Pictured Rocks National Lakeshore

N8391 Sand Point Road, Munising Mi, 49862

Replace Siding Grand Marais Officer in Charge Building
PMIS 328904

PROJECT SPECIFICATIONS

NATIONAL PARK SERVICE
2026-03-13

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DIVISION 1 SHORT FORM GENERAL REQUIREMENTS

PART 1 – GENERAL

ITEM 1 - DESCRIPTION OF WORK

1.1 Background: Built in the 1920s the Grand Marais Officer in Charge Residence replaced an existing "shack" that was previously on site. The Officer in Charge Residence also known as Historic Structure 19 or HS-19. HS-19 was built from standard U.S Naval plans commonly used as a Radio Station Building. HS-19 served as the officer in charge quarters until the mid 1980s when the adjacent Coast Guard Station closed. It was around this time that the buildings were handed off to the National Park Service. HS-19 has been utilized as employee housing ever since.

In 2001 the National Park Service removed existing siding that did not match what would have adorned the building during its period of historic significance. Custom wooden Dutch lap siding was reinstalled to match original designs. During install of new wooden lap siding strips of oriented strand board were installed in a vertical pattern to try and mitigate moisture issues behind siding by providing an air gap between the sheeting and the siding (photos of this install are located in appendices). Unfortunately, this may have ultimately ended up accelerating moisture issues. The current siding rotten from the inside out within 25 years. Following the siding install new windows were installed through the entirety of the building. Following the window project the windows were clad in metal to better protect them from the harsh element. This window cladding goes over the current siding and will likely need to be redone following the siding installation.

1.2 Work Covered by the Contract Documents:

A. Project Location: E22030 Coast Guard Point, Grand Marais Mi, 49839

B. Work consists of:

The Contractor shall provide all labor, materials, equipment, supervision, transportation, and incidentals necessary to remove and replace the existing wood siding and associated building envelope components.

Work includes the removal and replacement of approximately 1,606 square feet of deteriorated custom wood dutch lap siding. New siding shall consist of custom cedar dutch lap siding that matches the existing profile. The Contractor shall verify the existing siding profile and, if necessary, identify a manufacturer capable of fabricating a custom knife to replicate the profile exactly.

All existing siding shall be removed and disposed of in accordance with applicable regulations. This work also includes removal and proper disposal of approximately 1,606 square feet of existing house wrap, as well as removal and disposal of vertical wood strips previously installed between the sheathing and siding.

Following removal, the Contractor shall furnish and install new house wrap (Tyvek DrainWrap or approved equal) and wood furring strips behind new cedar siding. Nominal 1”x2” green treat lumber will be used for furring strips to achieve a 3/4” air gap. Contractor must follow all details labeled 1-6 in Appendix C of this document. The contractor will be required to submit shop drawings of these details and produce elevations of the building (or photo elevations) with notes where each detail will occur to ensure the proper installation of the new siding system. Provide insect screen at top and bottom of walls per details labeled 1-6 in in appendix C. Provide CoraVent SV-5 Rainscreen Siding Vent or approved equal.

All corner trim, including starter trim, inside corners, and outside corners, shall be removed and replaced with new smooth-planed cedar trim boards matching the existing size and appearance.

Existing metal window cladding removed during siding replacement shall be refabricated and reinstalled to match the original configuration, appearance, and color. Installation shall ensure proper integration with the new house wrap system to maintain a watertight assembly.

All new cedar siding and trim shall be primed on all sides and edges prior to installation. After installation, all wood components on this contract shall receive two finish coats of Sherwin-Williams Emerald Rain Refresh exterior acrylic latex paint, or an approved equal, applied in accordance with manufacturer specifications.

Cedar siding boards will be continuous and shall not contain joints when they are avoidable in runs under 16’. Where joints are unavoidable or 16’ they shall be staggered and properly sealed. All end joint shall be primed prior to installation.

The Contractor will need to temporarily remove handrails and other building attachments to complete the work. Moulding at the soffit intersection shall be carefully removed and reused where possible. If damaged, it shall be replicated and reinstalled to match the existing condition exactly.

All soffit and facia will be painted to match existing color.

Rotted top wooden hand boards along the front stairs shall be replaced in kind, matching existing dimensions, materials, and profile.

The Contractor shall protect all adjacent building components and site features during construction and shall repair any damage caused by construction activities at no additional cost to the Government.

Upon completion, the Contractor shall remove all construction debris, clean the work area, and deliver a complete, properly functioning exterior siding and building envelope system.

Contractor must follow all installation instructions from Appendix D How to Install Western Red Cedar Siding provided by Western Red Cedar Lumber Association. The intent is that cedar available at a local lumber yard is appropriate for this project. Western Red cedar is not required as long as material provided meets grade #1 requirements. These installation instructions are applicable for all types of cedar.

C. All work will be performed under a single contract.

D. Period of performance: Work shall be completed within 180 calendar days of the start date provided on the Notice to Proceed.

a. Clarification: The Notice to Proceed will be issued with a period of performance that is all inclusive of supply lead times, material deliveries, decommissioning, installation, anticipated average weather days for location, final commissioning, and acceptance of completed work. The contractor will be expected to provide a project schedule with adequate critical path details to ensure all work is completed within the stated calendar days from issuance of the Notice to Proceed. If weather impacts project beyond typical average weather patterns, contractor shall provide documentation in request for additional days.

1.3 Existing Condition Protections:

A. Preservation of Historical and Archeological Fabric:

i. The Historic and Archeological Data Preservation Act of 1974 provides for the preservation of historical and archeological data that might otherwise be lost as the result of alterations to the terrain caused by a federal or federally licensed activity or program.

ii. IF, in connection with operations under this contract, the Contractor, subcontractors, or employees of any of them, discovers, encounters or becomes aware of any possible historical or archeological remains or data, objects or sites of cultural value on the project area, such as historical ruins, graves or grave markers, fossils, or artifacts not specifically noted within the contract. The Contractor shall immediately suspend all operations in the vicinity and continue work in other areas outside a 50 foot radius of discovery and notify the Contracting Officer immediately. When safe to do so, follow up in writing with photographs within 2 days, giving the location and nature of the findings. No objects of cultural resource value may be removed. Contracting Officer will contact other entities as required.

iii. Where appropriate by reason of discovery, the Contracting Officer may order delays in the time of performance and/or changes in the work. If such delays and/or changes are ordered, the time of performance and contract price shall be adjusted in accordance with Changes clause.

iv. The Contractor will be responsible for protecting the cultural resources within and adjacent to the project area from damage. In addition, the Contractor will be liable for all damage to the cultural resources caused by their actions or the actions of their agents or representatives. The Contractor shall immediately notify the Contracting Officer or their representative if any damage occurs to any cultural resource and immediately suspend work in the area in which damage has occurred until authorized to proceed.

v. The Contractor agrees to include this language within all subcontracts.

B. The structure involved in the work of this Contract is a designated historic structure listed in the National Register of Historic Places. Every precaution shall be taken by the Contractor to prevent damage to existing historical materials, structural components of the building and to the surrounding area. Should any damage be incurred as a result of the Contractor's operations at the site, it shall be repaired, or the damaged materials replaced in kind by the Contractor to the satisfaction of the Contracting Officer at no additional expense to the Government.

C. Protection of Landscaping and Surrounding Structures: All Ground Disturbance at this project shall have oversite by an Owner provided Archeologist. Coordinate schedules as required. The Contractor shall take all necessary measures to provide protection for all trees, fencing, walks and other landscape features and surrounding structures near the work site as noted with the contract. Any such surrounding features damaged, scarred or broken as a result of the Contractor's operations at the site outside of agreed upon documented extents, shall be treated, repaired or replaced in kind to the satisfaction of the Contracting Officer at no additional expense to the Government.

ITEM 2 – PROTECTING EXISTING UTILITIES

2.1 Protecting Existing Utilities: Notify Contracting Officer (CO), Contracting Officer's Representative (COR) and utility companies as required to request location services prior to and to coordinate any excavation/digging operations, and/or for demolition if within Scope of Work.

2.2 Contractor shall be responsible for locating and preventing damage to known utilities on site or indoors. If contractor damage occurs, alert CO and COR as soon as safely possible, and repair utility at no additional expense to the Government. If damage occurs to an unknown utility, contact CO and COR as soon as safely possible.

2.3 Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Government or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated below:

A. Notify CO and COR not less than two business days in advance of proposed utility interruptions.

B. Hours for Utility Shutdowns: Shutdowns shall not exceed 2 to 3 hours. Temporary provisions will be needed by the Contractor for periods longer than stated allowance or if required for critical systems as determined by COR.

ITEM 3 - CONTRACTOR'S USE OF PREMISES

3.1 Conduct of Operations: At all times the contractor shall conduct his operations in conformance with the rules and regulations promulgated by the Secretary of the Interior for the National Park Service, and applicable park rules and regulations prescribed by the Park Superintendent. https://www.nps.gov/piro/learn/management/suptcompendium.htm

A. Communications: Contractor shall provide the Contracting Officer and COR with methods of communications including land and/or cell phone numbers (note some areas of work have limited service coverage), email and in case of emergency 24-hour contact options for duration of time operations.

B. No signs or advertisements (except those specified herein and as required for safety) shall be displayed on the construction site or within the park unless approved by the Contracting Officer.

C. Smoking is not permitted within any Federal building or within 25 feet of entrances, operable windows, or outdoor air intakes.

D. Public Use of Site: Contractor shall always conduct operations to ensure the least inconvenience to the public. Contractor will be working on a building that will currently be occupied as housing.

3.2 On-site work hours: Work shall be generally performed during normal business working hours of 9am - 5pm, Monday through Friday, except when otherwise indicated. Work on Saturdays, Sundays, Federal holidays, early morning, or at night may not be performed without prior consent from the CO and COR. Submit requests for work outside of the stated normal business hours to the CO and COR for approval at least 48 hours in advance of the work.

The following Federal holidays are observed by the National Park Service:
New Year's Day
Inauguration Day
Martin Luther King, Jr's Birthday
Washington's Birthday
Memorial Day
Juneteenth National Independence Day
Independence Day
Labor Day
Columbus Day
Veterans Day
Thanksgiving Day
Christmas Day

- Note: Any of the above holidays falling on a Saturday will be observed on the preceding Friday; holidays falling on Sunday will be observed on the following Monday. The specific day that each holiday is recognized for each year can be found at the following site: Federal Holidays (opm.gov).

3.3 Contractor Use of Site:

A. General: Contractor shall have limited use of the site for construction operations. Limit use of premises to construction area as shown on site plan. Do not disturb portions of Project site beyond areas in which the Work is indicated.

B. Driveways and Entrances: Keep driveways, access roads, and entrances serving premises clear and available to Government, Government's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize use of driveways and entrances.

C. Do Not disturb site outside of noted disturbance area, including earthwork, and clearing of vegetation, to:

1. 25 feet beyond constructed areas

Contractor shall provide appropriate matts for equipment on turf areas to reduce soil compaction. Contractor shall remediate soil compaction as directed to do so by the CO/COR.

D. Utilities

1. General: Cost or use charges for temporary facilities shall be included in the Contract Sum as required.

2. Water Service: Water from existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations without any additional permit costs. Use resources wisely and minimize waste of water.

3. Electric Power Service: Electric power from existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations without any additional permit costs. Power may or may not meet your construction power tool requirements, provide generators if questionable. Use power in a resourceful manner and avoid excess power waste.

4. Sanitary Operations:

a. Toilets: Contractor must provide toilets for contractor personnel, sufficiently lighted and ventilated toilet facilities in weatherproof, sight proof, handicap accessible (if required), sturdy enclosures with privacy locks. Coordinate with COR for approved location if not shown on attached site plan.

E. Security and Protection facilities:

1. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with state and federal environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

2. Cleaning of Equipment: The Contractor shall ensure that prior to moving on to the Project Area, all equipment, is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Ensure that all equipment has been pressure washed and is free of exotic species prior to start-up of operations and moving of equipment to Project Area. Equipment shall be considered free of soil, seeds, and other debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools are not required.

3. Vegetation and Wetland Protection: Coordinate with COR to construct protection fence at drip line of any vegetation or wetlands impacted within construction and grading limits. Any

damaged vegetation or wetlands are to be restored to original conditions via replacement at no additional expense to the Government. Protection fence to be a temporary barrier, meeting the following requirements: High-density plastic, extruded and stretched polyethylene fabric with 2 inch (50mm) maximum opening pattern, highly visible orange color, 48 inches (1220mm) high, supported by tubular or T-shape galvanized steel posts spaced not more than 96 inches (2440mm) apart. Coordinate with COR prior to ANY vegetation or wetland removals. Consult with COR for any unplanned removals required for vegetation that interferes with construction. Carefully supervise excavating, grading, filling, and other construction operations near vegetation to prevent damage.

4. Pest Control: Follow best practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at project completion. Perform control operations lawfully, using environmentally safe materials.

5. Temporary Enclosures: Provide and maintain temporary enclosures such as snow fence as required for protection of construction in progress and from access by visitors or staff, other construction operations, and similar activities.

6. Hot Work Permit: Not Required

3.4 Storage - Staging Areas:

A. Confine Storage of materials and equipment to the project staging area noted on the plans/aerial. Specific storage units shall be provided by the contractor and exact location within staging area shown in appendix A below may be discussed at the preconstruction briefing. All storage units provided by the contractor shall be in a clean and acceptable condition to the COR. Security of the materials and equipment on site is the Contractor's responsibility.

3.5 Preservation of Natural Features: Care must be taken if utilizing man lifts man or equipment to not damage historic sidewalks that are located on three sides of this building.

3.6 Hauling Restrictions: Contractor shall verify and be responsible for the path accessing the site and obtaining / maintaining all local, state and federal permits/licenses associated with hauling/road requirements and dumping of materials associated with the project.

3.7 Waste Removal, Recycling, and General Housekeeping:

A. Keep project site in a neat, orderly, and safe condition at all times.

1. Contractor is responsible for providing dumpsters for waste and recycling and for removing all waste created by the project. Contractor shall recycle to the highest degree possible and empty dumpsters as necessary to avoid debris on site. Coordinate with COR for approved dumpster locations prior to commencing construction.

2. Dispose of waste materials and recycling legally outside the park. The contractor shall not use park dumpsters.

3. Address Recycling: Government goal is to salvage and recycle as much nonhazardous construction waste as possible. Use sustainable methods to the extent possible during this project, recycling material as much as possible within local means. Maintain accurate documentary records for submittal of all recycled materials used including fly ash and slag cement.

4. For all waste and recycling removals offsite, contractors shall provide estimates and/or tickets to quantify material weights and report back to the park, submit to COR for review and record filing.

3.8 Occupancy Requirements for Buildings:

A. Existing Buildings:

1. Full Government Occupancy: Government will occupy buildings that will be under construction during the entire contract period. Cooperate with Government during construction operations to minimize conflicts and facilitate Government usage. Perform the Work so as not to interfere with Government's day-to-day operations. Maintain existing exits, unless otherwise indicated. Contractor will maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the CO or COR. Contractor will maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

B. New /Existing Buildings Unoccupied:

1. N/A

3.9 Photo Documentation:

A. Contractor must provide existing condition, progress, and completion photos. All photos shall be in focus, show maximum range of depth of field general photo and then close up detail photo as needed. Shall be in JPEG digital form and submitted preferably electronically by email or optional via CD-R Archival Gold or DVD-R Archival Gold media with printed labels and 8 mega pixels minimum within 7 days from time of taken or as approved by COR.

B. Existing Condition Images:

1. Before starting construction, take color, dated, digital images of project site and adjacent property/roads/etc. that may be impacted by construction activity/traffic. Include existing items to remain or be salvaged from different vantage points and with context for location identification.

C. Construction Progress Images:

1. Document all sub-surface work/ trenches etc. prior to backfill with photos covering enough overall field view to show location and then zoom in for details. (Locations and dimensions shall also be noted on as built drawing set.)

2. Maintain organized index for photos with date, description, etc.
3. Additional images as needed when questions or emergency situations occur. Submit within 24 hours.

D. Completion Images:

1. Document all completed work within scope of work.
2. Maintain organized index for photos with date, description, etc..
3. Additional images as needed when questions or emergency situations occur. Submit within 24 hours.

3.10 Fire and Life Safety:

A. As a minimum, conduct one weekly 15 minute "toolbox" safety meetings. These meetings shall be conducted by a foreman or supervisor and attended by all construction personnel at the worksite. Topics need to coincide with work scheduled for the following week. Document and submit meeting minutes to the CO and COR within one day after the meeting and document the meetings on the daily reports.

B. Comply with the requirements of NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations). Take all necessary precautions to prevent fire during construction. Provide adequate ventilation during use of volatile or noxious substances.

C. Store and handle hazardous materials in accordance with manufacturers and OSHA 29CFR1926 Subpart D requirements 1926 | Occupational Safety and Health Administration (osha.gov). Maintain readily available, on site, MSDS/Safety Data Sheets (SDS) for each chemical.

1. Immediately report all spills of hazardous materials to the CO, COR, and park.
2. Maintain a spill emergency response kit.
3. Train employees how to respond to a spill and use the emergency response kit.

3.11 Noise and Acoustics Management

A. Contractor shall not have personal radios or other media sources and they shall not be broadcast within NPS property.

B. Noise Control: Perform operations to minimize noise. Perform noise-producing work in less sensitive hours of the day or week as directed by the Contracting Officer or COR.

C. Repetitive and/or intermittent, high-level noise: Permitted only during Daytime.
a) Do not exceed the following dB(A) limitations at 50 feet: 70 dB(A) More than 12 minutes in any hour, 80 dB(A) More than 3 minutes in any hour. 2. Maximum permissible construction equipment noise levels at 50 feet: Compressors 75 dB(A), Pneumatic Tools 80 dB(A), Pumps 75 dB(A), Saws 75 dB(A), Generators 75dB(A), Vibrators 75 dB(A) 3. Ambient Noise maximum noise levels (dB) for receiving noise area at property line shall be as follows. Residential receiving area: Daytime 65 dB Nighttime 45 dB. Commercial/Industrial receiving area: Daytime: 67 dB Nighttime: 65 dB

ITEM 4 - COMMENCEMENT, PROSECUTION, AND COMPLETION

4.1 The Contractor shall commence work in accordance with the terms and conditions of the contract. Contractor shall coordinate and incorporate long lead and delivery time items within the schedule.

ITEM 5 - EXAMINATION OF THE SITE

5.1 All bidders are urged to visit the job site and examine existing conditions before submitting bids. Contractors will be accountable for understanding existing conditions. No cost changes for items visible during site visit will be allowed.

ITEM 6 - ABBREVIATIONS

6.1 The list of abbreviations, standards and organizations which may be used in/referred within the Construction Specifications or Special Provisions, may be found linked from the listed page below. On the home page, follow the link under **"Contracting and Procurement"** labeled **"NPS Reference Standards."** https://www.nps.gov/orgs/1671/do-business-with-us.htm

ITEM 7 - ACCIDENT PREVENTION

7.1 Description: The work of this section consists of establishing and implementing an effective accident prevention program (APP) and providing a safe environment for all personnel and visitors.

7.2 Submittals:

A. Accident Prevention (Safety) Plan (APP): Submit a **site-specific** accident prevention (safety) plan. The Plan shall be written to comply with OSHA and project requirements (a generic plan is not acceptable) including but not limited to the following:

1. Name and qualifications of responsible supervisor to carry out the program.
2. First aid and rescue procedures.
3. Training, both initial and continuing.
4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase, with a Job Hazard Analysis (JHA)/Job Safety Analysis (JSA), etc. A sample JHA template may be provided upon request.
5. Planning for possible emergency situations, such as cave-ins, earthquake, explosions, fires, floods, power outages, slides, and windstorms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.
6. Contractor to identify nearest location of medical facility for emergencies
7. Recognition that works will be performed in remote areas with limited communication or cell phone coverage if applicable.
8. Supplemental hazard specific plans may be required IAW 29 CFR 1926 or 1910.

B. Meeting and Inspection Reports: Safety Meetings: As a minimum, conduct 15 minute "toolbox" safety meetings. These meetings shall be conducted by a foreman and attended by

all construction personnel at the worksite. Submit a report of safety meetings and inspections to CO and COR within one day after the meeting and document the meetings on the daily reports.

7.3 Qualification of Employees:

A. Ensure that employees are physically qualified to perform their assigned duties in a safe manner to include operators of vehicles and equipment. Provide operating instructions for all equipment.

B. Do not allow employees to work whose ability or alertness is impaired because of drugs, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.

7.4 Accident Reporting: The Contractor shall report all accidents to the CO and COR as soon as safely possible and assist the CO and COR and other officials as required in the investigation of the accident.

7.5 First Aid Facilities: Provide access to facilities for the number of employees and appropriate to the hazards associated with the types of ongoing construction work at the site.

7.6 Emergency Instructions: Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

7.7 Personal Protective Equipment (PPE): It is the Contractor's responsibility to require all those working on or visiting the site to wear necessary protective equipment at all times.

A. PPE must meet requirements of applicable ANSI standards. Selection shall conform to OSHA 29CFR 1926 Subpart E.

B. A hard hat use area shall be designated by the Contractor. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Contracting Officer.

C. All PPE will be serviceable at all times. At a minimum, maintain 2 sets of PPE including hard hats and all other Accident Prevention Plan required equipment.

7.8 Hazardous Materials: It shall be the responsibility of all operators and contractors, functioning within the park to properly cleanup, mitigate and remediate if necessary, all unauthorized discharges of hazardous materials or non-hazardous chemical and biological products released from fleet and/or other support vehicles or stationary sources. Response shall be consistent with guidelines established by federal, state, and local regulations, and as outlined within the operator's Safety or Hazardous Materials Business Plan.

A. If a spill, leak, or other release occurs, the operator shall as soon as possible, without impeding cleanup, notify the local 911 Emergency Response, COR and or the National Park Service Emergency Dispatch.

ITEM 8 - PRECONSTRUCTION CONFERENCE

8.1 If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed. See Item 9.1C below.

ITEM 9 - SUBMITTALS

9.1 General Contracting Submittal Procedures:

A. General: Prepare and submit submittals required by individual Technical Specification Sections. Types of submittals are indicated in individual specific sections.

1. CM-16 Transmittal Form: All submittals shall be transmitted via electronic email using National Park Service form CM-16 form. The form will be provided by the Contracting Officer. No action will be taken on a submittal item unless accompanied by the CM-16 transmittal form. Submit completed CM-16 forms to the CO and the COR

B. Submittal List: administrative required submittals are listed below in 9.1.C and does not include technical section submittal requirements included in each technical section.

C. Preconstruction Conference Submittal: Satisfactory evidence of liability insurance coverage and workman's compensation, and any applicable bonds, must be submitted within 10 calendar days of Notice of Award. The following items are to be submitted prior to the Preconstruction Conference or as specified at the CO's discretion. The timeline for the documents to be submitted will be addressed at the pre-construction conference for those items that were not received and approved prior. Notice to Proceed may not be issued, and the Contracting Officer will consider other contractual remedies if not resolved as directed. Work shall not commence until written Notice to Proceed has been issued. Contracting Officer will notify Contractor of tentative date for the Pre-Construction Conference:

1. Letter designating Project Superintendent.
2. Construction Schedule. (Must include shop drawings, procurement time including long lead time items, mobilization, trade work progression and completion at minimum.)
3. A comprehensive breakdown of the Schedule of Values.
4. Accident Prevention (Safety) Plan (see section 7 of this document).
5. A list of Subcontractors for this project.
6. Written statements from subcontractors certifying compliance with applicable labor standard clauses (SF1413).
7. Quality Control Plan.

9.2 Project Submittal Process (Shop Drawings, Product Data, and Samples): Contracting Officer will provide sample cover sheet and a list of required submittals is included in each technical specification or attached at the end of this document.

A. Shop Drawings: Indicate all coordinating materials and work impacting the installation coordination, connection details, anchorage requirements, hardware locations, and installation details and locations.

1. Submit Shop Drawings according to Part 9.1 of this section to include one digital file (.PDF or .TIF) and two full size hardcopy documents to COR.

B. Product Data: Provide component construction and specification data sheets, anchorage requirements and any other product specific data.

1. Submit Product Data according to Part 9.1 of this section to include one digital file (.PDF or .TIF) to COR.

C. Samples: Submit 2 color samples 4” x 6” minimum in size for all product color selections. Paint samples shall be actual paint finish drawdown for all project colors.

1. Submit Samples CM-16 Transmittal Form according to Part 9.1 of this section to include one digital file (.PDF or .TIF) and physical samples of actual material to COR.

D. For submittals specified above, forward submittals to Contracting Officer and COR at least 15 days before need for approval (depends on length of project).

E. After approving submittals, Contracting Officer and/or COR will return one copy to the Contractor. If submittals are not approved, Contracting Officer will return all copies to Contractor with reasons for rejection. Resubmit, identifying changes. Any work done before approval shall be at Contractor's own risk.

9.3 Approved Equals: All brand names noted are subject to ‘or equal’ products. If an item in this solicitation is identified as “brand name or equal” or lists more than 1 manufacturer, the description of the proposed item must reflect the characteristics and level of quality that will satisfy the Government’s needs as demonstrated by the salient physical, functional, or performance characteristics that “equal” products must meet and/or exceed that as specified in the solicitation or relevant specification. Contractor shall incorporate and be responsible for all collateral costs due to the or equal proposed as required to provide a complete project.

A. For each item proposed as an “approved equal,” submit supporting data, including:

1. Drawings and samples as appropriate.
2. Comparison of the characteristics of the proposed item with that specified and with the salient characteristics provided.
3. Changes required in other elements of the work because of the substitution.
4. Name, address, and telephone number of vendor.
5. Manufacturer’s literature regarding installation, operation, and maintenance, including schematics for electrical and hydraulic systems, lubrication requirements, and parts lists. Describe availability of maintenance service, and state source of replacement materials.

B. A request for approval constitutes a representation that General Contractor:

1. Has investigated and shall provide documentation in request showing that the proposed item is equal or superior in all respects to the salient characteristics specified.
2. Will meet or exceed warranties for the proposed item specified.
3. Has determined that the proposed item is compatible with interfacing items.

4. Will coordinate the installation of an approved item and make all changes required in other elements of the work because of the substitution.
5. Waives all claims for additional expenses that may be incurred as a result of the substitution.

C. Approved Equals will be evaluated and approved/disapproved during the submittal process.

9.4 Schedule of Values: Submit the Schedule of Values a minimum of one week prior to the Preconstruction Conference for COR review. Schedule of Values shall include defined work line items with cost break downs including labor, material, and equipment for COR approval.

9.5 Progress Reporting: The initial Construction Schedule and Schedule of Values are required a minimum of one week prior to the Preconstruction Conference. After the Notice to Proceed is issued and after on-site work begins, progress will be documented via daily logs and by providing an updated Construction Schedule and Schedule of Values when requested, but minimally with each pay application. Submit digital copy electronically (PDF preferred) of all required documents. Construction Schedules are normally in bar chart form and indicate estimated starting and completion dates for each part of the work. For a pay application to be reviewed and processed in a timely manner, the following information must either be submitted prior to or accompany submission of the pay application:

A. Daily/weekly progress reports during construction as part of the administration process.

B. Updated Schedule of Values: Breakdown each lump-sum item into component work activities used in the schedule, for which progress payments may be requested. The Schedule of Values will form the basis for payment. The work activities broken out within the schedule of values shall be integrated into and made a logical part of the construction baseline schedule submitted under this specification. The total costs for the component work activities shall equal the contract price for that lump-sum item. The Contracting Officer may request data to verify accuracy of dollar values. A sample Schedule of Values format may be provided upon request.

ITEM 10 – TEMPORARY SERVICES

10.1 It is the Contractor's responsibility to provide temporary services, equipment, tools, and skilled labor as required for the chosen means and methods to perform the work in accomplishing this Contract.

ITEM 11 - PROJECT CLOSEOUT

11.1 Description: The work of this section consists of final cleanup, closeout submittals, final inspection procedures working toward Final Acceptance.

11.2 Cleaning: Remove all tools, equipment, surplus materials, and rubbish. Move attic stock to location coordinated with COR. At time of final inspection, project shall be thoroughly clean and ready for intended use. Inspector holds the right to reschedule if project is not ready for inspection.

11.3 Completion and Final Inspection: Contractor shall submit written certification of project completion and request a final inspection to the Contracting Officer and COR. The Contracting Officer or designee will make an inspection within 10 days of receipt of request or at a mutually agreeable time.

A. If the work is determined to be complete following the final inspection with minor comments, the COR will prepare and provide the Contractor a Punch List noting outstanding items to be addressed.
B. If the work is not determined to be complete following the final inspection, the Contracting Officer will notify Contractor in writing, stating reasons. Contractor, after completing the work according to the Contract Documents, shall resubmit completion and request a new final inspection. Re-inspection costs may be charged against the Contractor in accordance with the Inspection of Construction contract clause.

C. Contractor shall complete the Punch List within 30 calendar days, or a time directed by the CO.

D. Once Contractor completes all items of work on the Punch List and all contractually required items are accepted, Contracting Officer will issue Letter of Final Acceptance of Work and request the final pay application.

E. If the Contractor fails to complete the work within the time frame, the Contracting Officer may correct the work with an appropriate reduction in contract price or charge for re-inspection costs in accordance with the Inspection of Construction contract clause.

F. Disposition of any permits and warranties required by the specifications in this section.

11.4 Final Acceptance of the Work: After all punch list deficiencies have been corrected, a Letter of Final Acceptance will be issued. A Release of Claims document must be executed and submitted to the Contracting Officer before final payment can occur.

11.5 Warranties

A. Construction Warranty shall be based on date of final acceptance of the work and remain in effect for one year.

B. Provide all manufacturer warranty information of products installed organized by Division. All contact information, extent of coverage and conditions shall be clearly noted as well as date of overall final acceptance.

C. Information shall include operation and maintenance manuals for each warranted product.

ITEM 12 - DEFINITION OF CONTRACT LINE ITEMS

12.1 Summary

A. The intent of this section is to explain, in general, what is and what is not included in a contract line item, and the limits or cut off points where one item ends, and another begins.

B. If no contract line item exists for a portion of the work, include the costs in a related item.

12.2 List of Contract Line Items

A. Contract Line-Item No. 01 Replace siding and associated building envelope components

1. This item consists of . providing all labor, materials, equipment, supervision, transportation, and incidentals necessary to remove and replace the existing wood siding and associated building envelope components
2. Payment will be made per the contract and percentage of completion level.

END OF SECTION

SECTION 07 46 00

WOOD SIDING

PART 1 – GENERAL

1.1 RELATED SECTIONS

A. Section 01 74 21 – Construction/Demolition Waste Management and Disposal
B. Section 06 10 53 – Miscellaneous Rough Carpentry
C. Section 07 62 00 – Sheet Metal Flashing and Trim
D. Section 07 92 00 – Joint Sealants

1.2 REFERENCES

A. Comply with the latest editions of the following:

1. American National Standards Institute (ANSI)
2. Western Wood Products Association – Standard Grading Rules for Western Lumber
3. National Lumber Grading Authority – Standard Grading Rules for Canadian Lumber
4. ASTM International – Fasteners, corrosion protection, and coatings
5. National Fire Protection Association – Applicable fire safety requirements

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1.3 SUBMITTALS

A. Product Data: Manufacturer’s product literature for siding, trim, fasteners, sealants, coatings, and WRB.

B. Samples:

1. Siding sample showing profile, finish, and grade characteristics.
2. Trim sample.

C. Installation Instructions: Manufacturer’s written instructions for siding and WRB system

D. Safety Data Sheets (SDS) for coatings and sealants.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original, unopened packaging labeled with grade and moisture content.

B. Store siding off the ground (minimum 4 in / 100 mm), flat, well-drained, and protected from moisture and sunlight.

C. Allow siding to acclimate to site conditions before installation.

1.5 WARRANTY

A. Provide manufacturer’s standard warranty for coatings and materials.

B. Warranty Period: Minimum 10 years for coating performance against peeling, cracking, blistering, and loss of adhesion, commencing at Substantial Completion.

PART 2 – PRODUCTS

2.1 WOOD SIDING

A. Species: Western Red Cedar or approved equivalent suitable for exterior siding.

B. Profile: Dutch lap, custom milled to match existing profile.

C. Grade: No. 1 (Select Tight Knot) or better, in accordance with WWPA or NLGA grading rules.

D. Finish: Smooth-planed on exposed face.

E. Characteristics:

1. Free of loose knots, knot holes, splits, or decay.
2. Tight, sound knots permitted within grading rules.
3. Maximum moisture content 12 percent at installation.

F. Lengths: Maximum practical lengths to minimize joints.

G. Pre-finish:

1. Prime and paint all sides and edges prior to installation.
2. Apply two coats of high-quality exterior acrylic latex paint with self-cleaning properties.
3. Touch-up paint to match field-applied finish.

2.2 WEATHER-RESISTIVE BARRIER (WRB)

A. Material: Tyvek DrainWrap, or approved equal.

B. Description: Drainable, water-resistive barrier with an integrated, compression-resistant spacer mesh.

C. Installation:

1. Provide a continuous WRB behind all siding.
2. Horizontal installation with minimum 6-inch (150 mm) overlaps; stagger vertical joints.

3. Tape all seams per manufacturer instructions.
4. Maintain a minimum 1 mm drainage gap between WRB and siding to ensure proper moisture management.

D. Accessories: Flashing tape, fasteners, and accessories per manufacturer instructions.

2.3 TRIM AND ACCESSORIES

A. Material: Cedar, No. 1 grade or better, matching siding species and finish.

B. Components: Corner boards, starter strips, fascia, frieze boards, window and door trim.

C. Pre-finish: Prime and paint all sides and edges consistent with siding.

2.4 FASTENERS

A. Stainless steel or hot-dip galvanized, corrosion-resistant, compatible with cedar.

B. Split less ring shank siding nails with textured heads must be used for all fastening.

2.5 FLASHING

A. Concealed flashing: Minimum 26-gauge galvanized steel or approved corrosion-resistant metal.

B. Provide flashing at all openings, penetrations, and transitions.

2.6 SEALANTS

A. High-performance exterior sealant compatible with wood siding and paint.

B. Color shall match siding and appear flush prior to final top coat.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify substrates are plumb, level, and suitable for siding installation.

B. Correct unsatisfactory conditions prior to installation.

3.2 PREPARATION

A. Install flashing at all openings and horizontal transitions.

1. B. Install WRB as continuous drainage plane:Stagger vertical laps.
2. Tape seams per manufacturer instructions.

C. Install furring/strapping at 16 or 24 inches on center to support siding.

D. Install starter strip at base of wall to set alignment.

E. Apply sealant around openings and penetrations.

3.3 INSTALLATION – SIDING AND TRIM

A. Install siding per manufacturer instructions for Dutch lap profile.

B. Ensure siding sheds water properly and maintains proper overlap.

C. Secure siding to wood substrate with corrosion-resistant fasteners.

D. Jointing: Stagger joints minimum 32 inches (800 mm); distribute evenly across walls.

E. Corners and Trim: Miter or butt joints as required; install trim and closures to match design intent.

F. Install insect screening at base of wall where required.

3.4 FINISHING

A. Exposed fasteners flush with surface; do not damage wood finish.

B. Touch up any blemishes to match existing color and sheen.

3.5 CLEANING

A. Remove all debris, excess materials, and equipment from site.

B. Leave areas clean, safe, and ready for use.

3.6 PROTECTION

A. Protect installed siding, trim, and adjacent components from construction damage.

B. Repair any damage caused by installation at no additional cost to the Government.

3.7 CLOSEOUT

A. Deliver a fully installed, primed, and painted cedar siding system integrated with WRB, ready for long-term performance.

END OF SECTION

SECTION 07 46 20

ALUMINUM WINDOW CLADDING

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Removal and proper disposal of existing aluminum window cladding and trim.
B. Fabrication and installation of new aluminum window cladding, trim, and accessories to integrate with new siding system.
C. Coordination with flashing, sealants, and weather-resistive barriers (WRB) for a watertight assembly.

1.2 RELATED SECTIONS

A. Section 07 46 00 – Wood Siding: Coordination for integration of window cladding with new siding and WRB.
B. Section 07 62 00 – Sheet Metal Flashing and Trim: Interface flashing at windows.
C. Section 07 92 00 – Joint Sealants: Sealant application at window interfaces.
D. Section 06 10 00 – Rough Carpentry: Wood framing or furring supporting cladding.
E. Section 01 74 21 – Construction/Demolition Waste Management and Disposal: Proper disposal of removed cladding.

1.3 REFERENCES

A. ASTM International:

1. ASTM E84 – Surface Burning Characteristics of Building Materials
2. ASTM E136 – Behavior of Materials in a Vertical Tube Furnace at 750°C

B. AAMA – Aluminum Coatings and Performance:

1. AAMA 2604 – High-Performance Organic Coatings on Aluminum Extrusions and Panels

C. Aluminum Association Standards:

1. AA ASM 35 – Aluminum Sheet Metal Work in Building Construction
2. AA ADM 1 – Aluminum Design

D. Testing Standards:

1. TAS 202-94 – Impact and Non-Impact Resistant Components
2. TAS 203-94 – Cyclic Wind Pressure Testing

1.4 SUBMITTALS

A. Product Data: Manufacturer’s specifications for aluminum window cladding, trim, and finishes.
B. Shop Drawings: Show dimensions, profiles, joints, expansion allowances, anchorage, and interface with siding, flashing, and sealant.
C. Samples: Two samples, minimum 2 x 3 in (51 x 76 mm), representing color, finish, and texture.
D. Closeout Submittals: Manufacturer’s recommended maintenance and cleaning instructions.

1.5 QUALITY ASSURANCE

A. Mock-Up: Construct mock-up of typical window cladding assembly for review and approval prior to full installation.
B. Compliance: Fabrication and installation shall comply with AAMA 2604, ASTM standards, and manufacturer instructions.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store cladding in manufacturer’s unopened packaging, under cover, off the ground, and protected from weather.
B. Prevent contact with materials that may cause staining or corrosion.
C. Handle and transport carefully to avoid bending, warping, or surface damage.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions within manufacturer-recommended temperature and humidity limits during fabrication and installation.
B. Do not install cladding under environmental conditions outside manufacturer limits.
C. Install only when weather conditions will not compromise finish, adhesion, or watertightness.

1.8 COORDINATION

A. Coordinate installation with new siding, flashing, sealants, and WRB to provide a watertight, secure assembly.
B. Adjust dimensions as required to accommodate field conditions while maintaining alignment with window openings.

1.9 PERFORMANCE REQUIREMENTS

A. Cladding shall resist design dead and live loads, wind pressures, and thermal movement.
B. Components shall be compatible with adjacent wood, metal, and siding substrates.
C. Fire Resistance: Aluminum components are inherently non-combustible; confirm assembly compliance with applicable codes (e.g., NFPA 285 for multi-story assemblies if required).

1.10 ALUMINUM WINDOW CLADDING PRODUCTS

A. Basis of Design: Extruded or roll-formed aluminum cladding, custom fabricated to window dimensions and profile.
B. Material: Minimum 0.032 in (0.81 mm) aluminum, corrosion-resistant, suitable for exterior exposure.
C. Finish:

1. Pre-treated with five-stage, chrome-free pretreatment.
2. Coated per AAMA 2604 – high-performance organic coating or powder coat.
3. Color and gloss as selected by Architect; wood-grain finish optional if specified.
   D. Accessories: Corner trim, closures, and flashings to ensure a watertight interface with WRB and siding.

PART 2 – EXECUTION

2.1 EXAMINATION

A. Verify that window openings and supporting substrates are plumb, level, and properly prepared.
B. Do not begin installation until unsatisfactory conditions are corrected.

2.2 PREPARATION

A. Remove existing aluminum window cladding carefully to prevent damage to framing, sheathing, and adjacent materials.
B. Clean surfaces, remove debris, and prepare for new cladding per manufacturer recommendations.
C. Ensure WRB and flashing are properly installed and integrated.

2.3 INSTALLATION

A. Install new aluminum window cladding, trim, and accessories per manufacturer instructions.
B. Secure cladding with corrosion-resistant fasteners to wood or metal substrate.
C. Maintain proper alignment, spacing, and expansion allowances.
D. Seal joints and interfaces with approved sealant per Section 07 92 00.
E. Ensure watertight integration with siding and WRB system.

2.4 FIELD QUALITY CONTROL

A. Inspect installed components for proper alignment, finish integrity, and secure attachment.
B. Verify sealant continuity and watertight performance at interfaces.

2.5 CLEANING AND PROTECTION

A. Clean aluminum surfaces per manufacturer instructions.
B. Touch-up, repair, or replace any damaged components before Substantial Completion.
C. Protect installed components until project closeout.

END OF SECTION

SECTION 09 91 00

EXTERIOR PAINTING

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Surface preparation, priming, and top coating of exterior wood siding, trim, and aluminum components.
B. Application of Sherwin-Williams Wood Primer and Sherwin-Williams Emerald Rain Refresh exterior acrylic latex topcoat (or approved equal).
C. Protection of adjacent surfaces and site features during painting operations.
D. Touch-up and finish repair of painted surfaces.

1.2 RELATED SECTIONS

A. Section 07 46 00 – Wood Siding: Surfaces to be primed and painted.
B. Section 07 46 20 – Aluminum Window Cladding: Surfaces to receive primer and finish coat.
C. Section 07 92 00 – Joint Sealants: Sealants to be cured before painting.
D. Section 01 74 21 – Construction/Demolition Waste Management and Disposal: Proper disposal of paint-related waste.

1.3 REFERENCES

A. ASTM D16 – Terminology for Paints and Coatings
B. ASTM D3359 – Standard Test Methods for Measuring Adhesion by Tape Test
C. SSPC PA 1 – Shop, Field, and Maintenance Painting Practices
D. Sherwin-Williams Product Data Sheets – Wood Primer and Emerald Rain Refresh coatings

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1.4 SUBMITTALS

A. Product Data: Manufacturer’s literature for primer, topcoat, and approved equal products.
B. Samples: Provide a sample panel, minimum 12 x 12 in (300 x 300 mm), demonstrating primer and topcoat application and color.
C. Closeout Submittals: Maintenance instructions, including cleaning and touch-up procedures.

1.5 QUALITY ASSURANCE

A. Apply coatings per manufacturer’s written instructions and NPS standards.
B. Installer Qualifications: Contractor experienced with exterior wood and aluminum coatings, capable of producing uniform, durable finishes.

C. Field Mock-Up: Prepare a mock-up area to verify color, sheen, adhesion, and finish quality; retain as standard for remaining surfaces.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver all coating materials in original, unopened containers labeled with manufacturer's information.
B. Store in accordance with manufacturer recommendations, protected from freezing, excessive heat, or direct sunlight.
C. Maintain product temperature within manufacturer-recommended range during storage and application.

1.7 PROJECT CONDITIONS

A. Environmental Conditions:

1. Apply coatings when surface and air temperature are within manufacturer-specified range (typically 50–90°F / 10–32°C).
2. Do not paint in wet, rainy, or excessively humid conditions.
   B. Substrate Conditions: Surfaces must be dry, clean, and free of dust, dirt, grease, mildew, or loose material.

PART 2 – PRODUCTS

2.1 PAINT MATERIALS

A. Primer: Sherwin-Williams Wood Primer, or approved equal.
B. Topcoat: Sherwin-Williams Emerald Rain Refresh exterior acrylic latex, or approved equal.
C. Colors: As selected by COR from manufacturer's standard or custom range.
D. Sealants: Ensure all sealants are fully cured prior to painting.

2.2 MATERIAL REQUIREMENTS

A. Primer shall provide adhesion, stain-blocking, and moisture resistance for exterior wood and aluminum surfaces.
B. Topcoat shall provide a durable, weather-resistant finish with self-cleaning properties, UV protection, and color retention.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify surfaces are clean, dry, and properly prepared.
B. Confirm that all wood and aluminum components are fully installed and any sealants are cured.
C. Notify Architect of any deficiencies before starting painting.

3.2 SURFACE PREPARATION

A. Clean wood surfaces: Remove dirt, dust, mill glaze, and loose fibers.
B. Sand wood surfaces to remove rough spots and promote adhesion.
C. Clean aluminum surfaces: Remove oils, dust, and oxidation per manufacturer instructions.
D. Protect adjacent surfaces, hardware, glazing, and landscaping from paint.

3.3 PRIMING

A. Apply primer to all wood and aluminum surfaces per manufacturer’s instructions.
B. Ensure complete coverage of all edges, ends, and surfaces before topcoat.
C. Allow primer to dry completely before topcoat application.

3.4 TOPCOATING

A. Apply two finish coats of Sherwin-Williams Emerald Rain Refresh (or approved equal) over primed surfaces.
B. Maintain uniform color, gloss, and film thickness.
C. Brush, roll, or spray application permitted as recommended by manufacturer; avoid runs, sags, or pooling.

3.5 TOUCH-UP AND REPAIR

A. Repair any scratches, chips, or blemishes after installation.
B. Feather edges to match surrounding surfaces.
C. Ensure all coated surfaces have a consistent and uniform appearance.

3.6 CLEANING AND PROTECTION

A. Remove paint debris, masking materials, and protective coverings from site.
B. Protect freshly painted surfaces from damage until project completion.
C. Any damage caused by painting operations shall be repaired at no additional cost to the Government.

END OF SECTION

Appendix A Site Plan

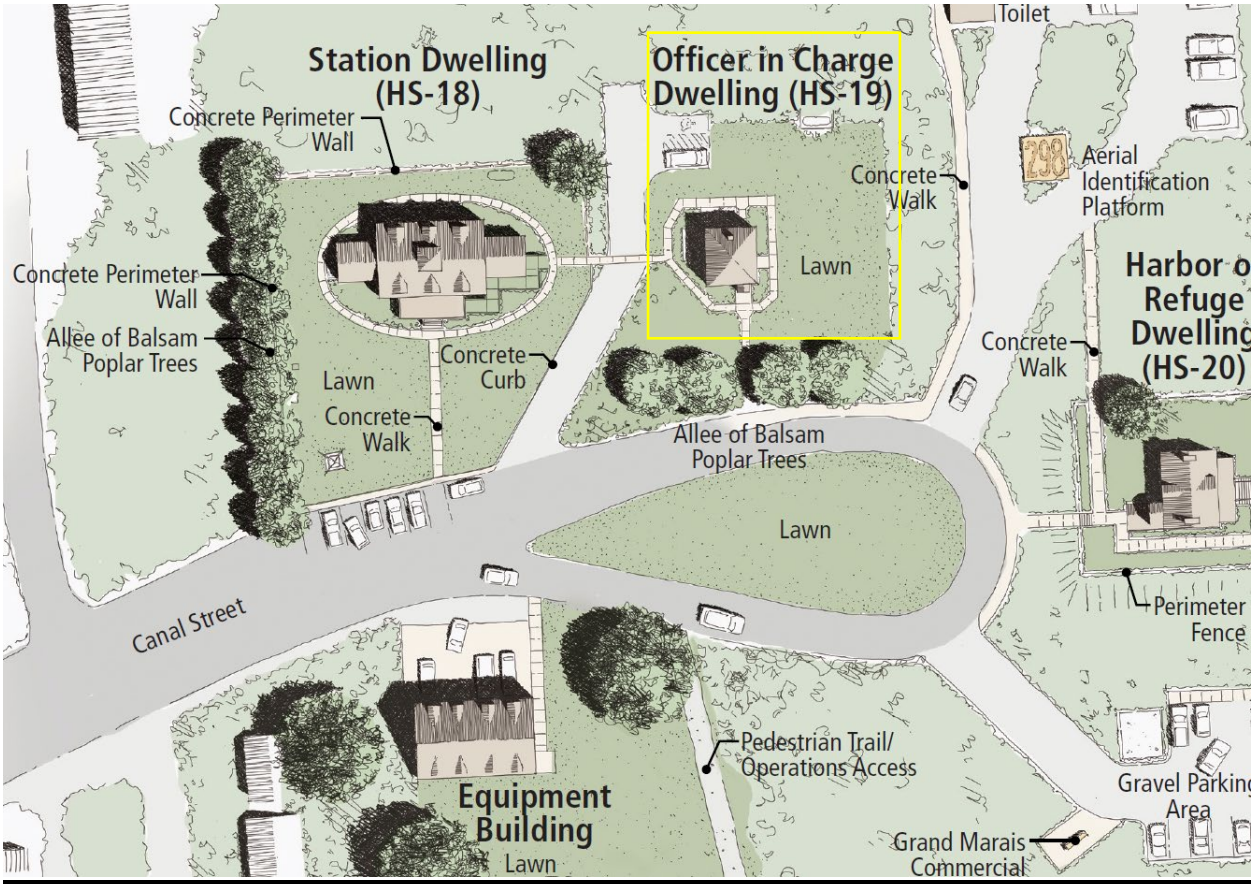


Figure 1 Coast Guard Point Showing Officer in Charge Dwelling

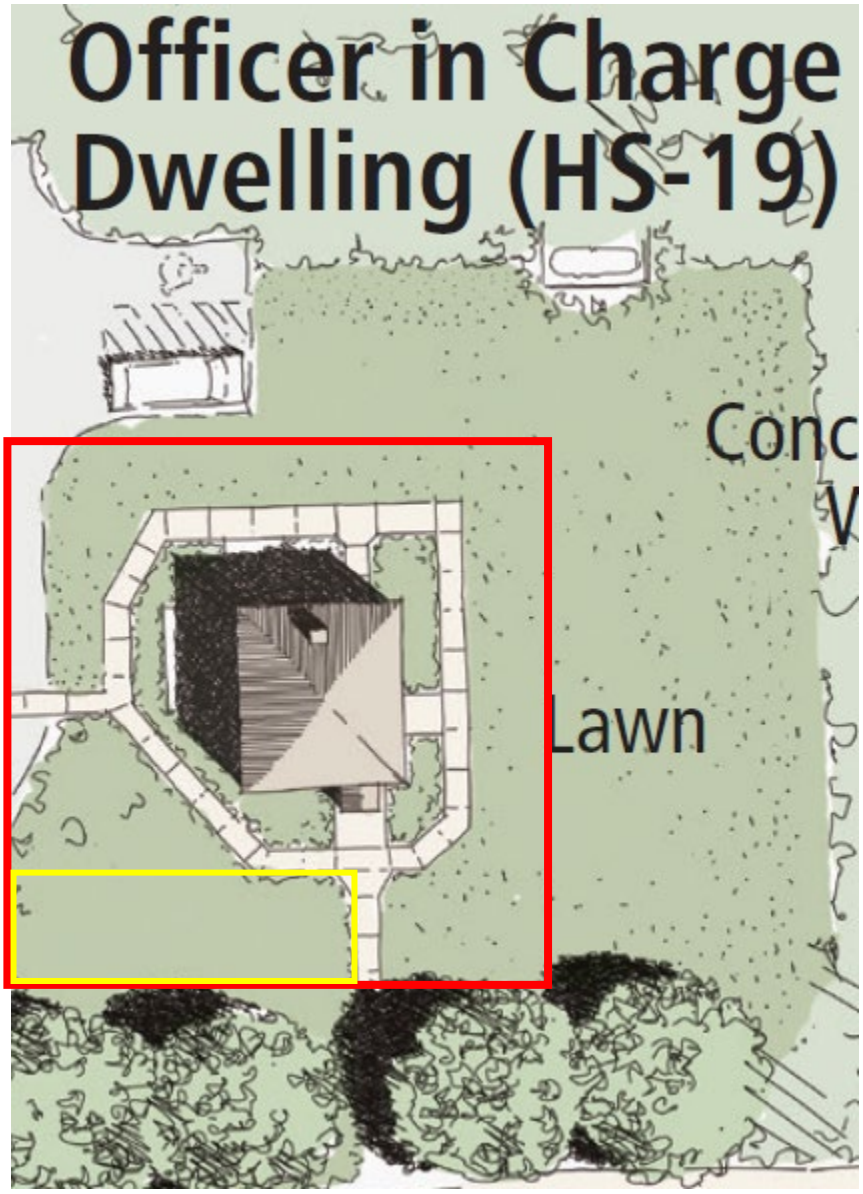


Figure 2 Red outline shows the overall work zone. The yellow outline shows approved location for dumpsters

Appendix B Project Photos

Figure 3 Current Condition

Figure 4 Siding rotting from inside out

Figure 5 Top handrail boards located along front staircase that will need replacement

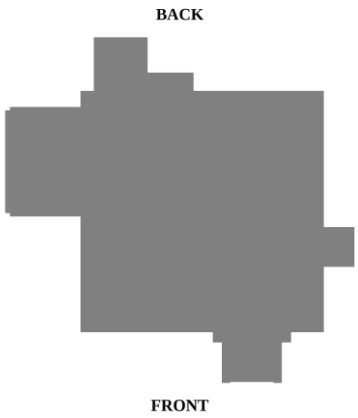
Figure 6 Photo of current siding install 2002 showing contractor what to expect to find under current siding. Notice OSB strips over tyvek

Figure 7 soffit and facia close up photo

Figure 8 Showing hidden rafter tail detail

Appendix C Project Drawings

All below measurements are approximate and must be field verified by Contractor



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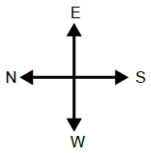
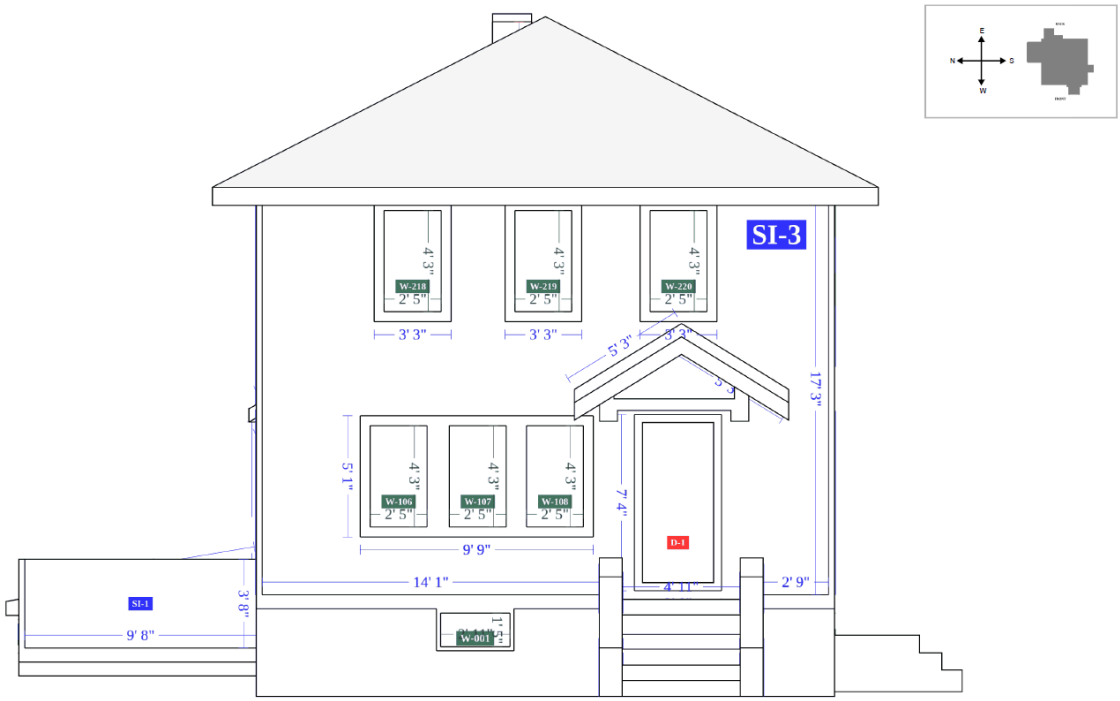


Siding Per Elevation

FRONT			RIGHT			LEFT			BACK		
SI-1	-	36 ft²	SI-2	-	9 ft²	SI-12	-	55 ft²	SI-8	-	288 ft²
SI-3	-	273 ft²	SI-5	-	31 ft²	SI-13	-	9 ft²	SI-9	-	8 ft²
SI-4	-	8 ft²	SI-6	-	31 ft²	SI-14	-	296 ft²	SI-10	-	38 ft²
			SI-7	-	336 ft²	SI-15	-	31 ft²	SI-11	-	31 ft²
						SI-16	-	6 ft²			
						SI-17	-	6 ft²			
317 ft²			**407 ft²**			**403 ft²**			**365 ft²**		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W-220
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W-107
W-108
W-001
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3' 3"
5' 3"
17' 3"
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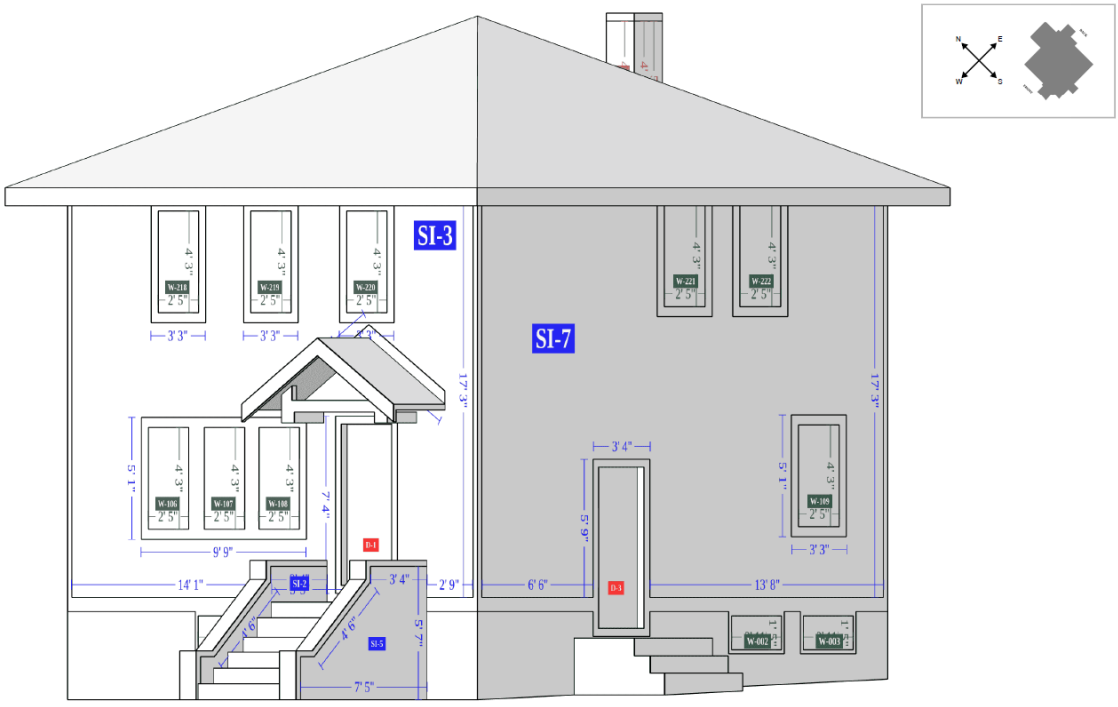
7' 4"
9' 9"
14' 1"
2' 9"
3' 8"
9' 8"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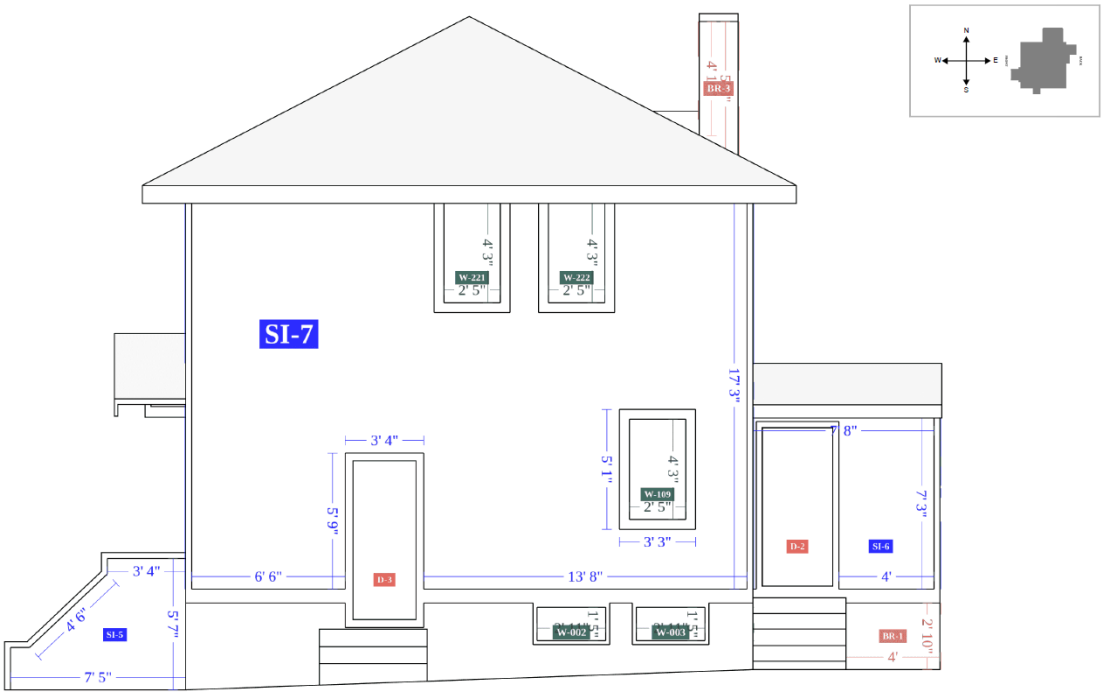
7' 5"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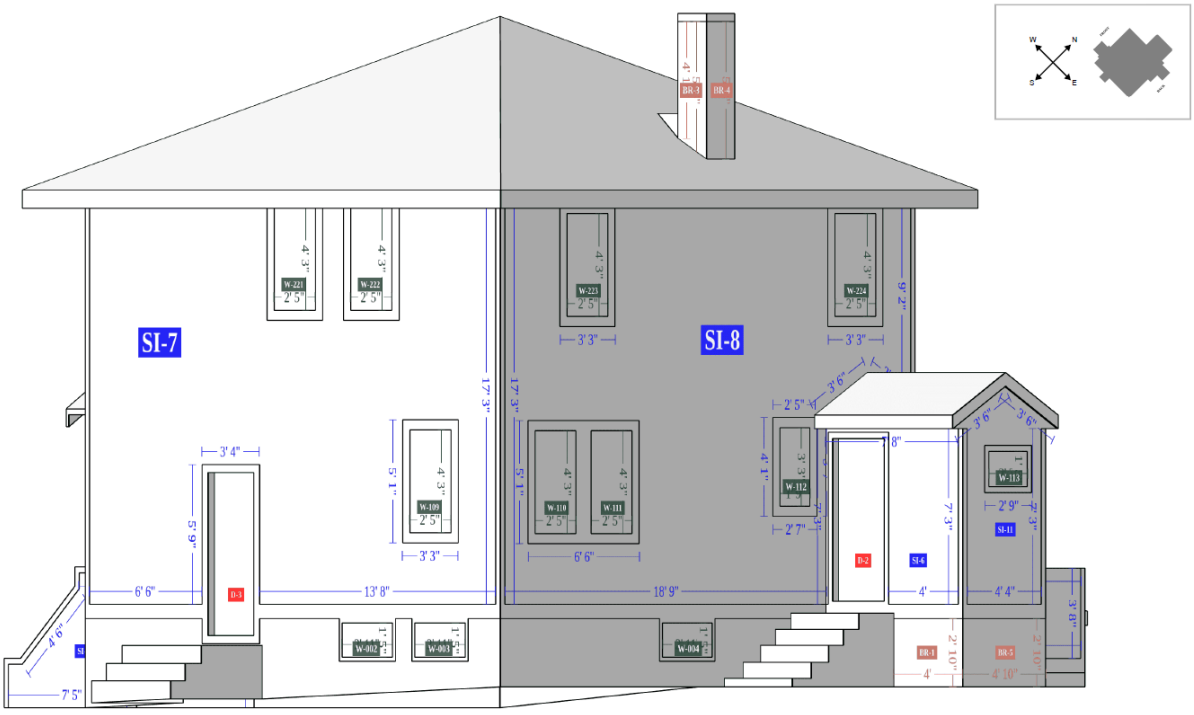
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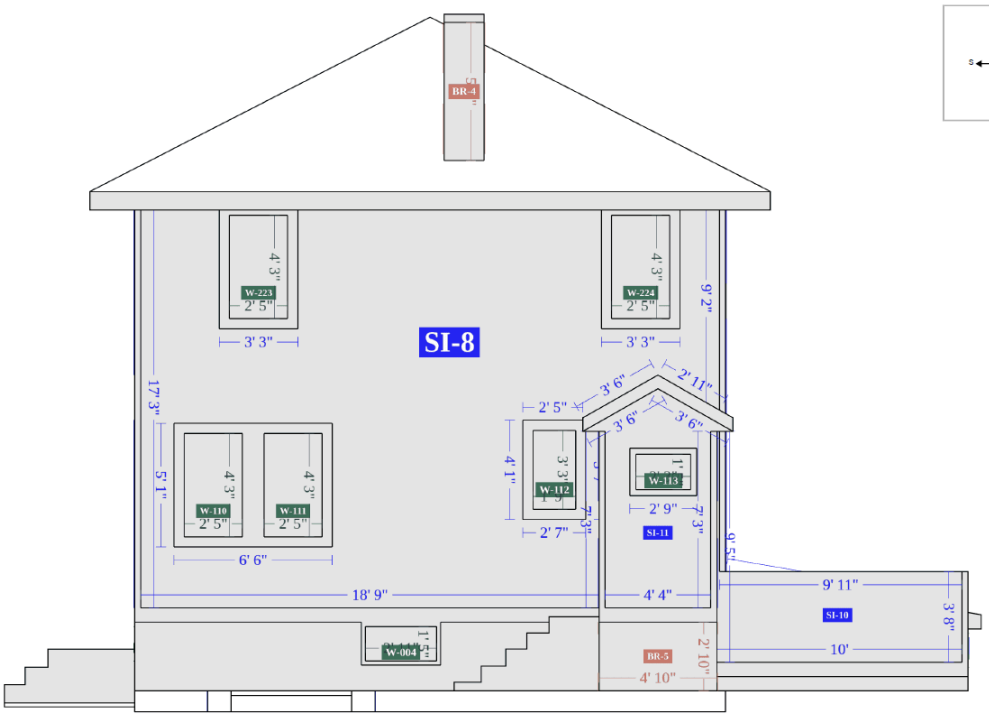
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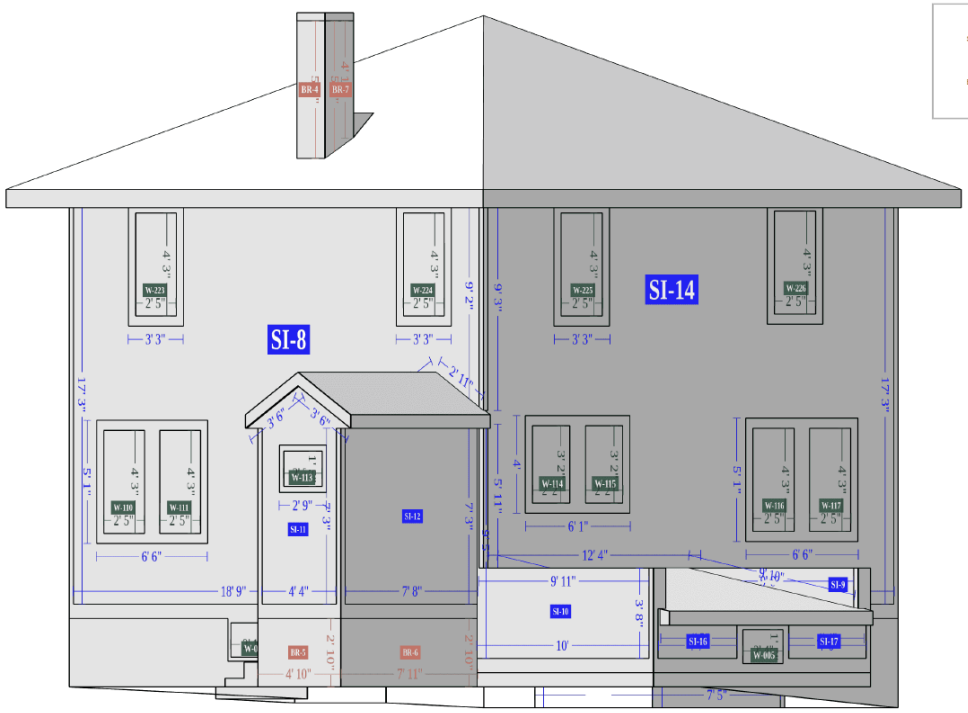
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17' 3"
5' 1"
6' 6"
18' 9"
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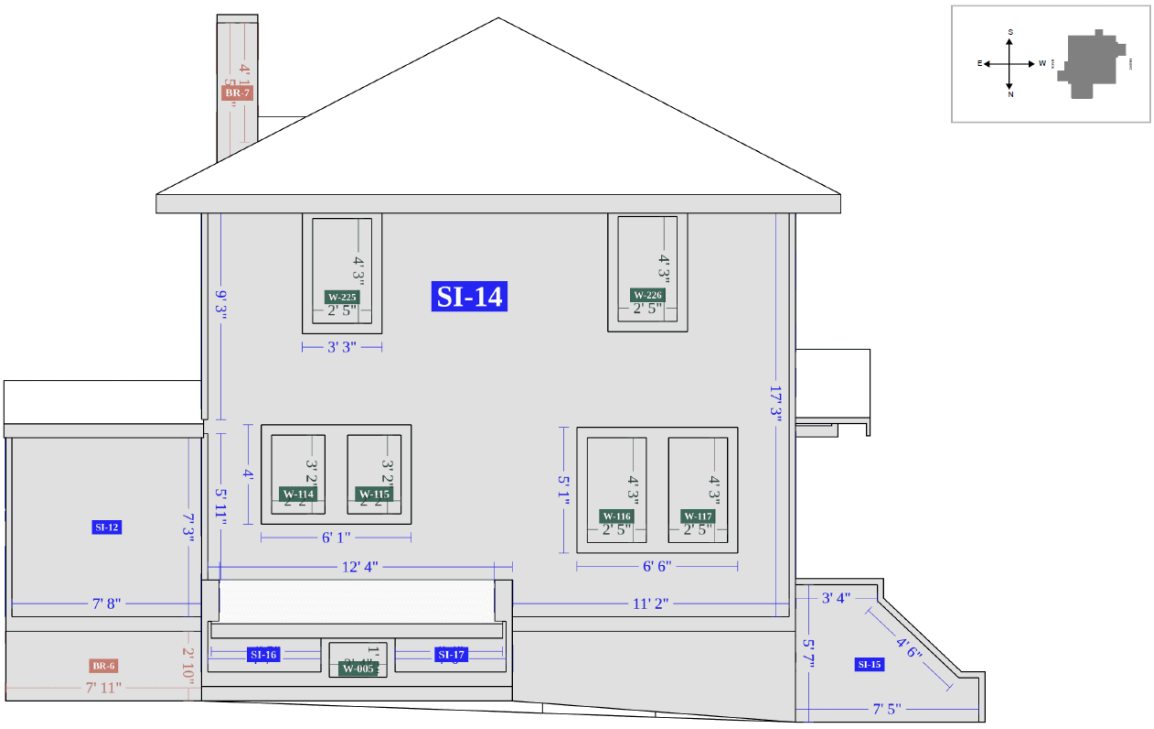
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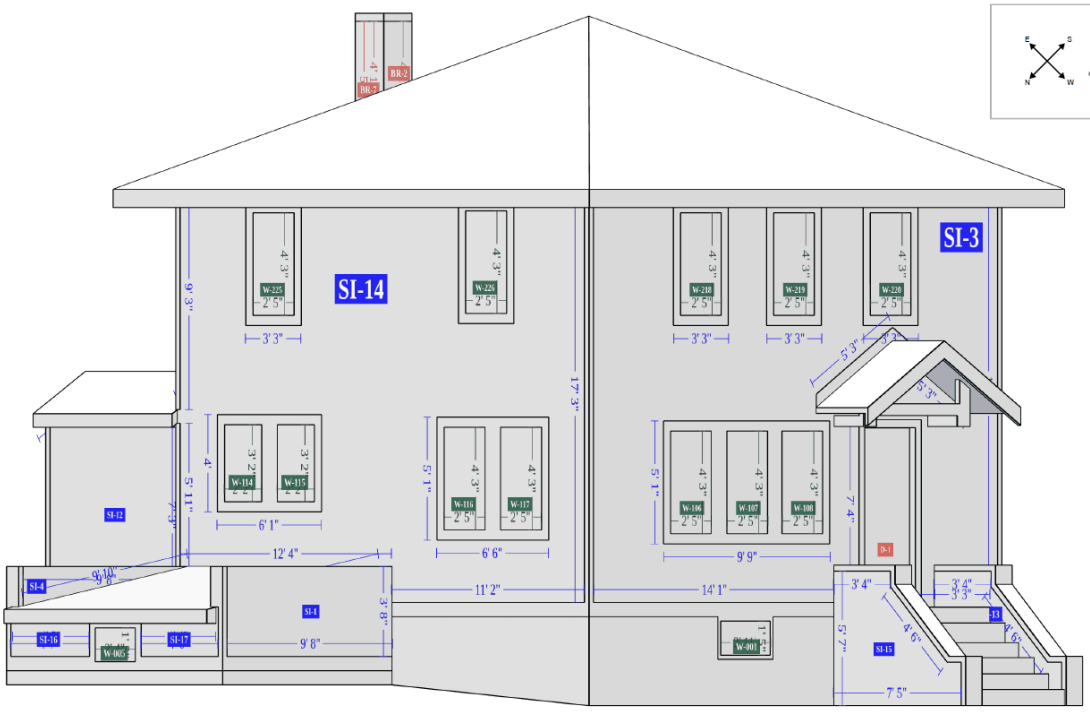
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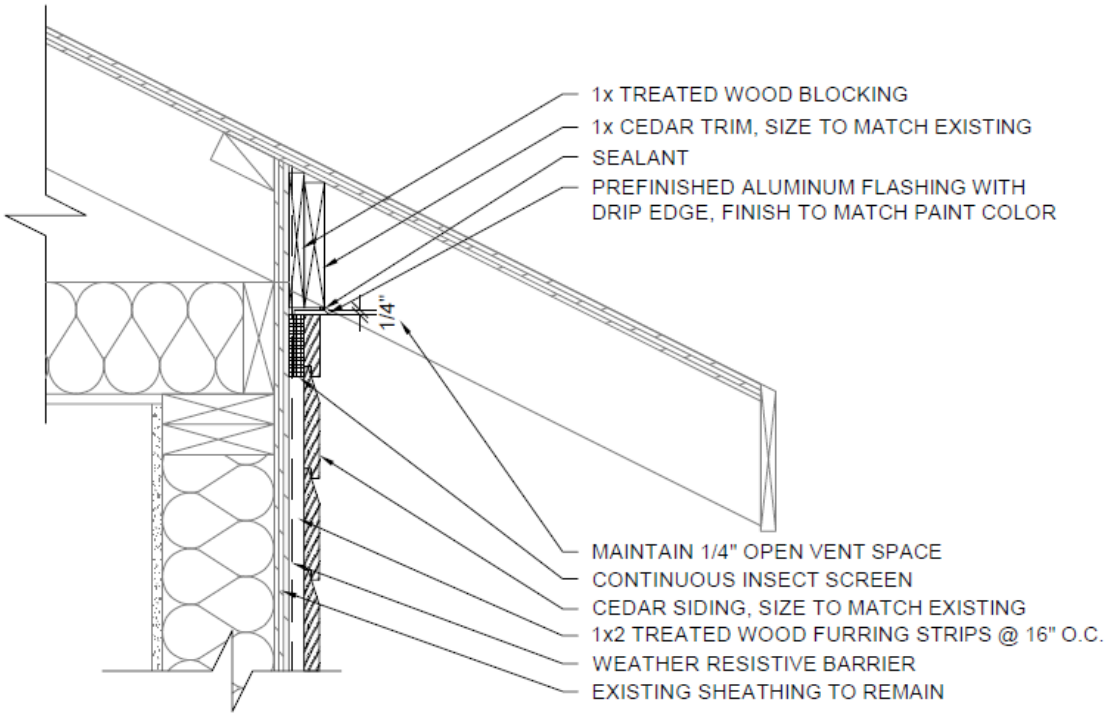
W-108
SI-12
SI-4
SI-1
SI-16
SI-17
W-005
W-001
SI-13
BR-2
BR-3

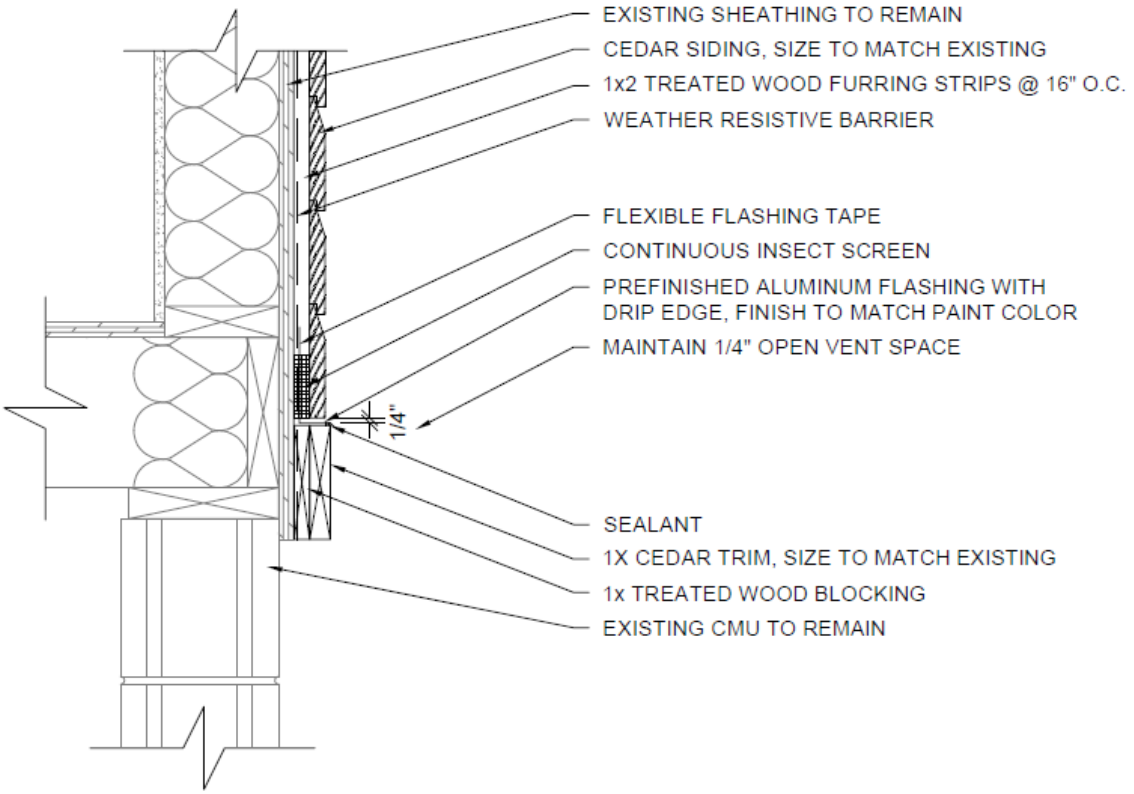
Facades

		Trim			Corners		Roofline		Openings		
Facade	**Area**	**Level Starter**	**Sloped**	**Vertical**	**Inside**	**Outside**	**Level Frieze Board**	**Sloped Frieze Board**	**Tops**	**Sills**	**Sides**
SI-1	36 ft²	9′ 8″	-	5′ 4″	2′ 1″	-	-	-	-	-	-
SI-2	9 ft²	7′ 5″	-	1′ 9″	4′ 10″	-	-	-	-	-	-
SI-3	273 ft²	11′ 1″	10′ 6″	20′ 7″	6′ 7″	-	23′ 8″	10′ 6″	37′ 2″	23′ 1″	72′ 5″
SI-4	8 ft²	-	9′ 10″	1′ 8″	-	-	-	-	-	-	-
SI-5	31 ft²	7′ 5″	-	6′ 1″	1′ 11″	-	-	-	-	-	-
SI-6	31 ft²	-	-	-	7′ 3″	-	7′ 8″	-	7′ 8″	-	21′ 4″
SI-7	336 ft²	-	-	-	-	-	23′ 6″	-	33′ 1″	9′ 8″	76′ 3″
SI-8	288 ft²	-	6′ 5″	1″	7′ 3″	9′ 3″	24′ 3″	-	34′ 2″	15′ 6″	55′ 3″
SI-9	8 ft²	-	9′ 10″	1′ 8″	-	-	-	-	-	-	-
SI-10	38 ft²	10′	-	5′ 4″	7′ 10″	5′ 9″	4″	-	-	-	-
SI-11	31 ft²	6′ 2″	-	7′ 3″	-	7′ 10″	-	7′ 1″	2′ 9″	2′ 9″	3′ 11″
SI-12	55 ft²	7′ 8″	-	-	7′ 3″	7′ 10″	7′ 8″	-	-	-	-
SI-13	9 ft²	7′ 5″	-	1′ 9″	4′ 10″	-	-	-	-	-	-
SI-14	296 ft²	23′ 8″	-	17′ 9″	1′ 6″	15′	23′ 9″	-	19′	19′	38′ 5″
SI-15	31 ft²	7′ 5″	-	6′ 1″	1′ 4″	-	-	-	-	-	7″
SI-16	6 ft²	-	-	8″	-	-	4′ 5″	-	2″	4′ 7″	3′ 5″
SI-17	6 ft²	-	-	8″	-	-	4′ 4″	-	2″	4′ 6″	3′ 5″
Total*	1492 ft²	97′ 11″	36′ 7″	76′ 9″	31′	22′ 10″	119′ 7″	17′ 7″	134′ 1″	78′ 11″	274′ 11″



1 / -- DETAIL - TOP OF WALL (TYP)

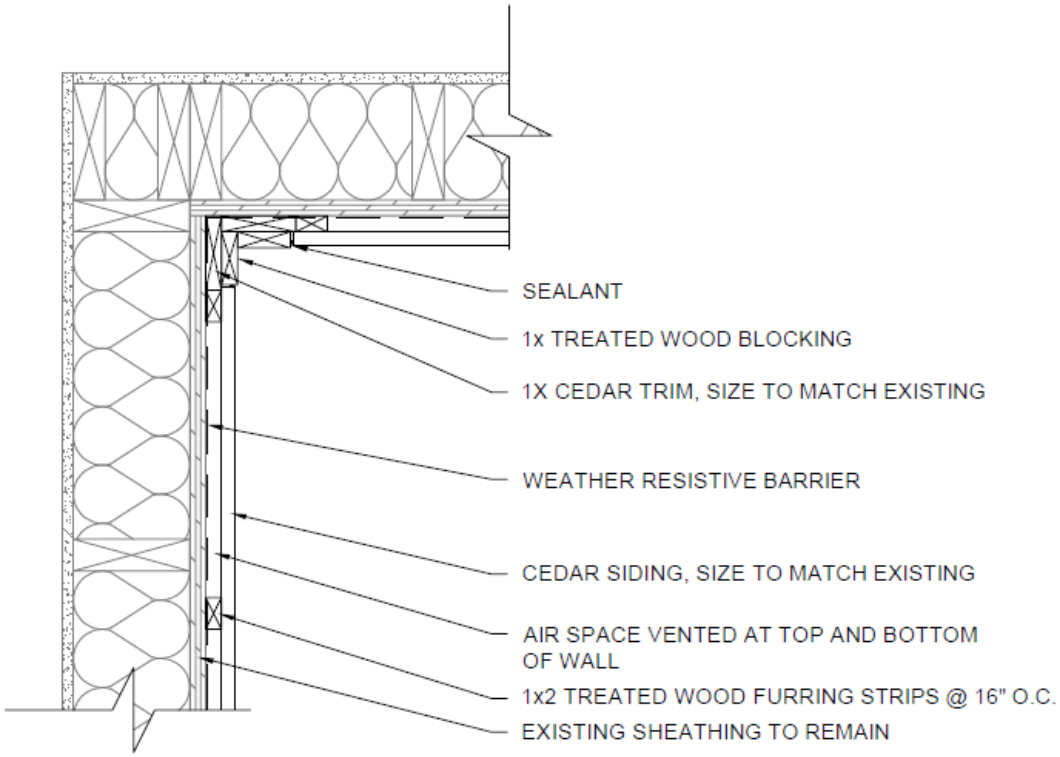
1-1/2" = 1'-0"



2 / --

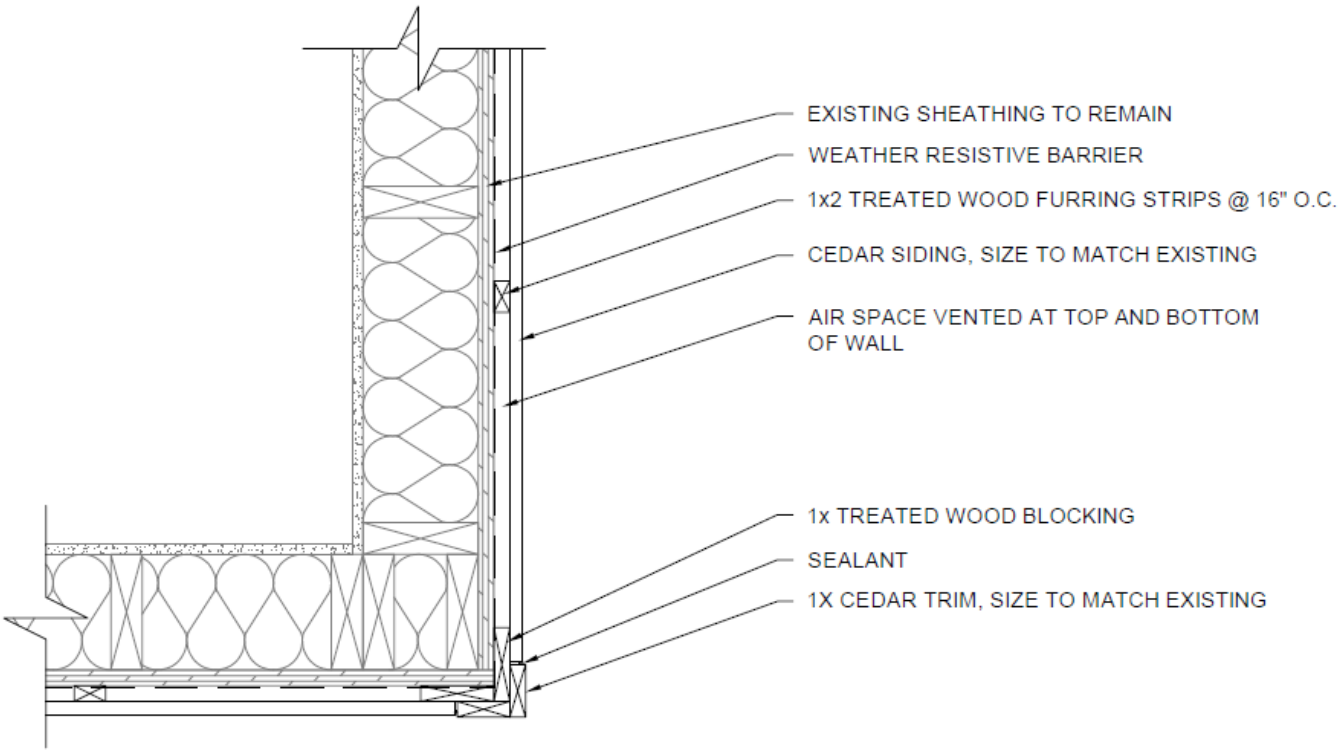
DETAIL - BOTTOM OF WALL (TYP)

1-1/2" = 1'-0"



3 / -- DETAIL - INTERIOR CORNERS (TYP)

1-1/2" = 1'-0"



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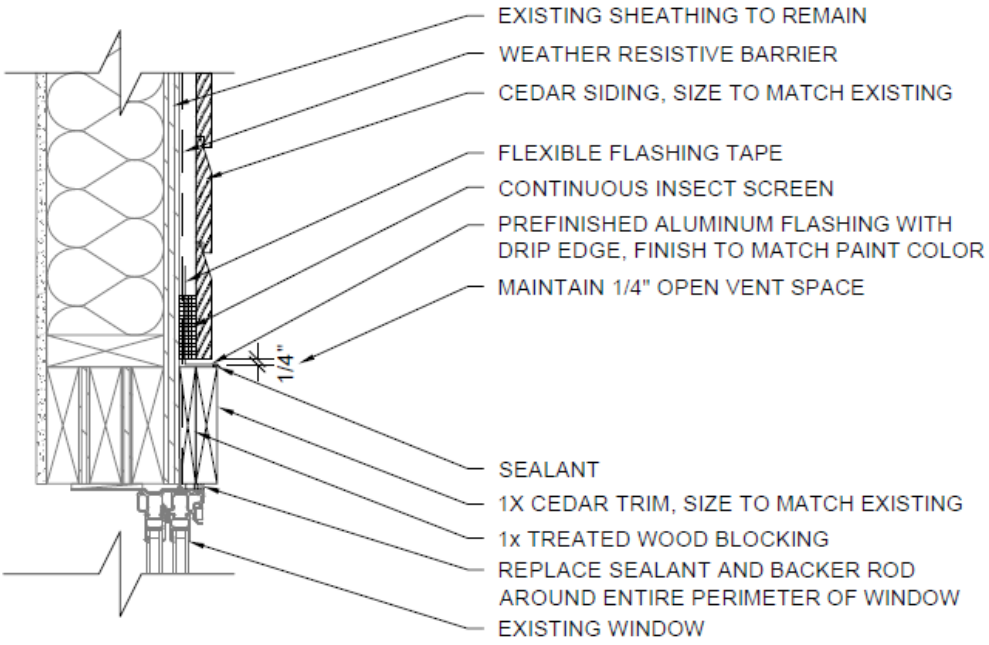
DETAIL - EXTERIOR CORNERS (TYP)

1-1/2" = 1'-0"



5
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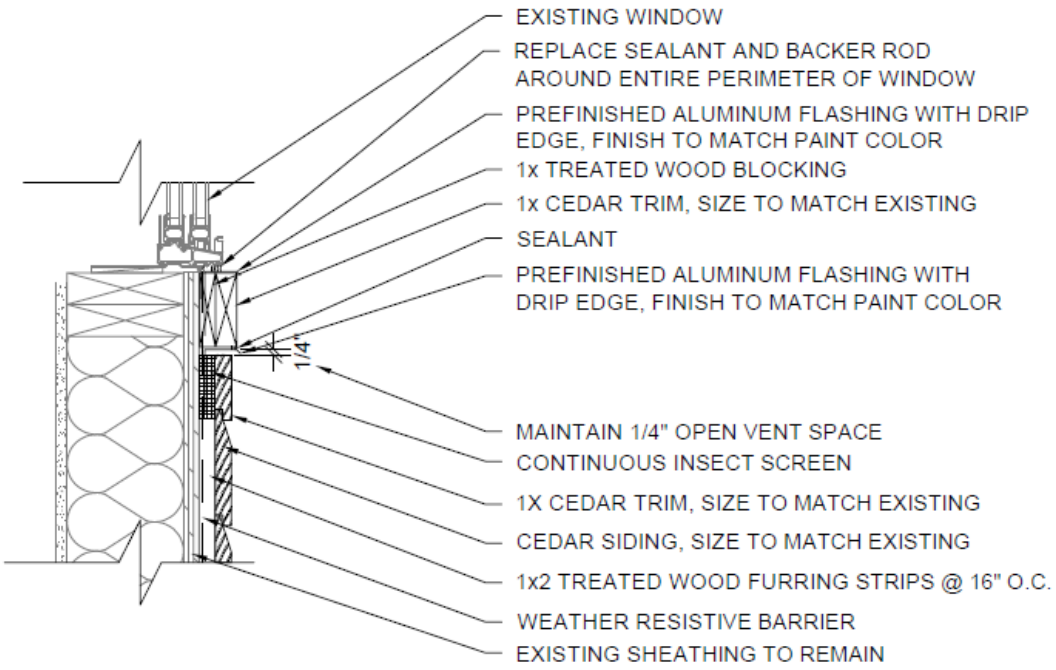
DETAIL - WINDOW HEAD (TYP)

1-1/2" = 1'-0"



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DETAIL - WINDOW SILL (TYP)

1-1/2" = 1'-0"

HOW TO INSTALL WESTERN RED CEDAR SIDING -APPENDIX D

HOW TO INSTALL
WESTERN RED CEDAR
SIDING

WESTERN RED CEDAR LUMBER ASSOCIATION

Congratulations on your choice of Western Red Cedar siding. Western Red Cedar is one of the world's premier quality woods noted for its appearance, durability, light weight, insulation value and dimensional stability. It will provide your home with character and a distinction that other sidings cannot match. Properly installed and finished, it will provide years of low maintenance performance.

Before beginning your siding project read this brochure thoroughly – it contains useful information to ensure the siding is installed correctly and will perform as intended. This brochure is organized into three sections.

Section I. Before You Start deals with numerous considerations which you should be aware of before you start installing Western Red Cedar siding.

Section II. Outlines proper installation techniques.

Section III. Provides a list of industry best practices for Western Red Cedar siding installation.

Note that these are general guidelines that are minimum standards to be followed with confidence in most areas. However, severe local climatic conditions such as extreme heat and dryness; high winds; seacoast exposure; and, areas with wide climatic swings may necessitate additional provisions for the installation of the siding. Your national and local building code requirements always supersede these instructions.

SECTION I BEFORE YOU START

1. INSPECT MATERIAL

Always purchase recognized grades such as those from WRCLA members and ensure you understand the grade of material you've purchased. Grades are designed for specific appearances and uses. Before installing, be sure the siding you've selected meets your requirements. Any product found to be damaged or visually unacceptable for any reason should not be installed; if you encounter any such product STOP and call your supplier immediately.

2. ACCLIMATIZE SIDING BEFORE INSTALLING

One of the most stable softwoods, Western Red Cedar is nevertheless a natural material and it responds to the environment. Cedar siding can swell or shrink as it gains or loses moisture to reach equilibrium with the moisture content of the surrounding air. Ensuring that the moisture content of cedar siding is at equilibrium before it is installed will minimize movement later on. Recommended moisture content for sidings are given in the table below.

	Average	Individual Pieces
Most Areas	12%	9-14%
Dry Areas	9%	7-12%
Damp, Warm Coastal	12%	9-14%

1) To calculate average, test 10% or more of pieces.
2) Source: Wood Handbook 1987.

The following procedures are suggested for different siding specifications:

Kiln Dried Clear Siding

Kiln dried siding products are the preferred choice for consistency, stability, paintability and overall performance. These siding products have been dried at the mill to 12-15% moisture content. They are the most ready-to-use of all siding products. If the siding has not been wetted prior to arrival on the job site it may be applied upon arrival except in hot and dry conditions where 3 to 5 days of well ventilated storage away from direct sunlight is generally required. If the siding has been wetted it must be separated and allowed to dry to the local equilibrium moisture content.

Dry Knotty Sidings

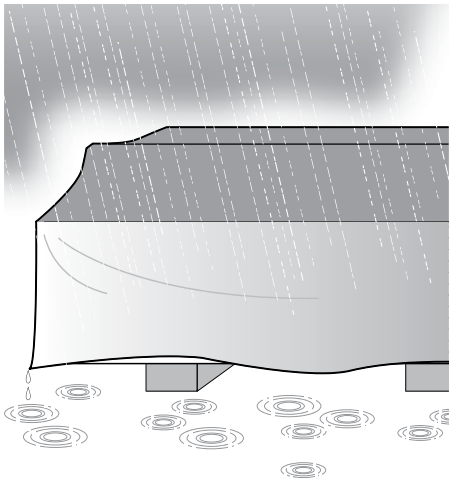
Some knotty sidings are air or kiln dried to less than 19% moisture content. These products should be acclimatized to ambient moisture conditions by stacking the siding face to face on evenly spaced, vertically aligned stickers in a dry storage area for 7-10 days. More time may be required in damp or humid conditions.

Green (Unseasoned) Sidings

Unseasoned or green sidings have not been dried prior to delivery and require a longer time to acclimatize than seasoned sidings. Separate the siding with vertically aligned stickers, keeping two pieces stacked face to face between stickers and store in a well ventilated dry location for a minimum of 30 days, or longer in damp or humid conditions. If specifying unseasoned siding, patterns such as channel, bevel and board-and-batten are recommended since these allow for shrinkage. Narrower widths are also recommended since they move less overall than wider widths. Note the WRCLA discourages the use of green sidings.

3. JOB SITE STORAGE

Until installed, Western Red Cedar siding needs protection from direct sunlight, water saturation, snow, ice, dirt, and other elements. Store the siding flat and off the ground on stickers and a vapor barrier so that moisture is not absorbed through the bottom boards of the stack. Protect with a waterproof covering elevated in the center so that water does not pool on the cover. Do not completely seal the bundle, as good air circulation is required. Ideally, the siding should be stored in an enclosed building such as a garage prior to use.



4. FINISH SIDING PRIOR TO INSTALLATION

Before installation (job site), applying a finish to all surfaces (including ends) is recommended. Factory applied finishes are best. They ensure the best performance of the finish. The type of coating will be determined by final finish and look selected. The finish protects the wood from moisture absorption and UV degradation, helps prevent staining caused by mildew and extractives and will increase the service life of top coats.

Recommended Procedures for Finishing Western Red Cedar Siding

Type of Finish Coat	Recommendation
Natural and semi-transparent stains	Apply the oil based stain to all surfaces.
100% acrylic-latex solid color stains and paints	Apply an alkyd oil, stain-blocking primer (preferred) to all surfaces. High quality water based stain blocking primers may also be used.
Bleaching oils	Apply the bleaching oil to all surfaces.

More information about finishing is available on the WRCLA's website and in the "How to Finish Western Red Cedar" publication.

5. FIELD CUTS

Regardless of the time of the year of the installation, all field cuts must be finished. The end grain of all wood products absorbs liquids up to 250 times more rapidly than other wood surfaces. 100% acrylic-latex primer is acceptable as long as it is able to properly cure according to the primer manufacturer's instructions. However, where temperatures drop below 50 degrees Fahrenheit either during application or within the curing period, use an alkyd oil wood primer to coat end grain exposed by jobsite cuts. Siding with end cuts coated with alkyd oil primer can be installed before drying without compromising the coating's effectiveness. Above 50 degrees, a high quality 100% acrylic-latex primer will suffice to coat exposed end grain if allowed to dry before installation. With either primer, follow manufacturer's recommendations.

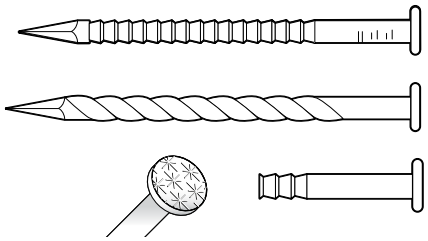
6. FASTENERS

Stainless steel nails are the best choice, especially if the siding is to be finished with transparent, semi-transparent stain or bleaching oil. Use No. 304 stainless for general siding applications and No. 316 for seacoast exposures.

Hot-dipped galvanized as per ASTM A-153, aluminum and stainless steel fasteners are all corrosion-resistant and all can be used to fasten Western Red Cedar. Other types of fasteners (including electroplated and mechanically galvanized) are not recommended. They can rust and disintegrate and react adversely with the natural preservative present in cedar, resulting in stains and streaks.

Type

For best result use "splitless" ring shank siding nails. These have thin shanks and blunt points to reduce splitting. Textured heads should be used to reduce the glossy appearance of the nail head.



Hand Nailing is Preferred.

Nails should be driven with care into the framing members. To ensure nailing accuracy, run chalk lines to mark framing locations. Heavy nailing distorts the wood and may cause splitting. At mitered corners, near edges and near ends, nail holes may need to be pre-drilled to avoid splitting. Avoid the use of pneumatic nailers if possible. If a pneumatic nailer must be used, reduce the air pressure and tap nails flush.

Overdriven nails must be remedied immediately. Fill overdriven nail holes with exterior grade wood putty specifically designed for filling exterior nail holes.

Placement

Siding should be fastened to each stud or blocking with nails spaced at a maximum of 24 inches on center. Nail placement depends on the siding pattern and width. The key is to fasten the siding securely without preventing it from moving in response to the moisture content in the air. In general, each piece of siding must be nailed independently. Nailing overlapping pieces together restricts the natural movements of each piece and may cause splitting.

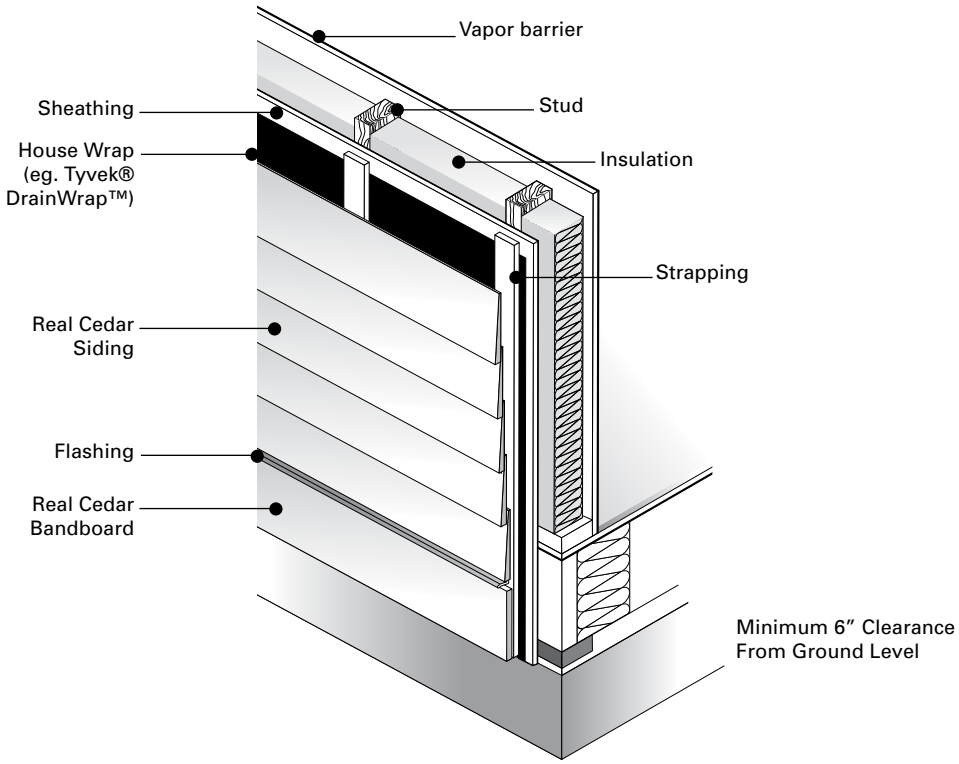
Size

The size of nails to use depends on the type and thickness of siding. Use ring-shank siding nails long enough so that they penetrate solid wood by a minimum of 1 ¼".

Siding Type*	**Nominal Thickness (in.)**	**Spiral/Ring shank Nail Length (in.)**
Bevel	1/2	2 (6d)
	5/8	2 (6d)
	3/4	2-1/4 (7d)
	7/8 to 15/16	3 (10d)
	5/4	3 (10d)
Boards, T&G and Lap	5/8	2 (6d)
	3/4	2 (6d)
	7/8	2-1/4 (7d)
Battens for Board and Batten	3/4	3 (10d)

** Important: For application over foam sheathing, add the thickness of the foam to the tabulated nail length.*

7. CONTROLLING MOISTURE: VAPOR BARRIERS AND BUILDING PAPER



High humidity output from washers, dryers, showers, kitchens and other sources, combined with today's energy-efficient construction, can result in a build-up of interior moisture vapor. This vapor migrates through the fabric of a building from the warm interior to the cold exterior, and when it condenses to water can cause structural damage and damage to sidings and finishes. Vapor barriers installed on the warm side of the wall largely prevent the migration of moisture vapor but they are not perfect. Residual vapor must be allowed to escape to the outside. Housewrap installed on the outside face of the sheathing helps prevent rain and snow from penetrating the walls but allows the escape of moisture vapor. The WRCLA recommends the use of rainscreen wall construction (see diagram and related section later in this publication) especially when installing over rigid foam.

Proper wall construction includes the use of breathable or gas permeable housewrap (such as DuPont™ Tyvek® DrainWrap™) or building paper and interior vapor barriers. These are extremely effective in helping to prevent moisture problems.

8. WALL CONSTRUCTION

Stud Walls

Like all siding materials, Western Red Cedar performs best when installed properly on a suitable frame. Cedar siding should be securely nailed to framing members, furring members or to blocking between framing members. Standard stud walls generally require no special preparation for horizontal siding installation. Siding should be nailed into studs or blocking at maximum of 24 inches on center when applied over wood based sheathing and 16 inches on center when siding is installed without sheathing. In instances where an air space between siding and sheathing is desired (see rain screen wall construction), nail siding to furring strips, sheathing and framing. Maximum spacing for furring strips is 16 inches on center. Spacing for furring strips should match the spacing of the studs.

Vertical siding applications require horizontal nailers, blocking or other wood framing members spaced no more than 24 inches on center. Check your building code to verify requirements in your area.

Lumber Size and Spacing for Blocking and Furring[1]

	Nominal Size (inches)	Actual Size (inches)	Preferred Spacing (inches)	Maximum Spacing (inches)
Blocking	2x2	1 ½x1 ½	16	24
Furring over plywood/ OSB sheathing[2]	1x2	¾x1 ½	16	24
Furring over masonry walls	2x2	1 ½x1 ½	16	24

1. Furring must be securely fastened to studs.
2. Can be used in moist and severe climates to form an air space between siding and sheathing (i.e. rain screen).

Rain Screen Construction

The basic rainscreen wall configuration, incorporating two layers, or wythes, separated by an air space, has variations that provide different levels of rain protection effectiveness. A distinction should be made between the drained cavity wall, the simple or open rain screen, and the pressure-equalized rain screen wall. What is usually meant by a "rain screen wall" is generally the latter: an exterior cladding, a cavity behind the cladding, drained and vented to the outside; an inner wall plane incorporating an air barrier; and a set of compartment seals limiting the cavity size. The outer "screen" layer of cladding deflects the kinetic force of the rain, while the inner wythe remains protected. The vented cavity uses gravity and flashings to drain water that penetrates the outer wall, away from vulnerable surfaces and joints. The cavity is sufficiently wide so that surface tension and capillary action are not able to move water across the cavity.

Step by step construction tips for basic rainscreen construction (check with local building codes for the appropriate techniques in your area):

1. Install gas permeable housewrap (such as DuPont™ Tyvek® DrainWrap™) or breathable building paper.
2. Install vertical furring strips. Ensure they are lined up with the studs.
3. Install screen materials under the ends of the furring strips. Fold the screen material over the furring strips and staple to the front of the furring strips.
4. Install Western Red Cedar siding over the furring strips.

Masonry Walls

Masonry walls require furring strips for horizontal and vertical siding installation. Furring strips must be thick enough to allow for nail penetration of 1 ¼″ into solid wood.

Structural Insulated Panels (S.I.P.)

Structural Insulated Panels require furring strips for horizontal and vertical siding installation. Furring strips must be thick enough to allow for nail penetration of 1¼″ into solid wood. Typical Structural Insulated Panels have nominal ½″ sheathing. To ensure the appropriate nailing base, furring strips a minimum of ¾″ thick should be installed on the outside of the sheathing and breathable building paper at a maximum of 16 inches on center.

Insulated Concrete Forms (I.C.F.)

These systems have no wood component and the foam has no nail holding capacity. As a result, Insulated Concrete Forms require framing of a minimum of 1¼″ thick spaced 16 inches on center on the outside of the foam. Note these will need to be securely fastened to the concrete.

Rigid Foam Sheathing

Rigid foam sheathing has an insulation value superior to that of traditional lumber and plywood sheathings. However, it has no nail holding power and using rigid foam sheathing as a nailing base for cedar siding is not recommended. Follow the nailing recommendations given in this publication as to nail type, positioning, penetration and spacing.

Foam sheathing panels vary in moisture permeability but are generally considered good moisture barriers. They should be used with a continuous film vapor retarder on the inside wall under the interior finish. Rigid foam sheathing can cause moisture to accumulate on the back of siding and cause staining, buckling and damage to finish coats. As a result, it is recommended that furring strips are used to create an air space between the sheathing and siding (follow the rainscreen construction method).

Other recommendations that should be followed to minimize potential problems:

- Thick, narrow siding is more stable than thinner, wider patterns and better able to resist dimensional changes.
- Use kiln-dried siding over rigid foam sheathing. This is the most stable cedar siding.
- Proper prefinishing is essential.
- Use light color finish coats to maximize heat reflection and reduce dimensional movement.
- In all cases it is strongly recommended that gas permeable house wrap, such as DuPont™ Tyvek® DrainWrap™, be applied over the foam sheathing.

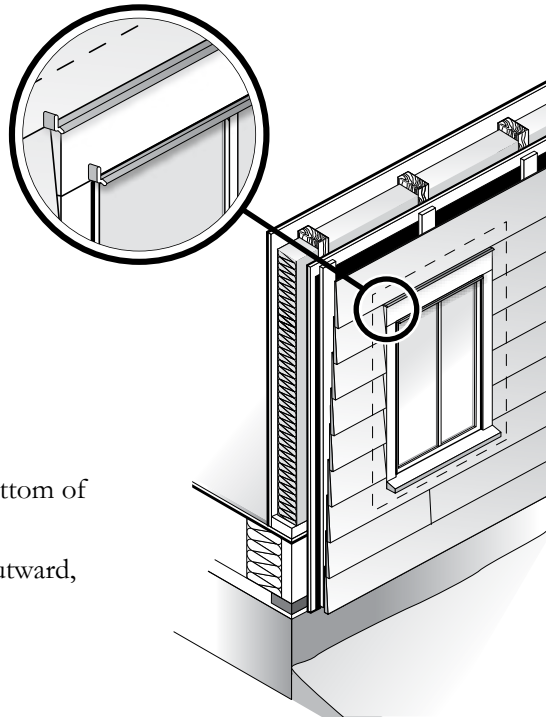
SECTION II INSTALLING WESTERN RED CEDAR SIDING

1. FLASHING

Before installing siding, make sure that flashings are installed to prevent moisture from entering wall and roof spaces. Flashing is an important line of defense in controlling moisture in wall assemblies. Flashing intercepts and directs the flow of water away from the building to designed drainage paths. Install horizontal flashing extending from the top of all wall penetrations (i.e. all windows and doors) and at any material or material directional change (i.e. bandboards, water tables or the introduction of any alternative material). The flashing should tilt downward to allow water to drain away from the wall. Siding or trim should be ¼″ above the flashing ledge. Do not caulk where the flashing and trim or other materials meet. Note that caulking in lieu of flashing is not acceptable.

Door and Window Flashing

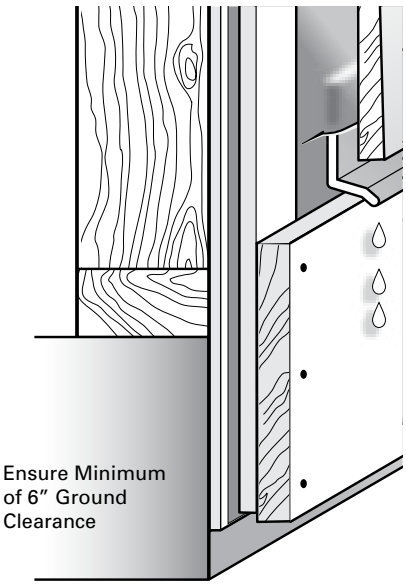
The purpose of flashing window and door headers is to intercept water behind the siding and direct it to the outside, and to redirect water flowing down the face of the wall to flow away from the wall opening.



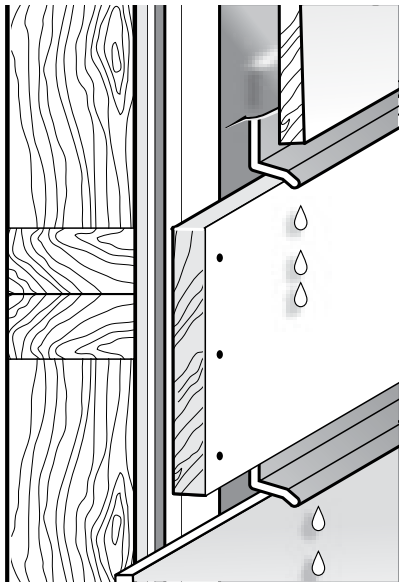
Moisture can accumulate behind the siding as a result of:
- rain penetration through the siding;
- water vapor diffusion;
- leakage of moist air from the interior or condensation.

Some moisture will drain through the weepholes at the bottom of windows. An additional head trim flashing is required at the head of the window/door to direct water further outward, beyond the thickness of the window

Skirt and Bandboards



Ground Level Skirtboard

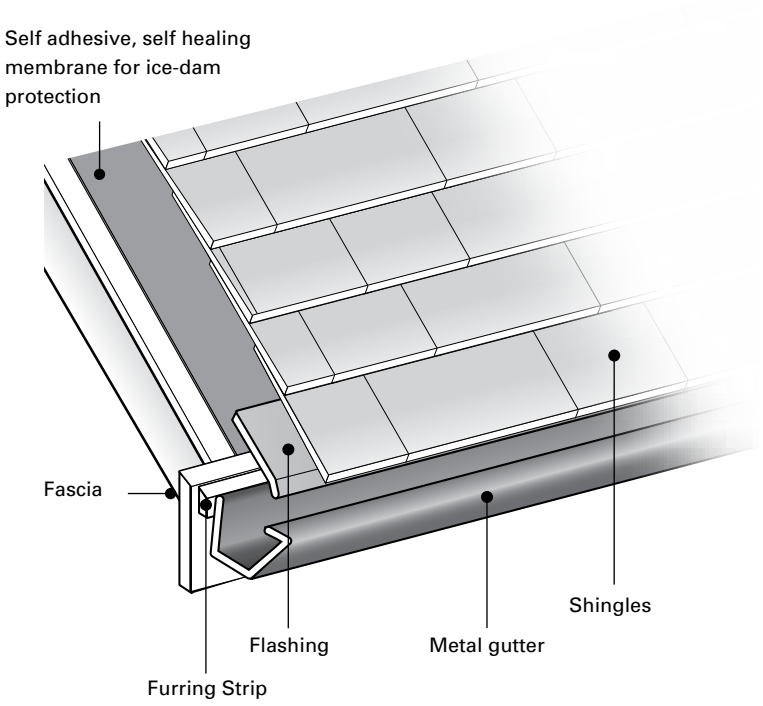


Second Story Bandboard

Fascia Flashing

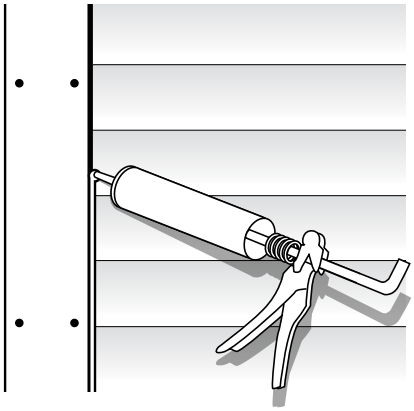
The purpose of fascia flashing is to support the shingle edge and to provide a drip edge to prevent water from running back underneath the roofing shingles and down along the fascia and soffit.

Preformed eaves flashing/drip edge should be installed under the starter course of the shingle roofing. The extension of flashing supports the edge of shingles. If eavestroughs (rain gutters) are used, the flashing edge also helps to direct the water into troughs. Fascia flashing protects both the soffit and the fascia board, and provides a drip edge at the bottom edge to direct water away from the building.



2. CAULKING

Use high-performance acrylic-latex, acrylic, acrylic-silicone, polyurethane, polysulfide or terpolymer rubber caulks or sealants to seal gaps around windows, doors, corners, and other exterior joints that are exposed to potential water intrusion. Pure silicone and clear caulks do not work well on Western Red Cedar and are not recommended. Caulking is not a permanent solution and as such requires regular maintenance. If not inspected and maintained, caulking may fail and trap water, creating severe moisture problems. Do not rely on it as the only barrier to moisture penetration. Do not caulk areas that will prevent moisture from escaping the wall cavity (e.g., under windows and around flashing).



3. ROOF AND GROUND CLEARANCE

Siding and Trim that extends down to a roof (dormers, second floors, etc.) and decks requires a minimum of a 2-inch gap to avoid wicking. Trim, such as water table or skirt boards must be a minimum of 6 inches above the grade.

4. INSTALLING BEVEL SIDING (ALSO KNOWN AS CLAPBOARDS)

Spacing for the siding should be laid out beforehand. The number of board spaces between the soffit and bottom of the lowest piece of siding at the foundation should be such that the overlap is as per the table below.

Start with the bottom course using a furring strip to support the lower edge. Each succeeding course overlaps the upper edge of the previous one by a minimum of 1 inch. Rabbeted patterns are self-spacing, but leave ⅛″ expansion clearance. Where possible, the bottom of the board that is placed across the top of the windows should coincide with the window cap.

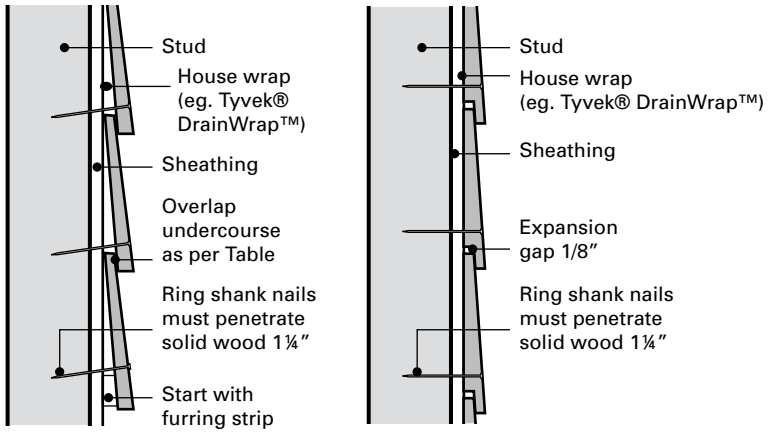
Bevel siding should be face nailed to studs with 1¼″ penetration into solid wood using one nail per piece spaced at a maximum of 24 inches on center. Place nail just above the overlap. Take care not to nail through the overlap of two pieces.

Do not reduce the siding overlap recommendations given in the installation sections of this publication. Doing so could result in damage from wind-driven water. Use the larger overlaps for unseasoned sidings to allow for shrinkage and expansion. Take care not to overdrive fasteners when using larger overlaps. Butt joints between boards should be staggered and meet on studs. Fit siding snugly to other pieces and to trim.

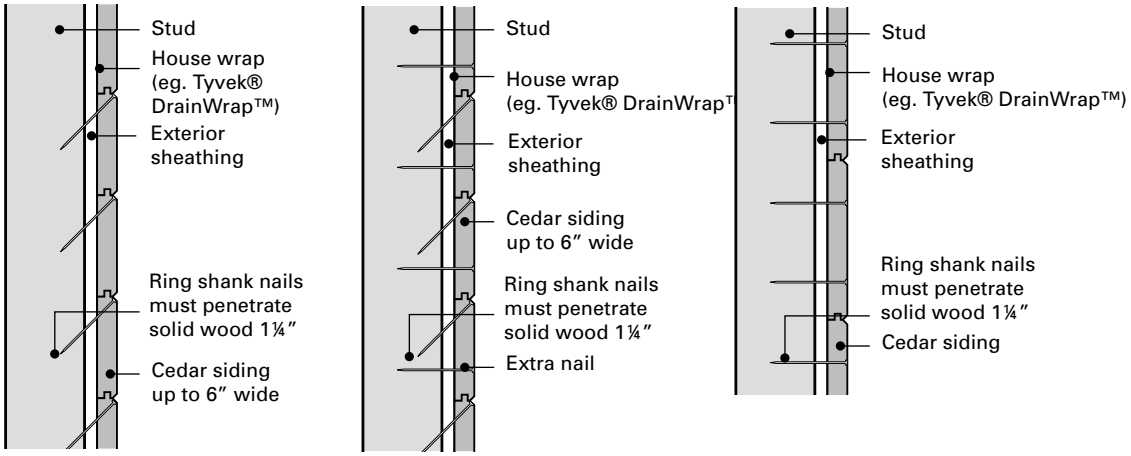
Recommended Overlap

Nominal Width	Overlap (inches)
4	1
6	1
8	1 to 1 1/8
10	1 to 1 1/2
12	1 to 2

** These overlap recommendations must be followed for proper installation.*



5. INSTALLING TONGUE AND GROOVE



(A) 6" and narrower siding in normal climatic conditions

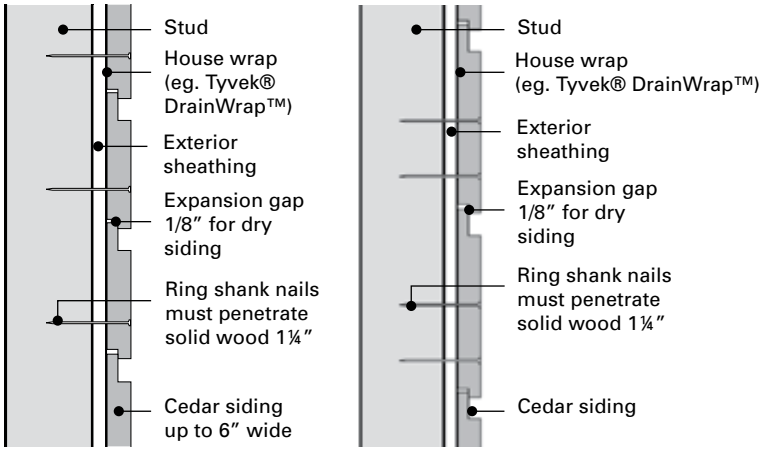
(B) 6" and narrower siding in hot, dry, windy or seacoast climates

(C) 8" and wider siding

Tongue and groove siding can be installed horizontally or vertically. In horizontal application, start at the bottom and work up with the groove edges facing downwards. Siding up to 6 inches wide can be blind nailed with one siding nail per bearing toe-nailed through the base of each tongue. Wider siding should be face nailed using two nails per piece. Nails must penetrate 1¼" into solid wood.

In vertical application, start at one corner with grooved edge toward the adjacent wall. Use a level or plumb line to ensure that the first board is installed plumb. The grooved edge of the first board may have to be trimmed to ensure a flush fit. Siding is nailed to horizontal blocking lines installed between studs or to furring strips. As with horizontal installation, pieces up to 6 inches can be blind nailed and wider pieces should be face nailed.

6. INSTALLING LAP SIDINGS

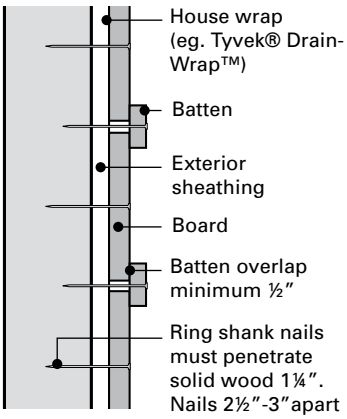


(A) 6" and narrower lap siding

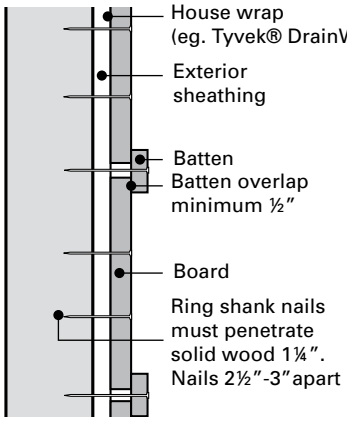
(B) 8" and wider lap siding

Lap sidings can be installed horizontally or vertically. For horizontal applications, start with the bottom course and work up with the channels pointing upwards. Allow a ⅛" expansion gap between pieces if the siding is air or kiln-dried. Do not nail through overlaps. For siding up to 6 inches wide, use one nail one inch up from the lap. Face nail with two nails per piece for 8 inches patterns and wider, keeping nails 2 ½ to 3 inches apart to allow for dimensional movement without splitting. For vertical applications, siding should be nailed to horizontal blocking or furring strips.

7. INSTALLING BOARD-AND-BATTEN SIDING



(A) Narrow boards 6"



(B) Wide boards 8" and wider

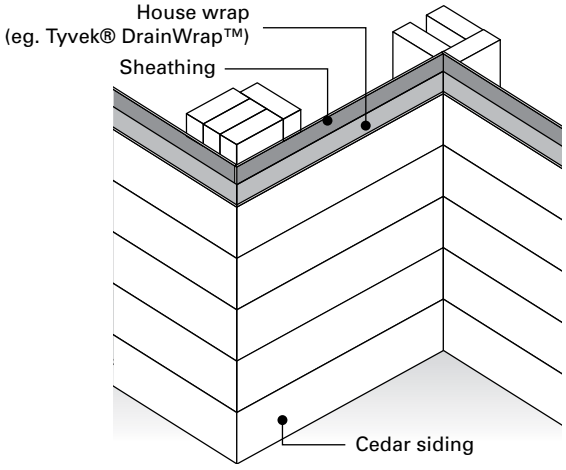
Board-and-Batten is a vertical pattern created using cedar boards and battens of various widths for a wide range of appearances. For nominal 6 inches boards spaced ½" apart, battens should overlap by a least ½". With wider boards, increase batten overlap proportionately. While there are no set widths for board-and-batten siding, an attractive combination is 1x3 battens with 1x10 boards.

Siding should be nailed to horizontal blocking lines or to furring strips. Boards up to 6 inches wide should be fixed with one nail per bearing driven through the center of the board. The overlying batten covering the gap between boards should be attached with one nail per bearing, the shank passing between the edges of the under boards. Use two nails per bearing on boards 8 inches and wider placing the nails 2 ½ to 3 inches apart.

8. OUTSIDE AND INSIDE CORNERS

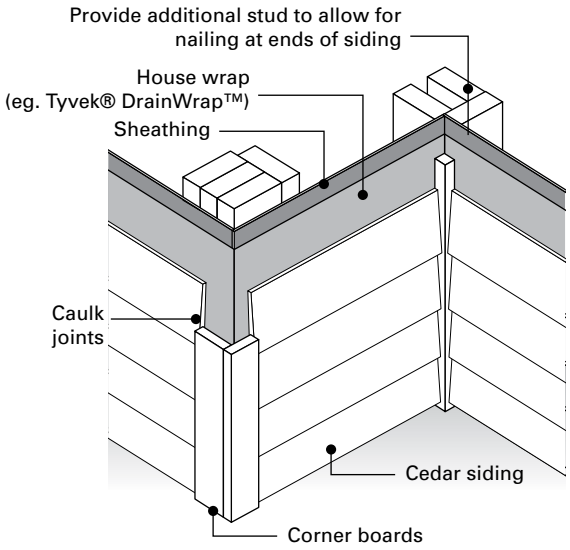
There are two main methods used for outside corners. The choice depends primarily on the desired appearance but also the experience and skill of the installer.

Mitered corners offer a professional looking finish. They are most commonly used with horizontally applied siding applications such as bevel. Mitered corners require good carpentry skills. They must fit tightly for the full depth of the miter.

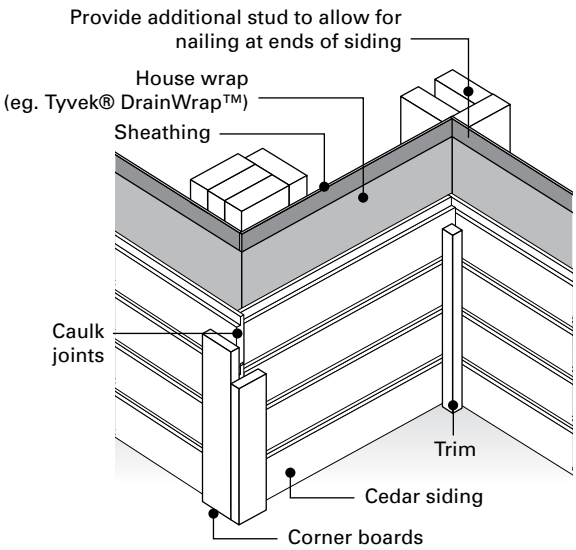


(A) Mitered Corners

Corner boards are a popular and easier alternative to mitered corners. Thickness of the corner board will depend on the thickness of the siding. The most common are nominal one inch or nominal 5⁄4″ thick. Width is a matter of taste and proper proportion. Corner boards are applied to the sheathing with siding fitting tightly against the narrow edge of the boards, allowing for expansion and an adequate caulking bead. The corner boards and the ends of the siding are nailed to the corner studs, which anchor the wood for a maintenance-free joint. Designing roofs with an eaves overhang to protect corners from weathering also helps ensure trouble-free joints. Always apply primer or stain to end cuts. With corner boards, there is the choice of applying them next to the siding or over top of the siding as shown here.



(B) Corners boards



(C) Trim boards

As in the above illustration, at inside corners, siding is frequently butted against a 2 x 2 trim strip. It can also be butted against adjoining walls with a trim strip used to cover the joint.

9. FIELD JOINTS

When butt jointing siding, cut ends at 45 degree angles to form an overlapping joint. This is particularly important for vertical installation. Ensure joints meet on studs, blocking or furring strips with the nail penetrating solid wood at least 1¼″.

SECTION III SIDING INSTALLATION QUICK TIPS

All installers should learn and follow "best practices" in order to deliver a better job for their customer and reduce callbacks.

DO:

- Follow local and national building codes.
- Follow WRCLA installation instructions.
- Purchase from WRCLA members, distributors and retailers.
- Use construction techniques to create easy drainage planes to shed water accumulations.
- Finish Western Red Cedar ASAP! Factory finish or apply coatings prior to installation if possible. Always touch up field cuts.
- 'Acclimatize' Western Red Cedar siding before you install it.
- Use the correct fasteners: 304 or 316 grade stainless steel, aluminum, or hot dipped galvanized (as per ASTM A-153).
- Nail all Western Red Cedar siding into 1¼″ of solid wood.
- Ensure butt joints are made over solid wood to provide secure nailing. Join two pieces of siding with a mitered butt joint.
- Visit: RealCedar.com or call 866 778 9096 for more information.

DO NOT:

- Allow Western Red Cedar to 'Weather' before applying a finish coating to the Cedar.
- Use electroplated or mechanical galvanized fasteners that do not conform to ASTM A-153.
- Install Western Red Cedar siding without acclimatizing.
- Fasten Western Red Cedar siding only to the sheathing material.
- Nail through two layers of siding.
- Fail to finish the end cuts during installation.
- Attempt to 'blind nail' bevel siding/clapboards.
- Install or paint over wet siding.
- Use caulking sealant as a substitute for flashing.
- Place siding in direct contact with concrete, masonry, top soil, mulch, patios, porches and/or roofs.

WESTERN RED CEDAR LUMBER ASSOCIATION

The Western Red Cedar Lumber Association is an organization of Western Red Cedar producers, distributors and retailers throughout North America. Founded in 1954, the association is known worldwide as "the voice of the cedar industry." Its members account for more than 65 percent of the world's production of cedar and have an annual production volume of nearly 1 billion board feet.

The mission of the WRCLA is to promote quality Western Red Cedar products and support them with a comprehensive marketing and PR program, technical services, education and training. The WRCLA works closely with architects, designers and builders to ensure the right product is specified and utilized. The association offers extensive resources including installation guides for builders and installers.

For more information about the WRCLA and Western Red Cedar siding products, visit our website at RealCedar.com or call 1 866 778 9096.

Or if you like to "DIY on the Fly", download our new Real Cedar Mobile Toolkit app for fast & easy building facts. Available for free from iTunes or the Google Play Store.

For a list of distributors or affiliated retailers stocking WRCLA member product, visit the 'Where to Purchase' section on RealCedar.com or the Real Cedar Mobile Toolkit.

WESTERN RED CEDAR LUMBER ASSOCIATION
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(July/15)