FOUR SEASONS BUILDING PRODUCTS
5005 Veterans Memorial Highway
Holbrook, NY 11741

LRP ROOF SYSTEM & 4" DX ENCLOSURE SYSTEM

CSI Section:

07 40 00 Roofing and Siding Panels
13 34 00 Fabricated Engineered Structures

1.0 RECOGNITION

Four Seasons Building Products LRP Roof System and 4" DX Enclosure System described in this report were evaluated for use as patio covers for recreational, outdoor living purposes associated with a dwelling unit. The structural properties of the patio cover systems comply with the intent of the provisions of the following codes and regulations:

- 2021, 2018, 2015, 2012, and 2009 International Building Code® (IBC)
- 2021, 2018, 2015, 2012, and 2009 International Residential Code® (IRC)
- 2022 California Building Code® (CBC) – Supplement attached
- 2022 California Residential Code® (CRC) – Supplement attached

The patio cover systems comply with Appendix I of the IBC and Appendix H of the IRC.

2.0 LIMITATIONS

Use of the LRP Roof System and 4" DX Enclosure System recognized in this report is subject to the following limitations:

2.1 Construction of the residential roof system and enclosure system shall comply with the applicable codes, the manufacturer's installation instructions, this report, and the accompanying drawings identified in Sections 4.1 and 4.2 of this report, bearing the names Four Seasons Building Products and TJC and Associates, Inc. Where conflicts occur, the more restrictive shall govern.

2.2 Patio covers shall be associated with one- or two-family dwelling units only and shall be limited to use as structures regulated under Appendix I of the IBC or Appendix H of the IRC.

2.3 The roof and enclosure systems shall be installed attached to residential structures having mean roof heights not exceeding 30 feet (9.1 m).

2.4 Enclosure walls and patio enclosure configuration shall meet the requirements of IBC Section I103.1 or IRC AH103.1, as applicable. Enclosure openings and openings onto the patio shall comply with IBC Section I103.2 or IRC AH103.2, as applicable, to maintain lighting, venting, and emergency egress requirements from existing structures.

2.5 Patio covers shall have a roof slope of at least ¼ inch per foot (2.083 percent).

2.6 Residential patio covers, carports, and commercial roof structures subject to topographic effects of abrupt changes such as wind-speed up over hills, ridges, and escarpments in accordance with Section 26.8.1 of ASCE/SEI 7-10 and or ASCE/SEI 7-16 w/Supplement 1, as applicable, are outside the scope of this report.

2.7 Any roof structure constructed in an area with a flat roof-top snow load greater than 55 psf (239.4 Pa), or in Seismic Design Categories E or F, is outside the scope of this report.

2.8 The Four Seasons Building Products LRP Roof System and 4" DX Enclosure System recognized in this report are produced in Buena Park, California.

3.0 PRODUCT USE

The combination of the LRP Roof System and the 4" DX Enclosure System together form a structure used as patio cover enclosures for residential applications. These enclosures are intended to be non-habitable patio cover structures conforming to Appendix I of the IBC and Appendix H of the IRC.

3.1 Design:

3.1.1 General: The appropriate design criteria shall be determined in accordance with Chapter 16 of the IBC or Section R301 of the IRC, as applicable. The project location, use (patio cover), corresponding code, and applicable design criteria, including wind speed and exposure category, roof live load, ground snow load, and seismic design category shall be placed on or be attached to the plans accompanying this report. The design criteria shall be confirmed by consulting the applicable local codes and ordinances, and the building official. The criteria shall be used with the design steps and tables in the accompanying drawings to determine the appropriate configurations for the roof and enclosure systems based on the design loads occurring at the building

site. Wind speed shall be converted to ASD for use in the tables in the accompanying drawings. Construction documents shall be submitted to the building official for approval. The documents shall include this report and the site-specific structural components of the accompanying drawings identified in Sections 4.1 and 4.2 of this report, as applicable, including but not limited to the title sheet, general notes, applicable code, structural configuration, design criteria in Section 3.1.1 of this report, related span tables, and appropriate structural details. The documents shall include satisfactory information to demonstrate the adequacy of the existing structure to support the additional loads from the attached patio cover.

3.1.2 LRP Roof System: Using the design criteria referenced in Section 3.1.1 of this report and procedures and tables beginning on page 6 (LRP-3), the required roof panel section shall be determined for the desired spans.

3.1.3 4" DX Patio Enclosure System: Using the design criteria referenced in Section 3.1.1 and procedures and tables beginning on page 19 (E40-4) the proper wall components shall be determined.

3.2 Installation: The components determined in Section 3.1 of this report shall be assembled in accordance with the drawings accompanying this report and in accordance with the applicable code. Any penetrations made in the existing weather-resistant exterior wall envelope shall be caulked or sealed in accordance with the code.

4.0 PRODUCT DESCRIPTION

The Four Seasons Building Products LRP Roof System is a patio cover made of composite panels and roof supports. The LRP Roof System may be used by itself or in conjunction with the Four Seasons Building Products 4" DX Enclosure System, a framing system used with laminated sandwich panels or glass panes as filler panels to form exterior walls.

4.1 LRP Roof System: The LRP Roof System consists of composite roof panels with steel or extruded aluminum edge and support members. The panels have foam plastic cores of pre-formed Type II expanded polystyrene (EPS) boards that are certified in accordance with ASTM C578 by an approved agency. The foam plastic cores are enclosed between aluminum skins with an alloy and temper of 3105-H254. The panels are available in 3.0-inch, 3.5-inch, 4.0-inch, and 6.0-inch (76 mm, 89 mm, 102 mm, and 152 mm) thicknesses. The skins are nominally 0.024-inch-thick (0.610 mm), with a base metal thickness of 0.022 inch (0.559 mm). The ASTM B209 mechanical properties of the aluminum are: min/max tensile strength of 23.5/30.5 ksi (162/210 MPa); and minimum yield strength of 19.5 ksi (134 MPa). The system is described in drawings GLRP-1, GLRP-2, LRP-1, LRP-2A, LRP-2B, LRP-3, LRP-4A, LRP-4B, LRP-4C, LRP-5A, LRP-5B, LRP-6, and LRP-7, dated April 2004 with revisions up to February 2023, with Signed and Printed On date of 2/10/23. The skins are bonded to the EPS foam using ISOGRIP SP5040D, a moisture cure urethane adhesive manufactured by Ashland Specialty Chemical Company, recognized in ICC-ES Report Number ESR-1140.

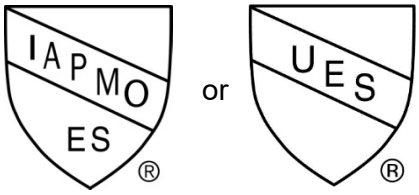
Optional "skylight" panels having translucent center sections consisting of sheets of 10-mm Lexan LTC 2R10 2000 or equivalent multi-walled polycarbonate sheets are also available for use as roof panels.

4.2 4" DX Patio Enclosure System: The 4" DX Patio Enclosure System consists of bearing and non-bearing wall panels, aluminum mullions, and posts with an alloy and temper of 6105-T5 or 6005-T5. The filler panels between structural members shall be approved panels or glass panes in accordance with the accompanying drawings and Chapter 24 of the IBC or Section R308 of the IRC. The system is described in the accompanying drawings G40-1, G40-2, E40-1, E40-2, E40-3, E40-4, E40-5, E40-6, E40-7, and E40-8, dated September 2004 with revisions up to February 2023, with Signed and Printed On the date of 2/10/2023.

4.3 Accessories: The fasteners, sealants, and other accessories shall be as described in the accompanying drawings.

5.0 IDENTIFICATION

A label shall be affixed to the product or packaging. The label shall include the company name or trademark, and the evaluation report number (ER-115). Either Mark of Conformity may also be used as shown below:



IAPMO UES ER-115

6.0 SUBSTANTIATING DATA

6.1 Structural calculations, drawings, and details submitted in accordance with the ICC-ES Acceptance Criteria for Patio Covers (AC340), approved August 2018, Editorially Revised August 2021.

6.2 Data in accordance with ICC-ES Acceptance Criteria for Sandwich Panels, approved June 2019 (AC04). Test reports are from laboratories complying with ISO 17025.

6.3 Quality management system documentation.

6.4 Manufacturer's installation instructions.

6.5 Test reports are from laboratories complying with ISO 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Four Seasons Building Products LRP Roof System and 4" DX Enclosure System to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at the location noted in Section 2.8 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

CALIFORNIA SUPPLEMENT

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1.0 RECOGNITION

The Four Seasons Building Products LRP Roof System and 4" DX Enclosure System as evaluated and represented in IAPMO UES Evaluation Report ER-115 and with changes, as noted in this supplement, are satisfactory alternative systems for use in buildings built under the following codes:

- 2022 California Building Code (CBC)
- 2022 California Residential Code (CRC)

2.0 LIMITATIONS

Use of the LRP Roof System and 4" DX Enclosure System recognized in this report is subject to the following limitations:

2.1 Use and installation of the roof and enclosure systems shall be in accordance with ER-115 and its corresponding drawings, the manufacturer's published installation instructions, and Appendix I of the CBC or Appendix H of the IRC, as applicable.

2.2 The site-specific design criteria for live load, wind speed and exposure category, seismic design category, rain load, and ground snow load conditions shall be determined in accordance with Chapter 16 of the CBC or Section R301 of the CRC, as applicable. The appropriate configurations for the LRP Roof and 4" DX Enclosure Systems shall be determined in accordance with Section 3.1 of ER-115 based on the design loads determined in accordance with the CBC or CRC for the building site.

2.3 This supplement expires concurrently with ER-115.