



The Ultimate Guide to Building Green with Rain Screen Wood Siding

Brought to you by:

General Woodcraft, Inc. and

Climate-Shield™ Rain Screen Wood Siding Systems

New London, CT ♦ Healdsburg, CA ♦ Portland, OR

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SECTION 1: Understanding Rain Screen Wood Siding Systems

What is rain screen siding technology?

The rain screen siding principle is very simple: first build an outside wall and weatherproof it, secondly, build an outer layer of siding to keep the weather (wind, rain, snow, sleet and sun) away from the inner wall. The air space in between these two layers (the wall cavity) allows bulk water outside to drain and moisture trapped inside to escape, while creating a passive insulation layer.

Rain screen siding technology has been commonly used in Canada for decades and Europe for centuries as a system to create a better building envelope. American architects, designers and builders are now using this green building technology and embracing its numerous benefits.



This stave church in Urnes, Norway is estimated to have been built in the late 12th century using wood and other materials from a church that was built even earlier. This is the oldest known wood structure still in existence to have used “rain screen” principles in its construction.



Over 800 years later you can use the Climate-Shield rain screen wood siding system in your residential or commercial project designs. The rain screen system is so versatile you can install siding horizontally, vertically or at any angle that is appropriate for your project design.

How does a wood rain screen system help meet the needs of sustainable design?

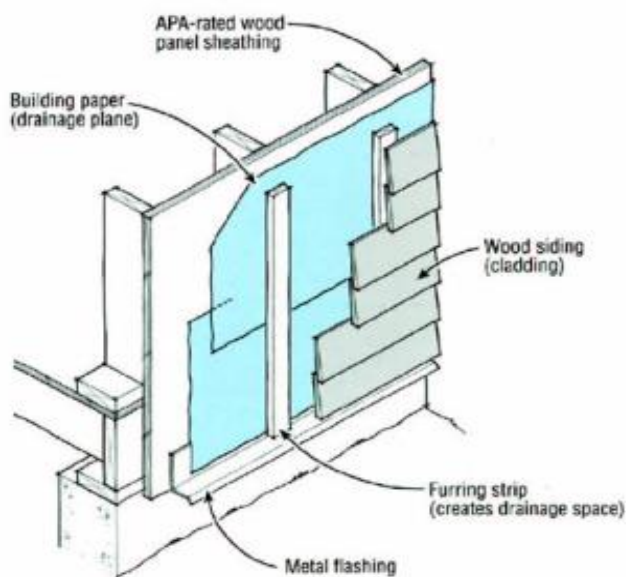
The generally accepted premise of sustainable design, sometimes referred to as green building, is loosely defined as ‘the philosophy of designing the man made environment to meet the needs of social, financial and ecological sustainability’. In other words, sustainable building design, when done properly, saves money, lasts longer, is more energy efficient and is a benefit to inhabitants or occupants of the building.

A well designed rain screen system can be a valuable contributor to the sustainable design of a building or structure. Rain screen systems help minimize mold inside and outside a home or building. This helps create a better, more breathable interior while also minimizing the potential for rot and decay on the outside. Minimizing mold, rot and decay also reduces building repair costs and helps extend the lifetime of the structure, both of which reduce the annualized life cycle costs of a home, building or structure. The wall cavity (space between the exterior wall and the back of the rain screen cladding) also adds a buffer area helping to reduce the building’s heating and cooling costs.

Wood rain screen options currently available

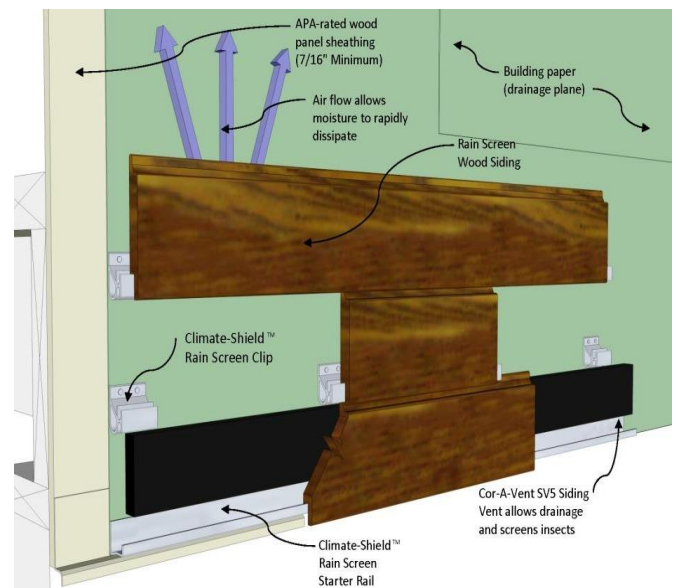
There are only a handful of wood rain screen systems available on the market and most of these methods require furring strips. Before our thorough research process, we didn't realize just how much better the Climate-Shield rain screen system was than the other wood rain screen options. Here are a few key differences:

Typical rain screen detail using furring strips



- ✓ The building envelope is weatherproofed to keep the weather from entering into the interior of the structure
- ✓ The outer siding keeps the weather away from the structure
- ✗ The open space between the layers of the rain screen system allows trapped moisture to escape and also creates an energy-efficient air space that acts as an insulator. This layer helps buffer the transmission of both cold and heat. **The furring strips restrict air flow to each individual cavity.**
- ✗ The major disadvantage of this system is that it requires the use of furring strips: adds material costs
- ✗ Adds construction time and labor costs
- ✗ Provides inconsistent spacing between the siding and the sheathing
- ✗ Furring strips have a tendency to rot and decay and are susceptible to insect damage.
- ✗ Wet furring strips are an excellent food source for mold and mildew
- ✗ Some clips are susceptible to a galvanic reaction and promote corrosion

Climate-Shield™ Rain Screen Wood Siding System detail



- ✓ The building envelope is weatherproofed to keep the weather from entering into the interior of the structure
- ✓ The outer siding keeps the weather away from the structure
- ✓ The open space between the layers of the rain screen system allows trapped moisture to escape (minimizing mold) and also creates an energy-efficient air space that acts as an insulator. This layer helps buffer the transmission of both cold and heat.
- ✓ **Climate-Shield™ rain screen clips eliminate the need for furring strips! Saves material cost**
- ✓ **Saves construction time and labor costs**
- ✓ **Climate-Shield™ Rain screen clip provides consistent spacing between siding and sheathing**
- ✓ **No furring strips eliminates a food source for mold, mildew and rot**
- ✓ **Climate-Shield™ Clips allow free movement of air to accelerate moisture dissipation time**
- ✓ **Climate-Shield™ Clips have no galvanic reaction to the screws (eliminates electrolytic corrosion)**

SECTION 2: Climate-Shield™ Rain Screen Wood Siding System

What is the Climate-Shield™ Rain Screen Wood Siding System?



The **Climate-Shield™ Rain Screen Clip** is the heart of the Climate-Shield Rain Screen Wood Siding System. The rain screen clip's remarkable design makes it superior to any other options in the marketplace.

- ✓ Smooth rain screen clip design minimizes perforations in house wrap fabric (and cuts and nicks when handling and installing)
- ✓ Precision machining of the rain screen clip guarantees consistent spacing of the siding off the sidewall
- ✓ Heavy duty marine grade aluminum alloy ensures long lasting durability
- ✓ Compatibility of the rain screen clip and the stainless steel screws eliminates any galvanic reaction of the rain screen clip system.
- ✓ Rugged rain screen clip design provides a secure base for siding attachment
- ✓ Two screws per rain screen clip provides a stable attachment and strengthens the Design Pressure rating of the system
- ✓ Minimizes thermal bridging to the building envelope

Climate-Shield™ Rain Screen Clip compared to other clips

The Climate-Shield Rain Screen Clip is stronger, sturdier and longer lasting than other rain screen clips. Installation of the Climate-Shield™ rain screen clip is much simpler and less costly than other methods.

- Unlike other options, the screws of the Climate-Shield rain screen clip are fastened straight into the sheathing eliminating the need to work at an awkward downward angle.
- The two screws of the Climate-Shield rain screen clip provide a stronger base to secure your siding.
- Climate-Shield Rain Screen Clips eliminate the expense and inconsistency of furring strips
- Climate-Shield Rain Screen Clips eliminate the time labor costs of installing the furring strips.
- The elimination of the furring strips also minimizes food sources for mold and mildew to thrive on.
- The small contact size of the Climate-Shield rain screen clip compared to a furring strip *minimizes thermal bridging to less than 2% of the building envelope surface.*



Climate-Shield™ Rain Screen Components

The Climate-Shield System is a lot more than simply an incredibly effective rain screen clip. As the name implies, Climate-Shield is a complete rain screen system. From the starter rail, the siding vent, the rain screen clips and fasteners, door and window trim options and corner options, to the cladding material options, every component is manufactured and designed for strength, ease of installation, durability, longevity, style and appearance.

There are several rain screen siding products on the market but none like Climate Shield Wood Siding System. Climate Shield's patent pending technology allows architects, builders and owners the flexibility to install rain screen siding horizontally, vertically or even diagonally without having to worry about how to layer furring strips or creating complicated designs for horizontal furring strips.



Standard components for the Climate-Shield rain screen system include:

CSSR8- Climate-Shield eight foot Starter Rail The starter rail makes installing the system perfectly level so simple. Screw holes are pre-drilled to make installation easier and more efficient. Weep holes on the bottom of the track ensure that any bulk water that may get into the wall cavity can easily escape.

Cor-A-Vent SV5 Siding Vent is designed to provide a barrier to prevent insects and wildlife from inhabiting the wall cavity, keeping it free and clear of obstructions. The siding vent is recommended for use above and below window openings, and at the top course of siding below the soffit or rake trim. The SV5 vent may also serve as a spacer and/or blocking.

CSVSR8- Climate-Shield Vertical Starter Rail is available for use with vertical siding installations. Climate-Shield starter rail is manufactured from marine grade aluminum for greater strength and longer lifetime.

CS2- Rain Screen Clip with its two stainless screws provides the strongest attachment of any clips on the market. The entire system is engineered to withstand seismic activity and hurricane force winds in excess of 180 MPH.

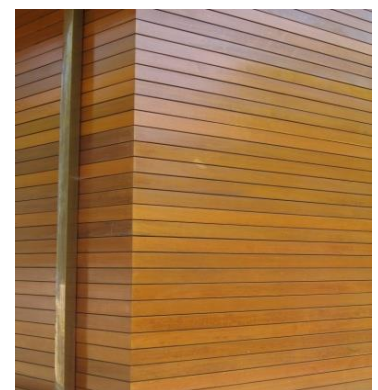
Climate-Shield Outside Corner Options



Hardwood outside corner can be assembled in many sizes and species (shown above in Ipe hardwood).



Aluminum outside corners are available in mill finish and also in a wide palette of custom color options to complement your design scheme.



Mitered and fastened outside corner. (shown above in Ipe hardwood)

SECTION 3: Architectural Details and Specifications

The Climate-Shield rain screen wood siding system allows the design team to use either softwood or hardwood siding. The material selected can be installed in the normal horizontal fashion, but now you are free to install on the vertical or diagonal and still have all the efficiencies of a highly effective rain screen system.



Horizontal installations of Climate-Shield rain screen systems can be completed without the cost, headache or inconsistency of furring strips.

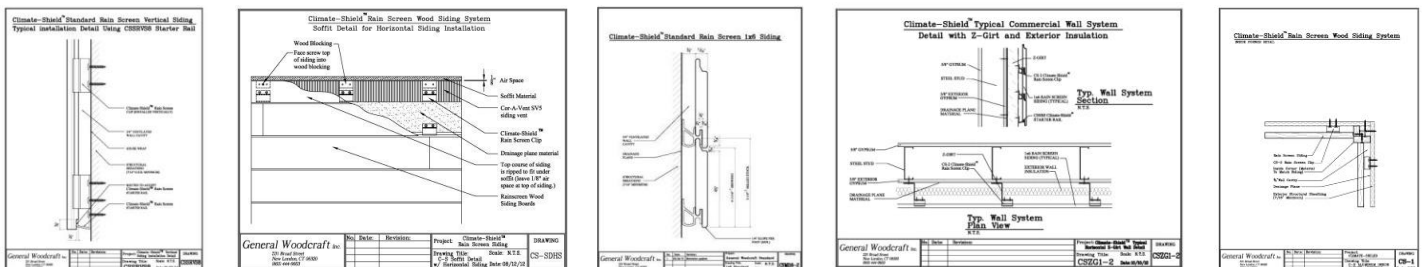


Now you have the ability to incorporate vertical or diagonal rain screen siding systems into your project without a complicated matrix of furring strips.

ARCHITECTURAL ADVANTAGES OF THE CLIMATE-SHIELD RAIN SCREEN WOOD SIDING SYSTEM

American Made Quality	Marine Grade Aluminum Alloy	Stainless Steel Screws
2" Long Clip For Strong Joints	Easy To Handle Radius Parts	Horizontal or Vertical Siding
Clean Face - Fastener Free	Install Hardwood or Softwood	The Most Cost Effective System
No Pre-Drilling Hardwoods	No Furring Strips to Purchase	No Furring Strips to Install
Corner System for Clean Lines	Corner System—No Splits	Green Building Technology

We have developed a full suite of CAD drawings, architectural details and construction specification documents specifically for architects and design professionals.



For your convenience we have consolidated all of these architectural drawings, details and specifications for decking, hardwood and rain screen systems in one convenient location online:

<http://www.mataverdedecking.com/architectural-details-and-specifications/>

SECTION 4: Hardwood Siding Species and Cladding Options

When you are building a rain screen system with the Climate-Shield Rain Screen Wood Siding System, it stands to reason that a long-lasting environmentally friendly siding material is the ideal choice. Several high density hardwood species such as Ipe, Cumaru, Garapa and Machiche make ideal options for your wood siding. Many of the same qualities that make Ipe, Cumaru, Garapa and Machiche smart choices for decking projects, make them natural considerations for wood siding: beauty, strength, longevity, low life cycle costs, warmth, all natural, eco-friendly rugged specie and more.



Mataverde® Ipe Hardwood Siding

[Ipe hardwood](#) cladding is extremely durable and stable. Ipe ranges from light browns to olive brown to nearly black colorations. Tropical graining ranges from fine-grained to highly figured character. Due to its high density, standard finishes will not penetrate the surface- finishing options include oil finishes such as Penofin. (Be sure to follow manufacturer's instructions)

Mataverde® Garapa Hardwood Siding

[Garapa hardwood](#) cladding is a lighter, golden to amber toned siding option. Garapa is an exceptionally stable, medium density cladding option that accepts many standard exterior stain options.



Mataverde® Cumaru Hardwood Siding

[Red Cumaru hardwood](#) siding ranges in color from yellowish brown to deep reddish brown tones. Exotic graining is often intense and highly figured. Moderate stability. Due to its high density properties, finish options include Penofin.

Mataverde® Machiche Hardwood Siding FSC Certified

[FSC certified Machiche hardwood](#) cladding is a chocolate brown siding option with good stability and a coarse grained tropical appearance. Finish options include Penofin and Seal Once.



Mataverde® Santa Maria Hardwood Siding FSC Certified

[Santa Maria hardwood](#) is a stable, beautiful, FSC certified cladding option that looks like genuine mahogany. Santa Maria hardwood accepts a wide range of standard exterior stain options

Many species of hardwood siding are readily available for your wood rain screen cladding projects. If your project calls for special sizing, profiles or species, additional custom profiles can be developed for you and your specific project needs.

The Lamboo® ELEMENTS™ Rain Screen Cladding Option

Due to its amazingly fast growth, bamboo is considered a rapidly renewable resource. Lamboo®, Inc. has taken the science of manufacturing and has artfully combined it with the natural beauty of bamboo to create a high performance durable cladding that will work effectively with well-designed rain screen systems.

A few key factors about Lamboo Rain Screen Cladding

- Of the nearly 1,600 species of bamboo throughout the world, only four have been selected to manufacture Lamboo® rainscreen siding. These species were specifically selected for their beauty and performance in exterior applications.
- While bamboo has natural resistance to microbes, bacteria and fungi, Lamboo has added other naturally occurring elements into the manufacturing process to increase this resistance further
- Lamboo is a highly stable rainscreen cladding material that exhibits minimal expansion and contraction in harsh exterior environments
- The high silica content of Lamboo makes it harder and more resistant to insects
- The low V.O.C. bonding agents used to manufacture this product are incredibly high performing and long lasting in all types of harsh exterior climates and environments
- Lamboo may be stained with high quality exterior stains for a full palette of design options



SECTION 5: Climate-Shield Rain Screen Wood Siding System Installation Guidelines

Horizontal Siding Installation Guidelines

Step 1 - Install structural sheathing to the framed wall system. Plywood or Oriented Strand Board (OSB) may be used. The panel thickness should be rated for structural application and be a minimum of 7/16" thick. Refer to local code requirements, but 1/2", 5/8" and 3/4" are standard sizes, obviously the thicker the board - the stronger the wall, and the greater the holding strength of the screw. Install per manufacturer instructions and local building codes. Please allow an expansion gap of 1/16" in between panel ends and 1/8" between panel edges. Foam and gypsum boards are not structural panels. (Installation of the Climate-Shield Rain Screen System over non-structural panels is possible using Climate-Shield Attachment Channels and alternate installation techniques)

Step 2 - Install the drainage plane material. There are two basic categories:

Building Paper - Also known as felt paper, tarpaper, roofing paper or roofing underlayment. Building paper is an asphalt-impregnated paper that comes in different weights. For example, 15-lb. paper is typically used for most roofing and wall applications. For most builders, felt paper is the drainage plane of choice for roofing, and many builders use it to provide a drainage plane for the walls as well. Building paper resists air and water getting into the home, but allows moisture to diffuse through it. Microscopic pores in the paper allow moisture through but are so small that bulk water can't penetrate its surface.

House Wrap - House wraps are available in a wide variety of different styles, brands and types of materials. Some serve mainly as a vapor barrier that allows moisture to pass from inside the building envelope to the outside. Other more advanced designs also serve as an air barrier as well as a moisture barrier. Follow manufacturer's instructions for installation. Pay careful attention to seams and sealing around doors, windows and other openings.

Your Architect or Builder will have knowledge of local performance for these products. Regardless of the product you select, install per the manufacturer instructions and local building codes. The details of preparing the window and door areas are worth particular attention. Window and door manufacturer's installation recommendations take precedent over these guidelines.

Step 3 – **All windows and doors should now be installed.** Please follow the instructions from manufacturers. (Note: When installing the siding interface to the windows and doors, we recommend leaving up to a 1/8" spaced gap, this will help minimize any misalignment that could be caused by potential expansion of the wood siding material.

Step 4 - **Please create the base line elevation on all walls** where the bottom of the siding will be installed. This can be done with laser lines, or a snapped chalk line. We recommend that you complete this on all walls, so you know you have continuity. **This step is critical to a successful siding installation** and should be done with accuracy. Do this well, and everything will be perfectly aligned as you build.

Step 5 - **Install the outside and interiors corners systems you have selected.** The Climate Shield System offers both Aluminum Extrusions and Solid Wood components. You may also install corners crafted by your builder. Please install the Climate-Shield System with the screws provided. They are the proper length and are made from stainless steel, the finest choice for your building. Make sure to attain perfect alignment of the corners. They should be installed at 90 degrees to the elevation lines you created in Step 3. Check your alignment as you move along the length of the corner attachment. If you do this with accuracy every siding board you cut will be a simple 90 degree cut and your alignment will be precise. With the Climate-Shield Aluminum Corner System, install only the outside corner base component at this time. (The outside corner finish piece installs after all the wood siding is installed)

Step 6 – **Install window and door trim.** Climate-Shield offers window and door trim packages, or you can design your own. Now is the time to install them and put flashing in place. With Climate Shield components please use the screws supplied, as they have been designed for the application. Follow the window and door manufacturer's installation and flashing instructions.

Step 7 – **Installing starter course of siding.** In this step you can choose to use Climate-Shield Rain Screen Clips or the Climate-Shield 8' Starter Rail. The Starter Rail speeds up installation and provides a continuous strip at your bottom course of siding. Detail drawings of these options can be viewed at <http://www.mataverdedecking.com/architectural-specifications/>

Method A.) If you are using the Climate-Shield Rain Screen Clips as a starter course, begin to install your starter row of Climate-Shield rain screen clips at the beginning elevation that you established in Step 4. Install a clip at the beginning of the wall base and then install every 16” to 24”, as your plans call for, screwing into your exterior sheathing. Finish the starter row with a clip at the end of the run to hold the end of the siding board. The clips are supplied with two stainless steel screws per clip. This system provides quick installation, with amazing strength. The screws feature a #3 Square Drive head for safe secure fastening (square drive head provided in screw package). Tighten all screws securely so the clips are flush to the sheathing.

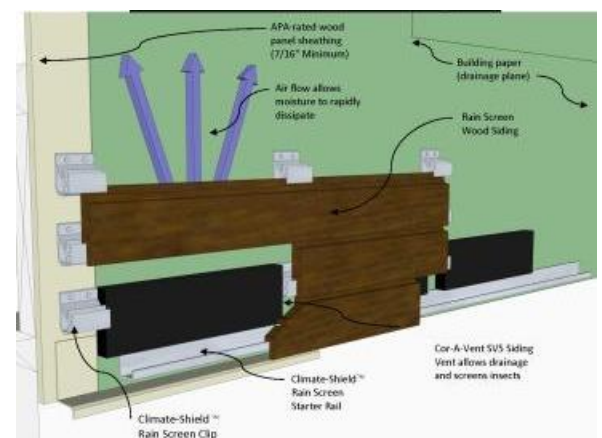
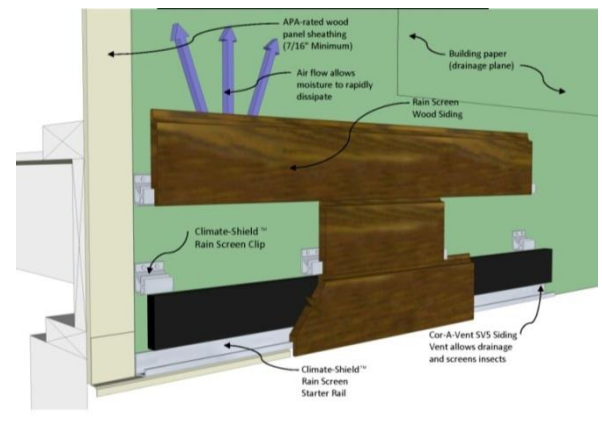
Method B.) If you choose to use the Climate-Shield Starter Rail for your starter course of siding, the installation is very similar to Step 7A. except that you simply follow the screw pattern on the rail to securely screw the starter rail flush to the exterior sheathing. This 8' rain screen starter rail will simplify and speed up your installation process.

Step 8 – We suggest installing a siding vent screen to prevent insects from entering the wall cavity from the ground. Follow the instructions of the manufacturer. The Cor-A-Vent SV5 siding ventilation is ¾” thick and fills the wall cavity between the drainage plane created by the Climate Shield rain screen clips. This siding vent also allows moisture and bulk water to escape as well. It is also suggested to install the siding vent at the soffit and rake trim, above door openings and above and below window openings.

A.) If you are using 6" nominal rain screen wood siding, align the Cor-A-Vent siding ventilation across the top of the starter row of rain screen clips (or rain screen starter rail) and fasten them to the sheathing. The assembly will be covered by the siding board in the next step.

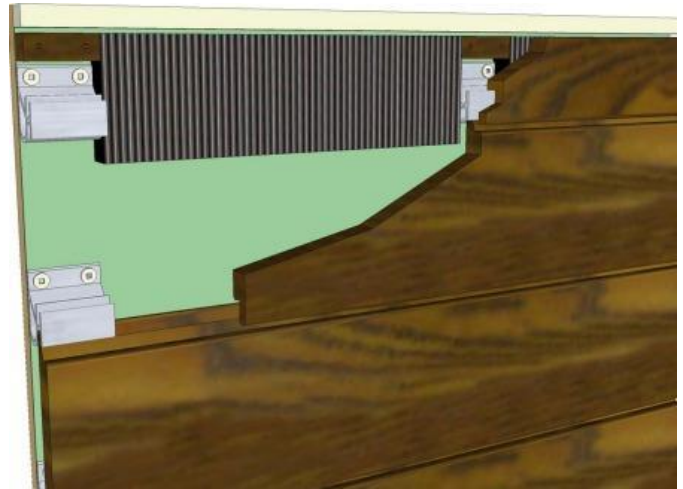
B.) If you are using 4" nominal rain screen wood siding, you will find it helpful to cut the Cor-A-Vent SV5 strips to length and fasten it between the rain screen clips in the starter row. If you are using the Climate-Shield Starter Rail with 4" rain screen siding, you will find it easier to install the Cor-A-Vent on top of the starter rail and cut it to length to fit between the rain screen clips at the top of the first course of siding. This assembly will be covered by the second course of siding.

Step 9 – Insert the bottom of a Climate Shield Rain Screen Wood Siding board into the previously attached rain screen clips or starter rail. The milling is quite precise to allow for climate variations in seasons and geographic locations. Occasionally you may need to use a rubber mallet to seat the board into the clip. Seating each board gives the perfect alignment that you want for your wall. Now begin attaching the clips to the top of the siding board. Same process, spacing at up to 24” and using 2 screws per clip. (Note: You can create a staggered arrangement with your clip spacing and on 24” installs you will have support to your board every 12”. This is a huge advantage over other installation systems.)



Step 10 – Repeat the assembly process for each row of siding. If you need to make a joint in the length of siding, simply use a rain screen clip at the bottom and top of the joint and straddle the two boards. You will automatically get proper alignment of the two boards. The joint can be done with 90 degree cuts, but over time the joints may open with weather exposure. We suggest that you miter the siding boards to be joined at a 45 degree angle (scarf joint), and there will be no gap showing in the future, regardless of the weather. Center the clip over the joint for maximum stability. This will give you a quality installation that you can be proud of for years.

Step 11- Installing the top row of siding. When you reach the soffit (or areas below window openings), it is typically necessary to rip the top of the wood siding to the appropriate width. The bottom edge of the top row of siding will seat in the rain screen clip. The top edge of the siding will need to be drilled and face screwed to blocking behind the siding. We suggest short pieces of solid wood blocking behind where you will be screwing and placing siding vent between the blocking to allow continuous uninterrupted ventilation at the top of your rain screen wall system.



Step 12- Sealing your wood siding. If you have not already done so prior to installing your siding boards, applying a coat of sealer to provide UV protection is an excellent idea. UV protection helps to minimize any potential surface checking as your siding acclimates to local EMC (Equilibrium Moisture Content) conditions. Follow the coating manufacturer's instructions for best application.

[Download Horizontal Rain Screen Installation Guidelines](#)

Vertical Siding Installation Guidelines

Step 1 - Install structural sheathing to the framed wall system. Plywood or Oriented Strand Board (OSB) may be used. The panel thickness should be rated for structural application and be a minimum of 7/16" thick. Refer to local code requirements, but 1/2", 5/8" and 3/4" are standard sizes, obviously the thicker the board - the stronger the wall, and the greater the holding strength of the screw. Install per manufacturer instructions and local building codes. Please allow an expansion gap of 1/16" in between panel ends and 1/8" between panel edges. Foam and gypsum boards are not structural panels. (Installation of the Climate-Shield Rain Screen System over non-structural panels is possible using Climate-Shield Attachment Channels and alternate installation techniques)

Step 2 - Install the drainage plane material. There are two basic categories:

Building Paper - Also known as felt paper, tarpaper, roofing paper or roofing underlayment. Building paper is an asphalt-impregnated paper that comes in different weights. For example, 15-lb. paper is typically used for most roofing and wall applications. For most builders, felt paper is the drainage plane of choice for roofing, and many builders use it to provide a drainage plane for the walls as well. Building paper resists air and water

getting into the home, but allows moisture to diffuse through it. Microscopic pores in the paper allow moisture through but are so small that bulk water can't penetrate its surface.

House Wrap - House wraps are available in a wide variety of different styles, brands and types of materials. Some serve mainly as a vapor barrier that allows moisture to pass from inside the building envelope to the outside. Other more advanced designs also serve as an air barrier as well as a moisture barrier. Follow manufacturer's instructions for installation. Pay careful attention to seams and sealing around doors, windows and other openings.

Your Architect or Builder will have knowledge of local performance for these products. Regardless of the product you select, install per the manufacturer instructions and local building codes. The details of preparing the window and door areas are worth particular attention. Window and door manufacturer's installation recommendations take precedent over these guidelines.

Step 3 – **All windows and doors should now be installed.** Please follow the instructions from manufacturers. (Note: When installing the siding interface to the windows and doors, we recommend leaving up to a 1/8" spaced gap, this will help minimize any misalignment that could be caused by potential expansion of the wood siding material.

Step 4 - **Please create the base line elevation on all walls** where the siding will be installed. This can be done with laser lines, or a snapped chalk line. We recommend that you complete this on all walls, so you know you have continuity. This step is very important for a vertical or diagonal siding installation and should be done with accuracy.

Step 5 - **Install the outside corners you have selected.** The Climate Shield System offers both Aluminum Extrusions and Solid Wood components. You may also install corners crafted by your builder. To maintain the structural integrity of the system, it is imperative to always use the screws provide with the Climate-Shield System with the screws provided. **All components are engineered to be of the proper strength, size, threading, length and appropriate grade of material for proper rain screen system performance.** Make sure to attain perfect alignment of the corners. They should be installed at 90 degrees to the elevation lines you created in Step 4. Check your alignment as you move along the length of the corner attachment. With the Climate-Shield Aluminum Corner System, install only the outside corner base component at this time. (The outside corner finish piece installs after all the wood siding is installed)

Step 6 – **Install window and door trim.** Climate-Shield offers window and door trim packages, or you can design your own. Now is the time to install them and put flashing in place. With Climate Shield components please use the screws supplied, as they have been designed for the application. Follow the window and door manufacturer's installation and flashing instructions.

Step 7 – **Install the Climate-Shield Vertical Siding Starter Rail at the bottom of all areas to receive the wood siding.** The Vertical Siding Starter Rail speeds up installation and provides a continuous strip at the bottom edge of each siding board. Detail drawings can be viewed at <http://www.mataverdedecking.com/architectural-specifications/>

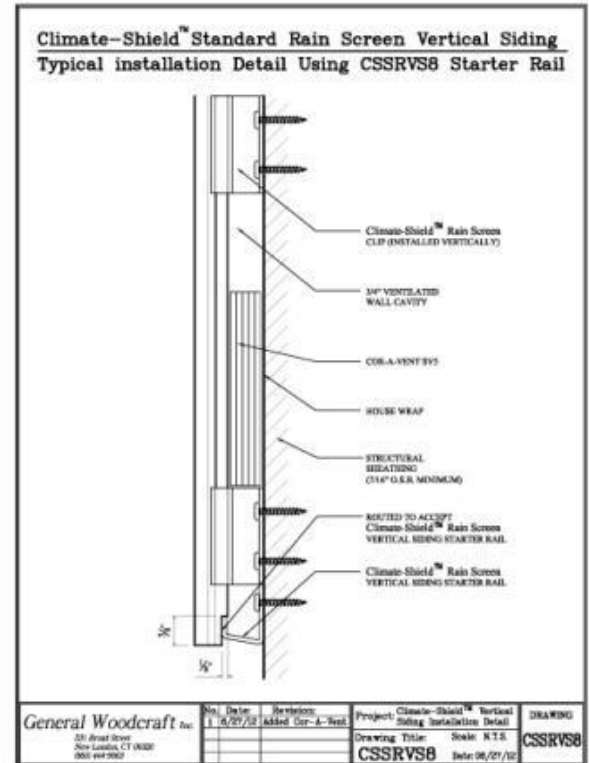
Step 8 – **We suggest installing a siding vent screen** to prevent insects from entering the wall cavity from the ground. Follow the instructions of the manufacturer. The Cor-A-Vent SV5 siding ventilation is 3/4" thick and fills the wall cavity between the drainage plane created by the Climate Shield rain screen clips. This siding vent

also allows moisture and bulk water to escape at the as well. It is also suggested to install the siding vent at the soffit, above door openings and above and below window openings.

Step 9- Determine where your vertical siding joints will align before installing your first siding board. To avoid ending up with extremely narrow vertical siding boards around doors and windows or at the end of your siding run, you will want to determine the correct width to rip your first siding board. You will need 3/4" solid blocking to attach the cut edge of this board to fasten to the exterior wall. Cor-A-Vent SV5 may also be used in lieu of blocking.

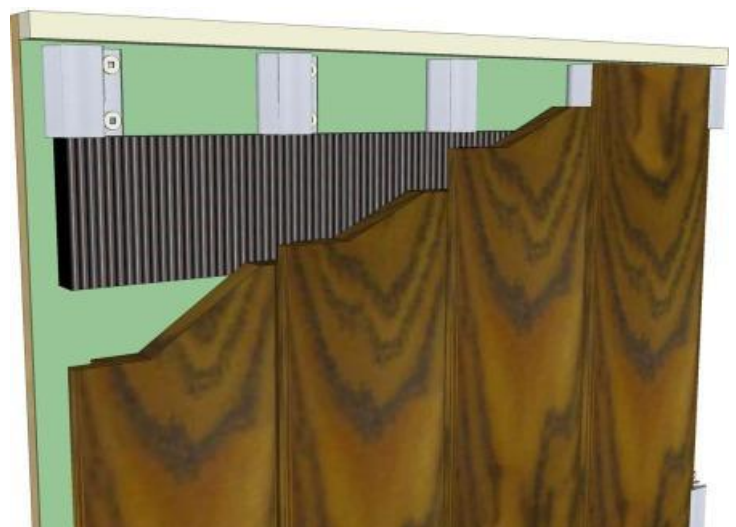
Step 10- Use a Router to notch 1/8" off of the back side of each siding board at the bottom. This will allow the bottom of each siding board to seat properly in the vertical siding starter rail. You can make this notch up to 1" up the board; depending on how much coverage you would like the bottom of the vertical siding board to conceal the starter rail.

Step 10 – Repeat the assembly process for each vertical row of siding. If you need to make a joint in the vertical length of siding, simply use a rain screen clip at the bottom and top of the joint and straddle the two boards. You will automatically get proper alignment of the two boards. We suggest that you miter the siding boards to be joined at up to a 45 degree angle (scarf joint), and there will be no gap showing in the future, regardless of the weather. Center the clip over the joint for maximum stability. This will give you a quality installation that you will be proud of for years.



Step 11- Installing the top end of siding. When you reach the soffit (or areas below window openings), it is necessary to trim the top end of the wood siding to the appropriate length. Always seal the cut ends of hardwood immediately with Anchor Seal to minimize end checking of the siding boards. For best results, the rain screen clips need to be installed at the top of the boards and the siding vent installed below the clips.

Step 12- Sealing your wood siding. If you have not already done so prior to installing your siding boards, applying a coat of sealer to provide UV protection is an excellent idea. UV protection helps to minimize any potential surface checking as your



siding acclimates to local EMC (Equilibrium Moisture Content) conditions. Follow the coating manufacturer's instructions for best application.

[Download Vertical Rain Screen Installation Guidelines](#)

SECTION 5: Climate-Shield Rain Screen Project Gallery

With the architectural and design communities trending toward more energy efficient and sustainable designs, rain screen systems are being specified and built on a regular basis. Due to its beautiful natural character and durability, hardwood cladding is being incorporated into wood rain screens regularly. Even when other cladding materials such as stone, stucco and/or metal cladding are being used on the same project, wood is often being used to provide warmth and a harmonious balance to the inorganic materials in the design.

For additional project photos, please visit any of our rain screen galleries on-line:

[Rain Screen project gallery](#)

[Ipe Rain Screen project gallery](#)

[Machiche Rain Screen project gallery](#)

[Garapa Rain Screen project gallery](#)

[Cumaru Rain Screen project gallery](#)



Residential rainscreen project in Southern California using 1x6 hardwood siding and mitered outside corners.

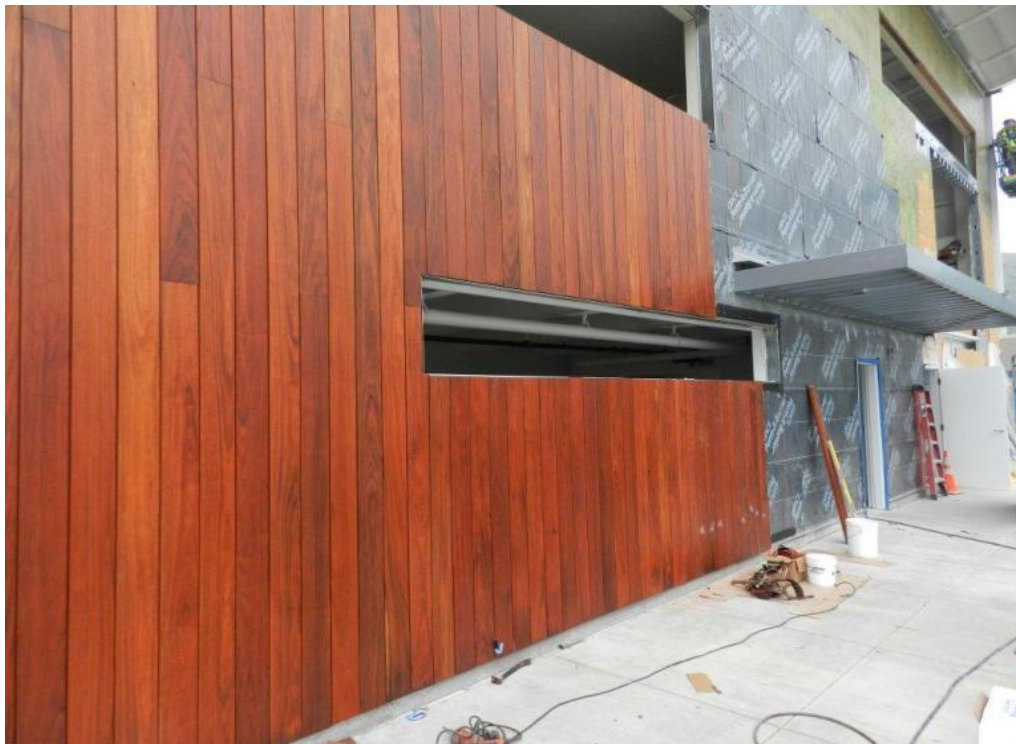


**Window trim detail using 1x6 Ipe cladding in rain screen design
Weeksville Heritage Center, Brooklyn New York**



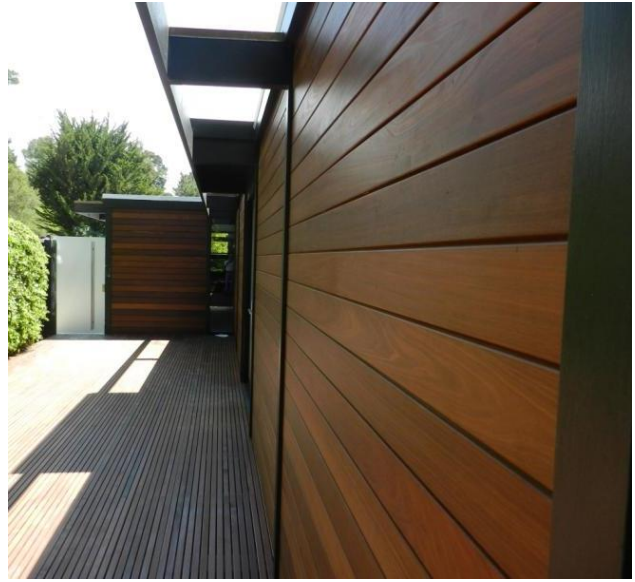
1 x 4 lpe rain screen cladding on museum and cultural center project

Municipal Rainscreen Project in Northern, California



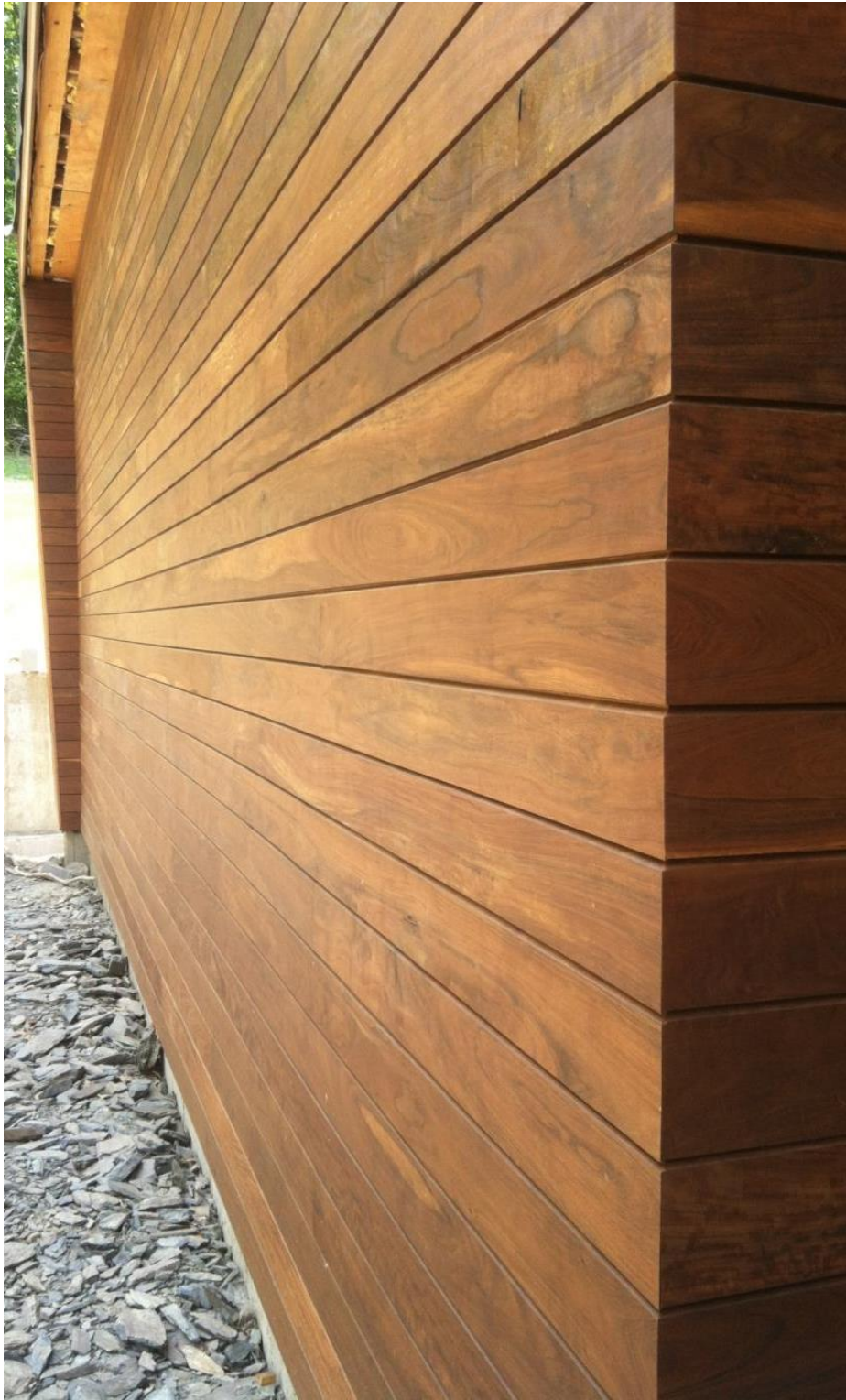
FSC certified Machiche 5/4 x6 cladding, installed vertically

Residential Rain Screen Project overlooking San Francisco Bay



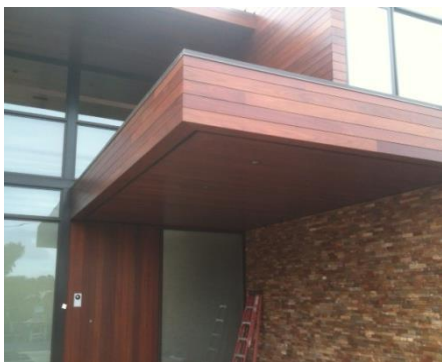
1x6 Ipe rain screen cladding

Residential rain screen installation in upstate New York



1 x 6 lpe rain screen cladding with mitered outside corners

Minimalist Architectural Rain Screen Design in Los Gatos, California



5/4 x6 FSC certified Machiche cladding (used as siding, soffit, fascia and trim) provides organic harmony with the stone and stucco exterior finishes.

Mixed Use Rain Screen Project in Minnesota



FSC certified 5/4x6 Machiche hardwood cladding used with other rain screen media

Office Building Retrofit in Greater Los Angeles, California



Climate-Shield rain screen system using reclaimed 1x6 redwood siding

Garapa Rain Screen residential remodel and addition project in Pennsylvania



5/4x6 Garapa hardwood siding was selected to clad the new addition and also replace the circa 1950's aluminum siding, employing the benefits of rain screen technology. Garapa hardwood cladding was chosen due to its warm tones and contrast to the red tones of the existing brick on the home. Garapa rain screen was likewise specified to create the ventilated soffit for the carport.

Celebrating an Ipe Rain Screen project completion in Hillside, CA



We hope you have enjoyed “The Ultimate Guide to Building Green with Rain Screen Wood siding”. Please feel free to contact us at any time for additional information or questions.

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