

ICC-ES Evaluation Report

ESR-5321P

Reissued August 2025

This report also contains:

- [FL Supplement](#)

Subject to renewal August 2026

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DIVISION: 10 00 00— SPECIALTIES Section: 10 73 00— Protective Covers	REPORT HOLDER: STRUXURE	EVALUATION SUBJECT: PERGOLA X	
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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021 [International Building Code® \(IBC\)](#)

Property evaluated:

- Structural

2.0 USES

The Struxure Pergola X freestanding and attached patio covers described in this report are used as patio covers complying with Appendix I of the IBC. Commercial roof structures are used as covers where permitted by the applicable chapters and sections of the IBC, including IBC Section 406.

3.0 DESCRIPTION

3.1 General:

The freestanding and attached patio covers, and commercial roof structures must be constructed as indicated in this report and in accordance with the engineering plans accompanying this report. The walls must be unenclosed on minimum of two sides for attached patio covers, and on four sides for freestanding patio covers and commercial structures.

3.2 Materials:

3.2.1 Aluminum: The aluminum members and connecting elements are roll-formed and extruded shapes of various alloys and tempers, complying with Chapter 20 of the IBC and as specified in the engineering plans accompanying this report.

3.2.2 Steel: The steel members and connecting elements are made from steel having various grades and galvanized coating designation as specified in the engineering plans accompanying this report.

3.3 Mechanical Fasteners and Anchors:

Mechanical fasteners and anchors used for connection amongst components of the cover structures (including patio covers, carports and commercial structures), and for connection of the attached cover structures to the supporting structures, must be in accordance with the engineering plans accompanying this report.

4.0 DESIGN AND INSTALLATION

The design and installation of the patio covers and commercial roof structures described in this report must be in accordance with this report and with the accompanying engineering plans, dated July 15, 2024, as referenced in [Table 1](#).

Fasteners specifications must be as follows:

- a) #14 stainless steel (316) sheet metal screws with a minimum allowable tension of 313 lbs. (1392 N) and a minimum allowable shear of 517 lbs. (2300 N).
- b) 3/8 in. wood lag screws in compliance with National Design Specifications (NDS) Chapter 12.

5.0 CONDITIONS OF USE:

The Struxure Pergola X, freestanding and attached patio covers, and commercial roof structures described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Construction of patio covers and commercial roof structures must comply with this report and the engineering plans accompanying this report dated July 15, 2024, as referenced in [Table 1](#). Where there is a conflict between this report and the plans, this report governs.
- 5.2 Patio covers are limited to use as structures regulated under Appendix I of the IBC. For columns supporting loads greater than 750 lbf (3336 N) when attached to 3.5-inch (89 mm) concrete slab on grade without footings, a registered design professional must provide design and calculations to the satisfaction of the code official.
- 5.3 Commercial roof structures are limited to use as structures regulated by the applicable chapters and sections of the IBC, including IBC Section 406.
- 5.4 Any unit built in Seismic Design Category C, D, E or F is outside the scope of this report.
- 5.5 Patio covers and commercial roof structures installed in geographical areas cited in Section 26.8.1 of ASCE 7-16 for the 2021 IBC are outside the scope of this report.
- 5.6 Effects of sliding snow described in Section 7.9 of ASCE 7-16 are outside the scope of this report.
- 5.7 The minimum live load for patio covers must be 10 psf (47.88 Pa). The minimum live load for commercial structures must be 20 psf (95.76 Pa).
- 5.8 For attached patio cover structures, the height between the top of the host structure's roof to the patio cover roof must not exceed 15 feet (9.1 m).
- 5.9 For attached units, the loads that are to be resisted by the structures to which the patios and commercial roof structures are attached, as applicable, are to be determined by a registered design professional. The adequacy of the structures that support the additional loading from the attached units must be justified, by a registered design professional when required by the jurisdiction where the project is located, and the justification is subject to the approval of the code official.
- 5.10 Plans, details and specifications concerning proper installation of the patio covers and commercial roof structures, which are applicable to the specific building under consideration, must be part of the construction documents submitted to the code official for approval.
- 5.11 The Struxure Pergola X patio covers are manufactured under an approved quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Patio Covers \(AC340\)](#), dated August 2018, editorially revised August 2021.

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5321P) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, each structure bears a permanent decal or identifying tag stating allowable roof live/snow load, design wind speed and exposure and name of manufacturer.

7.3 The report holder's contact information is the following:

STRUXURE
154 ETHAN ALLEN DRIVE
DAHLONEGA, GEORGIA 30533
(404) 844-9174
www.struxure.com

**TABLE 1—STRUXURE: ENGINEERING PLANS (Dated July 15, 2024)
FOR PATIO COVERS AND COMMERCIAL ROOF STRUCTURES (For the 2021 IBC)**

[illegible]

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DIVISION: 10 00 00—SPECIALTIES
Section: 10 73 00—Protective Covers

REPORT HOLDER:

STRUXURE

EVALUATION SUBJECT:

PERGOLA X

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Struxure Pergola X, described in ICC-ES evaluation report [ESR-5321](#), has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 *Florida Building Code—Building*

2.0 CONCLUSIONS

The Pergola X, described in Sections 2.0 through 7.0 of ICC-ES evaluation report [ESR-5321](#), complies with the *Florida Building Code—Building*. The design requirements must be determined in accordance with the *Florida Building Code—Building*. The installation requirements noted in ICC-ES evaluation report [ESR-5321](#) for the 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building* with the following conditions:

Use of the Pergola X for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued August 2025.