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C-THRU SUNROOMS

OMEGA 4 WALL AND LRP OR GLASS ROOF SYSTEM

CSI Sections:

- 10 73 00 Protective Covers
- 13 34 00 Fabricated Engineered Structures
- 13 34 13 Glazed Structures
- 13 34 13.16 Solariums
- 13 34 13.23 Sunrooms

1.0 RECOGNITION

The Omega 4 Wall and LRP or Glass Roof System described in this report has been evaluated for use as patio covers for recreational, and outdoor living purposes associated with a dwelling unit. The structural properties of the Patio Cover Enclosure Systems have been evaluated for compliance with the following codes and regulations:

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

The system complies with Appendix I of the IBC and Appendix H of the IRC, as applicable.

2.0 LIMITATIONS

The C-Thru Sunrooms enclosed patio system described in the accompanying drawings dated 01/23/2023, bearing the name C-Thru Sunrooms and VTA Consulting Engineers, complies with the codes listed in Section 1.0 of this report and is subject to the following limitations:

2.1 The materials and components described in this report are limited to patio covers associated with a dwelling unit described in Appendix I of the International Building Code and Appendix H of the International Residential Code.

2.2 Analysis shall be provided to the building official to show component and cladding wind loads at the site are less than the capacity of the glass panels in accordance with IBC Chapter 24.

2.3 Windows serving as emergency egress or rescue openings from the sleeping rooms are not permitted to exit into the patio enclosure. Where an exterior opening serves as an exit from the dwelling unit, the patio enclosure shall have at least a 36-inch-wide exterior door.

2.4 The scope of the report is limited to sites that have no special topographical effects like hills, ridges, or escarpments.

2.5 The effects of sliding snow described in Section 7.9 of ASCE/SEI 7-10 or ASCE/SEI 7-16 w/Supplement 1 are outside the scope of this report.

2.6 The roof support systems shall have a slope of at least ¼ inch per foot (2.083 percent).

2.7 Safety glazing shall be installed in hazardous locations as set forth in IBC Section 2406 or IRC Section R308.

2.8 The Omega 4 Wall and LRP or Glass Roof System recognized in this report is produced by Latium USA Trading, LLC dba C-Thru Sunrooms in Ontario, California.

3.0 PRODUCT USE

3.1 General: The combination of the Omega 4 Wall System and the LRP or Glass Roof System, together with wall and LRP or glass roof panels, form a system used as an attached patio enclosure for residential applications. These enclosures are intended to be patio covers associated with a dwelling unit conforming to Appendix I of the IBC and Appendix H of the IRC, and not as carports, garages, storage rooms, or habitable rooms.

3.2 Design: The appropriate design criteria for live load, wind speed, wind exposure category, seismic design category, rain load, and ground snow load conditions shall be determined in accordance with Chapter 16 of the IBC or Section R301 of the IRC, as applicable. The design criteria shall be confirmed by consulting the applicable local codes and ordinances, and the building official. This design criteria shall be used with the design steps and tables in the attached drawings to determine the appropriate configurations for the Omega 4 Wall and Roof System based on the design loads occurring at the building site. The project location, use (patio cover, carport, commercial structure), corresponding code, and applicable design criteria, including risk category (IBC only) wind speed, wind exposure category, roof live load, ground snow load, seismic design category, and frost line depth shall be placed on or attached to the plans accompanying this report and be observed in the selection of the components.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





3.2.1 Roof System: The support system for the LRP or glass roof panels shall be designed in accordance with the design steps and tables in the attached drawings. The LRP panels shall be manufactured and installed in accordance with the listing or evaluation report that governs their use. The glass panels shall be as described in Section 4.1.3 of this report.

3.2.2 Omega 4 Wall System: The Omega 4 Wall System shall be used in accordance with the procedures and tables beginning on Drawing Sheet 13 to determine the appropriate wall components for the design loads.

3.2.3 Assembly: Assembly of the components determined for use in Sections 3.2.1 and 3.2.2 of this report shall be in accordance with the details provided in this report and in accordance with the local governing building code.

3.3 Installation: General installation shall be in accordance with the codes in Section 1 of this report, the manufacturer’s published installation instructions, and corresponding drawings dated 01/23/2023. Installation of the LRP Roof panels shall be in accordance with the evaluation report governing the LRP panels. An approved sealant or caulking shall be used at any penetrations made in the existing weather-resistant exterior wall envelope, and weather protection shall be provided as required by IBC 1403.2 or IRC Sections R703.1 and R703.2. Enclosure wall configurations that form enclosed attached residential patio covers shall conform to the limits noted in Section I103 of the IBC and Section AH103 of the IRC.

4.0 PRODUCT DESCRIPTION

4.1 General

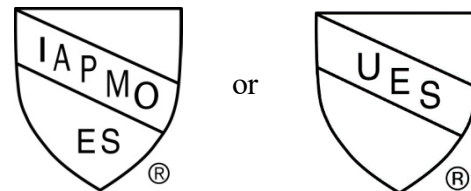
4.1.1 Omega 4 Wall System: The Omega 4 Wall System described in drawing sheets 13 through 17, consists of bearing and nonbearing wall panels of aluminum skins with expanded polystyrene cores, and aluminum mullions and posts with an alloy and temper of 6063-T6. The recognition pertains to the ability of the mullions, posts, and fasteners to support the patio structure, including the wall panels, in response to the design loads. The wall panels and glass panels are outside the scope of recognition of this report.

4.1.2 LRP Roof System: The LRP Roof System described in drawing sheets 4 through 7 consists of aluminum ledgers, beams, rails, and post extrusions. The LRP roof panels, made of structural insulated panels with polystyrene foam plastic cores and aluminum skins, are outside the scope of recognition of this report. LRP roof panels used with the structural components described in this report to form enclosed residential patio covers shall be recognized and listed by an approved and accredited listing agency. The extrusions shall be designed as described in Section 3.2 of this report to support the loads described in the attached drawings.

4.1.3 Glass Roof System: The supporting framing system for the glass roof panels is designed in accordance with IBC Section 2403.3, with deflection limited to the lesser of L/175 of the glass edge length or 0.75 inch (19.1 mm). The glazing for the glass roof shall be impact resistant as required by Section 1609.2 of the 2018 IBC (Section 1609.1.2 of the 2015 and 2012 IBC), and shall be designed, supported, glazed, screened, and identified in accordance with Chapter 24 of the IBC.

5.0 IDENTIFICATION

Each installation shall bear an original identifying decal or label bearing the company name or trademark, model number, and the Evaluation Report Number (ER-181) to identify the products recognized in this report. The label shall be affixed on at least one of the following: product, packaging, installation instructions, or descriptive literature. Either Mark of Conformity may be also used as shown below:



IAPMO UES ER-181

6.0 SUBSTANTIATING DATA

Data and analysis in accordance with the ICC-ES Acceptance Criteria for Patio Covers (AC340) approved August 2018, Editorially Revised August 2021. Test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on the Omega 4 Wall System and LRP or Glass Roof System for use as an attached patio enclosure for residential applications to assess conformance to the codes and standards shown in Section 1.0 of this report, and documents the product’s certification. Products are manufactured at locations noted in Section 2.8 of this report under a quality control program with periodic inspections 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

C-Thru Sunrooms Omega 4 Wall System and LRP or Glass Roof System as evaluated and represented in IAPMO UES Evaluation Report ER-181 and with changes as noted in this supplement is a satisfactory alternative 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 C-Thru Sunrooms enclosed patio system described in this report supplement in the accompanying drawings dated 01/23/2023 bearing the name C-Thru Sunrooms and VTA Consulting Engineers, is subject to the following limitations:

2.1 The use and installation of the Omega 4 Wall System and LRP or Glass Roof System shall be in accordance with the 2021 International Building Code and Appendix I, or the 2021 International Residential Code and Appendix H, as applicable, as noted in ER-181 and its corresponding drawings, and the manufacturer's published installation instructions.

2.2 The site-specific design criteria for live load, wind speed, wind 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 Omega 4 Wall and Roof System shall be determined in accordance with Sections 3.2 of ER-181 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-181.

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