



CITY OF PORTLAND, OREGON - BUREAU OF DEVELOPMENT SERVICES

1900 SW Fourth Avenue, Suite 5000 • Portland, Oregon 97201 • www.portlandonline.com/bds • Fax 503-823-7425



2

Facility Permit Plan Intake Form

FOR INTAKE, STAFF USE ONLY		Building/Mechanical	Scott
Date Received	6/5/13	Electrical	Dave
Building Registration #	99-125505-FL	Plumbing	
Fixed Bid		Fire	Jeff
Bin #	B1	Planning	
Building Permit #	13-165081-FA	BES	
Mechanical #		PDOT	
Plumbing Permit #		Structural	
Electrical Permit #		Other	

1
2

APPLICANT: Complete all sections below that apply to the project. Please print legibly.

Print Name KEN MCKINNEY Sign Name [Signature] 3545932
 Street Address 2545 TERWILLIGER PLAZA BLVD.
 City PORTLAND State OR Zip Code 97201
 Day Phone 503-808-7880 FAX 503-820-5464 email kmckinney@terwilligerplaza.com

Plans / permits available for pick up at 1900 SW 4th Avenue, 2nd floor between 8:00 am to 5:00 pm

Contact Name for plan/permit pick up KEN MCKINNEY
 Day Phone 503-808-7880 email kmckinney@terwilligerplaza.com

Project Building Name / # TERWILLIGER PLAZA
 Project Address or Location 2545 TERWILLIGER BLVD.
 Project Name and Description 12th FLOOR LOUNGE CEILING REMOVE! REPLACE GYPSUM w/ GYP. BRD + 2 LAYERS TYPE "X" 5/8 DRYWALL
 Total Project Value \$ 10,000 Project Reference #/Billing ID # 12 Floor Lounge Ceiling
 Building Contractor R2H CONSTRUCTION CCB # 38,304
 Mechanical Contractor _____ CCB # _____
 Electrical Contractor N/A TO REMAIN CCB# _____ License # _____
 Plumbing Contractor N/A " " " CCB# _____ License # _____

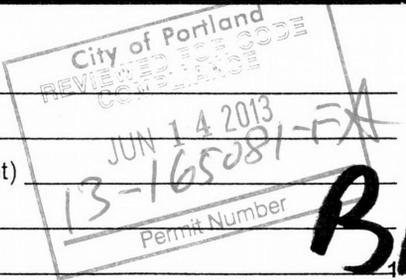
13-165081-FA

Building Permit [Y] [N] Alarms Required
 No. of Stories _____ [Y] [N] Smoke Det. Req'd
 Const. Type _____ [Y] [N] Sprinklers Req'd
 [Y] [N] Struct. Eng / Calcs Submitted

Electrical Permit
 Please provide a completed standard electrical permit application form. You may mail or deliver it to 1900 SW 4th Avenue, Portland, Oregon 97201 or FAX to 503-823-7425.

Mechanical Permit
 Mechanical Valuation _____
 Description _____

Plumbing Permit
 Number of Fixtures _____
 Back Flow Devices _____
 Water Service (# of Feet) _____
 Medical Gas _____
 Other _____



Recycled Content: up to 61%

DRYWALL/STUCCO/PLASTER

Grid Systems

An economical alternative to stud and track construction that is fast and easy to install. Provides practical solutions to many interior installation conditions.

Key Selection Attributes

- Some components available in High Recycled Content (HRC) Total Recycled Content 61%, Post-consumer 53%, Pre-consumer 8%
- Non-HRC items have 30% recycled content
- **PeakForm®** patented profile increases strength and stability for improved performance during installation
- **SuperLock™2** main beam clip is engineered for a strong, secure connection and fast, accurate alignment confirmed with an audible click; easy to remove and relocate
- **ScrewStop™** reverse hem prevents screw spin off on 1-1/2" wide face
- Rotary-stitched during manufacture by a patented method for additional torsional strength and extra stability during installation
- HD8906 (HRC) and HD8901 main beams and cross tees with extra routings for Type F light fixtures
- Minimum G40 hot dipped galvanized coating, per ASTM C645; provides superior corrosion resistance
- G90 hot dipped galvanized coating is available for exterior applications (HD8906G90, XL8945PG90, XL8947PG90, XL8965G90, XL8925G90, XL7936G90)
- Wind uplift construction available
- **XL²** (staked-on end detail) cross tees provide secure locked connection; fast and easy to install
- All drywall components minimum .018" steel thickness; complies with ASTM C645
- Accommodates stud, track, hat channel, wood, or other supplemental framing
- Fire Guard™ components meet broad range of UL design assemblies (XL7936G90 is not fire rated)
- 10-year limited warranty

Typical Applications

- Indoor/outdoor applications
- Soffits/special transitions
- High visibility areas
- Combination drywall and acoustical panel or tile ceilings
- Barrel vaults and domes
- Wet installations (stucco/plaster)

Product Description

Materials

A. General: ASTM C635 Heavy-duty main beam classification, ASTM A653 zinc-coated hot dipped galvanized steel. Exposed surfaces chemically cleaned, zinc-coated and prefinished. Materials conform to the performance standard ASTM C645 (Standard Specification for Rigid Furring Channels for Screw Applications of Gypsum Board).

B. Components:

1A. Main Beams: Double-web construction, profile height 1-11/16" with peaked roof top bulb and 1-1/2" knurled flange.

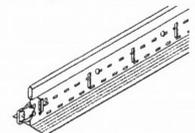
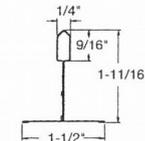
HD8906 (144", 1-1/2" flange, 51 routes starting 2-1/4" from each end for Type F light fixture compatibility, fire notch expansion relief in web, galvanized)

HD8906HRC (144", 1-1/2" flange, 51 routes starting 2-1/4" from each end for Type F light fixture compatibility, fire notch expansion relief in web, galvanized)

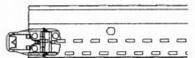
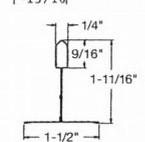
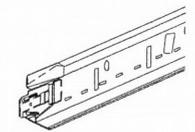
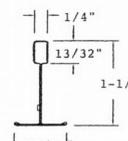
HD8901 (144", 15/16" flange, 51 routes starting 2-1/4" from each end for Type F light fixture compatibility, fire notch expansion relief in web, galvanized)

SP135 (135", 1-1/2" flange, 13-1/2" route spacing)

Other _____



HD8906



SP135

2A. Cross Tees: Double-web construction, profile height 1-1/2" with peaked roof top bulb and 1-1/2" knurled flange.

XL8965 (72", 2 routes, starting 24" off each end, galvanized) For Type F light fixture compatibility

XL8965HRC (72", 2 routes, starting 24" off each end, galvanized) For Type F light fixture compatibility

XL8947P (50", 8 routes, starting 10" off each end, galvanized) For Type F light fixture compatibility

XL8945P (48", 9 routes, center route and routes starting 10" off each end, galvanized) For Type F light fixture compatibility

XL8945PHRC (48", 9 routes, center route and routes starting 10" off each end, galvanized) For Type F light fixture compatibility

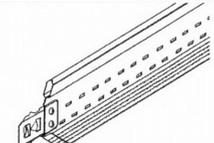
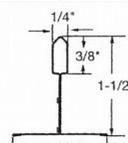
XL7936G90 (36", no routes, galvanized)

XL8925 (26", 2 routes, 12" off each end, galvanized) For Type F light fixture compatibility

XL8926 (24", 3 routes, center route and 12" off each end, galvanized) For Type F light fixture compatibility

XL7918 (14", no routes, galvanized) For Type F light fixture compatibility

Other _____

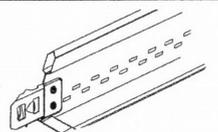
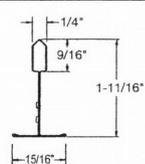


2B. Cross Tees: Double-web construction, profile height 1-11/16" with peaked roof top bulb and prefinished 15/16" flange.

XL7341 (48", 3 routes starting 12" from each end, galvanized)

XL8341 (48", center route, galvanized)

Other _____

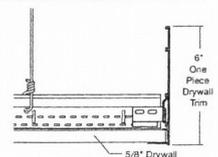


3. Axiom Trim: One-Piece Drywall Trim: Integrated and pre-punched tapping flange for drywall attachment. Available in White, standard colors, and unfinished for field painting.

One-Piece Drywall Trim 2.5" (AX1PC2STR) (AX1PC2CUR)

One-Piece Drywall Trim 4" (AX1PC4STR) (AX1PC4CUR)

One-Piece Drywall Trim 6" (AX1PC6STR) (AX1PC6CUR)

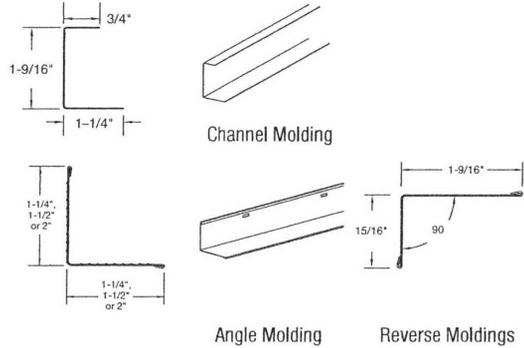


DRYWALL/STUCCO/PLASTER Grid Systems

(Continued from front)

4. Wall Moldings: Galvanized steel

- 7838 (120", unhemmed channel molding, nominal 3/4" x 1-9/16", 1-1/4")
- 7858 (144", hemmed reverse angle molding, nominal 1-9/16" x 15/16")
- LAM12/LAM12HRC (144" locking angle molding (Locking tabs 8" O.C.))
- KAM10 (120", knurled angle molding, nominal 1-1/4" x 1-1/4")
- KAM12/KAM12HRC (144", knurled angle molding, nominal 1-1/4" x 1-1/4")
- NEW** KAM1510 (120", nominal 1-1/2" x 1-1/2" knurled angle molding)
- NEW** KAM1512 (144", nominal 1-1/2" x 1-1/2" knurled angle molding)
- KAM21020 (120", knurled angle molding, 20 gauge, nominal 2" x 2")
- KAM21025 (120", knurled angle molding, 25 gauge, nominal 2" x 2")
- Other _____



5. Accessories: (see Drywall Accessories Submittal Sheet, CS-3082).

Physical Data

Material

Hot dipped galvanized steel

Surface Finish

Unpainted steel

Fire Resistance Rating

Resistive when used in applicable UL fire resistive designs. Fire Guard™ components meet UL Design Listings D501, D502, G523, G524, G526, G527, G528, G529, J502, L502, L508, L513, L515, L525, L526, L529, L564, P501, P506, P507, P508, P509, P510, P513, P514, P516 (XL7936G90 and SP135 are not fire rated)

NOTE: See UL Directory for details on specific designs.

Cross Tee/Main Beam Interface

Override

End Detail

Main Beam: Staked-on clip - HD8906 (HRC), SP135

Main Beam: Coupling - HD8901 Cross Tee: Staked-on clip

Duty Classification

Heavy-duty

Main Beam Load Test Data

MAIN BEAMS	LENGTH	WEB HEIGHT	ASTM CLASS	HANGER SPACING (Lbs./LF, Simple Span)**					
				L/240			L/360		
				2'	3'	4'	2'	3'	4'
HD8901	144"	1-1/2"	Heavy-duty	123.2	46.3	24.75	80.1	31.4	16.50
HD8906 (HRC)	144"	1-11/16"	Heavy-duty	143.0	57.3	28.14	95.50	35.8	18.76
SP135	135"	1-11/16"	Heavy-duty	139.85	52.59	28.71	-	-	-

Cross Tee Load Test Data

CROSS TEE	LENGTH	WEB HEIGHT	HANGER SPACING (Lbs./LF, Simple Span)**											
			L/240					L/240						
			2'	3'	4'	50'	72'	2'	3'	4'	50'	72'		
XL7918	144"	1-1/2"	107.0								71.5			
XL8926	144"	1-1/2"	158.0								129.0			
XL8925	135"	1-1/2"	117.0								98.0			
XL7936G90	36	1-1/2"	50.0								33.3			
XL7341	48	1-11/16"		24.8							16.59			
XL8341	48	1-1/2"		24.8							16.59			
XL8945P (HRC)	48			22.5							15.0			
XL8947P	50				19.5							13.0		
XL8965 (HRC)	72					6.4							4.27	

Seismic Performance

Seismic loading: ICC Evaluation Service, Inc., ESR-1289

2003 International Building Code

1997 Uniform Building Code, Continuous Membrane, One Level;

Per Section 25.210. Consult local code for requirement.

MAIN BEAMS

MINIMUM LBS. TO PULL OUT COMPRESSION/TENSION
HD8901
HD8906

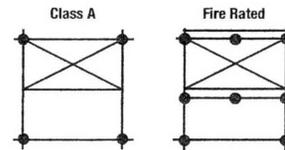
CROSS TEES

MINIMUM LBS. TO PULL OUT COMPRESSION/TENSION
XL7918, XL8926, XL8925, XL7936G90, XL7341, XL8341, XL8945P (HRC), XL8947P, XL8965 (HRC)

Maximum Fixture Weight

A. Main Beam to Main Beam

Main Beam ↑
Hanger Wire (•)



1. Fixture*

24" x 48"

2. Planning Module

48" x 48"

3. Hanger Spacing

48"

4. Item HD8901 Item HD8906

90.0 lbs.
90.0 lbs.

90.0 lbs.
90.0 lbs.

Main Beams tested as follows: HD8906 tested at 18.76 lbs./lin ft. to 1/360 of 4' span.

NOTE: The above data is based on 48" hanger wire spacing, board weight of 2 lbs./sq. ft., maximum deflection of tees not to exceed 1/360 of the span, and suspension system installed in accordance with ASTM C636.

Fixture weight is based on single fixture only. For end-to-end fixtures, consult your Armstrong representative.

*Fixtures weighing more than 56 lbs. should be independently supported.

**To derive maximum lbs/SF, divide the on-center spacing of the component into the lbs/LF given in the load test data table.

ICC Reports

For areas under ICC jurisdiction, see ICC evaluation report number 1289 for allowable values and/or conditions of use concerning the suspension system components listed on this page. The report is subject to reexamination, revisions, and possible cancellation.

TechLineSM / 1 877 ARMSTRONG

1 877 276 7876

armstrong.com/drywallgrid

CS-3081-911

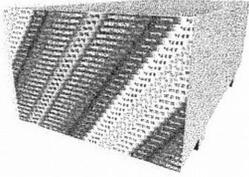
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Sheetrock® Gypsum Panels

Regular and Firecode® Cores



Quality interior wall and ceiling panels at low cost

- Fire-resistant dry construction
- Quick installation and decoration
- Score and snap easily
- Resist cracking and warping
- Specialized types for all systems

Description

SHEETROCK® brand gypsum panels are factory-fabricated, composed of a fire-resistant gypsum core encased in heavy natural-finish face paper and strong liner paper on the back side. The face paper is folded around the long edges to reinforce and protect the core, and the ends are square-cut and finished smooth. Long edges of panels are tapered, allowing joints to be reinforced and concealed with a USG joint treatment system.

SHEETROCK gypsum panels are available with three core types for standard construction uses.

Regular core

With a regular core, available in three thicknesses for specific purposes.

1/2" Panels Recommended for single-layer application in residential construction.

3/8" Panels Lightweight, applied principally in the double-wall system over wood framing, and in repair and remodeling.

1/4" Panels Lightweight, low-cost, utility gypsum panels, used as base layer for improving sound control in double-layer steel and wood-stud partitions, and for use over old wall and ceiling surfaces. Also for forming curved surfaces with short radii.

2-LAYERS



FIRECODE® Core

5/8" Type X Gypsum Panels Provide additional fire resistance over regular panels.

FIRECODE C Core

1/2" and 5/8" Type C Gypsum Panels Specially formulated mineral core provides fire resistance superior to that offered by FIRECODE Core gypsum panels.

Limitations

1. Avoid exposure to sustained temperatures exceeding 125 °F (52 °C).
2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
3. Non-loadbearing.
4. Fire-resistance ratings achieved when assembled in accordance with UL designs.

Finishing and Decorating

For high-quality finishing results, USG recommends the following products:

- SHEETROCK® ready-mixed joint compounds
- SHEETROCK® setting-type joint compounds
- SHEETROCK® joint tape
- SHEETROCK® First Coat primer
- SHEETROCK™ paper-faced metal bead and trim
- SHEETROCK® TUFF-HIDE™ primer-surfacer

Painting products and systems should be used which comply with recommendations and requirements in Appendixes of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used.

All surfaces, including applied joint compound, must be thoroughly dry, dust-free, and not glossy. Prime with SHEETROCK First Coat primer or with an undiluted, interior latex flat paint with high-solids content. Allow to dry before decorating.

To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to severe artificial or natural side lighting and be decorated with a gloss paint (egg shell, semi-gloss or gloss), the gypsum panel

surface should be skim coated with joint compound. This equalizes suction and texture differences between the drywall face paper and the finished joint compound before painting. As an alternative to skim coating, or when a Level 5 finish is required, use SHEETROCK TUFF HIDE™ primer-surfacer.

Product Data

Size: 1/4" , 3/8" , 1/2" and 5/8" x 48" wide; 8'–14' long. 1/2" and 5/8" also available in 54" wide.

Weight: 1/4" – 1.2 lbs/sf; 3/8" – 1.4 lbs/sf; 1/2" – 1.6 lbs/sf; 5/8" – 2.2 lbs/sf.

Thermal Resistance "R": For 1/2" thickness: 0.45 °F x ft.² x h/Btu (0.08 K x m²/W).

Thermal Coefficient of Expansion: Unrestrained: 40-100 °F (4-38 °C):
9.0 x 10⁻⁶ in./in./°F (16.2 x 10⁻⁶ mm/mm/°C) (16.2 μm/m/°C).

Hygrometric Coefficient of Expansion: Unrestrained: 5-90% r.h.
7.2 x 10⁻⁶ in./in./% r.h. (7.2 x 10⁻⁶ mm/mm/% r.h.) (7.2 μm/m/% r.h.).

Packaging: 2 panels per bundle.

Test Data

Surface Burning Characteristics: Flame spread 15, smoke developed 0.

Maximum Frame Spacing Drywall Construction

Direct Application	Panel thickness ⁽¹⁾		Location	Application method ⁽²⁾	Max. frame spacing o.c.	
	in.	mm			in.	mm
Single-Layer	3/8	9.5	ceilings ⁽³⁾	perpendicular ⁽⁴⁾	16	406
				parallel ⁽⁴⁾	16	406
	1/2	12.7	ceilings	perpendicular	24 ⁽⁵⁾⁽⁶⁾	610
				parallel ⁽⁴⁾	16	406
5/8	15.9	ceilings ⁽⁶⁾	perpendicular	24	610	
		sidewalls	parallel or perpendicular	24	610	
Double-Layer	3/8	9.5	ceilings ⁽⁷⁾	perpendicular	16	406
			sidewalls	perpendicular or parallel	24 ⁽⁸⁾	610
	1/2 and 5/8	12.7 and 15.9	ceilings	perpendicular or parallel	24 ⁽⁸⁾	610
			sidewalls	perpendicular	24 ⁽⁸⁾	610

(1) 5/8" thickness is recommended for the finest single-layer construction, providing increased resistance to fire and transmission of sound; 1/2" for single-layer application in new residential construction and remodeling; and 3/8" for repair and remodeling over existing surfaces. (2) Long edge position relative to framing. (3) Not recommended below unheated spaces. (4) Not recommended if water-based texturing material is to be applied. (5) Max. spacing 16" if water-based texturing material is to be applied. (6) If 1/2" SHEETROCK® interior ceiling board is used in place of gypsum panels, max. spacing is 24" o.c. for perpendicular application with weight of unsupported insulation not exceeding 1.3 psf., 16" o.c. with weight of unsupported insulation not exceeding 2.2 psf. (7) Adhesive must be used to laminate 3/8" board for double-layer ceilings. (8) Max spacing 16" o.c. if fire rating required.

Compliance

Meets ASTM C1396.

Submittal Approvals:

Job Name	
Contractor	Date

Trademarks

The following trademarks used herein are owned by United States Gypsum Company or a related company: DURABOND, EASY SAND, FIRECODE, SHEETROCK, TUFF HIDE.

Note

Products described here may not be available in all geographic markets. Consult your U.S. Gypsum Company sales office or representative for information.

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 and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.



Manufactured by
United States Gypsum Company
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Chicago, IL 60661

800 USG.4YOU (874-4968)
usg.com

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