

## C49, C49C, C49D, C49S and C49JR Bridge Overhang Bracket

Dayton Superior offers the bridge contractor four different versions of the C49 Bridge Overhang Bracket, which allows for maximum adjustability to meet the varied bridge overhang forming requirements on both structural steel and precast/prestressed concrete beams. The C49 is the most versatile overhang bracket available and is used for general conditions.

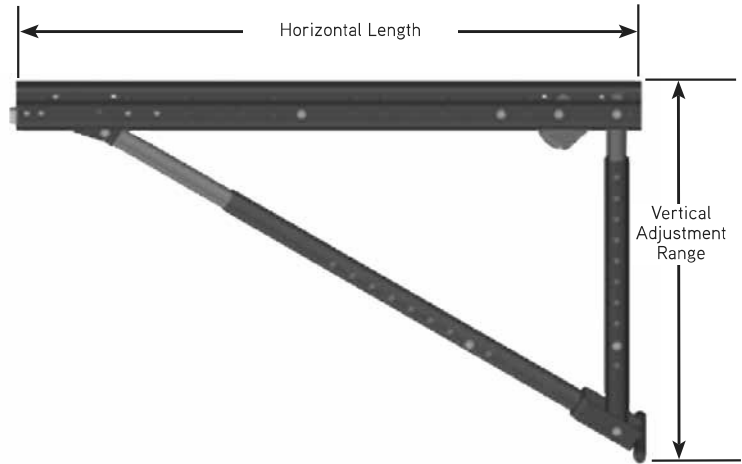
The C49C (Century Series) Bridge Overhang Bracket is a heavy duty version of the standard C49, with an increased SWL or 7,500 lbs. at a 2 to 1 safety factor in the diagonal member

The C49D version is used on deep beams. The C49D bracket is identical to the C49 bracket, except it uses longer bottom diagonal and vertical legs.

The C49S bracket is a field modified C49. The C49 is modified by removing the inner vertical leg. Using only the outer vertical leg, the bracket can be adjusted to a minimum vertical height of 14". This bracket is ideal for use on shallow steel or concrete beams.

The C49JR is a small bracket used in situations where the horizontal member of the standard C49 Overhang Bracket is too long, due to limited space between twin bridges.

The adjusting nut at the outboard end of the bracket is used to adjust the bracket to grade.



Bracket Type	Vertical Adjustment Range	Horizontal Length	Weight
C49	30" - 50"	54"	46
C49C	30" - 50"	54"	48
C49D	50" - 70"	54"	50
C49S	14" - 26"	54"	42
C49JR	16" - 28"	27"	29

Each of these brackets offer the bridge contractor, the ability to easily and quickly preset the brackets to size and shape on the ground, as required for each specific overhang requirement. The adjusting nut and the wide range of adjustability built into the brackets vertical and diagonal legs allow a bracket to be adjusted to fit almost any standard bridge overhang.

Both the vertical and diagonal legs have adjustment holes spaced at 2" increments which allows the legs to be adjusted so the diagonal leg will transfer the construction load to near the bottom flange, which aids in resisting web deflection and bending.

The C54 Extender, C52, C52P and C53 Guardrail Receptacles, and C51 Wall Plate Assemblies add to the versatility of the C49 overhang brackets.

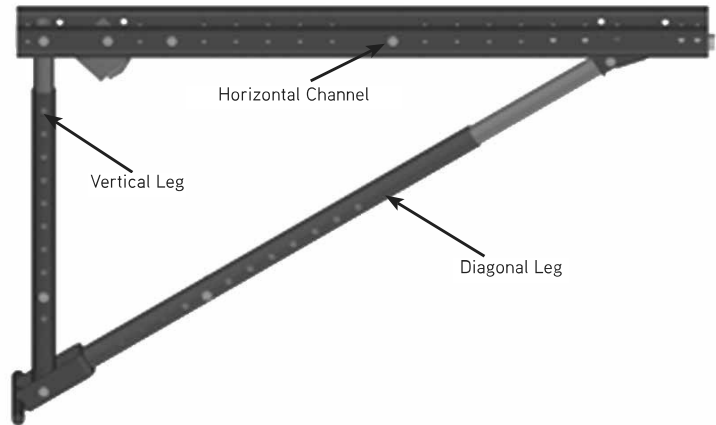
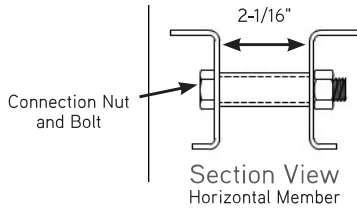
### SAFETY NOTE:

Overhang brackets should be adjusted to proper grade during the normal "dry run" operation.

DO NOT attempt an upward adjustment during the concrete pouring operation. Lowering the bracket is permissible during the concrete pour.

## Type C49, C49D, C49S and C49JR Bridge Overhang Bracket

The diagonal leg of all versions of the C49 Bridge Overhang Bracket have a SWL of 3,750 lbs based on an approximate factor of safety of 2 to 1.



### Horizontal Channels

The horizontal channels are fabricated from back to back, unequal leg, 54" long, channel sections using 12 gauge HRP&O, high strength, low alloy steel ASTM A-570 Grade 50 standards. This material has a minimum yield strength of 50 ksi and a minimum ultimate tensile strength of 65 ksi.

As shown in the section view above, 3/4" O.D. tubing is placed over 1/2" diameter bolts to provide a 2-1/16" space between the two steel channel sections of the bracket's horizontal member.

### Vertical and Diagonal Leg

Vertical and diagonal legs are fabricated from electric resistance welded carbon steel tubing, Type #1 A.W.H.R. (as welded hot-rolled steel), Grade 1010 per ASTM A-513 standards. The bracket's four leg members along with their outside diameter and wall thickness are listed in the chart.

Part	Outside Diameter	Wall Thickness
Outer Vertical Leg	1-7/8"	0.083"
Inner Vertical Leg	1-5/8"	0.120"
Outer Diagonal Leg	1-7/8"	0.083"
Inner Diagonal Leg	1-5/8"	0.120"

### Connection Bolts and Nuts

Connection bolts and nuts are galvanized 1/2"-13 NC threaded meeting ASTM Standard A-449 or SAE Standard J-429 Grade 5.

### Section Properties

Horizontal Member	C54 Overhang Bracket Extender
Total Section Modulus (S) = 0.537 in. <sup>3</sup>	Section Modulus (S) = 0.231in. <sup>3</sup>
Moment of Inertia (I) = 0.799 in. <sup>4</sup>	Moment of Inertia (I) = 0.310 in. <sup>4</sup>
Area (A) = 0.888 in. <sup>2</sup>	Area (A) = 0.438 in. <sup>2</sup>