POST FRAME CONSTRUCTION MANUAL

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Leveling
Get your pad level and elevated (see Drainage below) before you begin construction. It is important that fill material is compacted with each 6-8 inches of material added.

Drainage
Raise your building pad at least 6" above the surrounding terrain. Extend the pad a minimum 3' wider and longer than the building on all sides.

Staking
Use batter boards to lay out your building dimensions. Make the batter boards long enough (4'-6') to allow adjustment of string line to get dimensions precise.

Post Plan Measurements
Note on your plan that the corner bays measure 1 1/2" less than those in between.

Setting the posts 1 1/2" inset from the actual building measurement leaves room for the girts that are nailed to the outside of the posts.

The combination of girt and post spacing below will result in a 24' wide x 32' long building including the girts and steel.

Squaring Your Post Plan
To confirm a square post plan, measure the same length diagonally as shown below. Adjust the string line until both measurements are the same.

Note:
Diagonal measurement for string line is post to post
So circumference on this post plan is 23' 9" wide by 31' 9" long
SETTING POSTS

POST ORIENTATION

EMBEDMENT DEPTH & METHOD

Concrete Footer
Each post stands on concrete. A pre-cast concrete footer, sakrete, or pre-mixed concrete may be used, minimum compressive strength of 2500 psi.

Uplift Protection
Your plans will define the uplift protection used for your site location.

Treated uplift cleats are used in low wind areas

#4 rebar encased in a concrete collar is typical in high wind regions

Embedment Depth
Your plans will define embedment depth based upon your engineering requirements. This measurement is shown on the Wall Section drawing.

1) 29 GA STEEL ROOFING
2) 2x4 #2 SPF PURLINS 24” OC
3) FASCIA & TRIM
4) SOFFIT
5) (2) 2x10 #1 SYP TRUSS SUPPORTS
6) 29 GA STEEL SIDING
7) 4x6 UC4B TRT SAWN FOUNDATION POST
8) 2x4 #2 SPF WALL GIRT 24” OC
9) (1) 2x8 TRT #1 SYP PRESSURE TREATED SKIRT
10) 2x6 PRESSURE TREATED UPLIFT CLEATS
11) 18” Ø X 6” THICK CONCRETE FOOTER
12) SLOPE GRADE AWAY FROM BUILDING
13) WOOD TRUSS DESIGNED BY OTHERS
14) OPTIONAL CONCRETE SLAB

Wall height is measured from bottom of skirt board to top of truss support

BEARING WALL SECTION

REFER TO YOUR PLANS FOR EMBEDMENT DETAILS
Make certain that your hole is the proper depth including the thickness of the concrete footer.

Remove any loose soil from bottom of hole prior to pouring or dropping footer in hole. This will eliminate the possibility of settling when the weight of the building and snow load is applied to the structure.

Pre-cast footers should be laid on a level surface to ensure post stability.

Some packages will replace precast concrete footers with 80# sakcrete due to the amount of concrete required under the post.

With your uplift protection on the post and the footer in place the next step is to set the corner posts.

When placing the corner posts ensure that post is plumb on two sides, then backfill the hole compacting the material as required every 6”-8” with a 2x4 or spud bar.

Make sure the post is plumb until the hole is completely backfilled.

TIP
Foundation posts and other treated lumber will warp badly if left in the sun unbanded, even for short periods of time.

- Leave posts and lumber banded until needed.
- Cover lumber to prevent direct sunlight warpage in horizontal position.
SIDEWALL POSTS

Find the post plan drawing included in your structural building plans. Note the measurements are from center of post to center of post except for door openings and corner posts.

Door openings and corner posts are measured from the edge of the post.

Measure as indicated and lay a nail to mark the location required for each sidewall post. Embed each post and plumb using the technique described for corner posts above.

Temporary bracing may be used to maintain plumb while construction is in progress.

ENDWALL POSTS

Locate the gable endwall posts which are longer than eave and corner posts.

These posts extend to the top of the truss.

Use the same measurement, plumb, and embedment techniques discussed earlier.
INSTALL SKIRT BOARD

Locate the 2x8 treated lumber in your package. Find the corner post with the highest grade.

Place a nail in the post establishing grade, or ground level for your building.

Establish a level line around the perimeter of the building and place a nail in each post.

Install treated skirt board with (3) 0.177 x 4” 20d galvanized ring shank nails.

The structural drawings include wall drawings that identify the lengths of dimensional lumber to be used for treated skirt board, untreated 2x4 wall girts, and truss supports (2x10 or 2x12).

Your building package may include two, three, or four truss supports on each eave side. See your Wall Section drawing in the structural plans for your specific supports.

<table>
<thead>
<tr>
<th>Member to Member</th>
<th>Qty</th>
<th>Fastener/ remarks</th>
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<tbody>
<tr>
<td>Cleats to post</td>
<td>3</td>
<td>0.177 x 4” RS SS or HDG</td>
</tr>
<tr>
<td>Skirt to Post</td>
<td>3</td>
<td>0.177 x 4” RS Galvanized</td>
</tr>
<tr>
<td>Girts to Post</td>
<td>2</td>
<td>0.131 x 3” RS Galvanized</td>
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<tr>
<td>Truss to Post</td>
<td>7</td>
<td>0.177 x 4” Ring Shank</td>
</tr>
<tr>
<td>End truss to Post</td>
<td>6</td>
<td>0.177 x 4” RS</td>
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<tr>
<td>Purlin to Truss</td>
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<td>0.131 x 3” RS Galvanized RS</td>
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<tr>
<td>Supports &amp; Headers to Post</td>
<td>--</td>
<td>See Details</td>
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<tr>
<td>Corner Brace to Girts &amp; Post</td>
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<tr>
<td>Truss to Truss</td>
<td>-</td>
<td>As noted on design drawing by others!</td>
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</table>

SKIRT or GRADE BOARD

Skirt board, girts, and truss supports will extend beyond corner posts 1 1/2” on the eave sides.

For expansion and contraction issues you can place a nail between lumber lengths to leave a small gap.
INSTALL WALL GIRTS

Install girts to post using (3) 16d 0.131x3 galvanized ring shank nails. Girts on the eave (gutter sides) will extend 1 1/2" beyond the corner posts for a boxed fit with gable girts.

Dimensional lumber may be cut and staggered to improve wall fastening strength in high wind areas. To stagger girts simply move the fastening post over one bay. For instance in this drawing move row 2 fastening point B to the post between A and B by cutting a 16’ 2x4 in two 8’ lengths for the ends. We recommend staggering the skirt board and truss supports to fasten adjacent to the girts if girt rows are not staggered.

Wainscot (two tone walls) includes a 2x6 nailer and Z trim positioned at 40” from grade to work with 36” long wainscot plus 4” since the siding starts 4” up from grade.

Refer to Wall Section drawing for girt spacing for your design.
Truss supports are sized based upon your specific needs. Supports may be 2 ply, 3 ply or 4 ply 2x10 or 2x12 dimensional lumber.

Placement of the truss support is simple. Measure from the bottom of the grade board up the post the height of your wall as shown on the wall section in the structural plans.

Mark the post and nail the truss supports to the post based upon the fastening specifications included in your plans. ONLY USE GALVANIZED RING SHANK NAILS AS REQUIRED BY OUR PLANS.

**TRUSS SUPPORTS MUST EXTEND 1 1/2" BEYOND CORNER POSTS TO SUPPORT GABLE ENDFRAME TRUSSES**
**Endframe Truss To Corner & Gable Post Connection**

The endframe trusses with horizontal nailers are nailed to all gable posts on the bottom and top chord of the truss. See page 1 fastener schedule for end truss nail size and quantity.

Endframes should rest on truss supports. If you didn’t extend the truss support beyond the post to support end truss then cut a 2x6 bearing block 18” long and nail with (6) 20d 0.177x4 ring shank nails

Make sure truss is centered by measuring overhang on both sides.

Place both endframes trusses first. Then confirm squareness using the diagonal method discussed on page 3.

**Common Truss to Stub Post Connection**

The next truss will sit full bearing on the post. A 2x6 stub post is inserted between truss supports to secure the truss in place.

Ensure truss is square using a jig fashioned to your truss spacing.

Measure overhang on both sides and adjust until both measurements are the same.

**Common Truss to Eave Post Connection**

The next truss will sit full bearing on the post. Cut a 1 1/2” notch in the corner of the post and nail using fastener schedule on page 1 of structural plans.

Measure overhang on both sides and adjust until both measurements are the same.
After setting the gable end truss, bracing must be installed to support the intermediate trusses as they are placed.

2x4 purlins are used at 24” on center typically along the top chord of each truss. If your snow load dictates, the spacing may be less in the drift area.

Your structural plans will include the drift area if needed.

Full height gable posts should be cut even with the top chord of the truss. Eave posts are cut along the pitch of the roof.

Prior to unbanding your trusses consult your structural plans to determine purlin spacing. Measure 24” (or your purlin spacing) from the ridge and mark the trusses for purlin placement.

Trusses with no overhang require a purlin at the end of the truss. Trusses with overhang use the 2x6 fascia board for the eave purlin. See Wall Section drawing on structural plans.

Similar to girts, purlin runs can be staggered to prevent connection points from residing on the same truss thus making a stronger roof system.
Wind bracing is commonly used so it is included here. Our designs do not use wind bracing.

Wind bracing certainly doesn't hurt anything so feel free to liberally brace your trusses.
Trims may be fastened with wood binder screws or color matched nails. Both are included in your building package.

EAVE TRIM
2x6 FASCIA BOARD
SOFFIT
F&J OVERHANG TRIM
ANGLE TRIM

INSTALL EAVE TRIM BEFORE ROOFING
EAVE TRIM TUCKS UNDER ROOFING

INSTALL GABLE TRIM AFTER ROOFING
GABLE TRIM LAYS OVER ROOFING

CORNER TRIM
ANGLE TRIM

ELEMENTS NOT SHOWN IN CONTACT FOR CLARITY
STEEL TRIMS NO OVERHANG

GABLE TRIM DETAIL
NOT TO SCALE

EAVE TRIM DETAIL
SCALE: 1 1/2" = 1'-0"
Starting at one end of the building, fasten the first roof panel at the top and bottom of the panel ensuring that the panel is square and that the roofing extends past the eave trim 2". This will leave a gap at the top where the foam closures and ridge cap go. The top and bottom of the panel require a screw on both sides of the rib. The screws between the top and bottom only require one screw next to the rib. DO NOT SCREW ON TOP OF THE RIB.
Steel Trims

RIDGE CAP

2" screws on the rib
G-Rib Trim

14" Ridge Cap *
Available Length: 10'6"

20" Ridge Cap
Available Length: 10'

Angle Trim *
Available Length: 10'

5-1/2" Corner/Gable Trim *
Available Length:
8' - 10' - 12' - 14' - 16' - 18' - 20'

5-1/2" Inside Corner Trim
Available Length:
8' - 10' - 12' - 14' - 16' - 18' - 20'

Special trim prices based on total inches x total bends. A hem is one bend.

*STOCKED TRIM
G-Rib Trim

End Wall Flashing
Available Length:
8' - 10' - 12' - 14' - 16' - 18' - 20'

Side Wall Flashing
Available Length:
8' - 10' - 12' - 14' - 16' - 18' - 20'

W-Valley Flashing
Available Length:
8' - 10' - 12' - 14' - 16' - 18' - 20'

Door Track Cover *
Available Length: 10'6''

Overhead Door Trim w/I-channel
Available Length:
8' - 10' - 12' - 14' - 16' - 18' - 20'

J-channel *
Available Length: 10'

Overhang Trim *
Available Length: 10'

Ratguard *
Available Length: 10'

Z-bar *
Available Length: 10'

Special trim prices based on total inches x total bends. A item is one bend.

*STOCKED TRIM
Eave Trim
Available Length: 10'

Special trim prices based on total inches x total bends. A hem is one bend.

*STOCKED TRIM
Pre-manufactured truss 4' oc typical
Heel height to match rafter height

#1 SYP Rafters to site
specific snow load