

USG  
Ceiling  
Solutions

## USG Exterior Ceiling Systems

### SYSTEMS GUIDE



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# USG EXTERIOR CEILING SYSTEMS

## SYSTEMS GUIDE

For decades, USG exterior ceiling systems have been utilized in a wide variety of exterior applications because they not only satisfy stringent performance requirements and design criteria but also provide beauty and durability.

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# SYSTEMS OVERVIEW

## Exterior Ceiling Applications

### Introduction

USG provides six systems for use in exterior environments that are not directly exposed to the weather, such as under soffits, parking garages, covered entrances, or drive-throughs:

- Paraline® II Linear Metal Ceiling System<sup>1</sup>
- Paraline® Plus Linear Metal Ceiling System
- Celebration™ Snap-In Metal Panel Ceiling System
- Celebration™ Torsion Spring Metal Panel Ceiling System
- ZXLA™ with USG Sheetrock® Lay-In Ceiling Panel
- USG Drywall Suspension System

These ceiling systems combine traditional modules, elegant linear pans, or metal panels with a specially engineered suspension system to create dynamic ceilings featuring clean, contemporary planes.

These guidelines outline the design considerations, test results, and construction details for the installation of each USG exterior ceiling system. USG exterior assemblies were tested per UL 580, UL 1897, TAS 202, and TAS 203, and listed in PEI Evaluation Report, PER-12055.

For more information about UL Standards, please visit [www.UL.com](http://www.UL.com).

For more information about Florida Building Code Testing Application Standards (TAS), please visit [www.floridabuilding.org](http://www.floridabuilding.org).

### Celebration



<sup>1</sup> The Paraline II closed-reveal linear metal ceiling is the Paraline system appropriate for exterior ceiling applications.

# SYSTEMS OVERVIEW

## Performance Selector

### Linear Metal Ceiling Systems

	Main Tee / Carrier System	Spacing			Uplift Class	Test Standard	Maximum Load Rating <sup>1</sup> (w)	Equivalent Wind Speed <sup>2</sup> (v)
		Main Tee	Cross Tee	Compression Post				
Paraline II	Symmetrical Carrier	48 in.	N/A	24 in.	N/A	UL 1897	46 psf	134 mph
		24 in.	N/A	24 in.	Class 90	UL 580	90 psf	188 mph
		24 in.	N/A	24 in.	N/A	UL 1897	106 psf (downward load)	203 mph
Paraline Plus	Paralock Plus Carrier	48 in.	24 in.	24 in.	Class 30	UL 580	30 psf	108 mph
		48 in.	24 in.	24 in.	N/A	UL 1897	55 psf	147 mph
		24 in.	24 in.	30 in.	Class 60	UL 580	60 psf	153 mph
		24 in.	24 in.	24 in.	Class 90	UL 580	90 psf	188 mph
		24 in.	24 in.	24 in.	N/A	UL 1897	102 psf	200 mph
		24 in.	24 in.	24 in.	NOA No. 15-1223.05	Miami-Dade TAS 202 & 203	+75/ -35 psf	171 mph
		24 in.	24 in.	24 in.	N/A	UL 1897	17 psf (downward load)	81 mph

<sup>1</sup> Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

<sup>2</sup> Calculated using the simplified formula on page eight.

# SYSTEMS OVERVIEW

## Performance Selector

### Metal Panel Ceiling Systems

	Main Tee / Carrier System	Spacing			Uplift Class	Test Standard	Maximum Load Rating <sup>1</sup> (w)	Equivalent Wind Speed <sup>2</sup> (v)
		Main Tee	Cross Tee	Compression Post				
Celebration Snap-In Ceiling System with Fineline® DXFEV	DXFEVH 2924	48 in.	24 in.	24 in.	N/A	UL 1897	25 psf (downward load)	98 mph
		24 in.	24 in.	24 in.	Class 90	UL 580	90 psf	188 mph
		24 in.	24 in.	24 in.	N/A	UL 1897	102 psf	200 mph
		24 in.	24 in.	24 in.	NOA No. 15-1223.04	Miami-Dade TAS 202 & 203	+80 / -70 psf	176 mph
	DXFEVH 2930	30 in.	30 in.	30 in.	N/A	UL 1897	51 psf (downward load)	141 mph
		30 in.	30 in.	30 in.	N/A	UL 1897	68 psf	163 mph
30 in.		30 in.	30 in.	Class 60	UL 580	60 psf	153 mph	
Celebration Torsion Spring Metal Panel Ceiling System	ZXLA26	24 in.	24 in.	24 in.	Class 90	UL 580	90 psf	188 mph
		24 in.	24 in.	24 in.	N/A	UL 1897	133 psf	228 mph
		24 in.	24 in.	24 in.	NOA No. 16-0404.02	Miami-Dade TAS 202 & 203	73.3 psf	170 mph
		48 in.	24 in.	24 in.	Class 30	UL 580	30 psf	108 mph
		72 in.	24 in.	24/48 in.	Class 30	UL 580	30 psf	108 mph
		48 in.	24 in.	48 in.	Class 15	UL 580	15 psf	77 mph
		24 in.	24 in.	24 in.	N/A	UL 1897	13 psf (downward load)	71 mph

<sup>1</sup> Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

<sup>2</sup> Calculated using the simplified formula on page eight.

# SYSTEMS OVERVIEW

## Performance Selector

### USG Sheetrock® Brand Lay-In Ceiling Panel

ZXLA with USG Sheetrock®  
Brand Lay-In Ceiling Panel

Main Tee / Carrier System	Spacing			Uplift Class	Test Standard	Maximum Load Rating <sup>1</sup> (w)	Equivalent Wind Speed <sup>2</sup> (v)
	Main Tee	Cross Tee	Compression Post				
ZXLA26	48 in.	24 in.	24 in.	N/A	UL 1897	26 psf	101 mph
	24 in.	48 in.	24 in.	Class 30	UL 580	30 psf	108 mph
	24 in.	48 in.	24 in.	N/A	UL 1897	85 psf	182 mph
	48 in.	24 in.	24 in.	N/A	UL 1897	21 psf	91 mph

### USG Drywall Suspension System

USG Drywall Suspension  
System

Main Tee / Carrier System	Spacing			Uplift Class	Test Standard	Maximum Load Rating <sup>1</sup> (w)	Equivalent Wind Speed <sup>2</sup> (v)
	Main Tee	Cross Tee	Compression Post				
DGLW26	48 in.	24 in.	24 in.	Class 15	UL 580	15 psf	77 mph
	48 in.	16 in.	30 in.	Class 15	UL 580	15 psf	77 mph
	48 in.	24 in.	30 in.	Class 15	UL 580	15 psf	77 mph
	24 in.	24 in.	30 in.	Class 30	UL 580	30 psf	108 mph
	24 in.	24 in.	42 in.	Class 60	UL 580	60 psf	153 mph
	24 in.	24 in.	30 in.	Class 90	UL 580	90 psf	188 mph
	24 in.	16 in.	24 in.	Class 90	UL 580	90 psf	188 mph
	24 in.	16 in.	24 in.	NOA No. 15-0618.06	Miami-Dade TAS 202 & 203	+75/-75 psf	171 mph

<sup>1</sup> Ultimate loads per UL 1897 are 15% greater than the values presented. The values presented for UL 1897 have a 0.85 coefficient applied to account for possible installation deficiencies.

<sup>2</sup> Calculated using the simplified formula on page eight.

# SYSTEMS OVERVIEW

## Wind Design Notes

### Miles Per Hour (mph) versus Pounds Per Square Foot (psf)

ASCE 7-10, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI), contains a formula that converts wind speed into static pressure. The formula is a comprehensive approach to include factors such as height or location of the building or directionality of wind loads affecting the structure expressed as:

$$q_z = 0.00256 K_z K_{zt} K_d V^2$$

$q_z$  = velocity pressure evaluated at height  $z$  above the ground

$K_z$  = velocity pressure exposure coefficient

$K_{zt}$  = topographic factor

$K_d$  = wind directionality factor

$V$  = basic wind speed

All the test results presented in this guide were achieved by measuring the maximum pressure that the system can withstand. The formula above provides guidance on how to estimate the wind speed correlating to the particular pressure. Because the factors ( $K_z$ ,  $K_{zt}$ ,  $K_d$ ) are project specific, they were conservatively estimated to be equal to one. Therefore, the simplified formula to estimate wind speed based on given pressures is as follows:

$$V = \sqrt{q_z / 0.00256}$$

Wind load provisions of ASCE 7-10 are recognized in the 2015 International Residential Code (IRC) and the 2015 International Building Code (IBC). The information presented is correct to the best of our knowledge at the date of issuance. Because codes continue to evolve, check with a local official prior to designing and installing a ceiling system. Other restrictions and exemptions may apply.

## Wind Pressure Test Methods

USG exterior assemblies were tested for both uplift (positive) and downward (negative) pressures. Testing for both positive and negative pressures offers a more complete assessment of the performance of USG assemblies. It also allows USG to evaluate and certify the comparative resistance of USG assemblies to both positive and negative pressures. With the publication of this thorough wind load assessment, design professionals can be assured USG exterior assemblies satisfy the most stringent performance requirements and design criteria.



# LINEAR METAL CEILING SYSTEMS

Paraline® II

Paraline® Plus

## TECHNICAL DATA

	Spacing			Uplift Class	Test Standard	Maximum Load Rating (w)	Equivalent Wind Speed (v)	Reference
	Main Tee	Cross Tee	Compression Post					
Paraline II	48 in.	N/A	24 in.	N/A	UL 1897	46 psf	134 mph	<a href="#">page 14</a>
	24 in.	N/A	24 in.	Class 90	UL 580	90 psf	188 mph	<a href="#">page 15</a>
	24 in.	N/A	24 in.	N/A	UL 1897	106 psf (downward load)	203 mph	<a href="#">page 16</a>
Paraline Plus	48 in.	24 in.	24 in.	Class 30	UL 580	30 psf	108 mph	<a href="#">page 20</a>
	48 in.	24 in.	24 in.	N/A	UL 1897	55 psf	147 mph	
	24 in.	24 in.	30 in.	Class 60	UL 580	60 psf	153 mph	<a href="#">page 21</a>
	24 in.	24 in.	24 in.	Class 90	UL 580	90 psf	188 mph	<a href="#">page 22</a>
	24 in.	24 in.	24 in.	N/A	UL 1897	102 psf	200 mph	
	24 in.	24 in.	24 in.	NOA No. 15-1223.05	Miami-Dade TAS202 & 203	+75/-35 psf	171 mph	
	24 in.	24 in.	24 in.	N/A	UL 1897	17 psf (downward load)	81 mph	<a href="#">page 23</a>



# PARALINE® II AND PARALINE® PLUS

## Wind Resistance

USG Paraline® ceiling systems may be used for sheltered exterior applications not directly exposed to the weather. The Paraline II and Paraline Plus systems have been tested for wind load resistance. The two units of measure commonly used are miles per hour (mph) and pounds per square foot (psf), equated by the methods in ASCE 7, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI).<sup>1</sup>

**Limitations:** The Paraline finish is not UV-resistant; therefore, these ceiling systems should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. These ceiling systems are not suitable for areas subject to high concentrations of acid rain. Indirect exposure to severe environmental conditions may shorten the lifespan of these products. The specific design of exterior ceiling installations requires the review and approval of the architect or engineer of record. For more information refer to *Paraline® Linear Metal Ceiling Systems* IC463.

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### Technical Data

- The wind pressure is presented in accordance with applicable test standards.
- Compression posts used for the tests were USG compression posts or minimum 1-5/8 in., 20-gauge steel studs (maximum length of 24 in.).

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### Guidelines

- The building structure from which the Paraline system is suspended and spaced, as well as hanger wire and compression post attachment methods, must be capable of withstanding the loads applied during wind conditions.
- The compression post shall be positively attached to the structure. For further information on the USG Compression Post, see page 57.
- Other materials can be used for compression posts, provided the compressive strength and attachment method are approved for use by a local structural engineer.
- The architect's details must cover the design and location of expansion joints and meet all applicable building code requirements.

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### Panel Sizes

The Paraline and Paraline Plus systems presented in this guide can accommodate all available panel sizes. The performance values are not limited to a particular panel size. All available panel sizes will meet the performance values presented.

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<sup>1</sup>The system shall comply with local wind load requirements. The engineer of record shall determine the final recommendation for the design wind pressure requirements of each project.

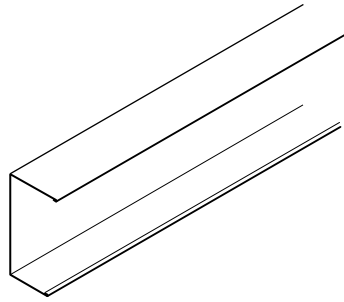
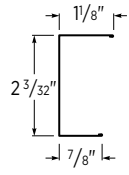
For more information about Paraline linear metal ceiling systems, visit [usg.com](http://usg.com)

# PARALINE® II

## System Components

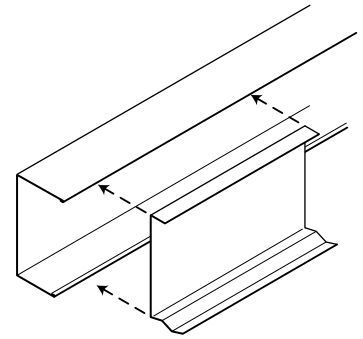
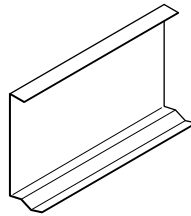
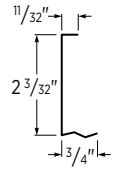
### Perimeter Molding

#### U-2-3/32



### Accessories

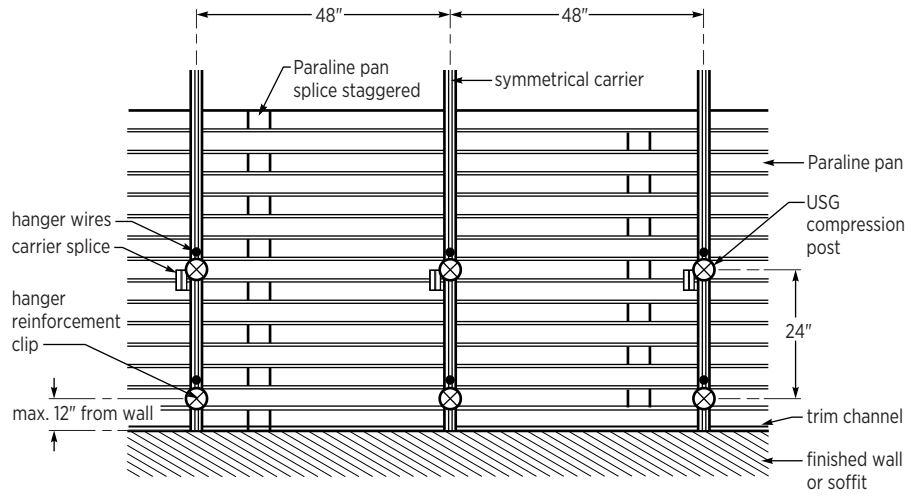
#### U-2-3/32 Hold-Down Clip



# PARALINE® II

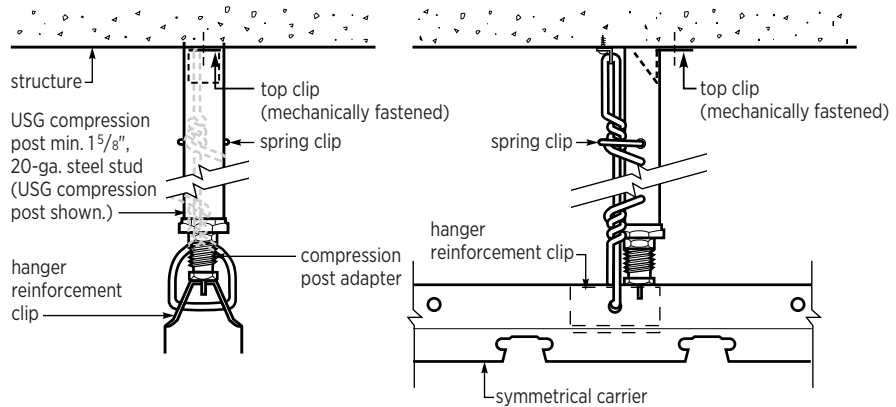
## Application Details

### General Layout<sup>1</sup>

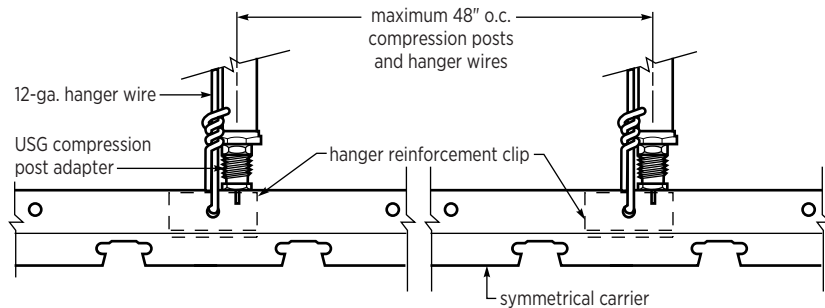


<sup>1</sup> The product layout and spacing will vary based on the load rating and uplift class. Refer to the technical data and associated reference pages for details.

### USG Symmetrical Carrier Run



### Compression Post Detail

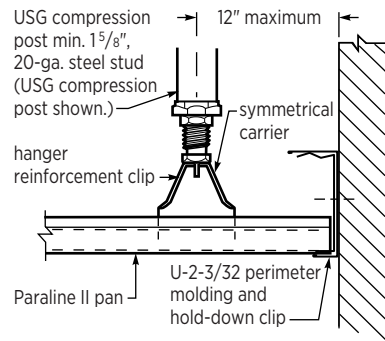


# PARALINE® II

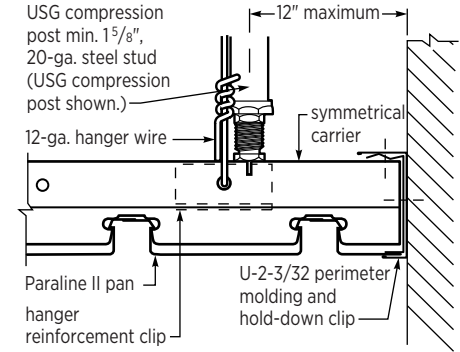
## Application Details

### Wall Intersection

#### Pans Perpendicular to Wall



#### Pans Parallel to Wall



**Note:** Pop rivets are suitable for exterior use.

USG compression posts or min. 1-5/8", 20-ga. steel studs may be used. A USG compression post is shown.

# PARALINE® II

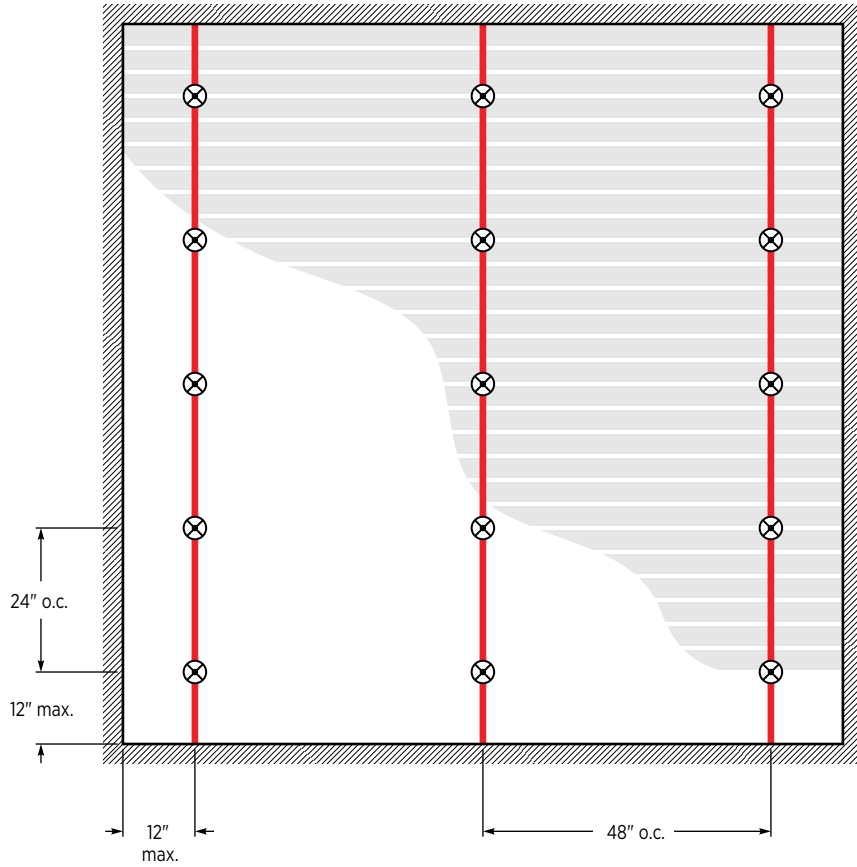
**UL 1897**  
**46 psf**

**Main Tees:** 48 in. o.c.

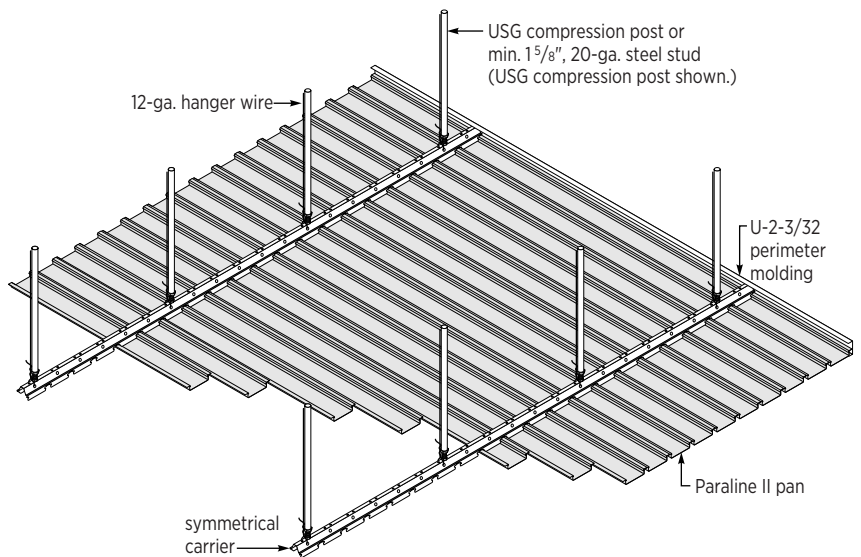
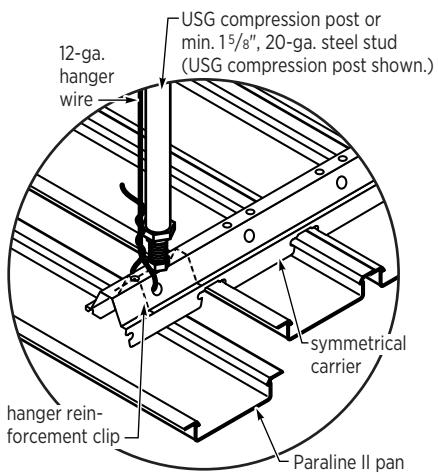
**Compression Posts:** 24 in. o.c.

⊗ Hanger & Compression Post

— Paraline Symmetrical Carrier



## Paraline II Assembly

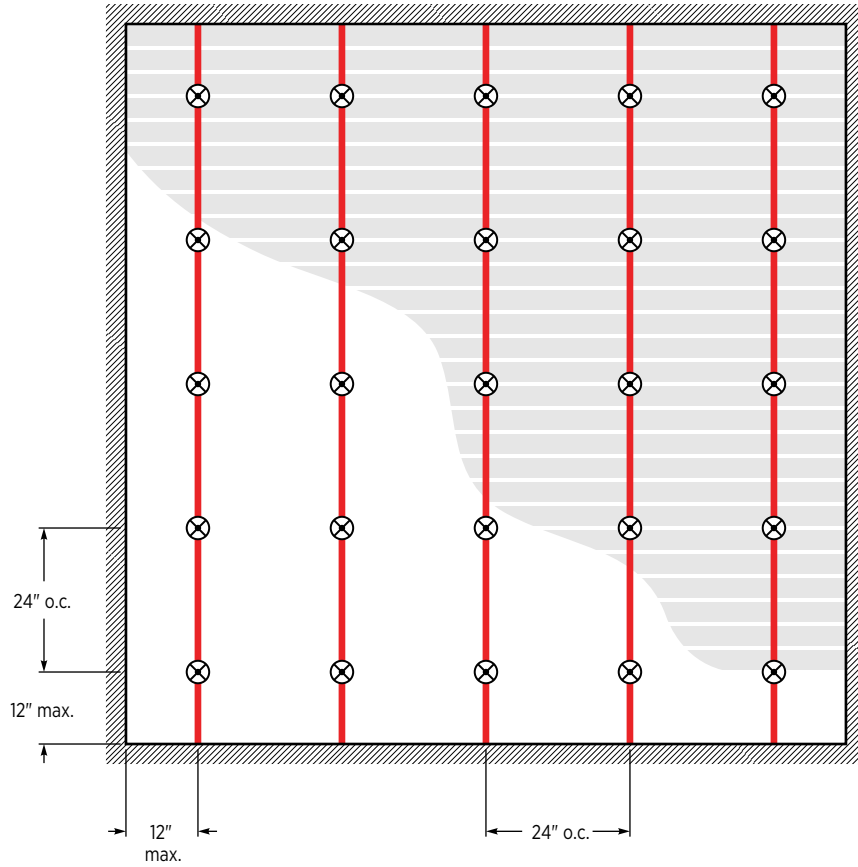


# PARALINE® II

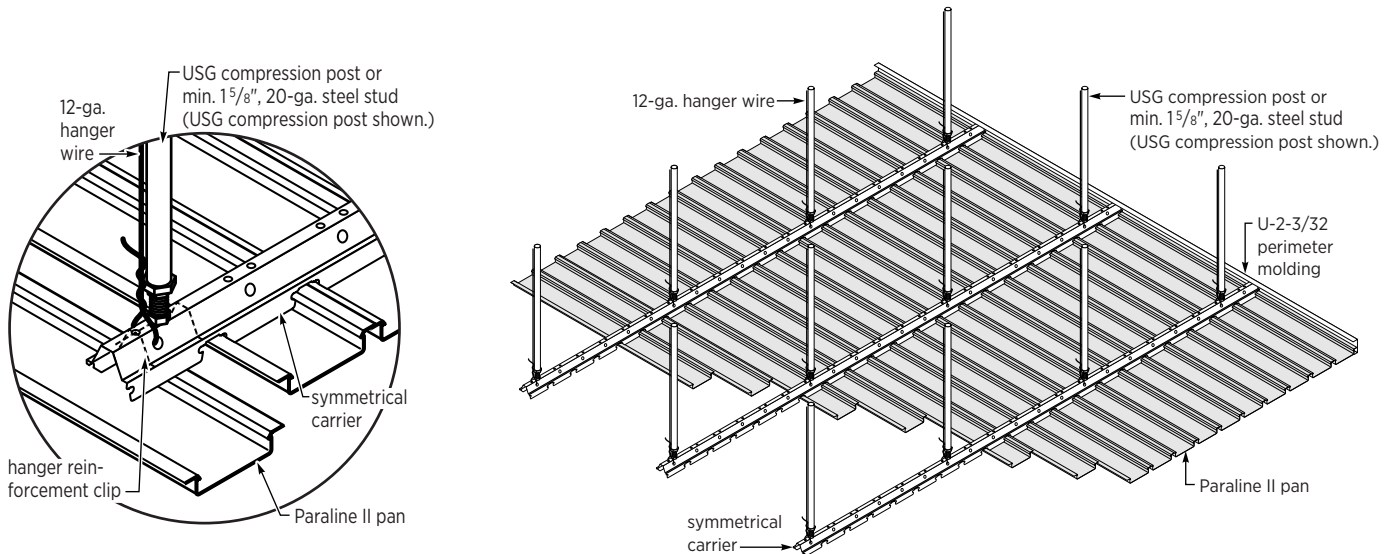
**UL 580  
Class 90**

**Main Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.

- ⊗ Hanger & Compression Post
- Paraline Symmetrical Carrier



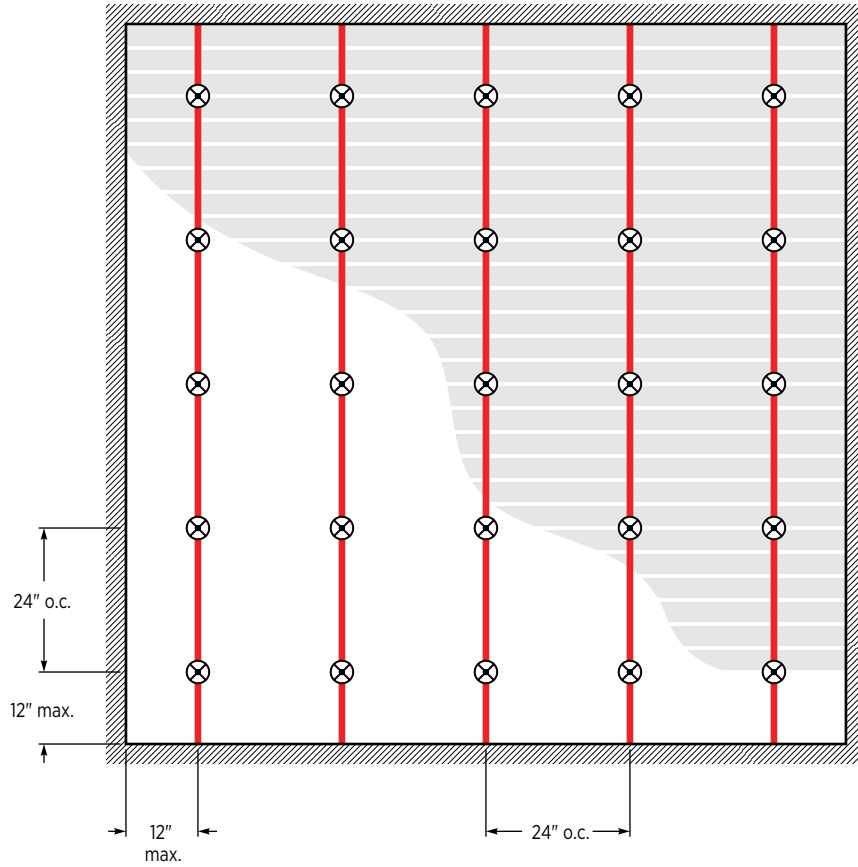
## Paraline II Assembly



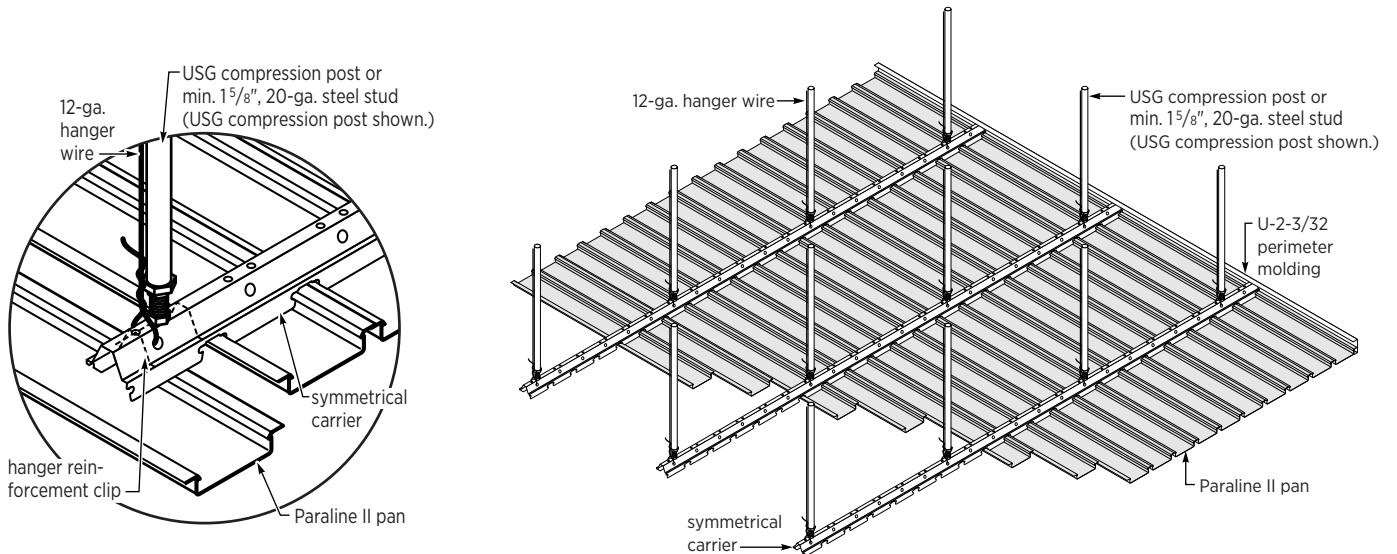
# PARALINE® II

## UL 1897 106 psf (Downward Load)

- Main Tees:** 24 in. o.c.
- Compression Posts:** 24 in. o.c.
- ⊗ Hanger & Compression Post
- Paraline Symmetrical Carrier



### Paraline II Assembly



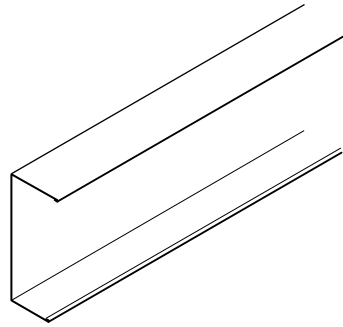
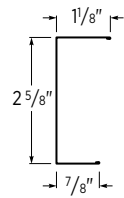


# PARALINE® PLUS

## System Components

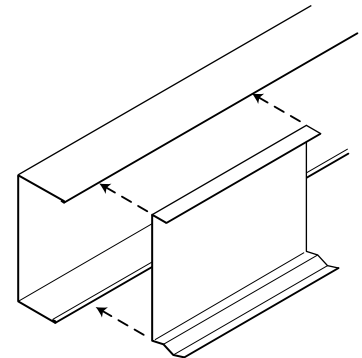
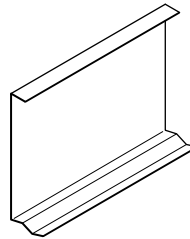
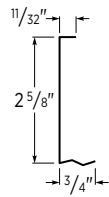
### Perimeter Molding

#### U-2-5/8



### Accessories

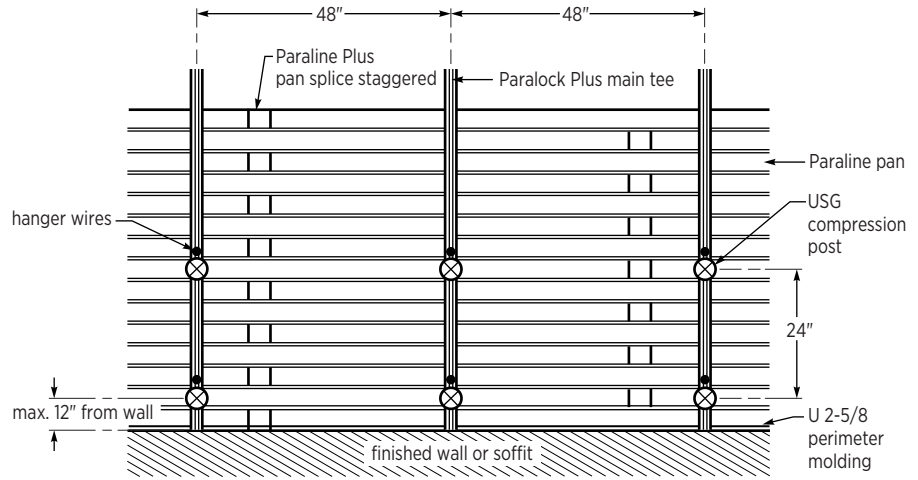
#### U-2-5/8 Hold-Down Clip



# PARALINE® PLUS

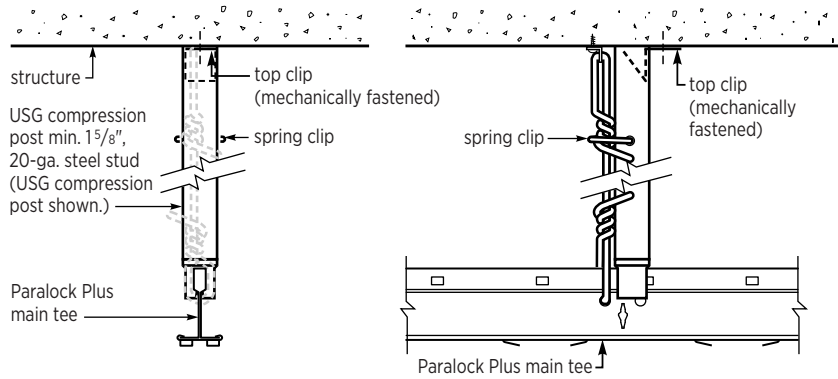
## Application Details

### General Layout<sup>1</sup>

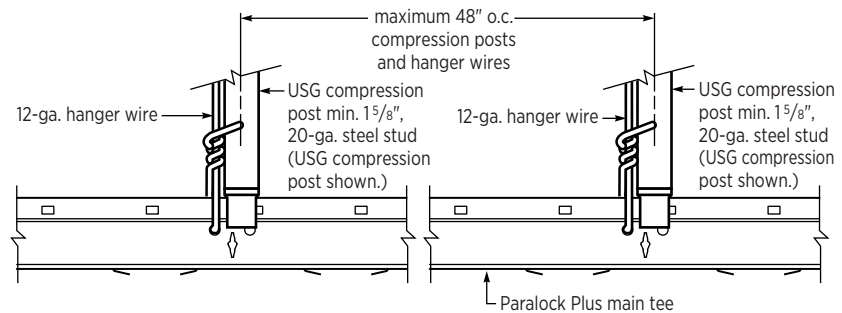


<sup>1</sup> The product layout and spacing will vary based on the load rating and uplift class. Refer to the technical data and associated reference pages for details.

### Paralock Carrier Run



### Post Detail

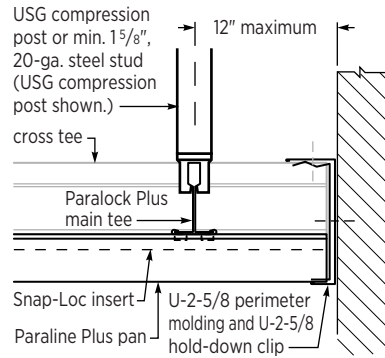


# PARALINE® PLUS

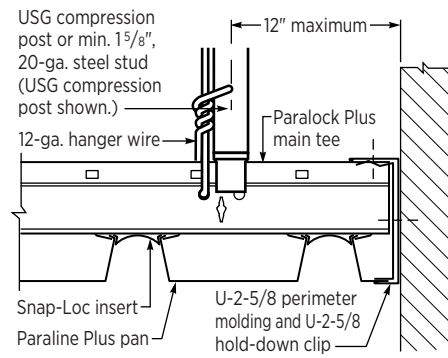
## Application Details

### Wall Intersection

#### Pans Perpendicular to Wall



#### Pans Parallel to Wall



**Notes:** Pop rivets are suitable for exterior use. Field notch the top flange of the molding at the grid intersection. USG compression posts or min. 1-5/8", 20-ga. steel studs may be used. A USG compression post is shown.

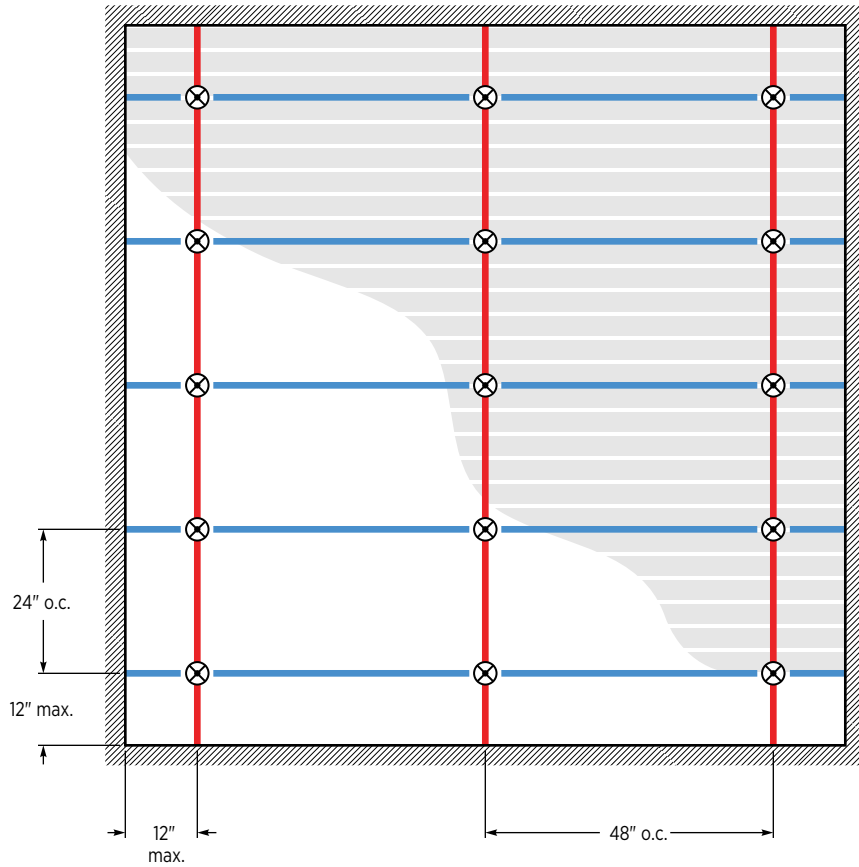
# PARALINE® PLUS

**UL 580**  
**Class 30**

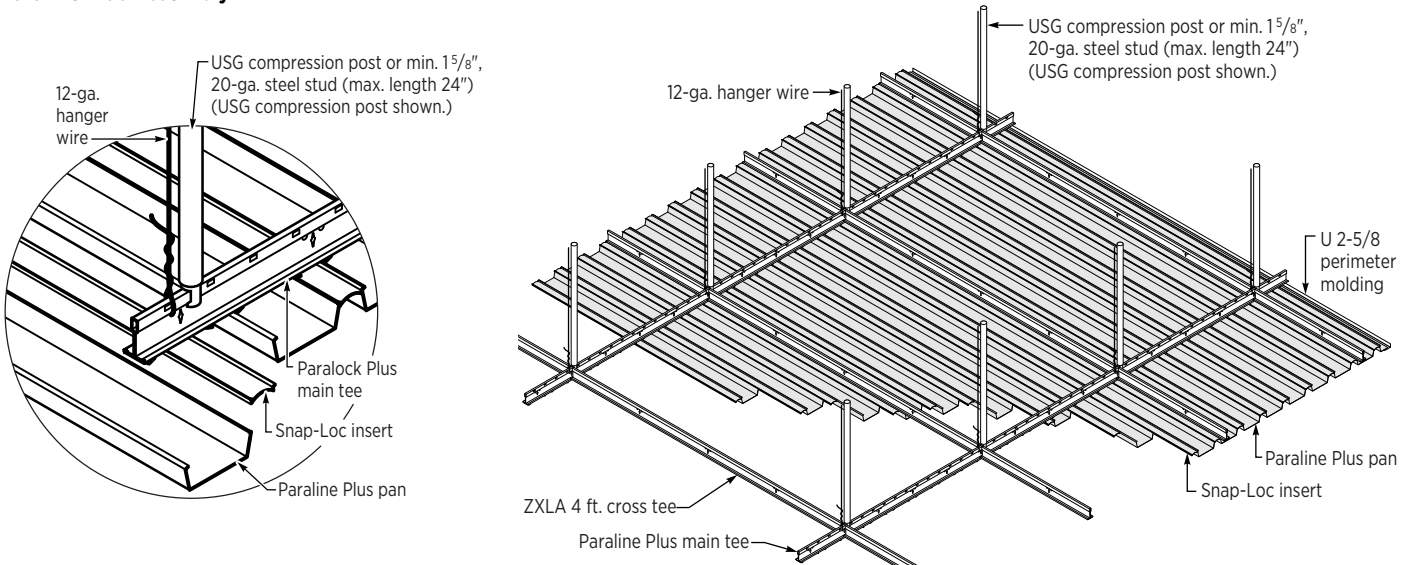
**UL 1897**  
**55 psf**

**Main Tees:** 48 in. o.c.  
**Compression Posts:** 24 in. o.c.  
**Cross Tees:** 24 in. o.c.

- ⊗ Hanger & Compression Post
- Paralock Plus Main Tee
- ZXLA424 (48 in. Cross Tee)



## Paraline Plus Assembly



# PARALINE® PLUS

## UL 580 Class 60

**Main Tees:** 24 in. o.c.

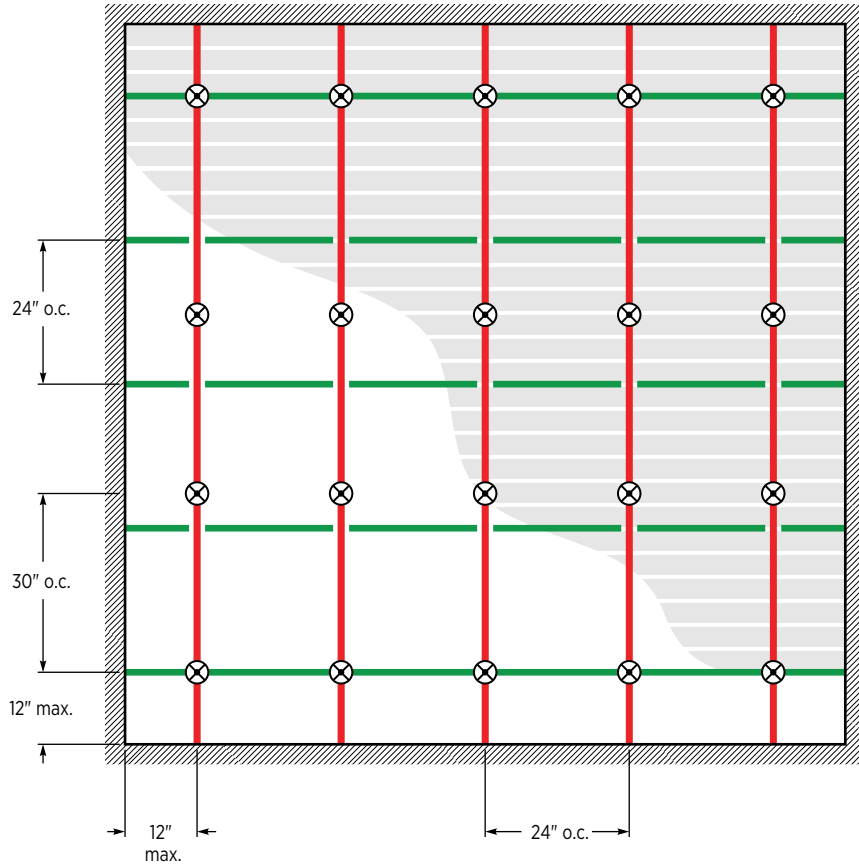
**Compression Posts:** 30 in. o.c.

**Cross Tees:** 24 in. o.c.

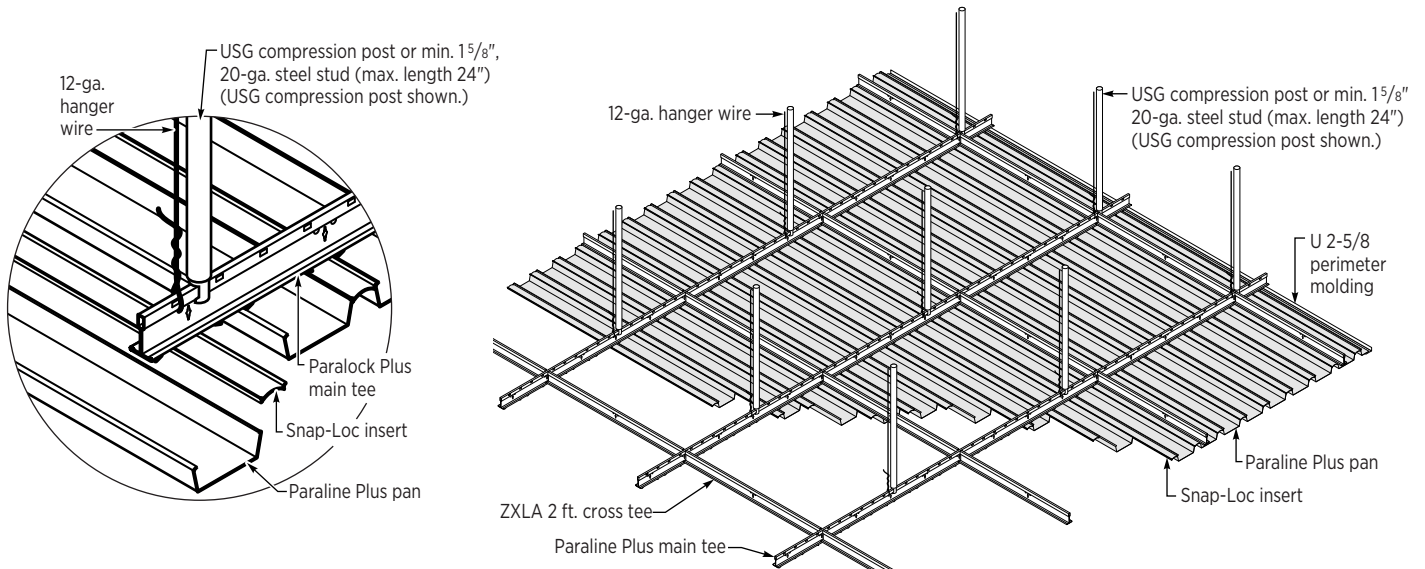
⊗ Hanger & Compression Post

— Paralock Plus Main Tee

— ZXLA224 (24 in. Cross Tee)



### Paraline Plus Assembly



# PARALINE® PLUS

**UL 580**  
**90 psf**

**UL 1897**  
**102 psf**

**Miami-Dade NOA No. 15-1223.05**  
**171 mph**

**Main Tees:** 24 in. o.c.

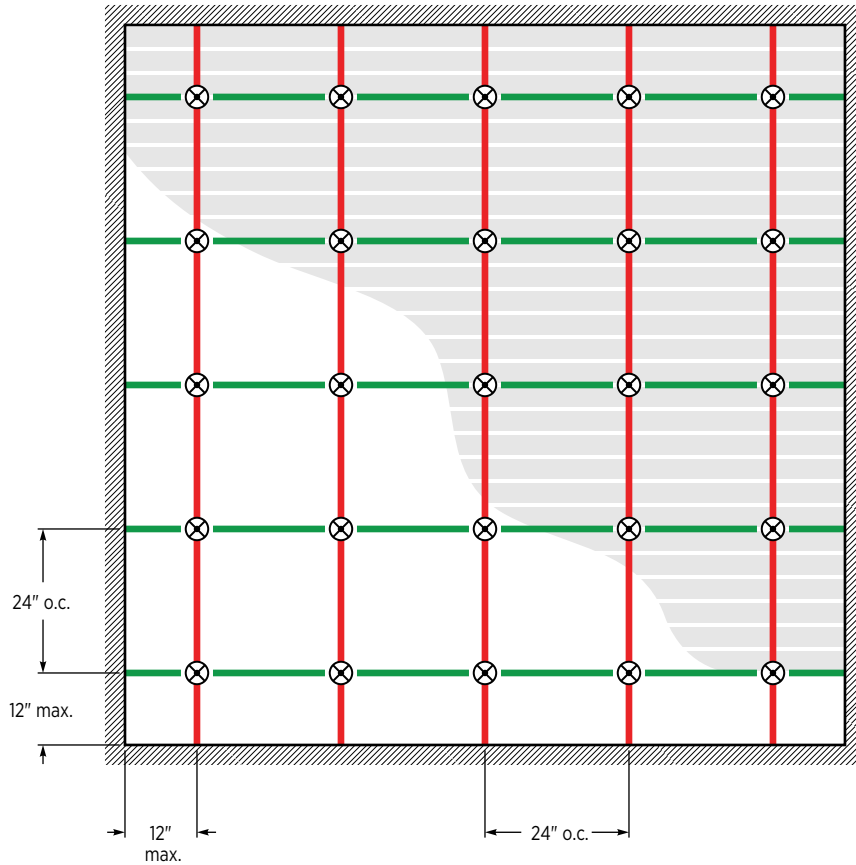
**Compression Posts:** 24 in. o.c.

**Cross Tees:** 24 in. o.c.

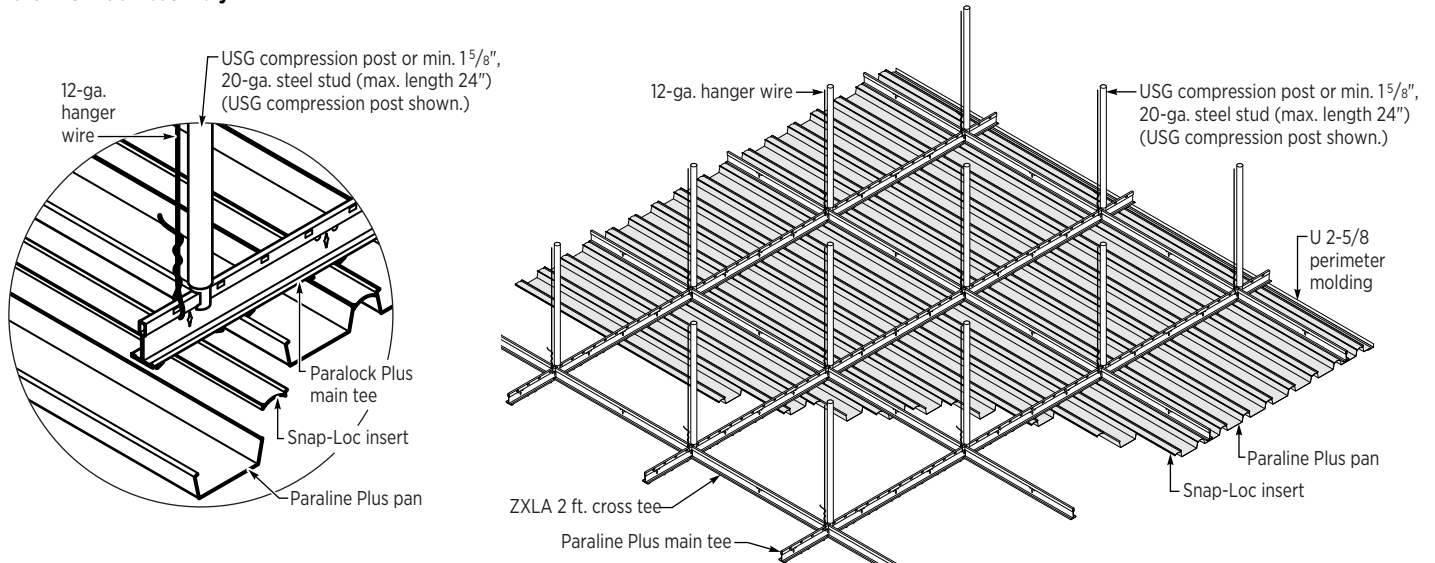
⊗ Hanger & Compression Post

— Paralock Plus Main Tee

— ZXLA224 (24 in. Cross Tee)



## Paraline Plus Assembly



# PARALINE® PLUS

## UL 1897 17 psf (Downward Load)

**Main Tees:** 24 in. o.c.

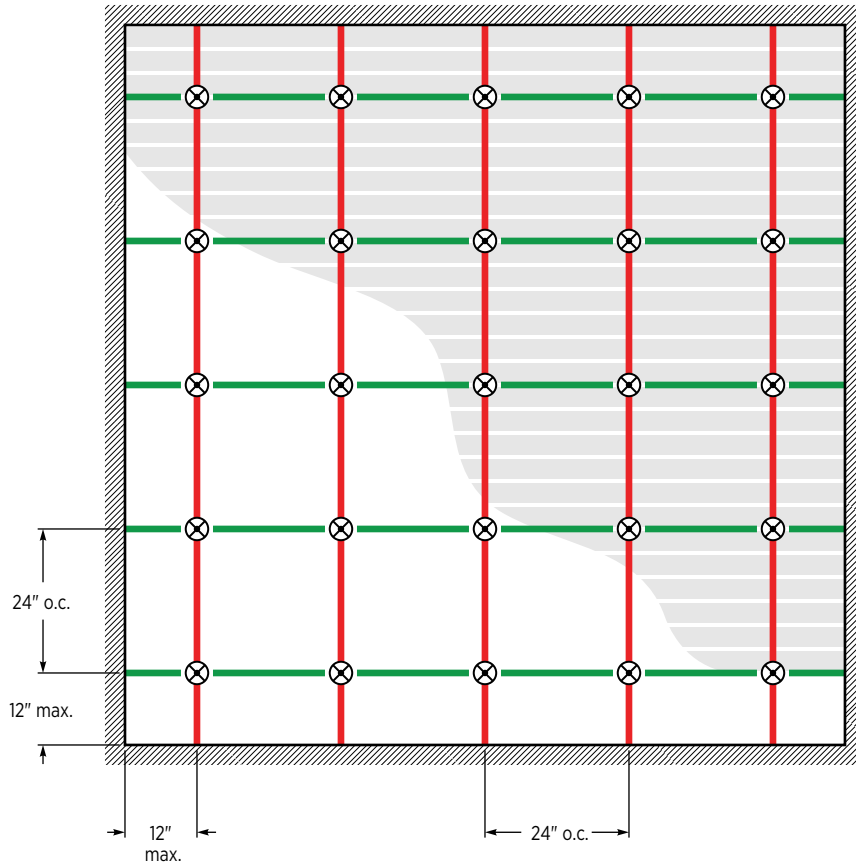
**Compression Posts:** 24 in. o.c.

**Cross Tees:** 24 in. o.c.

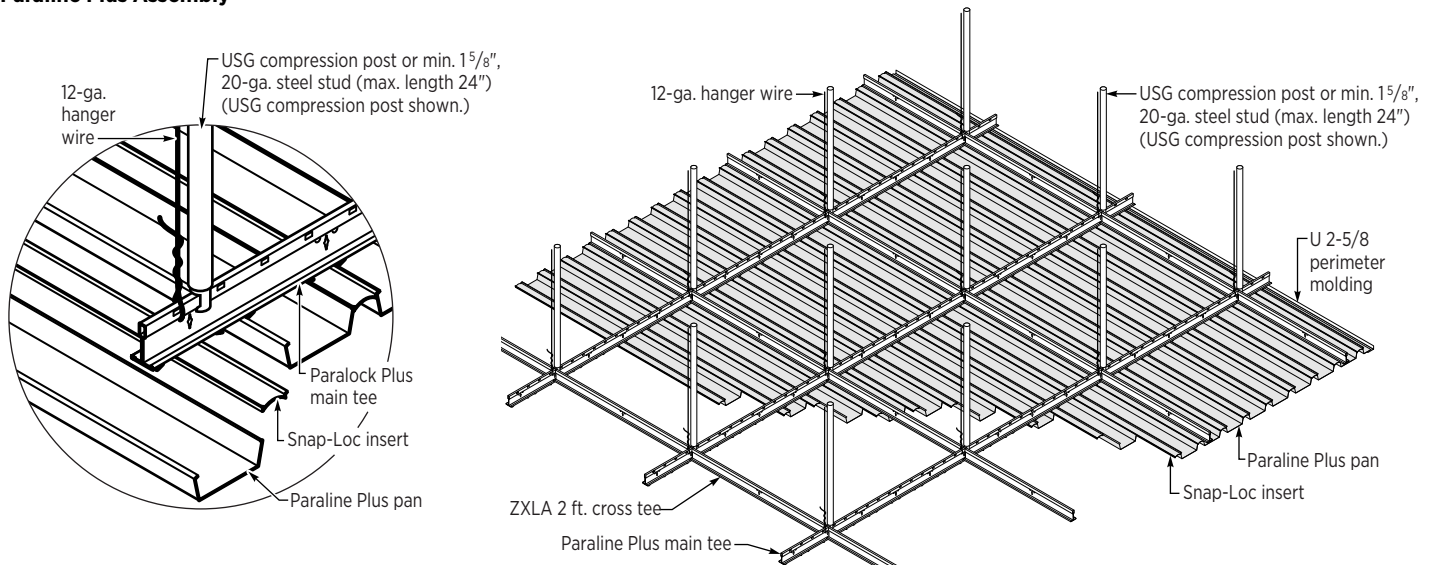
⊗ Hanger & Compression Post

— Paralock Plus Main Tee

— ZXLA224 (24 in. Cross Tee)



### Paraline Plus Assembly



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# METAL PANEL CEILING SYSTEMS

## Celebration™ Snap-In

## Celebration™ Torsion Spring

### TECHNICAL DATA

#### Celebration Snap-In

##### Fineline DXFEVH 2924

	Spacing			Uplift Class	Test Standard	Maximum Load Rating (w)	Equivalent Wind Speed (v)	Reference
	Main Tee	Cross Tee	Compression Post					
	48 in.	24 in.	24 in.	N/A	UL 1897	25 psf (downward load)	98 mph	<a href="#">page 28</a>
	24 in.	24 in.	24 in.	Class 90	UL 580	90 psf	188 mph	<a href="#">page 29</a>
	24 in.	24 in.	24 in.	N/A	UL 1897	102 psf	200 mph	
	24 in.	24 in.	24 in.	NOA No. 15-1223.04	Miami-Dade TAS202 & 203	+80 / -70 psf	176 mph	
	30 in.	30 in.	30 in.	N/A	UL 1897	51 psf (downward load)	141 mph	<a href="#">page 30</a>
	30 in.	30 in.	30 in.	N/A	UL 1897	68 psf	163 mph	<a href="#">page 31</a>
	30 in.	30 in.	30 in.	Class 60	UL 580	60 psf	153 mph	

#### Celebration Torsion Spring

##### ZXLA26

	24 in.	24 in.	24 in.	Class 90	UL 580	90 psf	188 mph	<a href="#">page 33</a>
	24 in.	24 in.	24 in.	N/A	UL 1897	133 psf	228 mph	
	24 in.	24 in.	24 in.	NOA No. 16-0404.02	Miami-Dade TAS202 & 203	73.3 psf	170 mph	
	48 in.	24 in.	24 in.	Class 30	UL 580	30 psf	108 mph	<a href="#">page 34</a>
	72 in.	24 in.	24/48 in.	Class 30	UL 580	30 psf	108 mph	<a href="#">page 35</a>
	48 in.	24 in.	48 in.	Class 15	UL 580	15 psf	77 mph	<a href="#">page 36</a>
	24 in.	24 in.	24 in.	N/A	UL 1897	13 psf (downward load)	71 mph	<a href="#">page 37</a>

# CELEBRATION™ SNAP-IN

# CELEBRATION™ TORSION SPRING

## Wind Resistance

Both USG Celebration™ Snap-In and Torsion Spring metal panel ceiling systems may be used for sheltered exterior applications not directly exposed to the weather. Celebration Snap-In and Torsion Spring metal panel ceiling systems have been tested for wind load resistance. The two units of measure commonly used are miles per hour (mph) and pounds per square foot (psf), equated by methods in ASCE 7, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI).<sup>1</sup>

**Limitations:** The Celebration finish is not UV-resistant; therefore, the Celebration Snap-In and Torsion Spring metal panel ceiling systems should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. These systems are not suitable for areas subject to high concentrations of acid rain. Indirect exposure to severe environmental conditions may shorten the lifespan of these products. The specific design of exterior ceiling installations requires the review and approval of the architect or engineer of record. For more information refer to *Celebration™ and Panz™ Metal Ceiling Systems*, IC415.

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### Technical Data

- The wind pressure is presented in accordance with applicable test standards.
- Compression posts used for the tests were USG compression posts or minimum 1-5/8 in., 20-gauge steel studs (maximum length of 24 in.).

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### Guidelines

- The building structure from which the Celebration Snap-In or Torsion Spring ceiling system is suspended and spaced, as well as the hanger wire, compression posts, or studs used in the assembly, must be capable of withstanding the loads applied during wind conditions.
- Posts or studs shall be positively attached to the structure. For further information on the USG Donn Brand Compression Post, [see page 57](#).
- Heavy duty main tees shall be used.
- Other materials can be used for compression posts if the compressive strength and attachment method are approved for use by a local structural engineer.
- The architect's details must cover the design and location of expansion joints and meet all applicable building code requirements.

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### Panel Sizes

The Celebration Snap-In systems presented in this guide can accommodate all available panel sizes. The performance values are not limited to a particular panel size. All available panel sizes will meet the performance values presented.

The Celebration Torsion Spring systems presented in this guide can accommodate the following panel sizes: 2 ft. x 2 ft., 2 ft. x 4 ft., 2 ft. x 6 ft., 2 ft. x 8 ft., and 4 ft. x 4 ft.

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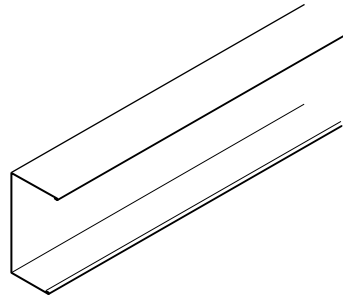
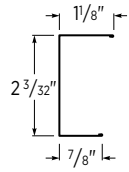
<sup>1</sup>The system shall comply with local wind load requirements. The engineer of record shall determine the final recommendation for the design wind pressure requirements of each project. For more information about Celebration metal panel ceiling systems, visit [usg.com](http://usg.com)

# CELEBRATION™ SNAP-IN

## System Components

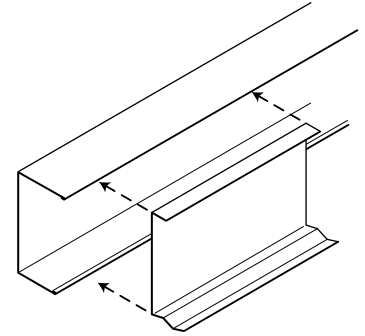
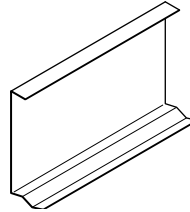
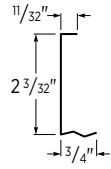
### Perimeter Molding

#### U-2-3/32

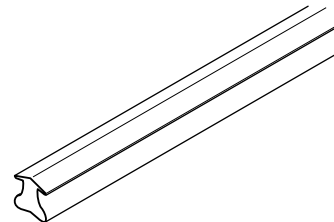
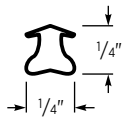


### Accessories

#### U-2-3/32 Hold-Down Clip



#### CA1 Arrowhead Reveal Spacer



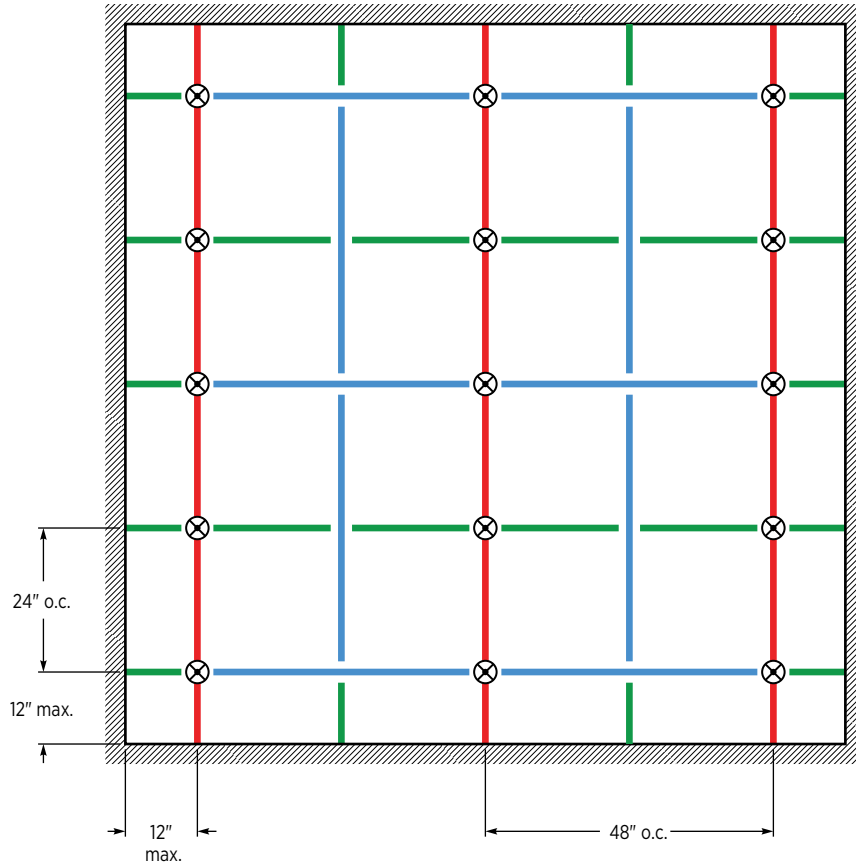
# CELEBRATION™ SNAP-IN

## UL 1897 25 psf (Download Load)

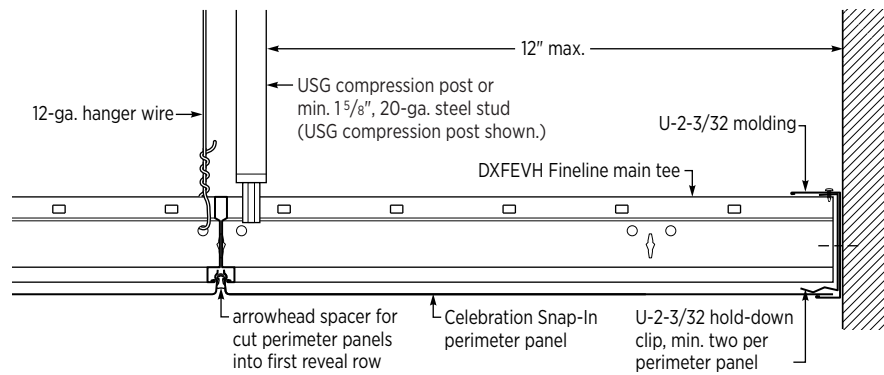
- Main Tees:** 48 in. o.c.
- Cross Tees:** 24 in. o.c.
- Compression Posts:** 24 in. o.c.

- ⊗ Hanger & Compression Post
- DXFEVH2924 (Heavy Duty Main Tee)
- DXFEV429N (48 in. Cross Tee)
- DXFEV229 (24 in. Cross Tee)

**Note:** Celebration Snap-In panels cannot be installed across a main tee and a 4 ft. cross tee.



### Perimeter Conditions



**Note:** U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

	Item Number	Commodity Code
Hold-Down Clip	U-2-3/32HDC	903046
Channel Molding	U-2-3/32	907947

# CELEBRATION™ SNAP-IN

**UL 580**  
**Class 90**

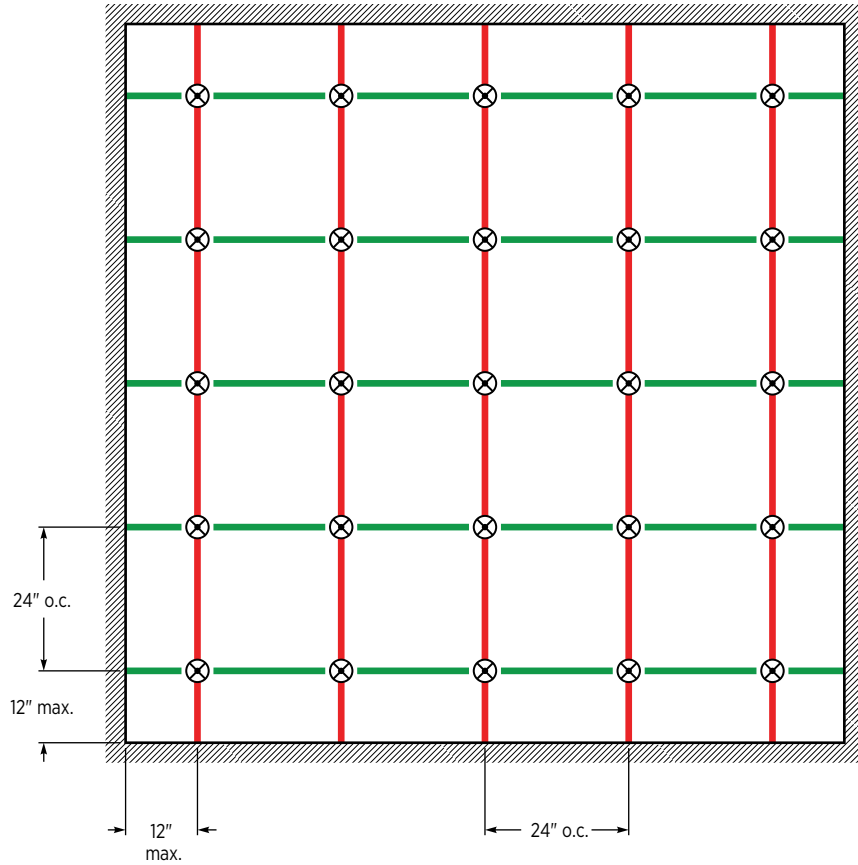
**UL 1897**  
**102 psf**

**Miami-Dade NOA No. 15-1223.04**  
**176 mph**

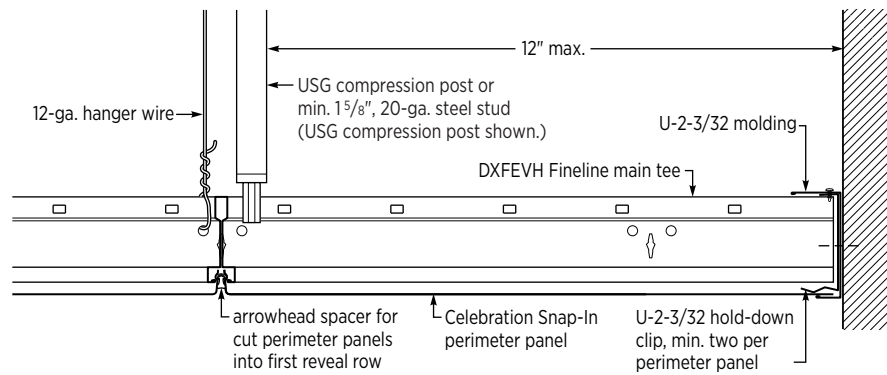
**Main Tees:** 24 in. o.c.  
**Cross Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.

- ⊗ Hanger & Compression Post
- DXFEVH2924 (Heavy Duty Main Tee)
- DXFEV229 (24 in. Cross Tee)

**Note:** Celebration Snap-In panels cannot be installed across a main tee.



## Perimeter Conditions



**Note:** U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

	Item Number	Commodity Code
Hold-Down Clip	U-2-3/32HDC	903046
Channel Molding	U-2-3/32	907947

# CELEBRATION™ SNAP-IN

## UL 1897 51 psf (Downward Load)

**Main Tees:** 30 in. o.c.

**Cross Tees:** 30 in. o.c.

**Compression Posts:** 30 in. o.c.

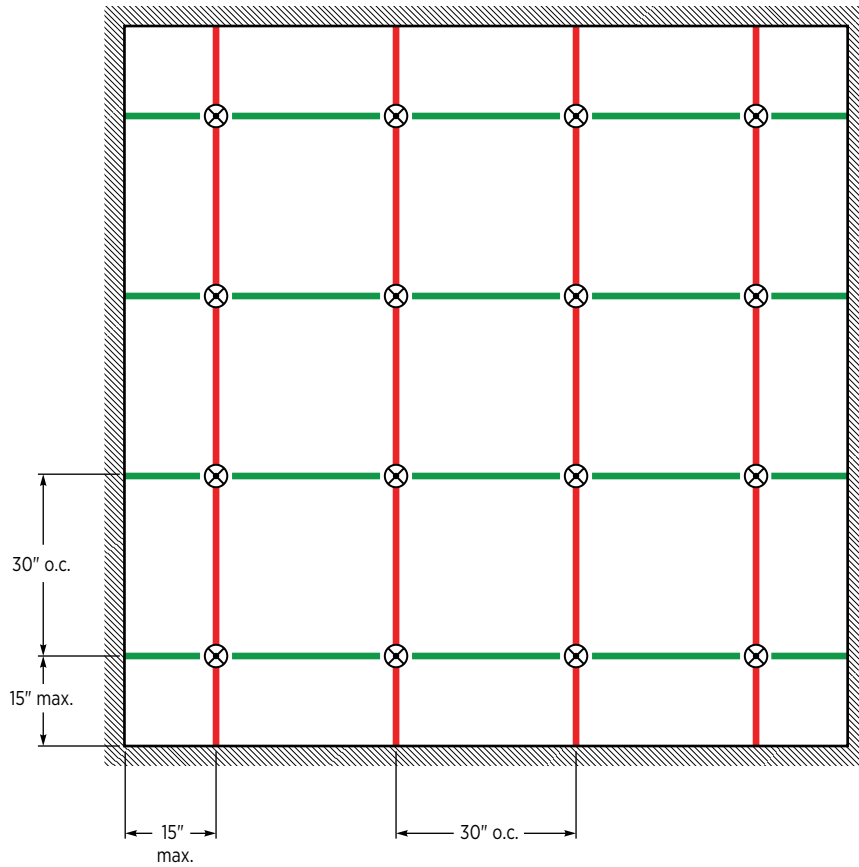
⊗ Hanger Wire & Compression Post

— DXFEVH2930 (Heavy Duty Main Tee)

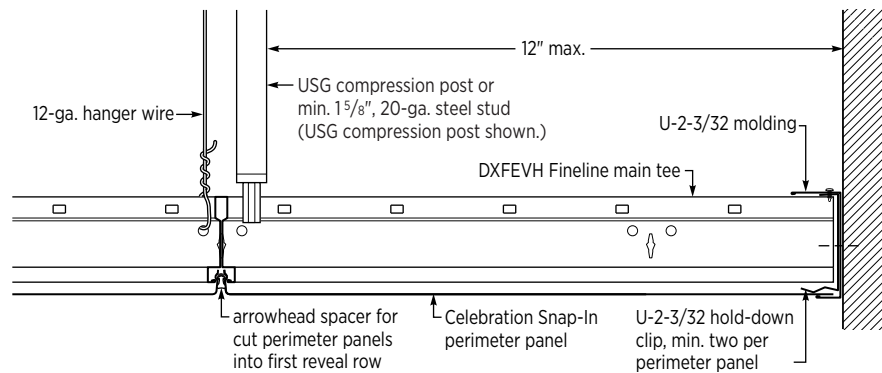
— DXFEV30 (30 in. Cross Tee)<sup>1</sup>

<sup>1</sup>Special Order

**Note:** Celebration Snap-In panels cannot be installed across a main tee.



### Perimeter Conditions



**Note:** U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

# CELEBRATION™ SNAP-IN

**UL 1897**  
**68 psf**

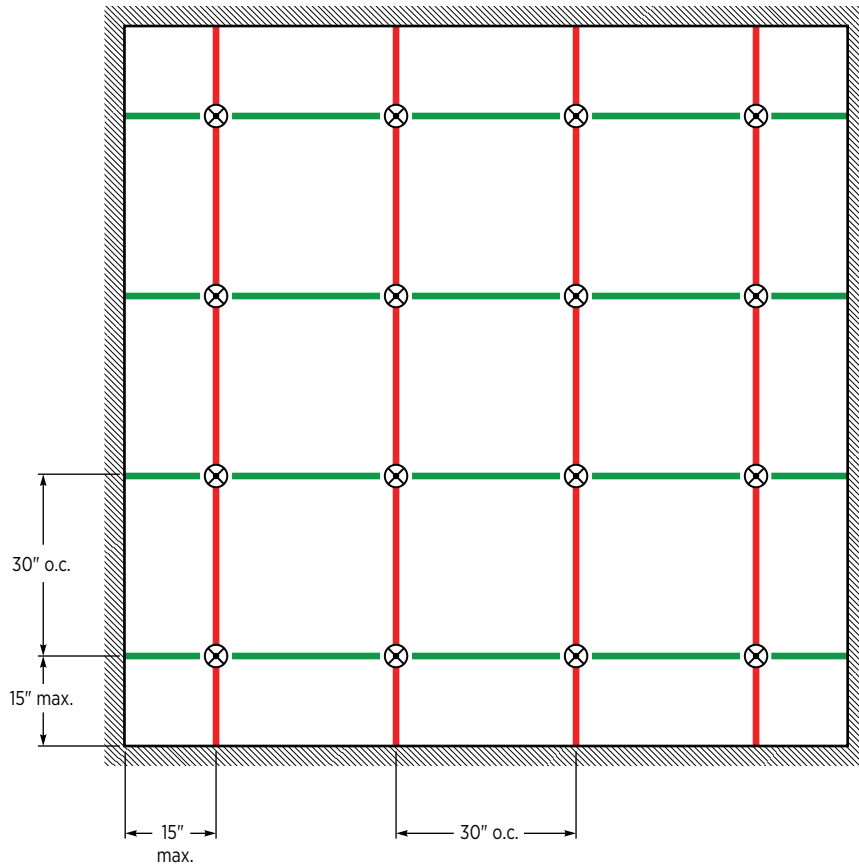
**UL 580**  
**Class 60**

**Main Tees:** 30 in. o.c.  
**Cross Tees:** 30 in. o.c.  
**Compression Posts:** 30 in. o.c.

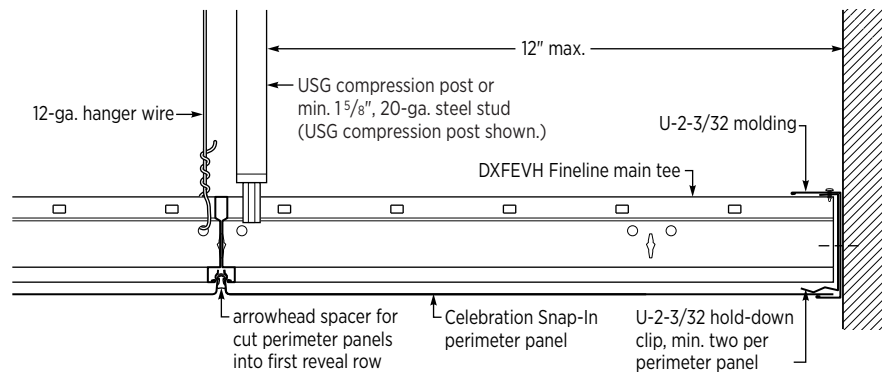
- ⊗ Hanger Wire & Compression Post
- DXFEVH2930 (Heavy Duty Main Tee)
- DXFEV30 (30 in. Cross Tee)<sup>1</sup>

<sup>1</sup>Special Order

**Note:** Celebration Snap-In panels cannot be installed across a main tee.



## Perimeter Conditions



**Note:** U-2-3/32 molding is designed to receive the perimeter tees. The tee ends are not cut back at an angle. Back blocking is not required. A fastener attachment through the top leg of the molding into the tee bulb is required.

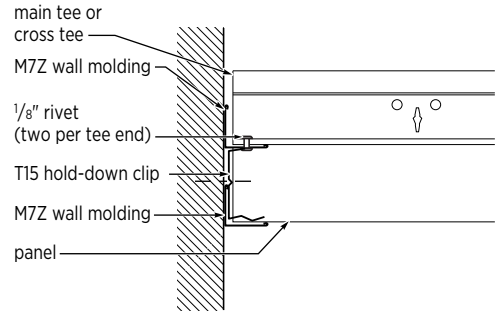
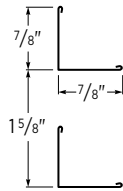
	Item Number	Commodity Code
Hold-Down Clip	U-2-3/32HDC	903046
Channel Molding	U-2-3/32	907947

# CELEBRATION™ TORSION SPRING

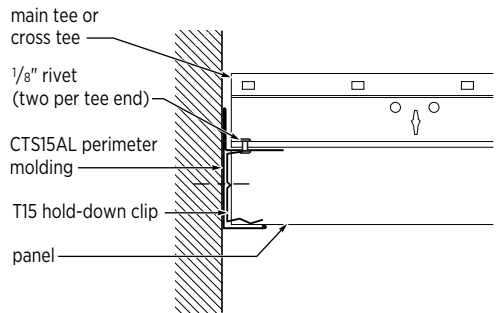
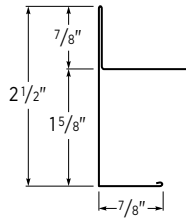
## System Components

### Perimeter Molding

#### Option 1 Two Layers of M7Z

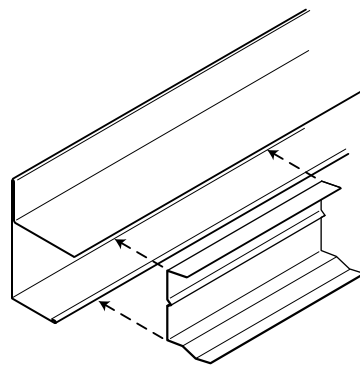
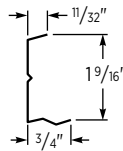


#### Option 2 CTS15AL Perimeter Molding



### Accessories

#### T15 Hold-Down Clip





# CELEBRATION™ TORSION SPRING

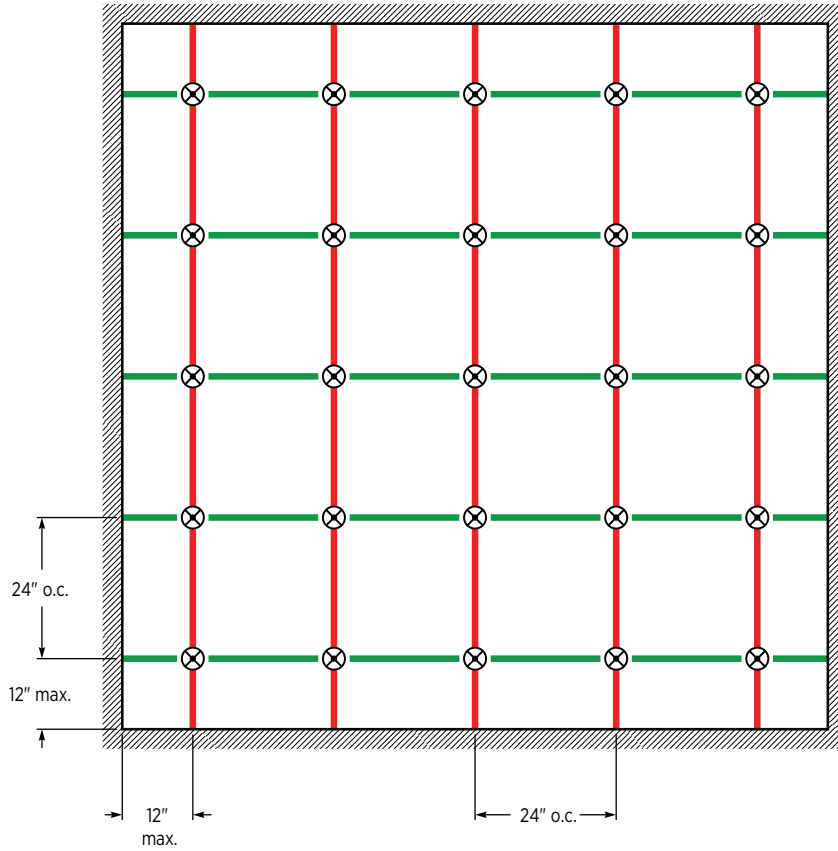
**UL 580**  
**Class 90**

**UL 1897**  
**133 psf**

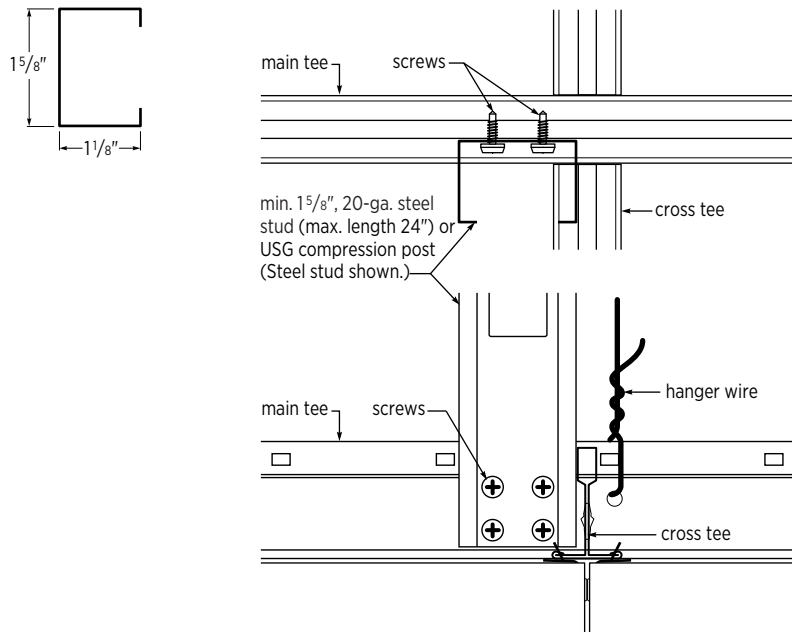
**Miami-Dade NOA No. 16-0404.02**  
**170 mph**

**Main Tees:** 24 in. o.c.  
**Cross Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.  
**Panel Sizes:** 2 ft. x 2 ft. and  
2 ft. x 4 ft.

- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- TSCT22ZX (24 in. Cross Tee)



## Compression Post Details



# CELEBRATION™ TORSION SPRING

## UL 580 Class 30

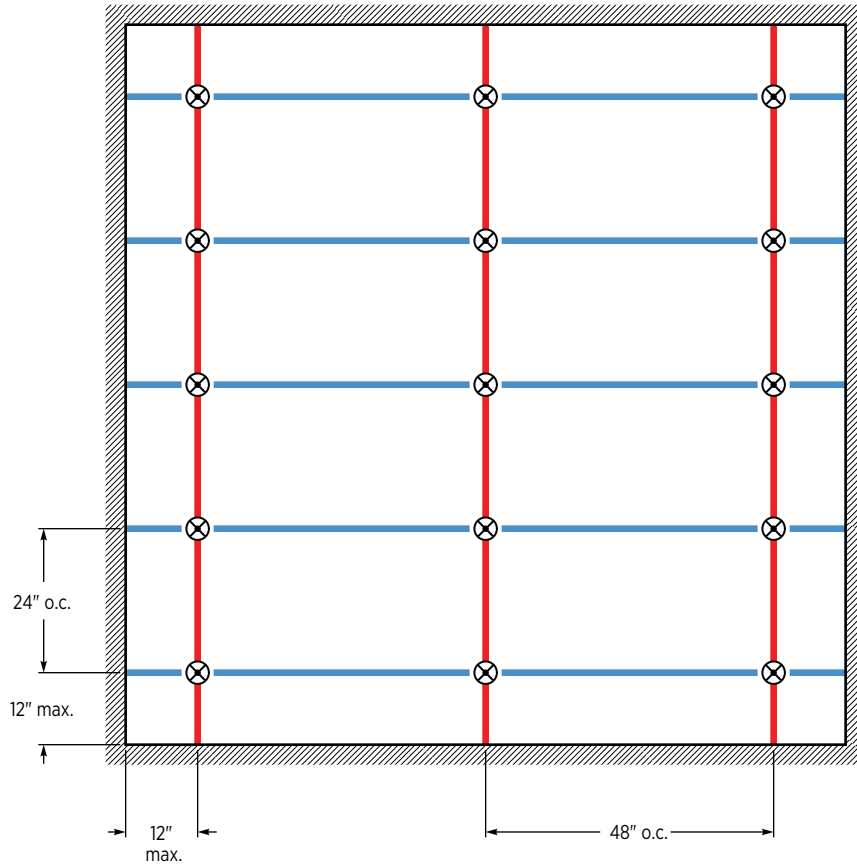
**Main Tees:** 48 in. o.c.

**Cross Tees:** 24 in. o.c.

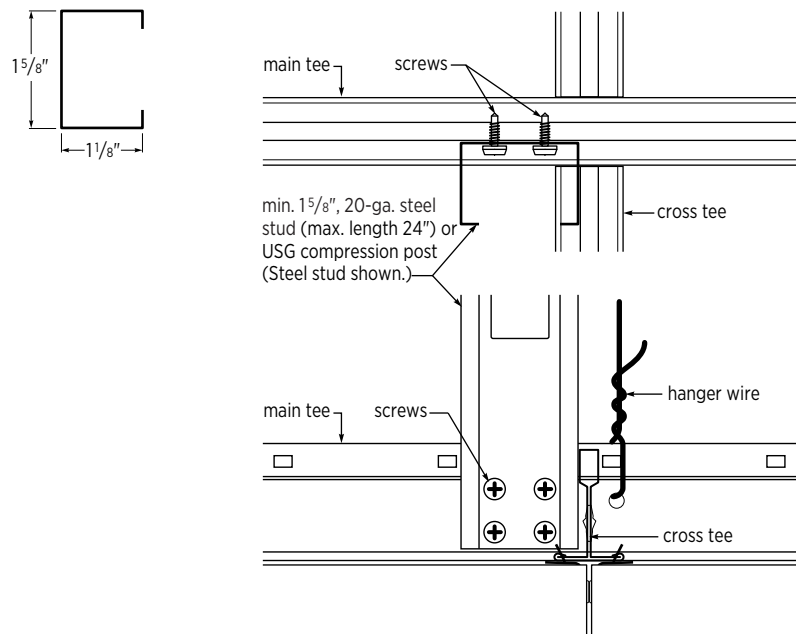
**Compression Posts:** 48 in. o.c.

**Panel Sizes:** 2 ft. x 4 ft. and  
2 ft. x 8 ft.

- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- TSCT44ZX (48 in. Cross Tee)



### Compression Post Details



# CELEBRATION™ TORSION SPRING

## UL 580 Class 30

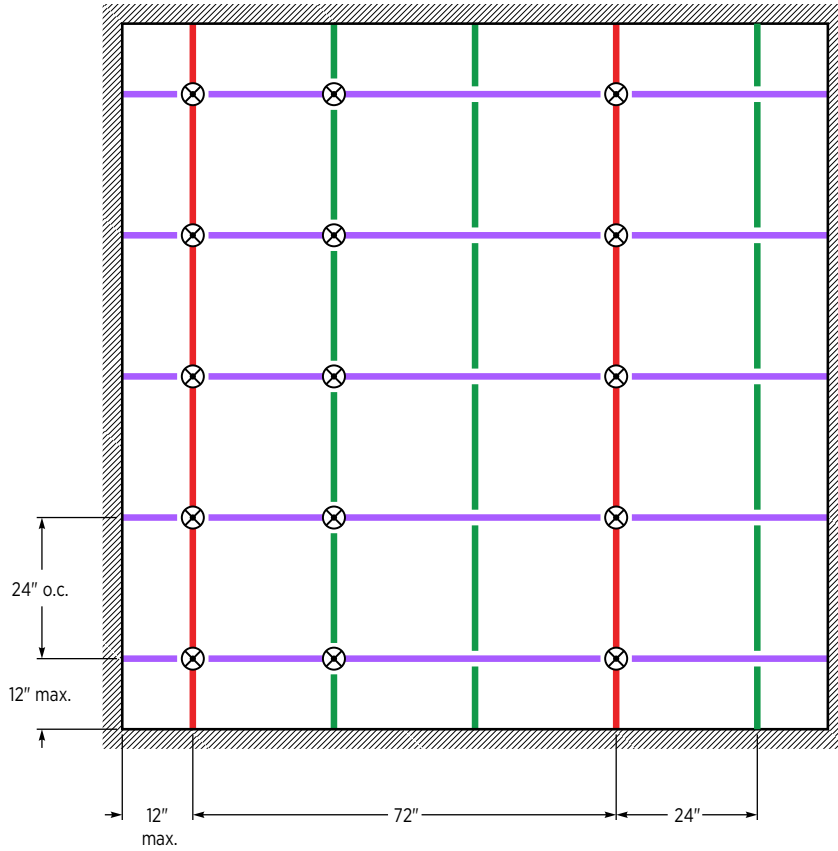
**Main Tees:** 72 in. o.c.

**Cross Tees:** 24 in. o.c.

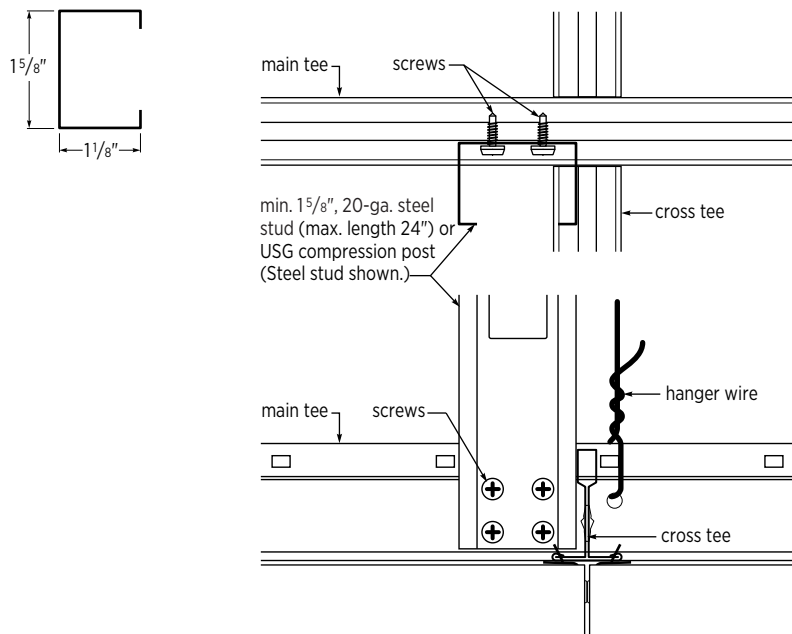
**Compression Posts:** 24 in. o.c.

**Panel Size:** 2 ft. x 6 ft.

- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- TSCT66ZXA (72 in. Cross Tee)
- ZXLA224 (24 in. Cross Tee)



### Compression Post Details

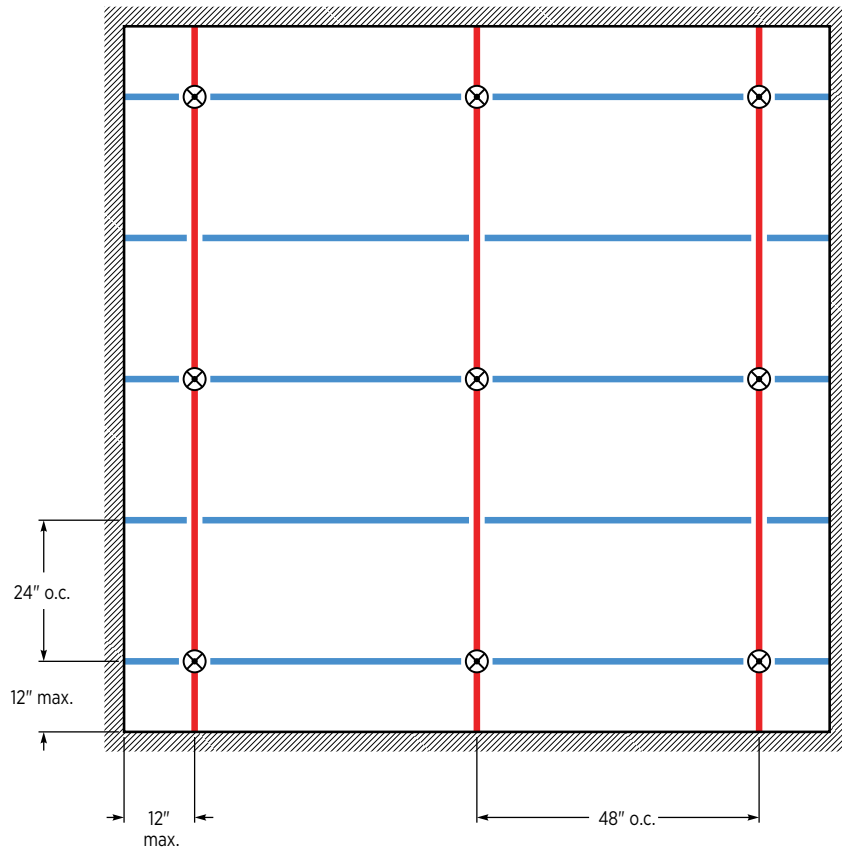


# CELEBRATION™ TORSION SPRING

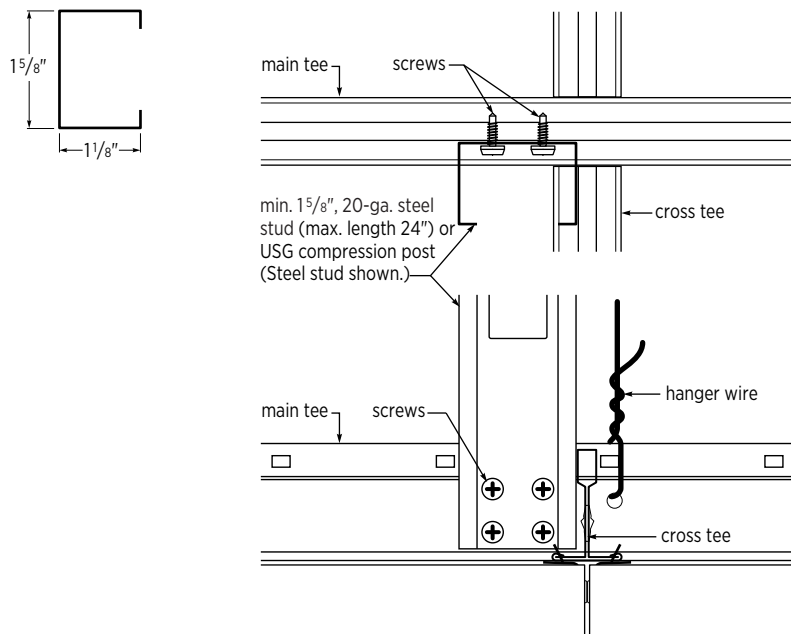
## UL 580 Class 15

- Main Tees:** 48 in. o.c.
- Cross Tees:** 24 in. o.c.
- Compression Posts:** 48 in. o.c.
- Panel Size:** 4 ft. x 4 ft.

- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- TSCT44ZXA (48 in. Cross Tee)



### Compression Post Details

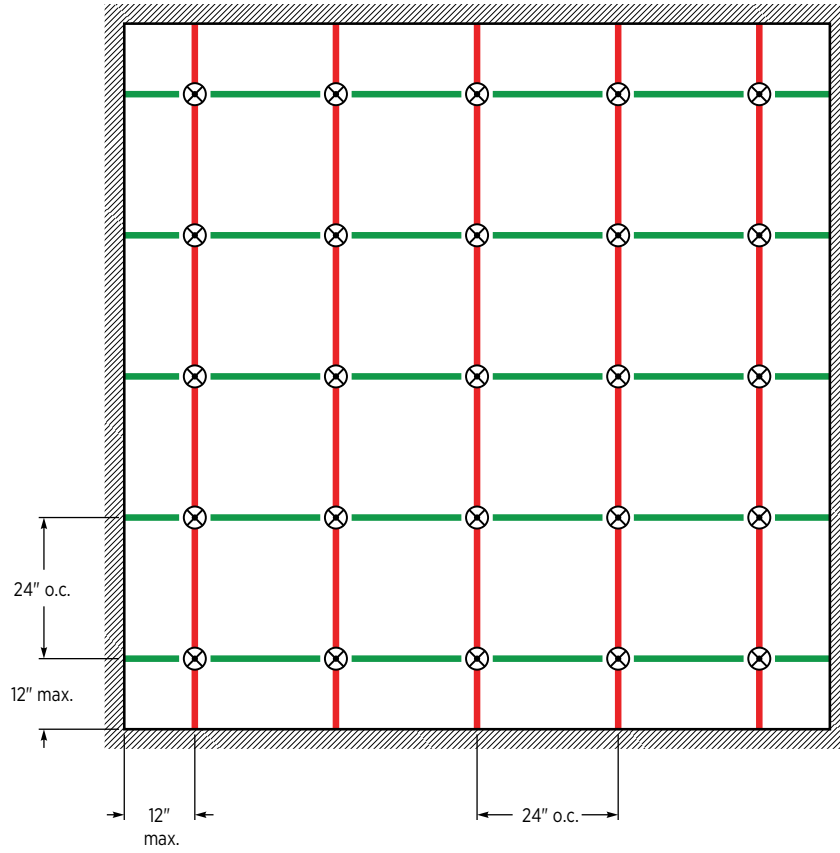


# CELEBRATION™ TORSION SPRING

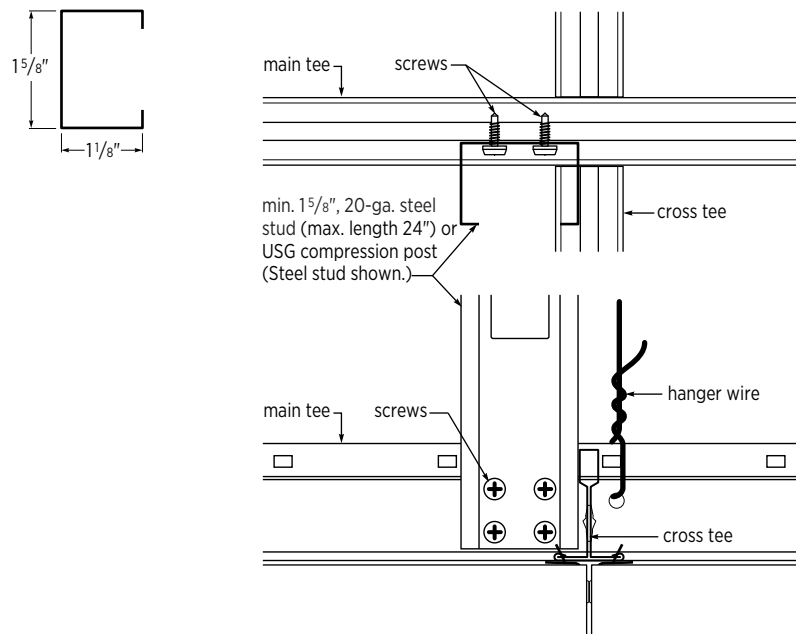
## UL 1897 13 psf (Downward Load)

- Main Tees:** 24 in. o.c.
- Cross Tees:** 24 in. o.c.
- Compression Posts:** 24 in. o.c.
- Panel Sizes:** 2 ft. x 2 ft.

- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- TSCT22ZX (24 in. Cross Tee)



### Compression Post Details



Page 38 intentionally left blank.

# USG SHEETROCK® BRAND LAY-IN CEILING PANELS

## ZXLA™

### TECHNICAL DATA

ZXLA26	Spacing			Uplift Class	Test Standard	Maximum Load Rating (w)	Equivalent Wind Speed (v)	Reference
	Main Tee	Cross Tee	Compression Post					
	48 in.	24 in.	24 in.	N/A	UL 1897	26 psf	101 mph	<a href="#">page 41</a>
	24 in.	48 in.	24 in.	Class 30	UL 580	30 psf	108 mph	<a href="#">page 42</a>
	48 in.	24 in.	24 in.	N/A	UL 1897	21 psf	91 mph	<a href="#">page 43</a>
	24 in.	48 in.	24 in.	N/A	UL 1897	85 psf	182 mph	<a href="#">page 44</a>



# ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL 2 ft. x 4 ft. SYSTEM

## Wind Resistance

USG ZXLA™ Suspension Systems with USG Sheetrock™ Lay-In Ceiling Panels may be used for sheltered exterior applications not directly exposed to the weather. These systems have been tested for wind load resistance. The two units of measure commonly used are miles per hour (mph) and pounds per square foot (psf), equated by methods in ASCE 7, Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI).<sup>1</sup>

**Limitations:** This system should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. This system is not suitable for areas subject to high concentrations of acid rain. Indirect exposure to severe environmental conditions may shorten the lifespan of the product. The specific design of exterior ceiling installations requires the review and approval of the architect or engineer of record.

### Technical Data

- The wind pressure is presented in accordance with applicable test standards.
- Compression posts used for the tests were USG compression posts or minimum 1-5/8 in., 20-gauge steel studs (maximum length of 24 in.).

### Available Panels

	Edge	Panel Size	Item No.
USG Sheetrock® Lay-In Ceiling Panel, Vinyl	Square	2' x 2' x 1/2"	3260
	Square	2' x 4' x 1/2"	3270

### Guidelines

- The building structure from which the USG Sheetrock® Lay-In Ceiling Panel system is suspended and spaced, as well as hanger wire and compression post attachment methods, must be capable of withstanding the loads applied during wind conditions.
- Other materials can be used for compression posts if the compressive strength and attachment method are approved for use by a local structural engineer.
- A minimum of 6d common hold-down nails or similar devices shall be installed at regular intervals to prevent uplift. A minimum of six for each 2 ft. x 4 ft. panel module and a minimum of four for each 2 ft. x 2 ft. panel module are required.
- A minimum of 6d common hold-down nails or similar devices shall be inserted in alternating directions.
- A minimum of 6d common hold-down nails or similar devices may be installed through the hanger wire holes, cross tee clip holes, and through a field-punched hole in the web of the tee.
- The architect's details must cover the design and location of expansion joints and meet all applicable building code requirements.

<sup>1</sup> The system shall comply with local wind load requirements. The engineer of record shall determine the final recommendation for the design wind pressure requirements of each project.

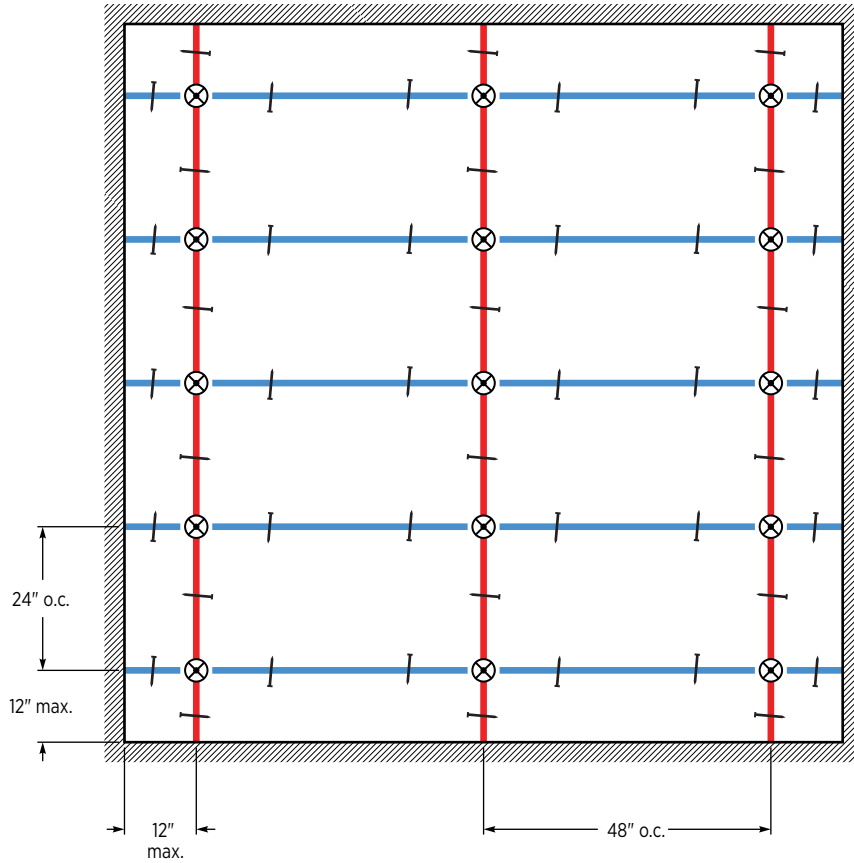


# ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL 2 ft. x 4 ft. SYSTEM

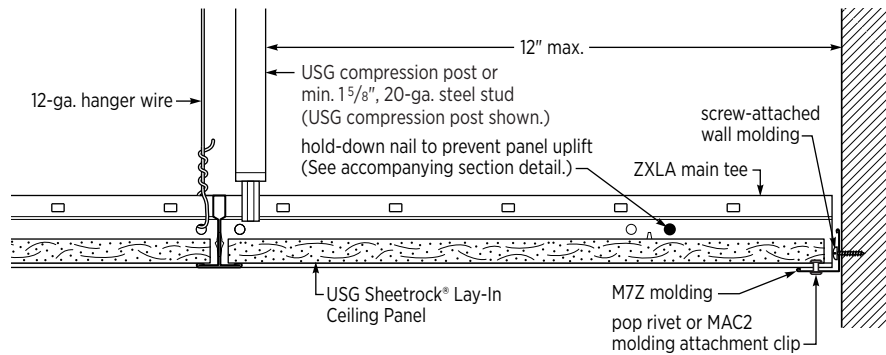
**UL 1897**  
**26 psf**

**Main Tees:** 48 in. o.c.  
**Cross Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.

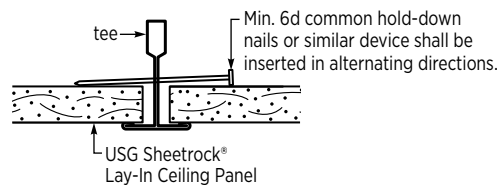
- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- ZXLA424 (48 in. Cross Tee)
- Hold-Down Nail



## Perimeter Conditions



## Hold-Down Nail



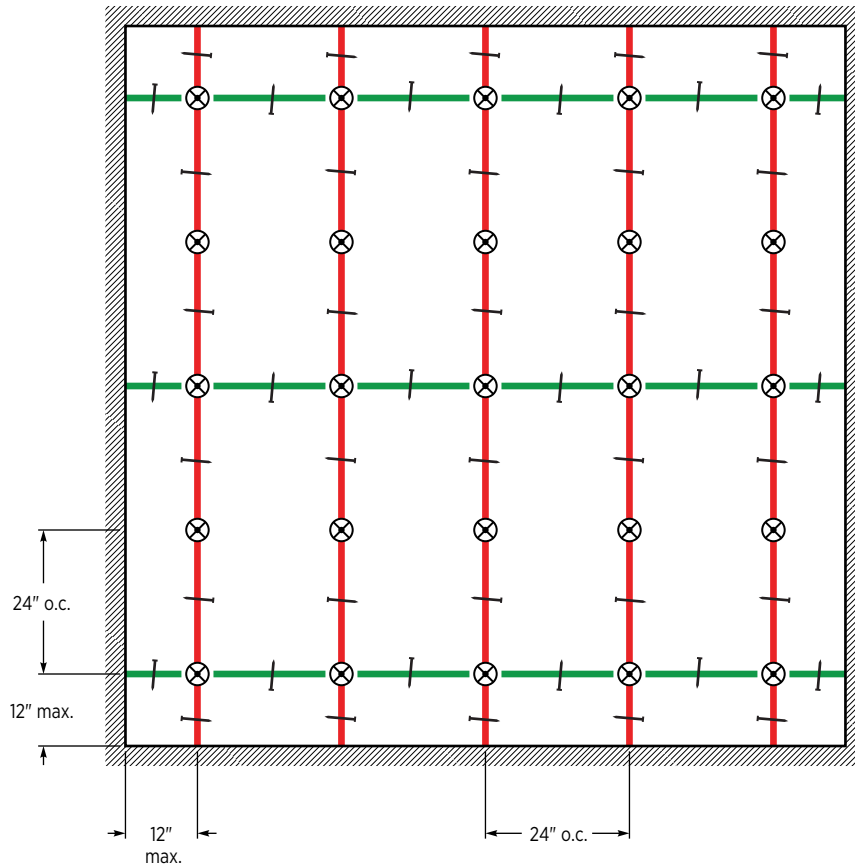
**Note:** Pop rivets are suitable for exterior use.

# ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL 2 ft. x 4 ft. SYSTEM

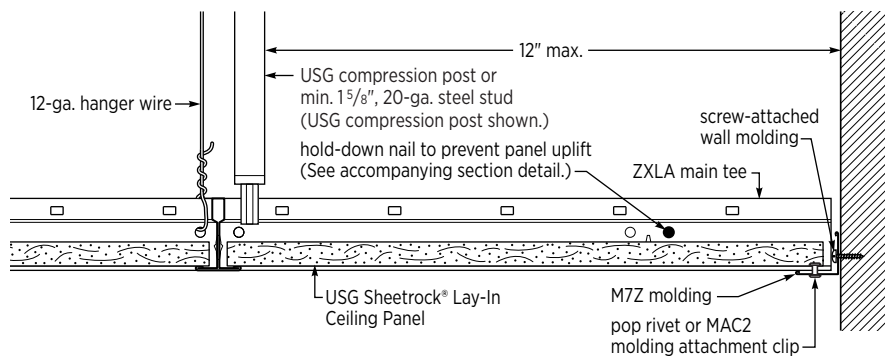
**UL 580**  
**Class 30**

**Main Tees:** 24 in. o.c.  
**Cross Tees:** 48 in. o.c.  
**Compression Posts:** 24 in. o.c.

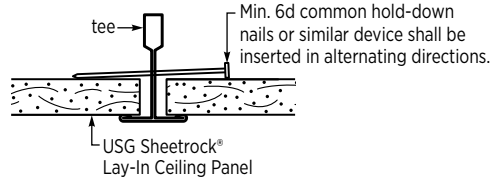
- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- ZXLA224 (24 in. Cross Tee)
- Hold-Down Nail



## Perimeter Conditions



## Hold-Down Nail



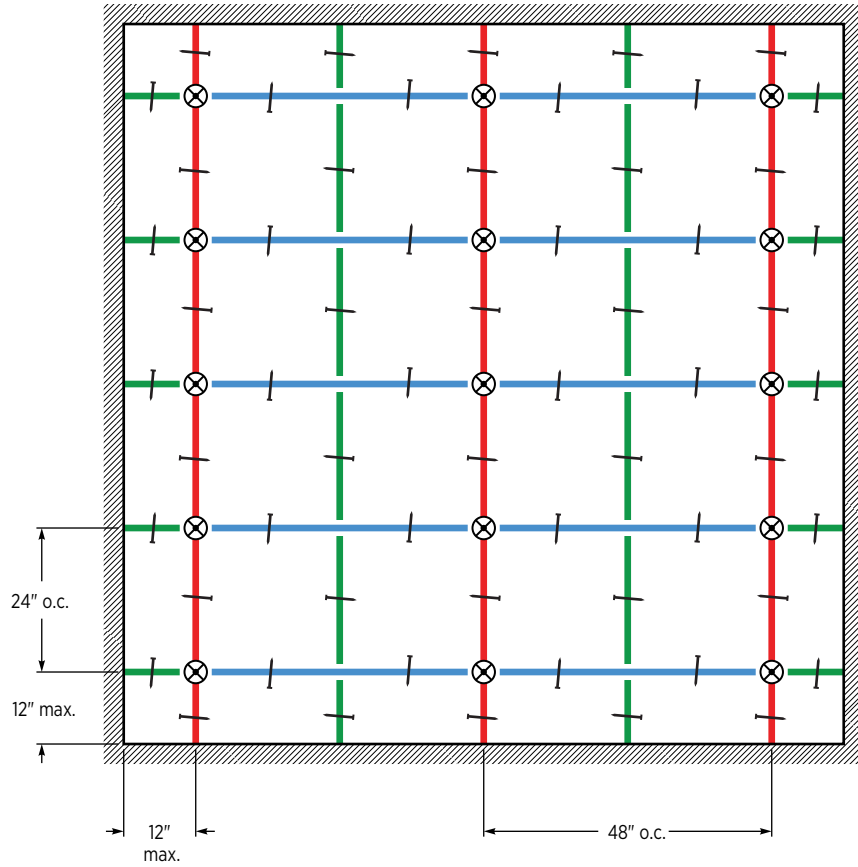
**Note:** Pop rivets are suitable for exterior use.

# ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL 2 ft. x 2 ft. SYSTEM

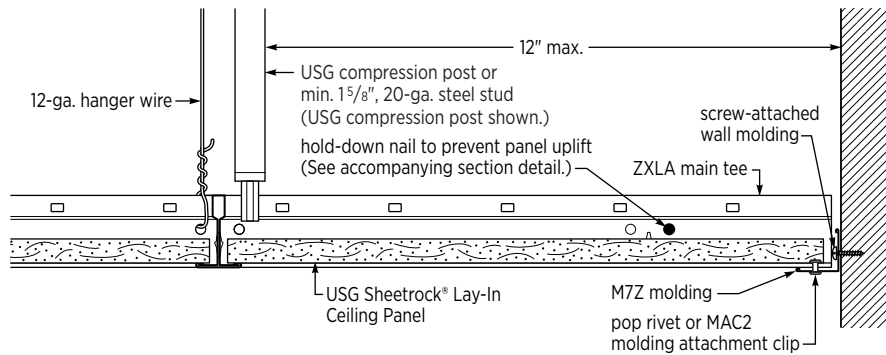
**UL 1897**  
**21 psf**

**Main Tees:** 48 in. o.c.  
**Cross Tees:** 24 in. o.c.  
**Compression Posts:** 24 in. o.c.

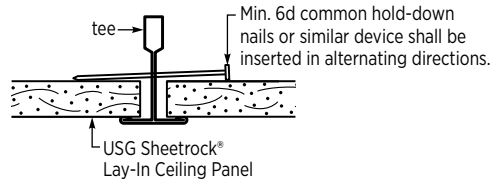
- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- ZXLA424 (48 in. Cross Tee)
- ZXLA224 (24 in. Cross Tee)
- Hold-Down Nail



## Perimeter Conditions



## Hold-Down Nail



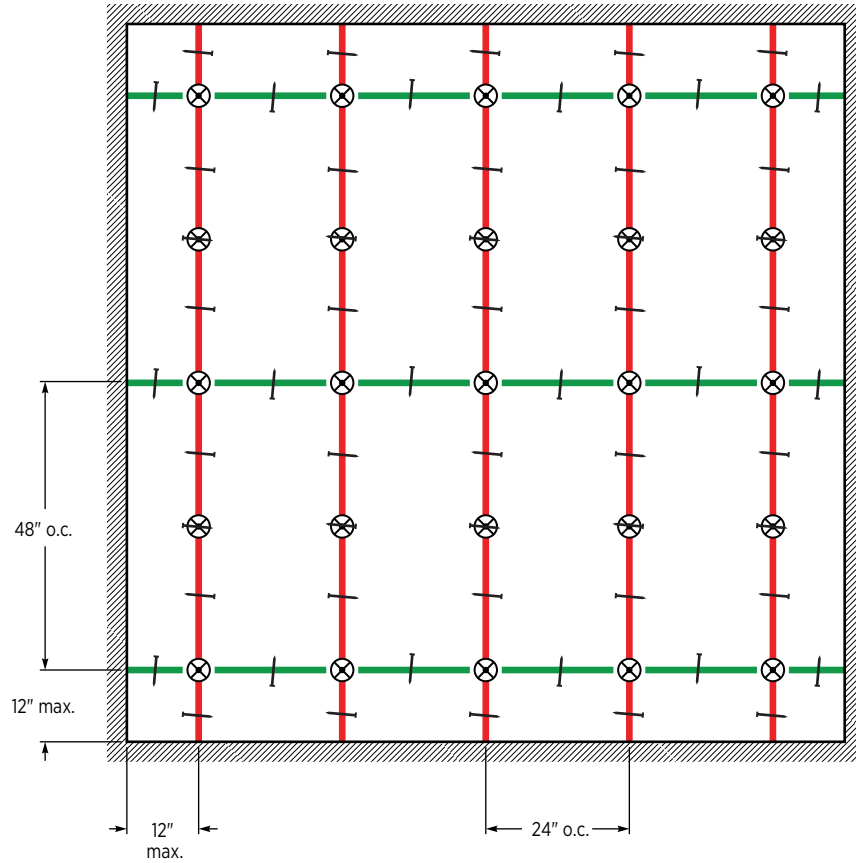
**Note:** Pop rivets are suitable for exterior use.

# ZXLA™ WITH USG SHEETROCK® LAY-IN CEILING PANEL 2 ft. x 4 ft. SYSTEM

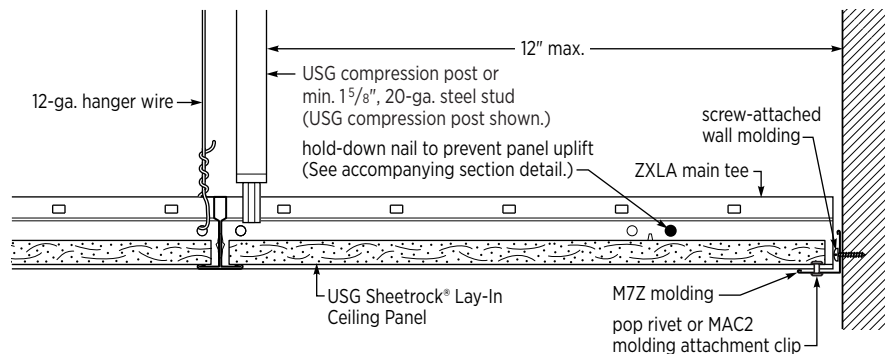
**UL 1897**  
**85 psf**

**Main Tees:** 24 in. o.c.  
**Cross Tees:** 48 in. o.c.  
**Compression Posts:** 24 in. o.c.

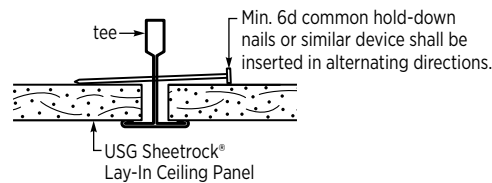
- ⊗ Hanger & Compression Post
- ZXLA26 (Heavy Duty Main Tee)
- ZXLA224 (24 in. Cross Tee)
- Hold-Down Nail



## Perimeter Conditions



## Hold-Down Nail



**Note:** Pop rivets are suitable for exterior use.

# USG DRYWALL SUSPENSION SYSTEM

## DGLW26E

### TECHNICAL DATA

	Spacing			Uplift Class	Test Standard	Test Record	Maximum Load Rating (w)	Equivalent Wind Speed (v)	Reference
	Main Tee	Cross Tee	Compression Post						
DGLW26E	48 in.	24 in.	24 in.	Class 15	UL 580	UL 526	15 psf	77 mph	<a href="#">page 48</a>
	48 in.	16 in.	30 in.	Class 15	UL 580	UL 526A	15 psf	77 mph	<a href="#">page 49</a>
	48 in.	24 in.	30 in.	Class 15	UL 580	UL 526B	15 psf	77 mph	
	24 in.	24 in.	30 in.	Class 30	UL 580	UL 526C	30 psf	108 mph	<a href="#">page 50</a>
	24 in.	24 in.	42 in.	Class 60	UL 580	UL 526D	60 psf	153 mph	<a href="#">page 51</a>
	24 in.	24 in.	30 in.	Class 90	UL 580	UL 526E	90 psf	188 mph	<a href="#">page 52</a>
	24 in.	16 in.	24 in.	Class 90	UL 580	UL 526F	90 psf	188 mph	<a href="#">page 53</a>
	24 in.	16 in.	24 in.	NOA No. 15-0618.06	Miami-Dade TAS 202 & 203	NOA No. 15-0618.06	75 psf	171 mph	<a href="#">page 54</a>



# USG DRYWALL SUSPENSION SYSTEM

## Wind Uplift Resistance for Exterior Soffits

The USG Drywall Suspension System accommodates the wind loads for most applications. The system has been tested using applicable industry standards for wind uplift resistance when installed in exterior soffits and canopies. For more information regarding test standards and online resources, please refer to the Systems Overview section of this guide.

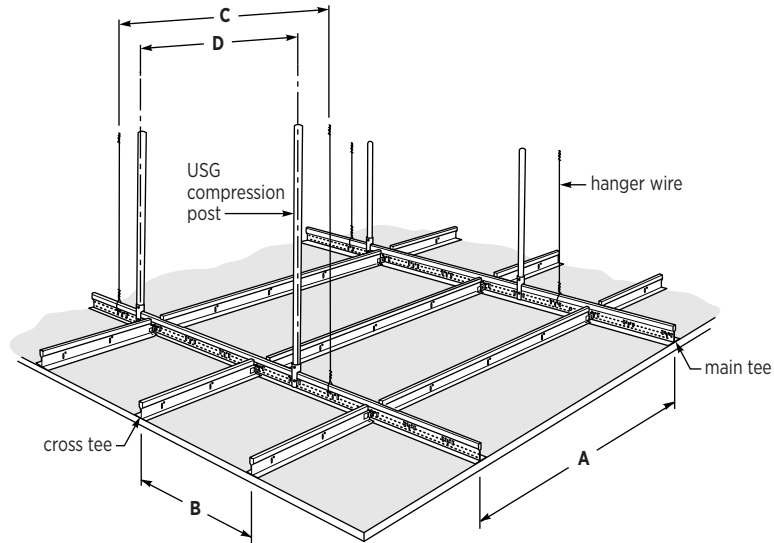
Only USG Sheetrock® Brand Exterior Ceiling Board, Durock® Cement Board, and Securock® Glass-Mat Sheathing are suitable for exterior applications. Specific information for gypsum panel applications can be found at [usg.com](http://usg.com) and [usgdesignstudio.com](http://usgdesignstudio.com).

The following pages detail the components and spacing necessary to achieve the different uplift classifications, including compression post spacing, limiting plenum depths, and construction details for the installation. The structure that the USG Drywall Suspension System is attached to shall be designed to withstand the applicable wind loads and carry the soffit system's total weight.

**Note:** Design wind loads vary with geographic region and building conditions and must be determined by a professional engineer or architect of record.

# USG DRYWALL SUSPENSION SYSTEM

## Wind Uplift Resistance for Exterior Soffits



Test Record	UL Class	Maximum Uplift Load (psf)	Equivalent Wind Speed (mph)	Component Spacing				Exterior Soffit Panels	Plenum Height <sup>1</sup> (in.)	Maximum Compression Post Load (lb.)	Test Standard
				(A) Main Runner	(B) Cross Tee	(C) 12-Gauge Hanger Wire	(D) Compression Post				
UL 526 page 40	15	15	77	48	24	24	24	single layer 5/8 in. gypsum panels	141	183.2	UL 580
UL 526A, B page 41	15	15	77	48	16 (526A) 24 (526B)	48	30	single layer 1/2 in. gypsum panels	128	229	UL 580
UL 526C page 42	30	30	108	24	24	48	30	single layer 1/2 in. gypsum panels	130	225	UL 580
UL 526D page 43	60	60	153	24	24	48	42	double layer 5/8 in. gypsum panels	76	525	UL 580
UL 526E page 44	90	90	188	24	24	48	30	double layer 5/8 in. gypsum panels	76	525	UL 580
UL 526F page 45	90	90	188	24	16	48	24	single layer 5/8 in. gypsum panels, single layer 3/8 in. plywood	76	525	UL 580
NOA No. 15-0618.06 page 46	N/A	+75, -75	171	24	16	24	24	single layer 1/2 in. or 5/8 in. glass-mat sheathing with direct applied EFIS	24	300	TAS 202 & TAS 203

<sup>1</sup> Larger plenum heights require the compression post size and gauge to be determined by a qualified structural engineer.

# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526 Class 15 Uplift

### System Components

<b>Main Runners</b>	DGLW26E
<b>Cross Tees</b>	DGLW424E
<b>Perimeter Molding</b>	DGWM24E angle mold or DGCM27E channel mold  When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.
<b>Gypsum Panels</b>	<ul style="list-style-type: none"><li>• 5/8 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension perpendicular to the cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</li><li>• Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of each cross tee and with additional screws located 12 in. o.c. beginning from the center screw and with screws located 1-1/2 in. from each gypsum panel side joint.</li><li>• At gypsum panel butt ends, a total of seven screws shall be used, with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from the wallboard side joint. All screws shall be located a maximum of 1/2 in. from the edge.</li><li>• End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</li><li>• Gypsum panels shall be fastened to the lower leg of the wall channel with screws spaced a maximum of 12 in. o.c.</li></ul>
<b>Accessories</b>	Please refer to <a href="#">page 57</a> for more information on USG compression posts.



# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526A and UL 526B Class 15 Uplift

### System Components

<b>Main Runners</b>	DGLW26E
<b>Cross Tees</b>	DGLW424E
<b>Perimeter Molding</b>	DGWM24E angle mold or DGCM27E channel mold  When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.
<b>Gypsum Panels</b>	<ul style="list-style-type: none"><li>• 1/2 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension perpendicular to the cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</li><li>• Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of each cross tee and with additional screws located 12 in. o.c., beginning from the center screw and with screws located 1-1/2 in. from each gypsum panel side joint.</li><li>• At gypsum panel butt ends, a total of seven screws shall be used, with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from the wallboard side joint. All screws shall be located a maximum of 1/2 in. from the edge.</li><li>• End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</li><li>• Gypsum panels shall be fastened to the lower leg of the wall channel with screws spaced a maximum of 12 in. o.c.</li></ul>
<b>Accessories</b>	Please refer to <a href="#">page 57</a> for more information on USG compression posts.

# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526C Class 30 Uplift

### System Components

<b>Main Runners</b>	DGLW26E
<b>Cross Tees</b>	DGLW424E
<b>Perimeter Molding</b>	DGWM24E angle mold or DGCM27E channel mold  When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.
<b>Gypsum Panels</b>	<ul style="list-style-type: none"><li>• 5/8 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension perpendicular to the cross tees. End joints centered along 1/2 in. thick, 4 ft. wide cross tees shall be installed with the long dimension perpendicular to cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</li><li>• Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of the cross tee and with additional screws located 12 in. o.c., beginning from the center screw and with screws located 1-1/2 in. from each gypsum panel side joint.</li><li>• At gypsum panel butt ends, a total of seven screws shall be used, with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from the wallboard side joint. All screws shall be located a maximum of 1/2 in. from the edge.</li><li>• End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</li><li>• Gypsum panels shall be fastened to the lower leg of the wall channel with screws spaced a maximum of 12 in. o.c.</li></ul>
<b>Accessories</b>	Please refer to <a href="#">page 57</a> for more information on USG compression posts.

# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526D Class 60 Uplift

### System Components

<b>Main Runners</b>	DGLW26E
<b>Cross Tees</b>	DGLW424E
<b>Perimeter Molding</b>	DGWM24E angle mold or DGCM27E channel mold  When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.
<b>Gypsum Panels</b>	<ul style="list-style-type: none"><li>• Two layers of 5/8 in. thick, 4 ft. wide gypsum panels are required. The inner layer shall be installed with the long dimension perpendicular to cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</li><li>• Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of the cross tee and with additional screws spaced 12 in. o.c., beginning from the center screw with screws located 1-1/2 in. from the gypsum panel side joint.</li><li>• At butt ends, a total of seven screws shall be used with one screw located at the midspan of the cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from side joints. All screws shall be located 1/2 in. from the edge.</li><li>• End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</li><li>• The outer layer shall be rotated 90 degrees from the inner layer and attached to cross tees and main runners through the inner layer using 1-5/8 in. long screws spaced 8 in. o.c. along the butt ends and 12 in. o.c. in the field. (Same spacing as the inner layer.)</li><li>• Butt joints shall be centered along main runners and staggered a minimum of 4 ft.</li><li>• Gypsum panels shall be attached to the lower leg of the wall channel with fasteners spaced 12 in. o.c. for both layers.</li></ul>
<b>Accessories</b>	Please refer to <a href="#">page 57</a> for more information on USG compression posts.

# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526E Class 90 Uplift

### System Components

<b>Main Runners</b>	DGLW26E
<b>Cross Tees</b>	DGLW424E
<b>Perimeter Molding</b>	DGWM24E angle mold or DGCM27E channel mold When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.
<b>Gypsum Panels</b>	<ul style="list-style-type: none"><li>• Two layers of 5/8 in. thick, 4 ft. wide gypsum panels are required. The inner layer shall be installed with the long dimension perpendicular to cross tees. End joints shall be centered along cross tees. Side joints shall be centered along main runners.</li><li>• Gypsum panels shall be fastened to each cross tee with 1 in. long #8 bugle-head screws with one screw located at the midspan of the cross tee and with additional screws spaced 12 in. o.c., beginning from the center screw with screws located 1-1/2 in. from the gypsum panel side joint.</li><li>• At butt ends, a total of seven screws shall be used with one screw located at the midspan of each cross tee and additional screws spaced 8 in. o.c. with one screw located 1-1/2 in. from side joints. All screws shall be located 1/2 in. from the edge.</li><li>• End joints of adjacent gypsum panels shall be staggered a minimum of 4 ft.</li><li>• The outer layer shall be rotated 90 degrees from the inner layer and attached to cross tees and main runners through the inner layer using 1-5/8 in. long screws spaced 8 in. o.c. along the butt ends and 12 in. o.c. in the field. (Same spacing as the inner layer.)</li><li>• Butt joints shall be centered along main runners and staggered a minimum of 4 ft.</li><li>• Gypsum panels shall be attached to the lower leg of the wall channel with fasteners spaced 12 in. o.c. for both layers.</li></ul>
<b>Accessories</b>	Please refer to <a href="#">page 57</a> for more information on USG compression posts.

# USG DRYWALL SUSPENSION SYSTEM

## Test Record UL 526F Class 90 Uplift

### System Components

<b>Main Runners</b>	DGLW26E
<b>Cross Tees</b>	DGLW424E
<b>Perimeter Molding</b>	DGWM24E angle mold or DGCM27E channel mold When angle mold is used, main runners and cross tees shall be attached to molding with 1/2 in. type S screws.
<b>Plywood</b>	<ul style="list-style-type: none"><li>• 4 ft. wide by 8 ft. long by nominal 3/8 in. thick (11/32 in.), B-C Group 1 exterior grade plywood sheets are required.</li><li>• The plywood shall be installed with the long dimension perpendicular to the main runner and centered along cross tees with end joints centered along main runners.</li><li>• Plywood shall be fastened to cross tees and main runners with 1-1/4 in. long steel screws spaced 8 in. o.c.</li><li>• End joints of adjacent plywood sheets shall be staggered not less than 2 ft. o.c.</li><li>• Plywood sheets shall be screw attached to the lower leg of the wall channel with screws spaced 12 in. o.c.</li></ul>
<b>Gypsum Panels</b>	<ul style="list-style-type: none"><li>• 5/8 in. thick, 4 ft. wide gypsum panels shall be installed with the long dimension parallel with main runners, with end joints centered along cross tees, and with side joints centered along main runners.</li><li>• Gypsum panels shall be fastened to each cross tee and main runner through plywood with 1-5/8 in. long #8 bugle-head steel screws spaced 8 in. o.c.</li><li>• One screw shall be located at the midspan of the cross tee, with screws spaced 8 in. o.c. from each side of the cross tee midspan with screws located 1-1/2 in. from each gypsum panel side joint.</li><li>• At butt ends, adjacent panel joints shall be staggered 48 in.</li><li>• Gypsum panels shall be fastened to cross tees with 14 wallboard screws, with seven at the end of each wallboard.</li><li>• Gypsum panels shall be screw attached to the lower leg of the wall channel with wallboard screws spaced 12 in. o.c.</li></ul>
<b>Accessories</b>	Please refer to <a href="#">page 57</a> for more information on USG compression posts.

# USG DRYWALL SUSPENSION SYSTEM

## NOA No. 15-0618.06 75 psf Uplift, for High Velocity Hurricane Zones

### System Components

<b>Main Runners</b>	DGLW26E
<b>Main Runner Splice</b> (if required)	DGSC-180 shall be attached to the main runner on each side with two #8, S12 screws. Hanger wire and a compression post shall be located within 6 in. of the splice.
<b>Cross Tee</b>	DGLW224E
<b>Perimeter Channel Molding</b>	DGCM2 shall be fastened to the structure with #8 screws (or equivalent) at 8 in. o.c.
<b>Compression Posts</b>	The size and gauge must be determined by a qualified structural engineer; the engineer's determination will be based on the project's conditions, such as plenum height and supporting structure type.
<b>Sheathing Panels</b>	One layer of USG Securock® Brand Glass-Mat Sheathing panels, 1/2 in. or 5/8 in. thick, shall be installed with long dimensions parallel with main runners. The panels shall be attached to main runners and cross tees with 1-1/4 in. #8 truss-head screws spaced 8 in. o.c., with end joints staggered.
<b>Direct Applied Exterior Finish System (by others)</b>	The acrylic finish is a fiberglass-reinforced mesh embedded with an acrylic-modified cementitious basecoat.

For complete installation details, see Miami-Dade County Notice of Acceptance no. 12-0924.3 at [miamidade.gov/building](http://miamidade.gov/building).

# OTHER CONSIDERATIONS

Finishes

Compression Posts

Seismic Perimeter Applications

Miami-Dade Applications



# FINISHES

## Selector

USG offers a wide selection of colors and finishes suitable for linear metal and metal panels in exterior applications. Available in painted, anodized, and wood-tone finishes.

**Painted:** Flat White, Silver Satin, Metallic Oyster

**Anodized:** Satin Chrome

**Wood Tone:** Beech, Dark Bamboo, Dark Cherry, Light Bamboo, Light Cherry, Maple, Red Oak, Walnut

Additional finish options may be available to meet specific project requirements or coating specifications. Contact your USG representative for more information.

### Painted Metals

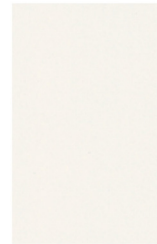
**Flat White  
(050)**



**Silver Satin  
(002)**



**Metallic Oyster  
(1652)**



### Anodized Metal

**Satin Chrome  
(PM614)**



### Wood Tones

**Beech**



**Dark Bamboo**



**Dark Cherry**



**Light Bamboo**



**Light Cherry**



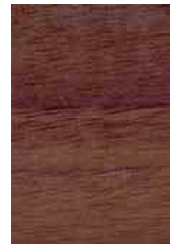
**Maple**



**Red Oak**



**Walnut**





# COMPRESSION POSTS

## USG Compression Posts

USG Donn® Brand Compression Posts provide rigid support for ceiling suspension systems in exterior applications. The telescoping compression posts attach to the main tees and to the Paraline® symmetrical carriers,<sup>1</sup> preventing upward movement of the system.


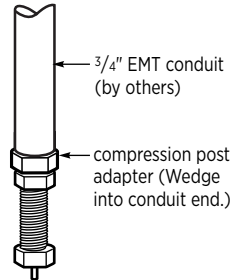
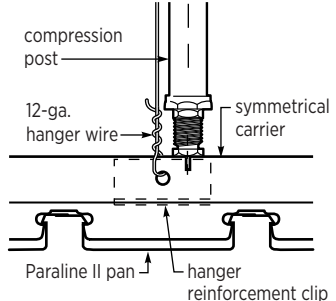
### Features

- Factory-engineered solution provides rigid support for ceiling suspension systems in exterior applications and offers quick installation, thus reducing field-labor time.
- Fast delivery included.
- Available in six different telescoping sizes that meet a variety of size requirements:

Item No.	Size
VSA 18/30	18 in. to 30 in.
VSA 30/48	30 in. to 48 in.
VSA 48/84	48 in. to 84 in.
VSA 84/102	84 in. to 102 in.
VSA 102/120	102 in. to 120 in.
VSA 120/144	120 in. to 144 in.

- Injection-molded, high-impact clip snaps onto the bulb of the main tee for a secure, positive connection.
- Heavy-wall galvanized steel tubing, no-rust telescoping post locks into permanent support length.
- Injection-molded guide ring prevents rattling.
- Spring steel top clip provided for attachment to the vertical hanger wire adjacent to the post.
- Adjustable self-locking connection has been tested and certified to a minimum compressive load of 900 lb.
- Meets UL 797.
- When used with Paraline II systems, Paraline compression post adapters<sup>2</sup> connect the post to the Paraline symmetrical carrier for a secure, positive connection.

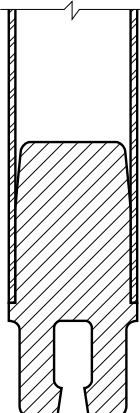
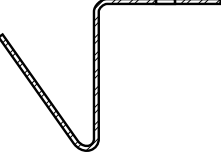
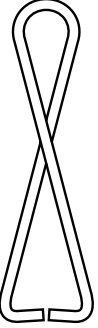
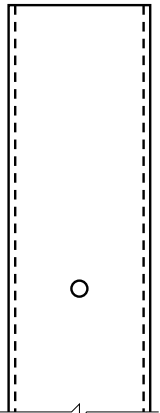
### Paraline II Compression Posts

Paraline II Compression Post Adapter	Paraline II Compression Post Adapter in Conduit	Paraline II Compression Post Application
		

<sup>1,2</sup> When used with symmetrical carriers, Paraline II compression post adapters must be purchased. The end plug of the compression post is removed and replaced with the Paraline II compression post adapter prior to installation. The Paraline II compression post adapter is not included with the compression post and must be purchased separately.

# COMPRESSION POSTS

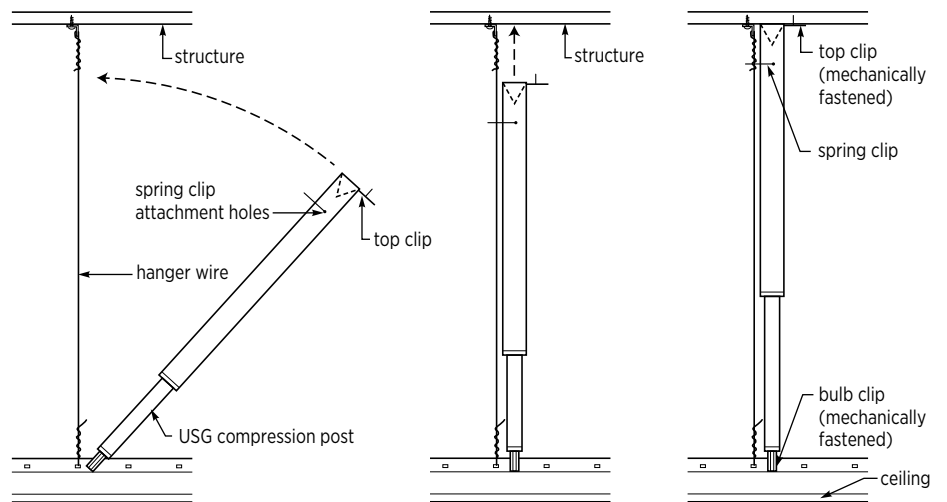
## USG Compression Posts

Components	End Plug	Top Clip	Hanger Wire Spring Clip	Spring Clip Attachment Holes (Top of Post)
				

**Note:** The end plug, top clip, and hanger wire spring clip are included with each post and cannot be ordered separately.

### Application<sup>1</sup>

- Step 1** Fit the top clip into the opening of the post.
- Step 2** Snap the compression post onto the main tee bulb next to the vertical hanger wire.
- Step 3** Bring the compression post to a vertical position with the hanger and extend the post for a snug fit against the structure.
- Step 4** Loop the spring clip around the vertical hanger wire and connect the clip to the holes on top of the post.
- Step 5** Mechanically fasten the end plug of the post to the main tee bulb.
- Step 6** Fasten the compression post to the structure with the appropriate mechanical fastener.



<sup>1</sup> When used with symmetrical carriers, Paralene compression post adapters must be purchased. The end plug of the compression post is removed and replaced with the Paralene compression post adapter prior to installation. The Paralene compression post adapter is not included with the compression post and must be purchased separately.

# COMPRESSION POSTS

## Steel Framing Compression Posts

The USG Donn® Brand compression post is an engineered solution designed to work with USG Exterior Ceiling Systems. The USG Donn Brand compression post is an option for almost every project; however, alternative steel members with sufficient strength are allowed by code and may be suitable for use as a compression post. Below are some common, light-gauge steel members provided by others that are typically used as compression posts.

Uplift Class / Maximum Pressure	Maximum Length (in.)	Compression Post
Class 15 & Class 30 / 30 psf	96	Min. 1-5/8 in. — 20-ga. stud
		Min. 1-5/8 in. — 20-ga. track
Class 60 / 60 psf	48	Min. 1-5/8 in. — 20-ga. stud
		Min. 1-5/8 in. — 20-ga. track
	96	Min. 2-1/2 in. — 20-ga. stud back to back
		Min. 2-1/2 in. — 20-ga. track back to back
Class 90 / 150 psf	48	Min. 1-5/8 in. — 20-ga. stud
		Min. 1-5/8 in. — 20-ga. track
	96	Min. 2-1/2 in. — 20-ga. stud back to back
		Min. 2-1/2 in. — 20-ga. track back to back

### Notes

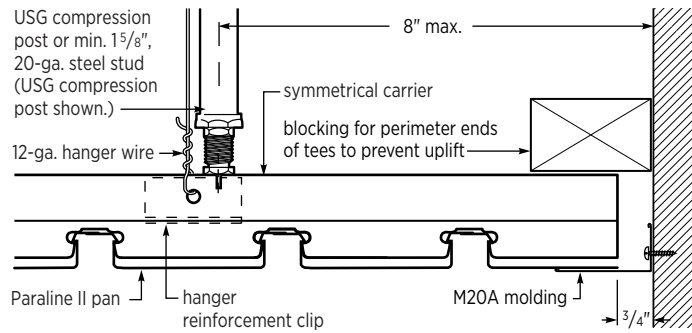
1. The information provided is for quick reference only. Other restrictions and exemptions may apply.
2. All struts and allowable lengths should be verified by a design professional before use.
3. A structural engineer should be consulted for lengths greater than 8 ft.
4. Larger posts can be used; however, the compression post properties listed above shall be considered minimums.
5. The compression post must be attached to the grid member with at least four #8 screws.
6. The compression post attachment to the structure shall be determined by the engineer of record. Miami-Dade anchorage details can be found in the Miami-Dade Applications section on [page 65](#).

# SEISMIC PERIMETER APPLICATIONS

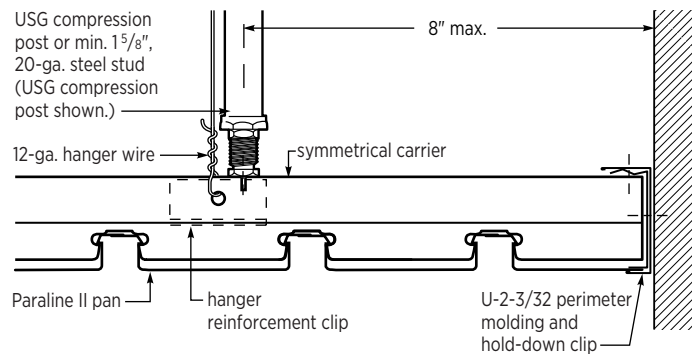
## Paraline® II

### Perimeter Conditions<sup>1</sup>

#### Floating



#### Fixed



**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

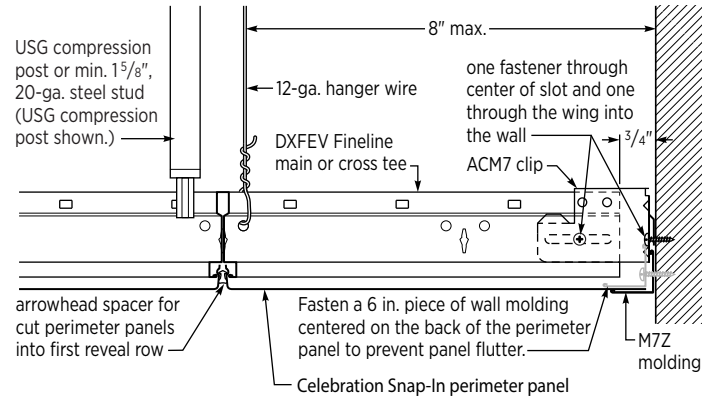
<sup>1</sup> Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit [usg.com](http://usg.com) for more information.

# SEISMIC PERIMETER APPLICATIONS

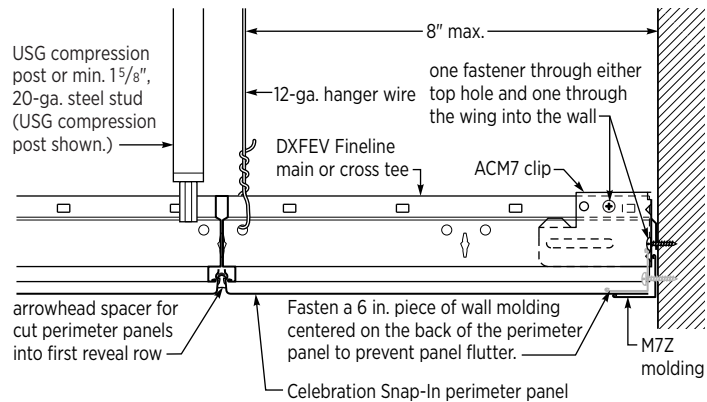
## Celebration™ Snap-In

### Perimeter Conditions<sup>1</sup>

#### Floating



#### Fixed



**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

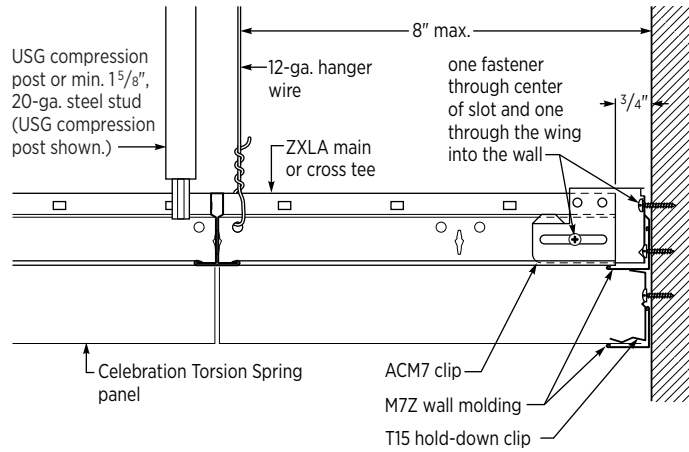
<sup>1</sup> Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit [usg.com](http://usg.com) for more information.

# SEISMIC PERIMETER APPLICATIONS

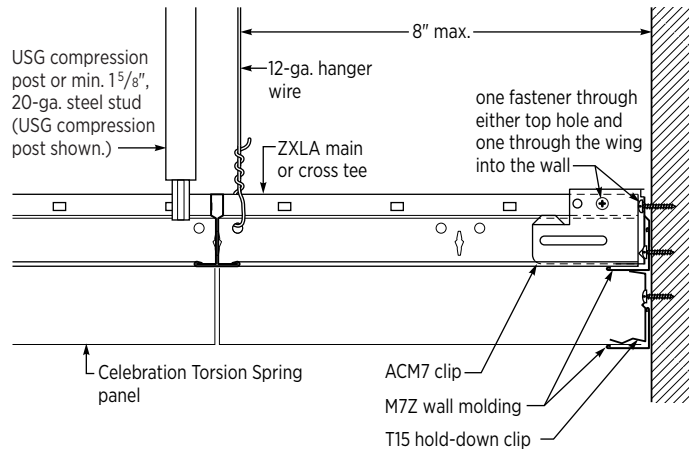
## Celebration™ Torsion Spring

### Perimeter Conditions<sup>1</sup>

#### Floating



#### Fixed



**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

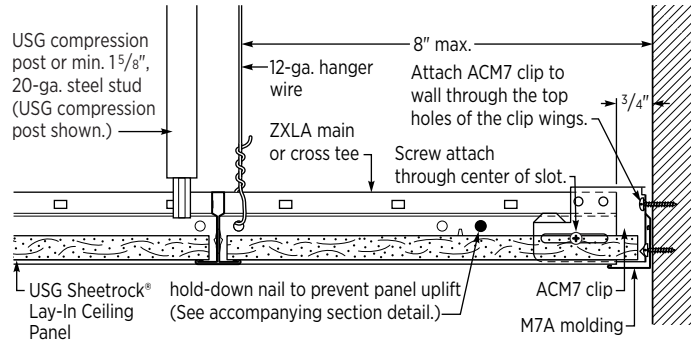
<sup>1</sup> Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit [usg.com](http://usg.com) for more information.

# SEISMIC PERIMETER APPLICATIONS

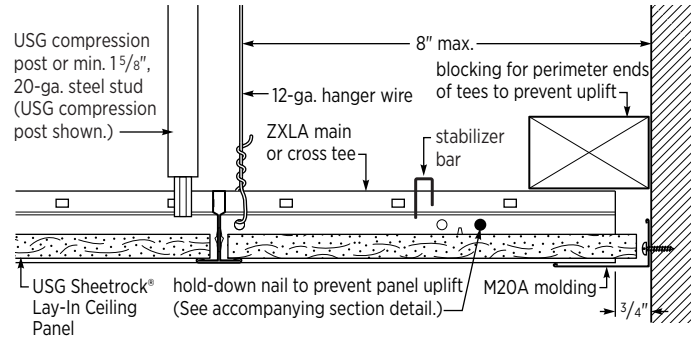
## ZXLA™ with USG Sheetrock® Lay-In Ceiling Panel

### Floating Perimeter Treatment Options<sup>1</sup>

#### ACM7 Seismic Clip

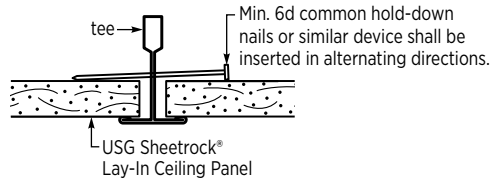


#### 2 in. Wall Molding



**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

#### Hold-Down Nail



**Note:** Min. 6d common hold-down nails or similar devices shall be inserted in alternating directions.

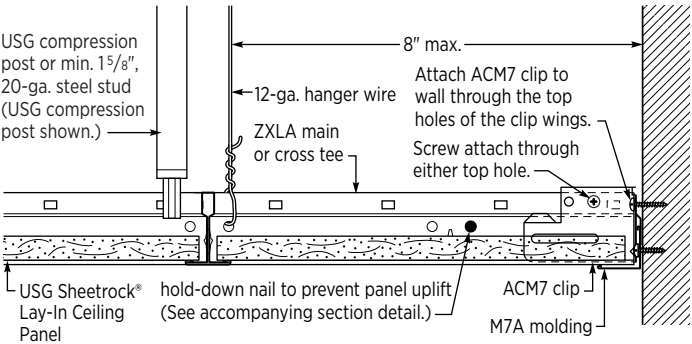
<sup>1</sup> Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit [usg.com](http://usg.com) for more information.

# SEISMIC PERIMETER APPLICATIONS

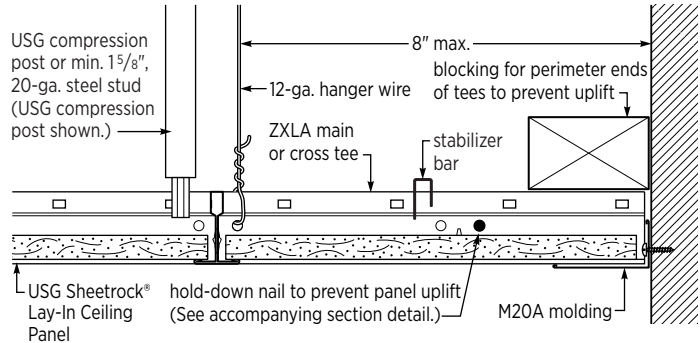
## ZXLA™ with USG Sheetrock® Lay-In Ceiling Panel

**Fixed Perimeter Treatment Options<sup>1</sup>**

**ACM7 Seismic Clip**

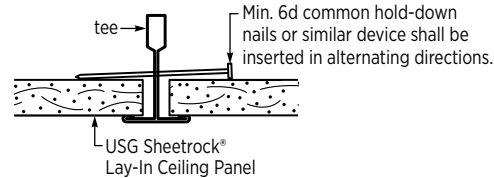


**2 in. Wall Molding**



**Notes:** A 3/4 in. gap is shown for typical seismic design categories D-F. Seismic design category C projects shall be constructed to satisfy seismic design category D-F, as illustrated.

**Hold-Down Nail**



**Note:** Min. 6d common hold-down nails or similar devices shall be inserted in alternating directions.

<sup>1</sup> Other seismic detailing in the field of the system may be required. Typically, wind load bracing requirements are more stringent than seismic requirements; however, there may be some exceptions. Please contact your representative or visit [usg.com](http://usg.com) for more information.



# MIAMI-DADE APPLICATIONS

## Performance Selector

### TECHNICAL DATA

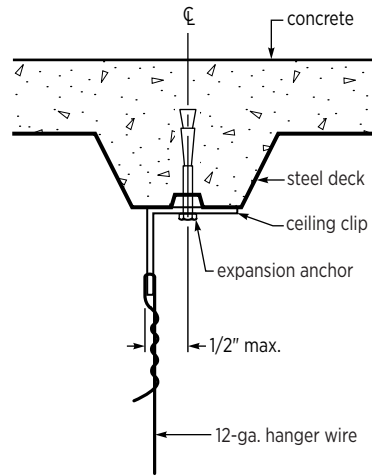
USG System	Main Tee/ Carrier System	Spacing			Panels	Test Standard	Test Record	Maximum Load Rating (w)	Equivalent Wind Speed (v)
		Main Tee	Cross Tee	Compression Post					
<b>Paraline Plus Linear Metal Ceiling System</b>	Paralock Carrier	24 in.	24 in.	24 in.	Paraline Plus Linear Metal Panels	Miami-Dade TAS202 & 203	NOA No. 15-1223.05	+75/-35 psf	171 mph
<b>Celebration Snap-In Metal Panel Ceiling System</b>	Fineline DXFEV	24 in.	24 in.	24 in.	Celebration Metal Panels	Miami-Dade TAS202 & 203	NOA No. 15-1223.04	+80/-70 psf	176 mph
<b>Celebration Torsion Spring Metal Panel Ceiling System</b>	ZXLA26	24 in.	24 in.	24 in.	Celebration Torsion Spring Metal Panels	Miami-Dade TAS202 & 203	NOA No. 17-0925-01	+73.3/-13 psf	170 mph
<b>USG Drywall Suspension System</b>	DGLW26	24 in.	16 in.	24 in.	Single layer 1/2 in. or 5/8 in. glass-mat sheathing with direct applied EFIS	Miami-Dade TAS202 & 203	NOA No. 17-0426.10	75/-75 psf	171 mph

# MIAMI-DADE APPLICATIONS

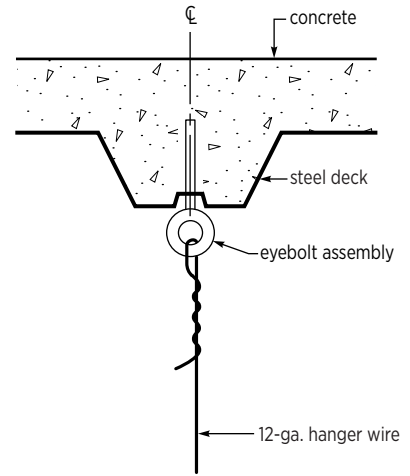
## PARALINE® PLUS CELEBRATION™ SNAP-IN CELEBRATION™ TORSION SPRING

### Anchorage Details

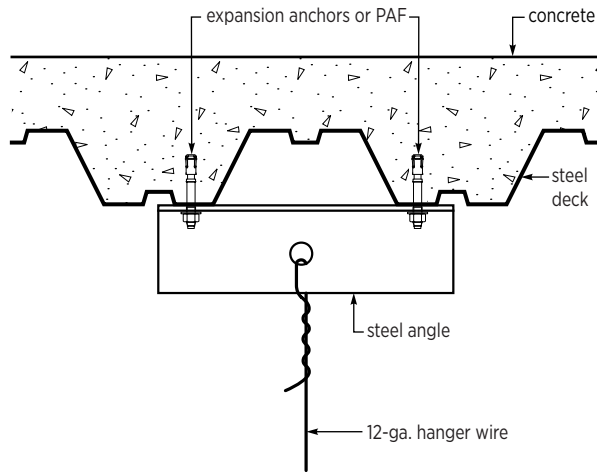
Detail 1



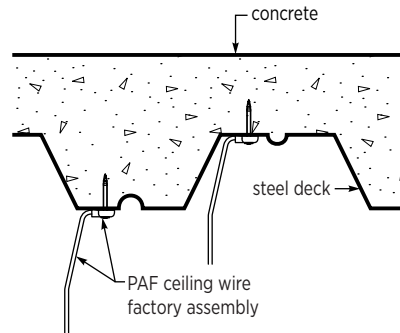
Detail 2



Detail 3



Detail 4

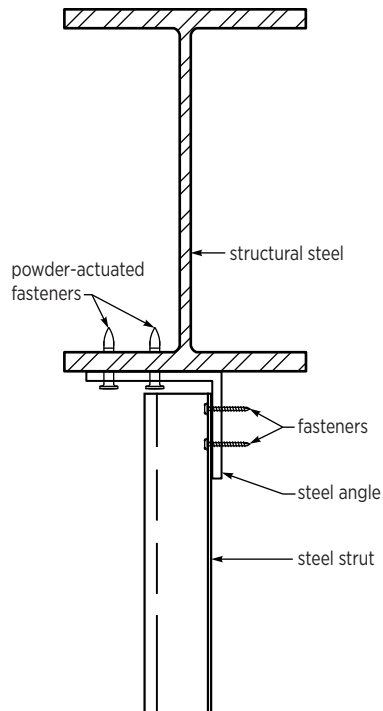


# MIAMI-DADE APPLICATIONS

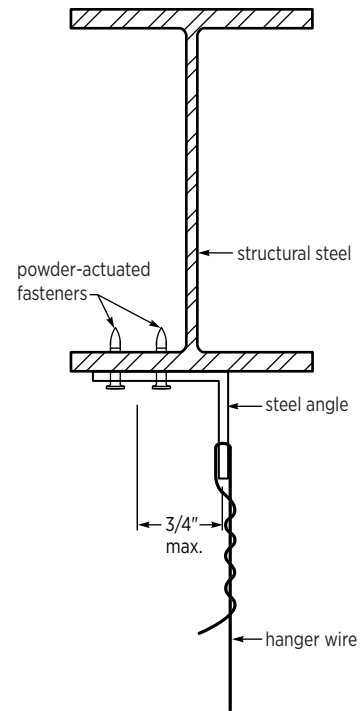
## PARALINE® PLUS CELEBRATION™ SNAP-IN CELEBRATION™ TORSION SPRING

### Anchorage Details

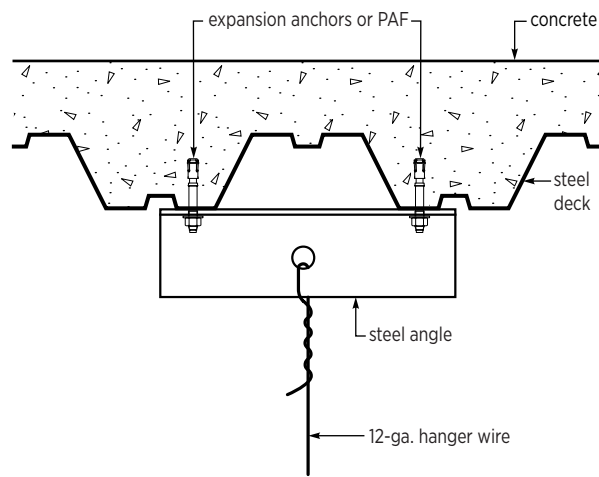
Detail 5



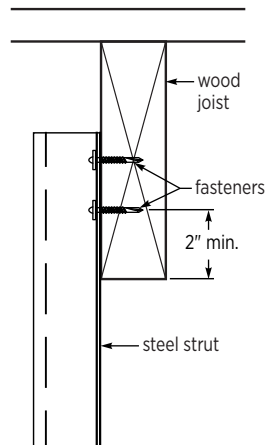
Detail 6



Detail 7



Detail 8

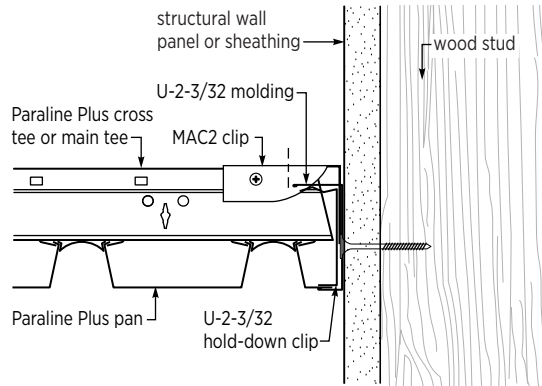


# MIAMI-DADE APPLICATIONS

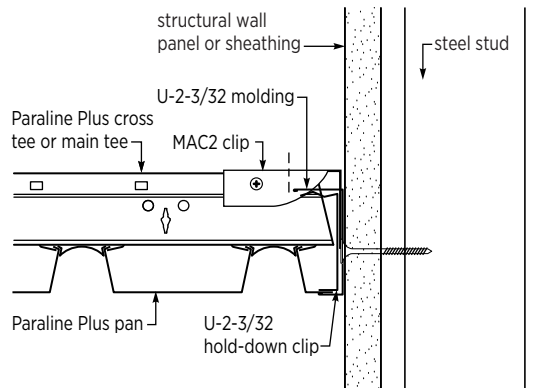
## PARALINE® PLUS

### Wall Mold to Structure

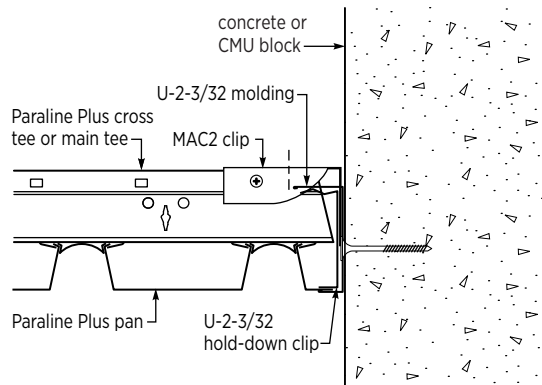
#### Wood Substrate



#### Steel Substrate



#### Concrete Substrate

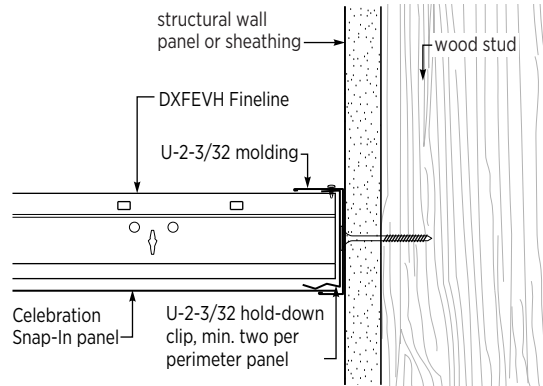


# MIAMI-DADE APPLICATIONS

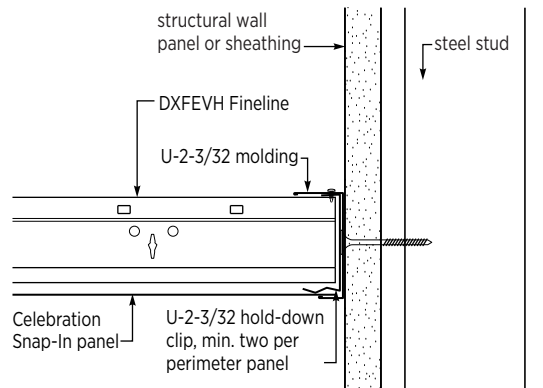
## CELEBRATION™ SNAP-IN

### Wall Mold to Structure

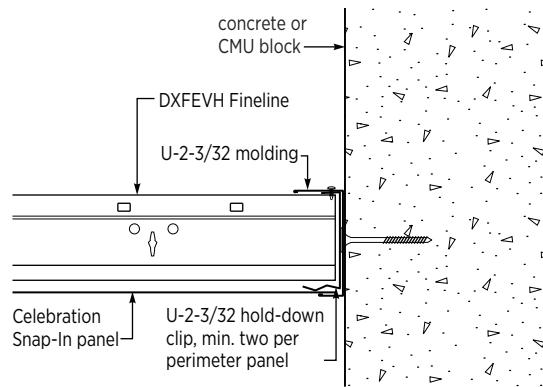
#### Wood Substrate



#### Steel Substrate



#### Concrete Substrate

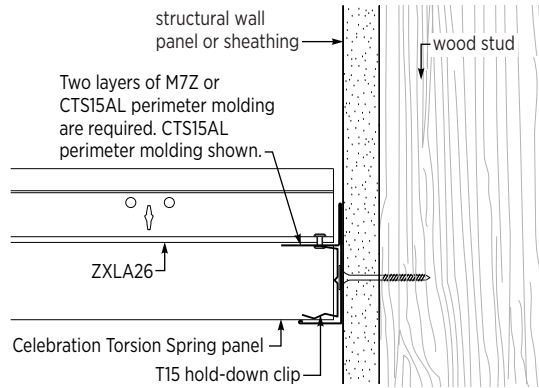


# MIAMI-DADE APPLICATIONS

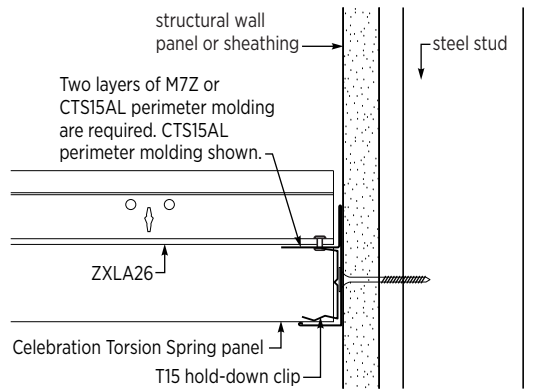
## CELEBRATION™ TORSION SPRING

### Wall Mold to Structure

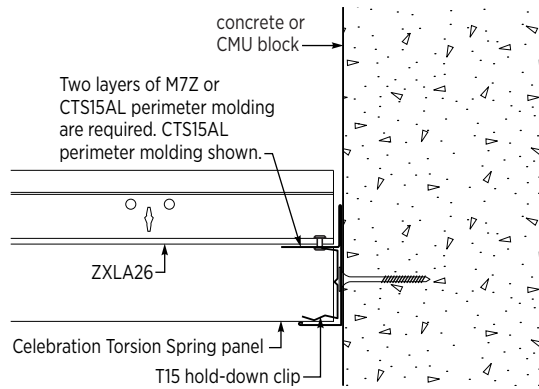
#### Wood Substrate



#### Steel Substrate



#### Concrete Substrate



## WEBSITES

[usg.com](http://usg.com)

[cgcinc.com](http://cgcinc.com)

[usgdesignstudio.com](http://usgdesignstudio.com)

[cgcdesignstudio.com](http://cgcdesignstudio.com)

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Manufactured by  
USG Interiors, Inc.  
550 West Adams Street  
Chicago, IL 60661

### PRODUCT INFORMATION

DXFEV Data Sheet AC3304. Celebration Torsion Spring Exterior Accessories IC642. Exterior Ceilings Installation Guide SC3212. See [usg.com](http://usg.com) for the most up-to-date product information.

### INSTALLATION

Must be installed in compliance with ASTM C636, ASTM E580, CISCA, and standard industry practices. Refer to Exterior Ceilings Installation Guide SC3212.

### CODE COMPLIANCE

The information presented is correct to the best of our knowledge at the date of issuance. Because codes continue to evolve, check with a local official prior to designing and installing a ceiling system. Other restrictions and exemptions may apply. This is only intended as a quick reference.

### PROGRESSIVE ENGINEERING INC. EVALUATION REPORT COMPLIANCE

Wind load tested and listed in  
PEI Evaluation Report PER-12055 and  
PEI Evaluation Report PER-14077.

### PURPOSE

This technical guide is intended as a resource for design professionals, to promote more uniform criteria for plan review and jobsite inspection of projects. This technical guide indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered and adopted. The renderings and details provided are for illustrative purposes only and are not a substitute for certified architectural and engineering drawings.

SC2561/rev 12-17

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### ICC EVALUATION SERVICE, INC., REPORT COMPLIANCE

Suspension systems manufactured by USG Interiors, LLC, have been reviewed and are approved by listing in ICC-ES Evaluation Report 1222. Evaluation Reports are subject to reexamination, revision and possible cancellation. Please refer to [usgdesignstudio.com](http://usgdesignstudio.com) or [usg.com](http://usg.com) for current reports.

### L.A. RESEARCH REPORT COMPLIANCE

Donn brand suspension systems manufactured by USG Interiors, LLC, have been reviewed and are approved by listing in the following L.A. Research Report number: 25764.

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Trademarks

### SAFETY FIRST!

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

