

NORDIC

DETAILS
NORDIC LAM+ NORDIC X-LAM

NS-DA2 

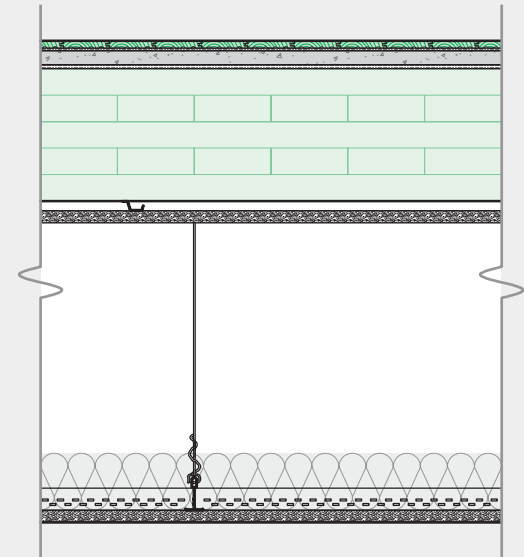
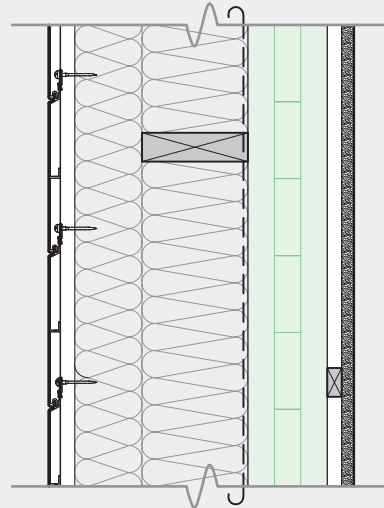
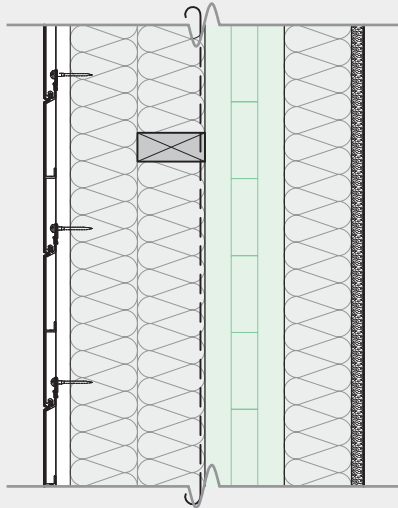
VERSION
2022-02-01

Mass Timber Construction

ARCHITECTURAL DETAILS

 NORDIC
LAM+

 NORDIC
X-LAM



NORDIC
STRUCTURES

ABOUT NORDIC

NORDIC STRUCTURES

Nordic Structures is the leading innovator in mass timber construction. Its resource comes from responsibly managed lands within the regional boreal forest. Vertical integration, from forest to structure, bolstered by Nordic's experienced design and development team, ensures consistent quality and unparalleled level of service.

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GENERAL NOTES

1.0 General

- 1.1 This document supersedes all previous versions. For the latest version, consult nordic.ca or contact Nordic Structures.
- 1.2 The information contained in this document is provided for information purposes only. This information should not be used for any application without examination and verification of its accuracy, suitability and applicability by a licensed engineer, architect or other professional. Nordic Structures does not guarantee that the information is suitable for any general or particular use, and assumes no responsibility for the use, application of and/or reference to the information.
- 1.3 Certain commercial products are identified in this document in order to properly represent the test procedure. In no case does such identification imply recommendations or endorsement by Nordic Structures, nor does it imply that the product or material identified is the best available for the purpose.
- 1.4 For more information, consult nordic.ca or contact Nordic Structures.

2.0 Fire Safety

- 2.1 The fire resistance rating (FRR) is determined using the design methodology specified in the National Design Specification (NDS) for Wood Construction 2015. The fire resistance rating may also be determined on the basis of the results of tests conducted in conformance with ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials.
- 2.2 To determine the fire resistance of an element or assembly according to other assumptions than those specified in this document, consult the Nordic X-Lam technical guide or use Nordic Sizer software.
- 2.3 The fire performance criteria for evaluating the separating function of building elements shall be considered when required by the applicable building code.
- 2.4 For this purpose, among other requirements, many firestop systems suitable for mass timber are available. For more details, consult the product suppliers.
- 2.5 Additional references: [Fire-Resistance-Tested Mass Timber Assemblies and Penetrations](#).

GENERAL NOTES (CONTINUED)

3.0 Envelope

- 3.1 Good thermal insulation is never arbitrary and must always be chosen according to location, area and climate.
- 3.2 The total thermal resistance of an assembly is calculated according to the values of thermal conductivity, λ , and thermal resistance, R, indicated in the following table.
- 3.3 To convert the thermal resistance of the International System (RSI) [$\text{m}^2\text{K/W}$] to the R-value [$\text{ft}^2\text{Fh/BTU}$], divide the RSI value by 0.1761.
- 3.4 As stated in technical note NS-NT602-US, Nordic X-Lam cross-laminated timber acts as a vapor barrier.
- 3.5 The use of closed cell spray polyurethane is not recommended for exterior wall assemblies made of cross-laminated timber because of its low permeability.
- 3.6 The study of the building envelope, including the control of condensation, the transfers of heat, air, moisture and sound, as well as the details of joining and fixing of the coverings, shall be carried out in accordance with the applicable building code.

Thermal Resistance of Materials

Product	t (in.)	λ (BTU/ftFh)	R (ft ² Fh/BTU)
Nordic Lam	1	0.0751	1.11
Nordic X-Lam	1	0.0751	1.11
Sawn lumber	1	0.0693	1.20
Spray polyurethane (BASF)	2	0.0116	14.2
Stone wool (Rockwool ComfortBatt R24)	5-1/2	0.0191	24.0
Gypsum board	1/2	0.0919	0.45
Polyisocyanurate (SOPRA-ISO)	-	0.0144	-
Air cavity – Wall	1/2 to 3/4	-	0.91
Air cavity – Ceiling	1/2 to 1-5/8	-	0.85
	1-5/8 to 3-1/2	-	0.91
Interior air film – Wall	-	-	0.68
Interior air film – Ceiling	-	-	0.62
Exterior air film	-	-	0.17

References: Test Report AT-00205 (AIR-INS inc.), Wood Handbook (FPL, 2010), Evaluation Listing CCMC 13588-L (2011), Technical Data Sheet (Rockwool, 2017), Technical Data Sheet 190304SCANE (Soprema, 2019) and Table A-9.36.2.4.1.1)-D of NBC 2015.

GENERAL NOTES (CONTINUED)

4.0 Acoustics

- 4.1 The Sound Transmission Class (STC) rating describes the performance of the separating wall or floor/ceiling assembly, whereas the Field Sound Transmission Class (FSTC) takes into consideration the performance of the separating element as well as the flanking transmission paths. Also, building professionals should ensure that floors are designed to minimize impact transmission. For more details, see the IBC 2018, Section 1206.
- 4.2 The following pages present separating assemblies that may comply with the applicable building code. However, selecting an appropriate separating assembly is only one part of the solution for reducing airborne sound transmission between adjoining spaces: to fully address the sound performance of the whole system, flanking assemblies must be connected to the separating assembly. For more details, see the Nordic X-Lam Technical Guide.
- 4.3 Unless otherwise noted, concrete topping and prefabricated concrete topping used in assemblies have a density of 2,710 kg/m³.
- 4.4 The use of prefabricated concrete topping in floor assemblies is only required by the acoustical testing procedure.
- 4.5 The use of an acoustic membrane under a floor covering is recommended, especially when it is a hard surface coating (e.g. ceramic).
- 4.6 Unless otherwise noted, the acoustic performance values are derived from test results from a certified laboratory. Test reports are available upon request.
- 4.7 Additional references:
- [WoodWorks – Acoustics and Mass Timber: Room-to-Room Noise Control](#)
 - [WoodWorks – Acoustically-Tested Mass Timber Assemblies](#)
 - [University of Oregon – Acoustic Lab Testing of Typical Multi-Family Residential Wall and Floor Assemblies](#)

LIST OF DETAILS

Exterior Wall

Detail	Product	Fire-resistance rating		Thermal resistance		Acoustic ratings				Drawing	Date	Page
		FRR		RSI	R	STC	FSTC	IIC	FIIC			
E1	Nordic X-Lam 105-3s	1.0 h		6.7	3.8	n.a.	n.a.	n.a.	n.a.	NS-DA2000	2022-02-01	1.1
E2	Nordic X-Lam 105-3s	0.5 h		4.8	27	n.a.	n.a.	n.a.	n.a.	NS-DA2001	2022-02-01	1.2
E3	Nordic X-Lam 105-3s	1.0 h		5.0	28	n.a.	n.a.	n.a.	n.a.	NS-DA2002	2022-02-01	1.3
E4	Nordic X-Lam 105-3s	0.5 h		3.7	21	n.a.	n.a.	n.a.	n.a.	NS-DA2003	2022-02-01	1.4
E5	Nordic X-Lam 105-3s	1.0 h		4.0	22	n.a.	n.a.	n.a.	n.a.	NS-DA2004	2022-02-01	1.5
E6	Nordic X-Lam 105-3s	0.5 h		2.9	16	n.a.	n.a.	n.a.	n.a.	NS-DA2005	2022-02-01	1.6
E7	Nordic X-Lam 105-3s	1.0 h		3.1	18	n.a.	n.a.	n.a.	n.a.	NS-DA2006	2022-02-01	1.7
E8	Nordic X-Lam 105-3s	0.5 h		3.4	20	n.a.	n.a.	n.a.	n.a.	NS-DA2007	2022-02-01	1.8
E9	Nordic X-Lam 105-3s	1.0 h		3.7	21	n.a.	n.a.	n.a.	n.a.	NS-DA2008	2022-02-01	1.9
E10	Nordic X-Lam 105-3s	0.5 h		5.8	33	n.a.	n.a.	n.a.	n.a.	NS-DA2009	2022-02-01	1.10
E11	Nordic X-Lam 105-3s	1.0 h		6.1	35	n.a.	n.a.	n.a.	n.a.	NS-DA2010	2022-02-01	1.11

Partition

Detail	Product	Fire-resistance rating		Thermal resistance		Acoustic ratings				Drawing	Date	Page
		FRR		RSI	R	STC	FSTC	IIC	FIIC			
P1	Nordic X-Lam 105-3s	0.5 h	0.5 h	n.a.	n.a.	33	n.a.	n.a.	n.a.	NS-DA2100	2022-02-01	2.1
P2	Nordic X-Lam 105-3s	1.0 h	1.0 h	n.a.	n.a.	58	n.a.	n.a.	n.a.	NS-DA2101	2022-02-01	2.2
P3	Nordic X-Lam 105-3s	1.0 h	1.0 h	n.a.	n.a.	53	n.a.	n.a.	n.a.	NS-DA2102	2022-02-01	2.3
P4	Nordic X-Lam 105-3s	1.0 h	1.0 h	n.a.	n.a.	37	n.a.	n.a.	n.a.	NS-DA2103	2022-02-01	2.4
P5	Nordic X-Lam 105-3s	0.5 h	1.0 h	n.a.	n.a.	37	n.a.	n.a.	n.a.	NS-DA2104	2022-02-01	2.5
P6	Nordic X-Lam 105-3s	0.5 h	1.0 h	n.a.	n.a.	n.a.	47	n.a.	n.a.	NS-DA2105	2022-02-01	2.6
P7	Nordic X-Lam 105-3s	1.0 h	1.0 h	n.a.	n.a.	n.a.	50	n.a.	n.a.	NS-DA2106	2022-02-01	2.7
P8	Nordic X-Lam 105-3s	1.0 h	1.0 h	n.a.	n.a.	n.a.	54	n.a.	n.a.	NS-DA2107	2022-02-01	2.8
P9	Nordic X-Lam 175-5s	1.5 h	1.5 h	n.a.	n.a.	37	n.a.	n.a.	n.a.	NS-DA2108	2022-02-01	2.9
P10	Nordic X-Lam 175-5s	1.5 h	2.5 h	n.a.	n.a.	53	n.a.	n.a.	n.a.	NS-DA2109	2022-02-01	2.10
P11	Nordic X-Lam 175-5s	2.5 h	2.5 h	n.a.	n.a.	71	n.a.	n.a.	n.a.	NS-DA2110	2022-02-01	2.11
P12	Nordic X-Lam 175-5s	2.5 h	2.5 h	n.a.	n.a.	53	n.a.	n.a.	n.a.	NS-DA2111	2022-02-01	2.12
P13	Nordic X-Lam 175-5s	2.5 h	2.5 h	n.a.	n.a.	53	n.a.	n.a.	n.a.	NS-DA2112	2022-02-01	2.13
P14	Nordic X-Lam 175-5s	2.5 h	2.5 h	n.a.	n.a.	65	n.a.	n.a.	n.a.	NS-DA2113	2022-02-01	2.14
P15	Nordic X-Lam 175-5s	2.5 h	1.5 h	n.a.	n.a.	62	n.a.	n.a.	n.a.	NS-DA2114	2022-02-01	2.15
P16	Nordic X-Lam 175-5s	2.5 h	2.5 h	n.a.	n.a.	61	n.a.	n.a.	n.a.	NS-DA2115	2022-02-01	2.16

LIST OF DETAILS (CONTINUED)

Floor

Detail	Product	Fire-resistance rating	Thermal resistance		Acoustic ratings				Drawing	Date	Page
		FRR	RSI	R	STC	FSTC	IIC	FIIC			
F1	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	39	n.a.	27	n.a.	NS-DA2200	2022-02-01	3.1
F2	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	64	n.a.	59	n.a.	NS-DA2201	2022-02-01	3.2
F3	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	n.a.	n.a.	54	NS-DA2202	2022-02-01	3.3
F4	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	n.a.	47	n.a.	46	NS-DA2203	2022-02-01	3.4
F5	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	59	n.a.	61	NS-DA2204	2022-02-01	3.5
F6	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	58	n.a.	60	NS-DA2205	2022-02-01	3.6
F7	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	54	n.a.	56	NS-DA2206	2022-02-01	3.7
F8	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	53	n.a.	52	NS-DA2207	2022-02-01	3.8
F9	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	62	n.a.	59	n.a.	NS-DA2208	2022-02-01	3.9
F10	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	61	n.a.	50	NS-DA2209	2022-02-01	3.10
F11	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	55	n.a.	51	n.a.	NS-DA2210	2022-02-01	3.11
F12	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	70	n.a.	56	n.a.	NS-DA2211	2022-02-01	3.12
F13	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	69	n.a.	54	n.a.	NS-DA2212	2022-02-01	3.13
F14	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	69	n.a.	58	n.a.	NS-DA2213	2022-02-01	3.14
F15	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	72	n.a.	65	n.a.	NS-DA2214	2022-02-01	3.15
F16	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	73	n.a.	66	n.a.	NS-DA2215	2022-02-01	3.16
F17	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	72	n.a.	62	n.a.	NS-DA2216	2022-02-01	3.17
F18	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	75	n.a.	66	n.a.	NS-DA2217	2022-02-01	3.18
F19	Nordic Lam 3-1/2 in.	1.0 h	n.a.	n.a.	52	n.a.	51	n.a.	NS-DA2218	2022-02-01	3.19
F20	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	61	n.a.	55	n.a.	NS-DA2219	2022-02-01	3.20
F21	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	58	n.a.	58	n.a.	NS-DA2220	2022-02-01	3.21
F22	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	57	n.a.	54	n.a.	NS-DA2221	2022-02-01	3.22
F23	Nordic X-Lam 175-5s	2.5 h	n.a.	n.a.	54	n.a.	53	n.a.	NS-DA2222	2022-02-01	3.23
F24	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	62	n.a.	59	n.a.	NS-DA2223	2022-02-01	3.24
F25	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	n.a.	>50	n.a.	>50	NS-DA2224	2022-02-01	3.25
F26	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	>50	n.a.	>50	NS-DA2225	2022-02-01	3.26
F27	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	n.a.	>45	n.a.	>45	NS-DA2226	2022-02-01	3.27
F28	Nordic X-Lam 175-5s	2.0 h	n.a.	n.a.	n.a.	>45	n.a.	>45	NS-DA2227	2022-02-01	3.28
F29	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	64	n.a.	53	n.a.	NS-DA2228	2022-02-01	3.29
F30	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	66	n.a.	60	n.a.	NS-DA2229	2022-02-01	3.30
F31	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	59	n.a.	53	n.a.	NS-DA2230	2022-02-01	3.31
F32	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	56	n.a.	50	n.a.	NS-DA2231	2022-02-01	3.32
F33	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	59	n.a.	54	n.a.	NS-DA2232	2022-02-01	3.33
F34	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	60	n.a.	54	n.a.	NS-DA2233	2022-02-01	3.34
F35	Nordic Lam 3-1/2 in.	1.0 h	n.a.	n.a.	65	n.a.	59	n.a.	NS-DA2234	2022-02-01	3.35
F36	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	56	n.a.	52	n.a.	NS-DA2235	2022-02-01	3.36
F37	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	57	n.a.	51	n.a.	NS-DA2236	2022-02-01	3.37
F38	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	57	n.a.	51	n.a.	NS-DA2237	2022-02-01	3.38
F39	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	57	n.a.	51	n.a.	NS-DA2238	2022-02-01	3.39
F40	Nordic X-Lam 175-5s	1.5 h	n.a.	n.a.	60	n.a.	58	n.a.	NS-DA2239	2022-02-01	3.40
F41	Nordic Lam 3-1/2 in.	1.0 h	n.a.	n.a.	65	n.a.	62	n.a.	NS-DA2240	2022-02-01	3.41

LIST OF DETAILS (CONTINUED)

Roof

Detail	Product	Fire-resistance rating	Thermal resistance		Acoustic ratings				Drawing	Date	Page
		FRR	RSI	R	STC	FSTC	IIC	FIIC			
R1	Nordic X-Lam 105-3s	1.0 h	7.9	45	n.a.	n.a.	n.a.	n.a.	NS-DA2300	2022-02-01	4.1
R2	Nordic X-Lam 105-3s	1.5 h	8.2	47	n.a.	n.a.	n.a.	n.a.	NS-DA2301	2022-02-01	4.2
R3	Nordic X-Lam 105-3s	1.0 h	7.9	45	n.a.	n.a.	n.a.	n.a.	NS-DA2302	2022-02-01	4.3
R4	Nordic X-Lam 105-3s	1.5 h	8.2	47	n.a.	n.a.	n.a.	n.a.	NS-DA2303	2022-02-01	4.4
R5	Nordic X-Lam 175-5s	1.5 h	7.5	43	n.a.	n.a.	n.a.	n.a.	NS-DA2304	2022-02-01	4.5
R6	Nordic X-Lam 175-5s	2.0 h	7.7	44	n.a.	n.a.	n.a.	n.a.	NS-DA2305	2022-02-01	4.6
R7	Nordic X-Lam 175-5s	2.0 h	7.7	44	n.a.	n.a.	n.a.	n.a.	NS-DA2306	2022-02-01	4.7
R8	Nordic X-Lam 175-5s	1.5 h	7.5	43	n.a.	n.a.	n.a.	n.a.	NS-DA2307	2022-02-01	4.8
R9	Nordic X-Lam 175-5s	2.0 h	7.7	44	n.a.	n.a.	n.a.	n.a.	NS-DA2308	2022-02-01	4.9
R10	Nordic Lam 3-1/2 in.	1.0 h	7.8	44	n.a.	n.a.	n.a.	n.a.	NS-DA2309	2022-02-01	4.10

CLT



NORDIC X-LAM CROSS-LAMINATED TIMBER

Nordic X-Lam cross-laminated timber is made of at least three orthogonal layers of graded sawn lumber that are laminated by gluing with structural adhesives.

SLABS AND PANELS

Layup combinations

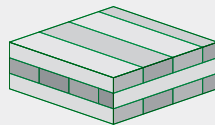
89-3s, 105-3s,
143-5s, 175-5s,
197-7s, 213-7l, 245-7s, 245-7l
and 267-9l

Maximum sizes

2.70 × 19.5 m (106-1/4 in. × 64 ft)

Stress grade

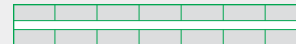
E1 (L 1950Fb and T No. 3/Stud)



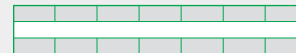
NORDIC X-LAM LAYUP COMBINATIONS

3 LAYERS

89-3s

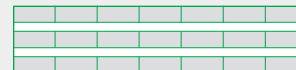


105-3s

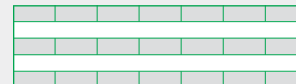


5 LAYERS

143-5s

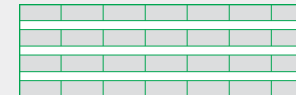


175-5s

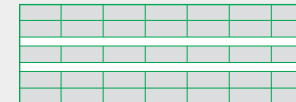


7 LAYERS

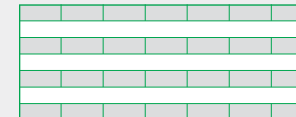
197-7s



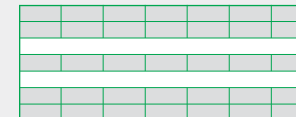
213-7l



245-7s

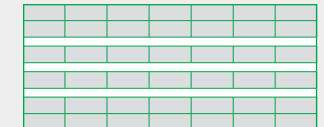


245-7l



9 LAYERS

267-9l



GLULAM



NORDIC LAM+ GLUED-LAMINATED TIMBER

Nordic Lam+ glued-laminated timber of architectural appearance classification consists of small wood laminations bonded together in parallel using structural adhesives.

BEAMS AND COLUMNS

Widths*

38, 86, 137, 184, 215, 241, 292,
346, 395, 448, 502, 552 and 603 mm
(1-1/2, 3-3/8, 5-3/8, 7-1/4, 8-1/2, 9-1/2, 11-1/2,
13-5/8, 15-1/2, 17-5/8, 19-3/4, 21-3/4 and 23-3/4 in.)

Depths*

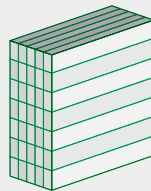
From 67 to 2435 mm
(2-5/8 to 95-7/8 in.)

Lengths*

Up to 24.4 m (80 ft)

Stress grade

24F-ES/NPG



* Larger sizes available upon request

DECKING

Thicknesses*

38, 44, 54 and 89 mm
(1-1/2, 1-3/4, 2-1/8 and 3-1/2 in.)

Widths

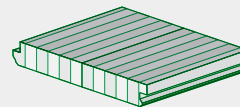
203, 305 and 406 mm
(8, 12 and 16 in.)

Lengths

Up to 18.9 m (62 ft)

Stress grades

ES11, except 89 mm thickness in 20F-ES/CPG



* Larger sizes available upon request

NORDIC

DETAILS
NORDIC LAM+ NORDIC X-LAM

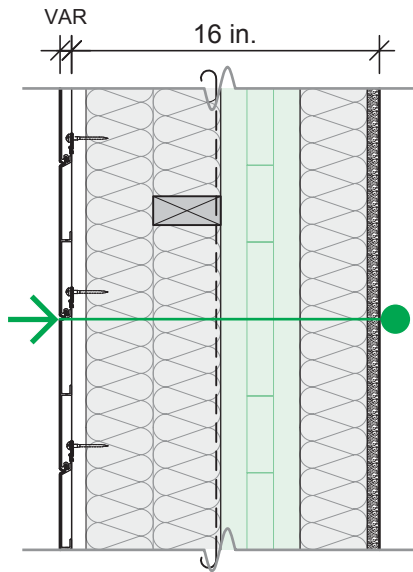
NS-DA2 

VERSION
2022-02-01

EXTERIOR WALL

1

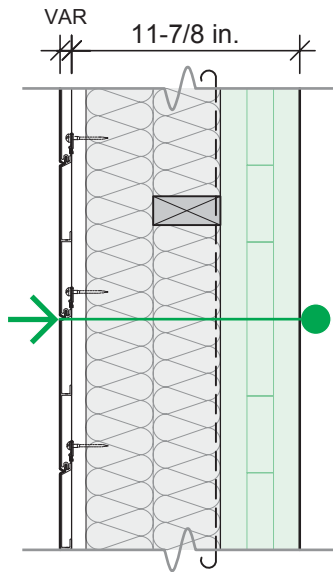
NORDIC
STRUCTURES



Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	6.7 / 38
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 4 in. @ 24 in. O.C.
- 2 ROWS OF STONE WOOL INSULATION 3-1/2 in. EA.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- 1 ROW OF STONE WOOL INSULATION 3-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

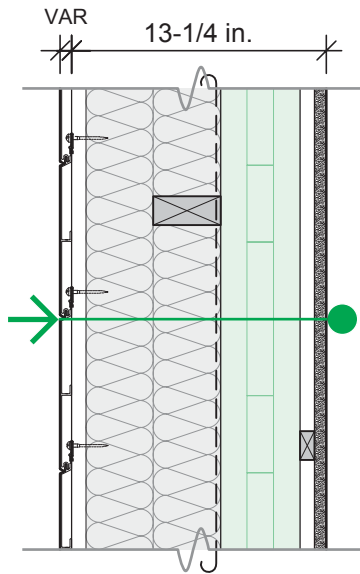


E2

Fire-resistance rating	FRR ^(a)	30 min
Thermal resistance	RSI / R	4.8 / 27
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 4 in. @ 24 in. O.C.
- 2 ROWS OF STONE WOOL INSULATION 3-1/2 in. EA.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.

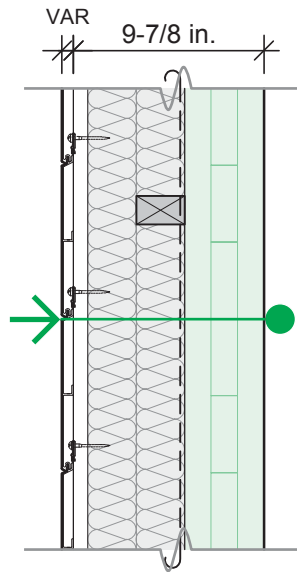


E3

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	5.0 / 28
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

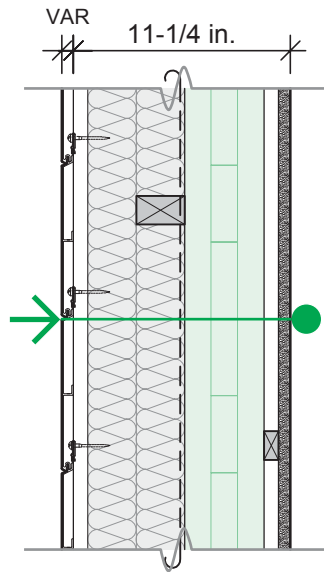
- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 4 in. @ 24 in. O.C.
- 2 ROWS OF STONE WOOL INSULATION 3-1/2 in. EA.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- WOOD FURRING 3/4 in. @ 24 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	30 min
Thermal resistance	RSI / R	3.7 / 21
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 3 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 3 in. @ 24 in. O.C.
- 2 ROWS OF STONE WOOL INSULATION 2-1/2 in. EA.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.

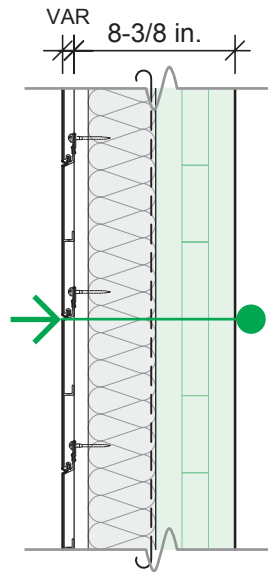


E5

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	4.0 / 22
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

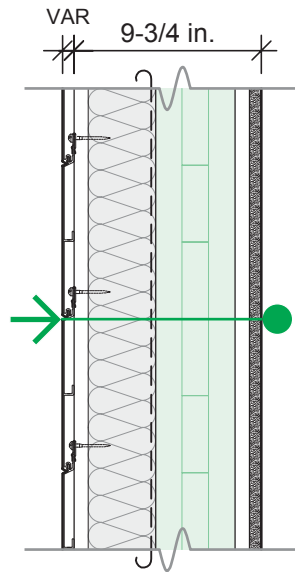
- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 3 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 3 in. @ 24 in. O.C.
- 2 ROWS OF STONE WOOL INSULATION 2-1/2 in. EA.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- WOOD FURRING 3/4 in. @ 24 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	30 min
Thermal resistance	RSI / R	2.9 / 16
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- 1 ROW OF STONE WOOL INSULATION 3-1/2 in.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.

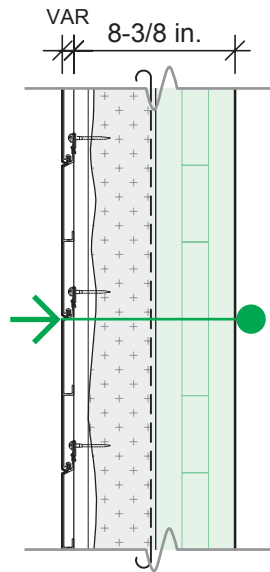


E7

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	3.1 / 18
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- 1 ROW OF STONE WOOL INSULATION 3-1/2 in.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- WOOD FURRING 3/4 in. @ 24 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

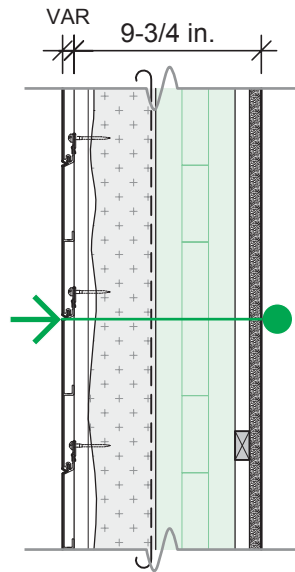


E8

Fire-resistance rating	FRR ^(a)	30 min
Thermal resistance	RSI / R	3.4 / 20
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- SPRAYED POLYURETHANE FOAM 3-1/2 in.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.

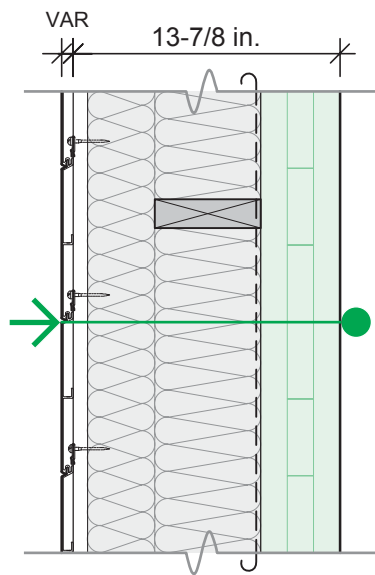


E9

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	3.7 / 21
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- SPRAYED POLYURETHANE FOAM 3-1/2 in.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- WOOD FURRING 3/4 in. @ 24 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

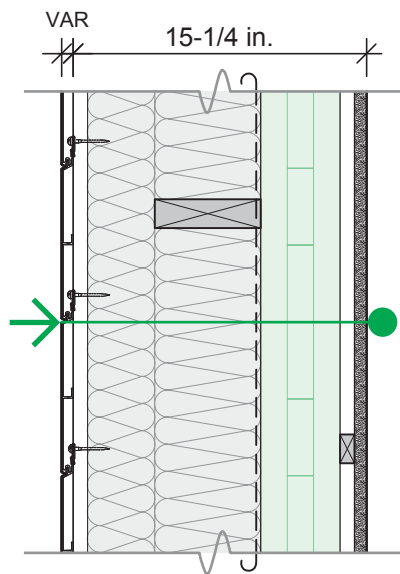


E10

Fire-resistance rating	FRR ^(a)	30 min
Thermal resistance	RSI / R	5.8 / 33
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 6 in. @ 24 in. O.C.
- 1 ROW OF STONE WOOL INSULATION 3-1/2 in.
- 1 ROW OF STONE WOOL INSULATION 5-1/2 in.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.



E11

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	6.1 / 35
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- CLADDING (UP TO THE DESIGNER)
- AIR GAP 3/4 in.
- WOOD STUDS 2 in. X 4 in. @ 24 in. O.C.
- WOOD FURRING 2 in. X 6 in. @ 24 in. O.C.
- 1 ROW OF STONE WOOL INSULATION 3-1/2 in.
- 1 ROW OF STONE WOOL INSULATION 5-1/2 in.
- AIR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- WOOD FURRING 3/4 in. @ 24 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

NORDIC

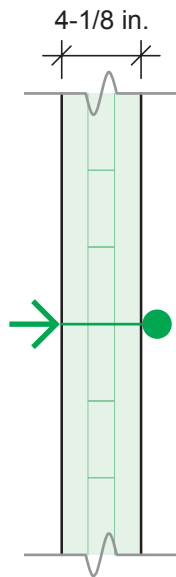
DETAILS
NORDIC LAM+ NORDIC X-LAM

NS-DA2 

VERSION
2022-02-01

PARTITION

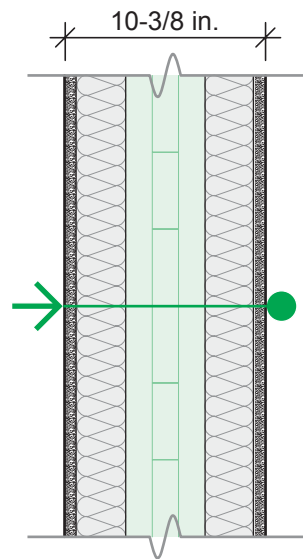
2



Fire-resistance rating	FRR ^(a)	30 min / 30 min
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	33 / n.a.
	IIC / FIIC	n.a. / n.a.

- a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.
- b) Composition and acoustic performance taken from the CLT Handbook – Canadian Edition (FPInnovations, 2011). Acoustic performance based on a CLT thickness of 95-115 mm (3-3/4 in. to 4-1/2 in.).

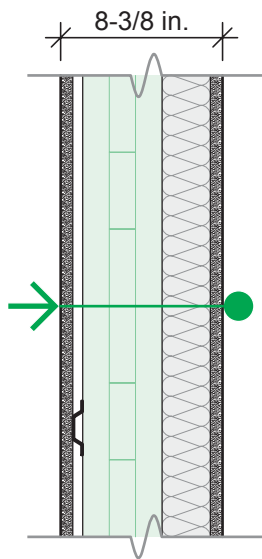
– NORDIC X-LAM 4-1/8 in.



P2

Fire-resistance rating	FRR ^(a)	1 h / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	58 / n.a.
	IIC / FIIC	n.a. / n.a.

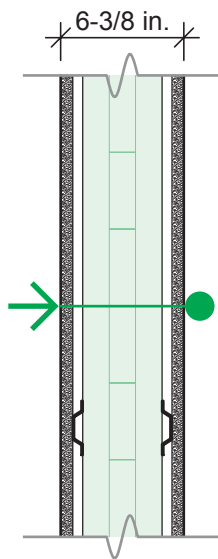
- a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.
- b) Composition and acoustic performance taken from the CLT Handbook – Canadian Edition (FPInnovations, 2011). Acoustic performance based on a CLT thickness of 95-115 mm (3-3/4 in. to 4-1/2 in.).
- 1 TYPE X GYPSUM BOARD 5/8 in.
 - 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
 - WOOD STUDS 2 in. X 3 in. @ 24 in. O.C.
 - NORDIC X-LAM 4-1/8 in.
 - WOOD STUDS 2 in. X 3 in. @ 24 in. O.C. OFF-CENTERED FROM THE OTHER ROW OF WOOD STUDS
 - 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
 - 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1 h / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	53 / n.a.
	IIC / FIIC	n.a. / n.a.

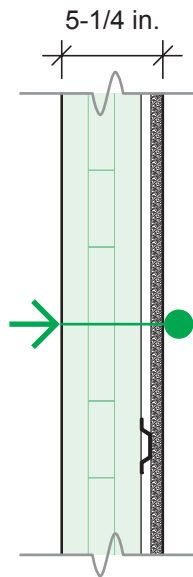
a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- 1 TYPE X GYPSUM BOARD 5/8 in.
- RESILIENT CHANNELS 1/2 in. @ 16 in. O.C. INSTALLED HORIZONTALLY
- NORDIC X-LAM 4-1/8 in.
- WOOD STUDS 2 in. X 3 in. @ 24 in. O.C.
- 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.



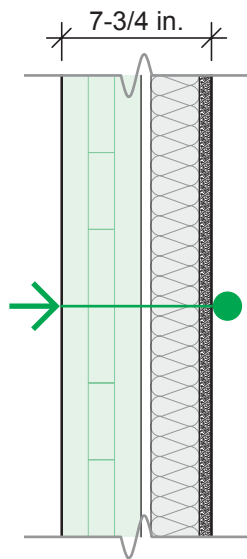
Fire-resistance rating	FRR ^(a)	1 h / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	37 / n.a.
	IIC / FIIC	n.a. / n.a.

- a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.
- b) Composition and acoustic performance taken from the CLT Handbook – Canadian Edition (FPInnovations, 2011). Acoustic performance based on a CLT thickness of 95-115 mm (3-3/4 in. to 4-1/2 in.).
- 1 TYPE X GYPSUM BOARD 5/8 in.
 - RESILIENT CHANNELS 1/2 in. @ 16 in. O.C. INSTALLED HORIZONTALLY
 - NORDIC X-LAM 4-1/8 in.
 - RESILIENT CHANNELS 1/2 in. @ 16 in. O.C. INSTALLED HORIZONTALLY
 - 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	30 min / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	37 / n.a.
	IIC / FIIC	n.a. / n.a.

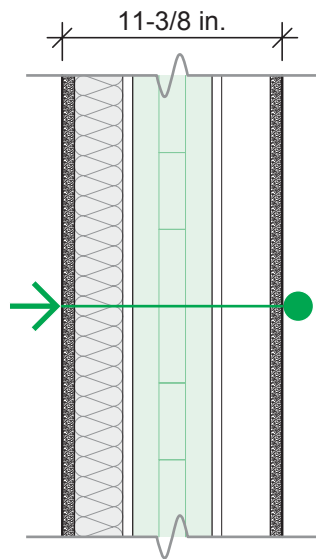
- a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.
- b) Composition and acoustic performance taken from the CLT Handbook – Canadian Edition (FPInnovations, 2011). Acoustic performance based on a CLT thickness of 95-115 mm (3-3/4 in. to 4-1/2 in.).
- NORDIC X-LAM 4-1/8 in.
 - RESILIENT CHANNELS 1/2 in. @ 16 in. O.C. INSTALLED HORIZONTALLY
 - 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	30 min / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 47
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

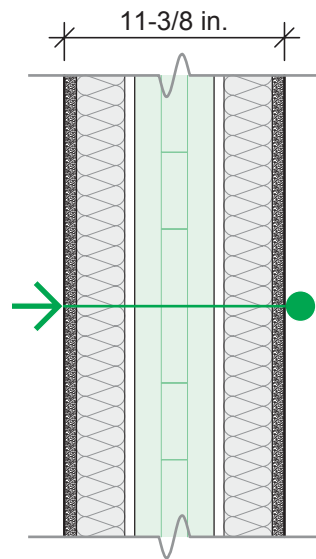
- NORDIC X-LAM 4-1/8 in.
- AIR GAP 1/2 in.
- WOOD STUDS 2 in. X 3 in. @ 16 in. O.C.
- 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1 h / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 50
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

- 1 TYPE X GYPSUM BOARD 5/8 in.
- 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
- WOOD STUDS 2 in. X 3 in. @ 16 in. O.C.
- AIR GAP 1/2 in.
- NORDIC X-LAM 4-1/8 in.
- AIR GAP 1/2 in.
- WOOD STUDS 2 in. X 3 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

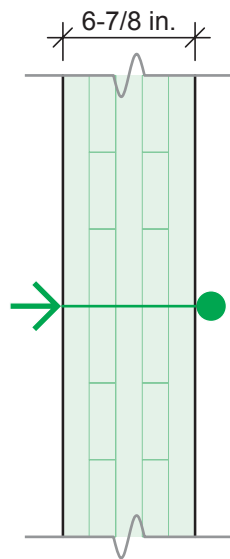


P8

Fire-resistance rating	FRR ^(a)	1 h / 1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 54
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 12,450 plf.

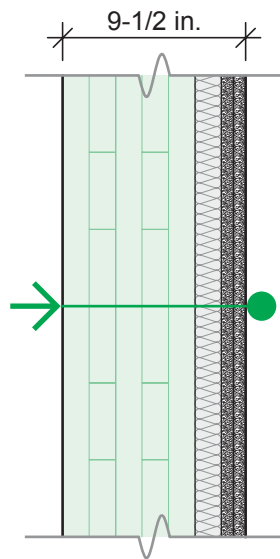
- 1 TYPE X GYPSUM BOARD 5/8 in.
- 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
- WOOD STUDS 2 in. X 3 in. @ 16 in. O.C.
- AIR GAP 1/2 in.
- NORDIC X-LAM 4-1/8 in.
- AIR GAP 1/2 in.
- WOOD STUDS 2 in. X 3 in. @ 16 in. O.C.
- 1 ROW OF MINERAL WOOL INSULATION 2-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1.5 h / 1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	37 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

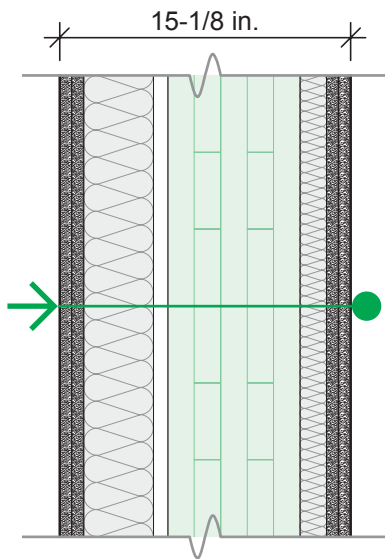
– NORDIC X-LAM 6-7/8 in.



Fire-resistance rating	FRR ^(a)	1.5 h / 2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	53 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 1-3/8 in. @ 16 in. O.C.
INSTALLED VERTICALLY
- 1 ROW OF FIBERGLASS INSULATION OF TYPE
"ROSE FIBERGLAS ECOTOUCH" 1-1/2 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.

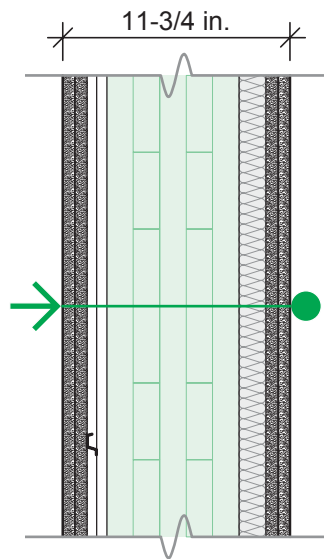


P11

Fire-resistance rating	FRR ^(a)	2.5 h / 2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	71 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.
- METAL STUDS (26 GAUGE) 1-1/4 in. X 3-5/8 in. @ 16 in. O.C.
- 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
- AIR GAP 3/4 in.
- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 1-3/8 in. @ 16 in. O.C. INSTALLED VERTICALLY
- 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 1-1/2 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.

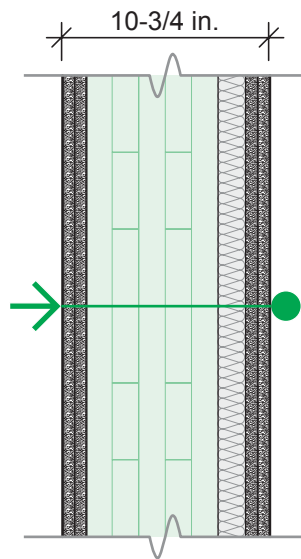


P12

Fire-resistance rating	FRR ^(a)	2.5 h / 2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	53 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.
- RESILIENT CHANNELS 1/2 in. @ 16 in. O.C.
INSTALLED HORIZONTALLY
- PLYWOOD STRIPS 1/2 in. @ 16 in. O.C.
- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 1-3/8 in. @ 16 in. O.C.
INSTALLED VERTICALLY
- 1 ROW OF FIBERGLASS INSULATION OF TYPE
“ROSE FIBERGLAS ECOTOUCH” 1-1/2 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.

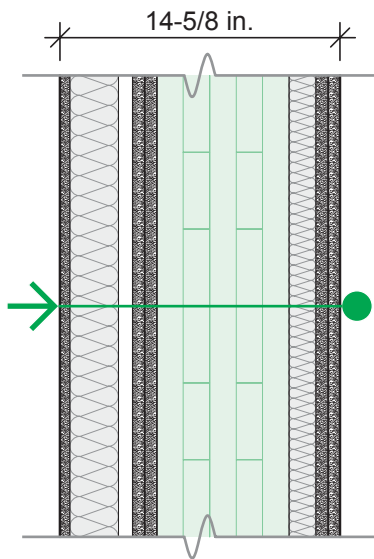


P13

Fire-resistance rating	FRR ^(a)	2.5 h / 2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	53 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.
- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 1-3/8 in. @ 16 in. O.C.
INSTALLED VERTICALLY
- 1 ROW OF FIBERGLASS INSULATION OF TYPE
"ROSE FIBERGLAS ECOTOUCH" 1-1/2 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.

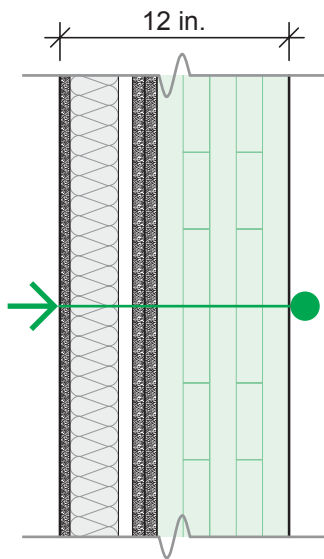


P14

Fire-resistance rating	FRR ^(a)	2.5 h / 2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	65 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- 1 TYPE C GYPSUM BOARD 1/2 in.
- METAL STUDS (26 GAUGE) 1-1/4 in. X 2-1/2 in. @ 16 in. O.C.
- 1 ROW OF STONE WOOL INSULATION OF TYPE "ROXUL AFB" 2-1/2 in.
- AIR GAP 3/4 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.
- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 1-3/8 in. @ 16 in. O.C.
INSTALLED VERTICALLY
- 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 1-1/2 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.

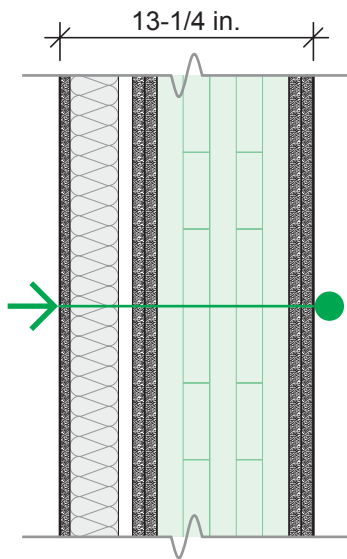


P15

Fire-resistance rating	FRR ^(a)	2.5 h / 1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	62 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- 1 TYPE C GYPSUM BOARD 1/2 in.
- METAL STUDS (26 GAUGE) 1-1/4 in. X 2-1/2 in. @ 16 in. O.C.
- 1 ROW OF STONE WOOL INSULATION OF TYPE "ROXUL AFB" 2-1/2 in.
- AIR GAP 3/4 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.
- NORDIC X-LAM 6-7/8 in.



P16

Fire-resistance rating	FRR ^(a)	2.5 h / 2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	61 / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance ratings on each side of the partition are based on an effective length of 10 feet and on a concentric uniform load of 32,150 plf.

- 1 TYPE C GYPSUM BOARD 1/2 in.
- METAL STUDS (26 GAUGE) 1-1/4 in. X 2-1/2 in. @ 16 in. O.C.
- 1 ROW OF STONE WOOL INSULATION OF TYPE "ROXUL AFB" 2-1/2 in.
- AIR GAP 3/4 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.
- NORDIC X-LAM 6-7/8 in.
- 2 TYPE X GYPSUM BOARDS 5/8 in. EA.

NORDIC

DETAILS
NORDIC LAM+ NORDIC X-LAM

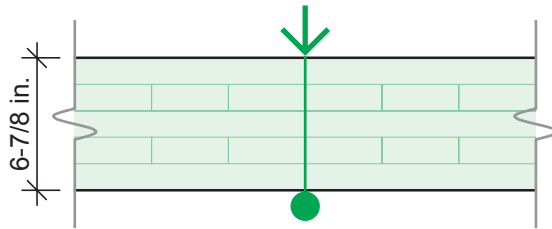
NS-DA2 

VERSION
2022-02-01

FLOOR

3

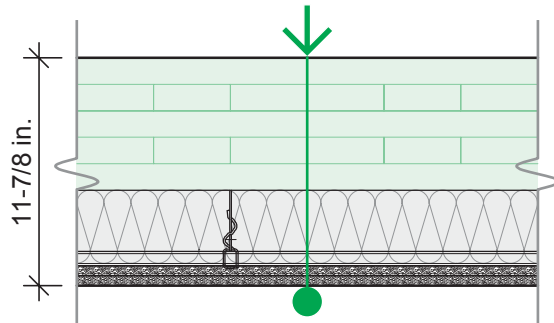
NORDIC
STRUCTURES



Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	39 / n.a.
	IIC / FIIC	27 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

– NORDIC X-LAM 6-7/8 in.



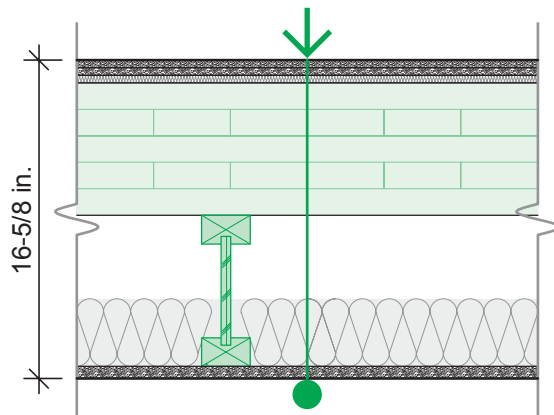
F2

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	64 / n.a.
	IIC ^(b) / FIIC	59 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – Canadian Edition (FPInnovations, 2011). Acoustic performance based on a CLT thickness of 146 mm (5-3/4 in.).

- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - RESILIENT METALLIC HANGERS 4 in.
 - METAL TRACKS @ 16 in. O.C. MIN
 - SOUNDPROOFING MATERIAL 4 in.
- 2 TYPE X GYPSUM BOARDS 1/2 in. EA.

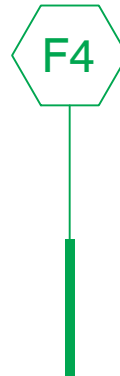
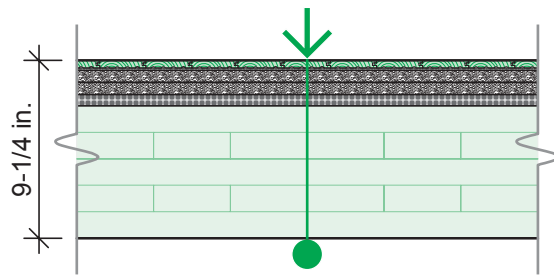


F3

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

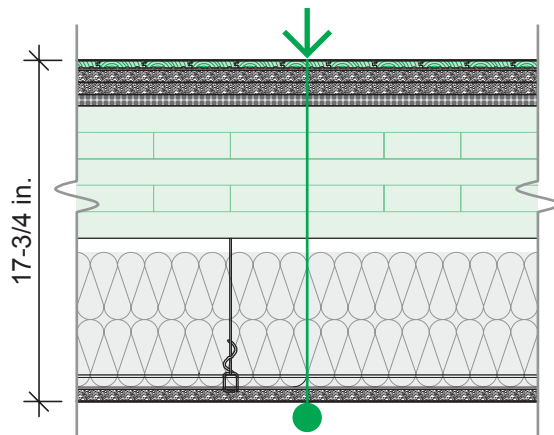
- UNDERLAY OF TYPE "FERMACELL 2E32" 1-1/4 in. OR "PERMABASE" WITH "SONOPAN"
- NORDIC X-LAM 6-7/8 in.
- NORDIC JOIST 7-7/8 in. @ 24 in. O.C.
- SOUNDPROOFING MATERIAL 3-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 47
	IIC / FIIC	n.a. / 46

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

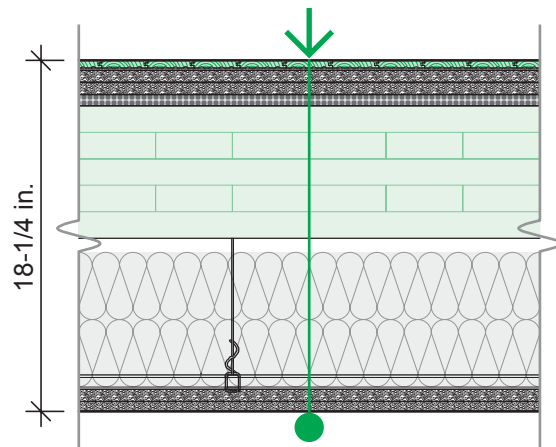
- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "INSONOBOIS" 1/8 in.
- 2 UNDERLAYS OF TYPE "FIBEROCK" 5/8 in. EA.
- UNDERLAY OF TYPE "INSONOMAT" 5/8 in.
- NORDIC X-LAM 6-7/8 in.



Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 59
	IIC / FIIC	n.a. / 61

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

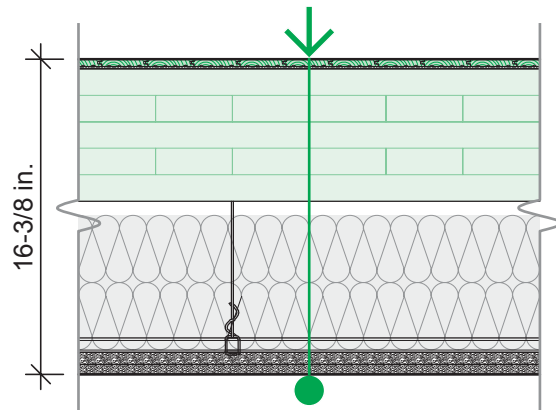
- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "INSONOBOIS" 1/8 in.
- 2 FLOOR BACKERBOARDS OF TYPE "FIBEROCK" 5/8 in. EA.
- UNDERLAY OF TYPE "INSONOMAT" 5/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - RESILIENT METALLIC HANGERS 7-7/8 in. @ 48 in. O.C.
 - METAL TRACKS @ 24 in. O.C.
 - 2 ROWS OF STONE WOOL INSULATION OF TYPE "ROXUL" (2.5 pcf) 3-1/2 in. EA.
 - 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 58
	IIC / FIIC	n.a. / 60

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

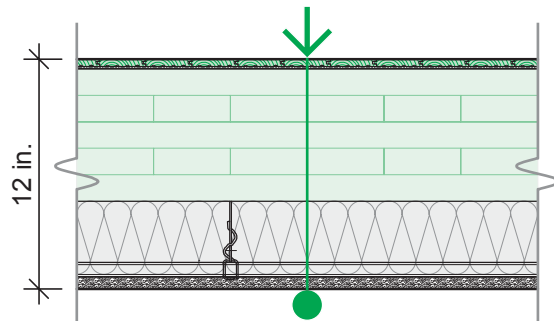
- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "INSONOBOIS" 1/8 in.
- 2 FLOOR BACKERBOARDS OF TYPE "FIBEROCK" 5/8 in. EA.
- UNDERLAY OF TYPE "INSONOMAT" 5/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - RESILIENT METALLIC HANGERS 7-7/8 in. @ 48 in. O.C.
 - METAL TRACKS @ 24 in. O.C.
 - 2 ROWS OF STONE WOOL INSULATION OF TYPE "ROXUL" (2.5 pcf) 3-1/2 in. EA.
 - 1 TYPE X GYPSUM BOARD 5/8 in.
 - 1 REGULAR GYPSUM BOARD 1/2 in.



Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 54
	IIC / FIIC	n.a. / 56

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "INSONOBOIS" 1/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - RESILIENT METALLIC HANGERS 7-7/8 in. @ 48 in. O.C.
 - METAL TRACKS @ 24 in. O.C.
 - 2 ROWS OF STONE WOOL INSULATION OF TYPE "ROXUL" (2.5 pcf) 3-1/2 in. EA.
 - 1 TYPE X GYPSUM BOARD 5/8 in.
 - 1 REGULAR GYPSUM BOARD 1/2 in.

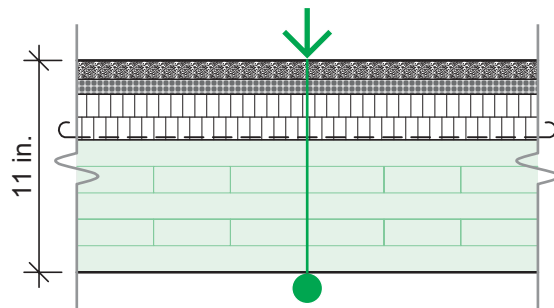


F8

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 53
	IIC / FIIC	n.a. / 52

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "INSONOBOIS" 1/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - RESILIENT METALLIC HANGERS 4 in. @ 48 in. O.C.
 - METAL TRACKS @ 24 in. O.C.
 - 1 ROW OF STONE WOOL INSULATION OF TYPE "ROXUL" (2.5 pcf) 3-1/2 in. EA.
 - 1 TYPE X GYPSUM BOARD 5/8 in.

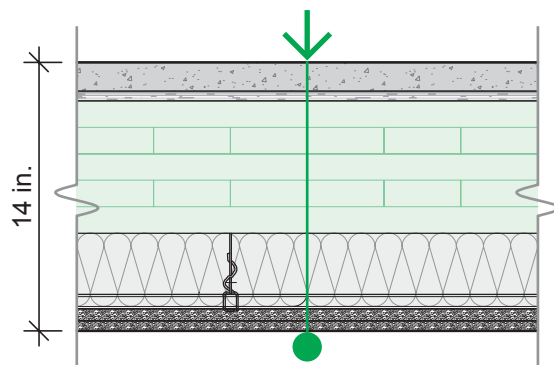


Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	62 / n.a.
	IIC ^(b) / FIIC	59 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – U.S. Edition (FPInnovations, 2013). Acoustic performance based on a CLT thickness of 135 mm (5-5/16 in.).

- GYPSUM FIBERBOARD OF TYPE “FERMACELL” 1 in.
- UNDERLAY OF TYPE “ISOVER EP3” 3/4 in.
- 2 LAYERS OF PELLETS AND HONEYCOMB CORE OF TYPE “FERMACELL” 1-1/4 in. EA.
- KRAFT PAPER UNDERLAY
- NORDIC X-LAM 6-7/8 in.

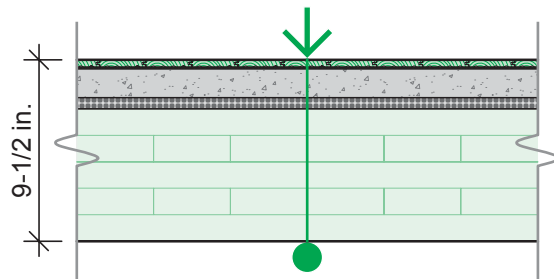


F10

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 61
	IIC / FIIC	n.a. / 50

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

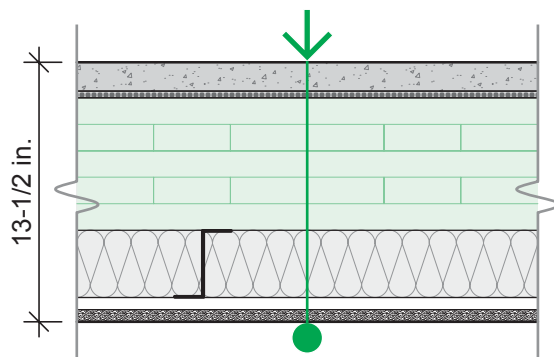
- CONCRETE TOPPING (125 pcf) 1-1/2 in.
- WOOD FIBER ACOUSTIC PANEL OF TYPE “BP ECO-LOGICAL” 1/2 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - RESILIENT METALLIC HANGERS 4 in. @ 48 in. O.C.
 - METAL TRACKS @ 24 in. O.C.
 - 1 ROW OF STONE WOOL INSULATION OF TYPE “ROXUL” (2.5 pcf) 3-1/2 in.
 - 1 TYPE X GYPSUM BOARD 5/8 in.
 - 1 REGULAR GYPSUM BOARD 1/2 in.



Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	55 / n.a.
	IIC / FIIC	51 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- ENGINEERED WOOD FLOOR 3/8 in.
- UNDERLAY OF TYPE "ROBERTS SOFT STRIDE" 1/8 in.
- CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "INSONOMAT" 5/8 in.
- NORDIC X-LAM 6-7/8 in.

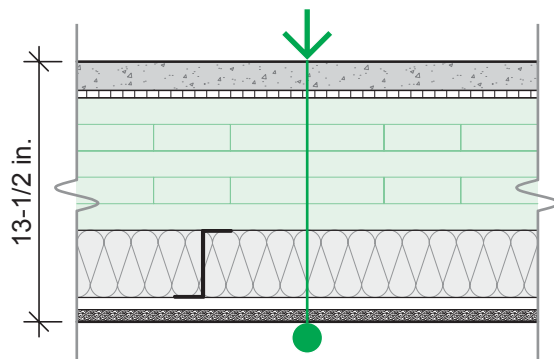


F12

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	70 / n.a.
	IIC / FIIC	56 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "OWENS CORNING QUIÉTUDE" 3/8 in.
- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 3-1/2 in. @ 24 in. O.C.
- 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

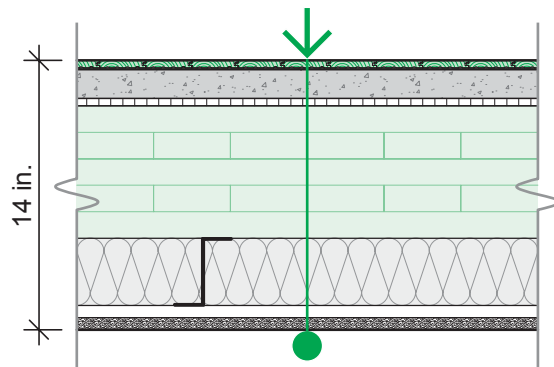


F13

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	69 / n.a.
	IIC / FIIC	54 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- CONCRETE TOPPING 1-1/2 in.
- TAR FIBERBOARD 3/8 in.
- NORDIC X-LAM 6-7/8 in.
- Z-CHANNELS (26 GAUGE) 3-1/2 in. @ 24 in. O.C.
- 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLASS ECOTOUCH" 3-5/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

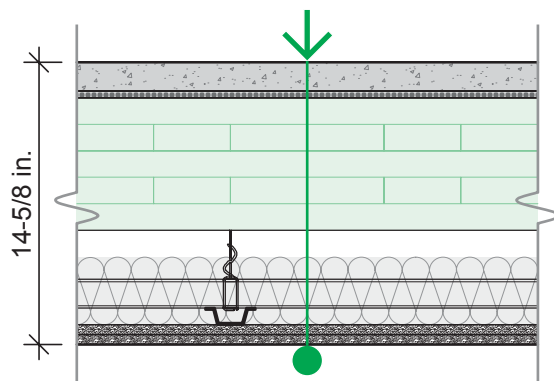


F14

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	69 / n.a.
	IIC / FIIC	58 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

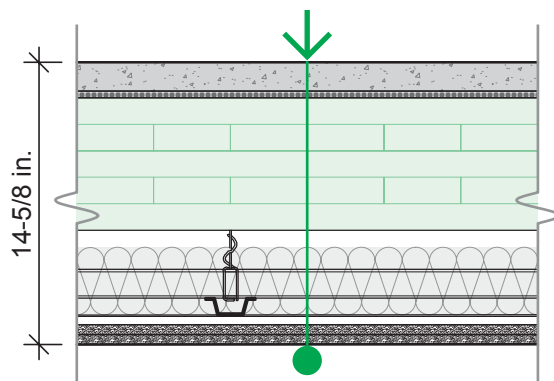
- ENGINEERED WOOD FLOOR 3/8 in.
- UNDERLAY OF TYPE "ROBERTS SOFT STRIDE" 1/8 in.
- CONCRETE TOPPING 1-1/2 in.
- TAR FIBERBOARD 3/8 in.
- NORDIC X-LAM 6-78 in.
- Z-CHANNELS (26 GAUGE) 3-1/2 in. @ 24 in. O.C.
- 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	72 / n.a.
	IIC / FIIC	65 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "OWENS CORNING QUIÉTUDE" 3/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - METALLIC HANGERS 2-1/2 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C.
 - FURRING CHANNELS 7/8 in. @ 16 in. O.C.
 - 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
- 2 TYPE C GYPSUM BOARDS 1/2 in. EA.

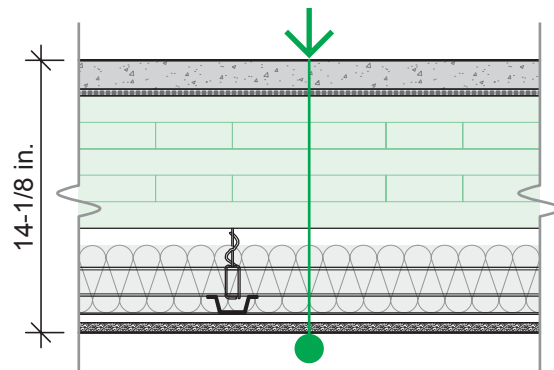


F16

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	73 / n.a.
	IIC / FIIC	66 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "OWENS CORNING QUIÉTUDE" 3/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - METALLIC HANGERS 2 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C.
 - FURRING CHANNELS 7/8 in. @ 16 in. O.C.
 - 1 ROW OF FIBERGLAS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
- RESILIENT CHANNELS 1/2 in. @ 24 in. O.C.
- 2 TYPE C GYPSUM BOARDS 1/2 in. EA.

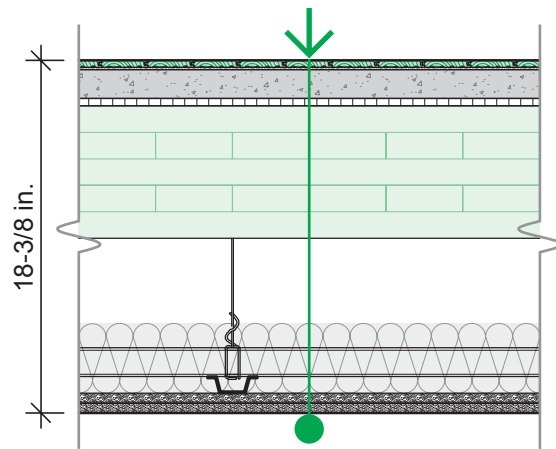


F17

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	72 / n.a.
	IIC / FIIC	62 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "OWENS CORNING QUIÉTUDE" 3/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - METALLIC HANGERS 2 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C.
 - FURRING CHANNELS 7/8 in. @ 16 in. O.C.
 - 1 ROW OF FIBERGLAS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
- RESILIENT CHANNELS 1/2 in. @ 24 in. O.C.
- 1 TYPE C GYPSUM BOARD 1/2 in.



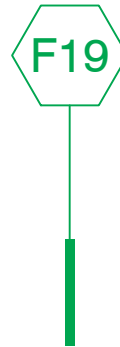
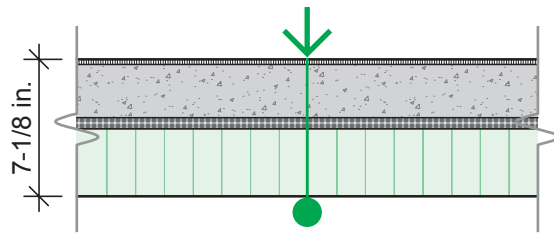
F18

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	75 / n.a.
	IIC ^(b) / FIIC	66 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

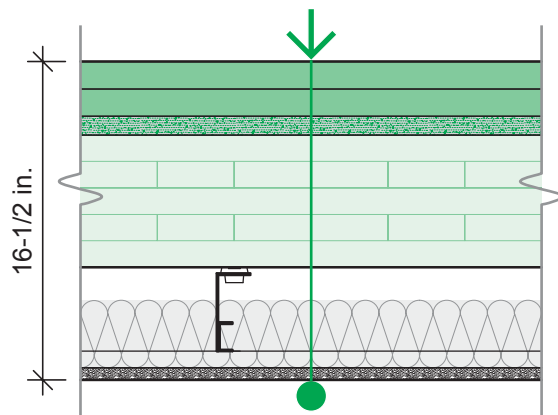
- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "ACOUSTITECH PREMIUM" 1/8 in.
- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- TAR FIBERBOARD 3/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - METALLIC HANGERS 5-3/4 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C.
 - FURRING CHANNELS 7/8 in. @ 16 in. O.C.
 - 1 ROW OF FIBERGLASS INSULATION OF TYPE "ROSE FIBERGLAS ECOTOUCH" 3-5/8 in.
 - 2 TYPE C GYPSUM BOARDS 1/2 in. EA.



Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	52 / n.a.
	IIC / FIIC	51 / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 90 psf.

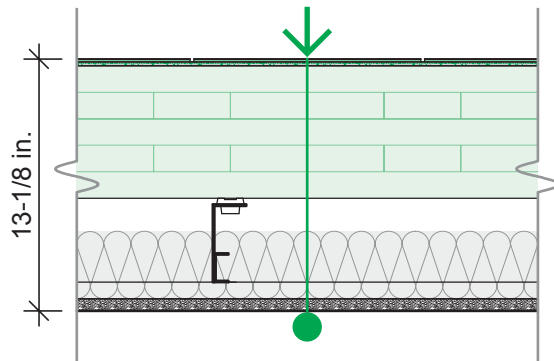
- CARPET TILES 1/4 in.
- PREFABRICATED CONCRETE TOPPING (144 pcf) 2-3/4 in.
- UNDERLAY OF TYPE "INSONOMAT" 5/8 in.
- NORDIC LAM DECKING 3-1/2 in.



Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	61 / n.a.
	IIC / FIIC	55 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- 2 ROWS OF PANELS OF TYPE "HUBER ENGINEERED WOOD ADVANTECH" 1-3/8 in. EA.
- UNDERLAY OF TYPE "GENIEMAT FF" 1 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - BRACKETS OF TYPE "GENIECLIP LB" 4-3/8 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C. FIXED AT THE BOTTOM OF THE BRACKETS
 - FURRING CHANNELS 7/8 in. @ 24 in. O.C.
 - 1 ROW OF FIBERGLASS INSULATION OF TYPE "JOHNS MANVILLE UNFACED BATTS R13" 3-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

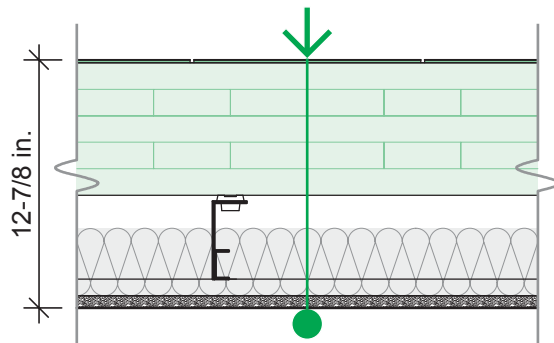


F21

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	58 / n.a.
	IIC / FIIC	58 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- VINYL TILES FLOORING 1/8 in.
- UNDERLAY OF TYPE "GENIEMAT RST05" 1/4 in.
- NORDIC X-LAM 6-78 in.
- SUSPENDED CEILING:
 - BRACKETS OF TYPE "GENIECLIP LB" 4-3/8 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C. FIXED AT THE BOTTOM OF THE BRACKETS
 - FURRING CHANNELS 7/8 in. @ 24 in. O.C.
 - 1 ROW OF FIBERGLASS INSULATION OF TYPE "JOHNS MANVILLE UNFACED BATTS R13" 3-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

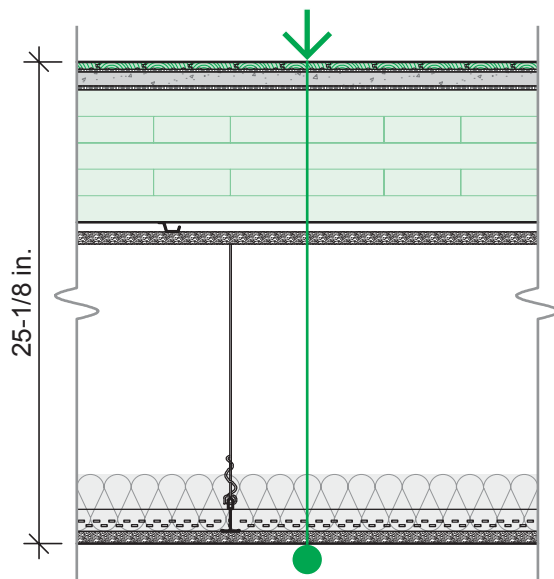


F22

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	57 / n.a.
	IIC / FIIC	54 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- VINYL TILES FLOORING 1/8 in.
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - BRACKETS OF TYPE "GENIECLIP LB" 4-3/8 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C. FIXED AT THE BOTTOM OF THE BRACKETS
 - FURRING CHANNELS 7/8 in. @ 24 in. O.C.
 - 1 ROW OF FIBERGLASS INSULATION OF TYPE "JOHNS MANVILLE UNFACED BATTS R13" 3-1/2 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

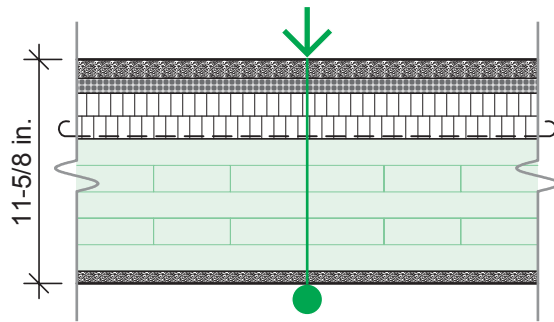


F23

Fire-resistance rating	FRR ^(a)	2.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	n.a. / 54
	IIC / FIIC	n.a. / 53

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- FLOATING FLOOR 3/8 in.
- UNDERLAY OF TYPE "INSONOBOIS" 1/8 in.
- TOPPING OF TYPE "MAXXON GYP-CRETE" (128 pcf) 3/4 in.
- ENTANGLED FILAMENT MAT OF TYPE "MAXXON ACOUSTI-MAT 1" 1/4 in.
- NORDIC X-LAM 6-7/8 in.
- RESILIENT CHANNELS 1/2 in. @ 24 in. O.C.
- 1 TYPE X GYPSUM BOARD OF TYPE "QUIETROCK" 5/8 in.
- SUSPENDED DRYWALL GRID SYSTEM OF TYPE "ARMSTRONG":
 - METALLIC HANGERS 15 in.
 - T-CHANNELS 1-5/8 in. @ 48 in. O.C.
 - 1 ROW OF STONE WOOL INSULATION OF TYPE "ROXUL" (2.5 pcf) 3 in.
 - 1 TYPE X GYPSUM BOARD 5/8 in.

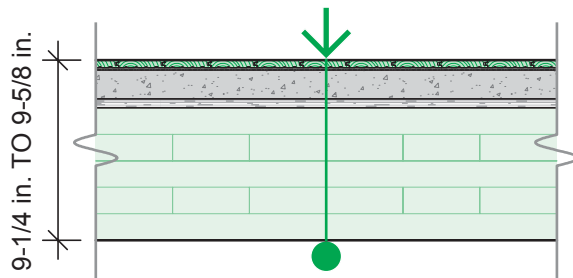


Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	62 / n.a.
	IIC ^(b) / FIIC	59 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – U.S. Edition (FPInnovations, 2013). Acoustic performance based on a CLT thickness of 135 mm (5-5/16 in.).

- GYPSUM FIBERBOARD OF TYPE “FERMACELL” 1 in.
- UNDERLAY OF TYPE “ISOVER EP3” 3/4 in.
- 2 LAYERS OF PELLETS AND HONEYCOMB CORE OF TYPE “FERMACELL” 1-1/4 in. EA.
- KRAFT PAPER UNDERLAY
- NORDIC X-LAM 6-7/8 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

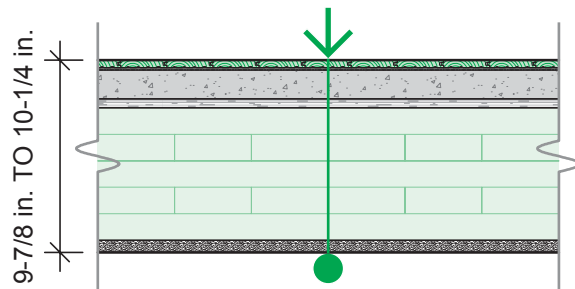


Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC ^(b)	n.a. / > 50
	IIC / FIIC ^(b)	n.a. / > 50

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – U.S. Edition (FPInnovations, 2013). Acoustic performance based on a CLT thickness of 135 mm (5-5/16 in.).

- CARPET OR FLOATING FLOOR 3/8 in.
- RESILIENT UNDERLAY (RUBBER OR FELT) 1/8 in.
- TOPPING, AT LEAST 15.6 psf (I.E. CONCRETE OR OF TYPE “MAXXON GYP-CRETE”)
- RESILIENT UNDERLAY (RUBBER 3/8 in., FELT 3/4 in., OR WOOD FIBERBOARD 1/2 in.)
- NORDIC X-LAM 6-7/8 in.

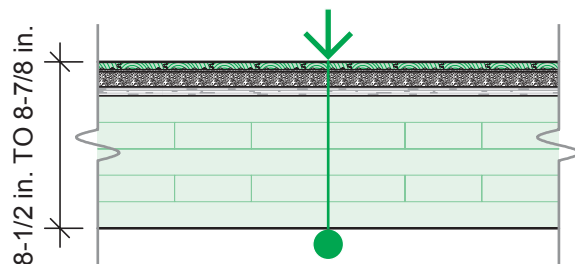


Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC ^(b)	n.a. / > 50
	IIC / FIIC ^(b)	n.a. / > 50

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – U.S. Edition (FPInnovations, 2013). Acoustic performance based on a CLT thickness of 135 mm (5-5/16 in.).

- CARPET OR FLOATING FLOOR 3/8 in.
- RESILIENT UNDERLAY (RUBBER OR FELT) 1/8 in.
- TOPPING, AT LEAST 15.6 psf (I.E. CONCRETE OR OF TYPE “MAXXON GYP-CRETE”)
- RESILIENT UNDERLAY (RUBBER 3/8 in., FELT 3/4 in., OR WOOD FIBERBOARD 1/2 in.)
- NORDIC X-LAM 6-7/8 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.



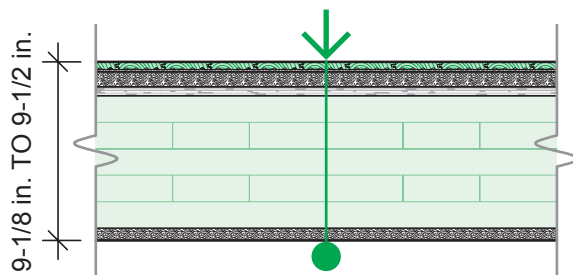
F27

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC ^(b)	n.a. / > 45
	IIC / FIIC ^(b)	n.a. / > 45

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – U.S. Edition (FPInnovations, 2013). Acoustic performance based on a CLT thickness of 135 mm (5-5/16 in.).

- CARPET OR FLOATING FLOOR 3/8 in.
- RESILIENT UNDERLAY (RUBBER OR FELT) 1/8 in.
- PREFABRICATED TOPPING, AT LEAST 5.1 psf (3/4 in. OF TYPE “FERMACELL” OR OF TYPE “FIBREROCK”)
- RESILIENT UNDERLAY (RUBBER 3/8 in., FELT 3/4 in., OR WOOD FIBERBOARD 1/2 in.)
- NORDIC X-LAM 6-7/8 in.



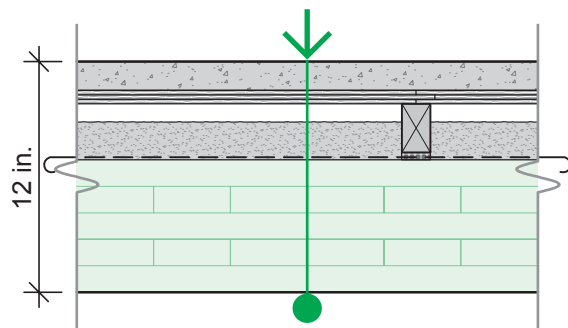
F28

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC ^(b)	n.a. / > 45
	IIC / FIIC ^(b)	n.a. / > 45

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Composition and acoustic performance taken from the CLT Handbook – U.S. Edition (FPInnovations, 2013). Acoustic performance based on a CLT thickness of 135 mm (5-5/16 in.).

- CARPET OR FLOATING FLOOR 3/8 in.
- RESILIENT UNDERLAY (RUBBER OR FELT) 1/8 in.
- PREFABRICATED TOPPING, AT LEAST 5.1 psf (3/4 in. OF TYPE “FERMACELL” OR OF TYPE “FIBREROCK”)
- RESILIENT UNDERLAY (RUBBER 3/8 in., FELT 3/4 in., OR WOOD FIBERBOARD 1/2 in.)
- NORDIC X-LAM 6-7/8 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

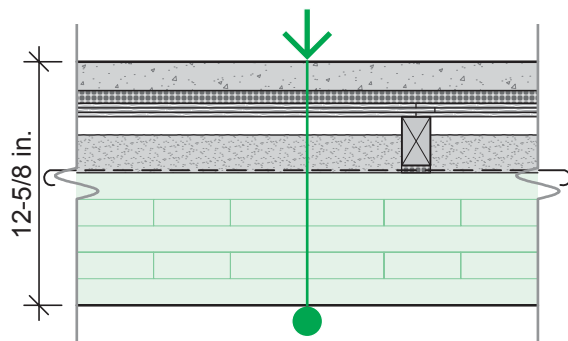


Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	64 / n.a.
	IIC ^(b) / FIIC	53 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- SILICA SAND (#71) 2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- POLYETHYLENE SHEETING 6 mil
- NORDIC X-LAM 6-7/8 in.



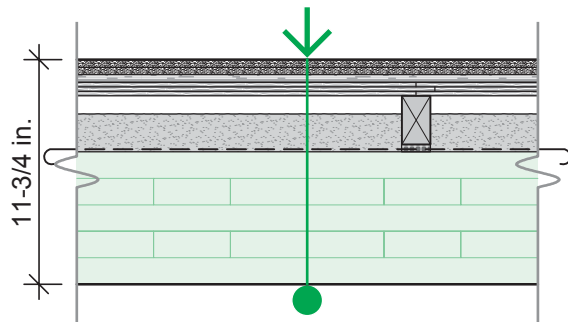
F30

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	66 / n.a.
	IIC ^(b) / FIIC	60 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "REGUPOL SONUS WAVE" 5/8 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- SILICA SAND (#71) 2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- POLYETHYLENE SHEETING 6 mil
- NORDIC X-LAM 6-7/8 in.



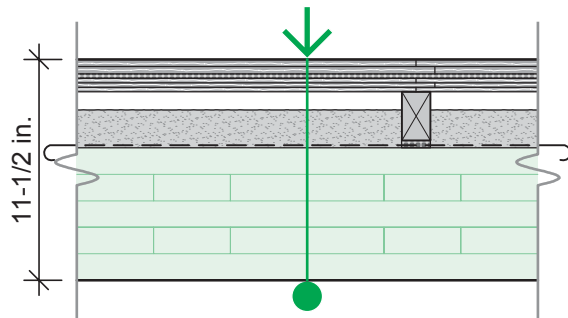
F31

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	59 / n.a.
	IIC ^(b) / FIIC	53 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- UNDERLAY OF TYPE "FERMACELL 2E31" 1-1/4 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- SILICA SAND (#71) 2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- POLYETHYLENE SHEETING 6 mil
- NORDIC X-LAM 6-7/8 in.



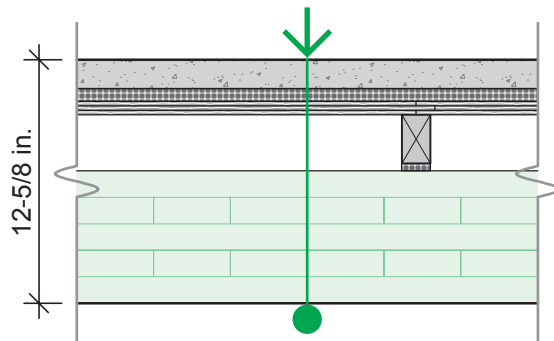
F32

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	56 / n.a.
	IIC ^(b) / FIIC	50 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- UNDERLAY OF TYPE "SONODECK INSULFLOOR" 1 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- SILICA SAND (#71) 2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- POLYETHYLENE SHEETING 6 mil
- NORDIC X-LAM 6-7/8 in.



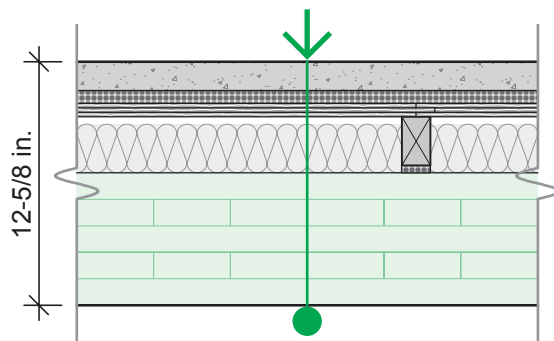
F33

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	59 / n.a.
	IIC ^(b) / FIIC	54 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "REGUPOL SONUS WAVE" 5/8 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- NORDIC X-LAM 6-7/8 in.



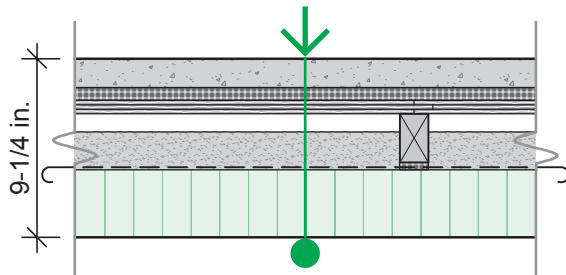
F34

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	60 / n.a.
	IIC ^(b) / FIIC	54 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "REGUPOL SONUS WAVE" 5/8 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- 1 ROW OF FIBERGLASS INSULATION 2-1/2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- NORDIC X-LAM 6-7/8 in.

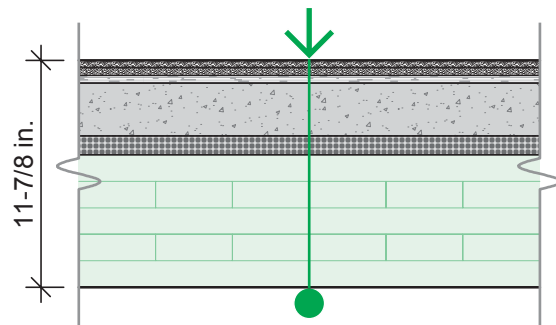


F35

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	65 / n.a.
	IIC / FIIC	59 / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 90 psf.

- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "REGUPOL SONUS WAVE" 5/8 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- SILICA SAND (#71) 2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- POLYETHYLENE SHEETING 6 mil
- NORDIC LAM DECKING 3-1/2 in.

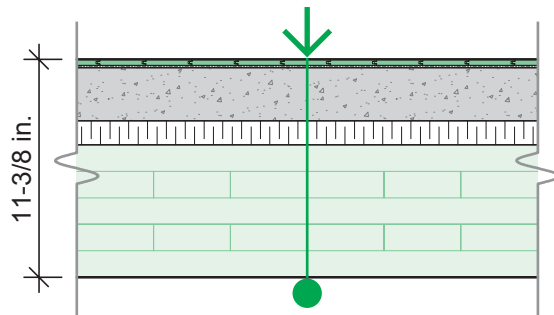


Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	56 / n.a.
	IIC ^(b) / FIC	52 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- UNDERLAY OF TYPE "FERMACELL 2E31" 1-1/4 in.
- PREFABRICATED CONCRETE TOPPING (147 pcf) 2-3/4 in.
- UNDERLAY OF TYPE "REGUPOL SONUS WAVE" 1 in.
- NORDIC X-LAM 6-7/8 in.



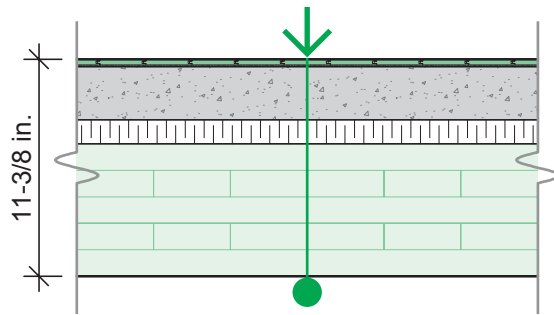
F37

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	57 / n.a.
	IIC ^(b) / FIIC	51 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- LAMINATED FLOORING 3/8 in.
- UNDERLAY OF TYPE "ACOUSTITECH PREMIUM" 1/8 in.
- PREFABRICATED CONCRETE TOPPING (147 pcf) 2-3/4 in.
- RIGID SHEATHING BOARD OF TYPE "ROXUL COMFORTBOARD IS" 1-1/4 in.
- NORDIC X-LAM 6-7/8 in.



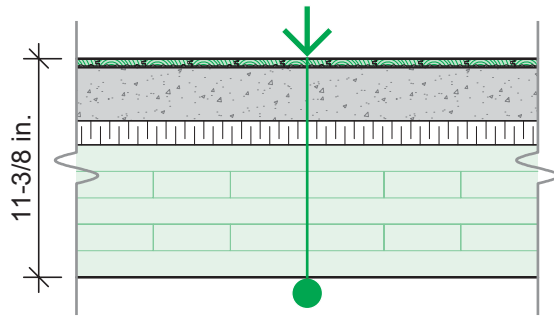
F38

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	57 / n.a.
	IIC ^(b) / FIIC	51 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- LAMINATED FLOORING 3/8 in.
- UNDERLAY OF TYPE "ROBERTS SOFT STRIDE" 1/8 in.
- PREFABRICATED CONCRETE TOPPING (147 pcf) 2-3/4 in.
- RIGID SHEATHING BOARD OF TYPE "ROXUL COMFORTBOARD IS" 1-1/4 in.
- NORDIC X-LAM 6-7/8 in.



F39

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC ^(b) / FSTC	57 / n.a.
	IIC ^(b) / FIIC	51 / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

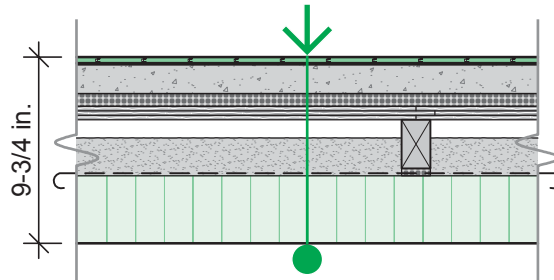
b) Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

- HARDWOOD FLOORING OF TYPE
"TORLYS EVEREST PREMIER" 3/8 in.
- UNDERLAY OF TYPE "ROBERTS SOFT STRIDE" 1/8 in.
- PREFABRICATED CONCRETE TOPPING (147 pcf) 2-3/4 in.
- RIGID SHEATHING BOARD OF TYPE
"ROXUL COMFORTBOARD IS" 1-1/4 in.
- NORDIC X-LAM 6-7/8 in.



- The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.
- Acoustic performance based on a CLT thickness of 131 mm (5-1/8 in.).

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F41

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	n.a. / n.a.
Acoustic ratings	STC / FSTC	65 / n.a.
	IIC / FIIC	62 / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 90 psf.

- LAMINATED FLOORING 3/8 in.
- UNDERLAY OF TYPE "ROBERTS SOFT STRIDE" 1/8 in.
- PREFABRICATED CONCRETE TOPPING 1-1/2 in.
- UNDERLAY OF TYPE "REGUPOL SONUS WAVE" 5/8 in.
- TONGUE AND GROOVE OSB SHEATHING 3/4 in.
- WOOD RAFTERS 2 in. X 3 in. @ 24 in. O.C.
- SILICA SAND (#71) 2 in.
- RUBBER MEMBRANE BANDS 3/8 in. UNDER RAFTERS
- POLYETHYLENE SHEETING 6 mil
- NORDIC LAM DECKING 3-1/2 in.

NORDIC

DETAILS
NORDIC LAM+ NORDIC X-LAM

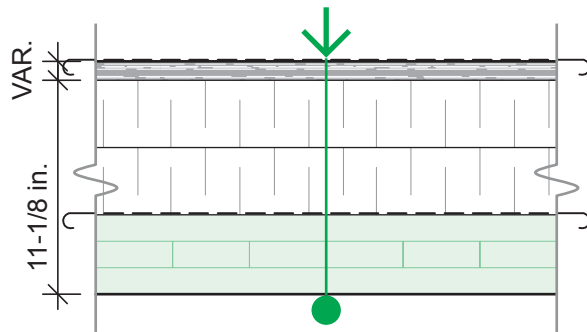
NS-DA2 

VERSION
2022-02-01

ROOF

4

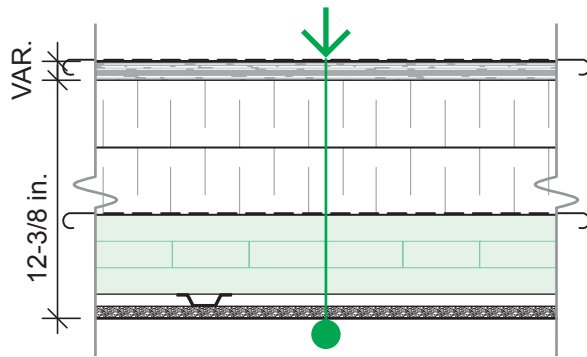
NORDIC
STRUCTURES



Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	7.9 / 45
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 80 psf.

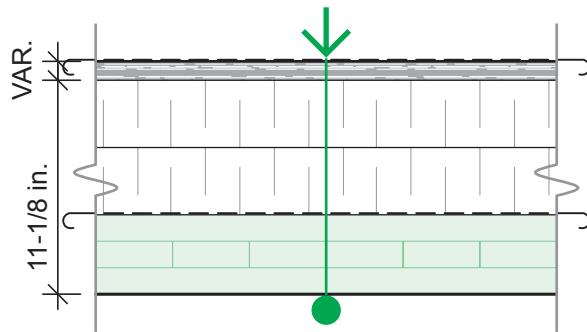
- TWO-LAYER ELASTOMERIC MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3-1/2 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.



Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	8.2 / 47
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 80 psf.

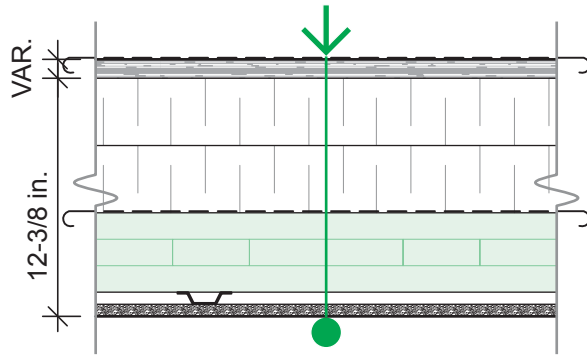
- TWO-LAYER ELASTOMERIC MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3-1/2 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	7.9 / 45
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 80 psf.

- THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3-1/2 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.

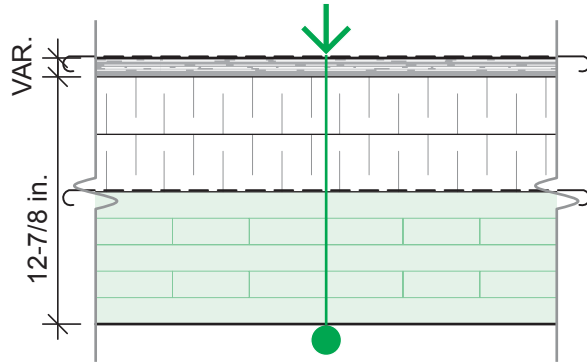


R4

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	8.2 / 47
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 80 psf.

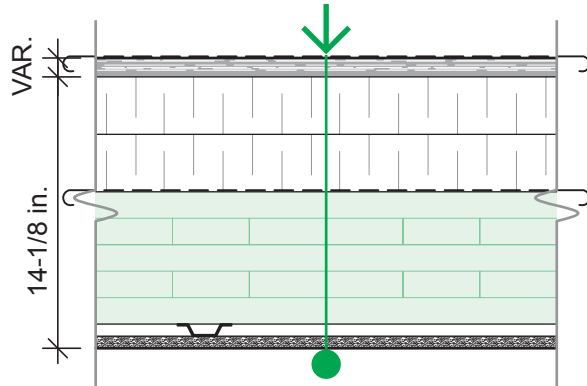
- THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3-1/2 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 4-1/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.



Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	7.5 / 43
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- TWO-LAYER ELASTOMERIC MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 6-7/8 in.

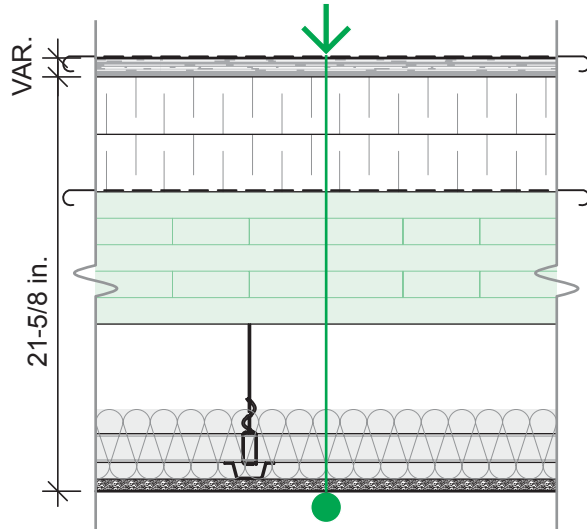


R6

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	7.7 / 44
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- TWO-LAYER ELASTOMERIC MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 6-7/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.

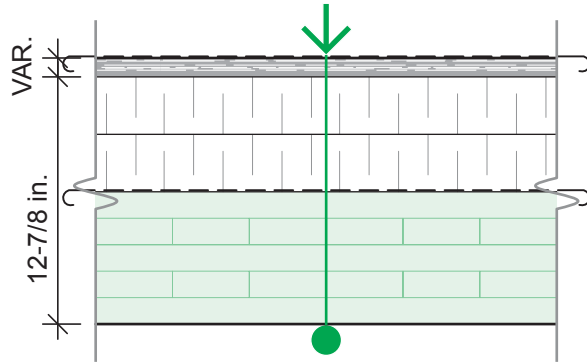


R7

Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	7.7 / 44
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- TWO-LAYER ELASTOMERIC MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 6-7/8 in.
- SUSPENDED CEILING:
 - METALLIC HANGERS 5-3/4 in.
 - CHANNEL IRONS 1-1/2 in. @ 48 in. O.C.
 - FURRING CHANNELS 7/8 in. @ 16 in. O.C.
 - SOUNDPROOFING MATERIAL 3-5/8 in.
- 1 TYPE X GYPSUM BOARD 5/8 in.

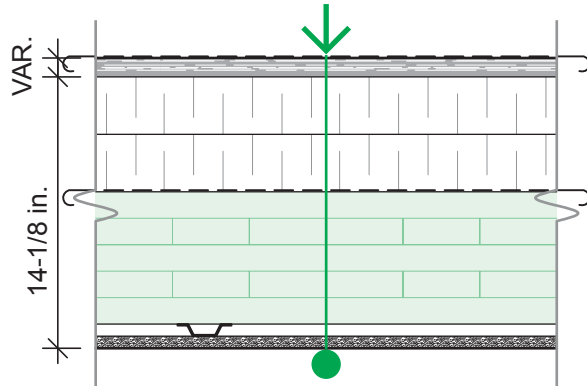


R8

Fire-resistance rating	FRR ^(a)	1.5 h
Thermal resistance	RSI / R	7.5 / 43
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

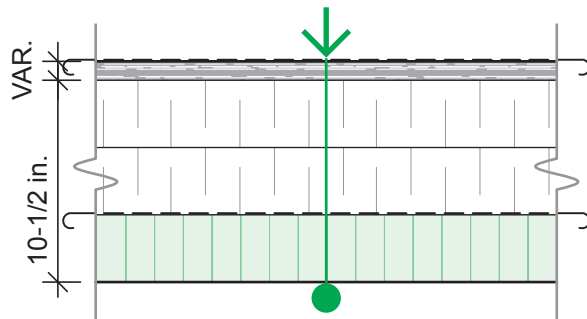
- THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 6-7/8 in.



Fire-resistance rating	FRR ^(a)	2 h
Thermal resistance	RSI / R	7.7 / 44
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 18 feet and on a uniform load of 90 psf.

- THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3 in. EA.
- VAPOR BARRIER MEMBRANE
- NORDIC X-LAM 6-7/8 in.
- FURRING CHANNELS 5/8 in. @ 16 in. O.C.
- 1 TYPE X GYPSUM BOARD 5/8 in.



R10

Fire-resistance rating	FRR ^(a)	1 h
Thermal resistance	RSI / R	7.8 / 44
Acoustic ratings	STC / FSTC	n.a. / n.a.
	IIC / FIIC	n.a. / n.a.

a) The fire-resistance rating is based on a span of 12 feet and on a uniform load of 90 psf.

- TWO-LAYER ELASTOMERIC MEMBRANE ROOFING
- ROOFING UNDERLAY (UP TO THE DESIGNER)
- 2 ROWS OF POLYISOCYANURATE INSULATION 3-1/2 in. EA.
- VAPOR BARRIER MEMBRANE
- PLYWOOD 1/2 in.
- NORDIC LAM DECKING 3-1/2 in.

