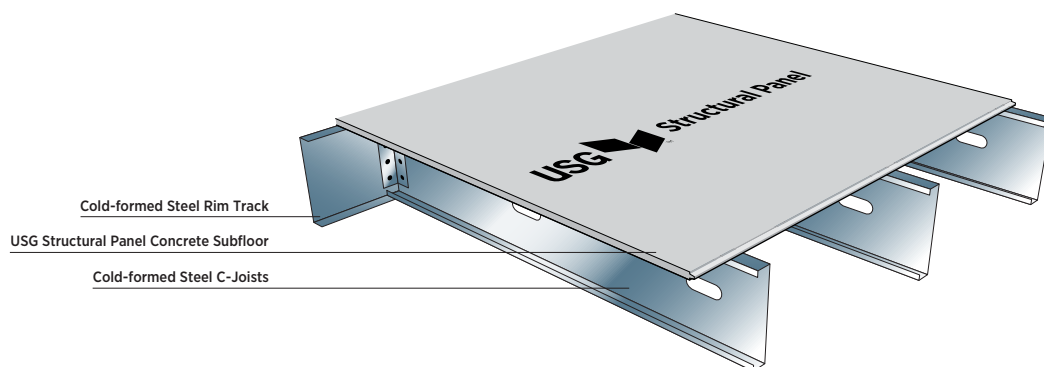


USG STRUCTURAL PANEL & JOBSITE STEEL MANUFACTURING

PRE-SHEATHED FLOOR OR ROOF DECK PANEL SYSTEM

The use of USG Structural Panel Concrete Subfloor and Roof Deck products complement the speed and quality controls of offsite construction offered by Jobsite Steel Manufacturing. Pre-sheathed and ready to set panel systems can accelerate a jobsite schedule by removing poured-in-place concrete subfloor and/or roof deck demands from the schedule's critical path. Projects can gain greater control of jobsite labor, time, and cost during the superstructure erection phase when converting to a pre-sheathed, noncombustible panel system with USG and Jobsite Steel Manufacturing.



In a controlled workshop, Jobsite Steel Manufacturing, using model to machinery technology, custom generates each section-specific light gauge panel. There, the Jobsite Steel fabrication team installs the USG Structural Panel to the light gauge steel panel using USG-drafted installation guidelines.

Pick-points are added, and the pre-sheathed panels are shipped per sequencing. At the jobsite the entire assembly is lifted into place and secured by trained Jobsite Steel installation crews. The panel is ledger hung from the inside walls. Once secure this single layer solution is complete: no topping required, no drying or shoring required. The project team can best utilize its resources with no waiting period before other trades can begin.

A NEW LEVEL OF SYSTEM PERFORMANCE

USG Structural Panels are high strength reinforced concrete panels for use in noncombustible construction, meeting active ASTM standard E136. This lightweight concrete panel product, at only 5 lbs. PSF, fundamentally impacts your wall sizing, lateral loading, podium size, and foundation demands. Incrementally, the USG Structural Panel products are components to a floor or roof environment that is mold-, moisture-, and termite-resistant.



AA-11

SUBFLOOR SYSTEMS

The USG Structural panel Concrete Subfloor and the Jobsite Steel cold-formed steel structural framing system consists of the USG Structural Panel fastened with screws to supporting Jobsite Steel 43mil. (18 gauge) to 97mil. (12 gauge) cold-formed steel c-joint floor joists. With the addition of joist cavity insulation and various combinations of supported USG Sheetrock® Brand gypsum panel ceiling systems, 1-, 2-, and 3- hour UL-certified rated floor/ceiling assemblies are available. These floor/ceiling systems are available with acoustic ratings for a variety of floor coverings, including carpet & pad, sheet vinyl, VCT, LVT, wood flooring and 12"x12" ceramic tiles. USG and Jobsite Steel provide multiple subfloor systems that are noncombustible, mold-, moisture-, termite-resistant and dimensionally stable floor assemblies.

ROOF SYSTEMS

The USG Structural panel Concrete Roof Deck and the Jobsite Steel cold-formed steel structural framing system consists of the USG Structural Panel fastened with screws to supporting Jobsite Steel 43mil. (18 gauge) to 97mil. (12 gauge) c-joint roof joists. The USG Structural Panel Concrete Roof Deck serves as the substrate for mechanically or adhered low-slope roof systems with UL-certified fire designs for 1-, 1.5- and 2-hour systems. The result is a noncombustible, mold-resistant, moisture-resistant, termite-resistant and dimensionally stable roof deck, allowing great design flexibility suitable for many roofing systems applications. See FM Approved ROOFNAV at www.FMApprovals.com/roofnav for the most up-to-date systems.

STRUCTURAL PERFORMANCE

The USG Structural Panels and the Jobsite Steel cold-formed steel structural framing system structural performance has great third-party certified uniformly distributed load, floor diaphragm and industry leading concentrated load capacities, as well as an ever-expanding set of FM certified uplift-resistance systems.

For the most up-to-date load capacity tables, see:

Concrete Subfloor

ICC ESR-1792 (www.ESR1792.com)

Progressive Engineering Inc. Product Evaluation Report PER-13067 (www.per13067.com)

Concrete Roof Deck

Progressive Engineering Inc. Product Evaluation Report PER-14076 (www.per14076.com)

Progressive Engineering Inc. Assembly Evaluation Report AER-17108 (www.aer17108.com)

EVALUATION REPORT SUMMARY

DESCRIPTION	REFERENCE
Evaluation Reports	ICC ESR-1792; PER-13067; PER-14076; AER-17108
Code Approvals	LARR #25682; FL#19921; MEA #214-07-M
UL 1-, 1.5-, 2-, 3-Hour Fire Resistance Designs	G556, G557, H505, H510, G602, P561, P562, H510

ATTAINABLE LOAD CAPACITIES

The following tables represent attainable load capacities for the USG Structural Concrete Panels fastened to Jobsite Steel cold-formed steel c-joint systems.

ATTAINABLE UNIFORM LIVE LOAD CAPACITIES ²		
Span Between Supports	Conditions	Total Allowable Load Capacity (PSF) ¹
12"	Dry or Wet	512
16"	Dry or Wet	283
24"	Dry or Wet	120

Notes:

1. Live load ratings have been determined from testing based upon a minimum 120psf service live load for the 24" span rating and a maximum panel live load deflection = L/360.
2. A factor of safety of 3.0 applied.
3. A minimum of two framing spans required per panel piece.
4. Tabulated live load ratings are valid for a service level dead load of 10psf or less.
5. See Table 3 in the Progressive Engineering Inc. Product Evaluation Report PER-13067 (www.per13067.com) for up-to-date uniform loading capacities.

ATTAINABLE LOAD CAPACITIES CONT.

ATTAINABLE SIMPLE BEAM DIAPHRAGM VALUES					
Panel Type	Support Spacing	Fastener Spacing		Blocking	Shear Strength
		Perimeter	Field		
Subfloor	16"	4"	12"	No	1462plf
		6"	12"		1395plf
	24"	4"	12"	No	1341plf
		6"	12"		1053plf
Roof Deck	24"	6"	12"	Yes	1468plf
	48"	4"	12"	Yes	2036plf

See Table 5 in the *Progressive Engineering Inc. Product Evaluation Report PER-13067* (www.per13067.com) for up-to-date simple beam floor diaphragm capacities and deflection equation.

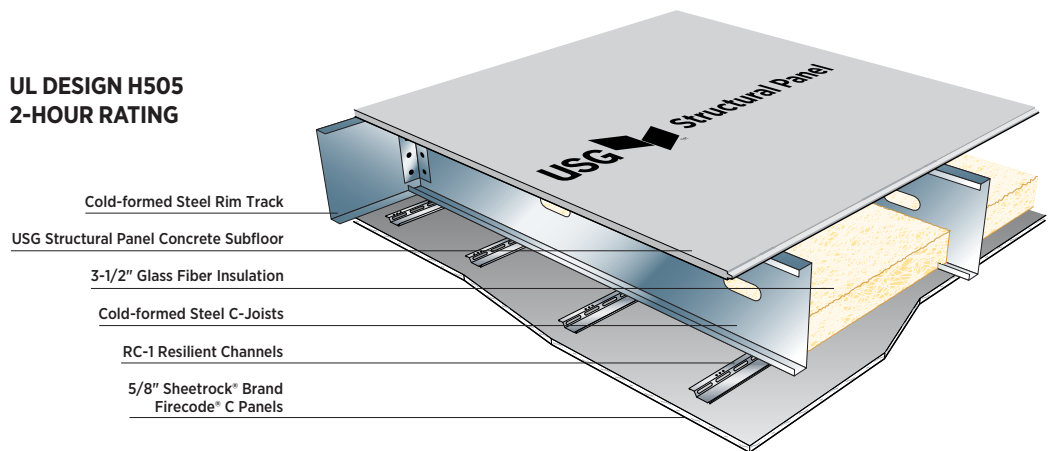
ATTAINABLE CANTILEVER DIAPHRAGM VALUES					
Panel Type	Joist Spacing	Fastener Spacing		Blocking	Shear Strength
		Perimeter	Field		
Subfloor	12"	4"	12"	No	772plf
		8"			1121plf
	16"	4"	12"	No	860plf
		8"			975plf
	24"	4"	12"	No	713plf
		8"			465plf
6"		1148plf			
Roof deck	48"	4"	12"	Yes	1641plf
	48"	8"	12"	Yes	1098plf

Notes:
See Table 6 in the *Progressive Engineering Inc. Product Evaluation Report PER-13067* (www.per13067.com) for up-to-date cantilever floor diaphragm capacities and deflection equation. See Table 4 in the same report for safety factors and resistance factors for diaphragms. For technical assistance, email questions to usgstructural@usg.com

FIRE DESIGN SYSTEMS

The USG Structural Panel & Jobsite Steel cold-formed steel c-joint systems can be used in multiple UL-certified fire designs with 1-, 1.5-, 2- and 3-hour ratings. These systems were all tested in accordance with ASTM E119/UL 263. Classified as a noncombustible system for floor/ceiling or roof/ceiling assemblies. The table below outlines the available systems.

**UL DESIGN H505
2-HOUR RATING**



**FIRE DESIGNS SYSTEMS
CONT.**

TABLE OF UL-CERTIFIED FIRE DESIGN SYSTEMS (www.USGStructuralUL.com)	
Floor/Ceiling Assemblies	Fire Rating
G556 (www.ULG556.COM)	1-, 1.5-, 2-Hour
G557 (www.ULG557.com)	2-Hour
H505 (www.ULH505.com)	1-, 2-Hour
G602 (www.ULG602.com)	2-Hour
H510 (www.ULH510.com)	3-Hour
Roof/Ceiling Assemblies	Fire Rating
P561 (www.ULP561.com)	1-, 1.5-, 2-Hour
P562 (www.ULP562.com)	1-Hour

The table above lists all the UL-certified designs in which the USG Structural Panel & Jobsite Steel cold-formed steel c-joint systems can be used. The development of new fire designs is ongoing, so please visit USG Structural UL-certified fire designs at www.USGStructuralUL.com for the most up-to-date list, or for technical assistance email queries to usgstructural@usg.com.

ACOUSTICAL PERFORMANCE

The USG Structural Panel & Jobsite Steel cold-formed steel c-joint systems achieve above the code minimum STC 50 value without any floor coverings. The UL-certified 2-hour design H505 attains a bare value of 54. Values recorded by following the Sound Transmission Coefficient (STC) when tested in accordance to ASTM E90, and Impact Isolation Class (IIC) when tested in accordance with ASTM E492.

The following table represents the attainable sound rating for Jobsite Steel cold-formed steel c-joints sheathed with USG Structural Panel Concrete Subfloors. For the most up-to-date acoustical information see your local USG Structural Sales Representative.

ACOUSTICAL RATINGS

2 -HOUR RATED H505 ASSEMBLY	10 in Steel C-Joist	
	STC	IIC
Bare	54	27
Carpet Only	56	71
Carpet & Pad	55	51
Sheet Vinyl	57-58	52-53
Sheet Vinyl with Backer	57-58	54-55
Vinyl Composition Tile (VCT)	57-58	50-53
Luxury Vinyl Tile (LVT)	57-58	50-53
Wood Laminate	58-59	50-51
1/2 in (12.7 mm) Engineered Wood	57	50-52
12 in x 12 in (305 mm x 305 mm) Ceramic Tile	59	54

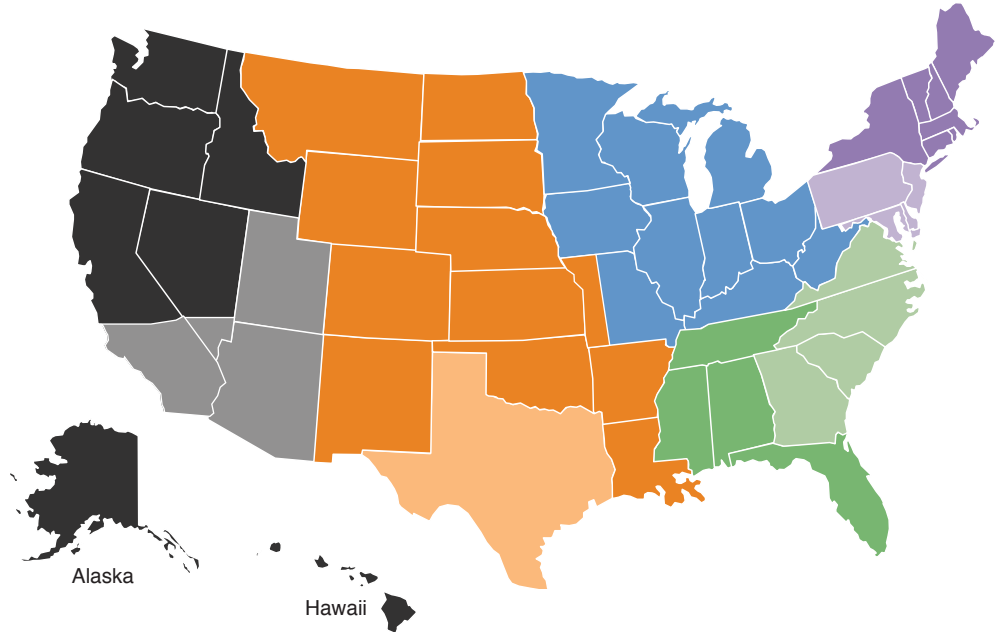
Notes:

1. Acoustical ratings are achieved on 10" (254 mm) Steel C-Joists with a single layer of USG Sheetrock® Brand EcoSmart Panels Firecode® X on 1/2" resilient channels.
2. Two layers of staggered 1/4" Fiberock Underlayment Panels were used under floor coverings and layered over either Kinetics Soundmatt or Pliteq Genie RST02 sound isolation mats, all supported by the USG Structural panel.
3. 12" (305 mm) and 14" (356 mm) Steel C-Joists values will be the same.
4. Ceiling constructed using 5/8" (15.9 mm) thick USG Sheetrock® Brand EcoSmart Panels Firecode® (ULIX), 28% lighter than 5/8" (15.9 mm) Type C USG Sheetrock® Brand Panels.
5. Bare system is for reference only. USG Structural Concrete Subfloor Panels are not intended to be left exposed.
6. Refer to the [USG Structural Fire and Acoustics Manual - SCPI00](#) for assembly details and flooring specifics.

**SERVICE AND PROJECT
SUPPORT**

To emphasize cost and timeline efficiency, Jobsite Steel Manufacturing engages early in the design process to offer design assistance and value engineering. Working in cooperation, USG technical product support runs design through installation. Contact your area USG Structural Solutions Sales Partner to begin the conversation.

CONTACT INFO



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To contact a Jobsite Steel Manufacturing representative email: info@jobstesteel.com, or visit www.jobstesteel.com.



PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

CUSTOMER SERVICE

800 USG.4YOU (874-4968)

EMAIL

usgstructural@usg.com

WEBSITE

usg.com/structural

MANUFACTURED BY

United States Gypsum Company
550 West Adams Street
Chicago, IL 60661

MSRP based upon full truckload delivered to jobsite:
Subfloor: \$4.50/sf
Roof Deck: \$5.40/sf

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SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.