

Preferred Hanger Selection

**C49 Brackets use ½" Coil Rod, C89 use ¾" Coil Rod*

- Glossary: Dayton Superior Terminology
- BOHB: Bridge Over Hang Bracket
- Interior Hanger: Hangers that will typically be on the interior Girders
- Exterior Hanger: Hangers that will typically be located on exterior Girders
- Haunch: A Bracket built on a wall of column, used to support a load outside the wall of column, also that portion of a girder or arch which is thickened near the supports. The distance from the bottom of Bridge Deck to the top of girder
- Fillet: Holds the haunch in place to get concrete coverage of the hanger
- Type 1: Hanger generally has a 90° end Clip
- Type 2: Hanger generally has a 90° end Clip with a 1" Haunch
- Type 3: Hanger generally has a 90° end Clip with a 2-1/2" Haunch
- Type 4: Hanger generally has a 90° end Clip with an Interlock-Clip
- Type 5: Hanger generally has 90° Clip end no haunch, Flush with top of girder
- Type 7: Hanger generally has a 90° Clip End with a 1-1/2" Haunch
- Type 8: Hanger generally has a 15° Offset End Clip for use when coil rod forming will need clearance for forming surface
- Type 9: Hanger generally has a ¾" End Clip for use with C89 and C89L Bridge Brackets
- A: Hanger designation that there is a 45° End Clip on the Hanger
- C: Hanger designation for C24 Half Hangers for 9" Standard Tail Lengths
- S: Hanger designation for C24 Half Hangers for 6" Standard Tail Lengths
- PR: Hanger designation for C24 Half Hangers for Cast in Place Precast Hangers
- Weld on Hangers: Hangers that are designed to be attached (welded) to beam, Nelson Stud or Rebar
- Pre-Install: Hangers designed to be installed in concrete girders before pouring the concrete, labeled as PR Type Hangers
- Bearing Plate: Steel plates attached to the 45° side of a hanger to allow for the weight applied to the hanger to be dispersed along the plate

● Continued Glossary at end of document.

Questions: Check answer and follow corresponding

- **HANGER PLACEMENT:** ☐ INTERIOR FORMING and/or ☐ EXTERIOR FORMING – C49 BRACKET*
- **ARE YOU LOOKING FOR 6,000 LBS. OR LESS?** ☐ MORE THAN 6,000 LB. or ☐ LESS THAN OR EQUAL TO 6,000 LB.
- **SCREED MACHINE LOCATION:** ☐ OVERHANG BRACKET or ☐ ON THE BEAM
- **BEAM TYPE:** ☐ CONCRETE or ☐ STEEL
- **STEEL BEAM TYPE:** ☐ WELDING ALLOWABLE or ☐ NELSON STUD
- **CONCRETE BEAM TYPE:** ☐ PRE-INSTALL or ☐ POST INSTALL

A bearing plate for all exterior concrete girders is preferable.

● These are standard applications. For any deviations or special cases, contact Dayton Superior Engineering.

Steel Beams: Weld, Stud, or Clip

WELD					
Exterior			Interior		
C24 Type 4AC	6,000 lbs. SWL		C24 Type 1C	3,000 lbs. SWL	
C24 Type 4AS	6,000 lbs. SWL		C24 Type 1S	3,000 lbs. SWL	

NO WELD/NELSON STUDS					
Exterior			Interior		
C68 TYPE 4AB	6,000 lbs. SWL		C68 TYPE 4B	6,000 lbs. SWL	
C63 TYPE 4AB	5,000 lbs. SWL		C63 TYPE 4B	5,000 lbs. SWL	
C60 TYPE 4A	6,000 lbs. SWL		C60 TYPE 1	3,500 lbs. SWL	
C60 TYPE 9A	11,300 lbs. SWL		C60 TYPE 9	11,300 lbs. SWL	
C41 TYPE 4A	4,500 lbs. SWL		C41	4,500 lbs. SWL	

CONCRETE BEAMS EXTERIOR ONLY					
Exterior			Interior		
C25A	Type 1, 3000 lbs. SWL		C24APR	Type 4, 6000 lbs. SWL	
C25 HD 45	Type 4, 6000 lbs. SWL		C25A	Type 1, 3000 lbs. SWL	
			C25 HD 45	Type 4, 6000 lbs. SWL	

CONCRETE BEAMS EXTERIOR/INTERIOR POST-INSTALL					
Exterior			Interior		
C25A	Type 1, 3000 lbs. SWL		C25	Type 1, 3000 lbs. SWL	
C25 HD 45	Type 4, 6000 lbs. SWL		C25 HD 90	6,000 lbs. SWL	
C60 TYPE 4A	6,000 lbs. SWL		C60 Type 1	3,500 lbs. SWL	
C60 TYPE 8A	4,500 lbs. STD 6,000 lbs. HVY		C60 Type 8	4,500 lbs. STD 6,000 lbs. HVY	
C60 TYPE 9A	11,300 lbs. SWL		C60 Type 9	11,300 lbs. SWL	

CONCRETE BEAMS EXTERIOR/INTERIOR PRE-INSTALL					
Exterior			Interior		
C24 APR	Type 4, 6000 lbs. SWL		C24 PR	Type 1, 3000 lbs. SWL Type 4, 6000 lbs. SWL	
C25A	Type 1, 3000 lbs. SWL		C25	Type 1, 3000 lbs. SWL	
C25 HD 45	Type 4, 6000 lbs. SWL				

Continued Glossary

- **AASHTO Beam:** An AASHTO beam refers to a standardized structural shape (girder) designed by the American Association of State Highway and Transportation Officials. These standardized, precast, and prestressed concrete I-beams are widely used across the United States to build bridges, overpasses, and railway structures safely and efficiently
- **Abutment:** The beginning and the end of a Bridge Structure, supporting Beams, Girders and the Deck of the bridge
- **Beam:** Horizontal member that supports the bending load over a span, such as column to column
- **Beam Hanger:** A wire, strap or other hardware device that supports formwork from structural members
- **Bent:** Two dimensional frame which is self supporting within these dimensions. It has at least two legs and is usually placed at right angles to the length of the structure that it carries
- **Bracket BOHB:** An overhanging member that projects from the wall or other body to support weight beyond the wall line
- **Bridge Deck:** The Slab of the Bridge superstructure that supports the traffic load
- **Camber:** A slight (usually) upward curvature of a Truss, Beam, or form to improve the appearance of the compensated bridge or anticipated deflection
- **Cast in Place Concrete:** Concrete placed in forms where it is required to set as part of the structure
- **Column:** Vertical member supporting Beams, Girders and/or floor slabs
- **Compression:** Stresses caused by pushing together or a crushing force
- **Deflection:** Amount of bending or distortion of material due to direct pressure
- **Fascia:** A flat member of board at the surface of a building or the edge beam on a bridge. Exposed eave of building, etc...
- **Fillet:** Holds the haunch in place to get concrete coverage of the hanger
- **Footing:** Part of a concrete foundation that spreads and transmits the load over a soil of piles
- **Girder:** Large horizontal member that supports the bending load over a span such as from column to column
- **Girder Web:** The web is the central vertical plate connecting the Top Flange and the Bottom Flange
- **Grade Beam:** Reinforced concrete beam used as a foundation for superstructures
- **Haunch:** A bracket built on a wall or column, used to support a load outside the wall of column, also that portion of a girder or arch which is thickened near the supports
- **Joist:** A horizontal structural member supporting deck form sheeting; usually rests on stringers or Ledgers
- **Ledger:** A primary horizontal structural member used to support either the bridge's falsework (temporary support) during the concrete deck pour or the modular scaffolding used to access the site
- **Parapet:** A low, protective barrier constructed along the edges of a bridge or viaduct
- **Pier Footing:** Concrete supporting base for post of columns
- **Pile:** Long Steel, wood or concrete members penetrating deep into the soil to support grade beam foundations walls or column
- **Post Tensioned:** Work by compressing concrete with high-strength steel cables after the concrete has been poured and cured. This active internal compression offsets the heavy tensile and bending stresses from traffic loads, allowing bridges to achieve longer spans with thinner, lighter, and more durable structures
- **Prestressed Concrete:** Concrete reinforced by stressing steel cables before or after concrete placement. Stressing cables places concrete in a state of compression.
- **Pretensioning:** Method of prestressing reinforced concrete in which steel is stressed before concrete sets
- **Slip Form:** A continuous casting method where concrete is poured into a moving formwork.
- **Soffit:** The exposed underside of a concrete slab, balcony, or roof overhang. It can either be a purely structural exposed ceiling, or it can refer to exterior boards made of fiber cement (often called cement board) used to cover the eaves of a building.
- **Superstructure:**
 1. Part of the building above the foundation
 2. In Bridge construction, concrete deck or traffic surface of the bridge
- **Tension:** Pulling, stretching force
- **Tension Zone:** A beam's tension zone is the region of the beam experiencing stretching or pulling forces. When an I-beam bends under a load, the inside of the curve is compressed (compression zone), while the outside of the curve is stretched.
- **Top Flange:** In an I-section (such as an I-beam or wide-flange beam), the flanges are the horizontal top and bottom plates
- **WF Girders:** WF girders are very efficient sections relative to the weight of the girders and are capable of reaching spans well over 200'