



DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking
Section: 05 31 13—Steel Floor Decking

REPORT HOLDER:

PRESCIENT COMPANY, INC.

EVALUATION SUBJECT:

PRESCIENT STEEL DECK PANELS FOR USE WITH THE PRESCIENT RATED WALLS AND FLOOR-CEILING ASSEMBLIES

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, 2012, and 2009 *International Building Code*® (IBC)

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-4240 LABC Supplement](#).

Property evaluated:

- Structural

2.0 USES

The Prescient Company Inc.'s steel deck panels are used as floor and roof decks to support vertical loads, and as components of horizontal diaphragms.

3.0 DESCRIPTION

The 18 gage [design base metal thickness of 0.0451 inch (minimum delivered base metal thickness of 0.0428 inch)] steel deck panels are cold-rolled from steel complying with ASTM A653 SS Grade 50 Class 1 with a minimum G60 galvanized coating. See Figure 1 for steel deck panel drawings.

4.0 DESIGN AND INSTALLATION

4.1 Installation:

Installation must comply with the table footnotes and figures of this report.

4.2 Section Properties:

Steel deck panel section properties are provided in Table 1.

4.3 Vertical Loads:

Steel deck panel uniform load capacities are provided in Table 2.

4.4 Horizontal Loads:

Steel deck panel diaphragm shear and stiffness values are provided in Table 3.

5.0 CONDITIONS OF USE

The steel deck panels described in this report comply with, or are a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The deck panels are manufactured, identified and installed in accordance with this report and the report holder's published installation guidelines and instructions. If there is a conflict between the report holder's published installation guidelines and instruction of this report, this report governs.
- 5.2** The base metal thickness of the steel deck panels delivered to the jobsite must be at least 95 percent of the design base metal thickness.
- 5.3** The minimum loads of IBC Section 1607 must be considered by the registered design professional based on the specific occupancy or use, as applicable.
- 5.4** Special inspection must comply with IBC Chapter 17.
- 5.5** Calculations and details demonstrating that the loads applied to the steel deck panels comply with the report must be submitted to the code official for approval. Calculations and drawings, must be prepared, signed and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.6** When the steel deck panels are used as roof decks, the panels must be covered with an approved roof covering.

6.0 EVIDENCE SUBMITTED

- 6.1** Data in accordance with the ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), dated February 2021
- 6.2** Data in accordance with the ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), dated October 2010 (Editorially revised September 2013).

7.0 IDENTIFICATION

- 7.1 Each bundle of decking is marked with labels with Prescient Company, Inc., the minimum base metal thickness (uncoated), minimum specified yield strength, minimum galvanized coating, and the ICC-ES Report number (ESR-4240).
- 7.2 The report holder’s contact information is the following:

PRESCIENT COMPANY, INC.
14401 WEST 65TH WAY, UNIT B
ARVADA, COLORADO 80004
(303) 551-0191
www.prescientco.com

TABLE 1—STEEL DECK PANEL SECTION PROPERTIES

Gage	Design Base Metal Thickness (inch)	Minimum Delivered Base Metal Thickness (inch)	Minimum Yield Strength (F _y , ksi)	Gross Area (A _g , in ²)	Weight (psf)	Gross Moment of Inertia (I, in ⁴)	Effective Moment of Inertia (I _e , in ⁴)	Positive Effective Section Modulus (S _p , in ⁴)	Negative Effective Section Modulus (S _n , in ⁴)	Location
18	0.0451	0.0428	50	0.94	3.21	0.235	0.228	0.583	0.176	In Span
						0.0029	0.0029	0.0349	0.0195	At Supports

For SI: 1 inch = 25.4 mm, 1 psf = 0.0479 kPa

TABLE 2—STEEL DECK PANEL UNIFORM LOADS^{1,2,3} (psf)

DIRECTION OF UNIFORM LOADS	UNIFORM LOADS (psf)	
	ASD	LRFD
Downward (gravity) ⁴	335	510
Upward (uplift)	93	141

For SI: 1 inch = 25.4 mm, 1 psf = 0.0479 kPa

¹Installation must comply with Figure 3.

²Based on a deflection limit of L/360 where the maximum span is 2'-0".

³Concentrated loads, where required by the applicable code, must be considered by the registered design professional.

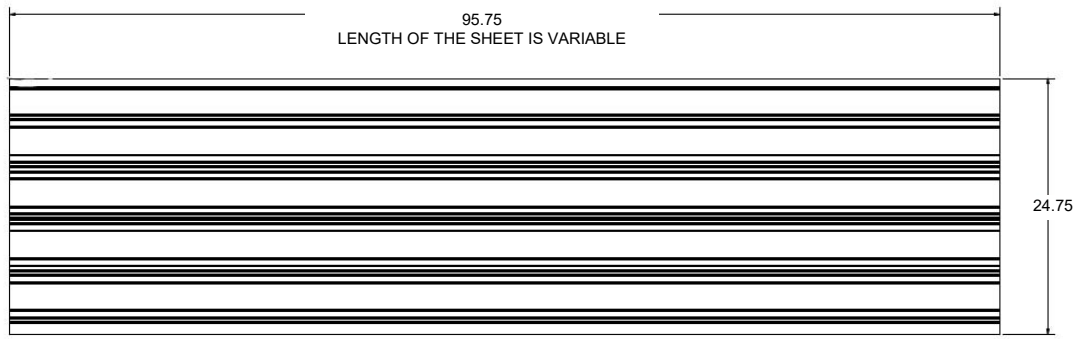
⁴Idealized as simple spans due to deck cross section at supports.

TABLE 3—STEEL DECK PANEL DIAPHRAGM SHEAR STIFFNESS AND STRENGTH¹

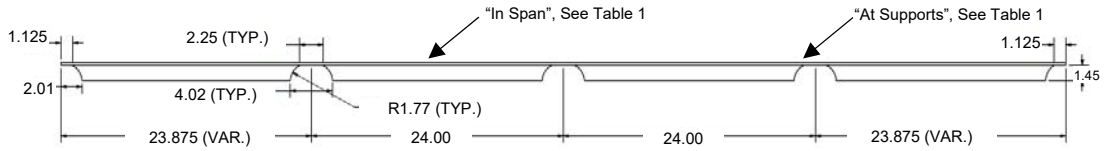
SCREW PATTERN (see Figure 3)	ASD DIAPHRAGM SHEAR STRENGTH (plf)		LRFD DIAPHRAGM SHEAR STRENGTH (plf)		DIAPHRAGM SHEAR STIFFNESS (kip/inch)
	Wind	Seismic	Wind	Seismic	
A	521	461	839	719	31
B	703	622	1131	970	37

For SI: 1 inch = 25.4 mm, 1 plf = 14.6 N/m, 1 kip/inch = 174 N/mm

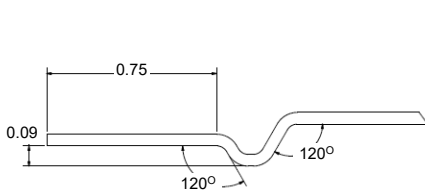
¹Installation must comply with Figure 3.



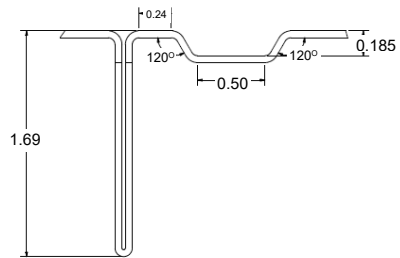
Top View – Steel Deck Panel – Drawing



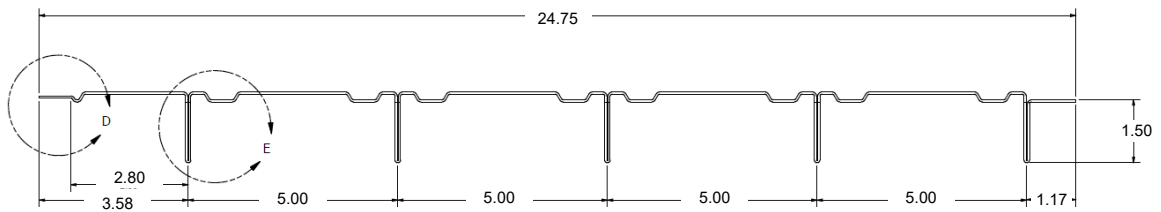
Side View – Steel Deck Panel



Detail D (see below)



Detail E (see below)



"In Span" Cross Section – Steel Deck Panel

FIGURE 1—STEEL DECK PANEL DRAWINGS

(All dimensions above in inches)

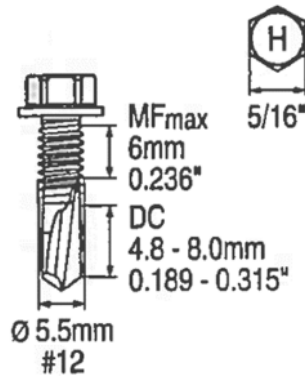
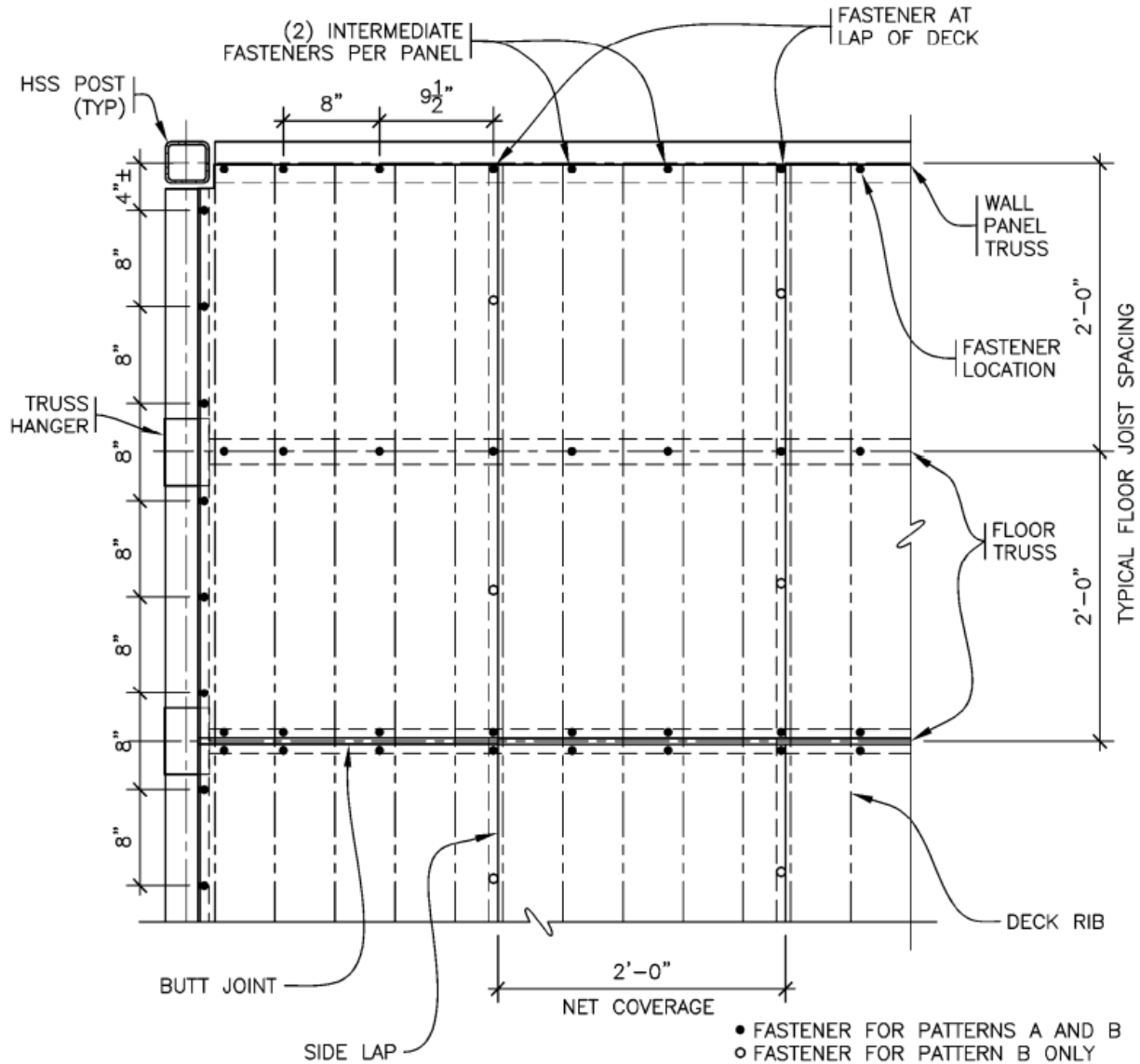


FIGURE 2—HILTI S-MD 12-24 M HWH4 SUPPORT AND SIDELAP FASTENERS

(as recognized in ESR-2196)



Notes:

Notes:

1. The Prescient Company, Inc. wall panel trusses and floor trusses must be as recognized in ESR-3745.
2. All fasteners at supports and sidelaps must comply with Figure 2.
3. The end and edge distance spacing of the fasteners is not shown, but must comply with the following:
 - a. The fasteners must be installed at least 3/8 inch (10 mm) from the ends and edges of the steel deck panel at perimeter supports (Wall Panel Truss).
 - b. The fasteners must be installed at least 3/8 inch (10 mm) from the ends of the steel deck panel at interior support (floor trusses) where butt joints occur.

FIGURE 3—TYPICAL STEEL DECK PANEL, SUPORT LAYOUT, AND FASTENER PATTERNS

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REPORT HOLDER:

PRESCIENT COMPANY, INC.

EVALUATION SUBJECT:**PRESCIENT STEEL DECK PANELS FOR USE WITH THE PRESCIENT RATED WALLS AND FLOOR-CEILING ASSEMBLIES****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that the Prescient Steel Deck Panels for use with the Prescient Rated Walls and Floor-Ceiling Assemblies, described in ICC-ES evaluation report [ESR-4240](#), have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2020 *City of Los Angeles Building Code* (LABC)

2.0 CONCLUSIONS

The Prescient Steel Deck Panels for use with the Prescient Rated Walls and Floor-Ceiling Assemblies, described in Sections 2.0 through 7.0 of the evaluation report [ESR-4240](#), comply with the LABC Chapter 22 and the LARC, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Prescient Steel Deck Panels for use with the Prescient Rated Walls and Floor-Ceiling Assemblies described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-4240](#).
- The design, installation, conditions of use and identification are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-4240](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- Diaphragm shear strength values in the evaluation report must not be increase for load combinations that include wind or seismic loads.
- For diaphragms that are used to provide wall anchorage, the adequacy of the steel deck panel end and side seam connections, shall be verified by a design professional to the satisfaction of the code official.
- When exposed to weather, the deck units shall be galvanized.

This supplement expires concurrently with the evaluation report, reissued December 2020 and revised March 2021.

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The purpose of this evaluation report supplement is to indicate that the Prescient Steel Deck Panels for use with the Prescient Rated Walls and Floor-Ceiling Assemblies, evaluated in ICC-ES evaluation report ESR-4240, have also been evaluated for compliance with Chapter 22 of the code noted below.

Applicable code edition(s):

■ 2019 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

2.0 CONCLUSIONS**2.1 CBC:**

The Prescient Steel Deck Panels for use with the Prescient Rated Walls and Floor-Ceiling Assemblies, described in Sections 2.0 through 7.0 of the evaluation report ESR-4240, comply with CBC Chapter 22, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 17 and 22, as applicable.

2.1.1 OSHPD:

The applicable OSHPD sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA sections of the CBC are beyond the scope of this supplement.

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The purpose of this evaluation report supplement is to indicate that the steel deck panels, recognized in ICC-ES master evaluation report ESR-4240, have also been evaluated for compliance with the code noted below.

Applicable code editions:*2020 Florida Building Code—Building***CONCLUSIONS**

The steel deck panels, described in Sections 2.0 through 7.0 of the master evaluation report ESR-4240, comply with the *2020 Florida Building Code—Building*, provided the design and installation are in accordance with the 2018 *International Building Code*® provisions noted in the master report.

Use of the steel deck panels has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* except that the steel deck panels must have a minimum G90 galvanized coating.

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 master report, reissued December 2020 and revised March 2021.