HO Structure Kit

STEEL RAILROAD BRIDGE TOWER BENTS

933-4555

Thanks for purchasing this Cornerstone® kit. Please read these instructions and study the drawings before starting construction. Allparts are styrene, so use compatible glue and paint to finish your model. As part of the Cornerstone Engineered Bridge System, walthers.com/bridgesystem, your new model can easily be used with other Cornerstone bridges and accessories to create a custom structure for your railroad.

Low spots, valleys and ravines proved to be among the biggest challenges to early railroad builders. Rather than spend the time or money on a standard bridge, many opted for trestles to get the right-of-way up and running. Technically a single supporting framework, a trestle consisted of numerous “bents” (built at different heights or “stories” to fit the terrain), connected by braces to increase overall strength and stability, a floor of stringers running between each bent, and an open or ballasted deck. Trestles did have their limits, as they couldn’t be placed in moving water and had no clearance between bents or below. In these situations, they were often used as approaches on either side of a traditional bridge placedacross a river, stream, railroad or highway. In the beginning, wood was often available for the taking and easily worked on site, so it remained the favorite building material for trestles into the 20th century. The tradeoff was a relatively short life span owing to damage caused by weather and insects, as well as the ever-present danger of fire. As the steel industry matured, beams, columns and other heavy-duty construction components became readily available and were combined to create much simpler but far stronger bents. All-steel plate girder deck bridges replaced the traditional trestle floor, resting on individual bents where overall height was relatively short, or on sturdy towers (kit #933-4554, sold separately) for taller installations. Today, many of these sturdy steel trestles are still in daily railroad service. For more ideas and information on the Cornerstone Engineered Bridge System please visit walthers.com/bridgesystem. For additional products to complete your scene, see your participating hobby dealer, check out the latest Walthers Model Railroad Reference Book or visit us online at walthers.com.

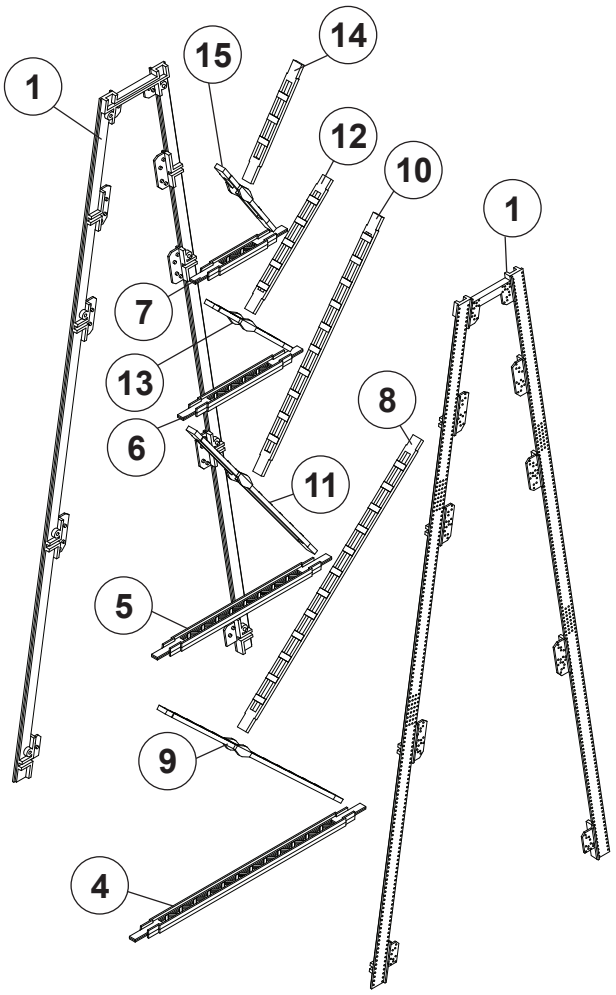
BEFORE STARTINGCONSTRUCTION…
This kit is designed especially for use with Cornerstone Single Track Deck Girder Bridges, available in multiple lengths from 30 to 90 scale feet (kits #933-4505 to 4509, each sold separately). We suggest test fitting each bent as a subassembly directly on your layout to determine final placement. Be sure each is level and correctly aligned before attaching the bridges and making the final installation. With some careful kitbashing, bents of different heights can be built for uneven terrain. The lower edge of the gusset plates on A-Frames (1) can be used as a cutting guide. Cut each leg in the same spot, and carefully trim away the lower half of the plate.

This kits includes parts for two complete Steel Bents, which assemble as follows:

1) Note the raised ridges on the inside edges of A-Frames (1) to help align cross braces. Glue both edges of Base (4), Large (5), Medium (6) and Top (7) Horizontal Braces to the slots between ridges as shown.

2) PLEASE NOTE: Assemble all four Diagonal Braces as shown (#8 & 9, 10 & 11, 12 & 13, and 14 & 15) by inserting - do not glue - parts in an X-shape. Align the upper and lower ends of the Diagonal Braces between the raised pegs on the backs of each gusset plate. Adjust as needed so parts fit square and snug, and apply a little glue where the Diagonal Braces meet the plates and Horizontal Cross Braces.

3) Note the small pins and sockets on the inside to help align the front and rear half of each A-Frame (1). Make sure all cross braces are aligned and glue second A-Frame in place.



4) With the rivet details facing inwards, use the inset areas on the back to align Lacings, (4x #18 and 2x each #19 & 20) and glue to left and right inside edge of A-Frame assembly.

5) Using the inset areas on the back to align parts, Glue Exterior Plates (2x 25) to left and right sides of A-Frame assembly.

6) Glue alignment pins on bottom of Top Plate (26) to openings in top of A-Frame assembly.

7) Both Small (28) and Large (29) Concrete Footings are provided that can be used-as is, or combined to fit uneven terrain. Glue Bottom Bearing Plates (2x 27) to lower ends of A-Frame assemblies; use the square inset area on the bottom to align with the raised square on the footings and glue in place.

To use your new model with Cornerstone Bridges (sold separately), please visit www.walthers.com/bridgesystem for information and illustrations of specific bridge combinations.