



Weaver

CONSTRUCTION MANAGEMENT

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SUBMITTAL TRANSMITTAL

February 22, 2012

WGC Submittal No: 09512-001

PROJECT: **Harold Thompson Regional WRF**
Birdsall Rd.
Fountain, CO 80817
Job No. 2908

ENGINEER: **GMS, Inc.**
611 No. Weber St., #300
Colorado Springs, CO 80903
719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
Sewage Disposal District**
901 S. Santa Fe Ave.
Fountain, CO 80817
719-382-5303 James Heckman

CONTRACTOR: **Tri City Drywall, Inc.**
3720 E Saint Vrain St.
Colorado Springs, CO 80909
719-596-0095 Frank Hoover

SUBJECT: EM Building Acoustical Ceiling Tile - Radar Panels and Donn DX/DXL Suspension System

SPEC SECTION: 09512

PREVIOUS SUBMISSION DATES: None

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

Contractor's Stamp:

Engineer's Stamp:

Date: 2/22/12

Reviewed by: H.C. Myers

() Reviewed Without Comments

(X) Reviewed With Comments

ENGINEER'S

COMMENTS:



Project: HDTWRF Project

Location: Fountain, CO

Supplier: Tri City Drywall

Date: 2/20/12

Submittal 09512-001 Acoustical Ceiling Tile EM Building (Information found on Sheet EM-11 and Addendum No. 8)

Additional Submittal Review Comments:

- 1. Tri City Drywall is submitting USG as an equal to Armstrong Product No. 933 or 769**



DOWN DX/DXL Suspension System/
ECLIPSE Panels with CLIMAPLUS Performance

LEED Credits

Recycled Content: Up to 65%

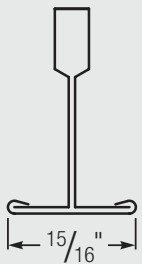
Waste Reduction	Recycled Content	Regional Materials	Rapidly Renewable Materials	Low-Emitting Materials	Daylight and Views	Acoustical Performance
●	●	●				

Features and Benefits

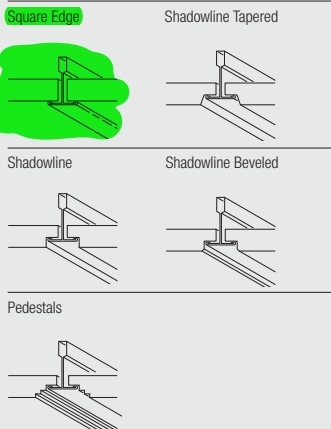
- 15/16" exposed tee system. Components for use in general and fire-rated applications
- Maximum economy and design simplicity
- DXL system features more than 80 UL designs (up to 3 hours)
- Cross-tee override ends resist twisting and give a professionally finished look
- Meets or exceeds all national code requirements, including seismic
- Proprietary QUICK-RELEASE™ cross tees
- High recycled content (HRC) available
- Custom color available.
- ICC-ES evaluated approach to seismic design installations (ICC-ESR-1222).

Applications

- Fire-rated, interior general use areas



Profile



Edge Detail

To order samples, go to usg.com

Standard Colors⁴

White	Parchment 103	Manila 246	Beige 142	Straw 143	Sandstone 090	Taupe 107
Charcoal 534	Flat Black 205	Silver Satin 002	Brass 065 ¹³	Chrome 066 ¹³		

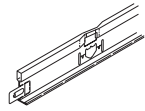
Advantage Colors⁴

Silverstone 052	Breeze 2659	Blue Grey 564	Azure 2660	Slate 568	Spruce 567	Tuscany 2663	Sorbet 2658
Squash 2661	Safari 2662	Redwood 566	Sienna 565	Halo 206	Mist 053	Nectar 546	Quartz 082

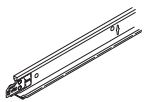


System meets or exceeds load compliance specifications per ASTM C635

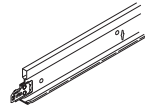
15/16" Tee System (Main Tee)



Cross Tee 1"



Cross Tee 1-1/2"



ASTM Class	Length	Height	Item No.	Class	Color	Post Consumer RC	Total RC	Seismic Design Categories ¹			Rated Load ²			
								IBC	ICC-ES Evaluated Installation	4' Hanger Spacing	5' Hanger Spacing	6' Hanger Spacing ³		
Intermediate Duty	12'	1.64"	DX/ ^{3,4,7,12} DXL24	Class B	Flat White Standard Advantage	up to 39%	up to 47%	A-C	7/8" Molding ACM7 Clip	12 lbs./LF	6.1 lbs./LF	3.6 lbs./LF		
			DX/ ^{3,4,12} DXL24 HRC			57% HRC	65% HRC							
Heavy Duty	12'	1-1/2"	DX/ ^{3,4,7,12} DXL26	Class B	Flat White Standard Advantage	up to 39%	up to 47%	A-F	7/8" Molding ACM7 Clip	16 lbs./LF	7.3 lbs./LF	4.9 lbs./LF		
						DX/ ^{3,4,12} DXL26 HRC	57% HRC						65% HRC	
Intermediate Duty	2'	1"	DX/ ^{3,4,7,12} DXL216	Class B	Flat White Standard Advantage	up to 25%	up to 33%	A-C	7/8" Molding ACM7 Clip	12 lbs./LF	6.1 lbs./LF	3.6 lbs./LF		
						DX/ ^{3,4,12} DXL216 HRC	57% HRC						65% HRC	
Heavy Duty	4'	1-1/2"	DX/ ^{3,4,7,12} DXL424	Class B	Flat White Standard Advantage	up to 20%	up to 47%	A-F	7/8" Molding ACM7 Clip	16 lbs./LF	7.3 lbs./LF	4.9 lbs./LF		
						DX/ ^{3,4,12} DXL424 HRC	57% HRC						65% HRC	
			5'	1-1/2"	DX422 ^{5,7,9}	Class A	Flat White Standard Advantage	up to 25% HRC	up to 33% HRC	A-C	7/8" Molding ACM7 Clip	12 lbs./LF	6.1 lbs./LF	3.6 lbs./LF
						DX422 HRC ⁵	57% HRC	65% HRC						
		DX/ ^{3,4,7,12} DXL524	Class B	Flat White Standard	up to 39%	up to 46%	A-F	7/8" Molding ACM7 Clip	16 lbs./LF	7.3 lbs./LF	4.9 lbs./LF			

HRC High Recycled Content

Classified as containing greater than 50% total recycled content. Total recycled content is based on product composition of post-consumer and pre-consumer (post-industrial) recycled content per FTC guidelines.

Wall Angle	Length	Item No.	Color	Wall Angle	Length	Item No.	Color	Post Consumer RC	Total RC
Molding ¹⁰	10'	M20SM-2 (up to 65% recycled content) HRC	Flat White		12'	M7 ⁶	Flat White Standard Advantage	up to 65% HRC	
						M7 HRC ⁶		57% HRC	65% HRC
Shadowline ¹¹	10'	MS274 ⁵ 2" shelf for seismic (Up to 65% recycled content) HRC	Flat White Custom		10'	M20 ⁵	Flat White Custom	up to 65% HRC	
						M20HD Heavy Duty		up to 58% HRC	
						M20SM Seismic		up to 65% HRC	

Physical Data/ Footnotes

Product literature & samples

Data sheet: AC3167. Sample flat white - seismic: 271370. Sample flat white: 215673. Sample main tee: 206563. Sample flat black: 205100.

Material

Double-web G30 hot-dipped galvanized steel body and G30 hot-dipped galvanized steel cap.

Recycled content

For details, see LEED report generator at usgdesignstudio.com.

Installation

Must be installed in compliance with ASTM C636, ASTM E580, CISCA or standard industry practices, within all applicable code requirements. See UL Fire Resistance Directory for rated assembly details.

Limitations

Severe Environmental Requirements: Panels in exposed grids in non-fire-rated, high-humidity applications: use all-aluminum AX™ or ZXA™ painted HDG suspension systems with aluminum cap. Panels in exposed grids in fire-rated, high-humidity applications: use ZXA suspension systems. For all exterior applications, suspension should be reviewed by a structural engineer.

ICC Evaluation Service, Inc., Report Compliance

Suspension systems manufactured by USG Interiors, LLC, have been reviewed and are approved by listing in ICC-ESR-1222. Evaluation Reports are subject to reexamination, revision and possible cancellation. Please refer to USGDesignStudio.com or 800.USG.4YOU 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 one or more of the following L.A. Research Report numbers: 22179, 23451, 24095, 25764.

The City of New York BSA and MEA Report Compliance

Down suspension systems have been approved by listing in one or more of the following City of New York Board of Standards and Appeals, and Department of Building, Material and Equipment Acceptance reports: BSA 618-60-SM, BSA 184-77-SM, BSA 796-81-SM, MEA 366-93-M, MEA 133-95-M, MEA 312-99-M, MEA 123-00-M.

ASTM C635 Standard for Load Compliance

System meets or exceeds load compliance specifications per ASTM C635. Main tees will not deflect more than 1/8" over 48" span (or L/360) in Light Duty, Intermediate Duty or Heavy Duty categories.

Footnotes

- All DX/DXL main-tee and cross-tee connections meet IBC requirements for tension and compression strength.
- Load test data shows uniform load in lbs./LF based on simple span tests in accordance with ASTM C635 deflection limit of L/360.
- UL fire-rated listing, labeling and follow-up applies only to fire-rated components.
- Color program for imperial only. Consult Customer Service for custom color and metric-tee colors.

- Non-fire-rated only.
- Cross-tee hole punch spacings also available for 20" and 30" modules.
- Available in metric
- DX cross tees available in additional sizes and lengths.
- Non-fire-rated applications may mix DX and DXL parts.
- For moldings information, see Perimeter Interface selector.
- Panels must be specified to be field-cut, field-revealed and to provide widest possible lay-on edge.
- For DXL, channel moldings are also acceptable in some designs. Check UL Fire Resistance Directory for molding options.
- Brass and chrome available on limited items.





RADAR Panels/
DONN DX/DXL Suspension System

LEED Credits
Recycled Content: 25% – 50%

MR				EQ		
Waste Reduction ¹	Recycled Content	Regional Materials ²	Rapidly Renewable Materials	Low-Emitting Materials	Daylight and Views	Acoustical Performance
●	●	●	●	●	●	●

Features and Benefits

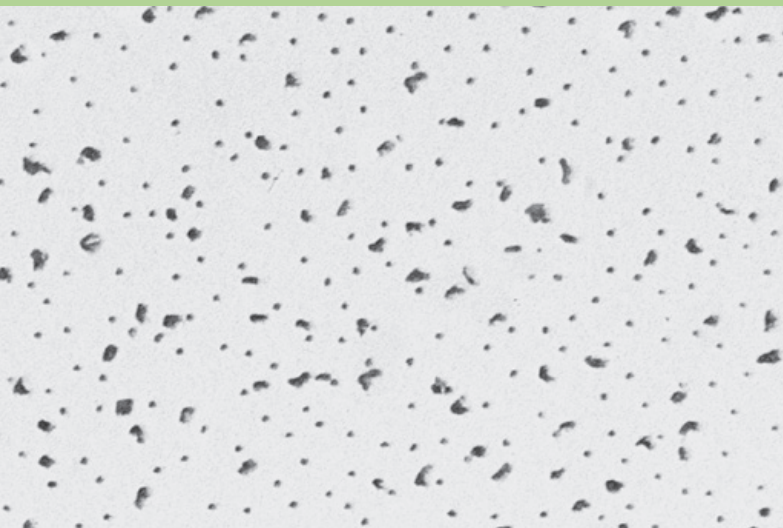
- Non-directional pattern with a fresh, clean appearance offers fast, efficient installation.
- Economical, all-purpose ceiling pattern offered in many sizes.
- Optional FIRECODE™ formulation designed to meet life safety codes.

Applications

- Schools
- Corridors
- Offices
- Retail stores

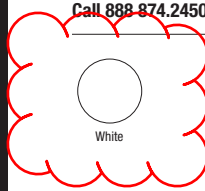
Substrate

- Water-felted mineral fiber



Medium-textured panel

Call 888.874.2450 for samples



UL Classified												
Edge	Panel Size Imperial Metric (mm)	Class ³	Item No. Imperial Metric	NRC	CAC Min.	LR ⁴	Color	Grid Options	VOC Emissions	Recycled Content ⁵	Panel Cost	
RADAR Panels	SO 	2'x2'x5/8"	Class A	2110 ME2110	.55	33	.85	White	A, B, C	Low	25%	\$
		600 x 600 x 15										
		2'x2'x5/8"		2115	.55	35	.85	White	A	Low	48–50%	\$
		2'x4'x5/8"	Class A	2310	.55	35	.85	White	A, B	Low	25%	\$
		600x1200x15										
		2'x4'x5/8"		2315	.55	35	.85	White	A	Low	48–50%	\$
		2'x5'x5/8"	Class A	2619	.55	35	.85	White	A, B	Low	25%	\$
		20" x60" x5/8"	Class A	2617	.55	35	.85	White	A, B	Low	25%	\$
	2'x4'x3/4"	Class A	2311	.60	35	.85	White	A, B	Low	25%	\$	
	30" x60" x3/4"	Class A	2618	.60	35	.85	White	A, B	Low	25%	\$	
	SLT 	2'x2'x5/8"	Class A	2120 ME2120	.55	33	.85	White	D	Low	25%	\$
		600x600x15										
		2'x2'x5/8"		2125	.55	35	.85	White	D	Low	48–50%	\$
		2'x4'x5/8"	Class A	2320	.55	35	.85	White	D	Low	25%	\$
FLB 	2'x2'x5/8"	Class A	2130	.55	33	.85	White	E, F, G, H	Low	25%	\$	
	2'x2'x3/4"	Class A	2121	.60	35	.85	White	D	Low	25%	\$	
RADAR Tile ^{6,7}	BESK 	Class A	2990	.50	40	.85	White	I	Low	25%	\$\$\$	
RADAR Illusion Two/24 Panel The look of 2'x2' panels	SLT 	Class A	2742	.55	35	.84	White	D	Low	25%	\$\$	

Illusion Two/24	Legend
Pattern 	Low Emissions (VOC Class) Classified as low-emitting per standards established by the Collaborative for High-Performance Schools (CHPS), following California Specification 01350 testing methods.

A DX [®] /DXL [™]	B DXW [™]	C CENTRICITEE [™] DXT	D DX/DXL	E CENTRICITEE DXT [®]	F FINELINE [®] DXF	G FINELINE [®] 1/8 DXFF	H IDENTITEE [™] DXI [™]	I DX [®] /DXL [™] Concealed

Physical Data/ Footnotes	Product literature Data sheet: SC2288 ASTM E1264 classification Type III, Form 2, Pattern C, D, E ASTM E84 surface burning characteristics Class A Flame spread: 25 Smoke developed: 50	Weight .61-1.15 lb./sq. ft. Thermal resistance R-1.4 (Class A, 5/8" panels and tile) R-1.7 (Class A, 3/4" panels) R-1.4 (Class A, 15 mm panels) R-1.6 (Firecode, 5/8" panels)	Maximum backloading See Warranty for details. Maintenance Can be cleaned easily with a soft brush or vacuum.	Footnotes 1. Applies when USG acoustical ceilings recycling program is utilized. 2. Dependent on location; see Sustainability selector. 3. Fire-rated items: see UL design details. 4. LR values are shown as averages. 5. For details, see the Sustainability selector.	6. Contact USG for adhesive recommendation for 12"x12" glue-up applications. 7. Not UL Classified for acoustics. 8. Maximum 2' x 2' for square panels.
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