Development Services

From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201
More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 18049	**Project Address:** 1627 SE Reedway St
Hearing Date: 6/20/18	**Appellant Name:** Steve Fosler
Case No.: B-001	**Appellant Phone:** 503 241 9339
Appeal Type: Building	**Plans Examiner/Inspector:** Kathy Aulwes
Project Type: commercial	**Stories:** 2 **Occupancy:** R-2 & M or A-3 **Construction Type:** V-A
Building/Business Name: Reedway Apts	**Fire Sprinklers:** Yes - throughout
Appeal Involves: Erection of a new structure	**LUR or Permit Application No.:** 17-284260-CO
Plan Submitted Option: mail [File 1] [File 2]	**Proposed use:** Apartments

APPEAL INFORMATION SHEET

Appeal item 1

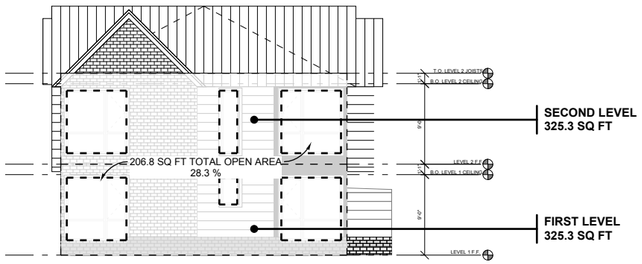
Code Section	705.8 Openings
Requires	Unprotected openings allowed and exit courtyard exit width met with 10' or more or courtyard width. Due to current City of Portland interpretation of wall area and openings allowed, the second floor projections over the courtyard effectively reduce the width used for calculating allowable openings to 7', even though there is still 10' clear on the ground floor.
Proposed Design	Second floor projections extend to within 7' of property line. Ground floor wall are at 10' from property line. Stairways that each provide exits for two second floor units have two treads that extend 22" into the 10' width of the exit court.
Reason for alternative	The occupant load using the court as exit is low, with a six one-bedroom units on the 2nd floor but with no more than two units using each stairway. The six ground floor units have bedrooms with egress windows on the opposite side of the building and a 10' clearance to the property line. The calculated occupant load of the exit court is low and the actual occupant load due to the one-bedroom units is lower. The three stairways are noncombustible construction and the stairway walls and ceiling are 1-hour rated. All windows on the ground floor will be 45 minute rated and non-operable and provided with sprinklers. Doors to units will be equipped with closers. The floor /ceiling assembly between the first floor and second floor units are 1-hr assemblies.

APPEAL DECISION

Exterior wall openings with projections into ten foot egress court: Granted provided sprinkler protection is provided beneath 2nd floor projections.
Appellant may contact John Butler (503 823-7339) with questions.

The Administrative Appeal Board finds with the conditions noted, that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

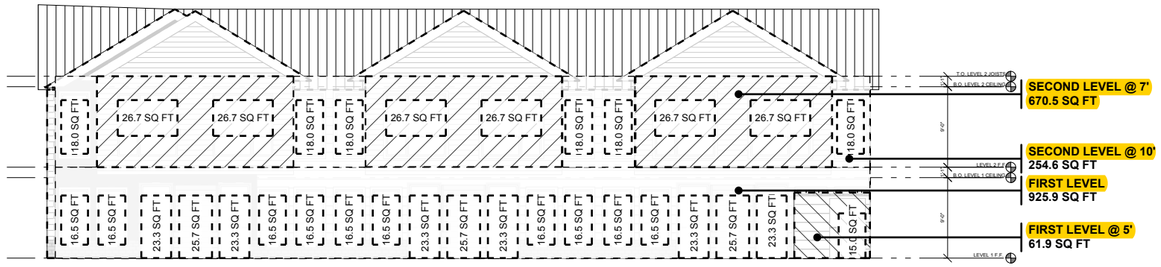
Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.



1 SOUTH ELEVATION OPENING ANALYSIS

16' 8' 4' 2' 0'
SCALE: 1/8" = 1'-0" @ 24" x 36"

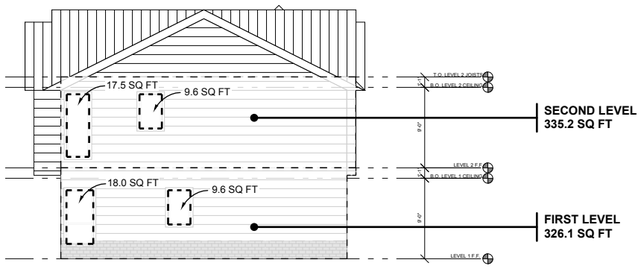
SOUTH WALL OPENINGS ANALYSIS	TOTAL AREA: 731.4 SQ FT
ALLOWABLE AREA: Unlimited for > 30' Fire Separation: Not Req'd	



3 EAST ELEVATION OPENING ANALYSIS

16' 8' 4' 2' 0'
SCALE: 1/8" = 1'-0" @ 24" x 36"

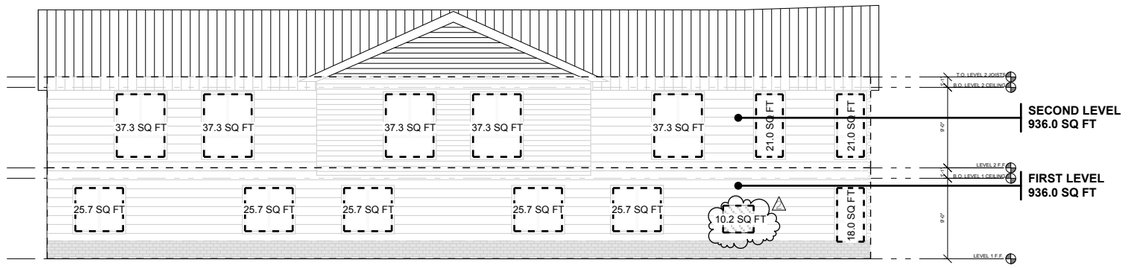
EAST WALL OPENINGS ANALYSIS	TOTAL AREA: 1,851.0 SQ FT
2ND LEVEL ALLOWABLE AREA: 25% for 5' to < 10' Fire Separation Level 2 East Wall: 160.2 sf open / 670.5 sf wall = 23.9% Windows & Doors	
2ND LEVEL ALLOWABLE AREA: 45% for 10' to < 15' Fire Separation Level 2 East Wall: 108 sf open / 254.6 sf wall = 42.4% Windows & Doors 1ST LEVEL ALLOWABLE AREA: 45% for 10' to < 15' Fire Separation Level 1 East Wall: 381.9 sf open / 925.9 sf wall = 41.2% Windows & Doors	
1ST LEVEL ALLOWABLE AREA: 25% for 5' to < 10' Fire Separation Level 1 East Wall: 15.0 sf open / 61.9 sf wall = 24.2% Windows & Doors	



2 NORTH ELEVATION OPENING ANALYSIS

16' 8' 4' 2' 0'
SCALE: 1/8" = 1'-0" @ 24" x 36"

NORTH WALL OPENINGS ANALYSIS	TOTAL AREA: 661.3 SQ FT
2ND LEVEL ALLOWABLE AREA: 25% for 5' to < 10' Fire Separation Level 2 North Wall: 27.1 sf open / 335.2 sf wall = 8.1% Windows & Doors 1ST LEVEL ALLOWABLE AREA: 25% for 5' to < 10' Fire Separation Level 1 North Wall: 27.6 sf open / 326.1 sf wall = 8.5% Windows & Doors	



4 WEST ELEVATION OPENING ANALYSIS

16' 8' 4' 2' 0'
SCALE: 1/8" = 1'-0" @ 24" x 36"

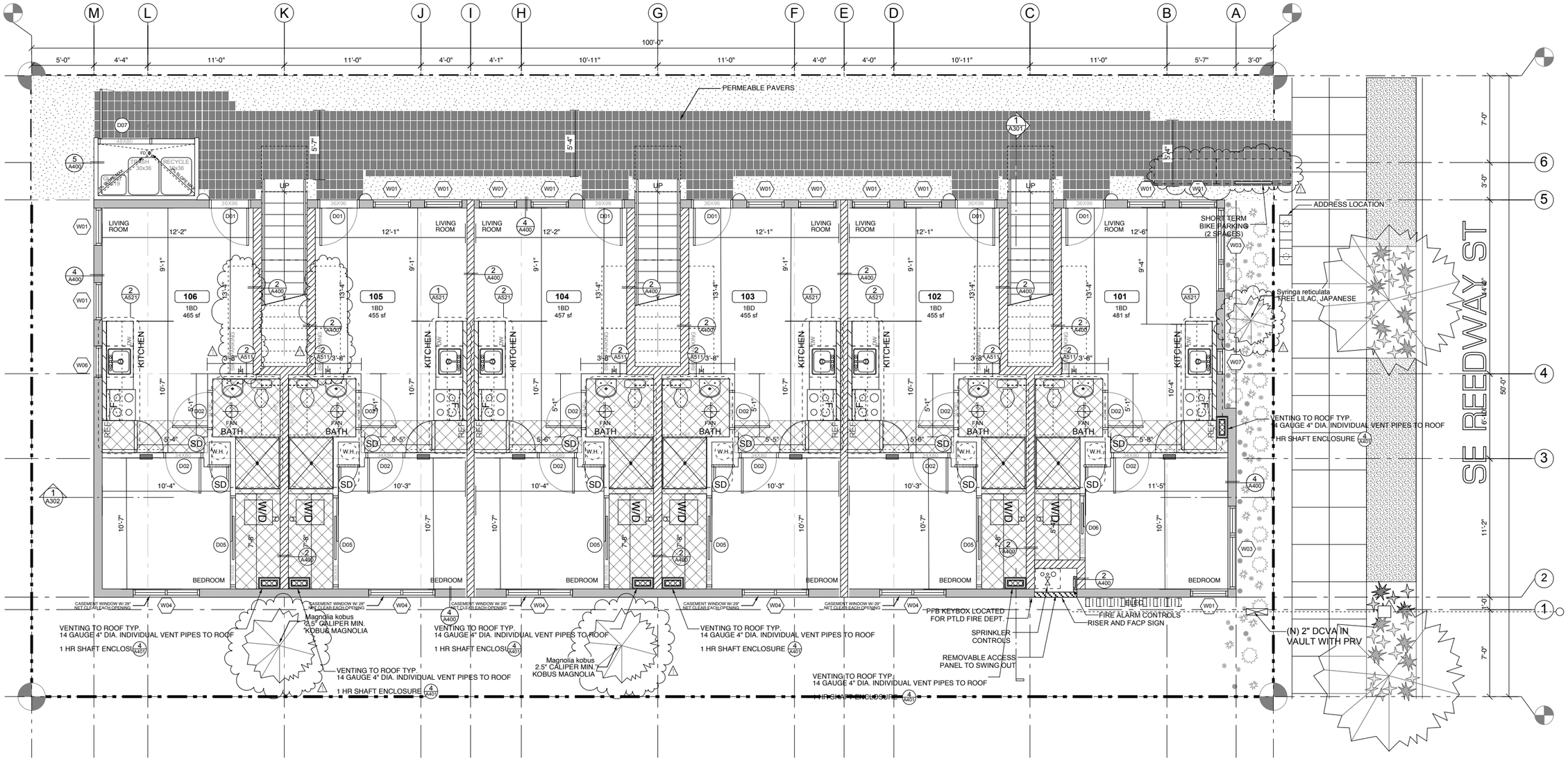
WEST WALL OPENINGS ANALYSIS	TOTAL AREA: 1,872.0 SQ FT
2ND LEVEL ALLOWABLE AREA: 25% for 5' to < 10' Fire Separation Level 2 North Wall: 228.5 sf open / 936.0 sf wall = 24.4% Windows & Doors 1ST LEVEL ALLOWABLE AREA: 25% for 5' to < 10' Fire Separation Level 1 North Wall: 156.7 sf open / 936.0 sf wall = 16.7% Windows & Doors	

REGISTERED ARCHITECT
STEVEN D. FOSLER
PORTLAND, OR
STATE OF OREGON

FOSLER ARCHITECTURE.COM
CREATING & IMPROVING SPACE SINCE 1985

Project
1631 SE. REEDWAY STREET
Reedway Street Apartments
Portland, OR 97202

Code	**SERD**
Set	PERMIT APPLICATION SET
Date	06 NOV 2017
Revisions	**R1** 07 DEC 2017 **R2** 12 APR 2018
Sheet	**A023.0**
Title	EXTERIOR OPENING ANALYSIS



1 FIRST FLOOR PLAN

NOTES: 75' HT LIMIT; 4 : 1 FAR; 15 % LANDSCAPING

SCALE: 1/4" = 1'-0" @ 24" x 36"

MECHANICAL KEY:

- F — Hood vent
- 100 cfm fan; 4" duct
- Soffit

WALL TYPES

- 1HR Fire Partition, 39 STC, R-21 Ext. Wall, 6" Nom. Framing (4/A400)
- 1HR Fire Partition, 50 STC Wall, 6" Nominal Framing (2/A400)
- Nonrated Interior/Exterior Wall (3/A400)
- ~~2HR Fire Partition, 6" Nom. Framing~~ NOT USED (1/A400)

ELECTRICAL FIXTURE KEY

- FAN — LIGHT/FAN (BATH. VENT)
- SD — SMOKE DETECTOR & CARBON MONOXIDE DETECTION (INTER-CONNECT SD'S IN UNITS TYP).
- EXTERIOR LIGHT FIXTURE
- 30 MIN FIRE RATED DROPPED SOFFIT ASSEMBLY FOR KITCHEN AND BATHROOM EXHAUST (TYP).
- ZONAL ELECTRIC HEATER

NOTES

SD — SMOKE DETECTOR & CARBON MONOXIDE DETECTION TO BE HARD WIRED WITH BATTERY BACKUP

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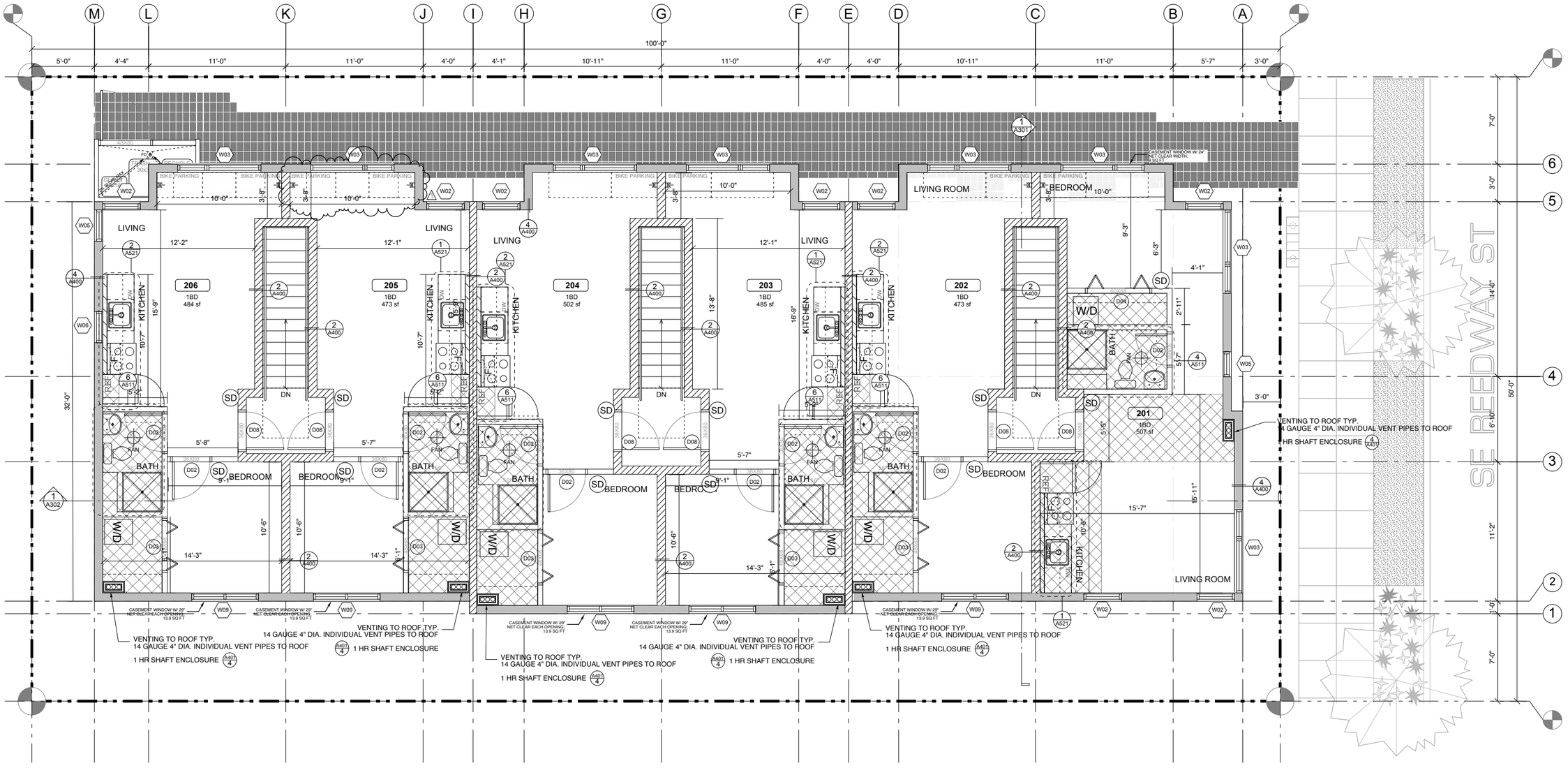
Date: 06 NOV 2017

Revisions:
R1 07 DEC 2017
R2 12 APR 2018

Sheet: **A101.0**

Title: FIRST FLOOR PLAN



1 SECOND FLOOR PLAN

NOTES: 75' HT LIMIT; 4 : 1 FAR; 15 % LANDSCAPING

SCALE: 1/4" = 1'-0" @ 24" x 36"

WALL TYPES

- 1HR Fire Partition, 39 STC, R-21 Ext. Wall, 6" Nom. Framing (4/A400)
- 1HR Fire Partition, 50 STC Wall, 6" Nominal Framing (2/A400)
- Nonrated Interior/Exterior Wall (3/A400)
- ~~2HR Fire Partition, 6" Nom. Framing~~ NOT USED (1/A400)

ELECTRICAL FIXTURE KEY

- FAN — LIGHT/FAN (BATH. VENT)
- SD — SMOKE DETECTOR & CARBON MONOXIDE DETECTION (INTER-CONNECT SD'S IN UNITS TYP).
- EXTERIOR LIGHT FIXTURE
- 30 MIN FIRE RATED DROPPED SOFFIT ASSEMBLY FOR KITCHEN AND BATHROOM EXHAUST (TYP).
- ZONAL ELECTRIC HEATER

NOTES

(SD) SMOKE DETECTOR & CARBON MONOXIDE DETECTION TO BE HARD WIRED WITH BATTERY BACKUP

REGISTERED ARCHITECT
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Code: SERD

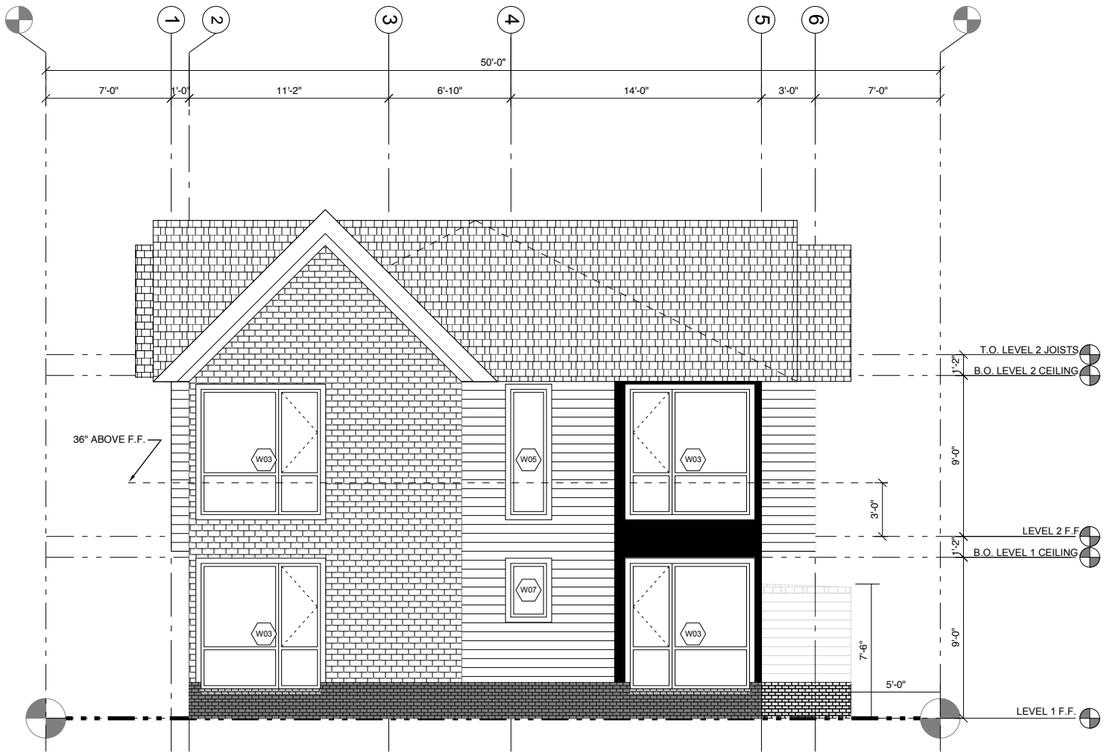
Set: PERMIT APPLICATION SET

Date: 06 NOV 2017

Revisions:
R1 07 DEC 2017
R2 12 APR 2018

Sheet: **A102.0**

Title: SECOND FLOOR PLAN



1 SOUTH ELEVATION

NOTES: 75' HT LIMIT; 4 : 1 FAR; 15 % LANDSCAPING

4' 2' 1' 1' 0'

SCALE: 1/4" = 1'-0" @ 24" x 36"

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Sheet	**A201.0**
Title	SOUTH ELEVATION

1 EAST ELEVATION

NOTES: 75' HT LIMIT; 4 : 1 FAR; 15 % LANDSCAPING

4' 2' 1' 1' 0'

SCALE: 1/4" = 1'-0" @ 24" x 36"

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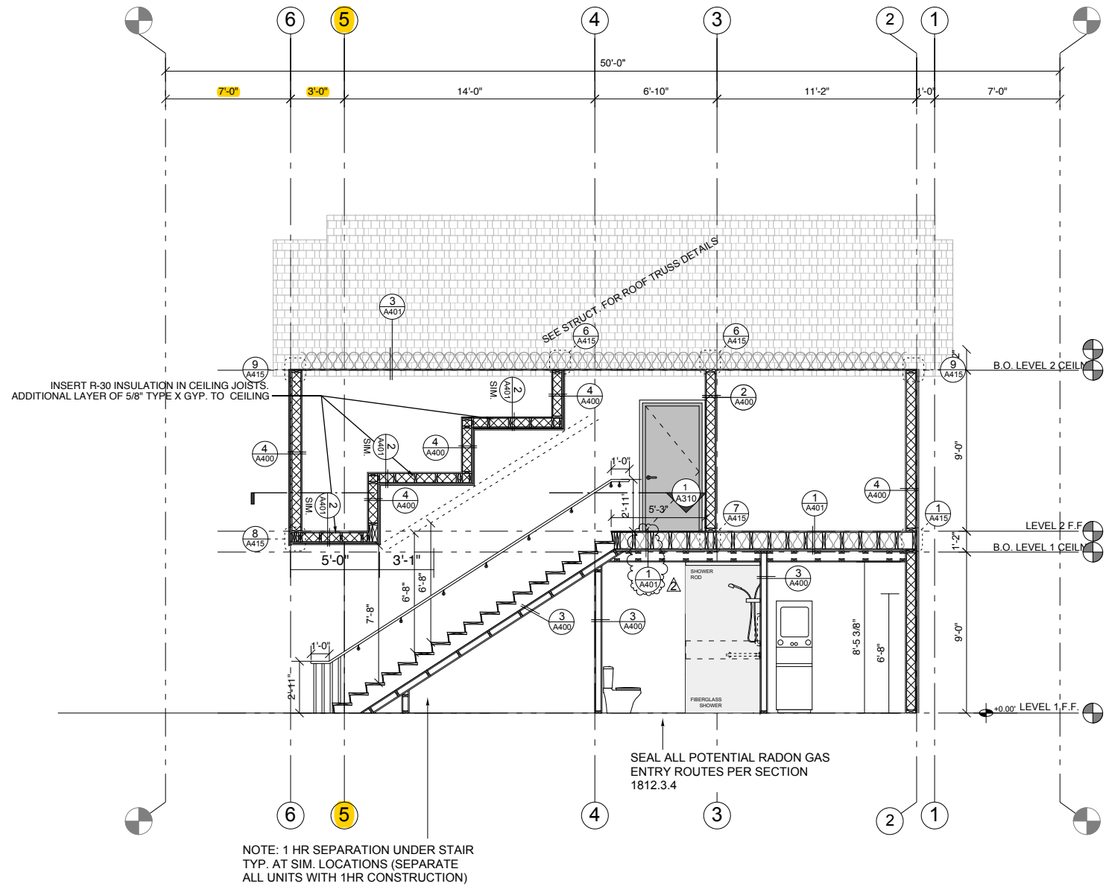
Title	EAST ELEVATION



1 BUILDING EAST-WEST SECTION

8' 4' 2' 1' 0'

SCALE: 1/4" = 1'-0" @ 24" x 36"

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Sheet	**A301.0**
Title	BUILDING SECTIONS

Gypsum Board Partitions - Wood Framing (Continued)

2 Hour FIRE	Design # UL U334	GA File # N/A	STC - 59
		Sound Test #	TL-93-115

Link to .PDF file
Link to .DWG file
Link to .DWG/Text file

5/8" (15.9 mm) Fire-Shield C Gypsum board base layers applied vertically to 2x4 wood studs 16" o.c. one side with 6d coated nails, 1-7/8" long, 14" o.c. other side over resilient furring channels 24" o.c. attached perpendicular to studs with 1" type S screws, gypsum board attached to channels with 1" type S screws 24" o.c. 5/8" Fire-Shield C Gypsum Board face layers applied horizontally, on stud side with 8d coated nails, 2-3/8" long, 7" o.c. Face layer on channel side applied with 1-5/8" type S screws 12" o.c. Face layer butt joints offset 16" from base layers. 2" thick mineral wool insulation friction fit in stud cavity.

NOT USED

1 2HR INT. WALL ASSEMBLY

UNIT SEPARATION

NTS

2

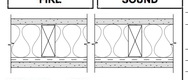
GA FILE NO. WP 3243	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 24" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1¼" Type S drywall screws. One layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer ⅝" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 1⅞" long, 0.0915" shank, 19/64" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**



Thickness: 5⅛"
Approx. Weight: 7 psf
Fire Test: Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test: NRCC TL-93-103, IRC-IR-761, 3/98

- (1) LAYER 5/8" TYPE X GYP
- BATT SOUND INSULATION (MIN. R-21 AT STAIR WALLS)
- 2x6 STUD
- RESILIENT CHANNEL
- (1) LAYER 5/8" TYPE X GYP

2 1HR 50 STC WALL ASSEMBLY

FOR UNIT SEPARATION AND STAIR ENCLOSURE

NTS

- 5/8" TYPE X GWB
- 2x STUD
- 5/8" TYPE X GWB

Walls And Interior Partitions – Wood Framed
Gypsum Association File – WP 3510
Generic Assembly

Gypsum Wallboard, Gypsum Sheathing, Wood Studs

One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of 2x4 min. wood studs (see struct) with 6d nails, 1-7/8" long, 0.0915" shank, 1/4" heads, 7" o.c.

Joints staggered 24" on opposite sides. **(LOAD BEARING)**

3 INT. ASSEMBLY

FOR PARTION WALLS WITHIN UNITS

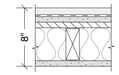
NTS

GA FILE NO. WP 8105	GENERIC	1 HOUR FIRE

GYPSUM WALLBOARD, GYPSUM SHEATHING, WOOD STUDS

EXTERIOR SIDE: One layer 48" wide 5/8" type X gypsum sheathing applied parallel to 2 x 4 wood studs 24" o.c. with 1 3/4" galvanized roofing nails 4" o.c. at vertical joints and 7" o.c. at intermediate studs and top and bottom plates. Joints of gypsum sheathing may be left untreated. Exterior cladding to be attached through sheathing to studs.

INTERIOR SIDE: One layer 5/8" type X gypsum wallboard, water-resistant gypsum backing board, or gypsum veneer base applied parallel or at right angles to studs with 6d coated nails, 1 7/8" long, 0.0915" shank, 1/4" heads, 7" o.c. **(LOAD BEARING)**



Thickness: Varies
Approx. Weight: 7 psf
Fire Test: See WP 3510 (UL R3501-47, -48, 9-17-65, UL Design U309 UL R1319-129, 7-22-70 UL Design U314)

- EXTERIOR CLADDING
- VAPOR BARRIER (SELF DRAINING)
- (1) LAYER 5/8" TYPE X GYP
- STRUCT SHEATHING
- BATT SOUND INSULATION (MIN. R-21)
- 2x6 STUD
- (1) LAYER 5/8" TYPE X GYP

4 1HR EXTERIOR WALL ASSEMBLY

USE ONLY FOR EXTERIOR NON-BEARING WALLS WITH FIRE SEPARATION > 5ft
SEE ARCH PLANS FOR LOCATIONS

NTS

1 Hour Fire-Rated Construction	Non-Loadbearing			Reference
Construction Detail	**Description**	**Test Number**	**Comments**	**Index**
wt.6  4¾"	• 5/8" SHEETROCK FIRECODE Core gypsum sheathing or SECURock glass-mat sheathing, exterior side – 3-1/2" 20 gauge structural studs 24" o.c. • 5/8" SHEETROCK FIRECODE Core gypsum panels, interior side *– load-bearing up to 100% allowable stud axial load*	UL Des U419	Rating also applies with SHEETROCK MOLD TOUGH FIRECODE Core gypsum panels, exterior	F-1

5 1HR EXTERIOR WALL ASSEMBLY

FOR USE WHEN CONSTRUCTING THE TRASH ENCLOSURE
SEE ARCH PLANS FOR LOCATIONS

NTS

2

REGISTERED ARCHITECT
STEVEN A. FOSLER
PORTLAND, OR
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FOSLER ARCHITECTURE.COM
CREATING & IMPROVING SPACE SINCE 1985

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Code	**SERD**
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Sheet	**A400.0**
Title	WALL ASSEMBLIES

GA FILE NO. FC 5011	PROPRIETARY*	1 HOUR FIRE	60 to 64 STC SOUND

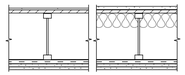
WOOD I-JOISTS, GYPSUM WALLBOARD, RESILIENT CHANNELS

Base layer 1/2" proprietary type X gypsum wallboard or gypsum veneer base applied at right angles to resilient furring channels 24" o.c. (16" o.c. when insulation is used) with 1" Type S drywall screws 16" o.c. Gypsum board end joints located midway between continuous channels and attached with screws 8" to additional pieces of channel 60" long located 3" back on either side of end joint. Resilient channels applied at right angles to minimum 10" deep wood I joists spaced a maximum of 19" o.c. with 1 1/4" Type S drywall screws. Face layer 1/2" proprietary type X gypsum wallboard or gypsum veneer base applied alright angles to resilient furring channels 1 5/8" Type S drywall screws 8" o.c. and 1 1/2" Type G screws 8" o.c. at the butt joints located mid span between the resilient channels. Glass fiber insulation secured to subfloor or loose fill insulation applied directly over gypsum board. Wood I joists supporting 19/32" wood structural panel subfloor applied at right angles to joists with construction adhesive and 6d ring shank nails 12" o.c. Minimum 1/2" proprietary gypsum floor topping applied over subfloor.

STC rated with I joists spaced 24" o.c., 3 1/2" glass fiber insulation in joist spaces, 3/4" proprietary gypsum floor topping poured over 1/4" proprietary sound reduction mat, and with finish flooring of sheet vinyl, engineered wood laminate, and ceramic tile. (STC 64 when sheet vinyl or engineered wood laminate is applied to floor; STC 66 when tested with ceramic tile applied to floor.)

PROPRIETARY GYPSUM COMPONENTS

United States Gypsum Company
- 1/2" SHEETROCK® Brand FIRECODE® C Core Gypsum Panels
- LEVELROCK® Brand Floor Underlayment



Approx. Ceiling Weight: 3 psf
Fire Test: UL R1319, 05NK04589, 2-4-05; UL R1319, 05NK09496, 3-31-05; UL Design L570
Sound Test: RAL OT03-05, 4-22-03; RAL OT03-07, 4-29-03; RAL OT03-09, 6-18-03;
IIC & Test: (58 sheet vinyl), RAL OT03-06, 4-22-03; (62 engineered wood laminate) RAL OT03-08, 4-29-03; RAL OT03-10, 6-18-03

1 FLOOR/CEILING ASSEMBLY

TYP. ASSEMBLY FOR FLOATING LAMINATE FLOOR FINISHES — NTS

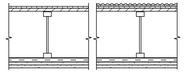
NOTE: MAINTAIN MIN 50 STC AND ICC ACOUSTIC RATINGS PER TESTED PROPRIETARY ASSEMBLY

GA FILE NO. FC 5111	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

WOOD I-JOISTS, GYPSUM WALLBOARD, RESILIENT CHANNELS

Base layer 1/2" type X gypsum wallboard applied at right angles to resilient channels 16" o.c. with 1 3/4" Type S drywall screws 12" o.c., Resilient channels applied at right angles to minimum 9 1/2" deep wood I-joists, with minimum 1 1/4" deep x 1 1/2" wide flanges and minimum 5/8" webs, 24" o.c. with 1 3/4" Type W drywall screws, Face layer 1/2" type X gypsum wallboard applied at right angles to channels with 1 5/8" Type S drywall screws 12" o.c. Face layer and joints located midway between channels and attached to base layer with 1 1/2" Type G screws 12" o.c. Edge joints offset 24" from base layer edge joints. Wood I-joists supporting 5/8" oriented strand board applied at right angles to I-joists with 8d common nails 12" o.c.

STC and IIC tested with 40 oz carpet over 1/4" foam pad.



Approx. Ceiling Weight: 5 psf
Fire Test: NRCC A-4440.1 (Revised), 6-24-07
Sound Test: NRCC B-3150.2, 6-30-00
IIC & Test: (68 C & P) NRCC B-3150.2, 6-30-00

2 FLOOR/CEILING ASSEMBLY

TYP. ASSEMBLY FOR CORRIDORS & LIVING AREA — NTS

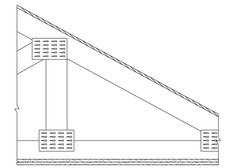
NOTE: MAINTAIN MIN 50 STC AND ICC ACOUSTIC RATINGS PER TESTED ASSEMBLY.
40 oz CARPET OVER 1/4" FOAM PAD REQ'D FOR CORRIDOR AND LIVING AREAS

ROOF-CEILING SYSTEMS

GA FILE NO. RC 2602	GENERIC	1 HOUR FIRE

WOOD TRUSSES, GYPSUM WALLBOARD

Base layer 5/8" type X gypsum wallboard applied at right angles to wood trusses 24" o.c. with 1 1/4" Type W or S drywall screws 24" o.c. **Face** layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to trusses with 1 7/8" Type W or S drywall screws 12" o.c. at joints and intermediate trusses and 1 1/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood trusses supporting 1/2" wood structural panels applied at right angles to trusses with 8d nails. Appropriate roof covering.

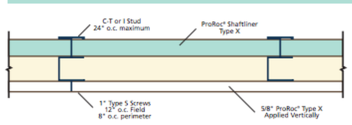


Approx. Ceiling Weight: 5 psf
Fire Test: FM FC 172, 2-25-72; ITS, 8-6-98

3 ROOF/CEILING ASSEMBLY

SEE ARCH PLANS FOR LOCATIONS — NTS

FIRE RATED SYSTEM DESIGNS FINISHED ONE SIDE



1 HR
VERTICAL SHAFTWALL SYSTEM
GA FILE NO. WP 7008, WP 7020
FINISHED ONE SIDE

FIRE TEST
UL DESIGN U417
SYSTEMS E & F
WHI 651- 0306.1 1989

THICKNESS*
3-1/8"
(80 mm)

APPROX. WT.
6-1/2 #/sf
(32 kg/m²)

ProRoc® Shaftliner Type X gypsum boards are inserted between 2-1/2", 4" or 6" C-T or I-Studs. A single layer of 5/8" ProRoc® Type X gypsum board is applied vertically, parallel to framing, on open-stud-face side with 1" No. 6 Type S screws spaced 12" on center in the field and 8" on center along the perimeter. Exposed joints and screwheads are to be finished with a joint-tape system unless otherwise specified.
(Non-Load Bearing)

4 1HR SHAFT ASSEMBLY

FOR VENTING — NOT TO SCALE

Home / Heating, Venting & Cooling / Ventilation / Ventilation Accessories

Model # 636 Internet #202191718 Store SKU #276518 Store SO SKU #1000626379

Broan
Roof Cap
★★★★☆ (18) Write a Review

- Dependable rooftop ventilation
- Black enamel finish
- Protective bird screen

$16.93 /each

5 SHAFT CAP AT ROOF

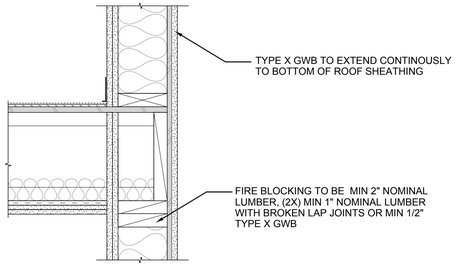
FOR VENTING — NOT TO SCALE

REGISTERED ARCHITECT
STEVEN J. FOSLER
PORTLAND, OR
STATE OF OREGON

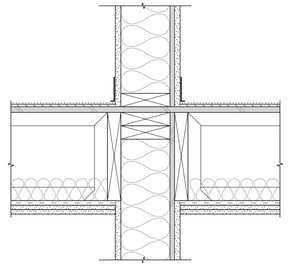
FSG ARCHITECTURE.COM
CREATING & IMPROVING SPACE SINCE 1985

Project
1631 SE. REEDWAY STREET
Reedway Street Apartments
Portland, OR 97202

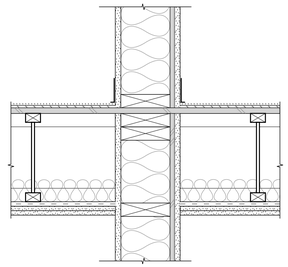
Code	SERD
Set	PERMIT APPLICATION SET
Date	06 NOV 2017
Revisions	**R1** 07 DEC 2017 **R2** 12 APR 2018
Sheet	**A401.0**
Title	FLOOR/CEILING & ROOF ASSEMBLIES



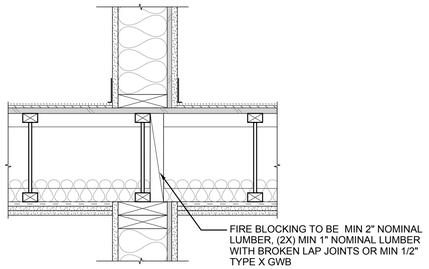
1 1 HR FLOOR-CEILING FIRE PARTITION TO EXT. WALL
NTS



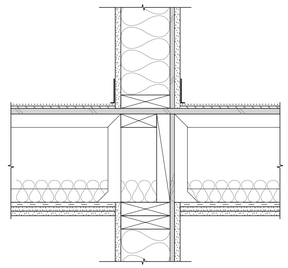
2 INTERIOR FLOOR-CEILING FIRE BARRIER
JOISTS PERPENDICULAR
NTS



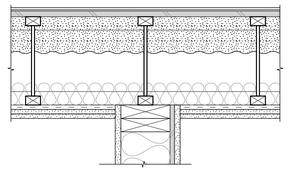
3 INTERIOR FLOOR-CEILING FIRE BARRIER
JOISTS PARALLEL
NTS



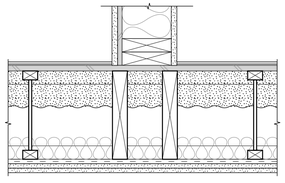
4 1 HR INTERIOR FLOOR-CEILING FIRE PARTITION
JOISTS PARALLEL ABOVE UNIT SEP. AND CORRIDOR WALLS
NTS



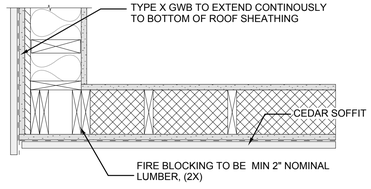
5 1 HR INTERIOR FLOOR-CEILING FIRE PARTITION
NTS



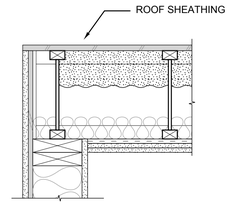
6 1 HR INTERIOR CEILING-ROOF FIRE PARTITION
JOISTS PARALLEL
NTS



7 1 HR INTERIOR CEILING FIRE PARTITION ABOVE
JOISTS PARALLEL
NTS



8 1 HR FLOOR-CEILING @ STAIR ALCOVE
NTS



9 1 HR CEILING-ROOF EXT. FIRE PARTITION
NTS

REGISTERED ARCHITECT
STEVEN A. FOSLER
PORTLAND, OR
STATE OF OREGON

FOSLER ARCHITECTURE.COM
CREATING & IMPROVING SPACE SINCE 1985

Project
1631 SE. REEDWAY STREET
Reedway Street Apartments
Portland, OR 97202

Code: **SERD**

Set: PERMIT APPLICATION SET

Date: 06 NOV 2017

Revisions:
R1 07 DEC 2017
R2 12 APR 2018

Sheet: **A415.0**

Title: FIRE SEPARATION DETAILS

WINDOW SCHEDULE:

WINDOW ASSEMBLY												COMMENTS
ASSEMBLY NUMBER	ROUGH OP. WIDTH	ROUGH OP. HEIGHT		MATERIAL	FINISH	COUNT (VERIFY TOTAL ON PLANS AND ELEVS)	U-VALUE	SHGC	E-VALUE	FIRE RATING	
W01	3'-0"	6'-0"		MTL	MFR	10	0.41	0.35	LOW-E	45 min	5, 6, 9	***OPTIMUM*** FIRE RATED ASSEMBLY
W02	3'-0"	7'-0"		WD	MFR	4	0.35	0.35	LOW-E	-	1	
W03	6'-8"	7'-0"		WD	MFR	10	0.35	0.35	LOW-E	-	3	
W04	5'-4"	7'-0"		WD	MFR	4	0.35	0.35	LOW-E	-	4	
W05	2'-0"	7'-0"		WD	MFR	2	0.35	0.35	LOW-E	-	1	
W06	2'-6"	3'-10"		WD	MFR	2	0.35	0.35	LOW-E	-	2	
W07	2'-0"	3'-0"		WD	MFR	1	0.35	0.35	LOW-E	-	2	
W08	2'-6"	7'-0"		WD	MFR	2	0.35	0.35	LOW-E	-	1	
W09	5'-4"	7'-0"		WD	MFR	4	0.35	0.35	LOW-E	-	2	
W10	3'-0"	6'-0"		WD	MFR	3	0.35	0.35	LOW-E	-	9	

COMMENTS

ALL WINDOWS: REFER TO ELEVATIONS FOR TEMPERED GLAZING LOCATIONS

1. FIXED WINDOW
2. CASEMENT WINDOW
3. FIXED OVER FIXED ADJACENT TO CASEMENT OVER FIXED WINDOW ASSEMBLY
4. CASEMENT WINDOW OVER FIXED
5. CLOSER
6. SMOKE AND DRAFT CONTROL GASKETS (S- LABEL)
7. MAGNETIC HOLD OPEN WITH ALARM RELEASE
8. MIN. 34" CLR WHEN OPEN AT 90 DEG.
9. SINGLE HUNG WINDOW

NOTES

NOTES: FIELD MEASUREMENTS REQUIRED & SITE CONDITIONS TO BE VERIFIED BY WINDOW SUPPLIER & CONTRACTOR PRIOR TO ORDER VERIFICATION & PRIOR TO INSTALLATION.
- ALL WINDOWS TO BE ATRIUM 'SERIES 720'
- WINDOWS: MIN. DOUBLE GLAZED w/ 1/2" AIR SPACE, LOW-E COATING, & THERMAL BREAK.
- SEAL ALL PENETRATIONS IN BUILDING ENVELOPE; CAULK, GASKET, & WEATHER STRIP ALL WINDOWS & DOORS.
- REFER TO ELEVATIONS FOR LOCATIONS OF REQUIRED TEMPERED PANELS

DOOR SCHEDULE:

	DOOR								FRAME		COMMENTS	
DOOR NUMBER	WIDTH	HEIGHT	TYPE	FINISH	FIRE RATING	COUNT (G.C. TO VERIFY TOTAL ON PLANS AND ELEVS)	U-VALUE	HARDWARE	MATERIAL	FINISH		
D01	3'-0"	8'-0"	MTL	PAINT	45	6	0.35	A	MTL	PAINT	4,5,7	Residential entry
D02	3'-0"	6'-8"	SCWD	PAINT	-	23	-	D	WD	PAINT	7	Interior dwelling door
D03	(2) 2'-0"	6'-8"	SCWD	PAINT	-	5	-	-	WD	PAINT	9	Closet door
D04	(2) 2'-6"	6'-8"	SCWD	PAINT	-	1	-	-	WD	PAINT	9	Closet door
D05	(2) 4'-0"	6'-8"	SCWD	PAINT	-	5	-	-	WD	PAINT	10	Closet door
D06	(2) 4'-0"	6'-8"	SCWD	PAINT	-	1	-	-	WD	PAINT	10	Closet door
D07	4'-0"	6'-8"	MTL	PAINT	-	1	-	-	MTL	PAINT	7	Trash area door
D08	3'-0"	8'-0"	MTL	PAINT	20 min	6	-	A	MTL	PAINT	4,5,7	Residential entry

HARDWARE KEY

A. ENTRANCE LOCK - LATCH BY LEVER EITHER SIDE. DEADBOLT BY KEY OUTSIDE, TURNPIECE INSIDE.

B. STOREROOM LOCK - LATCH BY LEVER INSIDE. LEVER BY KEY OUTSIDE. OUTSIDE LEVER ALWAYS RIGID. INSIDE ALWAYS UNLOCKED.

C. PRIVACY LOCK - LATCH BY LEVER EITHER SIDE EXCEPT WHEN OUTSIDE LEVER IS LOCKED BY INSIDE TURNPIECE.

D. PASSAGE LOCK - LATCH BY LEVER EITHER SIDE.

E. TENANT LOCK - LATCH BY LEVER INSIDE. LEVER BY KEY OUTSIDE. OUTSIDE LEVER ALWAYS RIGID. INSIDE ALWAYS UNLOCKED.

COMMENTS

ALL DOORS: MAX THRESHOLD HT. OF 1/2" W/ MAX 50% SLOPE BEVEL EACH SIDE

1. FULL LITE DOOR w/ TEMPERED GLASS
2. TRANSOM
3. SIDE LITE w/ TG GLAZING
4. CLOSER
5. SMOKE AND DRAFT CONTROL GASKETS (S- LABEL)
6. MAGNETIC HOLD OPEN WITH ALARM RELEASE
7. MIN. 34" CLR WHEN OPEN AT 90 DEG.
8. MAXIMUM CORE THICKNESS OF 1 3/8"
9. BI-FOLD CLOSET DOOR
10. SLIDING DOOR

NOTES

NOTES: FIELD MEASUREMENTS REQUIRED & SITE CONDITIONS TO BE VERIFIED BY WINDOW SUPPLIER & CONTRACTOR PRIOR TO ORDER VERIFICATION & PRIOR TO INSTALLATION

EXTERIOR DOOR SPECS:

NOTES: 45 min RATED DOOR FOR UNIT ENTRY AT EGRESS COURT

REGISTERED ARCHITECT
STEVEN B. FOSLER
PORTLAND, OR
STATE OF OREGON

FOSLER ARCHITECTURE.COM
CREATING & IMPROVING SPACE SINCE 1985

Project
1631 SE. REEDWAY STREET
Reedway Street Apartments
Portland, OR 97202

Code: **SERD**

Set: PERMIT APPLICATION SET

Date: 06 NOV 2017

Revisions:
R1 07 DEC 2017
R2 12 APR 2018

Sheet: **A610.0**

Title: DOOR SCHEDULES

TEST REPORT

for

Homasote Company
932 Lower Ferry Rd.
W. Trenton, NJ 08638
Steve Gleason / 609-883-3300

Impact Sound Transmission Test

ASTM E 492 – 09 (2016) / ASTM E 989 – 06 (2012)

On

9-1/2 Inch Wood I Joist (24 Inch o.c.) Floor-Ceiling Assembly
Flooring: 8 mm Mannington LVT Flooring
over 23/32 Inch Weyerhaeuser Edge Gold OSB
Ceiling: Resilient Channels, with 2 Layers of 5/8 Inch Type X Gypsum Board
and 6 Inches of Fiberglass Insulation

Report Number: NGC 7018036

Assignment Number: G-1505

Test Date: 05/11/2018

Report Date: 05/17/2018

Submitted by: _____
Anthony L. Rivers
Test Technician

Reviewed by: _____
Robert J. Menchetti
Director

Revision Summary:

Date	SUMMARY
Approval Date: 05/17/2018	Original issue date: 05/17/2018 Original NGCTS report: NGC 7018036

Report Number: NGC 7018036

Test Method: This test method is in accordance with American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine – Designation: E 492-09 (2016) / E 989-06 (2012).

The uncertainty limits of each tapping machine location met the precision requirements of section A1.4 of ASTM E 492-09 (2016).

Specimen Description: 9.5 inch (241.3 mm) I-Joists (spaced 24 Inches o.c.) floor-ceiling assembly with, according to client: Flooring consisting of 8 mm Mannington LVT Flooring over 23/32 inch Weyerhaeuser Edge Gold OSB; Ceiling consisting of RC-1 resilient channel, 6 inches of fiberglass insulation and two layers of 5/8 in. Type X gypsum board ceiling.

The test specimen was a floor-ceiling assembly consisting of the following:

- 1 layer of, according to client, 8 mm Mannington LVT Flooring. Sample thickness was 8.13 mm (0.32 in.). Measured sample weight was 7.42 kg/m^2 (1.52 PSF).
- 1 layer of 15.1mm (23/32 in.) Weyerhaeuser Edge Gold OSB panels. They were fastened to the wood joists with 41.28 mm (1-5/8 in.) Type W screws, spaced 304.8mm (12 in.) o.c. in field and 152.4mm (6 in.) o.c. perimeter. The measured weight was 11.30 kg/m^2 (2.31 PSF).
- 44.5 mm x 241.3 mm x 3517.9 mm (1-3/4 in. x 9-1/2 in. x 11-1/2 ft.) I-Joists spaced 406.4 mm (16 in.) o.c. The joists were attached to 2 layers of 28.6 mm x 241.3 mm x 4876.8mm (1-1/16 in. x 9-1/2 in. x 16 ft.) Laminated Strand Lumber rim boards with 8d nails, four nails per joist and construction adhesive. The joists had a measured weight of 8.89 kg/m^2 (1.82 PSF), the rim boards had a measured weight of 6.25 kg/m^2 (1.28 PSF).
- 152.4 mm (6 in.) unfaced fiberglass batt insulation which was laid over the suspended grid system parallel to the main tees. Sample weight: 1.37 kg/m^2 (0.28 PSF)
- RC-1 Resilient metal furring channel. Sample was observed to be 60.3mm (2-3/8 in.) wide x 3657.6 mm (144 in.) long x 12.7mm (1/2 in.) deep and 0.43mm (0 .017 in.) thick. The channels were spaced 406.4 mm (16 in.) o.c. They were attached perpendicular to joists with 31.8mm (1-1/4 in.) coarse thread screws. The sample weight was 0.732 kg/m^2 (0.15 PSF).
- 2 layers of 15.9mm (5/8 in.) Type X gypsum board. The board was attached perpendicular to the channels with 31.8 mm (1-1/4 in.) and 41.3 mm (1-5/8 in.) Type S drywall screws. The screw spacing was 304.8mm (12 in.) o.c. throughout. Sample was observed to be 16.2mm (0.636 in.) thick, Total weight of the 2 layers was 22.46 kg/m2 (4.60 PSF).

The overall weight of the test assembly is 49.50 kg/m^2 (10.14 PSF).

The perimeter of the floor assembly was sealed with a rubber gasket and a sand filled trough.

The test assembly is structurally isolated from the receiving room.

Specimen size: 3657.6mm x 4876.8mm (12 ft x 16 ft).

Conditioning: All materials were conditioned at 20°C and 55% humidity 24 hours prior to test. Adhesive cured 24 hours prior to test.

Test Results: The results of the tests are given on pages 4 and 5.

Normalized impact sound pressure level

Test: ASTM E 492 - 09 (2016) / ASTM E 989 - 06 (2012)

Test Report: NGC7018036 Date: 5/11/2018
Specimen Size [m²]: 17.8

Source room
Rm Temp [°C]: 25
Humidity [%]: 50

Receiving room
Volume [m³]: 127
Rm Temp [°C]: 25
Humidity [%]: 50

Impact Insulation Class IIC [dB]: 51
Sum of Unfavorable Deviations [dB]: 15
Max. Unfavorable Deviation [dB]: 8 at 125 Hz

Frequency [Hz]	L_n [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔL_n
80	69	68.9	27.42	0.1		1.96
100	64	64.5	23.94	-0.5	3	1.79
125	69	70.8	19.86	-1.8	8	2.23
160	65	68.1	14.41	-3.1	4	1.33
200	60	63.1	13.90	-3.1		0.49
250	57	59.3	15.87	-2.3		0.44
315	54	56.3	16.29	-2.3		0.39
400	51	53.1	17.16	-2.1		0.71
500	44	46.6	18.06	-2.6		0.63
630	42	43.9	18.16	-1.9		0.52
800	37	38.9	19.12	-1.9		0.66
1000	34	35.7	18.57	-1.7		0.46
1250	31	32.9	19.88	-1.9		0.37
1600	29	30.0	22.65	-1.0		0.43
2000	31	31.4	24.31	-0.4		0.37
2500	28	28.7	26.86	-0.7		0.44
3150	24	23.7	29.51	0.3		0.60
4000	16	16.3	33.43	-0.3		0.57
5000	10	11.1	38.05	-1.1		0.25

L_n = Normalized Sound Pressure Level, dB
L2 = Receiving Room Level, dB
d = Decay Rate, dB/second
ΔL_n = Uncertainty for 95% Confidence Level

Normalized impact sound pressure level

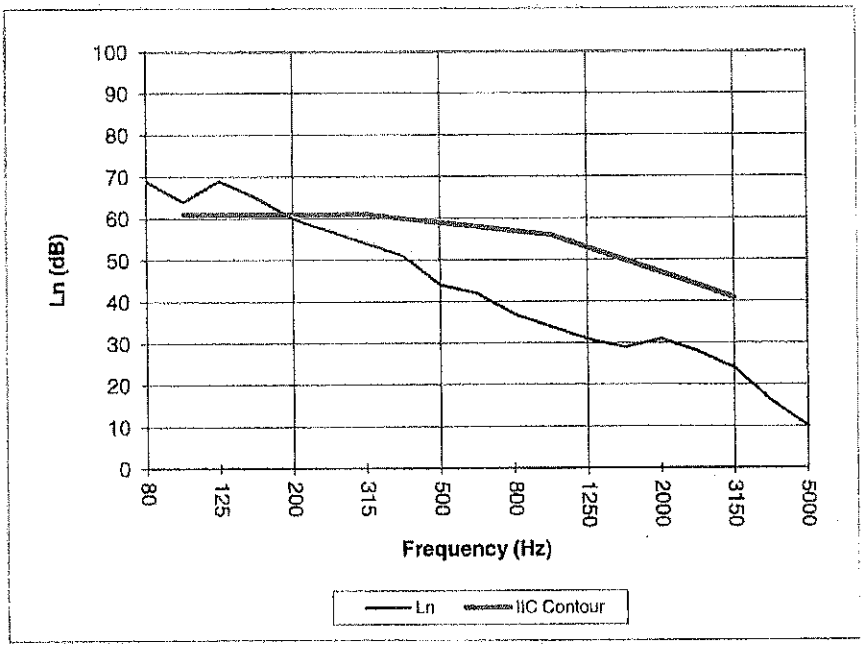
Test: ASTM E 492 - 09 (2016) / ASTM E 989 - 06 (2012)

Test Report: NGC7018036
Test Date: 5/11/2018
Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 51

Frequency [Hz]	L_n [dB]
80	69
100	64
125	69
160	65
200	60
250	57
315	54
400	51
500	44
630	42
800	37
1000	34
1250	31
1600	29
2000	31
2500	28
3150	24
4000	16
5000	10 *

* Due to high insulating value of specimen, background levels limit results at these frequencies.



L_n = Normalized Sound Pressure Level, dB

TEST REPORT

for

Homasote Company
932 Lower Ferry Rd.
W. Trenton, NJ 08638
Steve Gleason / 609-883-3300

Sound Transmission Loss Test

ASTM E 90 – 09 (2016) / E 413 – 16

On

9-1/2 Inch Wood I Joist (24 Inch o.c.) Floor-Ceiling Assembly
Flooring: 8 mm Mannington LVT Flooring
over 23/32 Inch Weyerhaeuser Edge Gold OSB
Ceiling: Resilient Channels, with 2 Layers of 5/8 Inch Type X Gypsum Board
and 6 Inches of Fiberglass Insulation

Report Number: NGC 5018038

Assignment Number: G-1505

Test Date: 05/11/2018

Report Date: 05/17/2018

Submitted by: _____
Anthony J. Rivers
Test Technician

Reviewed by: _____
Robert J. Menchetti
Director

Revision Summary:

Date	SUMMARY
Approval Date: 05/17/2018	Original issue date: 05/17/2018 Original NGCTS report: NGC 5018038

Report Number: NGC 5018038

Test Method: This test method conforms explicitly with the American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements – Designation: E 90 – 09 (2016) / E 413 - 16.

Specimen Description: 9.5 inch (241.3 mm) I-Joists (spaced 24 Inches o.c.) floor-ceiling assembly with, according to client: Flooring consisting of 8 mm Mannington LVT Flooring over 23/32 inch Weyerhaeuser Edge Gold OSB; Ceiling consisting of RC-1 resilient channel, 6 inches of fiberglass insulation and two layers of 5/8 in. Type X gypsum board ceiling.

The test specimen was a floor-ceiling assembly consisting of the following:

- 1 layer of, according to client, 8 mm Mannington LVT Flooring. Sample thickness was 8.13 mm (0.32 in.). Measured sample weight was 7.42 kg/m^2 (1.52 PSF).
- 1 layer of 15.1mm (23/32 in.) Weyerhaeuser Edge Gold OSB panels. They were fastened to the wood joists with 41.28 mm (1-5/8 in.) Type W screws, spaced 304.8mm (12 in.) o.c. in field and 152.4mm (6 in.) o.c. perimeter. The measured weight was 11.30 kg/m^2 (2.31 PSF).
- 44.5 mm x 241.3 mm x 3517.9 mm (1-3/4 in. x 9-1/2 in. x 11-1/2 ft.) I-Joists spaced 406.4 mm (16 in.) o.c. The joists were attached to 2 layers of 28.6 mm x 241.3 mm x 4876.8mm (1-1/16 in. x 9-1/2 in. x 16 ft.) Laminated Strand Lumber rim boards with 8d nails, four nails per joist and construction adhesive. The joists had a measured weight of 8.89 kg/m^2 (1.82 PSF), the rim boards had a measured weight of 6.25 kg/m^2 (1.28 PSF).
- 152.4 mm (6 in.) unfaced fiberglass batt insulation which was laid over the suspended grid system parallel to the main tees. Sample weight: 1.37 kg/m^2 (0.28 PSF)
- RC-1 Resilient metal furring channel. Sample was observed to be 60.3mm (2-3/8 in.) wide x 3657.6 mm (144 in.) long x 12.7mm (1/2 in.) deep and 0.43mm (0 .017 in.) thick. The channels were spaced 406.4 mm (16 in.) o.c. They were attached perpendicular to joists with 31.8mm (1-1/4 in.) coarse thread screws. The sample weight was 0.732 kg/m^2 (0.15 PSF).
- 2 layers of 15.9mm (5/8 in.) Type X gypsum board. The board was attached perpendicular to the channels with 31.8 mm (1-1/4 in.) and 41.3 mm (1-5/8 in.) Type S drywall screws. The screw spacing was 304.8mm (12 in.) o.c. throughout. Sample was observed to be 16.2mm (0.636 in.) thick, Total weight of the 2 layers was 22.46 kg/m2 (4.60 PSF).

The overall weight of the test assembly is 49.50 kg/m^2 (10.14 PSF).

The perimeter of the floor assembly was sealed with a rubber gasket and a sand filled trough.

The test assembly is structurally isolated from the receiving room.

Specimen size: 3657.6mm x 4876.8mm (12 ft x 16 ft).

Conditioning: All materials were conditioned at 20°C and 55% humidity 24 hours prior to test. Adhesive cured 24 hours prior to test.

Test Results: The results of the tests are given on pages 4 and 5.

Sound Transmission Loss Test Data

Test: ASTM E 90 - 09 (2016) / ASTM E 413 - 16

Test Report: NGC 5018038 Date: 5/11/2018
Specimen Size [m²]: 17.8

Source room		Receiving room	
Volume [m³]:	86	Volume [m³]:	127
Rm Temp [°C]:	25	Rm Temp [°C]:	25
Humidity [%]:	50	Humidity [%]:	50

Sound Transmission Class STC [dB]: 55

Sum of Unfavorable Deviations [dB]: 25
Max. Unfavorable Deviation [dB]: 8 at 125 Hz

Frequency [Hz]	STL [dB]	L1 [dB]	L2 [dB]	d [dB/s]	Corr. [dB]	u.Dev. [dB]	ΔSTL
80	25	101.7	78.5	31.2	1.8		3.18
100	35	105.9	73.4	28.7	2.5		3.93
125	31	104.9	77.7	21.7	3.7	8	1.85
160	38	107.0	74.1	16.1	5.0	4	1.40
200	42	106.9	70.5	15.1	5.6	3	0.78
250	45	103.2	63.4	16.1	5.1	3	1.42
315	47	101.8	59.6	16.1	4.8	4	0.58
400	51	101.3	54.6	18.8	4.3	3	0.95
500	56	102.9	51.3	20.3	4.4		0.62
630	57	103.0	49.5	21.2	3.5		0.83
800	60	102.0	45.6	21.1	3.6		0.36
1000	64	100.0	40.0	20.4	4.1		0.65
1250	67	97.4	34.8	21.0	4.4		0.61
1600	69	98.2	32.6	22.5	3.4		0.65
2000	72	100.2	31.0	25.1	2.9		0.62
2500	74	101.9	30.6	27.7	2.7		1.05
3150	78	101.0	26.0	29.4	3.0		1.34
4000	80	98.6	20.6	32.8	2.0		1.41
5000	83	92.1	10.6	37.2	1.5		1.59

STL = Sound Transmission Loss, dB
L1 = Source Room Level, dB
L2 = Receiving Room Level, dB
d = Decay Rate dB/second
Δ STL = Uncertainty for 95% Confidence Level

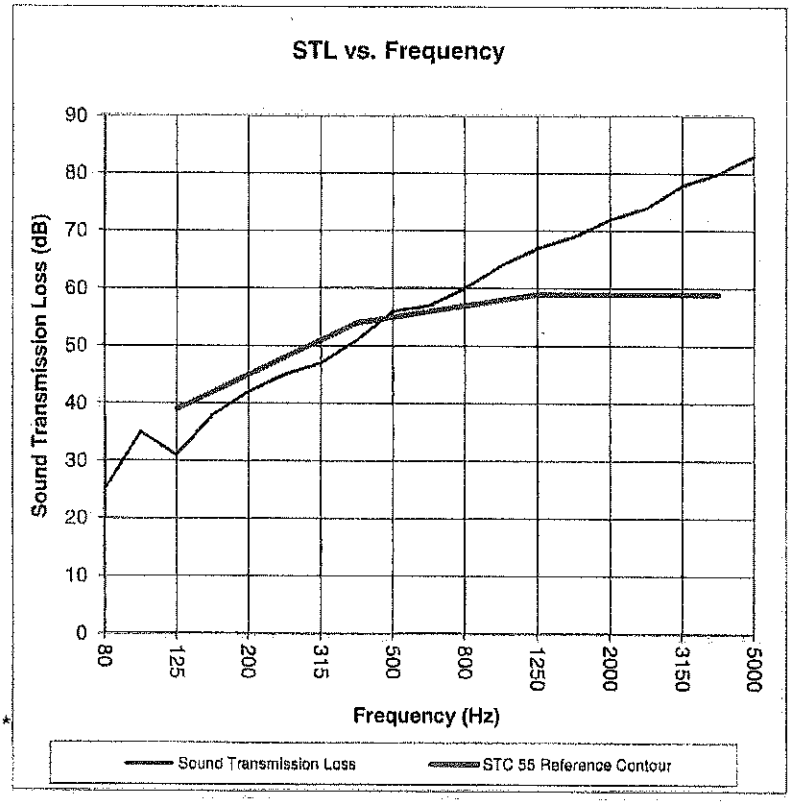
Sound Transmission Loss Test Data

Test: ASTM E 90 - 09 (2016) / ASTM E 413 - 16

Test Report: NGC 5018038
Test Date: 5/11/2018
Specimen Size [m²]: 17.8

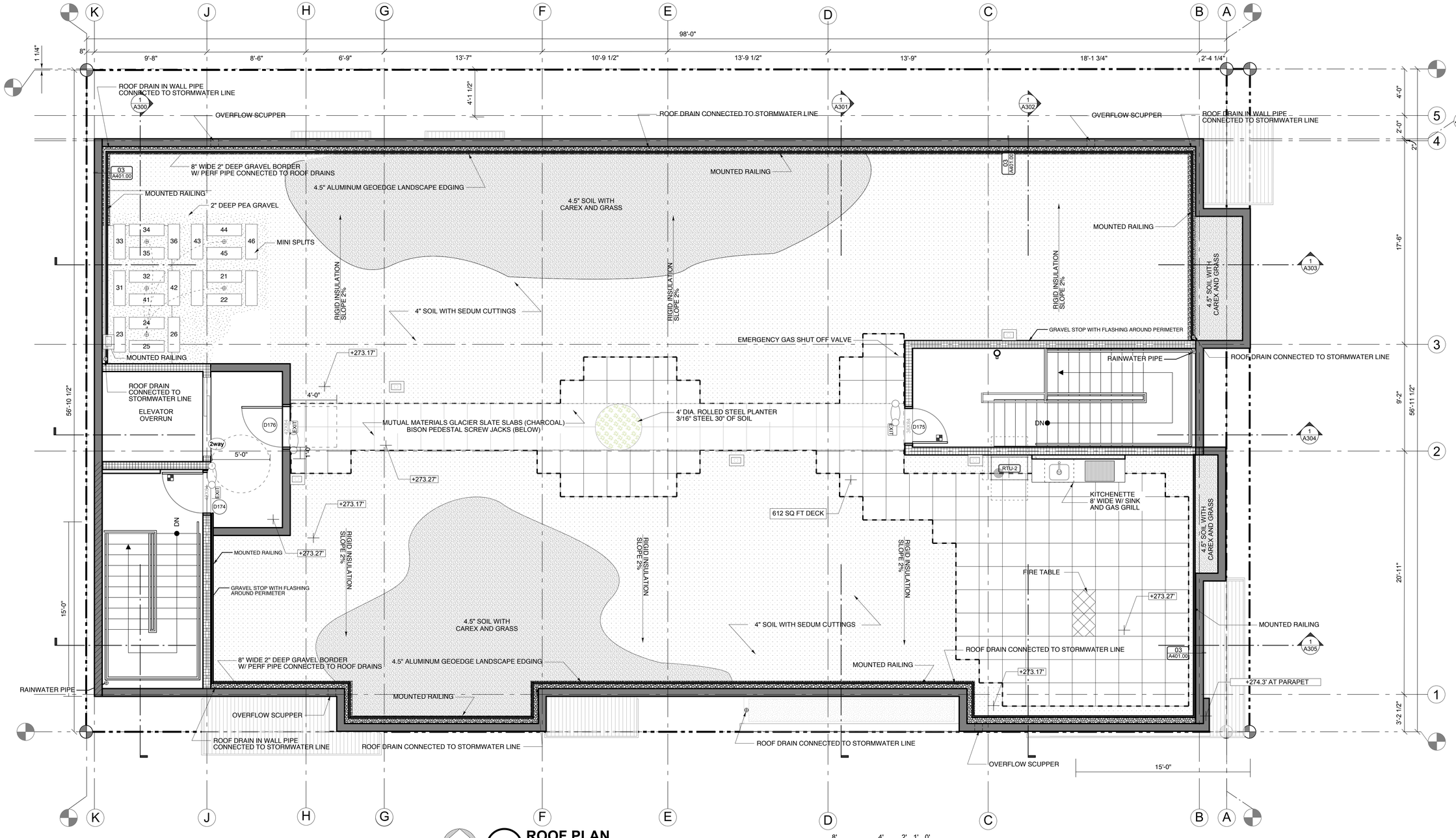
Sound Transmission Class STC = 55 dB

Frequency [Hz]	STL [dB]	ΔSTL
80	25	3.18
100	35	3.93
125	31	1.85
160	38	1.40
200	42	0.78
250	45	1.42
315	47	0.58
400	51	0.95
500	56	0.62
630	57	0.83
800	60	0.36
1000	64	0.65
1250	67	0.61
1600	69	0.65
2000	72	0.62
2500	74	1.05
3150	78	1.34
4000	80	1.41
5000	83	1.59



* Due to high insulating value of specimen, background levels limit results at these frequencies.

STL = Sound Transmission Loss, dB
Δ STL = Uncertainty for 95% Confidence Level



1 ROOF PLAN

SCALE: 1/4" = 1'-0" @ 24" x 36"

IMPERVIOUS SURFACE CALCS	TOTALS
OVERALL ROOF SQUARE FOOTAGE	4,464 sf
DECKING AND ELEVATOR PENTHOUSE (IMPERVIOUS SURFACE)	1,013 sf
ECOROOF AREA	3,451 sf
TOTAL ECOROOF COVERAGE	77%

APPROVED APPEAL # 16589 - 03/07/18 - ROOF DECK LOCATED ABOVE MAX NUMBER OF STORIES; GRANTED PER ICC APPROVED 2018 IBC MODEL CODE CHANGE LIFTING RESTRICTION ON LOCATION OF ROOF DECKS IN A FULLY SPRINKLED BUILDING

ELECTRICAL FIXTURE KEY

- SPRINKLER PROTECTED OPENING
- LIGHT/FAN (BATH. VENT)
- EXTERIOR LIGHT FIXTURE
- ZONAL ELECTRIC HEATER
- KEYPAD ACCESS ENTRY
- BUG EYE EGRESS LIGHTING
- SD — SMOKE DETECTOR & CARBON MONOXIDE DETECTION (INTER-CONNECT SD'S IN UNITS TYP).
- DROPPED SOFFIT ASSEMBLY FOR KITCHEN AND BATHROOM EXHAUST (TYP).
- ELECTROMAGNETIC DOOR HOLD OPEN WITH FIRE ALARM RELEASE

WALL TYPES: SEE STRUCTURAL FOR SHEAR AND BEARING WALLS

- 2HR, Fire Barrier, 50 STC min. — 1/A400
- 1HR, Fire Partition, 50 STC min. — 2/A400
- 2HR, int. Fire Partition — 3/A400
- 1 HR, Interior Wall — 4/A400
- 1 HR, Exterior Wall — 5/A400
- 2 HR, Shaft assembly — 3/A401

PROPOSAL AND DESIGN AS APPROVED IN CASE FILE # LU 17-216826 AD

4

STEVEN J. FOSLER — REGISTERED ARCHITECT — PORTLAND, OR — STATE OF OREGON

FOSLER portland architecture
1930 NW LOVEJOY STREET
PORTLAND, OREGON 97209
503.241.9339

Project
1481 NE ALBERTA Street
Alberta Apartments
Portland, OR

Code	ALB5
Set	PERMIT APPLICATION SET
Date	30 June 2017
Revisions	R1 27 OCT 2017 R2 13 FEB 2018 R3 16 MAR 2018 R4 24 MAY 2018
Sheet	A105.00
Title	ROOF PLAN

LETTER FROM STEVE GLEASON APPROVING FC1

Joseph,

I have attached a test that we can use as base data to estimate the STC/IIC ratings of your proposed assembly. This test is as follows:

Pergo Laminate Flooring
1/2" Homasote 440 SoundBarrier
5/8" CDX Plywood
9.5" TJI
No Insulation
RC-1
(2x) 1/2 GWB

STC 52, IIC 47

It is my opinion that your proposed assembly will surpass the tested assembly in the following ways:

1. The thicker subfloor will give the assembly more mass and a T& G component.
2. Your 11-7/8" I-Joists give more absorptive air space.
3. The addition of insulation will also allow for more cavity absorption.
4. The use of 5/8" Type X GWB will provide appreciably more mass.

Applying general sound attenuation principles to the above considerations should easily yield sufficient improvements over the referenced base data test assembly to bring it over IIC 50. Please feel free to contact me here at the Homasote Tech Desk for more detailed discussion. We appreciate your interest in our product line.

Regards,

Steve Gleason
Sales Engineer
Technical Department
Homasote Company
Call me at the Tech Desk
800.257.9491 ext: 1332

sgleason@homasote.com

FLOOR-CEILING SYSTEMS, WOOD-FRAMED

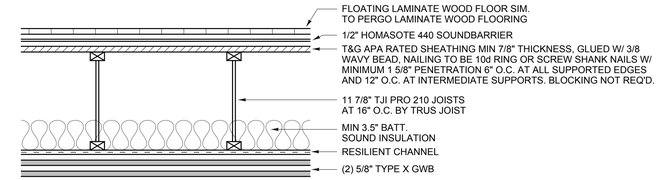
GA FILE NO. FC 5111	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

WOOD I-JOISTS, GYPSUM WALLBOARD, RESILIENT CHANNELS

Base layer 1/2" type X gypsum wallboard applied at right angles to resilient channels 16" o.c. with 1 1/4" Type S drywall screws 12" o.c. Resilient channels applied at right angles to minimum 9 1/2" deep wood I-joists, with minimum 1 1/4" deep x 1 1/2" wide flanges and minimum 3/8" webs, 24" o.c. with 1 1/4" Type W drywall screws. Face layer 1/2" type X gypsum wallboard applied at right angles to channels with 1 5/8" Type S drywall screws 12" o.c. Face layer end joints located midway between channels and attached to base layer with 1 1/2" type G screws 12" o.c. Edge joints offset 24" from base layer edge joints. Wood I-joists supporting 5/8" oriented strand board applied at right angles to I-joists with 6d common nails 12" o.c.

STC and IIC tested with 40 oz carpet over 1/4" foam pad.

Approx. Ceiling Weight:	5 psf
Fire Test:	NRCC A-4440.1 (Revised), 6-24-97
Sound Test:	NRCC B-3150.2, 6-30-00
IIC & Test:	(68 C & P) NRCC B-3150.2, 6-30-00



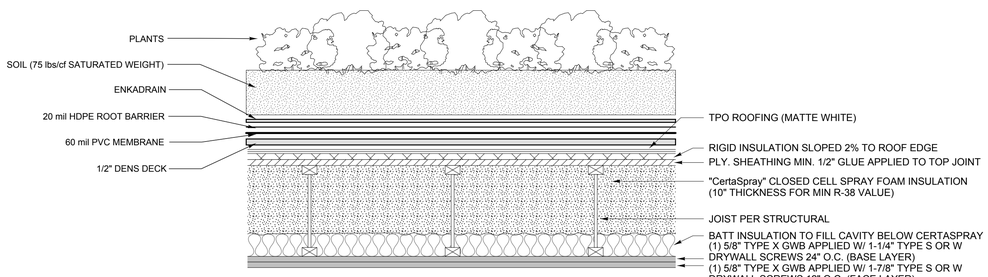
Floor-Ceiling Systems – Wood Framed

Wood I-Joists, Gypsum Wallboard, Resilient Channels

Base layer 1/2" type X gypsum wallboard applied at right angles to resilient channels 16" o.c. with 1 1/4" type s drywall screws 12" o.c. Resilient channels applied at right angles to minimum 9 1/2" deep wood i-joists with minimum 1 1/4" deep 1 1/2" wide flanges and minimum 3/8" webs, 24" o.c. with 1 1/4" type W drywall screws. Face layer 1/2" type x gypsum wallboard applied at right angles to channels with 1 5/8" Type S drywall screws 12" o.c. Face layer end joints located midway between channels and attached to base layer with 1 1/2 type G screws 12" o.c. Edge joints offset 24" from base layer edge joints. PER STRUCTURAL wood i-joists supporting T&G APA RATED SHEATHING MIN 7/8" THICKNESS, GLUED W/ 3/8 WAVY BEAD, NAILING TO BE 10d RING OR SCREW SHANK NAILS W/ MINIMUM 1 5/8" PENETRATION 6" O.C. AT ALL SUPPORTED EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. BLOCKING NOT REQ'D.

STC: 50, Minimum
IIC: 51

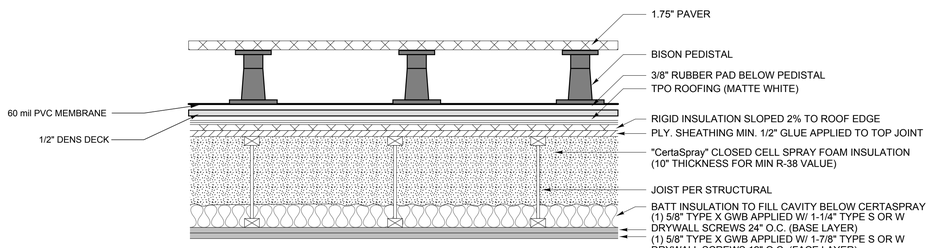
1 1HR FLOOR/CEILING ASSEMBLY SIM. TO GA FILE NO. FC 5111
NOT TO SCALE



NOTES:
MAINTAIN 1 HR. FIRE RATING (1 LAYER 5/8" TYPE 'X' GWB) @ UNIT CEILINGS
TOTAL R-VALUE OF ROOF INSULATION EQUAL TO OR GREATER THAN R-38.
LIMIT BATT INSULATION TO REDUCE RISK OF CONDENSATION

USE "CertaSpray" CERTIFIED INSTALLER. ROOF INSULATION INSTALLATION MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS, THE APPLICABLE CODE AND IN ACCORDANCE WITH ICC-ES, AC-377 (ESR-2669).

3 CEILING/ROOF ASSEMBLY
NOTES: 1 HR RATING (OSSC 721.1(3) 21 1.1)
NOT TO SCALE



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MAINTAIN 1 HR. FIRE RATING (1 LAYER 5/8" TYPE 'X' GWB) @ UNIT CEILINGS
TOTAL R-VALUE OF ROOF INSULATION EQUAL TO OR GREATER THAN R-38.
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2 CEILING/ROOF ASSEMBLY
NOTES: 1 HR RATING (OSSC 721.1(3) 21 1.1)
NOT TO SCALE

REGISTERED ARCHITECT
STEVEN J. FOSLER
PORTLAND, OR
STATE OF OREGON

FOSLER portland architecture
1930 NW LOVEJOY STREET
PORTLAND, OREGON 97209
503.241.9339

Project
1481 NE ALBERTA Street
Alberta Apartments
Portland, OR

Code: **ALB5**
Set: PERMIT APPLICATION SET
Date: 11 JUNE 2018
Revisions:
Sheet:
Title:

Design No. L570
BXUV.L570
Fire-resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

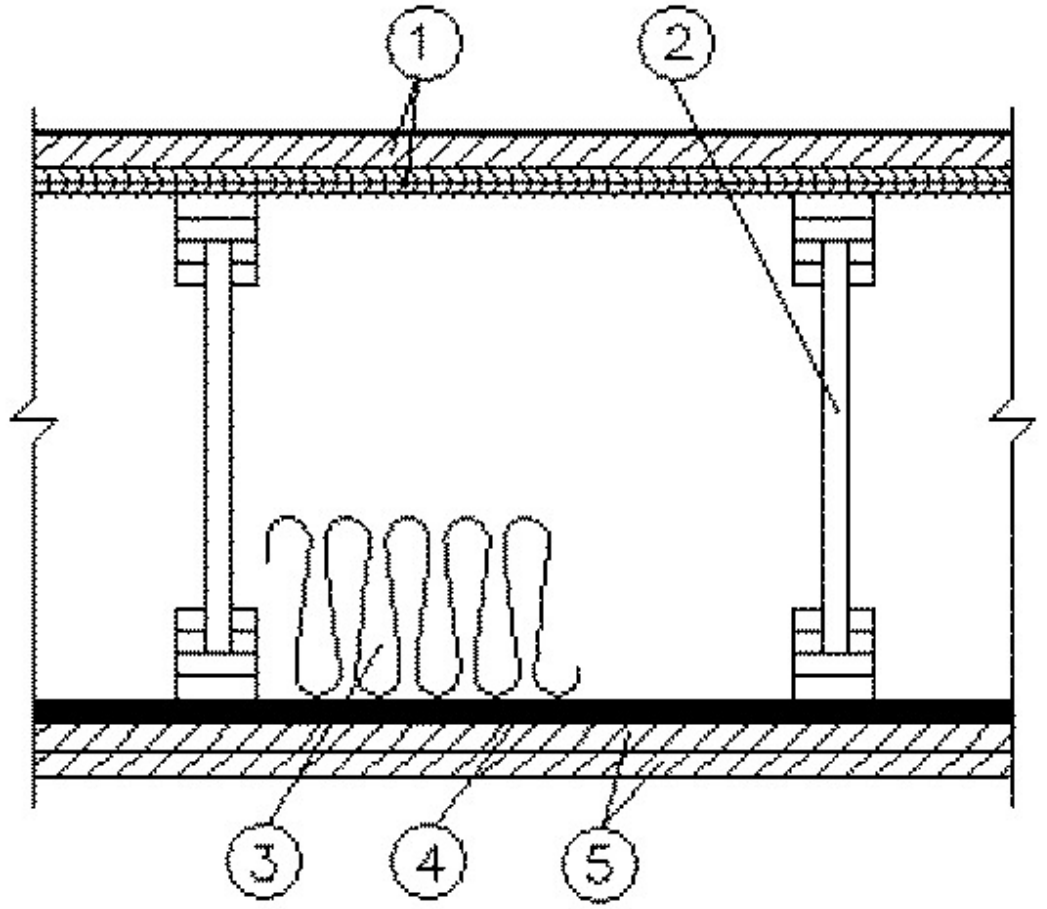
Design No. L570

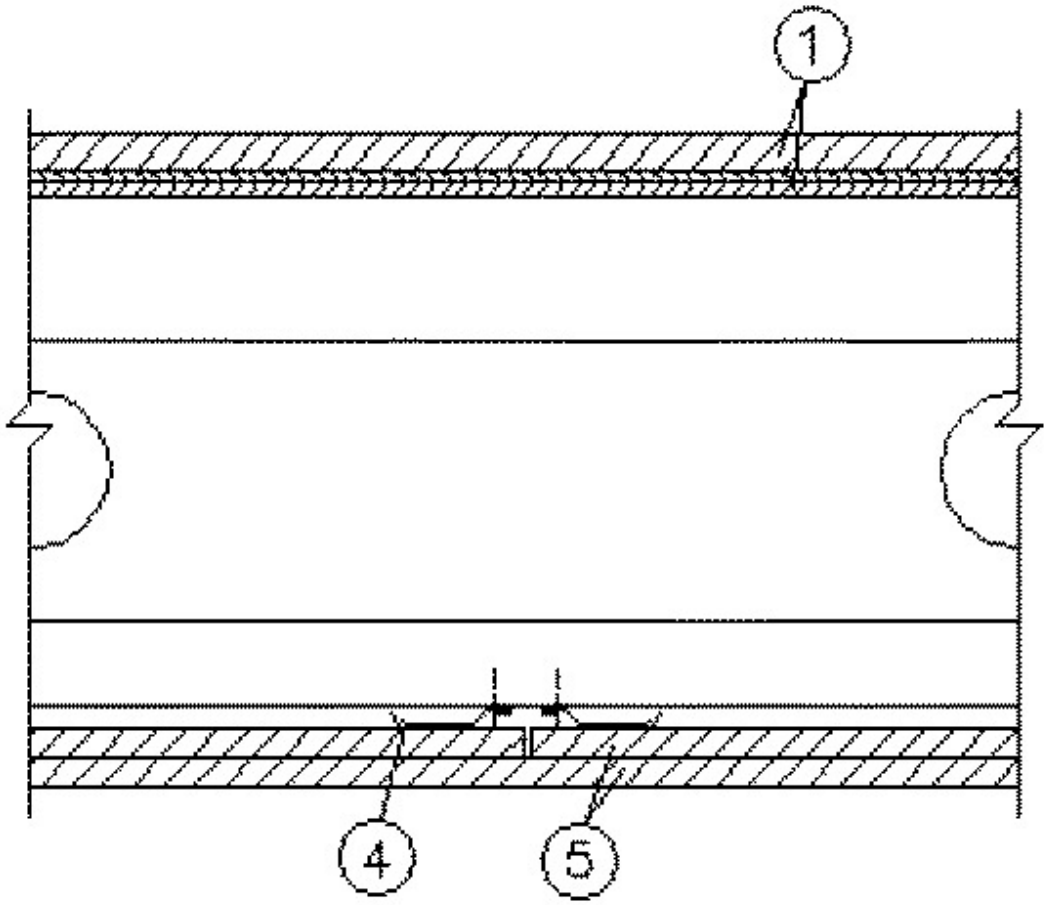
January 09, 2018

Unrestrained Assembly Rating — 1 Hr.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**





1. **Flooring System —** The flooring system shall consist of one of the following:

System No. 1

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Floor — Min 1 by 4 in. T & G lumber installed perpendicular to the joists, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

System No. 2

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

LATICRETE SUPERCAP L L C — Types LRK, HSLRK

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) — Nom 3/8 in. thick floor mat material loosely laid over the subfloor.

GRASSWORX L L C — Type SC50

System No. 3

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ACG MATERIALS — AccuCrete types NexGen, Green, Prime, B, M, and PrePour, AccuRadiant, AccuLevel types G40, G50 and SD30.

Alternate Floor Mat Material* — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thick for 19/32 or 15/32 in. thick wood structural panels respecitively.

ACG MATERIALS — AccuQuiet types P80, C40, D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

System No. 4

Structural Cement-Fiber Units* — Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to joists with end joints staggered a min of 2 ft and centered over the joists. Panels secured to joists with 1-5/8 in. long No. 8 self-drilling, self-countersinking steel screws spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the side edges of the panel.

UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

System No. 5

Subflooring — Min 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 6

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength and Gyp-Span Radiant

Metal Lath — (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Floor Mat Materials* — (Optional) Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTscu 4002

HACKER INDUSTRIES INC — Type Hacker Sound-Mat.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTrbm 3006-3

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

System No. 7

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Floor — Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 8

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXXON CORP — Type D-C, GC, GC2000, L-R, T-F, CT, SS

RAPID FLOOR SYSTEMS — Type RF, RFP, RFU, Ortecrete

Floor Mat Materials* — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat 3, Acousti-Mat 3 HP, Acousti-Mat LP, Acousti-Mat LP-R, Acousti-Mat SD.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping over each floor mat material, primers, and use of crack suppression reinforcement.

MAXXON CORP — Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)

Metal Lath — (Optional - For use with or as an alternate to Crack Suppression Mat (CSM) or Maxxon Reinforcement (MR)) 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

System No. 9

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

FORMULATED MATERIALS LLC — Types FR-25, FR-30, and SiteMix

Alternate Floor Mat Material* — (Optional) Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thick for 19/32 or 15/32 in. thick wood structural panels respectively.

FORMULATED MATERIALS LLC — Types M1, M2, M3, R1, and R2

System No. 10

Subflooring — Min 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Nom 3/32 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat RST02

Floor Mat Materials* — (Optional) — Nom 3/16 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat FF04

Floor Mat Materials* — (Optional) — Nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat FF06

Floor Mat Materials* — (Optional) — Nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

PLITEQ INC — Type GenieMat FF10

Floor Mat Materials* — (Optional) — Nom 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

PLITEQ INC — Type GenieMat FF17

Floor Mat Materials* — (Optional) — Nom 1 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

PLITEQ INC — Type GenieMat FF25

System No. 11

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6, GSL-CSD or GSL RH

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 12

Subflooring — Nom 19/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring* — Floor Topping Materials — Min 3/4 in. to 1-1/2 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance with a minimum compressive strength of 1500 psi.

See **Floor- and Roof-Topping Mixtures** (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Floor mat material nom 1/8 in. to 3/4 in. thick. Loose laid over the subfloor. When used, Acousti-flor CSM (crack suppression mat) is loose laid over the floor mat material. Floor topping material thickness is dependent on thickness of floor mat used.

WALFLOR INDUSTRIES INC — Type Acousti-flor, Acousti-flor CSM. Floor topping thickness depends on products used as follows:

Acousti-flor (1/8 in. thick) - Floor topping thickness shall be a minimum of 3/4 in.

Acousti-flor (1/4 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/8 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/4 in. thick) - Floor topping thickness shall be a minimum of 1-1/2 in.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

2. **Structural Wood Members* —** Min 9-1/2 in. deep "I" shaped wood joists spaced at a max of 19.2 in. OC. Joists shall conform to ICC-ES ESR-1153 Report. Joist top and bottom chords minimum 1-3/8 in. deep by 2.3 in. wide and constructed of either Microllam laminated veneer lumber (LVL) or TimberStrand laminated strand lumber (LSL). Webs constructed of minimum 3/8 in. thick Performance Plus OSB, PS2, Exposure 1. Installation shall be in accordance with manufacturers published literature. Spacing may be increased to 24 in. OC when **Batts and Blankets*** (Item 3B) is used.

3. **Insulation — Batts and Blankets* —** (Optional) — Glass fiber insulation, secured to the subflooring with staples, or to the wood joists with 0.090 in. diam galv steel wires, or draped over the resilient channel/gypsum panel (or Steel Framing Members/gypsum panel) ceiling membrane. Any thickness of glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.

3A. **Insulation — Loose Fill Material* —** (Optional) — As an alternate to Item 3 — Any thickness of loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, applied within the concealed space, over the resilient or furring channel/gypsum panel or Steel Framing Members/gypsum panel ceiling membrane.

3B. **Insulation - Batts and Blankets* —** (Optional) — Min. 1 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance draped over the resilient channel/gypsum panel (or Steel Framing Members/gypsum panel) ceiling membrane.

4. **Resilient Channels —** Formed from 25 MSG galv steel installed perpendicular to the joists. When no insulation is installed in the concealed space the resilient channels are spaced 24 in. OC. When insulation (Item 3) is installed to the underside of the subfloor the resilient channels are spaced . 16 in. OC When insulation (Items 3, 3A or 3B) is applied over the resilient channel/gypsum panel ceiling membrane, the resilient channels are spaced 12 in. OC.. Two courses of

resilient channel positioned 6 in. OC at gypsum panel butt-joints (3 in. from each end of wallboard). Channels oriented opposite at gypsum panel butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.

4A. **Alternate Steel Framing Members —** (Not Shown) — As an alternate to Item 4, main runners, cross tees, cross channels and wall angle as listed below.

a. **Main Runners —** Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to side of joists at least 5 in. above the bottom face.

b. **Cross Tees —** Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum panel end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

c. **Cross Channels —** Nom 4 or 12 ft long, installed perpendicular to main runners, spaced 16 in. OC. When Batts and Blankets (Item 5) are used, cross channels spaced 16 in. OC.

d. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panels.

CGC INC — Type DGL or RX

USG INTERIORS LLC — Type DGL or RX

4B. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to Items 4 and 4A, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to joists. When insulation, Items 3, 3A, or 3B is used, the furring channel spacing shall be reduced to 16 in. OC. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). When wood joists are spaced 19.2 in. OC, clips spaced a max of 38.4 in. OC. When wood joists are spaced 16 or 24 in. OC, clips spaced a max of 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating joists with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the wallboard butt joints, as described in Item 5.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

4C. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to Items 4, 4A, 4B furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to joists. When insulation, Items 3, 3A, or 3B is used, the furring channel spacing shall be reduced to 16 in. OC. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). When wood joists are spaced 19.2 in. OC, clips spaced a max of 38.4 in. OC. When wood joists are spaced 16 or 24 in. OC, clips spaced a max of 48 in. OC. Genie Clips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. Additional clips required to hold furring channel that supports the wallboard butt joints, as described in Item 5.

PLITEQ INC — Type Genie Clip

4D. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 4-4B, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 24 in OC, perpendicular to joists. When insulation, Items 3, 3A, or 3B is used, the furring channel spacing shall be reduced to 16 in. OC. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). When wood joists are spaced 19.2 in. OC, clips spaced a max of 38.4 in. OC. When wood joists

are spaced 16 or 24 in. OC, clips spaced at 48" OC and secured to the bottom of the joists with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire.Additional clips are required to hold the Gypsum Butt joints as described in item 5.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

5. **Gypsum Board* —** Two layers of 1/2 in. or 5/8 in. thick by 4 ft wide gypsum panels, installed perpendicular to resilient channels (Item 4). The base layer of panels screw-attached to the resilient channels with 1 in. long Type S screws spaced 8 in. OC at the butt joints and 16 in. OC in the field of the panel. The face layer screw-attached to the resilient channels with 1-5/8 in. Type S screws spaced 8 in. OC and 1-1/2 in. Type G screws spaced 8 in. OC at the butt joints located mid-span between resilient channels. When **Steel Framing Members** (Item 4A) are used, gypsum board installed with long dimension perpendicular to cross tees. The base layer of panels fastened to cross tees with 1 in. long Type S screws spaced 8 in. OC at the butt joints and 16 in. OC in the field of the panel. The face layer screw-attached to the cross tees with 1-5/8 in. Type S screws spaced 8 in. OC and 1-1/2 in. Type G screws spaced 8 in. OC at the butt joints located mid-span between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 4 ft OC. When **Steel Framing Members** (Item 4B) are used, panels installed with long dimension parallel with joists. Base layer attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the panels. Butted end joints shall be staggered min. 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of the gypsum panels shall be supported by a single length of furring channel equal to the width of the panel plus 6 in. on each end. The furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the joist with one RSIC-1 clip at each end of the channel. Butted base layer end joints to be offset a minimum of 24 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle-head steel screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints to be offset min 12 in. from base layer end joints. Butted side joints of outer layer to be offset min 12 in. from butted side joints of base layer. When **Steel Framing Members** (Item 4C) are used, panels installed with long dimension parallel with joists. Base layer attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the panels. Butted end joints shall be staggered min. 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of the gypsum panels shall be supported by a single length of furring channel equal to the width of the panel plus 6 in. on each end. The furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the joist with one Genie clip at each end of the channel. Butted base layer end joints to be offset a minimum of 24 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle-head steel screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints to be offset min 12 in. from base layer end joints. Butted side joints of outer layer to be offset min 12 in. from butted side joints of base layer. When **Steel Framing Members** (Item 4D) are used, base layer gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel. Face layer secured as described above.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR; 5/8 in. Type C, IP-X2. When there is no insulation in the cavity, or when insulation (Item 3) is secured to the underside of the subfloor 5/8 in. Type SCX or IP-X1 may be used

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR; 5/8 in. Type C, IP-X2, ULIX. When there is no insulation in the cavity, or when insulation (Item 3) is secured to the underside of the subfloor 5/8 in. Type SCX, or IP-X1 may be used

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Type C. When there is no insulation in the cavity, or when insulation (Item 3) is secured to the underside of the subfloor 5/8 in. Type SCX may be used

6. **Finishing System —** Fiber tape embedded in compound over joints and exposed nail heads, covered with compound with edges of compound feathered out. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of classified veneer baseboard. Joints reinforced.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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