BUILDYOUR FORTRESS

Build Faster. Build Smarter.

Build with HyPerformance SIPs —

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Introductory Note

Just a Few Things About Build Your Fortress —

At BYF, we've redefined modern construction with the introduction of Hyperformance Panels. These prefabricated building materials are designed for efficiency, featuring a core of insulating foam sandwiched between two layers of structural facings—crafted using OSB 7/16" and polystyrene. Unlike traditional framing, which requires on-site assembly piece by piece, Hyperformance Panels arrive ready-made, providing a faster, more streamlined building process. This efficiency translates to quicker builds and reduced labor costs without compromising on quality.

Our panels are packed with advantages, including superior insulation, exceptional energy efficiency, and a reduction in air leakage. These attributes create a tightly sealed building envelope that helps regulate temperature, providing comfort and savings in energy costs for both residential and commercial projects.

Versatility and Customization

Hyperformance Panels by BYF offer great versatility. Whether your project involves residential homes, commercial buildings, or unique architectural styles, these panels can be seamlessly integrated into a variety of design concepts. Our expert team of designers and engineers excels at transforming conventional architectural plans into those based on Hyperformance Panels, ensuring that your design vision is not only preserved but enhanced throughout the construction process.

Precision and Convenience

For every project, we make sure the details are covered. We pre-cut chases into the wall sections, ensuring that electrical and plumbing installations are straightforward. This kind of forethought saves time and money during the construction phase, allowing your team to focus on other critical elements of the build.

HyPerformance Panels by BYF are versatile enough to be used for both residential homes and commercial buildings. For larger, multi-story structures, additional support beams or structural elements may be required to ensure optimal safety and durability, but our panels are engineered with adaptability in mind. Each panel is designed and stamped by a certified engineer, guaranteeing that it meets or exceeds building codes.

A Warranty You Can Trust

At BYF, we stand behind the strength and durability of our Hyperformance Panels. That's why we offer a 20-year warranty on our products, providing peace of mind to builders and homeowners alike. However, like any building material, proper care and preventive measures must be followed to ensure the longevity of your structure.

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Choosing the Right Building Materials

When planning a project, it's important to choose materials that match your goals for durability, energy efficiency, and environmental sustainability. Hyperformance Panels by BYF are an excellent choice for projects aiming for certifications such as Net Zero, Passive House, or LEED. With our panels, you can easily achieve high R-values and minimize air infiltration, ensuring your structure stays energy-efficient and comfortable year-round.

For those focused on reducing their carbon footprint, Hyperformance Panels also offer significant environmental benefits. Structures built using our panels consume less energy and produce fewer CO2 emissions, making them an environmentally responsible choice.

Efficiency and Resilience

Hyperformance Panels by BYF excel in challenging climates, particularly in areas prone to extreme weather conditions. Their robust construction provides superior resistance against lateral forces like wind and flying debris, offering enhanced protection compared to traditional methods. Additionally, if your project faces a shortage of skilled labor, our panels simplify the construction process. The ready-made design allows for quick and accurate assembly, reducing the overall time needed to complete the structure.

Ensuring Code Compliance

With increasingly stringent building codes, meeting compliance standards can be a challenge. Hyperformance Panels by BYF offer a straightforward solution, allowing you to meet the latest IRC and IBC codes with confidence. Manufactured under strict quality controls, each panel undergoes rigorous testing to ensure it meets all necessary standards.

The Smart Choice for Your Next Build

By selecting Hyperformance Panels by BYF, you're choosing a building method that enhances efficiency, reduces environmental impact, and ensures lasting quality. If you're looking for an option that aligns with your project's sustainability and performance goals, Hyperformance Panels are the ideal solution.

Weather Protection and Interior Comfort

For optimal results, it's crucial to use high-quality materials for roofing and siding in conjunction with Hyperformance Panels by BYF. Popular siding choices, such as steel, vinyl, wood, or fiber-cement, are all suitable for our panels, while highperformance asphalt shingles provide excellent coverage for roofs. Ventilation is also key to maintaining indoor air quality and comfort in airtight buildings constructed with our panels. Whether in hot, humid climates or cold regions, installing a mechanical ventilation system will help regulate humidity and reduce the risk of mold. Be sure to provide adequate ventilation to maintain a healthy environment year-round.

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Handling and Storage

Proper handling and storage of Hyperformance Panels by BYF are essential to maintain their integrity and ensure a smooth construction process. Here are some tips to help you handle the panels efficiently:

• **Do:** Store the panels on a level surface and keep them separate by building section or floor to simplify assembly. Ensure that they are stacked with visible identifying marks and lay them flat, raised at least three inches off the ground.Use lifting plates or a forklift to handle larger panels, ensuring they remain undamaged during transportation and storage.

• **Don't:** Never pick panels up by the top skin, as this could compromise lamination. Similarly, avoid storing panels with supports spaced more than eight feet apart, as this may lead to warping or damage. Lastly, never leave panels on the ground or exposed to the elements without proper protection.

Assembly Tips for Success

When working with Hyperformance Panels by BYF, following a systematic approach ensures an efficient and safe build:

• **Do :** *Study the installation drawings carefully before beginning assembly. Start with the corner panels for added stability and ensure plates are set half an inch in from the building's edge to allow for a perfect fit. Mark your wall plates where panel edges will fall and work from the corners outwards to avoid "boxing yourself in."*

• **Don't :** *Avoid cutting wall panel skins horizontally for wiring installation or making alterations to the panels without consulting your supplier. Additionally, refrain from installing panels in direct contact with concrete—always provide a capillary break to prevent moisture issues.*

Making Your Build Last

To ensure the longevity of your structure, it's essential to follow best practices during the construction phase. Proper flashing around windows, doors, and other penetrations is necessary to keep moisture out, while termite deterrents and insect-resistant treatments can further protect your build. With the right precautions, Hyperformance Panels by BYF will offer decades of durability, backed by our comprehensive warranty.

Conclusion

At BYF, we're committed to offering cutting-edge building materials that meet the highest standards of efficiency, strength, and sustainability. Hyperformance Panels by BYF are the smart choice for builders looking to reduce construction time, minimize energy use, and ensure code compliance with ease. Whether you're embarking on a residential or commercial project, Hyperformance Panels by BYF offer unmatched performance and long-term benefits. By selecting our panels, you're not only choosing quality and innovation but also making a responsible decision that supports a sustainable future.

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Introductory Note

Just a Few Things About SIPS...

1. The connection details shown in this guide are industry minimums. Consult manufacturer for specific recommendations (e.g., CAD .dwg files).
2. Projects may require larger and/ore more closely spaced fasteners than shown in these details. Please refer to the project drawings and the SIP manufacturer's code listing for specific recommendations.
3. Structurally, surface splines and block/box splines have the same capacity, can be used interchangeably, and are fastened using 8d nailes (see manufacturer specifications).
4. Air sealing SIP connections is critical and caries by climate zone. Follow the SIP manufacturer's recommendations for the project's individual climate carefully. Not all air sealing specifications are listed in each of the following details for claroty. Additional information may be found in SIP DESIGN BP-8: ROOF AND WALL ASSEMBLIES (available for free download at sips.org).
5. Consult the SIP manufacturer for roofing underlayment, water resistive barrier (WRB), and capilary break recommendations.

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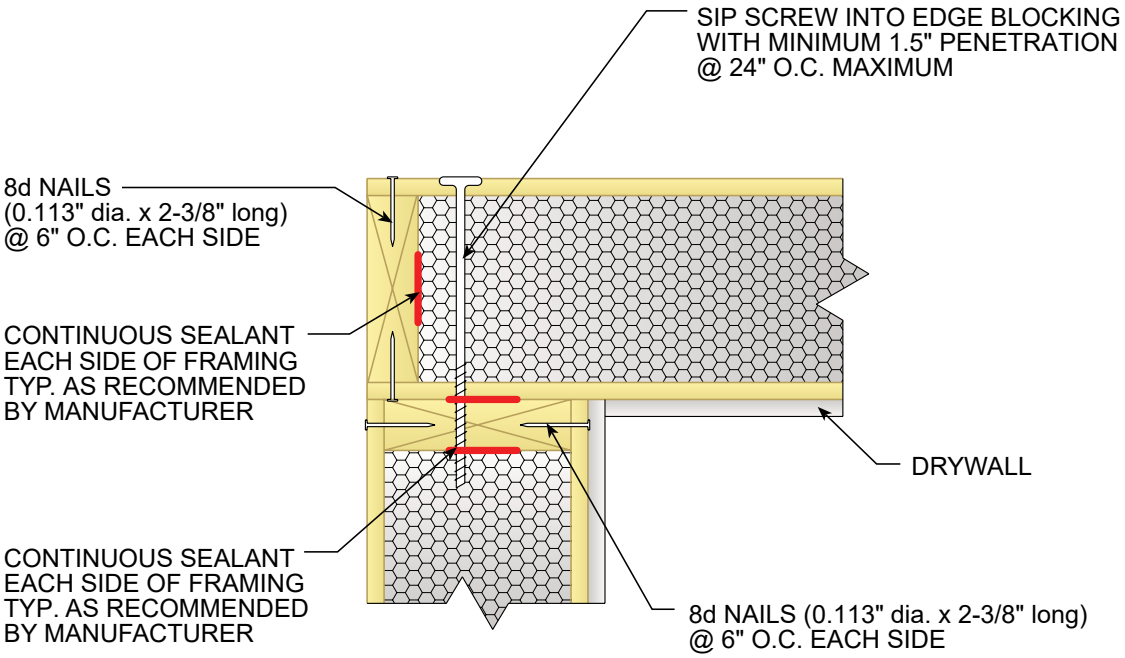
Figure 01

Wall-to-Wall Panel Connections :
Corner Wall Connection



ALL SIP JOINTS SHALL BE AIR SEALED WITH SEALANT AND/OR SIP TAPE. FOLLOW SIP MANUFACTURER'S RECOMMENDATIONS FOR SIP TAPE WIDTHS AND SEALANT PATTERN AND THICKNESSES.

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Figure 02

Foundation Connections :
SIP-Wrapped Floor System

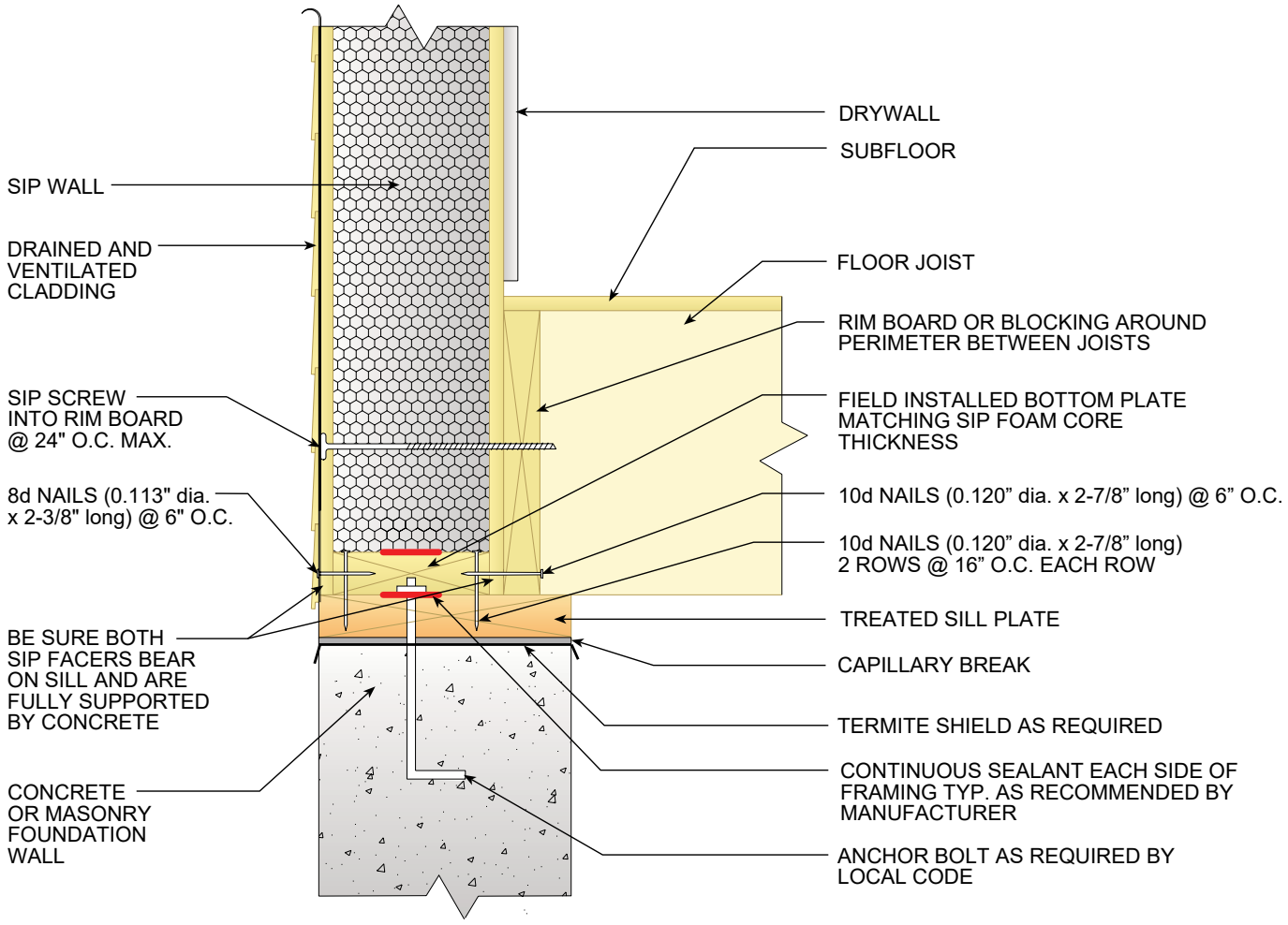

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Figure 03

Foundation Connections :
SIP Rim Panel

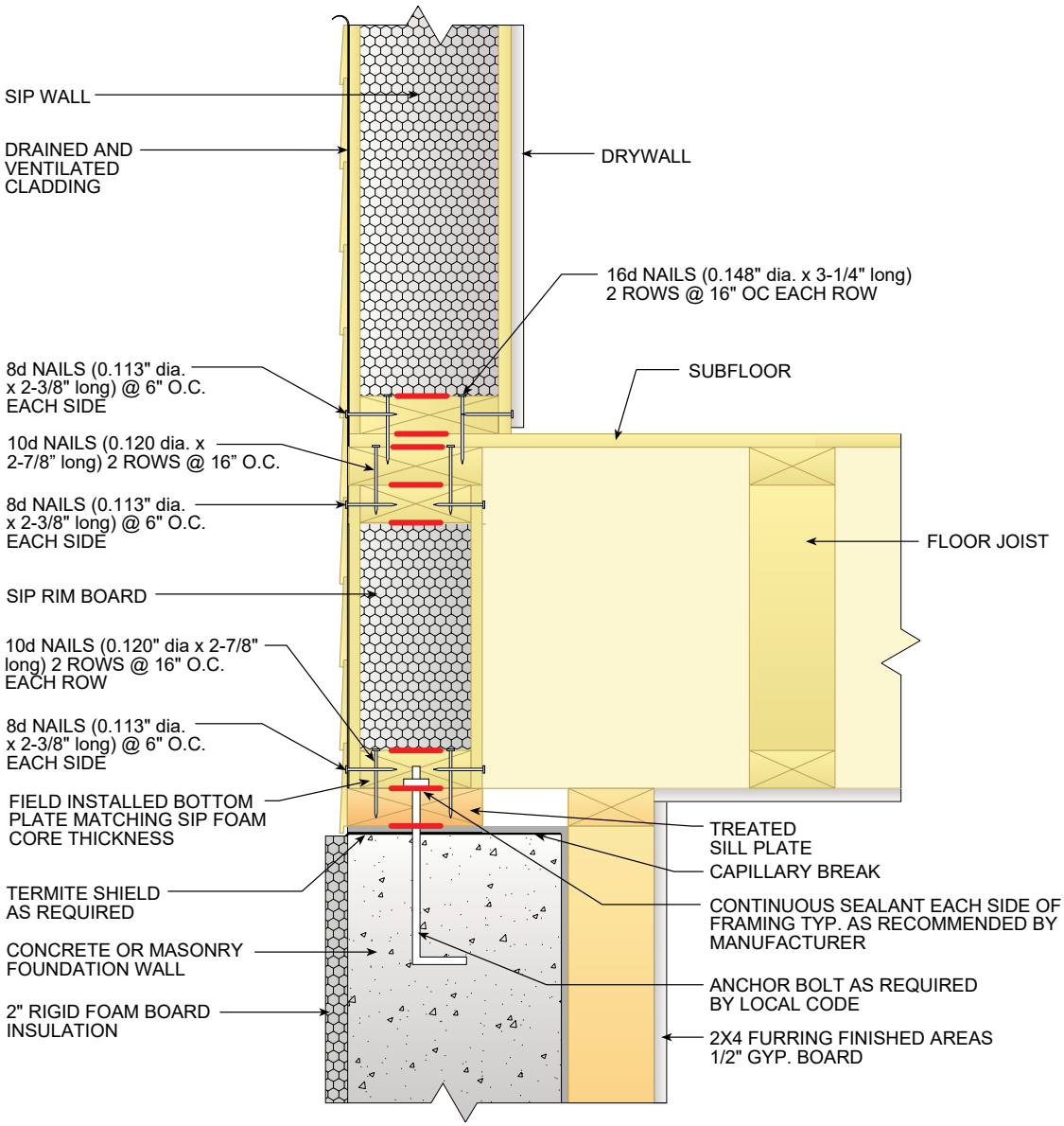

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Figure 04

Foundation Connections :
SIP Wall on Foundation

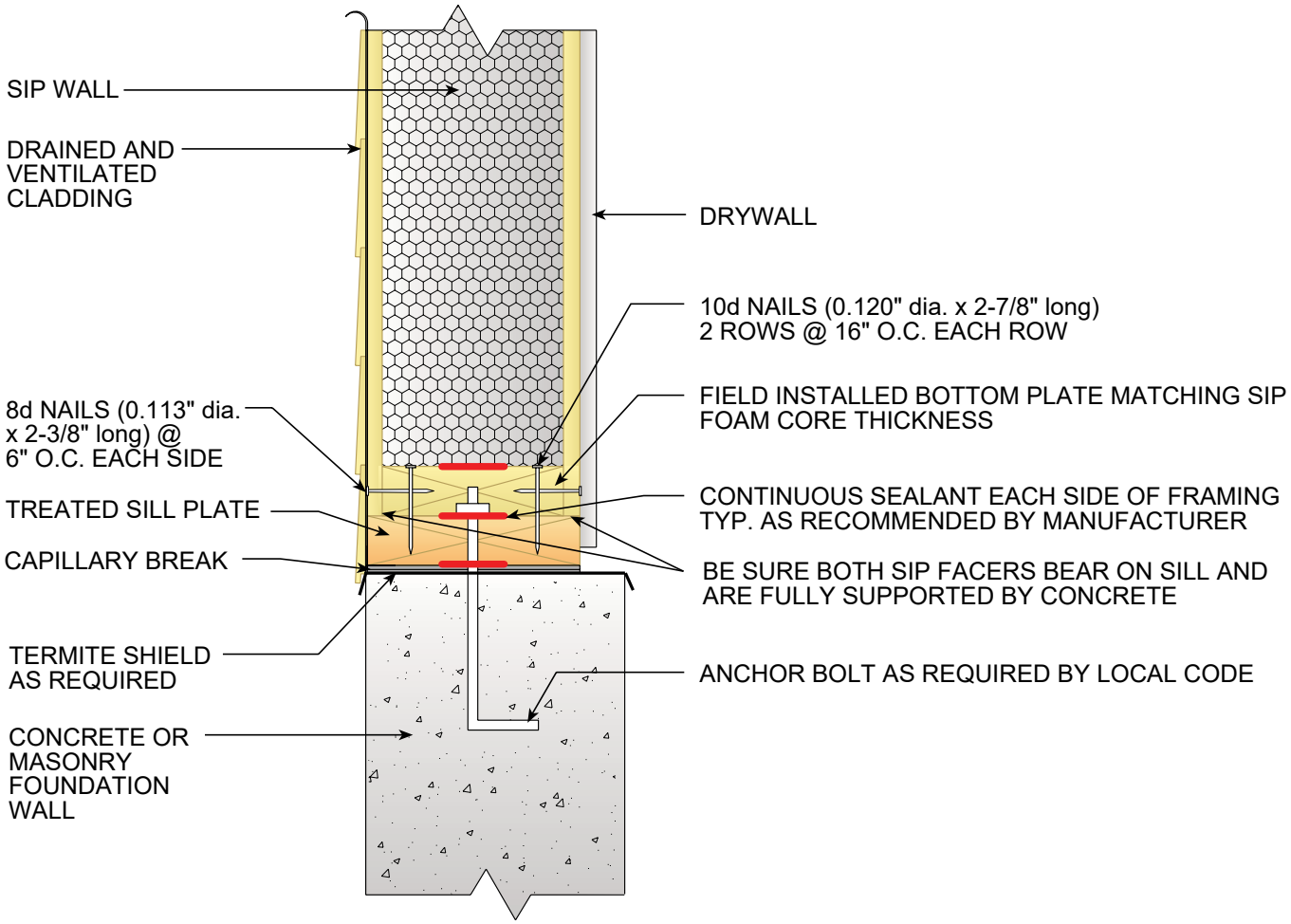

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Figure 05

Foundation Connections :
Platform-Framed Floor System (Wall Perpendicular to Joists)

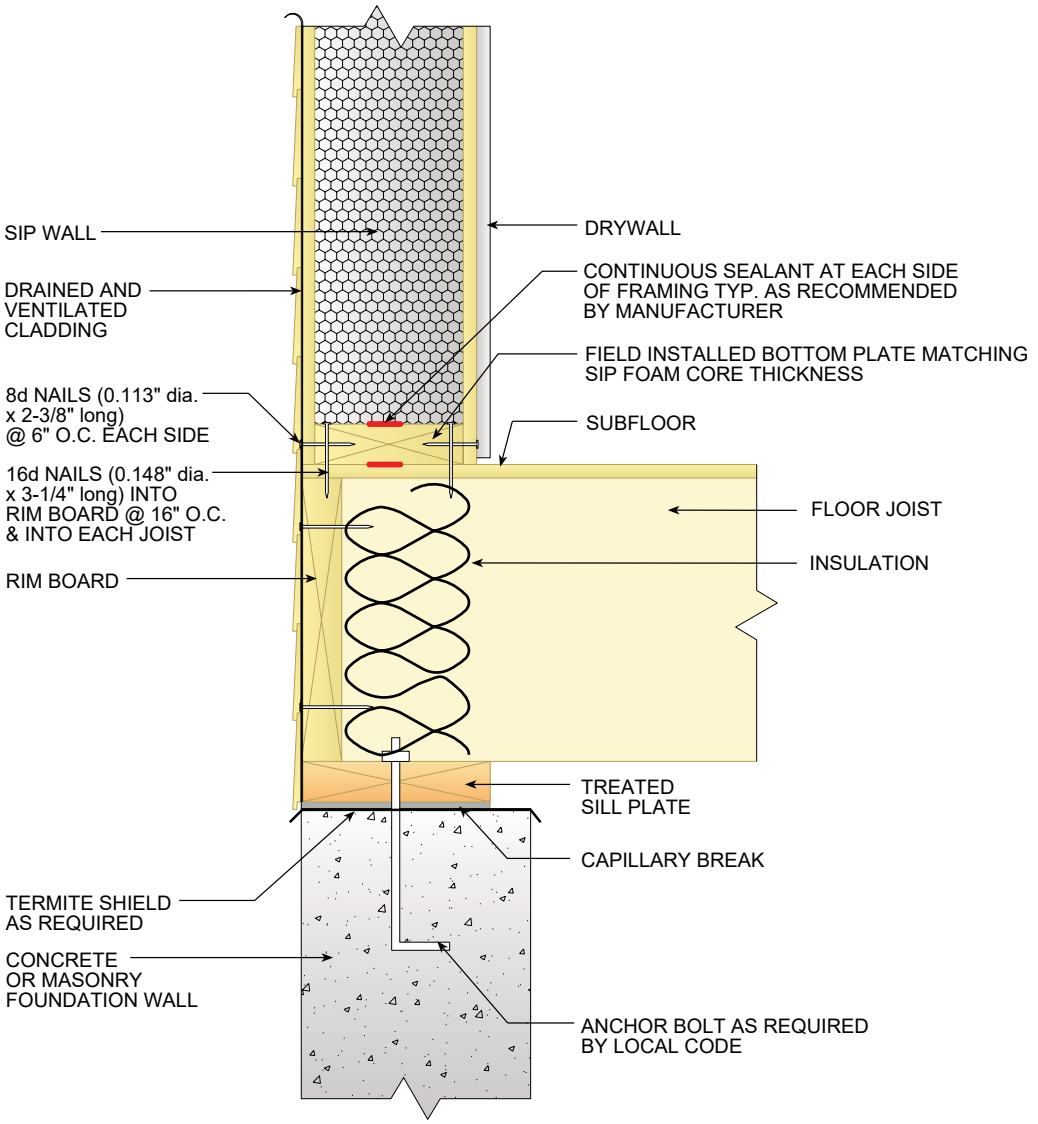

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Figure 06

Foundation Connections :
Platform-Framed Floor System (Wall Parallel to Joists)

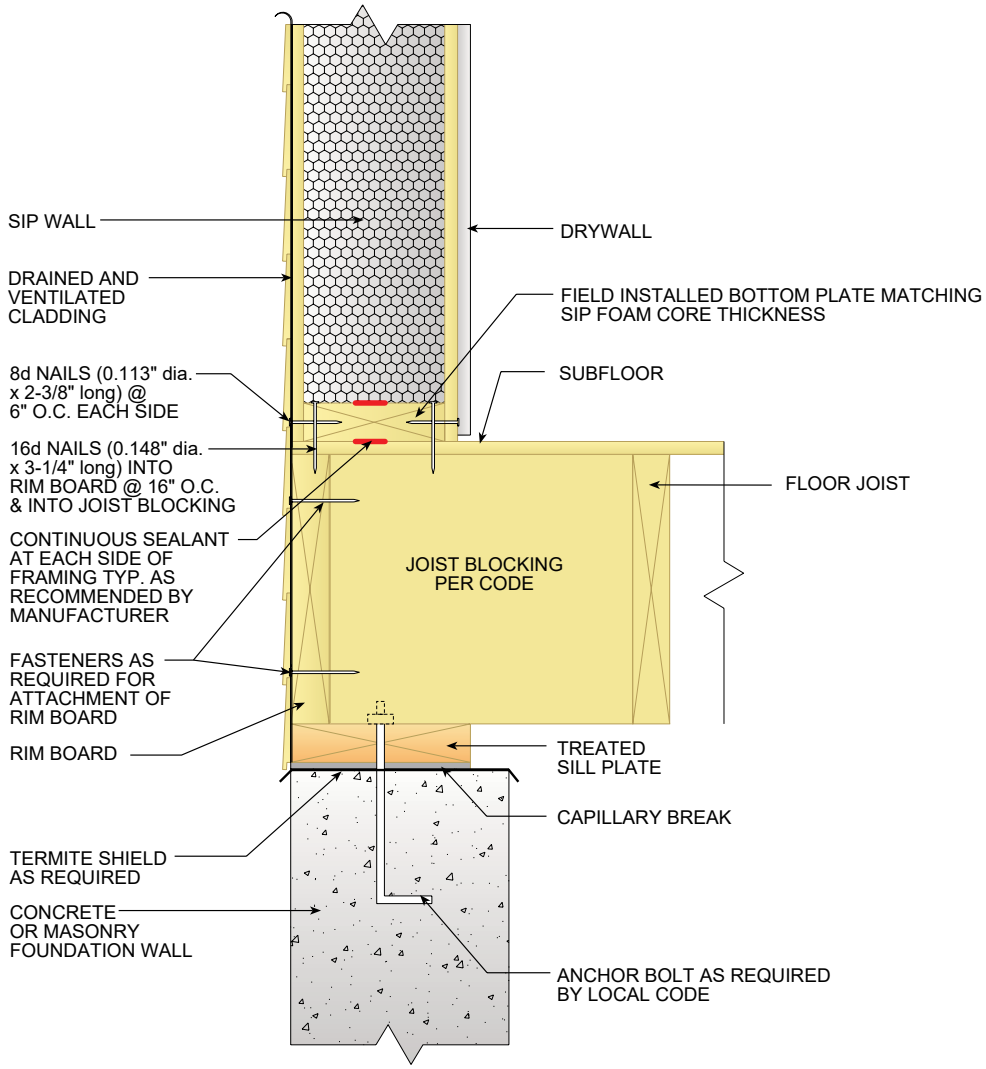

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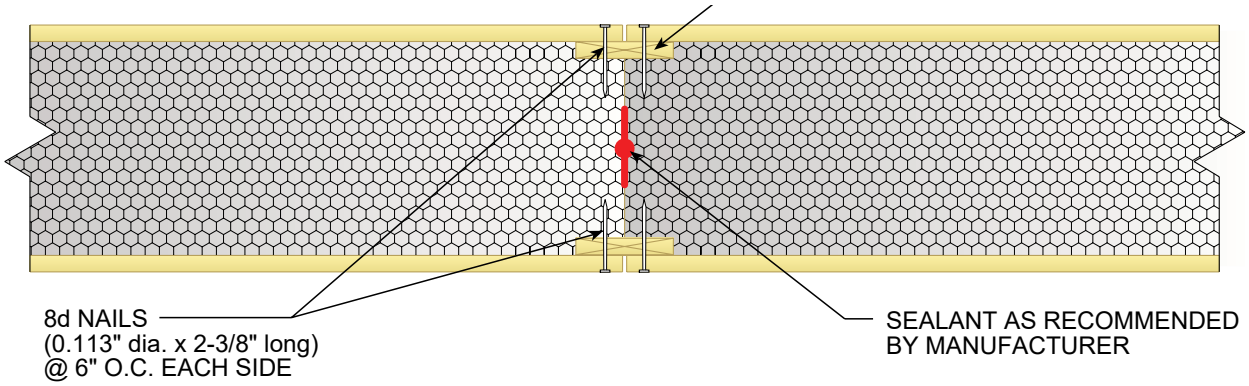
Figure 07

Surface Spline Connection



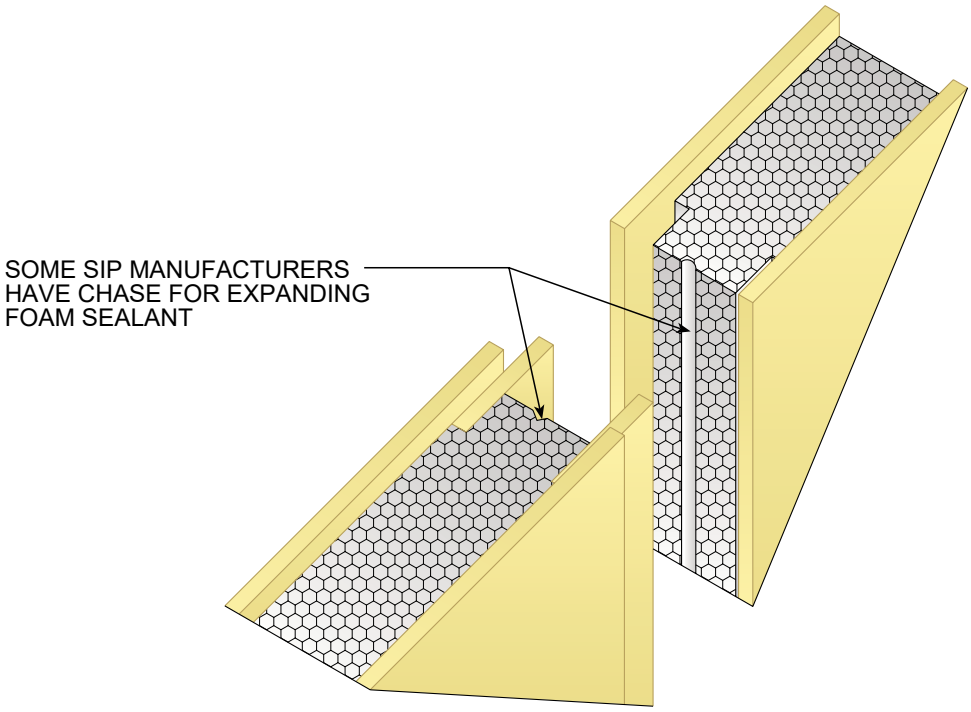


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Figure 08

Box/Block Spline Connection

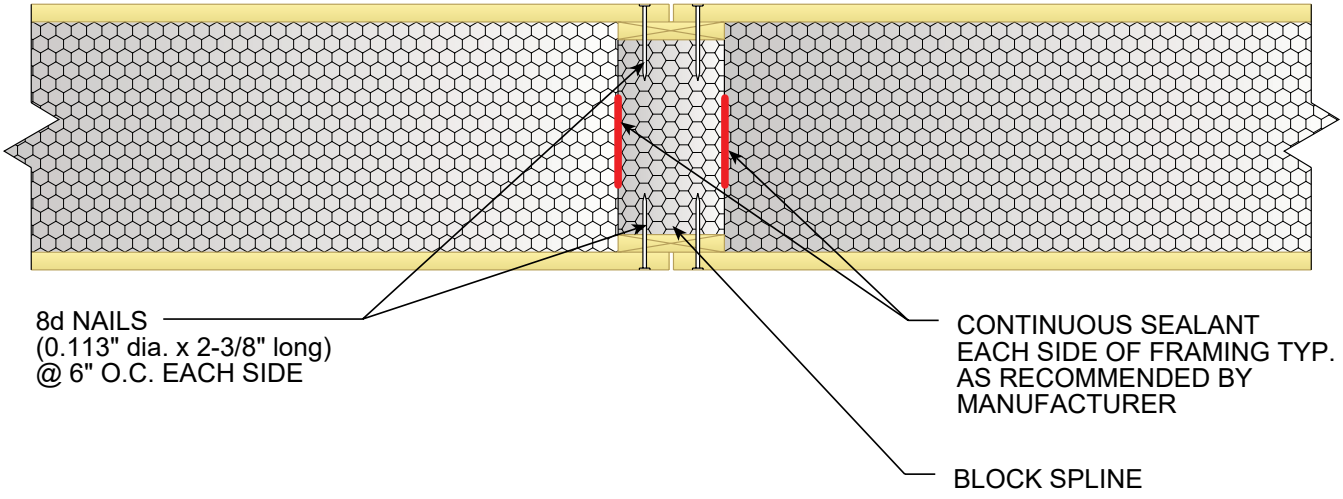

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Figure 09

Lumber Spline Connection

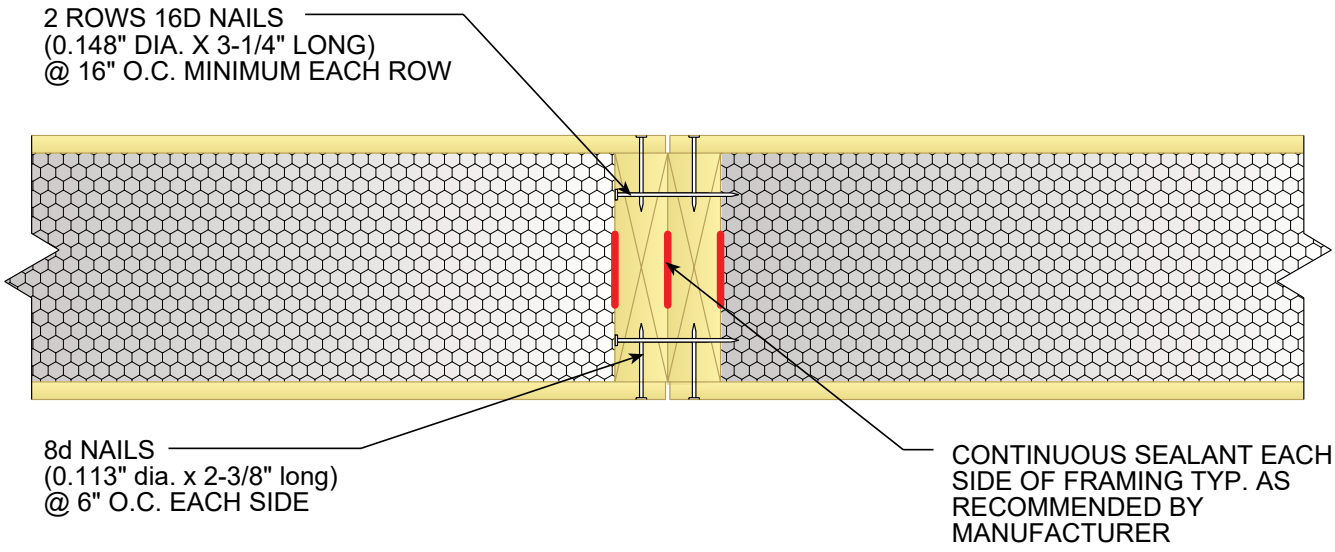

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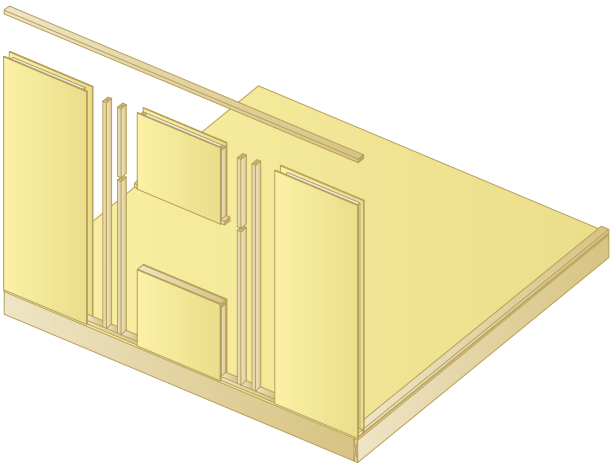
Figure 10

Window Header and Knee Wall Detail



1) NAIL STUD, JACK STUD AND JAMB STUD TOGETHER W/ 16d NAILS @ 6" O.C. STAGGERED

2) NAIL PANEL SKIN TO ALL 2x WOOD MEMBER W/ 16d NAILS @ 6" O.C. BOTH SIDES.

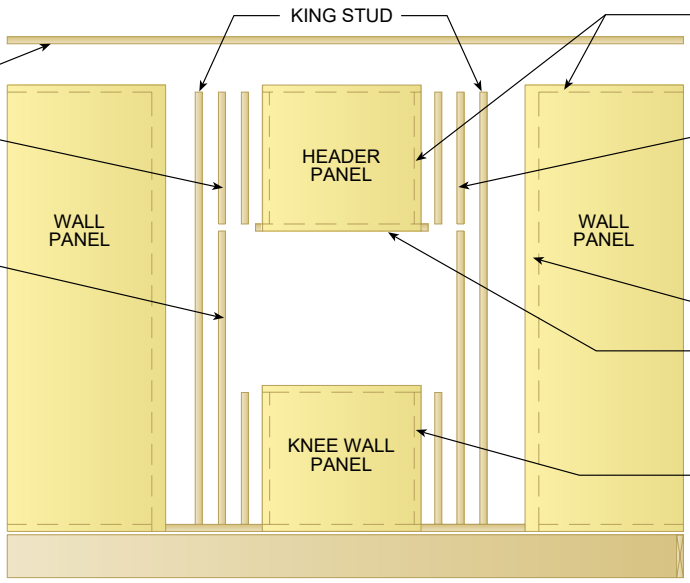


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Figure 11

Door and Window Framing for Cut-Outs

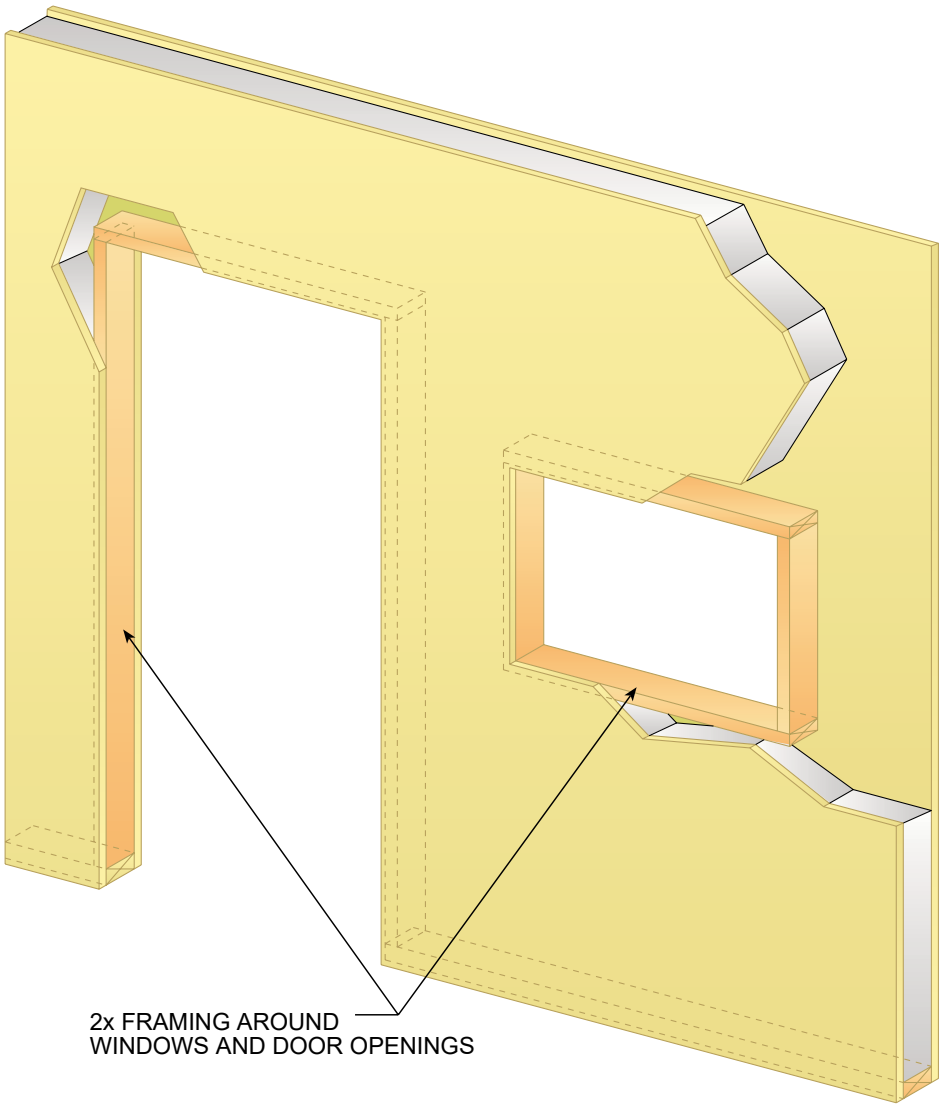

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Figure 12

Rough Opening and Insulated Header

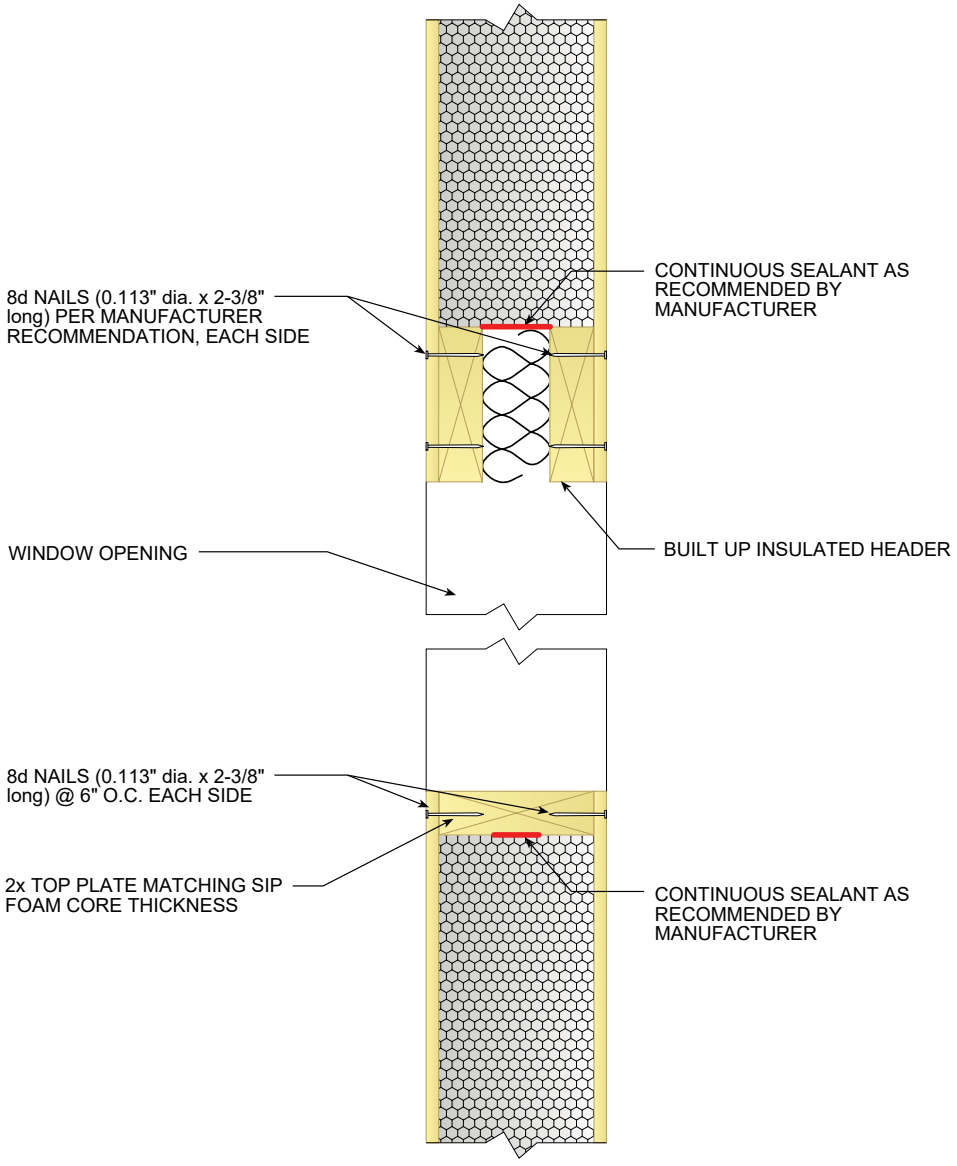

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Figure 13

2nd Floor Connection Details :
Hanging Floor Joist System (Wall Perpendicular to Joists)

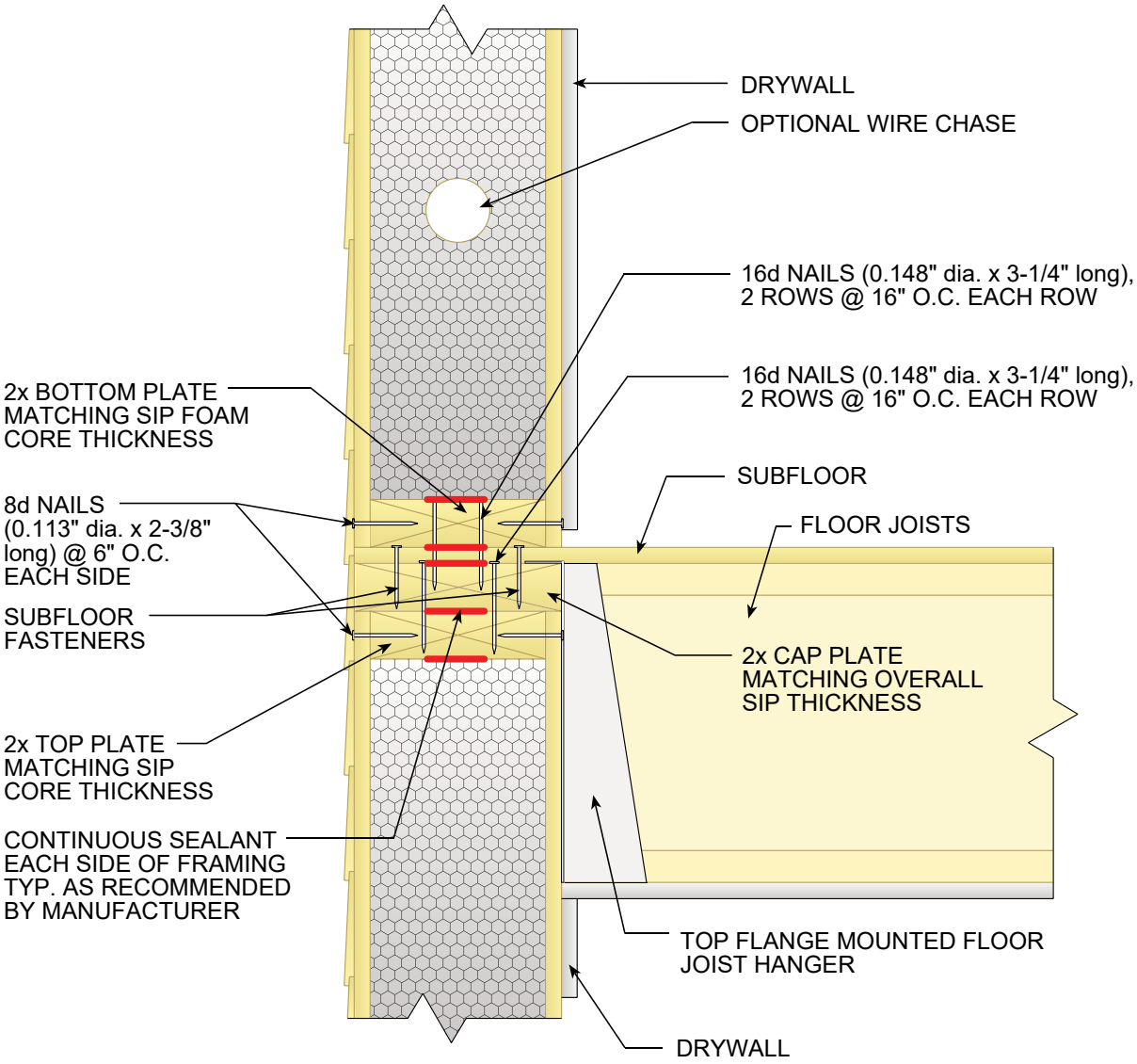

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Figure 14

2nd Floor Connection Details :
Hanging Floor Joist System (Wall Parallel to Joists)

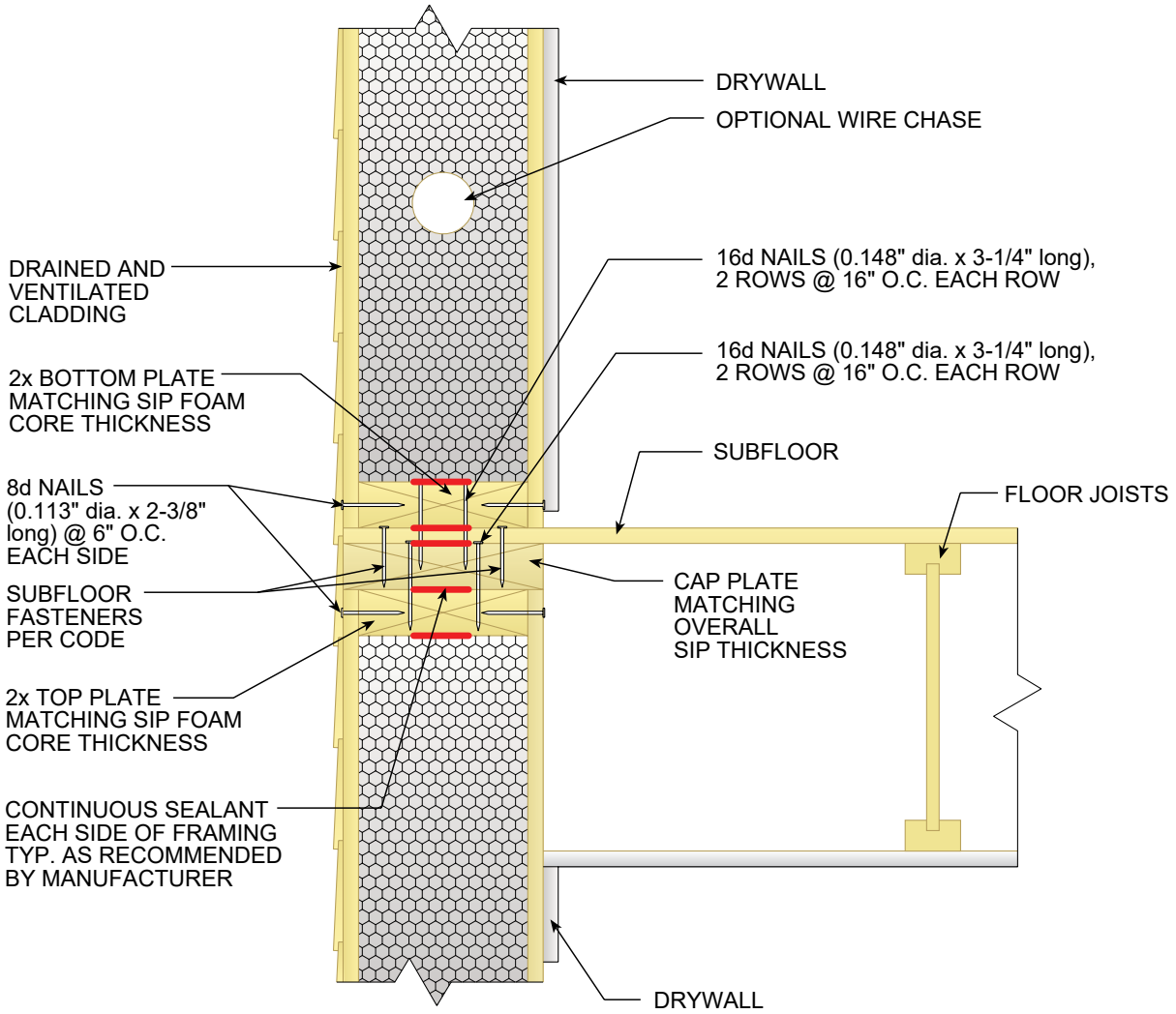

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Figure 15

2nd Floor Connection Details :
Platform Framing with Rim Board (Wall Perpendicular to Joists)

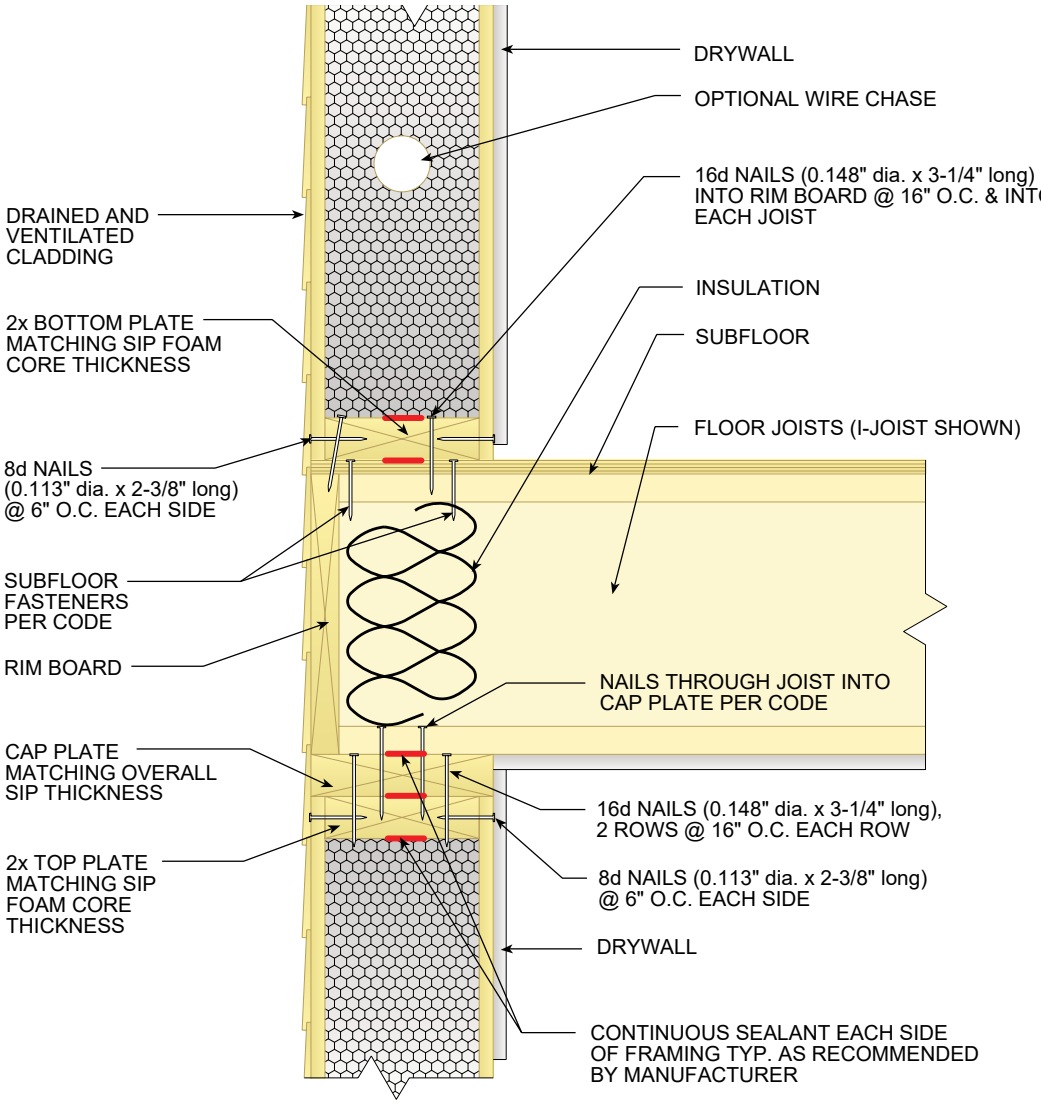

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Figure 16

2nd Floor Connection Details :
Platform Framing with Rim Board (Wall Parallel to Joists)

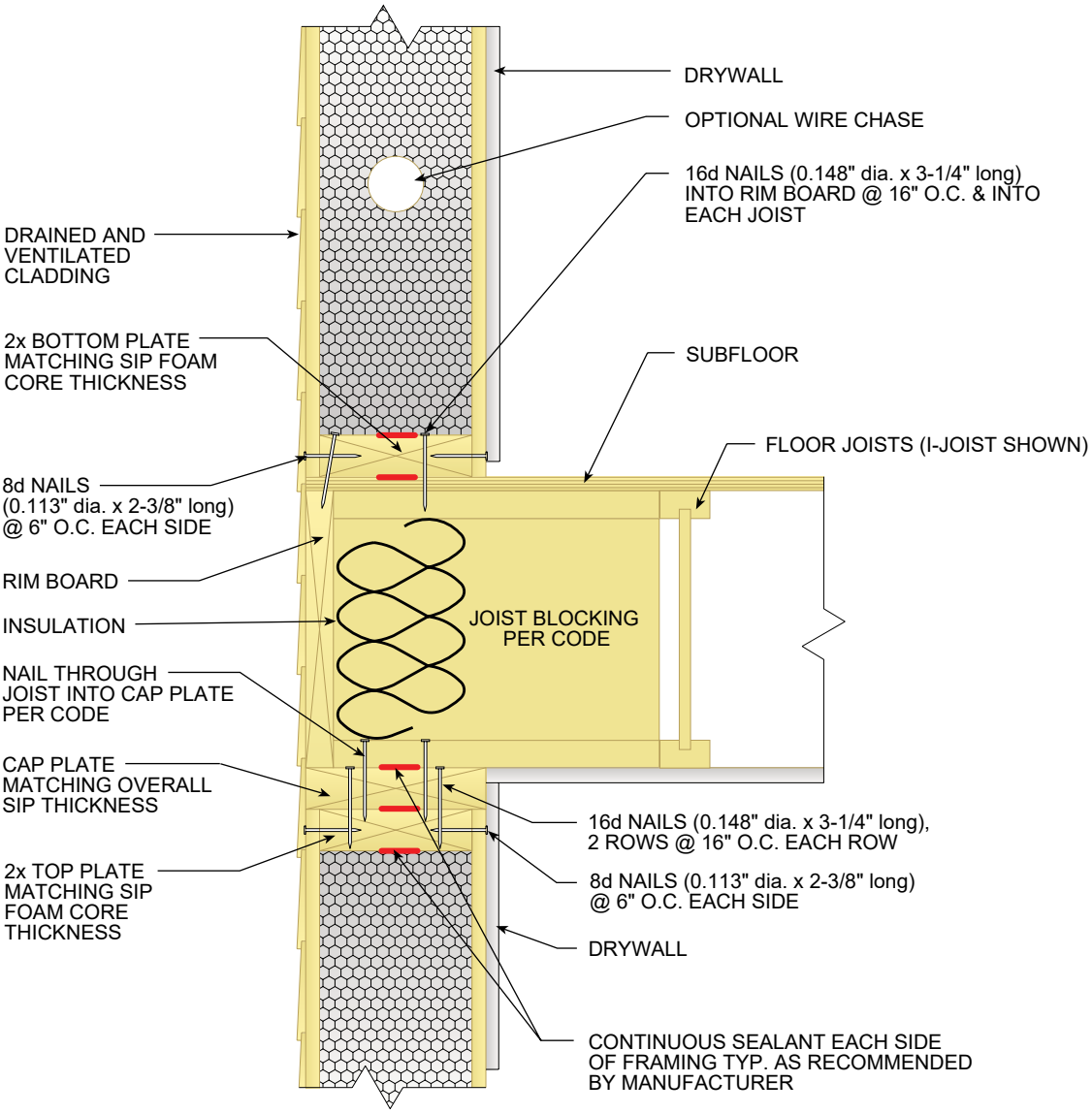

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Figure 17

Upper Wall to Roof Connection

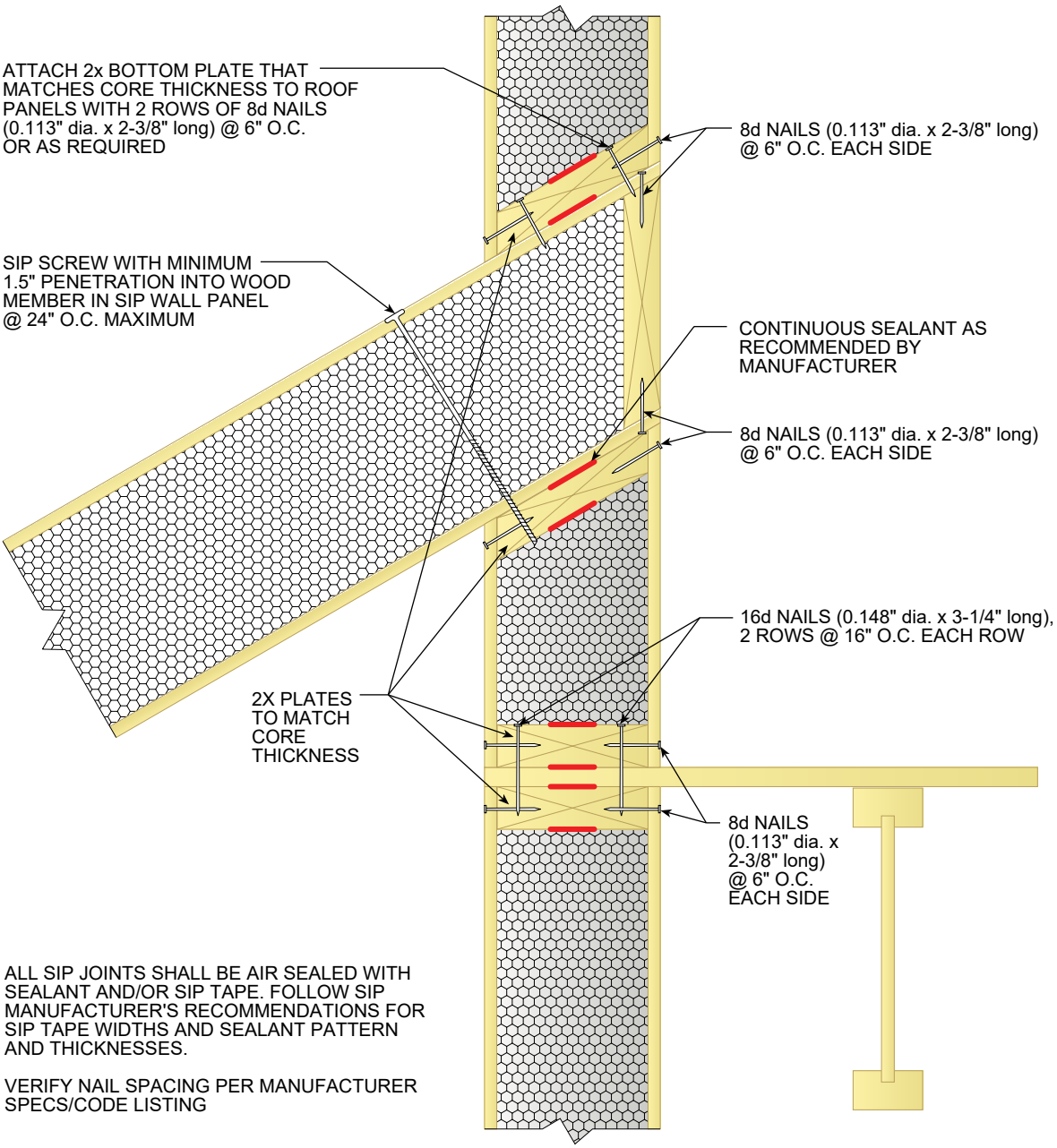

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Figure 18

Roof-to-Roof Panel Connections :
Beveled SIP Ridge

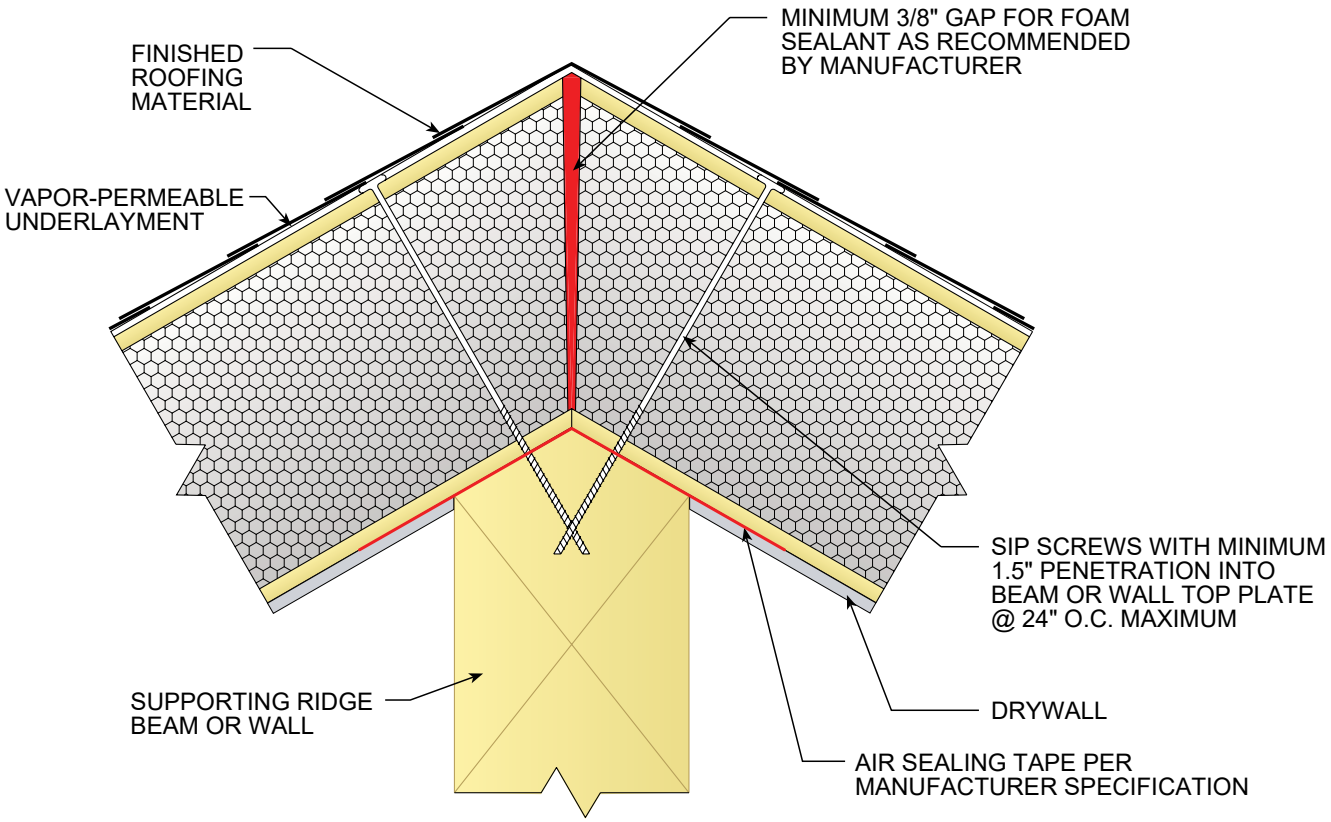

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Figure 18 a.

Roof-to-Roof Panel Connections :
SIP with Ridge Vent

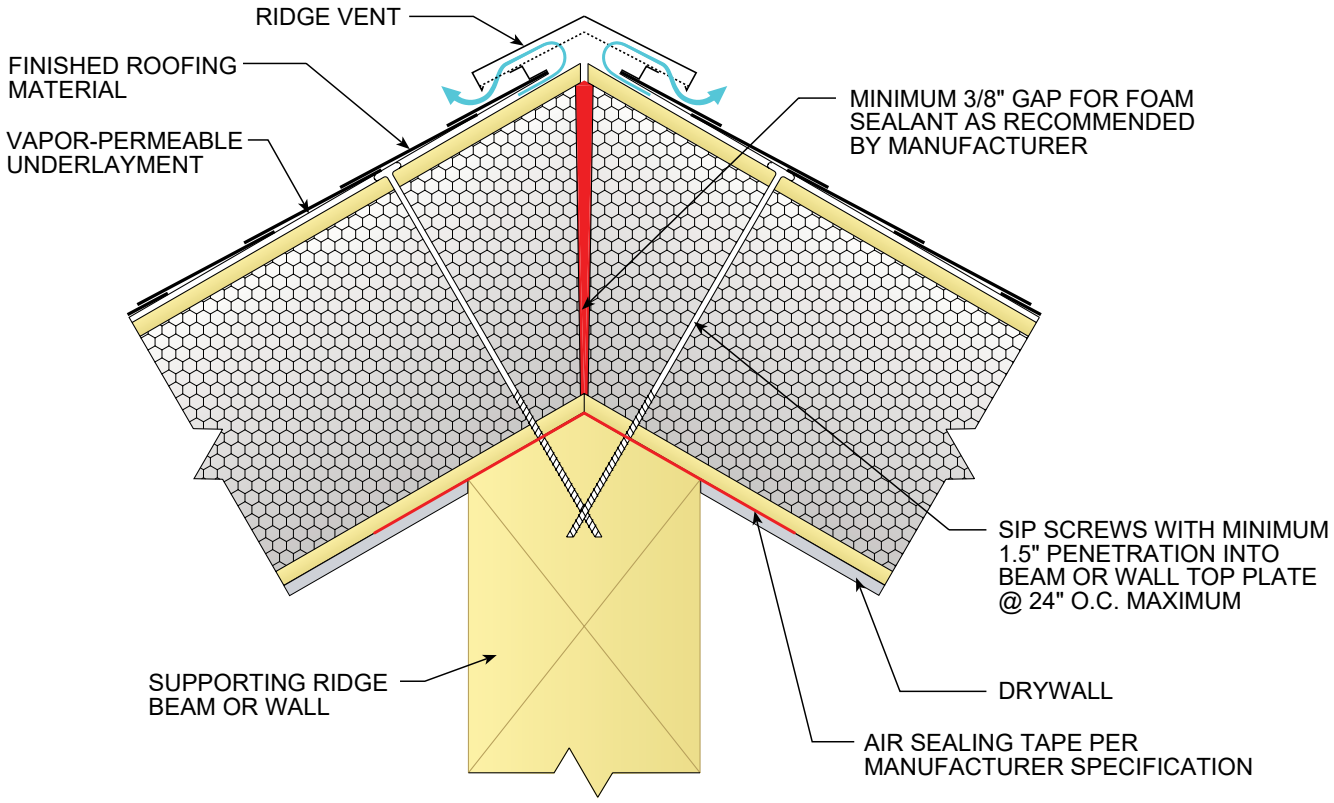

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Figure 19

Structural Hip Panel Connection

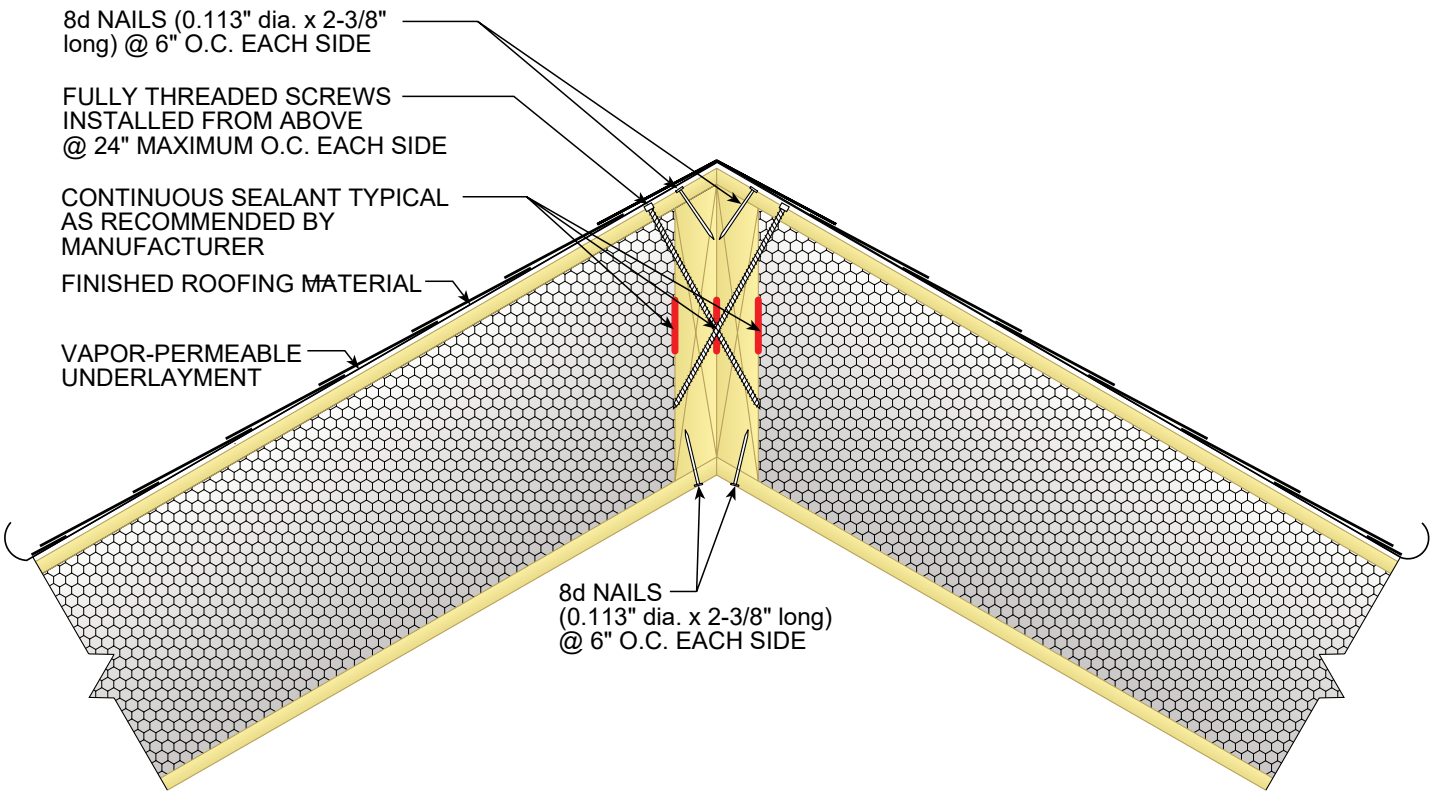

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Figure 20

Roof Calley Connection with Valley Support : Valley Detail

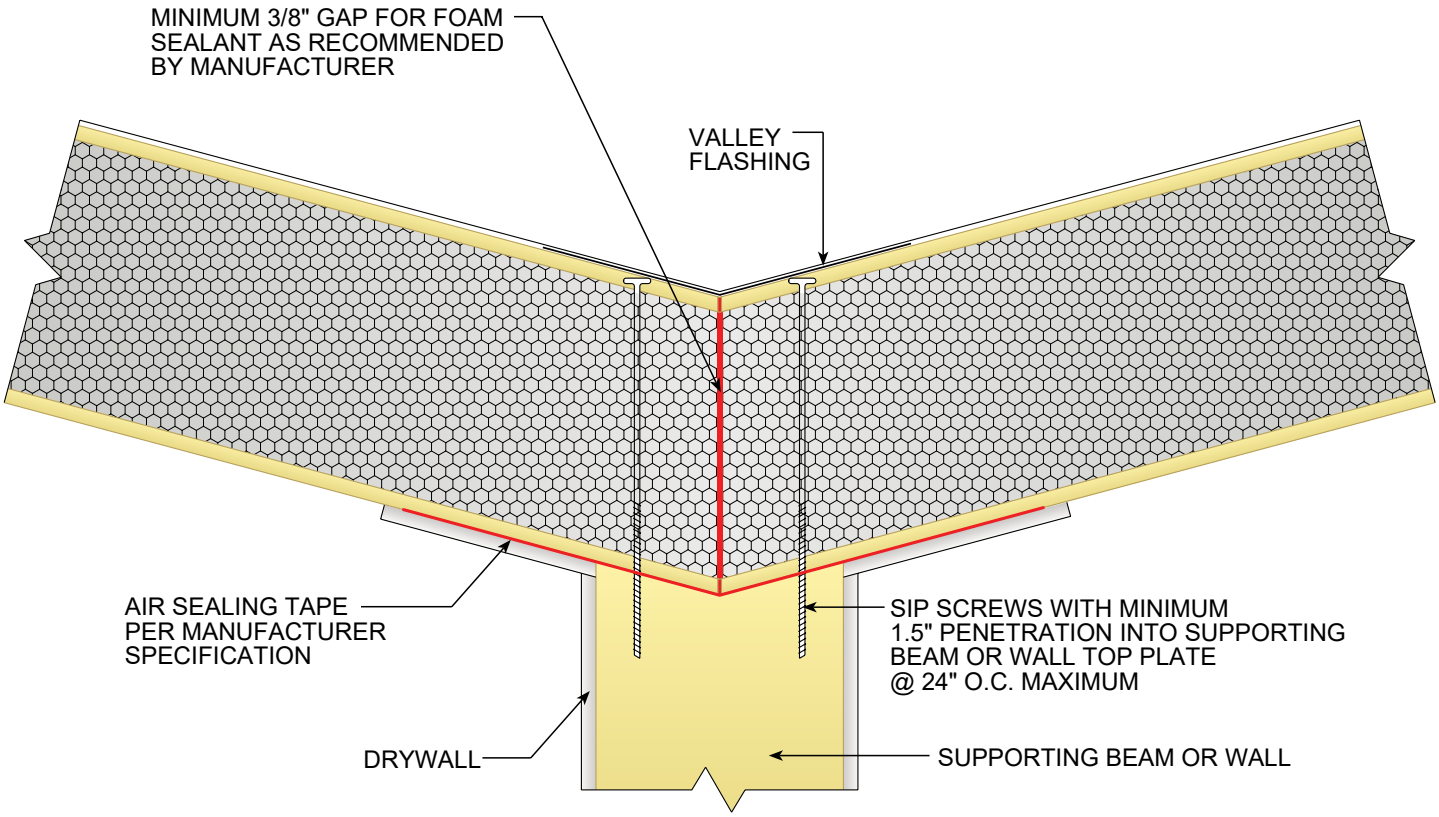

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Figure 21

Roof-to-Wall Panel Connections :
Beveled SIP Wall

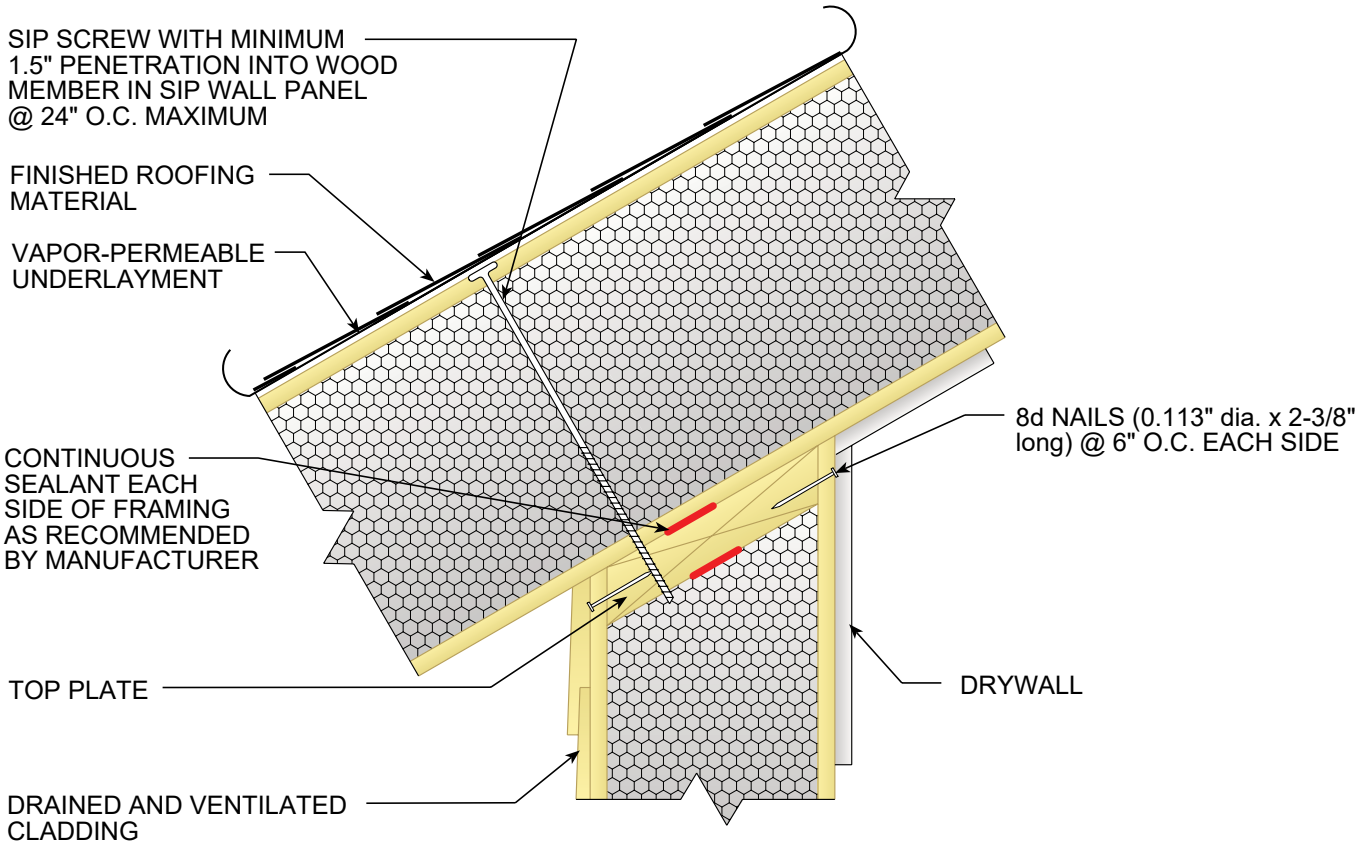

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Figure 22

Roof-to-Wall Panel Connections : Beveled Blocking

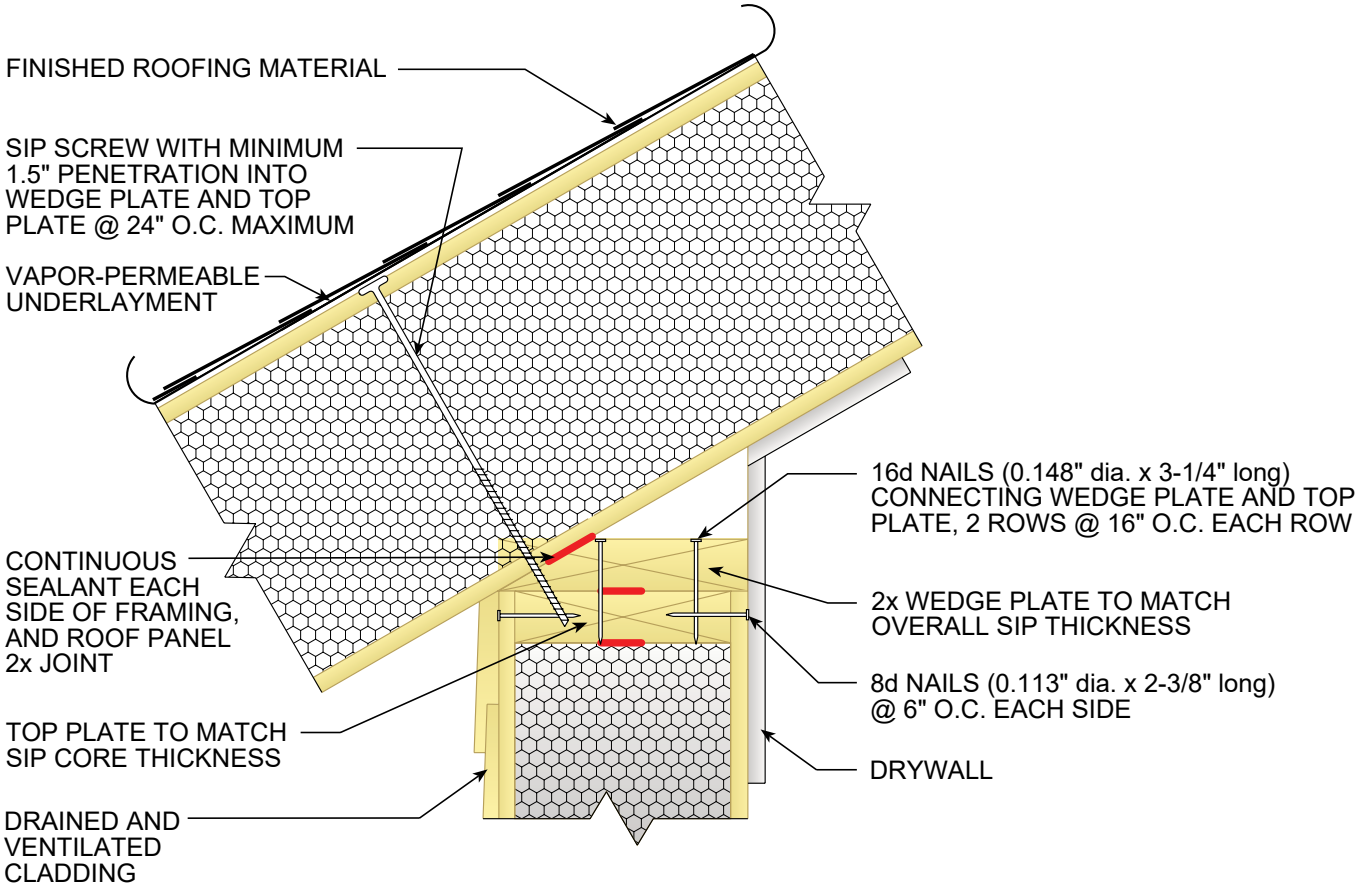

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Figure 23

Eave Detailing :
Sloped Overhand with Square Fascia

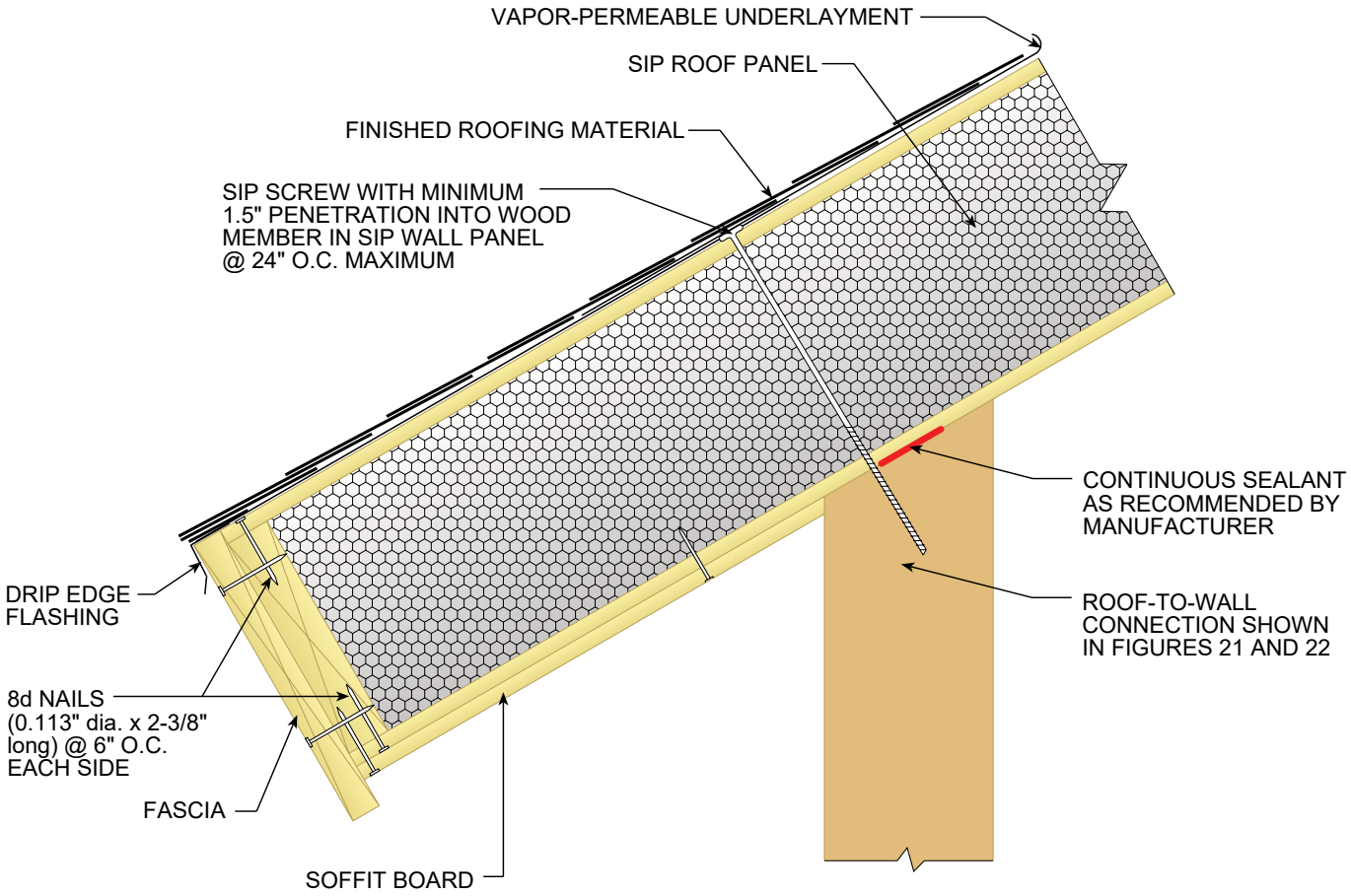

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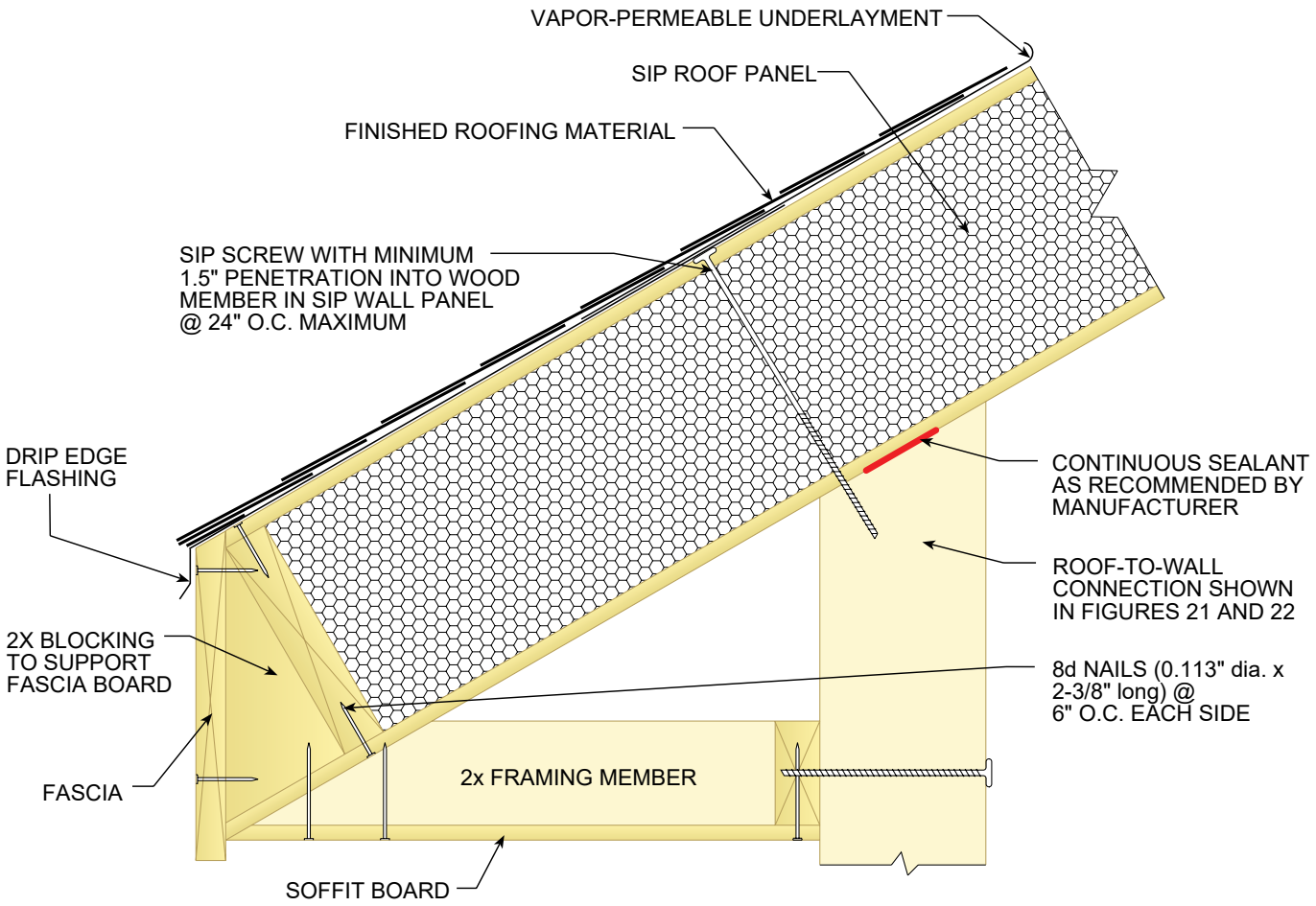
Figure 24

Eave Detailing :
Framed Level Soffit with Square Cut Roof SIP

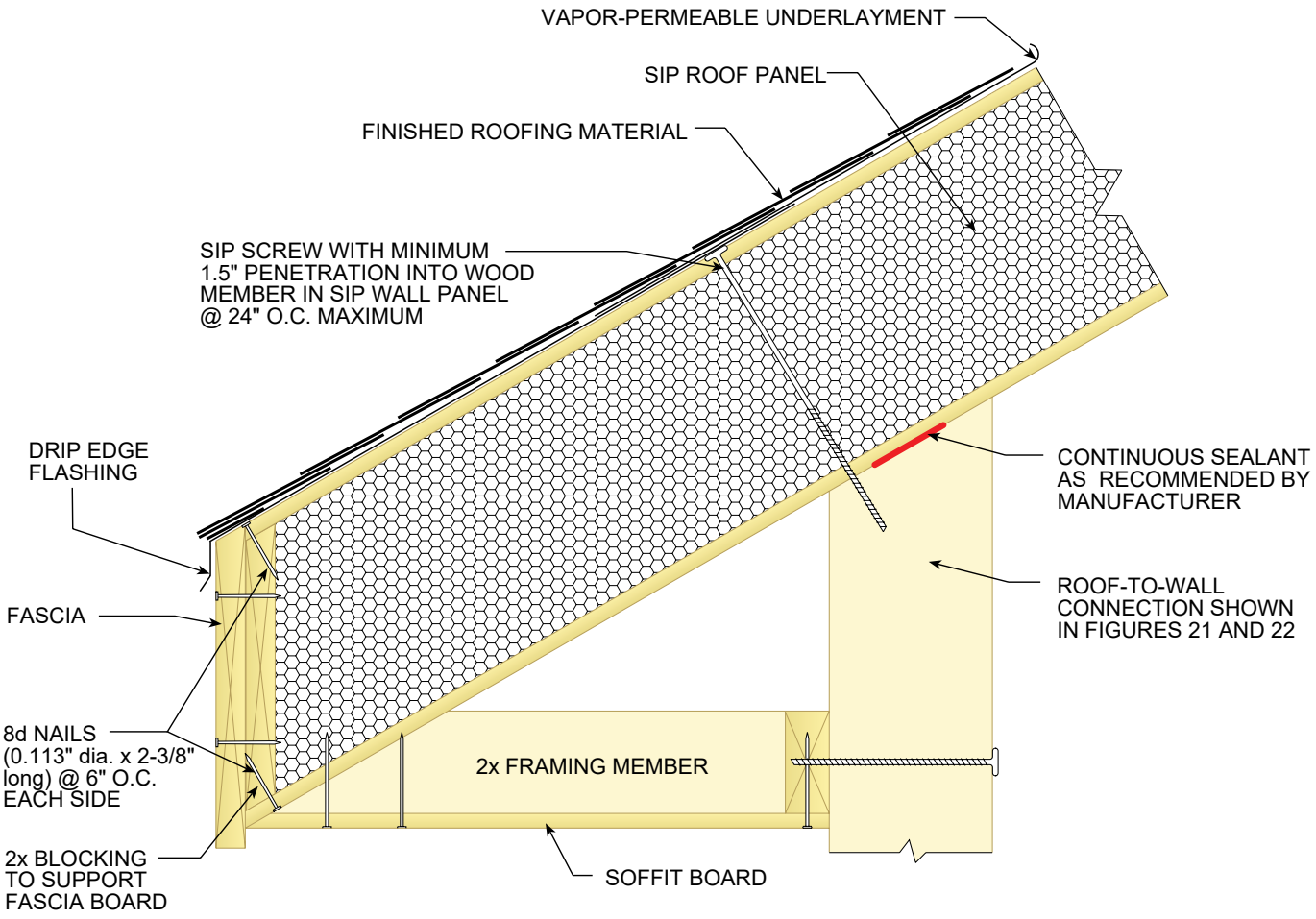


ALL SIP JOINTS SHALL BE AIR SEALED WITH SEALANT AND/OR SIP TAPE. FOLLOW SIP MANUFACTURER'S RECOMMENDATIONS FOR SIP TAPE WIDTHS AND SEALANT PATTERN AND THICKNESSES.

VERIFY NAIL SPACING PER MANUFACTURER SPECS/CODE LISTING

Figure 25

Eave Detailing :
Framed Level Soffit with Plumb Cut Roof SIP

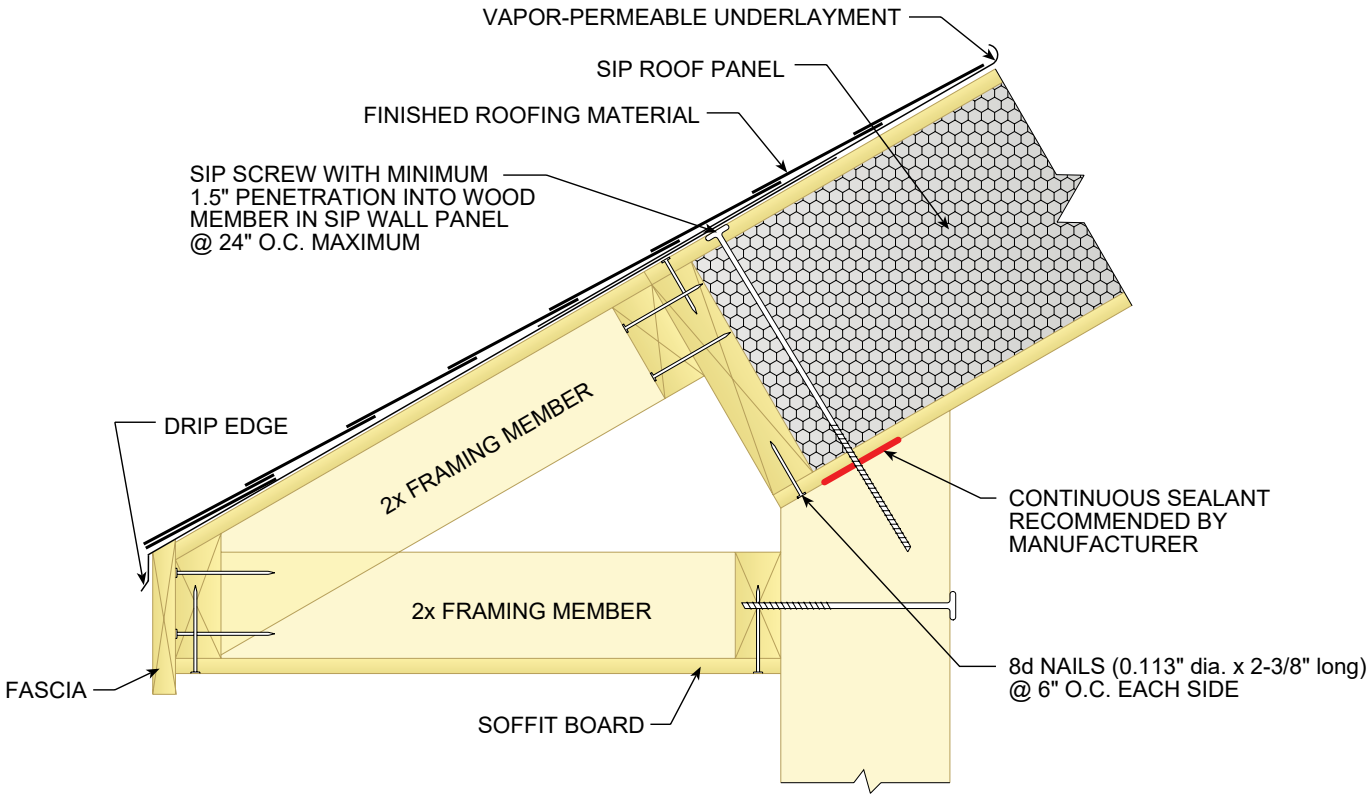


ALL SIP JOINTS SHALL BE AIR SEALED WITH SEALANT AND/OR SIP TAPE. FOLLOW SIP MANUFACTURER'S RECOMMENDATIONS FOR SIP TAPE WIDTHS AND SEALANT PATTERN AND THICKNESSES.

VERIFY NAIL SPACING PER MANUFACTURER SPECS/CODE LISTING

Figure 26

Eave Detailing :
Fully Framed Overhang

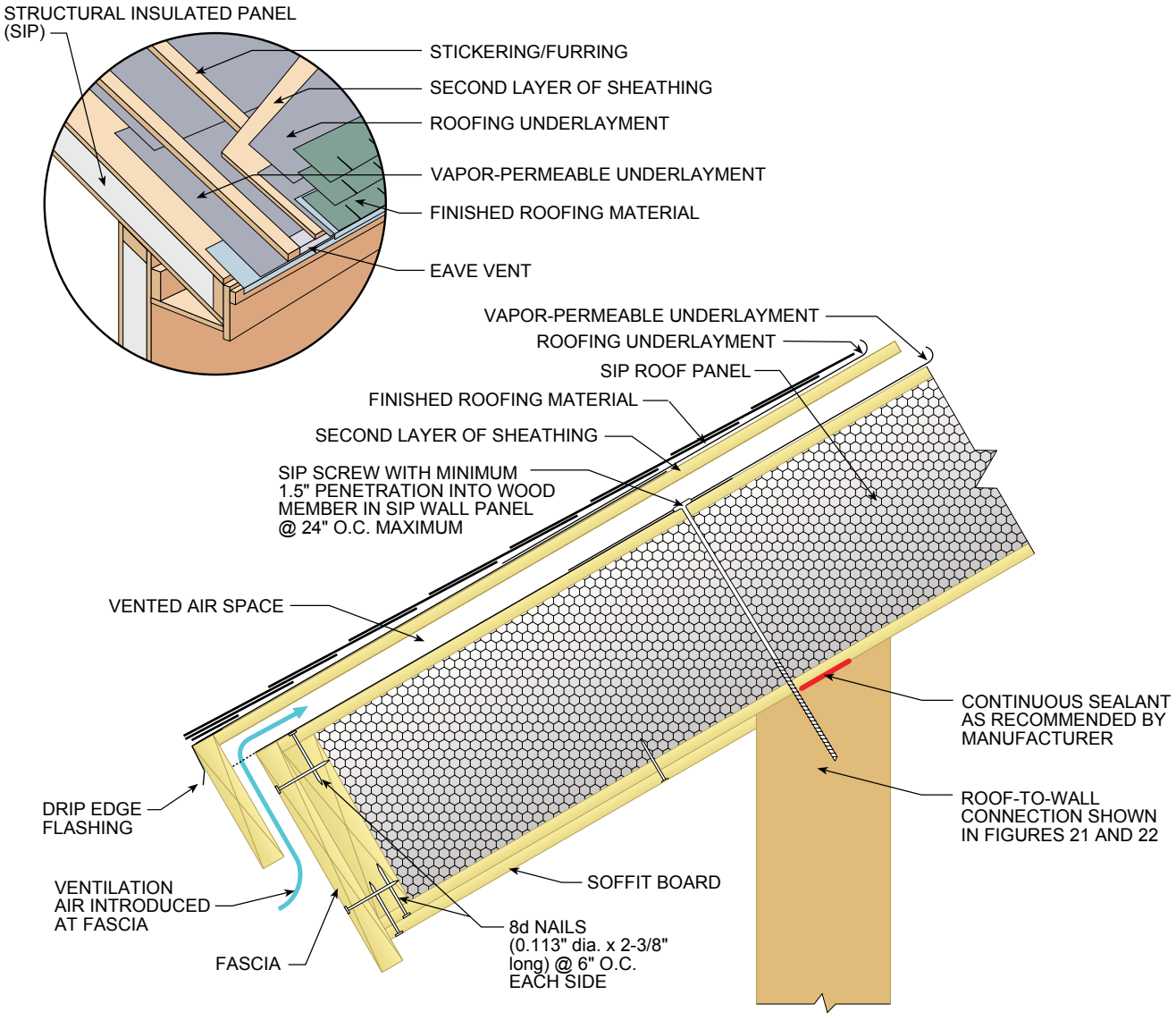


ALL SIP JOINTS SHALL BE AIR SEALED WITH SEALANT AND/OR SIP TAPE. FOLLOW SIP MANUFACTURER'S RECOMMENDATIONS FOR SIP TAPE WIDTHS AND SEALANT PATTERN AND THICKNESSES.

VERIFY NAIL SPACING PER MANUFACTURER SPECS/CODE LISTING

Figure 27

Vented Cold Roof Generic Detail



ALL SIP JOINTS SHALL BE AIR SEALED WITH SEALANT AND/OR SIP TAPE. FOLLOW SIP MANUFACTURER'S RECOMMENDATIONS FOR SIP TAPE WIDTHS AND SEALANT PATTERN AND THICKNESSES.