

# USG Exterior Ceiling Applications

## Technical Guidelines

USG provides three exterior systems for use in exterior environments that are not directly exposed to the weather such as under a soffit, parking garages, covered entrance or drive-through. They include the:

- PARALINE® Linear Metal Ceiling System
- CELEBRATION™ Metal Panel Ceiling System
- ZXLA™ with SHEETROCK® Lay-In Ceiling Panels

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

These guidelines outline the design considerations and construction details for the installation of each USG exterior ceiling system.

CELEBRATION



PARALINE



# Paraline

## Wind Resistance

PARALINE ceiling systems may be used for sheltered exterior applications not directly exposed to the weather. The PARALINE II system has 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> PARALINE ceiling systems were tested using wind speeds measured in miles per hour (mph).

Testing of the PARALINE II system reached positive (upward) wind speeds of up to 120 mph. Testing was conducted by an independent laboratory and the system did not reveal evidence of damage, failure, deformation or permanent damage under these extreme wind speed stresses. The PARALINE II system was further tested at negative (downward) wind speeds up to 99 mph.

The PARALINE II ceiling is a system of 12' long linear aluminum pans. The system has been wind speed tested for exterior applications. Pans are 3-1/4" wide with integral flanges that overlap to form a reveal closure.

**Limitations:** Finish is not UV-resistant; PARALINE should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. 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. Please refer to IC463 for more information about PARALINE ceiling systems.

Tested Wind Speeds	Positive (upward)	Negative (downward)
	120 mph	99 mph

Technical Data	– Wind speeds as certified by independent testing labs.
	– Compression posts used for the tests were 3/4" EMT conduit with compression post adapters.

Guidelines	– 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.
	– Compression post shall be positively attached to the structure. For further information on the USG DOWN Brand Compression Post, see pages 24–25.
	– Other materials can be used for compression posts, provided the compressive strength and attachment method are approved for use by a local structural engineer.
	– Architect's details must cover design and location of expansion joints in addition to meeting all applicable building code requirements.

<sup>1</sup> System is to 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 System, visit [www.USG.com](http://www.USG.com)

## Exterior Application Details

48" 48"

PARALINE pan splice

symmetrical carrier

compression post adapter and EMT (4' o.c.)

hanger wires

48"

carrier splice

hanger reinforcement clip

max. 6" from wall

PARALINE pan

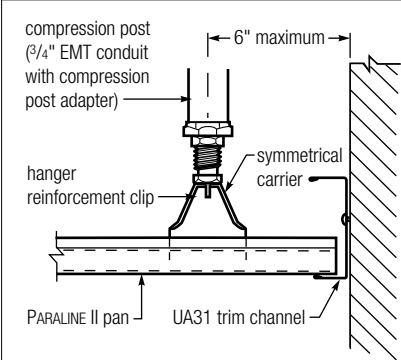
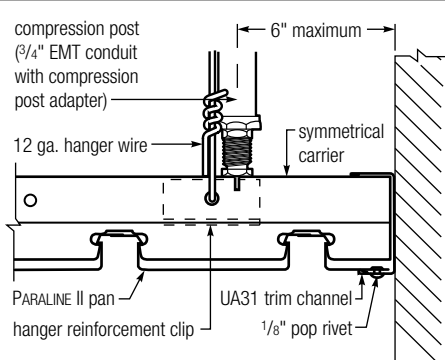
trim channel

finished wall or soffit

Diagram illustrating a symmetrical carrier with two compression posts and hanger wires. The diagram shows a cross-section of the carrier with two vertical compression posts. A 12 ga. hanger wire is shown attached to the top of the posts. A compression post adapter is shown at the base of the posts. A hanger reinforcement clip is shown at the base of the posts. The maximum distance between the compression posts and hanger wires is 48" o.c. (on center). The carrier is labeled as symmetrical.

# Paraline

## Exterior Application Details

Wall Intersection	PANZ Parallel to Wall	PANZ Perpendicular to Wall
	 <p>Diagram illustrating the installation of PANZ Parallel to Wall. The assembly includes a compression post (3/4" EMT conduit with compression post adapter) secured with a hanger reinforcement clip. A symmetrical carrier is positioned above the PARALINE II pan, which is supported by a UA31 trim channel. The distance from the wall to the carrier is marked as 6" maximum.</p>	 <p>Diagram illustrating the installation of PANZ Perpendicular to Wall. The assembly includes a compression post (3/4" EMT conduit with compression post adapter) secured with a hanger reinforcement clip. A symmetrical carrier is positioned above the PARALINE II pan, which is supported by a UA31 trim channel. The distance from the wall to the carrier is marked as 6" maximum. A 12 ga. hanger wire is used to secure the carrier, and a 1/8" pop rivet is used to secure the trim channel to the wall.</p>

# Celebration

## Wind Resistance

CELEBRATION ceiling systems may be used for sheltered exterior applications not directly exposed to the weather. CELEBRATION 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> CELEBRATION ceiling systems were tested using wind speeds measured in miles per hour (mph).

CELEBRATION systems up to 24" x 24" have been tested to 120 mph, both positive (upward) and negative (downward). CELEBRATION systems up to 30" x 30" have been tested to 120 mph positive (upward) and 110 mph negative (downward). CELEBRATION systems up to 30" wide and 78" long have been tested to 110 mph, both positive (upward) and negative (downward). Testing was conducted by an independent laboratory and neither system revealed evidence of damage, failure, deformation or permanent damage under these extreme wind speed stresses.

**Limitations:** Finish is not UV-resistant; CELEBRATION should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. 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. Please refer to IC415 for more information about CELEBRATION ceiling systems.

Tested Wind Speeds	CELEBRATION Panels	Positive (upward)	Negative (downward)
	24" x 24"	120 mph	99 mph
	30" x 30"	120 mph	99 mph
	All other panels	110 mph	110 mph

Technical Data	<ul style="list-style-type: none"><li>– Wind speeds as certified by independent testing labs.</li><li>– Compression posts used for the tests were 3/4" EMT conduit.</li></ul>
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Guidelines	<ul style="list-style-type: none"><li>– Building structure from which the CELEBRATION 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.</li><li>– Compression post shall be positively attached to the structure. For further information on the USG DOWN Brand Compression Post, see pages 24–25.</li><li>– Heavy duty main tees shall be used.</li><li>– Other materials can be used for compression posts, provided the compressive strength and attachment method are approved for use by a local structural engineer.</li><li>– Architect's details must cover design and location of expansion joints in addition to meeting all applicable building code requirements.</li></ul>
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<sup>1</sup> System is to 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 [www.USG.com](http://www.USG.com)

# Celebration

## Wind Resistance Exterior Application

### Suspension System Products

### Donn® Brand Fineline® DXFEV Suspension System

									Rated Load <sup>1,2</sup>		
		ASTM Class	Length	Height	Item No. <sup>3</sup>	Description	Class	Color	4' Hanger Spacing	5' Hanger Spacing	6' Hanger Spacing
9/16" Tee System	Main Tee <sup>4</sup>	Intermediate Duty	12'	1-25/32"	DXFEV2924	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal	12 lbs./LF	6.6 lbs./LF	3.6 lbs./LF
		Heavy Duty	12'	1-25/32"	DXFEVH2924	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal	16 lbs./LF	8.3 lbs./LF	4.9 lbs./LF
		Intermediate Duty	12'	1-25/32"	DXFEV2912	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal	12 lbs./LF	6.6 lbs./LF	3.6 lbs./LF
		Heavy Duty	12'	1-25/32"	DXFEVH2912	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal	16 lbs./LF	8.3 lbs./LF	4.9 lbs./LF
	Cross Tee		2'	1-25/32"	DXFEV229	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal			
			4'	1-25/32"	DXFEV429N <sup>5</sup>	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal			
			6'	1-25/32"	DXFEV629	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal			
			8'	1-25/32"	DXFEV829	Narrow-profile, slotted grid system with G90 galvanization	Class A	Flat White, Black Reveal			
Perimeter Molding <sup>6,7,8</sup>	Channel Molding		10'	1-9/16"	UA25	10' x 1-9/16" x 1/2" x 1" Aluminum U-Molding		Flat White			
			11.8'	2-3/32"	U-2-3/32	11.8" x 2-3/32" x 7/8" x 1-1/8" Aluminum U-Molding		Flat White			
Accessories <sup>9</sup>	Hold-Down Clip		10"	1-9/16"	T-15	10" x 11/32" x 1-9/16" x 3/4" Panel Hold-Down Clip					
			10"	2-3/32"	U-2-3/32	10" x 11/32" x 2-3/32" x 3/4" Panel Hold-Down Clip					
	Reveal Spacer		100' roll	1/4"	CA1	Arrowhead reveal spacer (100' roll)					

#### Footnotes

<sup>1</sup> Load test data shows uniform load in lbs./LF based on simple span tests in accordance with ASTM C635 deflection limit on L/360.

<sup>2</sup> For detailing and module loading request AC3003QRC.

<sup>3</sup> Some products are available in metric. Call Customer Service for details.

<sup>4</sup> Heavy duty main tees were used in the tested assemblies.

<sup>5</sup> N = Notch at midpoint.

<sup>6</sup> For more information about moldings, see Perimeter Interface selector.

<sup>7</sup> Panels must be field-cut to size at the perimeter.

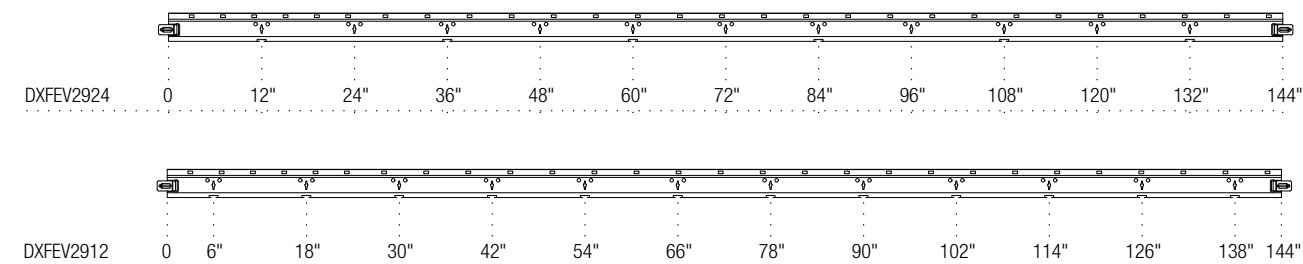
<sup>8</sup> If UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed. This is not required with U-2-3/32 molding.

<sup>9</sup> The T-15 clip is used with UA25 molding and the U-2-3/32 clip is used with U-2-3/32 molding.

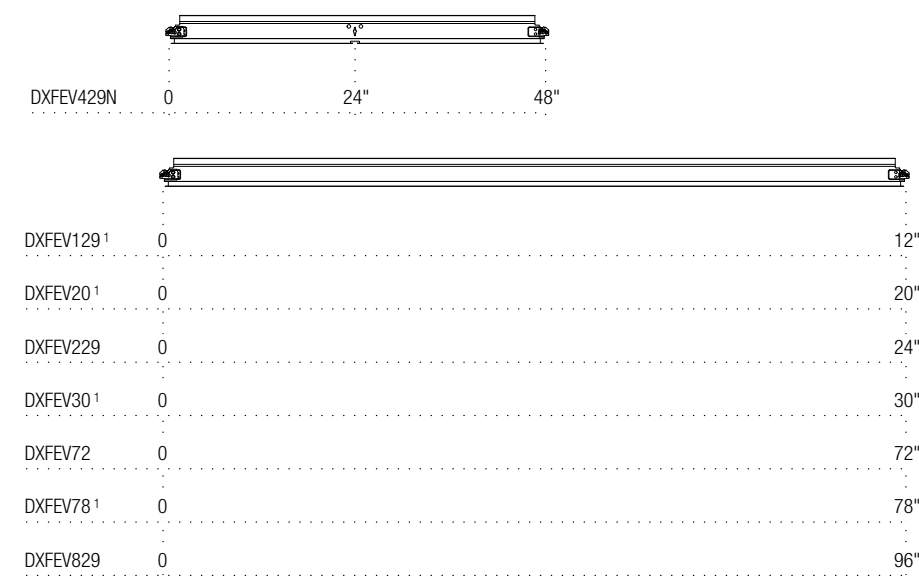
# Celebration

## Wind Resistance Exterior Application

### Main Tees 12' Intermediate Duty



### Cross Tees

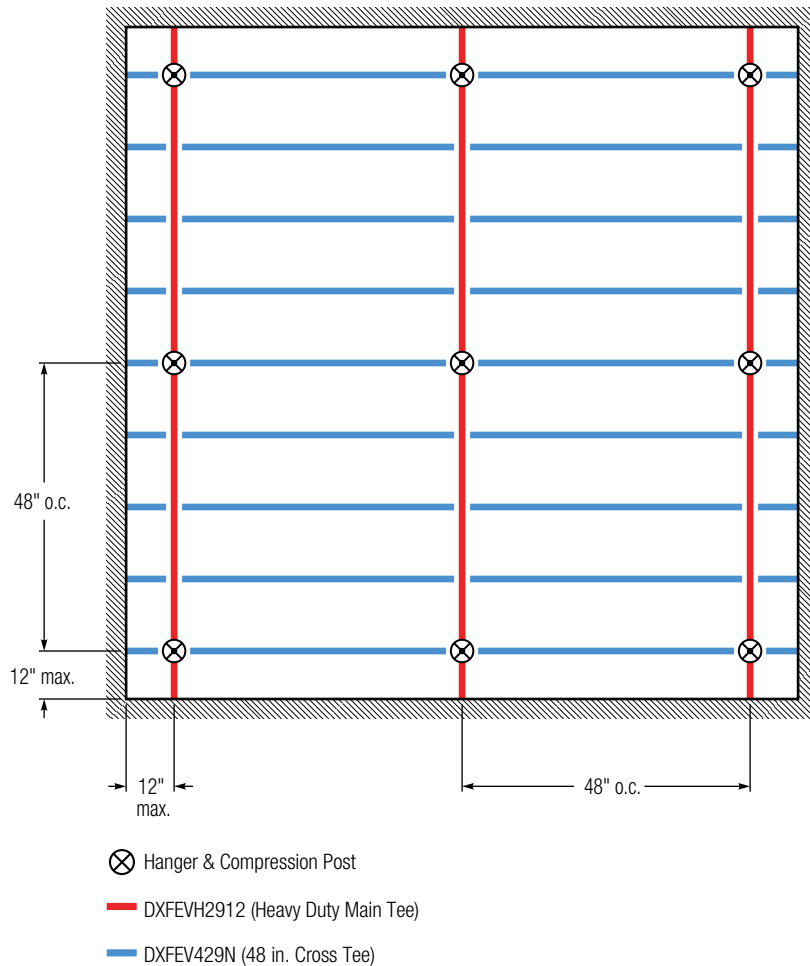


<sup>1</sup> Special Order

# Celebration 1' x 4' System

## Exterior Application

### Layout



### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

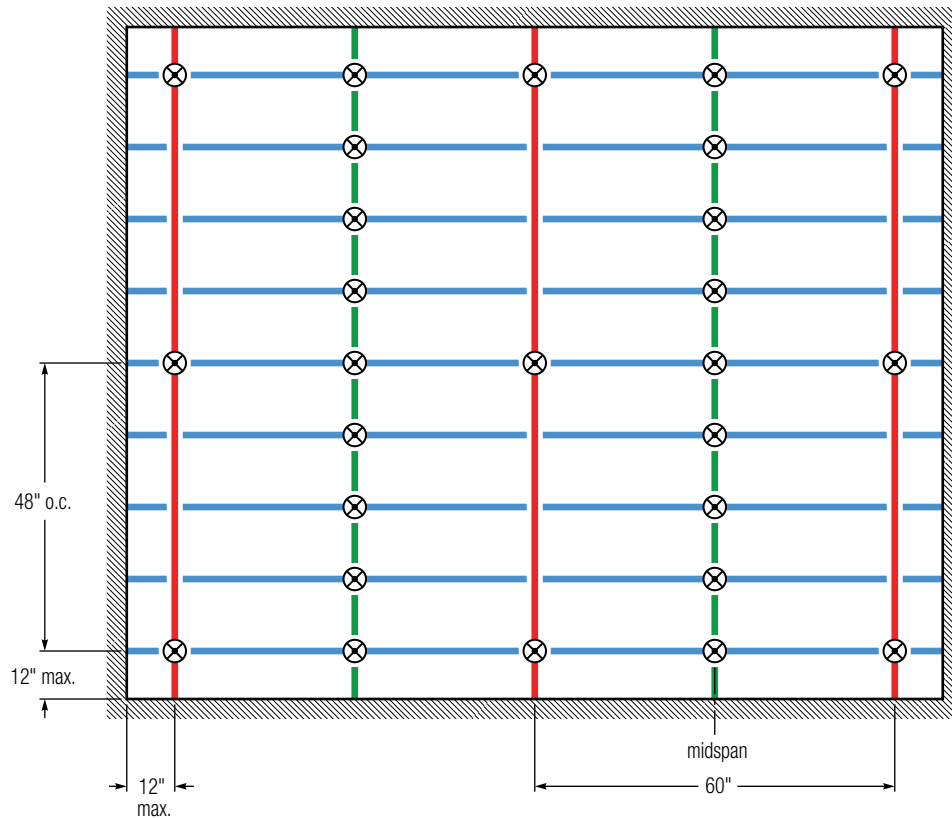
See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.



# Celebration 1' x 5' System

## Exterior Application

### Layout



⊗ Hanger & Compression Post

— DXFEVH2912 (Heavy Duty Main Tee)

— DXFEV529 (60 in. Cross Tee)<sup>1</sup>

— DXFEV129 (12 in. Cross Tee)<sup>1</sup>

<sup>1</sup> Special Order

### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

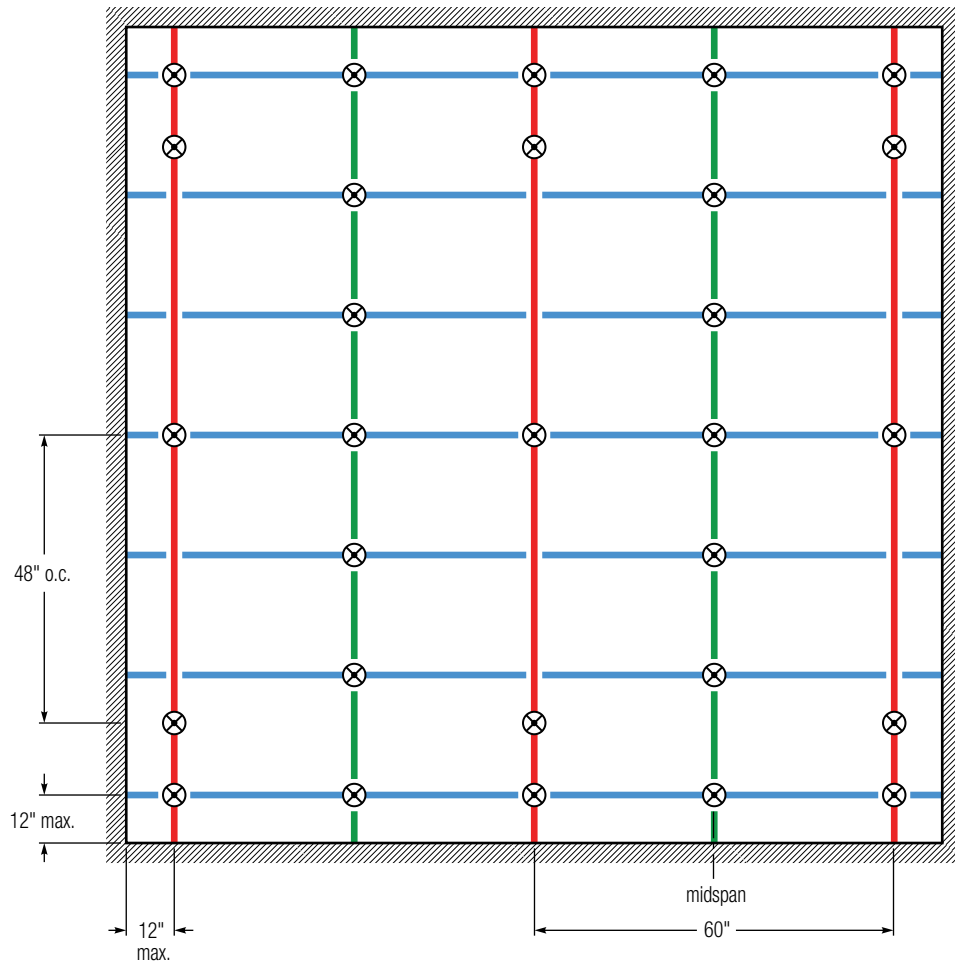
**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration 20" x 60" System

## Exterior Application

### Layout



⊗ Hanger & Compression Post

— DXFEVH2920 (Heavy Duty Main Tee)<sup>1</sup>

— DXFEV529 (60 in. Cross Tee)<sup>1</sup>

— DXFEV20 (20 in. Cross Tee)<sup>1</sup>

<sup>1</sup> Special Order

### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

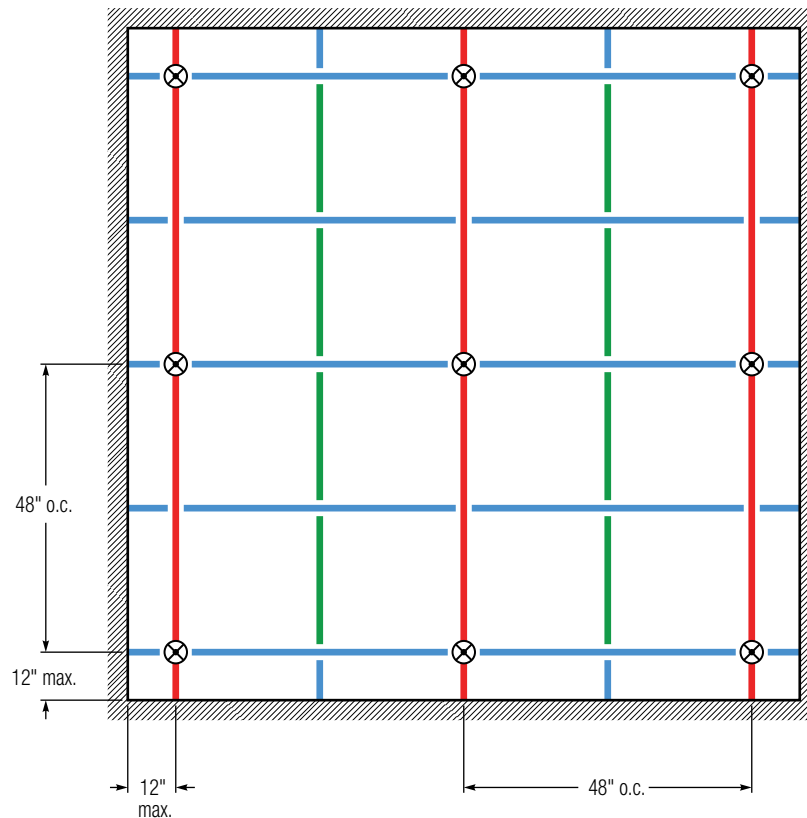
**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration 2' x 2' System

## Exterior Application

### Layout



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

### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

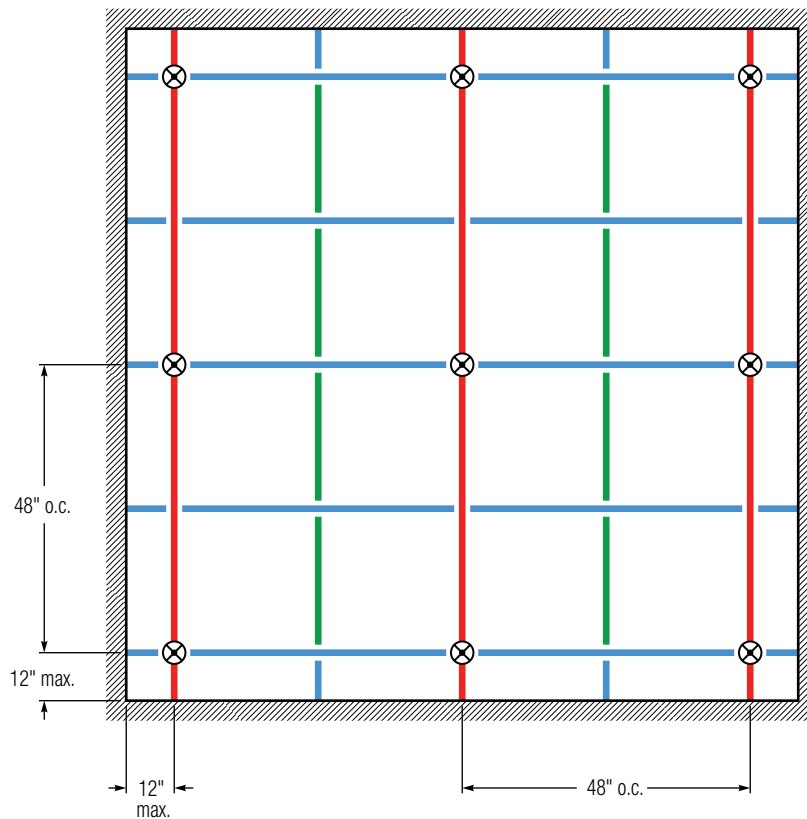
See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration

## 2' x 4' System<sup>1</sup>

### Exterior Application

#### Layout



⊗ Hanger & Compression Post

— DXFEVH2924 (Heavy Duty Main Tee)

— DXFEV429N (48 in. Cross Tee)

— DXFEV229 (24 in. Cross Tee)

<sup>1</sup> 2' x 4' panels shall be installed to a 2' x 2' grid layout for added rigidity.

#### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

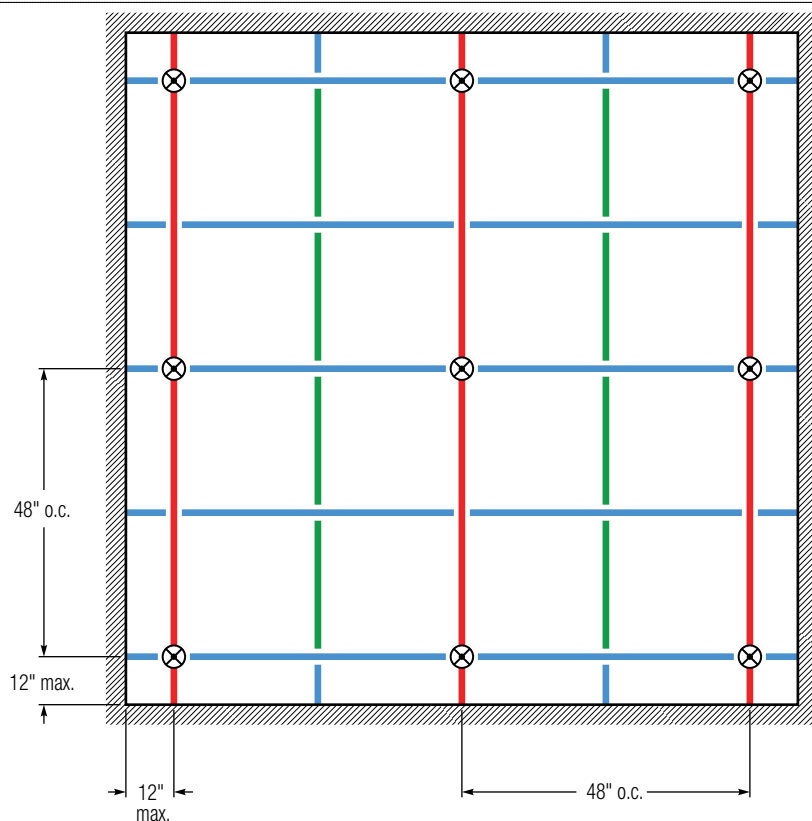
**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.





See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration 2' x 6' System<sup>1</sup>

## Exterior Application

### Layout



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

<sup>1</sup> 2' x 6' panels shall be installed to a 2' x 2' grid layout for added rigidity.

### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

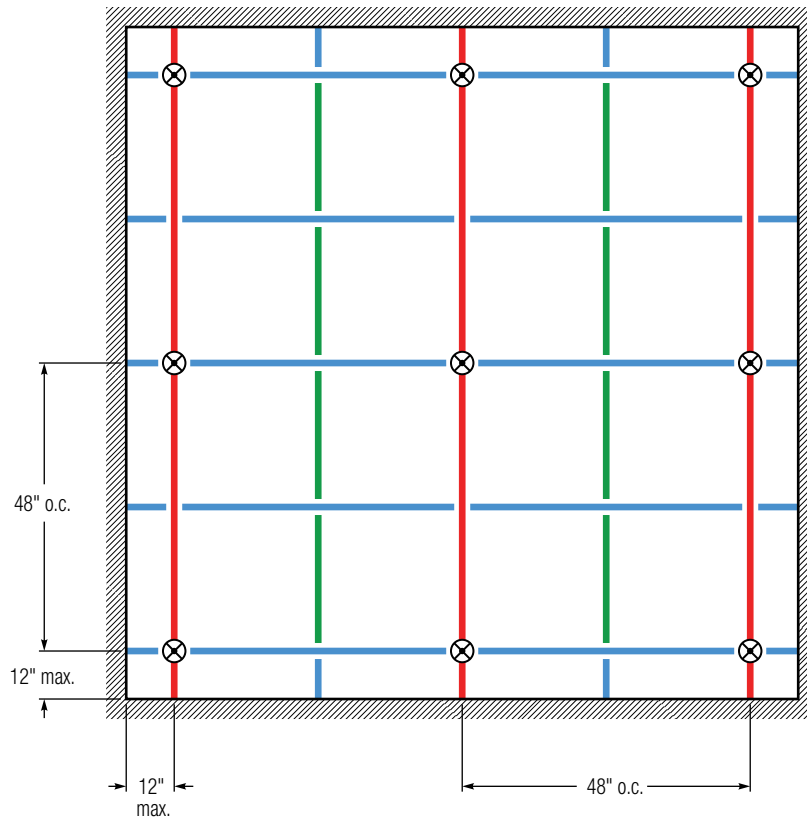
See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration

## 2' x 8' System<sup>1</sup>

### Exterior Application

#### Layout



⊗ Hanger & Compression Post

— DXFEVH2924 (Heavy Duty Main Tee)

— DXFEV429N (48 in. Cross Tee)

— DXFEV229 (24 in. Cross Tee)

<sup>1</sup> 2' x 8' panels shall be installed to a 2' x 2' grid layout for added rigidity.

#### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

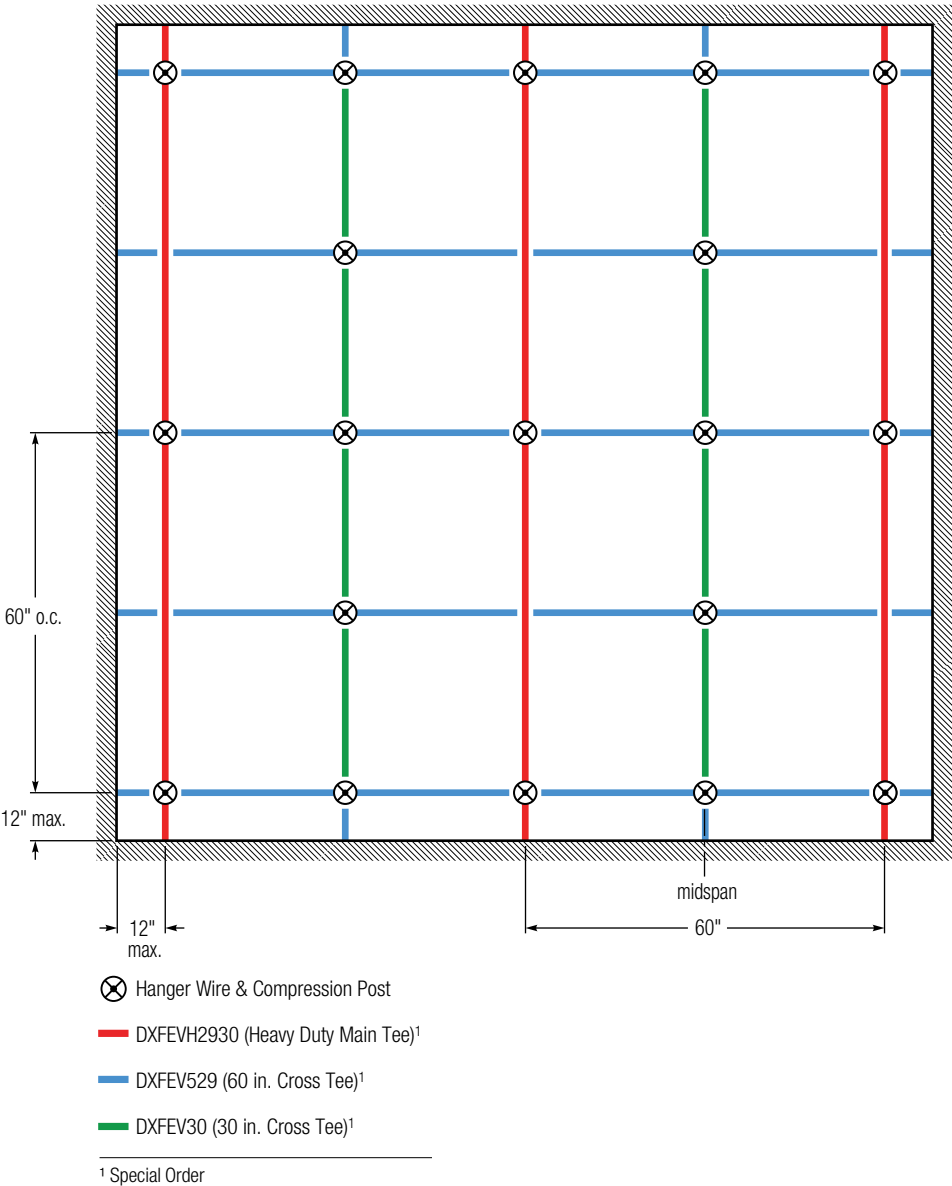
**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration 30" x 30" System

## Exterior Application

### Layout



### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

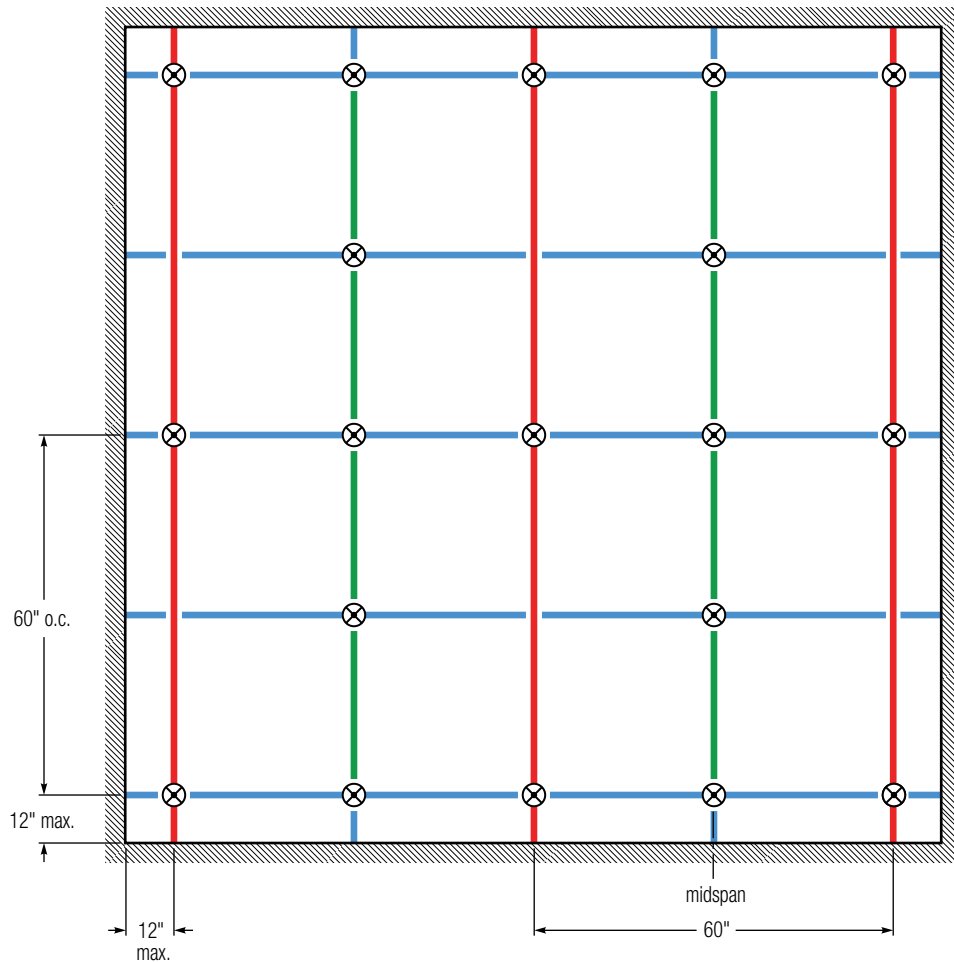
- Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.
- Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration 30" x 60" System<sup>1</sup>

## Exterior Application

### Layout



⊗ Hanger Wire & Compression Post

— DXFEVH2930 (Heavy Duty Main Tee)<sup>2</sup>

— DXFEV529 (60 in. Cross Tee)<sup>2</sup>

— DXFEV30 (30 in. Cross Tee)<sup>2</sup>

<sup>1</sup> 30" x 60" panels shall be installed to a 30" x 30" grid layout for added rigidity.

<sup>2</sup> Special Order

### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

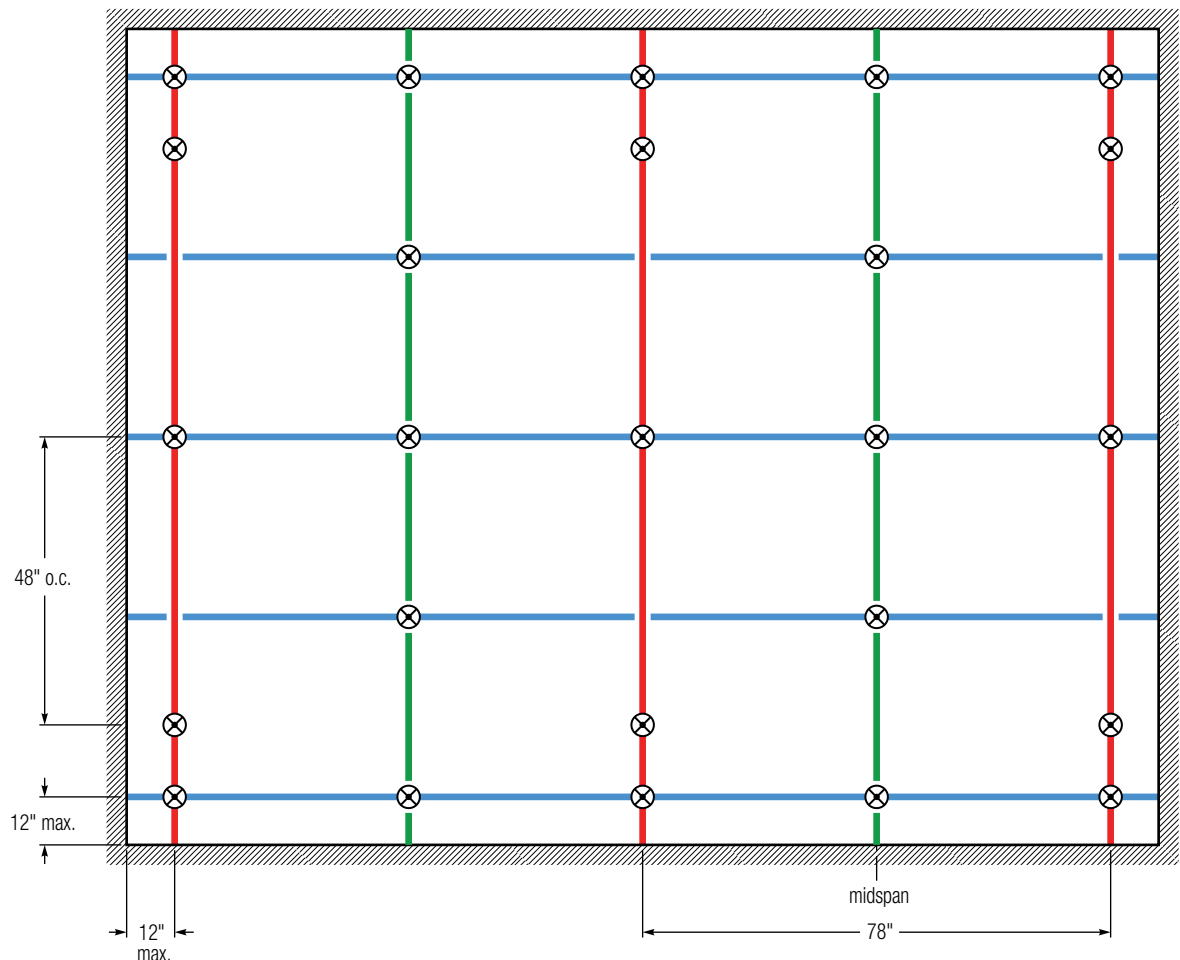
See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.



# Celebration 30" x 78" System<sup>1</sup>

## Exterior Application

### Layout



⊗ Hanger Wire & Compression Post

— DXFEVH2912 (Heavy Duty Main Tee)

— DXFEV78 (78 in. Cross Tee)<sup>1</sup>

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

<sup>1</sup> Special Order

### Perimeter Conditions

There are two options for the perimeter treatment of CELEBRATION with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

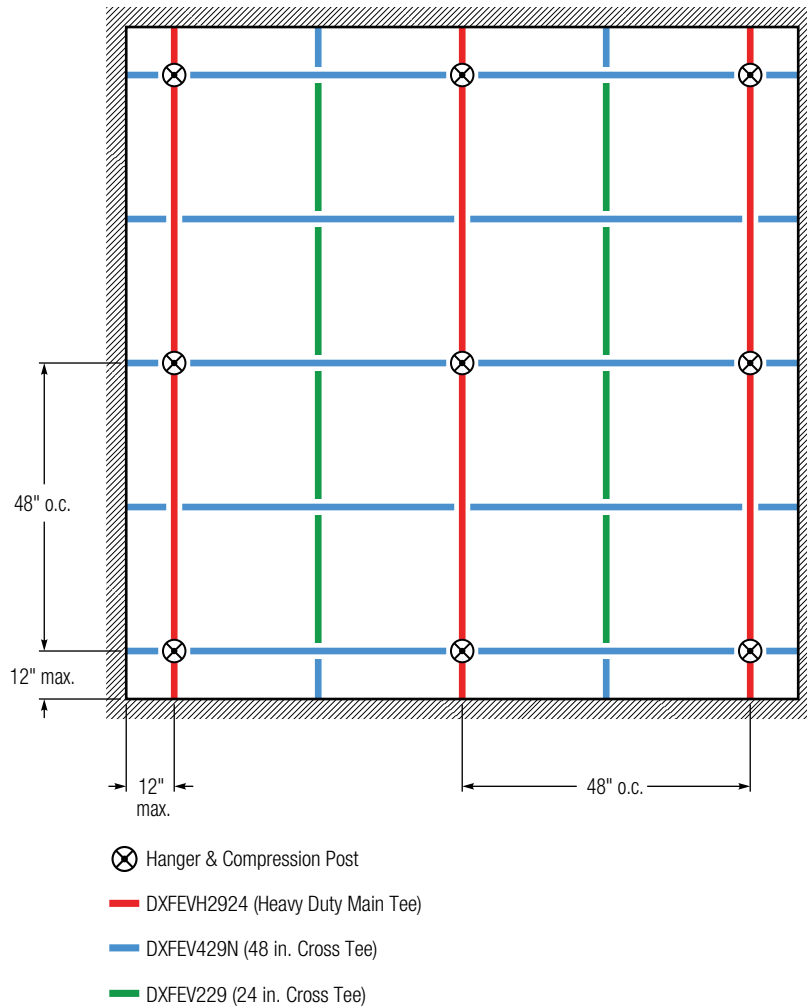
See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration

## 4' x 4' System<sup>1</sup>

### Exterior Application

#### Layout



<sup>1</sup> 4' x 4' panels shall be installed to a 2' x 2' grid layout for added rigidity.

#### Perimeter Conditions

There are two options for the perimeter treatment of Celebration with DXFEV in an exterior application:

**Option A:** Where UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed.

**Option B:** Where U-2-3/32 molding is used the tee ends fit into the increased height of the U-2-3/32 molding and are not cut back at an angle. Back blocking is not installed. Fastener attachment through the top leg of the molding into the tee bulb is required.

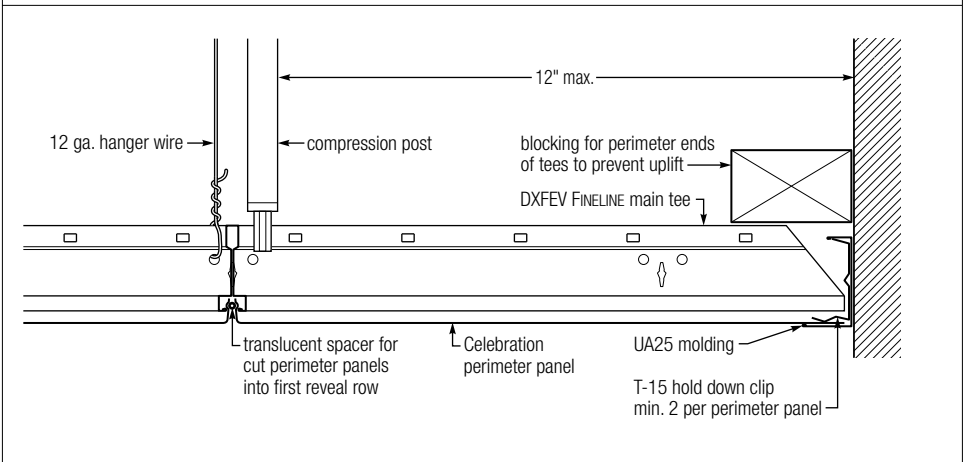
See page 19 for illustrations of these options and their requirements. For seismic perimeter options see page 27.

# Celebration

## Perimeter Applications

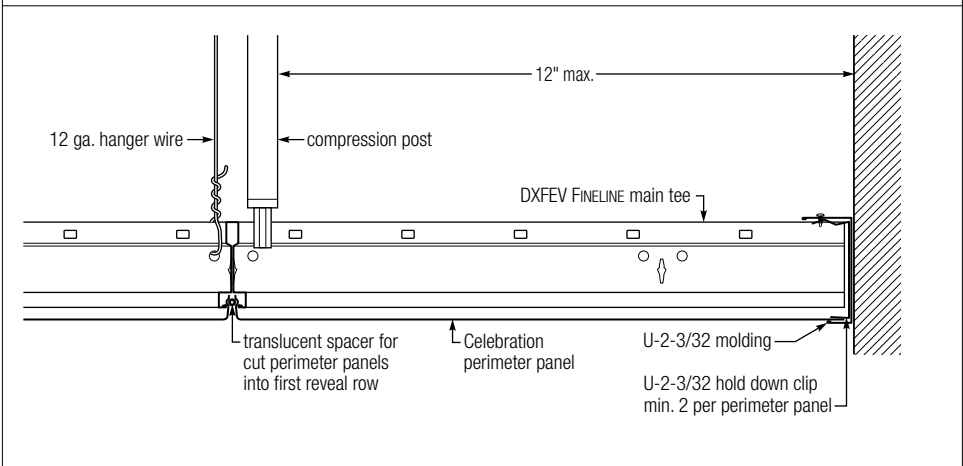
### Option A

Blocking at the end of the tees is used to prevent uplift. Use with UA25 molding and T-15 hold-down clip.



### Option B

Blocking is not used and the tee end is *not* angled back. Use with U-2-3/32 molding and U-2-3/32 hold-down clip.



**Note:** If UA25 molding is used, the tee ends must be cut back at an angle to accommodate the increased height of the tees and blocking must be installed. This is not required with U-2-3/32 molding. For seismic applications, see page 27.

	Hold-Down Clip		Channel Molding	
	Item No	Commodity Code	Item No	Commodity Code
Option A	T-15	207970	UA25	201383
Option B	U-2-3/32	903046	U-2-3/32	903045

# Sheetrock® Lay-In Ceiling Panels

## Wind Resistance

ZXLA™ and AX™ suspension systems with 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> ZXLA and AX suspension systems with Sheetrock Lay-In Ceiling Panels were tested using wind speeds measured in miles per hour (mph).

SHEETROCK Lay-In Ceiling Panel systems up to 24" x 48" have been tested to 120 mph. Testing was conducted by an independent laboratory and neither system revealed evidence of damage, failure, deformation or permanent damage under these extreme wind speed stresses.

**Limitations:** Should not be installed where direct exposure to sun or weather will occur, such as fascias or facades. 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.

Tested Wind Speeds	Positive (upward)	Negative (downward)
	120 mph	120 mph

- Technical Data**
- Wind speeds as certified by independent testing labs.
  - Compression posts used for the tests were 3/4" EMT conduit.

Available Panels	Edge	Panel Size	Item No.
Sheetrock Lay-In Ceiling Panel <i>ClimaPlus</i> , Vinyl	Square	2' x 2' x 1/2"	3260
	Square	2' x 4' x 1/2"	3270
Sheetrock Lay-In Ceiling Panel <i>ClimaPlus</i> , PVC-Free	Square	2' x 2' x 1/2"	3220
	Square	2' x 4' x 1/2"	3230

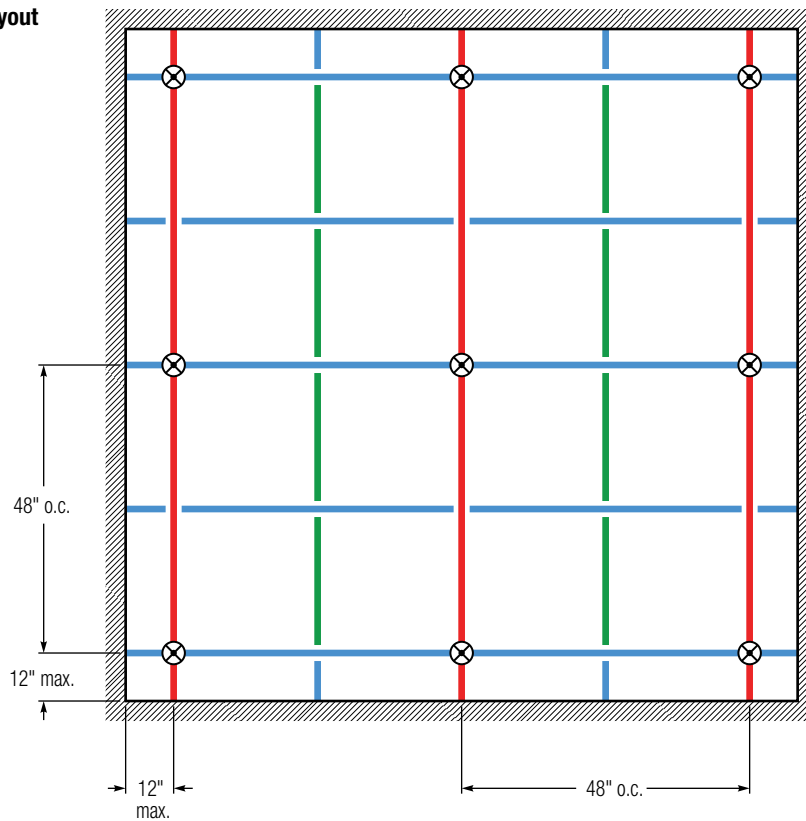
- Guidelines**
- Building structure from which the SHEETROCK Lay-In Ceiling Panel system is suspended and spaced, as well as hanger wire and compression post attachment methods, must be capable of withstanding the loads applied during wind conditions.
  - Other materials can be used for compression posts, provided the compressive strength and attachment method are approved for use by a local structural engineer.
  - Min. 6d common hold down nails or similar device shall be installed at regular intervals to prevent uplift. Min. 6 for each 2' x 4' panel module and min. 4 for each 2' x 2' panel module.
  - Min. 6d common hold down nails or similar device shall be inserted in alternating directions.
  - Min. 6d common hold down nails or similar device may be installed through the hanger wire holes, cross tee clip holes and through a field-punched hole in the web of the tee.
  - Architect's details must cover design and location of expansion joints in addition to meeting all applicable building code requirements.
  - Compression post and hanger wires are spaced 42" o.c. for AX systems. For AX assemblies requiring intermediate or heavy duty spacing shall be 36" o.c.<sup>2</sup>

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

<sup>2</sup> Reducing the hanger wire spacing on main tees can achieve heavy duty load carrying capacity values to satisfy this requirement, but does not change the duty classification of the main tee. Many jurisdictions accept the installation of Light Duty main tees with additional supports, however, some jurisdictions will not accept this application. Check with a local official prior to designing and installing a Light Duty ceiling system. Other restrictions may apply.

# Sheetrock Lay-In ZXLA 2' x 2' System

## Exterior Application Layout



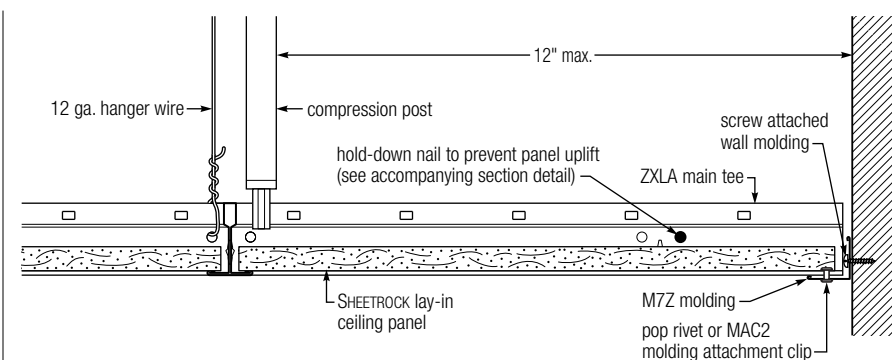
⊗ Hanger & Compression Post

— ZXLA26 (Heavy Duty Main Tee)

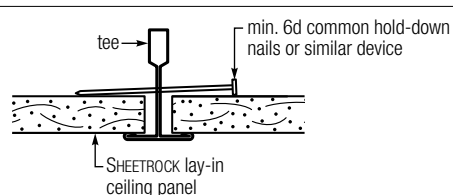
— ZXLA424 (48 in. Cross Tee)

— ZXLA224 (24 in. Cross Tee)

## Perimeter Condition



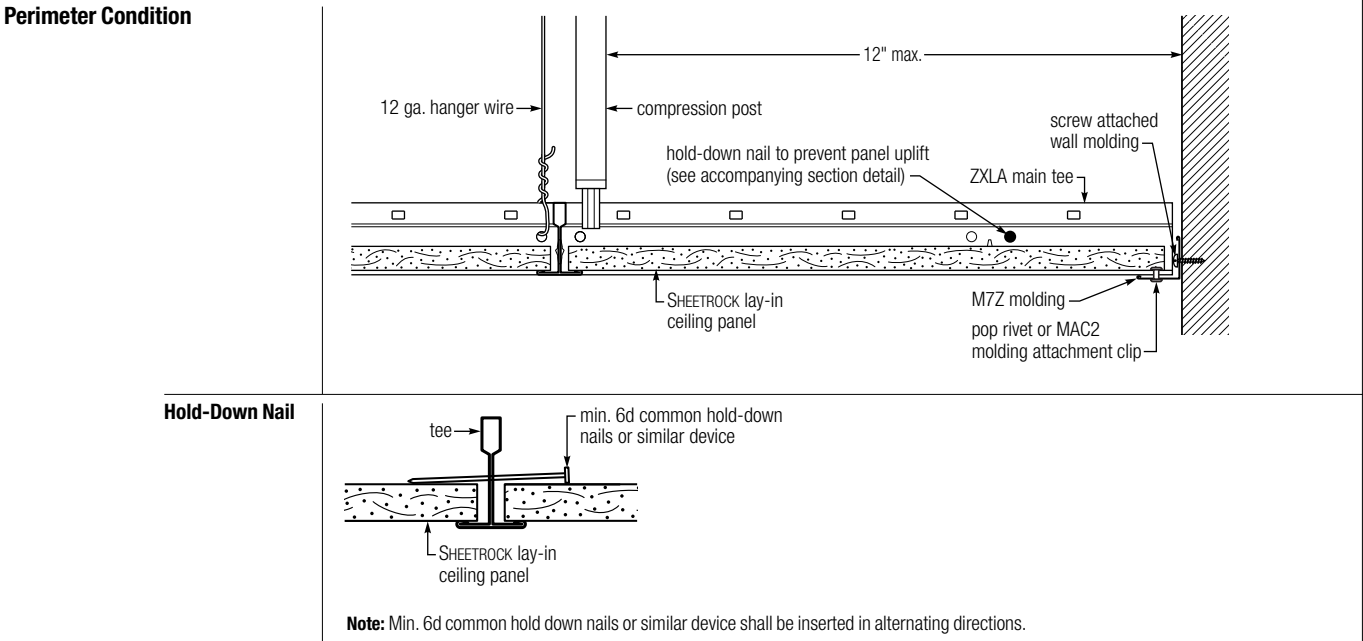
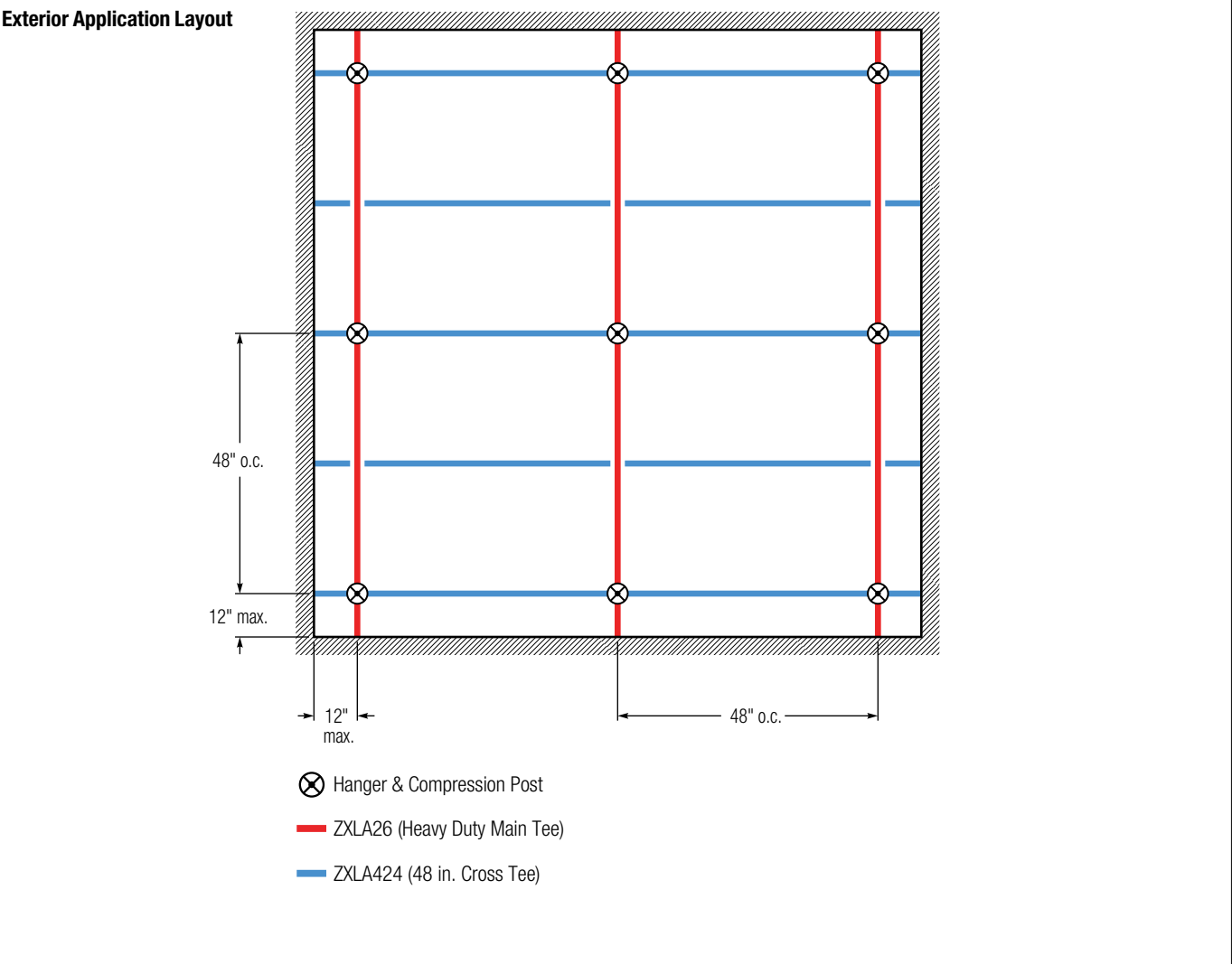
## Hold-Down Nail



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

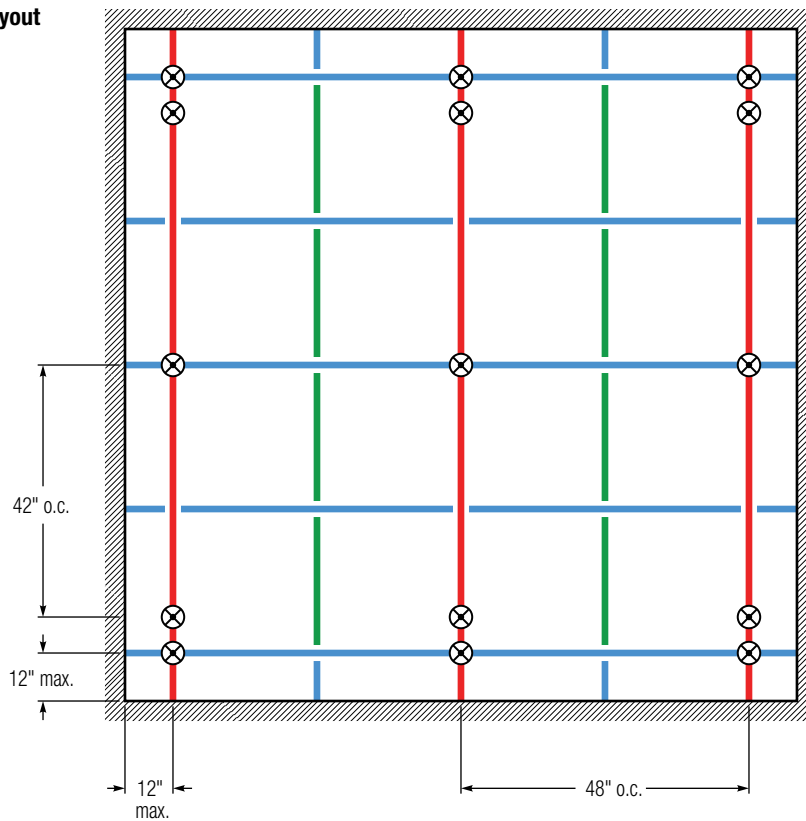
# Sheetrock Lay-In ZXLA

## 2' x 4' System



# Sheetrock Lay-In AX 2' x 2' System

## Exterior Application Layout



⊗ Hanger & Compression Post

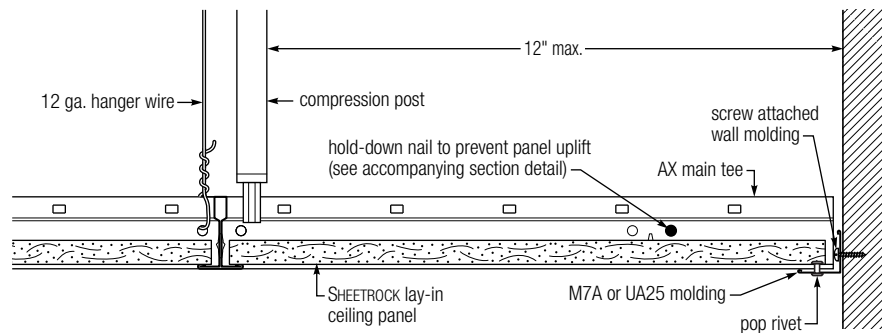
— AX26 (Light Duty Main Tee)

— AX424 (48 in. Cross Tee)

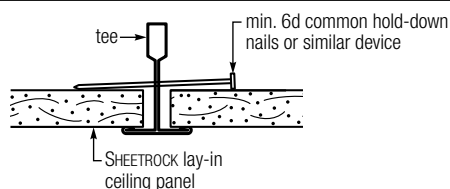
— AX224 (24 in. Cross Tee)

<sup>1</sup> Compression post and hanger wires are spaced 42" o.c. for AX systems. For AX assemblies requiring intermediate or heavy duty spacing shall be 36" o.c. Reducing the hanger wire spacing on main tees can achieve heavy duty load carrying capacity values to satisfy this requirement, but does not change the duty classification of the main tee. Many jurisdictions accept the installation of Light Duty main tees with additional supports, however, some jurisdictions will not accept this application. Check with a local official prior to designing and installing a Light Duty ceiling system. Other restrictions may apply.

## Perimeter Condition



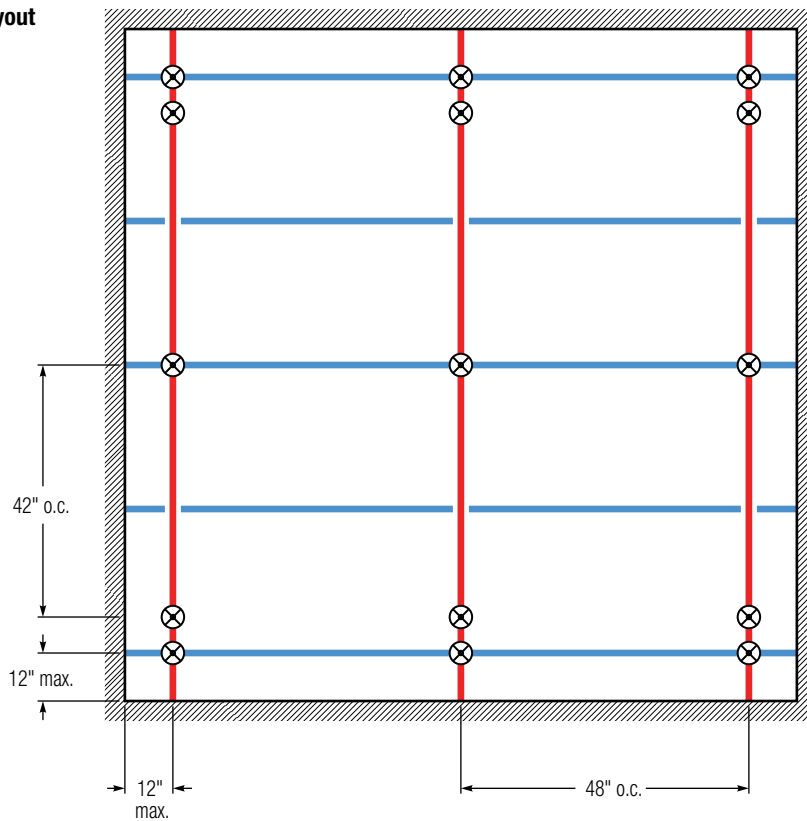
## Hold-Down Nail



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

# Sheetrock Lay-In AX 2' x 4' System

## Exterior Application Layout



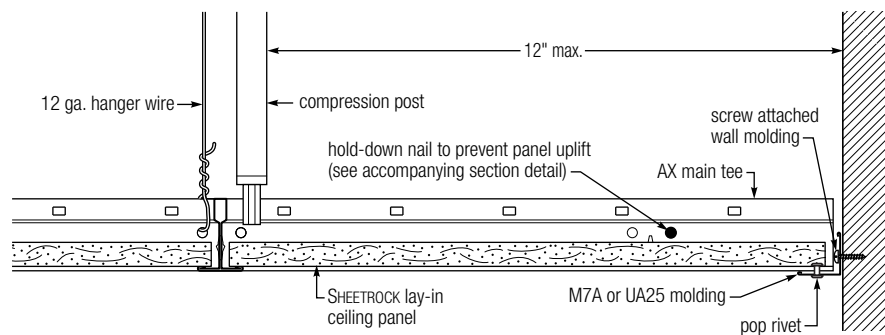
⊗ Hanger & Compression Post

— AX26 (Light Duty Main Tee)

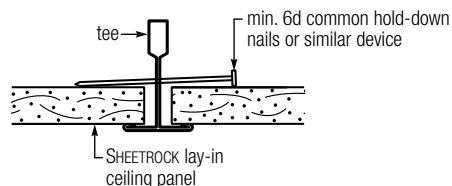
— AX424 (48 in. Cross Tee)

<sup>1</sup> Compression post and hanger wires are spaced 42" o.c. for AX systems. For AX assemblies requiring intermediate or heavy duty spacing shall be 36" o.c. Reducing the hanger wire spacing on main tees can achieve heavy duty load carrying capacity values to satisfy this requirement, but does not change the duty classification of the main tee. Many jurisdictions accept the installation of Light Duty main tees with additional supports, however, some jurisdictions will not accept this application. Check with a local official prior to designing and installing a Light Duty ceiling system. Other restrictions may apply.

## Perimeter Condition



## Hold-Down Nail



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



# Exterior Ceiling Accessories

## Compression Post

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

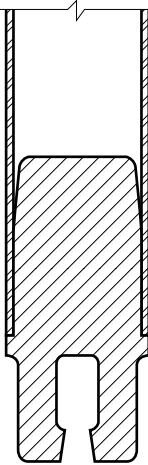
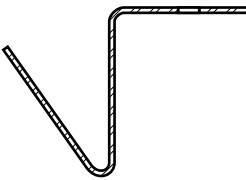
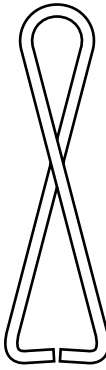
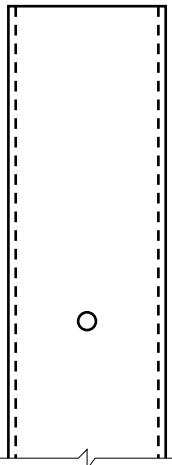
### Features

- Factory-engineered solution provides rigid support for ceiling suspension systems in exterior applications and offers quick installation thus reducing field labor time.
- Available in six different telescoping sizes that meet requirements and includes fast delivery.

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

- Injection-molded, high-impact clip snaps onto the bulb of the main tee for a secure, positive connection.
- When used with PARALINE systems, PARALINE compression post adapters<sup>1</sup> connect the post to the Paraline symmetrical carrier 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 for attachment to vertical hanger wire adjacent to post
- The adjustable self-locking connection has been tested and certified to a minimum compressive load of 900 lb.
- Meets UL797

### 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.

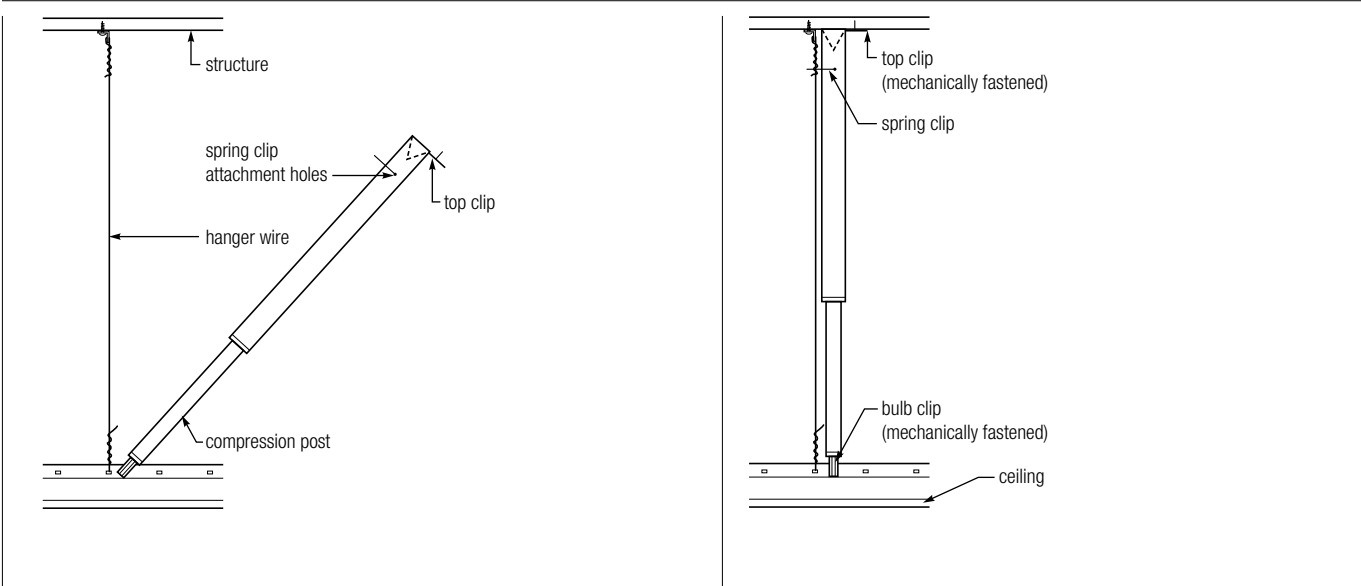
<sup>1</sup>When used with Paraline systems, Paraline compression post adapters must be purchased. The end plug of the compression post is removed and replaced with the Paraline compression post adapter prior to installation. The Paraline compression post adapter is not included with each compression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

# Exterior Ceiling Accessories

## Compression Post

**Application<sup>1</sup>**

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



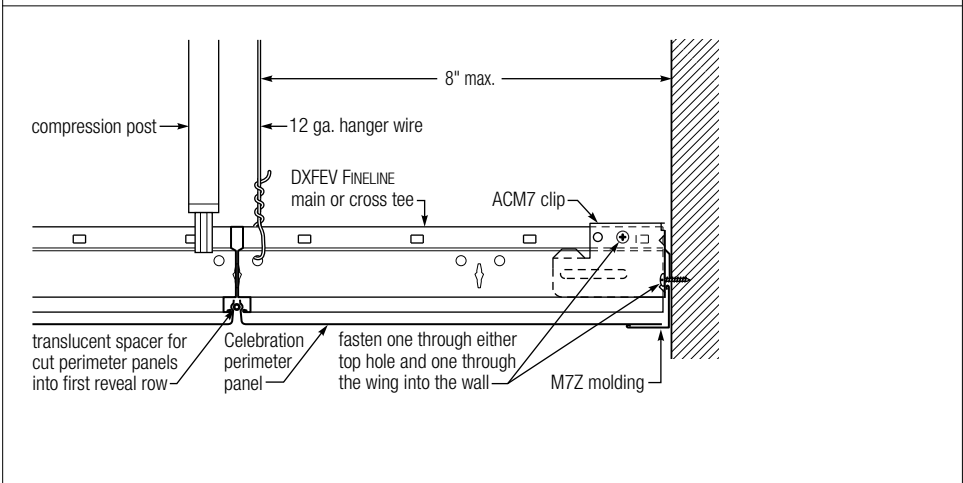
<sup>1</sup>When used with Paraline systems, Paraline compression post adapters must be purchased. The end plug of the compression post is removed and replaced with the Paraline compression post adapter prior to installation. The Paraline compression post adapter is not included with each compression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

# Celebration

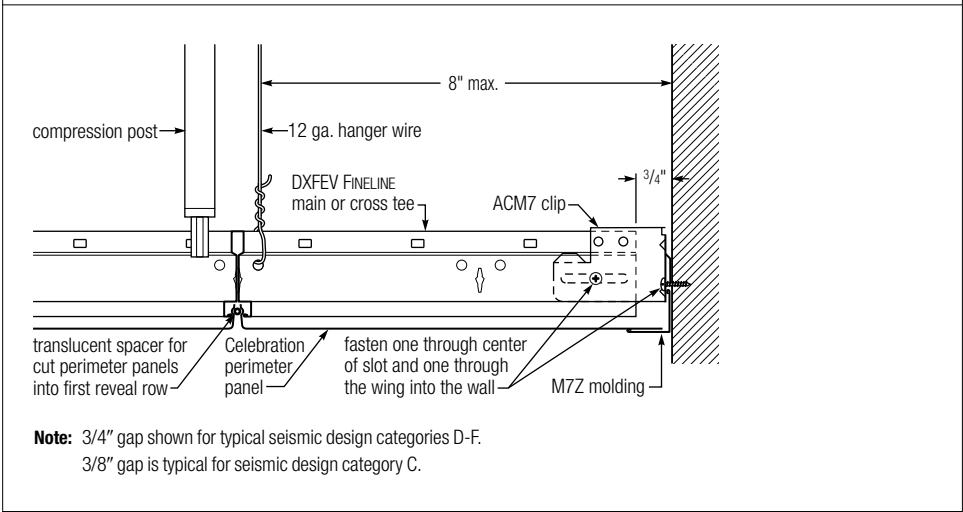
## Seismic Perimeter Applications

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

#### Fixed



#### Floating



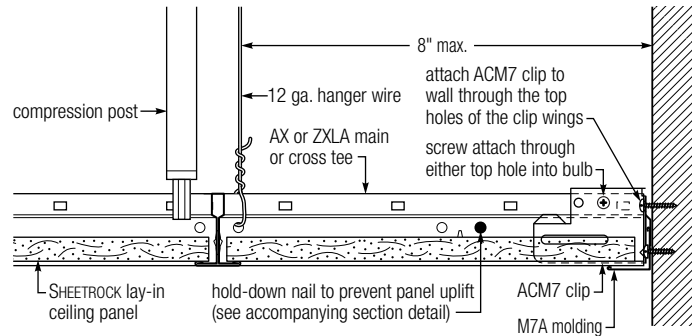
<sup>1</sup>Other seismic detailing may be required. Please visit [www.USG.com](http://www.USG.com) or [www.seismicceilings.com](http://www.seismicceilings.com) for more information.

# Sheetrock Lay-In AX / ZXLA

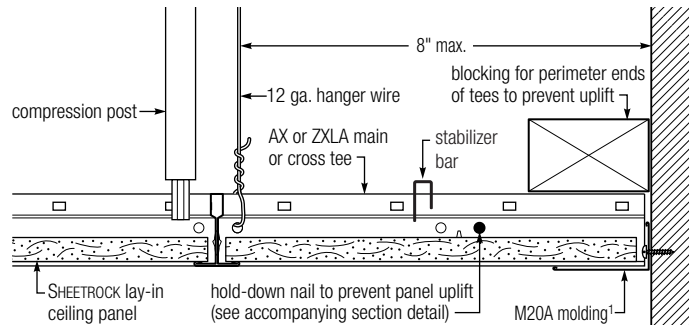
## Seismic Perimeter Applications

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

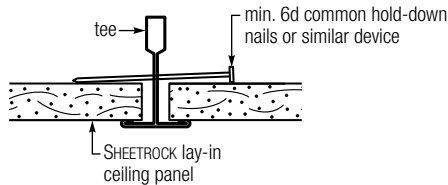
#### ACM7 Seismic Clip



#### 2" Wall Molding



#### Hold-Down Nail



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

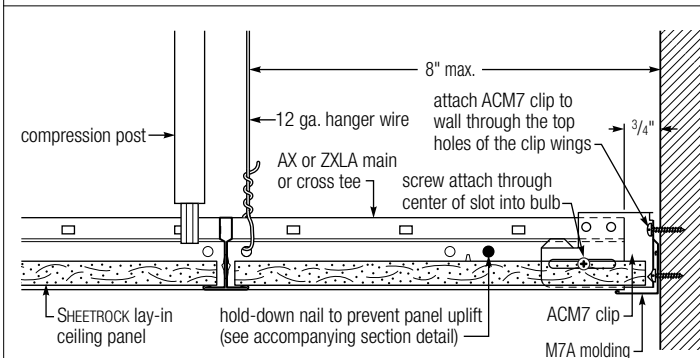
<sup>1</sup>Other seismic detailing may be required. Please visit [www.USG.com](http://www.USG.com) or [www.seismicceilings.com](http://www.seismicceilings.com) for more information.

# Sheetrock Lay-In AX / ZXLA

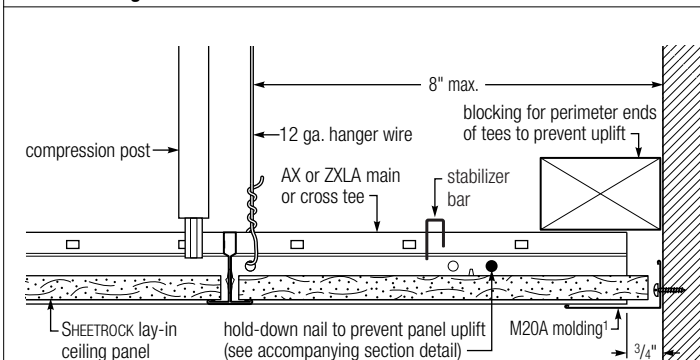
## Seismic Perimeter Applications

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

#### ACM7 Seismic Clip

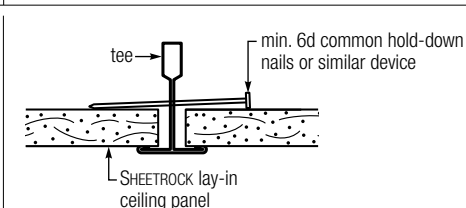


#### 2" Wall Molding



**Note:** 3/4" gap shown for typical seismic design categories D-F.  
3/8" gap is typical for seismic design category C.

#### Hold-Down Nail



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

<sup>1</sup>Other seismic detailing may be required. Please visit [www.USG.com](http://www.USG.com) or [www.seismicceilings.com](http://www.seismicceilings.com) for more information.

**Product Information**

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.

**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.

**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.

**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**

DOWN 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.

**Notice**

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

**Safety First!**

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

