

# SUBMITTAL REVIEW

Submittal: No. 058.00

Spec Section: 09 5153 Direct-Applied Acoustical Ceilings

Reviewed By: Laura Landon, Comma-Q Architecture

Date: September 25, 2012

Project: BPS – Belgrade Elementary School

Location: Belgrade, MT

Job Number: 11-03

Copy to: File, Owner



This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the submittals during this review do not relieve the CONTRACTOR from compliance with the requirements of the plans and specifications. An opinion of equivalence of a specific item shall not be interpreted as an opinion of equivalence of an assembly of which the item is a component. Submittal review comments have been made within this format and not on the submittal sheets according to the following:

**NEN** No Exceptions Noted

**GCAN** Generally Conforms as Noted

**RAN** Rejected for Reason as Noted

**IAS** Incomplete as Submitted

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1.	09 5153 Direct-Applied Acoustical Ceilings	Data Sheets	<b>GCAN</b>
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## Notes:

1. Please provide information on attachment system (screw cut sheet).
2. Please verify that the Tectum Wall Panel as submitted is the same product as the Tectum Direct-Attached Ceiling Panels. Ceiling panel cut sheet is attached.

END OF REVIEW

## TECTUM Direct-Attached Ceiling Panels

Tectum Direct-Attached Ceiling Panels create a monolithic appearance without the use of ceiling grid. They combine a unique textured look with superior abuse resistance. These high-impact acoustical panels combine several functions that truly set them apart for use in commercial, institutional, recreational and industrial buildings.

Tectum panels can be mechanically attached to a variety of ceiling substrates which include: the underside of the roof deck; the joists and other support members; drywall suspension systems; metal and wood furring structures and other commonly used support systems. Panels should be no greater than 96" long, beveled on all four sides and placed in a random ashlar pattern (cinder block style). They can be cut easily and shaped with standard woodworking tools.

Tectum Direct-Attached Ceiling Panels can be used in their attractive unpainted natural color, painted white or custom colors. Also, these panels may be painted or re-painted in the field up to six times without reducing their acoustical properties.

**NOTE: There is no asbestos, nor has there ever been any asbestos, used in Tectum products.**



## TECTUM ACOUSTICAL PERFORMANCE

### TECTUM DIRECT-ATTACHED CEILING PANELS

#### SOUND ABSORPTION COEFFICIENTS

Panel Type	125	250	500	1000	2000	4000	NRC	Mounting
1"	.06	.13	.24	.45	.82	.64	.40	A
1"	.07	.15	.36	.65	.71	.81	.45	D-20
1"	.16	.43	1.00	1.05	.79	.98	.80	C-20
1"	.32	.70	1.09	.93	.76	.94	.85	C-40
1 1/2"	.07	.22	.48	.82	.64	.96	.55	A
1 1/2"	.15	.26	.62	.83	.70	.91	.60	D-20
1 1/2"	.24	.57	1.17	.87	.93	.87	.90	C-20
1 1/2"	.40	.84	1.18	.84	.94	.88	.95	C-40
2"	.15	.26	.62	.94	.62	.92	.60	A
2"	.15	.36	.74	.82	.82	.92	.70	D-20
2"	.24	.67	1.14	.87	1.06	.96	.95	C-20
2"	.42	.89	1.19	.85	1.08	.94	1.00	C-40

## TECTUM PRODUCT

Panel Type	Nominal Thickness (inches)	Actual Size (inches)	Edge Detail	Factory Finish	Light Reflectance	Flame Spread	Weight LBS/SF		
Standard Tectum Panels	1, 1 1/2, 2	23 3/4, 31 3/4, 47 3/4 x 48 to 96 in 12" increments	Long Edges Beveled	White, Natural, Custom Colors	.75 / .60	0-25	1"	1 1/2"	2"
Tongue & Groove Tectum Panels	1 1/2, 2	23, 31, 47 x 48 to 96 in 12" increments	T&G Edges Square Ends	White, Natural, Custom Colors	.75 / .60	0-25		2.53	3.3

## ENVIRONMENTAL STATEMENT - LEED CONTRIBUTION

The wood fibers (excelsior) used in Tectum panels come from Wisconsin Aspen trees. The Wisconsin Aspen is a self-propagating type tree. When cut, a new tree will begin to grow back from its root structure. In addition, all Wisconsin Aspen used for Tectum is air-dried. No drying kilns are used. The wood is stored in racks to age naturally. No chemicals are used in the production of any excelsior purchased by Tectum Inc.

Tectum Inc. only purchases excelsior from a single source that is affiliated with both the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiatives (SFI) programs. These programs are a comprehensive system of objectives and performance measures that integrate the perpetual growing and harvesting of trees with the protection of wildlife, plants, soil and water quality. All loggers are trained to adhere to FSC and SFI principles.

Magnesium oxide is mixed with magnesium sulfate (Epsom salts) to form the primary binder. Tectum Inc. manufactures the magnesium sulfate solution on site using waste material that has been generated since production began in 1949. The

secondary binder is composed of sodium silicate and calcium carbonate (limestone). All of the water used in the manufacture of Tectum is captured and recycled.

### TECTUM PRODUCTS AND LEED

Tectum Inc. fully endorses the LEED Green Building Rating System.

Our products may contribute to the following LEED credit areas:

EA Prerequisite 2: Fundamental Energy Performance

EA Credit 1: Optimized Energy Performance

MR Credits 2.1 and 2.2: Construction Site Waste Management

MR Credits 4.1 and 4.2: Recycled Content

MR Credit 7: Certified Wood  
EQ Prerequisite 3: Minimum Acoustical Performance

EQ Credit 3.1 and 3.2: Construction IAQ Plans

EQ Credit 4.1: Low-Emitting Materials, Adhesives and Sealants

EQ Credit 4.4: Low-Emitting Materials, Composite Wood & Agrifiber Products

EQ 10: Mold Prevention (LEED for Schools)

EQ Credit 11: Low-Impact Cleaning and Maintenance Equipment Policy (LEED for Schools)

ID 1 - 1.4: Innovation in Design

Tectum products are listed in the GreenSpec Directory\*\* published by Building Green from the editors of Environmental Building News.

For complete information about Tectum products and LEED, please see our Marketing Bulletins M-81 (Tectum Products and LEED Certification) and M-83 (Tectum Products and LEED Q & A) or our Environmental Statement. All of these materials are available online at [www.tectum.com](http://www.tectum.com).

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\*\*Trademark of Building Green, Inc.

**MARTEL CONSTRUCTION, INC.**

1203 South Church Avenue  
Bozeman, MT 59715-5801

Telephone: (406) 586-8585 Facsimile: (406) 586-8646

**LETTER OF TRANSMITTAL**

DATE	<b>09/24/12</b>	JOB NO.	<b>12-001</b>
TRANSMITTAL/SUBMITTAL NO.		<b>58.00</b>	
RE:	Direct-Applied Acoustical Ceilings		
<b>BELGRADE ELEMENTARY SCHOOL</b>			

TO: **Comma Q Architects**  
**109 North Rouse Ave #1**  
**Bozeman, MT 59715**

ATTENTION: **Laura Landon**

We are hand delivering

We are sending via Email

- ATTACHED**       **UNDER SEPARATE COVER**      The following items:
- Shop drawings       Prints       Plans       Samples       Specifications
- Copy of letter       Change order       Product Data

COPIES	DATE	DWG NO.	DESCRIPTION
1			<b>09 5153 Direct-Applied Acoustical Ceilings - Tectum Panels</b>

**THESE ARE TRANSMITTED as checked below:**

- For approval       Approved as Submitted       Resubmit       Copies for Approval
- For your use       Approved as Noted       Submit       Copies for Distribution
- As requested       Returned for Corrections       Return       Corrected Prints
- For review and comment
- FOR BIDS DUE \_\_\_\_\_       PRINTS RETURNED AFTER LOAN TO US

REMARKS: \_\_\_\_\_  
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COPY TO File  
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SIGNED: Mike Wilkinson - Project Engineer

If enclosures are not as noted, kindly notify us at once.

## TECTUM Acoustical Walls

Tectum Interior Wall Panels offer an effective, permanent and attractive solution for any kind of activity that produces undesirable noise levels within an enclosed space. They are abuse resistant and are able to withstand the impact of thrown or kicked balls in gyms, yet are lightweight.

Tectum acoustical wall panels are easy to install in new construction and in existing buildings for effective sound control. Up to 1.00 NRC can be achieved. Furring strips installed horizontally (when using vertical panels) are recommended and should be a maximum of 24" o.c. when using 1" thick panels.

### SIZES, FINISHES

Tectum Interior Wall Panels are available 1", 1 1/2" and 2" thick in widths of 23 3/4", 31 3/4" and 47 3/4" with long edges beveled. 1 1/2" and 2" panels are also available with T&G edges in widths of 23", 31" and 47" for interlocking continuous paneling. 4' to 12' lengths are available in 1' increments. Tectum Interior Wall Panels are available in natural, painted white or custom colors and can easily be field painted without losing their acoustical efficiency.

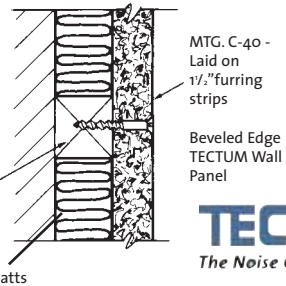
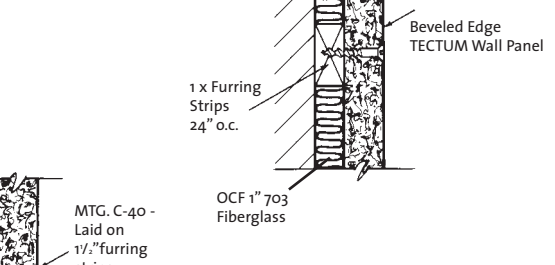
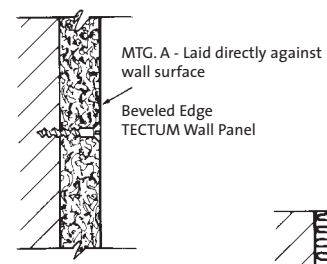
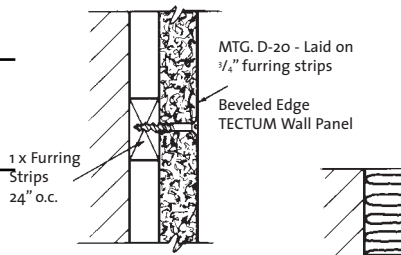


<input type="checkbox"/>	<b>NO EXCEPTS NOTED</b>	Fabrication / installation may be undertaken. Approval does not authorize changes in the Contract Sum or Contract Time unless stated by Change Order of Construction Change Directive.
<input checked="" type="checkbox"/>	<b>GENERALLY CONFORMS AS NOTED</b>	
<input type="checkbox"/>	<b>REVISE AND RESUBMIT</b>	Fabrication / installation MAY NOT. In resubmitting limit corrections to the items marked.
<input type="checkbox"/>	<b>REJECTED FOR REASON AS NOTED</b>	

Review and approval are only for conformance with the information given and the design concept of the Project as expressed in the Contract Documents. Review and approval of the submittals are not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities or for substantiating instructions for the installation or performance of equipment or systems all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review and approval of the Contractor's submittal shall not relieve the contractor from any obligation contained in the Contract Documents. The architect's review and approval shall not constitute approval of any construction means, methods, techniques, sequences or any safety precautions or procedures. The architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.



By **Laura Landon** Date **9/25/12**



P.O. Box 3002  
Newark, OH 43058



105 S. 6th St.  
Newark, OH 43055

## TECTUM ACOUSTICAL PERFORMANCE

### TECTUM WALL PANELS

Panel Type	SOUND ABSORPTION COEFFICIENTS						NRC	Mounting
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Kerfed	1	23 3/4 x 48 to 144 in 12" increments	BKR, Bevel, Kerfed, Rabbeted Square Ends	White, Natural, Custom Colors	.75 / .60	0-25	1.63		
V-line	1, 1 1/2, 2	23 3/4, 31 3/4, 47 3/4 x 72 to 144 in 12" increments	Long Edges Beveled	White, Natural, Custom Colors	.75 / .60	0-25	1.63	2.53	3.3

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