NORDIC

DETAILS
NORDIC JOIST

NS-DC3

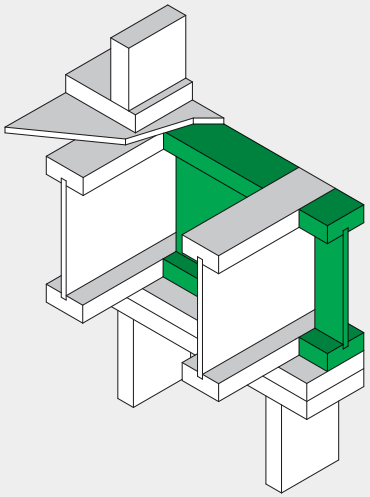
ENGLISH

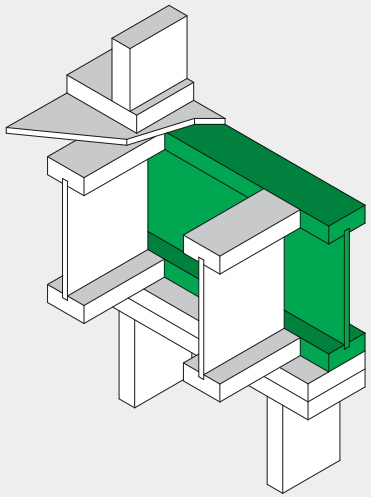
VERSION
2024-08-01

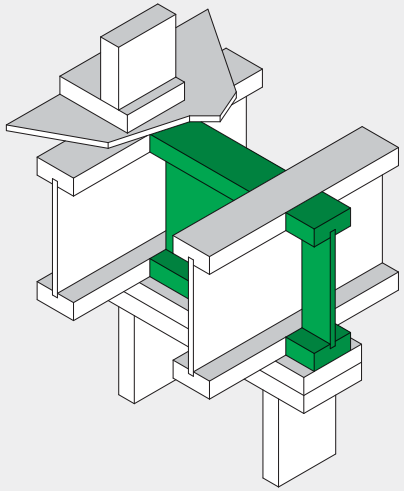
Engineered Wood Products

CONSTRUCTION DETAILS
NORDIC JOIST

NORDIC JOIST







NORDIC
STRUCTURES

ABOUT NORDIC

NORDIC STRUCTURES

Nordic Structures is the leading innovator in engineered wood products. Its resource comes from responsibly managed lands within the regional boreal forest. Vertical integration, from forest to structure, bolstered by Nordic's experienced design and development team, ensures consistent quality and unparalleled level of service.

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GENERAL NOTES

1.0 General

1.1 This document supersedes all previous versions. For the latest version, consult nordic.ca or contact Nordic Structures.

1.2 While this guide emphasizes residential construction, much of the basic design information can be used for other construction applications. Review by a design professional is required for applications beyond the scope of this document.

1.3 Refer to the Nordic Joist Technical Guide (NS-GT3) for the maximum spans, or to the floor or roof layout provided by your distributor.

1.4 For more information, consult nordic.ca or contact Nordic Structures.

2.0 Structure

2.1 For APA Rim Board Plus specifications, see ANSI/APA PRR 410, Standard for Performance-rated Engineered Wood Rim Boards.

3.0 Fire Safety

3.1 Numerous fire-rated assemblies incorporate I-joists and wood structural panels. These floor-ceiling and roof-ceiling assemblies, recognized as fire-rated constructions by building codes, are illustrated in the APA Product Report PR-S274, Fire-Rated Assemblies.

3.2 A rim board can also serve as a fire barrier when it is installed in a continuous assembly on top of a wall, parallel or perpendicular to the joists. Fire-resistant rim board assemblies are shown in the APA Data File: APA Rim Board in Fire-Rated Assemblies, Form D350 and the AWC DCA3, Fire-Resistance-Rated Wood-Frame Wall and Floor/Ceiling Assemblies.

3.3 I-joists are often used in conjunction with both steel and chlorinated polyvinyl chloride (CPVC) sprinkler systems. Details 9 provide some basic guidance on appropriate methods of attachment of steel and CPVC sprinkler systems to I-joists. All designs should be checked by a design professional to assure the adequacy of not only the hangers and fasteners used but the capacity of the I-joists themselves. For more information, refer to APA J745, Sprinkler Pipe Installation for APA Performance Rated I-Joists.

3.4 For more information, refer to Chapter 4 of the Nordic Joist Technical Guide (NS-GT3).

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Typical Floor Framing and Construction Details

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2
Web Stiffeners and Cantilevers

3
Openings and Rim Boards

LIST OF DETAILS (CONTINUED)

4
Various Installations for I-joists

5
Typical Roof Framing and Construction Details

NORDIC JOIST

NORDIC I-JOISTS

Nordic I-joists are composed of sawn lumber flanges connected by a structural oriented strand board and bonded together with exterior-grade adhesives.

Check availability of products with your local distributor.

RESIDENTIAL SERIES

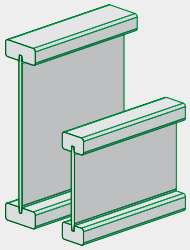
NI-20
2×3 S-P-F No. 2, 3/8 in. web
Depths
9-1/2 and 11-7/8 in.

NI-40x
2×3 1950f MSR, 3/8 in. web
Depths
9-1/2, 11-7/8 and 14 in.

NI-60
2×3 2100f MSR, 3/8 in. web
Depths
9-1/2, 11-7/8, 14 and 16 in.

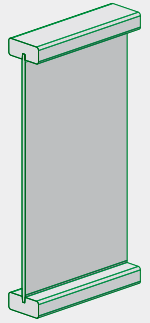
NI-80
2×4 2100f MSR, 3/8 in. web
Depths
9-1/2, 11-7/8, 14 and 16 in.

NI-90
2×4 2400f MSR, 7/16 in. web
Depths
11-7/8, 14 and 16 in.

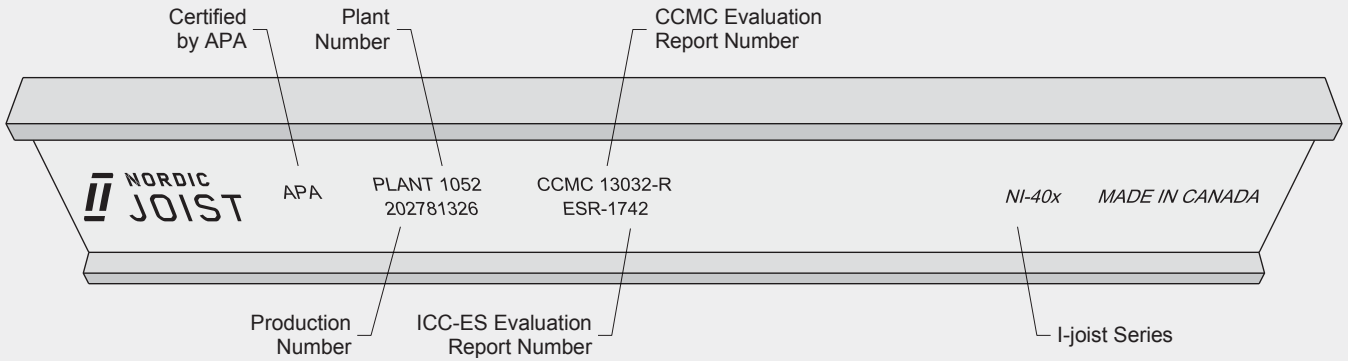


COMMERCIAL SERIES

NI-80x
2×4 2100f MSR, 7/16 in. web
Depths
18, 20, 22 and 24 in.



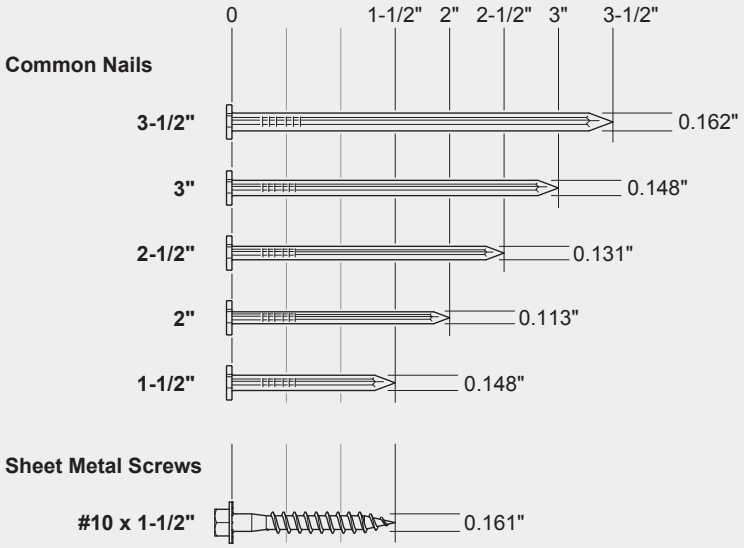
I-JOIST MARKING



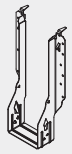
Notes:

1. Nordic I-joists are listed in the APA Product Report PR-L274C and the CCMC Evaluation Report 13032-R.
2. For APA Rim Board Plus specifications, see ANSI/APA PRR 410, Standard for Performance-rated Engineered Wood Rim Boards.

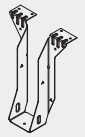
FASTENERS



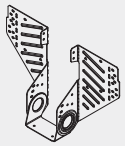
HANGERS



Face mount



Top mount



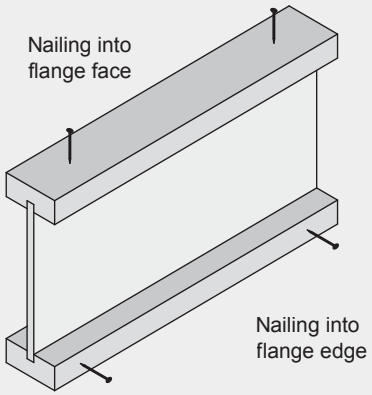
Slopeable & skewable

45° skew

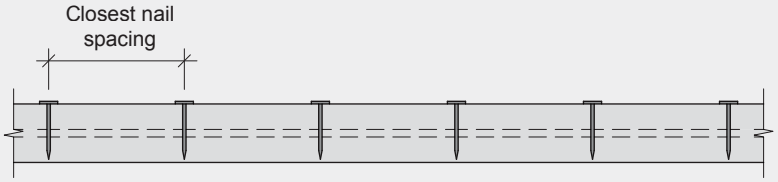
Notes:

1. Hangers shown illustrate the four most commonly used metal hangers to support I-joists.
2. All nailing must meet the manufacturer's recommendations.
3. Hangers should be selected based on the joist depth, flange width and load resistance.
4. Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.
5. For the selection tables, consult the technical guide NS-GT3. For further information, refer to the manufacturer's literature. Check with your local distributor.

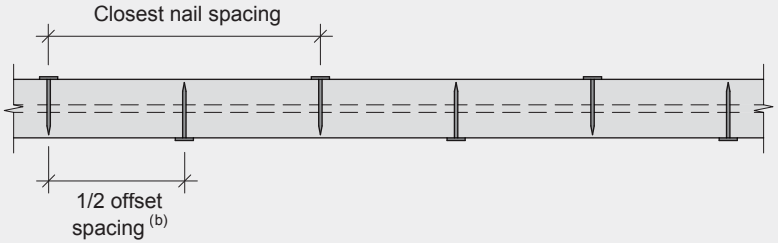
NAIL SPACING



Nailed to Only One Flange Edge (Top View)



Nailed to Both Flange Edges (Top View)



Recommended Closest Nail Spacing for Fastening Sheathing to I-joist Flanges to Minimize Splitting

Fastener size (diameter x length)	Flange face nailing (a)		Flange edge nailing (b)		
				Nail spacing (in.)	
	End distance (in.)	Nail spacing (in.)	End distance (in.)	Nailed to only one flange edge	Nailed to both flange edges
0.128" or smaller in diameter, and 3-1/4" or shorter in length	2	2	2	2	4
Greater than 0.128" up to 0.148" in diameter, and 3-1/4" or shorter in length	2	3	2	3	6

(a) If more than one row is required, offset rows a minimum of 1/2 inch and stagger.
(b) Closest nail spacing measured from one flange edge. Nails on opposite flange edge must be offset one-half the minimum spacing.

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TYPICAL FLOOR FRAMING AND CONSTRUCTION DETAILS 1

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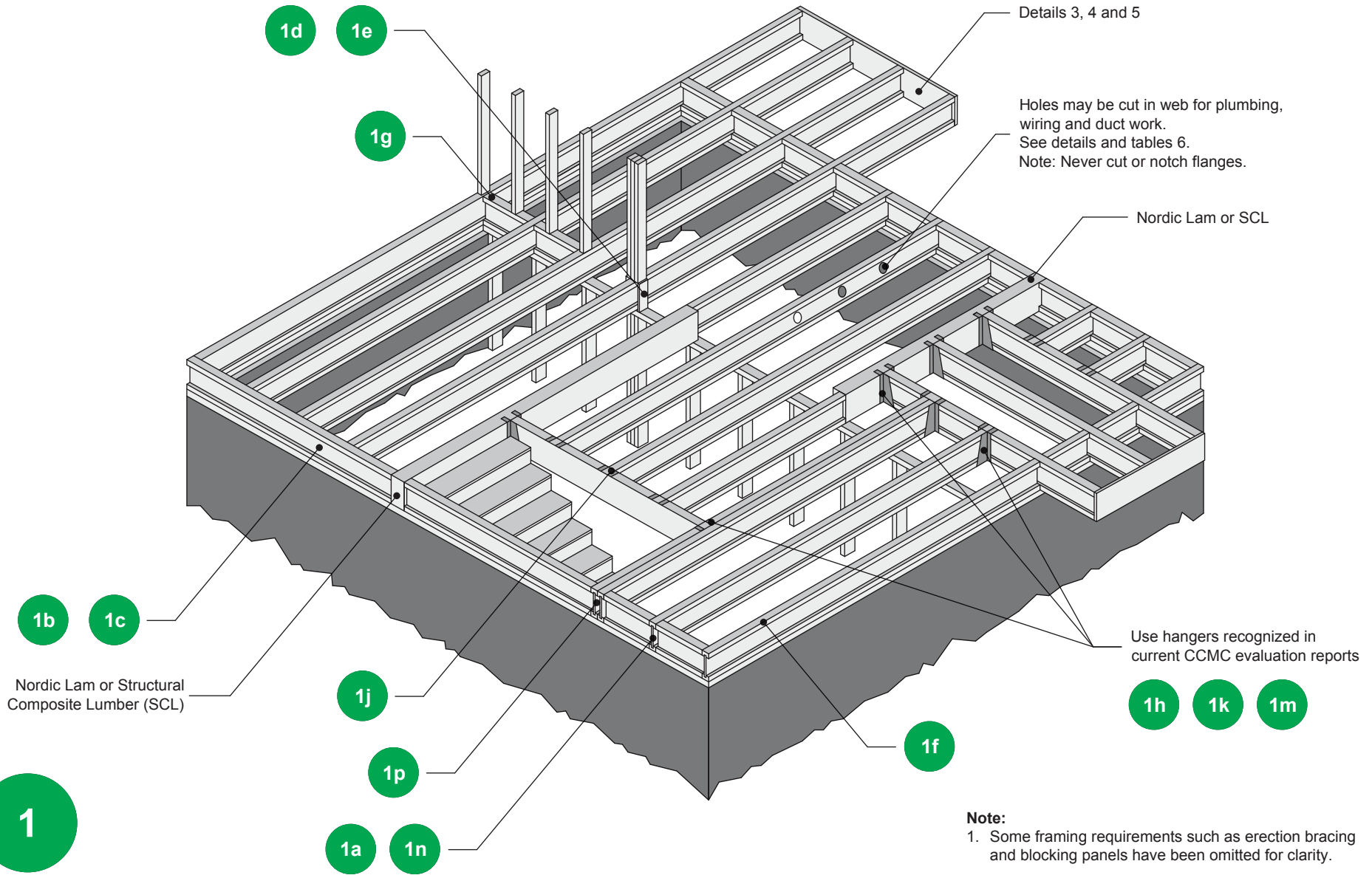
INSTALLATION NOTES

Floor Systems

1. Installation of Nordic I-joists shall be as shown in details 1.
2. Except for cutting to length, I-joist flanges should never be cut, drilled or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. Concentrated loads should only be applied to the top surface of the top flange. Concentrated loads should not be suspended from the bottom flange with the exception of light loads, such as ceiling fans or light fixtures.
5. I-joists must be protected from the weather prior to installation.
6. I-joists must not be used in applications where they will be permanently exposed to weather, or will reach a moisture content of 15 percent or greater, such as in swimming pool or hot tub areas. They must not be installed where they will remain in direct contact with concrete or masonry.
7. End bearing length must be at least 1-3/4 inch. For multiple-span joists, intermediate bearing length must be at least 3-1/2 inches.
8. Ends of floor joists shall be restrained to prevent rollover. Use rim board or I-joist blocking panels.
9. I-joists installed beneath bearing walls perpendicular to the joists shall have full-depth blocking panels, rim board, or squash blocks (cripple blocks) to transfer gravity loads from above the floor system to the wall or foundation below.
10. For I-joists installed directly beneath bearing walls parallel to the joists or used as rim board or blocking panels, the maximum vertical load using a single I-joist is 2,900 plf, and 5,800 plf if double I-joists are used.
11. Continuous lateral support of the I-joist's compression flange is required to prevent rotation and buckling. In simple span uses, lateral support of the top flange is normally supplied by the floor sheathing. In multiple-span or cantilever applications, bracing of the I-joist's bottom flange is also required at interior supports of multiple-span joists, and at the end support next to the cantilever extension. The ends of all cantilever extensions must be laterally braced as shown in details 3, 4, or 5.
12. Nails installed in flange face or edge shall be spaced in accordance with the applicable building code requirements or approved building plans, but should not be closer than those specified on page viii.
13. Details 1 on the following pages show only I-joist-specific fastener requirements. For other fastener requirements, see the applicable building code.
14. For proper temporary bracing of wood I-joists and placement of temporary construction loads, see APA Technical Note: Temporary Construction Loads over I-Joist Roofs and Floors, Form J735.



Note:

1. Some framing requirements such as erection bracing and blocking panels have been omitted for clarity.

NORDIC STRUCTURES

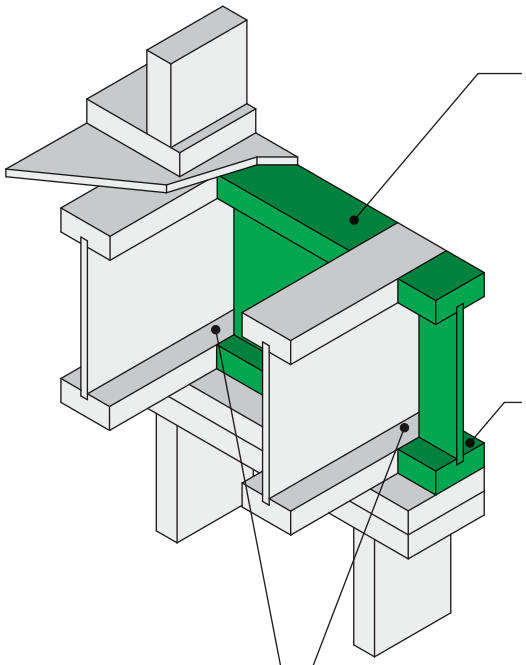
nordic.ca

NS-DC3

DETAILS NORDIC JOIST

TITLE		DRAWING	
Typical Floor Framing		1	
CATEGORY	SCALE	DATE	PAGE
Typical Floor Framing and Construction Details	-	2024-08-01	1.1

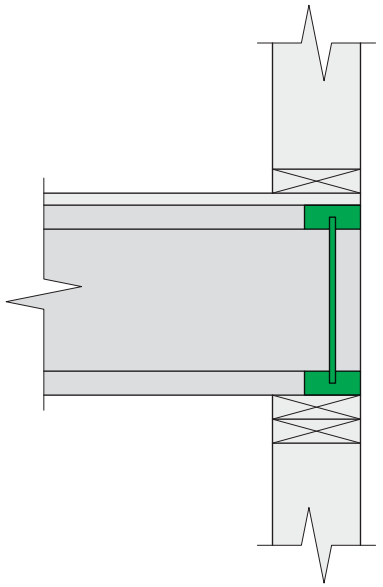
1a



Nordic I-joist blocking panel

2-1/2" nails at 6" o.c. to top plate (when used for lateral shear transfer, nail to bearing plate with same nailing as required for floor sheathing)

Attach I-joist to top plate per detail 1b

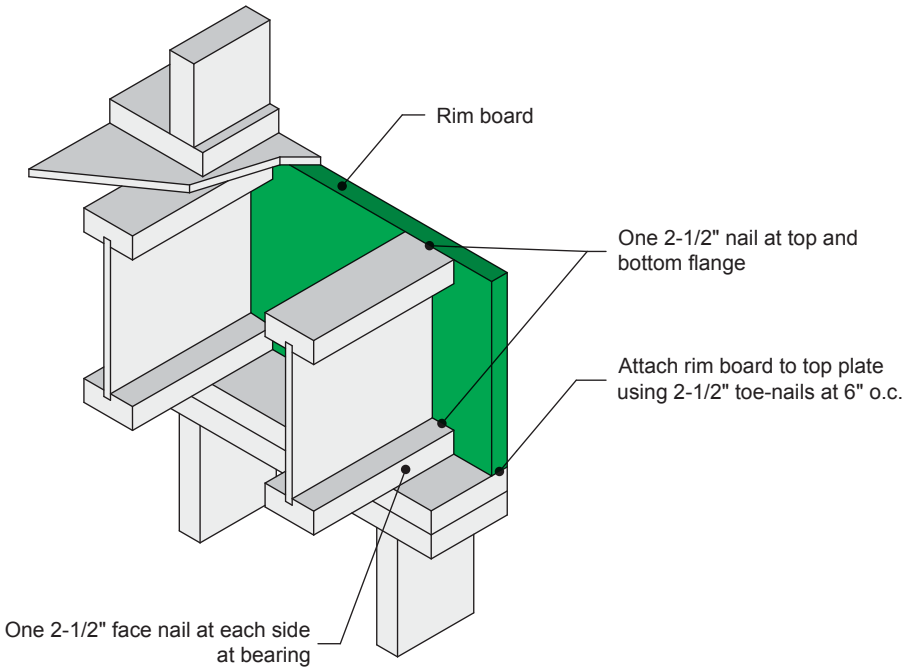


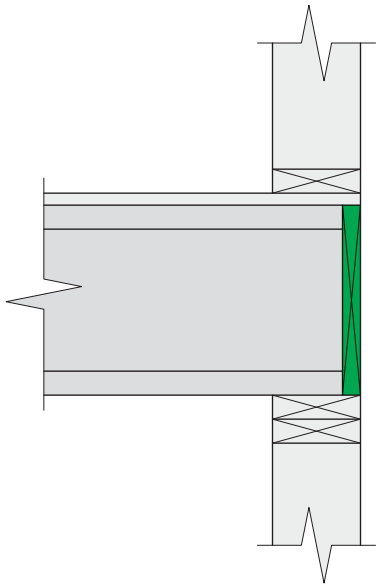
Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [a]
Nordic I-joists	2,900

(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1b





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [(a)]
1-1/8" APA Rim Board Plus	7,030

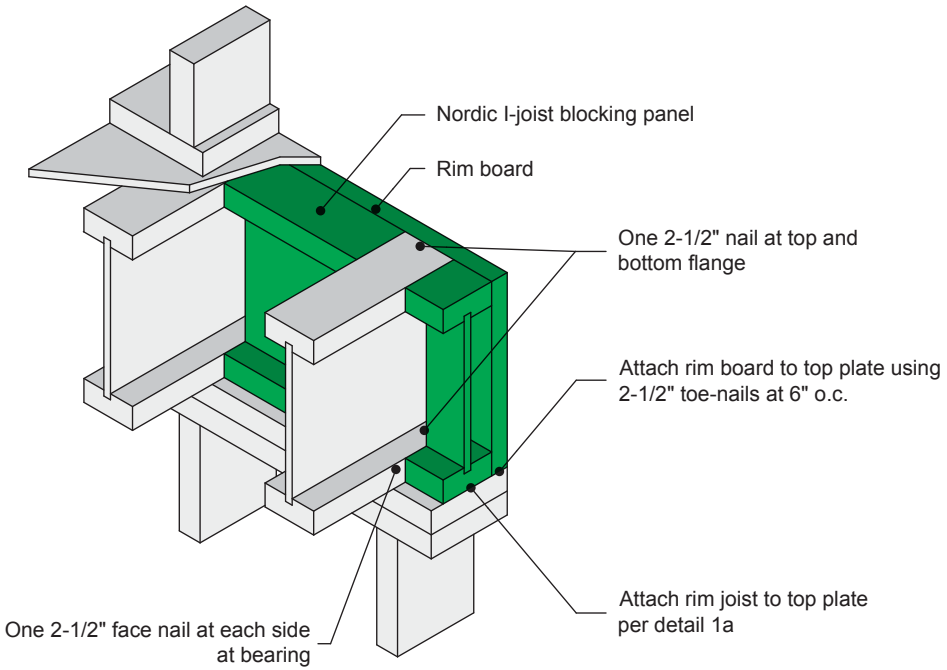
(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

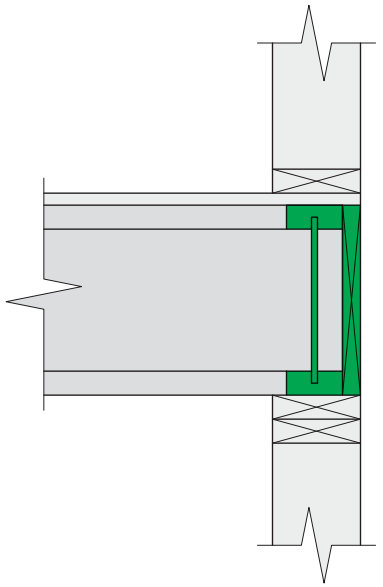
Note:

1. To avoid splitting flange, start nails at least 1-1/2 inch from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1b-1





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [a]
1-1/8" APA Rim Board Plus	7,030
Nordic I-joists	2,900
Both products	9,930

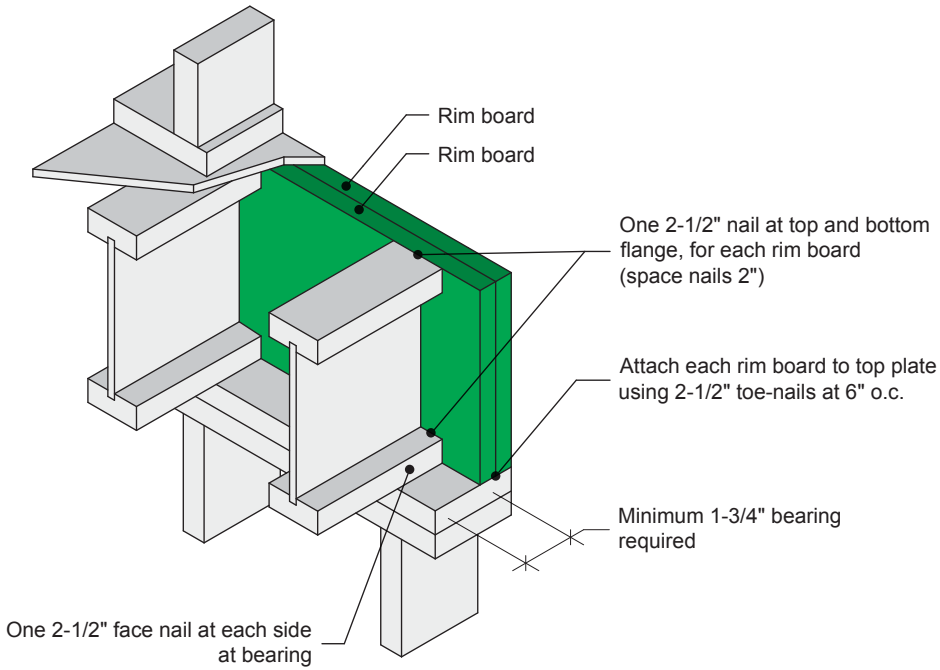
Note:

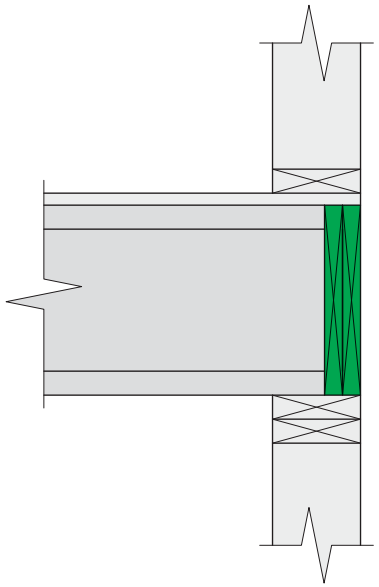
1. To avoid splitting flange, start nails at least 1-1/2 inch from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

[a] The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1b-2





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [(a)]
2 x 1-1/8" APA Rim Board Plus	14,070

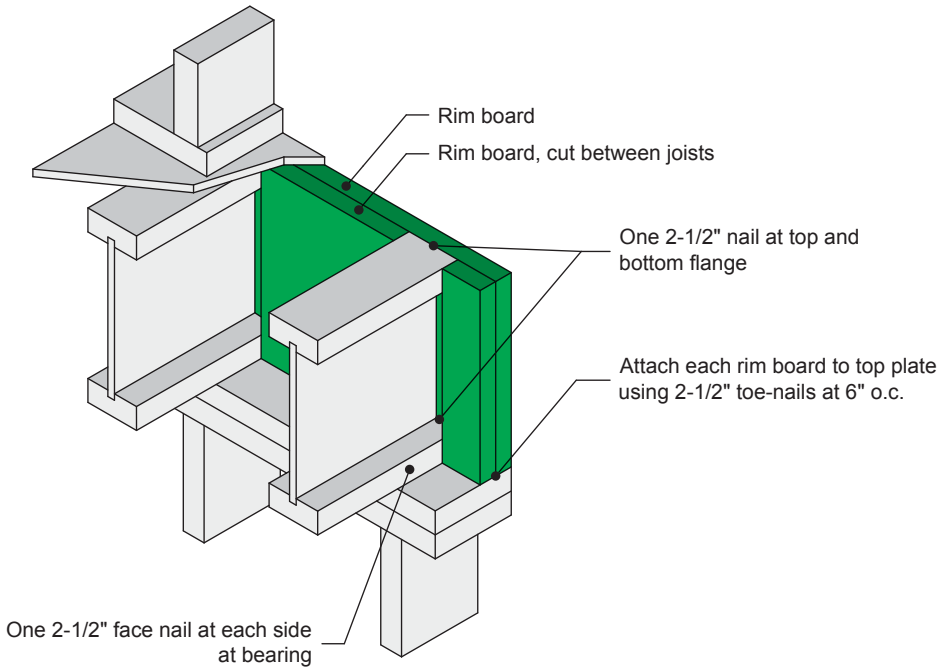
(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

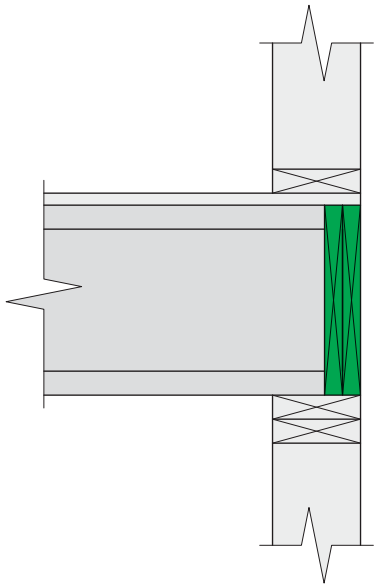
Note:

1. To avoid splitting flange, start nails at least 1-1/2 inch from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1b-3





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [(a)]
2 x 1-1/8" APA Rim Board Plus	14,070

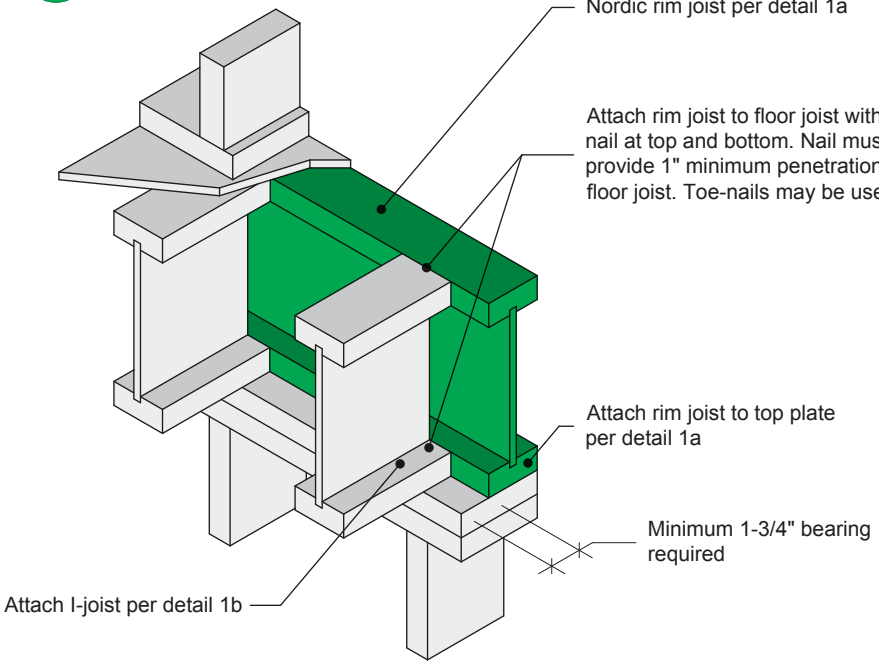
(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

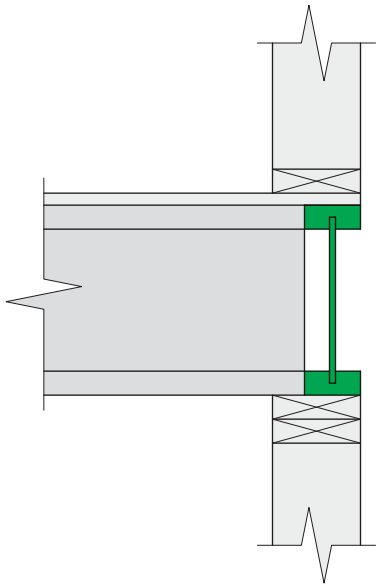
Note:

1. To avoid splitting flange, start nails at least 1-1/2 inch from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1c





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [(a)]
Nordic I-joists	2,900

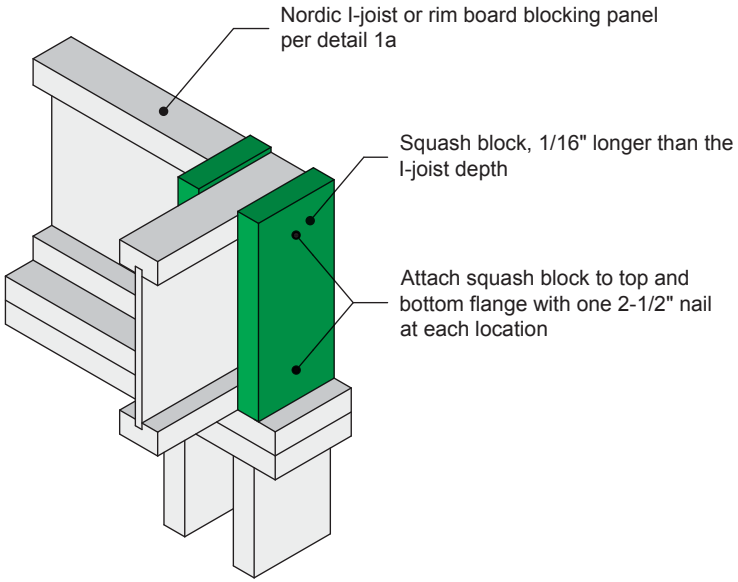
(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

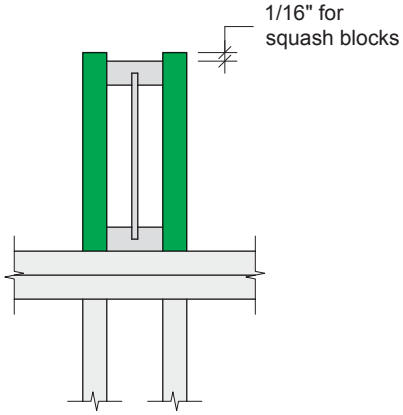
Note:

1. To avoid splitting flange, start nails at least 1-1/2 inch from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1d



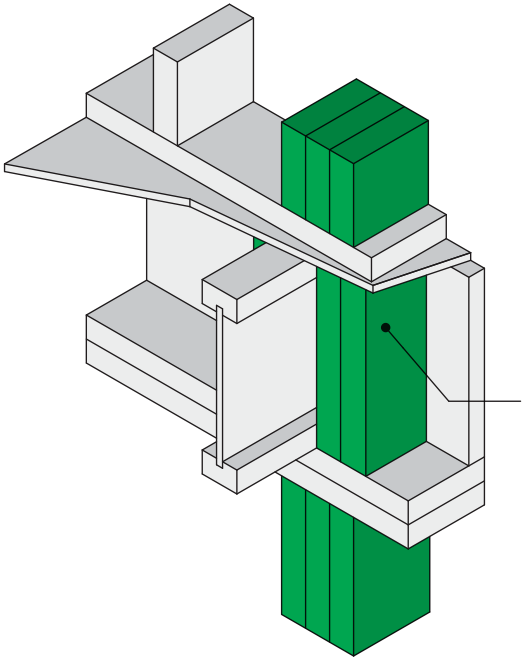


Pair of squash blocks [a]	Maximum vertical load transfer (lbf)	
	3-1/2" wide	5-1/2" wide
2x lumber	5,800	9,500
1-1/8" APA Rim Board Plus	4,100	6,400

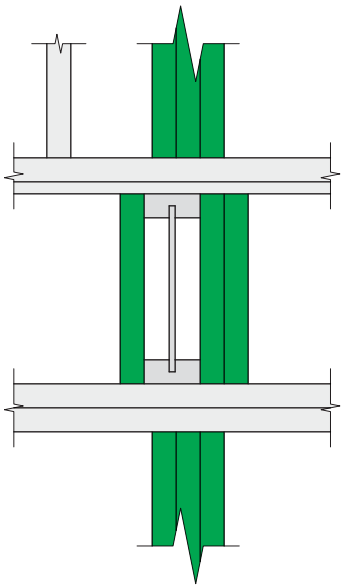
[a] The squash blocks are assumed to be in full bearing on the plate below.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1e

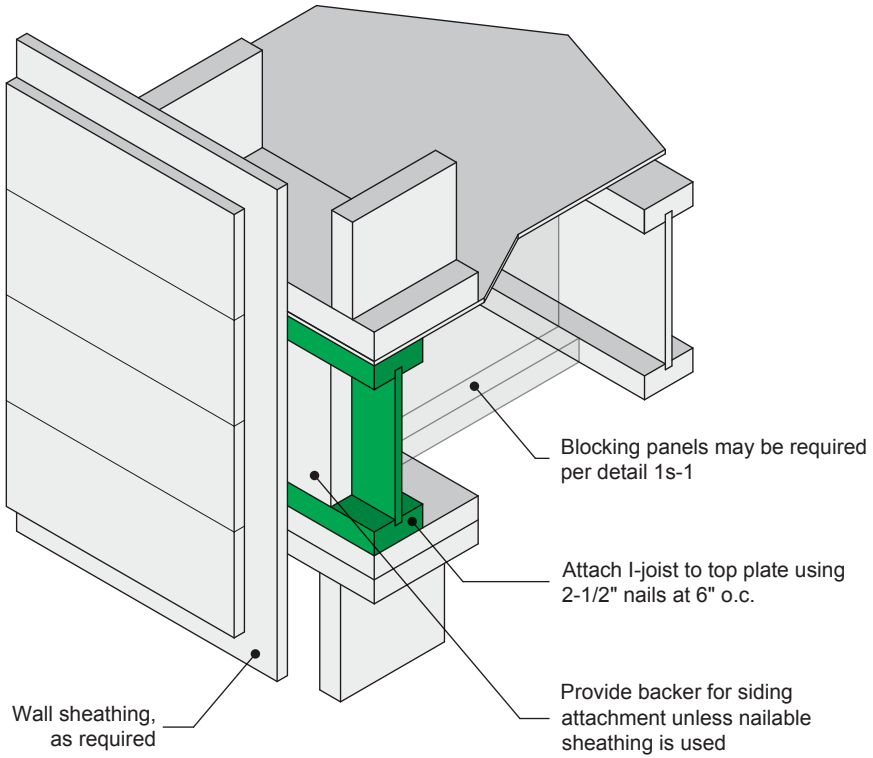


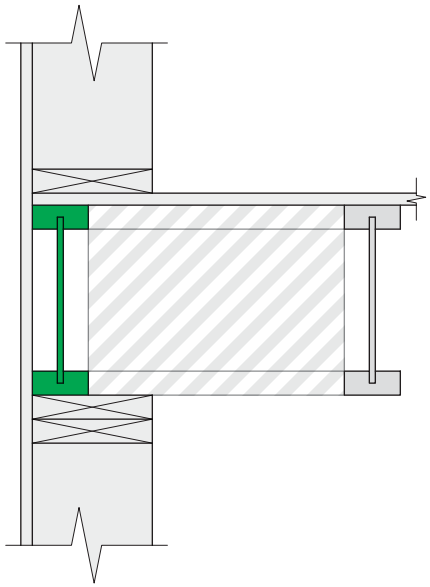
Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above. Stagger nails to avoid splitting.



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1f-1





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [a]
Nordic I-joists	2,900

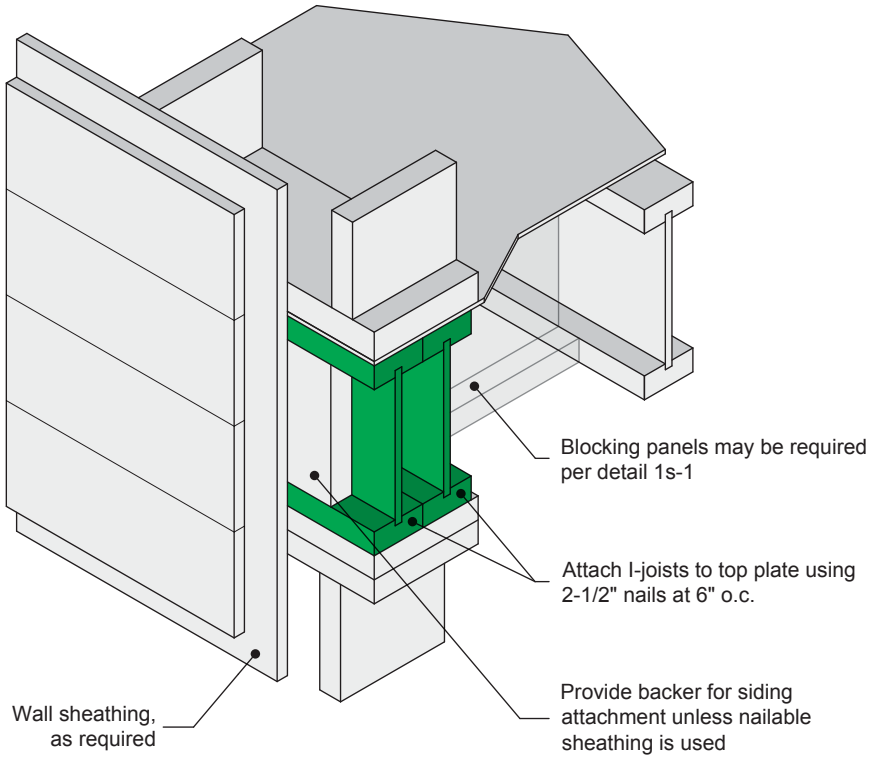
(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

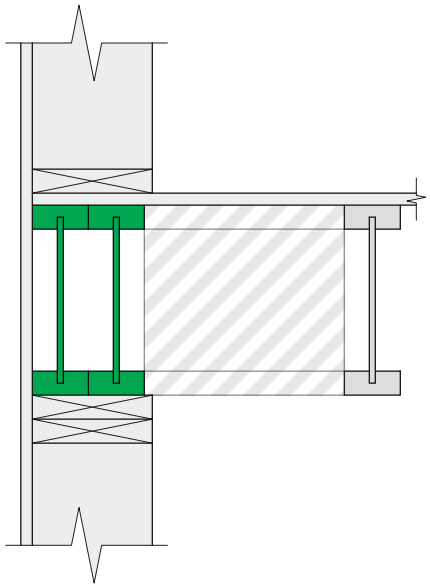
Notes:

1. Rim board may be used in lieu of I-joists. Backer is not required when rim board is used.
2. Notches of up to 3/4 inch in the I-joist bottom flange are permitted for fastening the sill plate to the foundation, with a spacing of 4 feet and more.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1f-2





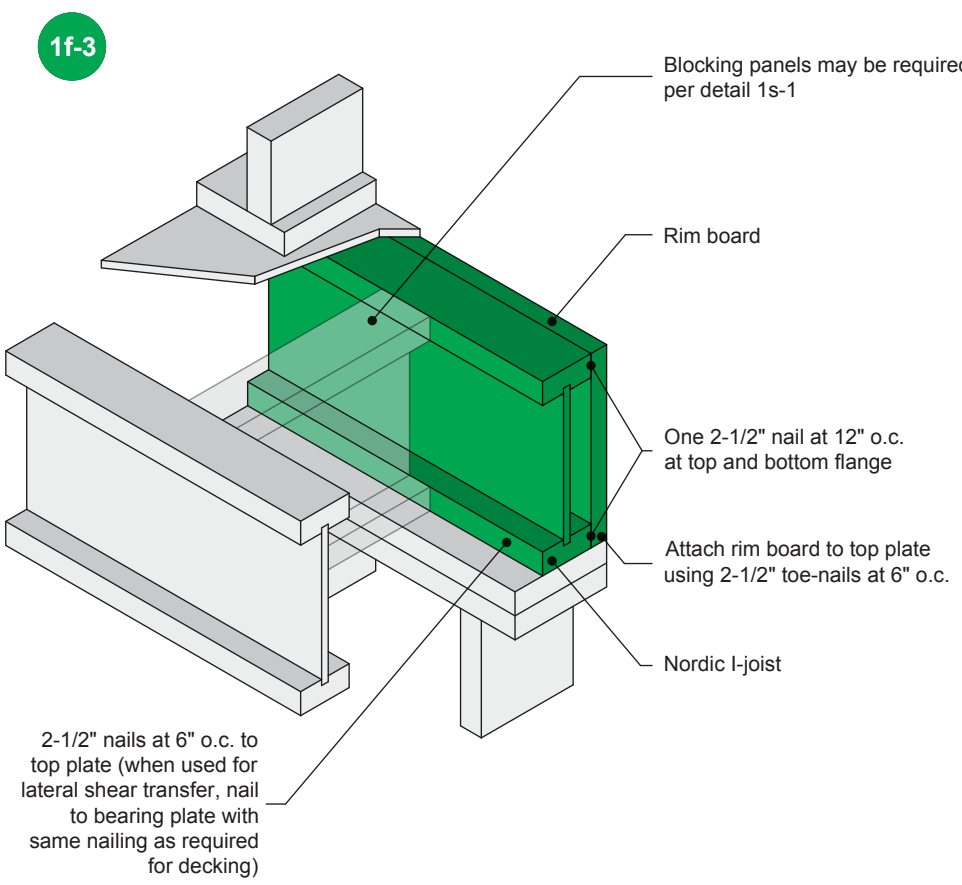
Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [a]
Double Nordic I-joists	5,800

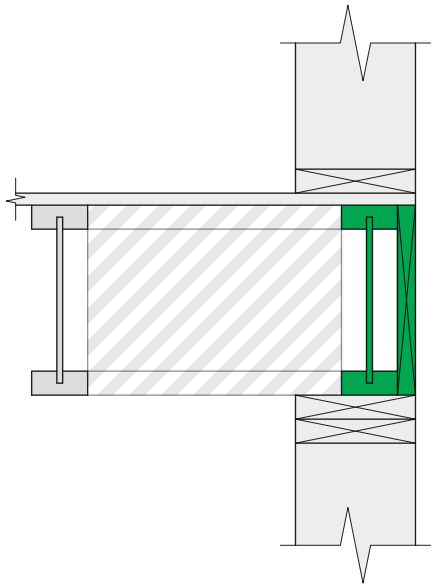
(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

Notes:
1. Rim board may be used in lieu of I-joists. Backer is not required when rim board is used.
2. Notches of up to 3/4 inch in the I-joist bottom flange are permitted for fastening the sill plate to the foundation, with a spacing of 4 feet and more.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1f-3





Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [a]
1-1/8" APA Rim Board Plus	7,030
Nordic I-joists	2,900
Both products	9,930

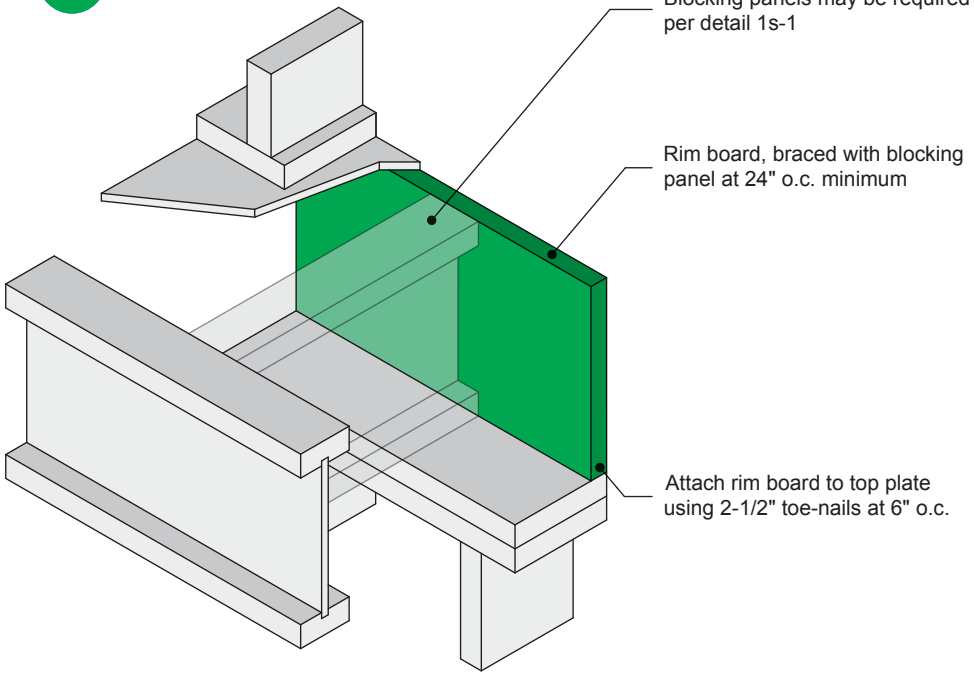
[a] The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

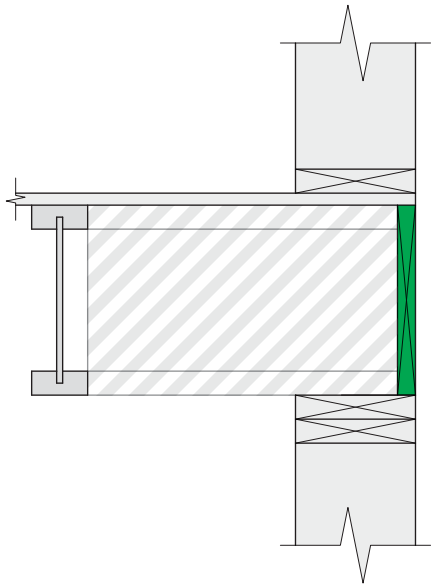
Note:

1. Notches of up to 3/4 inch in the I-joist bottom flange are permitted for fastening the sill plate to the foundation, with a spacing of 4 feet and more.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1f-4



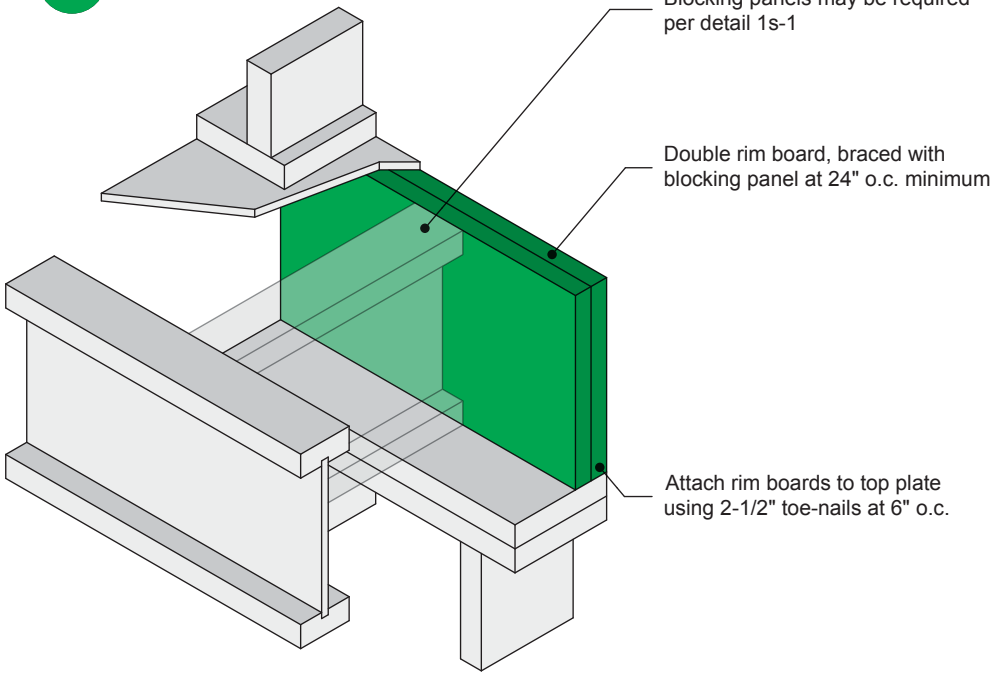


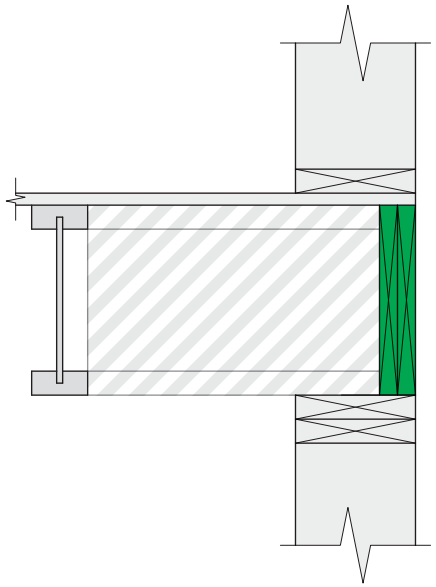
Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [a]
1-1/8" APA Rim Board Plus	7,030

[a] The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1f-5



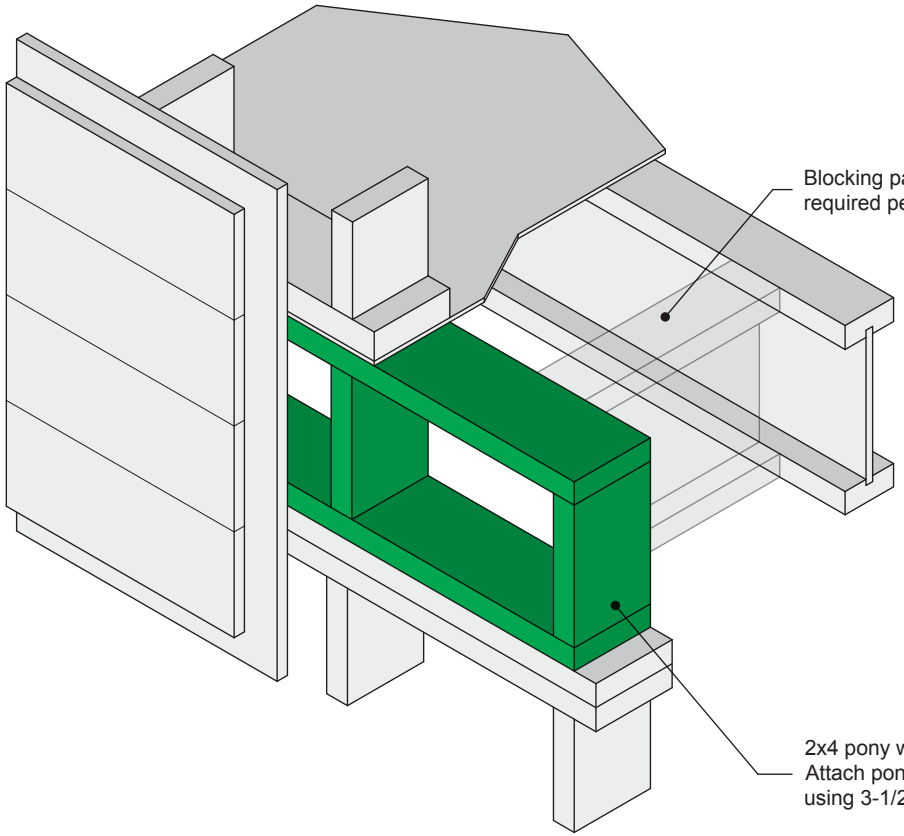


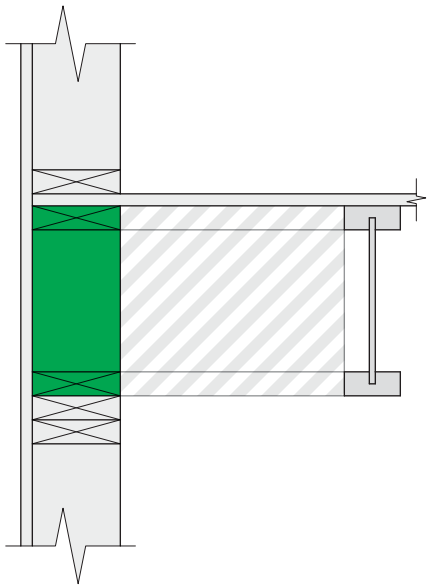
Blocking panel and/or rim joist	Maximum uniform vertical load transfer (plf) [(a)]
2 x 1-1/8" APA Rim Board Plus	14,070

(a) The uniform vertical load transfer resistance is limited to a depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer resistance, see detail 1d.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

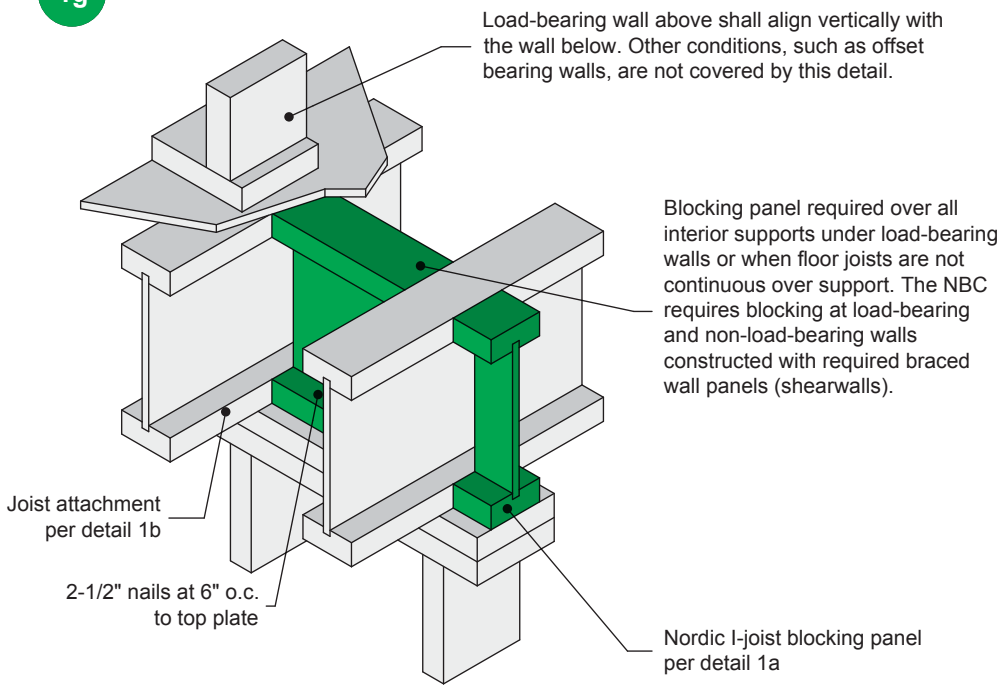
1f-6

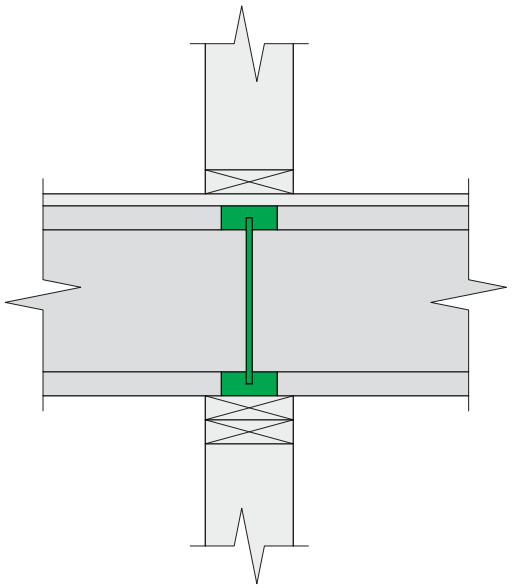




All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g



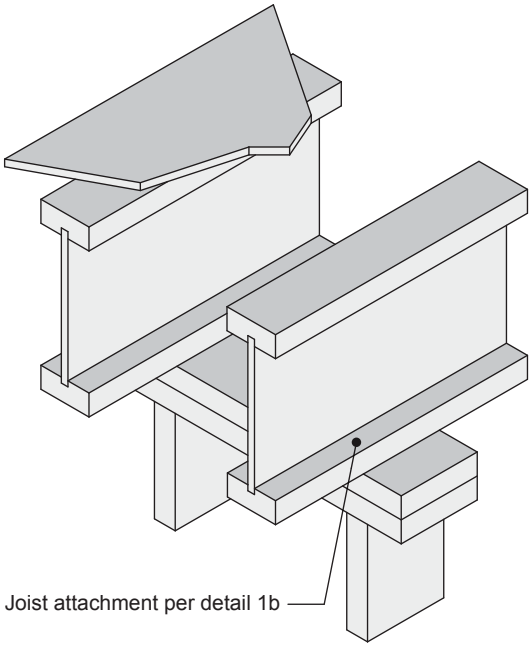


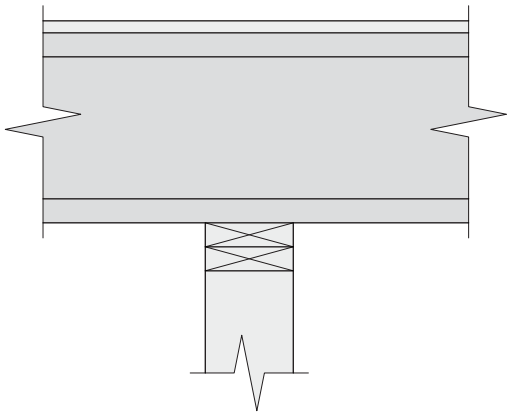
Notes:

1. An occasional blocking panel (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.
2. For other options, see details 1g-1 to 1g-7.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-1



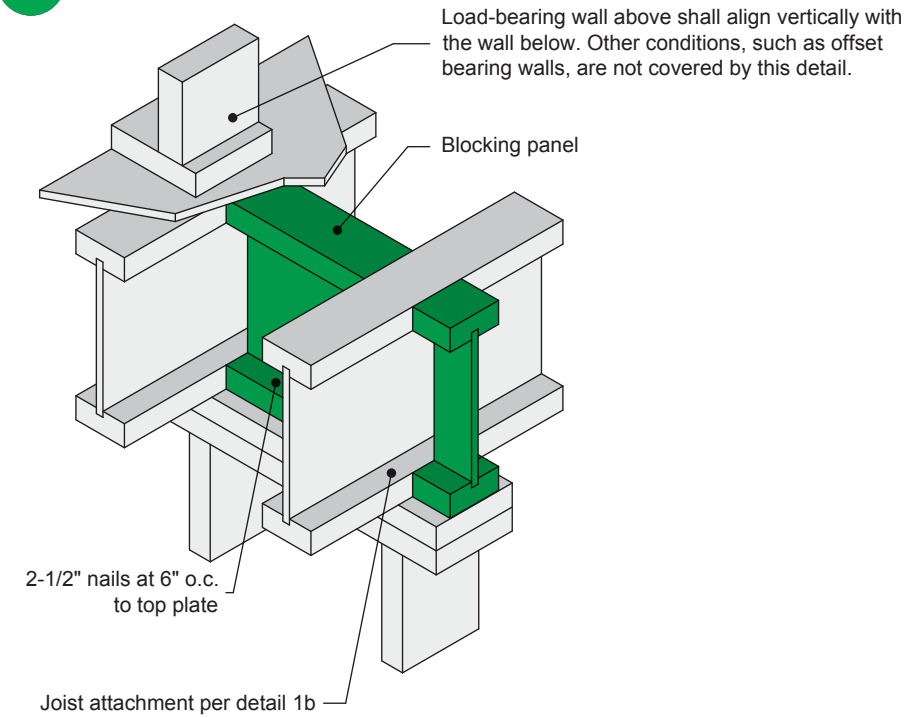


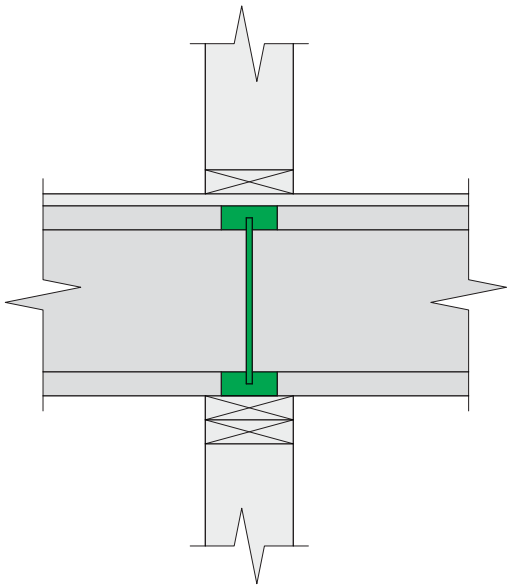
Notes:

1. This detail only applies to continuous I-joists without load-bearing wall above.
2. The NBC requires blocking per detail 1g at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-2



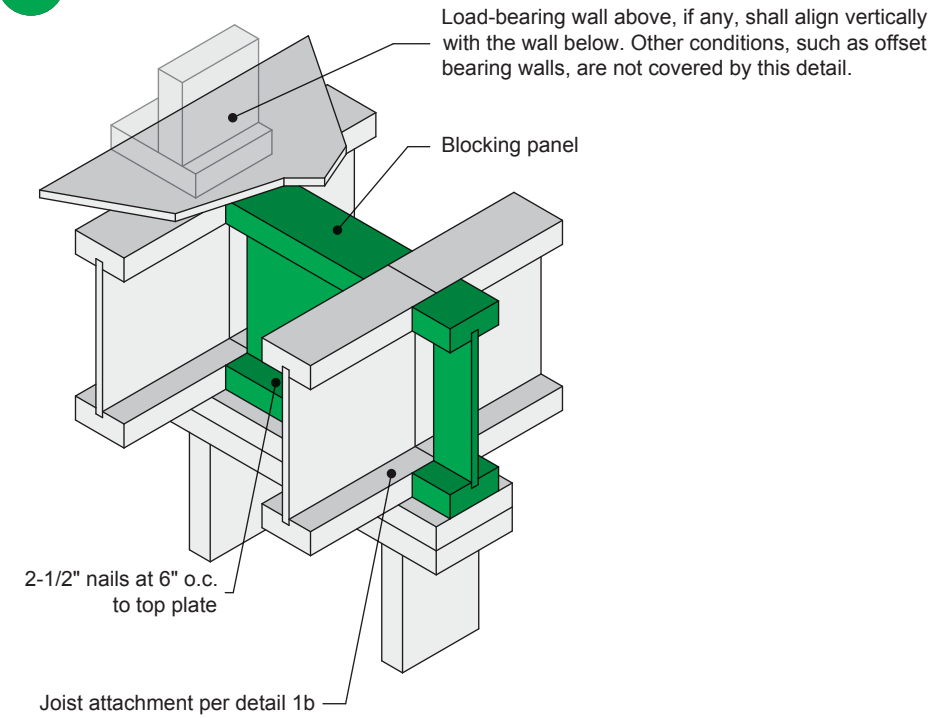


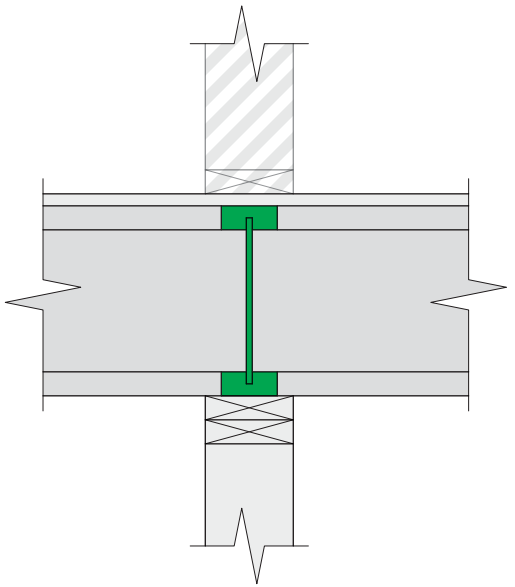
Note:

1. An occasional blocking panel (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-3



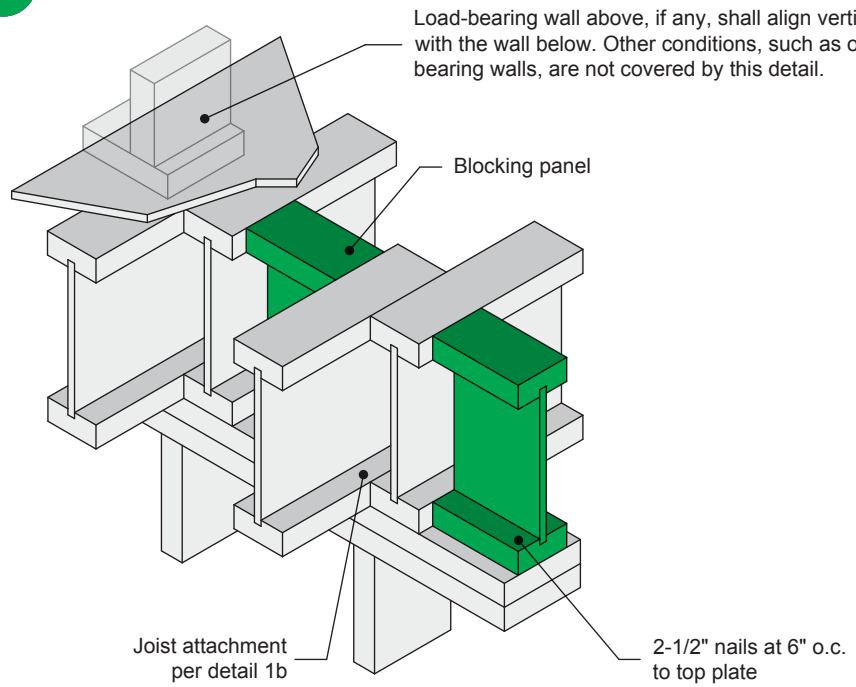


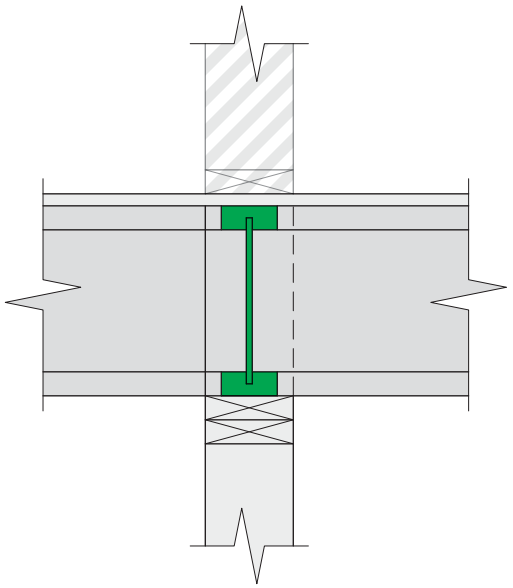
Note:

1. An occasional blocking panel (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-4



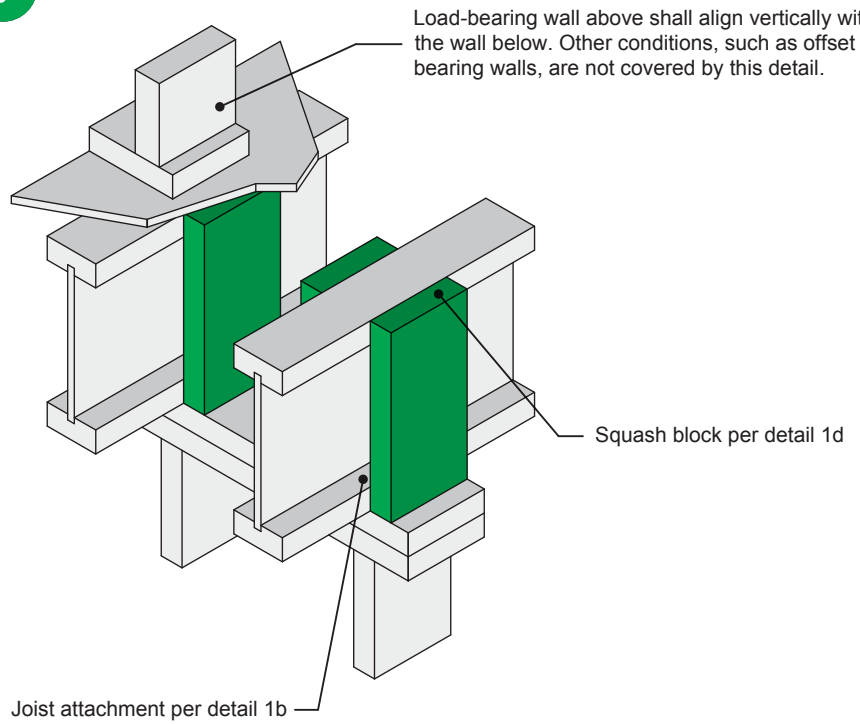


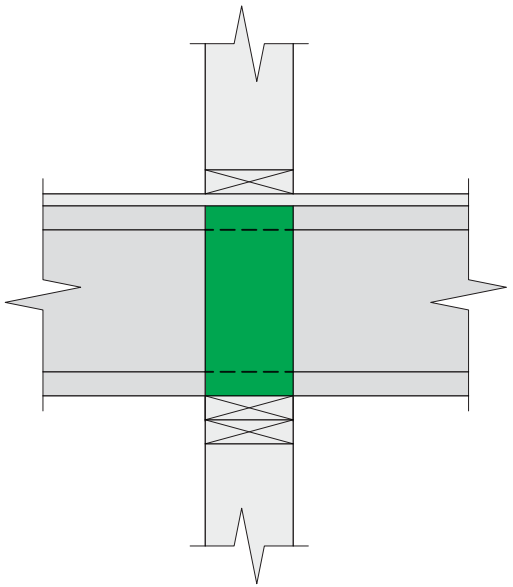
Notes:

1. An occasional blocking panel (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.
2. Joist spacing may vary from one side to the other. If the space between the joists is less than 3 inches, the blocking panel may be omitted.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-5



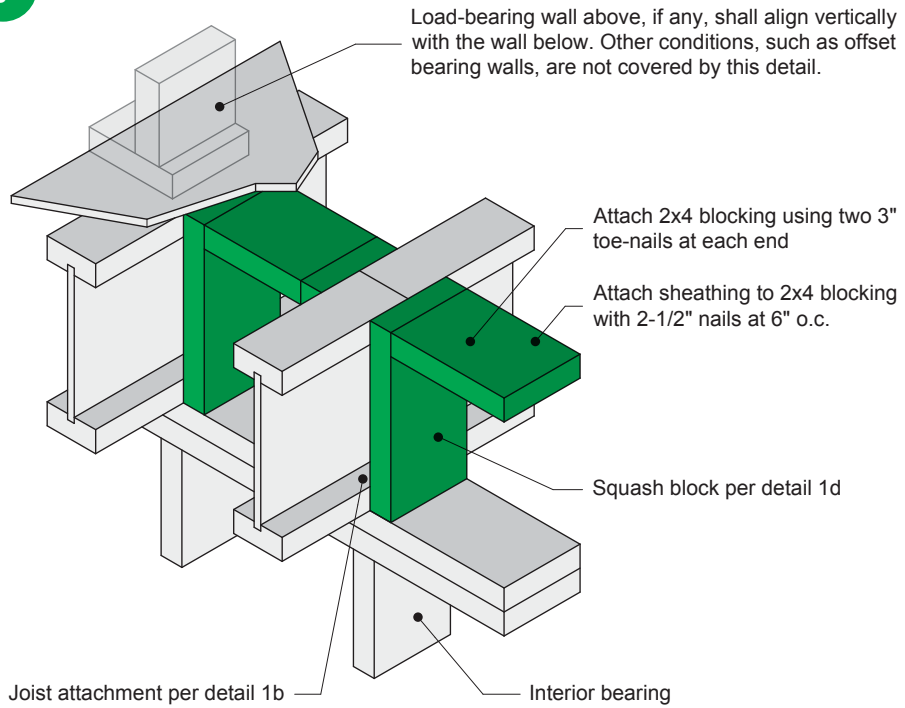


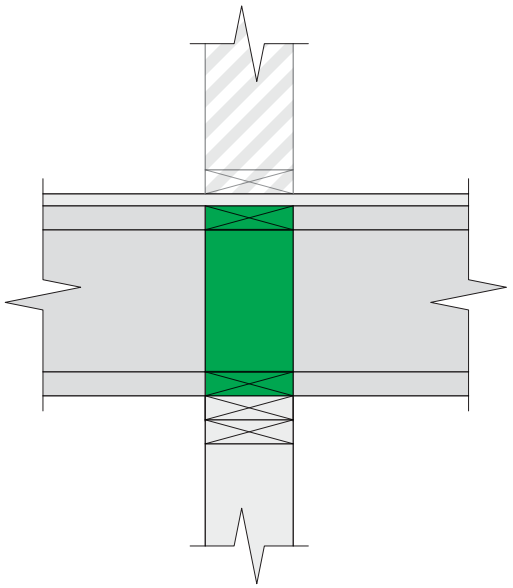
Note:

1. The NBC requires blocking per detail 1g at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-6



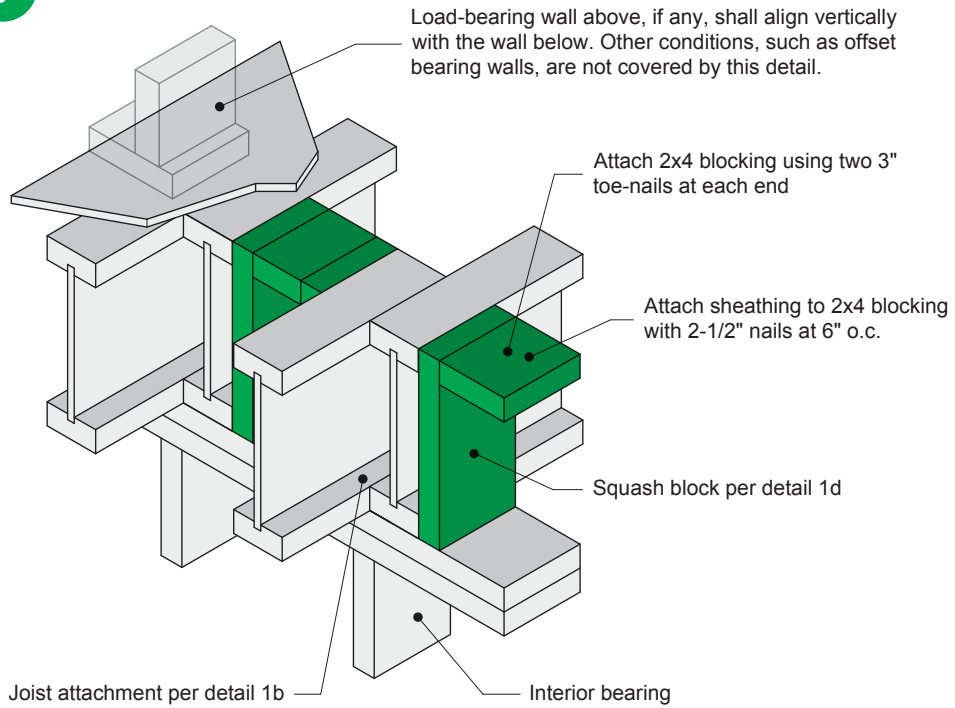


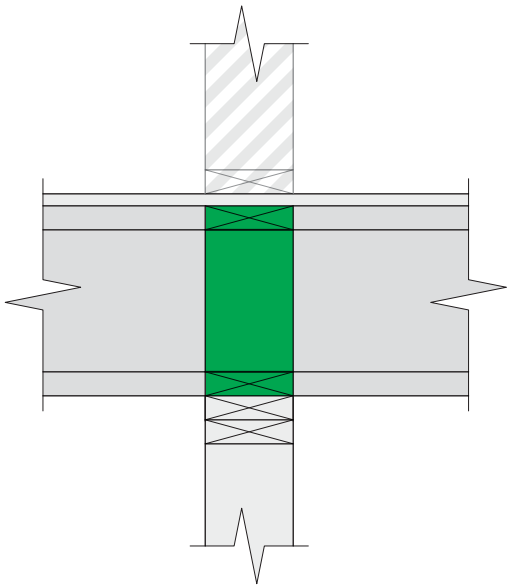
Notes:

1. The NBC requires blocking per detail 1g at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).
2. An occasional 2x4 blocking (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1g-7





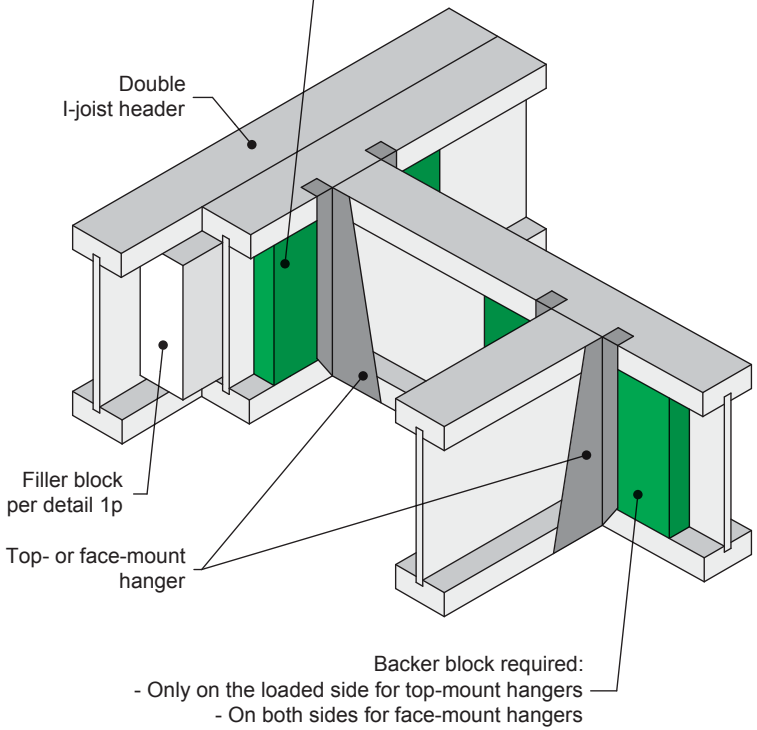
Notes:

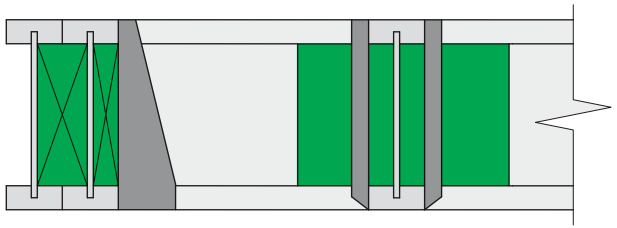
1. The NBC requires blocking per detail 1g at load-bearing and non-load-bearing walls constructed with required braced wall panels (shearwalls).
2. An occasional 2x4 blocking (one per line of blocking) may be left out for the passage of plumbing or ventilation ducts. For other applications, contact Nordic Structures.
3. Joist spacing may vary from one side to the other.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1h

Use backer block if hanger load exceeds 360 lbf. Before installing a backer block to a double I-joist, drive three additional 3" nails through the webs and filler block where the backer block will fit. Clinch. Install backer block tight to top flange. Use twelve 3" nails, clinched when possible. Maximum resistance for hanger for this detail = 1,620 lbf.





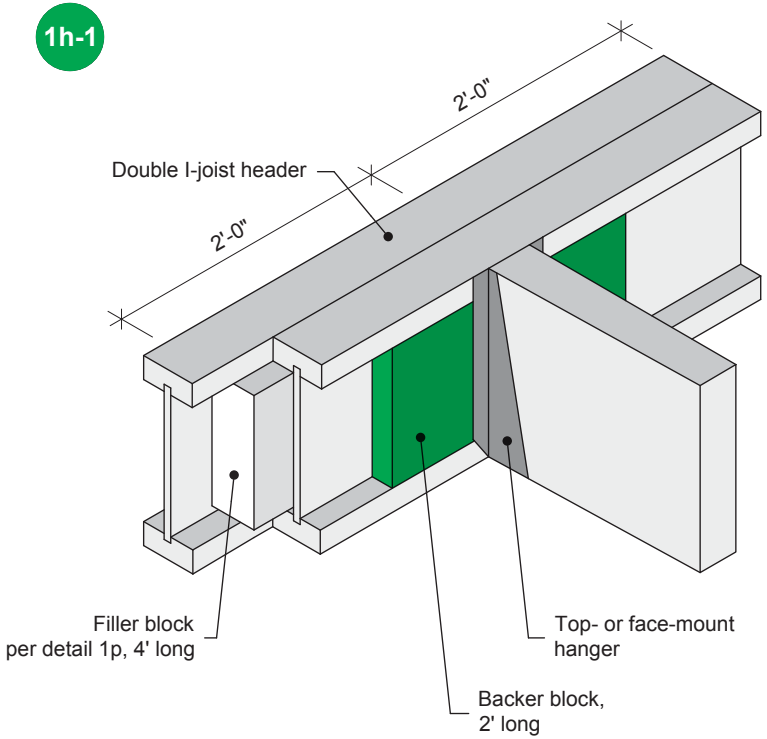
Flange width (in.)	Material thickness required (in.) [a]	Minimum depth (in.) [b]
2-1/2	1	5-1/2
3-1/2	1-1/2	7-1/4

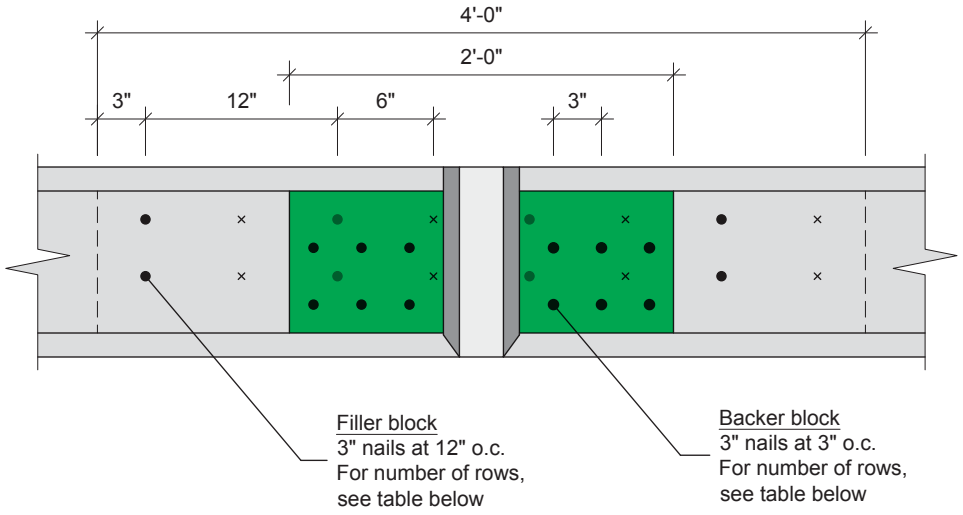
(a) Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 Standard.
(b) For face-mount hangers use net joist depth minus 3-1/4 inches.

Notes:
1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.
2. For hanger resistance, see manufacturer's recommendations.
3. Verify double I-joist resistance to support concentrated loads.
4. Backer blocks must be long enough to permit required nailing without splitting.
5. For other options, see details 1h-1 and 1h-2.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1h-1





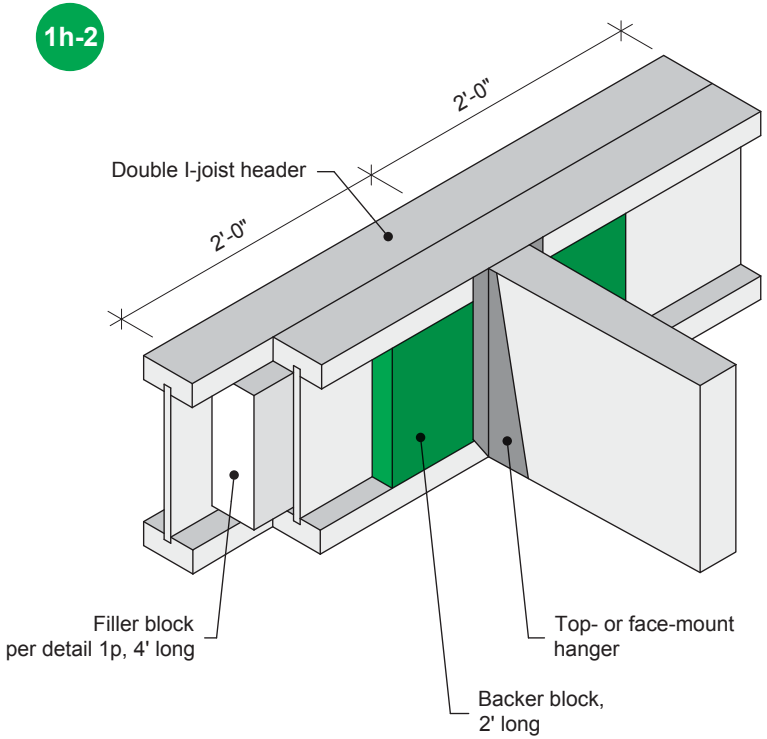
Joist depth (in.)	Filler block			Backer block			Maximum load (lbf)
	3" nails on 4'-0", on both sides			3" nails on 2'-0", on one side			
	Number of rows	Spacing (in.)	Total quantity	Number of rows	Spacing (in.)	Total quantity	
9-1/2	2	12	16	2	3	16	2,000
11-7/8	2	12	16	2	3	16	2,000
14	3	12	24	3	3	24	3,000
16	4	12	32	4	3	32	4,000

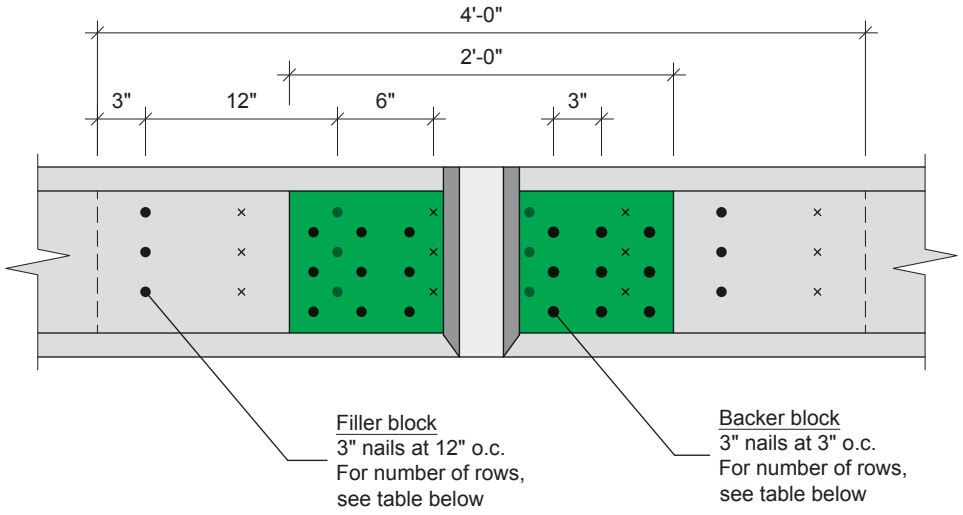
Notes:
1. Support back of I-joist web during nailing to prevent damage to web/flange connection.
2. Leave a 1/8-inch- to 1/4-inch-gap between top of filler block and bottom of top I-joist flange.
3. For face-mount hangers, use joist depth minus 3-1/4 inches.
4. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.
5. For hanger resistance, see manufacturer's recommendations.
6. Verify double I-joist resistance to support concentrated load.

Notes:
1. Minimum grade for backer block and filler block materials shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 Standard.
2. Minimum distances: Spacing parallel to grain of 3 inches; end distance parallel to grain of 2 inches; spacing between rows of 1-1/2 inch; and edge distance of 3/4 inch. As seen above, offset nails in backer block, relatively to those in filler block.
3. For filler block, alternate nails on opposite side.
4. Number of rows and spacings may vary, as long as the total quantity of nails and the minimum distances are respected.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1h-2





Joist depth (in.)	Filler block			Backer block			Maximum load (lbf)
	3" nails on 4'-0", on both sides			3" nails on 2'-0", on one side			
	Number of rows	Spacing (in.)	Total quantity	Number of rows	Spacing (in.)	Total quantity	
9-1/2	3	12	24	3	3	24	3,000
11-7/8	4	12	32	4	3	32	4,000
14	5	12	40	5	3	40	5,000
16	6	12	48	6	3	48	6,000

Notes:

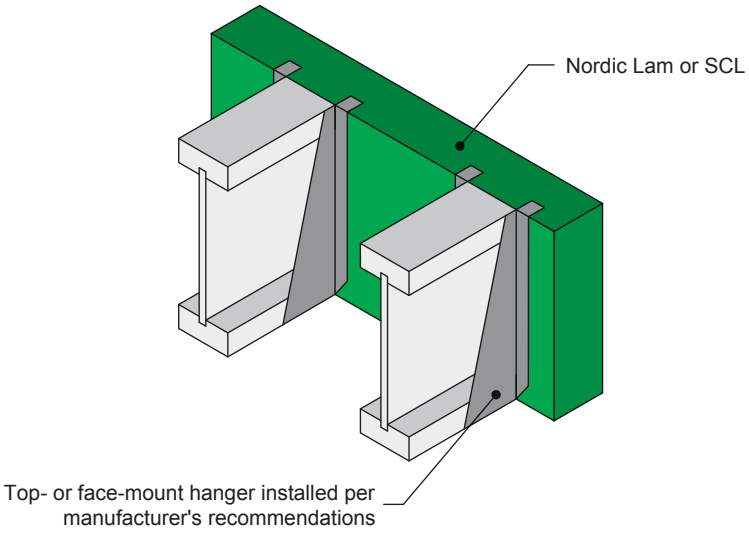
1. Support back of I-joist web during nailing to prevent damage to web/flange connection.
2. Leave a 1/8-inch- to 1/4-inch-gap between top of filler block and bottom of top I-joist flange.
3. For face-mount hangers, use joist depth minus 3-1/4 inches.
4. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.
5. For hanger resistance, see manufacturer's recommendations.
6. Verify double I-joist resistance to support concentrated load.

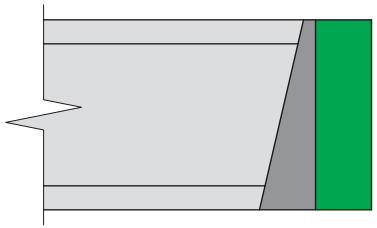
Notes:

1. Minimum grade for backer block and filler block materials shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 Standard.
2. Minimum distances: Spacing parallel to grain of 3 inches; end distance parallel to grain of 2 inches; spacing between rows of 1-1/2 inch; and edge distance of 3/4 inch. As seen above, offset nails in backer block, relatively to those in filler block.
3. For filler block, alternate nails on opposite side.
4. Number of rows and spacings may vary, as long as the total quantity of nails and the minimum distances are respected.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1j



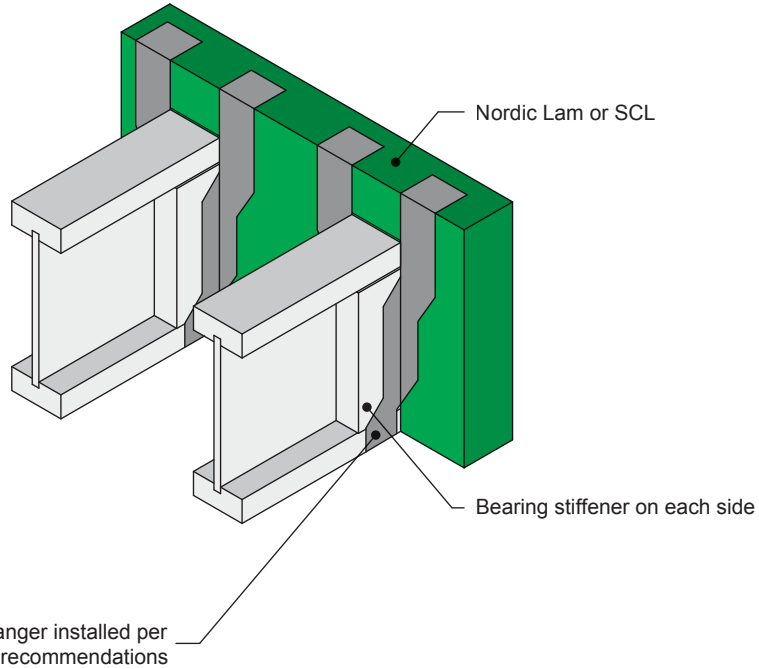


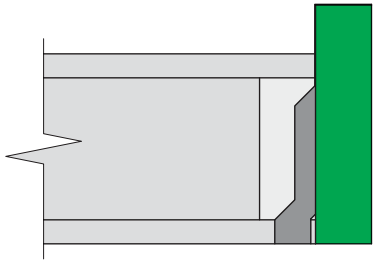
Notes:

1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.
2. For nailing schedules for multiple Nordic Lam or SCL beams, see the manufacturer's recommendations.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1j-1



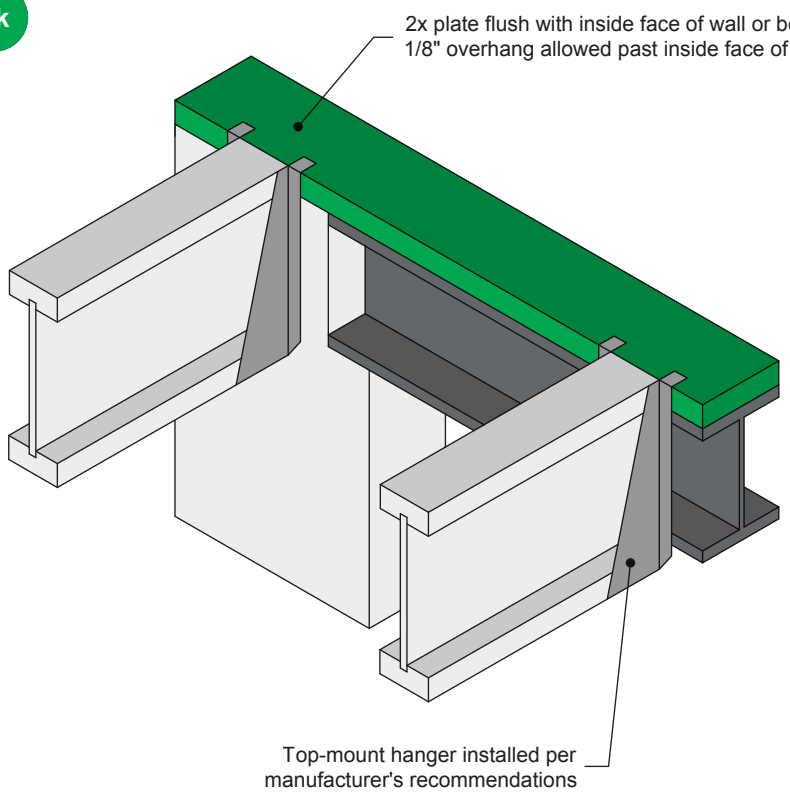


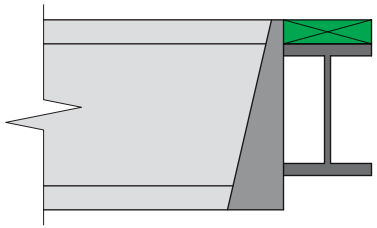
Note:

1. For nailing schedules for multiple beams, see the manufacturer's recommendations.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1k



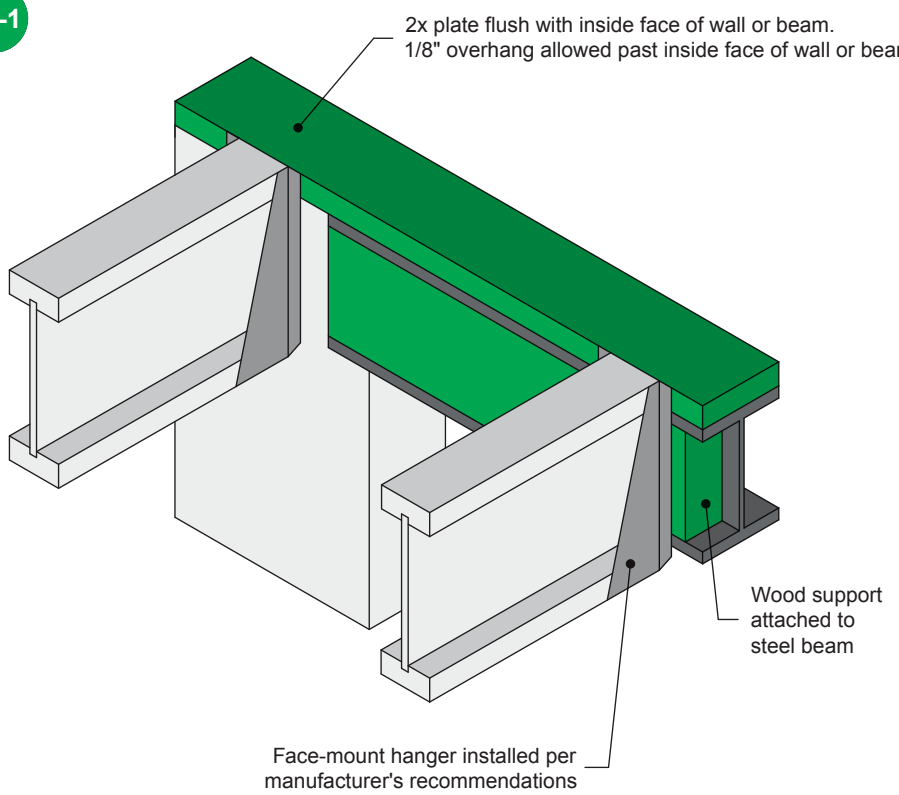


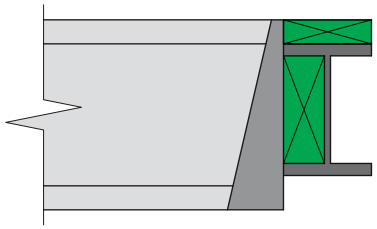
Note:

1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1k-1



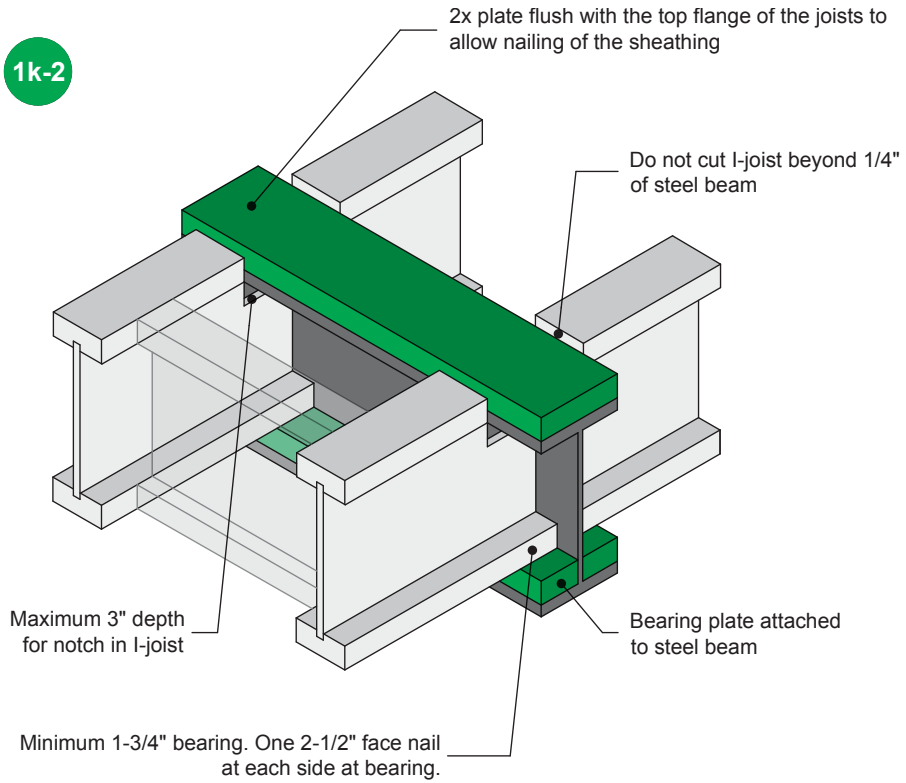


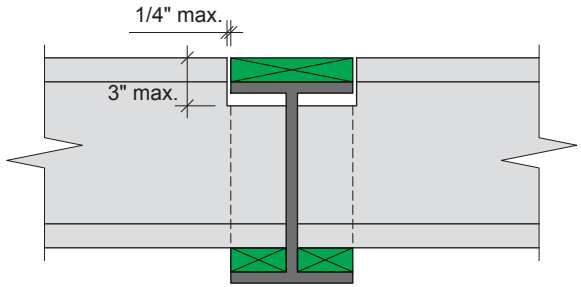
Note:

1. Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1k-2



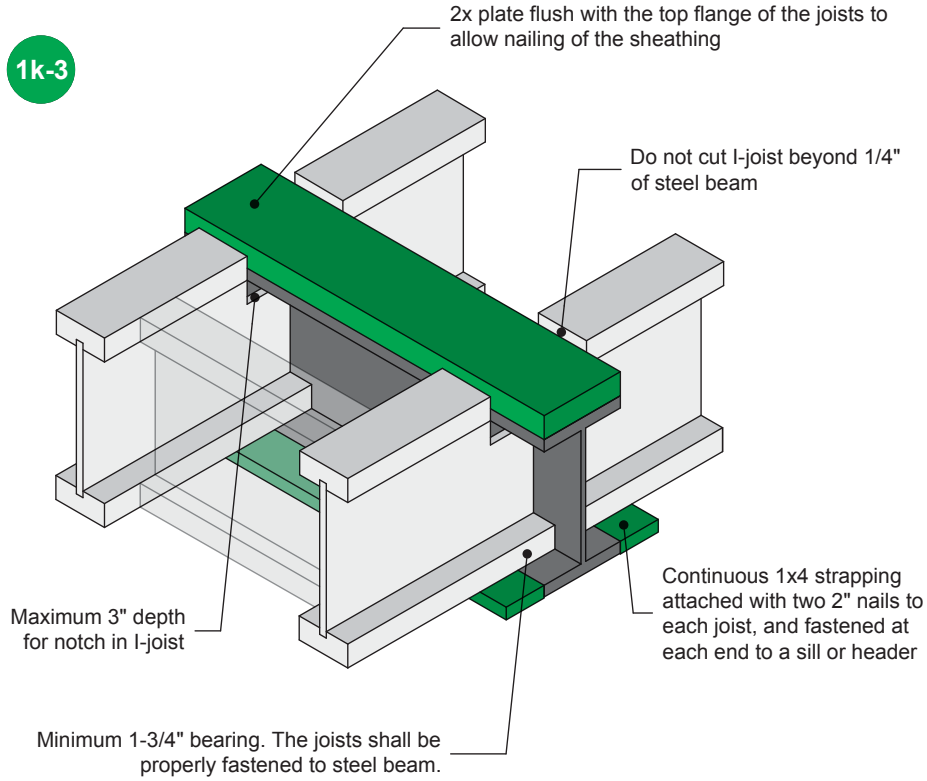


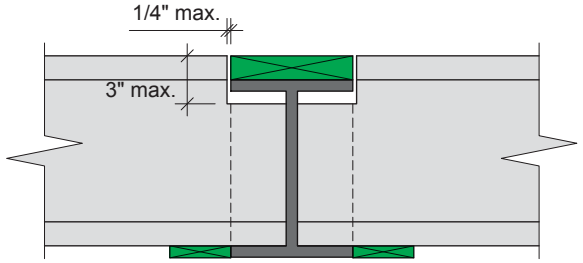
Note:

1. End of floor joists shall be restrained using blocking panels installed at a maximum of 6 inches from end of I-joists. Attach with one 2-1/2-inch toe-nail on each side of top and bottom flanges.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1k-3



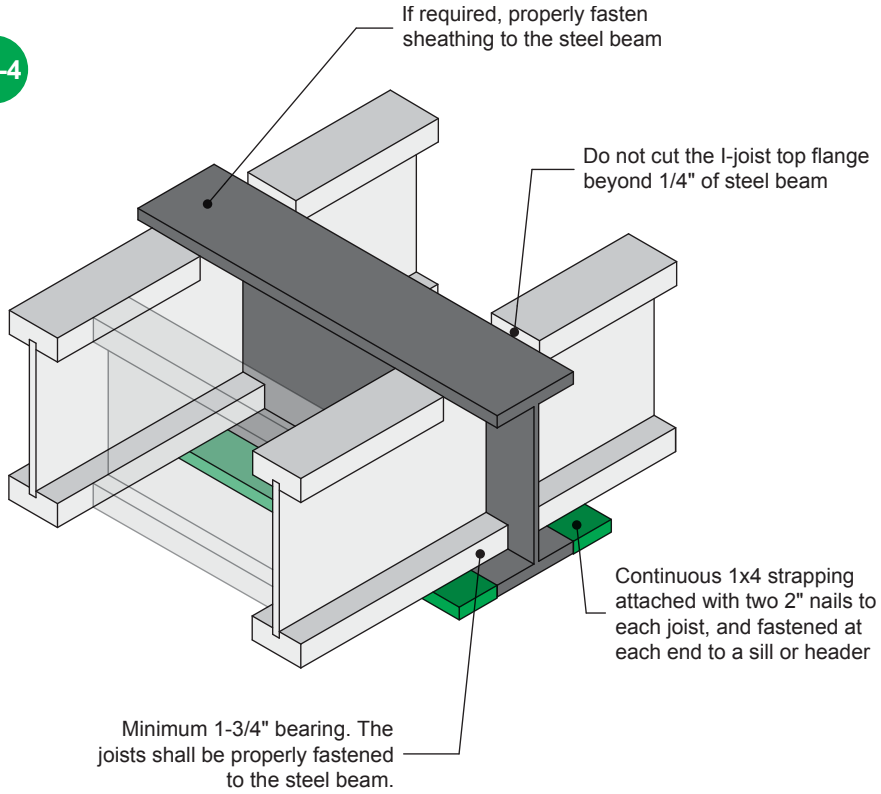


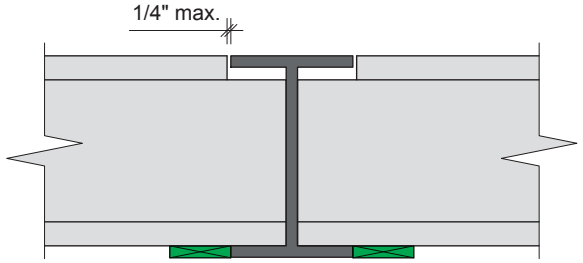
Note:

1. End of floor joists shall be restrained using blocking panels installed at a maximum of 6 inches from end of I-joists. Attach with one 2-1/2-inch toe-nail on each side of top and bottom flanges.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1k-4



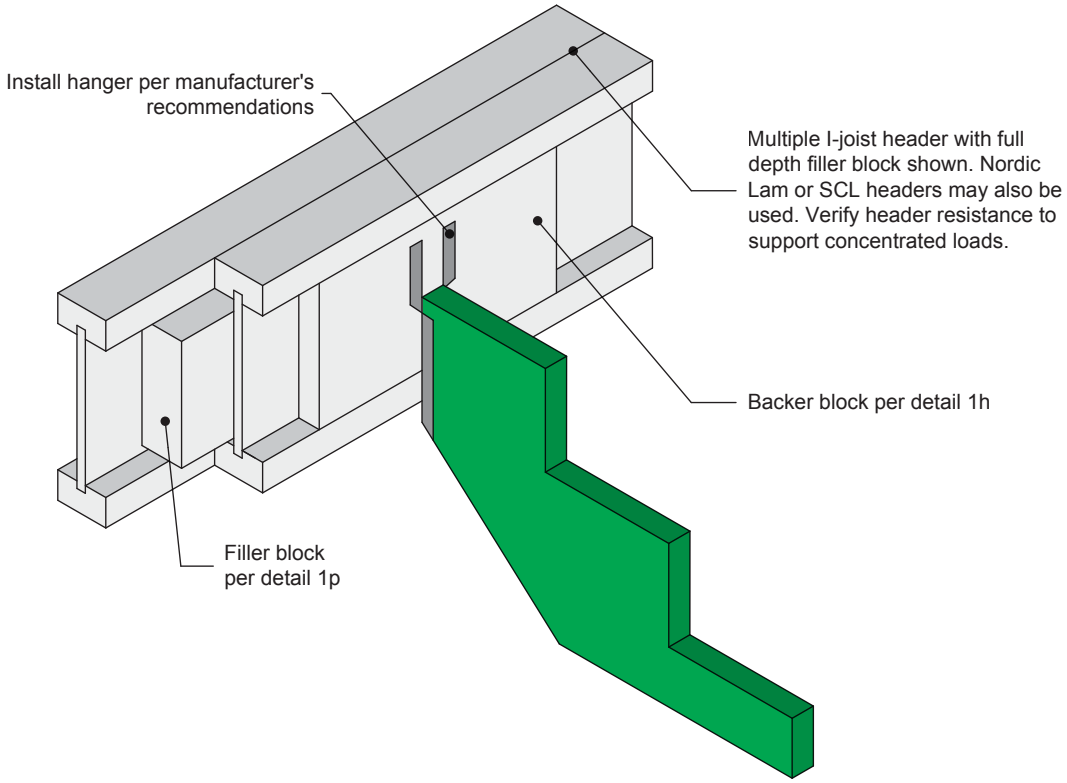


Notes:

1. End of floor joists shall be restrained using blocking panels installed at a maximum of 6 inches from end of I-joists. Attach with one 2-1/2-inch toe-nail on each side of top and bottom flanges.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

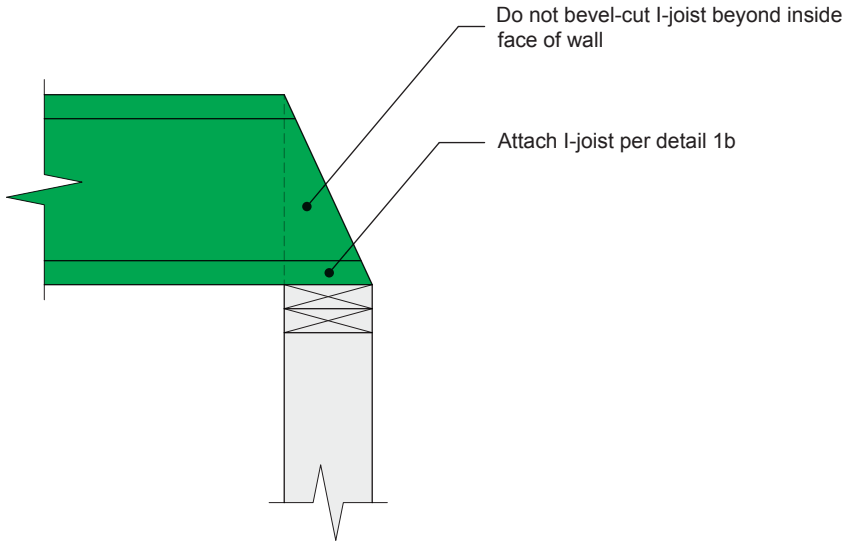
1m

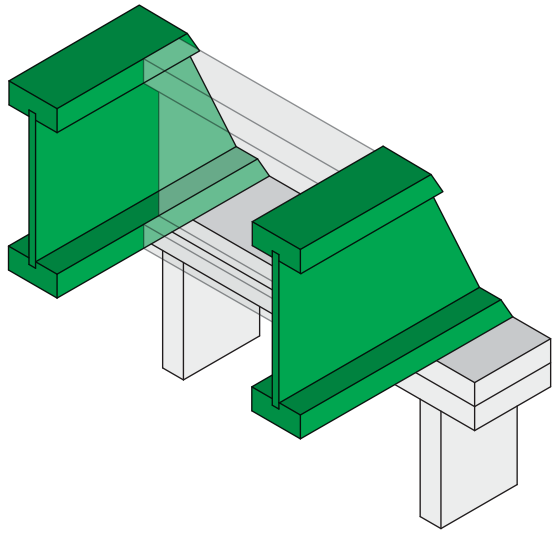


Note:

1. See detail 1h for maximum support resistance.

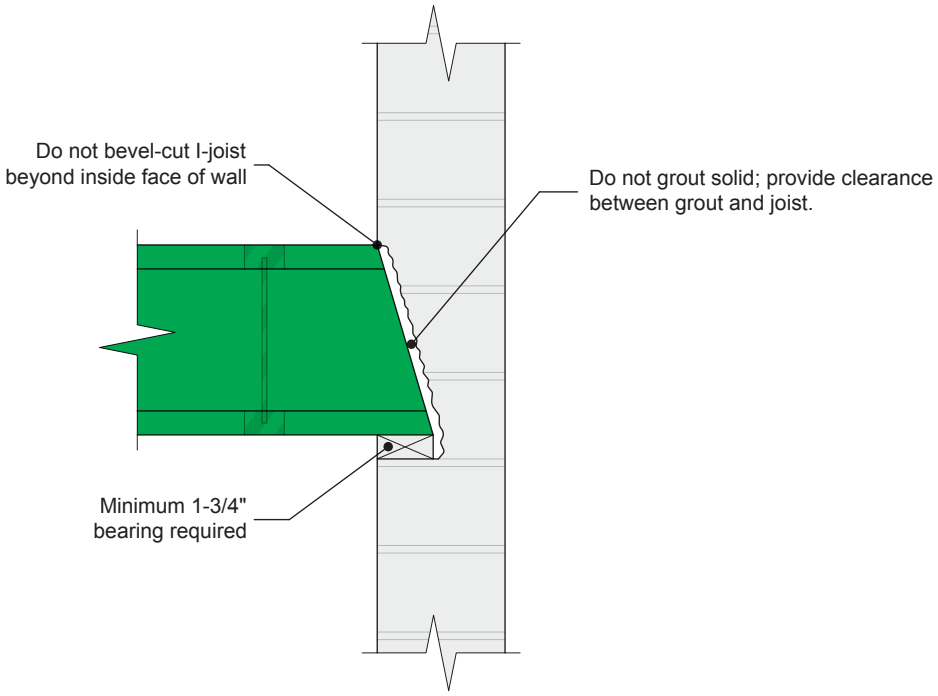
1n

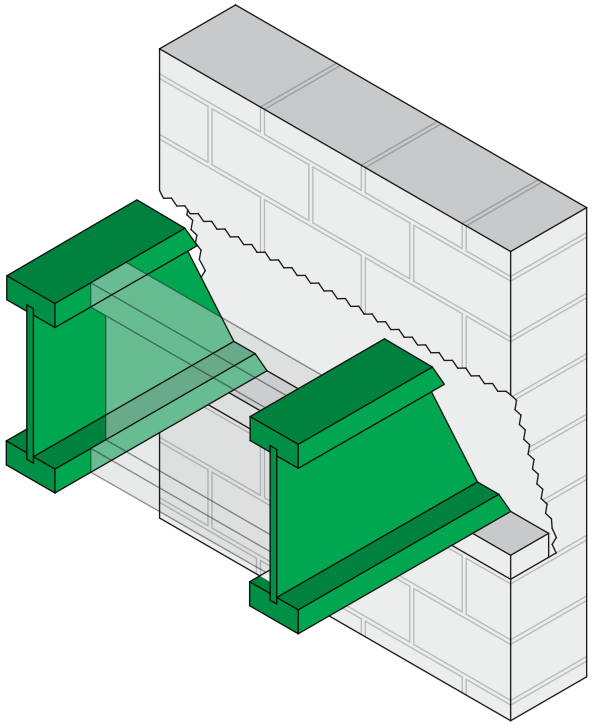




Note:
1. Blocking required at bearing for lateral support, not shown for clarity.

1n-1



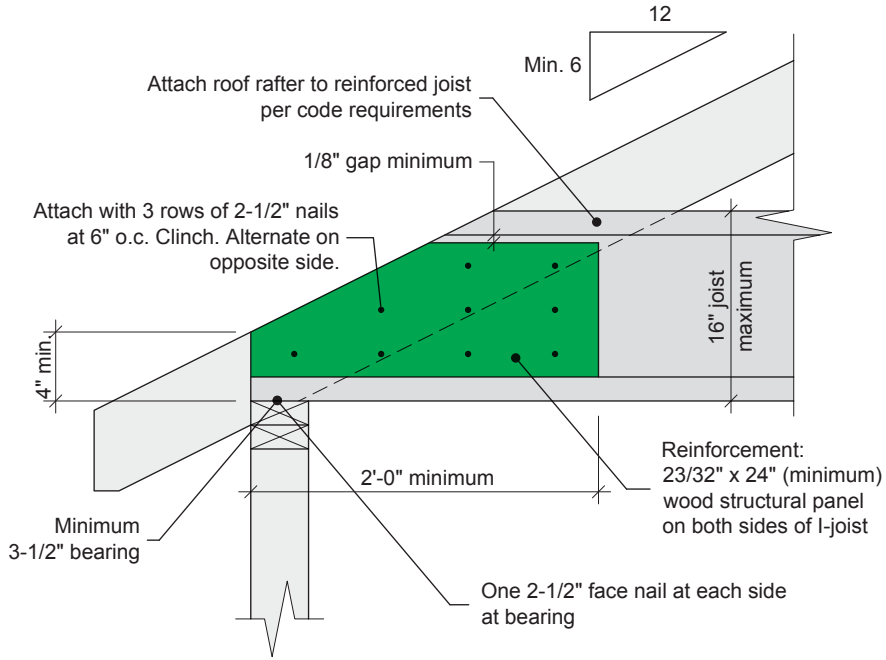


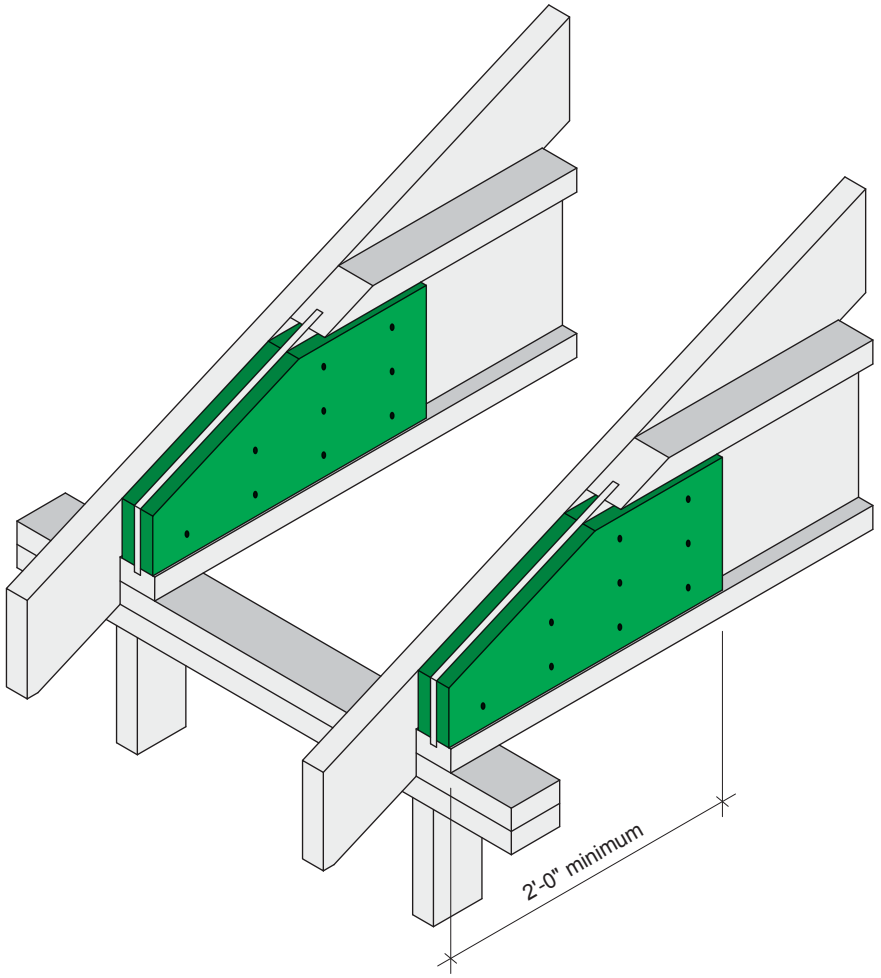
Note:

1. End of floor joists shall be restrained using blocking panels installed at a maximum of 6 inches from end of I-joists. Attach with one 2-1/2-inch toe-nail on each side of top and bottom flanges.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1n-2

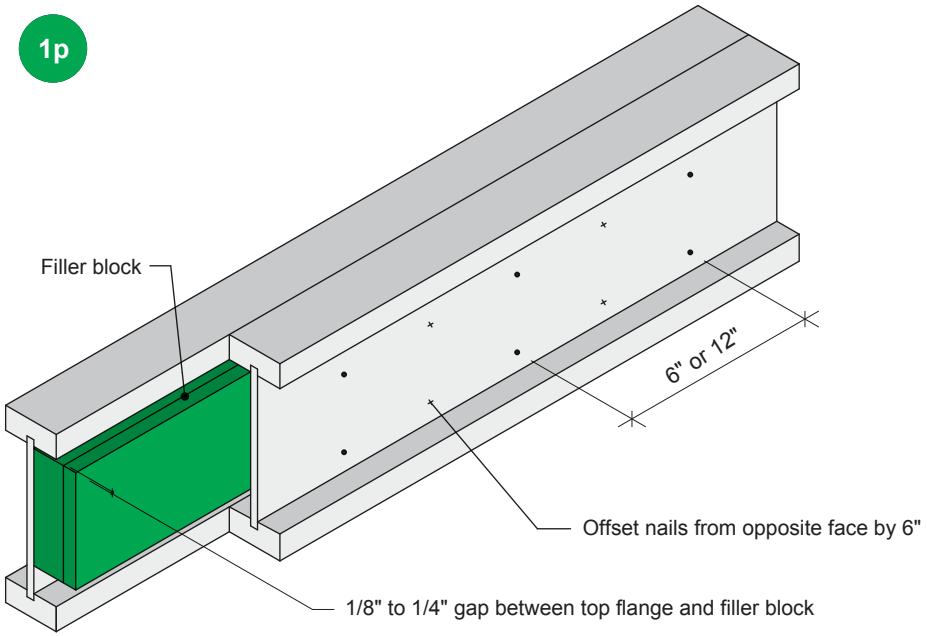




Notes:

1. Blocking required at bearing for lateral support, not shown for clarity.
2. This detail applies to roofs with a slope of 6:12 or greater. For a roof slope less than 6:12, contact Nordic Structures.
3. This detail is intended to reinforce the I-joist end and not to transfer thrust loads at the rafter heel. The applicability of this detail is based on the joist reaction at the support.

1p



Filler Block Requirements for Double I-joist Construction

Flange width (in.)	Net depth (in.)	Filler block size (in.)	Example
2-1/2	9-1/2	2-1/8 to 2-1/4 x 6	2x6 + 5/8" or 3/4" sheathing
	11-7/8	2-1/8 to 2-1/4 x 8	2x8 + 5/8" or 3/4" sheathing
	14	2-1/8 to 2-1/4 x 10	2x10 + 5/8" or 3/4" sheathing
	16	2-1/8 to 2-1/4 x 12	2x12 + 5/8" or 3/4" sheathing
3-1/2	9-1/2	3 x 6	2 x 2x6
	11-7/8	3 x 8	2 x 2x8
	14	3 x 10	2 x 2x10
	16	3 x 12	2 x 2x12

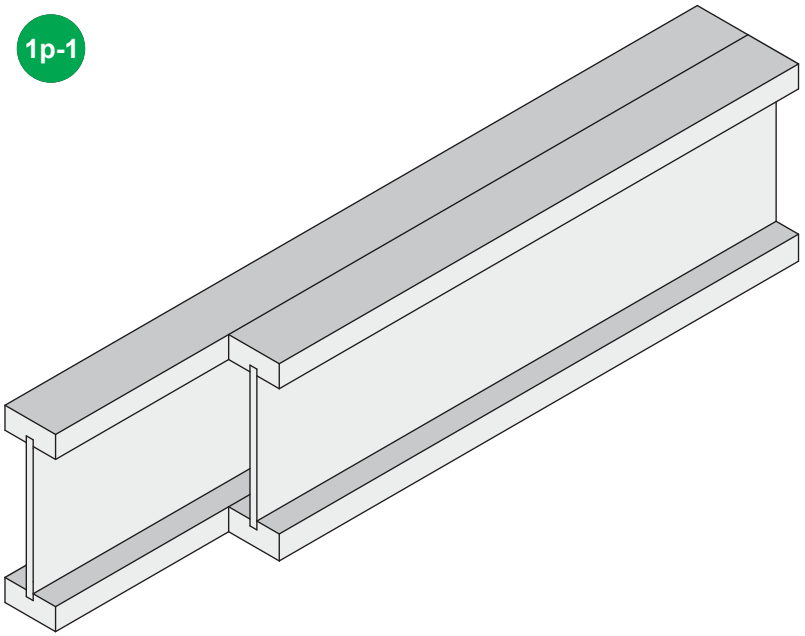
Note:

1. The height of the filler block may be different from that specified in the table, as long as it allows nailing and respects the required gap.

Notes:

1. Support back of I-joist web during nailing to prevent damage to web/flange connection.
2. Leave a 1/8-inch to 1/4-inch gap between top of filler block and bottom of top I-joist flange.
3. Filler block is required between joists for full length of span.
4. For flange width of 2-1/2 inches, nail joists together with two rows of 3-inch nails at 12 inches o.c. (clinched when possible) on each side of the double I-joist (total of four nails per foot). For flange width of 3-1/2 inches, use two rows of 3-inch nails at 6 inches o.c. on each side of the double I-joist (total of eight nails per foot).
5. The maximum factored load that may be applied to one side of the double I-joist using this detail is 860 lbf/ft.

1p-1

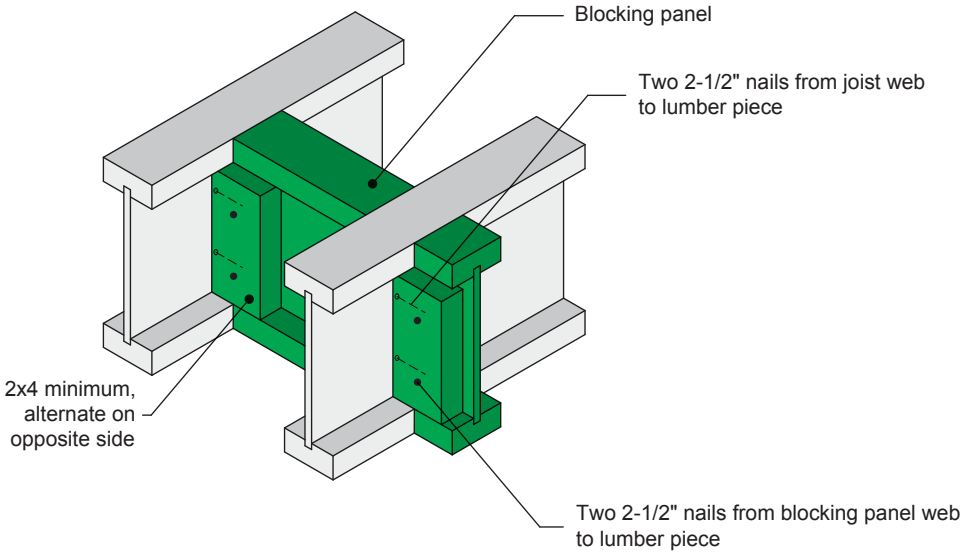


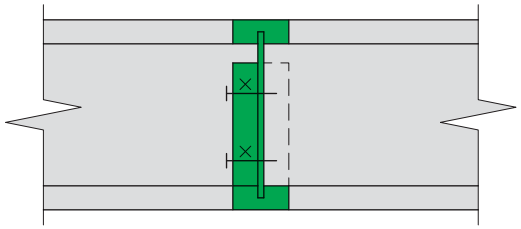
Notes:

1. This detail only applies to double I-joists uniformly loaded on top and equally on both joists, and when the top flanges of both I-joists are continuously laterally supported by connection to the sheathing. For other conditions, such as side-loaded I-joists, refer to detail 1p.
2. Attach floor sheathing to each joist. No filler block is required.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1r-1



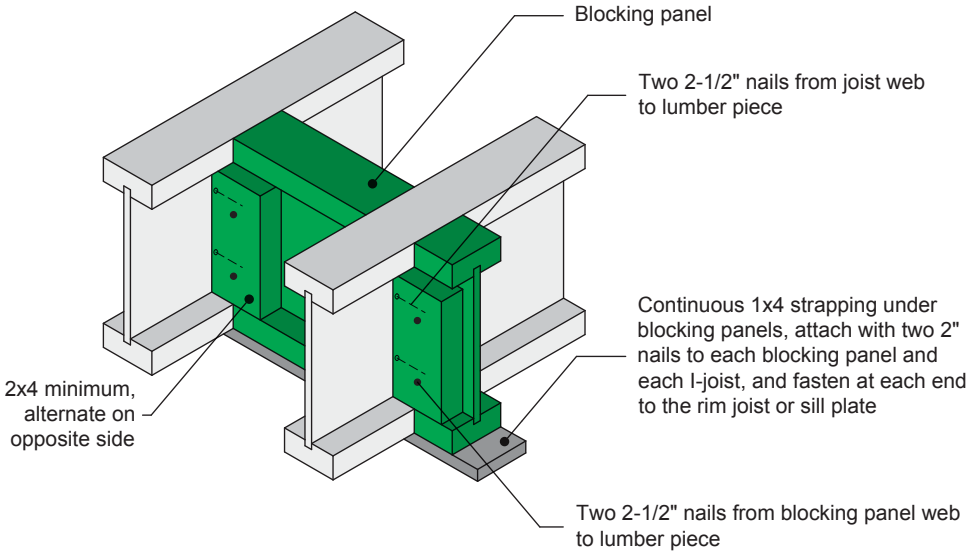


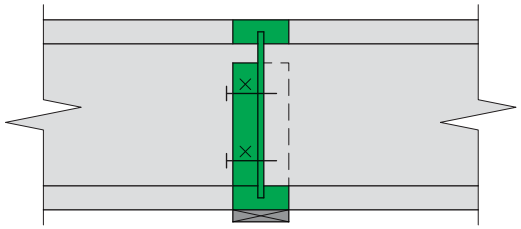
Notes:

1. This detail may be used to reduce floor vibration.
2. Blocking panels may be of any I-joist series. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.
3. One occasional blocking panel may be left out for the passage of plumbing or ventilation ducts. Otherwise, a hole of not more than 2/3 of the lesser dimension of the blocking depth or length may be drilled in the blocking panel.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1r-2



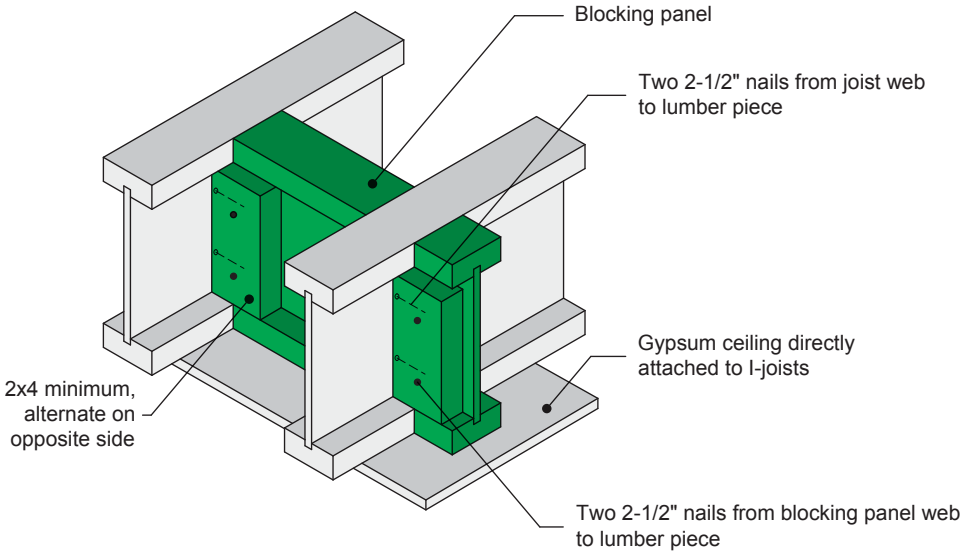


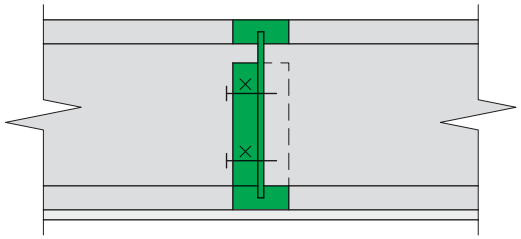
Notes:

1. This detail may be used to reduce floor vibration.
2. Blocking panels may be of any I-joist series. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.
3. One occasional blocking panel may be left out for the passage of ventilation ducts. Otherwise, a hole of not more than 2/3 of the lesser dimension of the blocking's depth or length may be drilled in the blocking panel.
4. For better performance, glue strapping to blocking panels and I-joists with construction adhesive.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1r-3



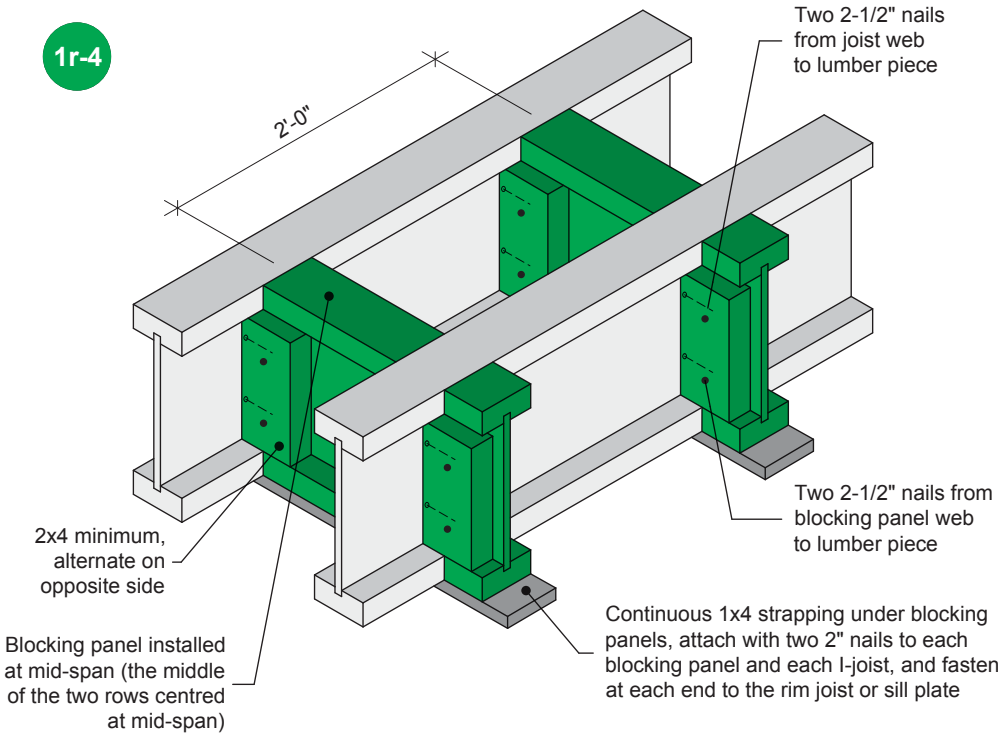


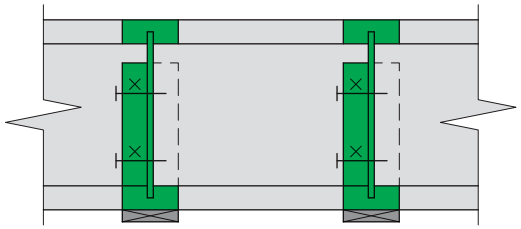
Notes:

1. This detail may be used to reduce floor vibration.
2. Blocking panels may be of any I-joist series. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.
3. One occasional blocking panel may be left out for the passage of ventilation ducts. Otherwise, a hole of not more than 2/3 of the lesser dimension of the blocking's depth or length may be drilled in the blocking panel.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1r-4



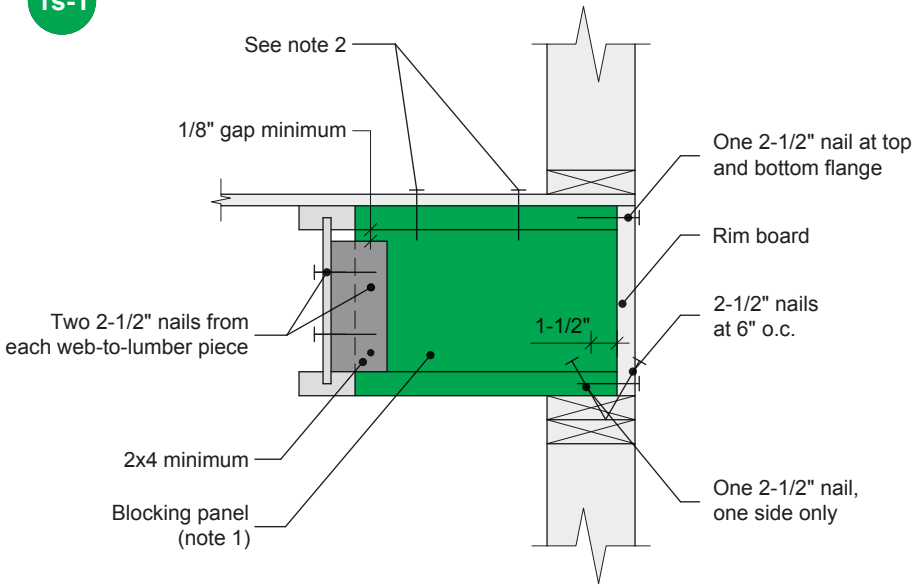


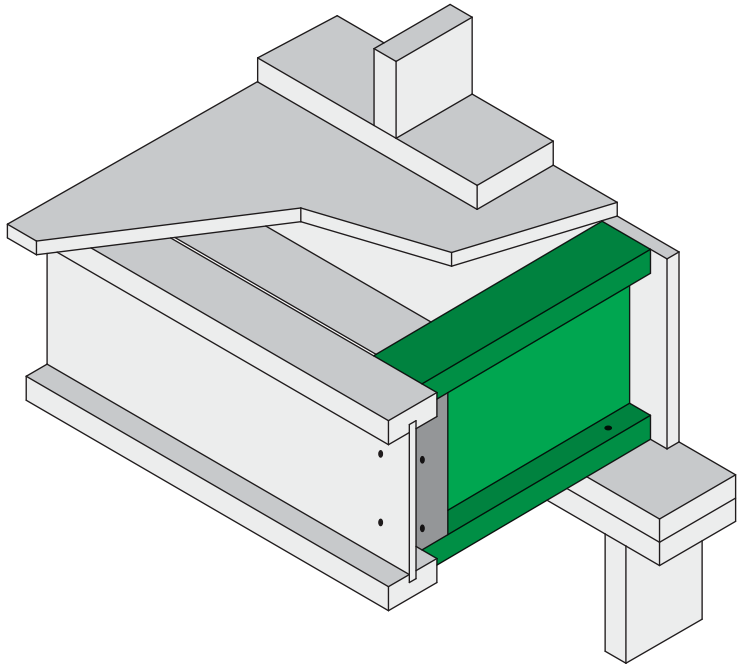
Notes:

1. This detail may be used to reduce floor vibration. Blocking panels must be installed at joist mid-span.
2. Blocking panels may be of any I-joist series. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.
3. For better performance, glue strappings to blocking panels and I-joists with construction adhesive.
4. A gypsum ceiling directly attached to I-joists can replace strappings.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1s-1



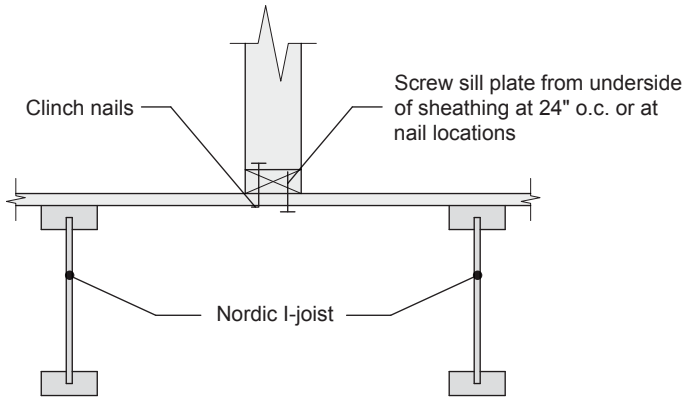


Notes:

1. In some local codes, blocking panels are prescriptively required in the first joist space (or first and second joist spaces) next to the starter joist. Where required, see local code requirements for spacing of the blocking panels. As a minimum, it is recommended to use blocking panels spaced at 4 feet on centre.
2. Details shown are for minimum blocking attachment. Transfer of lateral loads may require additional fasteners. In such cases, nail size, spacing and specific design detailing shall be provided by the building designer.
3. Where blocking panels are required between adjacent joists, the blocking panels can be staggered by approximatively 3 inches, and end-nailed as shown.
4. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1t-1

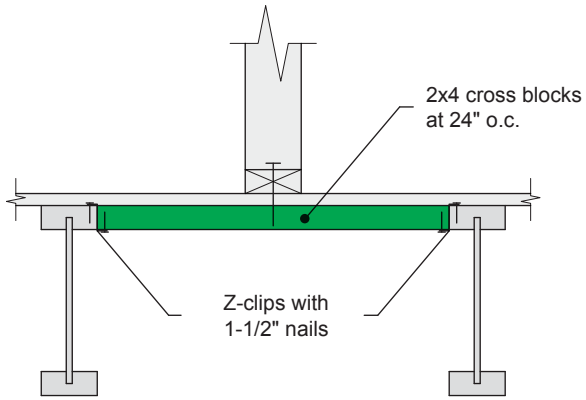


Notes:

1. Non-load-bearing partitions may be parallel or perpendicular to joists and positioned anywhere on the structural panel floor. Check the validity of this detail with the applicable building code.
2. The effect of the additional load on joist spans must be checked. Unless joists are already over-designed, additional joists may be required.
3. The sheathing panel shall be oriented so that its strength axis runs perpendicular to the joists.
4. For best performance, glue the bottom plate to wood structural panel with construction adhesive.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1t-2

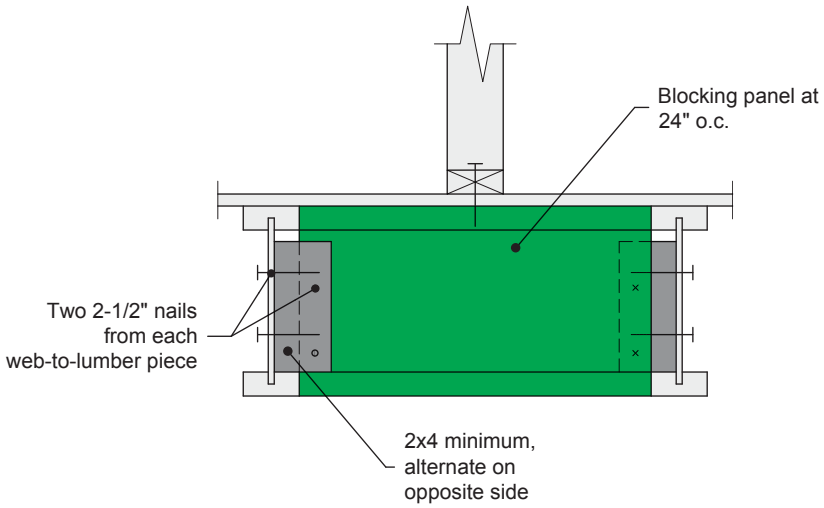


Notes:

1. Non-load-bearing partitions may be parallel or perpendicular to joists and positioned anywhere on the structural panel floor.
2. The effect of the additional load on joist spans must be checked. Unless joists are already over-designed, additional joists may be required.
3. The sheathing panel shall be oriented so that its strength axis runs perpendicular to the joists.
4. For best performance, glue the bottom plate to wood structural panel with construction adhesive.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

1t-3



Notes:

1. Non-load-bearing partitions may be parallel or perpendicular to joists and positioned anywhere on the structural panel floor.
2. The effect of the additional load on joist spans must be checked. Unless joists are already over-designed, additional joists may be required.
3. Blocking panels may be of any I-joist series. Nails attaching lumber piece to I-joist web should be driven from the web side and clinched on the lumber side.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

NORDIC

DETAILS
NORDIC JOIST

NS-DC3

ENGLISH

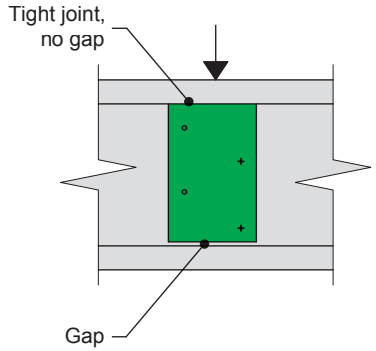
VERSION
2024-08-01

WEB STIFFENERS AND CANTILEVERS 2

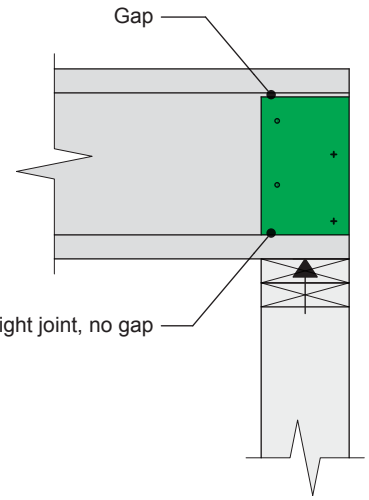
NORDIC
STRUCTURES

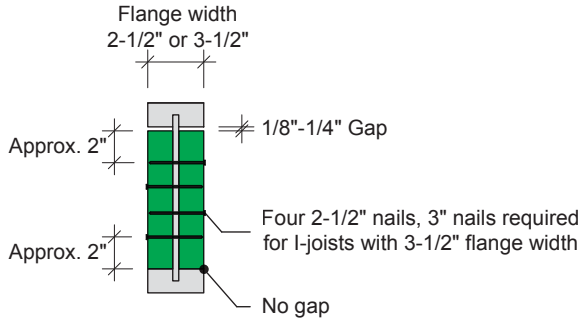
2

Concentrated Load
(Load Stiffener)



End Bearing
(Bearing Stiffener)



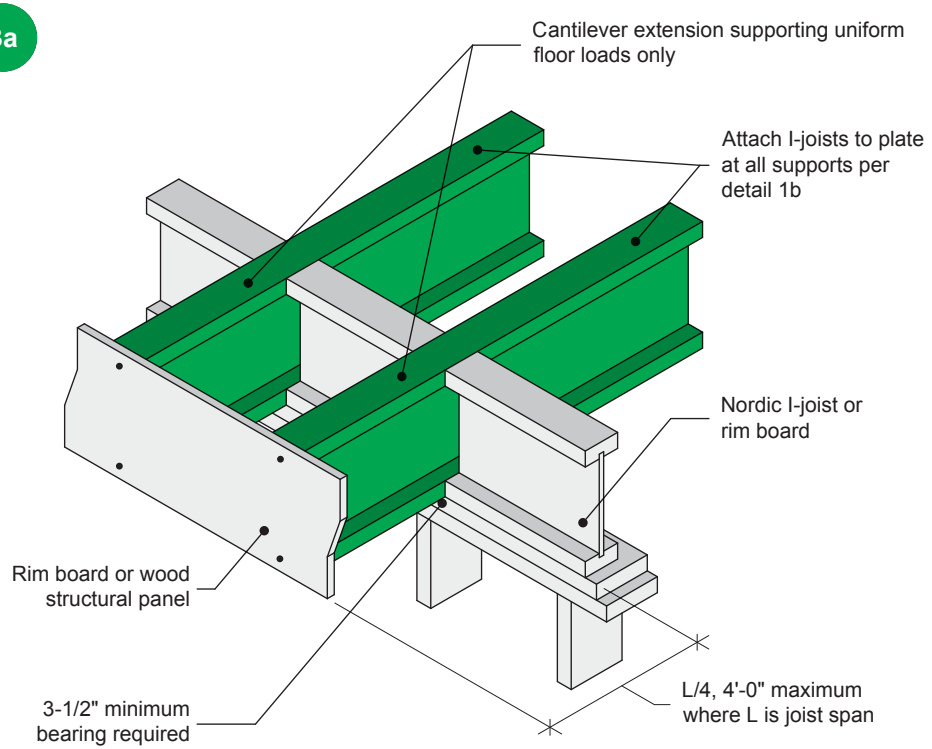


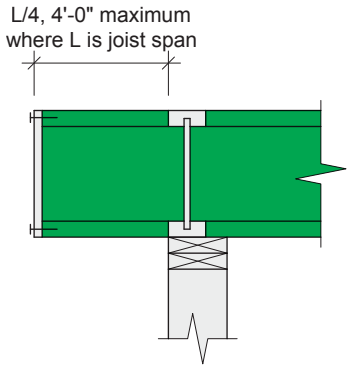
Stiffener Size Requirements

Flange width (in.)	Web stiffener size each side of web (in.)
2-1/2	1 x 2-5/16 Minimum width
3-1/2	1-1/2 x 2-5/16 Minimum width

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

3a



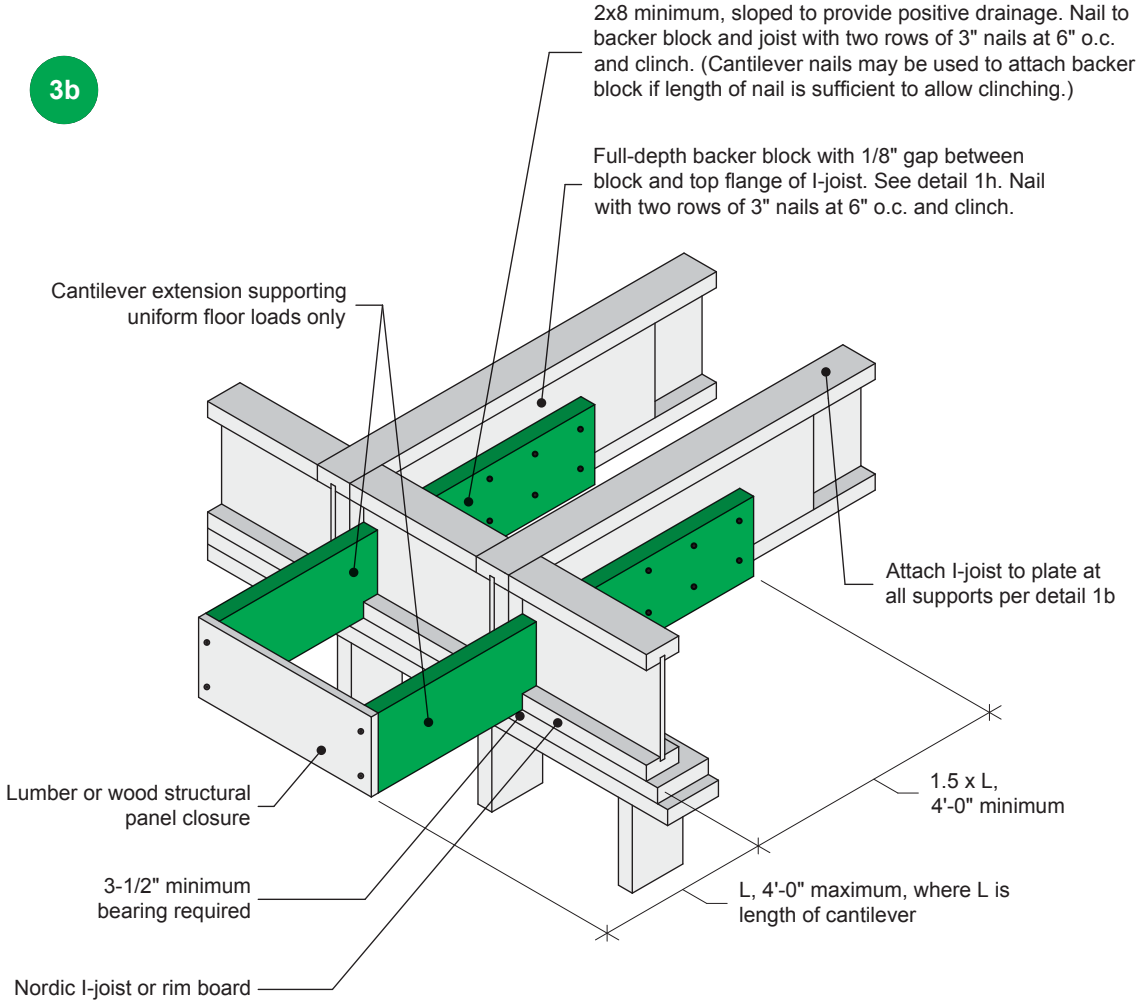


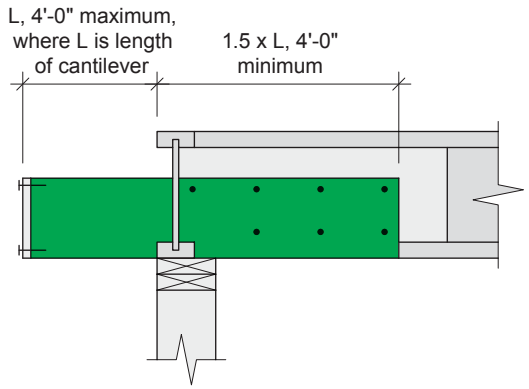
Caution

Cantilevers formed this way are limited to interior balconies.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

3b



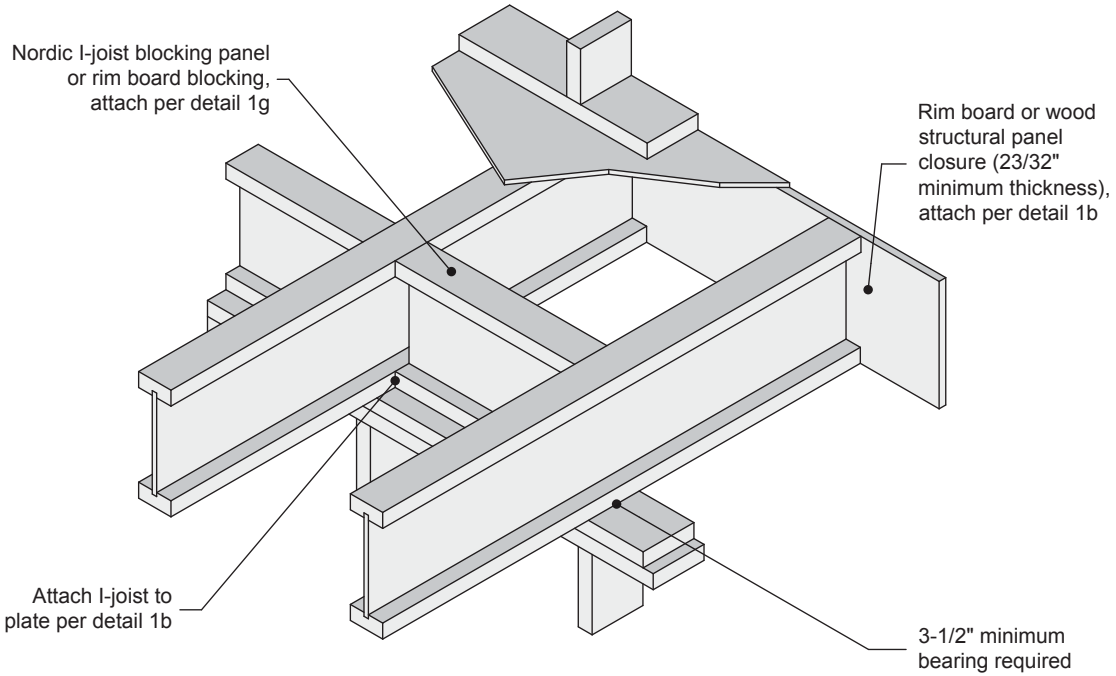


Notes:

1. The balcony shall be detailed in accordance with the applicable building code requirements. Consult with project's design professional of record.
2. Impervious moisture barrier systems, if required, shall be detailed, installed, and inspected in accordance with the applicable building code requirements.
3. See APA document TT-125 for more information.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

4a

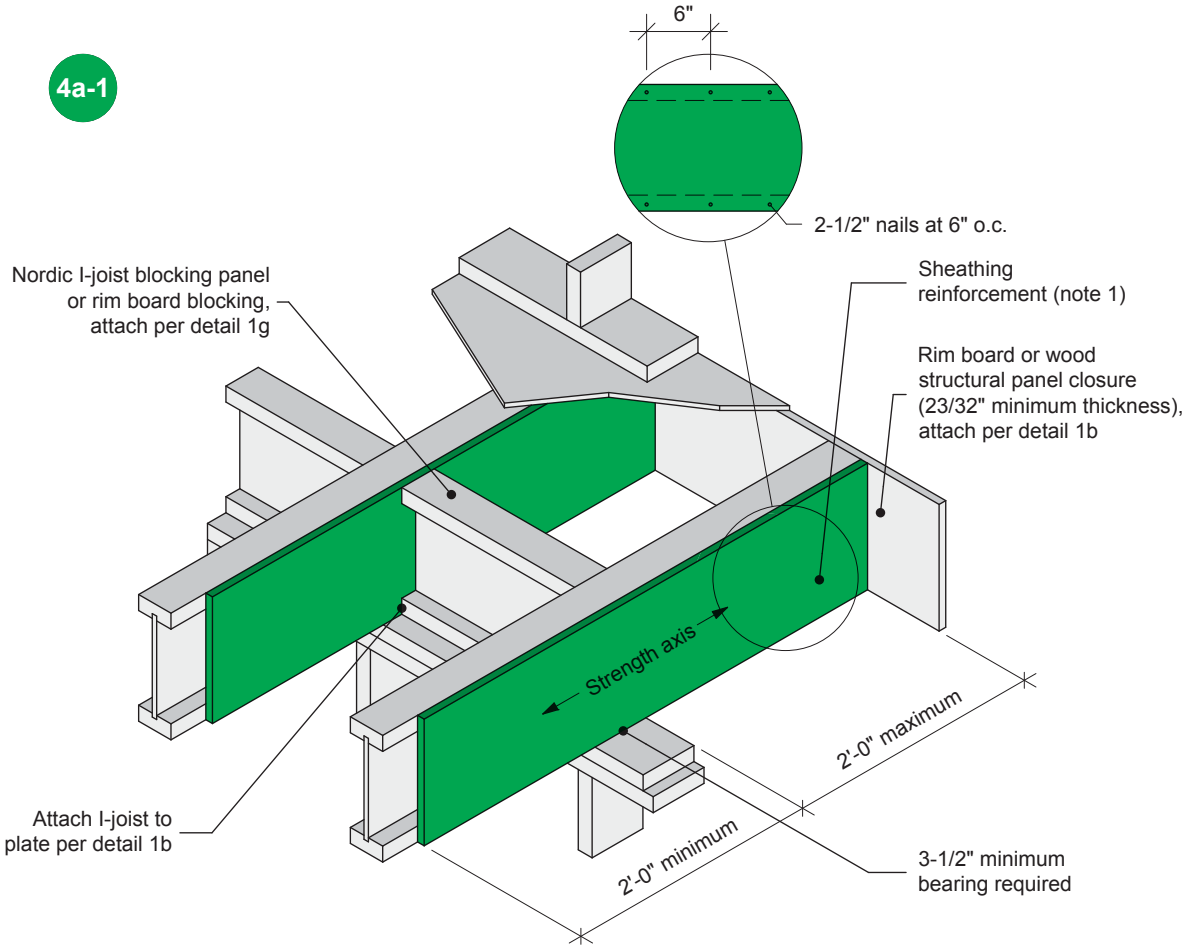


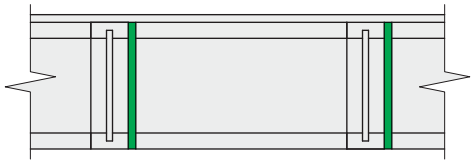
Notes:

1. Cantilevered joists must be properly sized to support all design loads. Refer to table 4.1 of the Nordic Joist Technical Guide (NS-GT3).
2. Blocking is required along the cantilever support.
3. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

4a-1



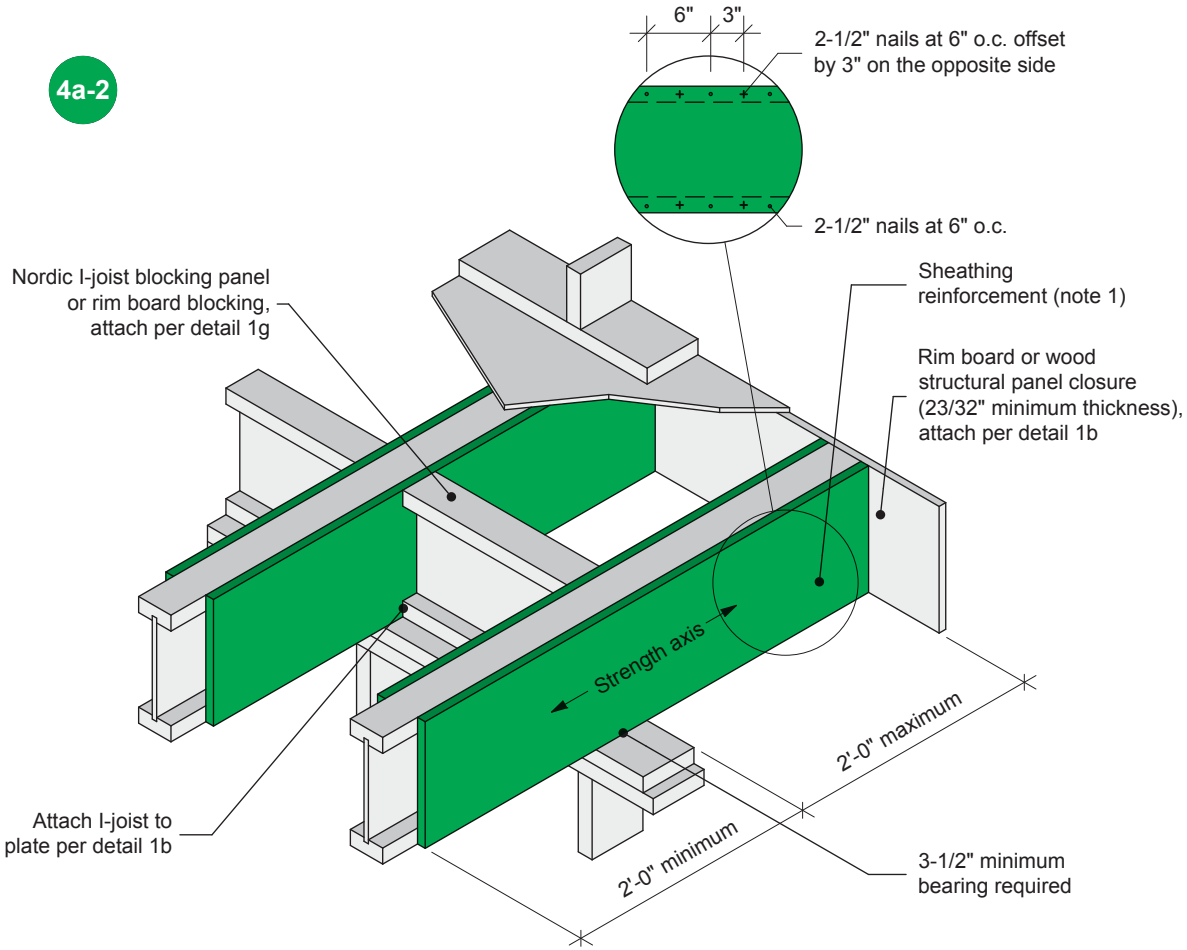


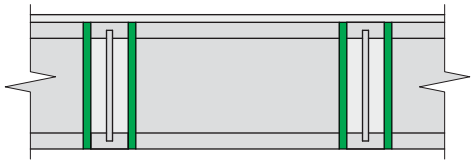
Notes:

1. Wood structural panel with a minimum thickness of 23/32 inch (for OSB, panel mark 48/24) required on one side of joist. Depth shall match the full height of the joist. Nail with 2-1/2-inch nails at 6 inches o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b.
2. Cantilevered joists must be properly sized to support all design loads. Refer to table 4.1 of the Nordic Joist Technical Guide (NS-GT3).
3. Blocking is required along the cantilever support.
4. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

4a-2

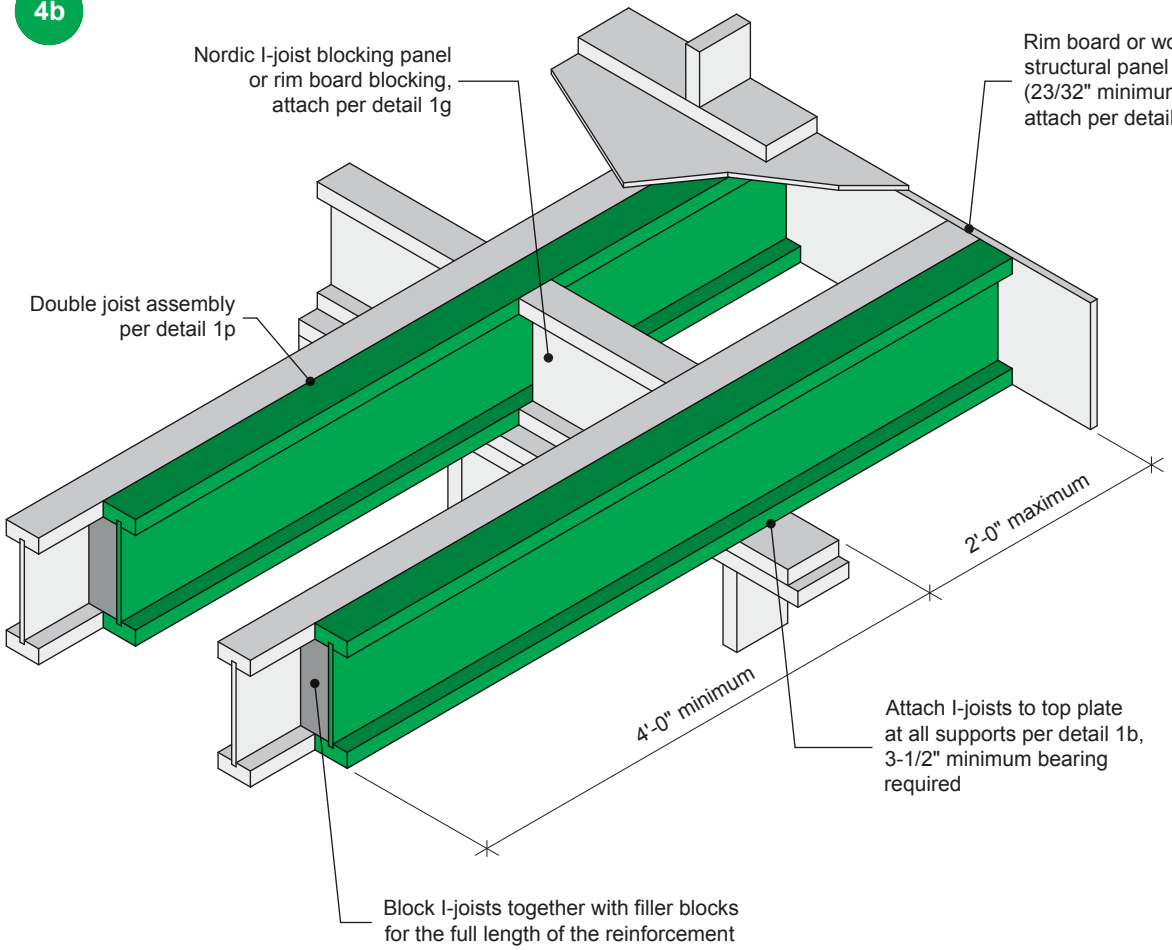


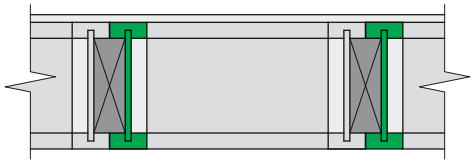


Notes:

1. Wood structural panel with a minimum thickness of 23/32 inch (for OSB, panel mark 48/24) required on both sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2-inch nails at 6 inches o.c., top and bottom flange, offset on opposite side. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b.
2. Cantilevered joists must be properly sized to support all design loads. Refer to table 4.1 of the Nordic Joist Technical Guide (NS-GT3).
3. Blocking is required along the cantilever support.
4. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

4b





Notes:

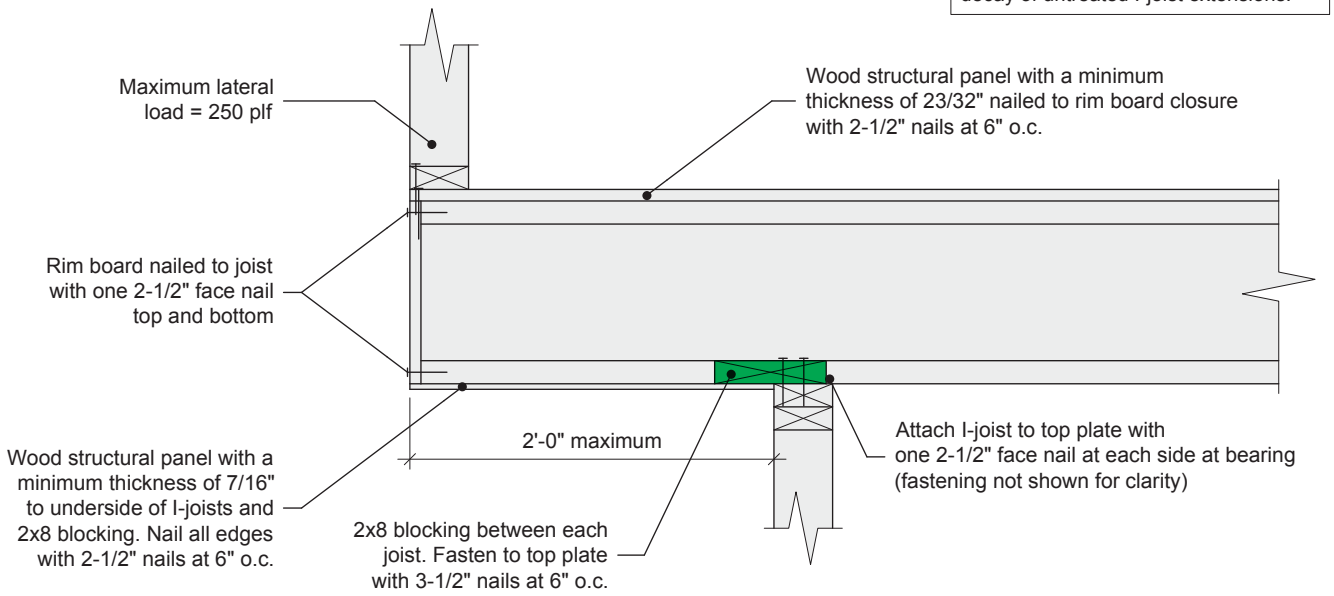
1. Cantilevered joists must be properly sized to support all design loads. Refer to table 4.1 of the Nordic Joist Technical Guide (NS-GT3).
2. Blocking is required along the cantilever support.
3. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

4c

Caution

Cantilevers formed this way must be carefully detailed to prevent moisture intrusion into the structure and potential decay of untreated I-joist extensions.

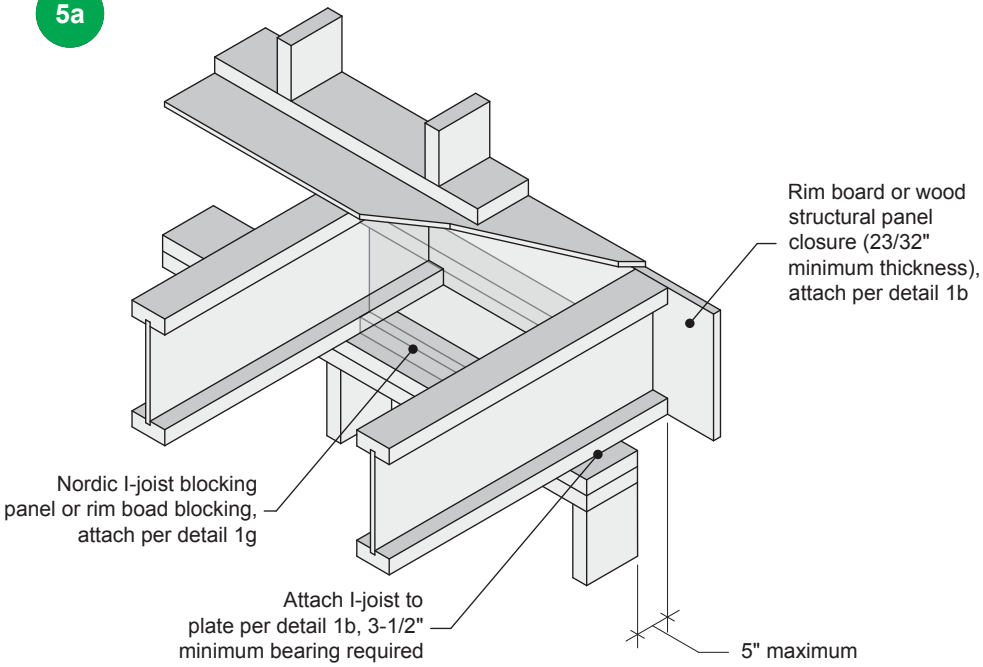


Notes:

1. The above detail is applicable only to single family residential construction, and when the cantilever is loaded by uniform floor loads only (i.e. wall is not load-bearing).
2. Cantilevered joists must be properly sized to support design loads.
3. Blocking over bearing wall must be provided at all areas of wall bracing (at end of walls and at least every 25'-0" of wall length).
4. This detail is adequate for I-joist lateral stability. Additional lateral resistance may be required in high wind and/or seismic load areas. In such cases, specific design detailing shall be provided by the building designer.
5. During erection, provide temporary blocking over bearing wall in order to prevent rollover of floor joists.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

5a

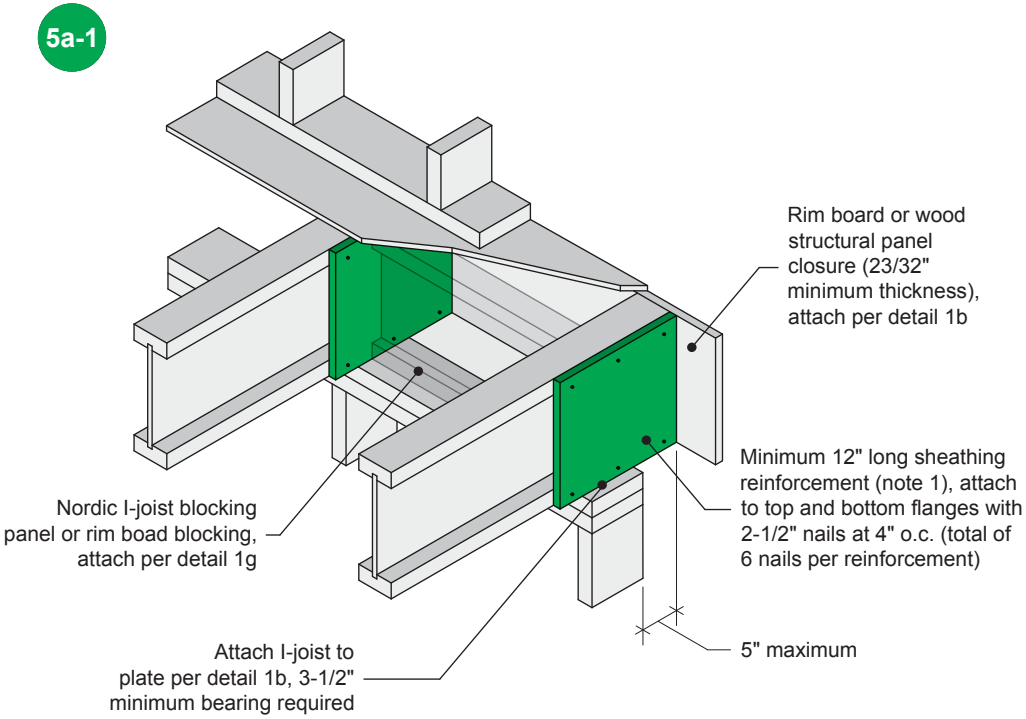


Notes:

1. Cantilevered joists must be properly sized to support all design loads. Refer to table 5.1 of the Nordic Joist Technical Guide (NS-GT3).
2. Blocking is required along the cantilever support.
3. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

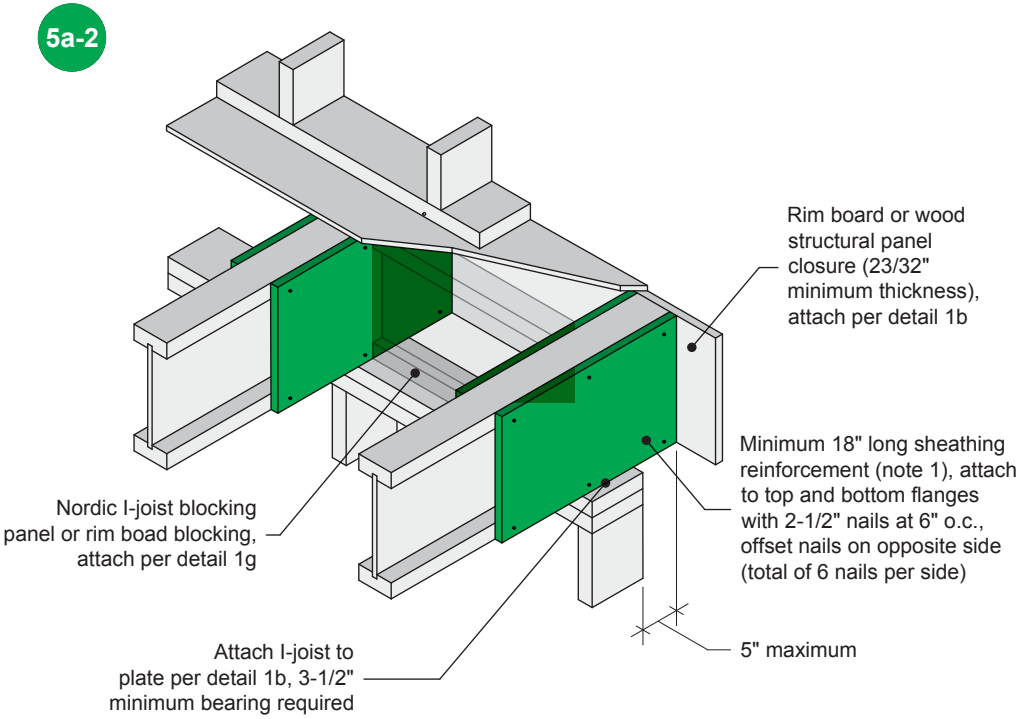
5a-1



Notes:

1. Wood structural panel with a minimum thickness of 23/32 inch (for OSB, panel mark 48/24) required on one side of joist. Depth shall match the full height of the joist. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b.
2. Cantilevered joists must be properly sized to support all design loads. Refer to table 5.1 of the Nordic Joist Technical Guide (NS-GT3).
3. Blocking is required along the cantilever support.
4. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

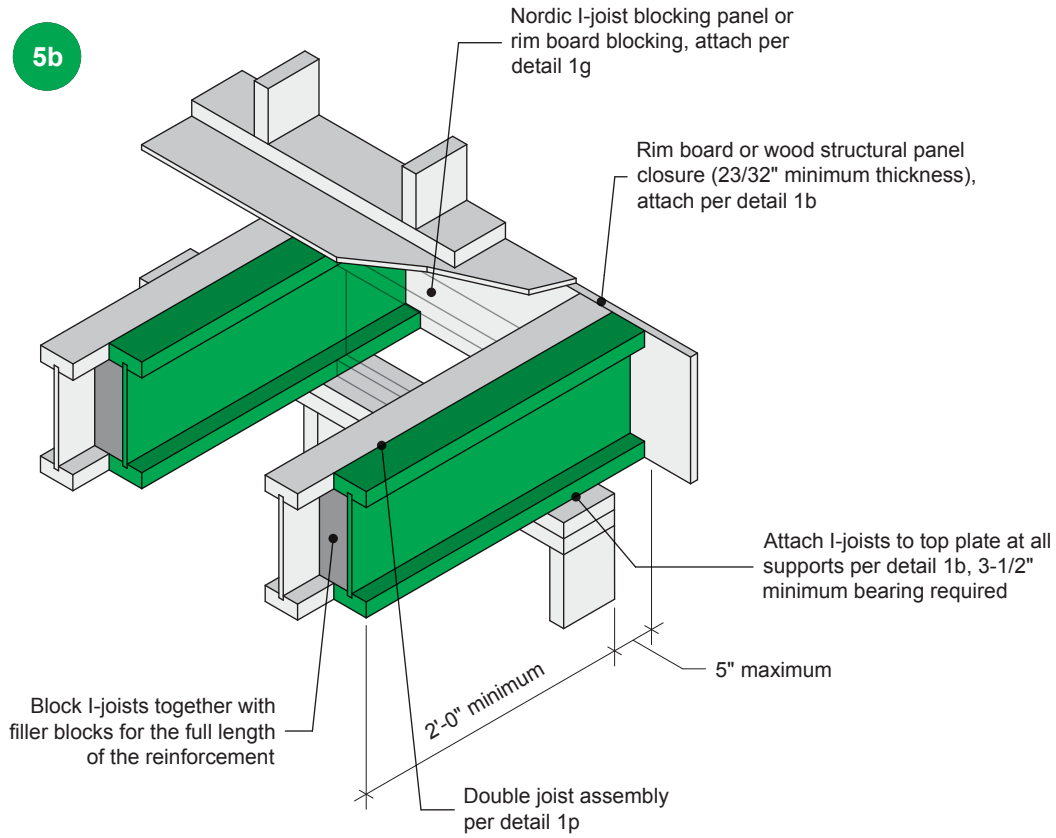
5a-2

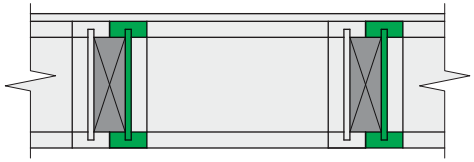


Notes:

1. Wood structural panel with a minimum thickness of 23/32 inch (for OSB, panel mark 48/24) required on both sides of joist. Depth shall match the full height of the joist. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b.
2. Cantilevered joists must be properly sized to support all design loads. Refer to table 5.1 of the Nordic Joist Technical Guide (NS-GT3).
3. Blocking is required along the cantilever support.
4. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

5b



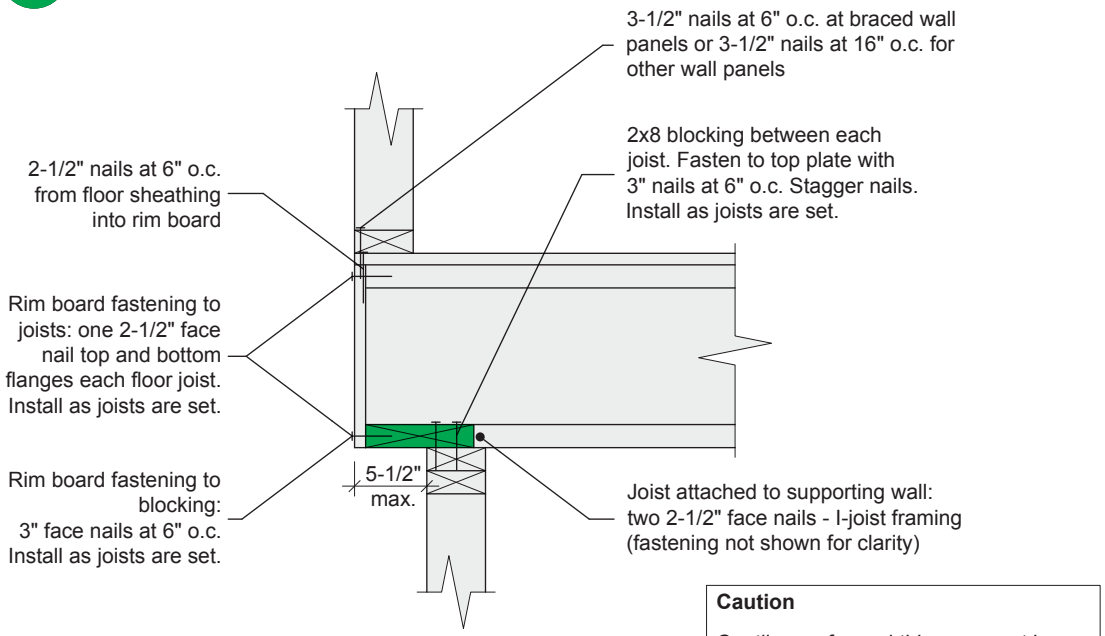


Notes:

1. Cantilevered joists must be properly sized to support all design loads. Refer to table 5.1 of the Nordic Joist Technical Guide (NS-GT3).
2. Blocking is required along the cantilever support.
3. Refer to detail 6c for holes in lateral-restraint-only blocking panels.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

5c



Caution

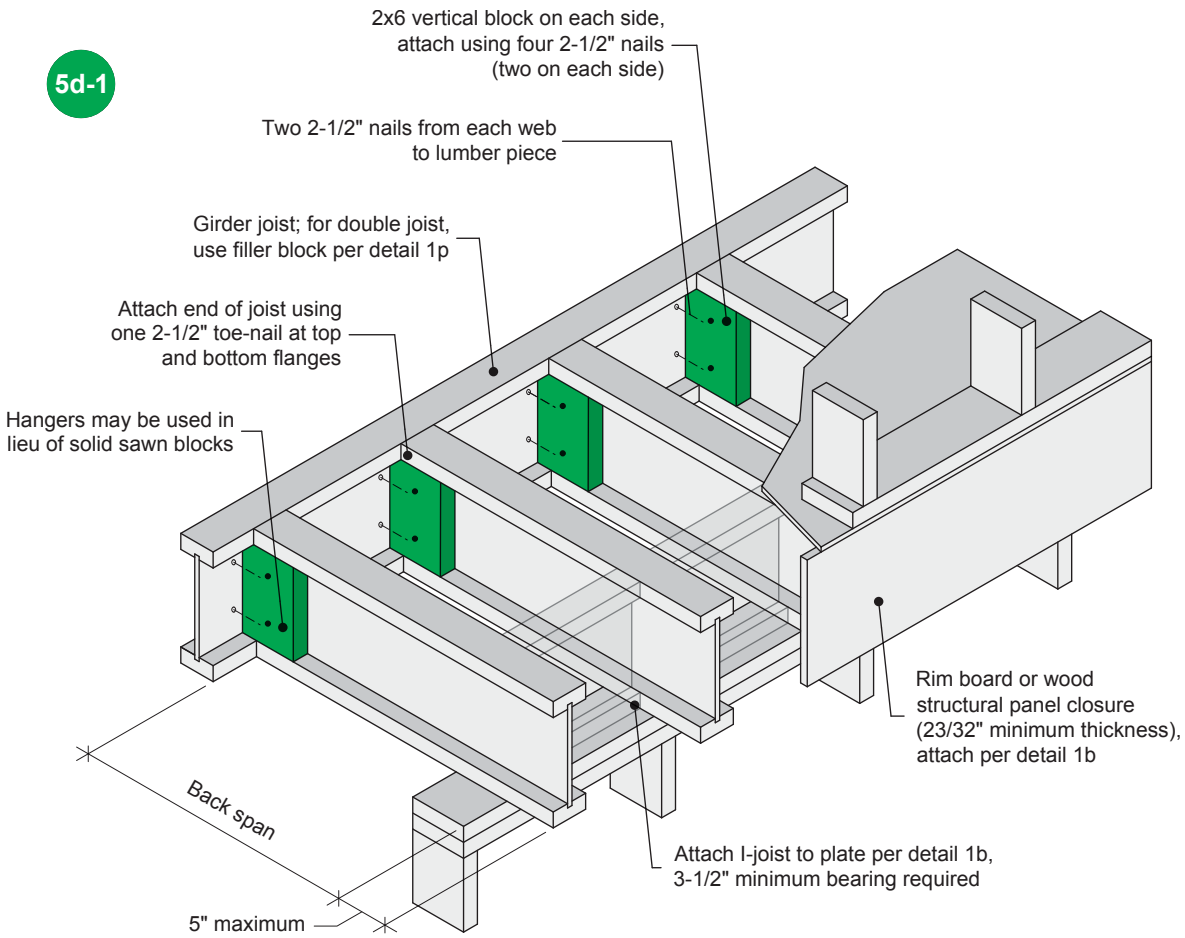
Cantilevers formed this way must be carefully detailed to prevent moisture intrusion into the structure and potential decay of untreated I-joist extensions.

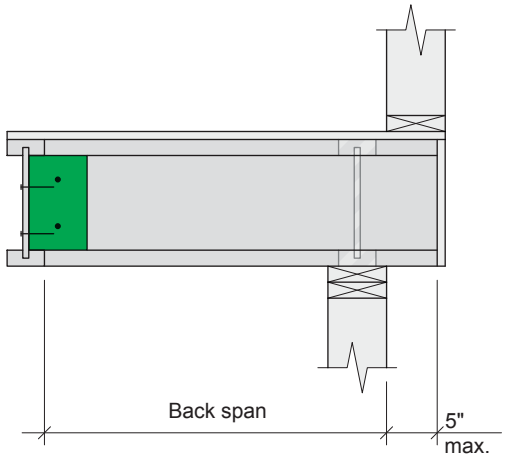
Notes:

1. Additional lateral resistance may be required in high wind and/or seismic load areas. In such cases, specific design detailing shall be provided by the building designer.
2. Cantilevered joists must be properly sized and spaced, and may require reinforcements to support vertical wall loads. Note that this detail can only be used when no I-joist reinforcement is required.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

5d-1



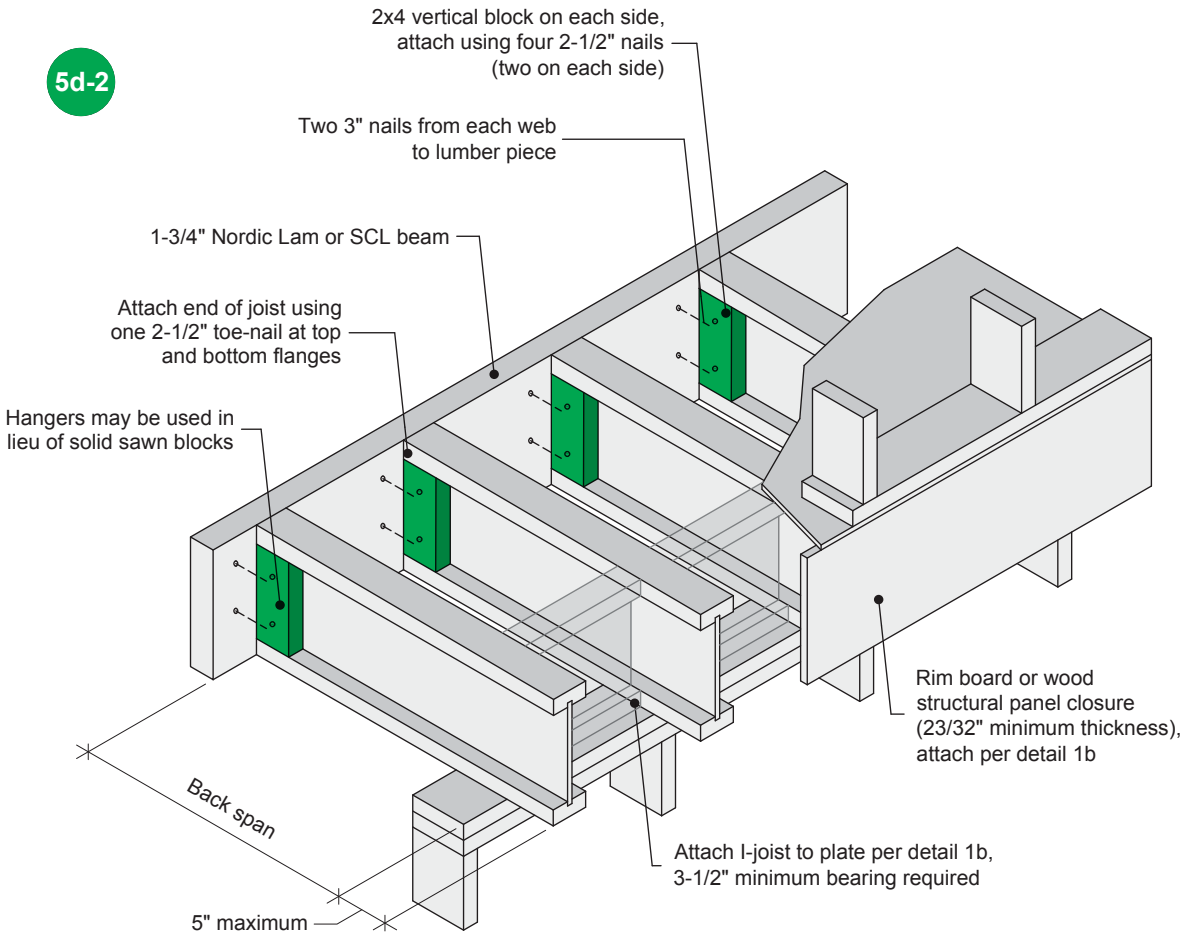


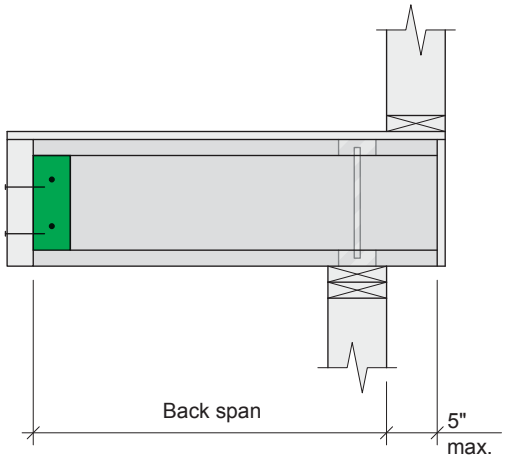
Notes:

1. Verify girder joist resistance if the back span exceeds the joist spacing. Limit the differential deflection between adjacent I-joists.
2. Cantilevered joists must be properly sized to support all design loads.
3. Blocking is required along the cantilever support.
4. Maximum resistance for pair of 2x6 blocks for this detail is 650 lbf (total of four nails). For higher resistances, use hangers in lieu of solid sawn blocks.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

5d-2



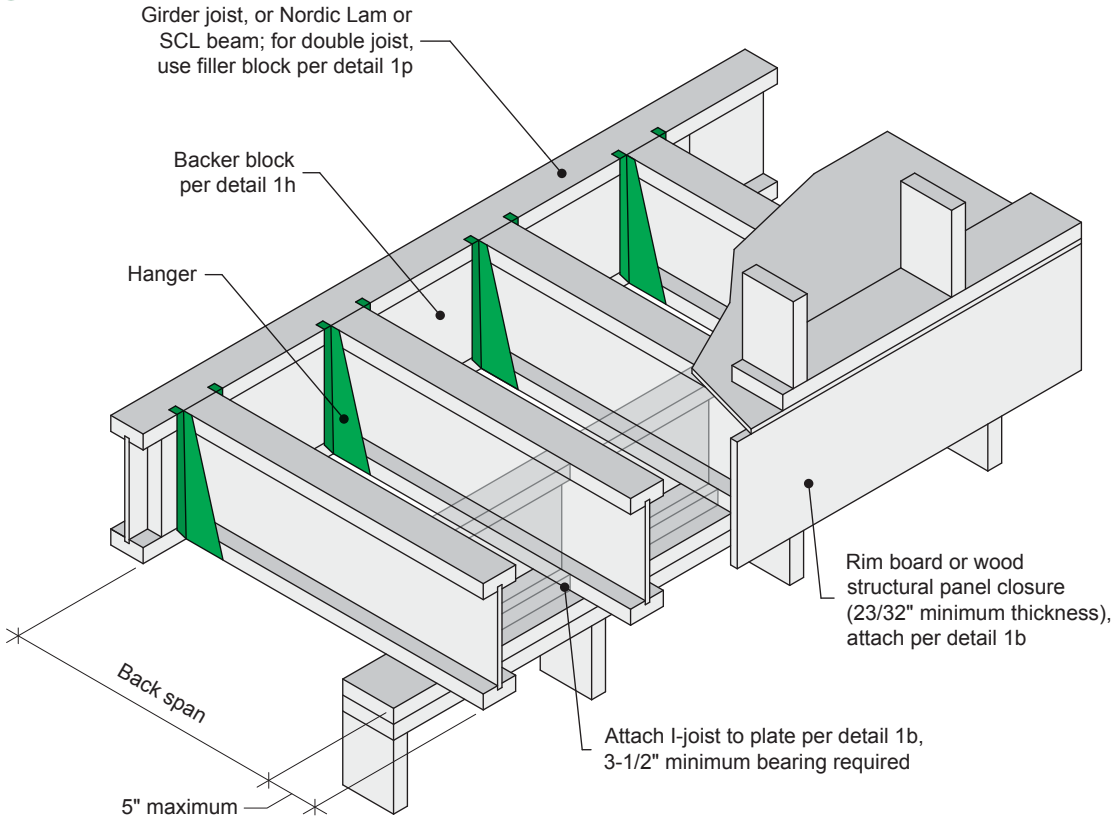


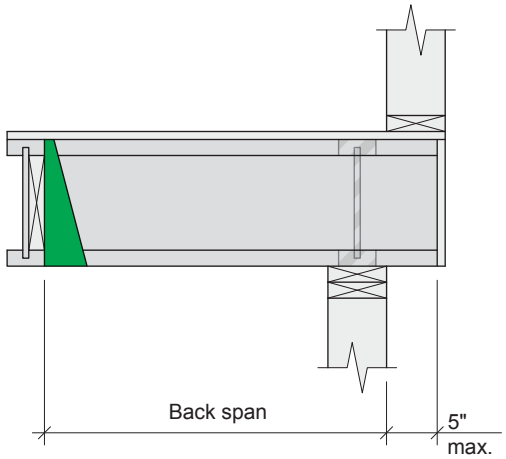
Notes:

1. Verify girder joist resistance if the back span exceeds the joist spacing. Limit the differential deflection between adjacent I-joists.
2. Cantilevered joists must be properly sized to support all design loads.
3. Blocking is required along the cantilever support.
4. Maximum resistance for pair of 2x4 blocks for this detail is 650 lbf (total of four nails). For higher resistances, use hangers in lieu of solid sawn blocks.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

5d-3



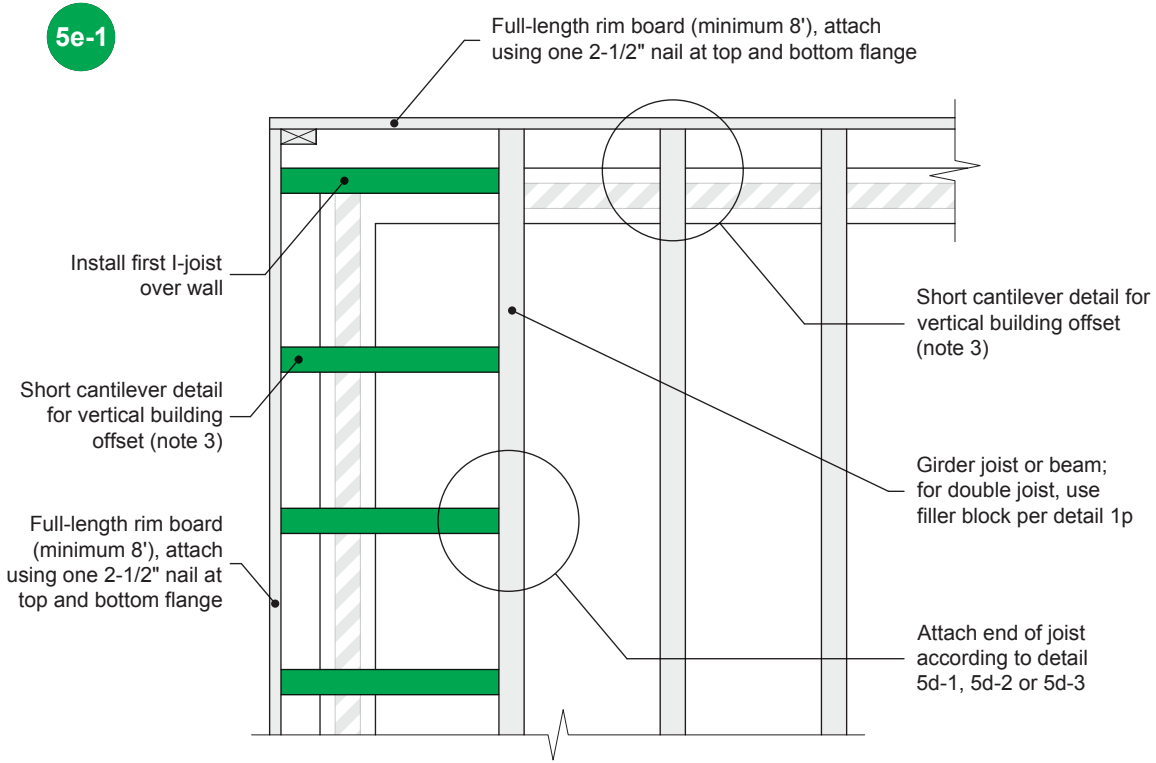


Notes:

1. Verify girder joist resistance if the back span exceeds the joist spacing. Limit the differential deflection between adjacent I-joists.
2. Cantilevered joists must be properly sized to support all design loads.
3. Blocking is required along the cantilever support.
4. For hanger resistance, see manufacturer's recommendations.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

5e-1



Notes:

1. This detail is limited to a 5-inch brick cantilever on two adjacent sides of the building. Use in conjunction with the short cantilever details for vertical building offset.
2. Verify girder joist resistance if the back span exceeds the joist spacing. Limit the differential deflection between adjacent I-joists.
3. Cantilevered joists must be properly sized to support all design loads.
4. Blocking is required along the cantilever support.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

NORDIC

DETAILS
NORDIC JOIST

NS-DC3

ENGLISH

VERSION
2024-08-01

OPENINGS AND RIM BOARDS 3

NORDIC
STRUCTURES

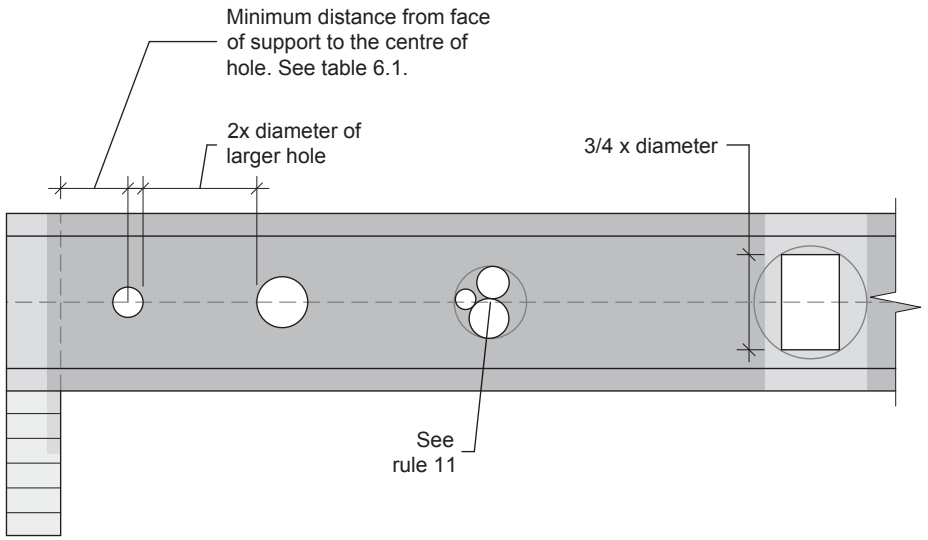
Web Hole Specifications

One of the benefits of using I-joists in residential floor construction is that holes may be cut in the joist webs to accommodate electrical wiring, plumbing lines and other mechanical systems, therefore minimizing the depth of the floor system.

Rules for Cutting Holes in I-joists

1. The distance between the inside edge of the support and the centreline of any hole shall be in compliance with the requirements of table 6.1.
2. I-joist top and bottom flanges must never be cut, notched or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole and the adjacent I-joist flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole - or twice the length of the longest side of the longest rectangular hole -, and each hole must be sized and located in compliance with the requirements of table 6.1.
7. Holes measuring 1-1/2 inch or smaller shall be permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.
8. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above. For more than three holes per span, refer to rule 11, space holes at minimum 15 inches on centre, or contact Nordic Structures.
9. All holes shall be cut in accordance with the restrictions listed above and as illustrated in detail 6a.
10. Limit three maximum-size holes per span.
11. A group of round holes at approximately the same location shall be permitted if it meets the requirements for a single round hole circumscribed around them.

6a



Notes:

1. Never drill, cut or notch the flange, or over-cut the web.
2. Holes in web should be cut with a sharp saw.
3. For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch-diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

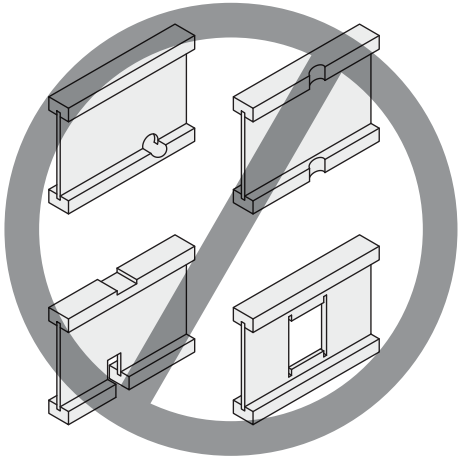


Table 6.1 – Location of Web Holes

Design Criteria	
Span:	Simple or multiple
Joist spacing:	Up to 24 inches
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load

Minimum distance from inside face of any support to centre of hole (ft-in.)

Joist depth	Joist series	Round hole diameter (in.)														L_{ref}
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4	
9-1/2"	NI-20	0'-7"	1'-6"	2'-10"	4'-3"	5'-8"	6'-0"	-	-	-	-	-	-	-	-	-	13'-5"
	NI-40x	0'-7"	1'-6"	3'-0"	4'-4"	6'-0"	6'-4"	-	-	-	-	-	-	-	-	-	14'-10"
	NI-60	1'-3"	2'-6"	4'-0"	5'-4"	7'-0"	7'-5"	-	-	-	-	-	-	-	-	-	14'-11"
	NI-80	2'-3"	3'-6"	5'-0"	6'-6"	8'-2"	8'-8"	-	-	-	-	-	-	-	-	-	15'-9"
11-7/8"	NI-20	0'-7"	0'-8"	1'-0"	2'-4"	3'-8"	4'-0"	5'-0"	6'-6"	7'-9"	-	-	-	-	-	-	15'-8"
	NI-40x	0'-7"	0'-8"	1'-3"	2'-8"	4'-0"	4'-4"	5'-5"	7'-0"	8'-4"	-	-	-	-	-	-	16'-7"
	NI-60	0'-7"	1'-8"	3'-0"	4'-3"	5'-9"	6'-0"	7'-3"	8'-10"	10'-0"	-	-	-	-	-	-	16'-9"
	NI-80	1'-6"	2'-10"	4'-2"	5'-6"	7'-0"	7'-5"	8'-6"	10'-3"	11'-4"	-	-	-	-	-	-	17'-7"
	NI-90	0'-7"	0'-8"	1'-5"	3'-2"	4"-10"	5'-4"	6'-9"	8'-9"	10'-2"	-	-	-	-	-	-	17'-11"
14"	NI-40x	0'-7"	0'-8"	0'-8"	1'-0"	2'-4"	2'-9"	3'-9"	5'-2"	6'-0"	6'-6"	8'-3"	10'-2"	-	-	-	18'-0"
	NI-60	0'-7"	0'-8"	1'-8"	3'-0"	4'-3"	4'-8"	5'-8"	7'-2"	8'-0"	8'-8"	10'-4"	11'-9"	-	-	-	18'-3"
	NI-80	0'-10"	2'-0"	3'-4"	4'-9"	6'-2"	6'-5"	7'-6"	9'-0"	10'-0"	10'-8"	12'-4"	13'-9"	-	-	-	19'-5"
	NI-90	0'-7"	0'-8"	0'-10"	2'-5"	4'-0"	4'-5"	5'-9"	7'-5"	8'-8"	9'-4"	11'-4"	12'-11"	-	-	-	19'-10"
16"	NI-60	0'-7"	0'-8"	0'-8"	1'-6"	2'-10"	3'-2"	4'-2"	5'-6"	6'-4"	7'-0"	8'-5"	9'-8"	10'-2"	12'-2"	13'-9"	19'-10"
	NI-80	0'-7"	1'-3"	2'-6"	3'-10"	5'-3"	5'-6"	6'-6"	8'-0"	9'-0"	9'-5"	11'-0"	12'-3"	12'-9"	14'-5"	16'-0"	21'-2"
	NI-90	0'-7"	0'-8"	0'-8"	1'-9"	3'-3"	3'-8"	4'-9"	6'-5"	7'-5"	8'-0"	9'-10"	11'-3"	11'-9"	13'-9"	15'-4"	21'-6"

Notes:

1. Tabulated values are applicable to residential floor construction meeting the above design criteria.
2. If the actual measured span is less than the reference span, L_{ref}, the minimum distance from inside face of any support to centre of hole may be reduced as follows:

$$D_{reduced} = (L_{actual} / L_{ref}) \times D$$

Where:

- $D_{reduced}$ = Reduced distance from inside face of any support to centre of hole (ft). The reduced distance shall not be less than 6 inches from the face of the support to edge of the hole.
- L_{actual} = Actual measured span distance between the inside face of supports (ft).
- L_{ref} = Reference span given in this table (ft).
- D = Minimum distance from the inside face of any support to centre of hole from this table (ft).

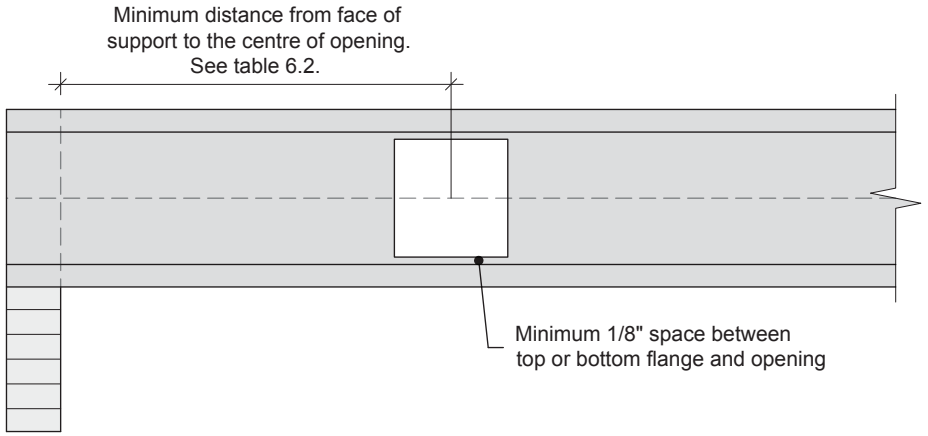
Duct Chase Opening Specifications

6b

One of the benefits of using I-joists in residential floor construction is that openings may be cut in the joist webs to accommodate a duct chase (supply duct for heating, ventilation or air-conditioning), therefore minimizing the depth of the floor system.

Rules for Cutting Duct Chase Openings in I-joists

1. The distance between the inside edge of the support and the centreline of a duct chase opening shall be in compliance with the requirements of table 6.2.
2. I-joist top and bottom flanges must never be cut, notched or otherwise modified.
3. The maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the opening and the adjacent I-joist flange.
4. All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.
5. Limit one maximum-size duct chase opening per span.



Notes:
1. Never drill, cut or notch the flange, or over-cut the web.
2. Holes in web should be cut with a sharp saw.
3. Avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch-diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.

I-joist depth (in.)	Maximum depth of the opening (in.)
9-1/2	6-1/4
11-7/8	8-5/8
14	10-3/4
16	12-3/4

Table 6.2 – Location of Duct Chase Openings

Design Criteria	
Span:	Simple
Joist spacing:	Up to 24 inches
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load

Minimum distance from inside face of any support to centre of opening (ft-in.)

Joist depth	Joist series	Duct chase length (in.)								
		8	10	12	14	16	18	20	22	24
9-1/2"	NI-20	5'-6"	5'-10"	6'-2"	-	-	-	-	-	-
	NI-40x	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	-	-
	NI-60	5'-4"	5'-9"	6'-2"	6'-7"	7'-1"	7'-5"	8'-0"	-	-
	NI-80	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8'-2"	8'-6"
11-7/8"	NI-20	7'-3"	7'-7"	7'-11"	-	-	-	-	-	-
	NI-40x	6'-8"	7'-2"	7'-6"	8'-1"	8'-6"	9'-1"	9'-6"	-	-
	NI-60	7'-3"	7'-8"	8'-0"	8'-6"	9'-0"	9'-3"	9'-9"	-	-
	NI-80	7'-2"	7'-7"	8'-0"	8'-5"	8'-10"	9'-3"	9'-8"	10'-2"	10'-8"
	NI-90	7'-6"	7'-11"	8'-4"	8'-9"	9'-2"	9'-7"	10'-1"	10'-7"	10'-11"
14"	NI-40x	8'-1"	8'-7"	9'-0"	9'-6"	10'-1"	10'-7"	11'-2"	-	-
	NI-60	8'-9"	9'-3"	9'-8"	10'-1"	10'-6"	11'-1"	11'-6"	-	-
	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7"	11'-1"	11'-6"	12'-1"	12'-6"
	NI-90	9'-2"	9'-8"	10'-0"	10'-6"	10'-11"	11'-5"	11'-9"	12'-4"	12'-11"
16"	NI-60	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	-	-
	NI-80	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12'-7"	13'-1"	13'-8"	14'-4"
	NI-90	10'-9"	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14'-2"	14'-10"

Note:

1. Tabulated values are applicable to residential floor construction meeting the above design criteria.

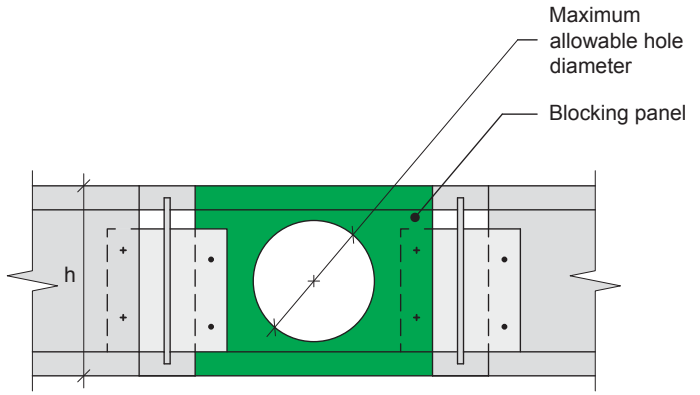
Holes in Lateral-restraint-only Blocking Panels

This detail concerns the placement of holes in the web of I-joists or rim board used as blocking for lateral restraint of floor and roof joists. Blocking for lateral restraint are those members used between floor joists, ceiling joists or rafters to prevent them from rolling over. As a rule of thumb, any blocking that is not supporting a load-bearing wall (vertical or lateral load) or part of an engineered diaphragm perimeter load path can be considered a lateral-restraint-only blocking panel.

Maximum Allowable Hole Size

1. The maximum allowable hole size for a lateral-restraint-only blocking panel is 2/3 of the lesser dimension of the blocking's depth or length. Assuming the blocking panel is longer than its height (or depth), the table aside applies. For other applications, contact Nordic Structures.
2. Holes cut into the blocking panels are subject to the following limitations:
   - The top and bottom flanges of an I-joist blocking panel must never be cut, notched or otherwise modified.
   - Field-cut holes must be centred in the blocking horizontally.
   - While round holes are preferred, rectangle holes may be used provided the corners are not over cut. Slightly rounding corners or pre-drilling corners with a 1-inch-diameter bit is recommended.
   - All holes must be cut in a workman-like manner in accordance with the limitations listed above.

6c

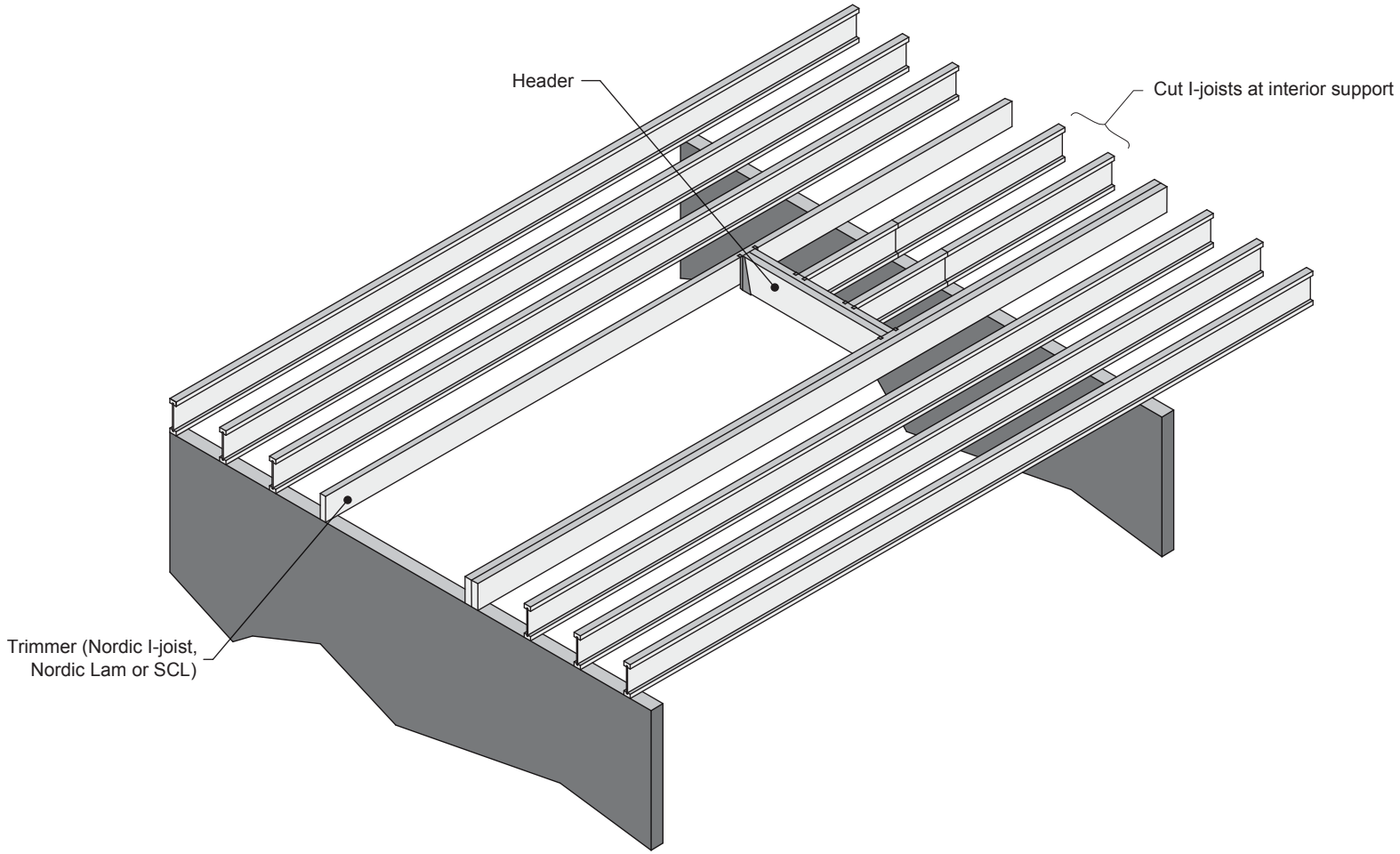


I-joist or rim board blocking depth (in.)	Maximum allowable hole diameter (in.) [a]
9-1/2	6-1/4
11-7/8	7-3/4
14	9-1/4
16	10-1/2

[a] Maximum allowable hole diameter in blocking panel, where the blocking panel is longer than its height.

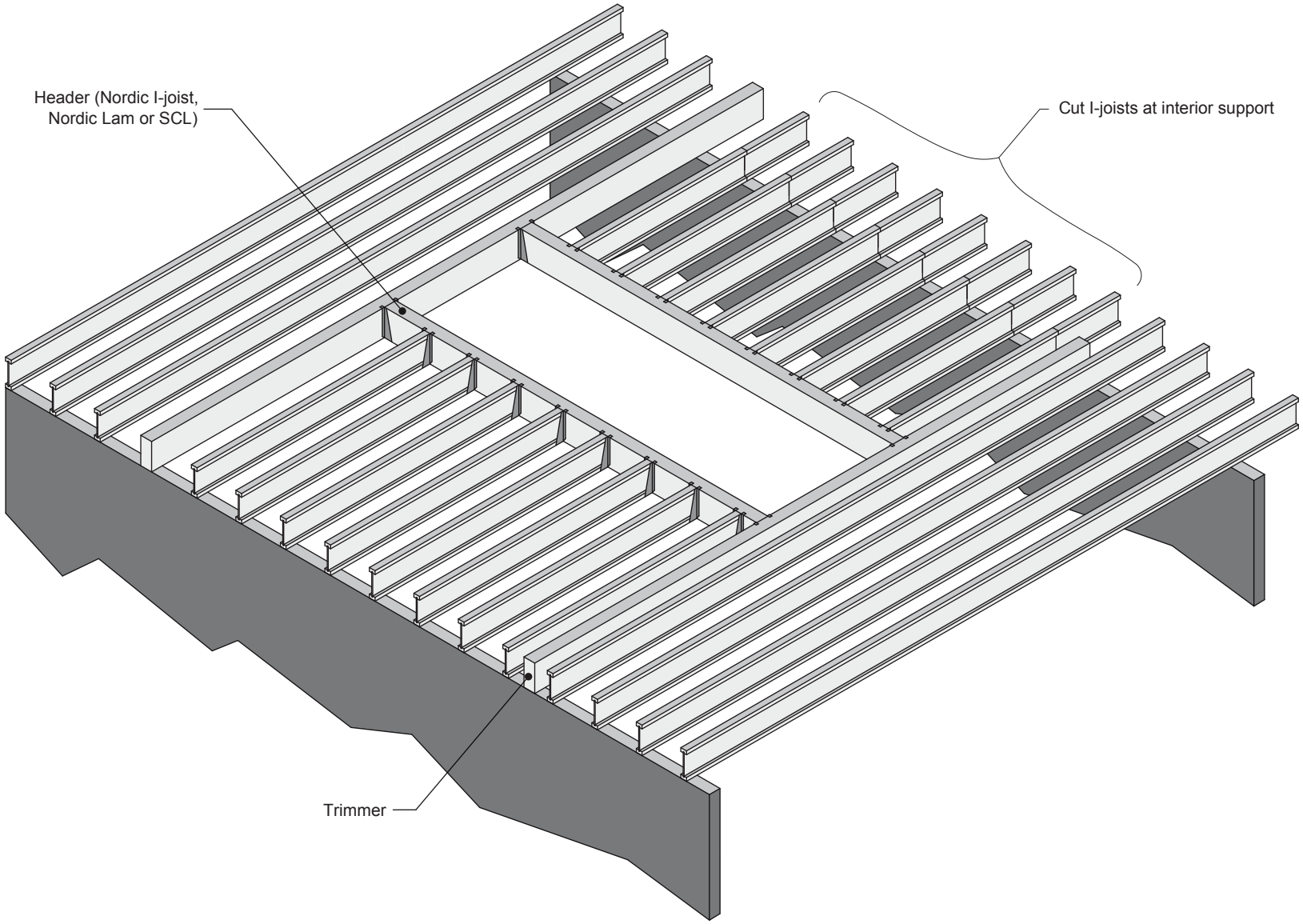
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

7a-1



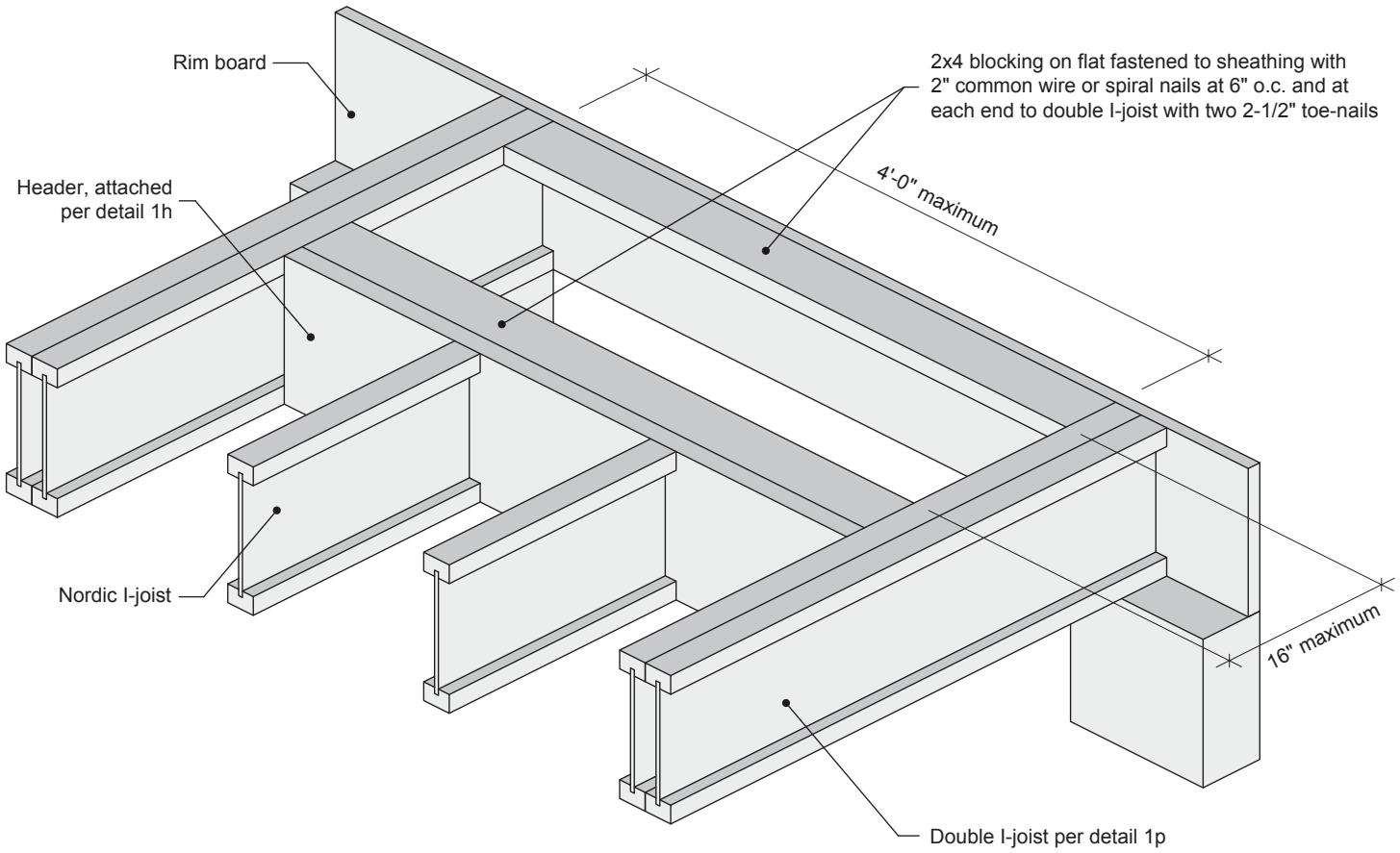
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

7a-2



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

7b-1

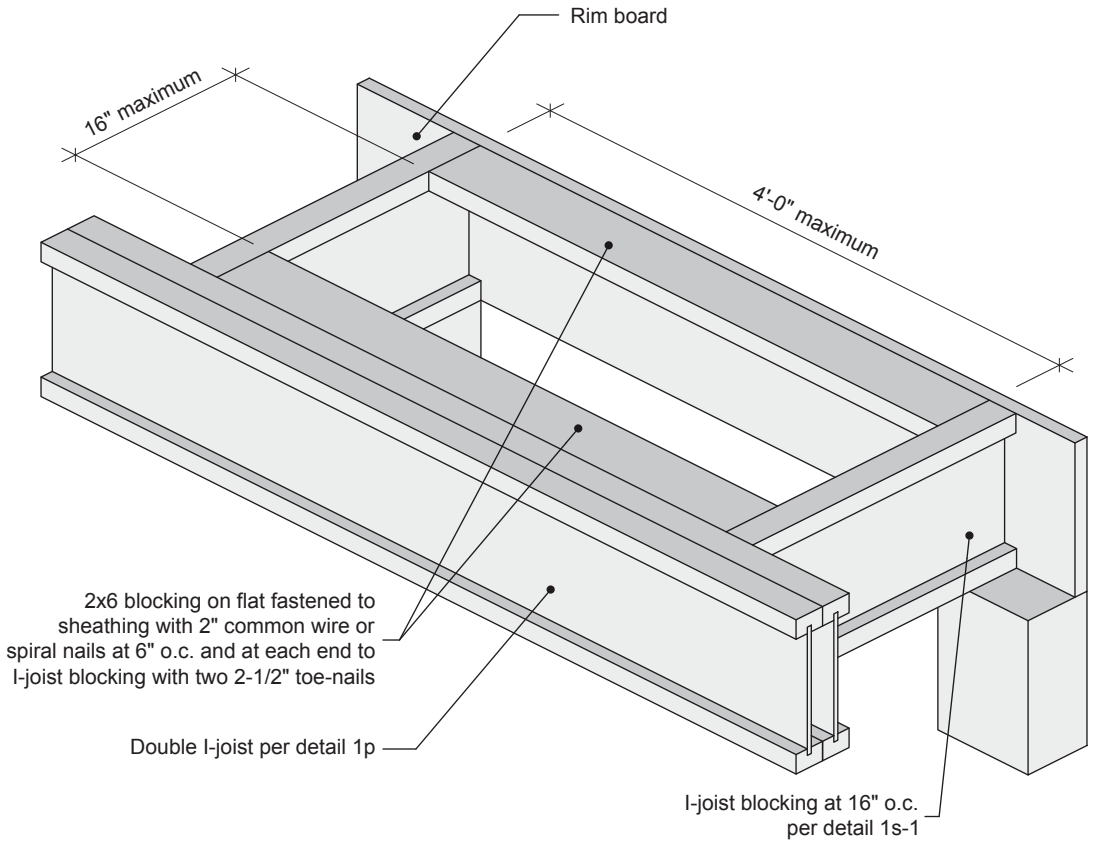


Notes:

1. The above detail represents a basement window framing. Verify rim board resistance to support loads. If needed, use multiple pieces or a Nordic Lam or SCL beam.
2. Verify double I-joist resistance to support concentrated loads.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

7b-2

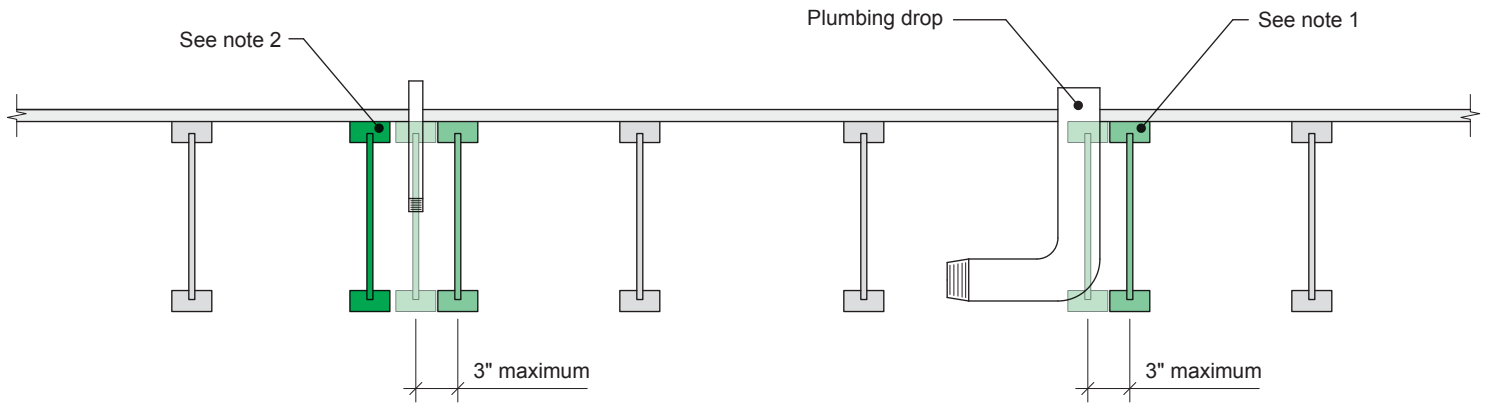


Notes:

1. The above detail represents a basement window framing. Verify rim board resistance to support loads. If needed, use multiple pieces or a Nordic Lam or SCL beam.
2. Verify double I-joist resistance to support concentrated loads.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

7c

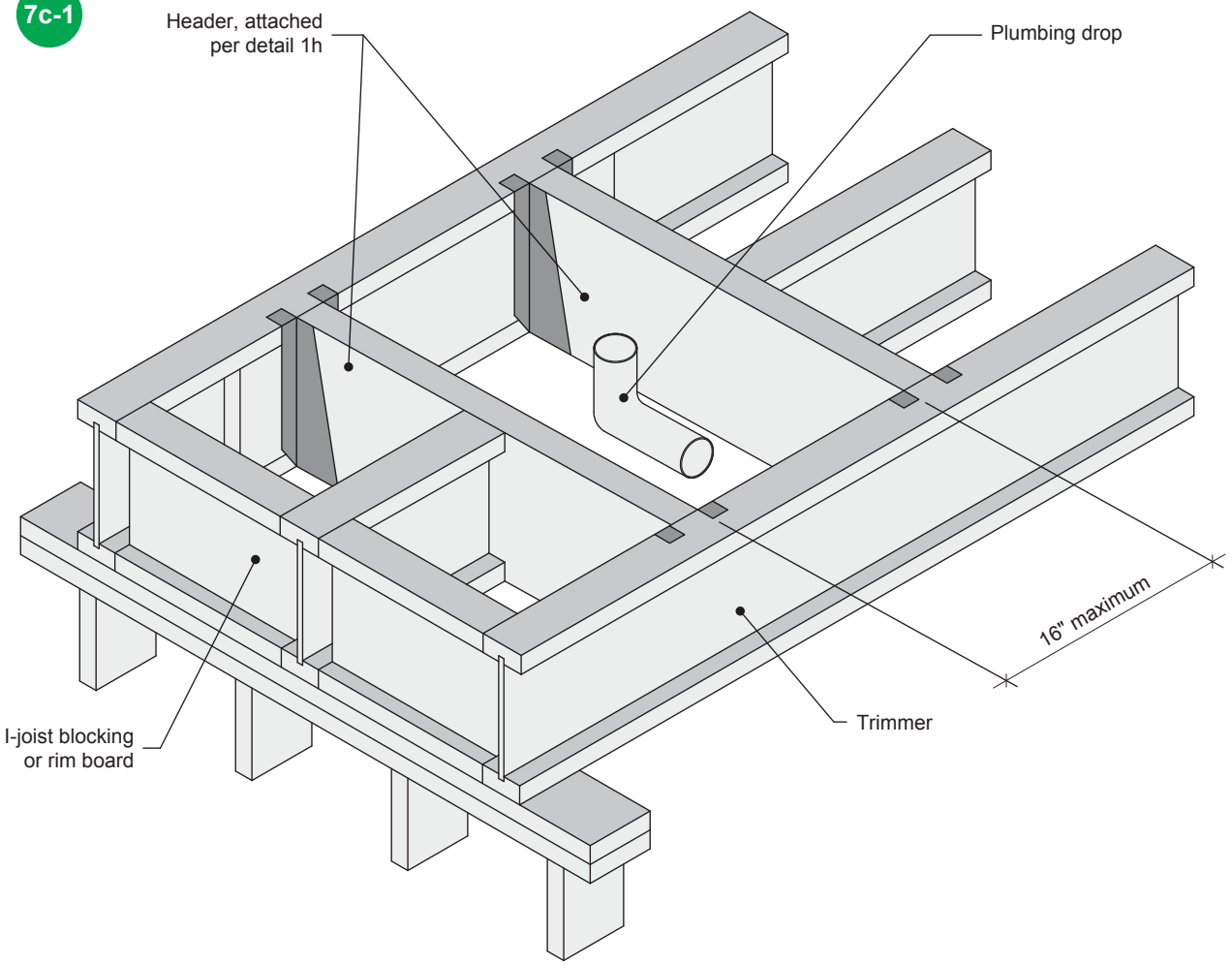


Notes:

1. To prevent interference with plumbing, a joist may be shifted up to 3 inches if the edge of the floor panel is supported and the span rating is not exceeded.
2. In all other cases, an additional joist is required.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

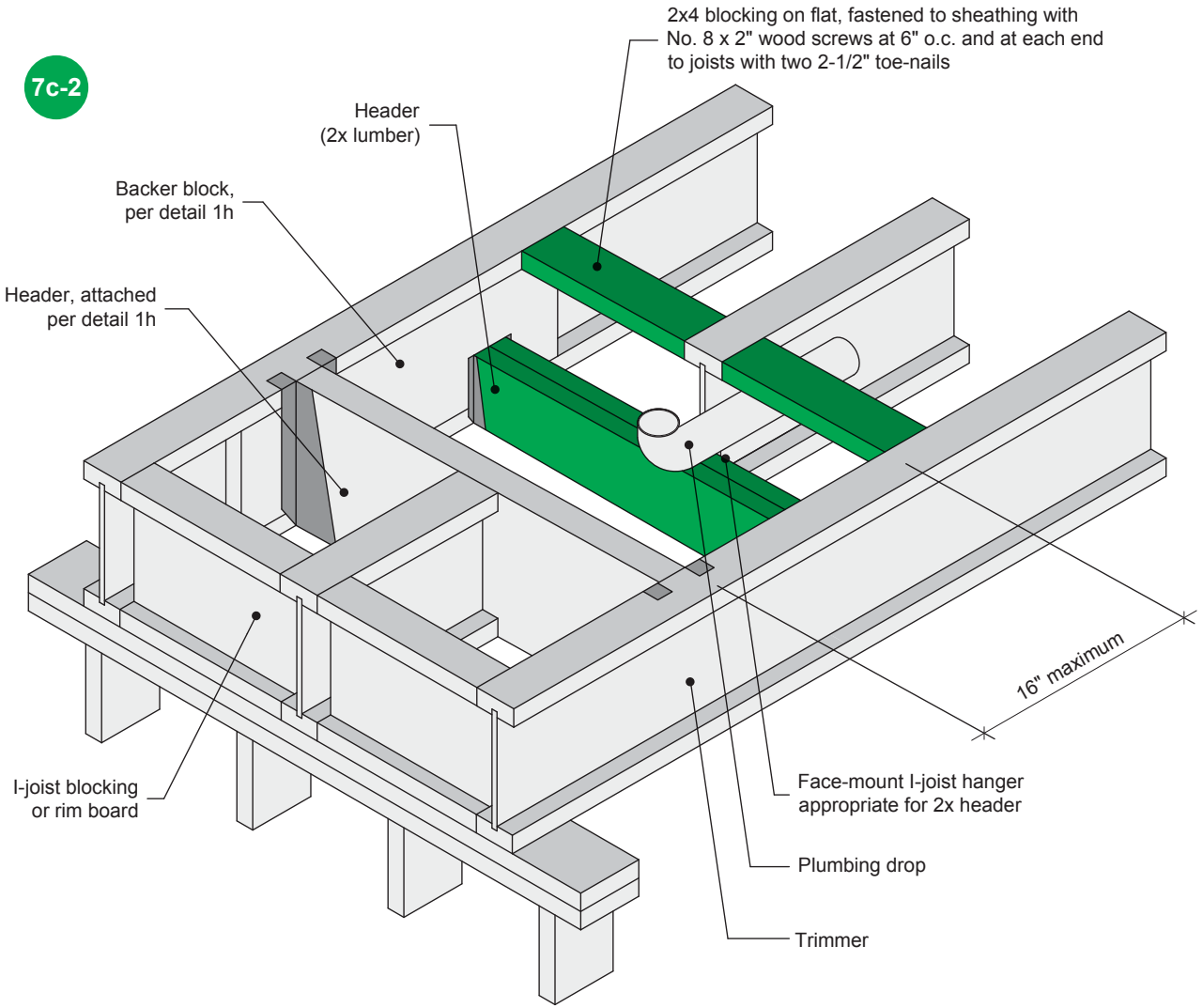
7c-1



Note:

1. Verify trimmers resistance to support concentrated loads.

7c-2

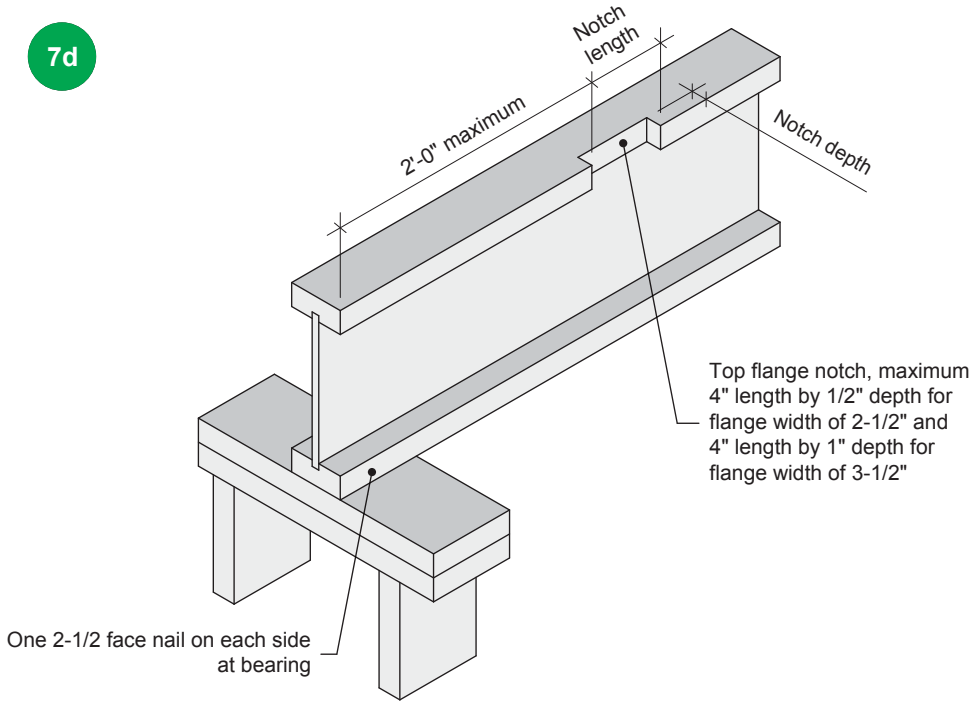


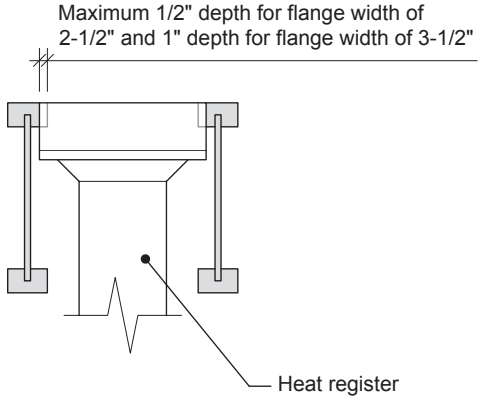
Notes:

1. Verify trimmers resistance to support concentrated loads.
2. Verify headers resistance to support loads. If required, use a Nordic Lam or SCL beam.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

7d





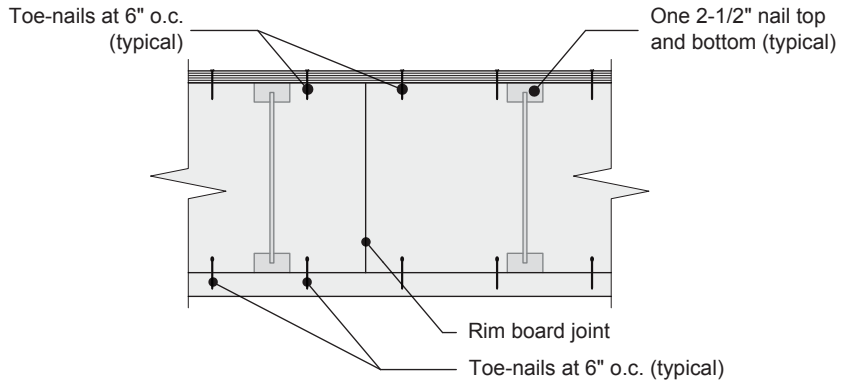
Notes:

1. Blocking required at bearing for lateral support, not shown for clarity.
2. The maximum dimensions for a notch on the side of the top flange are 4-inch length by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch length by 1-inch depth for flange width of 3-1/2 inches.
3. This detail applies to simple-span joists and multiple-span joists where the notch is located at the end half-span.
4. For other applications, contact Nordic Structures.

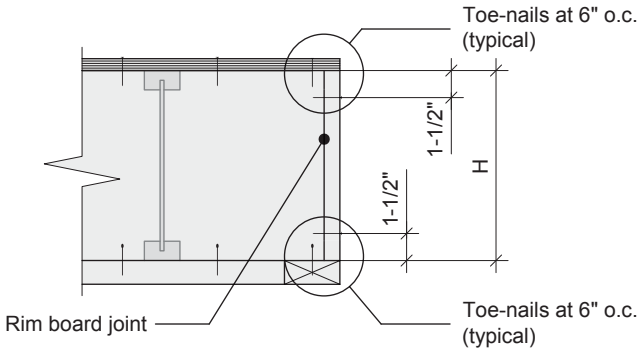
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

8a

Rim Board Joint Between Floor Joists



Rim Board Joint at Corner

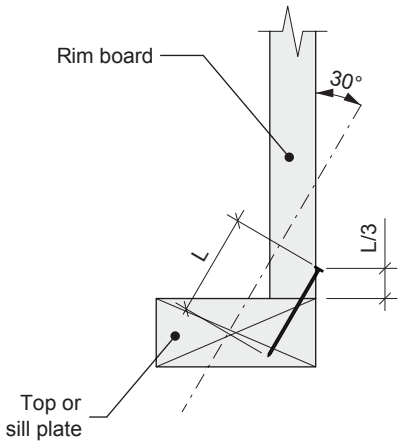


Notes:

1. Floor sheathing to rim board - Use 2-1/2-inch common nails at 6 inches o.c. ***Caution:*** *The horizontal load resistance is not necessarily increased with a decreased nail spacing. Under no circumstances should the nail spacing be less than 3 inches. The 3-1/2-inch common nails used to connect the bottom plate of a wall to the rim board through the sheathing do not reduce the horizontal load resistance of the rim board provided that the 2-1/2-inch nail spacing (sheathing-rim board) is 6 inches o.c. and the 3-1/2-inch nail spacing (bottom plate-sheathing-rim board) is in accordance with the prescriptive requirements of the applicable code. APA recommends a minimum 3/8-inch panel edge distance be maintained when nailing. Calculations show that the tongue does not need to be removed for floor sheathing 7/8-inch thick or less when used in conjunction with rim boards of 1-1/8 inch. Some local code jurisdictions, however, may require removal of the tongue at the edge of floor framing when nailing it to rim board.*
2. Rim board to I-joist - Use two 2-1/2-inch common nails, one each into the top and bottom flanges.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

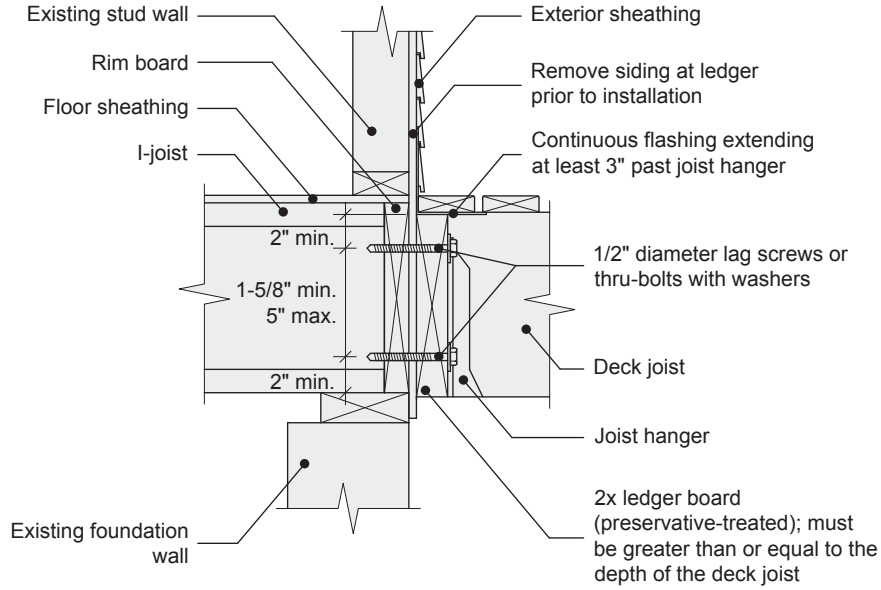
8b



Note:

1. Rim board to sill plate - Toe-nail using 3-1/2-inch common nails at 6 inches o.c.

8c

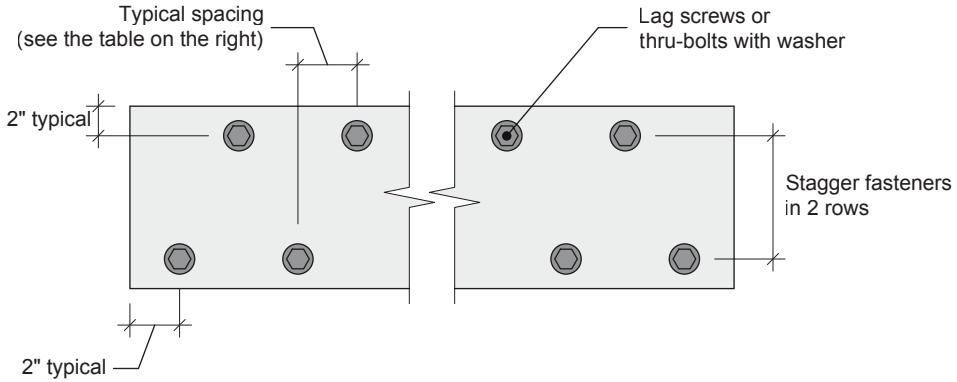


Notes:

1. Attachment of 2x lumber ledgers to rim board - Use 1/2-inch-diameter lag screws (minimum nominal length of 4 inches) or 1/2-inch-diameter through-bolts with washers and nuts. In both cases, use a design value of 585 lbf per fastener (see detail 8d). ***Caution:*** *The lag screw should be inserted in a lead hole by turning with a wrench, not by driving with a hammer. Over-torquing can significantly reduce the lateral resistance of the lag screw and should therefore be avoided. See CSA O86:19, Design in wood, for the appropriate size of clearance and lead holes.*
2. Positively anchoring decks to the primary structure is advised and may be required by the applicable building code. The lateral connection may be in accordance with detail 8e-1 or 8e-2, as appropriate.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

8d



Fastener Spacing for Deck Ledger and Rim Boards using 1/2-inch-diameter Lag Screws or Thru-bolts with 15/32-inch Maximum Sheathing [a]

Deck live load of 40 psf, deck dead load of 10 psf

Rim boards	Joist span (L)			
	10' < L ≤ 12'	12' < L ≤ 14'	14' < L ≤ 16'	16' < L ≤ 18'
	On-centre spacing of fasteners [b]			
1-1/8" or thicker	16"	13"	12"	10"

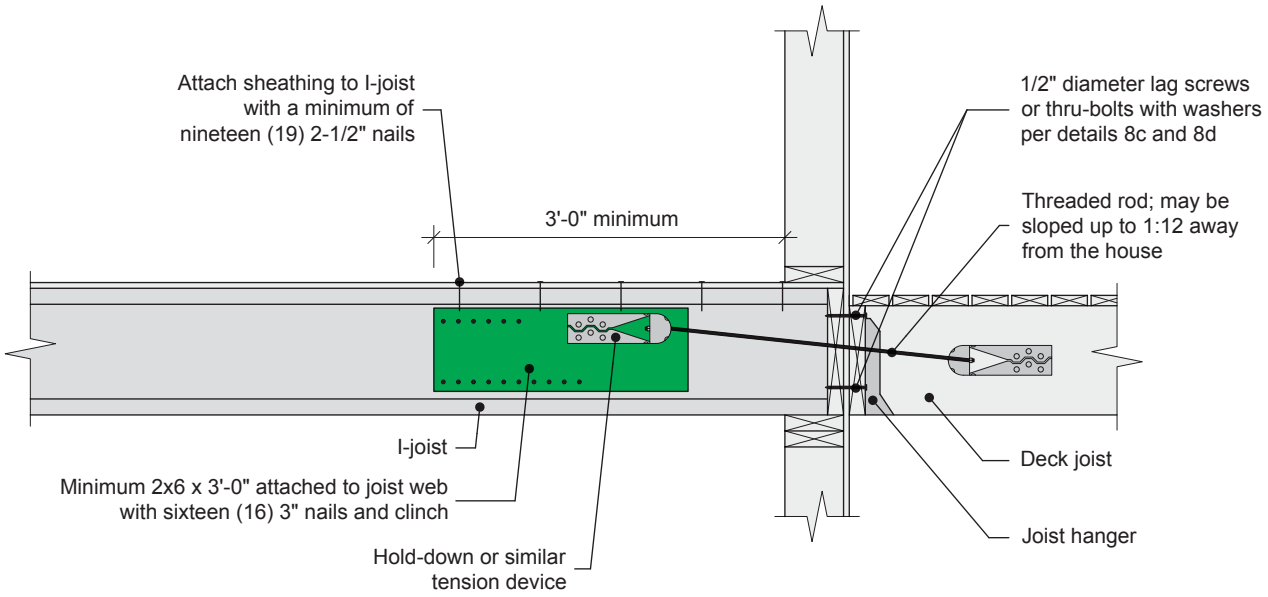
[a] See detail 8c for attachment details. Ledger shall be S-P-F or other wood species with a specific gravity of 0.42 or greater.

[b] Lag screws and thru-bolts shall be staggered in accordance with the detail on the left.

Notes:

1. See notes in detail 8c.
2. Lateral resistance of nails applied to the faces of rim board – Calculate the lateral nail resistance based on the procedures given in CSA O86:19, using the dowel bearing strength equivalent to Douglas-fir-Larch.

8e-1

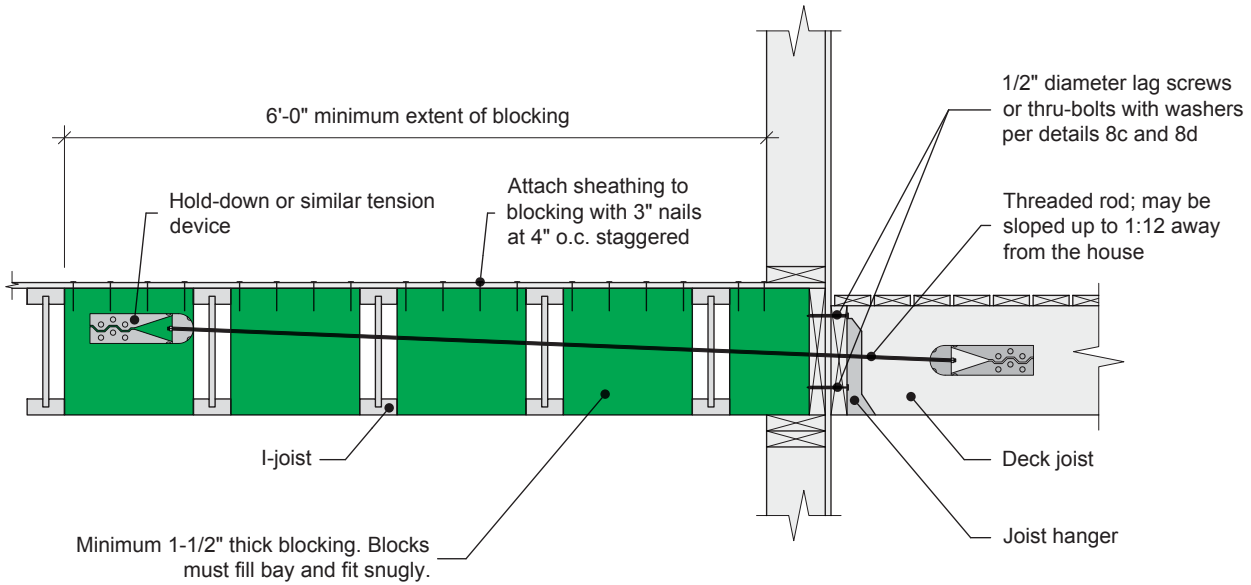


Notes:

1. Positively anchoring decks to the primary structure is advised and may be required by the applicable building code. This detail is based on U.S. code requirements; check the validity. For more details, refer to the AWC Prescriptive Residential Wood Deck Construction Guide.
2. Hold-down tension devices shall be provided in not less than two locations within two feet of the edge of the deck. Specific design detailing shall be provided by the building designer.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

8e-2



Notes:

1. Positively anchoring decks to the primary structure is advised and may be required by the applicable building code. This detail is based on U.S. code requirements; check the validity. For more details, refer to the AWC Prescriptive Residential Wood Deck Construction Guide.
2. Hold-down tension devices shall be provided in not less than two locations within two feet of the edge of the deck. Specific design detailing shall be provided by the building designer.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

Rim Board Hole Specifications

The maximum allowable hole size for a rim board shall be 2/3 of the rim board depth, as shown in the table aside. The length of the rim board segment containing a hole shall be at least eight times the hole size.

Application Notes

1. Do not cut holes in rim board installed over openings, such as doors or windows, where the rim board is not fully supported, except that holes of 1-1/2 inch or less in size are permitted provided they are positioned at the mid-depth and in the middle one-third of the span (see note 5 for minimum hole spacing).

2. Field-cut holes should be vertically centred in the rim board and at least one hole diameter or 6 inches, whichever is less, clear distance away from the end of the wall line. Holes should never be placed such that they interfere with the attachment of the rim board to the ends of the floor joist, or any other code-required nailing.

3. While round holes are preferred, rectangle holes may be used providing the corners are not over-cut. Slightly rounding corners by pre-drilling with a 1-inch-diameter bit is recommended.

4. When concentrated loads are present on the rim board (loads not supported by any other vertical-load-carrying members such as squash blocks), holes should not be placed in the rim board within a distance equal to the depth of the rim board from the area of loading.

5. For multiple holes, the clear spacing between holes shall be at least two times the diameter of the larger hole, or twice the length of the longest side of the longest rectangular hole. This minimum hole spacing does not apply to holes of 1-1/2 inch or less in diameter, which can be placed anywhere in the rim board (see note 1 for holes over opening) except that the clear distance to the adjacent hole shall be 3 inches minimum.

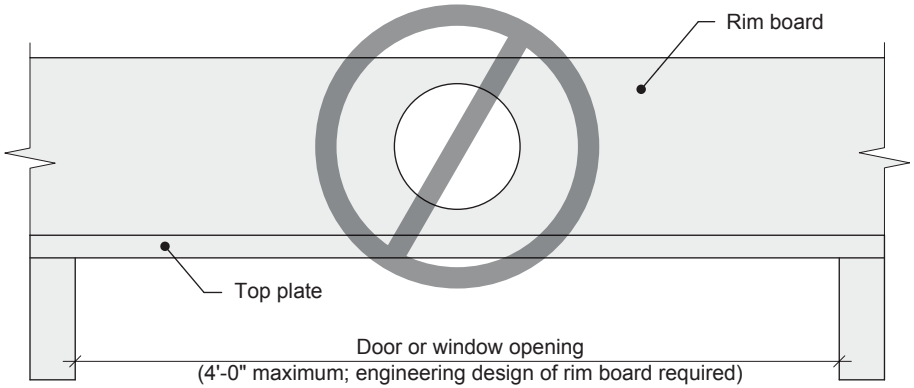
6. All holes shall be cut in accordance with the limitations listed above. See the information for cutting holes under details 6a and 6b.

Rim Board Hole Sizes and Minimum Lengths [a]

Rim board depth (in.)	Maximum allowable hole size (in.) [b]	Minimum length of rim board segment for the maximum allowable hole size (in.) [c]
9-1/2	6-1/4	50
11-7/8	7-3/4	62
14	9-1/4	74
16	10-1/2	84

(a) These hole provisions do not apply to rim board installed over openings, such as doors or windows.
(b) The diameter of a round hole or the longer dimension of a rectangular hole.
(c) The length of rim board segment per wall line. For multiple holes, the minimum length of rim board segment shall be eight times the sum of all hole sizes.

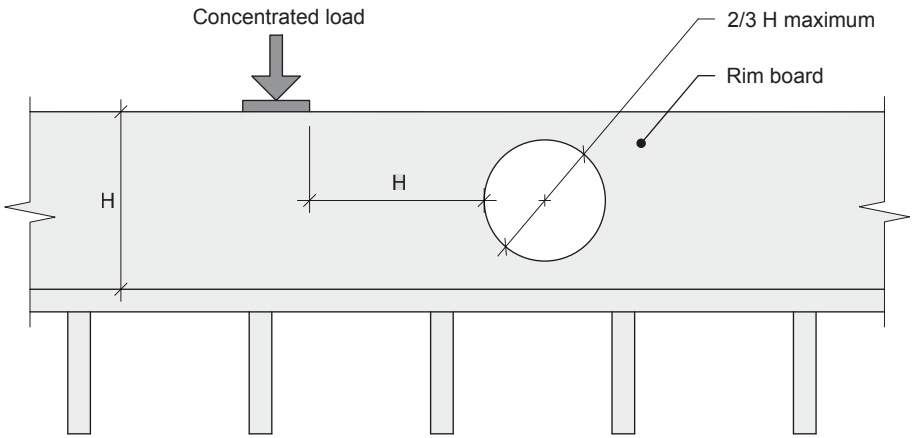
8f



Note:

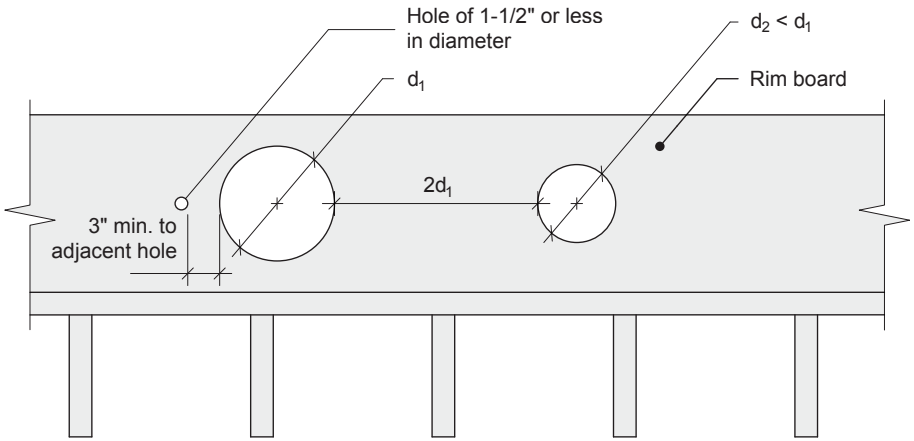
1. Do not cut holes in rim board over opening except for holes of 1-1/2" or less in size (see application note 1).

8g



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

8h



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

NORDIC STRUCTURES

nordic.ca

NS-DC3

DETAILS NORDIC JOIST

TITLE
Multiple Holes in Rim Board

DRAWING
8h

CATEGORY
Details for Rim Boards

SCALE
-

DATE
2024-08-01

PAGE
3.23

NORDIC

DETAILS
NORDIC JOIST

NS-DC3

ENGLISH

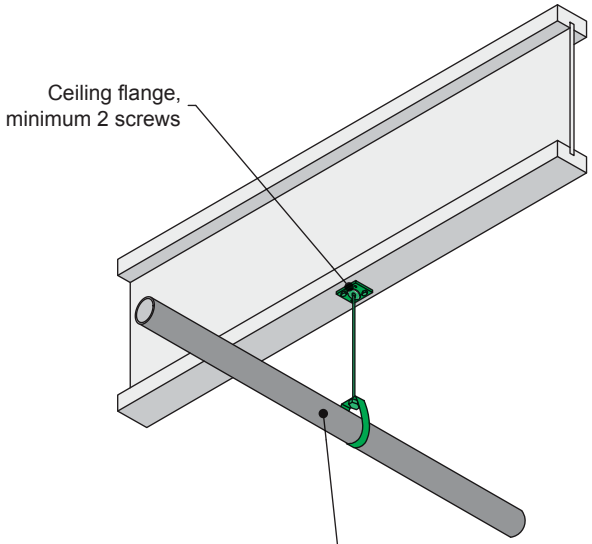
VERSION
2024-08-01

VARIOUS INSTALLATIONS FOR I-JOISTS

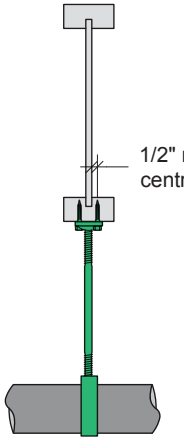
4

NORDIC
STRUCTURES

9a

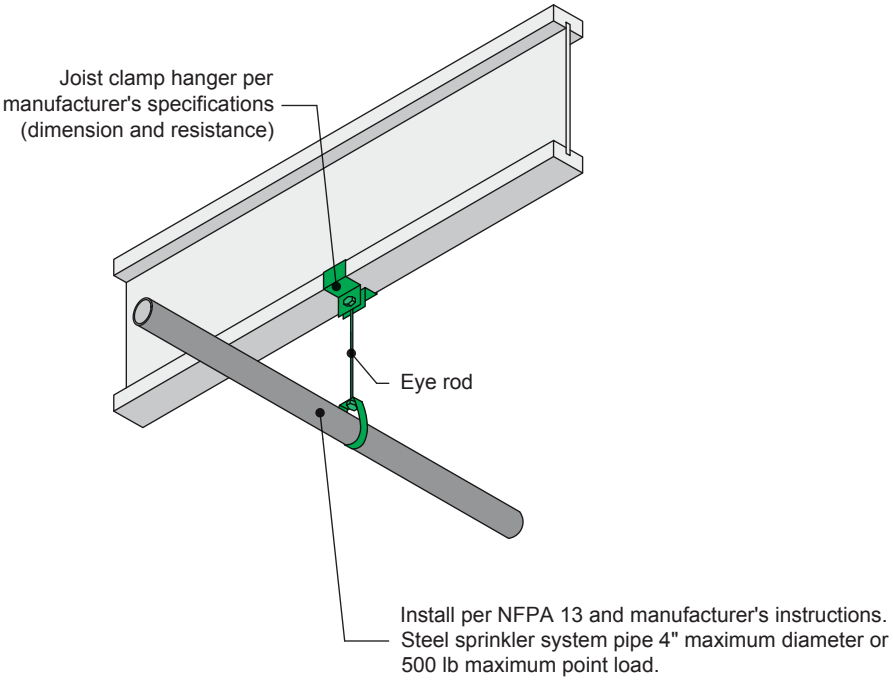


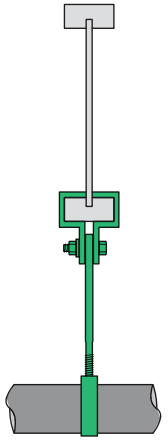
Install per NFPA 13 and manufacturer's instructions.
Steel sprinkler system pipe 4" maximum diameter or
500 lb maximum point load.



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

9b

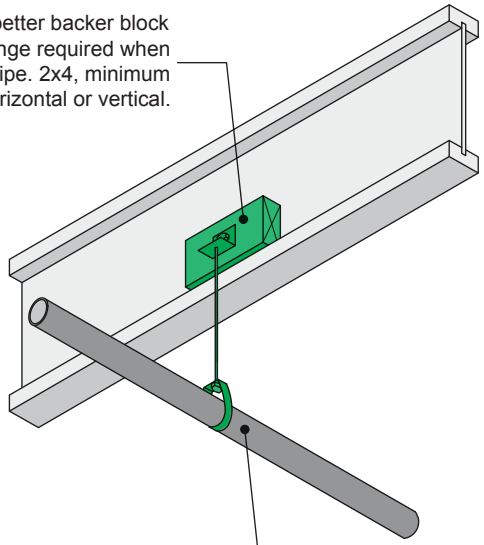




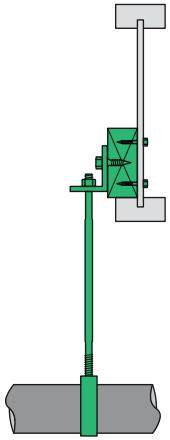
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

9c

S-P-F No. 2 or better backer block bearing on flange required when supporting steel pipe. 2x4, minimum 6" long, horizontal or vertical.



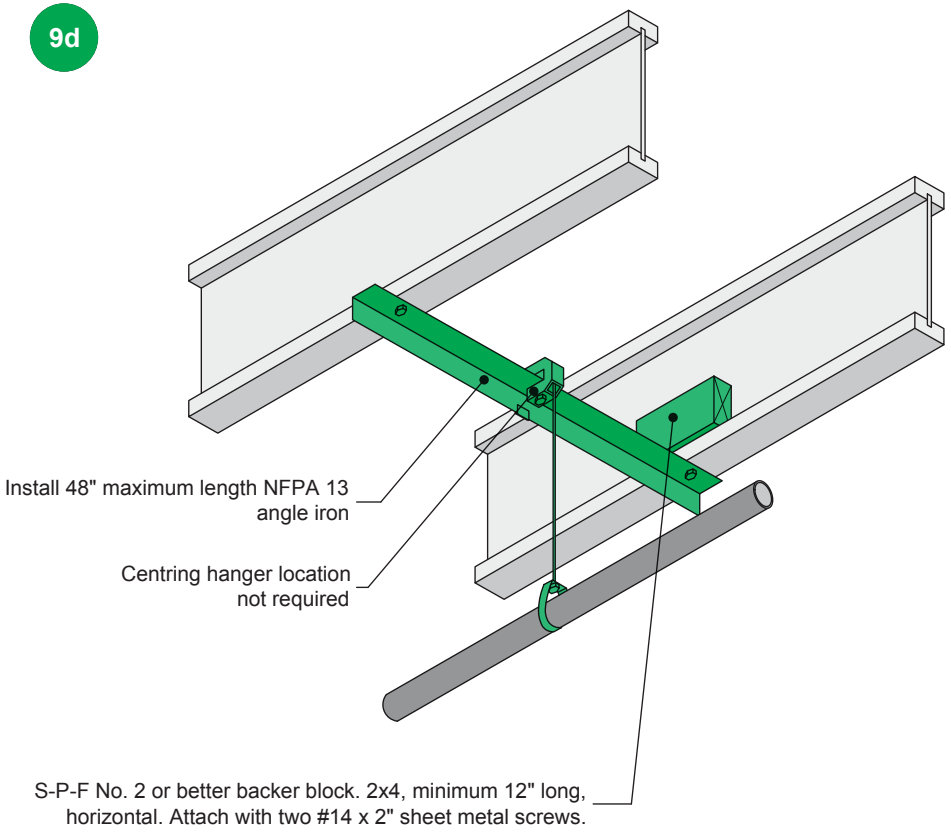
Install per NFPA 13 and manufacturer's instructions. Steel sprinkler system pipe 4" maximum diameter or 500 lb maximum point load.



Two sheet metal screws #10 x 1-1/2"
Option: Two clinched 2-1/2" nails

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

9d

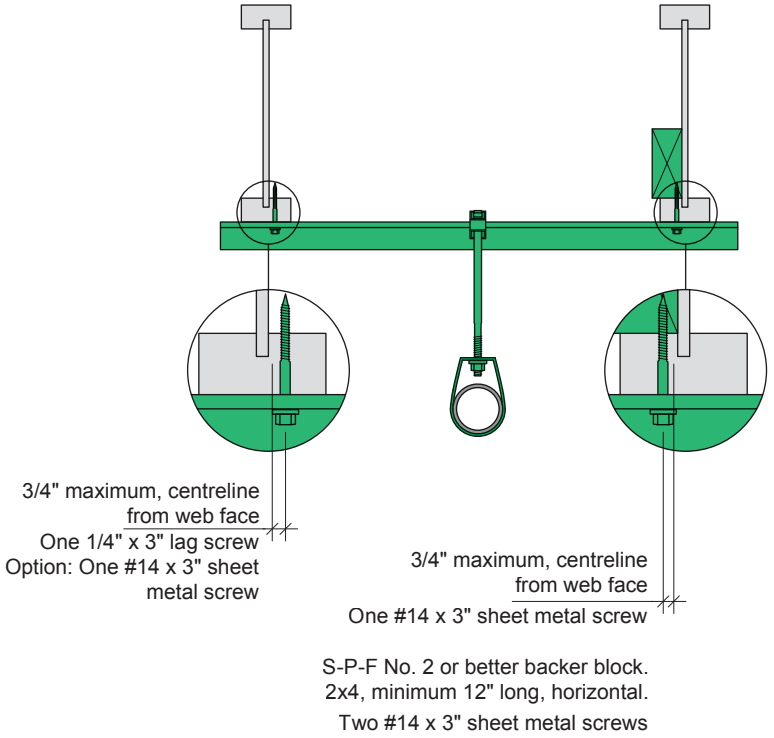


Option 1

Install per NFPA 13. CPVC sprinkler system pipe 2-1/2" maximum diameter = 290 lb maximum point load (145 lb per joist)

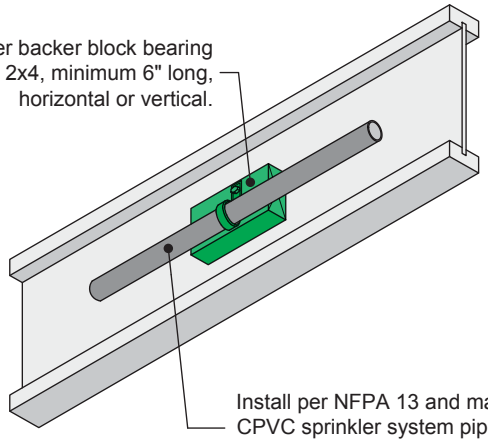
Option 2

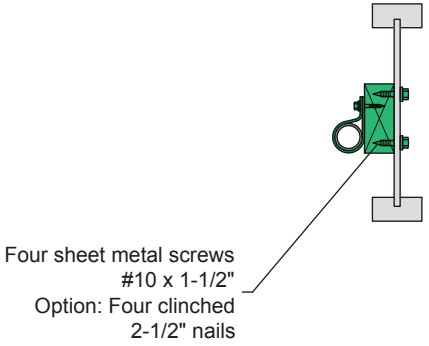
Install per NFPA 13. Steel sprinkler system pipe 4" maximum diameter = 500 lb maximum point load (250 lb per joist)



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

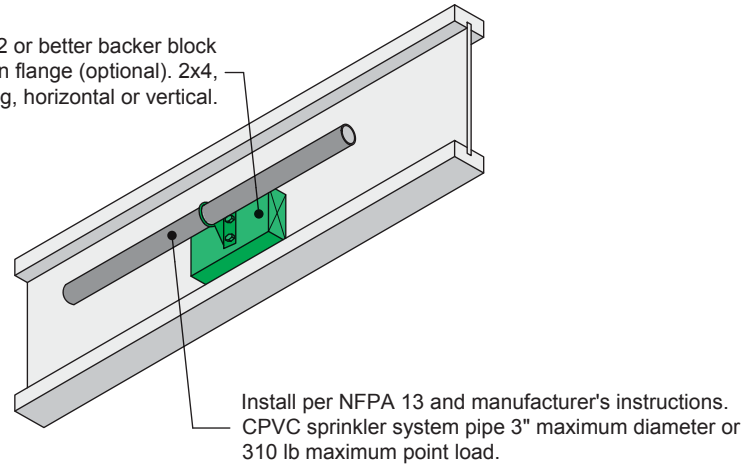
9e

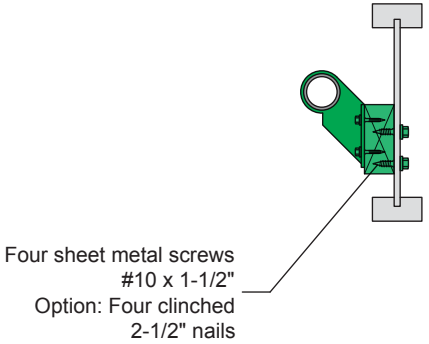




All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

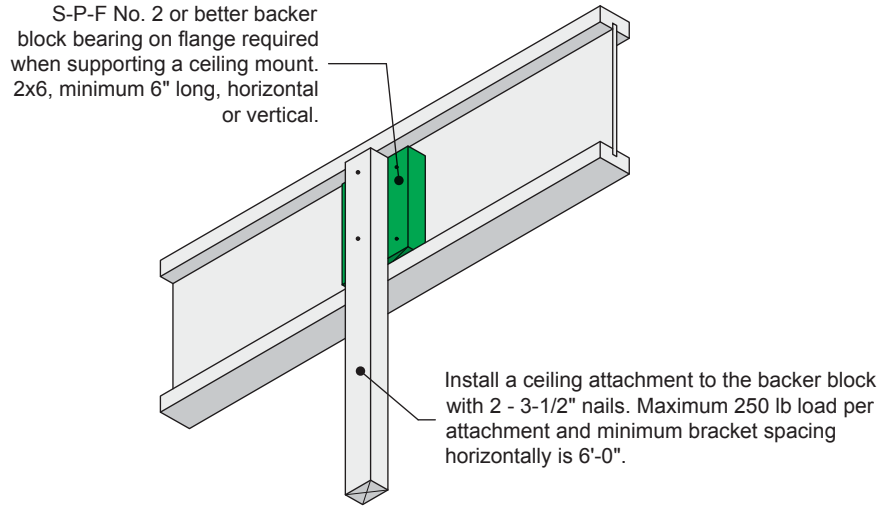
9f

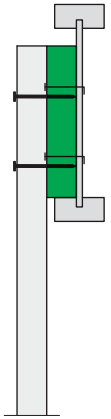




All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

9g-1



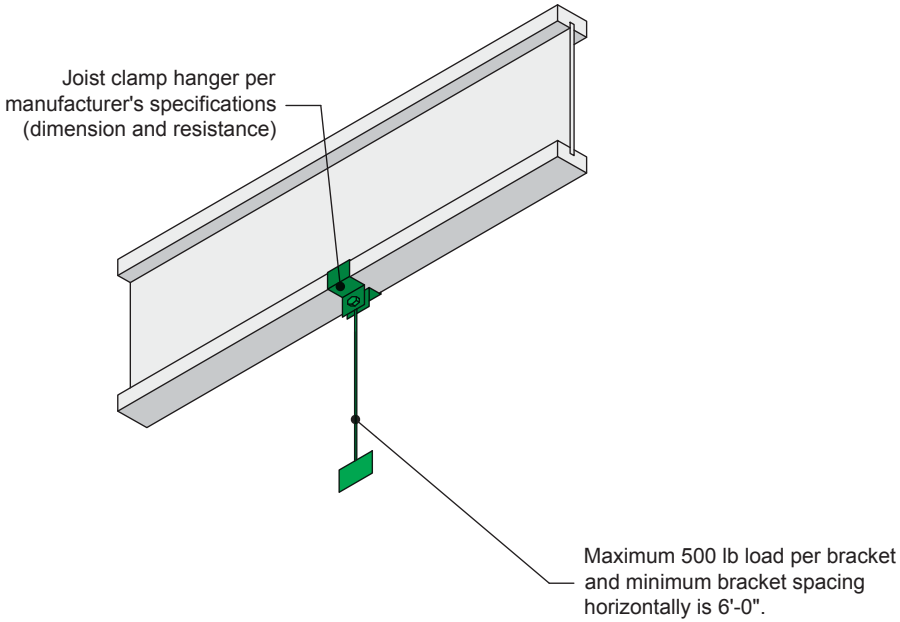


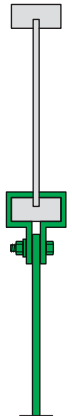
Note:

1. Structure of dropped ceiling construction by others.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

9g-2





Note:

1. Structure of dropped ceiling construction by others.

NORDIC

DETAILS
NORDIC JOIST

NS-DC3

ENGLISH

VERSION
2024-08-01

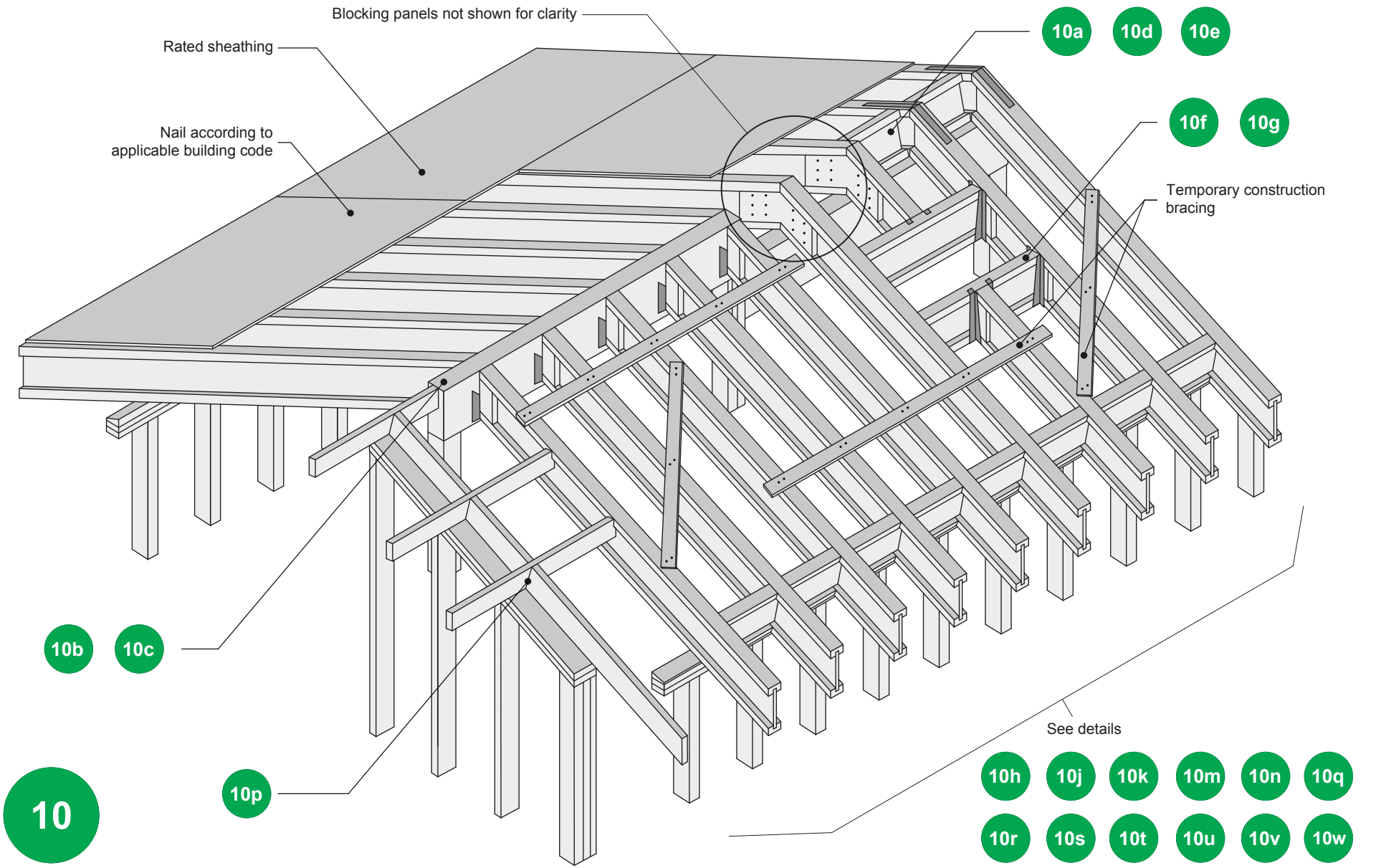
TYPICAL ROOF FRAMING AND CONSTRUCTION DETAILS 5

NORDIC
STRUCTURES

INSTALLATION NOTES

Roof Systems

1. Installation of Nordic I-joists shall be as shown in details 10.
2. Except for cutting to length, or for providing birdsmouth bearings, I-joist flanges should never be cut, drilled, or notched.
3. I-joists are permitted to be birdsmouth cut at the lower end of the joist only. The birdsmouth cut must have full bearing and not overhang the inside face of the plate. Bearing stiffeners are required at the birdsmouth cut on both sides of the web.
4. When beveled bearing plates are used at I-joists supports, I-joist attachment to the bevel plate must be designed to transfer lateral thrust.
5. End bearing length must be at least 1-3/4 inch. For continuous framing and roof framing with cantilevers, the intermediate support and end bearing adjacent to the cantilever must be at least 3-1/2 inches.
6. Ends of roof joists must be restrained at the bearing to prevent rollover. Rim board or I-joist blocking panels are preferred. Cantilever-end blocking must be placed at the support adjacent to the cantilever, and ends of all cantilever extensions must be laterally braced by a fascia board or other similar methods.
7. Continuous lateral support of the I-joist's compression flange is required to prevent rotation and buckling. In simple span roof applications, lateral support of the top flange is normally supplied by the roof sheathing. Bracing of the I-joist's bottom flange is also required at interior supports of multiple-span joists and at the end support next to an overhang. Lateral support of the entire bottom flange may be required in cases of load reversal such as those caused by high wind.
8. Details 10 show only I-joist specific fastener requirements. For other fastener requirements, such as wind uplift requirements or other member attachment details, see the applicable building code.
9. All roof details are valid up to a 12:12 slope unless otherwise noted.
10. Provide adequate ventilation at each joist bay as per detail 10v. Verify roof ventilation and insulation requirements with applicable building code.
11. Refer to typical floor framing installation notes for additional information.



10

NORDIC STRUCTURES

nordic.ca

NS-DC3

DETAILS NORDIC JOIST

TITLE
Typical Roof Framing

DRAWING
10

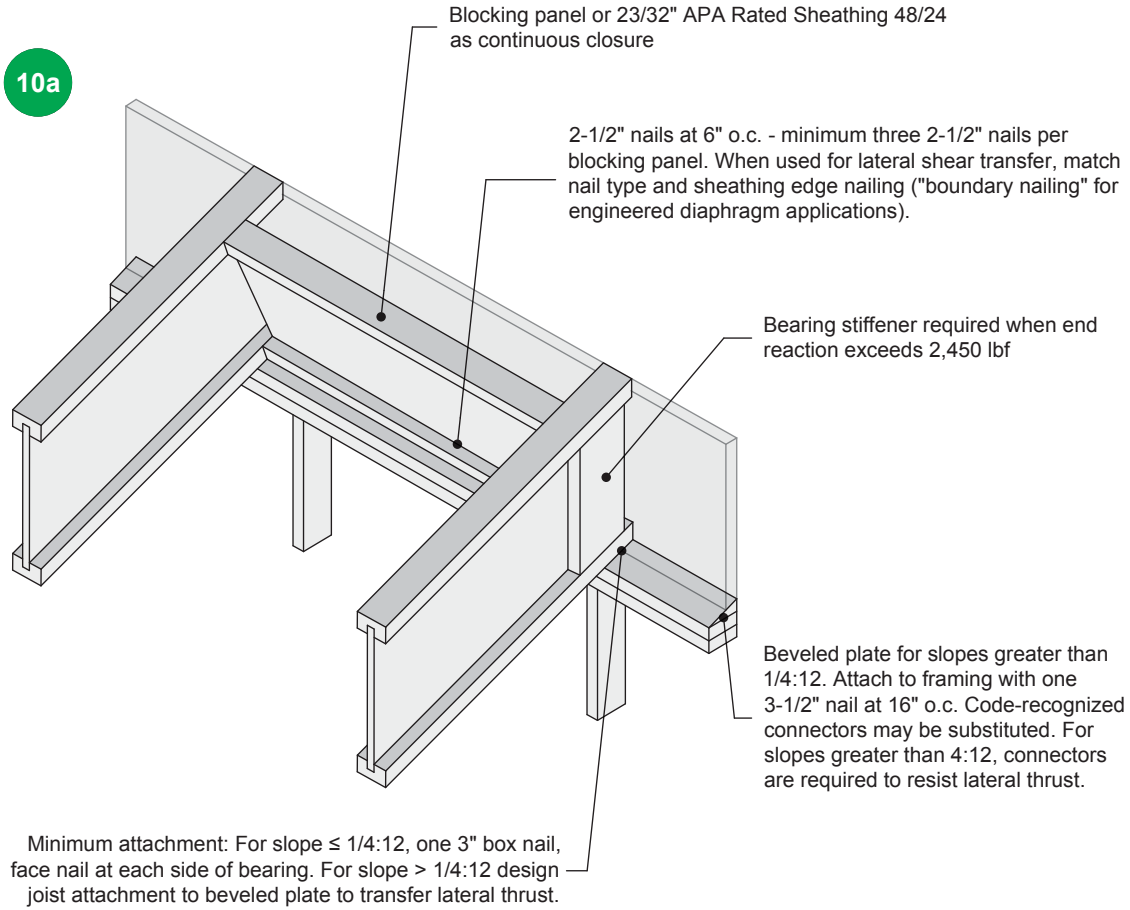
CATEGORY
Typical Roof Framing and Construction Details

SCALE
-

DATE
2024-08-01

PAGE
5.1

10a

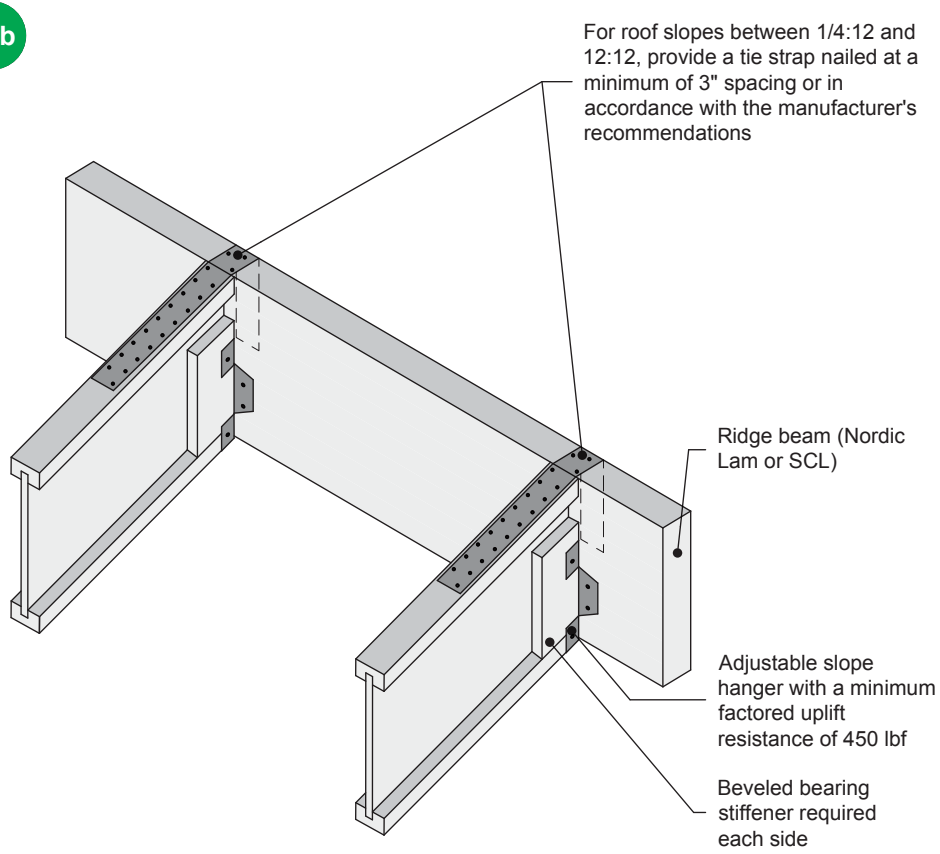


Note:

1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10b

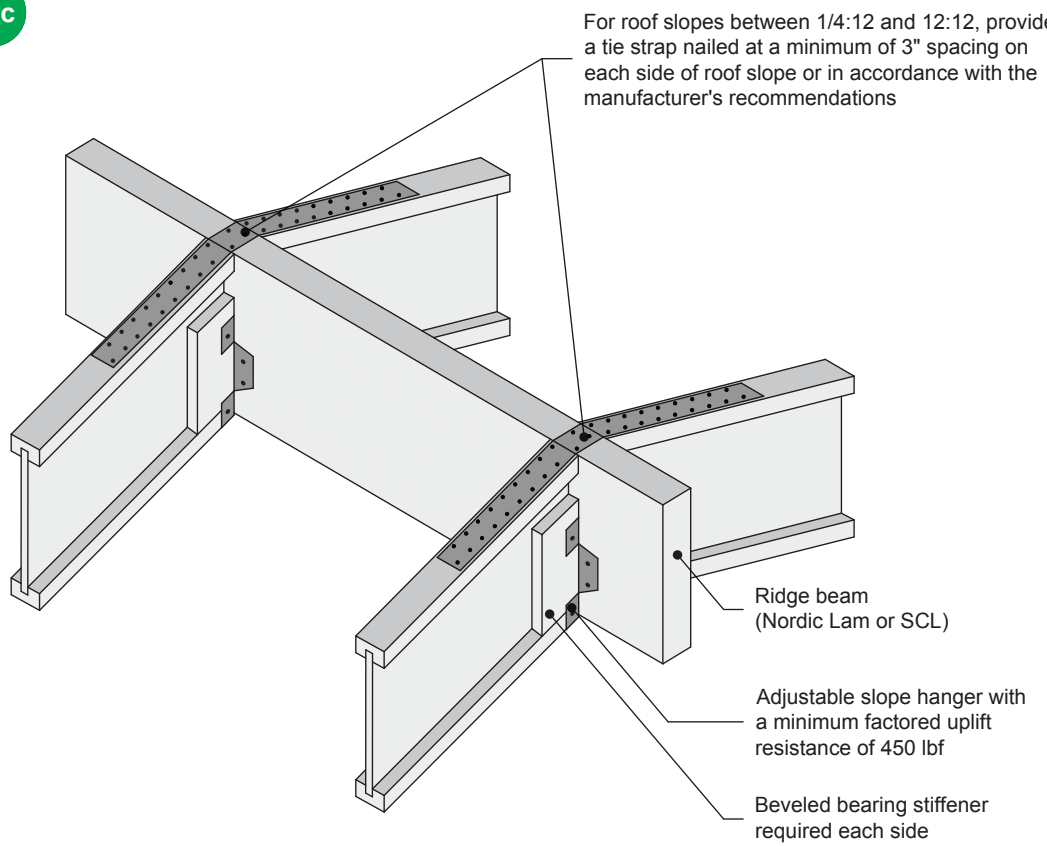


Note:

1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10c

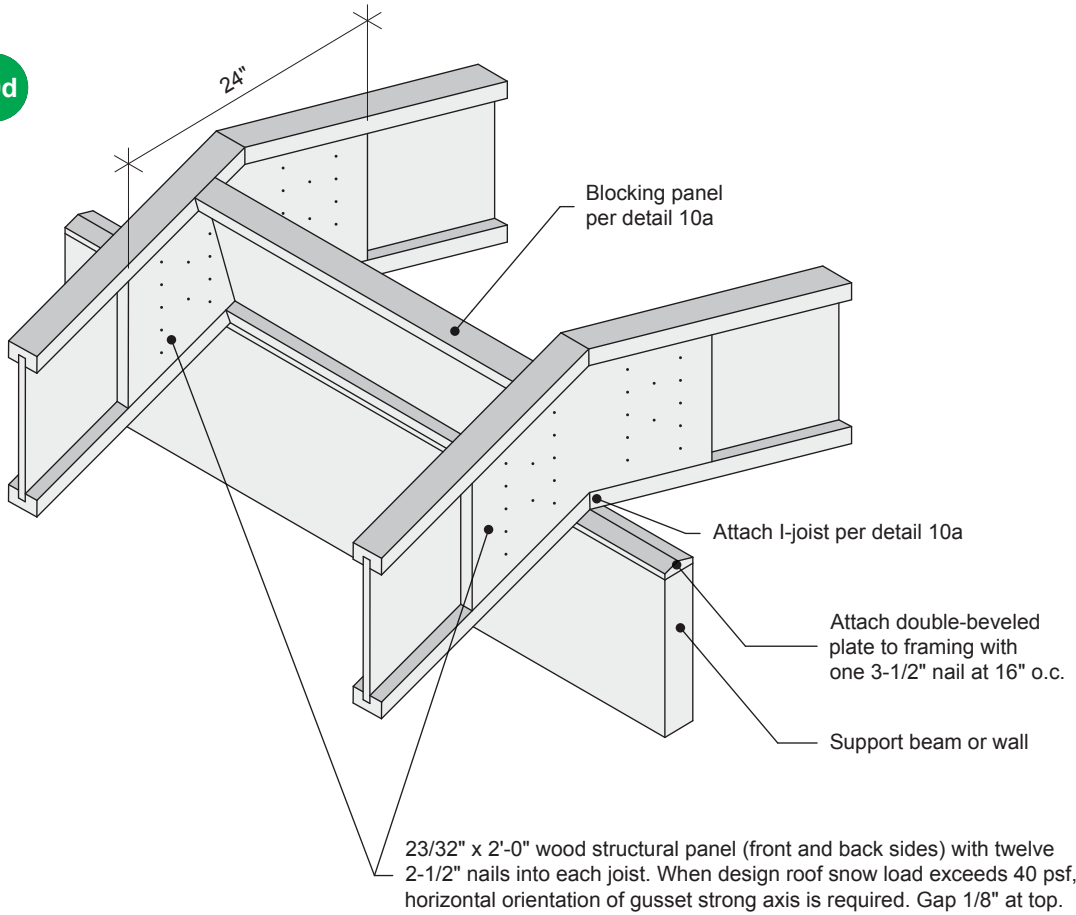


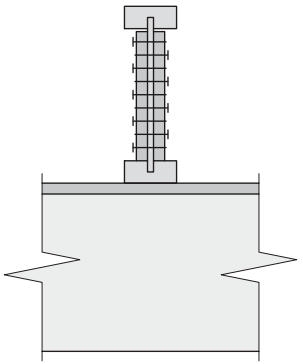
Note:

1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10d



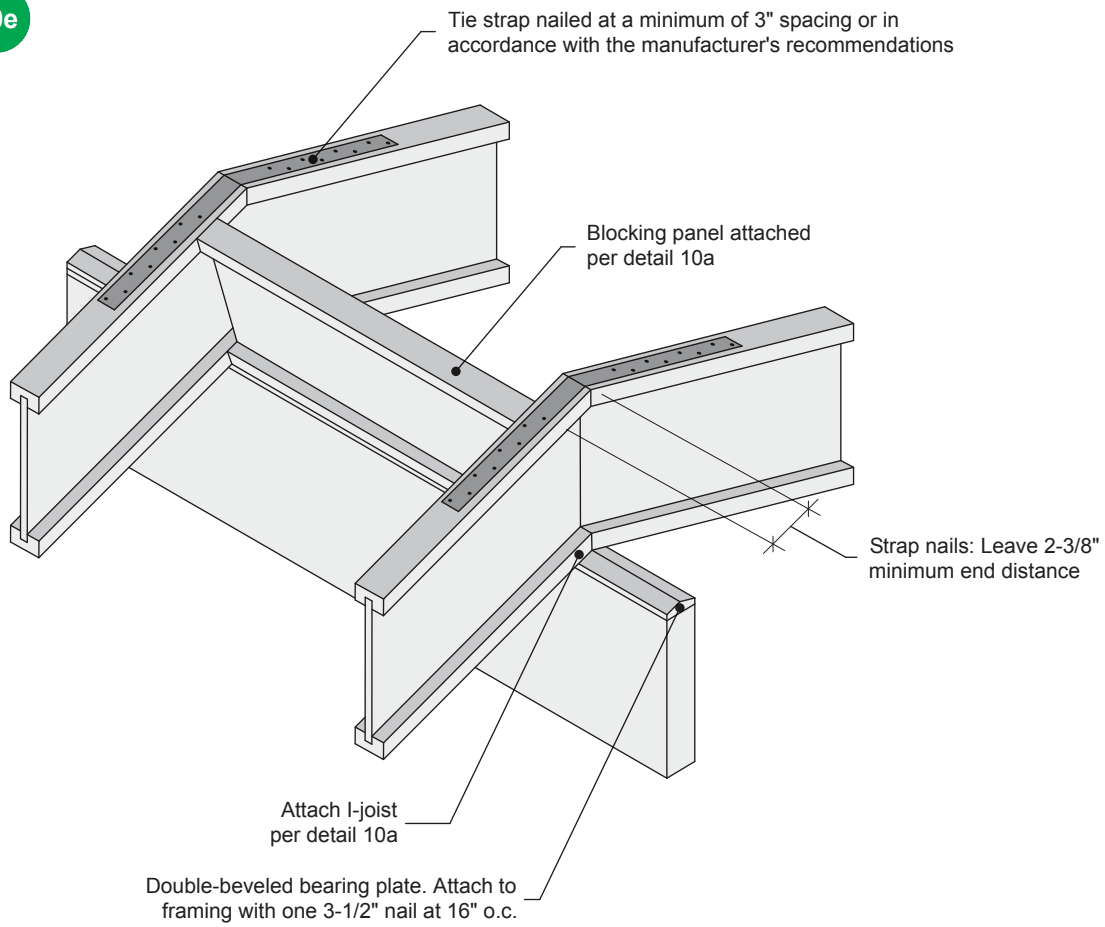


Note:

1. Additional connection may be required for wind uplift.

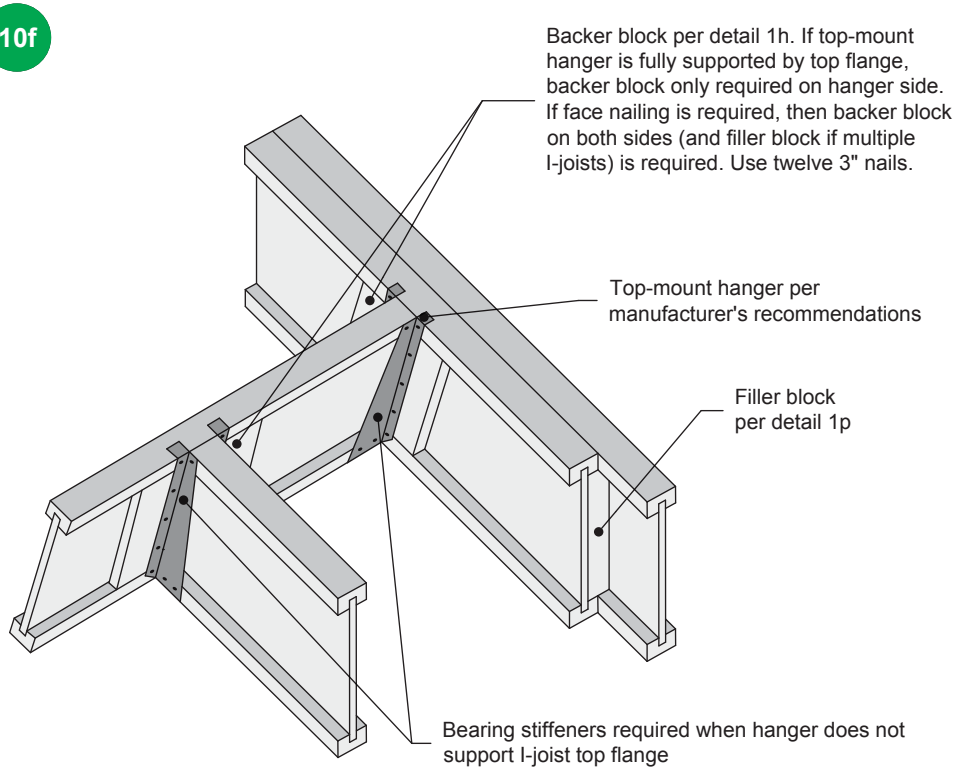
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10e



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10f

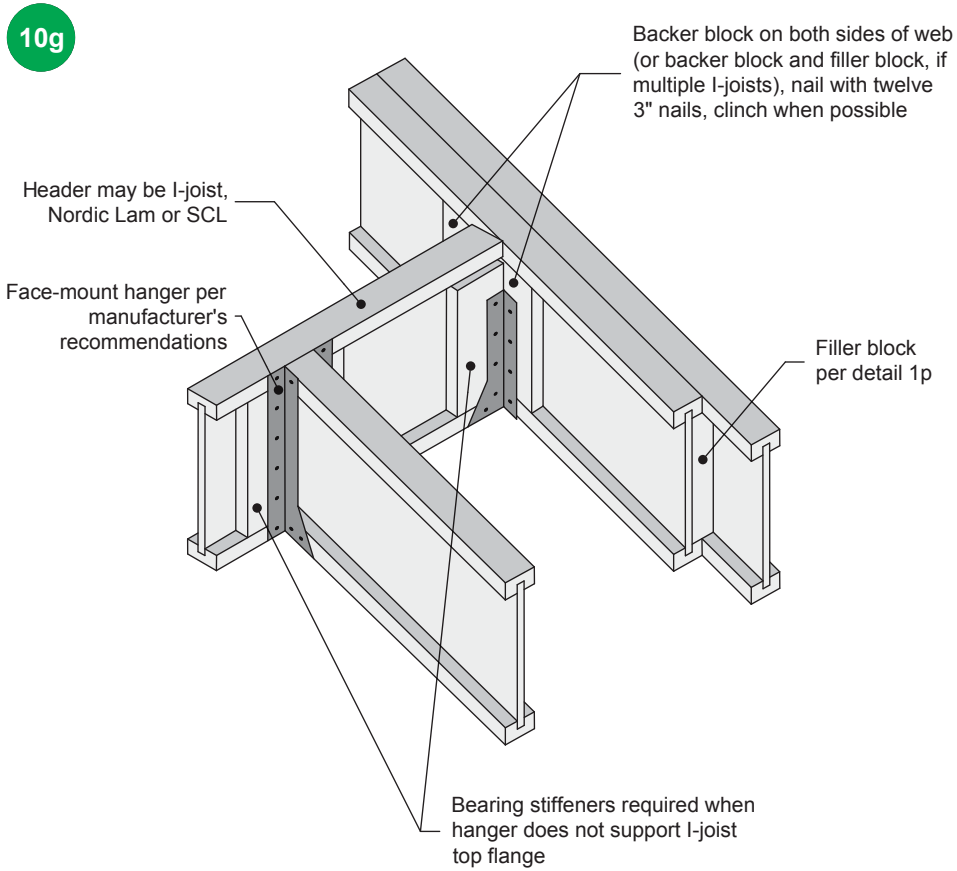


Note:

1. Application limited to 4:12 roof slope or less.

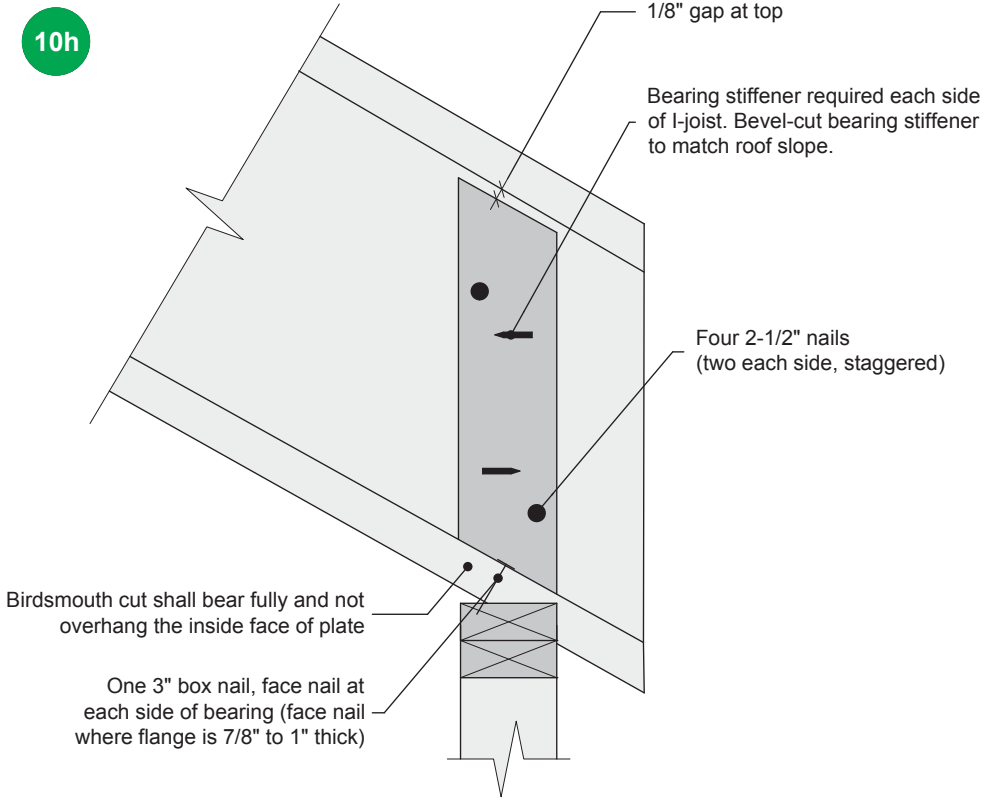
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

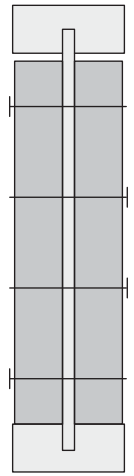
10g



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10h

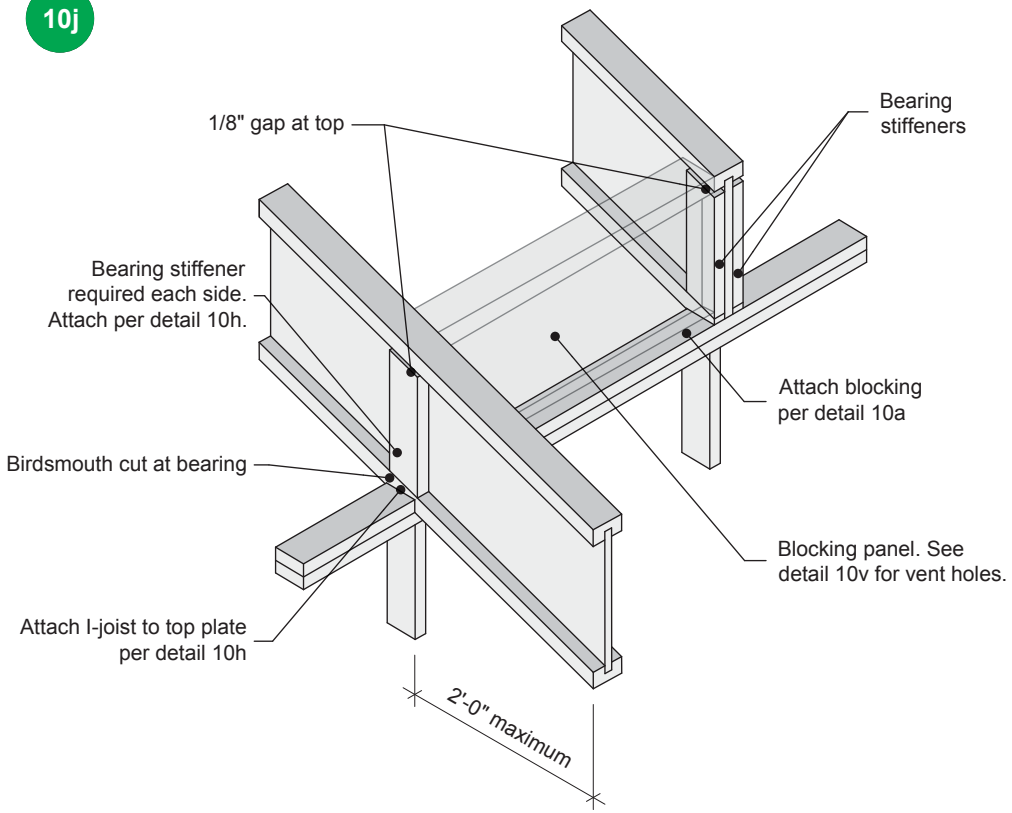




Notes:
1. Additional connection may be required for wind uplift.
2. Permitted on low end of I-joist only.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10j

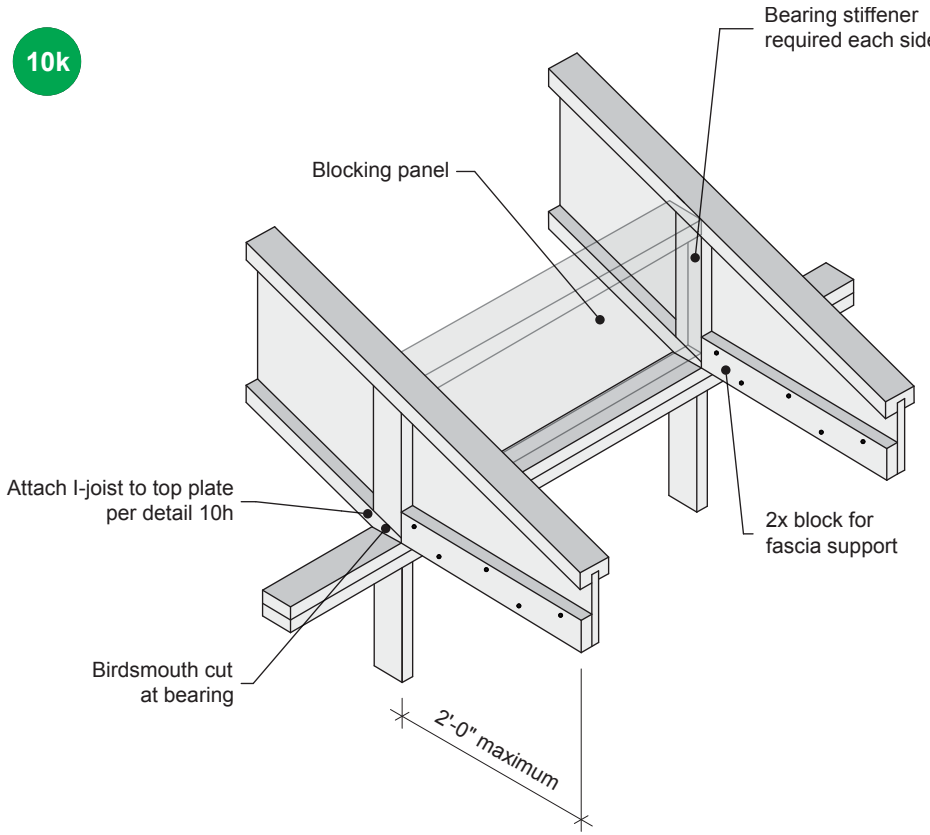


Notes:

1. Additional connector is required for wind uplift.
2. Outside corner of blocking panel may be trimmed if it interferes with roof sheathing. In such cases, position blocking panel on top plate to minimize trimming and still allow required nailing into top plate.
3. Permitted on low end of I-joist only.

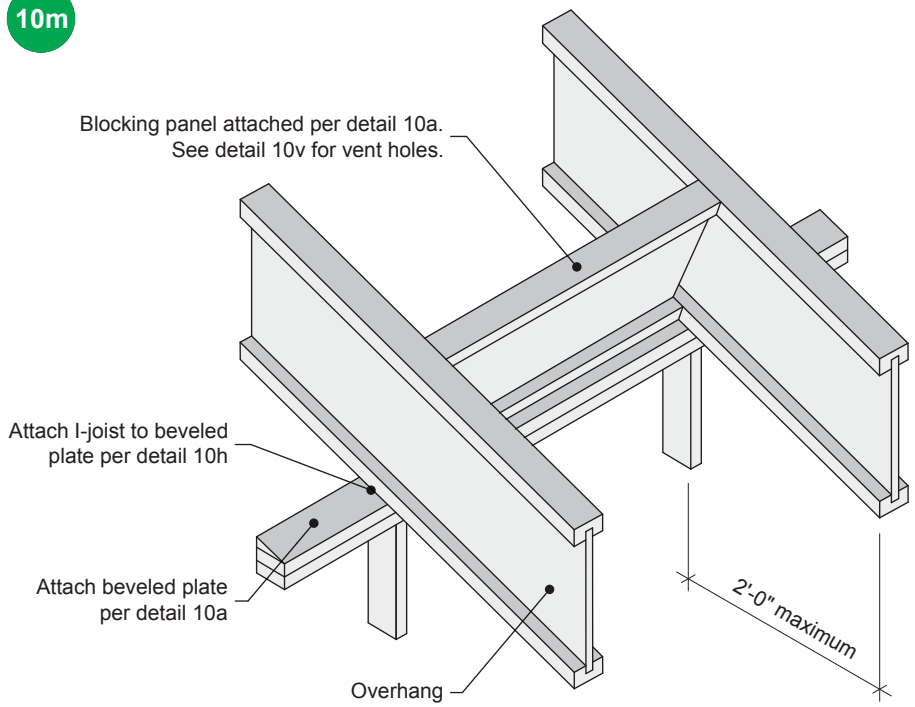
All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10k



All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

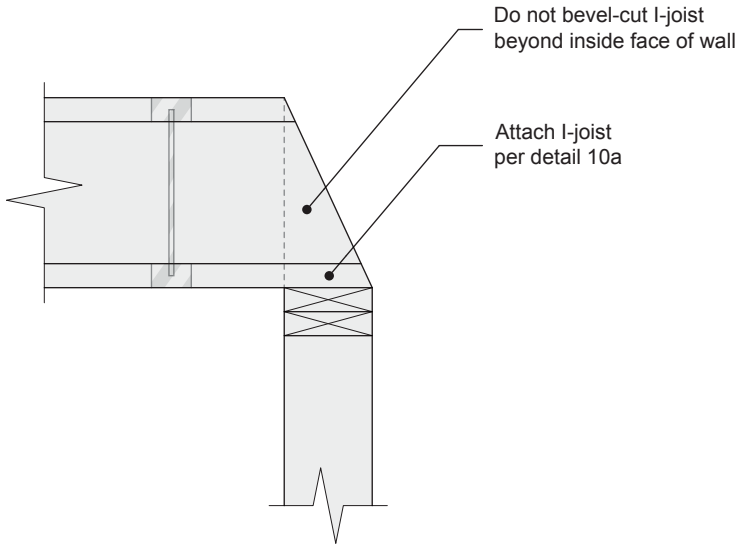
10m

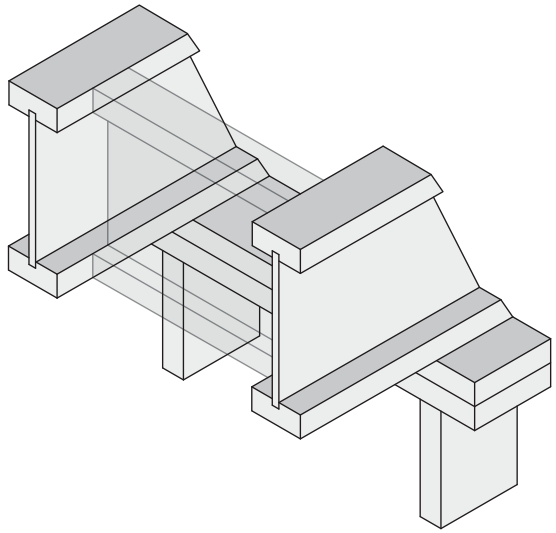


Note:
1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

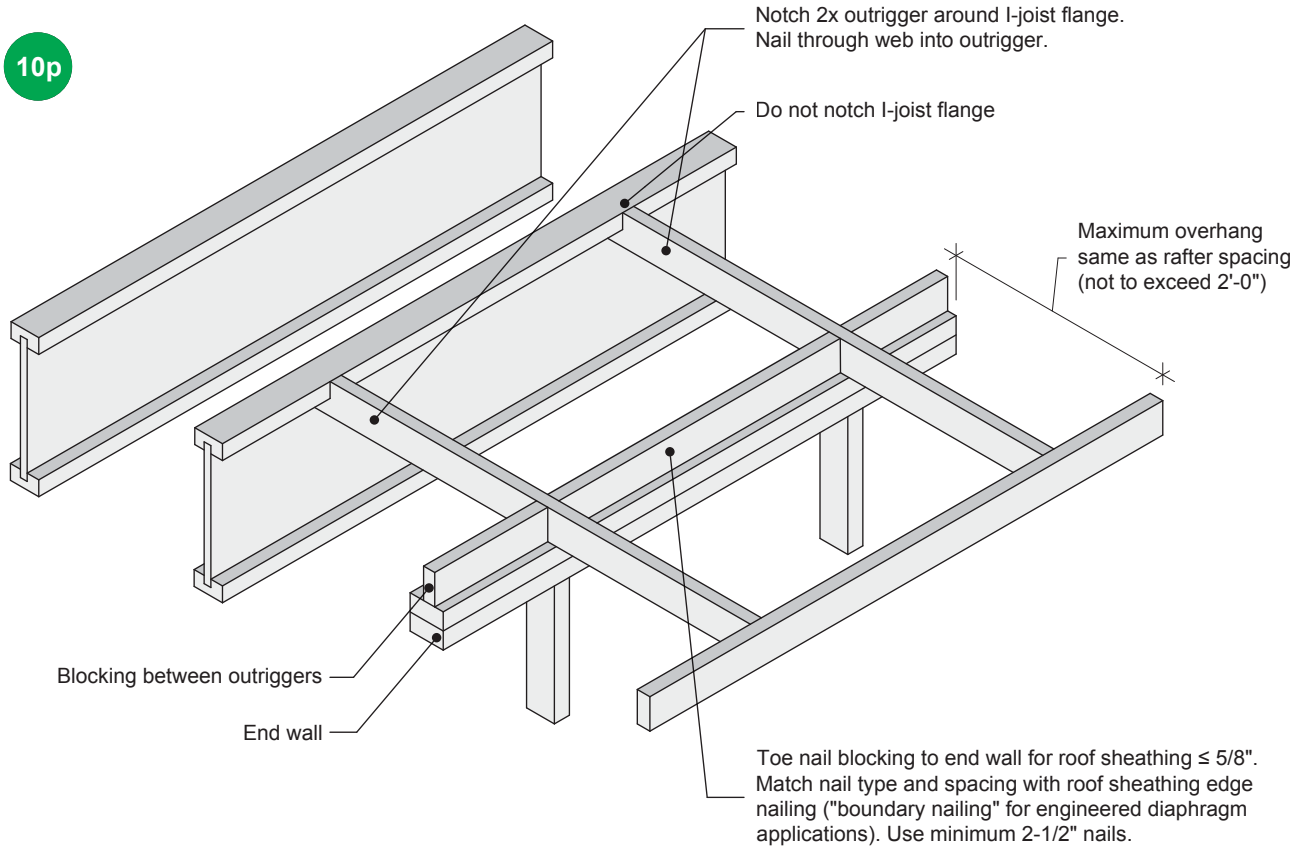
10n





Notes:
1. Additional connection may be required for wind uplift.
2. Blocking panel required at bearing for lateral support.

10p

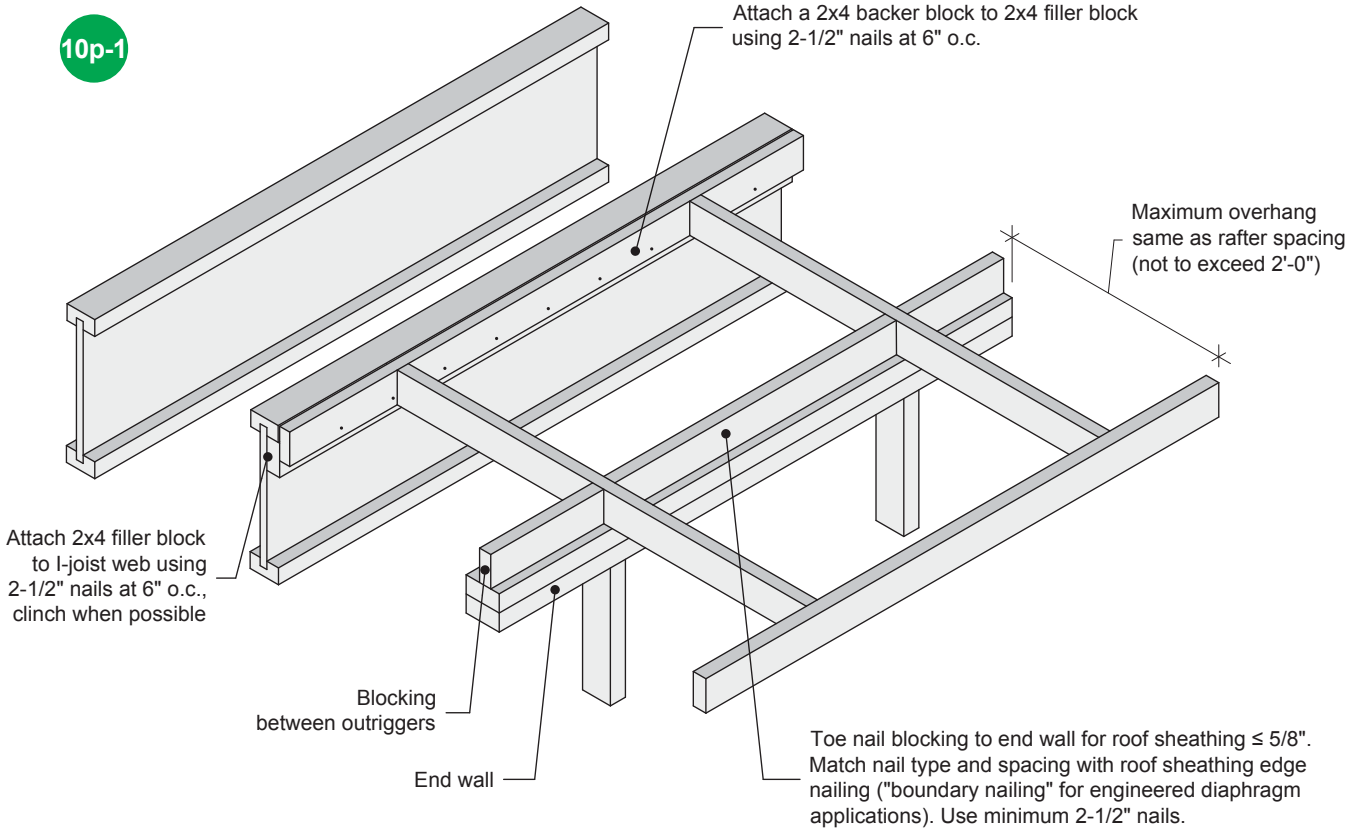


Note:

1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

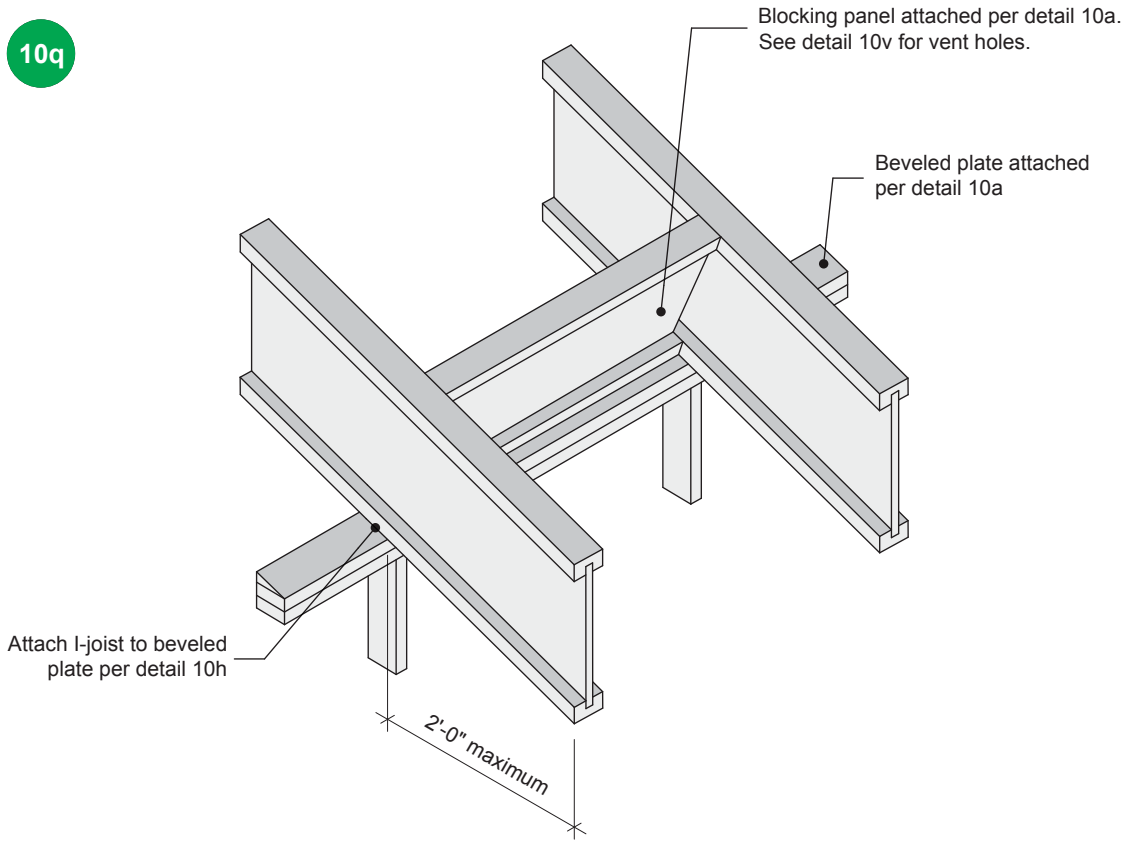
10p-1



Notes:
1. Additional connection may be required for wind uplift.
2. For outrigger nailing, refer to the applicable building code.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

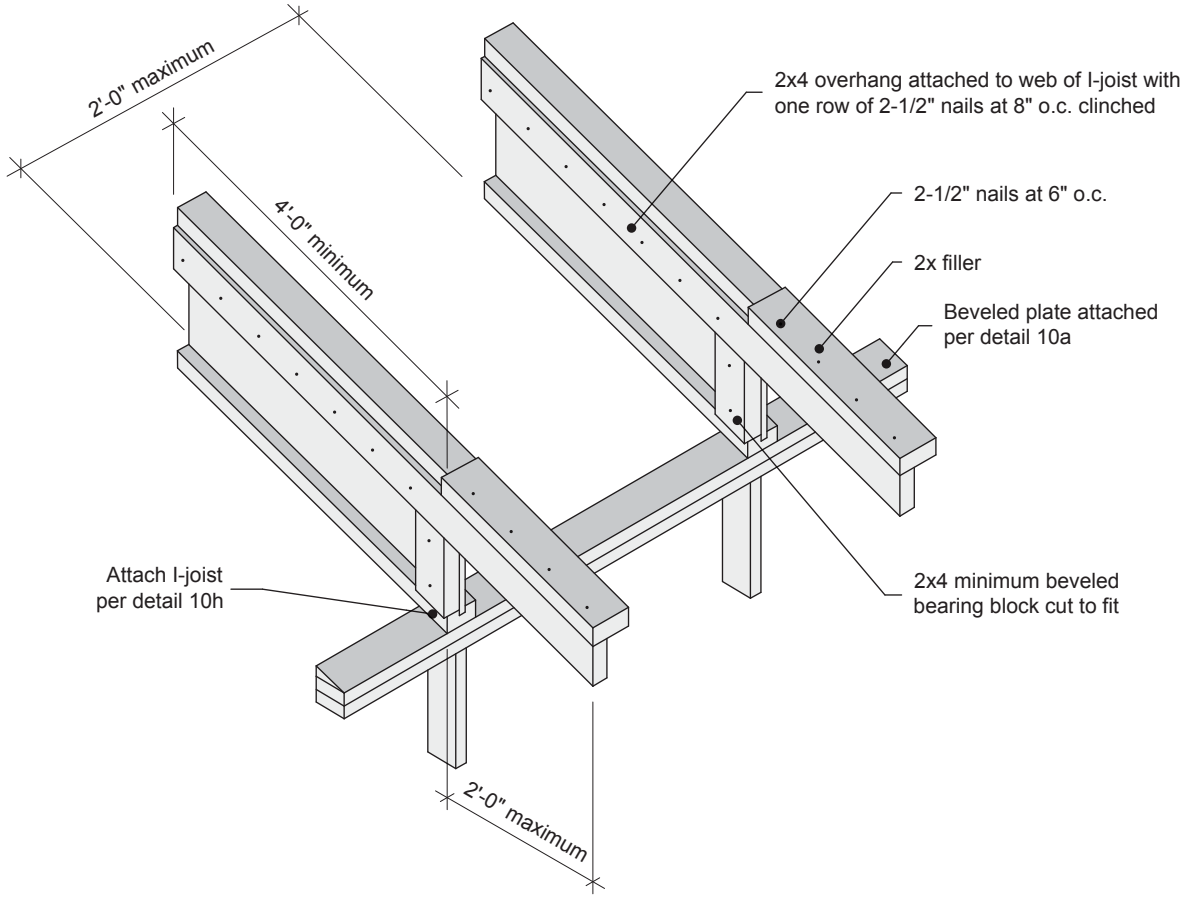
10q



Note:
1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10r

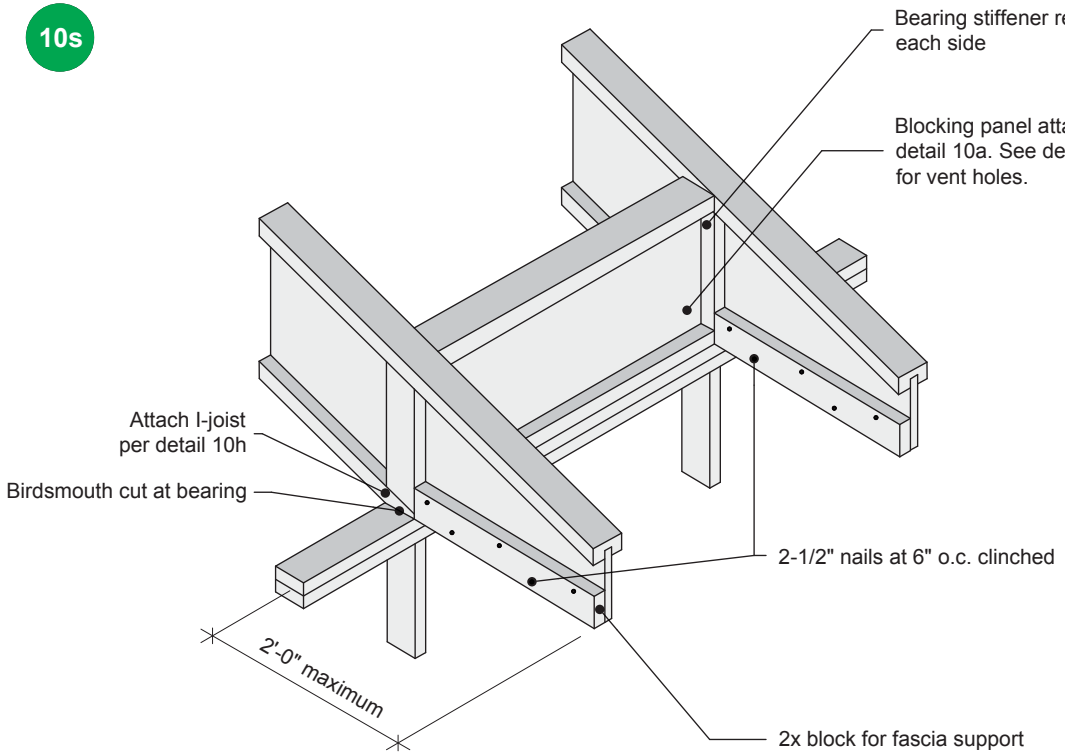


Notes:

1. Additional connection may be required for wind uplift.
2. Lumber overhang shall be 2x4 S-P-F No. 2 or better.
3. Blocking panels not shown for clarity.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

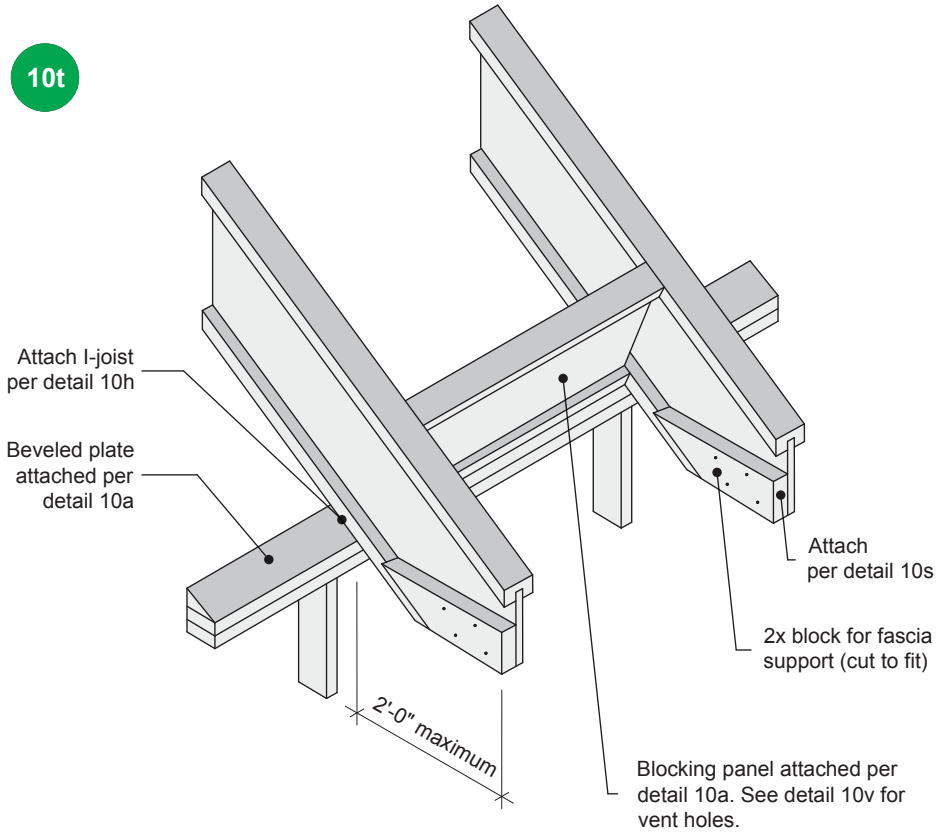
10s



Note:

1. Additional connection may be required for wind uplift.

10t

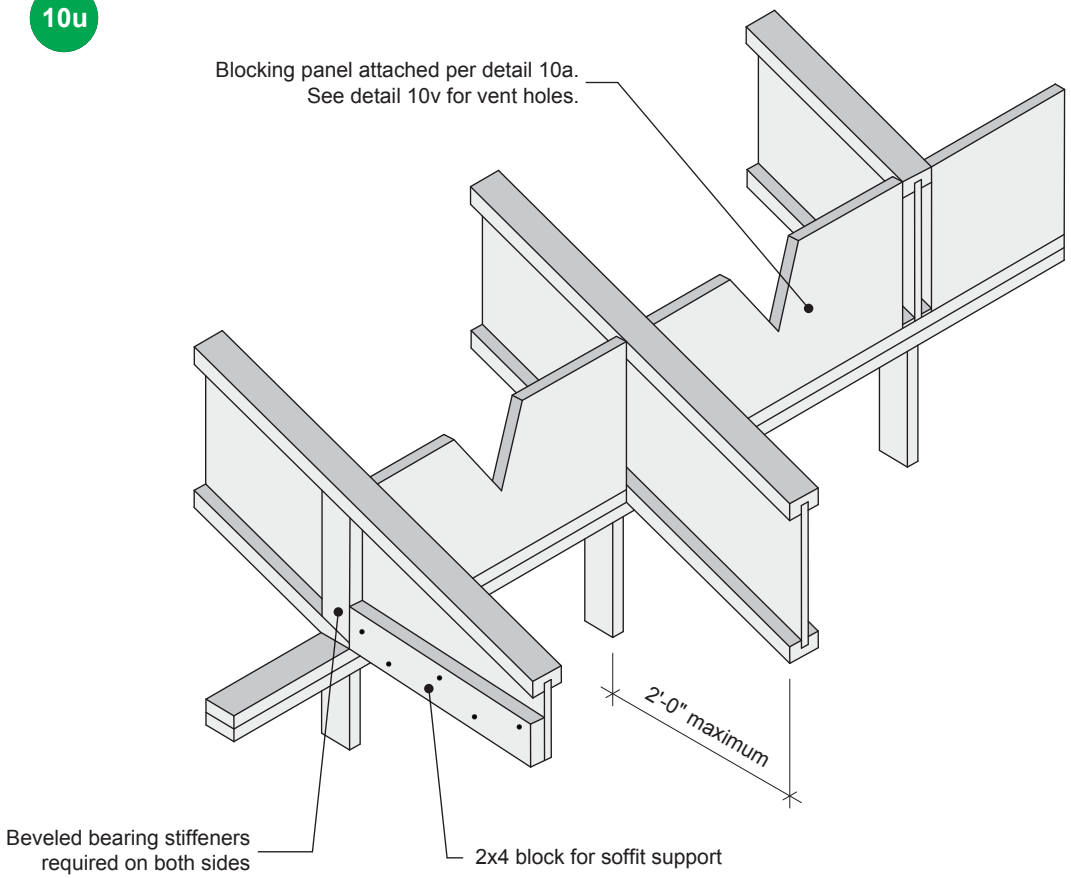


Note:

1. Additional connection may be required for wind uplift.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.

10u

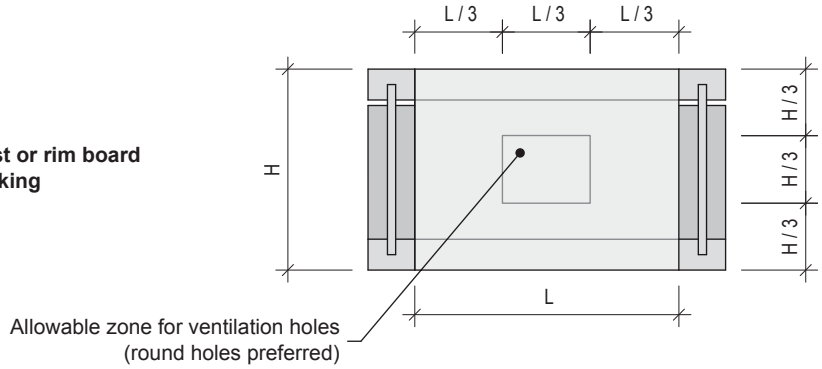


Notes:

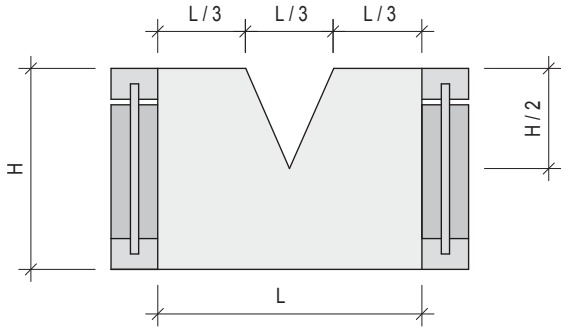
1. Allowed at low end of I-joist only.
2. Corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl or similar material shall cover the ventilation holes per code.

10v

I-joist or rim board blocking



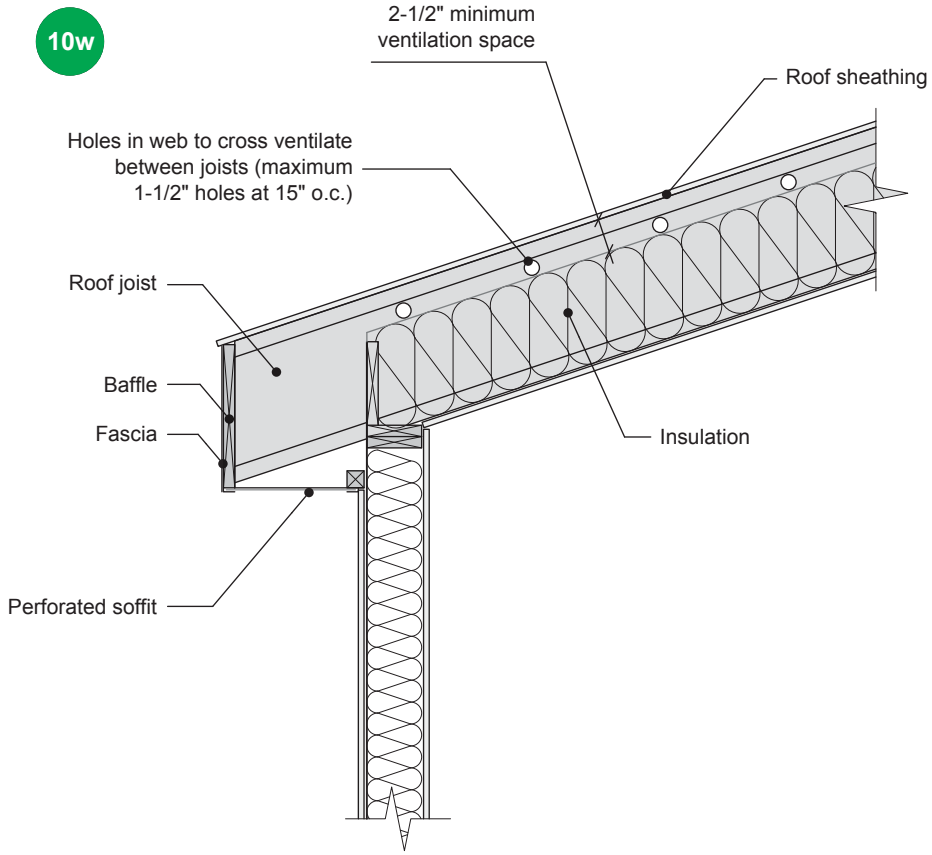
Rim board blocking



Notes:

1. Corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl or similar material shall cover the ventilation holes per code.
2. The maximum allowable round hole diameter for a lateral restraint-only blocking panel shall be 2/3 of the lesser dimension of blocking panel depth or length.
3. Whenever possible, field-cut holes should be centred in the blocking panel both vertically and horizontally.

10w



Note:

1. A minimum of 1/8 inch should always be maintained between the top of the hole and the I-joist flange.

All nails shown in the details are assumed to be common nails unless otherwise noted. Refer to page viii for diameters. Individual components not shown to scale for clarity.