Bevels
- Gusset Plate Call-out w/Thickness, Height, and Length
- Angle Member Dimensions/Call-outs
- W-Beam Call-out w/Length
- Alternate Welded Connection Detail Call-out
- Fill Plate Call-out
- Girder No./Stiffener No./Bay No.
- Welds
- Line Styles/Patterning
- Number Required (under title)

**W-Beam Cope Detail**

- Centerline W-Beam
- Length
- Cope Dimensions
- 1" Radius

**Field Splice Details**

- Centerline Girder/Field Splice
- Hole Spacing/Locations
- Gap Dimension
- Plate/Bar Call-outs
- Section Symbols
- Line Styles
- Number Required (under title)

**Detail of Girder End at Abutment**

- Centerline Abutment/Girder
- Centerline Bearing at Abutment (other than cap-type abutments)
- Skew and Complement
- Dimensions
- RF Abutment Call-out
- Bearing Pad Call-out
- End of Girder Call-out
- Bevel Sole Plate Call-out
- Line Styles/Patterning

**Detail of Skewed Intermediate/Bent/Pier/ Stiffeners**

- Centerline Girder/Stiffener/Bent/Pier
- Centerline Bearing at Abutment (other than cap-type abutments)
- Skew and Complement
- Stiffener Lengths Along Long Side/Short Side
- Dimension from Centerline Girder to Hole
- Line Styles/Patterning

**Detail of Flange End Cut at Skewed Abut**

- Centerline Girder
- Bevel
- Centerline Girder to Start of Cut Dimension
- Line Styles

**Bearing Details at Bents/Piers/Non Cap-type Abutments**

**Elevation**

- Centerline Abutment/Bent/Pier
- RF Abutment Call-out (use w/beveled plates)
- Pad/Plate Dimensions
- Slot Location/Size
- Plate Call-out w/Thickness, Height, and Length
- Pad Call-out w/Thickness, Height, and Length/Number of Shims, Thickness, and Location
- Welds
- Direction Arrow (use w/beveled plates)
- Section Symbols
- Line Styles/Patterning

**Section**

- Centerline Girder
- Pad/Plate Dimensions
- Slot Location
- Nut Clearance
- Bolt Call-out/Set with Adhesive Anchorage System
- Line Styles/Patterning
- Number Required (under title)

**Bearing Details at Cap-type Abutments**

**Section**

- Centerline Girder
- Pad/Plate Dimensions
- Bevel Sole Plate Call-out
- Pad Call-out w/Size
- Line Styles/Patterning
- Number Required (under title)

**Elevation (with bevel sole plate)**

- RF Abutment Call-out
- Bevel Sole Plate Thicknesses
- 1/2" Dimension
- Bevel Sole Plate Call-out w/Size
- Pad Call-out
- Welds
- Patterning

**Miscellaneous**

- Transverse Stiffener Details
- Stiffener Clip and Weld Detail
- Shear Connector Detail
- Girder End Bevel Detail
- Optional Shop Splice Detail
- Alternate Weld Connection Detail
- Keeper Plate Detail
- Swedge Bolt Detail

**Notes**

- Optional Shop Splice/Ultrasonic Testing
- Shear Connectors Are Intended to be Field Installed
- Bolt Hole Edge Distance
- Stiffeners/Girder Ends/Holes in Girder Web Placed Vertical
- Indicated Weld Not AISC Required

## **Rolled Beam (Wide Flange) Girder Checklist**

### **Framing Plan**

- Centerline Girder/Bridge Roadway/Bent/Pier/Field Splice
- Centerline Bearing at Abutment (other than cap-type abutments)
- Working Line/Construction Line Call-out
- Skew and Complement
- Girder/Stiffener Spacing
- Field Splice Locations
- Longitudinal Dimensions
- Curved Girder Radii
- RF Abutment/End of Girder Call-outs
- Stiffener/Diaphragm/Cross Frame/Call-outs
- Girder No./Diaphragm No./Field Splice No./Bay No.
- Stiffeners and Diaphragms/Cross Frames Orientation
- See Detail X Call-outs
- Line Styles
- Longitudinal Dimensions (under title)

### **Girder Elevation**

- Detail Projected from an Interior Girder on Framing Plan
- Stiffeners Orientation
- Detail Stiffeners/Girder Ends/Holes Adjusted For Grade
- Centerline Bent/Pier/Field Splice/Girder End Holes
- Centerline Bearing at Abutment (other than cap-type abutments)
- Shear Connector Spacing
- Girder Piece Lengths
- Field Splice Locations
- Longitudinal Dimensions
- Girder End Holes Spacings/Call-out
- W-Beam Call-out
- RF Abutment/End of Girder Call-outs
- Optional Shop Splice/Sole Plate Call-outs
- Stiffener Location No./Field Splice No.
- Line Styles
- Longitudinal Dimensions (under title)

**Blocking Diagram**

- Centerline Abutment/Bent/Pier/Field Splice
- Dimensions along Bottom Flange
- Ordinate Dimensions
- Level Dimensions
- End of Girder Bevel Cut Dimensions (if not in a separate detail)
- W-Beam Call-out
- Level Call-out
- End of Girder Call-out
- Line Styles

**Diaphragm Details**

**Typical Sections**

- Centerline Girder/Bridge Roadway
- Girder Spacing
- Hole Spacing/Location
- Vertical Offset Between Girders
- Bent Plate Call-out w/Thickness, Width, and Length
- Line Styles/Patterning
- Section/Dimensions Orientation (under title)
- Number Required (under title)

**Typical Section Thru Bent Plate**

- Width/Depth/Radius Dimensions
- Bent Plate Call-out
- Patterning

**Diaphragm Elevation (for sloped diaphragms)**

- Vertical and Horizontal Dimensions
- Bent Plate Call-out

**Field Splice Details**

- Centerline Girder/Field Splice
- Hole Spacing/Locations
- Gap Dimension
- Plate/Bar Call-outs w/Size
- Section Symbols
- Line Styles
- Number Required (under title)



**Detail of Girder End at Abutment**

- Centerline Abutment/Girder
- Centerline Bearing at Abutment (other than cap-type abutments)
- Skew and Complement
- Dimensions
- RF Abutment Call-out
- Bearing Pad Call-out
- End of Girder Call-out
- Bevel Sole Plate Call-out
- Line Styles/Patterning

**Detail of Skewed Intermediate/Bent/Pier/ Stiffeners**

- Centerline Girder/Stiffener/Bent/Pier
- Centerline Bearing at Abutment (other than cap-type abutments)
- Skew and Complement
- Stiffener Lengths Along Long Side/Short Side
- Dimension from Centerline Girder to Hole
- Line Styles/Patterning

**Detail of Flange End Cut at Skewed Abut**

- Centerline Girder
- Bevel
- Centerline Girder to Start of Cut Dimension
- Line Styles

**Bearing Details at Bents/Piers/Non Cap-type Abutments**

**Elevation**

- Centerline Abutment/Bent/Pier
- RF Abutment Call-out (use w/beveled plates)
- Pad/Plate Dimensions
- Slot Location/Size
- Plate Call-out w/Thickness, Height, and Length
- Pad Call-out w/Thickness, Height, and Length/Number of Shims, Thickness, and Location
- Welds
- Direction Arrow (use w/beveled plates)
- Section Symbols
- Line Styles/Patterning

**Bearing Details at Bents/Piers/Non Cap-type Abutments (Cont'd)**

**Section**

- Centerline Girder
- Pad/Plate Dimensions
- Slot Location
- Nut Clearance
- Bolt Call-out/Set with Adhesive Anchorage System
- Line Styles/Patterning
- Number Required (under title)

**Bearing Details at Cap-type Abutments**

**Section**

- Centerline Girder
- Pad/Plate Dimensions
- Bevel Sole Plate Call-out
- Pad Call-out w/Size
- Line Styles/Patterning
- Number Required (under title)

**Elevation (with bevel sole plate)**

- RF Abutment Call-out
- Bevel Sole Plate Thicknesses
- 1/2" Dimension
- Bevel Sole Plate Call-out w/Size
- Pad Call-out
- Welds
- Patterning

**Miscellaneous**

- Transverse Stiffener Details
- Stiffener Clip and Weld Detail
- Shear Connector Detail
- Optional Shop Splice Detail
- Girder End Bevel Detail
- Keeper Plate Detail
- Swedge Bolt Detail

**Notes**

- No Camber Required
- Shear Connectors Are Intended to be Field Installed
- Bolt Hole Edge Distance
- Stiffeners/Girder Ends/Holes in Girder Web Placed Vertical
- Indicated Weld Not AISC Required
- Dimensions Measured Along Centerline Girder (curved girders)

# Prestressed-Precast Concrete Bulb T Girder Checklist

## (Tri-Deck and Twin T Girders similar)

### Plan

- Centerline Girder Web/Bridge Roadway/Bent/Pier/Structure/  
Intermediate Diaphragm/Weld Tie
- Skew and Complement
- Girder Web Spacing
- Diaphragm/Weld Tie/Curb Tie Bar Spacing
- Girder Length
- Longitudinal Dimensions
- Clear Roadway/Curb/Sidewalk/Out-to-Out Dimensions
- Corbel Length
- Corbel Reinforcing Spacing/Call-out
- Curb Longitudinal Reinforcing/Typ Row Call-out
- RF Abutment/End of Girder Top Flange/Weld Tie Call-outs
- Diaphragms Orientation
- Line Styles

### Intermediate/Bent/Pier Steel Diaphragm Details

#### Section at Diaphragm

- Centerline Bridge Roadway
- Bolt Hole/Slot Spacing/Location
- Channel Member Call-out w/Length
- Bar/Plate Call-out
- Level or Angle to Stem Call-out
- Section Symbols
- Line Styles/Patterning

#### Section thru Diaphragm/Connection Plate

- Centerline Diaphragm
- Bolt Hole/Slot Spacing/Location
- Clearances
- Channel Member Call-out
- Bolt/Washer/Hole/Slot Call-outs/Sizes
- Angle Member/Bar/Plate/Sleeve Insert Call-outs w/Lengths
- Line Styles/Patterning

**Girder Sections**

- Centerline Girder Web/Keyway
- Height/Width Dimensions
- Chamfer/Cont Notch Call-outs
- See Keyway Detail
- Line Styles/Patterning

**Bearing Details**

**Plan**

- Centerline Abutment/Girder Bottom Flange
- Skew and Complement
- Dimensions
- RF Abutment Call-out
- Bearing Pad Call-out
- Line Styles/Patterning

**Section (end view)**

- Centerline Girder Web
- Pad/Plate Dimensions
- Line Styles/Patterning
- Number Required (under title)

**Section at End Diaphragm**

- Centerline Bridge Roadway/Girder Web
- Horizontal Dimensions
- Reinforcing Size/Spacing/Clearance/Call-outs
- Cross Slope(s) in Percent
- See Keyway Details
- See Railing Anchorage Details
- Line Styles/Patterning

## **Typical Sections thru End Diaphragm**

### **Section at Girder Web**

- Centerline Sleeve Insert
- Corbel Dimensions
- End of Top Flange/Bottom Flange Location
- Sleeve Insert Spacing/Location
- Sleeve Insert Call-out/Size/Fill with Nonshrink Grout
- Prestressing Strand Call-out/Spacing/Extension/Number Required
- Abutment Stirrup/Tie Bars
- RF Abutment/Tooled Edge Call-outs
- End of Girder Web/Top Flange/Bottom Flange Call-outs
- Line Styles/Patterning
- Showing Typical Dimensions (under title)

### **Section Between Girder Webs**

- Reinforcing Size/Spacing/Location/Clearance/Call-outs
- Line Styles/Patterning
- Showing Typical Reinforcing Steel (under title)

## **Bridge Railing Anchorage Details**

### **Section at Post**

- Bolt/Pipe Location
- Block Out Dimensions
- Reinforcing Size/Location/Clearance/Call-outs
- Bolt/Rod Call-out
- Plate/Pipe Call-outs/Place Flush
- Section Symbols
- Line Styles/Patterning

### **Section thru Anchorage**

- Centerline Post
- Reinforcing Size/Location/Call-outs
- Pipe Call-out
- Line Styles/Patterning
- Bolts Not Shown (under title)

### **Plate Detail**

- Centerline Pipe/Hole/Post
- Plate Dimensions
- Plate/Hole Call-outs/Sizes
- Pipe Call-out/Size/Tack Weld
- Line Styles/Patterning
- Bolts and Deck Not Shown (under title)

**Miscellaneous**

- Weld Tie Detail
- Anchor Rod Detail
- Keyway Detail
- Corbel Reinforcing Detail
- Typical Curb Section
- Bill of Reinforcement

**Notes**

- Top Flange Reinforcing Steel Coated
- Ensure Slab Bars Extend
- Ensure Prestressing Strands Are Evenly Spaced and Extended
- Backer Rod Continuous
- Reinforcing Steel Marked Not Included in Quantity
- Reinforcing Steel Prefix
- Attain 100% of Ultimate Design Strength
- Concrete Quantity

# Expansion Joint (Gland) Checklist

## Plan

- Centerline Bridge Roadway/Snow Plow Plate
- Working Line/Construction Line Call-out
- Complement
- Direction of Traffic
- Curb to Curb Length
- Stud/Snow Plow Plate Spacing/Orientation
- FF Curb/Sidewalk Call-out
- FF Curb/Sidewalk at RF Steel Rail Call-out (if skewed)
- RF Abutment Call-out
- Steel Rail/Miter Joint in Steel Rail/Steel Rail Joint Call-outs
- Stud Call-out/Field Bend to Maintain 2" Clearance
- Section Symbols
- Line Styles

## Snow Plow Plate Assembly Detail

- Centerline Snow Plow Plate
- Skew
- Direction of Traffic
- Width/Length/Location Dimensions
- Snow Plow Plate/Angle Members/Steel Rail/Bevel Call-outs
- Welds/No Welds
- Line Styles
- Gland Not Shown Note (under title)

## Plan at Sidewalk Cover Plate

- Centerline Anchorage System/Holes
- Plate/Angle Member/Bar Dimensions
- Anchorage System/Hole Spacing/Location
- Plate/Angle Member/Bar/Bevel Call-outs
- RF Abutment/FF Sidewalk Call-outs
- Section Symbols
- Line Styles
- Cap Screw Not Shown Note (under title)



**Miscellaneous**

- Typical Section (at snow plow plate)
- Typical Section at Sidewalk
- View at Curb
- Angle Cut Detail(s)
- Angle Weld Detail
- Snow Plow Plate Detail (if skewed)

**Notes**

- Install Snow Plow Plates Parallel with Grade
- Do Not Start Subsequent Welds
- Sidewalk Cover Plate Anchorage System Consists Of
- Field Weld Steel Rails at Joint