Evaluation Service

PER-12055

Pei **Evaluation Service** is an accredited **ISO Standard 17065** Product Certifier, accredited by the IAS. This **Product Evaluation Report** represents a product that *Pei* **ES** has Evaluated and this product has a Follow-up Service / Inspection Agreement. This **Product Evaluation Report** in no way implies warranty for this product or relieves **USG Interiors, LLC** and **CGC Interiors, LLC** of their liabilities for this product. This **PER** is an official document if it is within one year of the Initial or Re-Approval date.

Initial Approval	Re-Approved
July, 2013	July, 2015

See all *Pei* **ES** Listings at: www.p-e-i.com

Report Owner

USG Interiors, LLC
550 West Adams Street
Chicago, Illinois 60661

Product

Celebration™ System
Gypsum Lay-In Panel System
Linear Metal Ceiling System
(Paraline II® & Paraline Plus™**)**

Approved Manufacturing Locations

USG Interiors, LLC	USG Interiors, LLC	USG Interiors, LLC	CGC Interiors, Inc.
Plant # 601	**Plant # 603**	**Plant # 605**	**Plant # 091**
1000 Crocker Rd.	2575 East Loomis Rd.	1000 Donn Dr.	735 Fourth Line Rd.
Westlake, OH 44145	Stockton, CA 95205	Cartersville, GA 30120	Oakville, Ontario, Canada L6L 5B7

Evaluation Report Information

usg4you@usg.com
USG Support: 800.USG4YOU (800.879.4968)

General Details

This report covers the following evaluated systems: **Celebration™** Ceiling Panels supported by **FINELINE DXFEVH 2924** or **DXFEVH 2930** suspension systems**;** **SHEETROCK® Brand Clima Plus™ Lay-In Ceiling Panels** supported by **DONN® Brand ZXLA 26** suspension system**;** The **Linear Metal Ceiling Systems** are comprised of two systems **Paraline® II panels** supported by **Symmetrical Carrier** suspension system and **Paraline Plus™** Panels supported by **Paralock Main Tees.** These systems are manufactured by USG Interiors, LLC. The plant locations listed above have an approved Q.C. Manual for the manufacture of the grid parts only and have a Product Evaluation Service Agreement with *Pei* **Evaluation Service** / Inspection Agreement with *Progressive Engineering Inc* .The plant locations listed above will be audited Quarterly by *Pei* .

Product Description

The USG Interiors, LLC ceiling framing systems described in this report are assemblies used in exterior or interior, fire-resistance-rated and non-fire-resistance-rated, construction. The suspended ceiling systems consist of main and cross runner framing members with metal panels, gypsum lay-in panels, and linear metal pans. Each suspended ceiling system is available with a variety of wall angles, moldings, access angles and corner caps. The steel body of the suspension system members have hot-dipped galvanized coating Type G90 for exterior installations complying with ASTM A653.

Celebration™ Ceiling Panels are aluminum panels, painted or anodized supported by **FINELINE DXFEVH 2924** or **DXFEVH 2930** suspension systems**.** The main tees **DXFEVH2924** and **DXFEVH2930** are classified as Heavy Duty per ASTM C635. Available panel sizes are from 12"wide x 24"long to 30"wide x 78"long, with perforation and/or embossing. The clearance for installation and removal of panels is minimal, due to the panels being installed from below. The system has been tested for exterior applications and its performance is contained in this report.

SHEETROCK® Brand Clima Plus™ Lay-In Ceiling Panels supported by **DONN® Brand ZXLA 26** suspension system. Classified as *Heavy Duty* per *ASTM C635,* the **DONN® ZXLA 26** Suspension system is made of painted hot dipped galvanized steel, with an aluminum face cap. The suspension system has a polyester paint finish for corrosion protection. SHEETROCK® Brand ClimaPlus Lay-In Ceiling Panels with FIRECODE formulation are vinyl laminated face gypsum panels. Available panel sizes are 2'x2'x1/2" or 2'x4'x1/2". The system has been tested for exterior applications and its performance is contained in this report.

Paraline® II panels supported by Symmetrical Carrier suspension system. The **Paraline® II** ceiling system combines 12' long linear aluminum pans in widths of 3-1/4" and 7-1/4" and an aluminum Symmetrical Carrier. The system has been tested for exterior applications and its performance is contained in this report.

Paraline Plus™ Panels supported by Paralock® main tees, which are classified as Heavy Duty per ASTM C635. The **Paraline Plus™** ceiling system combines 12' long linear aluminum pans in widths of 3-1/4" and 7-1/4" and Paralock® main tees suitable for exterior ceiling applications under protected soffits, as well as interior applications. The system has been tested for exterior applications and its performance is contained in this report.

General Product Usage and Limitations

1. All USG DONN® brand suspension grid systems, when used with any USG ceiling panels or tiles, carry a lifetime (30-year) warranty that USG products shall be free from manufacturing defects and that the suspension systems shall be free from the occurrence of 50 percent(%) red rust as defined by ASTM D610 test procedures for 30 years from date of installation.

2. Building structure from which the DONN® Brand suspension system is suspended must be capable to withstand the applicable loads required by Chapter 16 of the 2012 and 2015 International Building Code®.

3. The DONN® Brand suspension grid system shall be installed in accordance with manufacturers recommendations and are subject to the conditions of this **PER**. A copy of the installation guide shall be made easily available to the installer.

4. Installation details shall meet or exceed the requirements in the following sections: ASTM C636, ASTM E580 and ASCE 7, as applicable.

5. The suspension ceiling framing system installed in accordance with the minimum requirements of Section ASCE 7, 13.5.6 as referenced in the 2012 and 2015 IBC, Section 1613 and upgraded to comply with the pressure loads for exterior systems as described in this report.

6. Finish is not UV-resistant. All USG DONN® Brand suspension grid systems should not be installed where direct exposure to sun or weather will occur. Furthermore, indirect exposure to severe environmental conditions will shorten the lifespan of the product.

Properties Evaluated

***Exterior Ceiling Installations**:* The evaluated systems comply with the requirements for exterior installations. The evaluated systems above are tested in accordance with **UL580 Tests for Uplift Resistance of Roof Assemblies** and **UL1897 Uplift tests for Roof Covering Systems**.

Code Compliance

Meets the requirements for suspended ceilings in accordance with the **2012 International Building Code®**
Meets the requirements for suspended ceilings in accordance with the **2015 International Building Code®**

Compliance with the following standards:

ASCE 7 - Minimum Design Loads for Buildings and Structures

ASTM C 635 - Standard Specification for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings

ASTM C 636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels

ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials

ASTM E 119 - Fire Tests of Building Construction and Materials

ASTM E 580 - Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Moderate Seismic Restraint

UL 580 - Tests for Uplift Resistance of Roof Assemblies

UL 1897 - Tests for Roof Covering Systems

Seismic Classification

Table 1 - Seismic Design Classification

Seimsic Design Category A, B	Seimsic Design Category C	Seimsic Design Category D, E, F
No Requirement	Intermediate Duty	Heavy Duty

Exterior System Assemblies

Celebration™ System:

Table 2 - Celebration™ System Load Rating and Performance

Main Tee	Main Tee Spacing (in)	Cross Tee Spacing (in)	Compression Post Spacing (in)	UL Class	Maximum Load Rating (psf)	Test Standard
DXFEVH 2924	48	24	24	Class 30	30	UL580
	24	48	48	Class 30[1]	30	Engineering Analysis
	24	24	24	Class 90	90	UL580
	24	24	24	n/a	102	UL1897
DXFEVH 2930	30	30	30	n/a	68	UL1897
	30	30	30	Class 60	60	UL580

Note:

1. Value derived through engineering calculation

Table 3 - FINELINE DXFEV Rated Loads

Main Tee	ASTM Class[1]	Fire Rating	Rated Load[2] (lbs./LF)		
			4' Hanger Spacing	5' Hanger Spacing	6' Hanger Spacing
DXFEV2924	Intermediate Duty	Class A	12	6.6	3.6
DXFEVH2924	Heavy Duty	Class A	16	8.3	4.9
DXFEV2912	Intermediate Duty	Class A	12	6.6	3.6
DXFEVH2912	Heavy Duty	Class A	16	8.3	4.9
DXFEVH2930	Heavy Duty	Class A	16	8.3	4.9

Notes:

1. ASTM Class is valid when ceiling grid is installed in accordance with ASTM C636 and/or ASTM E580
2. Rated loads are based upon the minimum of the load at a deflection limit of L/360 and the ultimate bending capacity divided by a safety factor of 2.0

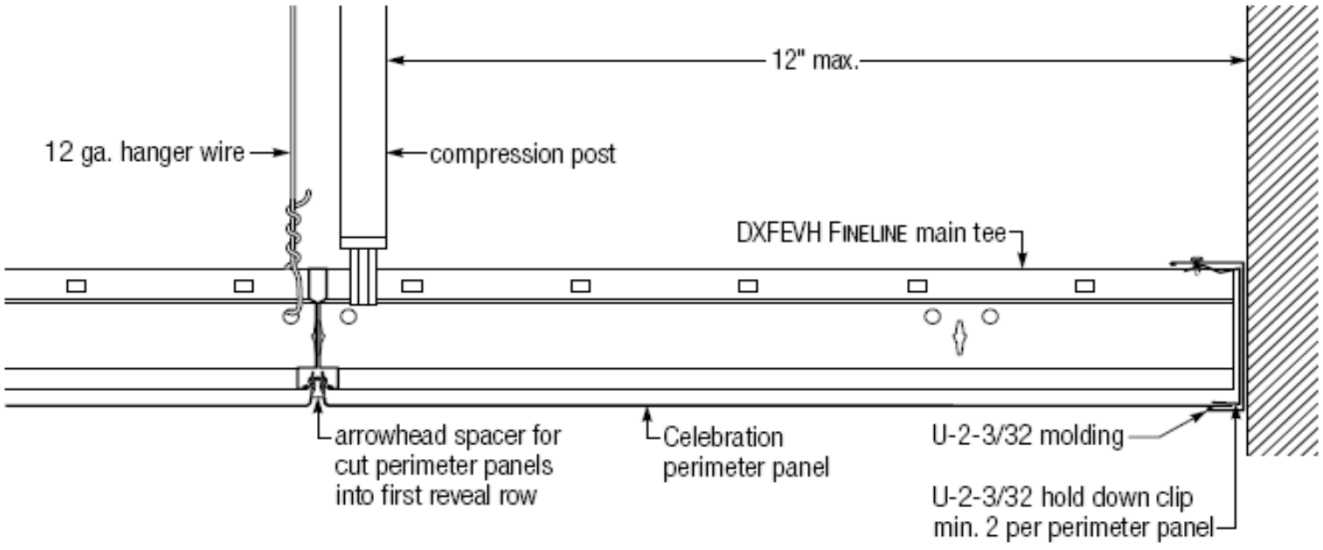

Figure 1 - DXFEVH FINELINE Main Tee Perimeter Detail Assembly

***Note**: U-2-3/32 molding is design to receive the perimeter tees and the tee ends are cut back at an angle. Back-blocking is not required. Fastener attachments through the top leg of molding in the bulb is required. See **Celebration™** installation guide and USG Exterior Ceiling Application guide for more details.*

SHEETROCK® Brand Clima Plus™ Lay-In Ceiling Panels supported by **DONN® Brand ZXLA 26**

1. The **SHEETROCK® Lay-in Panel** and **ZXLA 26** System performance is summarized in the table below.
2. The panels must be held down with a min. 6d common nail installed through available hanger wire holes to prevent panel uplift. The nails must be spaced at a maximum of 6 inches on center along each tee.
3. Pop rivets shall be suitable for exterior use.
4. See USG Exterior Ceiling Application Guid for more details.

Table 4 - ZXLA System Load Rating and Performance

Main Tee	Main Tee Spacing (in)	Cross Tee Spacing (in)	Compression Post Spacing (in)	UL Class	Maximum Load Rating (psf)	Test Standard
ZXLA26	48	24	24	n/a	26	UL1897
ZXLA26	24	48	24	Class 30	30	UL580
ZXLA26	24	48	24	n/a	85	UL1897

Table 5 - ZXLA Rated Loads

Main Tee	ASTM Class[1]	Rated Load[2] (lbs./LF)		
		4' Hanger Spacing	5' Hanger Spacing	6' Hanger Spacing
ZXLA24	Intermediate Duty	12	6.6	3.6
ZXLA26	Heavy Duty	16	8.3	4.9

Notes:

1. ASTM Class is valid when ceiling grid is installed in accordance with ASTM C636 and/or ASTM E580
2. Rated loads are based upon the minimum of the load at a deflection limit of L/360 and the ultimate bending capacity divided by a safety factor of 2.0

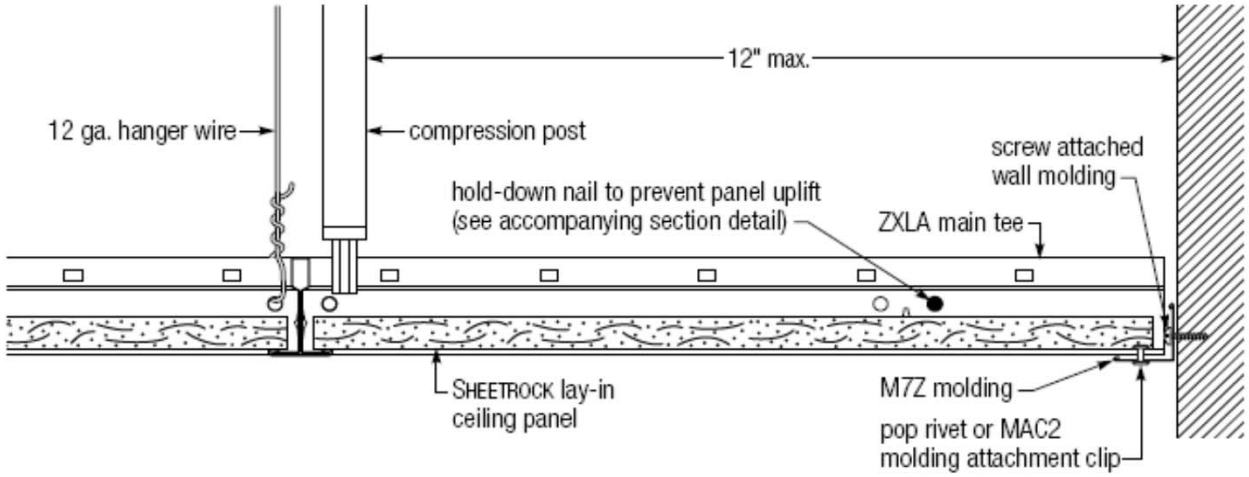

Figure 2 - ZXLA Main Tee Perimeter Detail Assembly

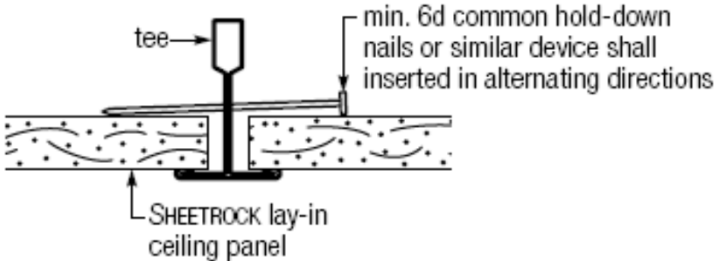

Figure 3 - Hold-Down Nail Detail

Paraline® II System:

1.Pop rivets shall be suitable for exterior use.

2. See USG exterior ceiling Application Guide for more details.

Table 6 - Paraline® II System Load Rating and Performance

Main Tee	Main Tee Spacing (in)	Cross Tee Spacing (in)	Compression Post Spacing (in)	UL Class	Maximum Load Rating (psf)	Test Standard
Symmetrical Carrier	48	no cross tees	24	n/a	46	UL1897
Symmetrical Carrier	24	no cross tees	24	Class 90	90	UL580

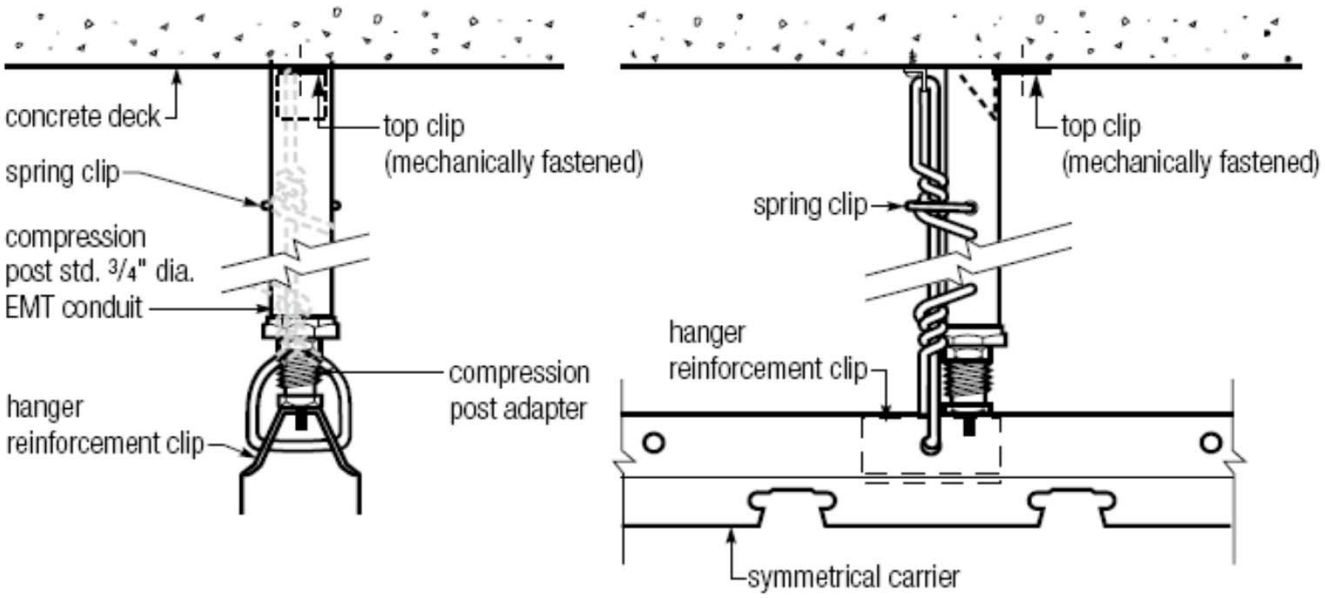

Figure 4 - Symmetrical Carrier Profile Detail

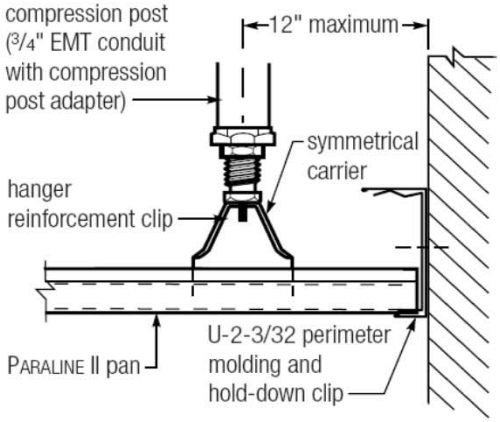

Figure 5 - Pans Perpendicular to Wall

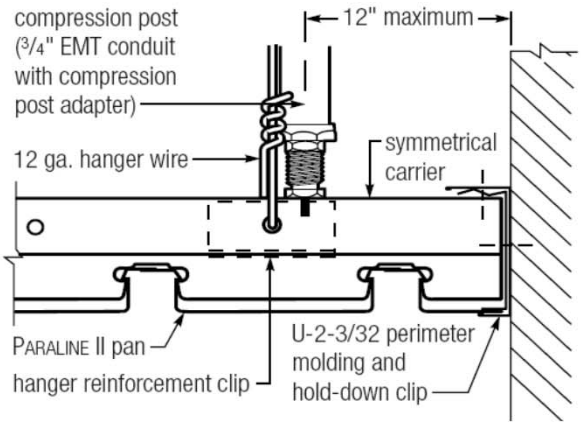

Figure 6 - Pans Parallel to Wall

Paraline Plus™ System:

1.Pop rivets shall be suitable for exterior use.
2. See USG exterior ceiling Application Guide for more details.

Table 7 - Paraline Plus™ System Load Rating and Performance

Main Tee	Main Tee Spacing (in)	Cross Tee Spacing (in)	Compression Post Spacing (in)	UL Class	Maximum Load Rating (psf)	Test Standard
Paralock	48	24	24	Class 30	30	UL580
Paralock	48	24	24	n/a	55	UL1897
Paralock	24	30	30	Class 60	60	UL580
Paralock	24	24	24	Class 90	90	UL580
Paralock	24	24	24	n/a	102	UL1897

Note:

UL fire-rated design number D-218 rating for 2-hour or 3-hour restrained or unrestrained assembly and 3-hour unrestrained beam rating.

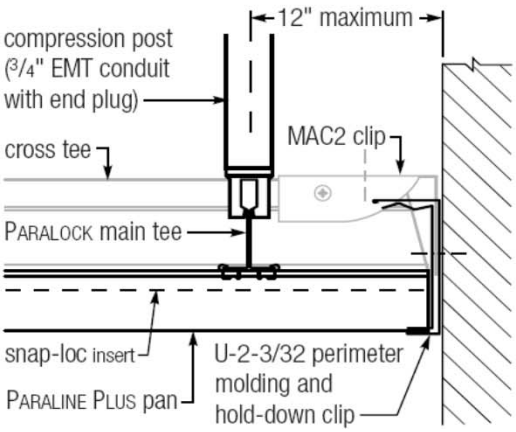

Figure 7 - Pans Perpendicular to Wall

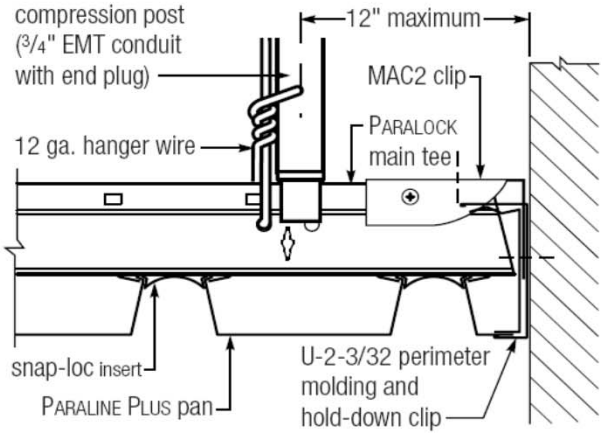

Figure 8 - Pans Parallel to Wall

Test Reports

Test Records in accordance with UL580 and UL1897 for Wind Uplift

Product Labeling

Each ceiling grid system shipment assembly, that is covered by this **Product Evaluation Report**, must have a label attached with at least the following information:

1. USG Interior, LLC Name and Address
2. Product Name
3. Plant Identifier & Date Code
4. *Pei* **ES** Information: See **Pei** Evaluation Report at p-e-i.com
5. UL Backstamp Information for Fire Resistance
6. Image of Permanent Label on Main Tee for Miami-Dade Resistance
7. ICC-ES ESR Report Number

Acceptable Evaluation Marks

Product Documentation

USG - The Gypsum Construction Handbook, Sixth Edition

USG Interiors, LLC Quality Control Manual for DONN® Brand Suspension Systems and USG Drywall Suspension Systems - Dated: August 4, 2015

USG Interiors, LLC Data Submittal Sheet - Celebration™ Metal Ceiling Panels -- Dated: January, 2015

USG Interiors, LLC Technical Document - USG Exterior Ceiling Applications including: Paraline®, Celebration™ and ZXLA™ Systems - Dated: March, 2012

USG Interiors, LLC Systems Guide - USG Exterior Ceiling Applications including: Paraline®, Celebration™ and ZXLA™ Systems - Dated: May, 2014

USG Interiors, LLC Data Submittal Sheet - Radar™ Ceramic ClimaPlus™ for ZXLA™ Suspension System -- Dated: June, 2008

USG Interiors, LLC Data Submittal Sheet - Paraline® Linear Metal Ceiling System -- Dated: April, 2010

USG Interiors, LLC Data Submittal Sheet - Paraline Plus™ Linear Metal Ceiling System -- Dated: March, 2005

USG Interiors, LLC Technical Data Sheet - Paraline Plus™ Linear Metal Ceiling System

USG Interiors, LLC MSDS #42-100-011 - DONN® Suspension System - ZXLA™ -- Dated: January 1, 2011

USG Interiors, LLC MSDS #41-200-050 - Radar™ Ceramic ClimaPlus™ -- Dated: January 1, 2011

USG Interiors, LLC MSDS #42-100-005 - DONN® Suspension System - DXLA™ -- Dated: January 1, 2011

ICC-ES Evaluation Report ESR - 1222 - Dated: December, 2013.

Quality Assurance Documentation

A Product Evaluation Service Agreement between *Pei* **Evaluation Service** and USG Interiors, LLC

An Inspection Agreement between *Progressive Engineering Inc.* and USG Interiors, LLC

Installation guide for the listed products in this **PER**