



## **SIP PREPARATION AND INSTALLATION GUIDE**

# TABLE OF CONTENTS

1. Introduction.....	2
A. Introduction to SIP's, our services and contact information	
B. Assumption of Risk and smart jobsite planning	
2. Planning.....	3
A. Panel Packages	
B. Necessary supplies and tools needed for installation	
C. Pre-Installation	
i. Site evaluation	
ii. Before you get started	
iii. Items to pay attention to	
iv. Receiving and storing panels	
3. ACME Panel Installation Documents/ Manual.....	10
A. The building science of an ACME Panel House	
i. Mechanical Ventilation	
ii. HVAC Design	
B. Getting started	
i. Foundation	
ii. Fastener schedules	
iii. Installing splines	
C. Jobsite preparation/ Panel handling	
D. First floor deck details	
4. Installing panels.....	13
A. Wall, corner details, splines and electrical chases	
B. Window and door openings	
C. Second story deck	
D. Second story walls, roof beams and beam pockets	
E. Roof panels	
5. Additional Information.....	18
A. Electrical Wiring	
B. Siding/Roofing	
C. Finishing	
D. Moisture management	
E. Interior, air exchangers and HVAC sizing	
F. Exterior, house wrap, siding	
G. Roofs, venting	
6. ACME Panel Company Warranty.....	18

## INTRODUCTION

### What's Included:

- Reliable packages of blank, pre-cut, and Ready to assemble (RTA) Panels
- Engineering
- Clear construction drawings
- Precision cuts
- All supplies tailored to your project
- On time, orderly delivery that includes everything the first time
- Full installation support – phone access, training, supervisors, or installation crews

if you have any problems with your panels we have experts who will review your building and quickly identify the easiest solution.



### **The easiest ways to contact us is to:**

Call us at: 1 (877) 331-4266, or 1-540-267-9988      OR      Email us at [info@acmepanel.com](mailto:info@acmepanel.com).

ACME Panel is America's greenest Structural Panel manufacturer, powered by 360 solar panels and the only SIP Company to publish prices on the Web. Family owned, reliable, ethical, and responsive, we will help you every step of the way.

***ACME Panel. Better Houses for Smarter People!***

## ASSUMPTION OF RISK AND SMART JOBSITE PLANNING

Construction is a hazardous industry in which workers are inherently at risk. The easiest way to prevent potential harm is to make smart decisions and know the proper building methods. SIP's are easy to install, however builders still need to practice jobsite safety and possess sound building skills. A builder will be working with a lot of materials & tools to install the panels; make sure your job site is clean, organized and free of hazards.

ACME recommends following OSHA standards for jobsite safety and following the panel layout plan provided by ACME Panel Company on site. The detail connections are specified on the provided drawings to make installation easy. Call ACME to discuss any questions or issues while building with their trained staff.



## Blank Panels:

If you ordered blank panels and are cutting them on site, you will need a workstation to keep the panel off of the ground and catch the panel when cuts are occurring. A simple solution is to use two sawhorses for panel support so the builder can easily adjust them depending on the panel length. When routing foam, set the foam scoop to the appropriate depth and be sure to work in a well ventilated area. The foam scoop is a hot object which will burn you; be careful not to burn yourself or lay it down on a flammable surface.



## Pre-Cut:

If you had the panels pre-cut in the factory they will be cut to the exact size needed. Make sure the foundation is plumb, level, square & dimensionally correct before installing panels. If not, contact your ACME representative for solutions.



## RTA Package:

ACME Panel Company can create Ready-To-Assemble (RTA) Packages where all possible let-in lumber and headers are inserted into the panels. The material will be labeled per the panel drawings where each insert will have the adjacent panels listed.





## Supplies and Tools Needed:

There are specific supplies necessary when building with panels. With your panel order, you will receive:

- Panel Screws
- Expanding Foam Sealer
- Panel Adhesive
- Wooden splines

Each item plays a critical component in putting together a SIP home that helps make a stronger, tighter panel package. You will also need 2 x materials the same thickness as your walls and roof panels. The 2x's needed are shown in the project drawings provided by ACME.



**For Example:** If you have a 6 ½" wall, you will need a 2x6" which will fit snugly within the two sides of OSB on each panel. The sizes of SIP's will match the corresponding 2x material needed, from 2x4's through 2x12's.

The building crew will need nails to fasten the panel splines, top and bottom plates, and other insert materials together. The necessary nails will be specified in the project drawings. Another material that ACME can supply is SIP sealant tape. This tape goes over the seams where panels fit together, and helps create a stronger thermal seal.



### These are the tools that may be needed for installation on site:

- A crane, lull, or other hoist
- A circular saw or beam cutter saw
- A hot knife
- A hammer or nail gun
- Impact driver
- Levels, tape measures, and ladders

Any panel larger than a 4x16' will need a crane or lull to put into place. ACME Recommends using a crane to set JUMBO panels.

## Supplies and Tools Continued:

A circular saw or beam cutter with a panel attachment is useful to have as the panels can then be cut on site if there are any modifications needed. An example would be if the foundation is 1" shorter in length on one end of the home than the other, using a circular saw or beam cutter you can easily trim off the additional 1". This saw cuts down on time when cutting rough openings out of blank panels.

A hot knife can be used to route out areas of panels used for splines or 2x material. ACME will route out all edges for spline material at their factory, however if you cut out any rough openings you will need a hot knife to create a recess for the accompanying 2x materials as needed.

A hammer or nail gun is needed to drive nails through the panels into splines, top plates, and sill plates (usually 6" O.C.).

The large panel screws are 1 1/2" longer than the panel to provide purchase into the supporting member. For this attachment we suggest using an impact driver to save time. The bit size needed is a T-30 which is supplied with each box of screws.

### Tools You Will Need

**In addition to your usual tool kit you may need to add two important tools.**

#### **14" Chain saw bar – Beam Cutter:**

While you can cut panels with your circular saw we recommend that you save time and potential frustration by modifying your circular saw with an attachment that easily becomes a controlled chain saw. A 14" chain saw bar, from your circular saw manufacturer, will speed up the project; you can also order Prazi USA PR7000 Beam Cutter for 7-1/4-Inch Worm Drive Saws or the PR2700 Circular saw attachment from Prazi or Prazi retailers.

#### **Hot Knife**

Used for melting and scooping EPS foam, the hot knife assists in routing foam for rough openings, corner connections, roof perimeter blocking, or from panel edges where 2x blocking needs to be installed. You can buy one from ACME or from L&H Branding Irons.



#### **Additional Supplies available from Acme Panel:**

- Expanding Foam Sealer
- SIP Tape for interior joints
- Foam Safe Construction Adhesive
- Splines
- Fasteners
- Foam Gun

## PLANNING:

---

### Receiving and storing panels:

there are a few things the builder should check before the panels are received on site. ACME's site checklist is on the following page which identifies aspects to confirm with the building crew.

When coordinating delivery with ACME, check the site to make sure it is navigable and the semi truck can maneuver up to your site. If the driveway is too steep or small, there have been heavy rains, or there is something lower than 13' overhead that the trailer might hit we recommend calling and talking with one of our experienced staff to make sure the truck can easily deliver to your location. If the truck cannot, talk with ACME to determine an alternate drop-off location.

### Unloading:

There is a two hour window to unload the panels; a fork lift will expedite the unloading process once the panels arrive as the panels will be bundled in stacks with spacers underneath them. If it is a small truck load of panels smaller than 4x16', a crew of a few men can unload the truck by hand. When unloading by hand you can cut the bundles open to move each individual panel.

The truck driver will have a bill of materials and invoice. Once the driver has received the remaining 50% as a certified check he will unstrap the panels. The trucking company can charge \$70 per hour for each extra hour afterwards. Supplies will be either in the trailer box or in the driver's cab, ask the driver if he has any additional supplies. The truck driver is solely responsible for delivering the panels and unstrapping the truck, he will not help to unload the panels.

### Storage:

There are dunnage spacers underneath. Make sure that there are always support stickers between the ground and the panels every 4 feet. The panels need to be elevated and flat to prevent any water damage from the ground.

The panels need to be covered to prevent exposure to rain and snow. While the OSB can go through wet to dry cycles, the ends will still swell and make construction with the panels much more difficult. Storing the panels in an interior space is best, but tarping the panels will also work well.

Each bundle will be stacked with as many panels within the same wall or roof as possible. Due to the weights and sizes of certain panels there may be other panels mixed in to best accommodate space on the trailer. We recommend preparing each stack with the appropriately lettered and numbered panels so that you can erect the walls and roof quickly.





## Pre-Installation Checklist

### Site Evaluation:

1. Is the site wet or out of level, have overhead power lines, have a well head exposed, does the landscape interfere with moving equipment (creek beds, large trees), have open holes (foundation back filled), know the septic tank location, debris piles in the way, or have the ability to support a large piece of equipment (crane, RTFL)?
2. Are there any restrictions or barriers to keep large vehicles from entering or maneuvering? (HOA restrictions, small bridges/low wt. class, or sharp turns for tractor trailers/delivery trucks)
3. Can ACME bring all the needed materials at once? Will you need to move materials/supplies as you build or can they stay in one spot the entire time?
4. Can you place the panels in order when unloading or can you separate the panels on-site as you assemble them?
5. Which piece of equipment would be best for the site: crane, RTFL, bucket lift? What size do you need? When should it be delivered and for how long? Who pays for this service (contract) the sub? The owner?
6. Is there space available for: SIPs, crane, RTFL, cutting area, materials, and vehicles?
7. Would it be more efficient to pre-cut, pre-assembly, or just have blank panels and cut/assemble in the field?
8. How far is the power source from the work area, is it sufficient, and is there access to the “trip” mechanism? Will you need a backup power supply (generator)?
9. Will you need ext. ladders, scaffolding, or pump jacks to speed the assembly?
10. Is there a land line phone or cell phone service available? If not, where is the closest service available?
11. Is the site “safe”? Can you leave trucks, tools, or other equipment overnight or should you take it all with you every evening?

Review These conditions with your building crew or ACME’s professional panel installers.



## Before you Get Started:

1. Are spaces for materials and equipment cleared?
2. Has the foundation been backfilled?
3. Are all subs out of your work space?
4. Is the foundation dimensionally correct according to plans, level, and square?
5. Designate areas for materials, cut and/or assembly stations, crane site (if any), and parking.
6. Mark or barricade any potential hazards.
7. Know and inform employees of order of assembly and stock materials accordingly. Be sure SIPs are not in direct contact with the ground. Keep in mind the reach of the crane (if needed) and any possible obstructions that may impede use of equipment.



8. Keep expansion foam and adhesives in a warm/dry area to ease application.

## Items to Pay Close Attention to:

1. Be sure to have “quality” materials (nominal lumber, beams...etc.) to speed assembly. Keep it stored off the ground with plenty of support.
2. Base structure is dimensionally correct, level, and square to prevent panel racking.
3. All “scooped” areas are of proper depth (not too deep- extra 1/8” is sufficient), completely cleaned out, and are as designed (beveled or squared out).
4. Use of proper/scheduled fasteners; nailing/screwing patterns as dictated on drawing schedule or as local codes require.
5. Nominal lumber inserted into panels with electrical chases have been drilled out in proper location BEFORE they are inserted.
6. Any sealant (sill seal, adhesive, SIP tape) used is to be “continuous” with no voids.
7. Panels that are fully pre-assembled are as straight as possible when assembled; any later movement may cause cracks/voids in expansion foam or adhesives. It is best to “drill/fill” after fully erected and electric wiring has been completely installed.
8. All top plates are as straight and flat as possible for the next panel to sit flush and minimize gaps. Exterior rake and fascia boards may be troublesome to insert if panels are not lined up properly.
9. All beams/headers sit tight on supports to minimize movement.
10. Mark any and all electrical chases, large voids, or areas of concern to keep efficiency up and confusion down.
11. Keep a clean, organized jobsite when arranging panels to assemble.

# GETTING STARTED

## How to handle SIPs

- Off-load panels and organize stacks in reverse order to installation sequence to minimize handling.
- Do not lift panels by top layer of OSB, lift from the bottom of panel.
- Cover the completed shell with drainage plane, roof felt and exterior cladding as soon as possible.

Your ACME Panels must be stored level, off the ground and protected from the elements with tarps to maintain the warranty.

The layout plan has everything located according to numbered panels, labeled by individual wall or roof. We try to stack the panels into bundles according to walls, however sometimes a few will be out of place due to weight and necessary sizes of each bundle for transportation. There are stickers used on the truck to separate bundles for easy lifting; use stickers and scrap material to make sure the panels are placed off of the ground to prevent potential damages on your site.

## Foundation



Regardless of your foundation type, the entire panel must be supported by the foundation. The outer edge of the panel should align with the outer edge of the foundation. If it is a concrete foundation, a capillary break must be put into place. It is essential the foundation be level & square. If the foundation is not level, use the sill plate or the floor deck to make corrections. Should the dimensions of the foundation vary by more than  $\frac{1}{4}$ ", panel installation will be difficult. Refer to the detailed foundation drawings for recommendations on your specific project. If the deck is already built but not level, you should Shim below the deck on the sill plate to square everything and pad out areas that need to be adjusted in order to get full bearing for the panels.

## Fastener Schedules

The detailed installation drawings indicate the size of fastener recommended. Refer to local fastener schedules for your project.

## Installing Splines

7/16" x 3" splines are required and provided for all non-2x joints between panels. Your project may require 2x blocking or 4"x4" splines as detailed by your specific drawings. After installing the splines nail the edges of both panels into the spline on both sides. Failure to install or improper installation of the splines will compromise the structural integrity of the building and invalidate the panel warranty.

# ACME PANEL INSTALLATION DOCUMENTS & MANUAL

## The Building Science of an ACME Panel House

### Mechanical Ventilation

Using ACME panels creates an airtight building. To maintain a healthy and moisture free environment it is essential that panel buildings utilize mechanical ventilation systems. Rather than allowing air to penetrate a building uncontrolled via traditional methods: door and window frames, seams in walls, attics, etc. Panel buildings require mechanical control of the air flow . This allows for control of the amount of fresh air entering the home while using the previously heated or cooled air to heat or cool fresh air. This system will also successfully deal with the moisture and humidity generated from daily activities.

Venting systems should be matched to the size and utility of the building. This decision should be made by the homeowner and the HVAC specialist prior to start of construction. The ACME Panel warranty requires adequate ventilation.

### HVAC Design

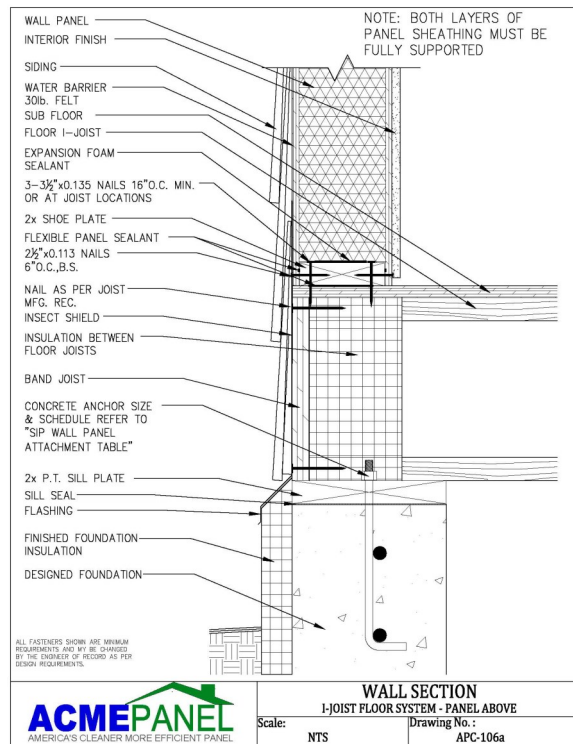
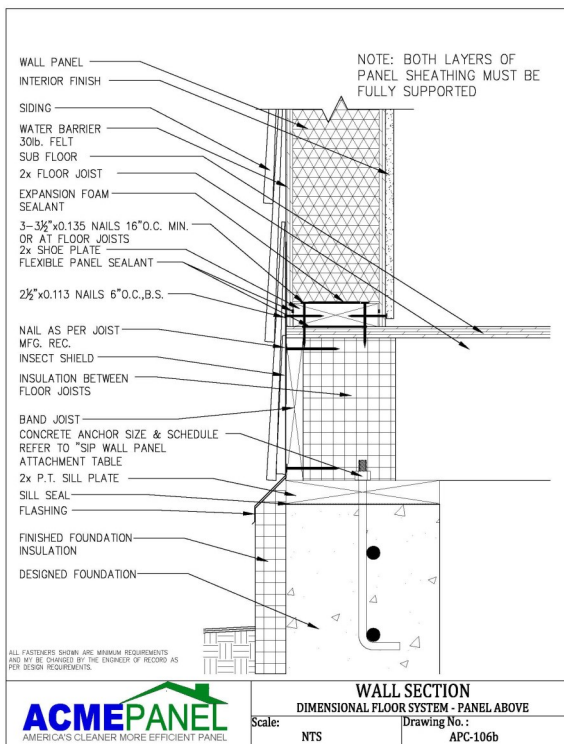
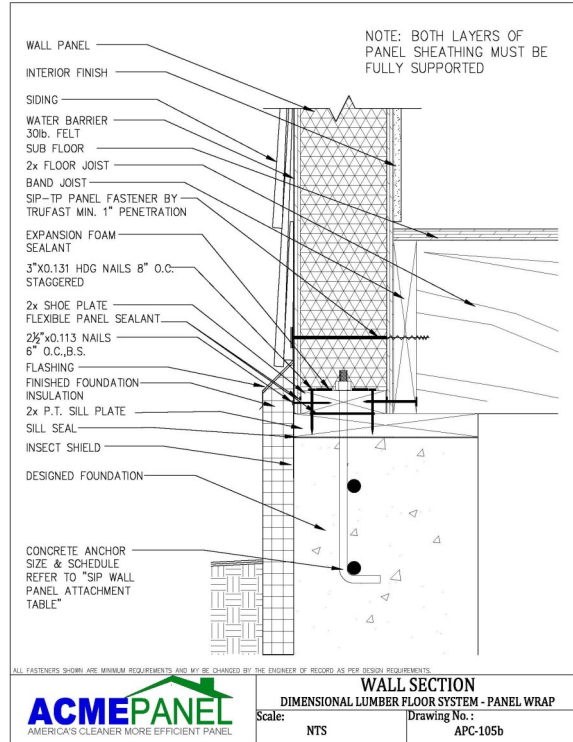
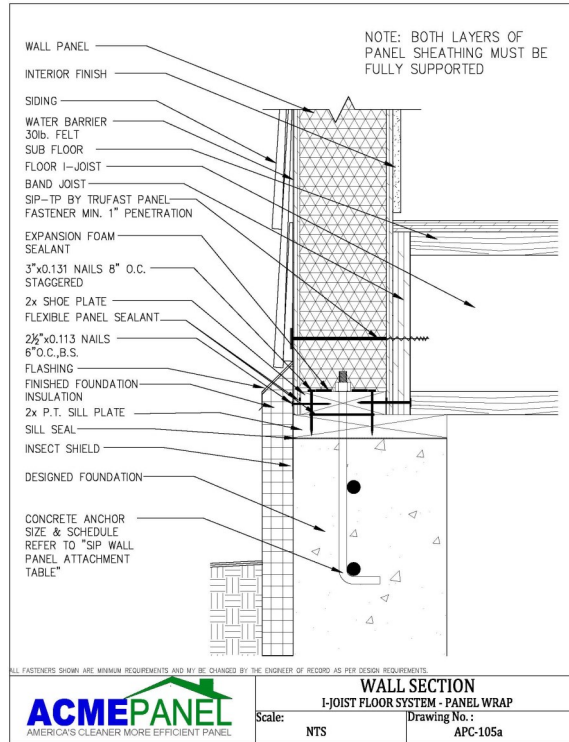
While the panel home requires a system for air exchange, it requires a smaller ton system for heating and cooling due to how airtight the panels are. Use the services of an HVAC specialist that has experience with super-tight structures, and energy efficient buildings which utilize blower door tests. A smaller system will cost less and help lower energy use, with the right plan.





## First Floor Deck Details

The outer edge of the panel is flush to either the outer edge of the foundation (diagram 105a, 105b,) or to the outer edge of the floor deck (diagram 106a & 106b). Attaching to the floor deck will require insulation between the joists and the band-joist to maintain the air seal.



## INSTALLATION TIPS:

1. Label panels as much as possible (electrical chases, large voids in foam, damages...etc.) to reduce confusion amongst your crew and other subs as well. Mark the panels and sub-flooring in case one is covered before the correction is made.
2. Electrical box jigs made for proper height and size of box will greatly increase the speed of cut outs. Use of 7/16" OSB, a router, and a 1 1/4" bit is sufficient.



3. Use of adhesive under the sill seal on wall to roof transitions helps to keep sill seal in place as well as creating an airtight seal. Use of adhesive alone may cause voids when roof panel is set into place; panels tend to move as they are set and may "smear" adhesive and create voids.
4. When setting roof panels; figure out fastener layout of attachment points and pre-set SIP screws in panels (do not pull through bottom skin) for quicker attachment once panel is in proper place. This is a good time to attach "toe boards" also.
5. On ridge beams; use SIP tape with 3 section backing if possible. Staple center onto ridge beam and allow sides to be peeled back and attached to the bottom of panels once panels are fully fastened.
6. Attach "stickers/blocking" at proper overhang dimensions/locations for gable and eave sides of roof panels; this will also help to keep you square. \*Be sure to allow for pitch on eave sides.\*
7. Run rake boards to the peaks for a stronger attachment (solves uplift issues and gaps from shrinkage of materials). Pre-installing all but the last 2'-3' of boards allows for an easier/safer installation of the last sections at high elevations; allows for a "one man" installation. Be sure to break the rakes in the middle of the panel, not at panel joints to keep a flat transition.
8. Attach "beam pocket blocking" to beams and set beam into pocket; be sure to glue blocks to beam and glue OSB where blocks will be set into panel. This makes a tighter seal than inserting blocks in pocket first and then setting beam.
9. Pre-assembling as many panels as your crew or machine can safely lift at one time will decrease time spent on ladders and reduce the number of lifts on the machine or crane.
10. Assemble wall panels on the deck by "butting" the bottom of the panels on the base/sole plate to keep them as straight as possible; this will allow you to keep track of "panel creep" and allow you to adjust your measurements as you assemble on the ground- not in the air.

# Installing Panels

## Walls

Once the floor deck is on, secure 2x bottom plates for the two long walls with construction adhesive and foam tape if ordered. Use 16d nails spaced 16" O.C. minimum, at floor joist (or at FSFA, the Fastener Schedule For your Area) in two staggered rows. Details may call out a tighter nailing pattern. The 2x plate should set back ½" from the outer edge of the floor deck, accommodating the outer skin of panel. Before attaching panels make sure each is plumb and level.

Install taller walls first to allow for wall assembly on the deck. Once the long wall is upright and braced, the short wall plate can be installed. (The short wall plate will be ½" short of the long wall plate on both ends to allow the inner OSB skin to fit in a corner.) Long wall is already installed, so a plate should butt the long wall OSB skin.



### Quick tips:

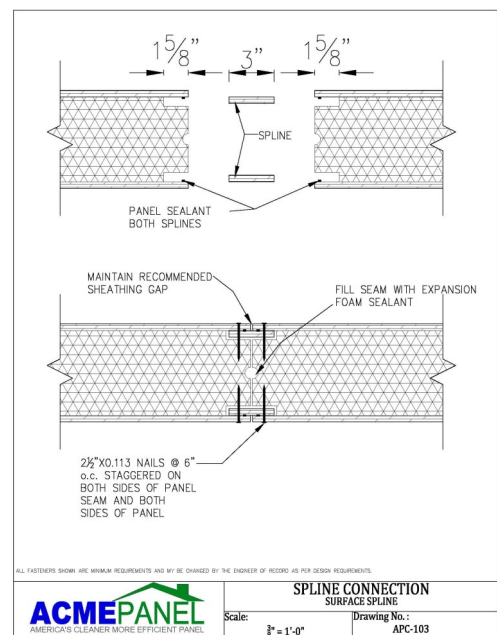
- Cut beam pockets for two story structures prior to assembling and standing walls.
- Overall wall length must match the plate and foundation dimensions
- Use truck straps or come-along to cinch panels tightly together, leaving 1/8" gap in-between
- Make sure the bottom of panels are lined up against the bottom plate so the wall won't "saw-tooth"
- Best time to seal all wall panel seams with expanding foam is after the electrical is installed

## STEP 1

**Layout the long wall panels** on the floor deck, ensuring the exterior side (if the in and outside is different) is facing up. Use the bottom plate to square the panels.

## STEP 2

**Insert the 7/16" OSB splines** at both sides of panel seams (diagram 103) by sliding or tapping from the top. The spline is in place when there is 1 ½" space at the top and bottom of seam for top/bottom plates. Some plans call for stronger 2x or double 2x splines. These panels will be routed at the factory to accommodate these situations or pre-cut packages.





**Remember to pre-drill your 2x insert lumber for electrical chases. Insert 2x's by making a continuous bead of foam safe adhesive on both sides of the 2x spline, creating a bead of spray foam. Position the 2x in the foam, leaving 1 ½" at top and bottom of spline for the top/bottom plates. Push panels together, cinch if necessary and secure with 8d nails. Refer to diagram 103a:**

**Assemble insert lumber by securing both 2x with adhesive and fasteners then insert just as the single 2x spline. Refer to diagram 103a:**

### STEP 3

**Install 2x corner blocking** by applying a continuous bead of foam safe adhesive to sides of 2x and apply a bead of spray foam in cavity for 2x prior to insertion in the panel edge. The blocking will run from bottom plate to top plate. FSFA.

### STEP 4

**Install top plate**, unless project is a two-story with beam pockets. Apply foam safe adhesive to sides of top plate and embed in spray foam. Add double top plate if needed. FSFA to corner blocking.

### STEP 5

**Nail outer skin** along seams on either side, including top plate at 6" o.c. with 8d nails (refer to fastening schedule).

### STEP 6

Apply a continuous bead of foam safe sealant to bottom plate sides, create a bead of spray foam on top of plate and raise wall to upright position. Once the wall is straight and plumb, use braces at the end of the walls on the outside edge to keep it that way. Use braces every 10' on long walls.

### STEP 7

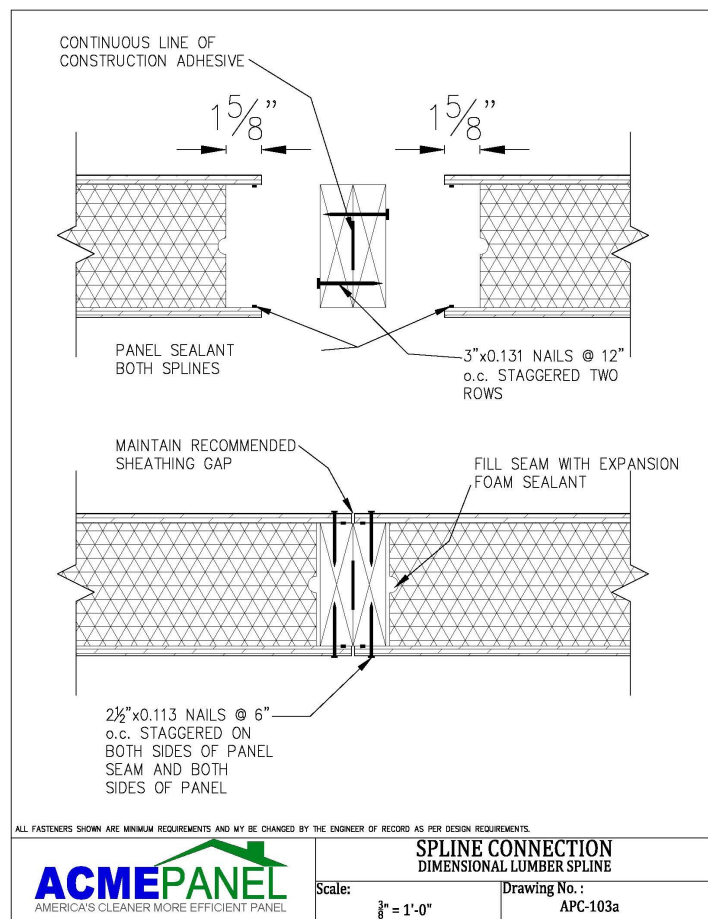
**Nail the inner skin** at panel seams including top and bottom plates according to FSFA.

### STEP 8

**Assemble walls by following steps 1-7, beginning at a corner and working your way out.** You may need to release side brace for space to raise end wall.

### STEP 9

**Connect end walls with long walls.** Apply 2 continuous bead rows of sealant behind end stud against adjoining wall prior to align end and long walls. Add sealant to edges of top plates that meet. Insert the fasteners specified in your detail drawings.



## Second Floor Deck

Floor joists will either run to a carrying beam or use top-bearing joist hangers and will be specified by your plans. The plan or the joist manufacturer will also specify proper joist spacing and fastening.

**Quick Tip:** Platform framing with panels create a small space between joists Fill this space with foam tape and expanding foam sealant to ensure an airtight seal.

Install second floor deck according to plans.

Install second floor walls following Steps 1 thru 9.

## DOOR AND WINDOW OPENINGS

Rough openings for doors and windows are usually cut at the factory. The routed grooves are 1 ½" deep to accommodate 2x blocking. These framing members will be fully inset in the panel, see diagram...The sill and header should rest on the side members. If you ordered an RTA package, the proper lumber will be labeled per each panel seam.

### STEP 1

Apply a continuous bead of expanding foam sealant to top of header and the bottom of sill and embed in foam. Add a continuous bead of expanding foam sealant to outside edge of side blocking and embed in foam. Nail or screw to the Fastener Schedule For your Area (FSFA).

For large window or door openings or heavy loads, your plans may specify alternative header requirements. Follow your construction details provided in your plans carefully.

### Should you need to make cuts, follow these directions:

#### 1. Use a chain saw, panel saw, or circular saw for panel cuts.

Miter cuts greater than 50 degrees will require finishing with a handsaw depending on thickness of panels. A handsaw may also be required of finishing corner cuts around windows and doors.

**2. Always rout the panels before setting them on the frame.** This reduces working from ladders and will speed up assembly of your walls/roof.

#### For OSB spline panel joints:

**3. Rout two 5/8" parallel grooves** in the foam next to the inner and outer skins to a depth of 1 ½" using hot knife / foam scoop.

**4. Rout a ¾" notch in the foam** between the spline grooves to accommodate the foam sealant when the panels are joined together with hot knife.

#### For 2x panel joints:

**For a single shared 2x spline:** Make a full-width rout ¾" deep in both panels to be joined. For a fully inset 2x (around door and window openings, at wall corners, etc.), 1 ½" of foam is routed out from the panel edge.

- **Angle cuts greater than 50°** - (Set the 14" Prazi beam cutter to its full depth) and complete the angle-cut with a handsaw if needed.

## Beam Pockets:

You will likely have panels with beam pockets in them. The pocket will land on a seam with an insert double 2x for support. With each pocket, make sure the beam fits snugly within the panel and matches up with the wall panels to support the roof. Secure 2x blocking to the ends of the carrying beam along the sides and bottom. Use sealants and fasteners per fastener schedule. Refer to construction details.

## Headers:

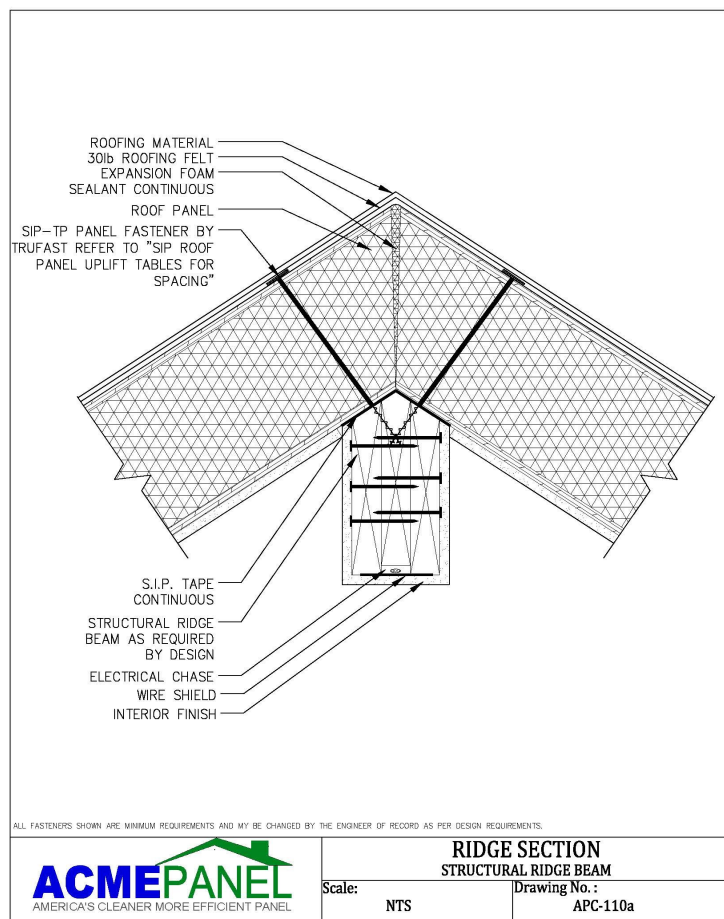
At window and door openings you will likely need to support the upper panel, especially on eave walls that carry more weight. Most headers are panels recessed for 2x insert lumber that will have 2x's in the adjacent panels for support. The panel may be further recessed for double 2x's, or there may be a space indicated on the plans to use a double or triple 2x as the only header.

**All Headers and Beam Pockets should be shown on drawings**

## Roof Panels:

If you have a pre-cut package, the spans should have been verified before building. If you are unsure of the distance you can span, our NTA report on ACME's span capacity is listed under the resources tab on ACME's website. If you are lifting larger panels make sure you use appropriate lifting materials, like steel lifting plates to lift a panel without any damages. The panels will likely be cut to complete the roof per APC-110a however further construction details can be viewed in the detail drawings provided on your plans.

When installing the roof panels, make sure the connections are well sealed: if done properly the panels create an extremely efficient long term system. Once installed, the panels should be fastened to the roof system with SIP screws into the support structure (refer to fastening schedule for your project). To best seal the panels fill in any gaps with expanding foam sealant by drilling holes at seams every 12"-16" with a 3/8" bit. ACME recommends installing the roof deck protection material as soon as possible to provide a vapor barrier and prevent moisture issues.





## Additional Details

### Electric wiring:

The standard height for wiring through wall panels is at 16" high for outlets. A project can have multiple different heights depending on the chases specified. Let ACME know if there is a problem with the chases or the builder needs advice on making another chase before cutting into a panel. An extra chase may harm the integrity of the panel if there are too many or are put too close to other chases. When installing lumber as sill plates, top plates, lumber connection splines and corner panels make sure you drill a hole to keep the electric chase open. If you haven't pre-drilled the lumber, the electrician can either go up vertically, down under, or create a notch at the height of your chase to turn the corner.

Before wiring, mark the interior of the panels with outlet, switch and box locations. All of the chases are at the same height, making wiring quick and easy. Make sure the builder completes the wiring cutouts before you put another corner on the wall to save time. All electrical chases are located in the center of your panels; remove foam to proper depth depending on the thickness of your panels to gain access to the wire.

### Foam Safe Construction Adhesive

Many construction adhesives are solvent based and will dissolve the supplied foam in the panel. Use only the supplied foam safe construction adhesive or those available from your local home supply store. Remember that sealants and adhesives are adversely affected by extreme heat and cold. All panel joints must be sealed with expanding foam sealant after installation or after electrical rough in is complete to create an airtight seal. This is best done by drilling holes every 12" and spraying the sealant until the hole is full.

### Moisture management:

Maintaining proper techniques to minimize or prevent moisture from entering into the SIP's is the most important thing a builder can do to prevent future complications. The HVAC and air exchanger will need to be properly sized for proper interior management. Identical to standard construction, the building will need to have a vapor barrier on the exterior of the building to prevent moisture from being absorbed into the panel skins. When moisture enters into a panel there may be swelling at the seams with potential damages of rot in the future as with all construction materials.

### Siding/Roofing:

Roofing materials can be installed on SIP's the same as conventional framing. For siding, you will need to create a 3/8" air barrier using furring strips to let the panels breathe (metal, stucco, and vinyl siding does not require a barrier). Always consult the siding manufacturer's installation instructions for attaching to SIP structures.

### Finishing:

A SIP home is finished the same as a stick frame house. If you are worried the 7/16" plywood is not enough support for cabinets, you can put another sheet of plywood or furring strips for more pull through before installing the cabinets. Add extra blocking before production (if needed) and use toggle bolts for additional support.



### **ACME Panel Company Structural Panel Warranty**

SIPs from ACME Panel Company come with a limited warranty. We warrant the following regarding the materials, workmanship, and manufacturing processes as used for SIPs in residential construction projects:

ACME Panel Company warrants that SIPs manufactured at our facility will not come apart due to adhesive de-lamination as long as the SIPs were installed in accordance with our specifications.

ACME Panel Company warrants that all materials used in our SIPs meet or exceed the standards set forth by ASTM, BOCA and ICBO for Structural Insulated Panels.

ACME Panel Company warrants that our SIPs were rigorously tested according to our quality management program and found to conform to our high standards.

This warranty applies to the SIPs of the original owner of the building for 10 years. The warranty does not cover damage occurring to the sips resulting from acts of God, fire, water, flooding, alteration, animal, rodent or insect damage, settling of the foundation, misuse or abuse of construction materials prior to or during installation or improper installation. Other limitations may be in effect, contact us for further details.