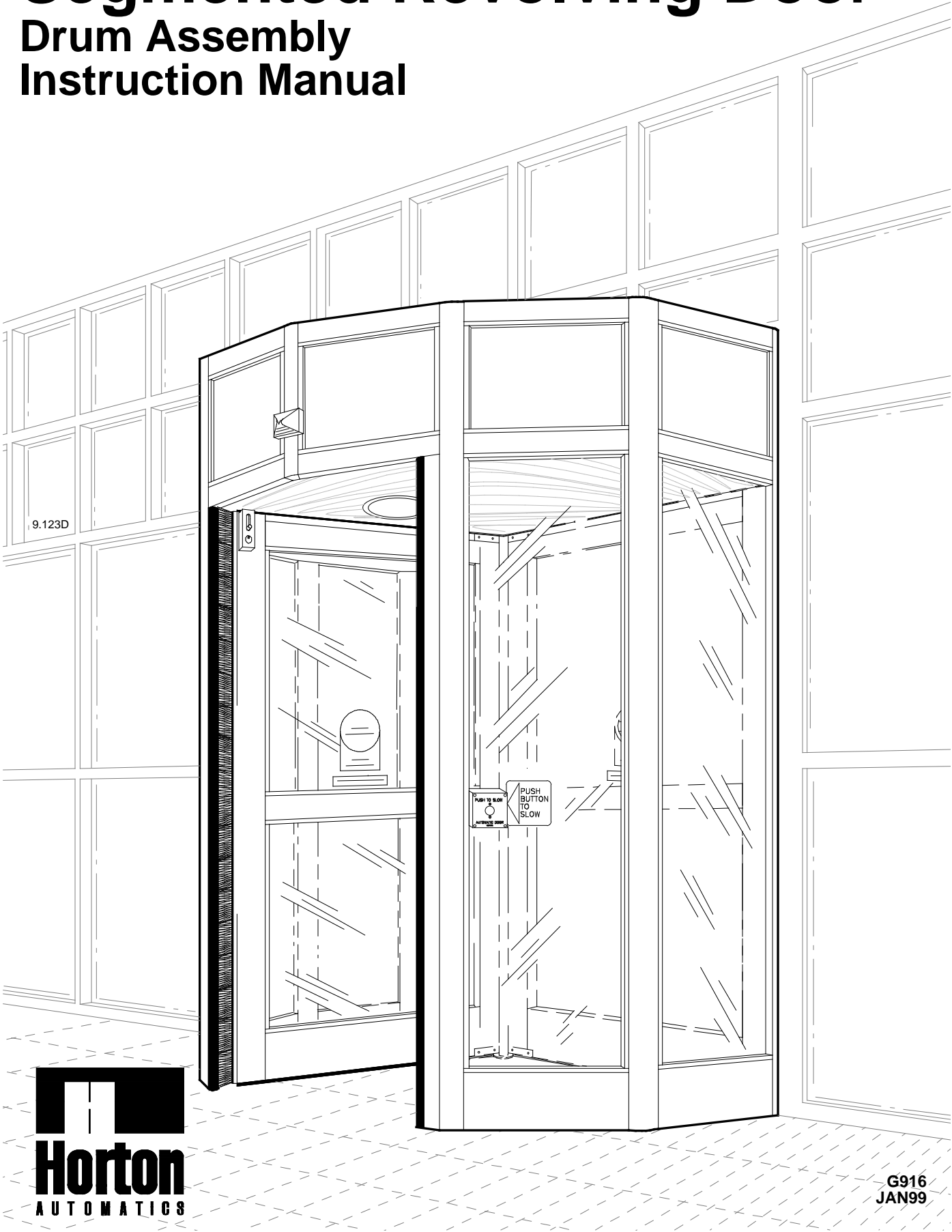


Segmented Revolving Door

Drum Assembly

Instruction Manual



1. GENERAL INFORMATION

A revolving door installation is more involved and time consuming than most other types of doors. The floor area is larger and there are more parts to assemble. Skill must be used to assure that the door is placed properly. Holes must be drilled in the correct places and the door in its entirety must be plumb and level. Therefore the door must be installed under the supervision of a trained professional distributor. Revolving door sections are prefabricated and shop fitted to facilitate installation. Round canopies are fabricated in either one or two sections. Ceiling panels are custom cut and fit for each canopy. It is very important that the installer begin installation at labeled starting points (A first, then B,C, etc...) and make attachments at labeled match points.

2. ITEMS TO CHECK PRIOR TO INSTALLATION

- A. NOTE: Dimensions in () are metric millimeter equivalents. Example - 1"(25)
- B. The floor area must be level inside the door. If not, notify the owner or general contractor immediately as the general safety and weatherstrip seals may be adversely affected +/- 1/2" (12) over the entire door.
- C. Check to see that the finished floor covering (tile, carpet) is in place or if there will be some other type of flooring to be added. Shimming of the door may be required if flooring is added later. Suggest to the owner that the threshold be clearly marked with mats or flooring pattern.
- D. The door requires a 120VAC 60 cycle 20 AMP dedicated circuit to supply power to the operator, lights and speed control.
- E. Check packing list to make sure all materials are accounted for. Check for damaged material.
- F. Review enclosed erection print, cut sheets, production documentation and related drawings. The wiring diagram can be found taped to the lid of the control box.
- G. Be familiar with all the desired functions of the door such as handicap switch attachment.

3. TOOL LIST - For a fast complete installation the following tools will be required:

- | | |
|--|---|
| <input type="checkbox"/> Trammel points or beam compass | <input type="checkbox"/> 12"(305) or 18" (457) long 3/8" (10) Masonry bit |
| <input type="checkbox"/> Hammer drill | <input type="checkbox"/> Plumb bob |
| <input type="checkbox"/> 6'(1829) Spirit level | <input type="checkbox"/> 9/16" (15) deep well socket, ratchet & extension |
| <input type="checkbox"/> Isopropyl Alcohol | <input type="checkbox"/> Mobilux EP-2 lubricating grease or equal |
| <input type="checkbox"/> Allen wrench set | <input type="checkbox"/> Black felt-tip marker |
| <input type="checkbox"/> 1/4"(6) dia. utility rope | <input type="checkbox"/> Two saw-horses |
| <input type="checkbox"/> Rubber mallet | <input type="checkbox"/> Transit level |
| <input type="checkbox"/> Stubby straight or offset screwdriver | <input type="checkbox"/> Volt/ohm meter |
| <input type="checkbox"/> | <input type="checkbox"/> Torque wrench - up to 300 in/lbs or 30 ft/lbs |
| <input type="checkbox"/> | <input type="checkbox"/> |

4. FIND EXACT LOCATION OF DOOR

- A. Verify with general contractor and architectural drawings.
- B. Layout door as follows:
 1. Determine centerline location through the storefront, line **A**. (Figure 1 on next page)
 2. Determine centerline through the revolving door; use the Equal Arc Method to ensure squareness, line **B**.

Follow this layout to determine wall post location dimensions. See erection print shipped with each door.

EQUAL ARC METHOD (Figure 1 & 2)

1. Measure 3'(991) on line **A** from each side of center point.
 2. Draw 5'(1524) arc from these points on line **A** (top and bottom).
- C. Draw a circle from the center point representing the outside diameter of the door, line **C**. This will serve as a reference point for anchoring the wall section. Layout the revolver using the erection print. A black felt-tip marker should be used to prevent accidental erasure of layout lines. The outside edge of the wall post should touch this circle (Figure 2 on next page). The door location is now laid out and you should proceed to the assembly phase.

Figure 1 - Equal Arc Method

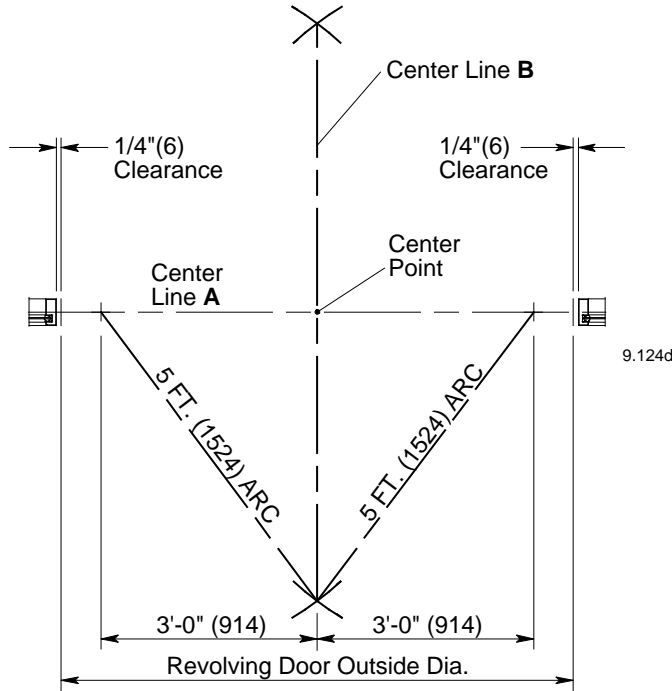
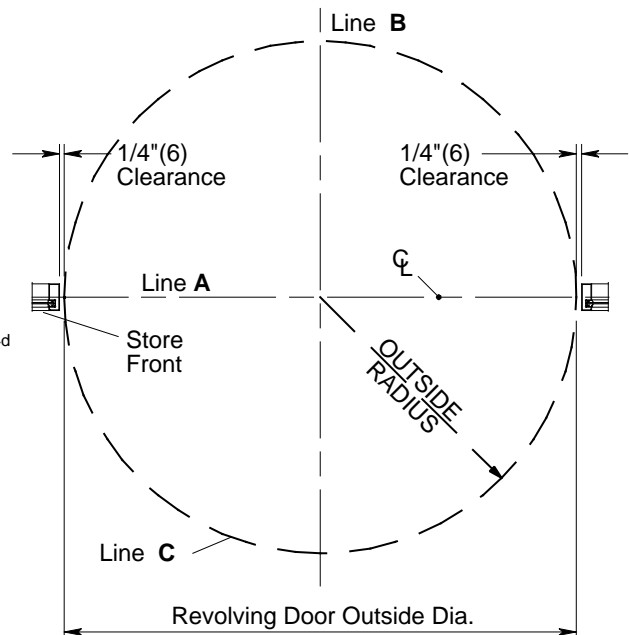


Figure 2 - Revolving Door Layout



5. DRUM ASSEMBLY

- A. See figures (3 & 4 on this page) for plan and section views of rails required for drum assembly.
- B. Place all extrusions into groups to match all like parts. Lay out materials on provided packing or similar material to protect finishes. Orient the parts as to which are vertical (corner blocks installed) and horizontal members. Group the horizontal top rails, ceiling support rails with 1" (25) angle and bottom rails together. These extrusions must be placed in the proper position in the drum assembly (Figure 5 & 6 on G916.3).

Figure 3 - Plan View of 3 & 4 Wing Revolver

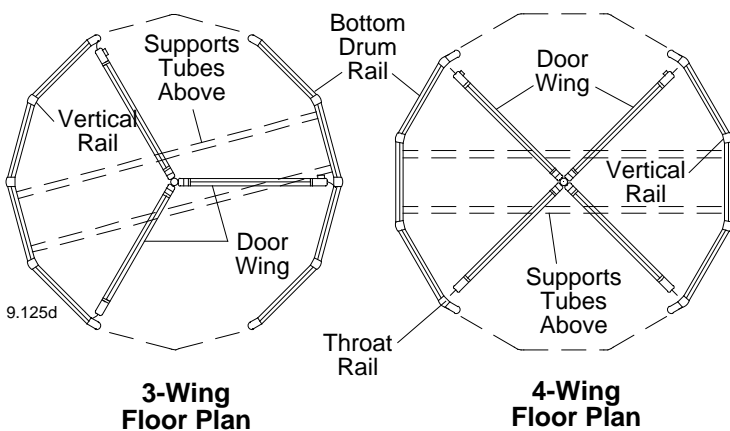


Figure 4 - Horizontal Sections Through Rails

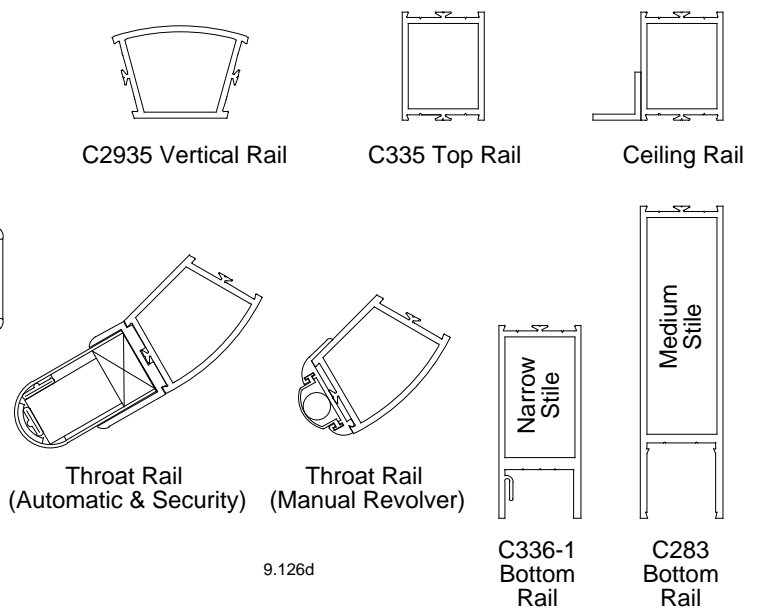


Figure 5 - Placement of Extrusions (Segmented Canopy) - View from Inside Door

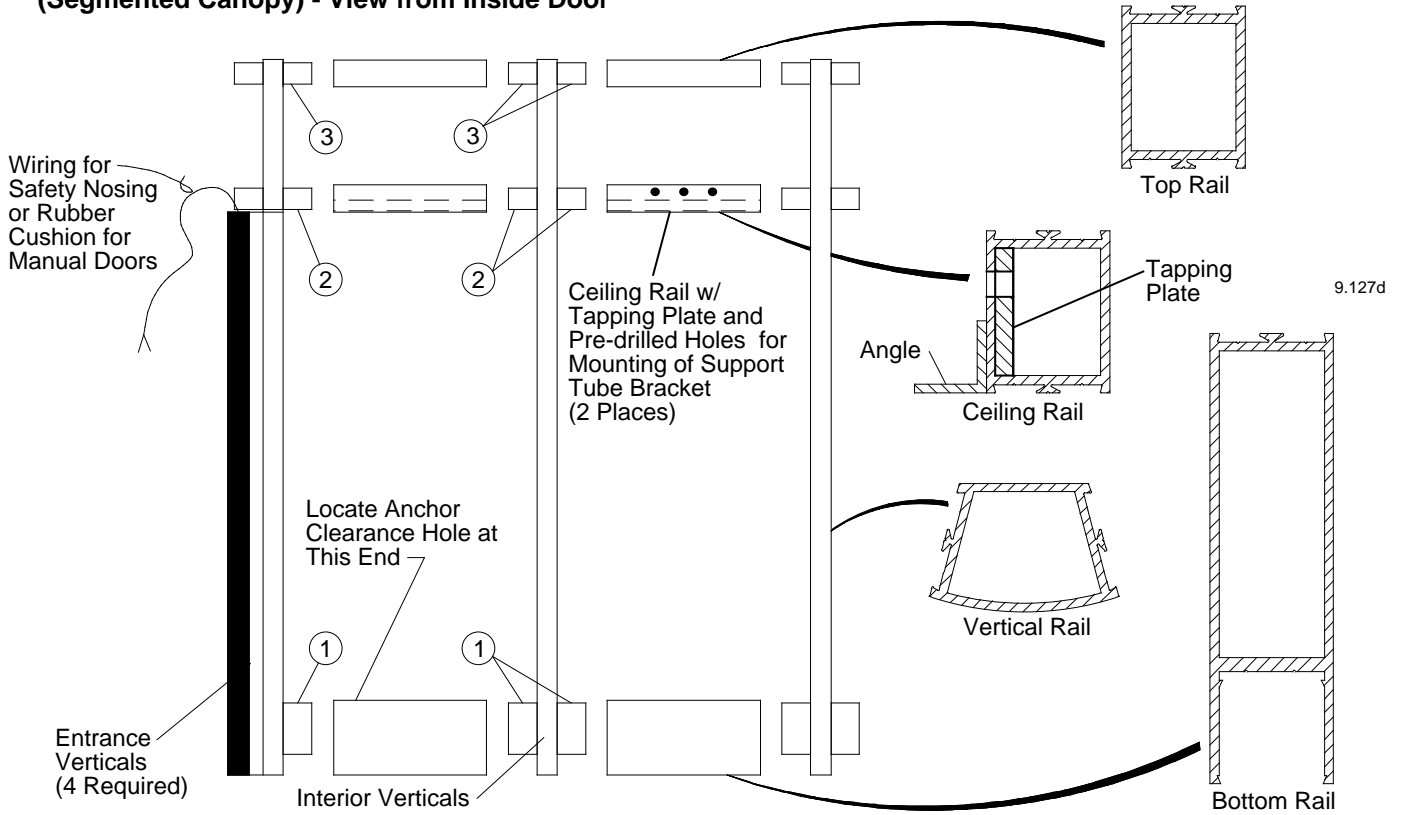


Figure 6 - Placement of Extrusions (Round Canopy) - View from Inside Door

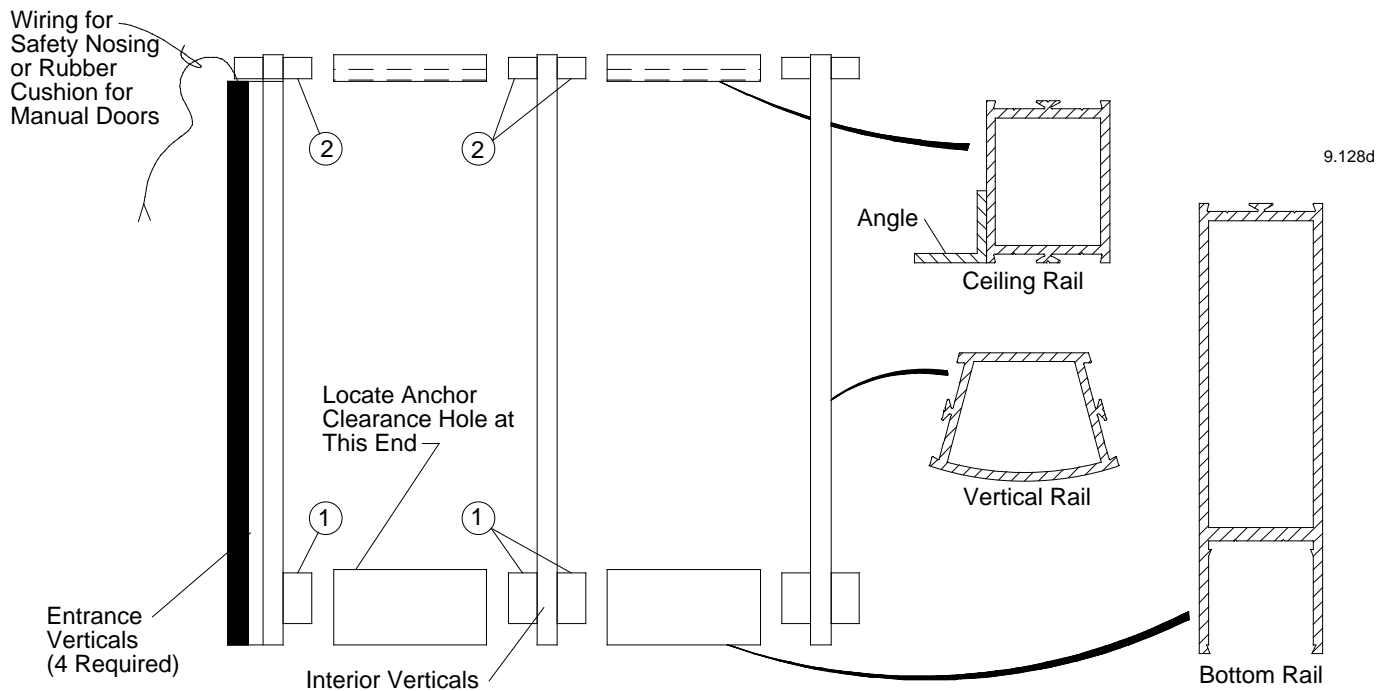
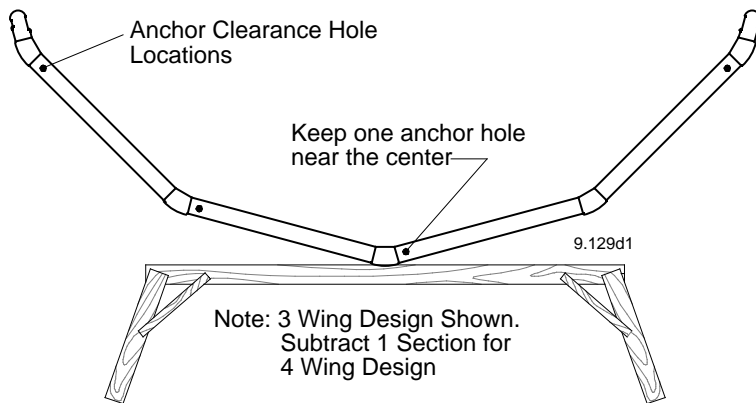
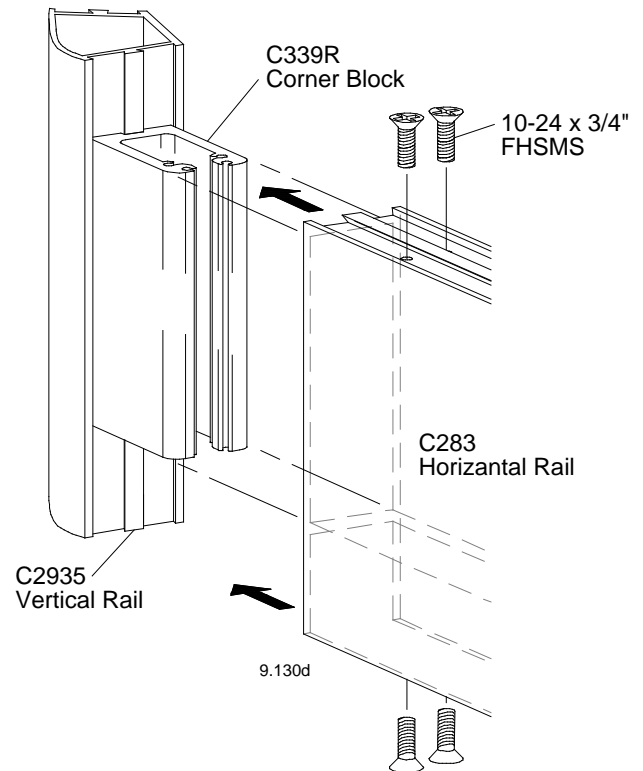
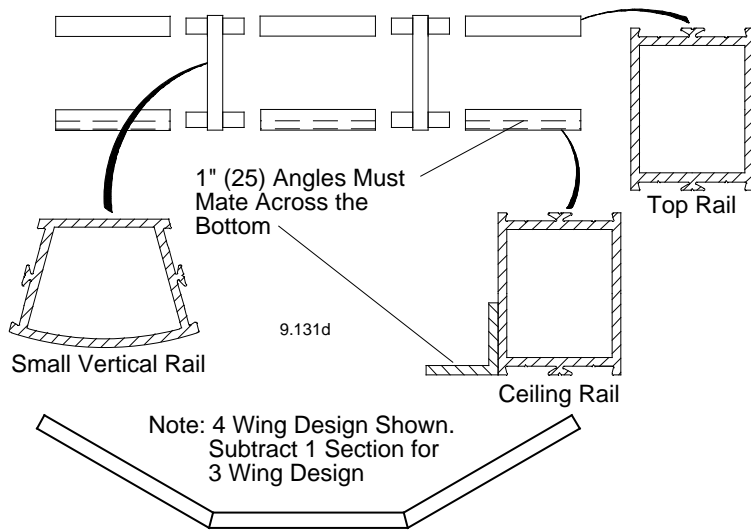


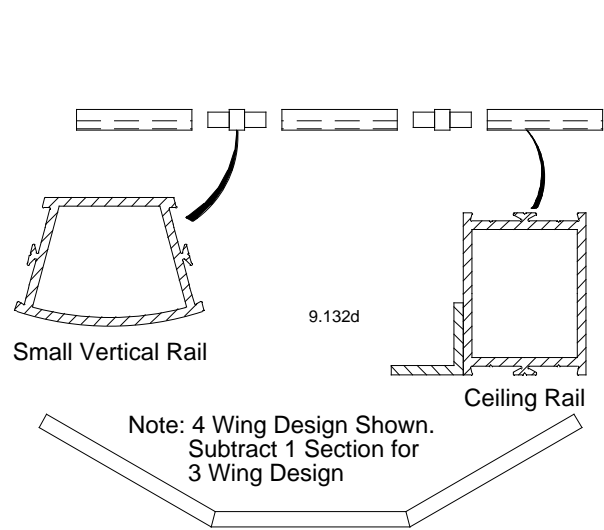
Figure 7 - Drum Assembly**Figure 8 - Vertical/Horizontal Rail Attachment**

- C. Starting with the vertical drum rails, place one entrance vertical rail on your left and one interior vertical rail on your right, across 2 saw-horses (Figures 7 on this page). Place one bottom horizontal rail on the corner block of the entrance vertical rail at point `1` (Figures 5 & 6). Make sure the anchor clearance hole is next to the entrance vertical rail. Place the ceiling support horizontal rail (The one with the 1" (25) angle attached to it) at point `2` (Figures 5 & 6). The short piece of 1" (25) angle on the vertical rails should line up with the 1" (25) angle on the ceiling support horizontal rail. If canopy is segmented, place one top rail at point `3` on the entrance vertical rail. Mate points 1, 2 & 3 (segmented canopy - Figure 5) or points 1 & 2 (round canopy - Figure 6) of the interior vertical rail to the horizontal rails on the entrance vertical (Figures 7 & 8). Secure drum sections first, then canopy sections with #10-24 x 3/4" flat head self tapping screws that are provided in the accessory pack.
- D. Add horizontal rails at point 1, 2 & 3 of the interior vertical rail. Note: At point 2 add a ceiling rail with tapping plate in it (Rail with 3 pre-drilled holes). This is where the support tube bracket will be mounted (1 per drum half) - See figure 3 to match up locations for support tube brackets. Add another interior vertical rail and mate 1, 2 (& 3) to the horizontals above. Tap joints with rubber mallet to completely close gaps. Secure with flat head screws as in previous step.
- E. Join the remaining interior vertical rail and the associated horizontals followed by the entrance or throat vertical. Check the sequence with Figures 5,6, 7, & 8.
- F. Repeat the above steps for the opposite side of the drum. If you build both halves identically, as described, the gear train support plates end up opposite each other when the halves face each other as in plan (Figure 3).
- G. Assemble the center (throat) sections using the short vertical rails, ceiling rails & top rails on each side. If round canopy, the short vertical rails and top horizontal rails are not used. (Figures 9 & 10 on next page).
- H. Assemble round canopy sections and attach to segmented drum halves (Figure 11 on G916.6).

**Figure 9- Center Canopy Section Assembly
(Segmented Canopy)**



**Figure 10- Center Canopy Section Assembly
(Round Canopy)**



10. JOINING DRUM HALVES

- Using the outside diameter of the circle laid out previously (Figure 1 & 2) place the drum halves in their approximate positions as shown in Figures 10 & 11 and join them together with the center (canopy) sections assembled in Figures 12 & 13.
- Line up the drum halves by centering the center vertical rail on the centerline. The rounded part of the vertical rails should touch the circle drawn in Figure 2 (See Figure 13 - Detail A).
- When you are sure of the accuracy of the previous steps you will be ready to anchor the drum to the floor with the 5" (127) Hilti type expanding anchors that are provided. For best results start in the center, making sure that the drum has not shifted out of alignment. Place 3/8" (10) x 12" (305), or longer, masonry bit through clearance hole in the bottom rail and drill at least 4" (102) into the concrete. Place each anchor through the bottom web and drive it into the concrete until it bottoms against the web taking care not to damage threads. **HINT: To prevent thread damage, take a spare Hilti type anchor with a nut just barely started on threads. Use this anchor as a tool to drive anchor into concrete. If threads are damaged, the anchor could spin in the concrete and fail to tighten. Use a 9/16" (15) deep socket with an extension to tighten nuts. HINT: Tape socket to extension to avoid dropping the socket inside the rail (Figure 14).**
- Determine if the drum is level with a transit or by using a straight edge with a spirit level across the bottom rails as shown in (Figure 15). If necessary, place horseshoe shims (provided) under the vertical rails to make the drum level, front to back and side to side. It is not possible to shim under the horizontal rails because of the hollow web (Figure 15).

11. INSTALLING SEGMENTED DRUM GLAZING

- Glazing stops are the snap-in type and can be installed using hand pressure. If inner stop is the narrow profile type, as commonly used for 1" (25) glazing (Figure 16), install this glass stop first at all four sides. Position nylon setting blocks to support glass. Carefully set glass in place. Install short outer stops first, then the longer outer stops next. If adjacent wall construction prevents glazing from exterior, the procedure can be reversed with added difficulty. A rubber mallet may be used to gently tap glass stops into place. Use caution if laminated glass is used as it can easily be cracked (Figure 16).
- Install canopy panels toward the outside (see Figure 16).

Figure 11 - Joining Round Canopy Sections

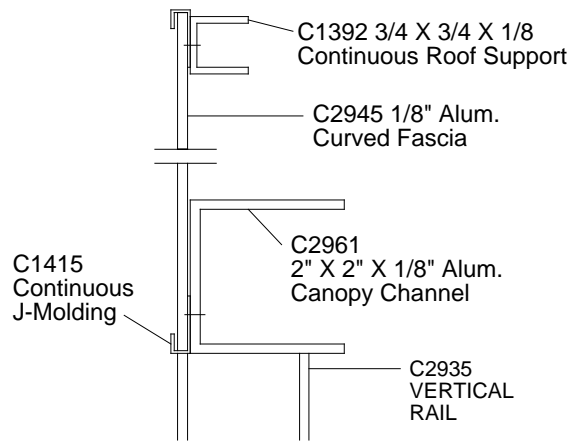
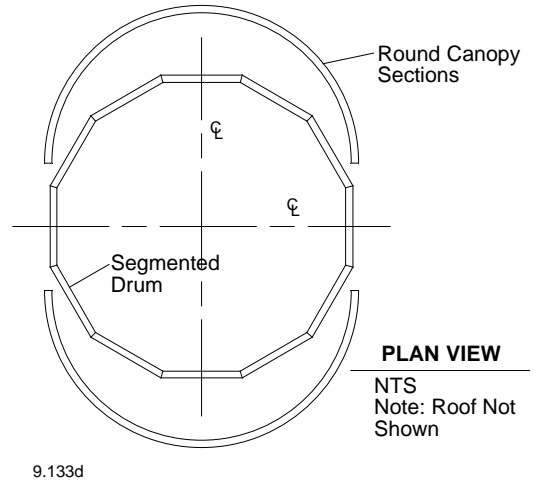
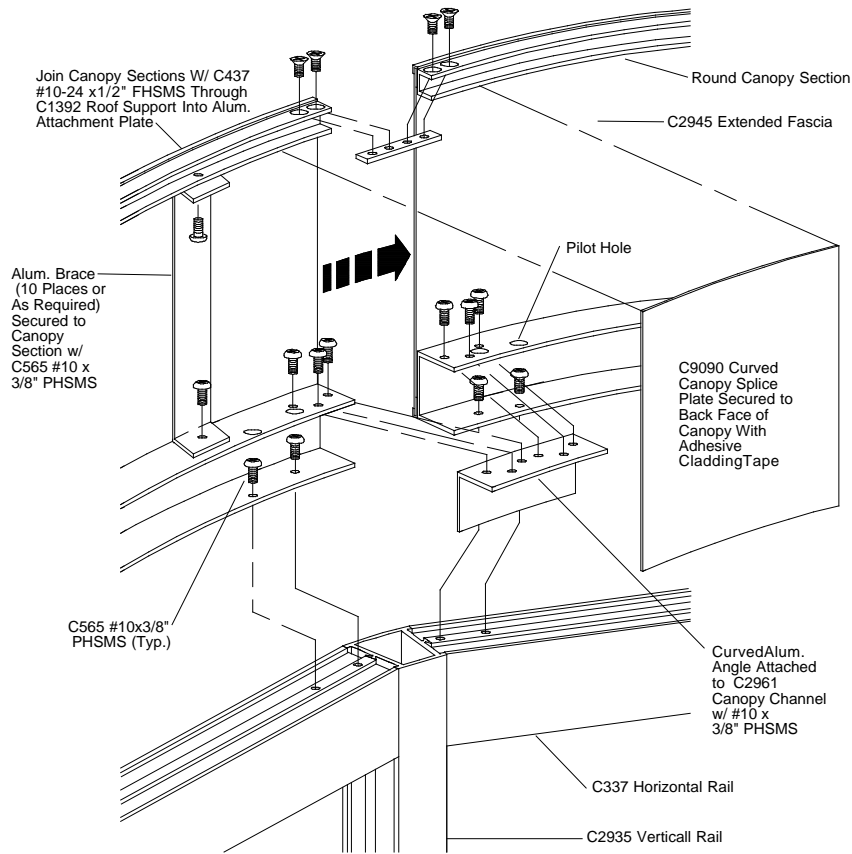


Figure 12 - Joining Drum Halves (Segmented Canopy)

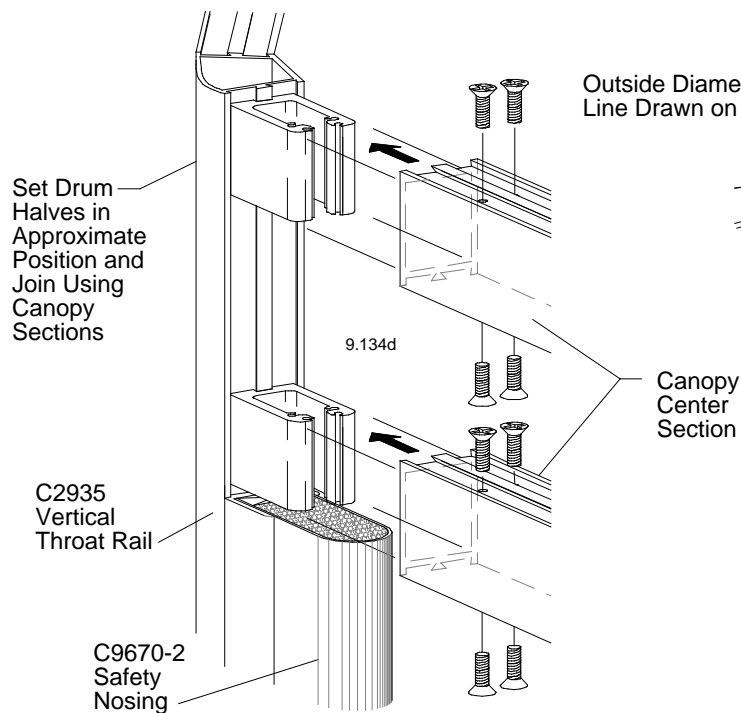


Figure 13 - Joining Drum Halves (Round Canopy)

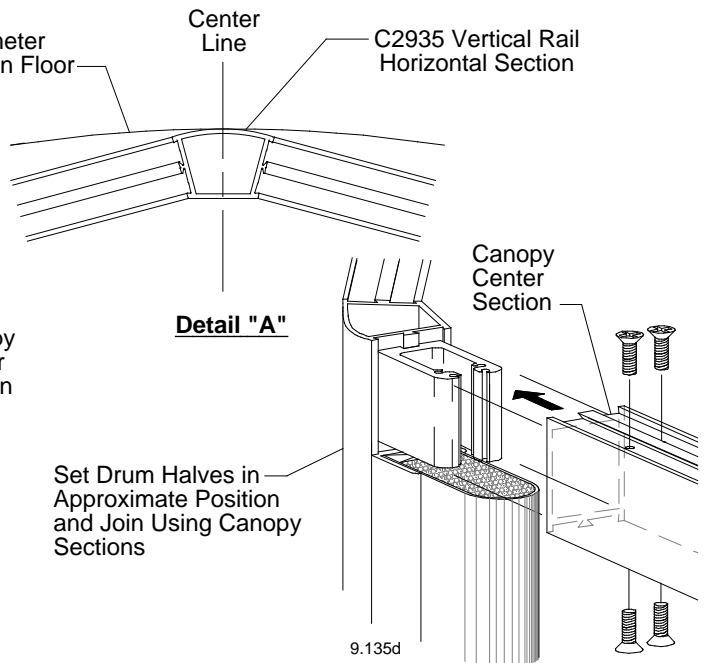


Figure 14 - Anchors

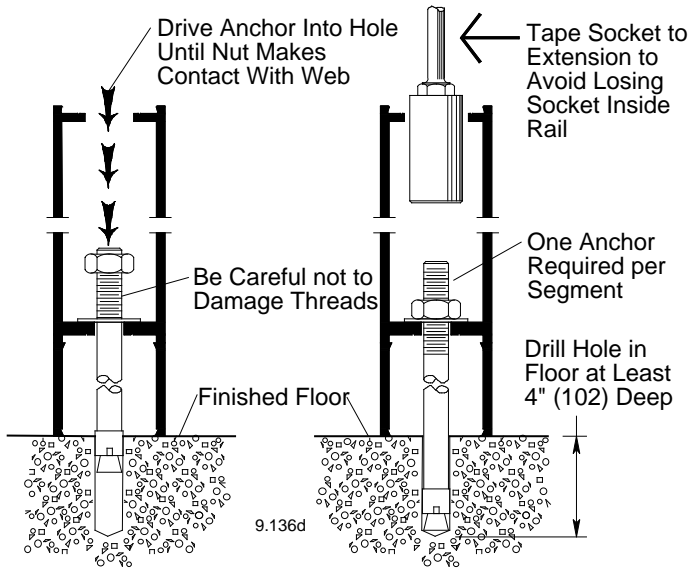


Figure 16 - Segmented Drum Section

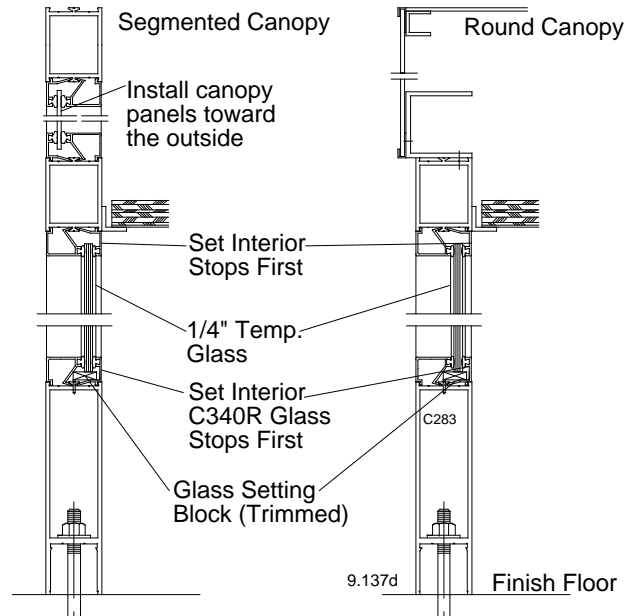
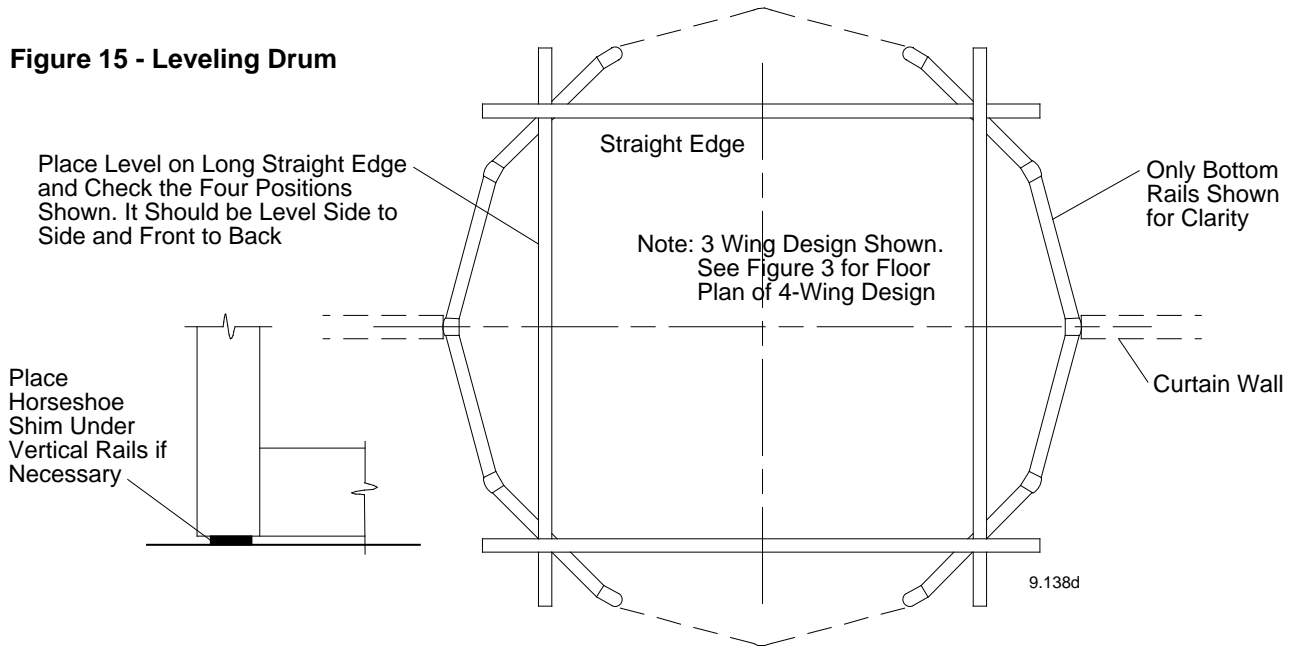


Figure 15 - Leveling Drum



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