INSTRUCTION MANUAL
Prefabricated Refrigerated Buildings
IM-161-76

Erection of Bally Prefabricated Refrigerated Buildings

(Suspending ceiling panels from exterior of refrigerated building.)

SECTION A: Erection of refrigerated building when suspended from a new steel structure.
SECTION B: Erection of refrigerated building when suspended from existing steel structure.

IMPORTANT: Enclosed with this instruction is a plan view showing all special panels and steel members to insure proper location. If a refrigerated building requires floor screeds, a screed layout will be provided with the set of "As Built" drawings in misc box #1 showing proper location of each individual screed. Before placing any panel into position check plan view for location.

CAUTION: Bally floor panels are designed to withstand uniformly distributed stationary floor loads up to 600 lbs/ft^2. Where carts, hand trucks or other mobile equipment will be use, the floor must be reinforced with diamond tread steel plate. If fork lift trucks are to be used, a minimum of 4" reinforced concrete must be poured on top of the floor panels.

Any phase of installation not covered in this instruction such as Operation of Bally Speed-Loks, Preparation of Building Floor to Accept Door Panel on Screed Installation, etc., are described in Instruction Manual IM-268-11.

SECTION A: ERECTION OF REFRIGERATED BUILDING WHEN SUSPENDED FROM NEW STEEL STRUCTURE RATHER THAN EXISTING STEEL.

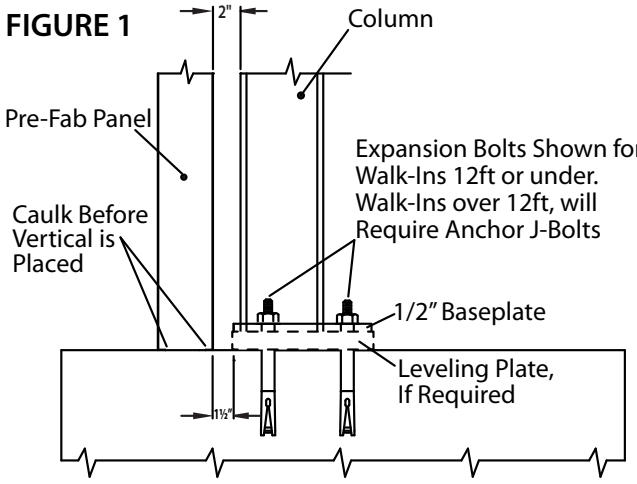
If refrigerated building is to be erected on a newly built-in floor, it must be constructed as shown on Bally engineering drawings submitted for your particular job.

I. ERECTION OF STRUCTURAL STEEL

When structural steel is supplied by Bally, all pieces are numbered for proper location. **BEFORE ERECTING THIS STEEL, ALWAYS CHECK PLAN FOR ITS PROPER LOCATION.**

1. Mark on the concrete floor the exact outside perimeter of the refrigerated building with a chalk line (*make sure area marked is perfectly square.*)
2. Mark position of all steel posts as indicated on your plan view. (*Care must be taken so these positions are marked accurately.*)
3. On refrigerated "building furnished with floor panels, find the highest point of entire floor area and of steel post positions.
4. On any post position, build up leveling plate with grout so that top of leveling plate is 1" higher than high point found in Step 3. (*All posts are figured 1" short of the required length, unless otherwise specified, no matter what type of floor refrigerated building is to be erected upon and therefore, requires a minimum 3/4" build-up plus 1/4" leveling plate. See Figure 1.*)
5. Build up remaining leveling plates with required grout so that top of all leveling plates are level.
6. Place all posts into position and secure to building floor. (When securing to building floor where anchor bolts have not been provided, use l/2" diameter x 6" long expansion anchors.
7. Set "I" beam into position and secure to post top plate.
8. Plumb all posts and install lateral bracing.
9. All structural steel must be self-supporting.

FIGURE 1



Note: It is important NEVER to walk on top of a Bally ceiling that is not supported by interior steel or other temporary structural supports. Failure to support ceiling will cause joint failure and likely cause serious injury or death.

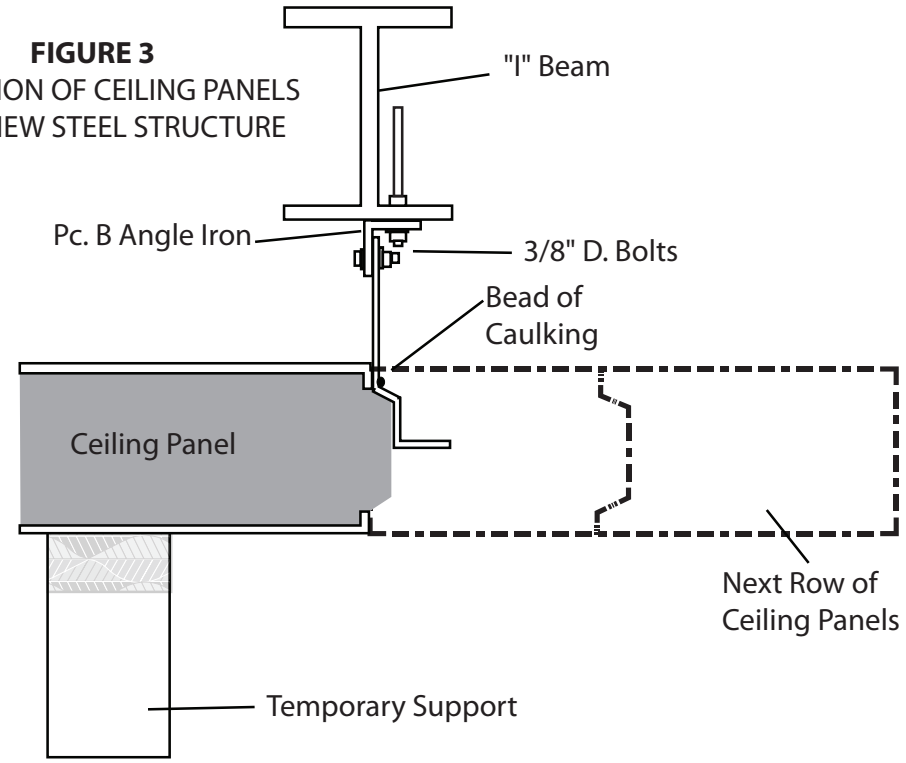
II. ERECTION OF PREFAB REFRIGERATED PANELS.

For erection of vertical panels when refrigerated building is furnished with floor panels, see SECTION C.

III. ERECTING CEILING PANELS

1. In order to erect ceiling panels, it will be necessary to support these temporarily from the interior of the refrigerated building (*as shown in Figure 2 or with some other similar method*).
2. Position 23-1/2" ceiling end panel Check the alignment of each edge and Speed-Lok to vertical panels.
3. Position an adjoining ceiling center panel (*23" or 46" wide as indicated on plan view*). Check alignment of each edge and Speed-Lok to adjacent ceiling panel and vertical panel. Continue with this procedure until entire first row of ceiling panels is installed. Place a bead of caulking on top flange of installed row of ceiling panels. See Figure 3.
4. Position Pc. A of hanger assembly as shown in Figure 3 With Pc. A in position, correct position of angle iron Pc. B can be obtained. Secure angle iron Pc. B to "I" beam with 3/8" D. bolts, four bolts per length of hanger.
5. Construct another temporary support in proper position so ends of next row of ceiling panels will be supported.
6. Place a bead of caulking on Pc. A of hanger support as shown in Figure 3.
7. Install next row of' ceiling panels in same manner as first row.
8. Position hanger assembly for second row of ceiling panels as explained in Step 4.
9. Remove support holding first row of top panels and position so third row of panels are supported. Continue with this procedure until all ceiling panels are installed.

FIGURE 3
SUSPENSION OF CEILING PANELS
FROM NEW STEEL STRUCTURE



Note: It is important NEVER to walk on top of a Bally ceiling that is not supported by interior steel or other temporary structural supports. Failure to support ceiling will cause joint failure and likely cause serious injury or death.

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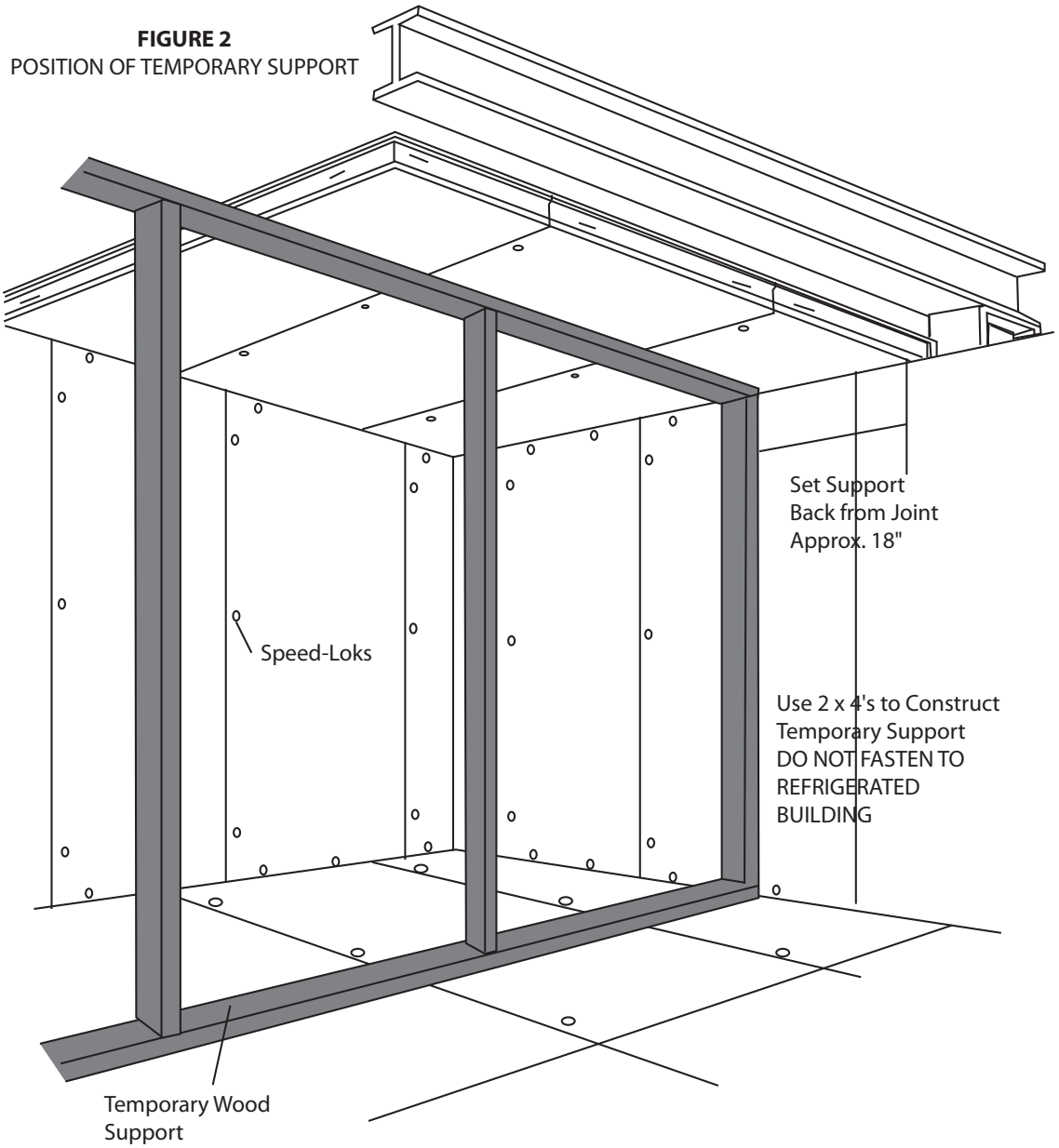
FIGURE 2
POSITION OF TEMPORARY SUPPORT



SECTION B: ERECTION OF REFRIGERATED BUILDING WHEN SUSPENDED FROM EXISTING STEEL STRUCTURE.

I. ERECTION OF PREFAB REFRIGERATED PANELS

For erection of vertical panels when refrigerated building is furnished with floor panels, see SECTION C.

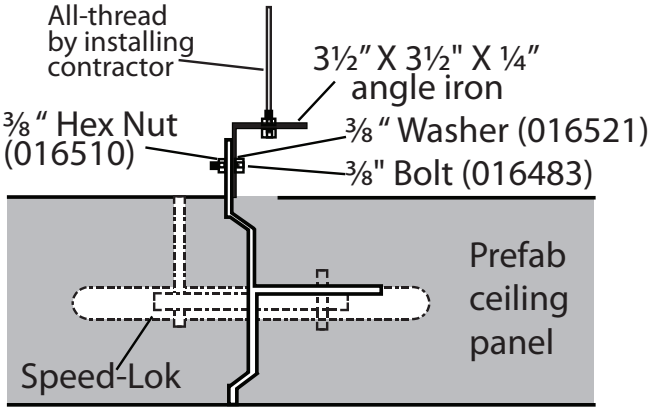
1. Mark on the building floor the exact outside perimeter of the refrigerated building. (*Make sure area marked is perfectly square.*)
2. On refrigerated building furnished with floor panels, find the high point of entire area within chalk lines.
3. Erection of prefab panels can now begin, however, the following things must be kept in mind.

   When erecting a refrigerated building with floor panels, the bottom of all floor panels must be kept level width the high point found in Step 2.

II. ERECTING CEILING PANELS

1. In order to erect ceiling panels, it will be necessary to support these temporarily from the interior of the refrigerated building (*as shown in Figure 2 or with some other similar method*.)
2. Position 23½" ceiling end panels. Check the alignment of each edge and Speed-Lok to vertical panels.
3. Position an adjoining ceiling center panel (*23" or 46" wide as indicated on plan view*). Check alignment of each edge and Speed-Lok to adjacent ceiling panel and vertical panel. Continue with this procedure until entire first row of ceiling panels is installed. Place a bead of caulking on top and bottom flange of installed row of ceiling panels.
4. See Bulletin IM-146-73 for position of Suspended Ceiling Supports.
5. Construct another temporary support in proper position so ends of next row or ceiling panels will be supported.
6. Place a bead of caulking on Pc. A of hanger support as shown in Figure 4.
7. Install next row of ceiling panels in same manner as first row.
8. Position hanger assembly for second row of ceiling panels as explained in IM-146-73.
9. Remove support holding first row of ceiling panels and position so third row of panels is supported. Continue this procedure until all ceiling panels are installed.

FIGURE 4



Detail showing suspended ceiling panels from building structure.

SECTION C: SETTING FLOOR AND VERTICAL PANELS WHEN REFRIGERATED BUILDING IS SUPPLIED WITH FLOOR

I. SETTING FLOOR PANELS

1. Position to chalk line and level floor panel number B3. See Figure 7. To level, place shims under each corner until top of panel is 3" above the leveling plates of structural steel (*It is very important that this dimension is held.*) Note: When installing refrigerated building that is to be suspended from existing steel structure there will be no leveling plates. In this case bottom of all floor panels must be kept level to high point. *See Section B.*
2. Lift panel up and fill between shims with dry sand or asphalt shingles to approximately the required height. Replace panel and pack additional sand under panel (Note: Entire outside perimeter of refrigerated building floor must have solid shims to prevent leakage of sand.)
3. Position required panel next to B3. Level this panel by shimming. Remove panel and fill with required amount of sand. Reposition panel and align panel edges with B3. Speed-Lok these two panels together. (*Note: Care must be taken so sand is not pushed up between panels.*)
4. Continue this procedure until entire front row of floor panels are installed.
5. Measure across corners of installed row of floor panels, as shown in Figure 1 to check squareness. If panels are square, proceed with next row. If panels are not square, adjust before proceeding.
6. Install next row of floor panels in the same manner as first row.
7. Measure across corners of both rows of installed floor panels, as shown in Figure 8. If panels are not square, adjust before proceeding. Check length of combined rows of floor panels; if dimensions do not correspond with that of plan view, tighten or release Speed-Loks until corrected.
8. Continue with this procedure until entire floor is installed, always checking squareness, levelness, and length of combined rows of panels.

Note: It is important NEVER to walk on top of a Bally ceiling that is not supported by interior steel or other temporary structural supports. Failure to support ceiling will cause joint failure and likely cause serious injury or death.

FIGURE 7
INSTALLATION OF FIRST ROW OF FLOOR PANELS

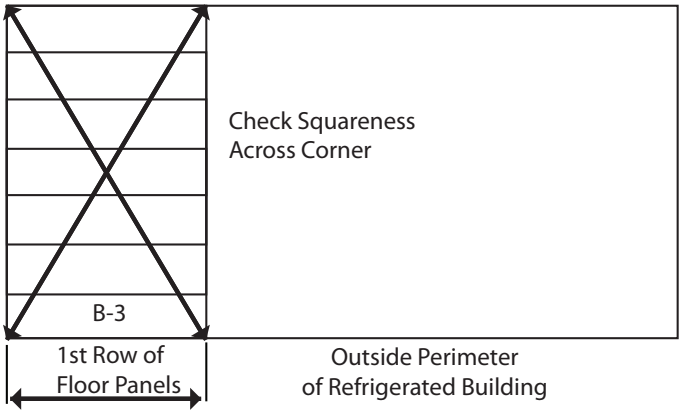
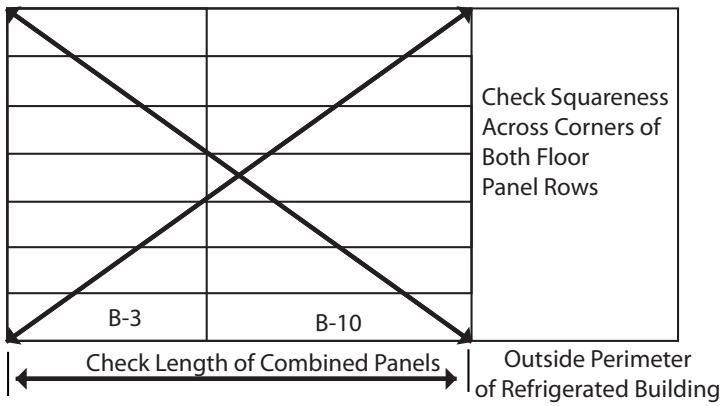


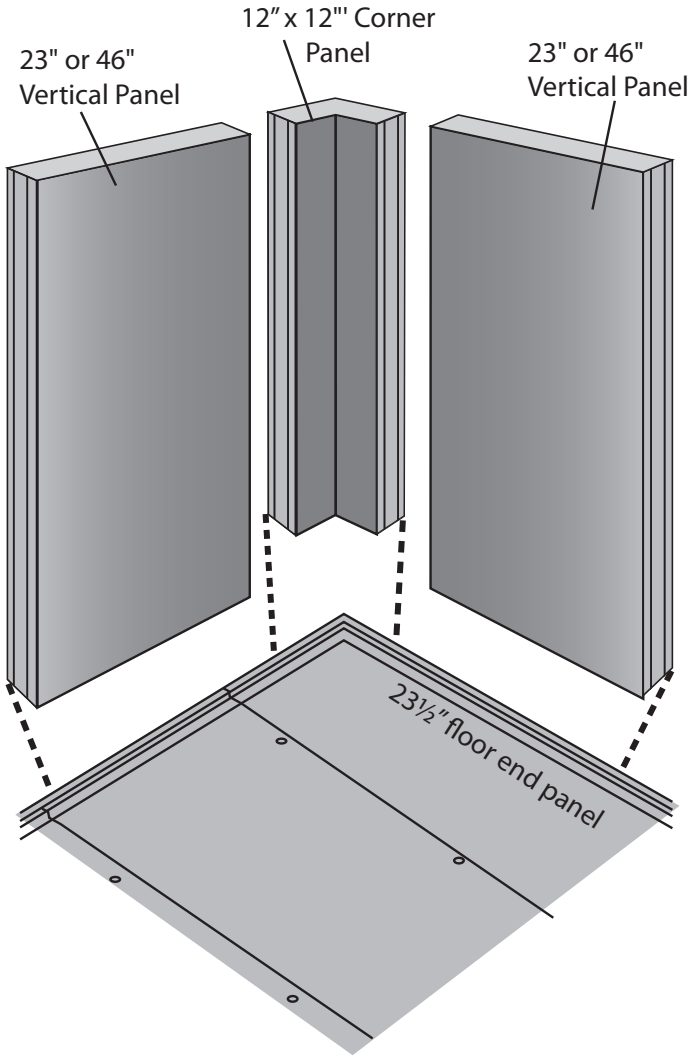
FIGURE 8
INSTALLATION OF SECOND ROW OF FLOOR PANELS



II. INSTALLATION OF VERTICAL PANELS

1. Start by erecting a 12" x 12" vertical corner panel when erecting, the holes for the Speed-Lok wrench must always be on the left hand side when facing the interior of the panel. See Figure 9.
2. Next erect either a 23" or 46" wide vertical panel, whichever the plan calls for, to the right of the corner panel. Engage the bottom Speed-Loks of the vertical panel to engaging position only - Do not put them into "full locking position".
3. Set up the required vertical panel to the left of the corner. This will prevent the wall from tilting in either direction. Engage the Speed-Loks between these two vertical panels to "full locking position".
4. Set up four verticals to the right of the corner panel with same procedure as above.
5. Check combined length of vertical panels erected. Example: If four 46" verticals have been erected, combined length must measure 15'4". If dimensions do not check out, tighten or loosen Speed-Loks of vertical joints until corrected. If length of verticals is correct, put bottom Speed-Loks in "full locking position".
6. Continue erecting vertical panels making sure they are plumb and that length of combined verticals is correct. The last vertical panel to be erected is the fourth corner panel.

FIGURE 9
INSTALLING VERTICAL PANELS



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