# Alaska Housing Finance Corporation

## Alaska-Specific Amendments to IRC 2012

August 1, 2017

This document is a list of Alaska-specific amendments to the International Residential Code 2012, First Printing, May, 2011 (IRC 2012) adopted by the Alaska Housing Finance Corporation (AHFC) on Wednesday, February 24, 2016. It is meant to be read in conjunction with the IRC 2012 which may be purchased at local bookstores or online. These amendments comprise the Minimum Construction Standards for AHFC-funded residential mortgage loans, energy rebates, and energy retrofits of public buildings. These amendments supplant the Minimum Construction Standard amendments to IRC 2009 for residential projects as adopted on March 9, 2011.These amendments are numbered and organized by the chapter and section numbers found in the IRC 2012 and follow immediately:

R101.1

This code shall be known as the 2012 International Residential Code (IRC) with Alaska-Specific Amendments and shall be cited as such. It is referred to herein as 'the code'.

R101.2 Scope

The 2012 IRC with Alaska-Specific Amendments shall be the referenced code for Residential structures containing four or fewer dwellings and townhouses not more than three stories above grade plane in height and their accessory structures for the Alaska Housing Finance Corporation.

R102.7 Existing Structures Delete

R102.7.1 Additions, Alterations and Repair Delete

Part 2 Administration and Enforcement Delete

R302.2 Townhouses

Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

Exception: If the building is not constructed utilizing a fire-suppression system, a common 2 hour fire-resistance-rated wall shall be used. If it is constructed with an approved fire-supersession system. A common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

R303.3 Bathrooms

Bathrooms, water closet compartments and other similar rooms shall be provided with exhaust ventilation in accordance with the requirements of ANSI/ASHRAE 62.2-2010 as amended in R403.5 of the 2012 Building Energy Efficiency Standard and per manufacturer requirements.

Exception: Delete

R303.4 Mechanical Ventilation

Whole-house and spot ventilation shall be installed per the requirements of ANSI/ASHRAE 62.2-2010 as amended in R403.5 of the 2012 Building Energy Efficiency Standard (chapter 11 of the code with Alaska-specific amendments).

R303.5.1 Intake Openings

Mechanical and gravity outdoor air intake openings shall be located a minimum of 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code. Where a source of contaminant is located within 10 feet (3048 mm) of an intake opening, such opening shall be located a minimum of 3 feet (94 mm) below the contaminant source and 3 feet horizontally from the contaminant source.

All mechanical ventilation shall be in accordance with ANSI/ASHRAE 62.2-2010 as amended in R403.5 of the 2012 Building Energy Efficiency Standard (chapter 11 of the code with Alaska-specific Amendments)

R309.5 Fire sprinklers (garages and carports)

Private garages shall be protected by fire sprinklers where required by the Department of Public Safety and/or where the garage wall has been designed based on Table R302.1(2) Footnote a.' Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to

provide a density of 0.05 gpm/ft2. Garage doors shall not be considered obstructions with respect to sprinkler placement.

R310.2.2 Window Well Drainage

Window wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an approved alternative method. Window wells shall be designed to minimize the potential of the well becoming filled with snow and/or standing water which impedes operation of the egress fenestration.

Exception: A drainage system for window wells is not required when the foundation is on well-drained soil or sand-gravel mixture soils according to the United Soil Classification System, Group I Soils, as detailed in Table R405.1.

R313 Automatic Fire Sprinkler Systems

R313.1 Townhouse automatic fire sprinkler systems.

If installed, automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with Section P2904.

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

R313.1.1 Design and installation. Delete

R313.2 One- and two-family dwellings automatic fire sprinkler systems.

If installed, automatic residential fire sprinkler systems for one- and two-family dwelling units shall be designed and installed in accordance with Section P2904 or NFPA 13D.

Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.

R313.2.1 Design and installation. Delete

R317.1 Location Required

Protection of wood and wood based products from decay shall be provided in the following locations by the use of ~~naturally durable wood or~~ wood that is preservative-treated in

accordance with AWPA U1 for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWEPA U1.

1. Wood joists or the bottom of a wood structural floor when closer than 18 inches (457 mm) or wood girders when closer than 12 inches (305 mm) to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation.

2. All wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches (203 mm) from the exposed ground.

3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.

4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than 1/2 inch (12.47 mm) on tops, sides, and ends.

5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surfaces exposed to the weather.

6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.

7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below grade except where an approved vapor retarder is applied between the wall and the furring strips or framing members.

R501.3 Fire protection of floors

Floor assemblies, not required elsewhere in this code to be fire resistance rated, shall be provided with a 1/2-inch gypsum wallboard membrane, 5/8-inch wood structural panel membrane, or equivalent on the underside of the floor framing member.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA13D, or equivalent sprinkler system.

2. Floor assemblies located directly over a crawl space containing a direct-vent, sealed combustion appliance with forced draft exhaust; combustion air intake must terminate to the building exterior. Application of this exception requires installation of a smoke alarm in the crawl

space in accordance with the requirements of Section R314 Smoke Alarms, with the exception of R314.3 Location, and a carbon monoxide alarm in accordance with the requirements of Section R315 Carbon Monoxide Alarms.

3. Portions of floor assemblies can be unprotected when complying with the following:

3.1 The aggregate area of the unprotected portions shall not exceed 80 square feet per story

3.2 Fire blocking in accordance with Section R302.11.1 shall be installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.

4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

R703.2 Water-resistive barrier

When installed or required by the manufacturer one layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D 226 for Type 1 felt of other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm). Where joints occur, felt shall be lapped not less than 6 inches (152 mm). The felt or other approved material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1.

R703.3.1 Panel Siding

Joints in wood, hardboard or wood structural panel siding shall be made as follows unless otherwise approved. Vertical joints in panel siding shall occur over framing members, unless wood or wood structural panel sheathing is used, and shall be ship lapped or covered with a batten. Horizontal joints in panel siding shall be lapped a minimum of 1 inch (25 mm) or shall be ship lapped or shall be flashed with Z-flashing and occur over solid blocking, wood or wood structural panel sheeting. Exterior type plywood siding with a grooved pattern shall not be installed horizontally and used as the weather resistant siding.

R806.1 Ventilation required

When located outside of the building thermal envelope enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6

mm) minimum and ¼ inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than ¼ inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 (1.6) minimum and ¼ inch (6.4 mm) maximum.

Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.

**Exception:** Delete

### R806.5.5.3 Air-impermeable insulation and air-permeable insulation.

The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table R-A806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

**Table R-A806.5**
**Insulation for Condensation Control**

| Air-Permeable Insulation R-value | Minimum Air-Impermeable Insulation R-value[a] |
|---|---|
| R-15 | R-30 |
| R-19 | R-38 |
| R-21 | R-42 |
| R-25 | R-50 |
| R-30 | R-60 |
| R-38 | R-76 |
| R-N | 2*(R-N)[b] |
| *Installed on the warm-in-winter side | *Installed on the cold-in-winter side |

a. Contributes to but does not supersede the requiremtns in Section N1102.

b. Air-Impermeable Insulation R-Value shall equal, at minimum, twice the R-value of the Air-Permeable insulation.

### R807.1 Attic Access

Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet (2.8m2) and have a vertical height of 30 inches (762 mm) or greater. The vertical height shall be measures from the top of the ceiling framing members to the underside of the roof framing members. The rough-framed opening shall not be less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22

inches wide by 30 inches high (559 mm wide by 762 mm high. when the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics. Attic access shall not be located in a room containing one or more fixtures in the Bathroom Group. Access may be located in closets with minimum depth of 23 inches and minimum width of 48 inches.

R905.2.835 Drip Edge

Exception: Allowing for best practices in covering all plywood edges on roofs with a slope equal or greater than four (4) units vertical in twelve (12) units horizontal (4:12) a full length fascia or a 1" by 2" continuous cedar block may be used as a drip edge (See appendix 1). Sheathing, underlayment and roofing materials shall be installed per the manufactures recommendations.

Chapter 11 Energy Efficiency

The 2012 Building Energy Efficiency Standard (BEES), being comprised of the 2012 IECC with Alaska-Specific Amendments, is the AHFC energy standard for all residential construction projects.

Chapter 12 Mechanical Administration Delete Chapter

M1301.2 Identification

Each length of pipe and tubing and each pipe fitting utilized in a mechanical system shall bear the identification of the manufacturer.

M1501.1 Outdoor Discharge, Exception Exception: Delete

M1502.4.2 Duct Installation

Exhaust ducts shall be supported at intervals not to exceed 10 feet (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of the airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 except where in conflict with the requirements of M1502. Dryer exhaust ducts shall not be joined with screws or similar fasteners that protrude into the duct.

M1506.2 Exhaust openings

Air exhaust openings shall terminate not less than 3 feet (914mm) from property lines; 3 feet (914mm) from operable and non-operable openings into the building and 10 feet (3048mm) from mechanical air intakes except where the opening is located 3 feet (914 mm) above the air

intake and 3 feet (914 mm) horizontally from the air intake. Openings shall comply with Sections R303.5.2 and R303.6.

Exception: Exhaust and intake openings that are part of a system engineered to prevent entrainment of exhaust air are exempt; the exemption applies only to the exhaust and intake that is part of the engineered system only, adjacent exhaust and inlet openings are not exempt.

A ventilation system's supply and exhaust vents on the exterior of a building may be separated less than 10 feet as long as they are separated a minimum of 6 feet horizontally.

M1507 Mechanical Ventilation

Mechanical Ventilation shall be installed per the requirements of ANSI/ASHRAE 62.2-2010 as amended in R403.5 of the 2012 Building Energy Efficiency Standard and per manufacturer requirements

M1602.1 Return Air

Return air shall be taken from inside the dwelling only if an exhaust fan is installed with automated control such that a positive pressure is not exerted on the structure while the furnace supply air handler is operating. Dilution of return air with outdoor air shall be permitted. Supply only systems and/or systems designed to induce a positive pressure inside the dwelling with reference to the outdoors are not permitted in Alaska.

M1602.2, 1 Prohibited sources

Closer than 10 feel (3048 mm) to an appliance vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3feet (914 mm) above the outside air inlet and at least 3' horizontally from the air intake.

M2301, M2302 Thermal and Photovoltaic Solar Energy Systems

Per AS 18.60.705 (a)(3): the 1997 edition of the Uniform Solar Energy Code published by the International Association of Plumbing and Mechanical Officials and adopted at the 67th annual conference, September 1996, excluding pages 1-7 of Part I, Administration.

G2412.9 Identification Delete

Chapter 25 Plumbing Administration Delete

Chapter 26 General Plumbing Requirements Delete

Chapter 27 Plumbing Fixtures Delete

Chapter 28 Water Heaters Delete

Chapter 29 Water Supply and Distribution Delete

Chapter 30 Sanitary Drainage Delete

Chapter 31 Vents Delete

Chapter 32 Traps Delete

Chapter 33 Storm Drainage Delete

Chapter 34 General Requirements Delete

Chapter 35 Electrical Definitions Delete

Chapter 36 Services Delete

Chapter 37 Branch Circuit and Feeder Requirements Delete

Chapter 38 Wiring Methods Delete

Chapter 39 Power and Lighting Distribution Delete

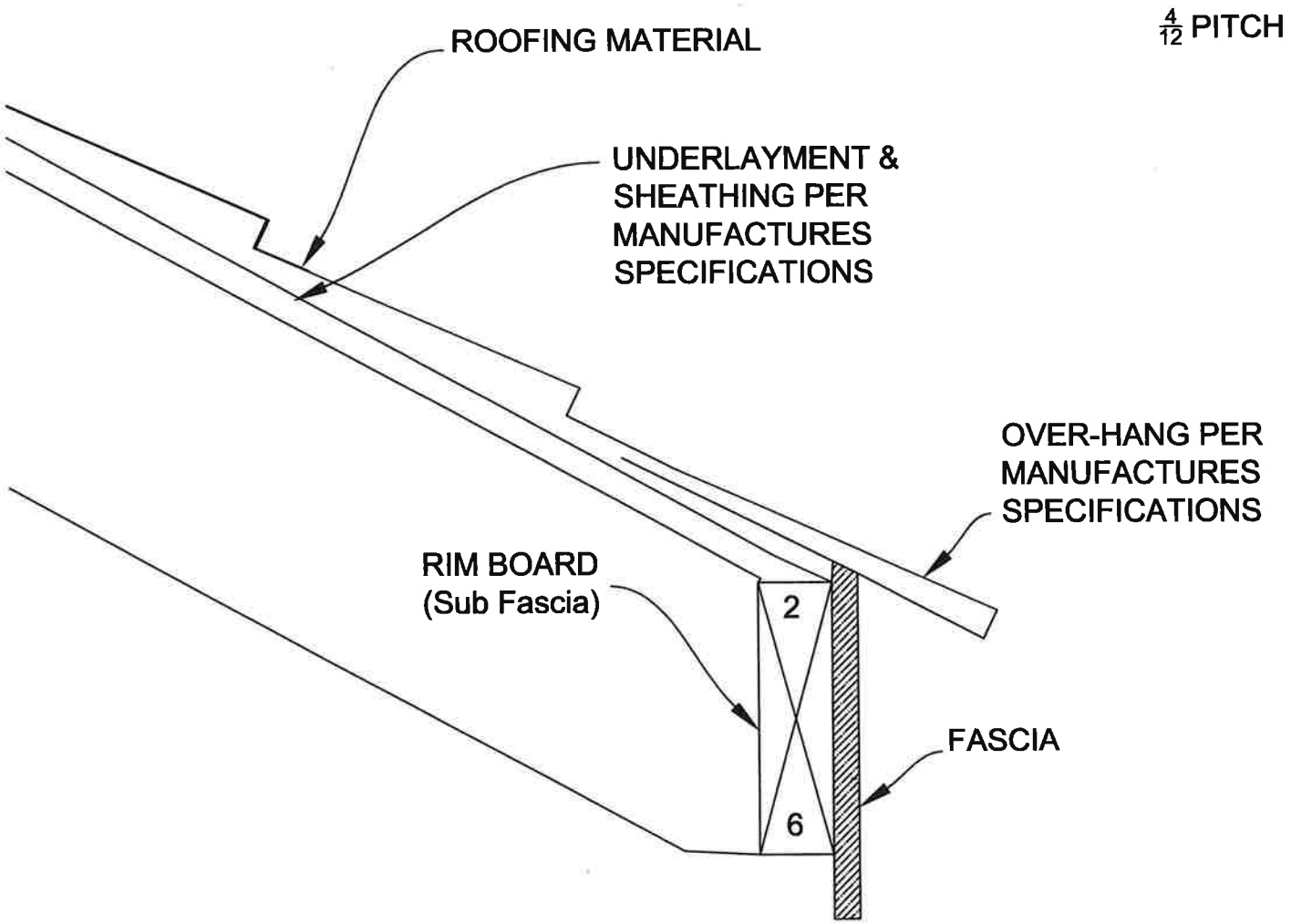
Chapter 40 Devices and Luminaries Delete

Chapter 41 Appliance Installation Delete

Chapter 42 Swimming Pools Delete

Chapter 43 Class 2 Remote-Control Signaling and Power-Limited Circuits Delete

Appendix 1.1 Full Length Fascia




General Notes

2012 IRC
Section 905.2.8.5

Exception: Allowable Best Practices

| No. | Revision/Issue | Date |
|---|---|---|
| | | |
| | | |

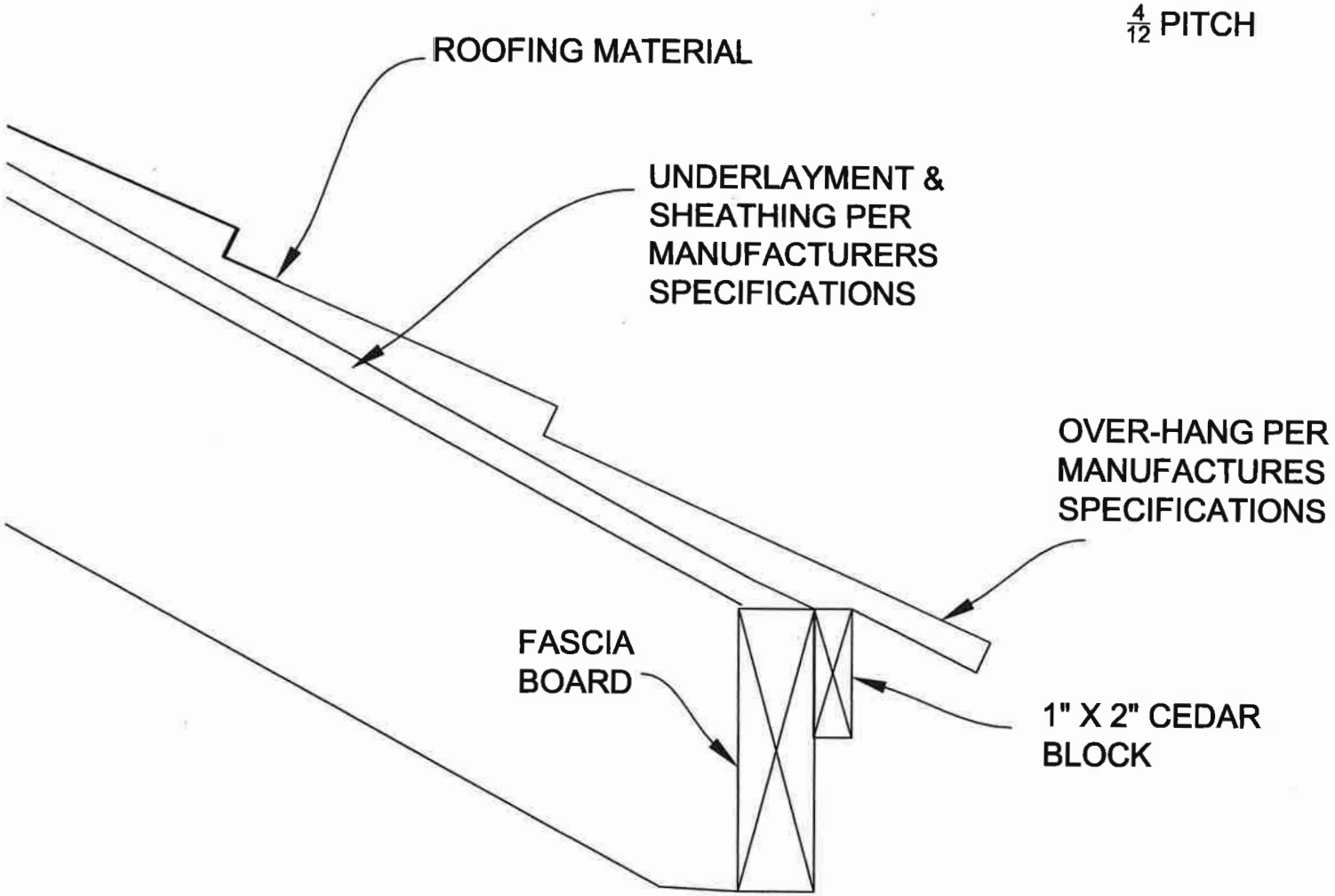
Firm Name and Address

Alaska Housing
FINANCE CORPORATION

Project Name and Address

| Project | Sheet |
|---|---|
| Date | |
| Scale | |

Appendix 1.2 Continuous Cedar Block

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2012 IRC
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| Project | Sheet |
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