CORNERSTONE®

HO Structure Kit
RAILROAD SHOP
933-2970

Thanks for buying this Cornerstone Series® kit. Please read all instructions before starting. All parts are made of styrene plastic, so use paints and glues that are compatible.

To keep locomotives in top condition, they are inspected frequently and undergo routine maintenance. While this is often done at smaller facilities, heavy repairs, such as a complete rebuilding, are done in the railroad's shop facility. Typically, the shops were built at a central point on the railroad, although some larger lines had shops at each end of the system.

In the steam era, a shop would typically include an erection area for dismantling and reassembling engines, a boiler shop, a tender shop (locos and tenders were disconnected and repaired separately), machine shops and various other repair departments. By the 1920s, larger engines were making older facilities obsolete, and many roads began construction of larger backshops.

Two basic designs were used: Longitudinal, where service tracks ran the length of the building and engines moved forward to work stations and Transverse, where tracks were side by side. In these buildings, huge shop cranes capable of lifting an entire locomotive, were installed. A smaller crane was also installed to aid in dismantling, and to handle lighter parts, such as the cab.

Each service track had an inspection pit, to allow easy access to the underside of the locomotive. This allowed some repairs to be done without raising and supporting the massive weight of the engine.

As diesels began entering service, some roads built specialized diesel shops, while others simply modified existing buildings and equipment. Since most of a diesel's working parts were above ground level, some shops installed platforms at deck height. Drop tables, used to remove trucks without lifting the entire engine, were also used to speed wheel and traction motor repairs.

Many of these buildings are still in use today. Through mergers, many roads found themselves with duplicate facilities and have since consolidated their repairs at one major complex.

ON YOUR LAYOUT

Based on our earlier Backshop kit and sharing many architectural elements, this model is larger to handle almost any motive power. In addition to its many details, there's room on the inside for adding the Heavy-Duty Overhead Crane (#933-3150) in the main bays and the smaller Overhead Traveling Crane (#933-3102) in the Annex. Used by itself, this big building is perfect for all kinds of heavy industries as well. Additional kits (sold separately) can be combined to build a wider building if desired.

The transverse design of these buildings allowed a railroad to maximize its available space, and the installation of a transfer table eliminated complex trackwork and expenses. This can be modeled using the Cornerstone Series Built-ups Working Transfer Table (#933-2968), which can be lengthened to match a customized Railroad Shop with the Transfer Table Pit Extension (#933-2969, each sold separately). Easily added to new or existing scenery, the unit is powered by the same proven drive and programmable indexing found in Walthers Built-ups turntables for years of trouble-free operation on DC or DCC powered layouts.

Railroad shops were also equipped to rebuild or repair virtually any type of freight or passenger cars in dedicated shop buildings. These specialized facilities were typically of the longitudinal style, with several tracks running the length of the building. Cars could then be moved easily to workstations repairing specific parts such as trucks, brakes, interiors and other appliances. These facilities were also connected by transfer tables, and can easily be modeled using the Car Shop (#933-3040). This kit can also be enlarged by combining kits.

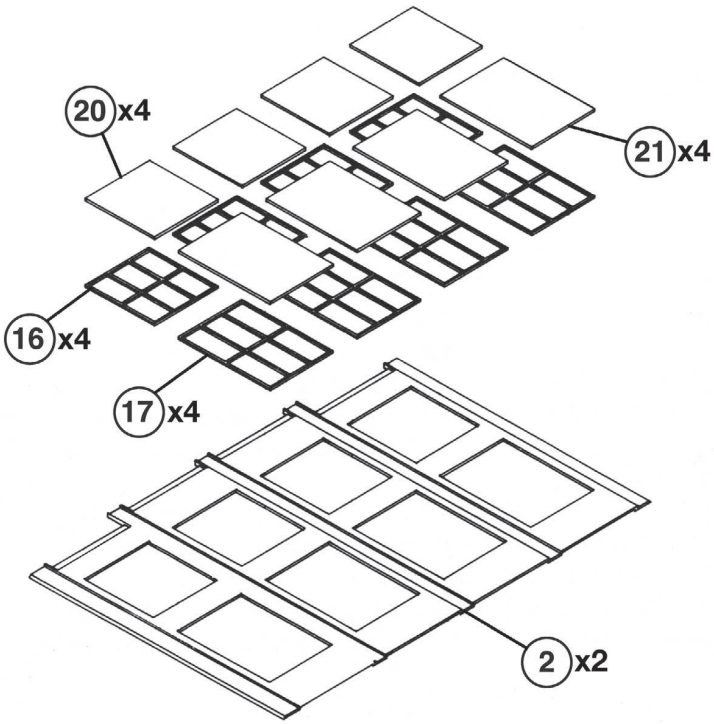
Overseeing all of these operations was the Engineering Office (#933-2967), which provided space for mechanical department officers, designers, draftsman, clerks, secretaries, stenographers and other employees. Although smaller than the nearby shop buildings, these facilities were often the most visible part of any railroad shop, typically located facing a major street.

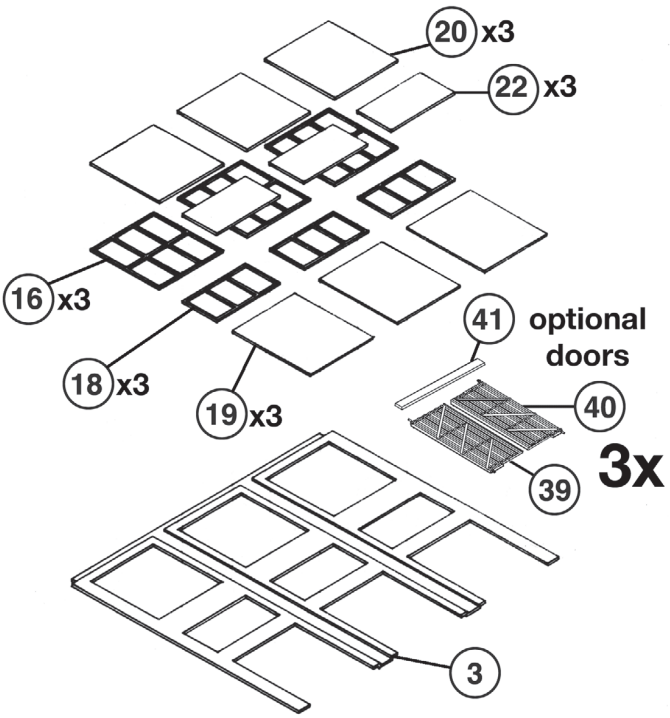
A typical shop complex also included numerous smaller buildings housing foundries, forges, machine shops, carpentry and woodworking operations, paint shops, supply warehouses, powerhouses and more. Virtually any industrial building can be used to model these important support operations.

For Additional ideas to model a complete shop complex on your layout, see your participating dealer, visit walthersscornerstone.com or see the latest Walthers HO Scale Model Railroad Reference Book.

READ FIRST!

Before starting, determine how wide of a structure you wish to build. You are able to increase the width of the building 100% each time you add an additional kit, thereby adding three new tracks. Each time you add an additional kit you will have to make modifications (mainly to the bases), so plan accordingly and follow the instructions.





1. Glue window frames (16, 18) into the back of the appropriate openings of the end wall (3). After painting the raised mullions on the clear pieces (see Painting Hints on page 3), glue the “glass” (20, 22) to the backs of the windows as shown.

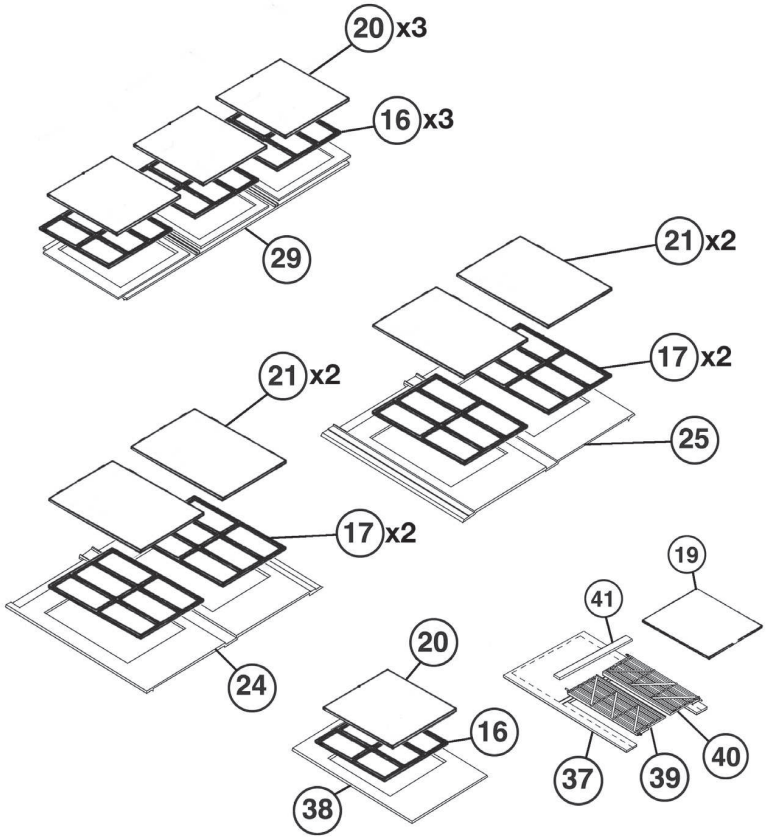
2. If you wish to have closed metal doors, glue the doors (19) into the openings in #3. You also have an option of working wooden doors. To install these, first glue the top hinge bar (41) over the door openings, with the notches down, within the raised ridges on the back of the wall (3). Then insert the pegs on top of the doors (39, 40) into the holes in the bottom of the bar. Do Not Glue! Set end wall aside.

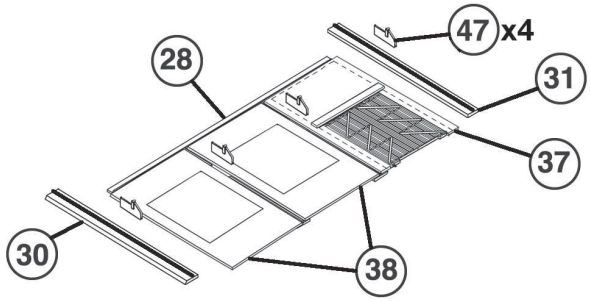
3. Glue window frames (16, 17) and “glass” (20, 21) in place on the backs of the side walls (2).

4. Glue the frames (16) and “glass” (20) to the back of the half upper wall (29).

5. Glue window frames (17) and “glass” (21) in place on the backs of the annex side walls (24, 25).

6. On the rear annex wall (28) you have the option of having panels with all windows, or two windows and a door. For windows, glue the frame (16) and “glass” (20) to the back of panel #38. For a door, use either metal door (19) or the wooden doors (39, 40, 41) and glue in place on the back of panel #37. Then glue these panels in the openings in the back of #28. Glue the end pilasters (30, 31) in place. Next glue the craneway supports (47) into the grooves in back of #28, in between the panels.





7. Glue the bases (1, 23) together, end to end, lining up the rail grooves.

8. Glue the end pilasters (4) to the end wall (3). Next glue the support columns (6) to the inside of the end wall (3), in between the windows and at each end. Then glue the craneway girder (8) into the slots of the support columns.

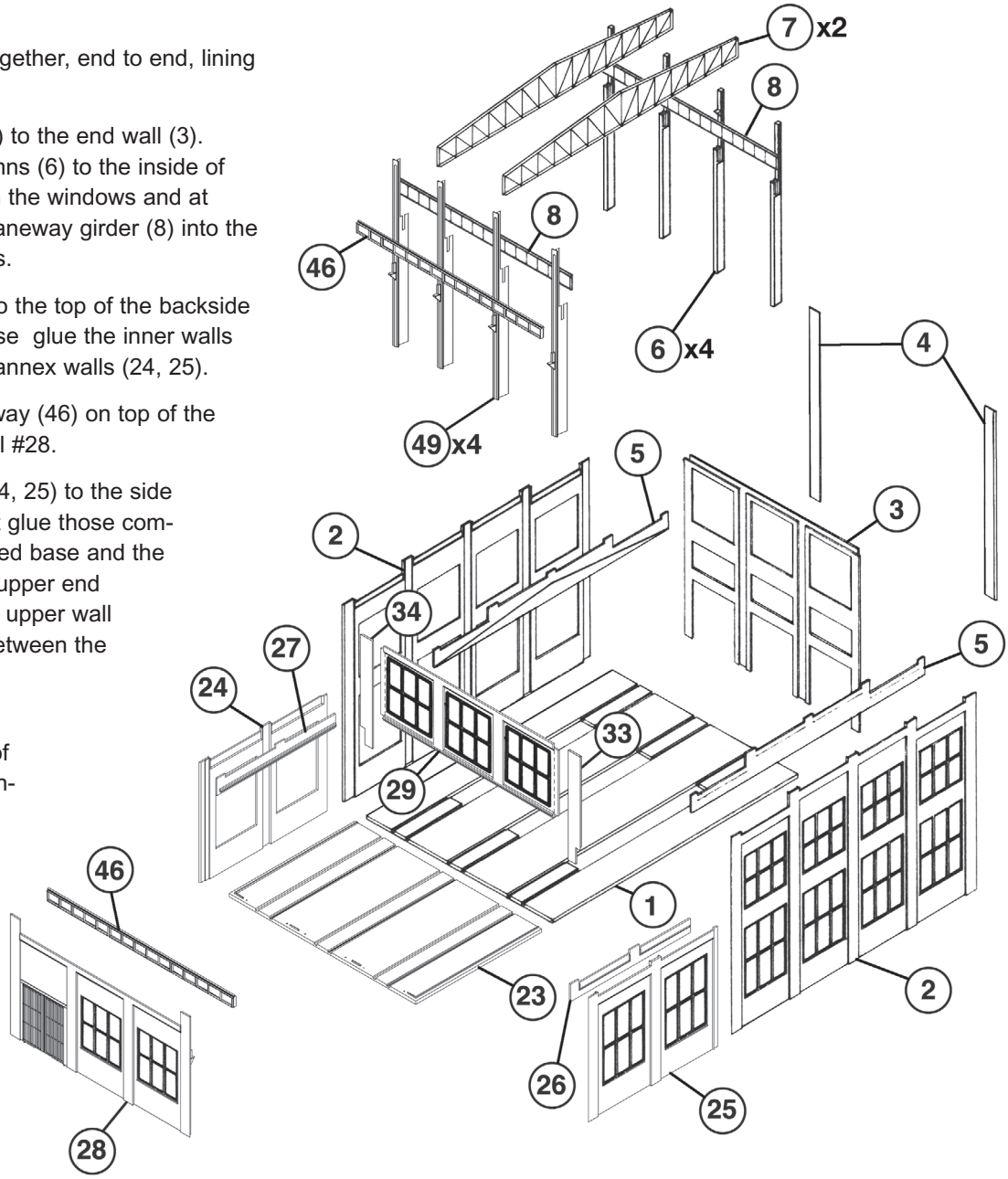
9. Glue the inner walls (5) to the top of the backside of the side walls (2). Likewise glue the inner walls (26, 27) to their respective annex walls (24, 25).

10. Glue the smaller craneway (46) on top of the supports on the back of wall #28.

11. Glue the annex walls (24, 25) to the side walls (2) as illustrated. Next glue those completed sections to the finished base and the end walls (3, 28). Glue the upper end pilasters (33, 34) to the half upper wall (29) and then glue this in between the side walls as shown.

12. Glue the other support columns (49) to the inside of wall #29, in between the windows and at each end, and to the base. Glue the large craneway (8) into the slots of the columns. Glue the trusses (7) to the upper brackets of the middle two support columns on both ends.

13. Glue the smaller craneway (46) on top of the lower brackets on columns #49.



Painting Hints

Two easy methods to paint the mullions on the glass.

1. Use a permanent black marker and run the side of the tip along the tops of the raised mullions.

2. Using a large eraser, dab the whole surface in paint, the color of your choice, and lightly press down on top of the mullions. Repeat until all mullions are covered.

Decaling

1. After cutting out the decal, dip in water for 10 seconds, remove and let stand for 1 minute. Slide decal onto surface, position and then blot off any excess water.

2. Lightly brush Micro Sol® on top. This will soften the decal, allowing it to comform to irregular surfaces. DO NOT TOUCH DECAL while wet!

3. When decal is thoroughly dry, check for any trapped air bubbles. Prick them with the point of a small pin or hobby knife blade and apply more Micro Sol®.

NOTE: Interior details have been left out of the illustration for clarity.

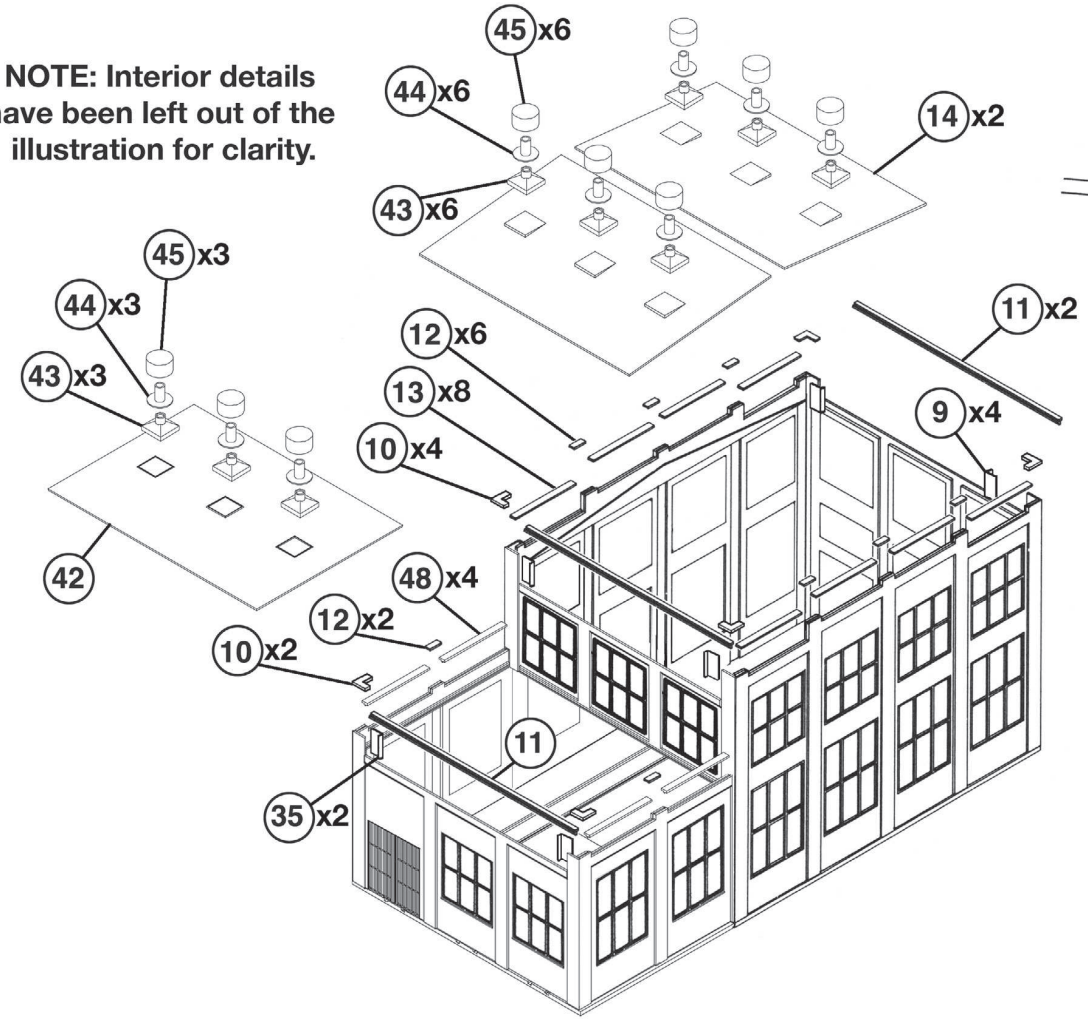
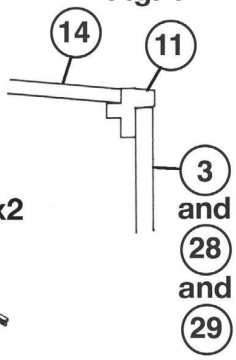


Fig. 1



14. Glue the inner corner pieces (9, 35) to the inside of the end walls, flush with the tops of the walls, as shown.

15. Glue the side wall caps (10, 12, 13, 48) in position as illustrated. Next glue the end wall caps (11) in place (see Fig. 1).

16. If you wish to mount the Heavy duty Crane (933-3150) in the main building and the Overhead Traveling Crane (933-3102) in the annex, both available separately, do so before gluing the roofs (14, 42) in place.

17. Glue the vents (43, 44, 45) together and then glue them onto the pads on the roofs (14, 42).

The building is designed to be made wider by combining two or more kits. The end wall can be expanded by gluing the pilaster (23) between two of the wall (3) sections and also gluing the support column (6) to the back of the walls (see Fig. 1). To accommodate the new wall size, the base must be modified. To splice two buildings together, you must cut off one side of each base (to the **outside** of the narrow ridge found underneath the base) and then glue the modified sides of the bases together (see Fig. 2). For more than two buildings, the middle base(s) must have both sides removed (see Fig. 3) in addition to having one side removed on the end bases. Then glue the modified sides together.

Fig. 1
Top view

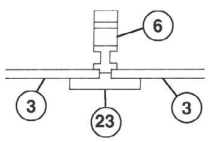


Fig. 2
bottom of bases when combining two buildings

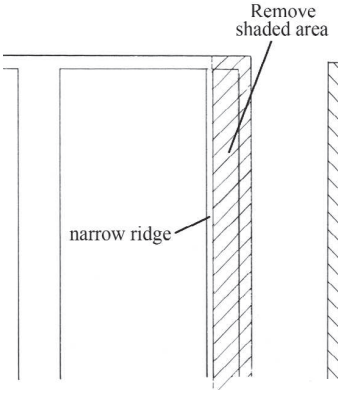


Fig.3
Bottom of middle base(s) when combining three or more buildings