

NichiProducts™ Installation Guidelines

General Instructions for All NichiProducts™

Construction Requirements

- All NichiProducts™ can be installed on braced wood or steel studs, or over approved APA rated sheathings. Please refer to the individual NichiProducts installation instructions for details.
- A weather resistant barrier is required by building code when installing NichiProducts™. Use the approved weather resistant barrier (WRB) as defined by the 2007 IRC. Refer to local building codes. Nichiha is not liable for water infiltration over sheathing.
- Please consult with your local dealer or Nichiha directly when using NichiProducts on installations higher than 45'. Special reinforcements may be required.

Product Inspection

- Inspect all products for breakage or defects before installation. Do not install questionable products, especially color inconsistency on pre-finished products.
- Contact your local dealer or Nichiha Customer Service toll-free at 1-866-424-4421 immediately, should you have any questions about NichiProducts.

Storage & Handling

- NichiProducts MUST be stored flat, and off ground prior to installation. Recommend storing siding on pallets.
- NichiProducts MUST be kept dry, and stored in a covered area or covered with wrap, before installation. Moisture saturation before installation can cause shrinkage and board damage.
- Carry the products on edge. Do not carry or lift NichiProducts flat. Improper handling may cause cracking or panel damage.
- Nichiha is not responsible for damage caused by improper storage and handling of NichiProducts.

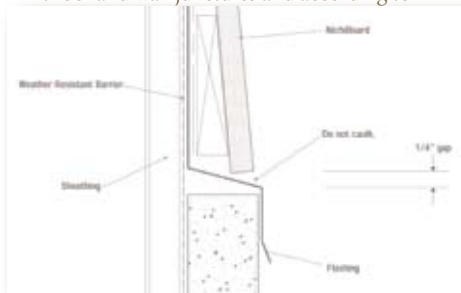
Minimum Clearances

- Maintain a minimum 1" - 2" clearance between boards and steps, driveways, roofs and decking products as per local building codes.
- A 1/4" gap must be maintained between

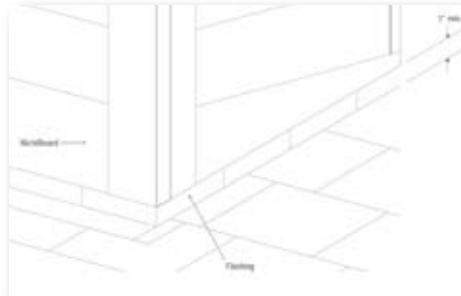


NichiProducts and horizontal flashing.

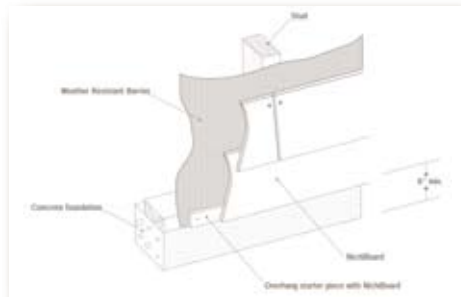
- At roof and wall junctures and according to



- roofing manufacturer's instructions flashing and counter-flashing are required. NichiProducts must be installed with a minimum 1" clearance from roofing as per local building codes.
- When installing boards leave a minimum 6"



from soil grade or 1" - 2" from hard surface to the starter strip and boards as per local building codes.



Cutting

- Refer to the Nichiha Safety Guidelines and OSHA guidelines for important safety practices for your and others' protection.
- Work outdoors where feasible, otherwise use mechanical ventilation.
- Always wear safety glasses and NIOSH/MSHA approved respirator with a rating of N100, O100, P100, or R100 whenever cutting, drilling, sawing, sanding or abrading the products. Refer to the Safety Instructions for more details.
- Use a dust-reducing circular saw with a diamond-tipped or carbide-tipped blade with a dust collector general cuttings. The dust collector must be connected to a HEPA vacuum. *Recommended circular saw: Makita 7-1/4" Circular Saw with Dust Collector (#5057KB). Recommended blade: Tenryu Board-Pro Plus PCD Blade (#BP-18505).*
- Jig saw can be used for complicated cuttings, such as service openings, curves, radii and scrollwork.
- Shears may not be used when cutting Sierra Premium™ Shake or Smooth boards.

Fastening

- Corrosion resistant fasteners, such as hot-dipped galvanized nails and screws that are appropriate to local building codes and practices must be used. Stainless steel fasteners are highly recommended in high-humidity and high-moisture regions. Nichiha is not liable for the corrosion resistance of fasteners. Do not use aluminum fasteners, staples, clipped head nails or fasteners that are not rated or designed for intended use.
- Fasteners must penetrate wood studs at least 1", and 1/2" in steel studs. Fasteners must be angled on the vertical joint.
- Nichiha products can be hand fastened or fastened with pneumatic tools. When using pneumatic tools set the pressure of compressor so that the fastener is driven snug or under-driven to the surface of the panel; then hand-drive with a smooth faced hammer until the fastener head is flush to board surface.
- Pressure from compressors can vary depending on manufacturer, type and age of unit. Always test and adjust pressure before beginning installation.
- Fastener head must be flush to the board surface; do not over drive or under drive fasteners.

Finishing & Maintenance

- Use exterior grade high-quality sealant that complies with either ASTM C-834 (for primed products) or ASTM C-920 (for finished products) for all gaps that require filling with sealant. Follow the manufacturer's instructions for use.
- All exposed field cut edges (i.e. outside edges, butt joints or where joint flashing is used), should be covered with primer, sealant, or paint.
- Dents, chips, scratches, etc. on the products shall be filled with exterior grade cementitious patching or putty. Follow the manufacturer's instructions for use.
- All unfinished (pre-primed) products must be painted within 12 months of installation. Exterior grade 100% acrylic latex paints are recommended. Follow the manufacturer's written instructions for use.

Safety Instructions

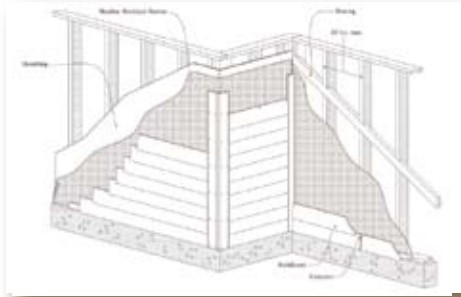
Whenever cutting, drilling, sawing, sanding or abrading the product, users must observe the following safety practices:

- 1) Use best work practices to reduce airborne dust concentrations.
- 2) Use a fiber cement circular saw with dust collector for cutting (e.g., Makita 5057KB). The dust collector must be connected to a HEPA vacuum.
- 3) Do not use compressed air for cleaning dust.
- 4) Work outdoors when feasible; otherwise use mechanical ventilation.
- 5) Anyone handling NichiProducts or in the vicinity of others using NichiProducts must wear safety glasses and properly fitted respirators, prior to handling NichiProducts. We require that users wear a NIOSH/OSHA approved respirator with a rating of N100, O100, P100 or R100 in accordance with applicable government regulations and manufacturer instructions.
- 6) All users must comply with the OSHA PEL.
- 7) Warn others in the area.

Preparation

Follow all general instructions on page one of this guide.

- NichiBoard™ can be installed directly on braced wood or steel stud (20GA or heavier) construction spaced at max. 24" o.c. over sheathing. Fasteners must penetrate wood studs a min. of 1" and 1/2" in steel studs.



- It is recommended that APA rated 7/16" OSB (Oriented Strand Board) or plywood sheathing be used to ensure nail-holding power and provide an air gap between board and sheathing.
- When installing boards directly to OSB or plywood and board ends fall between stud lines, the board end must be fastened with appropriate screws to the sheathing.

Fastening

Follow all general fastening instructions on page one of this guide.

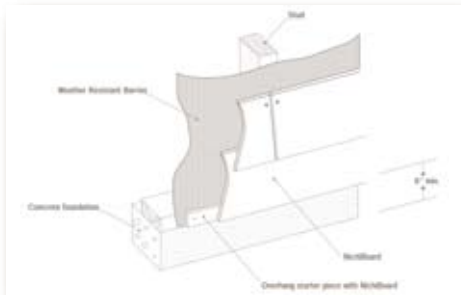
- NichiBoard must be jointed on the stud in metal construction, and should be staggered after installing the first course. For better appearance, 32" or more stagger is recommended.
- To avoid breakage or cracking, fasteners should be placed 3/4" - 1" from the top edge and a minimum of 3/8" from board end edges. If face fastening is required, fasteners should be placed a minimum of 3/8" from the bottom edge.

Installation

Follow all general instructions on page one of this guide.

Starter Strip & First Panel Course

- A starter strip is required to set the first course on the proper angle and to create drip edges and air spaces.



- To use NichiBoard as a starter strip, cut boards horizontally into 1-1/4" wide strips and install leaving a minimum 6" from soil grade or 2" from hard surface to the bottom of the strip. PVC, fiber cement or pressure-treated lumber siding starter can also be used. Do not use dimensional lumber, plywood, OSB or engineered wood products for starter strip.
- FS 1005 1/4" Nichiha spacer can also be used as a starter strip.
- Ensure the first course of boards is level as it will be the guide for entire installation. Continue to check for level lines throughout installation.

Vertical Joints

All board vertical joints must be located at the stud line.

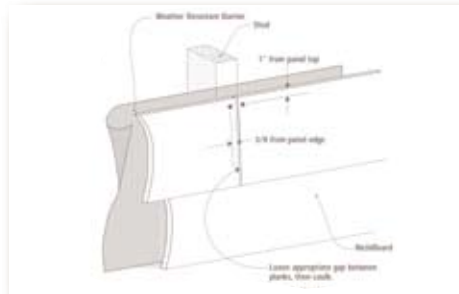
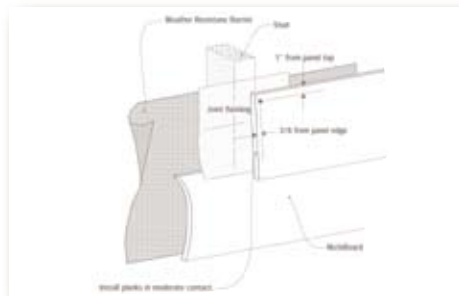
Joint Detail

Joint Installation Using Flashing (recommended)

Attach joint flashing recommended for fiber cement siding and follow flashing manufacturer's instructions. Then install boards with moderate contact (minimum 1/16" gap). All exposed board edges must be coated with primer, sealer or paint - NEVER leave exposed edges uncoated.

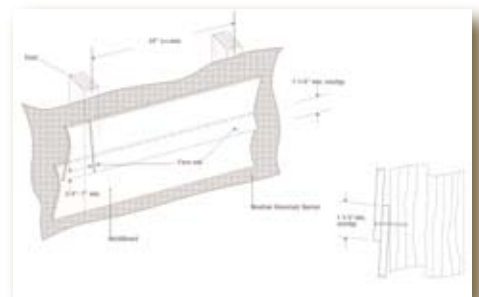
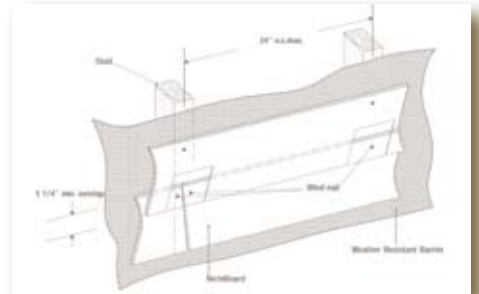
Joint Installation Using Caulk

Leave a 1/8" gap between each board and fill with acrylic latex caulk.



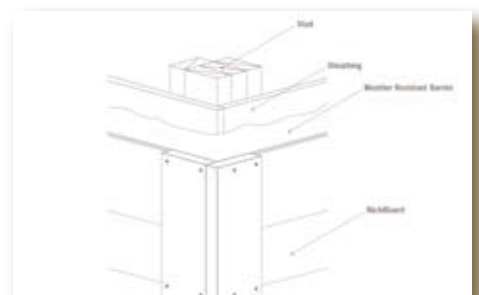
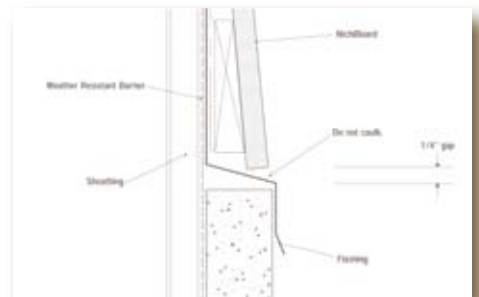
Horizontal Joints

A minimum 1-1/4" overlap is required. Do not fasten closer than 3/4" to 1" from the top edge and no closer than 3/8" from the board ends. If face fastening is required, fasteners should be placed at a minimum 3/8" from bottom edge.



Trim Joints

Outside and inside corners, around windows, doors and vents: For sides, bottom and around windows and trim, leave a 1/4" gap and fill with recommended sealant.



Finishing

Follow all general finishing instructions on page one of this guide.

NichiShake™ Individual Shakes

Preparation

Follow all general instructions on page one of this guide.

- NichiShake™ individual shakes must be installed directly on 7/16" thick APA rated OSB sheathing to ensure nail-holding power and provide an air gap between shake and sheathing.
- Due to overlapping of shakes, no sealant is required on any shake joint, with the exception of joints that butt to trim (i.e. windows, doors and vents), leave a 1/4" gap and fill with appropriate sealant.

Fastening

Follow all general fastening instructions on page one of this guide.

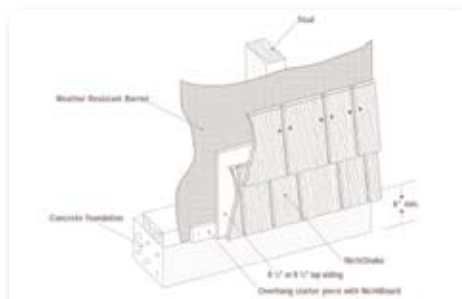
- NichiShake must be fastened through previous shake course. Always use corrosion resistant fasteners such as stainless steel or hot-dipped galvanized.

Installation

Follow all general instructions on page one of this guide.

Starter Strip & First Panel Course

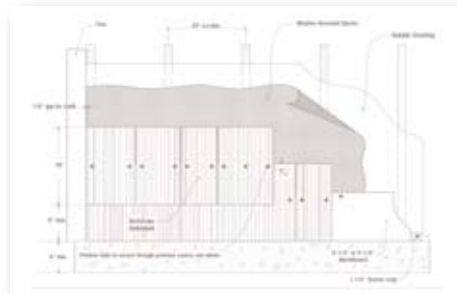
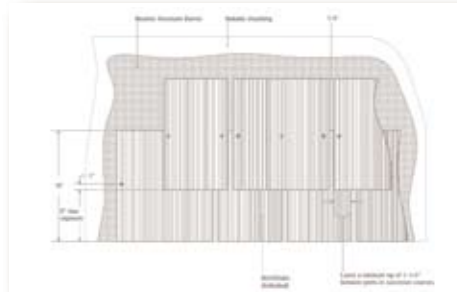
- A starter strip is required to set the first course on the proper angle and to create the drip edges and air spaces.



- Install a 1-1/4" starter strip and a 8-1/4" or wider NichiBoard™ lap siding starter course and install leaving a minimum 6" from soil grade or 2" from hard surface to the bottom of the strip. PVC, fiber cement or pressure-treated lumber siding starter can also be used. Do not use dimensional lumber, plywood, OSB or engineered wood products for starter strip.
- Ensure that the first course of shakes is level as it will be the guide for entire installation. Continue to check for level lines throughout installation.

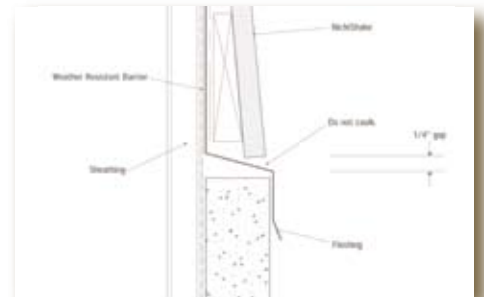
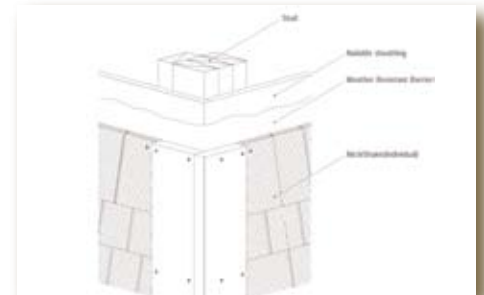
Installing Shake Courses

- Shakes must be blind nailed through preceding shake course. Measure 8" from bottom of course (shake boards) to set next course. Fasten shakes 9" from bottom through the bottom course, allowing for 1/4" to 3/8" gap between shakes.
- When installing, stagger shakes randomly by size, ensuring that the shake seams of the course below are also staggered. Shake edge seams from one course to the next should not line up.
- Leave a minimum 1-1/2" between shake joints and between successive courses for best appearance.



Trim Joints

Outside and inside corners, around window, doors and vents, etc.: For vertical joints, leave a 1/4" gap in between and fill with recommended sealant. For top of horizontal joints, (i.e.; top of windows or top of band board), use a metal flashing over the trim. For bottom and sides, leave a 1/4" gap and fill with recommended sealant.



Finishing

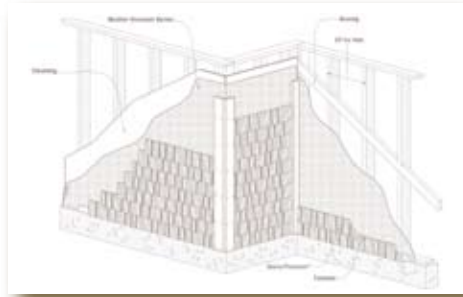
Follow all general finishing instructions on page one of this guide.

Sierra Premium™ Shake & Sierra Premium™ Smooth

Preparation

Follow all general instructions on page one of this guide.

- Sierra Premium™ Shake and Smooth boards can be installed directly on braced wood or steel stud (20GA or heavier) construction spaced at max. 24" o.c. over sheathing. Fasteners must penetrate wood studs a min. of 1" and 1/2" in steel studs.



- It is recommended that APA rated 7/16" OSB (Oriented Strand Board) or 1/2" plywood sheathing be used to ensure nail-holding power and provide an air gap between panel and sheathing.
- When installing boards directly to OSB or plywood and board ends fall between stud lines, the board end must be fastened with appropriate screws to the sheathing.

Fastening

Follow all general fastening instructions on page one of this guide.

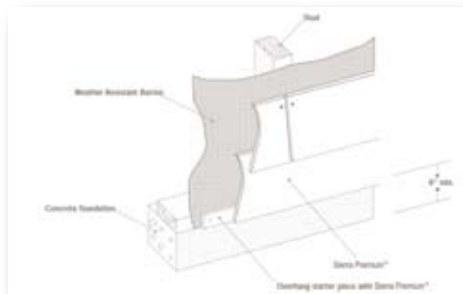
- Sierra Premium Shake & Smooth boards must be jointed on the stud in metal construction, and should be staggered after installing the first course. For better appearance stagger second course 16". For the third course, flip the board and stagger 16" from second course (these dimensions only apply if studs are 16" o.c., for other stud spacing, plan accordingly).
- To avoid breakage or cracking, fasteners should be placed no closer than 1" from the top edge and no closer than 3/4" from board edges. If face fastening is required, fasteners should be placed 3/4" from the bottom edge.

Installation

Follow all general instructions on page one of this guide.

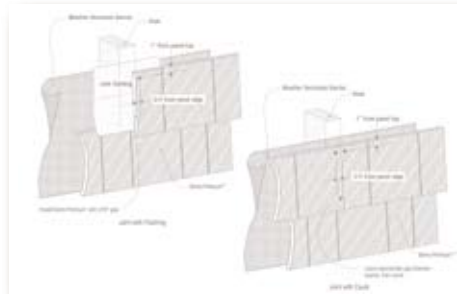
Starter Strip & First Panel Course

- A starter strip is required to set the first course on the proper angle and to create the drip edges and air spaces.



- Cut boards horizontally into 1-1/4" wide strips and install leaving a minimum 6" from soil grade or 2" from hard surface to the bottom of the strip. PVC, fiber cement or pressure-treated lumber siding starter can also be used. Do not use dimensional lumber, plywood, OSB or engineered wood products for starter strip.
- FS 1010 1/2" Nichiha spacer can also be used as a starter strip.
- Ensure that the first course of boards is level as it will be the guide for entire installation. Continue to check for level lines throughout installation.

Vertical Joints



All board vertical joints must be located at the stud line.

Joint Detail

Joint Installation Using Flashing (recommended)

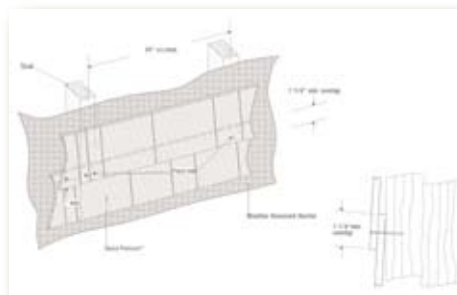
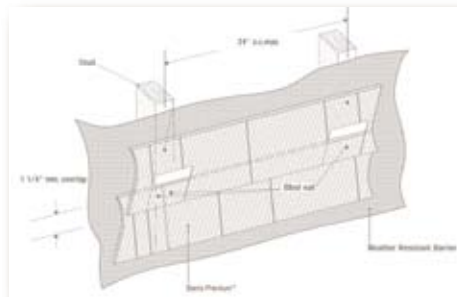
Attach joint flashing recommended for fiber cement siding and follow flashing manufacturer's instructions. Then install boards with at least a 3/16" gap. All board edges must be coated with primer, sealer or paint – NEVER leave exposed edges uncoated.

Joint Installation Using Caulk

Leave a 1/4" gap and fill with recommended sealant. For primed products, use ASTM C-834, for finished products use ASTM C-920 compliant sealant.

Horizontal Joints

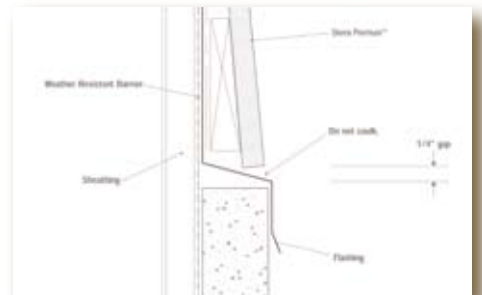
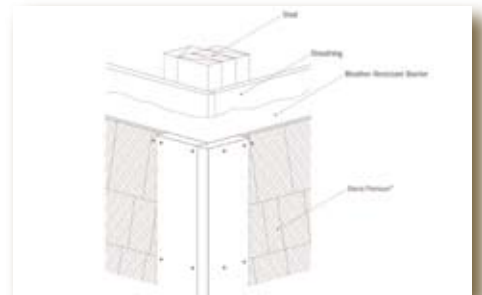
A minimum 1-1/4" overlap is required. Do not fasten closer than 1" from the top edge and no closer than 3/4" from the board ends. If face fastening is required, fasteners should be placed at 3/4" from



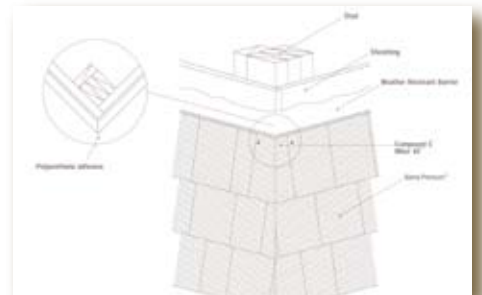
bottom edge. Fastening can begin at one board to the other or from board center out.

Trim Joints

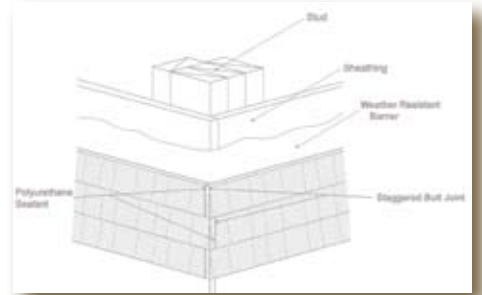
Outside and inside corners, around windows, doors and vents, etc.: For vertical joints, leave a 1/4" gap in between and fill with recommended sealant. For top of horizontal joints, (i.e.: top of windows or top of band board), use a metal flashing over the trim. For bottom and sides, leave a 1/4" gap and fill with recommended sealant.



Mitered Edge Joints



Staggered Butt Joint



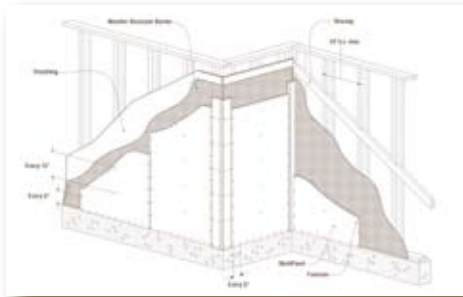
Finishing

Follow all general finishing instructions on page one of this guide.

Preparation

Follow all general instructions on page one of this guide.

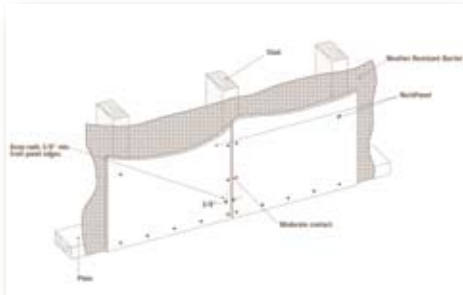
- NichiPanel™ can be installed directly on braced wood or steel stud (20GA or finer) construction spaced at max. 24" o.c. over sheathing. Fasteners must penetrate wood studs a min. of 1" and 1/2" in steel studs.



- It is recommended that APA rated 7/16" OSB (Oriented Strand Board) or plywood sheathing be used to ensure nail-holding power and provide an air gap between board and sheathing.

Fastening

Follow all general fastening instructions on page one of this guide.



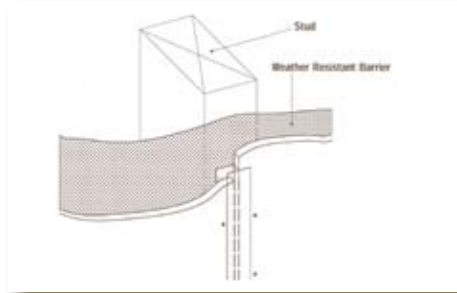
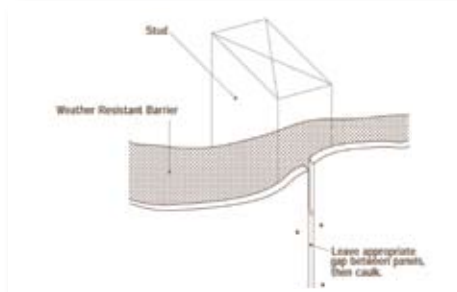
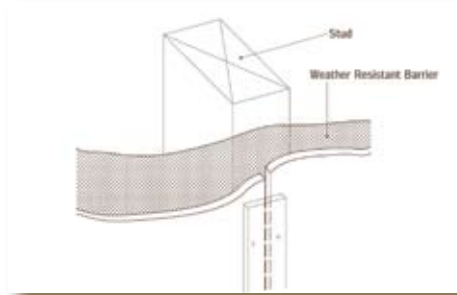
- NichiPanel boards must be jointed on the stud.
- To avoid breakage or cracking, fasteners should be placed no closer than 3/8" from panel edges.
- Use a chalk line to ensure a straight fastening line.
- Fasten panels a maximum 6" o.c. on all panel horizontal and vertical edges.

Installation

Follow all general instructions on page one of this guide.

Vertical Joints

All panel vertical joints must be located at the stud line and fastened 6" o.c. Fasteners can be installed from center out or from side to side on board.



Joint Installation Using Caulk

Leave a 1/4" gap and fill with recommended sealant.

Joint Joiner

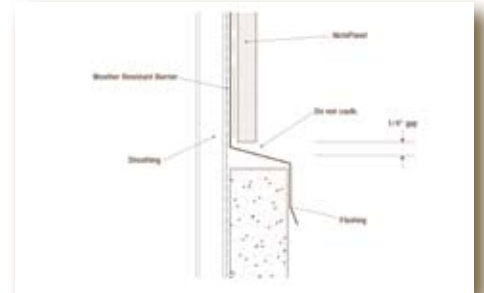
PVC or metal joiners can be used, follow joiner manufacturer's instructions.

Battens or Trim

Caulk board when using battens or trim.

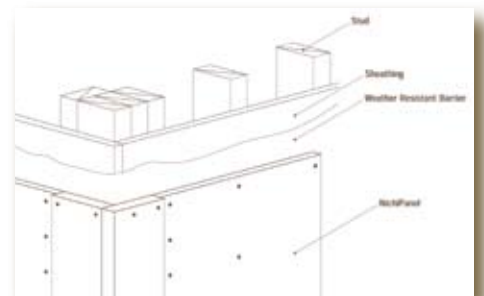
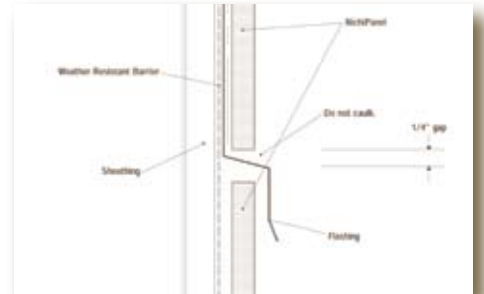
Horizontal Joints

Non-corrosive Z-flashing should be used. Do not fill the gap between the bottom of the board and the flashing with sealant. Do not fasten more than 3/8" from board edge.



Trim Joints

Outside and inside corners, around window, doors and vents, etc.: For vertical joints, leave a 1/4" gap in between and fill with recommended sealant. For top of horizontal joints, (i.e.; top of windows or top of band board), use a metal flashing over the trim. For bottom and sides, leave a 1/4" gap and fill with recommended sealant.



Finishing

Follow all general finishing instructions on page one of this guide.

Preparation

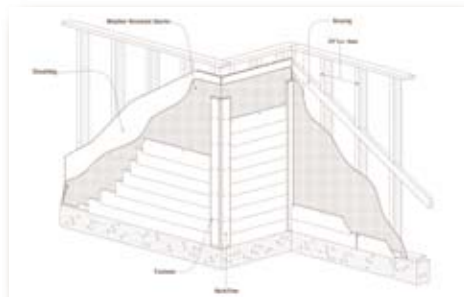
Follow all general instructions on page one of this guide.

- NichiTrim™ can be installed directly on braced wood or steel stud (20GA or finer) construction spaced at max. 24" o.c. over sheathing. Fasteners must penetrate wood studs a min. of 1" and 1/2" in steel studs.
- When picking up NichiTrim off the pallet, you must carry it on its edge. Trim is heavy and must be carried upright or it will break.

Fastening

Follow all general fastening instructions on page one of this guide.

- Finishing nails, smooth shank siding nails, trim nails or appropriate screws for application may be used to secure trim to wood and steel framing members. Fasteners must penetrate framing a minimum of 3/4" to ensure trim is securely fastened.

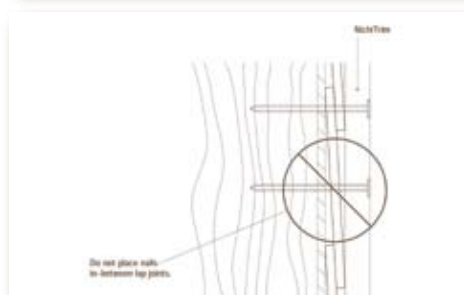
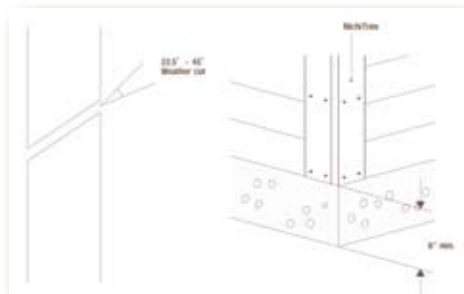


- Trim should be fastened a minimum of 3/4" from trim edges when using screws or 1/2" from trim edges when using finishing nails, and spaced a minimum of 16".

Trimming Inside & Outside Corners

Follow all general instructions on page one of this guide.

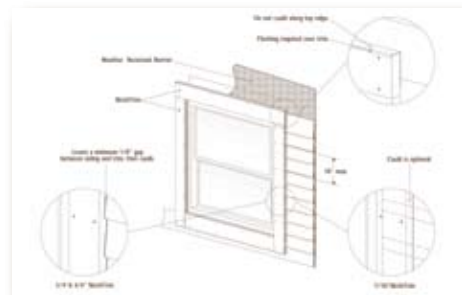
- Install boards using weather cuts angled away from wall.
- Do not fasten nails or screws between lap joints.



Trimming Windows, Doors & Openings

Follow all general instructions on page one of this guide.

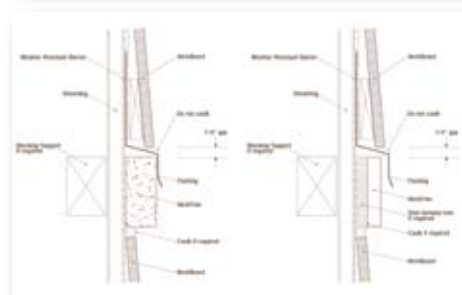
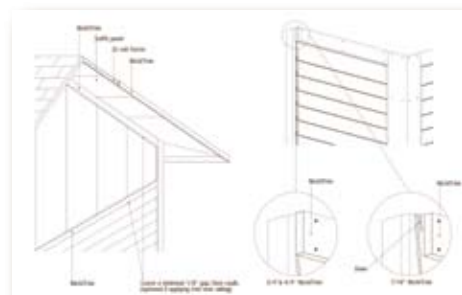
- Trim all openings prior to siding installation, and follow window, door, vent manufacturer's installation instructions.
- Leave a minimum 1/8" gap between trim and siding and apply sealant.



Fascia, Frieze Boards, Rake Trim & Band Boards

Follow all general instructions on page one of this guide.

- NichiTrim may be used as fascia, frieze boards, rake trim and band boards. When using NichiTrim for these applications use best construction practices.



Nichiha Warranties*

NichiBoard™, NichiPanel™ and NichiShake™ – Lifetime limited warranty.

NichiTrim™ and NichiSoffit™ – 25-year limited warranty.

Sierra Premium™ Shake and Smooth – Lifetime limited warranty.

See Nichiha Warranties for detailed information on terms, conditions and limitations. Visit nichiha.com for easy downloadable warranties or call toll-free 1.866.424.4421 for a copy.

Nichiha MSDS's are available at nichiha.com, at your local NICHIIHA dealer or call NICHIIHA direct, toll-free 1.866.424.4421.

NichiSoffit™

Preparation

Follow all general instructions on page one of this guide.

- These instructions are only intended for site construction applications. For applications on modular, panelized or manufactured housing, please contact Nichiha directly.
- NichiSoffit™ can be installed directly on braced wood or steel stud (20GA or heavier) construction spaced at maximum 24" o.c. Fasteners must penetrate framing a minimum of 1" and 1/2" in metal framing.

Fastening

Follow all general fastening instructions on page one of this guide.

- NichiSoffit must be jointed at the framing member.
- To avoid breakage or cracking, fasteners should be placed a minimum of 3/8" from soffit edges.

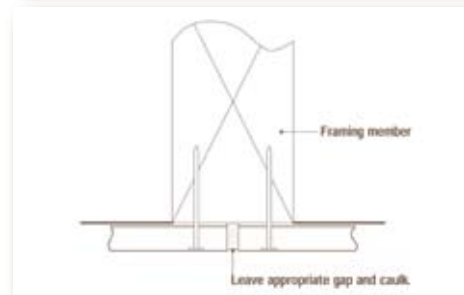
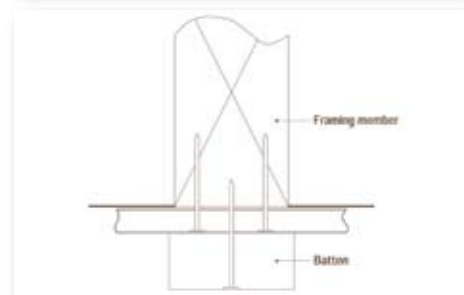
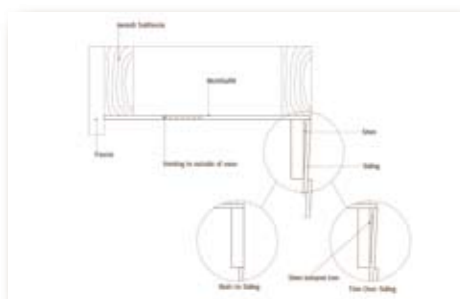
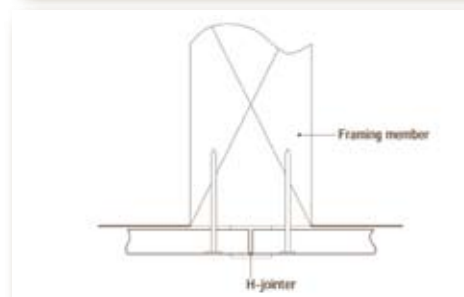
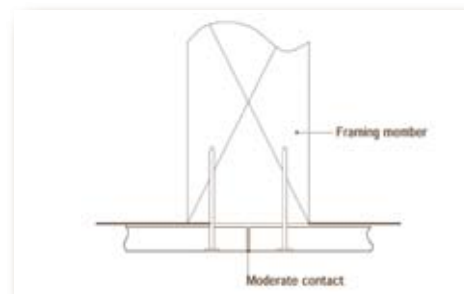
Installation

Follow all general instructions on page one of this guide.

- NichiSoffit must be installed to nominal 2x4 framing and spaced at 24" o.c. The long dimension of soffit board must be perpendicular to framing, with all edges supported by framing.
- Soffit must be fastened to a solid substrate such as 2x4 wood subfascia.
- Soffit vents can be installed into un-vented NichiSoffit boards.

Joint Methods

All soffit boards must be installed with moderate contact (a min. of 1/16") at ends, leave appropriate gap and apply sealant. PVC, metal joiners and battens can also be used, install in accordance with manufacturer's instructions.



Nichiha USA, Inc.

6659 Peachtree Industrial Blvd. Suite AA,
Norcross, GA 30092

Toll Free: 1.86 NICHIIHA 1.866.424.4421

P. 770.805.9466 F. 770.805.9467

nichiha.com

Fiber Cement At Its Best™

FIBER CEMENT AT ITS BEST, NICHIBOARD, NICHIPANEL, NICHIPRODUCTS, NICHISHAKE, NICHISOFFIT, NICHITRIM and SIERRA PREMIUM are trademarks of Nichiha USA, Inc.

©2008 Nichiha USA, Inc. All rights reserved. Printed in the USA.
DG 09/08 NI-1000

Dust Warning & Safety Instructions: Whenever drilling, cutting, sawing, sanding or abrading the product, users must observe the following safety practices: 1) Use best work practices to reduce airborne dust concentrations. 2) Work outdoors when feasible, otherwise use mechanical ventilation. 3) Anyone handling Nichiha's product or in the vicinity of others using Nichiha's product must wear safety glasses and properly fitted respirators, prior to handling Nichiha products. 4) All employers must comply with the OSHA PEL. 5) Use a circular saw with dust collector (i.e.; Makita 5057KB) the dust collector must be connected to a HEPA vacuum, when cutting the panels. 6) Do not use compressed air for cleaning dust. 7) Warn others in area.

Silica Dust Warning: NICHIIHA products contain crystalline silica [a.k.a. sand, silicon dioxide], which is a common Earth's naturally occurring mineral. Inhalation of crystalline silica into the lungs and repeated exposure to silica, can cause health disorders, such as silicosis, lung cancer, or a potentially death depending upon various factors. To be conservative, Nichiha recommends that whenever drilling, cutting, sawing, sanding or abrading the product, users must observe the following safety practices: 1) Use best work practices to reduce airborne dust concentrations. 2) Use a fiber cement circular saw with a dust collector for cutting (e.g., Makita 5057KB). The dust collector must be connected to a HEPA vacuum. 3) Do not use compressed air for cleaning dust. 4) Work outdoors where feasible, otherwise use mechanical ventilation. 5) Everyone handling Nichiha products or in the vicinity of others using Nichiha products must wear safety glasses and properly fitted respirators prior to handling Nichiha products. Nichiha requires that users wear a **NIOSH/OSHA approved respirator with a rating of N100, O100, P100, or R100** in accordance with applicable government regulations and manufacturer instructions. 6) All employers must comply with the OSHA PEL and ACGIH TLV-TWA. 7) Warn others in area. These requirements are designed to help minimize exposure to crystalline silica. We also require that you read all instructions and warnings (including MSDS) prior to using NICHIIHA's products. For further information or questions, please consult the MSDS or your employer. The MSDS for Nichiha products are available at nichiha.com, at your local Nichiha dealer or through Nichiha directly at 1.866.424.4421. FAILURE TO ADHERE TO OUR WARNINGS, MSDS, AND OTHER INSTRUCTION MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.