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Temperature Measurements in Full-Scale Wood Stud Shear Walls

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TEMPERATURE MEASUREMENTS IN FULL-SCALE WOOD STUD SHEAR WALLS

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V. K. R. Kodur, M. A. Sultan and E. M. A. Denham

ABSTRACT

This report presents the results of 10 full-scale fire resistance tests conducted at the National Fire Laboratory on load-bearing gypsum board protected, wood stud shear wall assemblies with and without resilient channels on the fire-exposed side. The two assembly arrangements studied were: symmetrical installation 1x1 (one layer of gypsum board on each of the exposed and unexposed sides) and asymmetrical installation of the shear membrane (one layer of gypsum board on both the exposed and unexposed sides and a shear wall membrane as a base layer alternating between the exposed (2x1) and unexposed sides (1x2)) on a wood stud frame. The gypsum board was 12.7 mm thick Type X. The insulations used were glass and rock fibres. The shear membranes used were plywood and oriented strand board (OSB).

Tests were conducted to determine the effects of the placement of the shear membrane on the exposed/unexposed face, type of shear membrane, insulation type, load intensity and resilient channel installations on the fire resistance of gypsum board protected, wood stud shear wall assemblies. Details of the results, including the temperatures and deflections measured during the fire tests, are presented.

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ACKNOWLEDGEMENTS

This research is part of a consortium project on the fire resistance and sound performance of wall assemblies - Phase II, among the following partners:

- Canadian Wood Council
- Canadian Home Builders Association
- Canadian Sheet Steel Building Institute
- Gypsum Manufacturers of Canada
- Owens-Corning Canada
- Roxul Inc.
- Institute for Research in Construction

The National Research Council of Canada appreciates the technical and financial contributions of these partners in this research.

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INTRODUCTION

General

In 1994, the National Research Council of Canada (NRC), Institute for Research in Construction, in partnership with a number of industry and government partners, completed a research study to quantify the sound transmission class and fire resistance ratings for gypsum board protected, wood stud and steel stud wall assemblies. The results of that study provided the basis for updating the fire resistance and sound insulation ratings in the 1995 edition of the National Building Code of Canada (NBCC), Table A-9.10.3.1. [1].

Table A-9.10.3.1 contains little or no information on certain wall assemblies, such as load-bearing steel stud walls and walls with shear bracing, since these were not part of the earlier study. Several parties suggested that the earlier research project be extended to include such wall assemblies. As a result, this current project commenced in 1995 with the objective of determining the fire resistance and sound transmission performance of gypsum board protected, wood and steel stud load-bearing wall assemblies and focused on three main areas:

1. The fire and sound resistance of gypsum board protected, loadbearing, steel stud wall assemblies.
2. The impact of using shear panels, or bracing, in combination with gypsum board, on the fire resistance and sound transmission performance of load-bearing, wood and steel stud walls.
3. The fire resistance and sound transmission performance of new products that were not part of the earlier study.

This report addresses only the fire resistance of wood stud shear walls portion of the project.

Background

As a result of a number of recent earthquakes and wind storms in North America, Japan and other parts of the world, there has been an increased focus on the design of buildings to resist lateral movement when exposed to high winds or earthquakes. In the case of buildings using wood frame construction, shear walls are often incorporated into the building design to resist these loads.

In residential buildings, these shear walls typically also form the critical boundaries between suites or between suites and corridors. Consequently, they are also required to meet fire resistance and sound transmission performance requirements. In the first NRC partnership project, shear wall systems, which incorporated wood-based panels in combination with gypsum board, were tested for sound transmission only. Information on the fire performance of such assemblies was not generated. As a result, there are limited references to shear wall designs in the new NBCC tabulated data on fire and sound ratings for wood stud walls.

The intent of the present study is to determine the impact of using wood-based structural panels, in combination with gypsum board, on the fire resistance rating and sound transmission rating of walls. Systems tested would be replicates of wall assemblies tested under the first phase of the project, but would include plywood and oriented strand board (OSB) sheathing in addition to gypsum board.

This report presents the results of 10 full-scale fire tests conducted at NRC's National Fire Laboratory. The average temperature distribution on the unexposed surface of each wall as well as on interior surfaces and the deflections for the loaded wall assemblies are presented.

DESCRIPTION OF TEST ASSEMBLIES

Ten full-scale wood stud shear wall assemblies were tested in a specifically-built furnace for conducting full-scale loaded/unloaded wall fire tests. The full-scale test furnace is shown in Figure 1. The details of the assemblies are given in Table 1.

Dimensions

The wood stud shear wall assemblies were 3048 mm high by 3658 mm wide with various depths depending on the number of layers of gypsum board/shear wall material. The specific dimensions of each assembly are given in Figures 2 to 5.

Materials

The materials used in the wall assemblies are described in the following sections.

Gypsum Board

Type X gypsum board (Westroc "Fireboard" C/Type X), conforming to the requirements of CAN/CSA-A82.27-M91 [2], was used. The thickness of this Type X gypsum board was 12.7 mm.

Framing Materials

The wood studs used were nominal 2x4's (SPF No. 2, S-Dry, 38 mm thick by 89 mm deep) and conformed to CSA 0141-1970 [3]. The wood studs were supplied by Forintek Canada Corp.

Shear Wall

Two types of shear wall panels were used: Plywood (12.5 mm thick, CSP Weldwood, COFI Exterior sheathing with an average mass per unit area of 5.96 kg/m²) and OSB (12.5 thick mm Weyerhaeuser Sturdy-Wood Structural Panels with a mass per unit area of 8.08 kg/m²). The shear wall panels were supplied by Forintek Canada Corp.

Insulation

Two types of insulation were used: Glass Fibre-R12 (supplied by Owens-Corning Canada, Willowdale, Ontario with a mass per unit area of 1.08 kg/m²), Rock Fibre (supplied by Roxul Inc., Milton, Ontario with a mass per unit area of 1.11 kg/m²). Both insulations satisfy CSA-A101 [4].

Resilient Channels

The resilient channels used in assembly F-24 consisted of sections of 0.18 mm thick galvanized steel. These channels consisted of a 34 mm web and one flattened 18-mm flange lip. The flange between the web and flattened lip was perforated with 36 mm wide oblong holes. Installation details of the resilient channels are shown in Figure 6.

Fabrication

The full-scale assemblies were constructed in accordance with CAN/CSA-A82.31-M91 [5]. Details on the assemblies are presented in Table 1.

Wood Stud Assemblies

The wood studs were spaced at 400 mm O.C. for all assemblies. Prior to the assembly being constructed, the wood studs were conditioned at room temperature (22°C) with a relative humidity of 50%. Studs were removed from the conditioning room only when ready to be used in construction. The average moisture content of the wood studs was 12%.

In single layer (1x1) wall assemblies, one layer of 12.7 mm thick Type X gypsum board was attached vertically to the wood studs on both the exposed and unexposed sides with Type S drywall screws, 41 mm long, and spaced at 400 mm O.C. along the edges and in the field of the board. Screw locations and gypsum board joints are shown in Figure 7. The screw heads on both the exposed and unexposed faces were covered with joint compound. The gypsum board joints were finished with fibre tape and covered with joint compound.

In asymmetrical (1x2) wall assemblies, the exposed side had one gypsum board layer (installed as per above) and the unexposed side had one gypsum board layer as a face layer and the shear wall panels (CSP or OSB) as the base layer. The base layer shear panels on the unexposed side were attached to the wood studs with 76.2 mm non-galvanized common nails spaced at 150 mm O.C. on the panel edges and 300 mm O.C. in the field of the panels. The face layer gypsum board on the unexposed side was attached to the shear wall panels and the studs with 41 mm long Type S drywall screws spaced at 400 mm O.C. along the edges and in the field of the gypsum board. Screw locations and gypsum board joints are shown in Figures 8 to 10 [3]. Screw heads on both the exposed and unexposed faces were covered with joint compound. Gypsum board joints were also taped and covered with joint compound. Similar construction practices were used for the other asymmetrical installation (2x1) assemblies with wood studs spaced at 400 mm O.C. as shown in Figures 11, 12 and 13.

Insulation

Rock and glass fibre batts were 89 mm thick by 381 mm wide and 1194 mm long.

Resilient Channel Installation

The resilient channels were attached to the wood studs, with 25 mm long, self-drilling, self-tapping steel screws spaced at 300 mm O.C. in Assembly F-24. The gypsum board was attached to the channels with 25 mm long, Type S drywall, steel screws spaced at 300 mm O.C. Eight rows of channels were installed horizontally, perpendicular to the studs, at 400 mm O.C. using similar construction practices to those specified in ULC

Assembly U-311 [6]. The gypsum board was oriented horizontally and applied to the resilient channels with two horizontal joints, 3658 mm long, and a vertical unprotected joint, 1219 mm long.

Instrumentation

Type K (20 gauge) chromel-alumel thermocouples, with a thickness of 0.91 mm, were used for measuring temperatures at a number of locations throughout an assembly. Inside the cavities, the thermocouples were attached to 6 wire hangers installed midway between the studs and at mid-depth of the studs at distances of 1/4 and 3/4 of the height of the wall. By providing tension to the hanger wire, the thermocouples were positioned flush with the surface of the gypsum board and shear membrane base layer.

Thermocouples located on the stud/base layer faces and those located between the base and face layers were taped into position and then the gypsum board or shear panel was screwed to the stud or the face gypsum board layer.

A number of small holes, 12.7 mm in diameter, were drilled through the wood stud assemblies at the bottom to allow the thermocouple wiring to exit the assembly.

Thermocouple locations are shown for each assembly in Figures 2 to 5. Thermocouple locations on the unexposed surface of the wall assemblies are shown in Figure 14.

The deflection at the unexposed surface was measured at different locations as shown in Figure 15 using the electro-mechanical method described in Reference [7].

Loading System

The loading device used in this study is illustrated in Figure 1. Details on this device are presented in Reference [8]. The components of this device are a strong steel frame, in which the wall assembly is placed, and 8 hydraulic jacks fitted at the top to simulate vertical structural loads. The applied loading on the wall assemblies used in this study is presented in Table 1. The load calculations were prepared by the Canadian Wood Council [9].

TEST CONDITIONS AND PROCEDURES

Test Procedure

The tests were carried out by exposing the assemblies to heat in a propane-fired vertical furnace as shown in Figure 1. The assemblies were sealed at the edges against the furnace using ceramic fibre blankets. The furnace temperature was measured by nine (20 gauge) shielded thermocouples in accordance with CAN/ULC-S101-M89 [10]. The average of the nine thermocouple temperatures was used to control the furnace temperature.

Fire Exposure

The ambient temperature at the start of each test was approximately 22°C. During the test, the wall assembly was exposed to heating on the exposed side, in such a way that the average temperature in the furnace followed, as closely as possible, the CAN/ULC-S101 [10] standard temperature-time curve.

Failure Criteria

The failure criteria were derived from CAN/ULC-S101-M89 [10]. The assembly was considered to have failed if a single point thermocouple temperature reading on the unexposed face rose 180°C above ambient or the average temperature of the 9 thermocouple readings under the insulated pads on the unexposed face (see Figure 14) rose 140°C above the ambient temperature or there was passage of flame or gases hot enough to ignite cotton waste. The test assembly was also deemed to have structurally failed if there was excessive (>150 mm) deflection.

Recording of Results

The furnace and wall assembly temperatures, as well as the deflections, were recorded at 1 minute intervals using Labtech Notebook data acquisition software and a Fluke Helios-I data acquisition system. The gauge pressure of the loading system was also recorded at 1 minute intervals.

RESULTS AND DISCUSSION

The results of the 10 full-scale fire resistance tests are summarized in Table 1 in which the failure times and mode of failure are given for each assembly. A summary of the cross-sectional sketches of the wall assemblies is given in Figure 16. The effects of different parameters on the fire resistance of load-bearing gypsum board protected wood stud shear wall assemblies are shown in Figures 17-20 and are discussed below. All wall assemblies in this portion of the project failed structurally through excessive deflection. For all wall assemblies, the unexposed surface temperature at the time of structural failure was below the temperature failure criteria.

The temperature distribution at the various locations in the assemblies, as well as on the unexposed surfaces, is plotted in Figures 21-30, while the measured deflections are plotted in Figures 31-40. The exact location of the thermocouples and deflection gauges can be found in Figures 14 and 15, respectively. Results and tabular data for each test are presented in the following table.

Test	Single Location Temperature Tables	Average Surface Temperature Tables	Deflection Measurement Tables
F-19	2	3	22
F-20	4	5	23
F-21	6	7	24
F-21A	8	9	25
F-22	10	11	26
F-22A	12	13	27
F-23	14	15	28
F-23A	16	17	29
F-23B	18	19	30
F-24	20	21	31

Effect of Shear Membrane

Tests F-23B, F-21 and F-19 were conducted to determine the influence of a shear membrane (plywood) on the fire resistance rating of load-bearing wood stud shear wall

assemblies (see Figure 16). The structural failure criterion was reached at 36, 42 and 48 minutes for Assemblies F-23B, F-21 and F-19, respectively (Figure 17). The results show that the addition of a shear membrane in a 1x1 wall assembly increases the fire resistance, with a maximum increase occurring when the shear membrane is placed on the exposed side of the assembly.

Effect of Shear Membrane Location

In order to determine the effect of the shear membrane location on the fire resistance rating, two tests, F-19 and F-21 were carried out with the shear membrane (plywood) on the exposed and the unexposed side of the assembly, respectively. The fire resistance rating for the wall assembly with the shear panel on the exposed side was 48 minutes while the assembly with the shear panel on the unexposed side was 42 minutes as shown in Figure 17. From these results, it can be inferred that the fire resistance rating of a shear wall is higher when the fire exposure is on the same side as the shear membrane.

Effect of Shear Membrane Type

To investigate the effect of the type of shear membrane on fire resistance, Tests F-19 and F-20 were conducted with OSB and plywood as shear membranes on the fire-exposed side of the wall (see Figure 16). The fire resistance rating obtained for the shear wall assembly with plywood was 48 minutes while the assembly with OSB was 47 minutes. As shown in Figure 18, these results indicate that the type of shear membrane material does not significantly influence the fire resistance performance of the assembly.

Effect of Insulation Type

Tests F-21 and F-22A were conducted to investigate the effect of insulation type on the fire resistance of load-bearing wood stud shear walls (see Figure 16). The failure of the glass fibre insulated wall assembly (F-21A) occurred at 42 minutes while the failure of the rock fibre insulated assembly occurred at 54 minutes. As shown in Figure 19, these results suggest that the use of rock fibre insulation provides a higher fire resistance compared to glass fibre insulation.

Effect of Resilient Channels

Tests F-21 and F-24 were conducted to investigate the effect of resilient channels on the fire resistance rating of load-bearing wood stud shear walls (see Figure 16). The failure of the F-21 wall assembly with resilient channels occurred at 37 minutes while in F-24, a wall assembly without resilient channels, the failure occurred at 42 minutes. These results, shown in Figure 20, indicate that, for the assembly with the resilient channels located on the exposed side of the wood stud shear wall, the fire resistance rating decreased by about 12%.

Effect of Load Intensity

During the testing of Assemblies F-22 and F-23, it was found that the applied load on these assemblies was higher than the intended load intensity (see Figure 16). A hydraulic leak had caused incorrect readings from a pressure transducer which was used to measure the gauge pressure applied to the wall furnace loading jacks. The tests on these assemblies were repeated after recalibrating the loading system using 4545 kg load cells and a light steel frame loading assembly. The exact loading in Assemblies F-22 and

F-23 could not be determined, however, the increase in loading, as compared to intended loading, was approximately 15-20%. Assemblies F-22 and F-23, which had an increased load, failed at 43 and 29 minutes, respectively. Assemblies F-22A and F-23B failed at 54 and 34 minutes, respectively. These results indicate that an approximate increase of 15-20% in the design load will lead to an approximate decrease in the fire resistance of approximately 15-20%.

Repeatability

As a measure of the repeatability of the results, tests on Assemblies F-21 and F-23 were repeated (F-21A and F-23B). All the parameters in the assemblies were kept the same as those in Assemblies F-21 and F-23, respectively. Assemblies F-21 and F-23 failed at 42 and 43 minutes, respectively. Assemblies F-23A and F-23B failed at 34 and 36 minutes, respectively. These results indicate that the repeatability of testing full-scale wall assemblies in the NRC furnace is within the tolerance limit of 2 minutes.

CONCLUSIONS

The following points summarize the information presented in this report:

1. For load-bearing gypsum board protected wood stud wall assemblies, the addition of a plywood or an OSB shear membrane increases the fire resistance of the assembly.
2. The maximum increase in the fire resistance of an assembly occurred when the fire exposure was on the same side as the shear membrane.
3. The type of shear membrane (plywood or OSB) does not influence the fire resistance of a load-bearing wood-stud shear wall assembly.
4. For load-bearing wood stud shear walls, the assembly with rock fibre insulation provided a better fire resistance compared to a similar assembly with glass fibre insulation.
5. For load-bearing wood stud shear walls with resilient channels installed on the fire-exposed side, the fire resistance decreases by about 12%.
6. The fire resistance of load-bearing wood stud and wood stud shear walls decreases with increased applied load.

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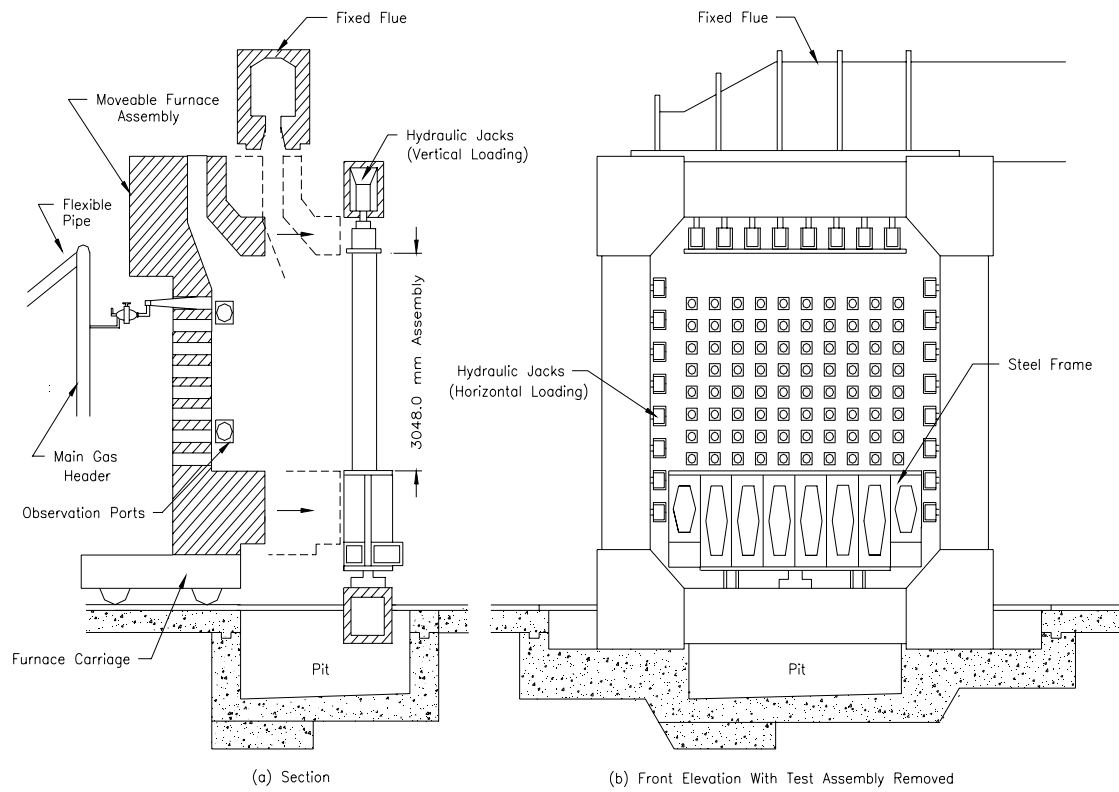


Figure 1 Full-Scale Wall Test Assembly Furnance

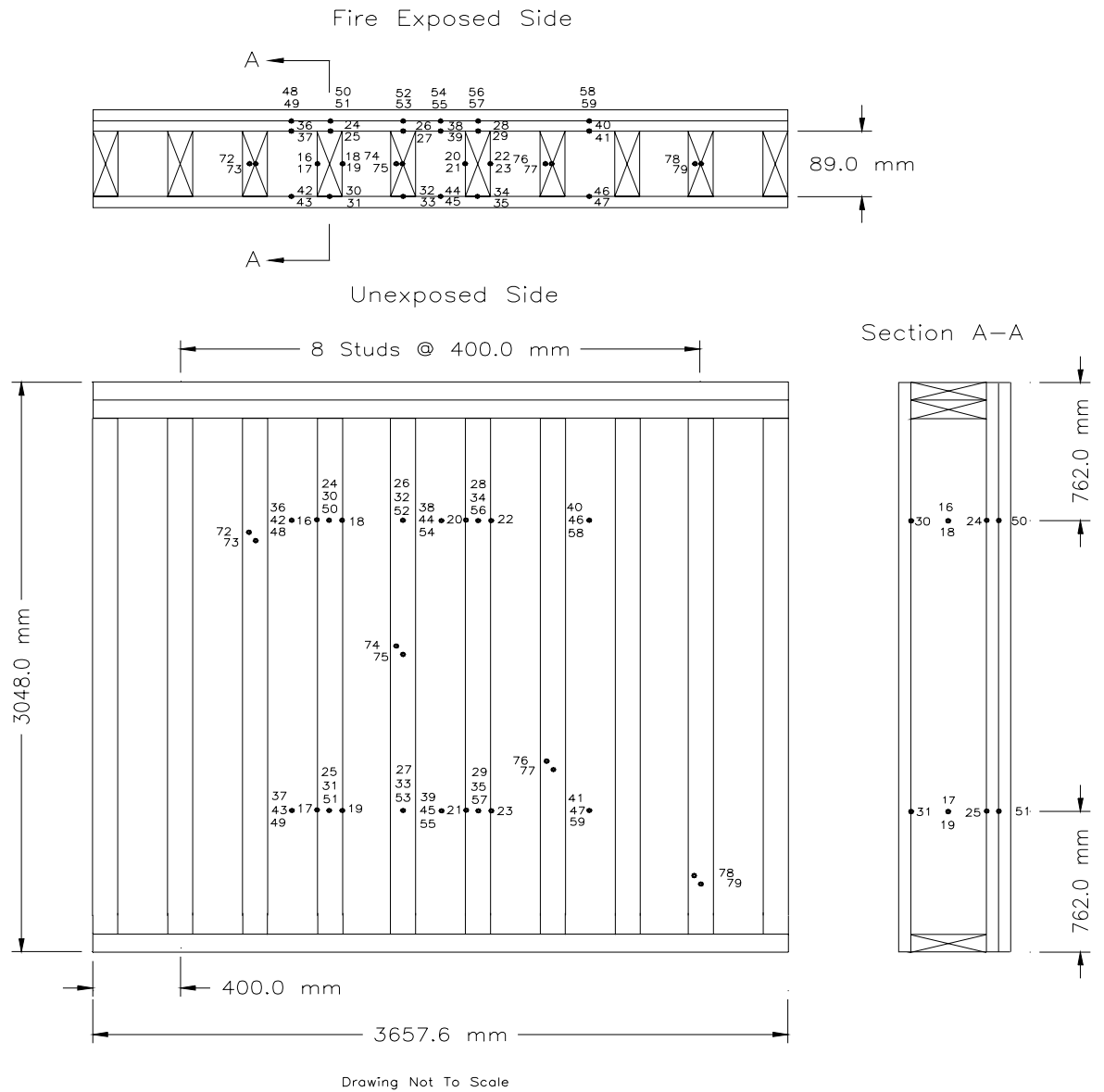


Figure 2. Thermocouple Locations in Wood Stud Wall Assemblies
F-19 and F-20 (Shear Membrane on Fire Exposed Side)

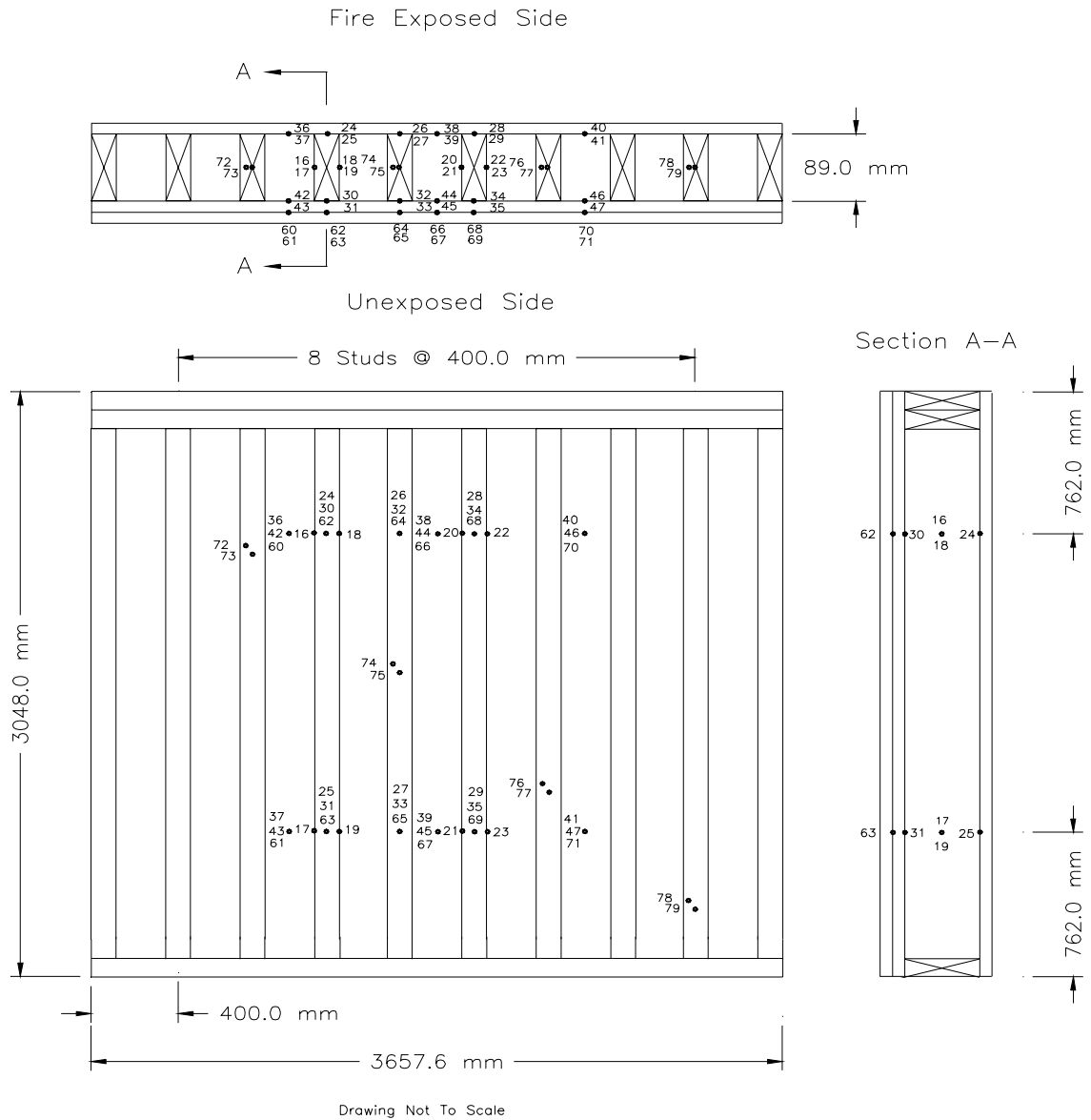


Figure 3. Thermocouple Locations in Wood Stud Wall Assemblies
F21, F21A, F22 and F22A (Shear Membrane on Unexposed Side)

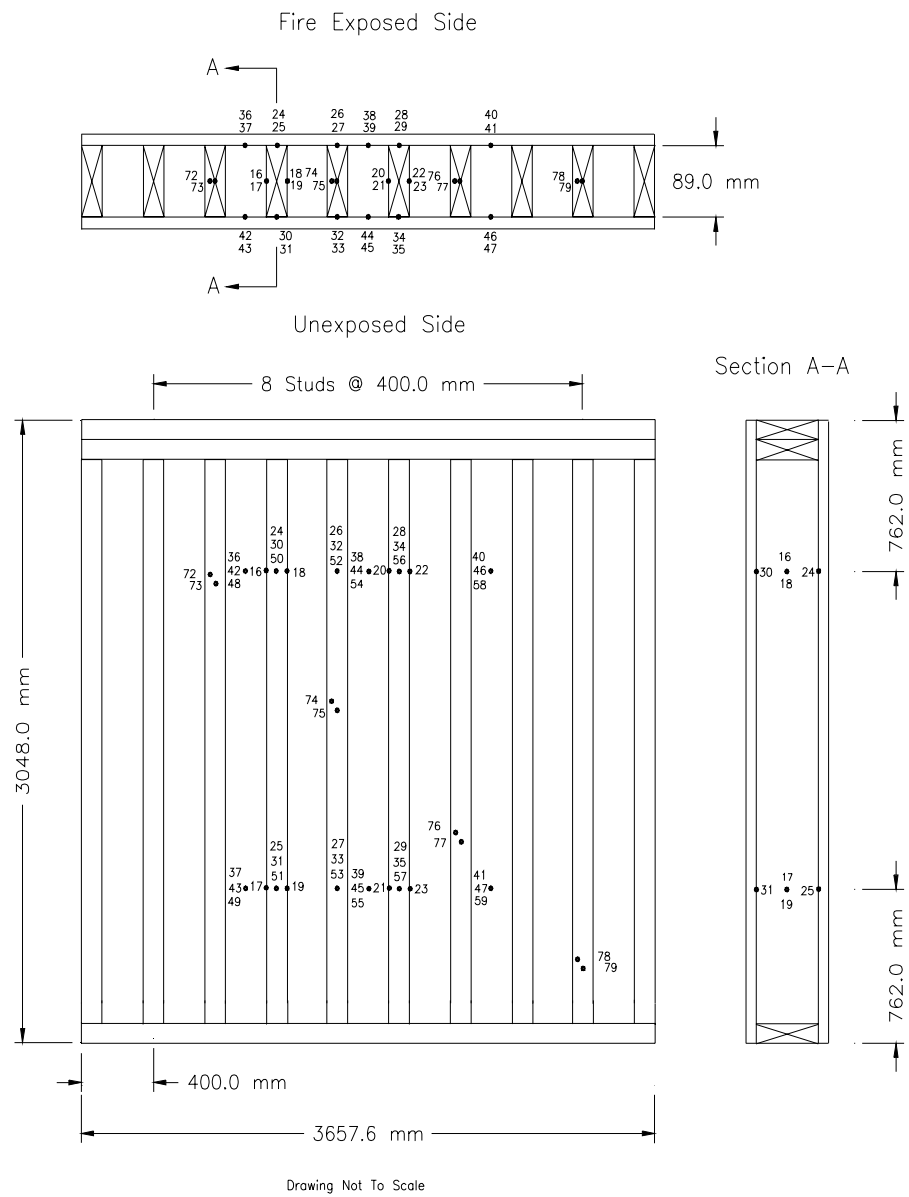


Figure 4. Thermocouple Locations in Wood Wall Assemblies F23, F23A and F23B (No Shear Membrane)

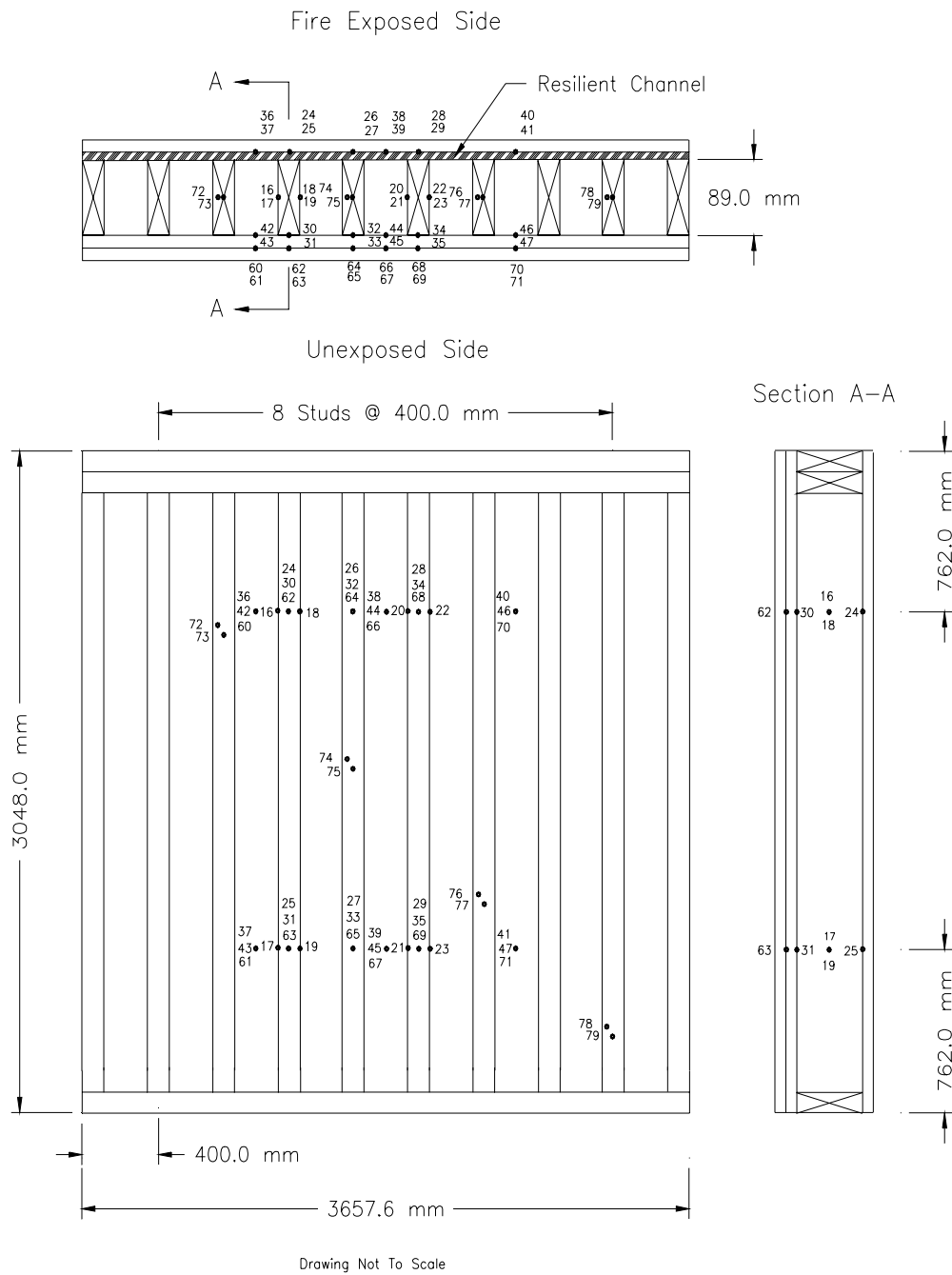
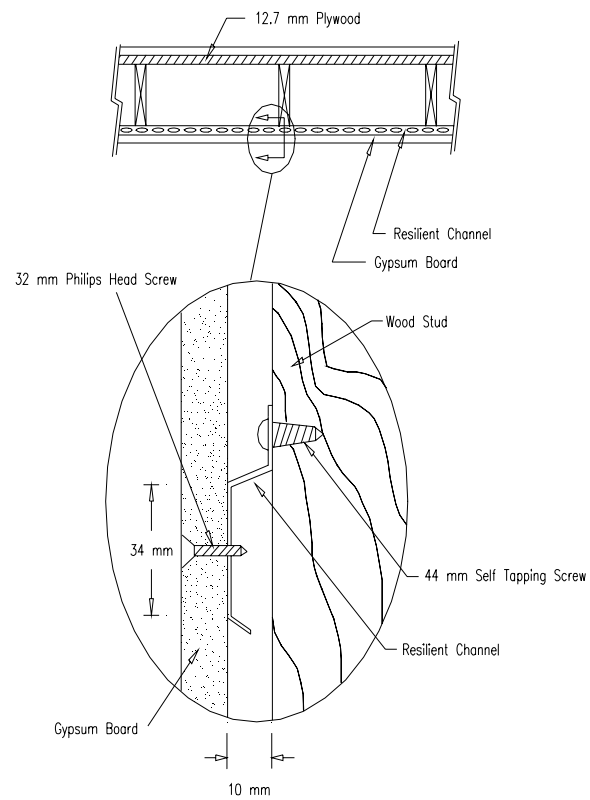


Figure 5. Thermocouple Location in Wood Stud Wall Assembly F24
(Resilient Channels on Fire Exposed Side and Shear Membrane
on Unexposed Side)



Edge View: Resilient Channel

Drawing not to scale

Figure 6. Resilient Channel Installation Detail for Wood Stud Wall Assembly
F-24

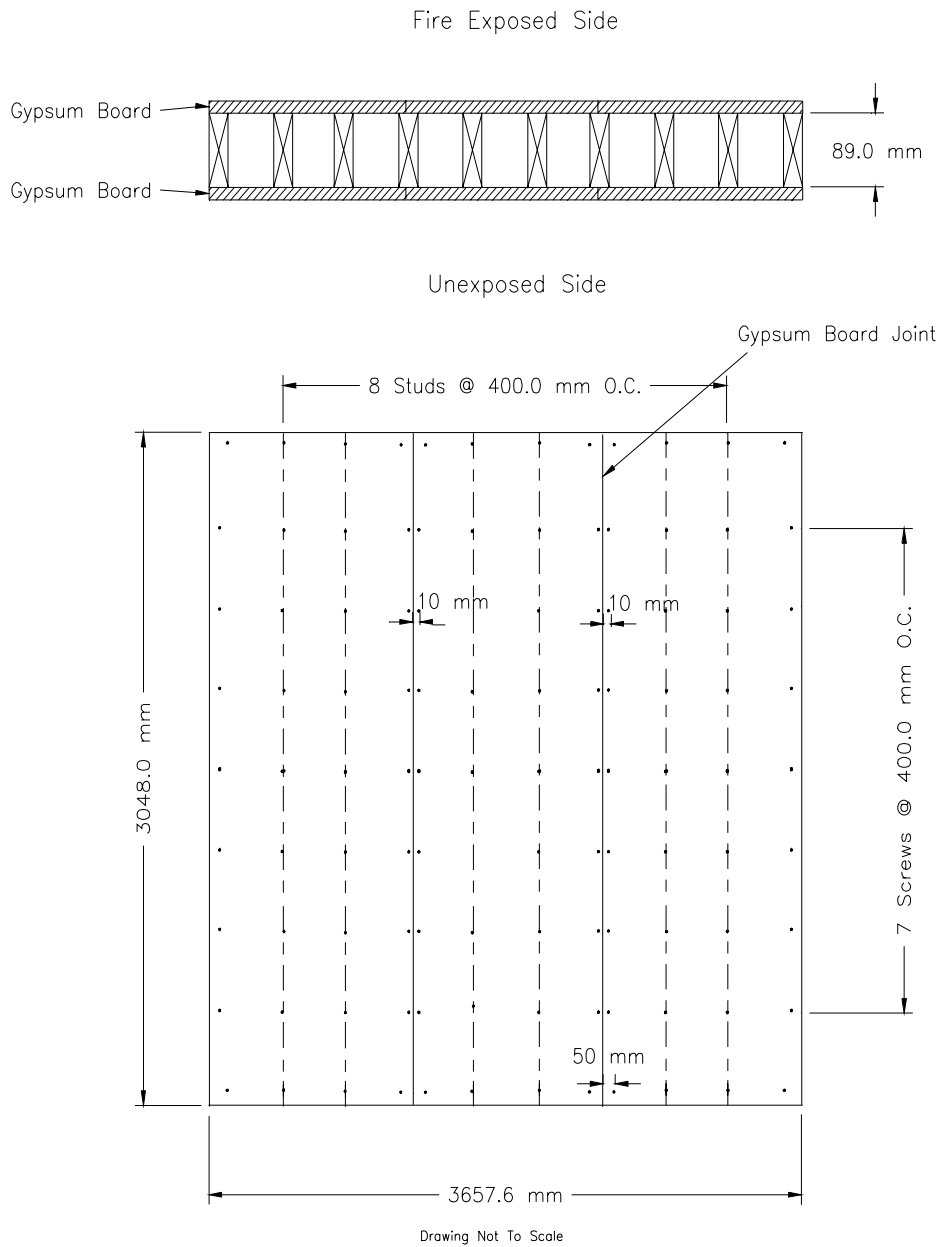


Figure 7. Screw Locations for Wood Stud Wall Assemblies, 1x1 Gypsum Board Layer (F23,F23A and F23B)

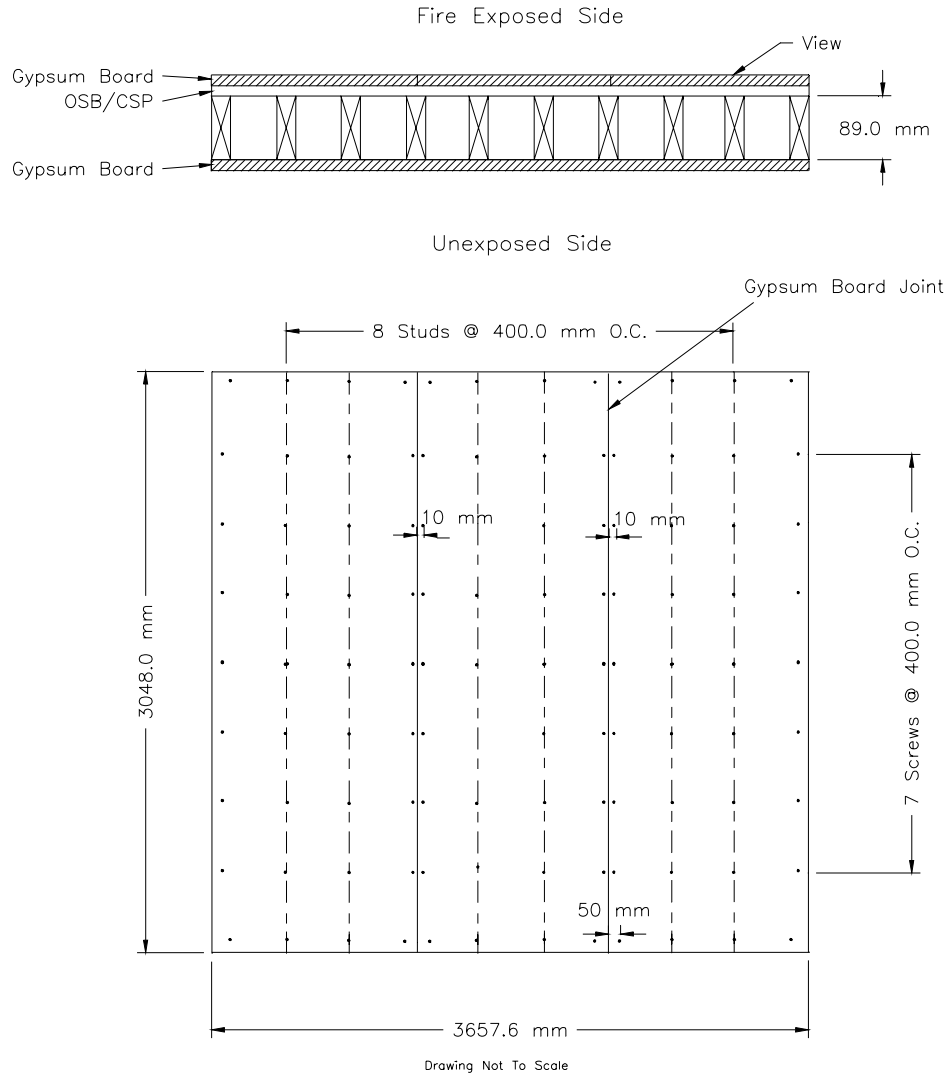


Figure 8. Screw Locations for Wood Stud Wall Assemblies, 2x1 Face Layer Unexposed Side (F19 and F20)

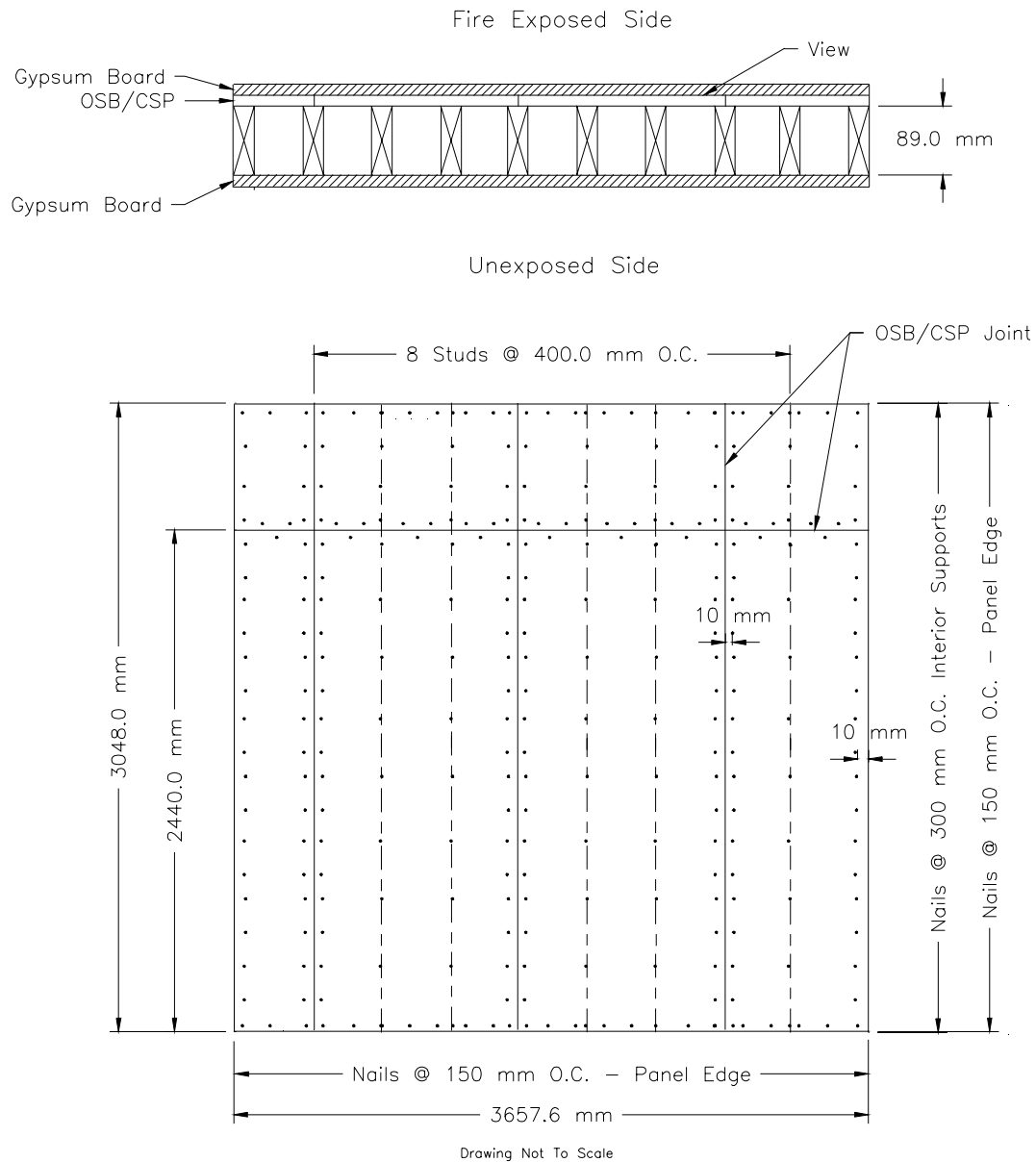


Figure 9. Screw Locations for Wood Stud Wall Assemblies, 2x1 Shear Membrane Layer Fire Exposed Side (F19 and F20)

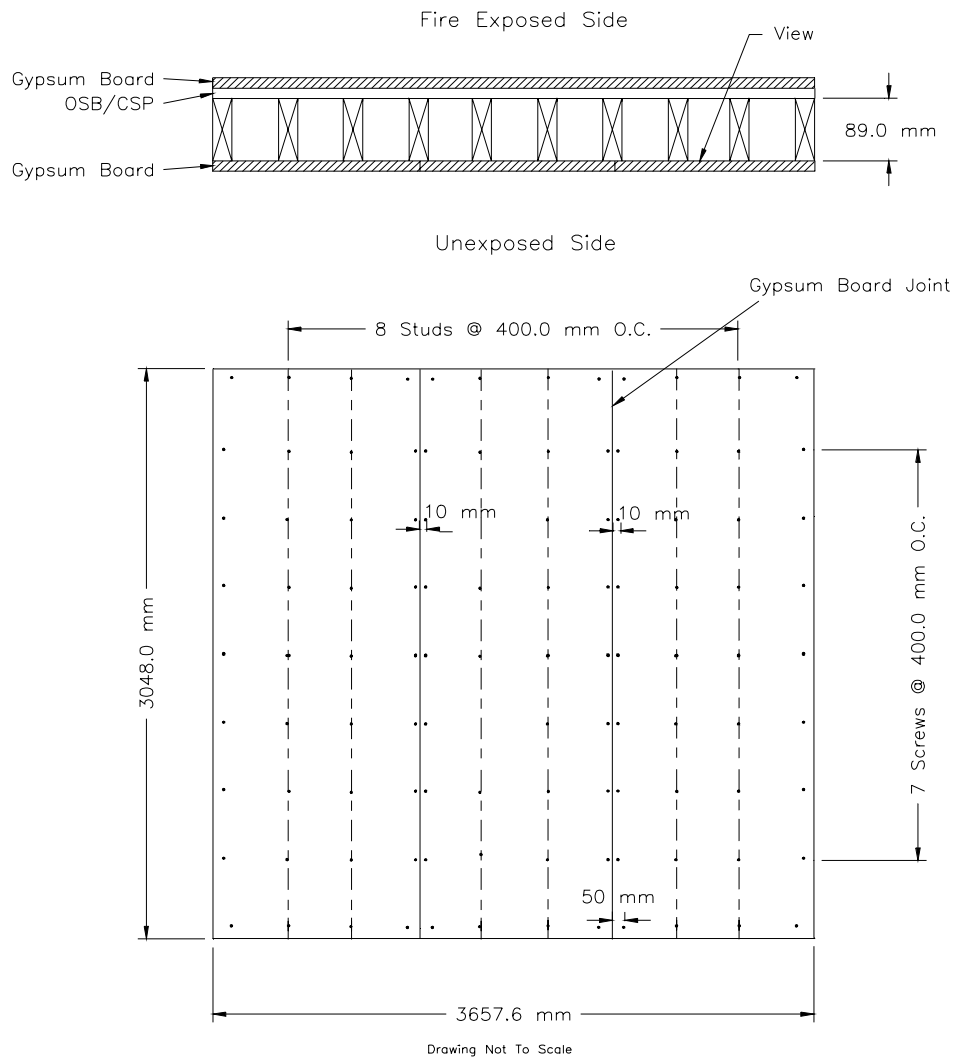


Figure 10. Screw Locations for Wood Stud Wall Assemblies, 2x1 Face Layer Fire Exposed Side (F19 and F20)

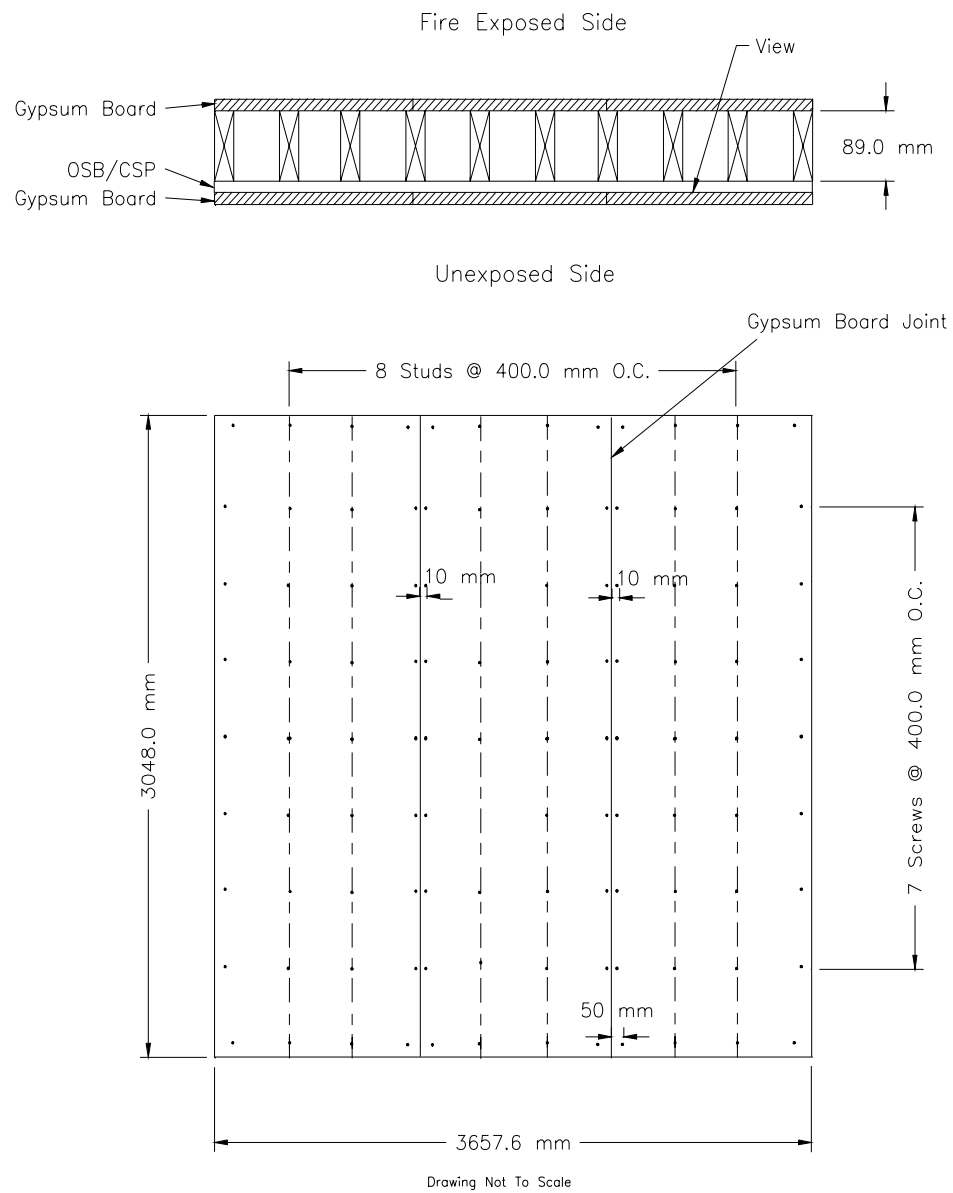


Figure 11. Screw Locations for Wood Stud Wall Assemblies, 1x2 Face Layer Unexposed Side (F21,F21A,F22,F22A and F24)

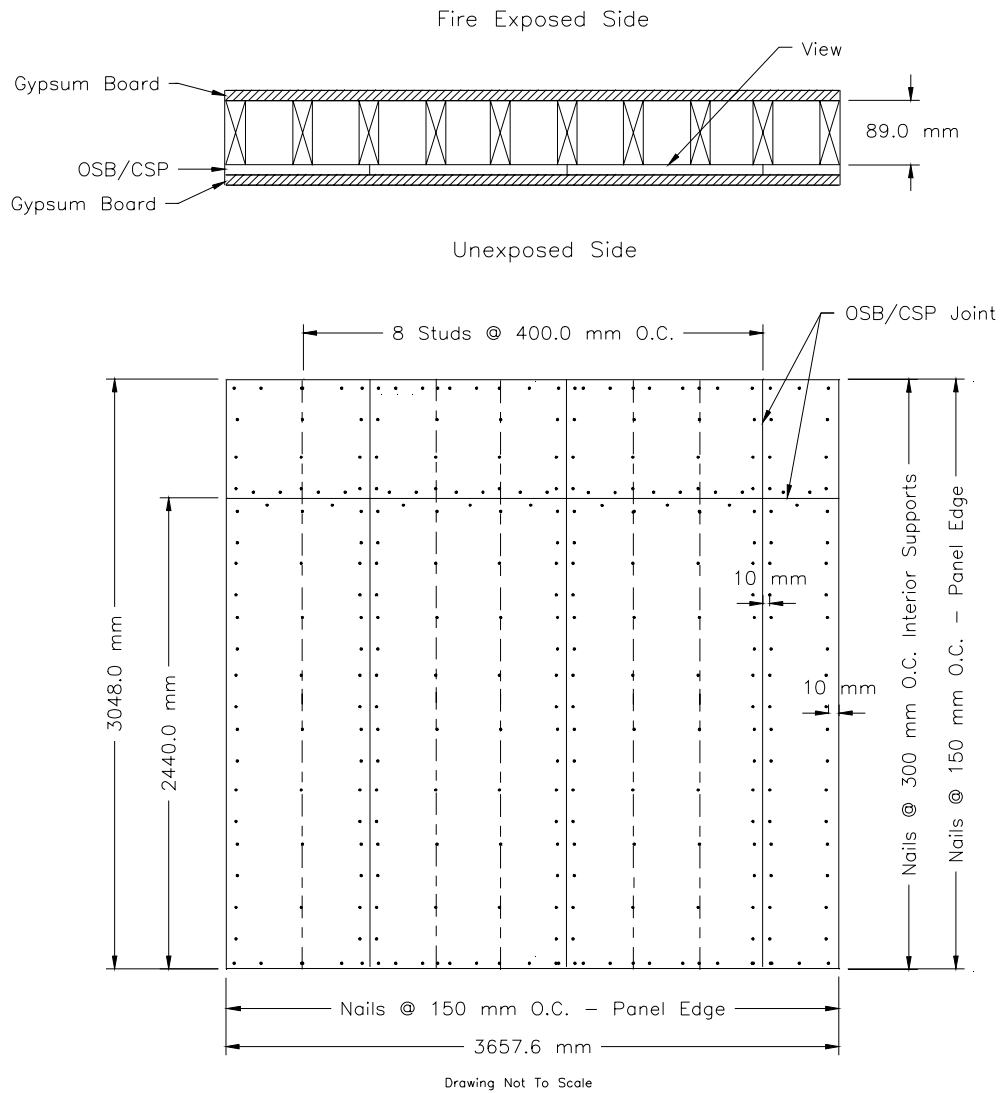


Figure 12. Screw Locations for Wood Stud Wall Assemblies, 1x2 Shear Membrane Layer Unexposed Side (F21, F21A, F22, F22A and F24)

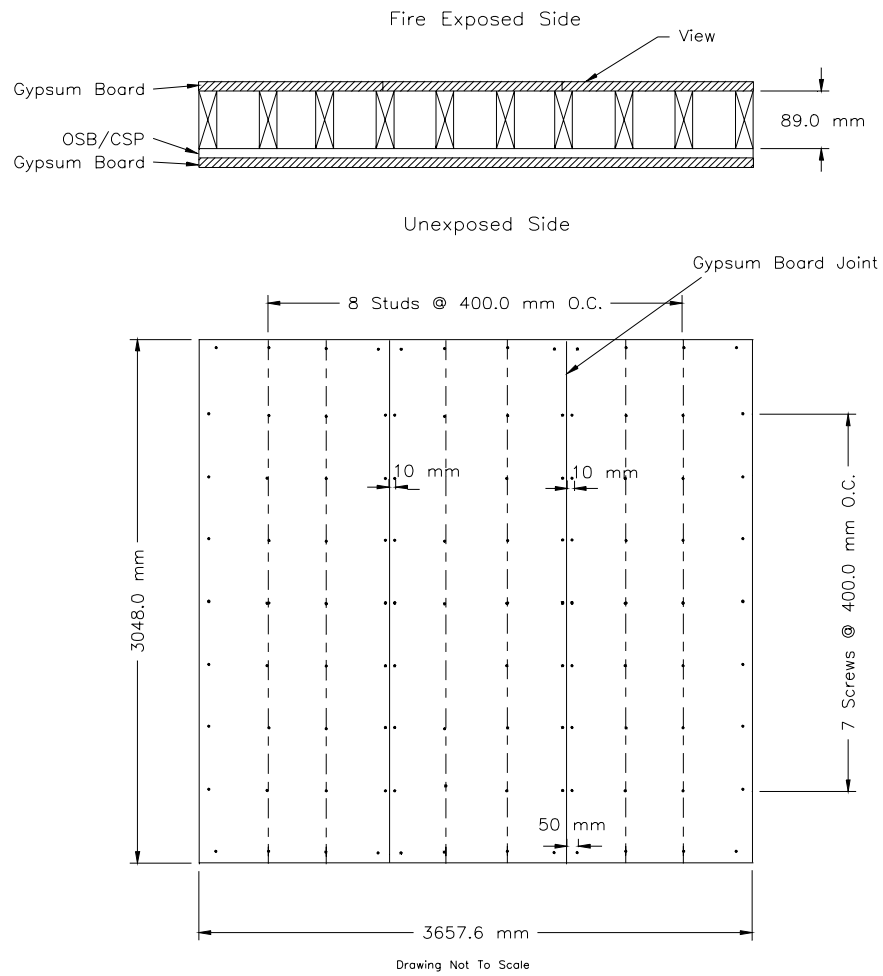
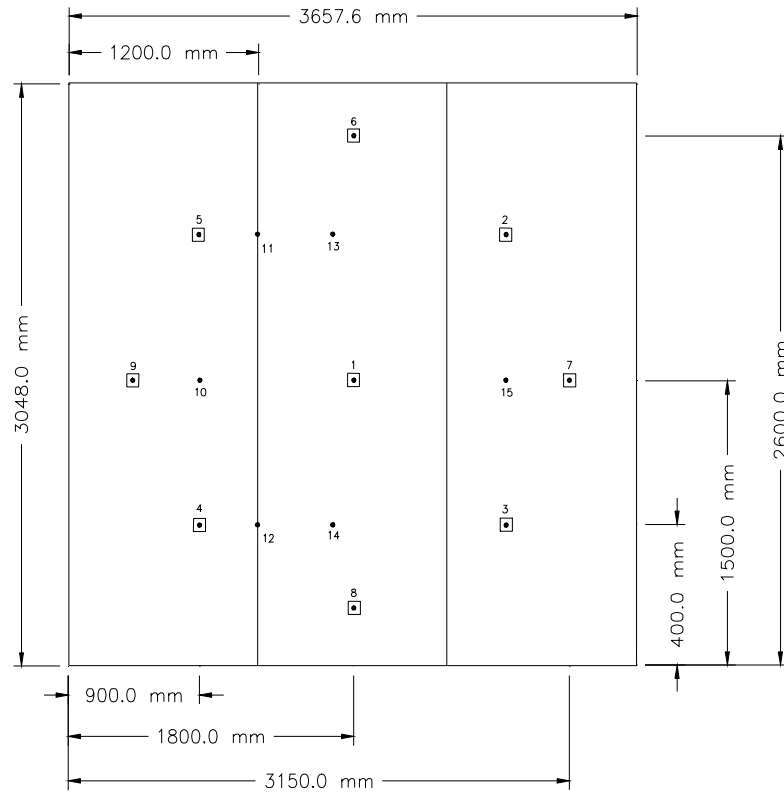


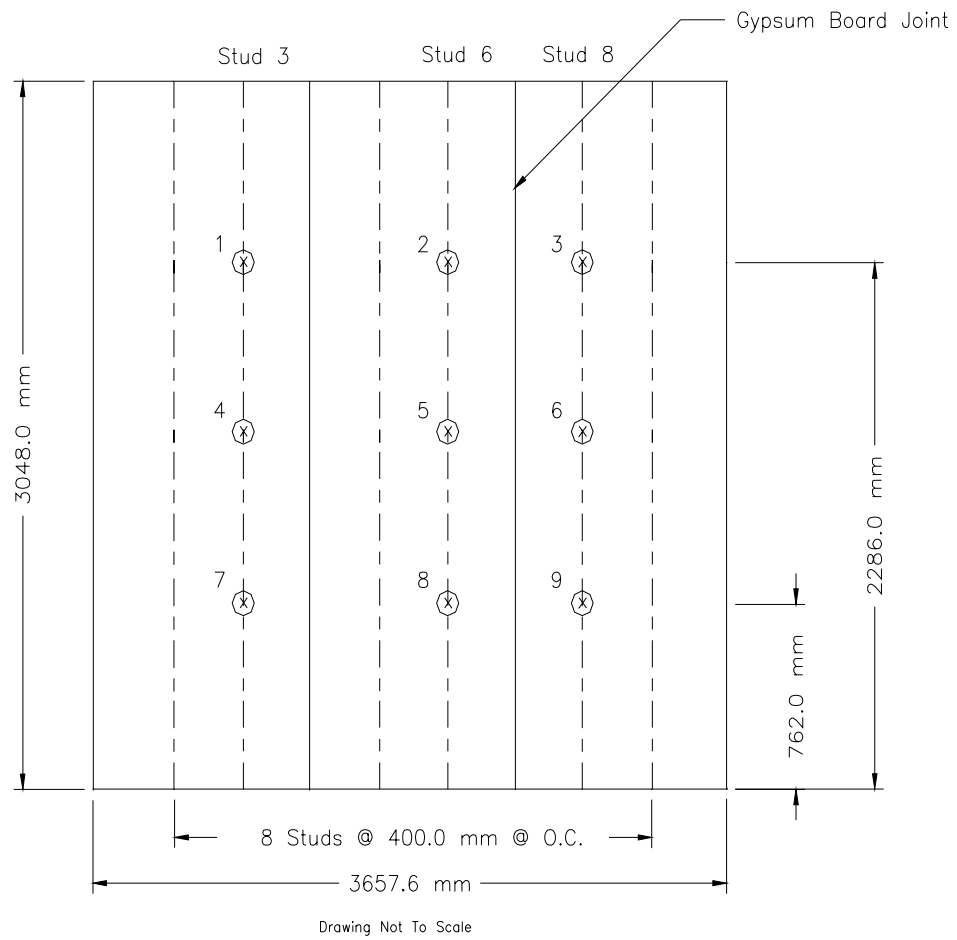
Figure 13. Screw Locations for Wood Stud Wall Assemblies, 1x2 Face Layer Fire Exposed Side (F21, F21A, F22A and F24)



Drawing Not To Scale

- ▣ Thermocouple Under Std. ULC S101 Insulated Pad
- Bare Thermocouple

Figure 14. Thermocouple Locations on Unexposed Surface of Wood Stud Wall Assemblies.



(X) Attachment Point For Measurement of Deflection During Test

Figure 15. Deflection Measurement Locations for Full-Scale Wood Stud Wall Assemblies

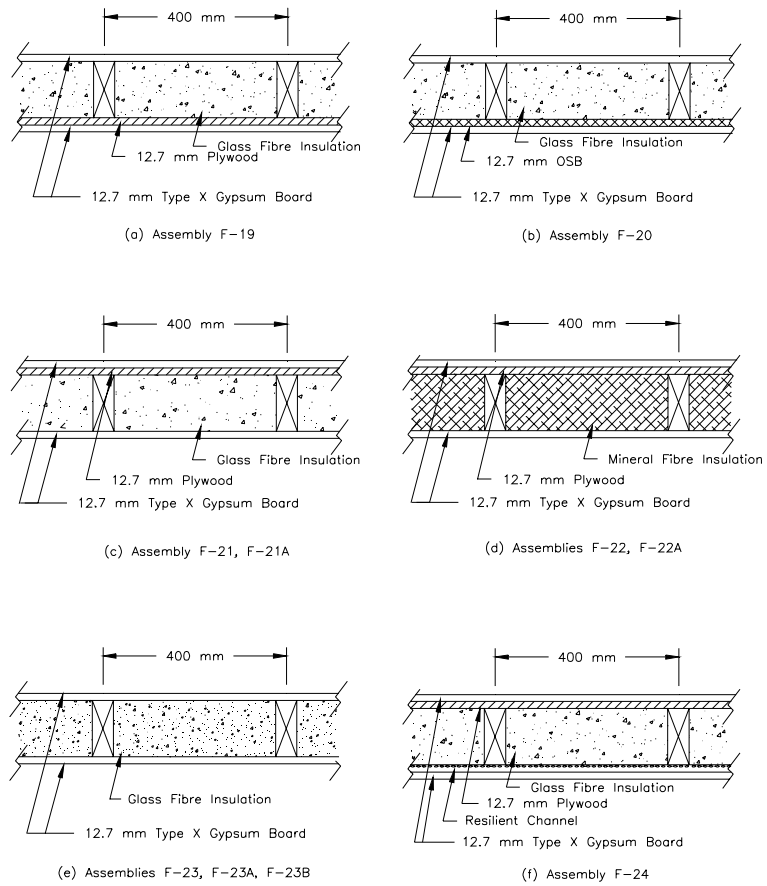


Figure 16. Cross-Sectional Details of Wood Stud Wall Assemblies

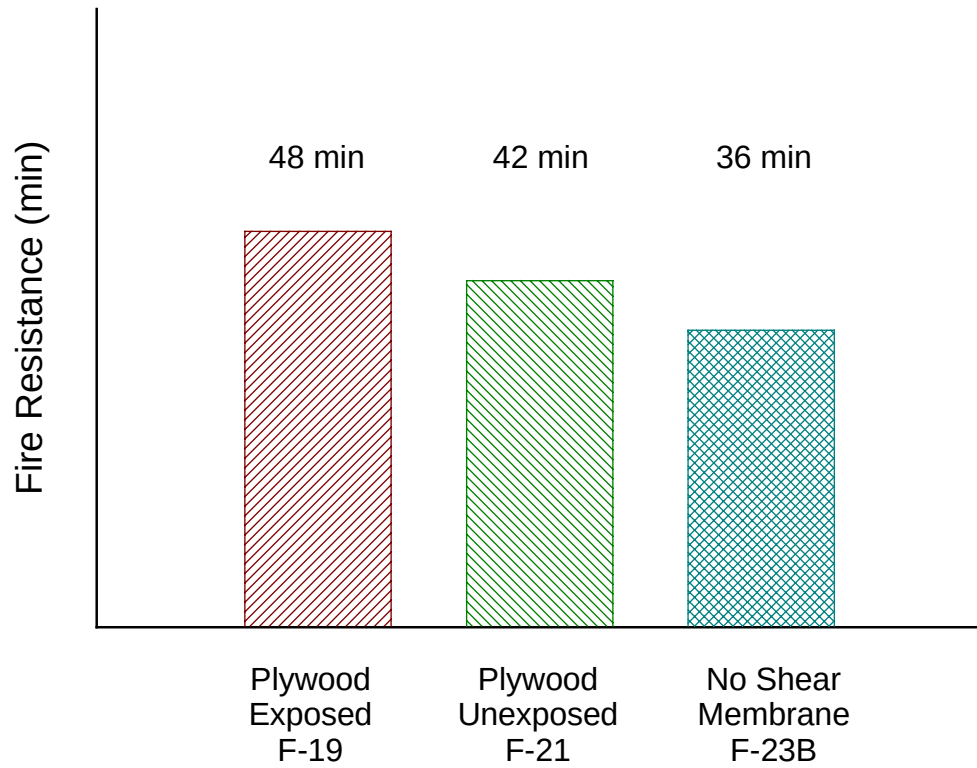


Figure 17. Effect of Shear Membrane and its Location on the Fire Resistance of Loadbearing Wood Stud Shear Wall Assemblies



Figure 18. Effect of Shear Membrane Type on the Fire Resistance of Loadbearing Wood Stud Shear Wall Assemblies

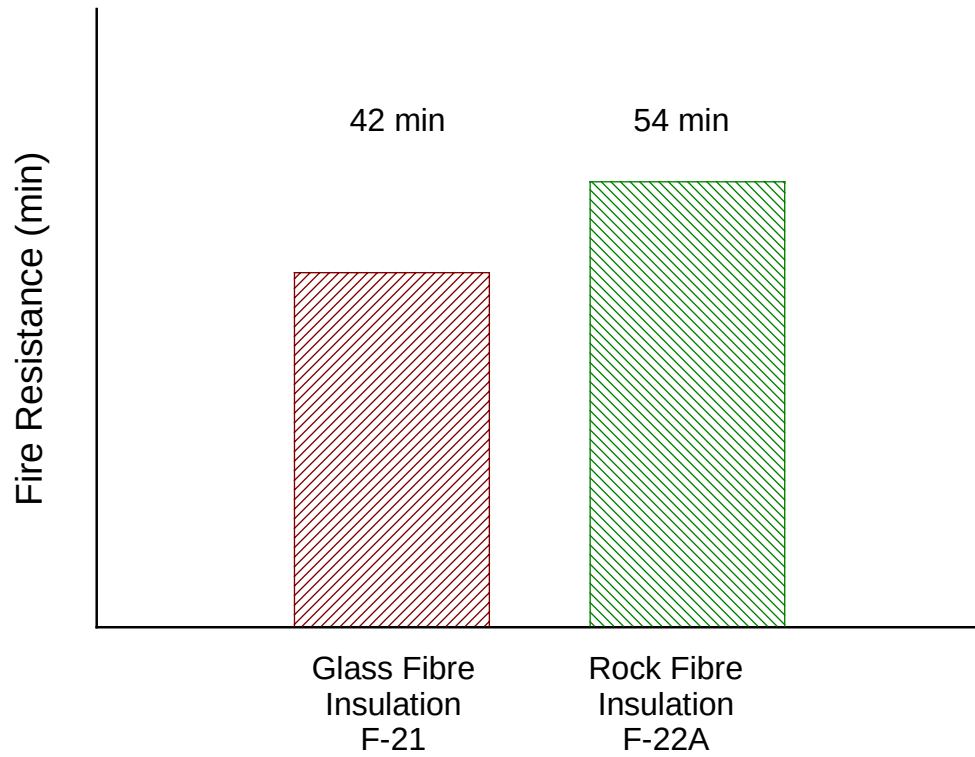


Figure 19. Effect of Insulation Type on the Fire Resistance of Loadbearing Wood Stud Shear Wall Assemblies

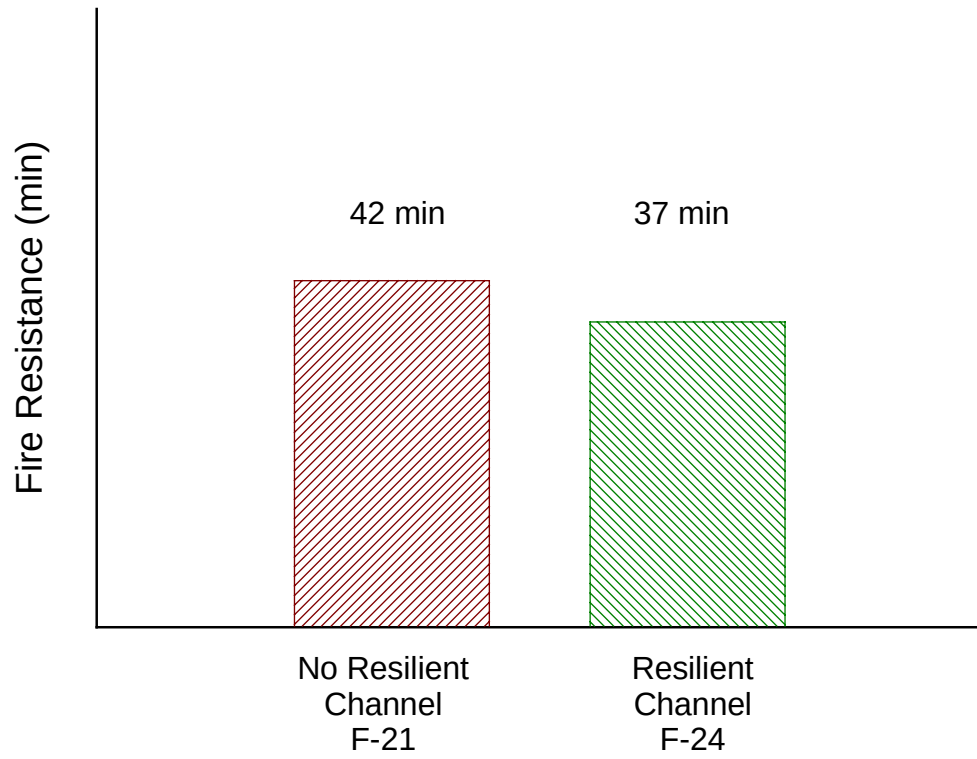


Figure 20. Effect of Resilient Channel on the Fire Resistance of Loadbearing Wood Stud Shear Wall Assemblies

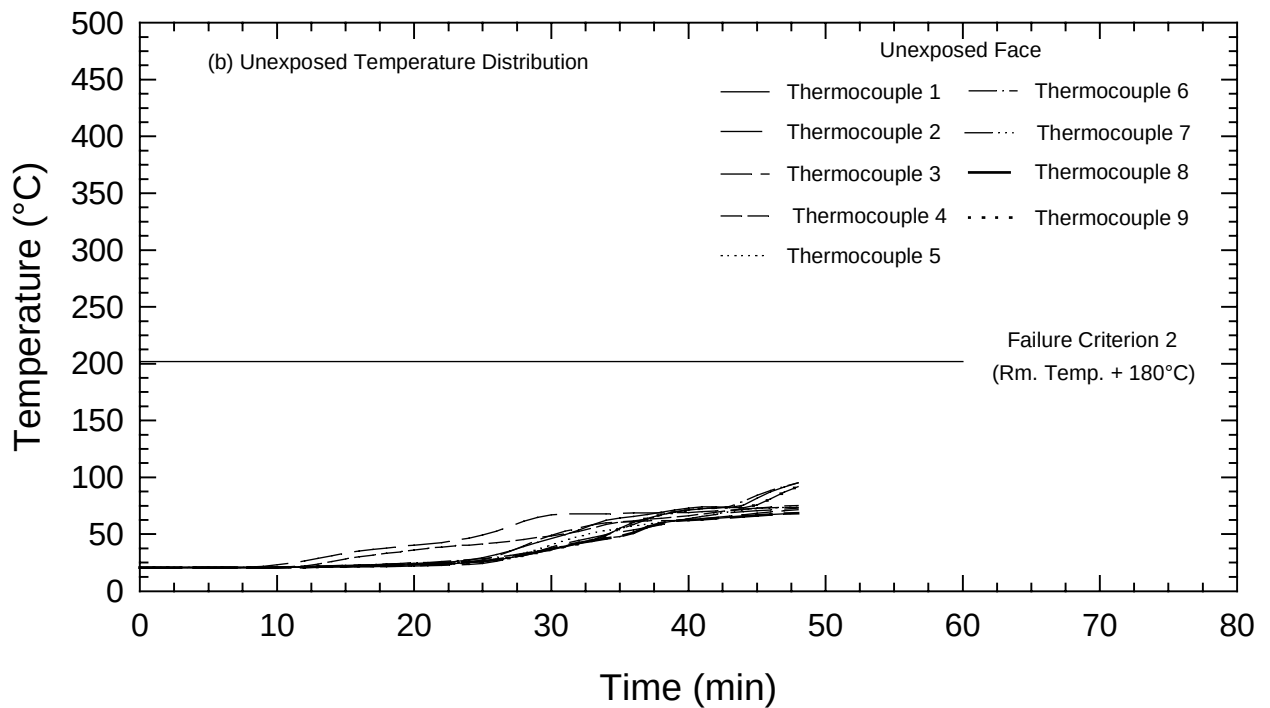
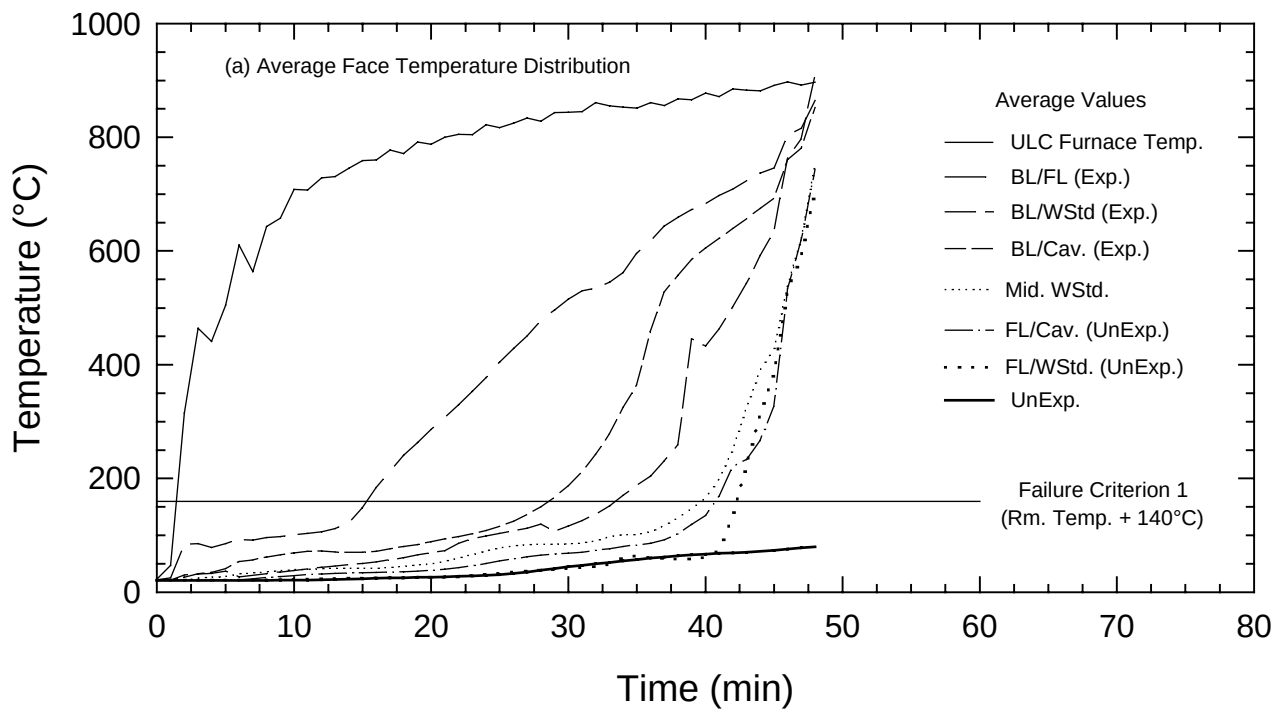


Figure 21. Temperature Distributions in Wood Stud Shear Wall Assembly F19

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

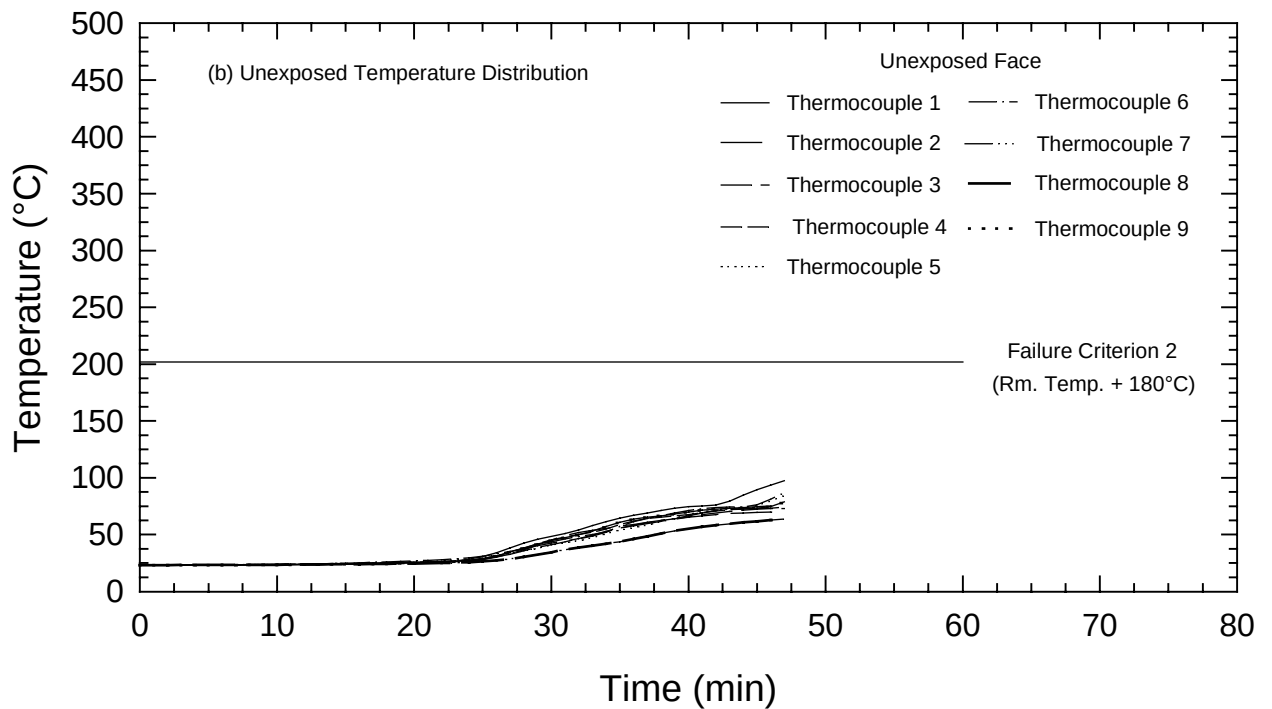
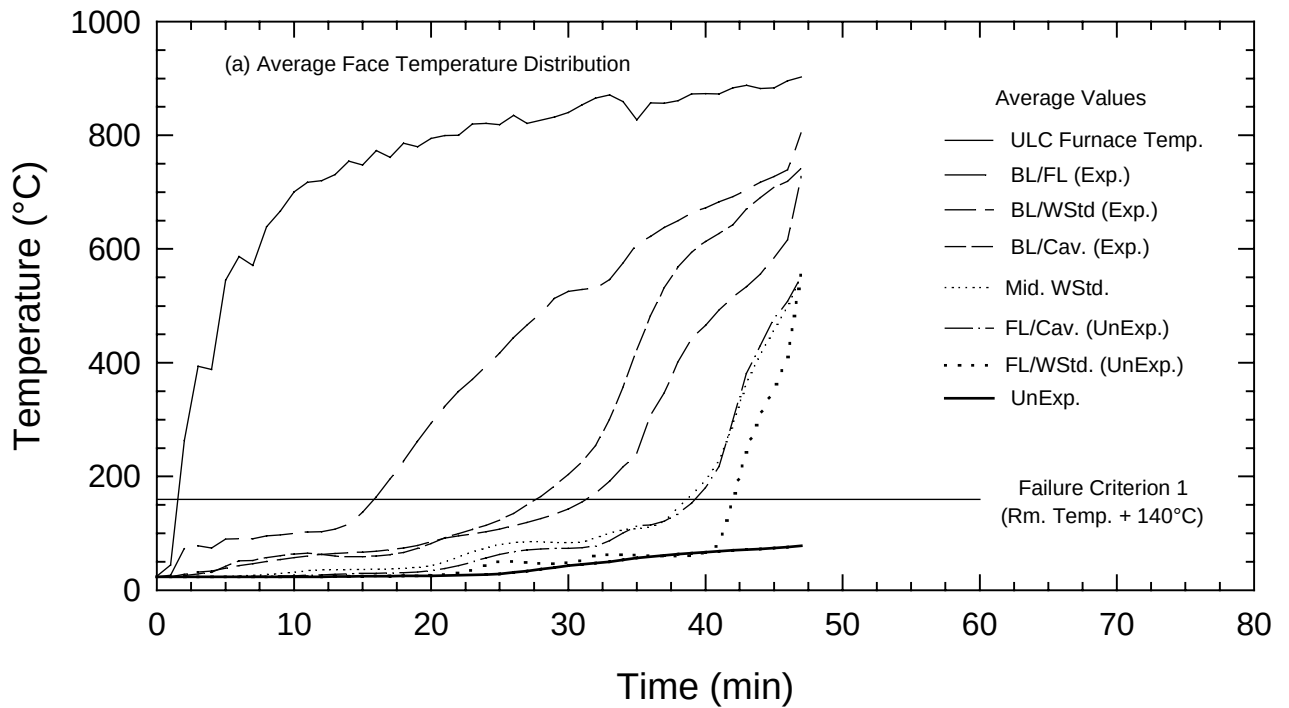


Figure 22. Temperature Distributions in Wood Stud Shear Wall Assembly F20

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

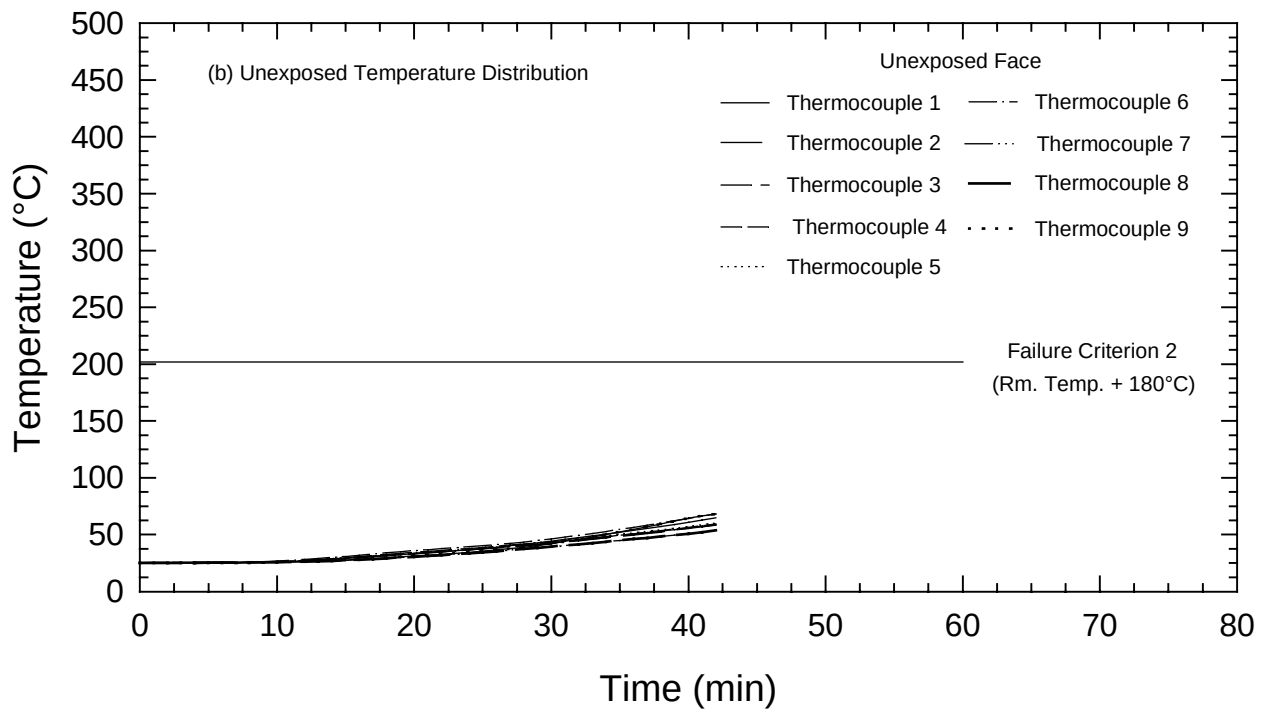
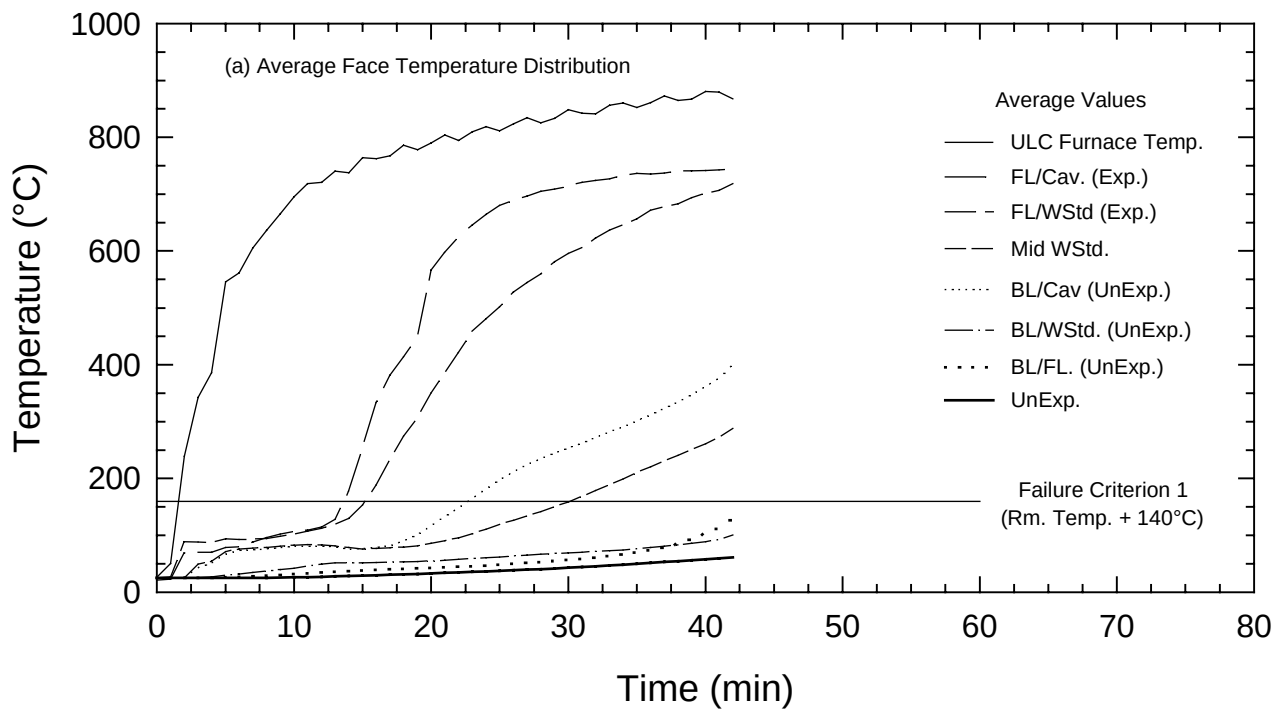


Figure 23. Temperature Distributions in Wood Stud Shear Wall Assembly F21

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
 FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

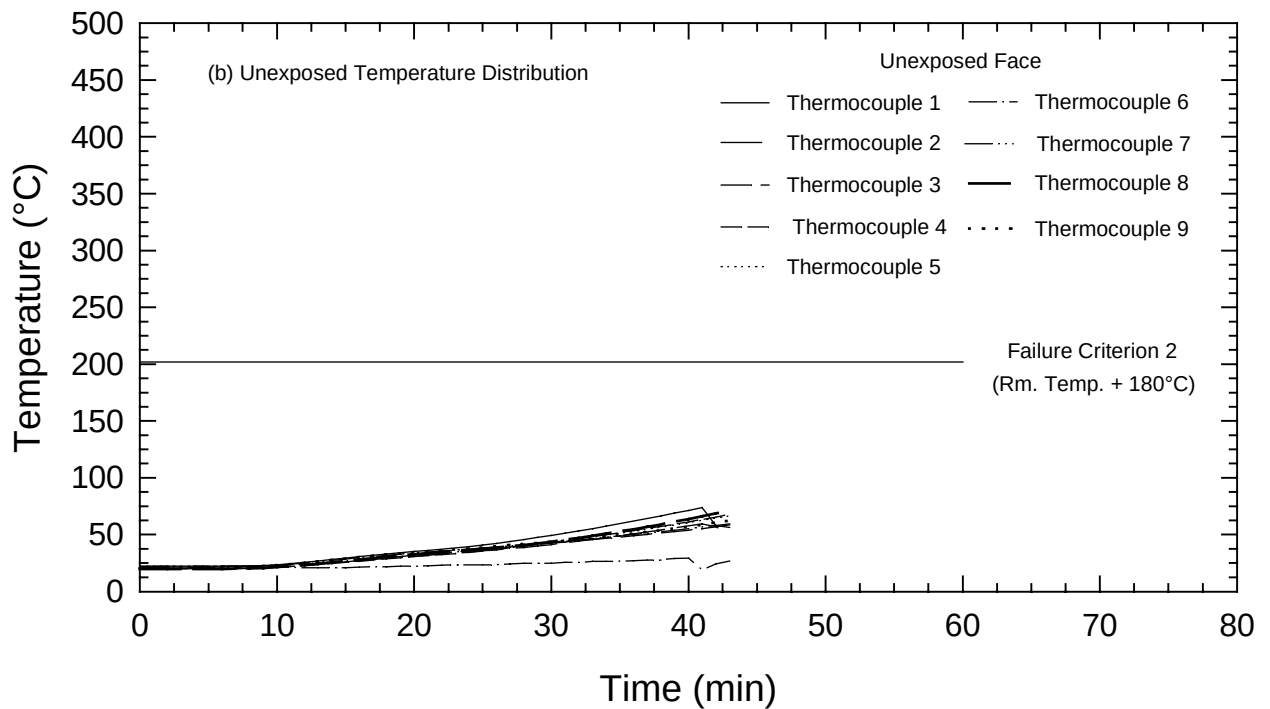
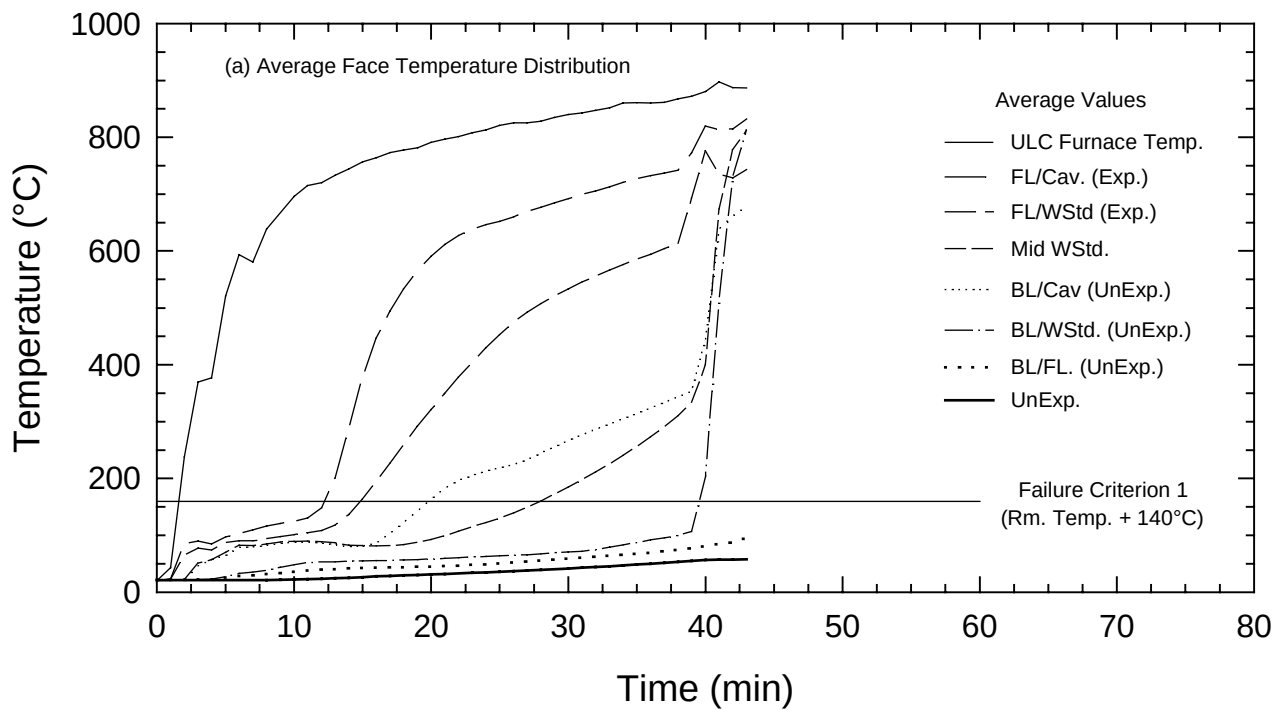


Figure 24. Temperature Distributions in Wood Stud Shear Wall Assembly F21A

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
 FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

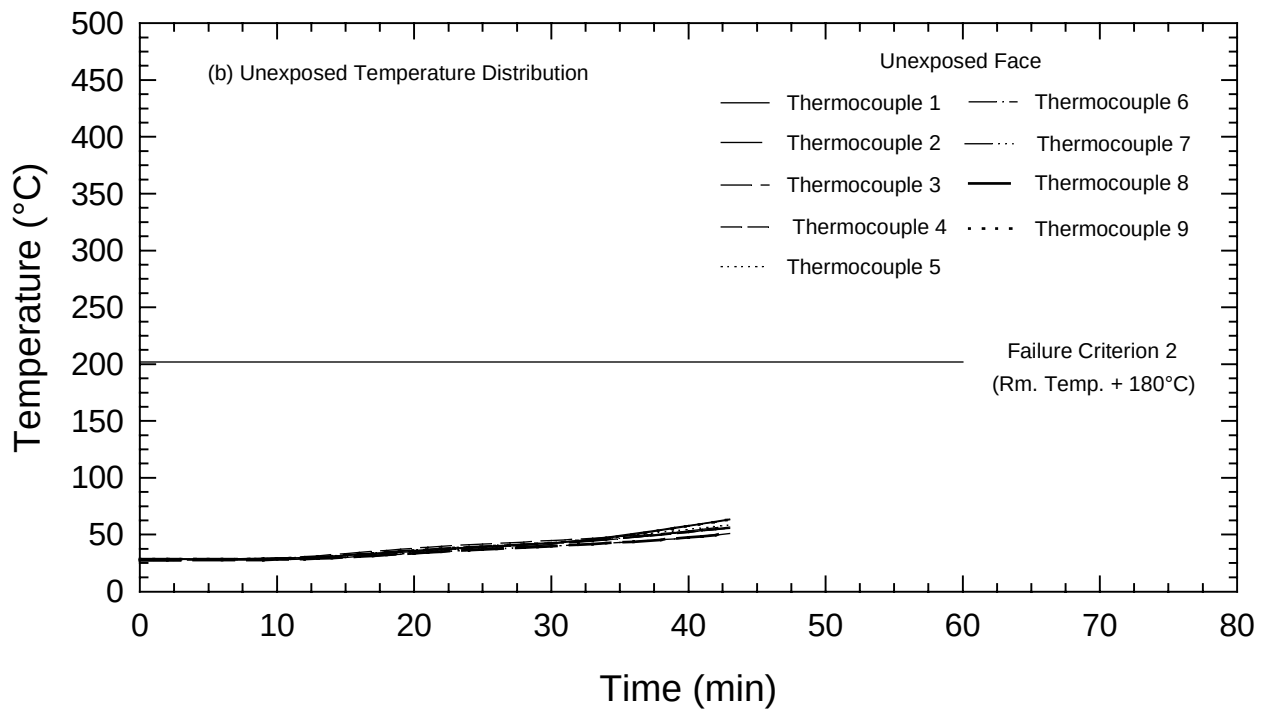
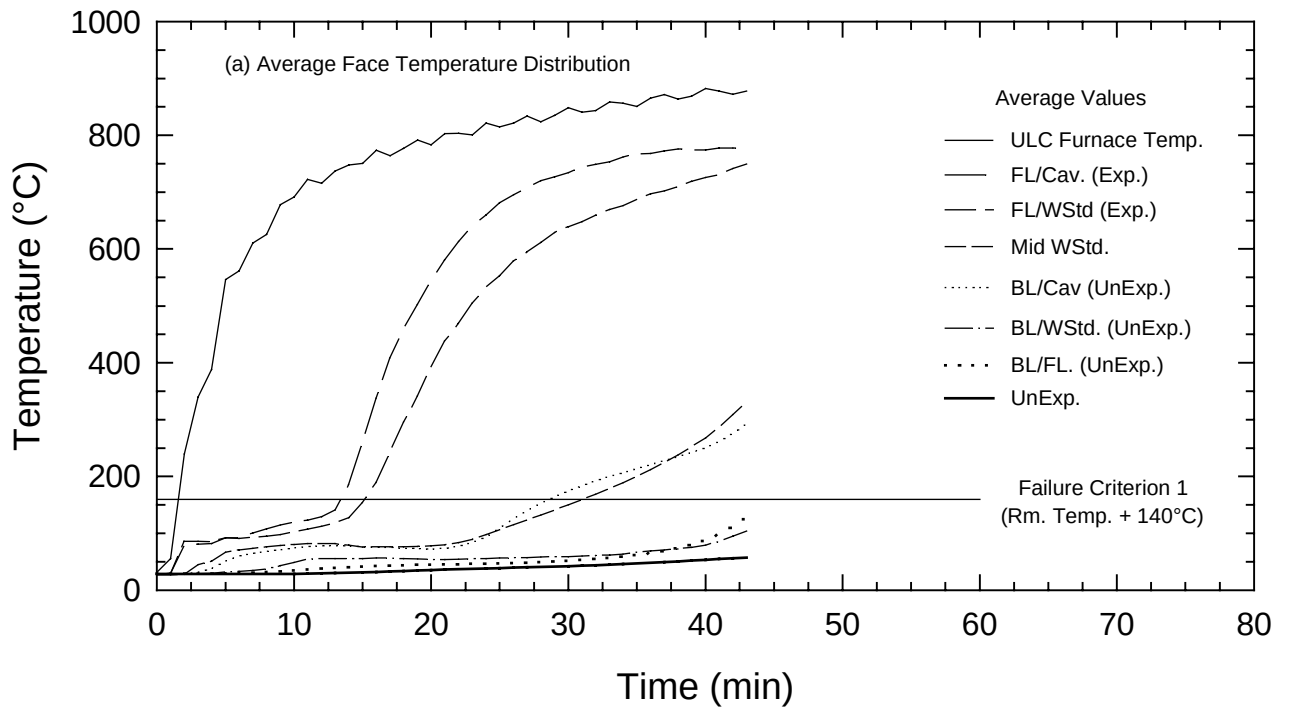


Figure 25. Temperature Distributions in Wood Stud Shear Wall Assembly F22

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
 FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

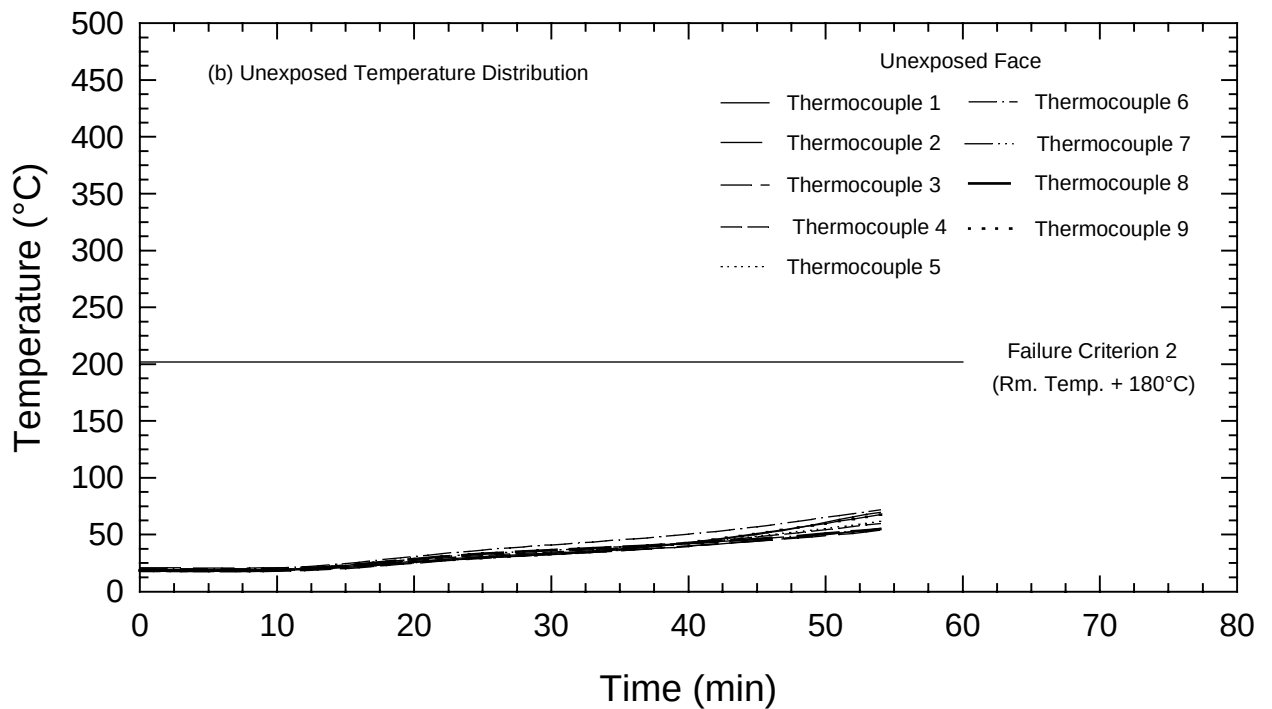
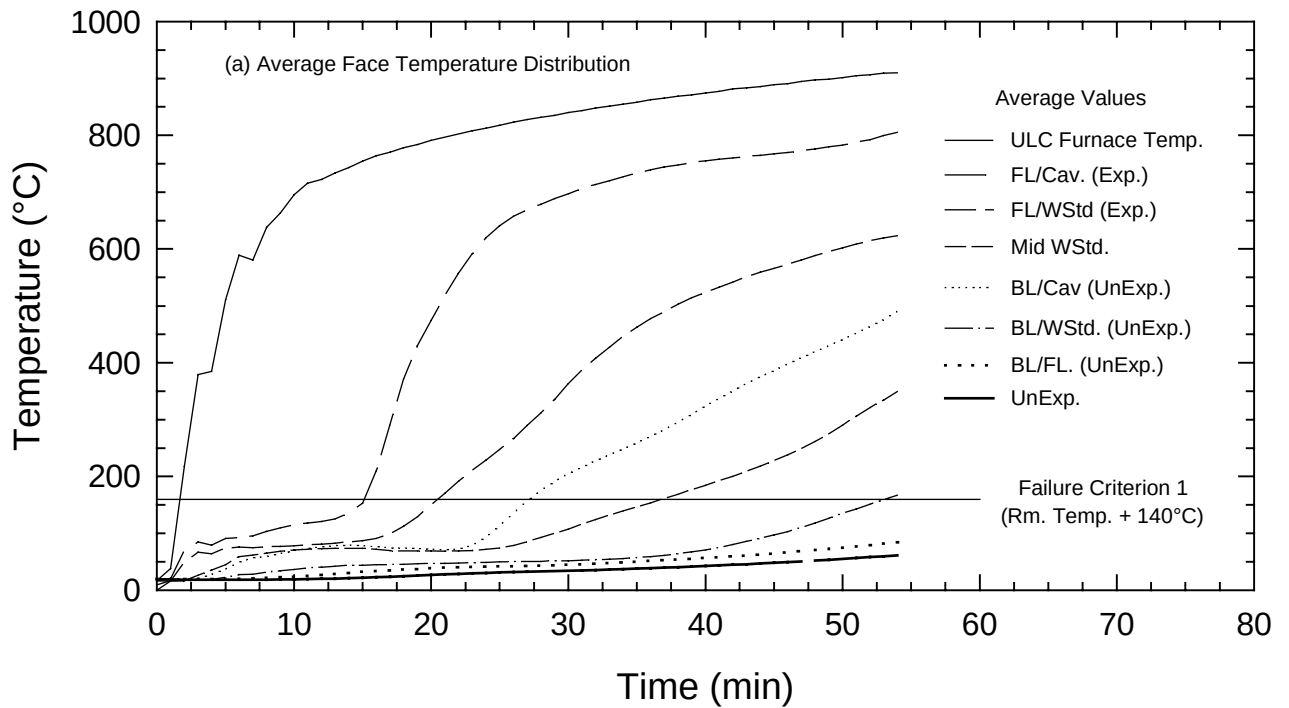


Figure 26. Temperature Distributions in Wood Stud Shear Wall Assembly F22A

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

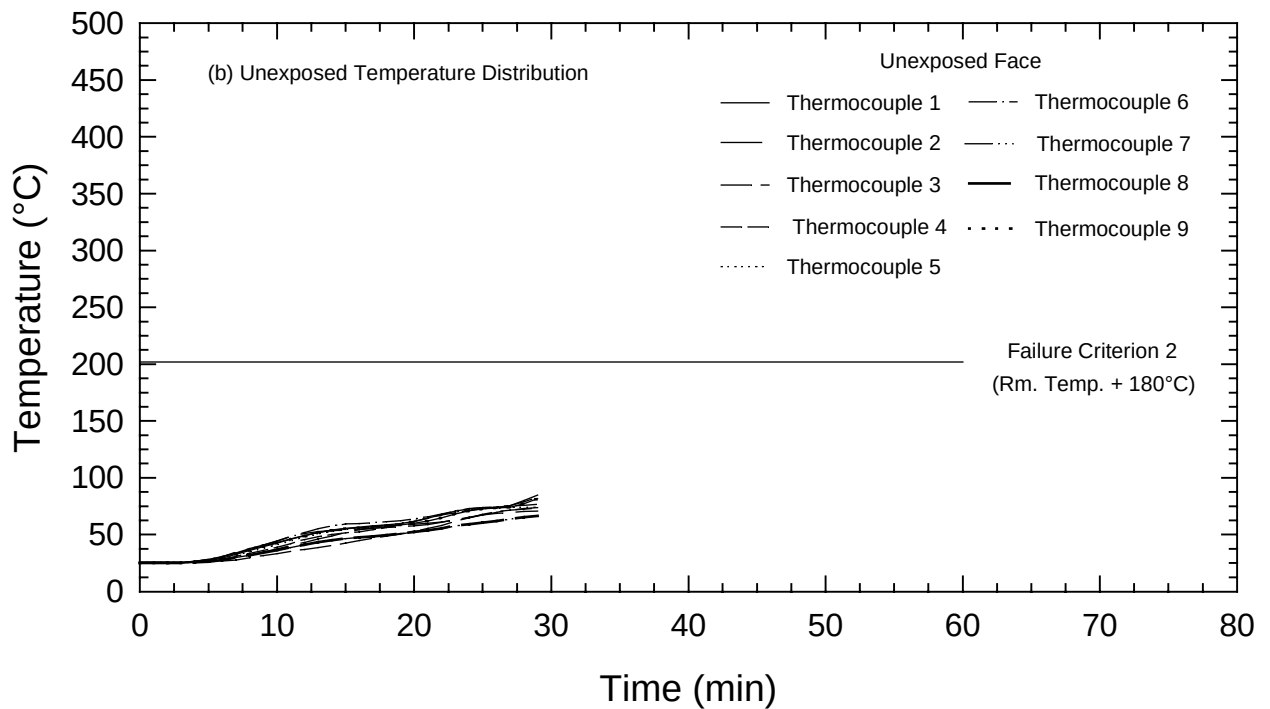
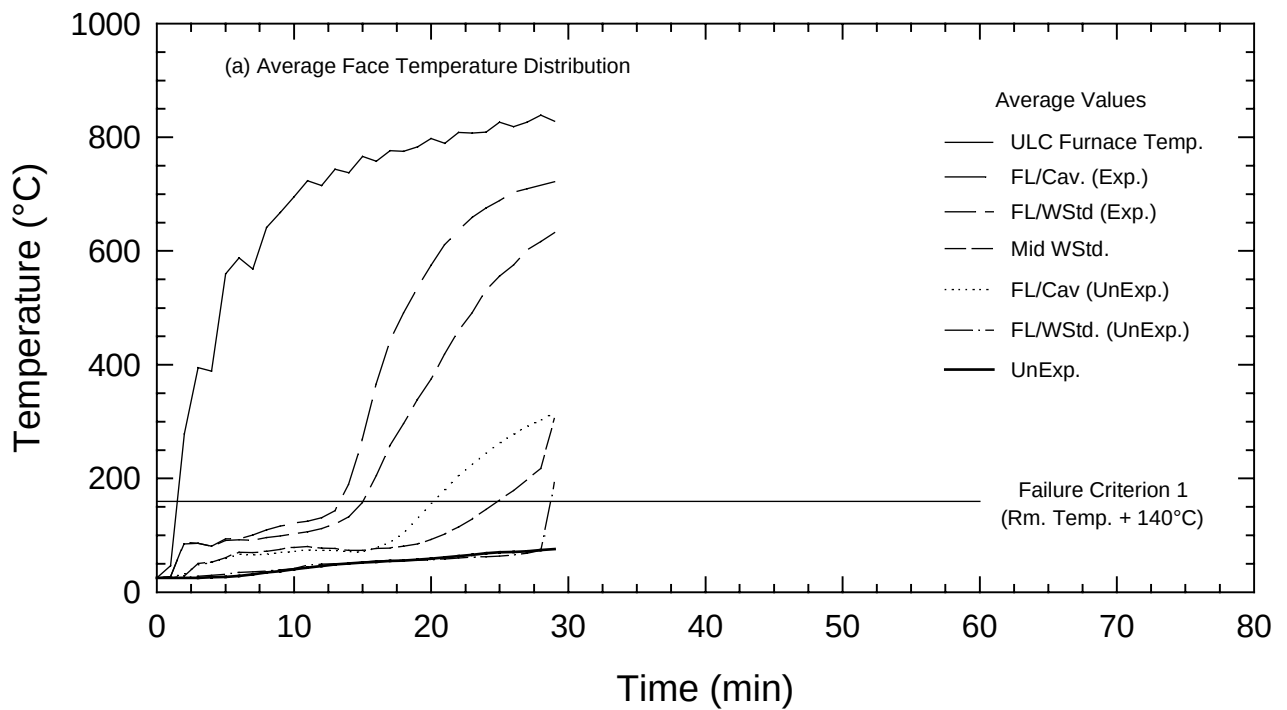


Figure 27. Temperature Distributions in Wood Stud Wall Assembly F23

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
 FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

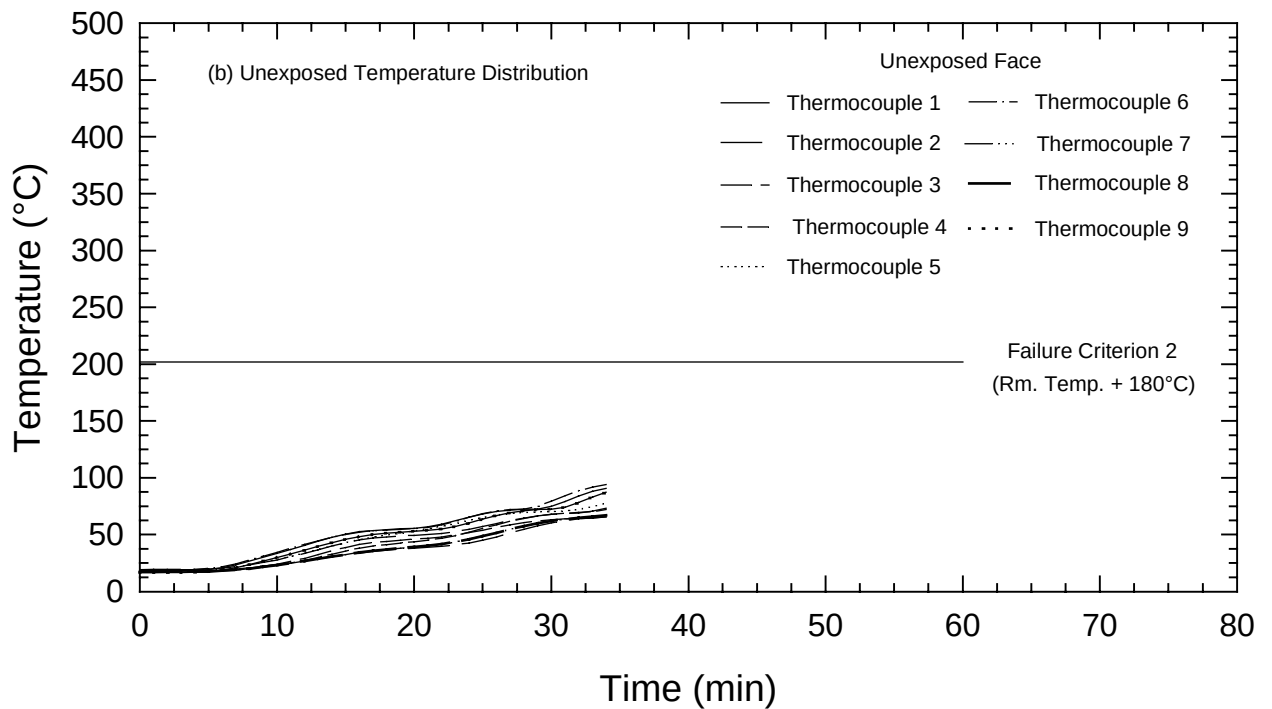
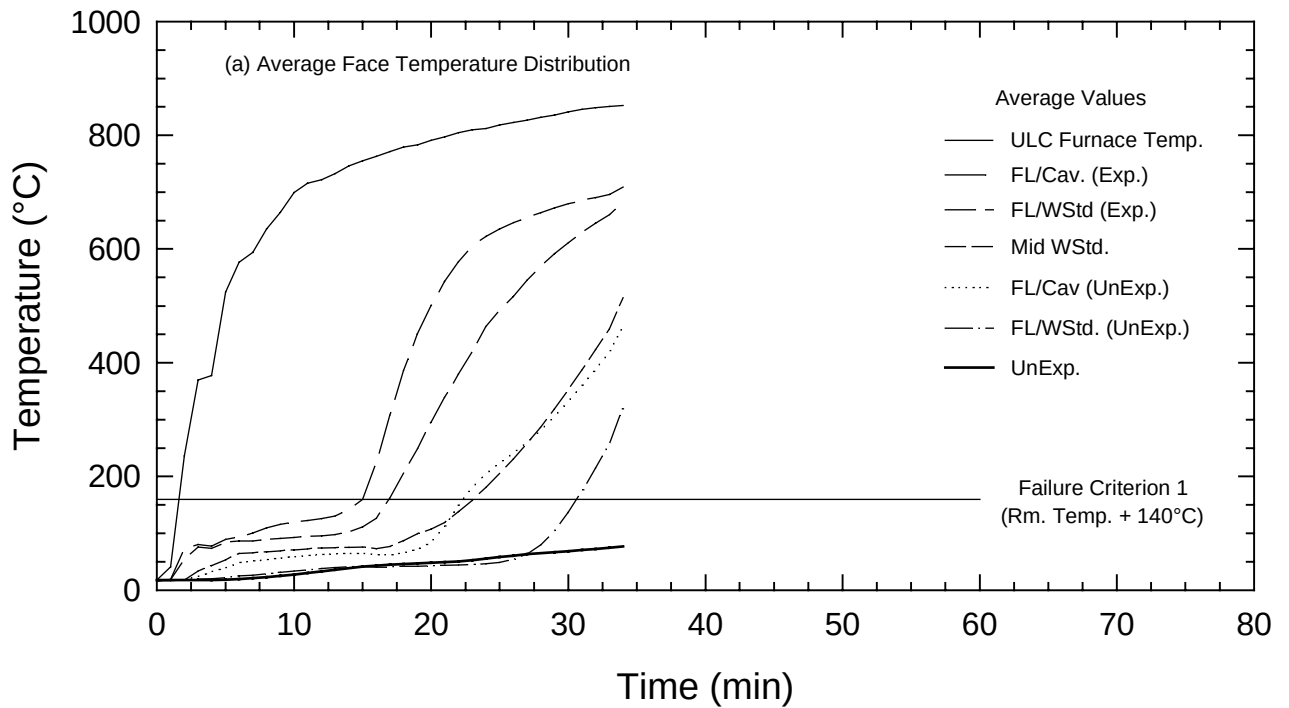


Figure 28. Temperature Distributions in Wood Stud Wall Assembly F23A

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

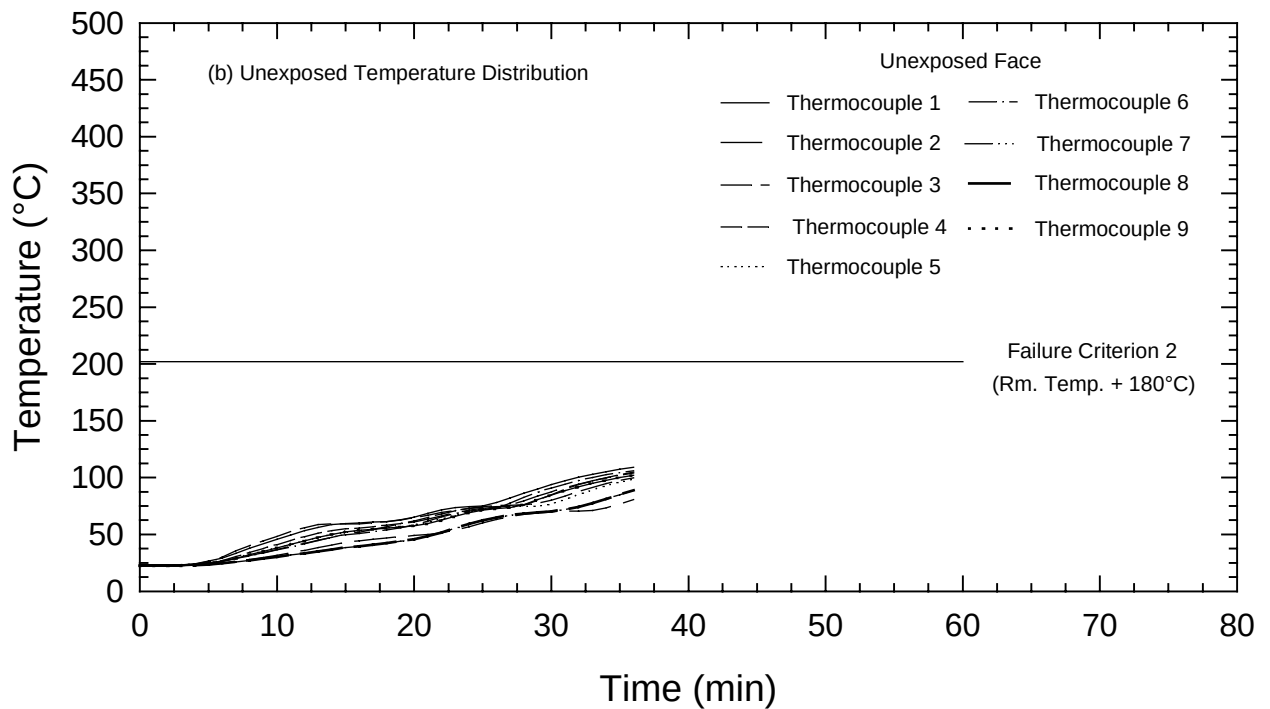
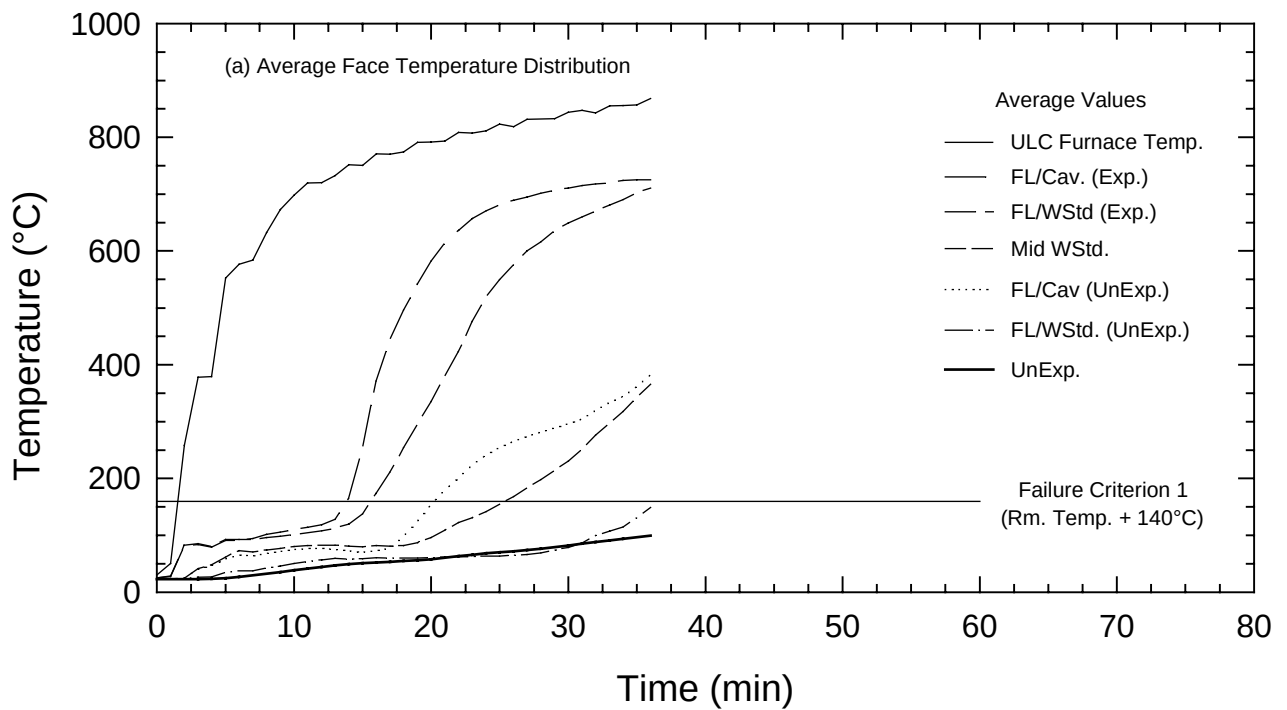


Figure 29. Temperature Distributions in Wood Stud Wall Assembly F23B

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
 FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

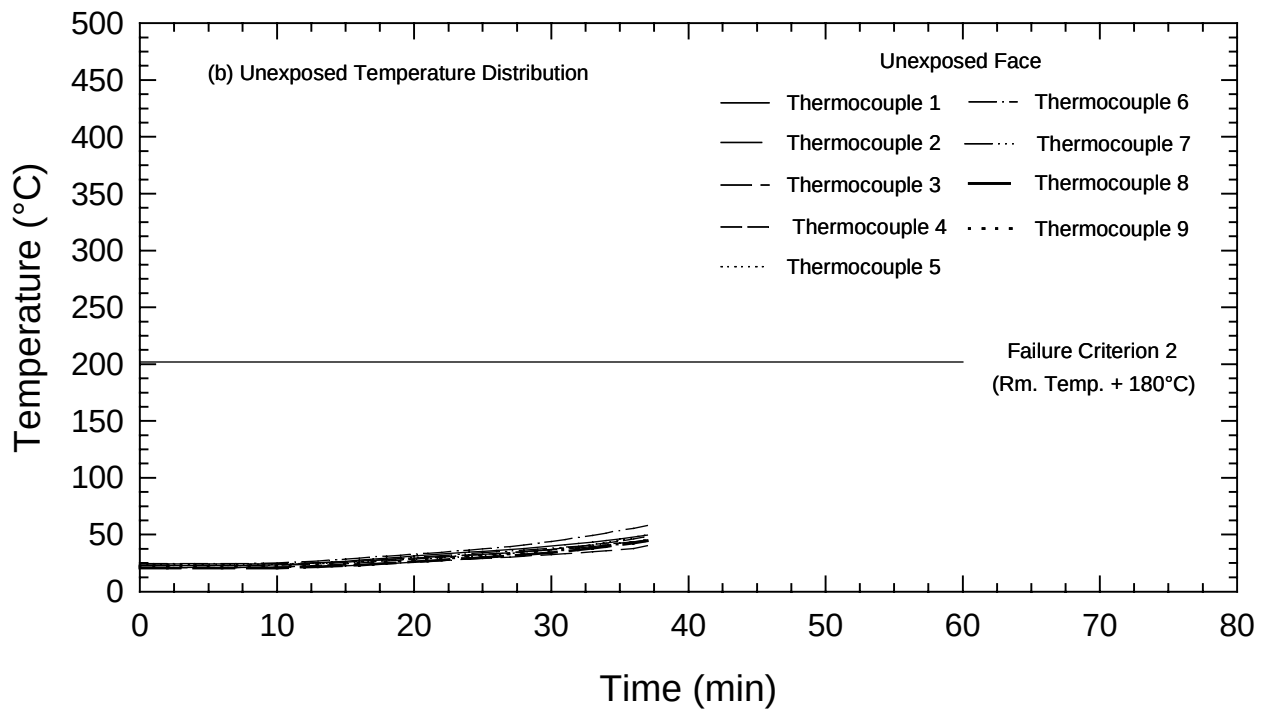
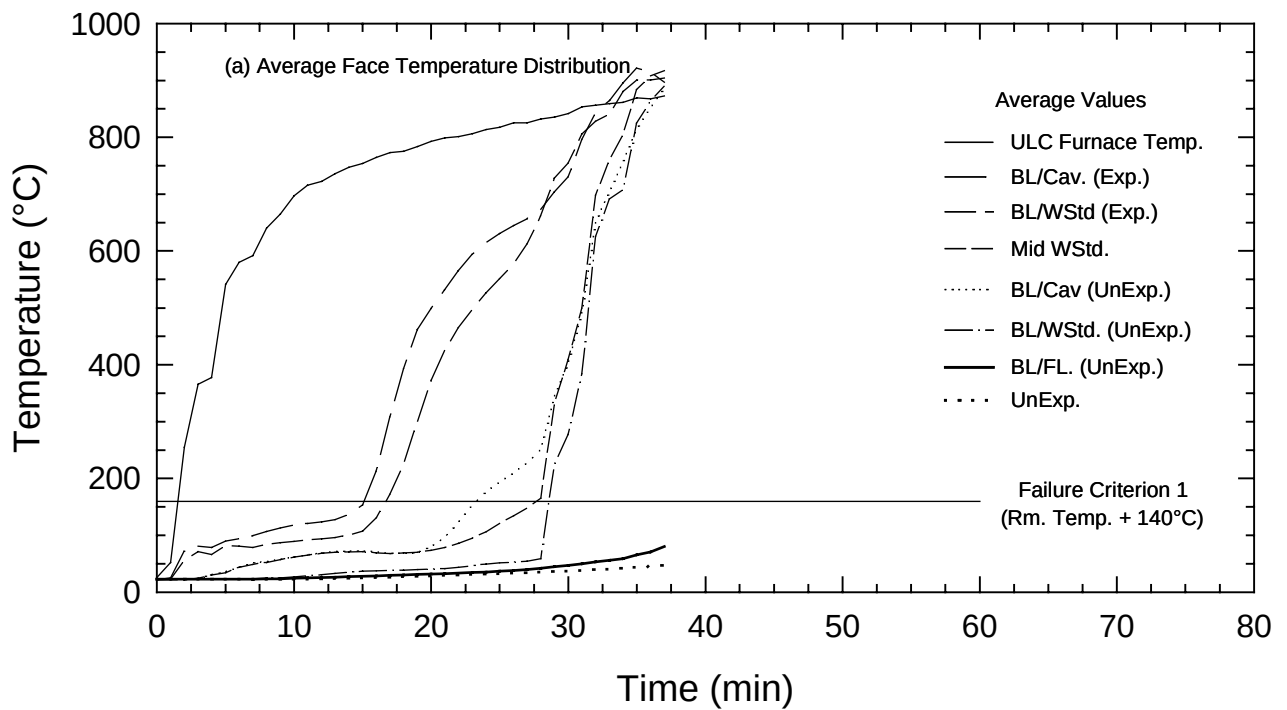


Figure 30. Temperature Distributions in Wood Stud Shear Wall Assembly F24

Legend

ULC Furnace Temp. - CAN/ULC - S101 - M89 Time Temp. Curve BL - Wood Shear Membrane Base Layer
FL - Gypsum Board Face Layer Wstd. - Wood Stud Cav. - Cavity Exp. - Exposed Side UnExp. - Unexposed Side

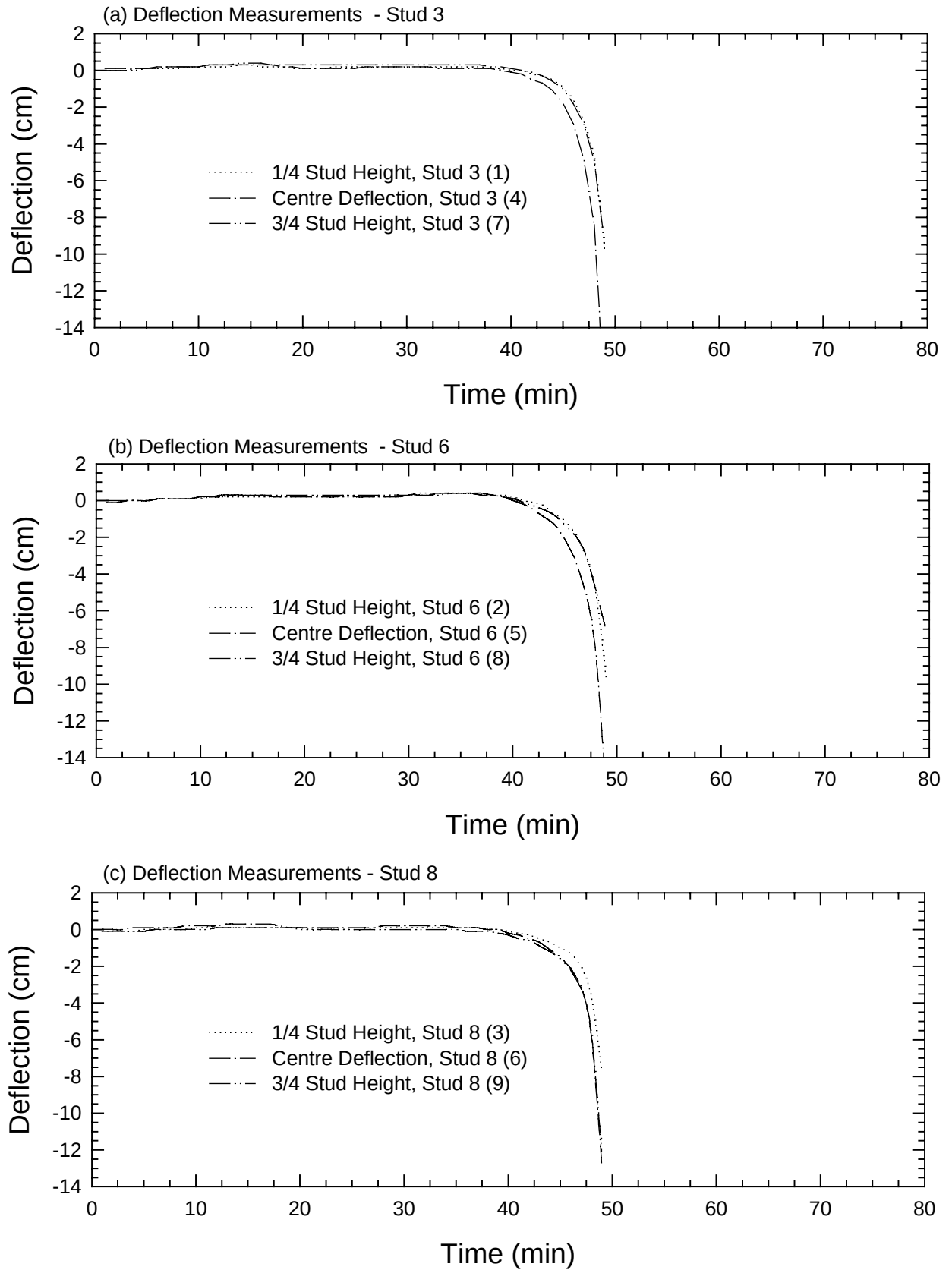


Figure 31. Measured Deflections in Wood Stud Shear Wall Assembly F19

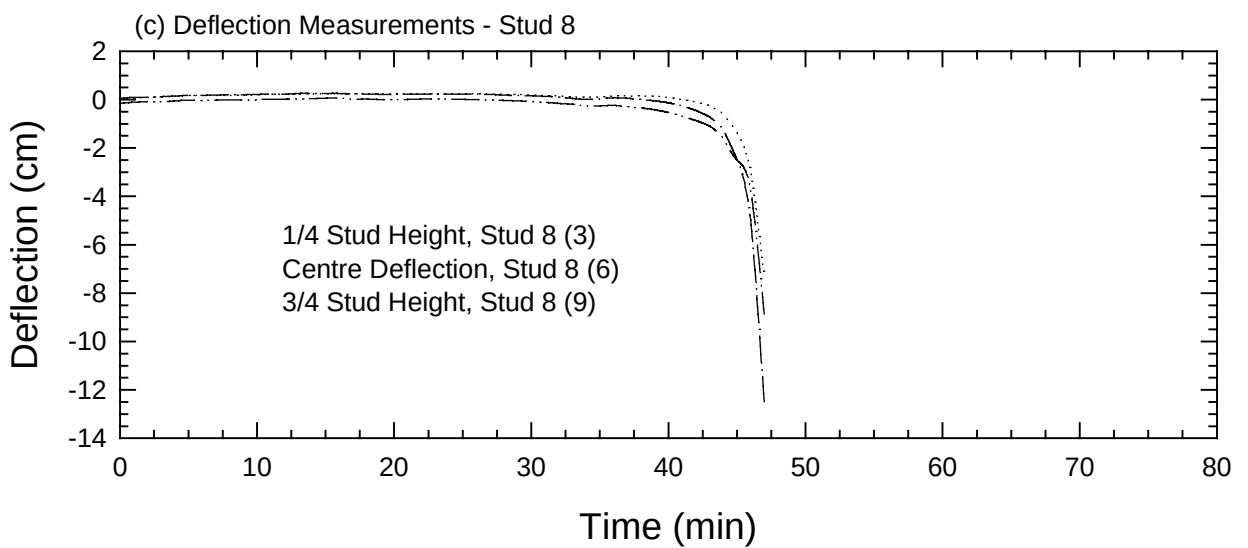
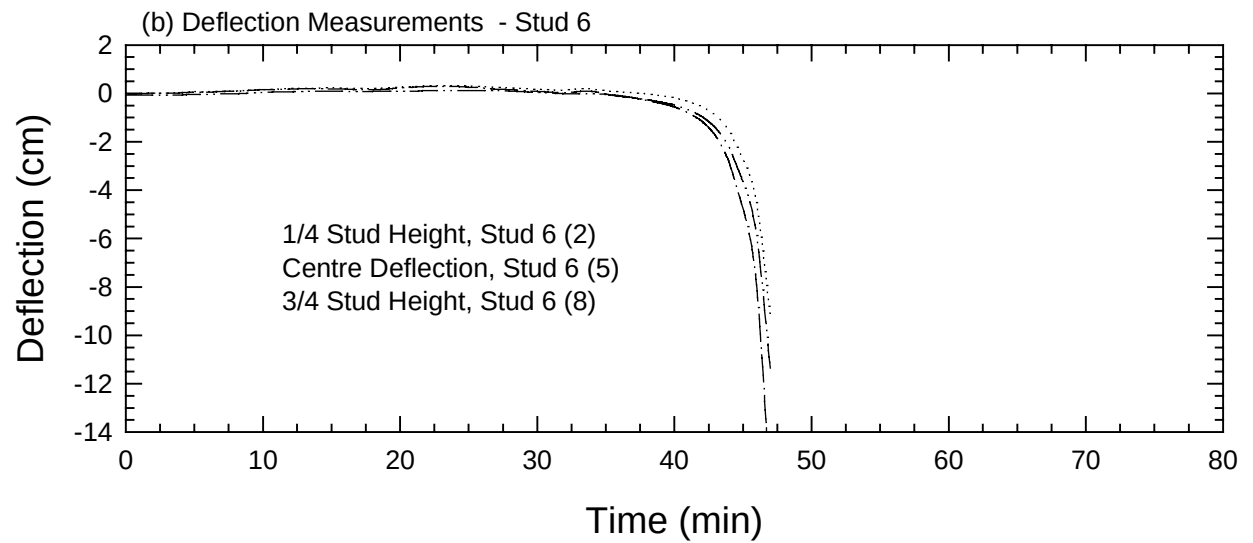
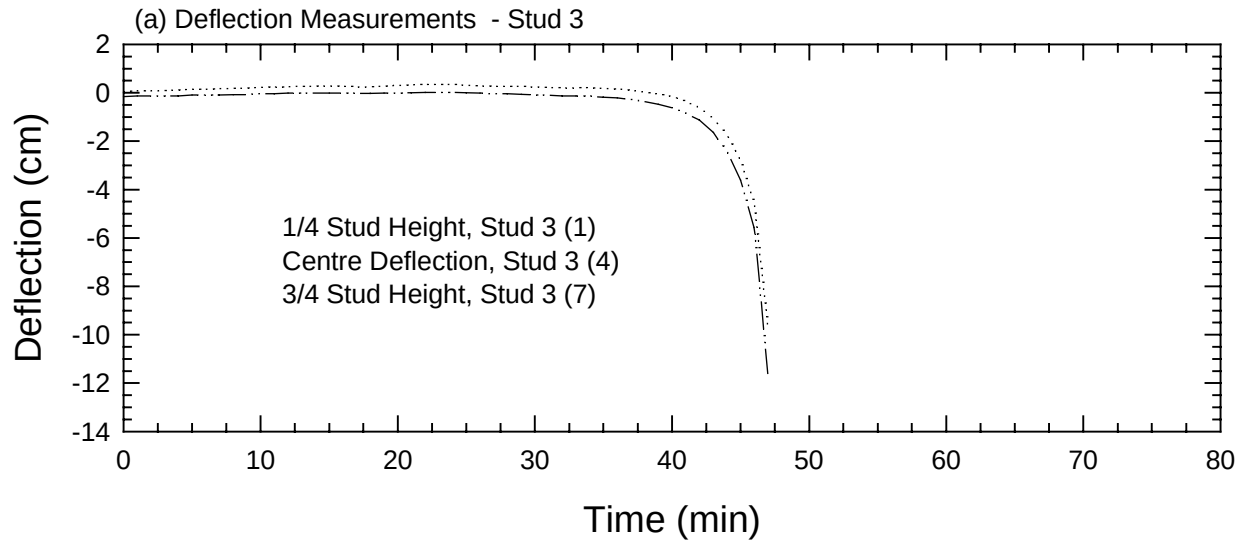


Figure 32. Measured Deflections in Wood Stud Shear Wall Assembly F20

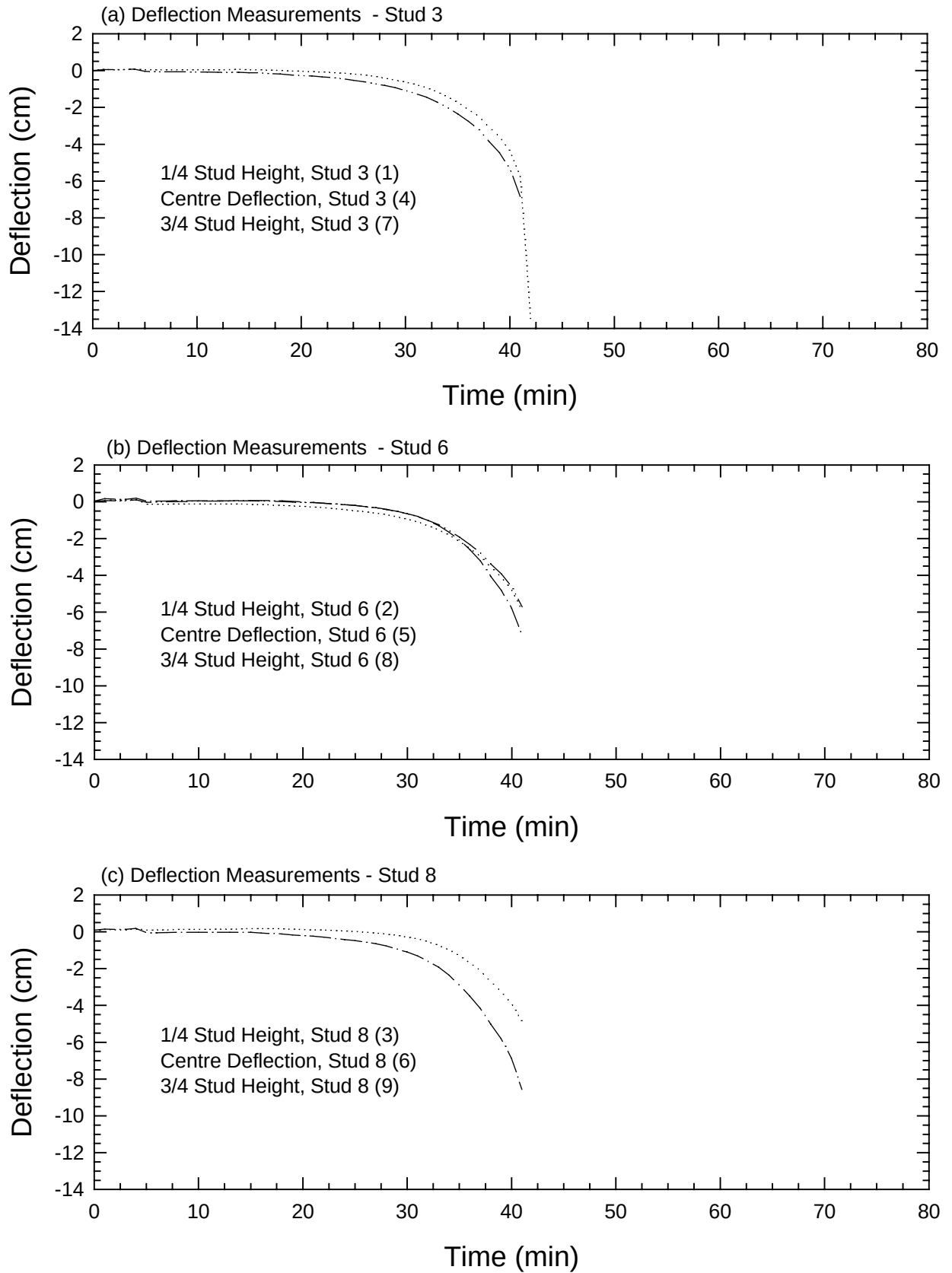


Figure 33. Measured Deflections in Wood Stud Shear Wall Assembly F21

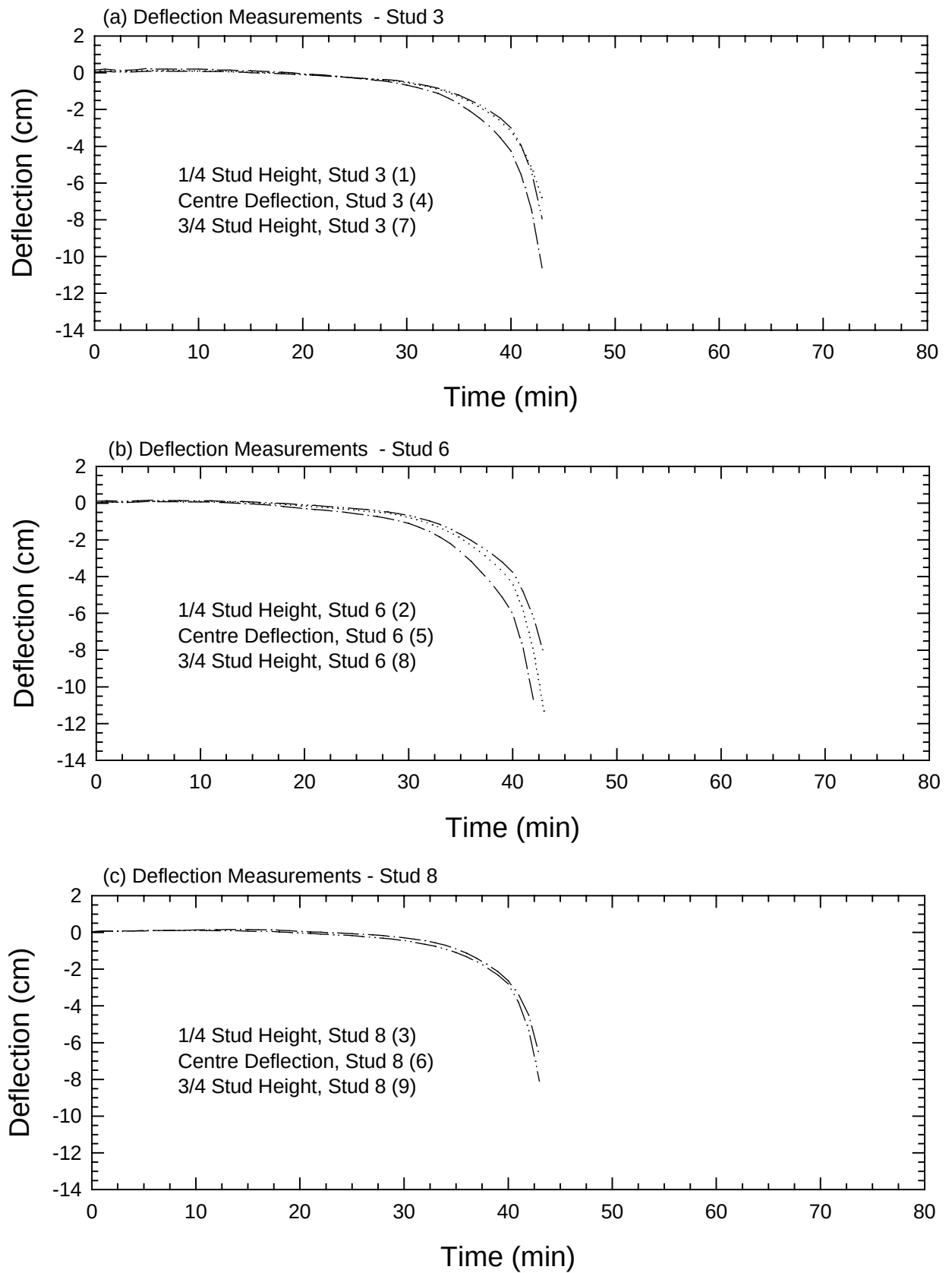


Figure 34. Measured Deflections in Wood Stud Shear Wall Assembly F21A

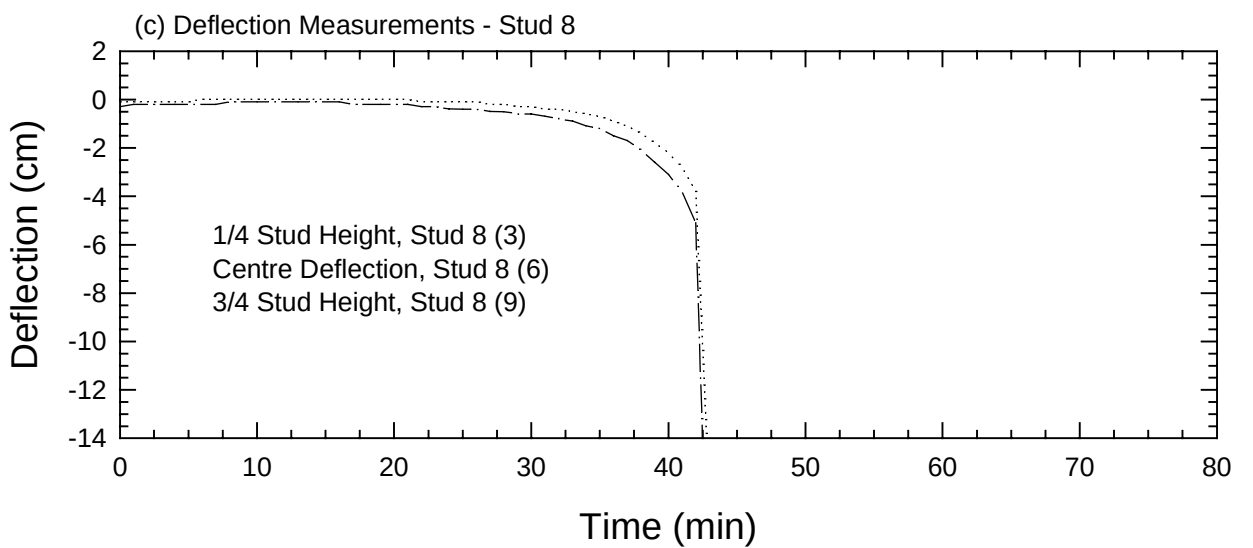
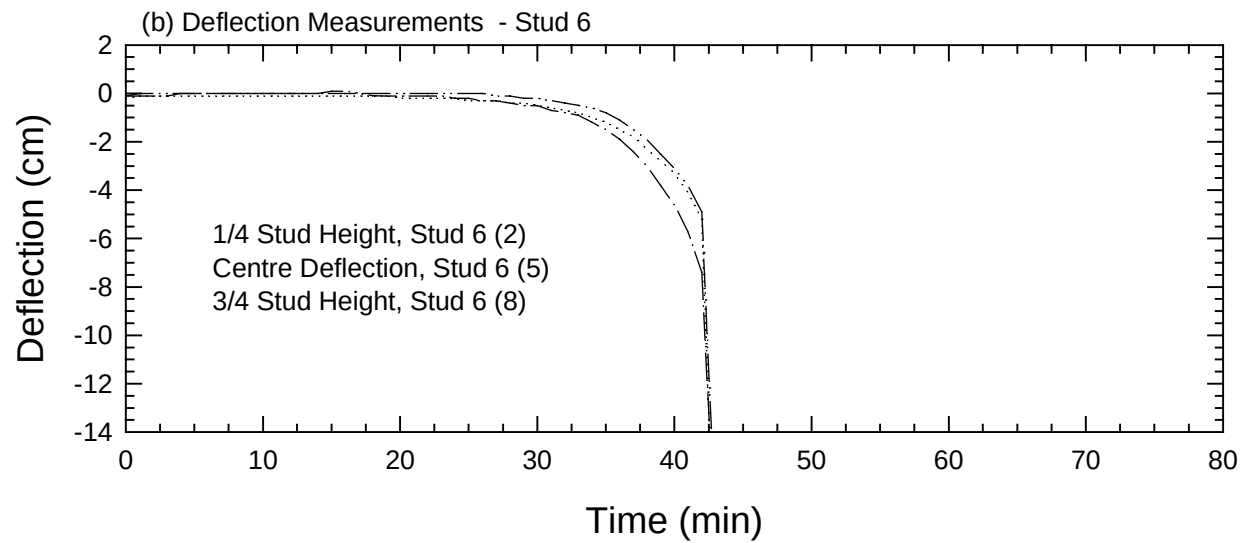
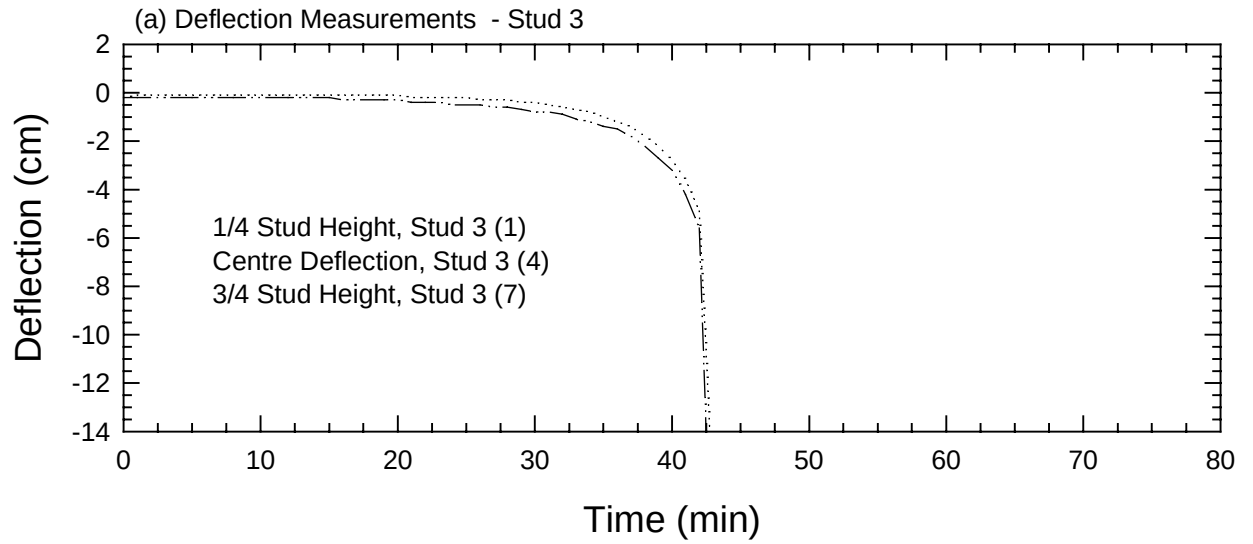


Figure 35. Measured Deflections in Wood Stud Shear Wall Assembly F22

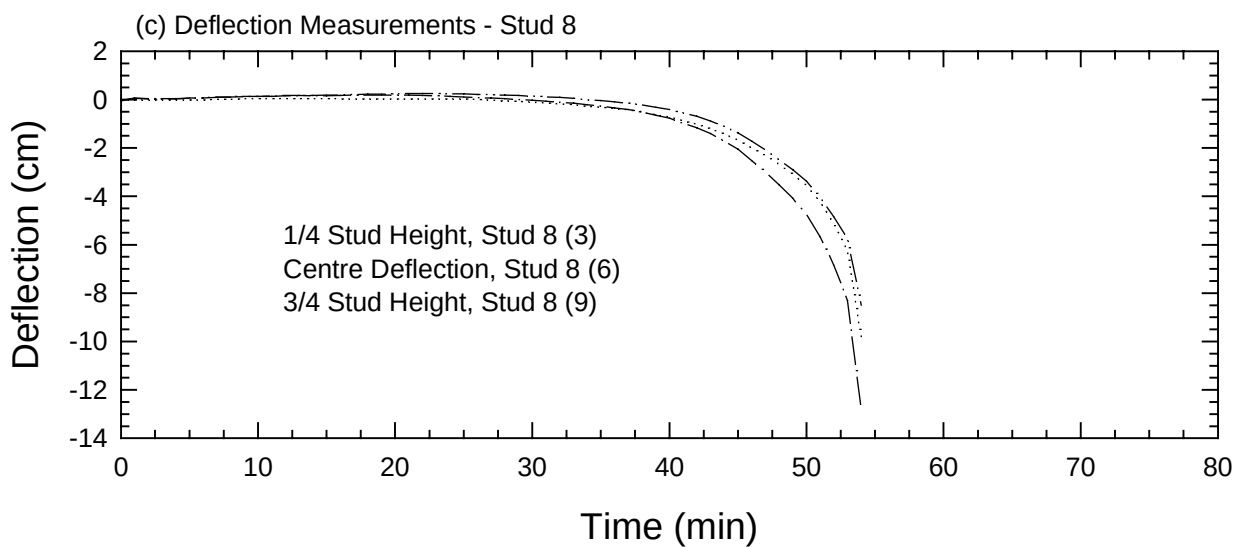
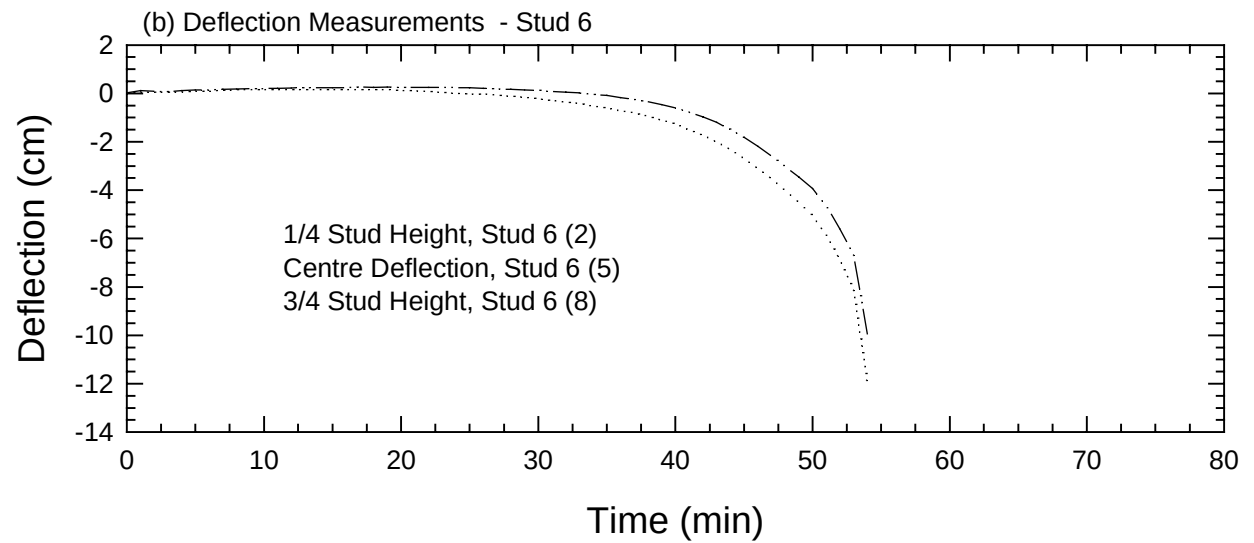
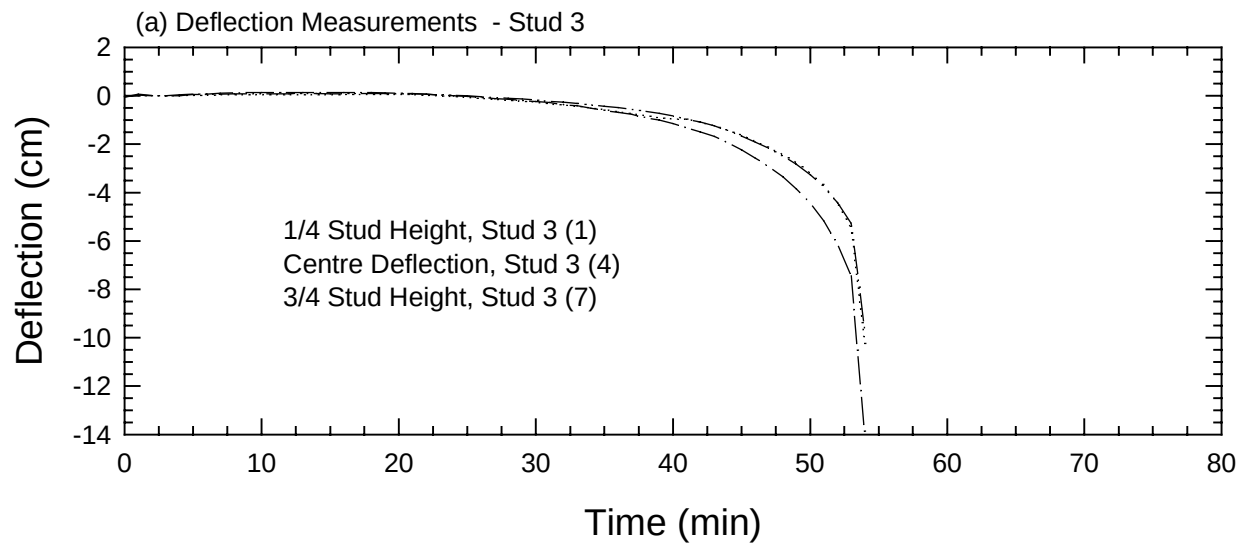


Figure 36. Measured Deflections in Wood Stud Shear Wall Assembly F22A

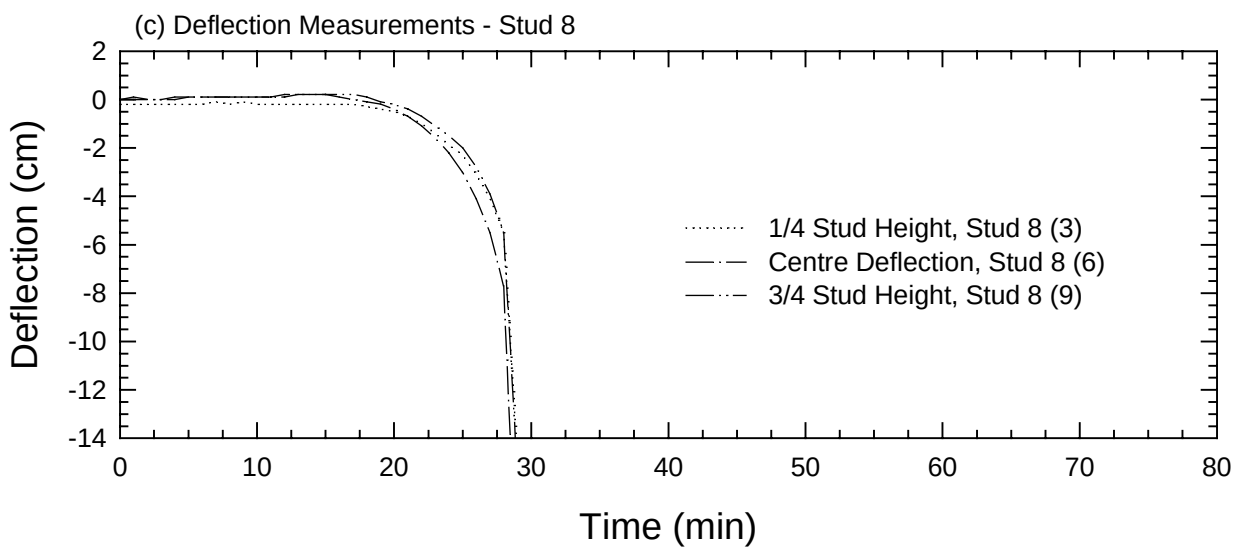
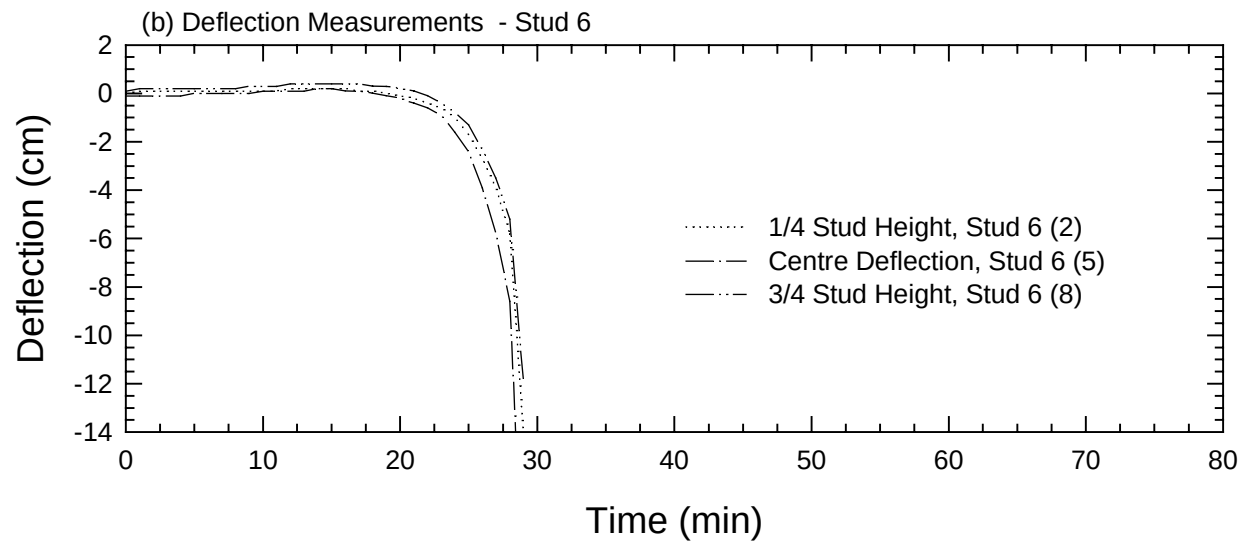
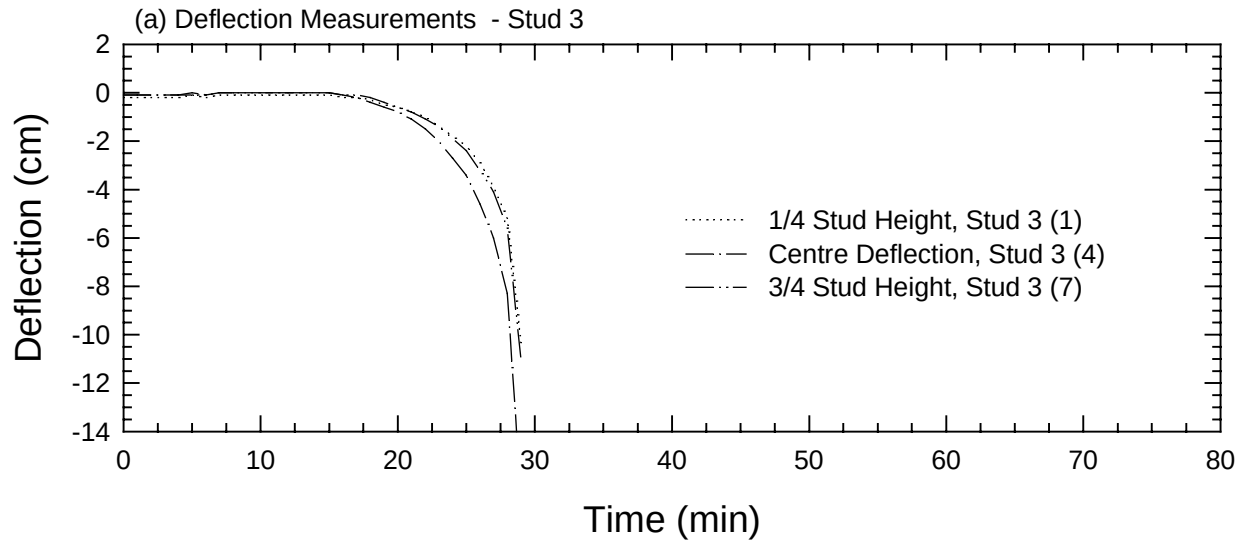


Figure 37. Measured Deflections in Wood Stud Wall Assembly F23

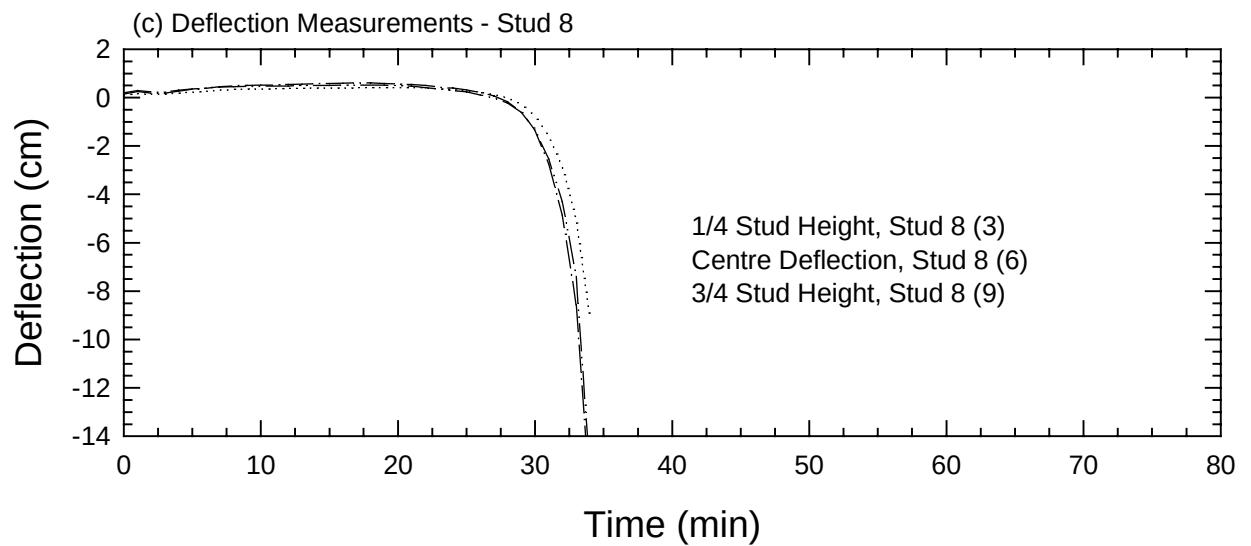
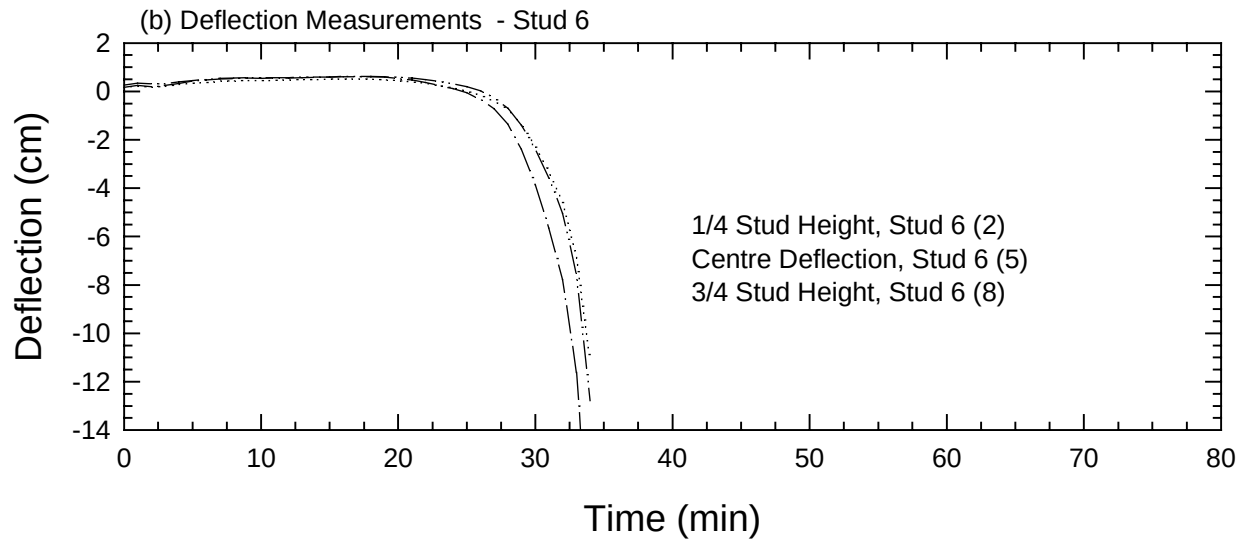
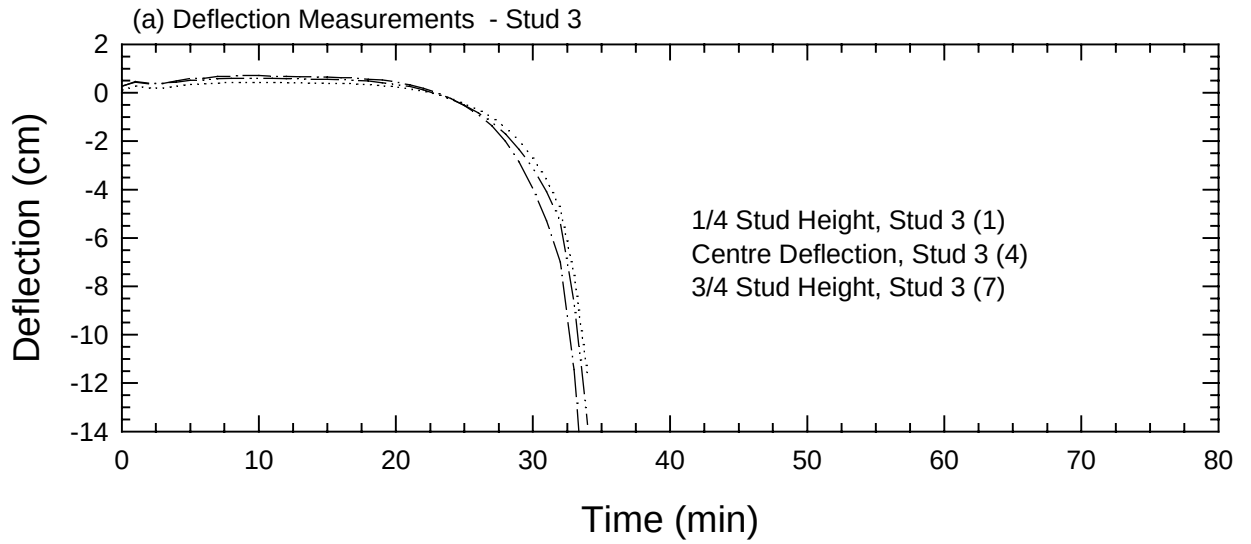


Figure 38. Measured Deflections in Wood Stud Wall Assembly F23A

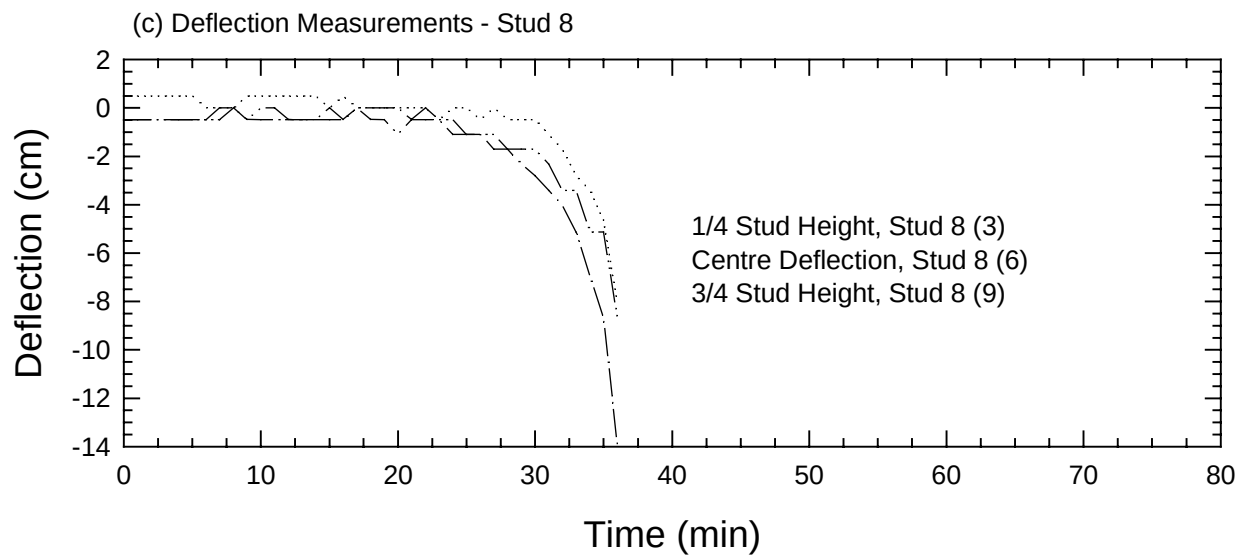
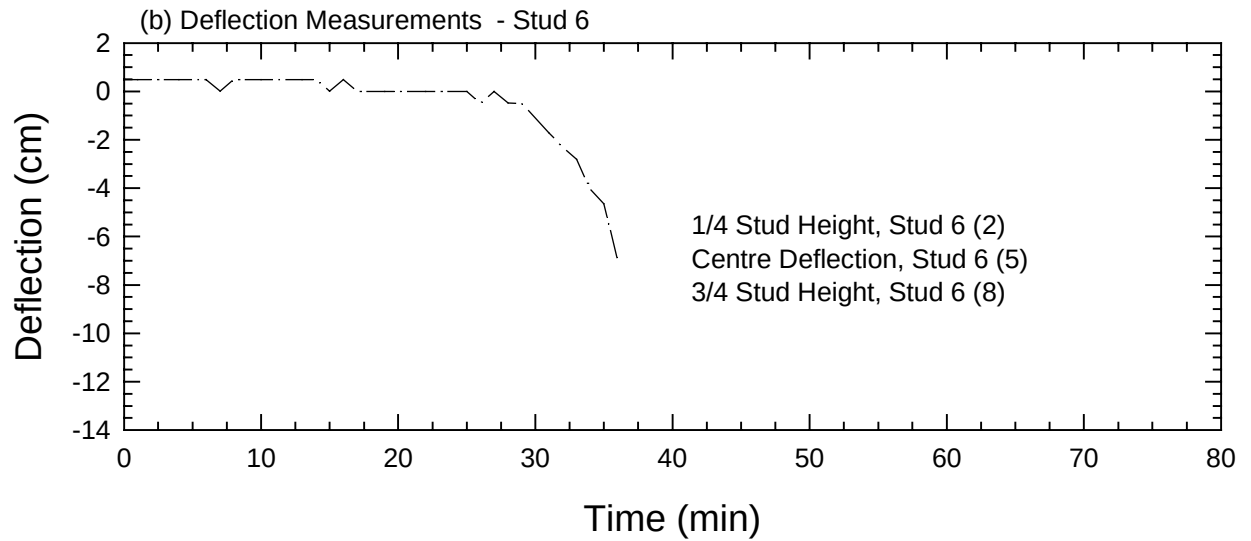
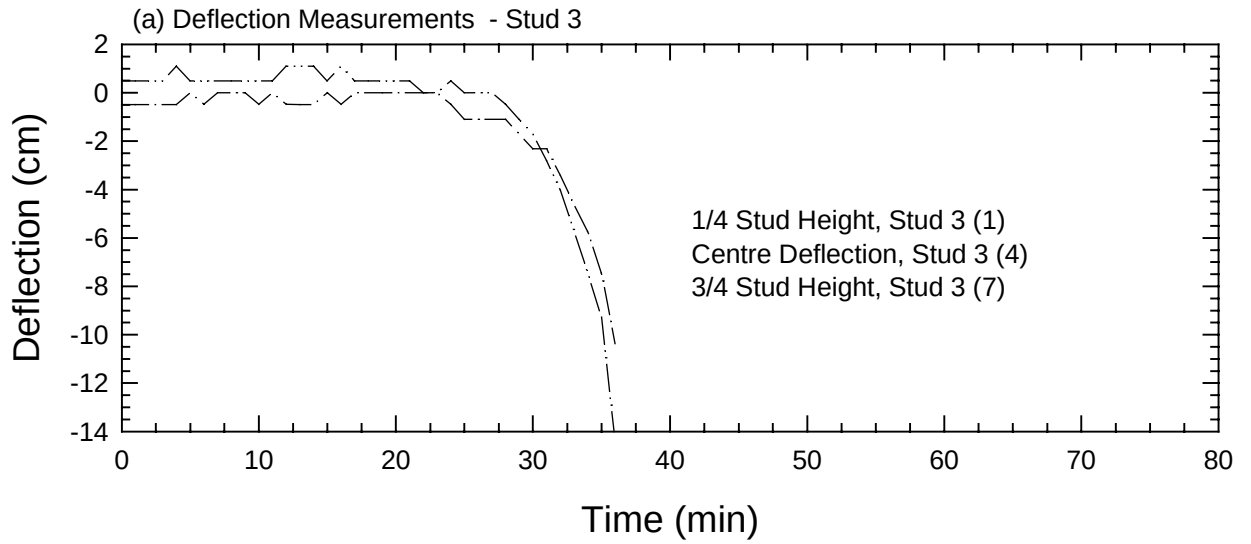


Figure 39. Measured Deflections in Wood Stud Wall Assembly F23B

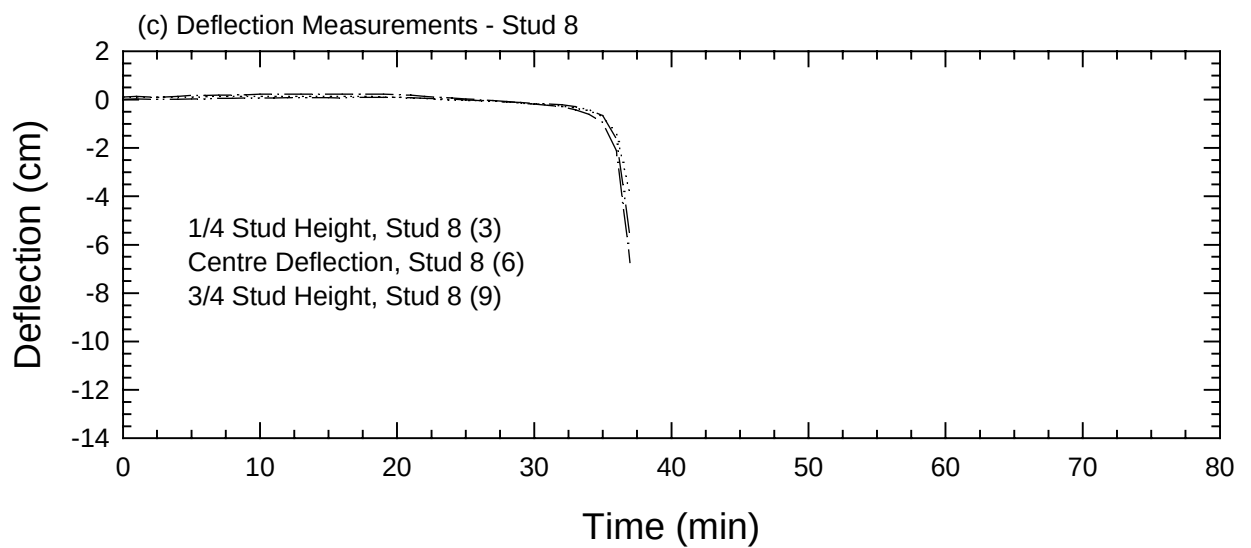
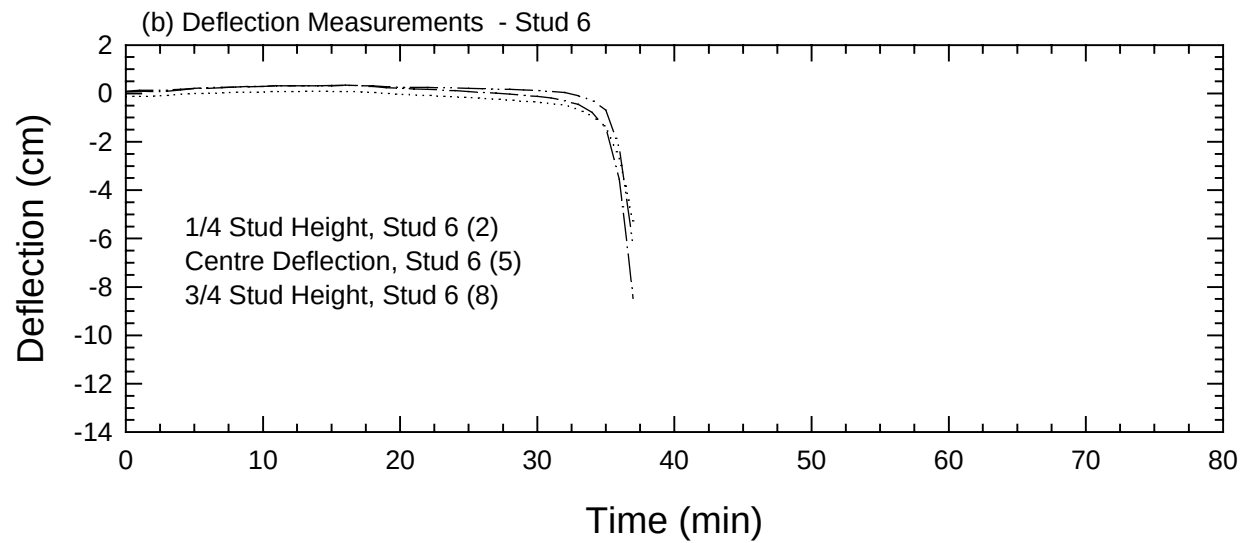
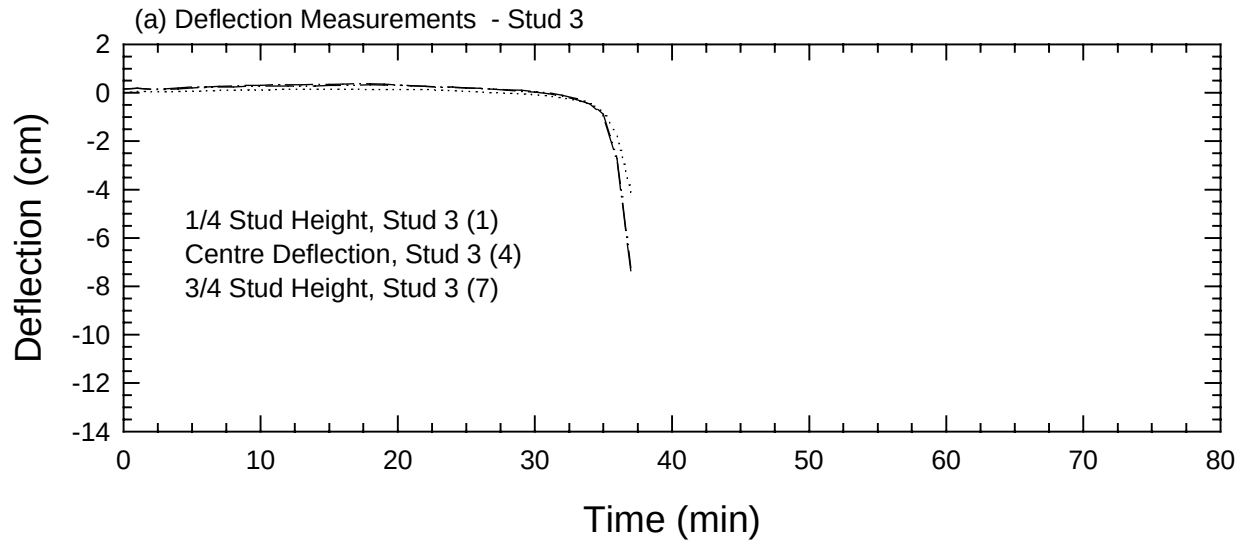


Figure 40. Measured Deflections in Wood Stud Shear Wall Assembly F24

Table 1. Wood Stud Shear Wall Assembly Parameters and Fire Test Results

Assembly Number	Stud Type	Stud Size (mm)	Shear Panel	Stud Rows	Stud Spacing (mm)	Gyp. Brd/Shr. Ph. Layer (Exp/Unexp.)	Gypsum Board/ Thickness (mm)	Gypsum Board Type	Insulation Type	Insulation Thickness (mm)	Resilient Channel
F19	Wood	89	Ply	1	400	2x1	12.7	X	GFI	89	***
F20	Wood	89	OSB	1	400	2x1	12.7	X	GFI	89	***
F21	Wood	89	Ply	1	400	1x2	12.7	X	GFI	89	***
F21A	Wood	89	Ply	1	400	1x2	12.7	X	GFI	89	***
F22	Wood	89	Ply	1	400	1x2	12.7	X	MFI	89	***
F22A	Wood	89	Ply	1	400	1x2	12.7	X	MFI	89	***
F23	Wood	89	***	1	400	1x1	12.7	X	GFI	89	***
F23A	Wood	89	***	1	400	1x1	12.7	X	GFI	89	***
F23B	Wood	89	***	1	400	1x1	12.7	X	GFI	89	***
F24	Wood	89	Ply	1	400	1x2	12.7	X	GFI	89	Exp.

S/F - Structural Failure

Ply - 12.5 mm Plywood (COFI) OSB - 12.5 mm Oriented Stranded Board (Weyerhaeuser Sturdi-Wood)

X - Type X (Westroc)

GFI - R12, Glass Fibre Insulation (Owens-Corning Canada)

MFI - Roxul Plus 90 mm thick Rock Fibre Insulation, 387 mm wide batts (Roxul Inc.)

Exp. - Exposed Side Un - Unexposed Side

*** - Null Value

Table 2. Temperatures Measured in Wood Stud Shear Wall Assembly F-19

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	22.9	20.7	20.7	20.4	20.5	20.8	20.8	20.5	20.5	20.8	21.9	22.0	21.5	22.3	21.8	21.6	21.0	20.8	21.1	20.8	21.0
1	47.3	20.7	20.7	20.4	20.5	20.8	20.8	20.5	20.5	20.7	21.9	22.0	21.6	22.4	21.9	21.5	21.0	20.7	21.0	20.8	21.0
2	314.7	20.7	20.7	20.4	20.5	20.9	20.8	20.5	20.5	20.8	21.9	22.1	21.6	22.4	21.9	21.5	21.0	20.8	21.1	20.8	21.0
3	464.4	20.8	20.7	20.5	20.6	20.9	20.8	20.5	20.5	20.8	22.1	22.1	21.7	22.4	22.0	21.5	21.0	20.8	21.2	21.0	21.0
4	441.0	20.8	20.7	20.5	20.6	20.9	20.8	20.5	20.5	20.8	22.1	22.2	21.7	22.5	22.0	21.6	21.1	20.9	21.4	21.3	21.2
5	504.6	20.8	20.8	20.5	20.6	21.0	20.9	20.5	20.6	20.9	22.2	22.3	21.8	22.6	22.0	21.6	21.3	21.2	21.6	21.5	21.6
6	610.4	20.8	20.8	20.5	20.6	21.0	20.9	20.5	20.6	20.9	22.3	22.3	21.8	22.7	22.0	21.7	21.7	21.7	22.1	21.8	22.3
7	564.1	20.8	20.9	20.5	20.7	21.0	20.9	20.5	20.6	20.9	22.3	22.4	21.8	22.7	22.1	21.8	22.1	22.3	22.6	22.3	23.4
8	642.9	20.9	21.2	20.6	20.7	21.1	21.0	20.6	20.7	20.9	22.4	22.5	21.9	22.8	22.2	21.8	22.6	22.9	23.3	22.9	24.7
9	657.7	20.9	21.9	20.6	20.8	21.1	21.1	20.6	20.7	20.9	22.5	22.5	21.9	22.9	22.2	21.9	23.2	23.6	24.2	23.7	26.3
10	708.6	21.0	23.1	20.7	20.9	21.2	21.2	20.7	20.8	21.0	22.6	22.6	22.0	23.0	22.3	22.0	23.9	24.4	25.3	24.5	28.1
11	707.0	21.2	24.6	20.7	21.3	21.4	21.4	20.9	20.9	21.1	22.8	22.6	22.0	23.1	22.5	22.0	24.5	25.2	26.5	25.3	30.1
12	728.3	21.3	26.5	20.8	22.1	21.5	21.5	21.1	21.0	21.1	22.9	22.7	22.0	23.2	22.6	22.2	25.2	26.4	27.6	26.1	32.0
13	731.0	21.5	28.8	20.9	23.8	21.7	21.8	21.3	21.2	21.2	23.1	22.8	22.1	23.4	22.8	22.3	26.0	28.4	28.5	26.8	33.4
14	745.2	21.7	31.1	21.0	26.0	21.9	22.1	21.7	21.3	21.3	23.4	22.8	22.2	23.5	22.9	22.5	26.8	30.4	29.4	27.6	34.7
15	758.9	22.0	33.3	21.1	28.3	22.1	22.5	22.0	21.5	21.4	23.6	22.9	22.2	23.7	23.2	22.6	27.7	31.9	30.4	28.3	35.9
16	760.0	22.3	35.2	21.3	30.2	22.4	22.9	22.4	21.8	21.5	23.8	23.0	22.3	23.9	23.3	22.8	28.7	33.0	31.4	29.1	37.2
17	777.2	22.7	36.7	21.4	31.7	22.6	23.3	22.7	22.0	21.6	24.0	23.1	22.4	24.2	23.6	22.9	29.7	34.6	32.7	29.8	39.0
18	771.5	23.1	37.9	21.6	33.1	22.9	23.8	23.0	22.3	21.8	24.4	23.1	22.5	24.5	23.8	23.1	30.8	37.2	34.3	30.7	41.3
19	791.4	23.5	39.1	21.9	34.6	23.2	24.2	23.4	22.6	21.9	24.6	23.2	22.5	24.6	23.9	23.3	32.0	40.4	36.4	31.7	43.9
20	787.5	24.0	40.2	22.1	36.1	23.6	24.7	23.7	23.0	22.1	25.0	23.3	22.6	25.0	24.3	23.5	33.4	48.5	39.3	33.6	47.0
21	799.8	24.5	41.4	22.5	37.5	23.9	25.3	24.1	23.4	22.3	25.3	23.4	22.7	25.2	24.5	23.7	35.1	61.9	45.4	39.2	51.8
22	805.0	25.1	42.7	23.0	38.7	24.3	26.0	24.5	23.8	22.5	25.7	23.5	22.8	25.5	24.9	24.1	38.2	67.0	56.0	47.7	60.4
23	804.2	26.0	44.5	23.8	39.7	24.9	26.8	24.9	24.4	22.8	26.2	23.5	22.9	26.0	25.7	24.7	44.1	71.4	68.5	54.9	69.5
24	821.9	27.4	46.6	25.1	40.5	25.5	27.6	25.5	25.1	23.4	27.1	23.7	23.1	26.7	27.1	25.7	52.5	77.2	78.2	60.8	76.4
25	817.2	29.4	49.3	27.3	41.4	26.5	28.6	26.3	26.0	24.4	28.3	24.0	23.4	28.3	29.1	27.4	60.6	81.3	83.0	65.2	84.5
26	824.7	32.1	52.7	30.6	42.6	28.0	29.8	27.6	27.4	26.2	29.6	24.2	23.6	30.1	31.2	29.5	67.3	83.5	85.2	68.2	90.4
27	833.8	35.4	57.0	34.9	43.9	30.2	31.3	29.4	29.3	28.6	31.3	24.5	23.9	32.1	33.4	32.1	72.6	85.5	86.1	70.4	92.6
28	828.3	39.1	61.4	39.8	45.4	33.1	33.1	31.8	31.4	31.7	33.1	24.9	24.3	34.6	35.5	34.8	76.1	87.1	86.5	71.9	92.9
29	843.6	42.8	64.9	44.7	47.0	36.7	35.2	34.4	33.8	35.1	35.0	25.2	24.7	36.3	36.5	36.7	77.9	89.0	86.9	73.1	91.0
30	844.2	46.3	67.0	49.1	48.6	40.6	37.3	37.1	36.4	38.6	36.7	25.7	25.2	38.0	38.0	37.8	79.2	91.8	87.6	73.4	91.6
31	845.3	49.7	67.8	52.6	50.3	44.6	39.6	39.8	38.9	41.9	38.3	26.2	25.9	39.3	39.3	39.1	78.2	95.0	91.2	74.3	96.0
32	860.7	53.6	67.8	55.4	52.5	48.1	41.9	42.3	41.6	44.7	39.5	26.9	26.6	40.2	40.5	39.4	79.4	100.4	91.3	79.5	102.9
33	854.9	58.4	67.7	58.3	55.5	51.1	45.1	44.4	44.6	47.1	41.0	27.6	27.2	41.6	41.0	39.8	85.7	109.9	94.2	89.2	105.8
34	853.0	62.2	67.8	60.1	58.5	53.3	49.5	46.1	48.7	49.5	42.6	28.3	28.3	43.5	42.4	40.2	86.7	104.5	94.8	91.5	111.8
35	851.4	64.2	68.2	60.6	60.5	55.2	54.1	48.1	55.1	51.8	43.0	29.2	30.0	46.3	43.7	42.0	85.6	101.0	93.7	88.2	117.0
36	860.7	65.6	68.8	61.1	61.8	57.1	58.7	51.5	60.5	53.8	43.7	30.3	31.9	46.8	45.2	45.1	90.8	104.9	97.9	88.7	149.3
37	856.0	67.3	68.8	61.7	63.1	58.8	63.0	56.4	64.1	56.0	45.0	31.0	33.2	47.2	45.9	47.5	94.6	119.4	119.1	91.6	169.5
38	867.6	69.3	68.8	61.9	64.0	60.3	66.8	59.9	66.9	58.4	46.7	31.9	34.3	48.6	47.1	47.8	99.0	139.1	149.0	98.6	188.1
39	865.7	71.4	68.8	62.1	65.0	61.8	69.8	61.7	69.3	61.1	48.9	32.7	35.1	49.5	49.0	47.4	113.2	162.7	176.9	111.2	200.8
40	877.6	73.0	69.2	62.6	66.2	63.6	71.7	62.6	71.2	63.7	50.5	33.9	36.2	50.8	50.5	47.6	138.7	187.4	204.2	129.5	212.2
41	871.5	74.0	69.8	63.6	67.7	65.7	72.8	63.3	72.6	65.8	51.7	34.7	36.9	50.6	51.2	48.7	166.3	214.2	236.2	206.6	229.4
42	885.1	74.2	70.5	64.7	69.3	67.9	72.9	64.1	73.3	67.5	52.4	35.5	37.8	52.0	52.1	49.2	194.5	244.0	270.8	343.6	248.1
43	882.9	73.6	71.2	65.9	70.6	69.8	74.3	64.8	73.6	68.8	54.1	36.6	38.8	51.9	52.7	49.4	224.6	276.1	306.7	517.5	268.6
44	881.5	75.6	72.0	67.2	71.8	71.4	78.9	65.7	73.4	69.8	54.1	37.8	39.6	52.6	52.6	50.0	261.2	313.0	345.7	590.2	290.3
45	891.2	81.6	73.0	68.4	72.7	72.5	84.2	66.5	75.7	70.6	54.5	38.5	40.4	54.5	52.9	50.2	309.6	358.3	391.6	553.1	312.9
46	897.2	87.2	73.9	69.6	73.2	73.1	88.5	67.3	81.2	71.4	55.2	39.7	41.3	56.9	56.2	50.9	371.7	442.5	447.9	781.1	335.8
47	891.8	91.6	74.7	70.6	73.5	73.6	92.0	67.9	87.1	72.1	55.2	40.7	42.1	57.6	58.5	51.4	504.1	781.9	572.7	772.5	362.0
48	896.7	95.3	75.2	71.5	73.5	73.7	95.1	68.5	91.9	72.9	57.1	41.7	43.2	58.1	60.7	51.7	824.6	855.2	857.4	728.4	580.0

Table 2. Temperatures Measured in Wood Stud Shear Wall Assembly F-19 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	22.9	20.6	20.9	20.7	21.4	21.2	21.3	21.2	21.2	21.0	21.1	20.8	21.1	20.9	21.1	20.9	21.7	21.5	21.5	21.4	20.9
1	47.3	20.6	20.9	20.7	21.5	21.2	21.3	21.2	21.2	21.8	21.1	20.8	21.1	20.9	21.1	20.9	21.8	21.5	21.5	21.4	20.9
2	314.7	20.9	20.9	23.3	21.5	21.3	21.4	21.2	21.2	74.7	21.2	20.9	21.1	21.0	21.1	20.9	41.5	21.7	21.7	29.4	21.0
3	464.4	27.7	21.0	44.7	22.7	22.2	22.1	22.4	22.1	80.2	21.2	20.9	21.2	21.0	21.1	21.0	50.3	22.8	23.3	55.7	21.9
4	441.0	35.2	21.1	49.6	26.1	25.1	24.3	25.5	24.7	73.8	21.3	21.0	21.2	21.1	21.2	21.4	44.7	25.9	26.8	59.1	26.4
5	504.6	38.4	21.3	53.4	30.2	28.8	27.0	29.4	28.0	79.3	21.3	21.0	21.2	21.2	21.2	21.7	54.7	30.0	30.8	66.8	34.3
6	610.4	54.3	21.6	73.9	34.1	32.4	29.6	33.2	31.1	***	21.3	21.0	21.3	21.2	21.3	22.3	76.4	34.2	35.1	81.6	62.6
7	564.1	62.0	22.0	75.3	37.9	35.9	32.4	37.3	34.5	***	21.4	21.1	21.3	21.2	21.3	23.3	68.2	38.6	39.8	79.9	75.4
8	642.9	65.3	22.7	79.2	41.5	39.5	35.1	41.6	38.0	***	21.4	21.1	21.4	21.3	21.4	24.5	76.3	43.0	44.3	83.8	78.7
9	657.7	73.2	23.5	84.6	44.9	42.9	37.8	45.7	41.4	***	21.5	21.2	21.4	21.4	21.5	26.1	80.9	47.2	48.6	87.0	83.8
10	708.6	76.9	24.4	87.1	48.2	46.1	40.4	49.9	45.0	***	21.6	21.3	21.5	21.6	21.7	28.2	82.9	51.5	52.7	88.8	86.1
11	707.0	79.2	25.5	88.0	51.4	49.1	42.9	54.0	48.7	***	21.6	21.3	21.5	21.7	21.9	30.6	82.9	57.6	56.4	89.1	87.1
12	728.3	78.3	26.9	87.5	54.6	52.2	45.3	57.7	52.2	***	21.7	21.4	21.6	22.0	22.1	33.0	77.0	65.0	59.8	87.5	86.4
13	731.0	76.6	28.6	86.6	57.9	55.2	47.6	60.5	55.6	***	21.8	21.5	21.7	22.3	22.1	35.0	65.5	64.1	62.7	83.8	83.8
14	745.2	74.1	30.4	84.1	61.3	58.2	49.8	63.1	58.6	***	21.9	21.6	21.8	22.5	22.2	36.6	62.1	66.4	65.0	80.1	81.2
15	758.9	70.0	32.0	79.7	64.9	61.2	51.9	65.7	61.7	***	22.0	21.7	22.0	22.8	22.4	37.7	61.9	69.1	66.9	77.4	79.5
16	760.0	67.2	33.4	77.3	68.6	63.6	54.2	68.4	65.8	***	22.1	21.8	22.0	23.0	22.5	38.5	65.9	72.2	68.9	76.0	78.6
17	777.2	67.8	35.1	81.2	72.4	66.0	56.9	71.6	76.4	***	22.3	21.9	22.1	23.2	22.7	39.2	81.4	76.3	71.9	77.0	79.4
18	771.5	70.5	38.0	84.9	76.6	69.0	60.1	75.2	83.1	***	22.4	22.0	22.3	23.5	22.9	40.0	86.5	80.2	75.8	79.5	82.1
19	791.4	71.2	41.3	84.5	91.1	73.4	63.8	79.7	86.1	***	22.5	22.1	22.4	23.7	23.1	40.8	87.7	84.4	80.1	82.1	85.3
20	787.5	69.5	44.7	83.1	94.8	80.0	68.4	85.1	88.8	***	22.7	22.2	22.5	23.9	23.4	41.5	90.4	90.5	84.8	86.9	87.9
21	799.8	68.7	48.4	83.6	99.0	87.6	73.8	90.2	88.8	***	22.9	22.4	22.7	24.1	24.1	41.9	94.1	95.9	90.3	93.2	89.0
22	805.0	68.8	55.0	86.0	101.4	90.5	80.4	94.3	87.9	60.3	23.2	22.6	22.9	24.3	27.0	42.3	96.7	99.8	97.2	97.7	90.7
23	804.2	69.7	64.2	89.9	103.9	93.4	87.7	97.9	89.9	90.7	23.6	23.0	23.2	24.5	38.0	42.9	102.1	103.3	104.7	101.9	95.1
24	821.9	71.2	73.4	91.8	106.3	97.2	94.0	101.6	95.9	99.4	24.1	23.5	23.6	24.8	50.1	43.7	112.3	107.6	112.9	106.3	98.7
25	817.2	73.7	81.6	92.8	109.9	102.8	97.9	105.8	100.1	104.9	25.1	24.1	24.0	25.3	57.2	44.6	124.5	113.4	122.0	112.9	102.1
26	824.7	77.4	87.4	92.7	115.1	107.9	101.0	110.4	100.7	109.8	26.2	24.8	24.5	25.7	64.8	45.5	137.0	122.8	132.4	122.6	105.6
27	833.8	81.0	88.3	92.0	122.2	114.5	104.9	116.5	101.6	115.6	27.6	25.6	25.3	26.3	70.6	46.4	149.9	136.5	144.5	135.5	110.4
28	828.3	82.8	87.9	90.4	131.1	123.6	109.9	124.8	108.5	121.5	29.0	26.6	26.2	27.0	75.2	47.1	163.7	154.0	158.2	151.8	117.9
29	843.6	82.8	86.1	89.2	141.3	136.0	116.4	135.5	114.8	***	30.5	27.6	27.2	27.8	79.6	47.8	178.3	171.0	174.1	171.4	129.4
30	844.2	81.2	86.0	89.2	152.6	156.3	124.9	148.6	116.9	***	32.1	28.8	28.2	28.8	83.2	48.2	194.3	196.6	192.5	193.9	145.7
31	845.3	81.2	88.6	89.2	164.6	173.1	134.1	163.1	121.7	***	34.2	30.1	29.5	30.2	86.4	48.5	213.9	227.8	214.7	219.6	166.8
32	860.7	85.8	97.6	84.2	178.2	187.2	145.9	178.7	133.6	***	37.5	32.2	31.8	31.4	87.6	49.0	237.5	254.6	241.9	249.6	205.0
33	854.9	93.9	116.9	84.4	197.7	204.6	163.2	195.3	151.5	***	40.7	37.7	34.2	49.4	79.8	51.9	266.6	279.4	280.2	287.1	259.8
34	853.0	94.6	139.4	89.2	221.5	222.5	182.2	224.7	170.9	***	42.5	44.4	50.4	83.5	86.5	57.5	298.6	336.2	338.4	332.6	316.6
35	851.4	95.6	135.5	95.7	242.9	240.6	205.8	253.0	184.3	***	42.2	44.6	69.6	87.2	81.8	56.7	335.0	373.1	382.3	372.3	355.9
36	860.7	94.4	129.0	98.2	267.8	255.6	228.6	264.5	209.9	***	43.0	44.1	64.4	81.5	76.1	54.8	395.2	497.5	500.3	450.0	447.7
37	856.0	95.9	141.4	104.6	300.6	272.0	244.8	272.0	295.5	***	44.1	44.2	61.2	75.7	75.0	54.4	503.1	578.4	545.0	500.4	543.7
38	867.6	97.8	158.3	116.5	358.8	300.4	270.7	281.0	346.9	***	45.4	44.7	60.3	72.0	72.5	54.5	543.8	607.5	587.4	525.9	543.7
39	865.7	103.9	174.8	129.6	415.9	353.3	295.9	295.3	381.7	931.6	47.1	46.9	59.6	69.5	69.7	56.1	573.1	630.8	623.6	547.6	554.8
40	877.6	112.3	193.1	147.1	471.7	410.9	319.8	310.7	406.6	675.8	49.2	55.9	59.3	69.4	68.0	64.3	596.1	648.6	646.3	567.9	564.4
41	871.5	147.4	211.9	178.1	514.4	460.3	357.1	330.8	446.3	669.3	52.2	76.3	59.4	76.9	68.0	110.8	613.6	665.8	663.6	587.2	581.4
42	885.1	228.1	236.2	242.4	543.7	508.4	394.6	369.6	485.1	707.6	57.0	135.0	59.7	149.0	73.1	334.9	630.5	691.9	677.4	605.5	596.4
43	882.9	354.7	291.0	359.5	574.7	569.2	445.3	404.1	530.1	732.8	68.3	273.3	60.4	283.9	99.2	555.9	655.0	713.0	688.7	622.2	608.9
44	881.5	457.2	390.6	479.3	618.1	640.2	513.5	444.3	583.6	749.4	95.4	465.0	62.0	463.8	167.8	623.3	686.4	735.1	700.9	639.5	621.0
45	891.2	482.3	502.2	512.9	660.4	684.4	585.3	496.5	635.3	750.0	149.9	555.5	65.2	578.8	272.5	694.0	714.0	756.5	713.9	658.9	633.5
46	897.2	605.7	596.4	735.9	692.4	915.1	637.7	744.3	682.2	916.4	240.2	844.2	71.7	818.1	391.1	818.2	731.4	827.2	722.4	821.8	646.9
47	891.8	632.5	677.3	671.1	733.0	894.6	685.4	829.9	722.6	914.2	469.2	868.9	84.3	817.2	509.4	798.6	756.8	837.9	737.9	854.5	659.0
48	896.7	618.9	929.7	632.5	952.0	860.2	932.8	847.1	976.5	891.6	857.8	840.9	141.9	825.5	812.8	769.1	951.8	847.1	947.6	854.6	667.0

Table 2. Temperatures Measured in Wood Stud Shear Wall Assembly F-19 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	22.9	21.1	20.9	20.5	20.9	20.7	20.7	20.6	22.1	22.1	21.8	21.6	21.9	21.5	21.8	21.6	21.4	21.2	21.5	21.7	***
1	47.3	21.1	20.9	20.6	20.9	20.8	20.8	20.7	25.3	26.7	24.5	24.2	26.9	25.0	26.3	25.6	25.2	23.9	25.0	25.1	***
2	314.7	21.2	21.0	20.6	20.9	20.8	20.8	20.7	83.4	84.1	90.9	96.0	82.9	89.9	82.6	79.9	78.1	80.6	90.2	71.7	***
3	464.4	22.1	21.1	20.7	21.0	21.0	20.9	20.8	87.1	86.1	90.8	93.5	82.2	89.0	80.0	79.1	80.0	83.7	89.1	83.9	***
4	441.0	25.5	21.1	20.7	21.1	21.4	21.0	20.8	78.5	77.3	84.0	87.9	74.6	83.1	74.3	72.3	72.8	76.7	81.6	77.9	***
5	504.6	30.4	21.3	20.8	21.2	22.2	21.3	20.9	88.5	85.7	92.2	90.5	82.3	88.1	81.4	79.6	79.3	82.9	89.4	86.4	***
6	610.4	35.2	21.4	20.9	21.4	23.4	22.4	21.1	96.3	94.2	94.4	96.1	88.2	91.1	89.1	88.0	90.0	89.6	96.2	93.9	***
7	564.1	40.2	21.7	21.0	21.6	26.1	31.2	21.3	97.3	95.4	95.0	94.3	87.4	87.3	88.6	84.3	91.9	89.7	91.3	91.9	***
8	642.9	44.9	22.0	21.3	22.0	29.2	39.0	21.6	103.4	99.2	102.5	95.7	92.1	93.2	93.6	88.8	96.7	99.0	95.8	95.6	***
9	657.7	49.2	22.3	21.5	22.5	32.1	44.2	21.9	104.7	99.3	108.1	96.7	94.0	92.5	96.0	91.4	99.7	102.6	96.9	95.6	***
10	708.6	53.2	22.8	21.9	23.2	35.6	49.4	22.3	104.2	99.2	117.7	97.2	97.0	100.0	97.8	94.2	101.6	106.3	97.7	95.5	***
11	707.0	56.7	23.3	22.5	24.0	39.1	53.2	22.8	105.0	99.6	126.7	97.7	99.4	112.5	98.7	95.6	103.8	109.5	98.4	95.2	***
12	728.3	59.8	23.8	23.9	25.0	42.0	55.3	23.4	105.3	101.4	134.5	103.7	101.6	119.2	99.6	96.5	105.7	113.2	100.1	95.5	***
13	731.0	62.5	24.5	26.2	26.0	43.5	55.5	24.0	111.7	106.4	145.2	112.8	106.3	127.3	101.4	100.4	110.2	118.5	104.2	99.5	***
14	745.2	64.7	25.3	28.2	27.0	43.8	54.6	24.8	118.0	117.2	168.1	119.4	116.9	137.5	110.6	109.8	119.5	127.8	110.3	104.3	***
15	758.9	66.8	25.9	29.5	27.9	43.7	53.9	25.5	151.0	166.0	193.3	124.1	151.1	175.1	141.2	139.9	146.3	143.0	120.2	131.9	***
16	760.0	69.3	26.5	30.4	28.5	43.5	53.5	26.2	195.2	203.1	220.6	130.9	187.9	220.9	176.0	173.2	181.9	189.2	150.7	175.5	***
17	777.2	72.9	27.0	31.2	29.0	43.4	53.6	26.9	224.2	233.3	244.7	144.0	214.1	254.2	202.7	200.8	214.2	226.9	193.6	201.0	***
18	771.5	78.1	27.5	32.4	29.6	43.6	54.6	27.8	253.1	256.4	274.9	172.2	241.0	284.0	228.1	226.9	238.7	263.7	225.9	221.0	***
19	791.4	84.3	28.2	33.9	30.3	44.1	56.6	29.0	272.9	268.5	302.7	210.4	265.8	309.3	247.3	251.8	255.6	282.2	248.7	244.7	***
20	787.5	91.6	29.1	35.4	31.3	44.8	59.4	30.7	293.5	289.4	330.8	252.0	289.2	332.1	269.2	281.0	259.7	292.0	273.0	271.6	***
21	799.8	99.1	30.2	37.3	32.4	45.8	61.7	34.5	304.3	308.8	363.3	302.1	313.9	359.4	294.9	309.2	245.7	296.8	292.7	289.4	***
22	805.0	104.9	31.9	40.1	33.8	47.1	63.7	41.6	327.9	330.2	383.8	359.0	342.4	388.2	325.1	339.3	226.1	309.3	317.3	308.8	***
23	804.2	109.2	34.8	43.1	35.9	48.8	66.7	48.9	346.5	354.3	411.4	406.6	368.5	413.3	356.5	366.1	197.4	335.6	343.8	338.7	***
24	821.9	113.4	39.6	46.3	39.7	50.9	71.6	53.9	359.4	379.6	440.9	441.5	388.5	437.6	383.1	391.0	197.3	376.0	364.4	368.6	***
25	817.2	119.3	45.8	50.0	45.3	53.3	77.0	57.4	378.0	405.8	464.5	474.5	407.0	467.6	419.8	427.2	208.4	414.3	390.2	397.5	***
26	824.7	128.2	51.9	53.3	51.3	55.7	80.8	60.6	396.9	432.2	496.8	502.3	430.2	487.2	442.7	453.7	222.6	438.4	412.8	425.9	***
27	833.8	140.7	57.0	56.3	56.6	58.0	83.2	63.4	422.5	451.1	516.1	527.1	459.5	503.4	468.9	467.9	245.5	465.0	434.3	448.0	***
28	828.3	157.0	61.3	59.1	60.3	60.1	83.8	66.0	447.2	473.9	544.0	547.1	487.7	523.4	495.5	487.5	287.5	487.8	467.7	468.6	***
29	843.6	177.3	64.9	61.7	62.3	61.9	83.3	67.5	466.8	493.3	561.1	565.9	504.1	543.0	511.7	507.8	319.4	503.6	492.2	487.6	***
30	844.2	201.3	67.8	65.3	62.1	63.4	82.2	68.5	489.8	522.0	588.9	585.3	521.5	563.6	518.8	527.4	355.9	488.1	519.3	502.4	***
31	845.3	229.1	70.0	70.8	62.6	64.7	81.4	70.6	511.1	550.5	611.4	592.9	541.7	582.0	527.4	549.5	392.6	451.3	536.4	513.3	***
32	860.7	265.4	71.2	76.5	68.2	66.2	82.6	75.9	531.3	547.2	623.9	603.5	572.4	588.9	550.8	565.0	354.5	399.2	544.5	529.7	***
33	854.9	297.1	72.5	80.4	72.3	70.5	85.9	77.2	551.2	528.5	658.9	609.6	598.0	601.2	582.5	577.4	363.1	374.9	555.7	544.2	***
34	853.0	327.8	73.6	80.0	81.9	74.9	88.4	83.6	576.8	560.6	676.1	601.5	619.5	603.9	619.9	599.5	376.7	385.4	566.9	558.2	***
35	851.4	368.3	74.5	79.9	85.2	77.1	94.5	86.7	595.2	586.9	716.3	652.0	637.7	609.1	649.2	613.5	423.8	503.5	603.5	560.3	***
36	860.7	458.7	74.4	80.7	91.7	77.3	101.1	90.1	612.8	599.6	732.4	661.2	667.8	620.0	674.2	633.6	478.9	548.7	620.2	571.8	***
37	856.0	497.1	76.0	83.8	106.7	79.1	108.7	97.1	641.8	618.5	740.7	692.6	690.8	628.0	696.4	647.8	557.4	569.7	632.5	606.6	***
38	867.6	534.5	81.4	92.1	125.4	87.3	122.1	111.5	663.6	634.2	743.1	709.2	706.0	634.4	713.4	657.5	601.9	579.2	630.8	636.7	***
39	865.7	579.6	95.5	106.2	143.8	102.8	136.2	129.2	672.6	649.3	763.5	719.3	716.7	644.1	730.3	672.0	624.2	590.8	631.9	659.4	***
40	877.6	607.7	109.5	122.9	161.5	120.5	148.1	146.9	681.5	664.5	767.0	726.4	722.8	653.4	742.0	684.9	635.5	603.8	641.1	675.7	***
41	871.5	621.2	126.1	250.1	179.6	136.3	158.2	163.2	692.1	679.3	781.6	742.5	728.9	663.1	752.1	698.6	651.1	639.2	656.2	686.9	***
42	885.1	636.7	143.7	480.1	200.2	151.2	168.6	182.8	699.3	701.4	794.9	762.0	734.0	671.8	760.7	716.3	675.2	633.5	664.3	691.7	***
43	882.9	652.7	176.0	434.0	232.5	168.5	181.0	208.3	705.9	728.8	790.8	769.3	740.9	681.9	768.9	748.1	717.0	650.8	668.7	707.2	***
44	881.5	666.6	242.0	418.6	288.5	196.5	194.8	261.1	711.8	755.4	801.0	780.7	744.2	692.9	773.3	764.2	738.0	679.8	681.2	722.8	***
45	891.2	680.1	346.2	449.0	368.0	253.2	213.3	331.3	716.9	769.1	802.1	785.4	746.7	702.9	775.9	795.3	755.1	690.6	690.0	725.5	***
46	897.2	812.6	451.9	643.4	443.7	749.6	238.6	676.0	721.7	921.1	791.1	892.9	748.6	846.2	776.8	916.5	776.6	772.8	701.7	777.0	***
47	891.8	840.2	600.5	741.3	515.9	823.3	270.4	760.1	745.9	949.9	805.0	875.9	754.3	846.3	774.1	887.1	817.5	819.5	711.3	803.0	***
48	896.7	847.3	900.8	727.6	908.2	821.2	310.6	792.3	857.3	894.5	895.7	894.1	899.9	866.8	870.3	948.4	933.1	804.4	715.8	797.3	***

Table 2. Temperatures Measured in Wood Stud Shear Wall Assembly F-19 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	22.9	***	***	***	***	***	***	***	***	***	***	***	21.1	21.2	21.0	21.0	20.6	20.6	20.5	20.5
1	47.3	***	***	***	***	***	***	***	***	***	***	***	21.1	21.2	21.0	21.0	20.6	20.6	20.5	20.5
2	314.7	***	***	***	***	***	***	***	***	***	***	***	21.1	21.2	21.0	21.3	20.6	20.6	20.5	20.5
3	464.4	***	***	***	***	***	***	***	***	***	***	***	21.1	21.2	21.0	23.4	20.6	20.6	20.5	20.5
4	441.0	***	***	***	***	***	***	***	***	***	***	***	21.1	21.2	21.1	24.8	20.7	20.6	20.5	20.5
5	504.6	***	***	***	***	***	***	***	***	***	***	***	21.2	21.2	21.3	25.6	20.8	20.7	20.5	20.6
6	610.4	***	***	***	***	***	***	***	***	***	***	***	21.3	21.2	21.7	26.4	21.0	20.7	20.5	20.6
7	564.1	***	***	***	***	***	***	***	***	***	***	***	21.4	21.2	22.0	27.2	21.2	20.7	20.6	20.6
8	642.9	***	***	***	***	***	***	***	***	***	***	***	21.5	21.3	22.4	27.9	21.4	20.8	20.6	20.7
9	657.7	***	***	***	***	***	***	***	***	***	***	***	21.8	21.4	22.8	28.5	21.7	20.8	20.7	20.8
10	708.6	***	***	***	***	***	***	***	***	***	***	***	22.0	21.6	23.3	29.1	22.1	20.9	20.9	20.9
11	707.0	***	***	***	***	***	***	***	***	***	***	***	22.3	21.8	23.7	29.7	22.5	21.1	21.0	21.1
12	728.3	***	***	***	***	***	***	***	***	***	***	***	22.7	22.0	24.2	30.2	23.0	21.3	21.2	21.2
13	731.0	***	***	***	***	***	***	***	***	***	***	***	23.1	22.3	24.7	30.8	23.6	21.5	21.5	21.5
14	745.2	***	***	***	***	***	***	***	***	***	***	***	23.6	22.6	25.2	31.3	24.2	21.8	21.8	21.8
15	758.9	***	***	***	***	***	***	***	***	***	***	***	24.1	23.0	25.8	31.8	24.8	22.0	22.1	22.1
16	760.0	***	***	***	***	***	***	***	***	***	***	***	24.6	23.4	26.3	32.3	25.4	22.4	22.5	22.4
17	777.2	***	***	***	***	***	***	***	***	***	***	***	25.2	23.9	26.9	33.0	26.1	22.8	23.0	22.8
18	771.5	***	***	***	***	***	***	***	***	***	***	***	26.0	24.4	27.6	33.9	26.8	23.2	23.5	23.3
19	791.4	***	***	***	***	***	***	***	***	***	***	***	27.0	25.2	28.3	34.9	27.6	23.6	24.1	23.8
20	787.5	***	***	***	***	***	***	***	***	***	***	***	28.5	26.1	29.2	36.2	28.6	24.2	24.9	24.5
21	799.8	***	***	***	***	***	***	***	***	***	***	***	30.4	27.4	30.5	37.8	29.7	24.8	26.0	25.5
22	805.0	***	***	***	***	***	***	***	***	***	***	***	34.3	29.5	32.4	40.0	31.0	25.5	27.4	26.7
23	804.2	***	***	***	***	***	***	***	***	***	***	***	40.4	33.1	34.9	43.0	32.9	26.4	29.5	28.6
24	821.9	***	***	***	***	***	***	***	***	***	***	***	44.7	36.6	37.9	46.1	35.5	27.6	32.2	30.9
25	817.2	***	***	***	***	***	***	***	***	***	***	***	45.8	39.4	41.2	49.6	38.8	29.3	35.6	33.9
26	824.7	***	***	***	***	***	***	***	***	***	***	***	48.0	41.7	44.5	53.2	41.8	31.1	39.1	37.2
27	833.8	***	***	***	***	***	***	***	***	***	***	***	50.6	44.0	47.5	57.1	44.3	33.1	42.5	40.5
28	828.3	***	***	***	***	***	***	***	***	***	***	***	53.1	45.7	49.8	60.9	46.4	35.0	45.8	43.7
29	843.6	***	***	***	***	***	***	***	***	***	***	***	55.7	47.9	53.0	64.8	48.1	37.1	48.7	46.5
30	844.2	***	***	***	***	***	***	***	***	***	***	***	57.9	50.0	55.7	68.9	50.0	39.0	51.4	49.1
31	845.3	***	***	***	***	***	***	***	***	***	***	***	60.1	51.9	58.9	72.8	51.9	41.0	53.9	51.6
32	860.7	***	***	***	***	***	***	***	***	***	***	***	61.8	54.3	62.0	76.4	55.7	43.2	56.3	54.4
33	854.9	***	***	***	***	***	***	***	***	***	***	***	64.0	56.9	63.6	79.9	60.4	46.4	58.6	57.1
34	853.0	***	***	***	***	***	***	***	***	***	***	***	65.7	59.4	65.0	83.6	64.9	50.1	60.6	58.8
35	851.4	***	***	***	***	***	***	***	***	***	***	***	67.7	62.1	67.8	87.8	69.8	53.3	62.4	61.0
36	860.7	***	***	***	***	***	***	***	***	***	***	***	70.2	65.1	72.8	92.7	73.3	56.4	64.5	63.3
37	856.0	***	***	***	***	***	***	***	***	***	***	***	73.5	69.7	81.9	98.6	77.0	59.9	66.6	65.0
38	867.6	***	***	***	***	***	***	***	***	***	***	***	79.0	78.4	106.6	107.1	81.2	63.8	68.6	66.9
39	865.7	***	***	***	***	***	***	***	***	***	***	***	91.8	97.1	257.9	177.4	85.8	68.2	70.7	68.8
40	877.6	***	***	***	***	***	***	***	***	***	***	***	123.7	139.1	611.4	596.6	90.4	79.3	73.2	71.3
41	871.5	***	***	***	***	***	***	***	***	***	***	***	186.8	231.0	744.6	689.7	94.8	164.1	76.5	74.7
42	885.1	***	***	***	***	***	***	***	***	***	***	***	344.3	415.1	770.0	742.4	99.8	381.1	81.5	79.7
43	882.9	***	***	***	***	***	***	***	***	***	***	***	520.9	598.7	787.3	762.9	106.1	476.1	95.7	90.9
44	881.5	***	***	***	***	***	***	***	***	***	***	***	627.6	697.4	787.3	765.8	115.5	526.7	181.2	145.8
45	891.2	***	***	***	***	***	***	***	***	***	***	***	702.9	746.1	775.0	765.6	132.6	565.8	279.2	225.3
46	897.2	***	***	***	***	***	***	***	***	***	***	***	862.5	898.1	897.8	891.0	377.9	820.6	672.5	624.7
47	891.8	***	***	***	***	***	***	***	***	***	***	***	860.7	887.6	855.3	909.6	822.9	722.9	715.7	713.9
48	896.7	***	***	***	***	***	***	***	***	***	***	***	837.6	888.8	783.4	894.9	802.6	709.8	752.4	765.8

Table 3. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-19

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(48,49,50,51,52,53, 54,55,56,57,58,59)	BL/WStd. (Exp.) Av(24,25,26, 27,28,29)	BL/Cav. (UnExp.) Av(36,37,38, 39,40,41)	Mid.WStd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (Unexp.) Av(30,31,32, 33,34,35)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	22.9	21.7	21.3	21.3	20.9	20.7	21.0	20.6
1	47.3	25.3	21.3	21.4	20.8	20.8	21.0	20.6
2	314.7	84.2	21.3	26.1	21.2	20.8	21.0	20.7
3	464.4	85.4	22.3	32.7	24.8	20.9	21.1	20.7
4	441.0	78.4	25.1	34.7	26.5	21.0	21.2	20.7
5	504.6	85.5	28.7	41.2	27.5	21.3	21.3	20.7
6	610.4	92.3	32.1	54.2	32.4	21.8	21.4	20.7
7	564.1	91.2	35.6	57.0	34.0	23.8	21.6	20.8
8	642.9	96.3	39.1	61.8	35.5	25.8	21.9	20.8
9	657.7	98.1	42.5	66.1	37.8	27.4	22.2	21.0
10	708.6	100.7	45.9	69.2	39.3	29.2	22.6	21.2
11	707.0	103.5	49.2	71.6	40.5	30.8	23.1	21.5
12	728.3	106.3	52.4	72.6	41.2	32.2	23.6	21.9
13	731.0	112.0	55.4	70.4	41.9	33.3	24.1	22.5
14	745.2	121.6	58.2	69.9	42.2	33.9	24.4	23.1
15	758.9	148.6	61.0	70.3	42.0	34.4	24.8	23.8
16	760.0	183.8	64.1	71.8	42.2	34.8	25.0	24.4
17	777.2	212.8	68.7	76.5	43.7	35.2	25.2	25.0
18	771.5	240.5	72.8	80.4	45.9	35.9	25.5	25.5
19	791.4	263.3	78.8	84.0	47.7	37.0	25.8	26.0
20	787.5	286.1	83.4	88.7	49.9	38.4	26.1	26.6
21	799.8	306.7	87.9	93.6	54.3	40.3	26.4	27.2
22	805.0	329.8	90.9	97.8	59.9	43.0	27.0	27.9
23	804.2	353.2	94.6	102.7	66.5	46.4	29.2	28.6
24	821.9	377.3	99.0	108.5	72.7	50.4	31.6	29.6
25	817.2	404.6	103.3	115.7	77.8	54.8	33.4	31.0
26	824.7	428.5	107.0	124.7	81.5	58.9	35.3	33.0
27	833.8	450.8	111.9	136.3	83.6	62.4	37.0	35.6
28	828.3	476.5	119.6	150.5	84.5	65.1	38.5	38.5
29	843.6	496.4	128.8	166.9	84.5	66.9	40.1	41.6
30	844.2	515.3	139.9	187.4	85.0	68.2	41.5	44.6
31	845.3	530.0	151.3	212.0	86.7	70.0	43.2	47.2
32	860.7	534.2	164.7	242.3	90.1	73.4	44.9	49.8
33	854.9	545.4	182.5	278.4	97.5	76.5	49.0	52.5
34	853.0	562.1	204.4	325.0	101.5	80.4	60.8	55.1
35	851.4	595.9	225.3	364.5	101.5	83.0	63.7	57.5
36	860.7	618.4	245.3	458.2	106.6	85.9	60.6	59.9
37	856.0	643.6	277.0	527.9	117.0	91.9	59.1	62.1
38	867.6	659.2	311.5	557.1	130.8	103.3	58.2	64.0
39	865.7	672.8	348.4	584.9	146.7	119.0	58.1	65.7
40	877.6	683.2	383.9	605.2	165.6	134.9	61.0	67.1
41	871.5	697.6	421.8	622.1	198.7	168.9	73.9	68.4
42	885.1	708.8	460.3	639.7	251.0	221.1	134.8	69.4
43	882.9	723.2	504.7	656.7	324.8	233.4	223.5	70.3
44	881.5	737.1	560.0	674.9	390.9	266.9	312.9	71.7
45	891.2	746.3	612.4	692.8	427.9	326.8	386.0	73.9
46	897.2	803.6	734.3	760.4	539.6	533.9	530.6	76.1
47	891.8	815.8	773.1	781.0	621.8	618.6	591.3	78.1
48	896.7	864.8	913.7	852.6	753.3	743.5	708.0	79.7

Table 4. Temperatures Measured in Wood Stud Shear Wall Assembly F-20

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	24.4	23.4	23.4	23.2	23.2	23.4	23.5	23.3	23.2	23.3	25.1	24.4	24.2	24.9	24.7	25.1	22.9	22.6	22.9	22.6	23.0
1	44.5	23.4	23.4	23.2	23.3	23.5	23.5	23.3	23.2	23.3	25.4	24.7	24.3	25.3	24.8	25.3	22.9	22.6	22.9	22.6	23.0
2	263.4	23.4	23.4	23.2	23.3	23.5	23.5	23.3	23.2	23.3	25.6	24.9	24.4	25.6	25.0	25.4	22.9	22.6	22.9	22.6	23.0
3	393.7	23.5	23.5	23.2	23.3	23.5	23.5	23.4	23.3	23.4	25.7	25.0	24.5	25.8	25.0	25.5	22.9	22.6	23.3	22.7	23.1
4	388.0	23.5	23.5	23.3	23.3	23.5	23.5	23.4	23.3	23.4	25.9	25.1	24.6	25.8	25.1	25.6	22.9	22.6	23.6	22.7	23.2
5	545.4	23.6	23.5	23.3	23.4	23.6	23.6	23.4	23.3	23.4	26.0	25.2	24.6	25.9	25.2	25.7	23.1	22.7	24.0	22.9	23.7
6	586.9	23.6	23.6	23.3	23.4	23.6	23.6	23.4	23.3	23.4	26.1	25.3	24.7	26.0	25.3	25.8	23.4	22.8	25.3	23.4	24.6
7	570.9	23.6	23.6	23.4	23.5	23.6	23.6	23.5	23.3	23.5	26.2	25.4	24.8	26.2	25.4	25.9	23.9	23.0	26.4	24.0	25.7
8	639.2	23.7	23.7	23.5	23.5	23.7	23.7	23.5	23.4	23.5	26.3	25.5	24.8	26.3	25.5	25.9	24.5	23.3	27.6	24.8	27.4
9	666.7	23.7	23.7	23.5	23.6	23.7	23.7	23.6	23.4	23.5	26.4	25.6	24.9	26.3	25.6	26.0	25.4	23.7	29.1	26.0	30.2
10	700.8	23.8	23.8	23.7	23.7	23.8	23.8	23.6	23.5	23.6	26.5	25.6	25.0	26.4	25.7	26.1	26.3	24.1	30.8	27.6	34.9
11	717.5	23.9	23.9	23.8	23.7	23.9	24.0	23.7	23.6	23.7	26.7	25.7	25.0	26.5	25.8	26.2	27.4	24.7	32.5	29.5	40.9
12	720.1	24.0	24.0	24.0	23.9	24.1	24.1	23.7	23.7	23.7	26.8	25.8	25.1	26.7	25.9	26.4	28.5	25.6	33.2	30.8	43.7
13	731.1	24.1	24.1	24.1	24.0	24.2	24.3	23.8	23.8	23.8	26.9	25.9	25.1	26.9	26.0	26.5	29.5	26.4	32.6	30.8	43.7
14	754.4	24.2	24.2	24.3	24.1	24.4	24.6	23.9	23.9	23.9	27.0	26.0	25.2	27.0	26.2	26.6	30.5	27.1	32.4	30.7	44.2
15	747.6	24.4	24.4	24.6	24.3	24.7	24.9	24.0	24.1	23.9	27.2	26.1	25.3	27.1	26.4	26.8	31.4	27.6	32.4	30.6	44.9
16	772.9	24.6	24.6	24.9	24.5	24.9	25.3	24.1	24.2	24.1	27.4	26.2	25.4	27.3	26.6	27.0	32.3	28.0	32.5	30.6	45.8
17	761.4	24.8	24.8	25.1	24.7	25.2	25.7	24.2	24.4	24.2	27.5	26.3	25.5	27.5	26.8	27.1	33.2	28.3	32.8	30.8	47.1
18	785.8	25.0	25.0	25.4	25.0	25.5	26.1	24.4	24.7	24.3	27.7	26.4	25.5	27.7	27.0	27.3	34.2	28.7	33.3	31.5	49.3
19	779.6	25.2	25.2	25.6	25.2	25.8	26.6	24.5	24.9	24.4	27.9	26.5	25.6	27.8	27.1	27.4	35.2	29.1	34.0	33.4	54.2
20	794.7	25.5	25.4	25.9	25.5	26.2	27.0	24.6	25.1	24.6	28.1	26.6	25.8	28.0	27.3	27.6	37.0	29.8	36.3	37.4	63.6
21	799.4	25.8	25.7	26.1	25.8	26.5	27.5	24.8	25.4	24.7	28.4	26.7	25.8	28.4	27.6	27.8	44.1	32.8	43.4	44.3	73.8
22	799.9	26.2	26.0	26.4	26.2	27.1	28.0	25.0	25.7	25.0	29.0	26.9	25.9	28.8	27.9	28.0	59.4	42.0	57.8	52.0	80.8
23	820.0	27.0	26.4	26.8	26.7	27.8	28.7	25.3	26.3	25.4	29.9	27.0	26.1	29.6	28.3	28.2	74.8	54.1	72.8	58.5	84.7
24	820.9	28.4	27.0	27.5	27.5	28.8	29.7	25.7	27.2	26.3	31.4	27.2	26.2	31.2	29.2	28.7	84.1	70.9	81.9	63.8	88.3
25	818.4	30.8	28.2	28.6	28.9	30.2	31.1	26.4	28.9	28.0	33.6	27.8	26.5	33.7	30.6	29.4	89.4	85.1	85.7	68.1	90.5
26	834.6	34.2	30.1	30.4	31.2	31.7	32.9	27.3	31.4	30.8	36.1	28.5	26.8	36.4	32.6	30.7	91.7	89.1	86.5	72.2	90.4
27	820.8	38.4	33.0	32.8	34.4	33.5	35.2	28.6	34.7	34.3	38.6	29.4	27.1	38.4	34.9	32.9	91.8	89.6	85.9	75.1	89.8
28	272.9	42.4	36.6	35.7	38.1	35.7	37.9	30.4	38.3	37.5	40.7	30.6	27.6	40.5	37.2	35.3	91.0	89.3	84.6	75.3	89.1
29	832.4	45.8	40.9	38.6	42.0	38.1	40.9	32.4	41.8	40.3	41.8	31.8	28.3	41.5	39.2	37.8	89.3	88.9	83.1	74.7	88.4
30	840.3	48.4	45.2	41.3	45.4	40.7	43.6	34.6	44.8	42.5	42.7	33.1	28.9	42.2	40.3	39.1	87.9	89.4	81.9	74.3	90.1
31	853.6	50.9	49.0	43.8	48.1	43.0	46.1	36.7	47.3	44.3	42.8	34.1	29.7	42.4	41.1	39.7	87.3	90.7	81.9	74.8	100.2
32	865.2	54.2	51.9	46.1	50.2	44.9	48.2	38.7	49.9	46.6	43.1	35.1	31.4	42.5	41.6	40.5	92.4	96.6	86.2	75.8	122.7
33	871.0	58.0	53.9	48.7	52.0	47.2	50.0	40.3	53.2	49.6	45.2	36.0	31.7	43.9	42.2	41.6	96.8	111.0	94.0	79.4	138.7
34	859.2	61.5	55.4	52.3	55.0	50.9	52.5	41.9	57.1	52.9	47.5	37.0	32.5	45.2	43.8	42.9	93.0	133.1	86.4	86.4	153.8
35	827.0	64.5	57.5	55.8	58.9	54.0	57.2	43.9	60.9	55.7	48.5	38.3	33.9	45.8	46.9	45.5	92.5	121.6	85.2	84.6	176.9
36	857.0	66.9	59.0	58.4	62.1	56.2	61.5	46.1	63.5	57.9	48.8	39.4	35.5	46.2	48.3	48.2	97.6	110.7	90.7	85.6	196.4
37	856.3	69.2	60.9	60.5	64.0	58.5	64.3	48.5	65.3	59.8	48.8	40.1	37.1	46.9	49.4	50.5	128.2	111.1	96.1	88.4	219.0
38	860.6	71.4	62.5	62.4	65.2	61.3	66.6	51.0	66.7	61.7	49.0	41.2	38.7	48.5	50.4	50.7	250.8	115.2	116.9	92.4	237.9
39	872.4	73.3	64.3	64.1	66.4	64.5	68.9	53.2	68.3	63.5	50.2	41.6	39.3	49.4	51.2	51.3	326.2	121.1	167.1	96.6	256.0
40	873.2	74.6	66.6	65.8	67.7	67.6	71.1	55.1	70.0	65.2	51.5	42.9	40.2	50.5	52.7	51.8	396.9	129.7	216.2	110.3	273.6
41	872.5	75.3	69.1	67.6	69.2	70.2	72.8	56.8	71.5	66.6	51.8	43.5	41.3	50.9	53.2	52.7	496.1	141.7	267.8	143.6	294.5
42	883.4	76.0	71.1	69.1	70.6	72.0	73.9	58.3	72.6	67.6	53.2	45.1	41.9	51.0	54.1	53.0	620.5	165.9	321.3	232.9	316.1
43	888.2	79.5	72.7	70.4	71.8	73.0	74.4	59.6	73.2	68.4	53.5	46.1	42.8	51.8	54.3	53.1	719.0	218.5	391.8	488.2	337.9
44	882.5	84.7	73.9	71.5	72.6	73.9	74.4	60.8	73.2	69.0	52.7	46.6	43.5	53.8	53.7	53.6	836.5	269.1	492.7	424.6	357.5
45	883.2	89.5	74.7	72.3	73.0	75.8	76.4	61.8	73.2	69.5	53.5	47.6	44.2	56.0	55.4	53.9	865.1	323.6	630.6	424.5	376.0
46	895.8	93.7	75.2	72.8	73.2	79.6	81.1	62.7	74.8	69.9	56.6	48.6	44.7	57.6	58.6	54.2	889.8	401.5	760.5	428.4	393.3
47	902.1	97.5	75.3	73.0	73.8	84.3	86.7	63.5	78.8	70.3	59.6	49.1	45.8	60.0	62.3	54.3	902.8	525.5	936.2	437.4	428.3

Table 4. Temperatures Measured in Wood Stud Shear Wall Assembly F-20 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	24.4	23.1	23.0	23.1	23.3	23.0	23.4	23.2	23.3	23.2	23.4	23.1	23.5	23.3	23.5	23.4	23.7	23.3	23.7	23.5	23.3
1	44.5	23.1	23.0	23.1	23.3	23.0	23.4	23.2	23.3	23.2	23.4	23.2	23.5	23.4	23.5	23.4	23.7	23.4	23.7	23.5	23.3
2	263.4	23.1	23.1	23.1	23.3	23.0	23.4	23.3	51.3	23.5	23.4	23.2	23.5	23.4	23.5	23.5	23.9	27.1	23.8	25.6	24.9
3	393.7	23.1	23.5	23.3	24.1	23.7	24.0	23.8	69.5	25.6	23.4	23.3	23.6	23.4	23.6	23.5	26.4	33.0	25.3	29.5	25.1
4	388.0	23.2	24.5	23.6	26.4	26.0	25.9	25.8	67.9	29.9	23.5	23.3	23.7	23.5	23.7	23.6	31.3	36.4	28.3	31.3	26.8
5	545.4	23.4	26.1	23.9	29.7	29.1	28.6	28.8	81.6	34.6	23.5	23.4	23.7	23.6	23.7	23.7	52.1	47.4	32.4	35.5	29.4
6	586.9	23.8	31.7	24.7	33.5	32.8	32.5	32.2	86.3	40.3	23.6	23.5	23.8	23.6	23.8	23.7	66.0	64.6	41.5	46.2	33.3
7	570.9	24.4	36.6	25.8	37.3	37.0	36.5	35.8	85.1	46.2	23.6	23.5	23.8	23.7	23.9	23.8	66.0	62.9	44.5	48.9	37.7
8	639.2	25.3	40.3	26.9	41.2	41.0	40.5	39.5	90.2	50.9	23.7	23.6	23.9	23.8	24.0	23.9	72.7	67.8	49.5	53.4	42.1
9	666.7	26.6	45.7	28.4	45.0	44.9	44.2	43.0	91.0	55.5	23.8	23.7	24.0	23.8	24.2	24.0	75.7	69.6	54.6	56.5	46.4
10	700.8	28.6	50.5	30.1	48.6	48.8	48.1	46.4	92.3	59.8	23.9	23.8	24.2	23.9	24.4	24.1	78.2	72.3	57.7	59.0	50.6
11	717.5	31.6	54.4	32.1	52.3	52.5	52.0	49.6	91.9	63.9	23.9	23.8	24.4	24.0	24.7	24.2	79.5	74.2	59.0	60.8	54.5
12	720.1	33.0	56.4	34.1	55.5	56.1	55.6	52.6	91.1	67.2	24.1	24.0	24.7	24.1	25.0	24.4	71.9	67.5	58.8	60.4	57.7
13	731.1	33.8	54.9	35.1	58.0	58.6	58.0	54.8	88.9	69.3	24.2	24.1	24.9	24.1	25.4	24.5	65.3	60.4	58.6	57.2	60.3
14	754.4	34.6	53.4	35.8	60.2	60.8	59.7	56.7	87.2	70.6	24.3	24.2	25.1	24.2	25.7	24.6	62.1	58.0	59.3	56.7	62.7
15	747.6	35.6	52.2	36.3	62.2	63.1	61.2	58.5	86.1	71.6	24.4	24.3	25.3	24.3	26.1	24.8	60.6	56.6	60.5	57.5	65.0
16	772.9	36.6	51.3	36.8	64.2	66.2	62.8	60.3	85.9	72.3	24.5	24.4	25.4	24.4	26.5	24.9	60.9	56.0	64.9	59.5	67.1
17	761.4	37.9	50.9	37.3	66.3	70.8	65.0	62.6	87.1	73.4	24.6	24.5	25.5	24.5	26.8	25.1	64.8	56.4	68.1	63.2	69.2
18	785.8	39.4	51.4	37.8	68.7	77.2	68.5	65.8	88.9	75.1	24.7	24.7	25.6	24.6	27.2	25.3	72.6	58.3	72.2	68.4	71.9
19	779.6	41.5	52.7	38.7	72.5	84.5	74.6	70.8	91.0	77.8	24.9	24.8	25.8	24.7	27.8	25.6	80.7	64.3	77.7	74.8	75.9
20	794.7	46.1	54.9	40.4	83.1	92.4	81.8	78.0	92.9	81.3	25.0	24.9	25.9	24.8	29.0	26.0	87.7	75.0	85.5	83.7	82.4
21	799.4	56.8	57.6	42.6	95.7	100.6	88.0	86.3	93.7	85.4	25.2	25.1	26.4	24.9	36.2	26.5	90.5	90.8	95.0	94.6	91.4
22	799.9	71.3	61.1	44.9	98.0	104.5	93.6	94.3	92.8	89.0	25.6	25.4	27.5	25.1	53.4	27.5	93.2	98.0	102.0	104.0	99.4
23	820.0	81.8	65.5	47.6	101.7	109.1	99.1	99.8	90.6	92.0	26.3	25.8	33.9	25.3	67.5	30.1	99.7	105.0	107.6	111.2	106.8
24	820.9	88.1	70.9	51.1	105.4	116.5	103.8	105.0	90.6	94.6	27.5	26.2	64.2	25.7	77.6	42.0	106.4	115.9	113.5	118.3	113.8
25	818.4	91.3	77.4	57.0	111.0	125.5	107.2	111.2	91.6	97.7	30.3	26.8	78.9	26.2	81.4	59.9	115.2	128.6	120.7	127.6	122.4
26	834.6	92.4	81.8	65.7	119.8	134.9	111.4	118.5	93.2	100.5	34.1	27.6	79.2	27.0	76.9	59.4	126.4	142.1	130.1	140.4	134.7
27	820.8	91.9	83.8	73.5	130.0	142.6	116.9	126.1	96.0	102.3	37.1	28.6	74.5	28.7	68.3	51.3	140.9	156.3	143.1	156.4	150.1
28	772.9	89.3	83.7	76.9	140.0	151.7	123.8	135.2	98.8	103.9	39.0	29.8	69.2	31.2	63.5	47.2	156.4	166.7	158.9	172.0	168.0
29	832.4	87.7	82.7	76.8	150.6	161.0	132.5	145.6	104.1	105.8	40.5	31.1	67.5	33.1	61.5	46.1	174.6	181.6	177.1	188.7	188.8
30	840.3	87.0	81.7	75.3	162.7	171.3	143.9	156.9	113.6	109.3	41.9	32.4	71.8	34.5	61.4	46.9	195.3	201.1	197.9	207.9	207.4
31	853.6	88.3	80.5	72.4	177.8	182.2	158.8	169.0	129.9	115.1	43.6	33.6	79.7	35.6	70.5	50.8	219.7	225.2	220.7	230.6	221.3
32	865.2	96.0	78.0	88.3	198.7	196.9	179.3	185.7	139.5	123.3	46.1	34.9	92.2	36.4	89.6	69.3	249.5	253.8	245.7	260.3	246.6
33	871.0	112.9	86.1	81.5	223.6	222.4	195.8	209.2	163.9	134.6	49.8	36.6	85.0	40.7	80.9	81.8	301.1	299.0	286.9	308.8	282.5
34	859.2	127.7	85.4	85.7	272.0	263.8	222.0	222.6	174.8	146.8	49.1	40.1	82.3	46.7	73.6	79.8	361.4	359.5	348.8	361.5	339.2
35	827.0	121.9	88.3	90.8	283.0	292.2	269.0	241.5	189.9	161.3	48.7	41.9	80.6	54.0	69.8	73.6	404.4	419.3	457.5	447.3	382.4
36	857.0	118.3	91.1	98.6	414.6	370.1	381.2	294.2	211.9	178.7	49.9	43.9	78.5	53.8	67.5	69.0	477.4	469.9	509.7	504.1	460.5
37	856.3	119.7	93.7	111.5	495.8	402.8	412.2	324.7	244.9	199.3	51.3	45.8	76.7	53.3	66.0	66.3	548.8	516.1	539.4	542.4	547.7
38	860.6	123.8	97.3	127.3	648.3	425.1	449.1	363.6	296.6	223.3	53.1	47.8	76.2	53.3	65.0	64.3	626.7	562.5	561.2	567.5	585.0
39	872.4	130.0	102.9	143.1	711.1	451.1	483.3	391.1	369.0	249.7	56.2	49.9	78.4	53.7	64.6	63.9	677.1	589.0	578.4	586.3	613.1
40	873.2	138.3	111.0	166.2	717.8	471.1	508.4	416.5	404.0	279.8	62.6	52.2	84.5	58.2	64.9	73.3	702.8	606.7	591.8	602.3	633.8
41	872.5	148.3	120.5	213.0	738.3	491.3	533.7	438.4	444.3	313.4	75.4	54.5	96.5	81.3	66.2	107.6	719.2	623.0	603.7	616.5	643.3
42	883.4	161.0	130.2	378.9	746.3	512.9	556.0	456.5	474.6	344.3	100.2	57.9	115.6	222.4	69.8	381.3	729.9	649.5	613.9	633.6	647.0
43	888.2	178.2	139.8	451.3	747.8	533.4	578.8	478.3	490.4	375.1	160.3	65.4	145.1	399.9	77.3	627.4	744.3	723.6	622.6	659.8	657.0
44	882.5	200.9	150.0	584.1	754.6	554.6	602.5	502.5	512.8	408.0	357.2	77.3	189.1	480.9	91.3	656.5	830.7	676.7	630.2	687.2	666.2
45	883.2	229.4	160.8	652.6	777.0	580.6	625.1	530.6	542.8	446.7	593.2	93.2	247.9	376.8	114.6	698.4	866.9	691.9	636.3	705.7	673.3
46	895.8	260.0	172.4	687.1	815.3	607.3	653.6	561.7	575.3	485.3	747.3	137.0	351.4	364.5	150.6	712.5	890.8	702.1	640.6	709.4	682.9
47	902.1	286.1	187.0	713.4	952.7	671.4	892.9	617.7	703.0	527.3	923.7	230.7	916.8	368.9	213.3	714.3	909.4	713.2	662.6	728.7	712.9

Table 4. Temperatures Measured in Wood Stud Shear Wall Assembly F-20 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	24.4	23.0	23.3	23.2	23.4	23.3	23.4	23.2	23.5	23.2	23.2	22.9	23.5	23.2	23.5	23.3	23.2	23.1	23.5	23.2	***
1	44.5	22.9	23.4	23.2	23.5	23.3	23.4	23.3	25.9	25.9	24.7	24.5	27.3	27.3	26.5	26.1	26.3	25.6	26.3	25.5	***
2	263.4	29.0	23.4	23.3	23.5	23.4	23.5	23.4	68.2	66.2	85.6	94.9	74.1	69.9	69.3	68.7	71.5	71.6	69.6	63.3	***
3	393.7	33.9	23.5	23.4	23.6	23.6	23.6	23.5	82.0	82.6	87.9	89.6	76.3	76.3	71.2	71.2	76.7	74.8	75.6	74.9	***
4	388.0	35.7	23.5	23.6	23.8	23.7	23.6	23.6	77.1	77.4	84.4	84.2	71.3	72.6	67.0	66.7	73.0	70.4	72.5	71.6	***
5	545.4	58.2	23.7	23.7	23.9	23.9	23.7	23.7	95.1	94.7	98.1	95.2	86.0	84.3	83.5	82.1	86.9	86.5	95.7	91.7	***
6	586.9	57.2	23.9	23.9	24.1	24.0	23.8	23.9	93.6	93.6	96.4	94.3	89.4	88.1	85.9	89.9	91.1	87.2	93.1	87.4	***
7	570.9	55.3	24.3	24.3	24.3	24.3	23.9	24.1	92.2	90.6	94.5	93.4	92.7	89.0	84.1	86.3	93.7	85.5	93.0	86.7	***
8	639.2	58.5	25.0	24.7	24.6	24.6	24.2	24.3	95.7	94.1	96.6	103.6	97.3	93.4	90.9	92.3	101.2	92.1	97.5	91.0	***
9	666.7	60.5	25.8	25.2	24.9	24.9	24.4	24.6	96.1	93.8	96.0	109.2	100.5	95.1	91.4	92.9	106.5	94.8	98.0	92.3	***
10	700.8	63.3	27.0	25.8	25.3	25.3	24.8	24.9	97.1	94.5	97.1	120.1	103.2	97.5	92.6	95.6	110.5	98.0	97.7	94.2	***
11	717.5	63.9	28.5	26.6	25.8	25.8	25.2	25.3	98.3	95.7	106.0	133.0	105.3	98.5	92.7	96.2	113.9	99.8	97.7	94.1	***
12	720.1	58.7	30.0	27.5	26.8	26.4	25.6	25.7	99.3	96.8	106.8	122.9	108.6	100.1	93.7	97.3	118.5	102.2	99.2	94.5	***
13	731.1	56.6	31.0	28.2	30.1	26.8	26.1	26.1	102.9	100.1	111.8	134.5	114.8	103.3	94.9	98.6	125.5	106.4	101.7	95.9	***
14	754.4	55.2	31.4	28.8	32.4	27.2	26.7	26.6	109.4	108.3	121.4	156.7	124.3	113.6	99.9	103.3	133.3	115.4	105.5	98.3	***
15	747.6	52.9	31.7	29.2	33.8	27.6	27.2	27.1	128.3	131.6	138.2	188.6	153.3	145.5	118.3	122.0	162.2	142.7	109.4	108.9	***
16	772.9	51.9	31.8	29.5	34.6	27.9	27.8	27.5	155.9	165.7	159.6	221.3	184.2	175.1	142.8	141.4	197.7	169.6	121.4	131.6	***
17	761.4	53.4	32.0	29.8	35.2	28.2	28.3	27.9	187.7	205.8	184.6	257.1	214.5	204.9	171.8	169.6	231.0	199.2	146.2	166.7	***
18	785.8	56.0	32.3	30.1	36.6	28.6	28.8	28.2	210.3	238.4	240.4	298.1	242.6	231.8	201.4	199.2	257.1	222.9	183.5	198.8	***
19	779.6	66.2	32.9	30.4	40.4	29.0	29.4	28.6	231.3	265.8	312.8	344.5	272.2	263.0	230.4	230.1	283.3	251.3	221.5	231.4	***
20	794.7	78.4	34.2	30.9	50.2	29.7	30.1	29.3	248.7	286.6	386.0	420.5	296.5	289.1	255.2	254.8	303.5	274.9	247.8	258.9	***
21	799.4	90.8	37.2	32.1	65.5	31.3	31.2	30.8	269.6	307.7	429.6	485.7	319.6	314.1	281.1	283.4	326.1	303.2	270.7	285.6	***
22	799.9	101.5	42.0	35.8	77.1	35.0	34.1	34.0	296.0	329.2	454.7	537.9	341.8	340.9	308.3	306.2	350.4	323.2	294.5	311.1	***
23	820.0	109.7	46.9	44.0	84.7	42.3	41.1	39.5	320.6	359.6	483.7	510.6	364.7	366.3	333.2	330.6	381.7	343.3	315.5	338.5	***
24	820.9	117.4	50.0	53.6	89.8	51.2	49.8	46.2	342.3	388.4	506.4	511.9	392.7	384.4	363.2	362.0	402.0	363.7	335.1	375.4	***
25	818.4	126.5	52.6	62.2	92.9	58.2	58.3	52.5	367.1	417.1	509.4	508.5	423.6	406.3	407.9	394.1	423.9	381.1	349.2	416.2	***
26	834.6	137.8	57.5	67.8	93.9	61.4	65.0	57.6	397.7	447.7	518.6	543.6	453.9	433.9	444.3	424.1	448.1	398.0	370.8	446.8	***
27	820.8	151.3	70.3	71.0	93.4	62.1	68.9	60.4	427.6	470.3	546.7	550.2	493.5	457.6	476.4	444.1	462.4	404.4	395.2	469.2	***
28	272.9	167.9	75.6	71.5	94.1	62.5	70.5	61.8	461.8	488.2	572.4	563.0	522.2	481.1	497.3	460.9	475.4	418.6	428.7	479.3	***
29	832.4	188.2	74.7	70.7	95.9	62.9	71.3	62.7	494.1	510.0	619.6	593.3	546.0	502.4	524.2	478.3	490.0	436.2	463.4	499.1	***
30	840.3	211.1	70.3	70.2	100.4	63.4	72.7	64.2	520.0	522.1	641.4	589.2	563.0	517.0	549.3	492.9	461.3	446.9	492.8	511.3	***
31	853.6	235.5	66.3	71.3	103.8	65.6	73.9	67.1	535.2	528.4	666.4	608.0	572.9	529.9	572.2	509.2	361.1	419.4	515.4	526.3	***
32	865.2	270.6	72.7	75.1	91.5	73.9	73.2	78.5	547.3	524.5	665.1	604.6	585.6	536.3	588.6	521.4	310.8	421.3	534.1	530.2	***
33	871.0	320.5	77.8	86.8	111.1	84.1	73.2	87.8	552.6	536.7	670.5	613.4	584.5	546.2	593.6	535.3	343.5	487.2	554.7	536.0	***
34	859.2	371.0	83.3	109.5	149.4	97.6	75.5	89.9	582.4	570.2	665.0	604.3	600.2	560.3	613.8	554.4	506.3	504.1	571.2	571.1	***
35	827.0	427.4	86.3	124.6	189.4	100.9	75.4	99.1	633.0	610.2	716.0	641.3	623.8	579.5	638.5	587.1	555.8	520.0	579.1	609.4	***
36	857.0	472.8	98.8	115.3	197.0	103.5	77.7	98.1	658.6	608.6	726.2	684.5	653.9	581.4	646.3	613.6	587.9	532.1	559.5	611.5	***
37	856.3	494.4	113.0	121.8	196.9	110.5	84.1	104.6	651.5	624.1	731.1	732.9	675.5	598.7	666.2	635.7	616.8	546.9	563.2	618.5	***
38	860.6	506.6	135.8	141.1	195.0	123.2	98.2	113.7	670.3	642.0	720.4	719.2	686.7	611.5	679.9	653.0	626.4	564.0	591.0	630.5	***
39	872.4	521.5	177.4	167.5	197.4	137.7	112.8	124.3	694.8	654.2	729.8	736.2	693.1	625.2	689.0	667.1	626.1	579.7	621.9	641.8	***
40	873.2	542.1	245.1	210.8	202.6	159.9	125.2	135.5	702.7	665.3	721.5	734.0	702.2	636.6	700.3	679.4	637.1	597.0	641.9	651.9	***
41	872.5	559.5	322.1	302.6	209.6	188.0	136.6	149.0	717.8	677.0	723.1	755.1	708.7	647.5	708.2	689.9	643.7	609.9	653.0	660.2	***
42	883.4	579.0	413.6	558.9	217.9	267.2	149.3	177.5	729.8	683.2	724.9	776.4	714.0	656.6	713.8	698.7	645.8	621.8	673.7	666.4	***
43	888.2	613.7	524.7	617.4	226.3	504.1	162.9	248.2	752.2	691.4	729.9	800.2	719.4	665.3	719.0	707.0	662.6	634.7	686.8	672.6	***
44	882.5	650.6	741.9	714.3	233.4	349.8	180.2	355.5	834.6	698.7	739.1	804.0	724.0	674.1	723.2	715.7	672.5	646.3	696.1	680.9	***
45	883.2	676.1	836.3	746.7	239.4	375.8	202.2	464.2	865.5	703.7	767.1	819.6	724.6	680.8	723.9	723.2	667.6	654.9	705.8	691.2	***
46	895.8	687.7	875.4	758.1	245.6	412.1	225.6	532.0	885.2	708.5	811.2	844.3	738.6	688.7	726.3	728.5	671.8	666.4	698.1	701.6	***
47	902.1	722.8	893.4	774.1	345.6	441.9	252.4	603.5	895.4	714.5	951.0	804.9	911.5	700.8	943.3	734.2	864.2	685.9	731.6	710.4	***

Table 4. Temperatures Measured in Wood Stud Shear Wall Assembly F-20 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	24.4	***	***	***	***	***	***	***	***	***	***	***	22.9	22.8	22.6	22.6	22.7	22.7	22.7	22.7
1	44.5	***	***	***	***	***	***	***	***	***	***	***	22.8	22.8	22.7	22.6	22.7	22.7	22.7	22.7
2	263.4	***	***	***	***	***	***	***	***	***	***	***	22.8	22.9	22.7	22.6	22.7	22.7	22.8	22.7
3	393.7	***	***	***	***	***	***	***	***	***	***	***	22.9	22.9	22.7	22.7	22.7	22.7	22.8	22.7
4	388.0	***	***	***	***	***	***	***	***	***	***	***	22.8	22.8	22.8	22.6	22.7	22.7	23.0	22.7
5	545.4	***	***	***	***	***	***	***	***	***	***	***	22.9	22.9	23.0	22.7	22.7	22.7	23.3	22.8
6	586.9	***	***	***	***	***	***	***	***	***	***	***	23.0	22.9	23.2	22.8	22.8	22.8	23.8	22.9
7	570.9	***	***	***	***	***	***	***	***	***	***	***	23.1	22.9	23.4	22.8	22.9	22.8	24.6	23.0
8	639.2	***	***	***	***	***	***	***	***	***	***	***	23.3	23.0	23.6	22.9	22.9	22.8	25.6	23.2
9	666.7	***	***	***	***	***	***	***	***	***	***	***	23.7	23.1	23.9	23.1	23.1	22.9	26.8	23.5
10	700.8	***	***	***	***	***	***	***	***	***	***	***	24.2	23.2	24.2	23.3	23.3	23.1	28.2	24.0
11	717.5	***	***	***	***	***	***	***	***	***	***	***	25.0	23.4	24.5	23.5	23.5	23.3	29.6	24.5
12	720.1	***	***	***	***	***	***	***	***	***	***	***	25.6	23.6	24.9	23.8	23.9	23.6	30.7	25.2
13	731.1	***	***	***	***	***	***	***	***	***	***	***	26.2	23.9	25.2	24.1	24.3	23.9	31.3	25.9
14	754.4	***	***	***	***	***	***	***	***	***	***	***	26.7	24.2	25.6	24.4	24.7	24.4	31.8	26.6
15	747.6	***	***	***	***	***	***	***	***	***	***	***	27.1	24.5	26.0	24.7	25.2	24.8	32.1	27.3
16	772.9	***	***	***	***	***	***	***	***	***	***	***	27.6	24.9	26.4	25.1	25.7	25.4	32.5	28.0
17	761.4	***	***	***	***	***	***	***	***	***	***	***	28.1	25.3	26.8	25.5	26.3	25.9	32.9	28.7
18	785.8	***	***	***	***	***	***	***	***	***	***	***	28.6	25.7	27.3	26.0	27.1	26.6	33.5	29.4
19	779.6	***	***	***	***	***	***	***	***	***	***	***	29.3	26.2	27.7	26.4	28.2	27.4	34.3	30.0
20	794.7	***	***	***	***	***	***	***	***	***	***	***	30.3	26.8	28.4	26.9	30.3	28.6	35.5	30.7
21	799.4	***	***	***	***	***	***	***	***	***	***	***	32.0	27.8	29.3	27.6	33.4	30.4	37.6	31.5
22	799.9	***	***	***	***	***	***	***	***	***	***	***	34.8	29.2	30.6	28.6	37.0	32.9	41.2	32.6
23	820.0	***	***	***	***	***	***	***	***	***	***	***	38.8	31.2	32.5	30.1	41.1	35.8	45.7	34.2
24	820.9	***	***	***	***	***	***	***	***	***	***	***	43.3	33.9	35.3	32.5	45.1	39.1	50.8	36.4
25	818.4	***	***	***	***	***	***	***	***	***	***	***	47.1	36.8	38.7	35.7	48.7	42.4	56.0	39.2
26	834.6	***	***	***	***	***	***	***	***	***	***	***	49.0	39.8	42.3	39.1	51.8	45.5	60.4	42.5
27	820.8	***	***	***	***	***	***	***	***	***	***	***	50.9	42.6	45.8	42.5	54.2	48.2	64.0	45.8
28	722.9	***	***	***	***	***	***	***	***	***	***	***	52.2	45.2	48.9	45.6	56.2	50.6	66.1	49.0
29	832.4	***	***	***	***	***	***	***	***	***	***	***	53.0	47.7	51.6	48.6	58.2	52.8	68.0	52.2
30	840.3	***	***	***	***	***	***	***	***	***	***	***	54.1	50.0	54.0	51.3	61.1	55.1	69.9	55.2
31	853.6	***	***	***	***	***	***	***	***	***	***	***	56.0	52.5	56.3	54.0	63.5	57.6	72.4	58.0
32	865.2	***	***	***	***	***	***	***	***	***	***	***	58.4	55.3	58.9	56.6	63.2	59.4	75.9	60.9
33	871.0	***	***	***	***	***	***	***	***	***	***	***	60.6	58.0	62.5	59.6	63.6	61.1	82.5	64.0
34	859.2	***	***	***	***	***	***	***	***	***	***	***	62.6	60.2	66.3	63.9	66.0	63.1	91.9	67.6
35	827.0	***	***	***	***	***	***	***	***	***	***	***	64.7	62.4	69.1	68.9	68.7	65.5	102.9	71.9
36	857.0	***	***	***	***	***	***	***	***	***	***	***	67.3	64.9	72.3	75.3	71.2	68.3	120.8	76.9
37	856.3	***	***	***	***	***	***	***	***	***	***	***	71.3	68.5	76.6	86.2	73.7	71.5	136.7	82.7
38	860.6	***	***	***	***	***	***	***	***	***	***	***	78.0	74.1	82.1	106.8	76.4	75.5	150.2	89.3
39	872.4	***	***	***	***	***	***	***	***	***	***	***	91.2	83.4	88.6	125.2	79.9	81.7	162.8	97.3
40	873.2	***	***	***	***	***	***	***	***	***	***	***	115.2	99.5	97.5	164.8	85.3	92.5	175.3	107.0
41	872.5	***	***	***	***	***	***	***	***	***	***	***	154.9	129.6	107.6	227.7	90.6	102.9	187.2	121.9
42	883.4	***	***	***	***	***	***	***	***	***	***	***	242.9	215.5	155.1	359.2	99.5	137.7	200.8	181.4
43	888.2	***	***	***	***	***	***	***	***	***	***	***	530.4	655.8	396.5	611.3	115.1	231.0	229.7	334.8
44	882.5	***	***	***	***	***	***	***	***	***	***	***	802.7	819.9	507.1	718.1	139.1	322.0	272.7	512.8
45	883.2	***	***	***	***	***	***	***	***	***	***	***	836.1	852.8	616.1	738.1	177.9	405.6	303.3	593.3
46	895.8	***	***	***	***	***	***	***	***	***	***	***	863.0	876.0	681.6	737.2	215.3	455.1	484.3	629.3
47	902.1	***	***	***	***	***	***	***	***	***	***	***	876.9	869.7	700.1	750.0	315.5	543.5	508.4	670.9

Table 5. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-20

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/FL (Exp.) Av(48,49,50,51,52,53, 54,55,56,57,58,59)	BL/WStd. (Exp.) Av(24,25,26, 27,28,29)	BL/Cav. (UnExp.) Av(36,37,38, 39,40,41)	Mid.WStd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (Unexp.) Av(30,31,32, 33,34,35)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	24.4		23.3	23.4	22.9	23.3	23.4	23.3
1	44.5	26.0	23.2	23.4	22.9	23.3	23.4	23.3
2	263.4	72.7	28.0	25.7	22.9	23.4	23.4	23.4
3	393.7	78.2	31.8	28.9	23.1	23.5	23.5	23.4
4	388.0	74.0	33.7	31.6	23.3	23.6	23.6	23.4
5	545.4	90.0	38.7	42.5	23.7	23.8	23.6	23.5
6	586.9	90.8	42.9	51.5	25.0	23.9	23.7	23.5
7	570.9	90.2	46.3	52.5	26.2	24.2	23.7	23.5
8	639.2	95.5	50.5	57.3	27.5	24.6	23.8	23.6
9	666.7	97.2	53.9	60.5	29.4	25.0	23.9	23.6
10	700.8	99.8	57.3	63.5	31.6	25.5	24.0	23.7
11	717.5	102.6	60.4	65.3	34.1	26.2	24.2	23.8
12	720.1	103.3	63.0	62.5	35.7	27.0	24.4	23.9
13	731.1	107.5	64.6	59.7	35.9	28.1	24.5	24.0
14	754.4	115.8	65.9	59.0	36.1	28.9	24.7	24.2
15	747.6	137.4	67.1	58.8	36.4	29.4	24.9	24.4
16	772.9	163.9	68.6	60.0	36.8	29.9	25.0	24.6
17	761.4	194.9	70.9	62.5	37.3	30.2	25.2	24.8
18	785.8	227.0	74.0	66.5	38.2	30.8	25.4	25.0
19	779.6	261.5	78.5	73.3	39.9	31.8	25.6	25.3
20	794.7	293.5	84.9	82.1	43.2	34.1	26.0	25.5
21	799.4	323.0	91.6	92.2	49.4	38.0	27.4	25.8
22	799.9	349.5	95.3	99.7	58.7	43.0	30.7	26.2
23	820.0	370.7	98.7	106.7	67.5	49.8	34.8	26.7
24	820.9	393.9	102.7	114.2	74.9	56.8	43.9	27.6
25	818.4	417.0	107.4	123.5	80.6	62.8	50.6	29.0
26	834.6	444.0	113.1	135.3	83.7	67.2	50.7	31.1
27	820.8	466.5	119.0	149.7	85.2	71.0	48.1	33.9
28	272.9	487.4	125.6	165.0	84.9	72.7	46.7	36.9
29	832.4	513.0	133.3	183.2	83.9	73.1	46.6	40.1
30	840.3	525.6	142.9	203.4	83.4	73.5	48.1	42.9
31	853.6	528.7	155.5	225.5	84.5	74.7	52.3	45.5
32	865.2	530.8	170.6	254.4	92.0	77.5	61.4	47.9
33	871.0	546.2	191.6	299.8	100.1	86.8	62.5	50.3
34	859.2	575.3	217.0	356.9	106.4	100.9	61.9	53.3
35	827.0	607.8	239.5	423.0	107.7	112.6	61.4	56.5
36	857.0	622.0	308.4	482.4	111.1	115.0	60.4	59.1
37	856.3	638.4	346.6	531.5	121.0	121.8	59.9	61.2
38	860.6	649.6	401.0	568.2	145.2	134.5	59.9	63.2
39	872.4	663.2	442.6	594.2	167.9	152.9	61.1	65.2
40	873.2	672.5	466.2	613.2	192.8	179.8	65.9	67.1
41	872.5	682.9	493.2	627.5	228.2	218.0	80.2	68.8
42	883.4	692.1	515.1	642.2	290.8	297.4	157.8	70.1
43	888.2	703.4	534.0	670.1	365.6	380.6	245.9	71.4
44	882.5	717.4	555.8	690.3	414.4	429.2	308.7	72.7
45	883.2	727.3	583.8	708.4	457.8	477.4	354.0	74.0
46	895.8	739.1	616.4	718.9	499.1	508.1	410.5	75.9
47	902.1	804.0	727.5	741.6	552.1	551.8	561.3	78.1

Table 6. Temperatures Measured in Wood Stud Shear Wall Assembly F-21

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	26.1	25.4	25.4	25.1	25.1	25.3	25.4	25.2	25.1	25.2	27.1	26.5	26.0	27.2	26.2	26.9	24.5	24.5	24.5	24.5	24.6
1	50.7	25.4	25.4	25.1	25.1	25.3	25.5	25.3	25.1	25.2	27.2	26.7	26.1	27.4	26.3	27.1	24.5	24.5	24.5	24.5	24.6
2	239.3	25.4	25.4	25.2	25.1	25.3	25.4	25.3	25.1	25.3	27.3	26.8	26.1	27.4	26.3	27.1	24.7	27.0	24.6	25.2	24.7
3	342.6	25.5	25.5	25.2	25.1	25.4	25.5	25.3	25.1	25.3	27.4	26.8	26.1	27.4	26.4	27.2	47.9	68.6	52.0	70.4	30.3
4	385.7	25.5	25.5	25.2	25.2	25.4	25.5	25.3	25.2	25.3	27.4	26.9	26.1	27.5	26.4	27.2	58.5	68.6	60.7	69.8	38.3
5	545.8	25.5	25.5	25.2	25.2	25.4	25.5	25.4	25.2	25.4	27.5	27.0	26.2	27.6	26.5	27.3	89.9	91.2	75.1	91.9	40.0
6	561.5	25.5	25.5	25.2	25.2	25.5	25.5	25.4	25.2	25.5	27.6	27.0	26.4	27.7	26.6	27.4	87.5	89.9	82.9	90.0	56.3
7	605.6	25.6	25.6	25.3	25.3	25.5	25.7	25.4	25.2	25.5	27.7	27.1	26.4	27.8	26.7	27.5	88.9	90.4	83.7	91.9	57.6
8	636.1	25.7	25.7	25.5	25.4	25.7	25.9	25.5	25.3	25.8	27.9	27.1	26.5	27.7	27.0	27.7	89.6	90.5	85.0	92.0	60.3
9	665.7	25.9	25.9	25.7	25.6	25.9	26.2	25.6	25.4	26.0	28.1	27.2	26.7	27.9	27.4	27.9	91.4	91.6	85.5	93.1	62.6
10	695.2	26.2	26.2	26.1	26.0	26.2	26.7	25.8	25.6	26.4	28.5	27.4	27.0	28.4	27.9	28.4	91.7	92.3	86.0	93.1	66.2
11	718.2	26.6	26.7	26.6	26.5	26.7	27.4	26.0	25.9	26.9	29.0	27.7	27.3	28.8	28.6	28.9	88.4	93.6	83.9	91.2	76.7
12	720.7	27.1	27.2	27.2	27.1	27.3	28.1	26.3	26.2	27.5	29.4	28.0	27.8	29.2	29.4	29.4	81.8	93.1	79.4	85.9	82.1
13	740.1	27.7	27.8	28.0	27.7	28.0	29.0	26.6	26.7	28.1	30.1	28.3	28.3	29.8	30.1	30.1	76.5	91.5	76.6	82.7	83.7
14	737.7	28.4	28.6	28.8	28.4	28.8	29.9	27.0	27.2	28.7	30.8	28.8	28.9	30.1	30.8	30.5	73.0	83.6	74.9	81.2	75.2
15	763.9	29.1	29.3	29.7	29.1	29.6	30.9	27.4	27.7	29.4	31.4	29.1	29.4	30.6	31.5	31.3	74.2	75.8	72.4	76.6	73.1
16	762.5	29.9	30.2	30.7	30.0	30.5	31.9	27.9	28.4	30.0	32.1	29.6	29.8	31.4	32.4	32.0	70.4	77.4	71.4	76.7	79.0
17	767.4	30.8	31.1	31.7	30.8	31.4	32.9	28.5	29.1	30.7	32.9	30.2	30.6	32.0	33.1	32.9	70.4	76.7	74.3	77.0	80.4
18	786.0	31.6	31.9	32.6	31.6	32.3	34.0	29.2	29.7	31.4	33.4	30.6	30.9	32.6	33.7	33.5	72.3	77.4	77.5	77.4	80.7
19	778.1	32.5	32.8	33.6	32.4	33.2	35.0	29.9	30.5	32.2	34.0	31.1	31.5	32.9	34.5	34.2	70.3	78.7	80.3	79.2	81.5
20	790.3	33.3	33.6	34.5	33.2	34.1	35.9	30.5	31.3	33.0	34.8	31.6	32.0	33.2	34.9	34.7	79.2	81.8	83.1	81.1	83.3
21	804.0	34.1	34.4	35.4	34.0	35.0	36.8	31.3	32.0	33.8	35.6	32.0	32.4	33.7	35.5	35.4	83.2	86.0	87.9	83.4	87.1
22	794.2	35.0	35.2	36.2	34.9	35.9	37.7	32.0	32.8	34.7	36.4	32.5	33.0	34.6	36.1	36.2	85.3	88.0	95.6	84.3	96.2
23	809.9	35.9	35.9	37.1	35.8	36.8	38.5	32.8	33.7	35.6	37.0	33.0	33.4	35.0	36.7	36.8	87.7	91.1	104.9	84.9	118.2
24	818.6	36.9	36.7	37.9	36.6	37.7	39.4	33.6	34.6	36.6	37.9	33.2	33.9	35.1	37.0	37.3	90.5	91.5	119.3	86.6	139.0
25	811.2	37.9	37.5	38.8	37.5	38.7	40.3	34.5	35.5	37.6	38.7	33.6	34.3	35.6	37.8	38.0	94.7	92.4	135.2	88.5	156.5
26	823.7	39.0	38.3	39.7	38.4	39.7	41.3	35.4	36.5	38.6	39.8	34.1	34.8	36.2	38.2	38.5	101.5	94.3	149.3	90.3	171.2
27	834.3	40.2	39.2	40.7	39.4	40.7	42.3	36.4	37.7	39.6	40.9	34.4	35.1	36.6	39.0	39.1	108.4	97.3	163.4	92.9	183.4
28	825.6	41.4	40.1	41.7	40.4	41.8	43.5	37.4	39.0	40.7	41.8	34.6	35.2	37.3	39.9	39.7	116.8	101.4	179.2	97.1	194.6
29	833.0	42.8	41.1	42.7	41.5	42.9	44.8	38.3	40.5	41.8	42.8	35.1	35.7	37.9	40.7	40.1	125.5	106.2	194.6	105.0	205.3
30	848.3	44.3	42.2	43.8	42.7	44.1	46.3	39.4	42.2	42.8	43.8	35.6	36.3	38.3	41.3	40.8	134.3	111.0	210.8	114.1	216.3
31	842.2	45.9	43.4	44.9	44.0	45.3	47.8	40.4	44.1	43.9	44.8	36.1	36.7	39.2	42.0	41.6	144.1	115.8	228.7	125.3	229.2
32	841.1	47.4	44.6	46.1	45.3	46.6	49.4	41.5	46.0	45.0	45.8	36.7	37.2	39.6	43.0	42.3	153.4	120.4	247.4	138.0	243.3
33	856.5	49.0	46.0	47.2	46.7	47.8	51.1	42.7	48.1	46.2	46.7	37.0	37.5	40.4	43.7	42.8	162.2	125.3	266.7	151.0	256.7
34	860.1	50.6	47.3	48.4	48.0	49.0	52.8	43.8	50.2	47.2	47.6	37.1	38.0	40.8	44.8	43.6	171.9	129.2	288.9	164.4	270.7
35	852.4	52.2	48.7	49.5	49.4	50.3	54.6	44.9	52.4	48.4	48.4	37.7	38.2	41.3	45.2	44.0	182.7	133.7	314.5	178.5	285.3
36	861.0	53.9	50.1	50.7	50.8	51.6	56.5	46.1	54.7	49.6	49.5	37.8	38.5	41.8	46.3	44.9	193.5	139.5	335.0	192.3	299.4
37	873.0	55.6	51.5	51.8	52.2	53.0	58.4	47.2	57.0	50.9	50.2	38.3	39.0	42.0	47.1	45.4	204.3	145.2	353.3	205.7	312.4
38	864.7	57.3	53.0	53.1	53.5	54.3	60.3	48.4	59.5	52.3	51.2	38.8	39.3	42.8	48.1	46.5	215.6	151.2	366.1	218.1	325.6
39	867.3	59.1	54.5	54.3	55.0	55.7	62.3	49.6	62.0	53.8	52.5	39.4	40.1	43.7	48.8	47.3	227.5	157.9	382.7	231.5	340.0
40	880.6	60.9	56.0	55.6	56.4	57.2	64.3	50.8	64.4	55.4	53.3	39.7	40.5	44.5	50.3	48.1	240.2	164.3	398.0	245.4	352.6
41	879.6	62.8	57.5	56.9	57.9	58.7	66.3	52.1	66.5	57.0	54.5	40.4	40.7	45.4	51.7	48.9	252.8	171.8	416.8	261.5	362.6
42	867.5	64.7	59.1	58.3	59.4	60.2	68.3	53.7	68.3	58.5	55.5	40.7	41.5	45.5	53.1	49.3	269.8	185.0	439.6	284.1	371.9

Table 6. Temperatures Measured in Wood Stud Shear Wall Assembly F-21 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	26.1	24.4	25.1	24.4	25.2	25.1	25.4	25.1	25.2	25.0	24.9	24.8	25.1	24.9	25.0	24.8	25.7	25.5	25.8	25.5	***
1	50.7	24.5	25.1	24.5	26.3	26.5	28.5	26.7	26.7	26.8	24.9	24.8	25.1	24.9	25.0	24.8	27.4	27.8	28.7	27.1	***
2	239.3	24.7	27.3	24.7	98.5	94.4	86.6	86.7	86.1	81.5	24.9	24.9	25.1	25.2	25.0	24.8	84.6	83.0	86.5	83.6	***
3	342.6	34.6	59.0	34.4	94.3	94.0	85.3	86.1	84.2	84.0	25.0	25.9	25.3	27.9	26.1	25.0	86.2	85.5	84.0	84.1	***
4	385.7	41.0	58.4	40.6	97.9	96.4	82.6	83.7	82.3	80.9	25.6	27.9	25.8	29.7	27.0	25.6	86.4	85.2	84.3	83.7	***
5	545.8	52.0	80.9	50.5	98.3	97.9	92.7	92.6	91.9	91.3	27.2	30.1	26.5	31.9	35.0	26.8	95.4	94.4	93.2	93.4	***
6	561.5	61.0	79.4	58.4	96.7	96.5	91.9	90.9	89.8	90.1	29.4	34.1	27.9	35.2	39.6	28.4	95.4	98.5	96.1	94.5	***
7	605.6	65.4	82.2	61.0	96.8	98.3	92.3	91.0	90.4	91.9	32.0	36.9	29.2	37.4	42.8	30.2	109.5	109.1	103.7	102.0	***
8	636.1	67.9	83.6	63.4	97.7	101.6	97.1	90.5	90.2	91.3	34.7	39.7	30.8	39.4	45.9	32.1	121.3	118.8	111.7	110.6	***
9	665.7	71.1	85.7	67.2	102.3	105.7	102.1	96.6	91.7	92.7	38.1	42.5	32.5	41.5	51.1	34.3	129.3	126.3	118.3	118.4	***
10	695.2	73.8	86.6	70.6	108.6	110.6	104.9	99.4	95.2	94.2	41.5	45.5	34.4	43.6	53.5	36.9	133.4	131.0	124.0	123.9	***
11	718.2	76.8	86.8	73.9	114.5	119.3	108.6	103.5	98.7	100.1	45.9	49.8	36.9	46.1	58.3	39.9	136.0	134.5	127.8	127.7	***
12	720.7	78.4	85.7	75.8	120.4	131.7	112.0	106.9	101.7	102.7	48.6	53.3	41.6	49.5	60.8	42.6	143.5	140.9	137.0	133.5	***
13	740.1	79.1	83.0	77.0	129.5	149.1	119.5	110.5	103.6	105.7	49.0	54.8	46.9	52.1	63.4	45.1	165.8	154.0	158.1	147.0	***
14	737.7	76.9	81.4	77.6	140.3	168.4	133.1	120.2	110.2	109.8	50.1	55.5	46.5	52.5	57.5	46.9	243.5	217.7	240.2	200.3	***
15	763.9	74.3	80.8	76.7	159.8	186.4	168.7	144.0	142.1	119.0	50.1	55.7	48.3	53.1	54.0	48.1	344.0	319.4	335.0	290.6	***
16	762.5	78.7	82.9	80.9	228.7	194.9	206.4	184.8	171.0	143.1	49.6	56.1	48.8	56.6	54.1	49.2	429.6	415.2	427.7	395.3	***
17	767.4	80.4	83.8	81.4	332.9	203.9	247.1	229.6	208.8	177.8	49.4	56.9	48.5	58.2	54.7	50.4	475.3	442.5	484.3	474.6	***
18	786.0	80.8	88.0	82.5	418.8	219.8	283.4	272.2	244.1	208.1	49.5	57.8	48.5	59.3	54.7	51.3	508.2	471.3	524.4	519.6	***
19	778.1	82.0	96.6	84.1	457.8	232.1	319.3	310.7	280.1	240.8	49.7	58.7	48.7	60.2	54.6	52.3	537.4	515.7	567.5	567.5	***
20	790.3	83.9	109.8	85.9	512.3	297.4	361.1	351.2	311.4	271.0	50.1	59.9	50.1	61.3	54.7	53.6	559.5	558.9	603.1	609.9	521.2
21	804.0	86.5	124.3	88.1	535.1	343.0	397.9	395.3	341.6	299.6	50.7	61.2	52.4	62.8	55.2	55.2	576.9	594.5	631.2	643.4	558.1
22	794.2	89.1	136.8	90.5	560.7	404.0	427.4	434.9	370.8	331.7	51.5	62.7	54.6	64.7	56.0	57.1	594.1	625.6	657.6	674.1	589.6
23	809.9	90.8	151.6	94.2	594.9	462.9	460.0	472.7	401.6	363.9	52.5	63.9	55.6	66.3	57.3	59.1	609.8	650.9	675.0	691.1	613.1
24	818.6	93.1	162.8	103.4	608.9	468.2	490.2	485.2	435.6	398.3	53.5	65.3	56.7	67.5	59.1	60.8	628.7	667.2	691.5	709.3	636.2
25	811.2	97.0	172.4	115.4	627.0	485.9	514.3	480.1	468.9	434.7	54.9	66.7	58.8	68.6	61.2	62.1	645.0	679.6	706.1	727.1	655.1
26	823.7	101.2	180.9	125.2	653.2	553.5	533.5	459.2	497.8	469.6	56.3	68.1	61.4	69.9	63.5	63.3	655.1	688.8	713.6	735.7	663.7
27	834.3	106.2	185.9	133.2	658.3	592.5	550.0	439.1	523.4	502.5	57.8	69.5	64.1	71.3	65.4	64.1	663.2	695.9	722.3	745.4	671.8
28	825.6	114.4	190.5	140.6	668.2	612.2	565.0	434.4	546.0	531.2	59.2	70.8	66.5	72.5	66.5	64.8	670.7	702.2	731.3	754.9	679.8
29	833.0	123.9	195.0	147.5	692.9	661.3	576.7	440.8	560.1	556.2	60.7	72.1	68.5	73.7	67.2	65.5	675.3	705.2	735.6	757.2	684.6
30	848.3	132.6	199.0	154.1	703.0	673.6	586.9	458.0	574.9	577.2	62.2	73.6	70.2	74.9	67.7	66.2	680.1	707.8	741.8	763.0	689.8
31	842.2	140.5	204.7	160.8	700.0	679.0	597.4	482.2	588.8	586.6	63.7	75.1	71.9	76.2	68.2	67.0	685.5	713.3	751.2	772.6	697.0
32	841.1	148.0	210.4	167.9	715.8	714.1	606.6	508.8	595.6	596.1	65.2	76.7	73.5	77.6	68.6	68.0	688.2	715.6	756.0	775.6	700.7
33	856.5	155.2	215.4	175.0	727.4	739.1	613.8	537.4	601.8	602.0	66.8	78.5	75.1	79.3	69.3	69.1	690.9	717.0	759.0	777.7	703.1
34	860.1	162.2	222.0	181.9	725.3	734.9	621.3	576.5	609.0	609.9	68.5	80.4	76.8	81.1	70.3	70.3	694.2	721.1	767.4	785.0	708.7
35	852.4	170.9	226.4	189.3	725.0	739.8	630.4	609.9	617.0	616.5	70.2	82.6	78.7	83.1	72.0	71.6	694.7	724.1	774.2	789.6	712.9
36	861.0	178.5	230.6	197.1	743.8	767.6	637.6	632.5	624.9	623.7	72.0	84.9	80.6	85.3	75.4	73.1	695.4	724.8	774.3	779.6	713.3
37	873.0	186.1	234.5	204.8	743.7	768.2	645.2	648.6	632.9	628.8	73.9	87.3	82.4	87.6	80.2	74.1	697.9	726.9	779.2	774.1	716.4
38	864.7	194.8	238.7	212.9	742.9	763.0	653.9	662.3	642.3	634.8	75.9	90.0	84.4	90.1	84.8	74.2	701.5	732.8	787.6	768.5	721.9
39	867.3	202.3	243.1	222.2	761.4	787.8	661.0	671.5	651.9	630.1	78.1	93.1	86.5	92.9	89.1	75.8	703.2	733.5	789.5	759.4	721.6
40	880.6	208.4	246.9	234.3	772.3	793.5	668.5	681.7	658.9	632.8	80.3	96.5	88.6	96.3	93.4	78.4	706.3	733.3	790.0	752.9	723.8
41	879.6	214.8	250.4	247.9	765.8	790.6	678.5	694.9	668.7	642.7	82.8	100.2	91.0	101.3	97.8	81.7	710.8	733.1	782.5	751.2	724.4
42	867.5	234.0	253.3	264.9	776.1	798.4	687.8	713.7	680.5	652.3	85.4	113.8	93.0	122.3	98.2	90.6	733.5	728.1	778.5	739.9	723.5

Table 6. Temperatures Measured in Wood Stud Shear Wall Assembly F-21 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	26.1	25.1	25.1	24.9	25.2	24.9	25.2	24.9	***	***	***	***	***	***	***	***	***	***	***	***	25.4
1	50.7	26.7	25.1	24.9	25.1	24.9	25.2	24.9	***	***	***	***	***	***	***	***	***	***	***	***	25.5
2	239.3	76.7	26.8	25.5	25.1	25.4	25.3	25.1	***	***	***	***	***	***	***	***	***	***	***	***	25.5
3	342.6	82.7	68.5	44.4	34.1	40.5	28.9	41.8	***	***	***	***	***	***	***	***	***	***	***	***	25.6
4	385.7	82.4	68.0	53.7	48.1	47.8	41.8	50.0	***	***	***	***	***	***	***	***	***	***	***	***	25.9
5	545.8	94.0	83.4	71.2	53.7	61.0	59.5	74.3	***	***	***	***	***	***	***	***	***	***	***	***	26.9
6	561.5	95.4	83.3	73.6	66.7	70.5	68.4	76.2	***	***	***	***	***	***	***	***	***	***	***	***	28.4
7	605.6	105.9	82.6	75.2	68.3	70.9	71.0	78.2	***	***	***	***	***	***	***	***	***	***	***	***	30.2
8	636.1	114.7	82.5	77.8	70.0	72.8	73.1	79.5	***	***	***	***	***	***	***	***	***	***	***	***	32.3
9	665.7	121.7	83.3	80.6	71.7	76.3	76.0	81.6	***	***	***	***	***	***	***	***	***	***	***	***	34.5
10	695.2	126.4	84.1	83.8	74.4	78.8	78.3	82.7	***	***	***	***	***	***	***	***	***	***	***	***	36.6
11	718.2	129.9	87.3	76.9	78.3	80.6	81.1	83.7	***	***	***	***	***	***	***	***	***	***	***	***	38.6
12	720.7	134.2	85.6	71.9	80.1	81.0	82.0	84.0	***	***	***	***	***	***	***	***	***	***	***	***	40.6
13	740.1	142.8	82.8	73.8	80.0	80.6	81.1	79.8	***	***	***	***	***	***	***	***	***	***	***	***	42.6
14	737.7	163.8	76.3	74.2	76.1	73.4	78.3	75.4	***	***	***	***	***	***	***	***	***	***	***	***	44.3
15	763.9	238.1	78.5	77.3	76.6	77.7	77.2	73.3	***	***	***	***	***	***	***	***	***	***	***	***	45.7
16	762.5	334.4	80.1	79.4	79.4	80.0	70.7	82.9	***	***	***	***	***	***	***	***	***	***	***	***	46.8
17	767.4	412.1	83.0	79.6	92.8	79.7	75.1	79.2	***	***	***	***	***	***	***	***	***	***	***	***	47.7
18	786.0	460.5	104.0	82.2	120.5	82.4	74.2	78.0	***	***	***	***	***	***	***	***	***	***	***	***	48.6
19	778.1	503.0	123.5	94.0	143.1	93.9	74.9	80.3	***	***	***	***	***	***	***	***	***	***	***	***	49.5
20	790.3	544.8	140.1	116.2	163.3	111.3	81.2	88.8	***	***	***	***	***	***	***	***	***	***	***	***	50.4
21	804.0	580.5	152.1	134.2	184.7	131.3	98.1	98.5	***	***	***	***	***	***	***	***	***	***	***	***	51.4
22	794.2	612.2	162.6	148.3	207.1	151.5	113.4	107.4	***	***	***	***	***	***	***	***	***	***	***	***	52.5
23	809.9	634.7	174.0	167.1	230.5	171.0	129.0	117.4	***	***	***	***	***	***	***	***	***	***	***	***	53.8
24	818.6	653.7	189.4	191.5	251.7	186.3	144.8	127.6	***	***	***	***	***	***	***	***	***	***	***	***	55.4
25	811.2	668.6	208.6	212.2	268.3	195.8	159.4	141.3	***	***	***	***	***	***	***	***	***	***	***	***	57.2
26	823.7	675.9	226.6	230.3	279.7	207.3	172.0	155.5	***	***	***	***	***	***	***	***	***	***	***	***	59.3
27	834.3	681.9	240.5	244.1	288.4	218.0	183.0	171.8	***	***	***	***	***	***	***	***	***	***	***	***	61.5
28	825.6	689.6	248.4	254.4	296.8	229.5	193.1	184.8	***	***	***	***	***	***	***	***	***	***	***	***	63.9
29	833.0	694.6	253.8	264.9	303.9	243.2	202.3	198.7	***	***	***	***	***	***	***	***	***	***	***	***	66.4
30	848.3	699.8	259.8	274.1	310.0	258.0	210.4	209.3	***	***	***	***	***	***	***	***	***	***	***	***	69.0
31	842.2	706.8	265.3	282.8	317.2	274.2	217.3	216.1	***	***	***	***	***	***	***	***	***	***	***	***	71.8
32	841.1	710.4	271.0	293.6	325.4	292.4	224.0	225.1	***	***	***	***	***	***	***	***	***	***	***	***	74.7
33	856.5	713.5	277.1	306.5	332.7	308.7	230.6	234.9	***	***	***	***	***	***	***	***	***	***	***	***	77.7
34	860.1	719.2	282.9	318.5	339.4	325.0	236.6	242.7	***	***	***	***	***	***	***	***	***	***	***	***	80.9
35	852.4	723.9	288.5	332.1	347.6	343.7	242.3	251.7	***	***	***	***	***	***	***	***	***	***	***	***	84.1
36	861.0	723.6	294.6	349.8	355.2	362.5	248.3	262.6	***	***	***	***	***	***	***	***	***	***	***	***	87.2
37	873.0	727.4	301.0	369.8	361.3	380.3	253.9	272.8	***	***	***	***	***	***	***	***	***	***	***	***	90.5
38	864.7	734.4	306.9	395.4	368.6	392.3	258.9	284.3	***	***	***	***	***	***	***	***	***	***	***	***	93.7
39	867.3	736.9	313.6	427.4	378.5	403.4	264.1	298.4	***	***	***	***	***	***	***	***	***	***	***	***	97.1
40	880.6	742.5	320.8	461.6	389.5	413.7	269.2	313.4	***	***	***	***	***	***	***	***	***	***	***	***	100.6
41	879.6	754.4	329.1	499.5	403.1	424.8	273.7	329.3	***	***	***	***	***	***	***	***	***	***	***	***	104.4
42	867.5	759.6	339.1	544.7	424.5	446.6	284.3	364.2	***	***	***	***	***	***	***	***	***	***	***	***	109.1

Table 6. Temperatures Measured in Wood Stud Shear Wall Assembly F-21 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	26.1	25.2	25.1	24.9	25.3	25.0	25.5	25.3	25.3	24.9	25.5	25.2	24.4	24.4	24.3	24.3	24.4	24.3	24.4	24.4
1	50.7	25.3	25.1	24.9	25.3	25.0	25.5	25.4	25.4	25.0	25.6	25.3	24.4	24.4	24.3	24.4	24.4	24.3	24.4	24.4
2	239.3	25.3	25.2	24.9	25.4	25.0	25.6	25.4	25.5	25.0	25.6	25.4	24.3	24.4	24.3	24.4	24.5	24.3	24.4	24.4
3	342.6	25.5	25.3	25.0	25.5	25.1	25.6	25.8	25.7	25.1	25.6	25.4	24.5	24.4	26.7	25.1	27.0	25.2	26.4	25.0
4	385.7	25.8	25.3	25.1	25.5	25.2	25.7	26.2	25.8	25.2	25.8	25.6	25.2	25.0	29.8	27.2	28.9	26.6	28.9	25.9
5	545.8	27.1	25.4	25.2	25.6	25.5	26.2	28.0	26.9	25.5	26.2	26.5	26.4	26.0	33.4	29.9	32.1	28.6	32.2	27.2
6	561.5	28.7	25.6	25.5	25.8	25.8	27.0	29.7	27.4	25.9	27.1	27.9	27.5	27.7	38.3	33.7	36.0	31.4	36.7	29.3
7	605.6	30.7	25.9	25.8	26.1	26.2	28.3	31.8	28.3	26.1	28.7	30.0	29.0	29.8	41.9	37.6	38.8	34.2	39.7	31.6
8	636.1	33.0	26.5	26.5	26.4	26.8	30.0	34.1	29.2	26.7	30.7	32.6	30.7	32.2	45.7	41.5	41.6	37.0	42.6	34.1
9	665.7	35.4	27.3	27.4	26.9	27.7	31.8	36.5	30.3	27.3	32.7	35.0	32.6	34.6	48.5	45.1	44.9	39.8	46.2	36.7
10	695.2	37.6	28.2	28.4	27.5	28.5	33.6	38.8	31.4	28.0	34.8	37.3	34.7	37.0	47.4	48.4	47.9	42.7	49.7	39.4
11	718.2	39.7	29.4	29.6	28.3	29.5	35.4	41.0	32.5	28.8	36.9	39.5	37.0	39.5	49.4	51.3	50.3	45.3	52.9	42.1
12	720.7	41.6	30.7	30.9	29.1	30.5	37.1	42.9	33.6	29.6	38.9	41.4	39.2	42.0	51.3	53.3	51.8	47.6	55.4	44.8
13	740.1	42.9	31.9	32.2	29.9	31.5	39.0	44.4	34.7	30.5	40.9	43.2	41.1	44.4	53.1	54.9	52.6	49.6	57.0	47.3
14	737.7	43.9	33.1	33.6	30.9	32.5	40.8	45.6	35.6	31.3	42.7	44.8	42.8	46.6	54.6	56.3	53.1	51.4	58.0	49.8
15	763.9	45.0	34.1	34.9	31.9	33.5	42.5	46.8	36.4	32.2	44.2	45.9	46.4	48.6	55.9	57.4	54.4	53.3	58.7	52.0
16	762.5	45.9	35.1	36.1	33.0	34.5	43.8	47.7	37.3	33.1	45.4	46.7	48.0	50.7	57.1	58.5	55.7	55.0	59.7	53.9
17	767.4	46.4	36.0	37.2	34.1	35.5	45.0	48.3	38.2	34.0	46.3	47.3	49.9	52.6	58.2	59.5	57.0	56.6	61.3	56.1
18	786.0	46.9	36.8	38.2	34.9	36.3	46.0	49.0	38.8	34.8	46.8	48.0	52.1	54.5	59.3	60.4	58.4	58.1	62.6	58.1
19	778.1	47.6	37.6	39.2	35.8	37.3	47.0	49.8	39.6	35.7	47.4	48.6	54.6	56.4	60.5	61.4	59.9	59.6	64.1	60.1
20	790.3	48.4	38.2	40.1	36.7	38.2	48.0	50.6	40.2	36.5	48.0	49.1	57.2	58.4	62.6	63.0	61.7	61.1	65.7	62.0
21	804.0	49.3	38.9	41.0	37.5	39.1	49.3	51.6	40.9	37.3	48.5	49.8	60.0	60.5	68.1	67.9	63.8	62.8	67.6	64.4
22	794.2	50.4	39.5	41.8	38.4	40.1	50.9	52.6	41.5	38.1	49.1	50.5	62.6	62.8	84.6	86.4	66.3	64.7	69.9	67.2
23	809.9	51.7	40.2	42.6	39.4	41.0	52.8	54.0	42.2	39.0	49.8	51.4	65.4	65.4	124.2	136.8	69.1	66.9	72.8	70.6
24	818.6	53.4	41.0	43.4	40.5	42.0	55.0	55.7	43.0	39.9	50.7	52.4	68.4	68.5	197.0	231.6	72.3	69.5	76.1	74.6
25	811.2	55.3	41.8	44.3	41.5	43.0	57.6	57.8	43.7	40.8	52.0	53.4	71.9	72.2	300.0	354.4	75.9	72.5	79.6	78.8
26	823.7	57.6	42.7	45.2	42.5	44.1	60.6	60.0	44.6	41.8	53.6	54.5	76.3	76.5	410.1	468.0	80.0	75.9	83.5	83.3
27	834.3	59.9	43.5	46.2	43.5	45.2	63.4	62.4	45.5	42.7	55.5	56.0	81.0	81.2	513.6	553.0	84.6	79.9	87.8	87.9
28	825.6	62.4	44.3	47.1	44.5	46.4	66.1	65.1	46.4	43.7	57.7	57.7	85.8	86.1	590.8	613.4	89.4	84.2	92.6	92.4
29	833.0	65.1	45.2	48.0	45.6	47.7	68.7	68.6	47.3	44.8	60.0	59.6	91.5	91.3	641.3	654.0	94.6	88.9	97.3	96.8
30	848.3	67.8	46.0	49.0	46.7	49.2	71.4	73.2	48.2	45.9	62.2	61.6	97.4	96.7	675.5	683.3	100.2	93.9	102.1	101.1
31	842.2	70.7	46.9	49.9	48.0	51.0	74.4	79.0	49.3	47.0	64.5	63.5	103.8	102.2	700.3	707.3	108.1	99.1	107.6	105.1
32	841.1	73.6	47.9	50.9	49.2	53.0	77.5	86.0	50.4	48.3	66.9	65.4	110.8	107.4	716.0	722.8	110.4	104.3	113.3	108.8
33	856.5	76.9	48.9	51.8	50.6	55.4	80.7	94.1	51.9	49.5	69.4	67.4	117.2	111.8	726.4	733.3	112.2	107.5	118.7	111.9
34	860.1	80.6	49.9	53.0	51.9	58.3	84.0	103.9	53.5	51.1	71.9	69.8	123.5	116.1	738.5	746.2	114.2	110.2	123.8	114.8
35	852.4	84.1	51.0	54.5	53.3	62.0	87.6	116.8	55.4	52.9	74.5	72.7	131.2	121.3	745.4	754.5	116.1	113.1	129.2	117.9
36	861.0	87.0	52.2	55.9	54.7	66.4	91.1	133.2	57.7	55.0	77.0	76.0	140.6	127.5	749.2	758.2	118.3	116.2	134.8	121.2
37	873.0	89.8	53.4	57.8	56.3	71.8	94.6	154.4	61.5	57.6	79.5	79.7	152.5	135.3	754.6	764.1	120.4	119.4	141.0	124.9
38	864.7	93.0	54.7	60.3	58.0	79.4	97.9	186.1	67.4	61.5	81.9	83.9	169.7	146.4	760.0	769.8	123.1	122.7	147.9	129.4
39	867.3	96.6	56.2	62.4	59.8	90.6	101.3	232.7	74.8	66.9	84.2	88.4	194.3	162.5	760.7	769.9	126.1	126.0	155.8	134.9
40	880.6	100.2	57.8	64.7	61.7	105.4	104.7	286.0	84.6	72.8	86.5	93.2	222.5	182.5	761.7	770.2	129.6	129.7	163.1	141.5
41	879.6	104.6	59.9	68.2	64.1	126.1	108.3	329.0	90.0	78.5	88.8	98.8	253.6	206.5	767.6	772.8	133.7	134.5	171.0	147.7
42	867.5	117.6	63.3	83.5	67.4	164.8	112.1	396.8	95.9	95.1	91.5	112.1	319.7	267.6	762.8	769.2	153.0	159.9	190.5	167.8

Table 7. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-21

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	BL/FL (UnExp.) Av(60,61,62,63,64, 65,66,67,68,69)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	26.1	21.3	25.2	24.6	25.0	24.9	25.2	25.2
1	50.7	23.0	26.9	24.6	25.0	24.9	25.2	25.3
2	239.3	69.1	89.0	25.4	25.5	25.0	25.3	25.3
3	342.6	70.4	88.0	49.6	43.0	25.9	25.4	25.3
4	385.7	70.3	87.3	54.5	51.6	26.9	25.6	25.3
5	545.8	78.4	94.1	71.5	67.2	29.6	26.2	25.4
6	561.5	80.0	92.6	75.7	73.1	32.4	27.0	25.4
7	605.6	88.4	93.4	77.6	74.4	34.8	27.9	25.5
8	636.1	96.2	94.7	79.0	76.0	37.1	29.2	25.6
9	665.7	102.3	98.5	81.0	78.3	40.0	30.5	25.8
10	695.2	106.5	102.2	82.5	80.4	42.5	31.9	26.1
11	718.2	109.3	107.4	83.9	81.3	46.2	33.3	26.6
12	720.7	114.8	112.6	82.8	80.8	49.4	34.7	27.1
13	740.1	128.0	119.7	81.3	79.7	51.9	36.0	27.7
14	737.7	177.6	130.3	78.0	75.6	51.5	37.2	28.4
15	763.9	254.5	153.4	75.5	76.8	51.5	38.3	29.1
16	762.5	333.7	188.1	77.2	78.8	52.4	39.3	29.9
17	767.4	381.5	233.4	78.0	81.6	53.0	40.2	30.8
18	786.0	414.0	274.4	79.6	90.2	53.5	41.0	31.6
19	778.1	448.5	306.8	81.6	101.6	54.1	41.9	32.4
20	790.3	566.2	350.7	86.0	116.8	54.9	42.7	33.2
21	804.0	597.4	385.4	90.8	133.1	56.3	43.6	34.1
22	794.2	625.5	421.6	95.7	148.4	57.8	44.6	34.9
23	809.9	645.8	459.3	102.9	164.8	59.1	45.7	35.8
24	818.6	664.4	481.1	110.8	181.9	60.5	46.9	36.7
25	811.2	680.3	501.8	119.0	197.6	62.0	48.3	37.6
26	823.7	688.8	527.8	126.7	211.9	63.8	49.8	38.5
27	834.3	696.8	544.3	133.8	224.3	65.4	51.4	39.6
28	825.6	704.8	559.5	141.8	234.5	66.7	53.0	40.7
29	833.0	708.8	581.3	150.4	244.5	68.0	54.7	41.8
30	848.3	713.7	595.6	159.0	253.6	69.1	56.7	43.1
31	842.2	721.1	605.7	168.6	262.2	70.3	58.8	44.4
32	841.1	724.4	622.8	178.6	271.9	71.6	61.1	45.8
33	856.5	726.9	636.9	188.4	281.8	73.0	63.8	47.2
34	860.1	732.6	646.1	198.9	290.8	74.6	66.7	48.6
35	852.4	736.6	656.4	210.2	301.0	76.4	70.2	50.1
36	861.0	735.2	671.7	220.7	312.2	78.6	74.0	51.5
37	873.0	737.0	677.9	230.8	323.2	80.9	78.8	53.1
38	864.7	741.1	683.2	240.4	334.4	83.3	85.2	54.6
39	867.3	740.7	693.9	250.9	347.6	85.9	93.8	56.2
40	880.6	741.5	701.3	261.3	361.4	88.9	103.9	57.9
41	879.6	742.7	706.9	272.3	376.6	92.4	113.3	59.5
42	867.5	743.9	718.1	287.8	400.6	100.6	130.6	61.2

Table 8. Temperatures Measured in Wood Stud Shear Wall Assembly F-21A

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	20.1	21.4	22.3	20.0	20.0	22.1	22.1	20.9	19.9	20.7	21.9	23.1	20.7	23.1	21.0	21.9	21.9	19.7	21.9	19.8	22.2
1	42.9	21.4	22.3	19.9	20.0	22.1	22.1	20.9	19.8	20.7	21.8	23.0	20.7	23.1	21.0	21.9	21.9	19.7	21.9	19.8	22.2
2	238.2	21.4	22.3	19.9	20.0	22.2	22.2	20.9	19.8	20.7	21.9	23.0	20.7	23.2	21.1	21.9	21.9	20.0	22.0	19.9	22.8
3	370.0	21.4	22.3	19.9	20.0	22.2	22.2	20.9	19.8	20.7	22.0	23.1	20.8	23.2	21.1	22.0	32.3	67.4	38.7	48.9	61.2
4	377.1	21.4	22.3	19.9	20.0	22.2	22.2	21.0	19.8	20.7	22.0	23.1	20.8	23.2	21.1	22.0	52.1	68.8	56.2	58.5	55.8
5	520.8	21.4	22.3	19.9	20.0	22.2	22.3	21.0	19.8	20.8	22.0	23.1	20.8	23.2	21.1	22.0	69.1	91.7	66.2	71.2	64.1
6	593.3	21.5	22.3	20.0	20.0	22.2	22.4	21.1	19.9	20.9	22.1	23.1	20.8	23.3	21.2	22.1	86.8	95.2	78.9	88.8	80.2
7	580.5	21.8	22.4	20.1	20.2	22.3	22.5	21.3	20.0	21.1	22.1	23.2	20.9	23.4	21.3	22.3	86.0	92.5	79.9	87.2	78.7
8	638.5	22.2	22.5	20.3	20.4	22.4	22.5	21.7	20.3	21.5	22.3	23.2	21.0	23.7	21.5	22.6	88.0	95.0	81.9	89.2	82.7
9	667.3	22.8	22.7	20.7	20.8	22.7	22.5	22.3	20.8	22.2	22.5	23.3	21.2	24.1	21.8	23.1	91.0	96.0	85.4	91.7	86.4
10	696.1	23.6	23.0	21.3	21.4	23.1	21.9	23.1	21.5	23.1	22.2	23.3	21.4	24.4	22.0	23.5	91.9	96.2	87.0	92.5	87.9
11	715.3	24.6	23.5	22.0	22.0	23.7	21.2	24.0	22.3	24.1	22.2	23.4	21.7	24.8	22.2	23.9	92.0	95.9	86.9	92.8	87.8
12	720.3	25.7	24.0	22.9	22.8	24.4	20.9	25.1	23.3	25.2	22.4	23.6	22.1	25.2	22.4	24.4	89.9	94.1	84.5	92.4	86.8
13	733.0	26.8	24.6	23.9	23.7	25.2	20.7	26.2	24.5	26.4	22.4	24.0	22.6	25.9	22.7	25.0	88.8	92.9	83.9	91.3	85.9
14	744.3	28.1	25.4	24.9	24.6	26.0	21.0	27.4	25.7	27.6	22.8	24.3	23.3	26.6	23.2	25.9	88.6	86.9	77.2	85.3	80.5
15	756.7	29.4	26.3	26.1	25.6	27.0	21.0	28.6	27.0	28.8	23.5	24.9	24.0	27.2	24.2	26.6	83.2	82.7	74.8	83.5	84.8
16	764.1	30.7	27.2	27.3	26.7	28.0	21.3	29.8	28.2	30.1	24.0	25.5	24.7	27.7	24.6	27.4	82.7	80.6	74.8	83.2	85.0
17	773.2	31.9	28.2	28.5	27.8	29.0	21.8	30.9	29.5	31.3	24.3	26.0	25.5	28.5	25.3	28.2	83.0	80.9	75.4	82.2	87.7
18	777.6	33.1	29.2	29.6	28.7	30.0	21.9	31.9	30.7	32.4	24.7	26.7	26.1	29.3	25.7	28.8	82.2	82.6	75.7	82.5	93.7
19	781.3	34.1	30.1	30.7	29.7	30.9	22.2	32.9	31.8	33.4	25.2	27.2	26.9	29.9	26.0	29.4	81.8	88.7	76.6	83.7	105.5
20	791.1	35.2	31.1	31.7	30.6	31.9	22.0	33.8	32.9	34.4	25.6	27.6	27.5	30.4	26.6	29.9	83.1	96.6	81.8	86.0	119.7
21	796.6	36.2	32.0	32.7	31.5	32.8	22.5	34.7	33.9	35.3	25.8	28.1	28.1	31.0	27.1	30.2	85.9	103.1	90.5	90.9	134.2
22	801.2	37.3	32.9	33.7	32.4	33.7	23.0	35.6	34.8	36.2	26.3	28.5	28.7	31.5	27.3	30.6	91.2	108.1	97.2	97.1	150.7
23	807.8	38.3	33.8	34.7	33.4	34.7	23.4	36.4	35.8	37.1	27.0	29.0	29.3	31.9	27.8	31.1	100.1	109.9	104.4	102.9	170.6
24	813.1	39.5	34.8	35.7	34.4	35.6	23.6	37.3	36.7	38.0	27.1	29.5	29.9	32.6	28.3	31.7	108.9	101.2	112.9	108.8	188.6
25	821.0	40.8	35.7	36.8	35.6	36.6	23.3	38.1	37.7	38.8	27.4	29.8	30.4	33.3	28.7	31.9	119.4	95.8	124.5	115.5	202.0
26	825.3	42.3	36.7	37.9	36.9	37.6	23.5	39.0	38.7	39.8	27.9	30.2	30.8	33.5	28.8	32.3	130.9	98.1	138.4	122.8	212.2
27	825.6	43.9	37.7	39.1	38.3	38.8	24.4	40.0	39.8	40.7	28.0	30.7	31.3	34.7	30.0	32.7	144.0	108.5	154.2	130.2	221.0
28	828.0	45.6	38.7	40.2	39.8	40.0	24.9	41.0	41.0	41.7	28.9	31.0	31.9	35.7	30.4	33.1	158.8	124.2	171.7	138.0	228.7
29	835.0	47.5	39.9	41.3	41.4	41.4	24.8	42.0	42.4	42.7	29.2	31.5	32.4	36.7	31.4	33.6	174.9	140.7	190.2	146.4	237.0
30	839.7	49.4	41.3	42.5	43.0	42.9	24.9	43.0	43.9	43.7	30.0	32.0	32.8	37.3	32.2	34.3	192.5	159.1	208.9	155.6	245.3
31	842.8	51.3	42.7	43.5	44.7	44.4	25.6	44.2	45.5	44.8	30.3	32.4	33.3	38.5	32.9	34.9	211.4	178.7	227.5	165.6	254.0
32	847.6	53.3	44.2	44.6	46.4	46.1	25.6	45.3	47.3	46.0	31.7	33.0	33.7	39.6	34.3	36.1	230.9	200.2	246.2	176.5	262.9
33	851.6	55.4	45.8	45.7	48.2	47.7	26.5	46.5	49.1	47.2	31.0	33.3	34.3	41.1	35.3	36.4	252.6	223.3	265.0	188.9	271.8
34	860.0	57.4	47.4	46.8	49.9	49.4	26.2	47.6	50.9	48.4	32.1	33.8	34.7	41.9	35.9	36.9	278.7	248.1	283.5	202.9	280.6
35	861.0	59.6	49.1	47.9	51.7	51.2	26.7	48.8	52.9	49.6	32.9	34.2	35.2	43.2	36.7	37.9	306.6	273.7	301.8	219.1	289.4
36	859.9	61.9	50.8	49.0	53.6	53.0	27.2	50.1	54.8	50.9	33.2	34.8	35.5	44.5	38.4	38.4	335.5	302.2	320.3	238.0	298.2
37	861.4	64.3	52.4	50.2	55.4	54.8	27.8	51.3	56.9	52.3	33.4	35.4	36.0	45.7	39.3	39.5	364.0	334.6	340.1	260.3	307.0
38	867.4	66.7	54.1	51.4	57.3	56.7	27.8	52.5	59.1	53.7	34.3	36.2	36.5	47.1	40.4	40.4	392.9	372.0	361.1	288.0	313.5
39	871.9	69.1	55.9	52.6	59.3	58.6	29.2	53.9	61.3	55.3	34.1	36.8	37.1	48.5	41.3	41.4	423.6	415.4	384.6	324.4	323.3
40	880.4	71.4	57.7	53.9	61.2	60.5	29.5	55.2	63.6	57.0	34.8	37.5	37.7	49.2	42.9	41.8	499.6	469.1	564.6	382.7	383.1
41	897.4	73.9	59.5	55.2	63.3	62.5	19.0	56.6	66.0	58.7	25.8	32.1	35.2	37.3	35.1	36.2	869.6	656.3	848.4	591.7	805.6
42	887.3	58.1	56.7	57.0	65.5	64.7	24.4	58.2	68.6	60.6	22.0	34.7	35.8	38.6	38.4	37.2	853.0	730.8	876.4	746.9	854.0
43	886.9	56.4	52.0	58.5	67.7	66.5	26.7	59.4	71.6	62.4	24.4	33.4	35.9	36.8	39.5	34.8	873.5	698.6	892.4	730.0	877.1

Table 8. Temperatures Measured in Wood Stud Shear Wall Assembly F-21A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	20.1	20.0	22.1	20.0	21.4	19.3	21.7	19.5	21.6	19.6	22.8	20.4	23.0	20.7	22.8	20.6	21.2	19.4	21.7	19.7	21.5
1	42.9	20.0	22.1	20.0	23.2	19.3	24.7	22.9	24.7	22.1	22.8	20.4	22.9	20.7	22.8	20.6	25.4	22.6	25.6	23.3	23.8
2	238.2	29.6	22.3	20.5	87.6	19.7	70.4	75.5	69.8	68.6	22.8	20.4	22.9	20.7	22.8	20.6	81.2	84.1	89.7	89.3	81.1
3	370.0	74.0	35.9	51.0	88.3	34.9	88.0	83.8	85.2	86.1	22.8	20.5	23.1	20.7	22.9	24.2	91.4	91.1	88.5	89.4	89.1
4	377.1	65.1	47.2	54.8	90.0	36.2	81.3	76.6	79.7	80.1	23.0	20.8	23.8	20.8	23.0	26.7	87.2	85.0	84.7	83.9	83.4
5	520.8	85.6	46.4	67.0	98.2	58.8	93.4	92.3	90.3	91.6	23.6	21.7	24.8	21.1	23.4	47.5	99.8	96.0	98.6	95.1	96.4
6	593.3	91.0	58.4	83.6	97.5	71.9	93.9	91.9	92.0	94.1	26.7	23.9	27.6	21.7	24.2	73.9	107.2	101.8	106.9	100.6	99.8
7	580.5	86.9	63.2	81.3	96.4	71.9	95.9	90.0	91.8	93.2	30.0	27.3	31.2	22.8	25.7	74.3	116.1	109.8	113.5	107.3	105.9
8	638.5	89.8	68.7	83.6	98.4	77.7	101.5	92.3	95.8	97.8	33.7	31.0	35.1	24.2	29.0	79.9	122.2	116.9	119.0	113.8	112.5
9	667.3	91.0	77.2	86.8	100.1	82.2	106.3	95.6	99.2	102.8	37.8	35.0	40.1	26.2	39.0	84.1	125.5	121.7	122.6	119.0	117.3
10	696.1	91.0	82.7	88.4	103.5	84.8	110.5	97.4	103.0	106.7	41.9	39.0	45.2	28.6	51.5	85.5	127.4	124.9	125.9	123.2	120.4
11	715.3	90.7	84.0	88.6	108.9	85.7	114.6	99.9	106.9	110.6	45.4	42.7	49.2	31.2	58.4	85.3	130.5	129.0	137.7	132.9	124.6
12	720.3	88.8	82.5	88.1	116.5	84.9	120.8	104.5	111.4	113.7	47.4	46.2	52.1	34.0	55.2	83.8	144.3	141.7	164.4	159.0	136.4
13	733.0	84.3	79.9	86.0	132.0	81.2	133.0	123.6	119.3	120.1	48.4	49.3	53.9	37.0	51.1	81.3	180.0	185.5	239.6	236.2	166.3
14	744.3	81.8	77.1	84.2	151.5	78.8	166.3	163.7	129.5	129.2	49.2	52.0	56.0	40.2	50.4	79.0	264.3	270.9	334.7	334.7	239.6
15	756.7	79.9	79.4	83.6	174.9	77.5	205.9	208.6	162.6	151.3	49.5	54.0	57.5	42.5	49.3	77.5	352.6	364.8	414.1	420.2	334.6
16	764.1	79.2	80.8	83.7	211.5	75.8	246.9	249.6	200.1	185.7	50.1	55.5	58.3	44.7	48.5	76.1	429.7	444.6	467.0	476.7	407.4
17	773.2	80.5	81.5	84.3	252.0	74.8	285.7	295.0	236.3	221.0	50.8	56.8	58.8	46.6	48.1	74.9	479.6	494.1	509.9	522.2	460.2
18	777.6	83.5	83.4	85.8	289.1	74.8	320.4	345.2	270.6	257.2	51.3	57.7	59.4	48.4	48.1	74.1	521.1	535.5	545.8	559.6	499.9
19	781.3	89.1	87.0	88.7	326.9	75.8	367.3	392.9	299.9	289.7	51.8	58.5	60.4	50.1	48.4	74.4	555.1	570.1	575.3	590.0	531.8
20	791.1	91.2	93.0	89.7	363.2	77.5	407.2	433.7	328.3	316.7	52.2	59.3	62.1	51.8	48.9	75.5	584.5	597.8	597.7	613.8	557.4
21	796.6	96.6	99.9	92.7	399.9	79.7	441.6	470.7	357.4	347.6	52.9	59.9	64.1	53.6	49.6	76.8	609.0	619.5	616.6	633.3	577.8
22	801.2	103.1	111.6	97.7	439.1	82.8	478.2	500.4	389.9	379.4	53.7	60.9	66.0	55.7	50.4	77.7	628.1	634.7	633.1	647.5	594.0
23	807.8	109.5	122.7	101.4	475.0	86.2	510.7	522.8	420.5	408.6	54.6	62.0	67.6	57.7	51.2	78.2	642.3	642.2	648.0	658.5	607.6
24	813.1	118.0	134.7	105.1	509.4	90.2	536.9	550.0	452.0	442.1	55.5	63.3	69.1	59.6	51.9	78.3	653.0	649.4	660.8	667.9	619.2
25	821.0	129.3	145.1	110.4	538.1	94.3	562.5	565.6	479.2	477.5	56.5	64.6	70.2	61.3	52.6	78.1	657.7	655.9	670.3	676.6	629.1
26	825.3	139.3	153.9	117.3	570.7	98.0	585.4	584.8	504.4	506.2	57.6	65.7	71.4	63.0	53.3	77.2	662.5	665.8	678.9	685.7	638.5
27	825.6	150.0	162.1	124.7	594.2	100.0	604.9	604.3	523.1	525.4	58.8	66.9	75.6	64.7	54.6	76.1	668.4	677.7	685.5	693.8	646.9
28	828.0	161.3	169.9	132.9	617.9	102.0	620.2	618.9	541.6	543.2	60.1	68.1	78.5	66.7	57.9	74.9	674.3	686.7	689.6	700.5	654.4
29	835.0	172.8	178.7	139.9	637.9	113.2	632.2	627.7	554.0	561.4	61.3	69.5	80.1	69.5	61.2	73.7	679.2	694.0	694.3	707.1	662.7
30	839.7	183.6	188.6	146.4	657.0	119.8	643.3	636.0	570.0	576.4	62.6	70.8	81.0	72.7	64.0	72.9	684.5	701.3	699.6	713.6	671.0
31	842.8	195.0	198.7	153.0	677.2	125.7	654.9	643.7	585.2	587.5	64.9	72.1	82.1	75.3	66.6	72.4	689.7	708.5	704.7	719.6	681.3
32	847.6	206.4	208.7	160.0	694.2	131.8	665.2	648.1	598.7	595.4	69.8	73.5	83.8	77.2	69.1	72.5	695.5	715.1	709.2	725.1	690.0
33	851.6	219.6	218.4	167.2	714.4	138.1	675.0	658.6	609.0	605.8	86.5	75.5	87.7	79.1	72.1	73.3	703.0	722.4	713.6	730.0	700.1
34	860.0	230.7	227.2	174.9	727.3	144.7	684.3	667.4	618.2	613.9	95.5	78.5	93.1	81.3	76.2	74.0	711.5	729.0	718.7	734.2	713.1
35	861.0	242.1	235.5	182.9	741.2	151.7	694.2	678.1	626.8	619.3	97.5	87.4	98.1	84.0	81.7	74.1	718.9	736.0	724.9	739.1	720.1
36	859.9	255.7	243.8	191.4	751.8	159.3	704.2	685.5	635.6	627.8	97.9	99.0	100.4	87.8	95.1	73.8	724.3	741.4	730.3	743.5	724.6
37	861.4	268.5	252.1	200.6	767.3	167.0	713.4	692.9	644.2	639.2	97.9	108.5	102.1	93.2	98.1	73.8	729.2	746.0	735.2	744.0	731.1
38	867.4	286.7	260.7	210.7	780.1	176.3	720.3	701.4	649.1	647.5	97.8	121.4	103.5	100.9	98.8	76.0	734.5	749.1	741.6	745.6	741.1
39	871.9	308.4	269.2	221.6	844.4	187.0	905.9	763.8	830.9	626.2	97.8	142.6	104.3	111.8	98.9	85.0	745.4	750.7	886.0	760.4	750.2
40	880.4	355.3	305.4	240.1	875.8	199.5	913.5	851.7	889.6	929.6	399.7	175.1	310.5	128.1	98.2	113.4	817.3	751.7	930.1	910.6	760.2
41	897.4	694.0	489.5	436.2	902.3	211.8	837.1	783.6	852.7	823.1	848.9	333.2	813.8	462.1	155.7	465.6	848.0	793.9	849.3	804.3	783.4
42	887.3	798.4	722.1	644.5	843.7	225.7	853.5	771.3	861.4	813.6	867.1	619.8	855.9	694.2	692.9	652.5	832.0	806.0	838.1	807.2	810.6
43	886.9	821.5	836.7	763.5	859.0	242.4	869.4	776.3	876.7	836.2	883.9	743.2	879.9	783.5	837.4	748.3	846.4	830.7	851.1	821.8	876.3

Table 8. Temperatures Measured in Wood Stud Shear Wall Assembly F-21A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	20.1	19.3	22.5	20.2	22.6	20.5	22.6	20.3	***	***	***	***	***	***	***	***	***	***	***	***	23.0
1	42.9	22.0	22.5	20.2	22.6	20.5	22.6	20.3	***	***	***	***	***	***	***	***	***	***	***	***	23.0
2	238.2	83.6	22.6	21.0	22.8	20.8	22.7	20.4	***	***	***	***	***	***	***	***	***	***	***	***	23.0
3	370.0	89.9	31.6	58.8	40.9	55.6	48.3	42.5	***	***	***	***	***	***	***	***	***	***	***	***	23.0
4	377.1	84.0	50.4	63.6	54.2	62.8	58.5	56.2	***	***	***	***	***	***	***	***	***	***	***	***	23.2
5	520.8	96.2	59.2	70.7	57.2	69.3	66.5	65.6	***	***	***	***	***	***	***	***	***	***	***	***	24.1
6	593.3	101.2	76.3	81.9	70.2	82.3	80.7	82.3	***	***	***	***	***	***	***	***	***	***	***	***	25.7
7	580.5	107.6	78.7	80.2	73.7	81.6	80.7	83.2	***	***	***	***	***	***	***	***	***	***	***	***	28.0
8	638.5	114.0	81.1	83.1	76.7	83.5	83.4	85.9	***	***	***	***	***	***	***	***	***	***	***	***	30.7
9	667.3	119.1	85.4	87.8	81.1	86.7	86.6	88.1	***	***	***	***	***	***	***	***	***	***	***	***	33.2
10	696.1	122.7	88.0	91.2	83.7	88.1	87.9	89.5	***	***	***	***	***	***	***	***	***	***	***	***	35.7
11	715.3	128.9	88.8	91.3	84.4	87.8	88.0	89.8	***	***	***	***	***	***	***	***	***	***	***	***	38.1
12	720.3	144.0	86.0	88.6	83.7	86.0	85.9	88.1	***	***	***	***	***	***	***	***	***	***	***	***	40.4
13	733.0	198.7	82.5	86.4	79.7	81.5	84.3	86.1	***	***	***	***	***	***	***	***	***	***	***	***	42.3
14	744.3	285.2	78.6	81.0	77.9	83.1	79.5	81.2	***	***	***	***	***	***	***	***	***	***	***	***	43.6
15	756.7	381.9	77.7	82.2	77.8	81.9	83.4	81.6	***	***	***	***	***	***	***	***	***	***	***	***	44.5
16	764.1	453.1	77.6	96.4	81.2	93.2	82.5	86.1	***	***	***	***	***	***	***	***	***	***	***	***	45.2
17	773.2	498.6	77.2	119.3	108.4	128.5	84.8	105.1	***	***	***	***	***	***	***	***	***	***	***	***	45.8
18	777.6	536.8	79.9	143.3	134.4	159.3	93.6	123.1	***	***	***	***	***	***	***	***	***	***	***	***	46.4
19	781.3	569.3	88.6	168.7	157.6	186.2	111.4	142.7	***	***	***	***	***	***	***	***	***	***	***	***	47.0
20	791.1	594.4	117.9	191.4	178.2	208.4	130.7	156.7	***	***	***	***	***	***	***	***	***	***	***	***	47.8
21	796.6	613.2	140.4	210.9	196.8	225.9	145.9	176.0	***	***	***	***	***	***	***	***	***	***	***	***	48.7
22	801.2	624.8	162.2	225.0	214.2	242.2	158.3	177.9	***	***	***	***	***	***	***	***	***	***	***	***	50.0
23	807.8	628.9	182.4	229.1	231.6	251.2	170.5	168.3	***	***	***	***	***	***	***	***	***	***	***	***	51.6
24	813.1	627.5	197.1	231.7	247.6	260.4	182.3	157.6	***	***	***	***	***	***	***	***	***	***	***	***	53.7
25	821.0	622.1	206.6	233.1	259.4	269.1	194.7	147.9	***	***	***	***	***	***	***	***	***	***	***	***	56.6
26	825.3	628.3	213.7	236.1	268.1	277.1	206.2	146.4	***	***	***	***	***	***	***	***	***	***	***	***	60.0
27	825.6	642.6	222.4	243.4	275.7	285.8	218.9	152.4	***	***	***	***	***	***	***	***	***	***	***	***	63.6
28	828.0	657.9	231.6	253.4	282.8	295.1	230.8	174.6	***	***	***	***	***	***	***	***	***	***	***	***	67.0
29	835.0	670.5	240.7	264.5	289.5	304.8	242.3	192.5	***	***	***	***	***	***	***	***	***	***	***	***	69.9
30	839.7	682.5	249.3	277.8	296.3	314.9	253.1	207.9	***	***	***	***	***	***	***	***	***	***	***	***	72.3
31	842.8	691.8	257.4	291.2	303.2	325.4	262.7	220.4	***	***	***	***	***	***	***	***	***	***	***	***	74.5
32	847.6	700.6	265.2	304.3	309.9	335.8	272.3	230.7	***	***	***	***	***	***	***	***	***	***	***	***	76.7
33	851.6	708.7	272.6	316.6	316.3	346.2	282.0	239.9	***	***	***	***	***	***	***	***	***	***	***	***	78.8
34	860.0	716.5	280.3	328.7	323.0	356.3	292.4	248.6	***	***	***	***	***	***	***	***	***	***	***	***	81.1
35	861.0	724.1	288.0	341.2	329.7	366.4	302.8	257.6	***	***	***	***	***	***	***	***	***	***	***	***	83.4
36	859.9	730.4	295.2	355.2	336.5	376.8	311.7	267.5	***	***	***	***	***	***	***	***	***	***	***	***	85.9
37	861.4	735.5	302.0	370.4	343.3	387.6	319.8	277.7	***	***	***	***	***	***	***	***	***	***	***	***	88.6
38	867.4	739.7	308.4	387.9	349.9	398.6	328.3	287.8	***	***	***	***	***	***	***	***	***	***	***	***	91.4
39	871.9	742.3	314.9	405.1	356.6	408.2	337.5	298.3	***	***	***	***	***	***	***	***	***	***	***	***	94.2
40	880.4	747.7	588.7	424.7	492.0	506.9	347.4	310.4	***	***	***	***	***	***	***	***	***	***	***	***	97.1
41	897.4	802.4	853.5	690.6	829.5	777.1	356.0	324.7	***	***	***	***	***	***	***	***	***	***	***	***	100.3
42	887.3	795.9	827.9	774.1	836.8	819.2	369.9	340.6	***	***	***	***	***	***	***	***	***	***	***	***	103.4
43	886.9	768.2	837.9	810.3	848.3	828.8	388.8	357.8	***	***	***	***	***	***	***	***	***	***	***	***	106.2

Table 8. Temperatures Measured in Wood Stud Shear Wall Assembly F-21A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	20.1	20.8	22.9	20.5	23.1	20.8	23.2	21.0	22.8	20.9	23.1	20.8	21.4	21.2	21.3	21.2	20.2	20.2	19.4	19.4
1	42.9	20.8	22.9	20.6	23.1	20.8	23.2	21.1	22.9	20.8	23.1	20.8	21.4	21.2	21.3	21.2	20.2	20.1	19.5	19.4
2	238.2	20.8	22.8	20.5	23.1	20.8	23.1	21.0	22.9	21.1	23.1	20.9	21.4	21.2	21.5	21.2	20.3	20.1	19.6	19.4
3	370.0	20.8	22.9	20.5	23.1	20.8	23.2	21.0	22.9	24.7	23.1	20.9	22.1	21.6	31.5	24.3	24.4	23.1	26.5	22.1
4	377.1	21.4	22.9	20.6	23.2	20.9	23.4	21.3	22.9	24.7	23.5	21.2	26.2	23.8	38.7	28.3	30.9	28.1	34.7	27.4
5	520.8	22.9	22.9	20.7	23.3	21.0	24.4	22.5	23.0	54.5	24.8	22.4	28.4	26.0	43.7	31.3	36.3	32.2	42.3	31.6
6	593.3	24.9	23.0	20.9	23.6	21.3	25.8	24.4	23.1	73.9	26.7	24.1	34.8	29.5	55.1	37.3	47.1	40.3	59.1	40.8
7	580.5	27.3	23.5	21.5	24.4	21.7	27.7	27.0	23.5	74.1	29.4	26.5	43.6	33.9	59.9	42.0	53.2	45.2	61.8	46.3
8	638.5	30.0	24.3	22.5	25.6	22.4	30.0	30.1	24.0	80.5	32.3	29.3	46.8	37.2	62.6	45.5	57.1	49.3	65.7	50.2
9	667.3	32.5	25.4	23.8	27.2	23.4	32.4	33.2	25.3	84.4	35.2	31.9	53.0	40.7	65.7	49.0	62.2	53.9	70.6	55.1
10	696.1	35.0	26.8	25.3	29.1	24.6	34.8	36.2	27.8	85.4	37.8	34.3	57.5	44.1	66.7	51.9	66.4	57.9	73.9	59.4
11	715.3	37.4	28.4	26.9	31.1	26.0	37.2	39.0	31.0	84.8	40.3	36.7	56.1	46.3	67.1	53.5	69.5	61.3	75.8	62.5
12	720.3	39.8	30.0	28.6	33.0	27.5	39.6	41.6	33.2	82.0	42.6	38.6	58.8	48.6	66.1	55.6	70.9	63.9	76.6	64.4
13	733.0	41.8	31.4	30.3	34.6	29.1	41.7	43.9	34.3	77.5	44.5	40.5	61.1	51.4	65.3	56.6	71.5	65.6	75.8	65.5
14	744.3	43.5	32.6	32.0	36.0	30.7	43.4	45.6	35.1	76.1	46.1	42.1	62.0	53.6	65.3	57.4	71.2	66.5	74.7	66.2
15	756.7	44.8	33.6	33.4	37.2	32.3	44.8	46.9	35.7	72.4	47.3	43.3	63.6	55.7	66.0	58.5	70.8	67.1	75.9	67.6
16	764.1	45.7	34.4	34.8	38.2	33.7	45.8	47.8	36.3	69.2	48.1	44.2	66.3	58.4	66.7	59.6	70.4	67.7	75.9	68.7
17	773.2	46.4	35.1	36.0	39.1	35.0	46.7	48.6	36.8	66.5	48.9	44.9	68.4	60.5	67.7	60.8	70.2	68.2	76.3	69.8
18	777.6	47.0	35.8	37.0	39.8	36.2	47.4	49.3	37.2	64.5	49.5	45.6	70.2	62.4	69.3	62.3	70.9	69.0	77.6	71.1
19	781.3	47.6	36.5	37.8	40.5	37.3	48.3	50.0	37.6	63.2	50.2	46.2	72.7	64.5	71.5	64.1	71.6	69.8	79.9	73.2
20	791.1	48.3	37.1	38.6	41.2	38.3	49.3	51.0	38.1	62.3	51.0	47.0	75.7	66.8	74.1	65.9	72.6	70.6	82.9	76.0
21	796.6	49.5	37.7	39.4	41.9	39.3	50.7	52.2	38.5	61.4	52.0	47.8	78.4	69.4	77.2	67.6	74.2	71.6	87.9	79.5
22	801.2	51.3	38.3	40.1	42.7	40.5	52.6	53.7	39.1	60.5	53.2	48.8	81.5	73.2	80.3	68.7	76.2	72.9	95.2	84.1
23	807.8	53.4	39.0	40.9	43.6	41.8	55.1	55.5	39.8	59.5	54.8	50.0	87.7	77.4	84.1	70.6	78.7	74.6	102.2	90.6
24	813.1	55.7	39.7	41.6	44.5	43.3	58.0	57.6	40.4	58.4	56.9	51.3	96.4	82.1	88.9	73.6	82.1	76.8	108.8	97.2
25	821.0	58.2	40.4	42.4	45.4	44.8	61.1	60.3	41.0	57.3	59.3	52.7	104.2	86.9	94.5	77.2	87.3	79.8	114.8	103.2
26	825.3	60.7	41.1	43.2	46.3	46.4	64.3	63.2	41.6	56.3	62.1	54.2	111.4	91.5	101.0	81.6	95.3	84.2	120.6	109.3
27	825.6	63.1	41.8	44.0	48.0	48.0	67.6	65.8	42.3	55.3	65.0	55.6	118.5	96.2	107.9	86.3	103.8	89.8	126.5	115.1
28	828.0	65.5	42.6	44.7	50.1	49.5	71.1	68.0	43.7	54.5	67.9	57.1	125.2	101.0	115.3	90.9	112.6	95.7	132.7	120.8
29	835.0	67.9	43.4	45.5	51.8	51.1	74.6	69.7	45.5	53.8	70.8	59.0	131.7	106.2	123.3	95.9	123.4	102.4	139.2	126.5
30	839.7	70.6	44.4	46.2	53.1	52.8	78.1	71.1	47.3	53.3	73.4	61.1	138.2	111.7	131.9	101.1	135.6	109.5	146.0	131.8
31	842.8	73.6	46.5	47.1	54.0	54.4	81.6	72.3	49.1	53.2	75.8	63.1	144.7	117.2	140.8	106.5	149.5	116.6	153.1	136.6
32	847.6	76.7	48.2	47.9	55.0	55.6	85.1	73.5	51.0	53.2	78.1	64.9	151.0	122.2	150.3	112.6	164.7	123.6	160.5	139.6
33	851.6	79.7	49.4	48.9	56.1	56.8	88.6	75.2	52.9	53.5	80.3	66.8	157.2	126.7	160.6	119.4	180.9	131.0	168.2	142.2
34	860.0	82.7	50.5	49.8	57.3	57.8	91.9	77.5	55.0	53.8	82.8	68.7	163.6	130.5	171.7	127.1	198.4	138.9	176.0	144.7
35	861.0	86.0	51.8	50.9	58.7	58.9	95.1	79.7	57.3	54.1	85.7	70.7	170.4	134.5	183.8	136.5	216.0	148.0	184.2	147.3
36	859.9	88.8	53.6	52.1	60.3	60.0	98.4	81.9	60.5	54.5	89.0	72.9	177.5	138.6	197.2	148.4	232.3	159.5	192.6	150.4
37	861.4	91.4	55.9	53.3	62.2	61.1	101.8	84.3	65.7	55.1	92.7	75.2	185.1	143.1	212.2	163.7	247.8	176.6	201.4	154.5
38	867.4	94.3	59.1	54.6	64.5	62.2	105.3	87.1	71.2	56.0	96.8	77.5	192.8	148.0	229.6	182.8	263.2	206.3	210.2	160.3
39	871.9	97.4	62.8	56.2	66.9	63.6	108.9	90.8	76.3	57.3	100.9	80.2	200.8	153.2	250.5	206.8	279.5	271.0	219.0	167.8
40	880.4	100.7	66.3	57.9	69.2	65.1	112.7	95.2	88.9	59.2	105.4	82.8	205.5	160.0	260.8	216.0	299.3	411.3	228.2	176.7
41	897.4	104.6	70.2	59.9	72.0	67.0	119.0	101.7	94.7	63.0	110.8	85.4	235.7	160.1	283.5	217.1	344.2	644.9	237.8	187.7
42	887.3	108.7	72.0	62.7	79.5	77.7	127.7	116.1	95.8	67.8	115.2	88.2	260.8	177.1	286.5	219.3	398.5	715.6	248.7	202.6
43	886.9	114.8	75.2	74.7	89.0	83.1	132.6	127.6	95.7	72.6	120.1	91.4	278.0	182.0	303.1	202.4	463.6	778.0	261.6	225.9

Table 9. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-21A

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	BL/FL (UnExp.) Av(60,61,62,63,64, 65,66,67,68,69)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	20.1	20.5	20.5	20.9	21.4	21.7	21.9	21.0
1	42.9	23.8	22.8	20.9	21.4	21.7	21.9	21.0
2	238.2	84.8	65.3	22.4	21.7	21.7	21.9	21.0
3	370.0	89.9	77.7	51.2	46.3	22.4	22.3	21.1
4	377.1	84.7	74.0	57.3	57.6	23.0	22.4	21.1
5	520.8	97.0	87.4	70.2	64.7	27.0	25.9	21.1
6	593.3	102.9	90.2	82.9	78.9	33.0	28.7	21.1
7	580.5	110.0	89.9	81.9	79.7	35.2	29.9	21.3
8	638.5	116.4	93.9	84.9	82.3	38.8	32.0	21.5
9	667.3	120.9	97.7	88.2	86.0	43.7	34.1	21.9
10	696.1	124.1	101.0	89.7	88.1	48.6	36.1	22.4
11	715.3	130.6	104.4	89.8	88.4	52.0	38.0	23.0
12	720.3	148.3	108.6	88.4	86.4	53.1	39.6	23.8
13	733.0	201.1	118.2	86.6	83.4	53.5	40.7	24.6
14	744.3	288.2	136.5	82.7	80.2	54.5	41.9	25.6
15	756.7	378.0	163.5	81.5	80.8	55.1	42.6	26.6
16	764.1	446.4	194.9	81.2	86.2	55.5	43.1	27.7
17	773.2	494.1	227.5	82.0	103.9	56.0	43.6	28.8
18	777.6	533.1	259.5	83.7	122.3	56.5	44.1	29.7
19	781.3	565.3	292.1	87.6	142.5	57.3	44.6	30.6
20	791.1	590.9	321.1	92.6	163.9	58.3	45.2	31.5
21	796.6	611.6	349.5	99.2	182.7	59.5	45.9	32.4
22	801.2	627.0	378.3	107.1	196.6	60.7	46.9	33.3
23	807.8	637.9	404.0	115.2	205.5	61.9	48.0	34.2
24	813.1	646.3	430.1	122.3	212.8	62.9	49.3	35.1
25	821.0	652.0	452.9	130.3	218.5	63.9	50.7	35.9
26	825.3	660.0	474.9	139.1	224.6	64.7	52.3	36.9
27	825.6	669.2	492.0	149.3	233.1	66.1	54.0	38.1
28	828.0	677.2	507.3	160.7	244.7	67.7	55.7	39.2
29	835.0	684.6	521.1	172.6	255.7	69.2	57.3	40.4
30	839.7	692.1	533.8	185.0	266.6	70.7	58.9	41.6
31	842.8	699.3	545.7	198.0	276.7	72.2	60.6	43.0
32	847.6	705.9	555.6	211.5	286.4	74.3	62.3	44.3
33	851.6	713.0	566.8	225.9	295.6	79.0	64.0	45.8
34	860.0	720.5	576.0	240.8	304.9	83.1	65.7	47.1
35	861.0	727.2	585.2	256.4	314.3	87.1	67.6	48.6
36	859.9	732.4	594.0	273.1	323.8	92.3	69.6	50.1
37	861.4	736.8	604.0	290.9	333.5	95.6	71.9	51.7
38	867.4	741.9	612.5	310.7	343.5	99.7	74.6	53.3
39	871.9	772.5	693.0	333.8	353.4	106.7	77.4	55.0
40	880.4	819.6	776.6	400.0	445.0	204.2	81.2	56.7
41	897.4	813.6	735.1	673.9	638.6	513.2	85.2	57.2
42	887.3	815.0	728.2	778.3	661.4	730.4	87.6	57.1
43	886.9	832.4	743.3	811.7	678.7	812.7	95.7	57.9

Table 10. Temperatures Measured in Wood Stud Shear Wall Assembly F-22

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	31.1	28.4	29.0	28.3	28.5	28.5	28.7	27.5	28.5	28.2	30.5	29.4	29.6	29.8	30.2	30.0	27.3	27.1	27.2	27.1	27.4
1	55.5	28.4	29.0	28.3	28.5	28.5	28.7	27.5	28.4	28.2	30.5	29.4	29.6	29.8	30.2	30.0	27.3	27.1	27.3	27.2	27.5
2	239.8	28.4	29.0	28.3	28.5	28.5	28.7	27.5	28.4	28.2	30.5	29.4	29.6	29.8	30.2	30.0	27.7	27.2	27.4	27.4	27.6
3	339.8	28.4	29.0	28.3	28.6	28.5	28.7	27.5	28.5	28.2	30.5	29.4	29.7	29.8	30.3	30.1	70.8	44.1	45.8	49.5	28.6
4	388.4	28.5	29.1	28.3	28.6	28.5	28.7	27.6	28.5	28.2	30.6	29.5	29.7	29.9	30.2	30.1	74.0	59.5	57.1	55.4	32.0
5	546.5	28.5	29.1	28.3	28.6	28.5	28.7	27.6	28.5	28.2	30.6	29.5	29.7	29.9	30.3	30.1	94.6	83.8	73.5	72.3	33.4
6	561.7	28.5	29.1	28.3	28.6	28.6	28.8	27.6	28.5	28.3	30.6	29.5	29.7	29.9	30.3	30.1	92.4	87.5	82.2	78.9	38.7
7	610.7	28.5	29.1	28.4	28.7	28.6	28.8	27.6	28.5	28.3	30.6	29.6	29.7	29.9	30.4	30.2	93.2	89.1	85.6	82.1	42.2
8	625.5	28.6	29.2	28.6	28.7	28.6	28.9	27.7	28.6	28.3	30.6	29.5	29.7	29.9	30.5	30.4	93.2	90.0	88.2	85.4	45.0
9	677.7	28.7	29.3	28.8	28.8	28.7	29.0	27.8	28.8	28.4	30.7	29.6	29.6	30.0	30.7	30.7	93.3	90.5	90.2	88.3	46.3
10	691.2	29.0	29.4	29.3	29.1	28.9	29.3	28.1	29.1	28.5	30.8	29.8	29.8	30.4	31.1	31.2	93.3	91.3	91.4	90.5	49.2
11	722.6	29.3	29.6	29.9	29.4	29.1	29.6	28.3	29.5	28.7	31.0	30.0	30.0	30.7	31.7	31.9	92.7	91.2	91.7	91.0	53.7
12	715.5	29.7	30.0	30.6	29.8	29.5	30.1	28.6	30.0	28.9	31.4	30.2	30.3	31.2	32.4	32.6	91.1	90.9	89.5	87.3	59.9
13	736.9	30.2	30.4	31.4	30.3	29.8	30.7	29.0	30.6	29.3	31.8	30.6	30.7	31.6	33.1	33.4	88.9	88.1	86.9	86.1	64.1
14	747.6	30.9	30.9	32.3	30.9	30.3	31.4	29.5	31.2	29.7	32.2	31.1	31.2	32.3	34.1	34.4	87.6	82.3	83.0	81.9	64.8
15	750.5	31.5	31.4	33.3	31.5	30.8	32.2	30.0	32.0	30.1	32.7	31.5	31.5	32.8	34.8	35.3	79.8	76.4	79.5	77.1	66.6
16	773.8	32.3	32.1	34.3	32.3	31.4	33.1	30.7	32.8	30.7	33.2	32.1	31.9	33.4	35.6	36.2	78.7	74.7	78.6	76.3	70.5
17	763.9	33.1	32.9	35.3	33.1	32.1	33.9	31.4	33.7	31.3	33.6	32.6	32.3	34.1	36.4	37.1	79.5	73.5	77.1	74.9	72.8
18	777.0	33.9	33.7	36.3	33.9	32.8	34.8	32.2	34.5	32.0	34.1	33.2	32.9	34.6	37.0	37.8	79.6	72.6	76.4	74.2	74.0
19	791.8	34.6	34.5	37.2	34.6	33.6	35.7	32.9	35.4	32.6	34.6	33.7	33.4	35.0	37.7	38.6	80.0	72.0	76.3	74.1	77.3
20	783.1	35.4	35.4	38.1	35.3	34.4	36.5	33.6	36.2	33.4	35.0	34.3	33.7	35.6	38.3	39.3	80.9	71.6	76.4	74.3	78.7
21	803.0	36.1	36.3	39.0	36.1	35.2	37.3	34.3	36.9	34.2	35.4	34.8	34.0	36.0	38.6	39.9	84.2	71.7	77.8	75.2	80.2
22	803.3	36.8	37.1	39.7	36.7	36.0	38.1	35.1	37.7	34.9	35.9	35.2	34.5	36.5	39.1	40.4	87.2	72.2	83.3	79.4	81.9
23	800.7	37.5	37.9	40.4	37.4	36.8	38.8	35.7	38.4	35.8	36.1	35.5	34.7	36.7	39.5	40.7	90.3	73.6	92.0	93.2	85.7
24	821.6	38.1	38.7	41.1	38.1	37.6	39.4	36.4	39.0	36.5	36.4	35.9	35.1	36.8	39.7	41.1	94.9	76.1	102.5	104.4	97.5
25	814.8	38.8	39.5	41.7	38.7	38.4	40.1	37.0	39.6	37.3	36.8	36.3	35.4	37.2	40.0	41.5	103.3	79.4	114.3	116.2	114.8
26	821.7	39.4	40.2	42.3	39.3	39.2	40.6	37.5	40.1	38.1	37.2	36.7	35.6	37.3	40.2	41.9	112.5	83.2	126.2	128.7	130.2
27	833.8	40.1	40.9	42.9	40.0	40.0	41.1	38.1	40.7	38.9	37.4	36.9	36.0	37.7	40.4	42.1	122.6	87.7	138.2	141.8	144.5
28	823.7	40.8	41.6	43.5	40.6	40.8	41.6	38.7	41.3	39.7	37.7	37.1	36.1	38.0	40.7	42.5	132.7	94.3	150.0	153.8	158.4
29	835.2	41.6	42.3	44.1	41.4	41.7	42.2	39.2	41.9	40.5	38.0	37.3	36.3	38.3	41.0	43.0	142.2	104.1	161.2	165.0	172.4
30	848.7	42.5	43.0	44.8	42.1	42.6	42.7	39.8	42.7	41.4	38.3	37.7	36.5	38.7	41.5	43.4	151.4	115.3	171.9	175.6	185.9
31	840.4	43.6	43.7	45.4	42.9	43.6	43.4	40.5	43.6	42.4	38.6	38.1	36.7	39.1	42.0	44.1	160.5	126.6	182.6	186.2	199.3
32	843.1	44.8	44.5	46.1	43.7	44.7	44.1	41.1	44.5	43.4	39.0	38.3	37.4	39.5	42.4	44.4	169.8	136.6	193.5	197.0	213.7
33	858.7	46.2	45.3	46.8	44.6	45.8	44.8	41.7	45.6	44.4	39.2	38.4	37.3	39.9	43.0	44.9	178.9	146.5	205.1	208.3	229.2
34	856.5	47.7	46.1	47.5	45.5	47.0	45.7	42.4	46.9	45.5	39.6	38.7	37.6	41.0	43.6	45.6	188.9	156.6	217.6	220.1	245.7
35	850.5	49.3	47.1	48.3	46.4	48.3	46.7	43.2	48.4	46.6	40.0	39.1	38.0	41.4	44.2	46.1	199.6	167.1	230.9	232.6	263.2
36	865.4	51.0	48.1	49.1	47.5	49.6	47.8	43.9	50.1	47.7	40.4	39.3	38.4	41.8	44.9	46.6	211.0	178.1	244.5	245.1	281.5
37	871.5	52.8	49.2	49.9	48.5	50.8	48.9	44.7	51.9	48.8	40.7	39.6	38.8	42.5	45.6	47.3	223.6	189.2	258.3	257.6	300.3
38	863.7	54.5	50.5	50.8	49.6	52.1	50.2	45.5	53.9	49.9	41.1	39.8	38.8	43.2	46.5	48.1	237.3	200.8	272.9	270.4	320.5
39	868.4	56.3	51.8	51.7	50.8	53.4	51.4	46.4	55.7	51.1	41.8	40.1	39.2	44.0	47.2	48.6	251.6	213.4	288.5	283.1	342.2
40	882.4	58.2	53.2	52.6	52.0	54.7	52.7	47.5	57.5	52.2	42.2	40.5	39.5	45.0	48.0	49.3	266.6	227.9	305.5	296.5	364.6
41	877.8	59.9	54.6	53.6	53.2	55.9	53.9	48.5	59.3	53.4	42.6	40.9	39.7	45.1	48.8	50.0	283.2	246.5	324.1	312.5	387.1
42	872.2	61.7	56.1	54.6	54.5	57.2	55.3	49.8	61.2	54.6	43.0	41.1	40.2	46.1	49.6	50.8	301.9	267.9	345.1	333.7	410.5
43	877.8	63.5	57.4	55.5	55.7	58.5	56.7	51.1	63.1	55.8	43.2	41.6	40.6	47.0	50.3	51.6	322.5	280.2	372.3	353.6	430.9

Table 10. Temperatures Measured in Wood Stud Shear Wall Assembly F-22 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	31.1	27.5	27.5	27.4	27.3	27.1	28.3	27.6	27.7	27.3	28.8	28.7	28.6	28.5	28.8	28.6	28.2	27.9	28.5	27.7	27.9
1	55.5	27.5	27.5	27.4	29.1	28.8	31.7	30.3	30.4	29.7	28.8	28.7	28.6	28.5	28.8	28.6	30.6	29.9	31.0	29.2	29.7
2	239.8	27.7	28.1	28.9	98.0	97.3	81.5	86.1	76.7	75.5	28.7	28.7	28.6	28.6	28.9	28.8	70.1	79.2	83.9	85.2	68.4
3	339.8	29.6	41.8	47.2	94.2	92.6	79.5	85.5	78.9	82.5	28.8	28.8	28.8	29.7	29.1	29.8	81.3	81.7	80.2	83.6	76.5
4	388.4	33.7	46.9	51.2	98.1	97.3	77.7	82.0	77.4	78.9	28.9	29.0	28.9	30.4	29.4	30.4	83.7	83.1	81.6	83.3	78.4
5	546.5	40.2	61.0	75.4	98.2	98.1	86.9	90.5	89.3	91.2	29.3	29.3	30.4	32.9	31.3	37.5	93.3	92.8	89.7	92.5	90.1
6	561.7	49.4	67.1	72.6	96.8	96.6	87.5	87.8	87.6	90.5	29.7	30.1	30.8	35.3	32.4	38.8	93.5	92.3	96.8	88.4	91.0
7	610.7	53.8	69.9	75.5	96.9	97.5	90.9	88.8	90.6	92.5	30.6	31.4	31.8	37.2	36.1	42.2	102.5	99.9	109.2	89.9	100.1
8	625.5	57.4	73.7	77.3	96.8	99.5	94.4	89.2	94.3	95.0	32.1	33.1	34.6	39.2	41.0	46.7	109.9	105.2	119.6	99.2	107.8
9	677.7	61.0	76.5	82.1	98.0	103.3	95.7	91.9	98.7	98.4	34.2	35.2	43.1	41.1	49.5	55.4	115.8	111.7	126.1	106.4	113.4
10	691.2	65.3	79.5	84.7	109.8	109.1	97.6	94.6	102.3	100.6	37.2	37.7	57.6	43.3	57.7	61.1	120.3	117.3	130.0	112.9	117.8
11	722.6	69.6	80.7	85.4	120.1	118.6	100.2	99.0	104.4	103.1	40.7	40.5	67.2	45.6	65.3	67.0	124.6	122.2	133.2	117.7	120.5
12	715.5	74.1	79.9	85.0	128.7	125.2	104.9	104.1	106.6	106.6	43.5	43.7	64.2	48.1	68.5	65.2	133.2	128.4	141.5	123.5	122.6
13	736.9	78.0	78.0	83.2	135.4	133.4	109.9	110.6	109.8	110.8	45.8	47.0	58.4	51.2	67.9	62.1	149.8	140.1	160.4	134.4	128.2
14	747.6	77.2	75.0	80.9	144.5	138.2	120.7	121.0	120.5	119.0	48.2	49.9	54.8	55.6	66.9	59.3	216.2	187.6	234.0	176.9	140.0
15	750.5	73.8	77.1	77.8	153.7	146.0	159.9	158.3	161.5	144.9	50.3	52.1	52.4	57.5	65.3	58.2	303.5	273.6	330.4	269.9	173.5
16	773.8	76.9	77.8	79.2	193.5	177.7	196.1	196.7	192.6	179.7	51.2	53.5	51.9	61.7	63.0	57.5	373.1	357.1	413.3	352.8	242.4
17	763.9	76.9	77.4	78.4	260.7	271.6	241.3	235.0	227.8	223.8	52.0	54.1	51.7	63.2	60.3	55.5	441.6	413.7	472.7	423.9	334.2
18	777.0	75.4	78.5	80.2	324.8	375.6	278.8	271.9	259.7	263.9	52.6	54.6	51.4	62.1	57.7	53.7	485.2	452.5	513.9	474.5	413.4
19	791.8	73.2	80.9	83.6	373.5	443.6	319.7	310.4	301.1	301.5	53.2	55.0	51.1	60.5	55.8	52.4	520.5	490.2	553.1	519.3	463.1
20	783.1	72.8	83.8	86.7	419.6	505.3	374.1	361.1	348.5	350.8	53.9	55.4	51.2	59.4	54.3	51.5	555.8	533.0	595.7	569.0	503.3
21	803.0	74.2	86.5	89.6	472.9	568.5	412.3	397.0	385.8	393.4	54.6	55.8	51.9	58.8	53.4	51.1	583.8	572.8	626.8	607.5	537.0
22	803.3	76.6	91.5	95.5	505.8	590.7	445.7	435.7	418.3	419.0	55.3	56.2	53.8	58.7	52.7	51.0	608.4	608.0	655.9	643.1	573.9
23	800.7	78.9	104.0	100.4	548.5	633.6	477.1	463.4	446.3	457.3	56.0	56.5	56.8	58.6	52.4	51.2	630.9	637.9	678.2	672.1	608.4
24	821.6	80.6	123.2	103.0	580.7	661.7	501.8	489.5	471.4	492.8	56.4	56.8	59.9	58.5	52.2	51.4	649.7	661.8	692.2	690.7	631.8
25	814.8	81.8	136.8	104.1	595.3	660.5	530.7	513.7	491.2	526.1	56.7	57.2	62.7	58.5	51.9	51.5	667.5	684.4	711.0	715.3	657.2
26	821.7	83.6	148.6	108.4	621.0	707.6	556.6	534.1	509.3	544.6	57.0	57.7	65.0	58.9	51.7	51.5	679.7	701.2	722.3	731.0	672.7
27	833.8	85.4	157.7	113.1	631.8	712.3	578.1	553.0	534.4	561.0	57.4	58.4	66.9	59.4	51.6	51.7	690.7	716.0	734.8	746.6	685.7
28	823.7	87.4	164.7	117.3	638.1	722.3	595.1	572.7	563.8	577.0	57.8	59.2	68.7	60.2	51.3	51.8	700.9	729.7	745.9	760.5	698.8
29	835.2	90.4	170.7	122.4	656.5	749.7	612.7	587.9	579.5	589.4	58.3	60.2	70.1	61.0	51.1	52.0	706.8	739.6	750.4	766.7	703.2
30	848.7	94.5	177.4	127.7	665.4	750.6	622.6	602.9	595.4	599.4	58.9	61.3	71.2	61.9	51.0	52.2	712.8	750.5	757.4	776.7	707.5
31	840.4	99.3	184.9	133.3	669.1	744.8	635.4	617.9	608.9	611.1	59.6	62.7	72.4	62.9	51.1	52.5	719.7	761.8	766.7	791.1	714.5
32	843.1	104.7	194.0	139.5	683.8	768.8	643.5	623.5	618.4	619.9	60.4	64.1	73.6	63.9	51.4	52.9	722.9	768.8	771.1	797.8	717.1
33	858.7	110.5	204.1	146.2	693.2	779.8	652.9	634.4	630.9	627.8	61.3	65.5	74.7	65.0	51.8	53.5	726.6	775.7	776.1	804.2	719.7
34	856.5	116.1	214.3	153.7	691.8	771.2	665.0	646.3	645.5	636.4	62.4	66.9	75.9	66.1	56.6	54.1	733.1	783.1	785.8	816.5	725.4
35	850.5	121.8	224.3	162.5	699.8	782.7	675.6	656.1	663.2	642.8	63.5	68.4	77.4	67.3	68.6	54.8	737.4	787.9	792.7	821.9	728.7
36	865.4	127.6	235.6	172.7	712.4	799.2	684.6	666.3	675.7	646.8	64.9	70.0	78.9	68.6	75.7	55.6	739.8	790.0	796.7	815.3	730.8
37	871.5	133.6	248.9	184.4	715.0	788.5	695.2	675.3	686.7	653.6	66.6	71.8	81.0	70.0	78.9	56.6	744.7	793.5	806.4	810.0	736.9
38	863.7	140.1	263.0	198.1	720.1	787.8	704.8	683.2	697.6	662.8	68.9	73.9	83.9	71.8	80.4	57.9	748.4	796.7	812.0	805.5	742.9
39	868.4	147.5	277.3	214.4	736.1	804.2	709.1	691.1	705.8	667.1	71.8	77.2	88.1	74.6	81.3	59.9	749.4	796.3	806.0	798.1	744.5
40	882.4	156.4	291.5	234.6	746.4	809.3	713.6	697.4	713.2	673.7	75.5	83.0	93.7	79.3	82.4	62.8	750.8	796.9	802.8	791.7	747.7
41	877.8	169.3	306.4	261.1	744.3	800.5	722.2	708.0	722.4	685.0	80.6	92.5	101.4	88.9	82.9	67.8	757.2	799.3	802.5	789.0	753.5
42	872.2	191.9	323.1	295.7	767.6	808.1	727.9	719.2	729.4	698.0	87.4	103.6	111.6	111.0	83.8	73.3	761.8	800.2	799.2	785.5	754.2
43	877.8	222.0	338.8	324.8	795.4	814.2	728.3	723.8	732.0	705.3	96.6	102.5	121.4	135.7	88.8	78.0	761.1	804.7	794.7	780.5	754.4

Table 10. Temperatures Measured in Wood Stud Shear Wall Assembly F-22 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	31.1	27.3	28.7	28.8	26.8	28.7	28.7	28.4	***	***	***	***	***	***	***	***	***	***	***	***	29.2
1	55.5	29.1	28.7	28.8	26.8	28.7	28.7	28.4	***	***	***	***	***	***	***	***	***	***	***	***	29.2
2	239.8	81.9	28.8	28.9	29.7	29.0	28.8	28.6	***	***	***	***	***	***	***	***	***	***	***	***	29.2
3	339.8	82.3	29.7	29.6	39.2	30.9	29.3	31.1	***	***	***	***	***	***	***	***	***	***	***	***	29.2
4	388.4	83.0	36.3	35.7	43.4	40.7	33.1	40.4	***	***	***	***	***	***	***	***	***	***	***	***	29.2
5	546.5	93.7	49.6	47.6	56.6	55.4	44.3	52.6	***	***	***	***	***	***	***	***	***	***	***	***	29.5
6	561.7	93.2	58.7	58.8	60.0	63.6	57.2	64.0	***	58.7	***	***	***	***	***	***	***	***	***	***	29.9
7	610.7	100.6	63.3	63.9	64.5	66.8	62.6	66.8	***	***	***	***	***	***	***	***	***	***	***	***	30.9
8	625.5	107.2	66.5	67.1	68.0	69.9	66.4	70.0	***	***	***	***	***	***	***	***	***	***	***	***	32.0
9	677.7	114.2	69.1	69.5	72.1	72.8	71.6	72.2	***	***	***	***	***	***	***	***	***	***	***	***	33.3
10	691.2	119.8	71.0	72.2	75.8	76.6	75.3	75.6	***	***	***	***	***	***	***	***	***	***	***	***	34.8
11	722.6	123.0	71.3	74.4	78.6	79.2	78.0	78.0	***	***	***	***	***	***	***	***	***	***	***	***	36.3
12	715.5	127.5	71.4	76.3	80.6	79.6	79.0	79.7	***	***	***	***	***	***	***	***	***	***	***	***	37.9
13	736.9	134.7	72.7	77.2	81.5	79.6	78.9	79.8	***	***	***	***	***	***	***	***	***	***	***	***	39.2
14	747.6	159.1	73.1	75.2	82.1	77.7	78.7	79.2	***	***	***	***	***	***	***	***	***	***	***	***	40.6
15	750.5	217.7	73.2	75.5	79.0	76.3	75.2	78.0	***	***	***	***	***	***	***	***	***	***	***	***	41.9
16	773.8	288.5	74.4	75.7	78.4	76.0	73.6	75.9	***	***	***	***	***	***	***	***	***	***	***	***	43.1
17	763.9	366.2	73.1	72.9	81.2	72.7	75.8	74.7	***	***	***	***	***	***	***	***	***	***	***	***	44.1
18	777.0	423.9	72.0	71.6	78.9	71.7	75.8	73.2	***	***	***	***	***	***	***	***	***	***	***	***	45.3
19	791.8	469.8	71.3	71.7	77.8	71.1	74.0	71.9	***	***	***	***	***	***	***	***	***	***	***	***	46.1
20	783.1	516.4	71.4	72.4	77.8	69.8	72.4	71.3	***	***	***	***	***	***	***	***	***	***	***	***	47.0
21	803.0	556.5	76.0	74.4	78.7	69.2	71.4	71.3	***	***	***	***	***	***	***	***	***	***	***	***	47.7
22	803.3	591.0	91.2	77.7	83.2	69.6	71.4	72.4	***	***	***	***	***	***	***	***	***	***	***	***	48.3
23	800.7	617.3	111.0	81.4	91.0	71.3	72.4	75.6	***	***	***	***	***	***	***	***	***	***	***	***	48.9
24	821.6	635.7	134.3	87.4	100.7	75.6	77.9	86.4	***	***	***	***	***	***	***	***	***	***	***	***	49.5
25	814.8	653.1	157.3	99.4	112.0	91.2	100.5	98.0	***	***	***	***	***	***	***	***	***	***	***	***	50.2
26	821.7	664.1	175.5	112.1	123.2	108.7	121.8	114.1	***	***	***	***	***	***	***	***	***	***	***	***	51.1
27	833.8	674.4	190.4	125.1	133.5	122.3	141.7	127.8	***	***	***	***	***	***	***	***	***	***	***	***	52.1
28	823.7	686.3	202.0	136.7	143.4	135.1	160.4	138.9	***	***	***	***	***	***	***	***	***	***	***	***	53.4
29	835.2	692.9	211.6	147.1	152.8	147.2	177.3	149.2	***	***	***	***	***	***	***	***	***	***	***	***	54.7
30	848.7	699.9	220.3	157.7	160.8	158.0	191.8	158.9	***	***	***	***	***	***	***	***	***	***	***	***	56.3
31	840.4	709.2	227.5	167.7	169.5	167.9	203.5	167.4	***	***	***	***	***	***	***	***	***	***	***	***	58.1
32	843.1	713.9	233.8	176.8	178.3	176.5	212.8	175.3	***	***	***	***	***	***	***	***	***	***	***	***	60.2
33	858.7	718.5	239.8	185.4	186.7	184.2	220.8	183.2	***	***	***	***	***	***	***	***	***	***	***	***	62.4
34	856.5	727.6	245.4	193.5	193.1	190.9	227.8	190.6	***	***	***	***	***	***	***	***	***	***	***	***	64.8
35	850.5	734.1	250.5	201.5	200.9	197.1	234.0	198.2	***	***	***	***	***	***	***	***	***	***	***	***	67.1
36	865.4	736.8	256.2	209.2	209.5	203.3	239.4	208.1	***	***	***	***	***	***	***	***	***	***	***	***	69.3
37	871.5	743.6	262.5	217.2	215.6	209.8	244.1	216.2	***	***	***	***	***	***	***	***	***	***	***	***	71.4
38	863.7	750.1	270.1	225.5	222.3	216.8	248.6	223.7	***	***	***	***	***	***	***	***	***	***	***	***	73.5
39	868.4	751.5	279.8	234.9	228.1	224.6	253.4	231.9	***	***	***	***	***	***	***	***	***	***	***	***	75.7
40	882.4	754.2	291.7	246.8	232.6	233.7	258.4	240.9	***	***	***	***	***	***	***	***	***	***	***	***	78.1
41	877.8	761.8	306.3	265.4	240.0	244.0	263.4	250.6	***	***	***	***	***	***	***	***	***	***	***	***	80.9
42	872.2	765.8	324.9	299.1	244.7	256.6	268.4	261.8	***	***	***	***	***	***	***	***	***	***	***	***	84.5
43	877.8	766.9	343.1	343.0	253.9	270.2	274.2	271.8	***	***	***	***	***	***	***	***	***	***	***	***	88.7

Table 10. Temperatures Measured in Wood Stud Shear Wall Assembly F-22 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	31.1	29.5	29.1	29.2	29.0	28.9	29.3	29.5	29.0	28.9	29.7	29.3	***	27.3	27.6	27.6	27.4	27.4	27.0	27.0
1	55.5	29.5	29.1	29.2	29.1	28.9	29.3	29.5	29.0	28.9	29.7	29.3	***	27.3	27.6	27.5	27.4	27.4	27.0	27.0
2	239.8	29.5	29.1	29.2	29.0	28.9	29.4	29.5	29.0	29.0	29.8	29.3	***	27.4	27.8	27.7	27.8	27.5	27.2	27.1
3	339.8	29.6	29.2	29.2	29.1	29.0	29.4	29.5	29.0	29.1	29.7	29.3	***	28.3	33.2	30.5	33.6	29.2	31.8	28.1
4	388.4	29.6	29.2	29.3	29.1	29.0	29.4	29.7	29.0	29.2	29.8	29.4	***	31.3	42.2	35.8	37.6	31.5	35.4	29.6
5	546.5	30.1	29.7	30.2	29.2	29.4	29.6	30.4	29.4	30.3	30.0	29.8	***	33.7	52.6	41.2	43.6	34.7	44.1	32.1
6	561.7	30.7	30.0	30.7	29.5	29.7	29.9	31.6	29.6	30.6	30.4	30.5	***	40.6	63.5	48.7	50.1	39.4	50.8	35.9
7	610.7	32.0	30.5	31.3	29.9	30.3	30.5	33.1	30.0	31.1	31.3	31.8	***	45.4	69.5	54.4	54.2	42.9	54.9	38.7
8	625.5	33.6	31.0	32.3	30.5	30.9	31.3	34.9	30.6	31.7	32.7	33.5	***	49.3	73.7	59.5	58.0	46.4	59.0	41.6
9	677.7	35.5	31.8	33.4	31.4	31.8	32.2	36.8	31.9	32.7	34.3	35.2	***	52.4	76.1	63.7	61.4	49.7	62.9	44.6
10	691.2	37.4	32.7	34.6	32.8	32.9	33.3	38.8	34.2	34.0	36.0	37.0	***	55.9	77.6	67.4	64.4	52.8	66.1	47.0
11	722.6	39.2	33.8	35.8	34.6	34.1	34.3	40.7	37.8	35.2	37.9	38.7	***	59.1	77.9	70.2	66.6	55.4	66.8	49.5
12	715.5	41.0	35.1	37.1	36.8	35.4	35.3	42.8	41.6	36.6	39.8	40.4	***	62.3	75.8	71.4	67.9	57.4	67.3	51.7
13	736.9	42.6	36.1	38.3	38.8	36.6	36.3	44.7	43.4	37.8	41.6	42.1	***	64.2	74.1	71.9	67.4	58.4	68.0	53.2
14	747.6	44.2	37.1	39.4	40.3	37.7	37.2	46.4	44.8	38.8	43.3	43.7	***	65.1	72.7	71.8	67.5	59.2	68.5	53.6
15	750.5	45.5	38.0	40.4	41.4	38.7	38.2	47.8	46.0	39.8	44.8	45.0	***	70.4	71.2	71.5	69.0	60.7	68.3	54.1
16	773.8	46.7	38.8	41.3	42.1	39.7	39.1	48.9	46.8	40.7	46.0	46.3	***	71.5	70.5	71.3	69.7	62.0	67.7	54.9
17	763.9	47.7	39.5	42.0	42.4	40.6	40.0	49.7	47.2	41.4	47.1	47.3	***	72.2	70.4	71.4	70.2	62.9	67.5	55.8
18	777.0	48.4	40.3	42.6	42.6	41.5	40.9	50.2	47.2	42.0	47.9	48.1	***	73.9	70.5	71.6	71.5	64.0	67.2	56.6
19	791.8	49.0	41.1	43.2	42.8	42.4	41.7	50.6	47.2	42.5	48.6	48.7	***	75.2	70.8	71.8	74.0	65.8	67.0	57.4
20	783.1	49.5	41.7	43.7	43.1	43.0	42.5	50.8	47.1	42.9	49.2	49.1	***	76.6	71.1	72.0	77.1	68.2	67.2	58.2
21	803.0	49.9	42.3	44.2	43.3	43.6	43.2	51.0	46.9	43.3	49.6	49.5	***	78.3	71.7	72.4	81.1	70.7	67.9	59.0
22	803.3	50.3	42.8	44.6	43.6	44.1	43.9	51.1	46.8	43.7	50.0	49.8	***	81.3	72.8	73.2	86.5	73.0	69.0	60.0
23	800.7	50.7	43.4	45.0	44.0	44.5	44.6	51.1	46.7	44.1	50.3	50.2	***	86.4	74.3	74.5	92.8	75.6	70.3	61.1
24	821.6	51.3	43.9	45.4	44.4	45.0	45.5	51.2	46.7	44.5	50.5	50.6	***	93.4	76.0	76.2	99.3	78.7	71.8	62.3
25	814.8	51.9	44.5	45.9	45.0	45.5	46.6	51.5	46.7	44.9	50.7	51.2	***	102.1	78.1	78.6	105.2	82.1	73.5	63.6
26	821.7	52.7	45.0	46.4	45.7	45.9	47.9	52.1	46.8	45.4	50.9	52.0	***	110.7	80.4	81.5	110.3	85.5	75.2	65.1
27	833.8	53.5	45.5	47.0	46.5	46.3	49.3	53.0	47.0	45.9	51.3	52.9	***	119.0	82.9	84.9	115.7	88.9	76.8	66.6
28	823.7	54.3	46.0	47.7	47.5	46.5	51.0	54.2	47.4	46.5	51.9	53.9	***	127.0	85.7	88.8	121.2	92.3	78.2	68.0
29	835.2	55.2	46.4	48.3	48.5	47.1	52.9	55.8	47.9	47.1	52.6	55.0	***	135.4	88.8	93.1	126.9	95.6	79.8	69.3
30	848.7	56.3	46.8	49.1	49.8	48.1	55.1	58.2	48.8	47.8	53.5	56.3	***	143.9	92.6	97.9	133.0	99.2	82.2	70.8
31	840.4	57.7	47.1	49.9	51.2	49.3	57.4	61.3	49.9	48.5	54.7	57.7	***	152.9	96.4	102.2	139.2	103.0	86.0	72.3
32	843.1	59.3	47.6	50.9	53.0	50.9	59.9	65.2	51.5	49.3	56.1	59.4	***	162.8	100.3	106.2	145.1	107.3	89.8	74.1
33	858.7	61.2	48.0	51.9	55.1	53.0	62.3	69.7	53.5	50.0	57.8	61.2	***	173.2	104.5	110.1	151.3	112.1	93.4	76.3
34	856.5	63.5	48.6	53.0	57.7	55.9	64.8	75.3	56.3	50.7	59.7	63.0	***	184.8	108.2	114.1	158.2	116.5	97.1	78.7
35	850.5	66.4	49.2	54.3	61.0	60.0	67.3	82.2	60.0	51.5	61.8	64.7	***	198.4	112.3	118.5	165.7	120.9	102.1	81.3
36	865.4	69.8	49.9	55.8	65.1	65.3	69.7	90.3	64.9	52.4	64.0	66.3	***	212.7	117.5	123.6	173.8	125.9	108.1	84.3
37	871.5	73.7	50.6	57.5	70.0	72.3	72.1	100.1	71.1	53.5	66.1	67.9	***	228.4	124.5	129.8	182.9	131.4	113.8	87.5
38	863.7	78.8	51.4	60.0	76.4	81.8	74.4	112.8	79.0	55.1	68.1	69.5	***	245.9	133.7	138.3	193.8	137.9	119.6	90.0
39	868.4	85.9	52.4	63.5	84.2	93.6	76.8	127.7	88.5	57.4	70.2	71.2	***	264.9	146.0	149.5	205.9	145.8	126.0	92.0
40	882.4	96.4	53.5	68.6	93.4	108.2	79.1	145.2	99.3	60.7	72.3	73.0	***	284.2	160.6	163.1	219.0	155.2	133.0	94.6
41	877.8	109.4	55.0	75.5	104.9	130.8	81.5	171.6	112.4	65.5	74.6	74.9	***	303.0	178.1	180.9	232.6	167.9	141.8	97.5
42	872.2	127.3	57.0	83.5	119.2	165.1	84.0	210.5	127.8	71.4	76.8	76.9	***	325.6	199.8	203.1	246.2	185.3	153.8	100.6
43	877.8	137.8	59.8	91.0	135.0	204.6	87.5	256.3	144.4	77.7	79.8	79.1	***	309.1	223.6	225.1	259.2	206.4	165.3	103.8

Table 11. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-22

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	BL/FL (UnExp.) Av(60,61,62,63,64, 65,66,67,68,69)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	31.1	27.9	27.6	27.3	28.4	28.6	29.2	28.4
1	55.5	29.9	30.0	27.3	28.4	28.7	29.2	28.4
2	239.8	78.1	85.9	27.7	29.0	28.7	29.2	28.4
3	339.8	80.9	85.5	44.7	31.6	29.1	29.2	28.4
4	388.4	82.2	85.2	51.2	38.3	29.5	29.3	28.4
5	546.5	92.0	92.4	66.8	51.0	31.8	29.8	28.5
6	561.7	92.5	91.1	71.1	60.4	32.8	30.2	28.5
7	610.7	100.4	92.9	73.9	64.7	34.9	30.9	28.5
8	625.5	108.2	94.9	76.3	68.0	37.8	31.9	28.6
9	677.7	114.6	97.7	78.5	71.2	43.1	33.1	28.7
10	691.2	119.7	102.3	80.6	74.4	49.1	34.5	29.0
11	722.6	123.5	107.6	82.0	76.6	54.4	36.2	29.3
12	715.5	129.4	112.7	82.2	77.8	55.5	38.0	29.7
13	736.9	141.3	118.3	81.7	78.3	55.4	39.4	30.2
14	747.6	185.6	127.3	79.1	77.7	55.8	40.7	30.8
15	750.5	261.4	154.0	76.0	76.2	56.0	41.8	31.4
16	773.8	337.9	189.4	76.6	75.7	56.5	42.7	32.2
17	763.9	408.7	243.4	76.3	75.1	56.1	43.5	33.0
18	777.0	460.6	295.8	76.4	73.9	55.4	44.1	33.8
19	791.8	502.7	341.6	77.2	73.0	54.7	44.7	34.6
20	783.1	545.5	393.2	78.2	72.5	54.3	45.1	35.4
21	803.0	580.7	438.3	79.9	73.5	54.3	45.5	36.2
22	803.3	613.4	469.2	83.4	77.6	54.6	45.9	36.9
23	800.7	640.8	504.4	89.8	83.8	55.2	46.3	37.6
24	821.6	660.3	533.0	97.8	93.7	55.9	46.7	38.3
25	814.8	681.4	552.9	106.3	109.7	56.4	47.3	39.0
26	821.7	695.2	578.9	115.2	125.9	57.0	47.9	39.6
27	833.8	708.1	595.1	123.9	140.1	57.6	48.6	40.3
28	823.7	720.3	611.5	132.3	152.8	58.2	49.4	41.0
29	835.2	726.6	629.3	141.0	164.2	58.8	50.4	41.7
30	848.7	734.1	639.4	150.0	174.6	59.4	51.6	42.4
31	840.4	743.8	647.9	159.1	183.9	60.2	53.1	43.2
32	843.1	748.6	659.6	168.6	192.2	61.0	54.8	44.1
33	858.7	753.5	669.8	178.6	200.0	62.0	56.7	45.0
34	856.5	761.9	676.1	189.1	206.9	63.7	59.1	46.1
35	850.5	767.1	686.7	200.2	213.7	66.7	61.9	47.1
36	865.4	768.2	697.5	212.0	220.9	69.0	65.2	48.3
37	871.5	772.5	702.4	224.5	227.6	70.8	69.2	49.5
38	863.7	775.9	709.4	237.9	234.5	72.8	74.3	50.8
39	868.4	774.3	718.9	252.2	242.1	75.5	80.6	52.1
40	882.4	774.0	725.6	268.0	250.7	79.5	88.3	53.4
41	877.8	777.2	730.4	286.3	261.6	85.7	98.8	54.7
42	872.2	777.8	741.7	308.7	275.9	95.1	113.0	56.1
43	877.8	777.0	749.8	330.6	292.7	103.8	128.3	57.5

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	17.0	19.4	20.9	17.8	17.7	19.4	20.0	18.6	18.4	18.4	18.4	19.4	16.3	19.7	16.5	19.1	19.2	17.4	19.3	17.5	***
1	38.0	19.3	20.8	17.8	17.7	19.4	20.0	18.6	18.3	18.4	18.5	19.5	16.5	19.7	16.5	19.8	19.2	17.4	19.3	17.5	20.2
2	217.5	19.3	20.8	17.7	17.6	19.3	20.0	18.5	18.4	18.3	18.4	19.4	16.1	19.5	16.4	19.7	19.3	17.4	19.3	17.5	22.1
3	379.3	19.3	20.8	17.7	17.6	19.3	20.0	18.5	18.3	18.3	18.3	19.4	16.3	19.5	16.6	19.4	29.4	17.8	28.7	19.3	57.9
4	384.9	19.3	20.7	17.7	17.6	19.3	20.0	18.4	18.3	18.3	18.5	19.4	16.2	19.6	16.6	19.3	42.4	27.3	40.4	38.6	54.2
5	510.5	19.2	20.7	17.6	17.6	19.2	19.9	18.4	18.3	18.2	18.5	19.4	16.3	19.5	16.5	19.3	53.0	40.1	46.8	50.0	72.8
6	588.8	19.2	20.7	17.6	17.6	19.2	19.9	18.4	18.3	18.2	18.6	19.5	16.4	19.7	16.5	19.8	71.1	58.7	59.9	73.0	79.4
7	581.0	19.2	20.7	17.6	17.6	19.2	19.9	18.4	18.3	18.2	18.4	19.4	16.3	19.4	16.3	20.0	73.4	66.8	66.0	79.5	76.8
8	637.8	19.3	20.7	17.6	17.7	19.2	20.0	18.5	18.4	18.3	18.4	19.5	16.3	19.5	16.5	19.4	76.6	71.6	66.6	84.0	82.7
9	663.3	19.4	20.8	17.7	17.8	19.3	20.3	18.7	18.5	18.4	17.8	18.8	16.1	19.0	16.4	19.3	80.4	77.3	68.4	88.0	84.9
10	695.8	19.6	20.9	17.8	18.2	19.4	20.6	19.1	18.7	18.6	17.6	18.4	15.9	18.7	16.2	18.8	83.3	81.9	69.6	89.7	86.1
11	715.7	19.9	21.1	18.1	18.7	19.6	21.1	19.6	19.0	18.9	17.8	18.2	16.0	18.9	16.2	19.0	85.5	84.7	70.9	90.8	86.7
12	722.2	20.3	21.3	18.4	19.3	19.9	21.7	20.2	19.4	19.4	17.9	18.2	16.1	18.9	16.8	19.4	86.8	85.7	72.3	91.3	85.9
13	733.7	20.8	21.6	18.9	20.1	20.2	22.6	21.0	19.8	20.0	18.4	18.5	16.2	19.3	17.3	19.9	87.5	86.7	73.6	91.5	84.9
14	743.4	21.4	22.0	19.5	21.0	20.7	23.5	21.9	20.5	20.7	18.5	18.6	16.3	19.8	17.2	20.8	87.9	87.8	74.6	91.6	82.8
15	754.6	22.1	22.5	20.2	21.9	21.2	24.6	22.9	21.2	21.4	19.0	18.6	16.5	19.9	17.9	21.1	86.5	89.8	84.6	89.6	79.4
16	763.7	22.9	23.1	21.0	22.9	21.9	25.8	24.0	21.9	22.3	19.8	18.9	17.1	20.6	18.2	21.4	84.6	88.5	83.8	87.7	72.9
17	770.1	23.8	23.7	21.9	24.0	22.6	27.2	25.1	22.8	23.2	20.3	19.2	17.4	21.0	18.6	22.7	79.9	88.2	78.6	86.3	70.7
18	778.4	24.7	24.4	22.8	25.1	23.4	28.4	26.3	23.7	24.2	20.8	19.4	17.9	21.6	19.3	23.4	80.4	86.5	77.2	85.2	73.5
19	783.8	25.6	25.1	23.8	26.2	24.3	29.7	27.4	24.6	25.1	21.1	19.9	18.5	21.8	19.8	23.7	77.6	83.7	76.1	85.2	73.9
20	790.9	26.5	25.9	24.8	27.3	25.2	30.9	28.5	25.5	26.1	21.6	20.5	18.7	22.4	20.0	24.9	76.9	81.7	74.5	85.6	75.6
21	796.6	27.4	26.7	25.8	28.3	26.0	32.1	29.6	26.4	27.0	22.1	20.9	19.5	22.8	20.7	25.7	77.2	80.7	73.4	84.6	78.4
22	802.3	28.4	27.5	26.7	29.2	27.0	33.2	30.6	27.3	27.9	22.4	21.4	19.9	23.5	20.9	25.6	78.1	80.1	73.5	84.1	80.5
23	807.8	29.2	28.3	27.5	30.1	27.8	34.3	31.6	28.0	28.6	22.5	21.7	20.2	23.2	20.9	26.5	79.3	79.5	74.2	83.3	84.4
24	812.4	30.0	29.0	28.4	30.9	28.7	35.4	32.4	28.9	29.4	22.9	22.1	20.3	24.0	21.1	26.3	81.7	78.8	76.4	82.7	86.2
25	817.5	30.7	29.7	29.2	31.7	29.5	36.4	33.2	29.5	30.1	23.1	22.2	20.7	23.9	21.2	27.4	83.3	77.6	81.1	83.2	88.7
26	823.1	31.4	30.4	29.9	32.4	30.2	37.5	33.9	30.2	30.7	23.7	22.7	21.0	24.5	21.9	27.8	95.7	74.2	84.8	78.8	93.8
27	827.6	32.0	31.0	30.6	33.0	31.0	38.4	34.6	30.8	31.3	23.8	23.1	21.4	24.9	22.4	27.4	115.3	72.7	95.0	77.2	102.9
28	831.3	32.6	31.6	31.2	33.6	31.6	39.3	35.2	31.4	31.9	24.4	23.2	22.1	25.2	22.4	28.6	131.7	73.1	107.2	77.6	112.9
29	835.1	33.2	32.3	31.9	34.2	32.4	40.2	35.8	32.0	32.4	24.4	23.7	21.9	25.1	22.7	28.5	145.5	74.7	118.6	79.6	122.8
30	840.0	33.8	32.8	32.5	34.8	33.1	40.9	36.4	32.6	32.9	24.4	23.9	22.3	25.5	22.9	29.1	157.2	76.9	128.9	85.3	132.2
31	843.4	34.4	33.4	33.1	35.4	33.8	41.8	36.9	33.3	33.5	24.9	23.9	23.2	25.5	23.1	28.7	167.6	79.4	138.4	98.3	141.8
32	847.9	35.1	33.9	33.7	36.0	34.6	42.6	37.4	34.0	34.1	24.7	24.4	23.0	25.9	23.0	29.1	176.8	82.4	147.9	113.1	150.8
33	851.3	35.8	34.6	34.4	36.7	35.4	43.5	38.0	34.8	34.7	25.5	24.6	23.7	26.5	24.1	30.0	185.5	86.2	157.1	123.3	159.5
34	854.7	36.5	35.2	35.1	37.4	36.3	44.5	38.6	35.6	35.4	25.9	25.1	23.6	27.2	24.6	30.9	193.8	90.8	166.1	131.8	168.1
35	858.1	37.4	35.9	35.8	38.1	37.2	45.3	39.2	36.6	36.1	26.0	25.3	23.5	27.2	25.1	30.5	202.0	95.2	175.2	139.6	176.6
36	862.3	38.4	36.7	36.5	39.0	38.2	46.3	39.8	37.7	36.8	26.2	25.4	23.8	27.5	25.4	31.4	209.8	101.7	184.4	147.0	184.8
37	865.3	39.4	37.4	37.3	39.8	39.2	47.3	40.5	38.9	37.6	27.0	25.7	23.8	28.3	25.8	31.9	217.4	109.5	194.1	154.5	193.5
38	868.8	40.5	38.2	38.0	40.7	40.3	48.3	41.1	40.2	38.4	26.8	26.4	23.8	28.9	26.2	32.1	224.9	117.7	203.8	162.3	201.8
39	870.7	41.7	39.0	38.8	41.6	41.4	49.3	41.8	41.5	39.2	27.8	26.4	23.9	29.3	26.9	32.9	232.8	126.2	213.7	170.1	209.6
40	874.5	42.9	40.0	39.7	42.6	42.5	50.4	42.5	43.0	40.0	28.1	26.9	24.8	30.2	27.3	33.8	241.2	134.2	223.5	178.0	217.4
41	877.1	44.2	40.8	40.5	43.6	43.7	51.5	43.1	44.5	40.8	28.5	27.7	24.9	30.6	27.8	34.9	250.0	141.9	233.3	186.6	224.8
42	881.6	45.6	41.8	41.5	44.7	44.9	52.8	43.9	46.0	41.7	29.7	28.5	24.7	31.9	28.9	33.8	259.7	149.6	243.3	195.8	232.8
43	883.4	47.1	42.8	42.4	45.7	46.1	54.1	44.6	47.6	42.5	30.8	28.4	26.1	33.1	30.2	35.4	269.9	157.7	253.5	205.6	241.1
44	885.6	48.7	43.8	43.4	46.8	47.3	55.5	45.4	49.3	43.4	30.9	28.8	25.5	33.4	30.4	36.9	281.0	166.5	263.6	216.0	250.1
45	888.6	50.3	44.8	44.4	48.0	48.6	56.9	46.2	50.9	44.3	31.2	29.2	26.2	34.1	31.0	37.3	294.1	176.0	273.8	226.9	258.6
46	890.5	52.1	45.8	45.4	49.1	49.9	58.4	47.1	52.7	45.3	32.1	29.6	26.4	35.4	33.0	38.9	308.7	186.8	283.9	238.7	267.5
47	894.8	53.9	46.9	46.5	50.4	51.2	60.1	48.0	54.4	46.2	32.4	30.3	26.0	35.4	33.3	37.7	324.8	199.3	293.7	252.4	276.3

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
48	897.3	56.0	48.0	47.6	51.7	52.6	61.6	49.0	56.3	47.2	32.5	30.5	26.3	36.1	33.8	38.0	342.8	213.6	305.6	268.4	284.2
49	898.4	58.3	49.1	48.8	52.9	53.9	63.4	49.9	58.1	48.1	32.4	30.9	26.2	37.4	34.0	39.0	359.7	230.2	318.0	287.1	292.1
50	901.5	60.8	50.2	50.0	54.3	55.3	65.1	50.9	59.9	49.0	32.9	31.1	26.4	37.5	35.5	38.3	376.5	249.4	330.7	309.0	299.9
51	904.6	63.4	51.4	51.2	55.7	56.8	66.8	51.9	61.8	50.0	33.7	31.2	26.5	38.6	35.8	40.6	395.3	271.8	342.9	334.0	306.6
52	906.4	65.8	52.5	52.6	57.1	58.4	68.5	52.9	63.7	51.1	34.6	31.8	27.7	39.5	36.7	40.4	416.1	297.1	356.8	361.8	307.4
53	909.3	67.9	53.7	54.0	58.5	60.0	70.2	53.9	65.6	52.5	34.4	31.9	26.7	39.5	36.4	41.1	440.9	325.8	371.2	391.7	320.1
54	909.6	69.7	55.0	55.5	59.9	61.7	71.8	54.9	67.7	53.9	34.4	32.6	26.6	39.9	37.0	42.0	468.6	357.8	385.4	422.2	329.0

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	17.0	***	***	***	***	***	***	***	***	***	***	17.9	20.6	19.2	20.9	19.1	18.8	17.5	18.5	19.6	18.5
1	38.0	19.6	***	19.4	19.3	15.4	20.7	21.7	***	19.8	***	17.9	20.6	19.2	20.9	19.1	20.3	19.1	20.4	20.8	20.3
2	217.5	19.9	***	19.6	96.8	25.3	64.3	58.4	***	47.9	***	18.0	20.6	19.2	20.8	19.3	70.0	73.2	73.3	72.6	69.7
3	379.3	32.2	***	26.7	93.7	70.6	79.2	76.1	***	81.0	***	18.0	20.6	19.3	21.8	26.8	84.4	85.3	85.1	86.0	84.7
4	384.9	42.8	***	35.8	88.7	71.2	74.2	72.1	***	78.1	***	18.0	20.6	19.3	23.3	32.3	79.4	80.0	78.4	79.2	78.7
5	510.5	55.2	***	44.0	97.6	90.5	83.5	84.1	***	86.9	***	18.2	20.7	19.7	27.9	49.0	90.6	92.9	91.2	91.7	91.6
6	588.8	69.4	***	61.5	95.5	89.9	89.2	87.6	***	91.7	***	18.5	20.9	20.8	43.1	61.7	91.3	94.0	92.7	91.1	92.5
7	581.0	68.6	***	62.2	93.8	90.8	86.9	85.0	***	89.7	***	19.2	21.3	22.7	45.0	59.0	91.2	97.1	97.7	93.8	97.1
8	637.8	72.4	***	66.9	94.0	93.0	90.7	88.4	***	92.2	***	20.2	21.8	25.2	56.4	65.7	100.2	104.3	107.0	102.7	105.8
9	663.3	76.8	***	71.3	93.8	94.7	92.1	89.2	***	92.9	***	21.6	22.6	28.2	62.1	71.3	105.8	110.8	113.9	109.3	112.3
10	695.8	79.9	***	74.6	94.4	95.7	95.5	89.9	***	93.4	***	23.5	23.9	31.5	65.9	75.9	110.4	115.8	117.9	113.7	117.6
11	715.7	82.2	***	77.1	97.4	96.2	99.0	90.9	***	94.6	***	25.8	25.5	34.8	68.2	79.4	113.9	119.5	121.0	117.4	121.2
12	722.2	83.5	***	78.5	98.5	96.6	102.0	91.8	***	96.8	***	28.5	27.4	38.1	68.9	81.4	116.7	122.9	124.1	120.9	124.1
13	733.7	83.8	***	79.6	100.9	96.9	105.0	94.6	***	99.9	***	31.5	29.6	41.0	69.1	82.4	119.7	128.1	129.2	125.5	127.7
14	743.4	83.6	***	79.7	103.5	97.3	107.2	98.5	***	103.2	***	34.8	32.0	43.6	68.4	82.8	126.5	140.4	141.4	135.5	136.7
15	754.6	83.5	***	78.1	104.3	96.1	111.3	104.6	***	106.2	***	39.8	34.4	47.1	66.2	76.8	137.1	161.4	170.9	153.4	151.2
16	763.7	77.5	***	76.4	110.5	96.0	117.5	112.9	***	110.0	***	44.8	36.6	48.4	63.4	74.4	169.4	232.7	244.1	212.7	207.1
17	770.1	75.8	***	74.7	120.8	96.3	125.4	135.7	***	115.6	***	48.8	38.7	49.0	61.6	73.2	245.8	320.5	334.1	294.6	286.4
18	778.4	77.9	***	75.4	142.8	96.2	146.2	164.7	***	124.0	***	50.2	40.8	49.3	59.9	71.8	329.6	393.2	411.3	384.2	365.3
19	783.8	77.1	***	77.4	163.9	96.8	179.8	198.1	***	138.5	***	52.8	42.7	50.2	59.1	73.6	395.6	447.5	464.6	446.0	418.2
20	790.9	77.0	***	77.7	199.2	96.8	213.7	231.7	***	161.6	***	53.9	44.4	51.2	58.9	74.0	441.0	490.5	510.7	494.8	448.2
21	796.6	76.9	***	78.0	226.1	97.1	247.7	263.3	***	188.0	***	54.2	45.9	52.2	58.8	73.2	483.4	530.2	552.4	542.1	493.0
22	802.3	76.8	***	78.5	264.7	97.3	278.5	294.2	***	213.9	***	54.6	47.3	53.0	59.2	72.3	524.2	566.1	589.7	585.0	533.2
23	807.8	78.8	***	79.5	299.4	97.5	303.0	327.4	***	239.5	***	55.0	48.6	53.8	60.5	71.6	560.0	597.2	621.9	621.1	566.8
24	812.4	86.4	***	80.8	325.9	98.0	326.0	358.8	***	265.3	***	55.3	50.0	54.6	62.6	71.6	591.2	624.2	648.1	650.4	593.3
25	817.5	100.1	***	81.7	350.1	98.6	356.8	388.2	***	291.8	***	56.0	51.4	55.3	63.8	71.4	614.4	648.9	666.5	671.5	609.1
26	823.1	116.6	***	82.9	381.5	96.0	387.3	417.6	***	318.0	***	56.5	53.0	55.8	63.6	71.2	630.1	672.3	682.3	690.2	617.8
27	827.6	132.2	***	84.8	422.8	108.2	417.3	444.5	***	345.8	***	56.8	54.7	56.2	63.2	71.3	629.2	693.4	697.7	707.7	620.5
28	831.3	150.4	***	89.0	458.3	127.8	449.1	462.0	***	372.8	***	57.0	56.4	56.8	63.0	71.7	631.1	709.1	708.0	722.6	623.0
29	835.1	164.7	***	94.4	496.9	156.1	479.0	482.5	***	397.5	***	57.5	58.3	57.6	63.0	71.9	645.0	723.0	717.0	733.4	626.7
30	840.0	175.3	***	104.7	527.6	215.8	501.9	509.4	***	423.3	***	58.3	60.2	58.4	63.2	71.8	650.0	736.0	726.4	742.3	631.9
31	843.4	186.0	***	118.3	551.2	270.9	521.2	534.8	***	448.2	***	59.5	62.3	59.4	63.8	71.4	658.6	747.4	734.8	750.0	638.3
32	847.9	196.5	***	128.8	565.1	314.6	539.0	556.3	***	472.5	***	61.4	64.4	60.5	64.5	70.7	667.0	757.7	742.5	757.0	644.8
33	851.3	207.2	***	137.6	589.4	353.7	554.8	573.4	***	494.3	***	64.1	66.6	61.7	65.3	69.7	673.5	766.3	750.3	763.4	650.4
34	854.7	217.8	***	146.1	609.1	399.2	567.5	588.5	***	513.2	***	67.9	68.9	63.0	66.2	68.7	680.9	774.1	757.4	769.2	655.8
35	858.1	227.7	***	155.2	624.3	444.5	579.7	598.9	***	528.4	***	73.0	71.4	64.3	67.1	67.7	686.7	782.7	763.5	775.2	661.2
36	862.3	237.6	***	164.6	638.1	484.4	591.2	609.2	***	542.7	***	79.5	74.3	65.7	68.0	66.7	691.2	791.1	769.0	780.3	666.0
37	865.3	247.1	***	174.3	646.8	515.1	602.8	617.8	***	554.8	***	87.5	77.9	67.2	68.8	65.7	696.1	799.1	774.1	783.1	670.5
38	868.8	257.1	***	183.8	666.7	544.8	612.6	626.3	***	567.4	***	97.4	82.4	68.8	69.7	64.8	696.1	806.3	780.0	780.4	673.8
39	870.7	266.9	***	193.6	677.2	573.5	620.1	634.3	***	578.8	***	109.6	88.3	70.7	70.5	64.0	699.4	814.6	786.0	777.5	678.3
40	874.5	277.2	***	203.5	687.3	598.0	627.7	640.9	***	588.8	***	124.4	94.4	73.0	71.5	63.3	703.1	819.2	791.9	774.2	682.4
41	877.1	287.6	***	213.2	697.9	618.0	636.7	646.4	***	598.3	***	142.2	97.0	76.7	72.4	62.7	707.0	819.0	797.7	772.1	686.0
42	881.6	298.9	***	222.8	709.4	632.6	643.0	656.7	***	607.8	***	163.0	98.2	84.3	73.4	62.2	709.8	819.4	803.7	770.5	689.6
43	883.4	311.7	***	232.3	718.7	656.4	649.4	665.6	***	616.7	***	187.0	98.7	94.0	74.4	62.0	711.9	819.3	808.5	769.6	694.9
44	885.6	326.3	***	241.8	728.3	673.7	657.2	672.4	***	624.6	***	213.5	99.3	98.5	75.5	62.0	714.7	819.0	812.0	768.7	699.5
45	888.6	341.3	***	251.2	735.6	685.0	665.3	678.9	***	631.2	***	242.3	100.1	100.2	76.7	62.3	719.7	818.7	816.6	767.9	704.2
46	890.5	357.8	***	260.7	744.5	699.2	673.6	684.1	***	637.0	***	274.7	101.2	102.0	78.0	63.0	725.8	817.5	819.7	767.5	708.2
47	894.8	376.3	***	270.3	753.9	714.0	682.8	691.9	***	642.7	***	312.1	102.5	103.6	79.3	64.2	733.3	816.0	822.0	766.9	712.7

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
48	897.3	397.1	***	280.0	761.3	727.6	691.2	699.0	***	649.9	***	353.6	104.3	106.1	80.8	65.9	743.1	815.7	824.3	767.0	717.1
49	898.4	423.8	***	289.8	771.5	737.2	699.2	704.6	***	658.6	***	395.6	106.6	108.7	82.3	68.1	756.1	815.5	825.5	767.0	722.4
50	901.5	457.1	***	299.2	784.3	746.0	706.2	710.3	***	666.2	***	434.2	110.1	111.5	83.9	70.9	769.2	811.9	825.8	767.2	727.5
51	904.6	489.1	***	309.1	798.3	750.3	712.5	713.8	***	676.8	***	469.8	113.6	114.9	85.5	74.3	785.9	810.2	824.2	767.5	736.2
52	906.4	511.7	***	319.0	809.4	755.6	718.7	715.8	***	687.9	***	504.6	117.5	118.8	86.3	78.8	801.1	808.2	821.2	767.9	750.7
53	909.3	497.0	***	328.5	827.0	758.7	723.8	720.1	***	688.5	***	533.6	121.5	123.4	92.9	84.0	818.6	805.5	817.8	769.3	773.9
54	909.6	494.0	***	338.2	833.0	758.3	727.8	726.1	***	695.1	***	557.8	124.9	129.3	95.0	94.2	830.5	803.1	813.1	771.0	796.0

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	17.0	17.7	20.2	18.7	21.1	19.7	21.4	18.9	***	***	***	***	***	***	***	***	***	***	***	***	20.8
1	38.0	18.9	20.2	18.7	21.0	19.7	21.4	18.9	***	***	***	***	***	***	***	***	***	***	***	***	20.5
2	217.5	58.8	20.2	18.7	21.1	19.7	21.4	18.9	***	***	***	***	***	***	***	***	***	***	***	***	20.5
3	379.3	83.4	20.6	19.2	22.2	20.6	21.9	19.6	***	***	***	***	***	***	***	***	***	***	***	***	20.5
4	384.9	79.2	25.9	28.7	30.8	31.2	23.7	26.0	***	***	***	***	***	***	***	***	***	***	***	***	20.4
5	510.5	90.7	35.0	41.6	38.0	41.1	27.9	37.6	***	***	***	***	***	***	***	***	***	***	***	***	20.5
6	588.8	92.1	42.9	56.1	48.2	53.3	40.6	54.1	***	***	***	***	***	***	***	***	***	***	***	***	20.9
7	581.0	94.6	50.6	62.6	53.0	60.1	51.1	63.0	***	***	***	***	***	***	***	***	***	***	***	***	21.7
8	637.8	101.5	53.1	65.0	56.7	61.6	55.1	65.9	***	***	***	***	***	***	***	***	***	***	***	***	22.8
9	663.3	107.1	58.7	68.9	61.6	65.3	61.8	70.4	***	***	***	***	***	***	***	***	***	***	***	***	24.3
10	695.8	111.5	66.9	72.5	66.5	68.9	66.9	74.3	***	***	***	***	***	***	***	***	***	***	***	***	25.9
11	715.7	114.8	74.2	75.6	70.6	71.9	70.8	77.5	***	***	***	***	***	***	***	***	***	***	***	***	27.8
12	722.2	118.2	78.5	78.1	73.9	74.3	73.3	79.7	***	***	***	***	***	***	***	***	***	***	***	***	29.9
13	733.7	122.9	80.9	80.0	76.1	75.8	74.6	81.2	***	***	***	***	***	***	***	***	***	***	***	***	32.2
14	743.4	132.2	82.2	81.3	77.2	76.6	75.4	81.9	***	***	***	***	***	***	***	***	***	***	***	***	34.5
15	754.6	144.0	76.4	81.0	76.3	76.9	77.7	81.1	***	***	***	***	***	***	***	***	***	***	***	***	36.7
16	763.7	188.4	75.9	78.6	73.7	74.4	77.4	79.4	***	***	***	***	***	***	***	***	***	***	***	***	38.6
17	770.1	259.8	73.0	76.4	73.5	72.1	74.4	77.0	***	***	***	***	***	***	***	***	***	***	***	***	40.3
18	778.4	342.7	71.9	75.7	74.2	73.1	74.9	75.3	***	***	***	***	***	***	***	***	***	***	***	***	41.6
19	783.8	407.3	72.3	74.2	71.1	71.6	74.8	74.8	***	***	***	***	***	***	***	***	***	***	***	***	42.5
20	790.9	461.7	71.6	73.1	69.7	70.2	72.3	73.6	***	***	***	***	***	***	***	***	***	***	***	***	43.3
21	796.6	506.8	70.9	72.3	69.7	70.3	71.0	72.7	***	***	***	***	***	***	***	***	***	***	***	***	44.0
22	802.3	546.1	70.5	71.7	73.7	75.2	70.5	71.8	***	***	***	***	***	***	***	***	***	***	***	***	44.6
23	807.8	581.3	75.2	71.5	95.1	91.2	70.8	71.8	***	***	***	***	***	***	***	***	***	***	***	***	45.0
24	812.4	611.4	97.0	73.9	125.8	116.0	72.7	76.2	***	***	***	***	***	***	***	***	***	***	***	***	45.4
25	817.5	636.1	123.8	90.1	153.4	141.7	77.8	95.7	***	***	***	***	***	***	***	***	***	***	***	***	45.9
26	823.1	652.7	152.8	111.3	179.3	165.6	87.6	117.6	***	***	***	***	***	***	***	***	***	***	***	***	46.4
27	827.6	665.8	180.3	132.7	203.0	187.0	102.0	136.4	***	***	***	***	***	***	***	***	***	***	***	***	47.1
28	831.3	678.0	200.1	153.3	222.2	206.8	115.9	154.0	***	***	***	***	***	***	***	***	***	***	***	***	48.3
29	835.1	688.5	213.4	172.2	237.3	224.4	128.8	170.9	***	***	***	***	***	***	***	***	***	***	***	***	50.0
30	840.0	697.5	222.3	188.8	249.5	239.9	140.6	187.0	***	***	***	***	***	***	***	***	***	***	***	***	52.3
31	843.4	704.9	229.0	203.5	260.6	253.4	151.1	202.4	***	***	***	***	***	***	***	***	***	***	***	***	54.8
32	847.9	711.9	234.2	217.7	271.1	265.1	160.7	217.0	***	***	***	***	***	***	***	***	***	***	***	***	57.4
33	851.3	718.7	238.9	233.3	281.3	275.1	169.6	231.0	***	***	***	***	***	***	***	***	***	***	***	***	59.9
34	854.7	725.0	243.5	249.9	291.8	284.3	177.7	244.6	***	***	***	***	***	***	***	***	***	***	***	***	62.4
35	858.1	731.7	247.9	267.7	303.4	293.2	185.1	258.3	***	***	***	***	***	***	***	***	***	***	***	***	64.9
36	862.3	737.8	252.6	287.6	316.0	302.4	192.1	272.4	***	***	***	***	***	***	***	***	***	***	***	***	67.3
37	865.3	744.2	257.2	310.0	329.6	312.2	198.7	287.1	***	***	***	***	***	***	***	***	***	***	***	***	69.8
38	868.8	749.9	261.9	335.4	344.6	323.4	205.0	302.8	***	***	***	***	***	***	***	***	***	***	***	***	72.3
39	870.7	755.1	266.7	363.8	360.7	335.4	211.1	319.6	***	***	***	***	***	***	***	***	***	***	***	***	74.6
40	874.5	759.7	271.6	391.9	377.8	347.4	216.7	337.7	***	***	***	***	***	***	***	***	***	***	***	***	77.0
41	877.1	764.1	276.9	415.8	395.7	357.9	221.9	357.1	***	***	***	***	***	***	***	***	***	***	***	***	79.4
42	881.6	767.8	282.4	436.4	414.1	366.8	227.1	377.3	***	***	***	***	***	***	***	***	***	***	***	***	82.0
43	883.4	771.8	288.0	455.0	432.7	373.7	232.0	398.4	***	***	***	***	***	***	***	***	***	***	***	***	84.6
44	885.6	774.9	293.8	471.9	450.7	377.8	236.8	420.0	***	***	***	***	***	***	***	***	***	***	***	***	87.3
45	888.6	778.4	300.0	487.4	467.6	380.5	241.7	441.8	***	***	***	***	***	***	***	***	***	***	***	***	89.8
46	890.5	781.3	306.8	502.3	483.7	384.4	246.7	463.4	***	***	***	***	***	***	***	***	***	***	***	***	92.3
47	894.8	783.8	314.4	516.1	498.8	388.0	251.5	483.8	***	***	***	***	***	***	***	***	***	***	***	***	94.7

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

[illegible]

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	17.0	19.5	19.9	18.2	20.8	19.5	21.4	20.0	21.0	18.6	21.6	18.9	19.8	19.8	20.3	20.2	18.4	18.3	18.1	18.1
1	38.0	19.5	19.9	18.2	20.8	19.5	21.4	19.9	20.9	18.6	21.6	18.9	19.9	19.8	20.3	20.2	18.4	18.4	18.1	18.2
2	217.5	19.5	19.8	18.1	20.7	19.5	21.3	19.9	20.9	18.7	21.7	18.9	20.0	19.9	20.4	20.3	18.5	18.4	18.2	18.2
3	379.3	19.5	19.8	18.0	20.7	19.5	21.3	19.9	21.1	18.7	21.9	18.8	26.2	20.5	21.6	21.1	19.0	18.9	18.7	18.4
4	384.9	19.4	19.8	18.0	20.7	19.5	21.3	19.9	21.2	18.8	21.9	18.8	30.2	22.6	25.9	24.1	22.8	21.6	20.5	19.6
5	510.5	19.6	19.7	17.9	20.7	19.4	21.4	20.0	21.8	19.0	22.0	18.9	38.3	24.7	29.7	26.9	26.7	24.4	28.3	23.7
6	588.8	20.1	19.8	17.9	20.7	19.5	21.7	20.4	23.1	19.6	22.1	19.2	48.2	29.3	37.5	32.6	33.0	29.2	44.3	31.3
7	581.0	21.2	19.9	18.1	20.8	19.5	22.4	21.1	23.7	20.1	22.6	20.0	51.2	33.5	43.7	37.7	39.8	34.1	52.0	36.7
8	637.8	22.8	20.1	18.3	21.0	19.6	23.3	22.4	25.8	20.8	23.5	21.6	55.4	36.7	47.9	41.5	44.1	37.9	56.6	41.8
9	663.3	24.8	20.5	18.7	21.2	19.7	24.6	23.9	27.9	21.9	24.9	23.6	59.2	40.5	53.6	46.5	48.8	40.9	61.7	46.6
10	695.8	26.9	21.1	19.2	21.6	20.0	25.9	25.4	30.0	23.2	26.4	25.7	61.7	44.0	59.0	51.2	48.9	38.7	65.8	50.6
11	715.7	28.9	22.0	19.9	22.2	20.3	27.4	27.1	31.9	25.1	28.1	27.9	64.0	47.1	63.3	55.2	51.6	40.8	68.7	54.0
12	722.2	31.1	23.1	20.7	22.9	20.8	29.2	28.7	33.6	27.8	30.0	30.2	65.0	49.7	65.9	58.0	54.0	43.3	69.6	56.0
13	733.7	33.3	24.4	21.6	23.9	21.5	31.4	30.3	35.4	31.8	31.9	32.4	66.3	51.9	68.0	59.5	56.3	45.7	71.7	57.6
14	743.4	35.4	25.9	22.6	25.0	22.2	36.2	32.0	36.9	36.6	33.7	34.6	67.4	53.8	67.7	60.5	58.3	48.1	73.5	60.0
15	754.6	37.4	27.3	23.7	26.0	23.0	41.9	33.6	36.0	39.5	35.5	36.6	68.1	55.5	66.7	61.2	60.5	49.9	73.2	62.4
16	763.7	39.2	28.7	24.8	27.1	23.9	43.6	35.1	36.3	40.0	37.1	38.4	68.7	56.9	65.9	61.2	61.2	51.5	72.5	63.9
17	770.1	40.7	30.0	26.0	28.2	24.8	45.4	36.5	37.0	41.1	38.6	39.9	68.1	57.5	66.5	62.0	61.3	53.1	71.7	64.7
18	778.4	41.9	31.3	27.6	29.3	25.8	48.0	37.6	37.9	41.3	39.9	41.1	67.5	58.2	67.2	62.2	62.0	54.5	70.8	65.3
19	783.8	42.8	32.6	29.2	30.5	26.7	49.7	38.5	38.9	41.9	40.9	41.9	67.4	59.1	67.2	62.2	62.1	55.6	70.8	65.8
20	790.9	43.5	33.7	30.4	31.7	27.6	53.4	39.3	40.3	42.7	41.8	42.5	67.9	60.2	67.3	62.7	62.1	56.5	70.7	66.4
21	796.6	44.1	34.7	31.3	32.7	28.5	56.3	39.9	41.6	43.1	42.5	42.9	68.8	61.5	68.2	63.6	62.1	57.4	70.5	67.0
22	802.3	44.5	35.5	32.0	33.7	29.3	58.2	40.4	43.0	43.1	43.0	43.2	69.9	62.8	69.4	64.9	62.1	58.2	70.5	67.5
23	807.8	44.8	36.2	32.6	34.6	30.0	59.6	40.7	44.7	43.2	43.3	43.4	71.1	64.3	70.7	66.3	62.6	59.1	70.8	68.0
24	812.4	45.1	36.8	33.1	35.5	30.8	61.0	41.0	46.3	43.1	43.7	43.6	72.6	66.0	72.1	67.6	63.6	60.1	71.3	68.6
25	817.5	45.5	37.4	33.6	36.4	31.4	61.1	41.4	47.2	42.7	44.0	43.7	74.2	68.0	73.1	68.9	64.9	61.3	72.2	69.4
26	823.1	46.1	37.9	34.1	37.1	32.0	60.5	41.8	47.4	42.0	44.3	43.8	76.0	70.4	74.7	70.5	66.4	62.5	74.1	70.3
27	827.6	46.9	38.3	34.5	37.9	32.6	59.8	42.4	47.5	41.4	44.7	43.9	78.3	73.5	77.1	72.5	68.0	64.0	75.7	71.3
28	831.3	47.8	38.9	34.9	38.7	33.2	59.3	43.3	47.7	40.9	45.2	44.2	81.5	77.3	79.9	74.8	69.9	65.8	77.5	72.8
29	835.1	48.9	39.6	35.3	39.6	33.7	59.3	44.3	47.9	40.4	45.9	44.7	85.5	81.8	83.2	77.5	71.8	68.1	78.9	74.4
30	840.0	50.3	40.3	35.8	40.5	34.3	59.7	45.5	48.1	40.0	46.9	45.4	90.9	86.5	86.7	80.5	73.8	70.7	80.2	76.1
31	843.4	51.8	41.2	36.2	41.5	34.9	60.4	46.9	48.4	39.7	48.1	46.3	96.3	91.1	90.6	83.6	76.1	73.8	81.5	77.9
32	847.9	53.6	42.1	36.7	42.6	35.6	61.4	48.4	48.6	39.5	49.4	47.3	101.9	96.4	94.7	87.0	78.7	77.6	82.9	79.7
33	851.3	55.6	42.9	37.2	43.8	36.3	62.7	50.1	49.0	39.4	50.9	48.5	107.4	101.4	99.1	91.0	81.8	82.2	84.8	81.8
34	854.7	57.8	43.8	37.7	45.0	37.0	64.1	52.1	49.4	39.6	52.4	49.7	113.3	106.1	102.8	95.8	85.9	87.3	87.2	84.2
35	858.1	60.1	44.7	38.4	46.2	37.9	65.7	54.3	49.9	39.7	54.1	51.0	120.0	110.5	106.5	100.6	92.1	92.3	90.1	87.0
36	862.3	62.2	45.5	39.0	47.5	38.7	67.4	56.5	50.5	39.8	55.7	52.4	127.1	114.8	111.0	104.2	98.0	96.9	93.4	90.2
37	865.3	64.1	46.4	39.7	48.8	39.5	69.3	58.6	51.1	40.0	57.4	54.1	134.4	118.9	116.0	107.5	103.6	100.3	96.8	93.4
38	868.8	66.0	47.2	40.4	50.1	40.4	71.2	60.6	51.8	40.3	59.1	55.8	142.0	123.0	121.5	111.0	108.7	103.1	100.4	96.7
39	870.7	68.0	48.0	41.1	51.4	41.3	73.1	62.5	52.6	40.7	60.7	57.7	149.7	127.2	127.5	115.0	113.4	106.9	104.2	99.6
40	874.5	70.2	48.8	41.9	52.8	42.2	75.1	64.5	53.4	41.1	62.4	59.7	157.6	131.6	134.0	119.4	118.1	112.3	108.7	102.3
41	877.1	72.5	49.6	42.6	54.3	43.0	77.1	66.8	54.3	41.6	64.1	61.6	165.4	136.0	141.2	124.1	123.0	118.1	113.7	104.8
42	881.6	75.0	50.5	43.3	55.8	44.0	79.0	69.3	55.3	42.3	65.8	63.4	173.5	140.8	148.8	129.5	128.5	124.3	119.2	107.4
43	883.4	77.7	51.4	44.1	57.4	44.9	80.9	72.1	56.4	43.1	67.5	65.1	181.7	145.8	156.7	135.6	134.5	131.3	125.1	110.4
44	885.6	80.4	52.5	44.8	59.1	45.9	82.9	75.2	57.6	44.0	69.2	66.7	190.3	151.4	165.0	142.4	141.1	138.7	131.2	113.9
45	888.6	82.9	53.7	45.6	60.8	47.0	84.9	78.5	59.0	45.4	71.1	68.3	199.3	157.5	173.7	150.0	147.9	146.0	137.4	117.9
46	890.5	85.4	54.9	46.3	62.5	48.0	86.9	81.6	60.4	47.9	73.0	69.8	208.7	164.1	183.0	158.3	154.5	152.3	143.5	122.5
47	894.8	87.9	56.0	47.0	64.2	49.1	89.2	84.7	62.1	51.6	75.0	71.2	218.7	171.5	193.2	167.5	161.0	156.9	149.6	127.7

Table 12. Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
48	897.3	90.1	57.1	47.7	65.8	50.2	91.6	87.5	63.9	55.8	77.1	72.7	229.7	179.9	204.2	177.3	167.3	160.8	155.8	133.3
49	898.4	92.3	58.2	48.4	67.3	51.5	94.1	89.2	65.9	60.5	79.1	74.2	241.6	189.6	216.1	188.1	173.9	164.8	162.2	139.4
50	901.5	94.4	59.3	49.2	68.9	53.0	96.6	90.7	67.9	65.4	81.0	75.8	254.9	201.0	228.7	199.8	180.6	170.0	168.9	145.7
51	904.6	96.2	60.5	50.1	70.4	55.0	99.4	92.6	69.8	69.9	82.8	77.7	269.4	214.3	241.8	211.7	187.7	173.6	175.6	151.7
52	906.4	98.0	61.7	51.3	71.8	58.0	103.2	94.5	70.5	76.9	84.4	80.0	286.8	229.8	255.9	224.7	194.6	174.9	182.2	157.7
53	909.3	99.9	63.1	53.5	74.0	61.9	109.3	96.5	74.0	76.2	86.8	82.4	312.1	247.4	270.9	238.8	201.1	177.9	189.2	163.6
54	909.6	102.4	70.8	56.7	75.5	64.4	113.2	101.0	74.0	73.7	90.8	84.8	354.4	273.0	286.7	253.7	207.7	179.4	196.5	169.9

Table 13. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-22A

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	BL/FL (UnExp.) Av(60,61,62,63,64, 65,66,67,68,69)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	17.0	18.4	0.0	10.5	20.0	19.5	20.0	18.9
1	38.0	20.0	19.4	18.9	20.0	19.5	19.9	18.9
2	217.5	69.6	58.5	19.3	20.0	19.6	19.9	18.9
3	379.3	84.8	80.1	30.3	20.7	21.3	19.9	18.9
4	384.9	79.2	76.9	40.2	27.7	22.7	19.9	18.8
5	510.5	91.5	88.5	51.7	36.9	27.1	20.0	18.8
6	588.8	92.3	90.8	67.6	49.2	33.0	20.3	18.8
7	581.0	95.3	89.2	70.5	56.7	33.4	20.8	18.8
8	637.8	103.6	91.6	74.4	59.6	37.8	21.7	18.9
9	663.3	109.9	92.5	78.1	64.5	41.2	22.7	19.0
10	695.8	114.5	93.8	80.7	69.3	44.1	23.9	19.2
11	715.7	118.0	95.6	82.5	73.4	46.8	25.3	19.5
12	722.2	121.2	97.2	83.4	76.3	48.9	26.8	20.0
13	733.7	125.5	99.5	83.9	78.1	50.7	28.6	20.5
14	743.4	135.5	101.9	84.0	79.1	52.3	30.7	21.2
15	754.6	153.0	104.5	84.5	78.2	52.8	32.5	22.0
16	763.7	209.1	109.4	81.6	76.6	53.5	33.7	22.9
17	770.1	290.2	118.8	79.2	74.4	54.2	35.0	23.8
18	778.4	371.1	134.8	79.4	74.2	54.4	36.2	24.8
19	783.8	429.9	155.4	78.7	73.1	55.7	37.3	25.8
20	790.9	474.5	180.6	78.4	71.7	56.5	38.6	26.7
21	796.6	518.0	204.4	78.5	71.2	56.9	39.6	27.7
22	802.3	557.4	229.7	78.8	72.2	57.3	40.4	28.6
23	807.8	591.4	253.4	79.9	79.2	57.9	41.1	29.5
24	812.4	619.8	274.8	81.9	93.6	58.8	41.8	30.3
25	817.5	641.1	297.1	85.1	113.7	59.6	42.3	31.1
26	823.1	657.6	320.1	89.6	135.7	60.0	42.5	31.8
27	827.6	669.1	347.7	97.2	156.9	60.4	42.8	32.5
28	831.3	678.6	374.0	106.0	175.4	61.0	43.3	33.2
29	835.1	688.9	402.4	114.3	191.2	61.6	43.9	33.8
30	840.0	697.4	435.6	122.9	204.7	62.4	44.7	34.4
31	843.4	705.7	465.3	132.8	216.7	63.3	45.6	35.1
32	847.9	713.5	489.5	142.3	227.6	64.3	46.6	35.7
33	851.3	720.4	513.1	150.9	238.2	65.5	47.7	36.4
34	854.7	727.1	535.5	159.2	248.6	66.9	48.9	37.2
35	858.1	733.5	555.2	167.4	259.3	68.7	50.2	38.0
36	862.3	739.2	573.1	175.7	270.5	70.8	51.4	38.8
37	865.3	744.5	587.5	184.3	282.5	73.4	52.7	39.7
38	868.8	747.8	603.6	193.1	295.5	76.6	54.0	40.6
39	870.7	751.8	616.8	201.8	309.6	80.6	55.3	41.6
40	874.5	755.1	628.5	210.7	323.9	85.3	56.7	42.6
41	877.1	757.7	639.5	219.6	337.6	90.2	58.1	43.6
42	881.6	760.1	649.9	229.0	350.7	96.2	59.6	44.8
43	883.4	762.7	661.4	238.8	363.3	103.2	61.3	45.9
44	885.6	764.8	671.2	249.3	375.2	109.8	63.0	47.1
45	888.6	767.6	679.2	260.3	386.5	116.3	64.7	48.3
46	890.5	770.0	687.7	272.0	397.9	123.8	66.6	49.5
47	894.8	772.5	697.1	284.7	408.8	132.3	68.6	50.9

Table 13. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-22A (Cont.)

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	BL/FL (UnExp.) Av(60,61,62,63,64, 65,66,67,68,69)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
48	897.3	775.7	705.8	298.8	419.4	142.1	70.7	52.2
49	898.4	779.6	714.2	314.4	430.1	152.3	72.7	53.6
50	901.5	782.8	722.6	331.7	440.8	162.1	74.7	55.1
51	904.6	787.4	730.3	349.8	452.0	171.6	76.8	56.6
52	906.4	792.4	737.5	367.1	463.8	181.2	79.4	58.1
53	909.3	799.4	743.6	382.2	476.3	191.1	82.0	59.6
54	909.6	805.4	748.1	399.3	490.2	200.2	84.6	61.1

Table 14. Temperatures Measured in Wood Stud Wall Assembly F-23

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	25.0	25.4	25.5	25.2	25.1	25.6	25.7	25.1	25.3	25.5	28.0	27.0	25.9	28.1	26.8	27.2	24.8	24.5	24.8	24.5	25.1
1	46.6	25.4	25.6	25.3	25.1	25.6	25.7	25.1	25.3	25.5	28.0	27.0	25.9	28.2	26.9	27.1	24.8	24.4	24.8	24.5	25.1
2	278.2	25.4	25.6	25.3	25.2	25.6	25.7	25.1	25.3	25.5	28.0	27.0	26.0	28.2	26.9	27.2	25.1	41.1	25.7	28.5	27.3
3	394.8	25.5	25.6	25.3	25.2	25.7	25.7	25.1	25.3	25.6	28.1	27.0	26.0	28.2	27.0	27.3	66.1	74.9	42.0	47.5	49.4
4	388.6	26.4	25.8	25.5	25.7	26.1	26.5	25.5	25.9	26.5	28.9	27.1	26.0	28.9	27.8	27.6	70.0	67.7	48.5	51.5	51.8
5	560.0	28.3	26.5	26.0	27.0	27.3	28.3	26.2	27.4	28.0	30.8	27.2	26.2	30.3	29.7	28.6	74.4	85.8	53.7	56.5	56.2
6	587.8	30.6	27.7	26.7	28.7	29.0	30.6	27.6	29.5	30.4	33.1	27.4	26.4	32.2	31.6	29.6	87.4	89.3	64.6	66.9	64.8
7	568.1	33.7	29.6	27.8	30.9	31.5	33.9	29.8	32.6	34.3	36.2	27.8	26.8	34.5	34.5	31.1	85.6	84.9	65.7	67.2	64.9
8	641.3	37.0	32.2	29.7	33.6	34.8	37.5	32.0	36.1	37.7	39.4	28.3	27.3	37.1	37.4	33.3	85.8	89.7	67.4	69.1	64.6
9	667.8	40.1	34.7	31.6	36.1	38.0	40.9	34.2	39.5	41.0	41.5	29.0	28.0	38.8	39.4	34.3	88.2	91.3	70.8	72.7	67.6
10	695.2	43.1	37.4	33.4	38.9	41.2	44.3	36.4	42.6	44.6	43.2	29.8	28.7	40.5	41.2	35.2	89.2	91.8	73.6	75.5	71.1
11	723.4	46.1	40.2	35.2	42.2	44.5	48.0	38.8	45.8	48.3	45.3	30.6	29.5	42.0	43.2	37.4	91.9	89.3	78.3	76.8	73.6
12	715.0	49.2	43.2	37.1	45.6	47.9	51.9	41.2	49.0	51.1	46.6	31.7	30.5	43.9	45.3	38.6	89.3	79.5	78.8	67.9	78.0
13	743.5	52.0	46.1	38.7	48.2	50.8	55.2	43.3	51.8	52.6	47.3	33.0	31.1	45.1	46.1	39.5	83.7	78.6	75.9	63.4	79.7
14	737.4	54.2	48.9	40.5	50.2	52.9	57.8	45.2	53.9	53.4	48.2	34.6	32.4	46.5	46.6	40.1	79.4	73.7	73.5	61.1	77.4
15	766.6	55.4	51.9	42.5	51.6	54.4	59.3	46.6	55.2	53.9	48.6	35.6	33.0	46.2	46.6	41.6	78.9	77.0	69.1	60.3	78.2
16	757.8	56.6	54.3	44.8	52.5	55.6	59.9	47.6	55.9	54.9	49.1	36.6	34.2	46.2	46.9	42.0	84.0	78.1	71.1	61.5	84.9
17	776.3	57.6	55.7	46.9	54.3	57.0	60.6	48.5	56.9	55.8	49.5	37.3	34.9	46.4	47.9	42.9	86.2	77.0	71.0	64.3	85.5
18	775.4	58.5	56.8	48.7	56.3	58.4	61.4	49.5	57.8	56.3	50.1	38.0	36.0	46.5	49.3	43.6	90.6	78.3	72.4	68.8	89.1
19	783.3	59.8	58.2	50.6	58.6	60.1	62.3	50.9	58.7	56.9	51.2	38.6	36.7	47.3	51.5	44.3	95.6	81.0	74.6	72.7	99.5
20	797.6	61.8	59.2	52.8	61.5	62.4	63.8	52.4	60.0	57.7	53.1	39.2	37.5	49.2	53.8	45.1	106.5	84.2	77.4	83.6	119.0
21	789.5	64.5	60.0	55.4	64.6	65.0	65.8	54.0	62.1	59.1	55.3	39.7	38.0	51.1	56.7	45.6	116.2	87.5	83.1	100.5	138.7
22	808.6	67.7	61.0	58.2	67.3	67.7	68.2	55.7	64.9	60.9	57.2	40.3	38.4	53.6	59.1	47.4	127.1	92.5	96.6	121.7	158.6
23	807.5	70.6	62.6	61.6	69.4	69.9	70.8	57.5	68.2	63.1	58.4	41.0	39.2	54.4	60.6	48.4	142.8	105.3	111.2	142.6	178.5
24	809.0	72.7	64.9	65.0	71.2	71.5	72.8	59.2	71.0	65.3	59.2	41.9	39.9	55.3	61.5	50.1	159.2	129.3	127.0	164.5	198.8
25	826.3	73.8	67.3	67.9	72.8	72.6	73.9	60.6	72.7	67.3	59.2	42.6	40.5	55.9	62.0	51.1	173.6	154.0	143.5	188.1	218.2
26	818.6	74.2	69.7	70.0	73.9	73.4	74.4	62.1	73.6	68.7	59.2	43.5	41.0	56.0	63.6	51.4	188.2	177.7	160.0	218.5	237.9
27	826.2	75.4	71.5	71.5	74.9	73.9	75.5	63.7	74.2	69.6	59.7	44.5	42.0	57.8	66.6	51.9	203.1	200.5	177.8	260.0	256.8
28	838.7	80.1	72.9	72.5	75.7	74.2	78.9	65.3	77.3	70.4	60.2	45.2	42.9	58.1	69.4	52.5	218.9	230.0	197.7	305.0	274.4
29	827.9	84.6	73.8	73.3	76.6	74.2	82.7	66.5	81.8	70.8	61.3	46.1	43.8	61.0	72.2	53.4	235.2	479.1	219.4	426.9	291.3

Table 14. Temperatures Measured in Wood Stud Wall Assembly F-23 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	25.0	24.8	25.0	24.8	24.9	24.6	25.0	24.7	25.0	24.7	25.8	25.5	25.9	25.6	26.0	24.9	25.4	24.9	25.3	25.0	25.0
1	46.6	24.8	25.0	24.8	26.7	26.4	28.8	28.2	28.3	27.1	25.8	25.6	25.9	25.6	26.0	24.9	28.2	27.8	27.9	27.8	27.0
2	278.2	26.7	29.1	26.3	84.4	89.0	84.5	87.1	84.0	81.1	25.9	25.5	26.1	25.5	26.2	25.5	91.0	88.3	91.4	91.3	82.5
3	394.8	33.5	45.3	46.7	93.3	91.6	80.8	82.9	81.8	85.9	26.2	25.7	26.5	26.6	26.5	38.0	87.7	85.3	85.8	87.6	83.9
4	388.6	37.2	48.0	49.8	87.5	85.0	74.8	77.3	76.4	80.7	26.8	26.1	26.8	28.3	26.9	43.6	82.5	80.0	80.0	81.6	78.5
5	560.0	45.6	59.2	57.2	93.7	91.4	90.9	90.7	90.0	90.7	27.8	26.7	28.2	29.1	28.1	49.3	95.3	93.2	93.7	94.2	93.6
6	587.8	53.6	68.6	67.6	95.7	94.3	88.6	91.0	90.2	92.9	29.2	27.6	29.8	32.4	28.7	59.2	95.9	91.6	90.6	97.4	93.7
7	568.1	53.6	66.1	66.7	95.6	91.8	88.9	90.4	89.9	91.8	30.1	28.4	30.5	35.2	29.6	61.1	100.9	101.9	97.2	103.5	100.7
8	641.3	58.6	71.8	69.7	100.0	92.8	93.7	95.6	95.4	98.4	31.5	29.5	32.6	36.0	30.8	63.3	109.8	109.8	106.2	112.9	111.5
9	667.8	64.3	75.1	73.3	104.1	94.4	95.3	98.0	98.8	102.2	33.0	30.9	34.4	37.4	32.2	67.1	115.7	115.4	112.1	119.5	118.0
10	695.2	73.7	78.2	76.9	109.4	95.6	97.8	102.7	101.7	106.7	34.9	32.5	37.4	38.9	34.3	70.6	120.9	119.9	116.8	124.2	122.5
11	723.4	72.3	79.4	78.9	114.8	101.2	100.6	107.8	104.7	110.5	37.9	33.9	40.8	61.4	37.9	73.1	125.1	126.3	121.3	128.2	124.4
12	715.0	68.7	78.4	80.1	122.7	108.7	104.3	113.2	108.6	114.3	39.8	34.8	41.9	66.6	39.1	74.4	130.7	135.9	127.3	134.3	125.9
13	743.5	71.7	77.4	80.1	134.9	123.8	110.0	119.6	113.0	118.0	40.5	35.8	42.7	66.7	39.5	74.7	144.7	154.6	139.6	148.1	130.8
14	737.4	64.8	75.5	79.6	160.6	146.5	119.8	127.7	120.0	122.7	41.3	36.9	43.8	63.0	40.3	74.5	205.4	223.8	190.0	201.6	141.4
15	766.6	68.4	78.5	78.0	188.8	187.6	148.6	151.6	137.9	130.7	41.6	38.1	50.3	66.4	45.9	74.9	297.8	330.2	275.2	289.6	173.2
16	757.8	73.1	82.1	81.4	267.8	272.4	186.9	190.7	172.0	141.9	42.4	39.4	52.7	71.8	46.7	76.9	394.8	435.8	381.2	394.5	236.3
17	776.3	72.8	81.7	83.2	359.4	358.1	224.6	225.1	206.3	174.0	43.1	40.6	56.0	68.5	46.5	78.3	451.1	493.7	458.1	468.4	335.7
18	775.4	78.2	83.3	84.9	393.6	404.4	261.1	260.9	249.3	210.8	43.7	41.9	58.5	69.5	47.4	77.0	489.6	533.9	505.0	513.9	402.1
19	783.3	81.5	87.5	86.3	421.7	486.9	290.8	294.6	288.2	247.8	44.3	43.1	63.7	72.5	48.3	64.4	529.3	577.8	550.7	558.2	447.1
20	797.6	86.8	95.0	88.9	450.5	536.6	324.6	322.7	328.0	284.5	45.0	44.2	67.1	75.6	50.1	59.5	563.3	615.5	592.2	598.6	483.7
21	789.5	90.4	111.7	91.6	503.0	589.9	363.0	363.7	373.3	318.3	45.8	45.3	70.4	76.4	52.0	62.3	591.9	645.9	628.4	635.5	527.5
22	808.6	95.7	129.4	95.6	544.5	641.3	400.3	408.7	415.8	352.1	46.7	46.5	72.8	77.8	53.6	64.6	615.2	662.5	653.6	658.4	564.4
23	807.5	105.4	144.6	100.4	553.6	660.1	438.3	449.5	455.5	392.0	47.7	47.9	73.1	78.7	55.2	66.6	641.5	679.8	677.9	680.1	595.3
24	809.0	117.4	159.5	108.9	595.5	709.0	472.8	489.0	497.1	424.7	48.9	49.5	72.6	79.2	56.6	67.6	663.5	690.8	695.4	689.3	619.1
25	826.3	128.1	173.1	117.5	611.9	720.1	504.8	519.1	524.8	455.0	50.6	51.7	71.6	80.0	58.3	68.6	676.3	700.5	711.1	696.4	640.0
26	818.6	137.0	187.0	125.9	623.2	720.8	535.7	542.0	547.2	485.7	52.8	54.3	70.4	81.5	59.9	72.4	688.3	712.4	727.2	706.6	664.3
27	826.2	146.4	201.3	135.2	661.6	752.7	558.3	563.0	563.3	512.5	55.8	58.3	70.4	84.8	61.8	78.3	696.0	716.4	733.7	705.9	677.2
28	838.7	156.4	215.7	146.0	672.9	751.6	578.6	584.4	577.7	534.6	59.4	66.1	71.7	92.3	63.8	86.3	701.8	722.5	739.5	708.8	687.4
29	827.9	324.1	230.8	239.7	691.8	766.3	597.1	594.0	589.5	557.0	64.1	345.6	74.4	337.2	66.3	269.0	705.0	730.3	744.6	713.9	696.0

Table 14. Temperatures Measured in Wood Stud Wall Assembly F-23 (Cont.)

[illegible]

Table 14. Temperatures Measured in Wood Stud Wall Assembly F-23 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	25.0	***	***	***	***	***	***	***	***	***	***	***	24.8	25.1	24.5	24.5	24.3	24.3	24.2	24.2
1	46.6	***	***	***	***	***	***	***	***	***	***	***	24.9	25.1	24.6	24.6	24.3	24.4	24.2	24.3
2	278.2	***	***	***	***	***	***	***	***	***	***	***	24.9	25.4	24.6	25.8	24.4	24.4	24.3	24.5
3	394.8	***	***	***	***	***	***	***	***	***	***	***	27.3	29.9	27.2	34.8	25.4	28.2	26.0	29.6
4	388.6	***	***	***	***	***	***	***	***	***	***	***	29.5	32.9	29.7	39.0	27.9	33.8	28.0	34.0
5	560.0	***	***	***	***	***	***	***	***	***	***	***	31.9	37.9	31.8	43.1	29.7	36.5	29.4	35.9
6	587.8	***	***	***	***	***	***	***	***	***	***	***	37.2	46.8	35.5	50.8	32.1	41.2	31.3	39.4
7	568.1	***	***	***	***	***	***	***	***	***	***	***	40.2	49.3	38.2	52.8	35.2	45.8	33.3	42.4
8	641.3	***	***	***	***	***	***	***	***	***	***	***	43.4	53.8	40.3	54.9	37.4	47.5	34.3	42.3
9	667.8	***	***	***	***	***	***	***	***	***	***	***	47.2	58.2	42.8	57.5	39.8	49.9	35.4	43.0
10	695.2	***	***	***	***	***	***	***	***	***	***	***	50.9	62.3	44.8	59.4	42.2	52.2	36.5	43.7
11	723.4	***	***	***	***	***	***	***	***	***	***	***	53.7	63.8	46.3	62.5	45.0	55.9	37.9	45.5
12	715.0	***	***	***	***	***	***	***	***	***	***	***	55.0	63.6	48.8	62.8	48.2	59.4	39.7	48.7
13	743.5	***	***	***	***	***	***	***	***	***	***	***	56.3	63.1	50.6	63.9	49.1	57.9	42.0	52.4
14	737.4	***	***	***	***	***	***	***	***	***	***	***	57.3	62.6	51.7	63.9	50.0	56.7	44.4	55.8
15	766.6	***	***	***	***	***	***	***	***	***	***	***	57.8	61.8	52.8	65.8	50.7	55.7	46.2	56.6
16	757.8	***	***	***	***	***	***	***	***	***	***	***	58.9	62.6	54.2	67.7	51.7	56.5	47.7	58.0
17	776.3	***	***	***	***	***	***	***	***	***	***	***	60.0	63.2	55.6	68.8	52.9	57.9	50.1	61.1
18	775.4	***	***	***	***	***	***	***	***	***	***	***	61.0	64.3	56.8	69.8	53.9	59.0	52.0	63.0
19	783.3	***	***	***	***	***	***	***	***	***	***	***	62.3	65.7	58.1	71.3	55.1	60.9	54.1	65.3
20	797.6	***	***	***	***	***	***	***	***	***	***	***	63.6	67.3	59.7	73.4	56.4	63.1	56.4	67.9
21	789.5	***	***	***	***	***	***	***	***	***	***	***	65.2	69.2	61.6	76.4	57.9	65.4	58.9	70.9
22	808.6	***	***	***	***	***	***	***	***	***	***	***	67.0	71.2	63.9	79.8	59.6	68.1	61.3	73.6
23	807.5	***	***	***	***	***	***	***	***	***	***	***	69.2	73.4	66.5	84.7	61.6	71.5	63.8	76.8
24	809.0	***	***	***	***	***	***	***	***	***	***	***	71.9	75.6	69.7	90.1	64.1	75.6	66.8	81.3
25	826.3	***	***	***	***	***	***	***	***	***	***	***	75.3	78.2	73.9	96.2	67.3	80.6	70.4	88.5
26	818.6	***	***	***	***	***	***	***	***	***	***	***	80.2	82.3	79.0	100.1	71.5	87.5	74.7	96.1
27	826.2	***	***	***	***	***	***	***	***	***	***	***	86.8	88.4	84.5	105.8	77.0	95.5	79.6	103.7
28	838.7	***	***	***	***	***	***	***	***	***	***	***	95.0	96.8	91.0	116.9	83.8	103.0	85.5	111.8
29	827.9	***	***	***	***	***	***	***	***	***	***	***	105.0	107.5	97.4	128.0	157.9	145.9	133.2	190.1

Table 15. Average Temperatures Measured in Wood Stud Wall Assembly F-23

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. WStd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	25.0	25.0	24.8	24.8	26.2	25.6	25.4
1	46.6	27.6	27.6	24.8	26.2	25.6	25.4
2	278.2	88.1	85.0	28.7	31.9	25.8	25.4
3	394.8	85.8	86.0	50.7	48.0	28.3	25.4
4	388.6	80.4	80.3	53.0	52.5	29.7	26.0
5	560.0	93.7	91.2	61.1	59.3	31.5	27.2
6	587.8	93.7	92.1	70.4	66.6	34.5	29.0
7	568.1	100.5	91.4	69.3	65.2	35.8	31.6
8	641.3	109.8	96.0	72.1	67.0	37.3	34.5
9	667.8	116.2	98.8	75.4	69.6	39.2	37.3
10	695.2	120.9	102.3	78.8	71.9	41.4	40.2
11	723.4	125.2	106.6	80.1	74.1	47.5	43.2
12	715.0	131.0	112.0	77.6	73.3	49.4	46.2
13	743.5	143.6	119.9	76.3	73.2	50.0	48.7
14	737.4	189.5	132.9	73.1	71.5	50.0	50.8
15	766.6	269.0	157.5	73.5	70.8	52.9	52.3
16	757.8	365.8	205.3	77.0	78.3	55.0	53.6
17	776.3	442.4	257.9	77.7	87.5	55.5	54.8
18	775.4	491.4	296.7	80.7	103.7	56.3	56.0
19	783.3	535.6	338.3	84.8	129.9	56.0	57.3
20	797.6	575.2	374.5	92.7	155.2	56.9	59.1
21	789.5	611.2	418.5	102.5	180.1	58.7	61.2
22	808.6	636.1	460.5	114.6	204.7	60.3	63.5
23	807.5	659.4	491.5	128.8	224.8	61.5	66.0
24	809.0	675.7	531.3	145.6	244.1	62.4	68.2
25	826.3	688.7	555.9	162.0	262.4	63.4	69.9
26	818.6	703.3	575.8	179.0	277.9	65.2	71.1
27	826.2	709.5	601.9	197.7	291.8	68.2	72.2
28	838.7	715.6	616.6	218.0	302.4	73.3	74.1
29	827.9	721.8	632.6	305.8	316.8	192.8	76.0

Table 16. Temperatures Measured in Wood Stud Wall Assembly F-23A

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	17.9	18.3	19.4	17.9	17.1	18.5	19.1	17.4	16.6	17.6	19.9	19.0	18.6	19.3	18.9	20.8	16.5	15.6	16.5	15.6	18.1
1	41.0	18.3	19.4	17.9	17.1	18.5	19.1	17.4	16.7	17.6	20.2	19.1	18.9	19.5	19.2	20.9	16.5	15.6	16.5	15.7	18.2
2	236.2	18.3	19.4	18.0	17.2	18.5	19.1	17.4	16.7	17.7	20.3	19.2	19.0	19.6	19.3	21.0	17.1	15.7	16.6	15.8	20.6
3	369.5	18.4	19.4	18.0	17.2	18.5	19.2	17.5	16.7	17.7	20.3	19.3	18.8	19.6	19.2	20.9	19.0	26.0	20.4	33.5	38.4
4	377.7	18.5	19.5	18.1	17.2	18.6	19.4	17.5	16.9	17.7	20.1	18.7	18.4	19.3	19.2	20.8	27.0	37.4	32.2	45.6	51.7
5	524.0	19.4	19.8	18.3	17.4	19.1	20.3	17.7	17.5	17.9	19.9	18.1	18.0	19.3	19.7	21.0	25.5	68.4	37.7	52.8	51.7
6	576.5	21.0	20.5	18.8	18.0	20.0	21.9	18.2	18.8	18.5	20.4	17.9	17.8	19.9	21.0	21.7	35.5	75.5	50.0	65.0	73.1
7	594.3	23.4	21.7	19.7	18.8	21.5	24.3	19.1	20.9	19.3	21.2	17.9	17.7	20.7	23.1	22.7	43.4	72.6	53.9	65.3	71.8
8	635.3	26.7	23.4	20.9	20.0	23.5	27.6	20.3	23.7	20.6	22.6	18.2	17.7	21.7	25.8	24.1	42.2	73.7	57.6	67.6	75.0
9	664.5	30.1	25.5	22.4	21.5	25.7	31.1	21.6	26.8	22.2	23.8	18.3	17.9	23.2	28.2	25.5	44.7	72.6	62.4	69.2	74.9
10	699.2	33.6	27.9	24.1	23.1	28.2	34.6	23.2	29.9	23.8	25.2	18.9	18.3	24.3	30.4	27.1	46.4	72.1	66.6	70.2	76.7
11	715.6	37.1	30.6	26.4	25.0	30.9	38.0	24.9	33.1	25.4	26.5	19.7	18.7	25.4	32.6	28.4	49.1	74.0	70.0	71.3	77.7
12	721.6	40.7	33.6	29.2	27.3	33.8	41.4	26.7	36.4	27.1	28.2	20.0	19.1	27.2	34.6	30.1	51.8	76.1	72.2	72.0	79.7
13	732.6	44.3	36.8	32.4	30.0	36.9	44.7	28.7	39.8	28.9	29.7	21.1	19.4	28.4	36.3	31.9	53.8	76.2	73.2	72.0	83.9
14	745.8	47.5	39.9	35.7	32.8	39.9	47.7	30.7	42.9	30.5	31.3	21.7	19.7	29.8	37.6	34.0	55.8	76.1	73.6	72.0	85.8
15	754.9	50.4	42.8	38.8	35.6	42.8	50.2	32.6	45.8	32.2	32.7	22.5	20.2	30.5	38.6	35.6	61.8	76.4	71.8	71.7	86.7
16	763.3	52.6	45.3	41.5	38.1	45.6	52.3	34.3	48.3	33.7	33.5	23.6	20.8	31.5	39.2	37.3	64.9	73.1	68.1	68.5	78.4
17	771.2	53.6	47.0	43.0	39.9	47.9	53.5	35.8	50.1	35.2	34.3	24.0	21.3	31.7	39.3	37.9	58.3	70.8	69.7	71.4	102.6
18	779.1	54.4	48.0	44.0	41.3	49.6	54.1	36.9	51.2	36.4	34.9	24.8	22.1	32.7	39.6	38.9	60.6	71.3	70.6	73.0	171.5
19	783.5	55.1	48.6	45.1	42.6	51.2	54.6	38.1	52.1	37.3	35.4	25.1	22.8	32.6	39.7	39.4	68.0	78.9	71.3	74.5	226.5
20	791.1	55.7	49.3	46.0	43.8	53.1	55.2	39.2	52.9	38.1	35.5	25.6	22.9	32.9	39.8	39.8	75.2	80.1	75.4	77.4	243.9
21	797.1	57.0	50.0	46.9	45.2	55.1	56.4	40.3	53.7	39.0	36.2	25.5	23.6	34.2	41.1	39.7	88.4	81.7	82.7	82.8	272.2
22	804.4	59.3	51.0	48.1	46.8	57.3	58.6	41.6	55.0	39.8	36.5	26.7	23.6	35.7	43.1	41.1	128.1	90.0	90.7	89.2	305.9
23	809.6	62.3	52.5	49.7	49.1	59.8	61.7	43.5	57.2	40.9	37.6	27.0	24.1	37.6	45.5	43.1	162.9	95.9	100.9	103.8	329.5
24	811.7	65.4	54.6	51.7	52.1	62.5	65.3	46.0	60.2	42.6	39.3	27.4	24.4	40.5	48.7	44.1	197.7	102.2	121.2	130.3	356.7
25	818.2	68.3	57.2	54.0	55.5	65.1	68.5	48.7	63.6	44.9	41.7	27.7	25.4	42.2	51.0	46.5	238.2	128.6	134.9	150.1	386.5
26	822.7	70.5	59.8	56.2	58.7	67.2	70.8	51.6	66.7	47.8	43.8	28.2	25.4	43.5	52.5	48.5	277.9	159.6	147.3	170.2	412.3
27	826.5	71.7	62.3	58.5	61.7	68.6	72.1	54.6	69.3	51.2	45.8	28.5	26.9	45.2	53.6	50.4	317.9	191.7	163.0	195.2	438.3
28	831.3	72.3	64.5	60.5	64.3	69.4	72.4	57.5	71.0	54.6	47.5	28.6	27.1	45.6	54.1	51.4	352.6	227.0	179.8	228.2	458.8
29	835.5	72.4	66.4	62.1	66.4	69.9	74.7	60.0	72.1	57.8	48.9	29.2	28.4	46.7	55.2	51.8	382.0	270.6	197.8	271.7	476.5
30	841.1	74.9	67.8	63.3	67.9	70.2	79.4	62.0	72.4	60.4	49.0	28.6	28.9	47.9	55.1	53.3	404.5	321.9	216.6	325.2	492.4
31	845.8	79.3	68.6	63.9	68.8	70.6	84.4	63.7	74.1	62.3	49.8	30.0	29.4	48.7	56.2	53.6	423.9	378.4	236.2	384.0	506.3
32	848.2	84.0	69.1	64.1	69.4	72.1	88.5	65.0	78.3	63.8	50.4	29.4	30.7	50.0	57.6	53.3	442.9	438.4	256.6	447.5	518.3
33	851.0	88.0	70.6	64.4	70.2	74.6	91.7	66.0	83.1	64.9	51.2	29.8	30.9	51.1	58.6	54.6	459.9	499.8	277.5	510.7	529.1
34	852.5	90.6	73.4	65.7	72.2	77.5	94.2	67.0	87.3	65.6	53.2	29.8	32.1	51.4	60.4	54.7	482.1	587.8	298.1	603.2	540.0

Table 16. Temperatures Measured in Wood Stud Wall Assembly F-23A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	17.9	16.3	18.1	16.4	16.0	15.4	16.8	15.8	16.9	15.9	18.1	16.8	19.9	17.5	20.4	17.8	16.4	15.8	17.0	16.0	16.6
1	41.0	16.4	18.1	16.5	17.7	17.0	20.4	18.9	19.9	18.3	18.1	16.8	19.9	17.5	20.4	17.9	19.2	18.1	19.6	18.8	19.8
2	236.2	23.0	19.7	16.8	43.6	50.7	61.0	57.1	58.9	***	18.1	16.7	20.4	17.5	20.4	17.9	73.1	72.9	73.0	73.7	68.8
3	369.5	47.2	62.4	24.5	78.8	86.1	72.4	68.6	74.7	76.8	18.1	16.8	25.8	17.6	20.9	18.0	81.5	82.3	78.7	81.7	76.8
4	377.7	53.4	63.9	35.2	78.1	82.1	68.8	65.9	72.9	74.6	18.4	17.3	27.8	17.8	22.4	18.3	80.0	77.6	74.0	77.5	76.8
5	524.0	71.8	78.9	42.1	82.4	89.2	84.8	78.2	86.1	84.5	19.2	17.9	34.7	18.1	24.7	19.0	92.1	90.4	88.4	86.9	87.7
6	576.5	78.2	84.4	54.5	86.5	91.0	85.0	81.0	89.1	87.4	20.8	19.1	43.2	18.6	30.2	20.2	98.2	89.1	90.0	96.5	94.1
7	594.3	77.2	81.3	58.6	85.4	90.3	84.7	81.9	90.9	***	22.1	20.2	43.0	19.0	34.0	21.1	107.2	93.7	95.0	105.7	103.7
8	635.3	81.8	83.8	61.0	85.6	91.0	88.4	86.7	94.6	***	24.2	21.3	46.2	19.7	39.1	22.5	116.0	104.7	103.2	114.0	112.8
9	664.5	83.3	85.0	63.9	87.0	91.2	90.9	89.5	97.7	***	26.9	22.6	48.9	20.5	44.9	23.9	121.5	111.1	108.2	119.2	119.1
10	699.2	84.4	85.7	66.1	88.5	91.4	92.7	91.7	100.8	220.2	30.8	24.4	50.2	21.4	49.9	25.2	124.8	115.8	112.4	122.4	122.8
11	715.6	85.2	86.3	67.6	90.0	92.3	92.7	95.4	102.4	103.6	35.1	26.4	50.5	22.5	54.0	26.4	127.2	119.3	116.1	124.8	125.5
12	721.6	85.2	86.1	68.8	91.3	92.7	92.3	98.6	103.8	***	39.8	28.4	50.5	23.8	57.1	27.6	129.6	122.6	119.9	127.5	127.9
13	732.6	85.0	85.5	69.6	94.9	94.3	94.1	101.8	105.0	***	45.0	30.2	50.4	25.3	59.1	28.8	134.1	128.0	125.2	131.9	131.7
14	745.8	84.8	84.8	70.1	99.4	99.0	97.4	107.9	107.0	***	48.3	31.7	49.9	26.9	60.0	30.0	146.0	138.7	136.4	143.4	141.0
15	754.9	85.5	82.7	71.4	111.0	113.9	105.1	116.1	112.4	***	48.4	32.4	48.8	28.2	59.2	31.0	163.9	159.3	154.2	161.6	155.4
16	763.3	75.7	79.2	73.4	128.4	132.1	123.2	126.2	124.1	***	43.5	32.9	47.4	28.3	56.2	31.7	230.5	218.4	218.7	230.9	205.4
17	771.2	84.5	82.6	73.6	163.3	163.7	161.7	155.4	167.8	***	47.1	33.5	47.1	28.9	54.1	33.1	316.8	295.9	304.6	327.5	272.8
18	779.1	96.5	81.6	73.6	204.9	203.6	208.1	184.4	229.1	***	51.8	34.6	47.3	30.9	55.5	34.3	396.8	367.4	372.1	427.9	337.6
19	783.5	119.6	81.4	75.7	235.8	240.5	258.8	213.2	298.6	216.5	48.8	34.9	47.5	32.1	56.0	35.3	465.6	438.5	418.1	490.7	415.0
20	791.1	142.0	84.2	80.2	289.4	272.4	313.4	245.8	357.0	260.4	50.1	35.2	48.0	32.6	55.0	36.3	516.0	494.8	462.7	539.6	468.4
21	797.1	167.2	90.4	87.4	336.0	300.1	367.2	280.4	414.4	304.4	52.4	35.8	48.8	33.1	54.0	37.3	556.5	544.3	501.9	583.5	512.0
22	804.4	193.5	101.5	106.1	379.9	334.2	411.8	313.8	457.7	***	55.5	36.7	49.8	33.6	53.3	38.5	588.8	579.2	535.5	622.2	548.7
23	809.6	218.8	120.0	132.4	442.8	386.5	443.3	346.0	475.5	***	56.7	38.1	50.5	34.4	53.0	39.9	614.1	611.3	566.9	652.3	575.2
24	811.7	245.4	136.7	158.0	487.1	484.0	473.6	382.0	490.8	446.0	54.8	40.6	51.2	37.5	53.1	42.0	634.5	616.1	594.6	674.6	584.0
25	818.2	270.0	152.4	184.0	511.5	516.3	501.7	420.7	510.0	482.5	52.9	45.9	52.2	44.8	53.7	45.5	646.7	630.2	612.7	693.6	586.6
26	822.7	298.3	168.0	210.5	523.6	549.9	525.9	452.5	532.4	515.2	51.8	56.2	53.3	57.5	54.5	51.4	653.8	640.9	624.5	711.4	595.6
27	826.5	332.9	183.0	240.1	549.1	585.2	546.9	490.9	553.2	526.3	51.8	75.7	54.6	82.8	55.7	61.9	659.6	649.3	634.2	717.2	607.7
28	831.3	372.5	197.8	275.2	575.6	607.4	566.4	528.9	569.4	***	53.0	111.0	56.5	121.1	57.2	80.5	665.9	660.7	643.6	719.1	619.7
29	835.5	416.0	212.9	317.2	598.2	629.8	583.5	561.6	584.8	***	55.5	166.7	59.0	173.8	59.1	110.5	672.6	671.9	652.9	719.9	633.0
30	841.1	461.2	228.2	366.0	617.5	652.8	598.2	589.6	597.2	***	59.4	240.8	62.2	240.8	61.5	154.7	679.4	681.5	660.6	719.4	643.9
31	845.8	504.8	244.1	418.3	640.4	670.1	610.9	616.0	609.0	***	65.0	321.4	66.2	313.6	64.4	213.0	685.1	689.2	667.9	718.0	654.0
32	848.2	548.0	260.6	473.2	660.3	686.4	621.1	640.0	619.7	***	72.4	402.9	71.3	390.5	67.8	284.1	692.1	695.0	673.5	715.8	664.7
33	851.0	589.5	277.4	529.5	681.8	697.4	632.7	663.4	627.3	***	82.0	479.9	77.3	467.0	71.7	366.1	700.4	707.0	676.1	711.3	674.5
34	852.5	684.6	294.4	625.7	700.5	725.6	642.5	706.7	634.8	***	91.3	585.5	84.1	583.8	75.7	509.8	709.7	728.9	679.2	724.3	680.9

Table 16. Temperatures Measured in Wood Stud Wall Assembly F-23A (Cont.)

[illegible]

Table 16. Temperatures Measured in Wood Stud Wall Assembly F-23A (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	17.9	***	***	***	***	***	***	***	***	***	***	***	17.4	17.4	17.3	17.0	16.1	16.0	15.8	15.7
1	41.0	***	***	***	***	***	***	***	***	***	***	***	17.4	17.4	17.3	17.0	16.1	16.0	15.8	15.7
2	236.2	***	***	***	***	***	***	***	***	***	***	***	22.0	19.9	17.6	17.2	16.2	16.0	16.1	15.7
3	369.5	***	***	***	***	***	***	***	***	***	***	***	39.5	31.5	21.0	19.7	19.1	16.9	19.1	15.9
4	377.7	***	***	***	***	***	***	***	***	***	***	***	43.4	36.2	25.7	22.2	25.8	19.6	24.4	16.4
5	524.0	***	***	***	***	***	***	***	***	***	***	***	51.0	41.7	30.0	24.6	31.2	22.4	27.9	17.4
6	576.5	***	***	***	***	***	***	***	***	***	***	***	55.9	47.2	37.2	28.5	38.1	25.8	34.6	18.5
7	594.3	***	***	***	***	***	***	***	***	***	***	***	55.2	49.6	42.2	31.4	44.9	29.7	40.8	20.9
8	635.3	***	***	***	***	***	***	***	***	***	***	***	56.4	52.2	46.2	34.1	49.9	33.2	44.6	23.2
9	664.5	***	***	***	***	***	***	***	***	***	***	***	58.1	54.4	50.4	36.4	53.8	36.5	49.1	25.9
10	699.2	***	***	***	***	***	***	***	***	***	***	***	60.2	56.4	53.6	38.5	57.2	39.7	53.3	29.0
11	715.6	***	***	***	***	***	***	***	***	***	***	***	62.0	58.3	56.1	40.6	60.4	42.7	57.1	32.5
12	721.6	***	***	***	***	***	***	***	***	***	***	***	63.5	60.1	57.0	42.3	61.4	45.3	60.2	36.2
13	732.6	***	***	***	***	***	***	***	***	***	***	***	64.7	61.6	57.3	43.4	62.9	47.5	63.2	39.8
14	745.8	***	***	***	***	***	***	***	***	***	***	***	65.7	63.0	57.7	44.5	64.2	49.4	65.8	43.4
15	754.9	***	***	***	***	***	***	***	***	***	***	***	66.8	64.5	58.1	45.9	64.2	50.6	68.3	46.9
16	763.3	***	***	***	***	***	***	***	***	***	***	***	67.7	65.8	59.3	47.6	63.3	51.4	68.2	49.8
17	771.2	***	***	***	***	***	***	***	***	***	***	***	67.2	66.9	60.9	49.5	65.5	52.6	67.5	51.7
18	779.1	***	***	***	***	***	***	***	***	***	***	***	71.1	73.1	62.0	51.4	66.8	54.4	71.0	54.1
19	783.5	***	***	***	***	***	***	***	***	***	***	***	76.8	81.5	63.1	53.6	67.7	55.9	74.0	56.8
20	791.1	***	***	***	***	***	***	***	***	***	***	***	83.0	90.6	65.4	56.5	69.5	57.5	77.2	59.3
21	797.1	***	***	***	***	***	***	***	***	***	***	***	89.2	98.6	69.1	60.4	71.8	59.2	81.6	62.0
22	804.4	***	***	***	***	***	***	***	***	***	***	***	93.9	105.4	75.0	66.2	74.2	61.1	88.0	65.2
23	809.6	***	***	***	***	***	***	***	***	***	***	***	98.7	111.8	83.3	75.1	76.4	63.3	100.0	68.8
24	811.7	***	***	***	***	***	***	***	***	***	***	***	104.1	117.7	95.8	83.4	79.0	66.3	111.6	73.2
25	818.2	***	***	***	***	***	***	***	***	***	***	***	115.9	128.0	113.1	97.3	83.3	70.5	122.7	78.4
26	822.7	***	***	***	***	***	***	***	***	***	***	***	140.6	147.3	135.6	118.3	89.5	76.3	134.1	83.9
27	826.5	***	***	***	***	***	***	***	***	***	***	***	185.8	180.6	169.7	149.8	98.7	84.7	148.4	90.4
28	831.3	***	***	***	***	***	***	***	***	***	***	***	257.2	234.3	218.9	197.4	114.3	96.7	166.0	98.4
29	835.5	***	***	***	***	***	***	***	***	***	***	***	346.9	307.4	281.7	259.9	139.0	114.7	185.7	106.1
30	841.1	***	***	***	***	***	***	***	***	***	***	***	438.2	390.8	352.8	332.7	175.7	140.5	206.4	112.4
31	845.8	***	***	***	***	***	***	***	***	***	***	***	516.5	471.1	428.6	409.6	225.0	175.0	227.5	119.8
32	848.2	***	***	***	***	***	***	***	***	***	***	***	578.2	540.5	500.4	485.3	286.0	219.4	248.4	129.5
33	851.0	***	***	***	***	***	***	***	***	***	***	***	630.1	604.7	565.4	555.1	359.8	275.1	270.5	145.2
34	852.5	***	***	***	***	***	***	***	***	***	***	***	713.7	709.1	660.0	650.2	494.7	417.4	328.3	235.9

Table 17. Average Temperatures Measured in Wood Stud Wall Assembly F-23A

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	17.9	16.2	16.2	16.6	18.4	18.4	18.0
1	41.0	18.9	18.8	16.7	18.4	18.4	18.0
2	236.2	72.3	54.3	18.2	18.5	18.5	18.0
3	369.5	80.7	76.1	33.9	24.3	19.6	18.1
4	377.7	77.2	73.6	43.3	32.5	20.3	18.2
5	524.0	89.4	84.1	53.6	39.0	22.3	18.6
6	576.5	93.2	86.5	64.5	48.4	25.4	19.5
7	594.3	100.4	86.7	65.5	51.3	26.5	21.0
8	635.3	109.5	89.3	67.8	53.4	28.8	23.0
9	664.5	115.5	91.2	69.5	56.5	31.3	25.2
10	699.2	119.6	93.0	71.0	58.9	33.6	27.6
11	715.6	122.8	94.5	72.6	61.0	35.8	30.2
12	721.6	125.8	95.7	74.0	62.7	37.8	32.9
13	732.6	130.5	98.0	74.9	63.8	39.8	35.8
14	745.8	141.6	102.2	75.4	64.6	41.1	38.6
15	754.9	160.0	111.7	76.0	64.8	41.3	41.2
16	763.3	223.2	126.8	72.7	62.3	40.0	43.5
17	771.2	307.7	162.4	76.7	62.1	40.6	45.1
18	779.1	386.4	206.0	87.3	65.9	42.4	46.2
19	783.5	450.9	249.4	99.5	71.6	42.4	47.2
20	791.1	500.5	295.6	107.3	84.7	42.9	48.2
21	797.1	543.0	339.6	119.1	112.1	43.6	49.3
22	804.4	577.3	379.5	138.1	150.2	44.5	50.8
23	809.6	605.4	418.8	158.0	180.7	45.4	53.0
24	811.7	622.5	463.5	181.0	204.8	46.5	55.6
25	818.2	635.2	492.0	205.6	223.8	49.1	58.4
26	822.7	646.3	516.9	230.5	241.1	54.1	61.0
27	826.5	655.3	545.1	257.8	259.7	63.7	63.3
28	831.3	664.0	569.5	286.5	281.2	79.9	65.2
29	835.5	672.5	591.6	318.1	305.7	104.1	66.9
30	841.1	679.5	611.1	352.0	332.0	136.6	68.7
31	845.8	685.4	629.3	387.0	360.2	173.9	70.6
32	848.2	690.7	645.5	423.2	389.1	214.8	72.7
33	851.0	696.1	660.5	459.2	418.2	257.3	74.8
34	852.5	709.0	682.0	514.5	464.3	321.7	77.0

Table 18. Temperatures Measured in Wood Stud Wall Assembly F-23B

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	30.6	23.1	23.4	22.6	22.5	23.4	23.4	22.7	22.6	22.8	23.5	23.6	23.1	23.7	23.1	23.1	24.0	23.4	24.1	23.5	***
1	50.7	23.2	23.4	22.6	22.5	23.4	23.4	22.7	22.5	22.7	23.4	23.6	23.0	23.6	23.1	23.1	24.1	23.4	24.1	23.5	***
2	258.1	23.1	23.4	22.6	22.5	23.4	23.4	22.7	22.5	22.7	23.4	23.7	23.0	23.7	23.1	23.2	24.1	23.6	25.0	23.9	***
3	378.2	23.2	23.4	22.7	22.6	23.4	23.5	22.7	22.6	22.8	23.5	23.7	23.0	23.8	23.1	23.3	34.7	34.5	45.0	46.5	***
4	379.1	24.2	23.9	23.8	23.2	23.9	23.9	22.9	22.9	22.9	24.1	23.8	23.0	24.2	23.6	23.6	56.5	44.6	50.1	51.1	***
5	552.5	26.5	25.0	26.3	24.7	25.2	25.2	23.5	24.2	23.5	25.5	23.9	23.1	25.2	25.1	24.6	60.0	68.1	66.4	66.2	***
6	576.8	29.4	26.5	30.0	26.9	27.0	26.8	24.5	26.1	24.5	27.2	24.2	23.6	26.8	26.9	26.0	84.9	83.5	74.3	77.3	***
7	584.3	33.5	28.8	35.5	30.4	29.5	28.7	25.8	28.9	26.1	29.7	24.7	24.2	28.9	29.5	27.5	77.8	80.9	73.4	75.3	***
8	632.4	37.9	31.4	40.2	34.2	32.5	31.2	27.3	32.2	27.9	31.7	25.5	24.9	30.8	32.1	28.9	76.8	86.4	76.5	78.2	***
9	672.8	41.8	34.1	44.3	37.7	35.3	33.8	28.9	35.2	29.8	33.4	26.4	25.8	33.0	34.1	30.4	77.7	88.7	78.5	80.6	***
10	698.3	45.7	36.7	48.4	41.2	38.3	36.3	30.4	38.2	31.7	35.1	27.5	26.8	34.8	35.8	32.0	79.3	89.9	80.5	82.7	***
11	719.5	49.6	39.4	52.4	44.7	41.3	39.0	32.0	41.2	33.8	36.6	28.3	27.8	36.1	37.2	32.7	80.5	90.2	81.9	83.6	***
12	719.8	53.2	42.1	56.0	48.0	44.4	41.8	33.5	44.3	36.0	38.6	29.4	29.5	37.7	39.0	34.2	81.1	90.1	82.8	84.6	***
13	732.3	56.1	44.8	58.7	51.0	47.3	44.7	35.2	47.3	38.4	40.2	30.7	31.3	39.0	40.8	35.4	80.3	89.5	83.2	86.7	***
14	751.7	58.6	47.6	59.3	53.4	50.0	47.5	36.9	50.0	40.7	41.1	32.0	32.3	40.4	41.6	36.3	77.7	87.6	82.7	86.7	***
15	750.6	59.4	50.2	59.3	55.0	52.0	49.7	38.4	52.3	42.8	41.7	33.9	33.4	40.7	42.5	37.0	77.6	87.4	80.8	80.7	***
16	771.0	60.2	52.1	59.3	55.7	53.3	51.0	39.6	53.6	44.6	42.0	34.5	34.3	40.5	42.3	37.7	74.2	83.1	75.5	84.2	***
17	770.4	60.8	54.5	60.3	56.8	54.5	52.5	41.0	54.6	45.8	42.4	34.9	35.6	40.9	42.5	38.2	72.7	76.3	73.3	81.1	***
18	774.1	61.4	56.9	61.4	58.2	55.8	53.9	42.5	55.7	46.9	42.8	35.8	36.4	40.7	42.2	39.6	71.4	71.6	74.9	78.0	***
19	790.9	62.9	59.0	62.6	59.7	56.9	55.8	44.0	56.5	48.1	43.4	36.7	37.0	41.7	42.7	40.6	70.7	69.8	79.2	77.6	***
20	791.6	65.2	61.1	64.6	61.9	58.4	58.4	45.9	57.6	49.0	44.7	36.9	37.4	43.0	44.1	41.7	70.7	71.1	83.8	82.6	***
21	793.3	68.5	63.6	67.0	65.0	60.7	61.8	48.5	59.6	49.9	46.2	37.0	37.8	45.3	46.2	43.0	73.7	71.8	88.9	88.0	***
22	808.7	71.6	66.4	69.2	68.2	63.8	65.4	51.8	62.5	51.5	48.3	37.1	38.1	47.1	48.1	45.3	79.5	73.9	105.2	98.9	***
23	807.4	73.6	69.1	71.2	70.8	67.1	68.5	55.5	66.0	53.7	50.1	37.6	38.5	48.6	50.2	46.9	86.8	74.5	123.5	113.8	***
24	811.5	74.5	71.3	73.1	72.7	70.0	70.6	59.2	69.1	56.6	51.4	37.8	39.0	49.9	51.0	48.7	99.4	80.3	140.4	127.1	***
25	823.1	75.1	73.0	74.4	73.9	72.3	72.0	62.4	71.4	60.1	52.8	38.2	40.3	51.0	53.3	49.4	129.1	86.8	156.1	141.5	***
26	819.0	78.0	73.9	75.3	74.6	73.6	73.1	64.9	72.8	63.3	52.7	38.8	40.7	51.4	53.0	49.7	158.3	94.4	172.8	157.7	***
27	831.8	82.2	75.8	75.8	74.7	74.4	77.5	66.9	73.6	65.8	53.3	39.7	41.4	51.7	53.7	49.8	187.8	103.2	189.3	175.7	***
28	831.9	86.2	79.5	76.1	76.0	74.6	82.6	68.4	76.3	67.7	53.5	40.3	41.9	53.7	55.9	50.6	212.1	113.4	206.2	195.6	***
29	832.8	90.1	83.7	77.3	80.0	74.5	87.2	69.5	80.6	68.9	53.9	41.5	42.7	56.4	58.1	51.2	235.4	125.7	223.8	217.4	***
30	843.9	93.8	87.6	80.2	85.1	76.7	90.9	70.4	84.8	69.7	56.1	42.3	43.7	58.4	61.1	51.8	260.5	139.9	241.1	240.0	***
31	847.5	97.3	91.2	83.8	89.8	80.7	94.3	71.8	88.6	70.3	58.0	43.1	44.4	60.4	62.6	53.5	286.9	156.3	258.7	264.8	***
32	842.9	100.4	94.4	87.7	93.7	85.2	97.4	74.3	92.0	70.5	61.6	43.8	45.4	61.2	64.8	56.3	313.8	191.0	276.0	301.6	***
33	855.5	103.0	97.2	91.4	97.0	89.3	100.2	77.6	95.1	71.2	64.1	45.3	46.4	62.3	66.8	57.6	342.0	222.5	292.7	321.0	***
34	855.9	105.2	99.8	94.7	99.9	92.9	102.5	81.2	97.8	73.3	66.1	46.0	47.1	62.9	67.1	59.6	367.4	220.0	308.8	347.4	***
35	856.6	107.3	102.0	97.5	102.5	96.0	104.5	85.0	100.1	76.8	66.8	47.1	48.3	63.5	69.8	59.9	390.7	240.1	327.3	382.1	***
36	868.2	109.1	103.9	99.9	104.8	98.8	106.1	88.9	102.1	80.8	67.7	47.7	49.3	62.9	70.1	60.6	414.9	268.9	345.5	419.4	***

Table 18. Temperatures Measured in Wood Stud Wall Assembly F-23B (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	30.6	23.2	24.0	23.2	25.4	24.6	27.3	24.5	26.3	24.2	23.7	23.0	23.7	23.0	23.8	23.0	25.9	25.7	24.9	24.4	25.3
1	50.7	23.2	24.0	23.2	27.1	26.3	31.5	28.1	30.3	27.8	23.6	23.1	23.7	23.0	23.7	23.1	28.6	28.4	25.7	27.4	26.7
2	258.1	26.1	24.2	24.1	70.4	95.5	84.3	75.1	86.7	79.1	23.7	23.0	25.0	23.1	24.0	24.0	86.2	86.6	64.3	87.4	78.5
3	378.2	57.4	31.9	39.1	92.2	90.8	78.9	79.7	85.7	82.2	23.7	23.1	33.5	24.1	27.4	27.8	83.8	84.3	80.0	86.3	81.8
4	379.1	57.7	34.4	42.9	87.5	86.7	73.5	75.0	79.3	76.4	23.9	23.4	31.6	24.9	27.6	28.8	79.5	80.0	75.3	80.8	76.8
5	552.5	74.3	48.3	50.4	98.3	96.6	86.7	90.6	92.8	91.5	24.2	23.9	51.0	27.8	35.9	44.7	92.8	93.4	81.7	93.2	90.6
6	576.8	78.8	51.6	62.0	96.9	96.4	87.2	89.1	91.6	92.1	24.6	24.7	52.7	29.3	42.2	52.7	89.7	95.3	84.9	93.0	87.5
7	584.3	74.5	50.9	61.1	95.8	94.9	90.0	90.2	92.9	94.2	25.4	25.6	50.7	30.2	42.2	50.6	97.6	103.1	79.2	98.6	85.9
8	632.4	78.2	57.9	66.2	96.9	96.5	95.3	93.4	99.2	100.4	26.3	26.8	61.6	32.9	49.4	58.1	107.3	113.2	82.8	107.6	89.1
9	672.8	80.3	63.3	70.6	96.8	96.9	100.3	94.0	103.9	103.9	27.3	28.2	67.4	35.3	55.0	62.6	113.4	119.9	83.3	114.4	89.5
10	698.3	82.7	69.7	76.0	97.5	99.1	106.2	95.3	107.8	107.8	28.6	30.0	72.8	41.7	61.8	67.8	118.2	124.8	84.9	119.9	90.8
11	719.5	83.8	73.5	79.4	98.1	105.4	112.8	96.0	111.2	111.8	30.1	32.1	75.5	48.1	66.6	71.5	121.6	128.7	85.6	124.7	100.6
12	719.8	83.8	75.0	81.7	98.7	110.8	117.8	97.2	115.3	116.0	31.7	34.3	76.5	56.0	69.0	73.7	127.0	133.6	85.7	130.2	105.8
13	732.3	82.9	73.1	84.4	100.8	118.1	122.8	99.8	119.1	121.0	33.4	35.7	75.3	72.9	63.3	76.5	137.9	144.2	87.4	140.1	115.7
14	751.7	77.8	70.8	81.9	103.5	131.7	131.0	107.0	127.1	128.7	34.7	36.9	71.0	70.3	60.3	72.7	195.9	187.2	82.5	178.7	141.6
15	750.6	76.1	73.2	81.0	111.1	147.8	154.2	130.1	146.7	149.5	36.5	38.7	73.8	70.8	65.5	69.7	299.0	272.9	157.7	264.3	222.8
16	771.0	90.0	81.6	86.1	123.6	174.7	203.0	173.1	195.0	187.6	38.1	39.7	71.8	72.1	67.7	75.6	396.9	387.2	294.4	372.2	347.3
17	770.4	91.3	83.3	88.0	148.9	207.4	246.0	216.1	237.0	227.0	39.4	40.8	70.0	69.0	66.4	73.1	460.3	478.1	370.7	463.7	409.7
18	774.1	103.1	85.4	91.0	198.8	246.4	288.4	258.7	278.7	264.8	40.6	41.9	69.1	66.8	66.1	72.7	508.2	528.1	426.1	518.0	456.6
19	790.9	126.0	93.6	94.8	255.3	287.9	325.2	294.6	316.6	299.8	41.7	42.9	69.1	64.8	67.3	73.4	553.0	572.6	470.4	567.2	498.5
20	791.6	152.7	108.6	106.4	312.9	320.4	359.9	325.3	357.9	333.3	42.7	44.1	69.8	62.7	69.7	74.9	592.6	613.3	509.6	612.9	537.5
21	793.3	195.3	125.8	117.7	373.9	359.7	400.2	364.1	401.7	371.1	43.6	45.2	71.6	61.1	72.1	76.3	626.5	644.3	541.5	647.7	569.0
22	808.7	242.0	133.3	123.0	434.6	414.1	432.2	399.6	433.7	405.8	44.4	46.3	73.1	60.1	73.5	76.7	654.0	666.5	565.8	672.6	593.4
23	807.4	247.6	141.0	130.4	481.7	528.8	463.8	439.3	467.1	439.2	45.4	47.4	73.0	59.6	74.4	76.6	676.2	686.5	587.2	696.0	615.2
24	811.5	256.6	150.0	140.1	537.1	590.9	496.3	476.6	495.9	478.6	46.6	48.6	72.3	59.9	75.1	76.4	691.2	699.0	604.2	708.0	629.9
25	823.1	257.5	159.8	150.8	575.0	623.4	521.2	504.7	522.4	509.7	47.9	50.8	71.7	60.8	75.2	76.3	702.4	710.7	618.8	713.7	638.1
26	819.0	263.3	170.3	162.3	611.0	653.6	544.5	525.7	544.5	540.7	49.5	55.0	71.3	62.5	74.9	75.7	711.2	720.2	631.8	716.1	644.6
27	831.8	269.6	181.3	174.1	643.4	682.1	565.6	548.4	562.9	565.4	51.1	61.7	70.6	66.3	74.4	74.2	717.7	726.9	639.9	716.7	650.0
28	831.9	279.4	192.4	185.9	658.5	690.0	584.5	564.2	583.7	586.3	53.0	71.5	69.4	72.9	76.8	73.4	723.6	733.5	650.0	720.9	655.5
29	832.8	291.3	203.8	198.8	679.9	711.2	601.3	583.2	601.6	602.8	55.2	85.4	68.5	81.4	77.7	73.5	728.0	738.1	659.1	721.7	660.3
30	843.9	306.2	214.9	212.0	693.8	723.2	613.8	600.7	615.2	614.3	57.6	103.7	68.0	90.6	78.7	74.7	732.2	740.7	667.8	722.4	662.5
31	847.5	334.7	226.1	229.2	695.4	727.9	628.0	617.2	630.8	634.7	60.3	127.4	67.9	103.0	79.3	82.5	736.0	742.4	677.0	725.0	665.8
32	842.9	364.1	237.9	246.8	702.2	731.9	639.9	632.0	644.2	645.2	63.5	194.0	68.6	113.5	79.7	78.5	739.3	740.7	685.7	725.2	669.8
33	855.5	398.1	250.0	254.4	717.2	736.7	650.1	648.7	650.9	644.4	67.1	215.0	70.3	128.5	80.8	81.3	742.2	738.2	691.3	725.9	672.0
34	855.9	452.7	262.4	267.1	723.8	740.2	663.0	662.5	661.7	652.2	71.3	230.6	73.2	147.8	82.0	85.0	745.9	737.7	703.0	729.0	676.5
35	856.6	502.7	275.1	281.0	739.9	750.0	674.3	674.6	673.4	661.8	76.8	282.4	77.4	175.6	82.9	89.8	748.5	734.1	715.0	714.6	680.7
36	868.2	528.3	287.5	295.1	748.9	754.5	682.4	687.5	681.0	673.5	83.9	341.5	83.2	207.4	83.6	95.2	749.5	726.7	725.9	705.2	687.1

Table 18. Temperatures Measured in Wood Stud Wall Assembly F-23B (Cont.)

[illegible]

Table 18. Temperatures Measured in Wood Stud Wall Assembly F-23B (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	30.6	***	***	***	***	***	***	***	***	***	***	***	23.9	23.9	24.0	23.9	23.6	23.5	22.9	22.9
1	50.7	***	***	***	***	***	***	***	***	***	***	***	23.9	23.9	24.0	23.9	23.6	23.5	22.9	22.9
2	258.1	***	***	***	***	***	***	***	***	***	***	***	23.9	23.9	24.3	24.0	23.7	23.6	23.1	23.0
3	378.2	***	***	***	***	***	***	***	***	***	***	***	25.8	24.8	27.6	24.6	31.0	25.4	28.3	25.1
4	379.1	***	***	***	***	***	***	***	***	***	***	***	30.6	26.9	31.5	26.1	36.8	28.2	32.3	27.1
5	552.5	***	***	***	***	***	***	***	***	***	***	***	32.0	28.5	33.1	27.0	53.4	31.6	37.4	29.4
6	576.8	***	***	***	***	***	***	***	***	***	***	***	38.2	31.1	38.0	28.9	62.8	38.1	46.6	34.1
7	584.3	***	***	***	***	***	***	***	***	***	***	***	44.0	33.9	41.6	31.3	61.6	41.1	48.9	36.3
8	632.4	***	***	***	***	***	***	***	***	***	***	***	44.7	35.9	43.9	33.1	63.2	44.5	54.6	39.6
9	672.8	***	***	***	***	***	***	***	***	***	***	***	47.3	38.1	47.2	35.3	65.4	47.8	58.9	43.3
10	698.3	***	***	***	***	***	***	***	***	***	***	***	48.9	40.2	50.4	37.7	68.1	50.3	60.0	46.8
11	719.5	***	***	***	***	***	***	***	***	***	***	***	50.8	42.4	53.6	40.3	70.1	51.8	61.6	49.5
12	719.8	***	***	***	***	***	***	***	***	***	***	***	52.4	44.4	56.6	42.9	71.7	53.2	63.5	51.3
13	732.3	***	***	***	***	***	***	***	***	***	***	***	54.1	46.4	59.9	46.1	70.4	54.2	65.0	50.1
14	751.7	***	***	***	***	***	***	***	***	***	***	***	56.1	48.3	59.3	48.7	69.1	55.0	65.7	50.5
15	750.6	***	***	***	***	***	***	***	***	***	***	***	55.2	49.5	61.1	51.0	67.2	55.7	65.8	51.7
16	771.0	***	***	***	***	***	***	***	***	***	***	***	58.0	51.3	63.7	54.2	65.5	56.1	67.0	53.2
17	770.4	***	***	***	***	***	***	***	***	***	***	***	60.4	53.5	65.5	56.1	64.2	56.5	68.0	54.8
18	774.1	***	***	***	***	***	***	***	***	***	***	***	63.7	55.5	67.0	57.8	63.7	57.0	69.5	56.5
19	790.9	***	***	***	***	***	***	***	***	***	***	***	69.5	57.7	69.1	59.8	64.0	57.7	71.2	58.4
20	791.6	***	***	***	***	***	***	***	***	***	***	***	75.1	60.7	71.7	62.0	64.9	58.5	73.3	60.3
21	793.3	***	***	***	***	***	***	***	***	***	***	***	78.8	63.6	73.8	64.1	66.4	59.6	75.2	62.3
22	808.7	***	***	***	***	***	***	***	***	***	***	***	82.7	66.5	75.6	66.0	68.5	61.2	77.0	64.4
23	807.4	***	***	***	***	***	***	***	***	***	***	***	88.9	69.9	77.5	68.1	70.8	62.8	79.6	66.5
24	811.5	***	***	***	***	***	***	***	***	***	***	***	95.8	74.4	81.6	71.0	72.7	64.7	83.1	69.0
25	823.1	***	***	***	***	***	***	***	***	***	***	***	103.3	79.7	90.2	75.1	74.4	66.9	87.0	72.0
26	819.0	***	***	***	***	***	***	***	***	***	***	***	111.5	85.8	104.0	81.5	76.5	69.9	91.7	75.6
27	831.8	***	***	***	***	***	***	***	***	***	***	***	120.0	92.7	118.4	90.2	80.2	73.9	96.5	79.9
28	831.9	***	***	***	***	***	***	***	***	***	***	***	128.7	100.5	133.1	101.2	86.0	79.4	101.5	84.6
29	832.8	***	***	***	***	***	***	***	***	***	***	***	137.5	109.3	149.3	114.6	94.1	86.5	106.4	89.4
30	843.9	***	***	***	***	***	***	***	***	***	***	***	146.9	118.8	167.5	129.9	102.9	94.2	111.7	94.2
31	847.5	***	***	***	***	***	***	***	***	***	***	***	157.2	129.3	191.4	147.7	117.4	110.5	119.5	103.2
32	842.9	***	***	***	***	***	***	***	***	***	***	***	168.5	141.3	263.3	173.2	122.0	113.2	125.1	105.9
33	855.5	***	***	***	***	***	***	***	***	***	***	***	180.8	155.4	254.0	193.3	132.7	118.0	131.5	108.4
34	855.9	***	***	***	***	***	***	***	***	***	***	***	193.7	172.1	262.7	221.8	146.9	126.5	139.0	111.7
35	856.6	***	***	***	***	***	***	***	***	***	***	***	207.6	192.9	295.6	261.3	166.6	138.6	150.4	116.4
36	868.2	***	***	***	***	***	***	***	***	***	***	***	221.7	216.7	332.3	308.3	198.2	158.3	166.8	123.8

Table 19. Average Temperatures Measured in Wood Stud Wall Assembly F-23B

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. Wstd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	30.6	25.2	25.4	23.6	23.1	23.4	22.9
1	50.7	27.5	28.5	23.6	23.2	23.4	22.9
2	258.1	81.6	81.8	24.4	24.0	23.8	22.9
3	378.2	83.6	84.9	41.3	40.3	26.6	23.0
4	379.1	78.8	79.7	48.2	47.2	26.7	23.5
5	552.5	90.9	92.7	61.9	58.6	34.6	24.9
6	576.8	91.2	92.2	73.2	65.2	37.7	26.9
7	584.3	94.5	93.0	70.5	63.9	37.5	29.7
8	632.4	101.7	96.9	74.3	68.1	42.5	32.7
9	672.8	105.9	99.3	77.1	71.5	46.0	35.6
10	698.3	109.7	102.3	80.1	74.7	50.5	38.6
11	719.5	114.1	105.9	81.8	76.6	54.0	41.5
12	719.8	118.6	109.3	82.7	77.1	56.9	44.4
13	732.3	128.4	113.6	82.9	74.8	59.5	47.1
14	751.7	165.0	121.5	80.7	72.5	57.6	49.3
15	750.6	255.0	139.9	79.5	70.1	59.1	51.0
16	771.0	371.4	176.2	82.1	72.7	60.8	52.2
17	770.4	444.9	213.7	80.9	77.8	59.8	53.4
18	774.1	496.0	256.0	82.2	98.1	59.5	54.7
19	790.9	541.7	296.6	87.4	125.2	59.9	56.2
20	791.6	582.7	335.0	96.5	154.0	60.6	58.0
21	793.3	613.8	378.5	108.7	179.4	61.6	60.5
22	808.7	636.5	420.0	122.3	201.3	62.3	63.4
23	807.4	657.2	470.0	131.1	223.8	62.7	66.2
24	811.5	670.7	512.6	142.0	241.2	63.1	68.6
25	823.1	680.9	542.7	154.5	254.5	63.8	70.5
26	819.0	689.3	570.0	168.4	265.1	64.8	72.2
27	831.8	694.8	594.6	183.0	273.9	66.4	74.1
28	831.9	701.6	611.2	197.9	281.4	69.5	76.4
29	832.8	706.5	630.0	213.7	288.6	73.6	79.1
30	843.9	710.4	643.5	230.7	296.0	78.9	82.1
31	847.5	714.8	655.7	251.0	304.4	86.7	85.3
32	842.9	717.8	665.9	275.9	319.7	99.6	88.4
33	855.5	719.6	674.7	297.2	333.5	107.1	91.3
34	855.9	724.4	683.9	318.0	344.1	115.0	94.1
35	856.6	724.9	695.7	342.7	361.5	130.8	96.9
36	868.2	725.5	704.6	365.7	382.2	149.1	99.4

Table 20. Temperatures Measured in Wood Stud Shear Wall Assembly F-24

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	25.8	22.9	24.4	21.3	21.1	23.9	24.5	23.0	20.6	22.5	23.4	24.8	21.7	25.0	21.7	24.6	23.5	20.9	23.5	20.9	23.5
1	52.4	22.9	24.4	21.2	21.1	23.9	24.6	22.9	20.6	22.5	23.4	24.9	21.7	25.0	21.6	24.5	23.5	20.9	23.5	20.9	23.5
2	255.1	22.9	24.4	21.3	21.1	23.9	24.6	22.9	20.6	22.5	23.4	25.1	21.8	25.3	21.6	24.5	23.9	21.0	23.7	21.1	23.7
3	365.8	22.9	24.4	21.3	21.1	23.9	24.6	22.9	20.6	22.5	23.3	25.1	21.7	25.2	21.4	24.3	27.1	22.2	26.1	23.4	25.4
4	377.4	22.9	24.4	21.2	21.1	23.8	24.5	22.9	20.6	22.4	23.2	25.1	21.7	25.1	21.3	24.1	33.1	29.6	32.3	30.5	29.0
5	541.1	22.9	24.4	21.2	21.1	23.9	24.5	22.9	20.6	22.4	23.0	25.1	21.6	25.1	21.1	24.1	36.5	30.5	37.5	36.3	32.0
6	580.2	22.8	24.3	21.2	21.1	23.8	24.5	22.8	20.6	22.4	23.1	25.1	21.5	25.0	21.0	24.0	40.8	50.6	46.4	45.8	36.9
7	591.6	22.9	24.3	21.2	21.0	23.8	24.5	22.8	20.5	22.4	23.1	25.1	21.5	25.1	21.1	23.9	46.5	56.2	52.4	51.8	41.2
8	640.3	23.0	24.3	21.2	21.1	23.9	24.6	22.8	20.5	22.5	23.2	25.2	21.5	25.3	21.1	24.0	47.0	59.3	57.9	55.9	44.4
9	665.3	23.2	24.4	21.2	21.3	24.0	24.9	22.9	20.6	22.6	23.5	25.2	21.5	25.5	21.3	24.2	49.2	65.6	64.6	60.5	48.2
10	697.1	23.5	24.5	21.3	21.6	24.1	25.2	23.0	20.8	22.7	23.8	25.3	21.6	25.7	21.5	24.4	52.6	70.1	70.4	64.2	51.8
11	716.0	24.0	24.7	21.4	21.9	24.3	25.7	23.3	21.0	22.9	23.9	25.4	21.6	26.0	21.6	24.6	56.2	73.9	74.6	67.5	55.2
12	722.7	24.5	25.0	21.6	22.4	24.6	26.2	23.7	21.3	23.2	24.1	25.5	21.6	26.3	21.9	24.9	59.9	76.2	77.7	70.1	58.4
13	735.7	25.2	25.4	21.9	23.0	24.9	26.9	24.2	21.7	23.6	24.4	25.6	21.7	26.7	22.2	25.1	62.6	77.3	79.4	72.0	61.2
14	747.1	25.9	25.8	22.3	23.6	25.3	27.6	24.9	22.2	24.0	24.6	25.8	21.7	27.1	22.2	25.6	64.2	77.1	79.8	72.9	64.0
15	754.0	26.7	26.2	22.7	24.4	25.7	28.5	25.7	22.7	24.4	25.0	26.0	21.8	27.6	22.7	25.9	65.2	75.6	79.1	73.3	67.6
16	764.7	27.6	26.8	23.2	25.2	26.2	29.4	26.5	23.3	25.0	25.3	26.4	21.9	28.3	23.1	26.4	64.4	70.8	76.2	70.8	66.6
17	772.9	28.5	27.4	23.8	26.0	26.7	30.2	27.4	24.0	25.5	25.8	26.8	22.1	28.8	23.7	26.9	66.4	66.4	75.1	69.8	65.2
18	775.2	29.4	28.0	24.5	26.9	27.3	31.2	28.3	24.7	26.1	26.5	27.2	22.4	29.3	24.0	27.4	73.6	63.3	75.1	69.6	67.3
19	783.7	30.4	28.7	25.1	27.7	27.8	32.0	29.2	25.4	26.8	27.0	27.7	22.7	29.9	24.6	28.0	79.4	61.5	74.7	70.2	68.6
20	793.0	31.3	29.4	25.8	28.6	28.4	32.9	30.0	26.2	27.5	27.5	28.2	23.0	30.6	25.0	28.5	88.4	64.0	76.1	72.7	70.4
21	799.0	32.2	30.1	26.5	29.5	29.0	33.7	30.9	26.9	28.1	27.9	28.6	23.2	31.2	25.5	28.9	102.7	68.4	79.0	75.3	73.5
22	801.1	33.0	30.8	27.2	30.3	29.7	34.6	31.7	27.7	28.9	28.3	29.1	23.5	31.5	26.0	29.4	119.1	73.4	82.5	78.0	76.9
23	806.5	33.8	31.4	27.8	31.0	30.3	35.5	32.4	28.4	29.6	28.7	29.6	23.9	32.0	26.4	29.9	138.8	80.2	86.3	81.2	80.1
24	813.4	34.6	32.1	28.4	31.8	31.0	36.4	33.2	29.2	30.4	29.3	30.0	24.3	32.4	26.9	30.2	158.2	93.9	90.3	86.4	85.2
25	817.6	35.4	32.7	29.0	32.5	31.7	37.4	34.0	29.9	31.2	29.5	30.4	24.5	32.6	27.2	30.5	178.7	107.8	97.6	95.9	98.7
26	825.4	36.3	33.4	29.7	33.3	32.5	38.4	34.8	30.7	32.1	29.8	30.8	24.8	33.2	27.3	30.9	201.3	119.4	105.5	105.2	111.7
27	825.6	37.1	34.1	30.3	34.2	33.5	39.6	35.6	31.5	33.0	30.4	31.4	25.2	33.5	27.6	31.3	224.1	126.8	115.4	114.9	125.9
28	832.5	38.0	34.8	30.9	35.1	34.5	40.9	36.4	32.3	34.0	30.7	31.9	25.6	34.0	28.0	32.0	247.5	133.1	126.8	129.5	151.6
29	835.6	38.9	35.6	31.6	36.1	35.6	42.4	37.3	33.2	35.0	31.2	32.4	26.0	34.6	28.6	32.4	282.9	509.3	140.2	412.0	178.2
30	841.6	40.0	36.5	32.4	37.1	36.9	44.0	38.1	34.2	35.9	32.3	33.0	26.4	35.3	28.8	33.1	335.1	618.4	157.9	556.8	199.2
31	853.5	41.1	37.4	33.1	38.3	38.2	45.7	38.9	35.4	37.0	32.6	33.4	26.9	35.8	29.5	33.4	395.9	723.8	189.2	690.4	218.9
32	856.3	42.3	38.4	34.0	39.6	39.7	47.5	39.8	36.6	38.0	33.6	34.0	27.5	36.6	30.0	34.1	778.4	773.5	811.3	769.5	257.3
33	859.3	43.5	39.6	34.8	41.0	41.3	49.5	40.7	38.0	39.2	34.1	34.5	28.0	37.6	30.5	35.0	898.6	808.2	919.1	807.1	290.6
34	861.3	44.8	40.8	35.7	42.6	43.2	51.5	41.7	39.5	40.4	35.1	35.0	28.6	38.2	31.2	35.6	907.3	851.2	910.6	850.5	441.7
35	869.2	46.2	42.2	36.7	44.2	45.2	53.6	42.7	41.0	41.8	36.7	35.5	29.3	39.9	32.4	36.7	910.6	901.0	918.0	883.5	804.1
36	867.8	47.8	43.7	37.8	46.1	47.5	55.7	43.7	42.7	43.4	37.8	36.2	30.3	42.6	33.6	37.5	927.8	895.1	920.7	881.9	905.8
37	872.4	49.8	45.3	40.3	48.3	50.1	58.0	44.8	44.5	45.1	39.2	37.0	31.9	46.3	36.5	38.4	910.8	921.1	883.7	919.7	898.1

Table 20. Temperatures Measured in Wood Stud Shear Wall Assembly F-24 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0	25.8	21.0	***	20.9	23.4	20.8	23.3	20.8	23.3	20.8	24.2	21.5	24.1	21.5	24.2	21.4	23.5	20.9	23.5	20.9	23.2
1	52.4	21.0	***	21.0	24.3	21.7	24.1	21.7	24.1	21.5	24.2	21.5	24.1	21.5	24.2	21.4	27.7	25.5	25.8	22.4	26.4
2	255.1	21.2	***	21.1	59.1	49.5	64.1	55.1	59.6	45.0	24.2	21.5	24.1	21.5	24.2	21.5	76.6	69.2	81.6	54.5	77.7
3	365.8	23.8	***	23.5	77.5	66.6	79.4	66.4	75.8	63.0	24.2	21.6	24.1	21.5	24.3	21.5	81.8	80.4	84.6	76.0	82.4
4	377.4	30.9	***	28.2	72.2	60.2	73.7	61.1	70.7	57.9	24.5	21.6	24.1	21.6	24.2	21.5	79.6	79.5	81.3	73.6	78.2
5	541.1	35.4	***	32.4	86.8	80.2	87.8	76.4	85.9	73.9	25.0	21.7	24.3	21.7	24.4	21.6	92.2	89.9	90.0	85.9	90.5
6	580.2	48.5	***	39.8	86.1	77.3	87.0	75.1	84.9	72.3	26.1	21.8	24.9	21.9	24.4	21.7	98.2	97.1	90.4	85.1	92.9
7	591.6	52.4	***	43.6	84.4	73.6	85.2	73.2	83.1	69.0	27.9	22.0	25.3	22.1	24.6	21.8	105.5	104.3	93.7	84.4	98.9
8	640.3	56.2	***	46.6	88.5	82.5	89.6	82.6	87.2	76.8	30.4	22.3	26.0	22.4	24.8	22.0	113.6	111.9	101.7	89.7	106.6
9	665.3	62.4	***	50.8	91.4	84.4	92.0	86.8	88.4	79.2	33.7	22.7	27.3	22.8	25.1	22.3	119.4	117.7	108.6	97.0	113.0
10	697.1	67.1	***	54.8	94.2	87.0	93.7	90.0	90.7	82.7	37.9	23.3	29.3	23.3	25.5	22.7	123.2	121.8	113.8	102.5	117.4
11	716.0	71.1	***	58.5	96.6	89.5	95.7	92.7	93.2	85.7	43.3	24.1	32.4	23.9	25.9	23.1	126.2	124.6	117.2	107.6	120.6
12	722.7	73.9	***	61.6	98.8	91.0	97.4	94.6	94.6	87.4	48.7	24.9	36.8	24.6	26.5	23.7	129.2	127.1	119.7	112.2	123.4
13	735.7	75.2	***	63.8	101.8	92.7	99.9	97.3	96.2	89.2	53.2	26.0	41.5	25.5	27.3	24.4	132.9	131.6	122.4	116.9	126.8
14	747.1	74.9	***	65.1	107.9	96.2	105.6	101.7	99.7	92.2	58.1	27.3	46.9	26.8	28.2	25.2	142.6	142.0	126.8	123.7	136.1
15	754.0	73.4	***	65.8	117.5	101.1	113.9	110.0	105.2	96.9	59.3	28.7	50.1	28.1	29.1	26.1	162.9	161.1	145.4	135.2	148.1
16	764.7	69.2	***	64.6	152.8	120.4	144.0	130.9	128.0	108.9	59.3	30.2	49.3	29.3	30.1	27.2	227.6	222.5	226.1	174.3	195.8
17	772.9	66.9	***	63.1	226.6	149.8	183.6	168.9	171.6	134.5	58.0	31.7	50.3	30.6	31.3	28.2	330.7	301.4	402.2	248.4	269.9
18	775.2	70.0	***	65.2	281.9	208.6	231.5	224.2	227.1	174.7	57.8	33.0	50.5	31.6	32.4	29.3	419.0	382.2	518.8	325.9	353.8
19	783.7	71.0	***	67.8	353.0	309.3	294.8	330.1	275.0	240.5	59.2	34.1	49.4	32.4	33.5	30.4	470.6	439.1	596.1	400.7	440.2
20	793.0	72.8	***	71.6	414.0	366.0	383.9	430.4	321.0	318.3	60.7	34.9	49.0	33.3	34.5	31.3	505.9	475.1	606.7	455.5	488.1
21	799.0	77.1	***	75.9	465.7	402.8	484.5	470.9	368.8	356.6	63.4	35.6	50.2	34.4	35.5	32.2	535.8	510.5	636.1	494.2	517.3
22	801.1	91.9	***	80.7	505.5	430.3	553.0	484.7	420.3	396.8	66.8	36.5	54.1	36.0	36.5	33.1	561.8	542.1	696.0	528.1	538.9
23	806.5	110.5	***	89.2	536.3	459.0	579.3	504.1	468.8	435.7	70.8	37.4	61.8	38.1	37.5	34.1	583.2	571.0	745.6	554.4	559.2
24	813.4	130.6	***	102.2	563.4	482.8	595.5	525.2	517.1	470.7	73.8	38.5	68.9	40.8	38.6	35.2	601.2	598.1	762.1	575.8	578.4
25	817.6	149.5	***	115.7	588.6	506.6	611.0	548.3	554.7	500.4	75.8	39.8	73.6	43.8	40.0	36.4	617.1	621.0	767.4	593.2	595.8
26	825.4	166.8	***	128.9	609.5	529.4	637.4	571.7	589.1	525.6	76.5	41.4	76.3	45.7	41.5	37.9	630.2	639.7	779.0	605.0	610.6
27	825.6	185.4	***	140.9	630.4	551.0	692.4	599.5	654.3	550.6	76.7	43.3	77.5	46.5	43.3	39.6	642.8	654.8	798.5	611.5	624.9
28	832.5	210.4	***	157.6	664.2	570.9	737.8	655.3	682.0	559.9	76.8	48.5	79.3	55.6	45.4	47.1	657.8	668.7	831.6	625.0	636.0
29	835.6	433.4	***	372.4	713.0	697.3	815.5	820.8	688.3	634.1	77.0	413.7	83.6	356.6	48.3	374.2	700.8	726.6	805.1	687.6	646.7
30	841.6	526.1	***	469.6	774.0	745.9	808.7	806.6	705.4	685.9	81.6	542.1	87.6	439.1	58.5	455.8	749.9	750.3	794.8	757.0	656.1
31	853.5	674.8	***	605.0	832.5	809.3	783.0	821.2	806.9	781.2	158.8	691.3	94.6	640.3	63.2	658.9	818.0	830.4	917.6	786.8	671.1
32	856.3	767.1	***	730.6	860.1	850.0	750.5	862.9	814.9	828.9	820.1	762.8	665.4	715.2	66.6	724.2	904.9	867.2	925.8	848.7	688.9
33	859.3	813.2	***	786.9	910.4	849.0	760.3	838.5	836.0	850.6	910.1	801.6	817.3	767.7	69.3	780.9	917.2	875.6	922.5	870.8	737.8
34	861.3	846.1	***	832.9	911.5	886.1	799.5	890.7	919.6	875.1	907.2	838.6	773.1	836.1	72.2	820.0	907.5	904.6	915.3	891.2	864.0
35	869.2	890.7	***	880.4	909.1	919.8	826.3	913.9	921.6	912.4	916.0	876.1	877.2	883.5	544.2	850.9	904.2	924.8	917.6	913.7	947.2
36	867.8	938.6	***	888.7	929.3	899.4	856.7	894.9	927.9	893.0	913.0	880.3	900.1	875.2	763.8	852.7	876.2	920.0	892.4	917.1	942.4
37	872.4	966.9	***	918.4	913.7	921.2	901.9	860.2	908.3	918.3	887.9	912.0	887.3	910.0	849.8	889.3	818.4	932.7	821.1	930.0	923.8

Table 20. Temperatures Measured in Wood Stud Shear Wall Assembly F-24 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	25.8	20.5	23.9	21.4	24.2	21.3	24.6	21.4	***	***	***	***	***	***	***	***	***	***	***	***	20.2
1	52.4	25.1	23.9	21.4	24.2	21.3	24.6	21.4	***	***	***	***	***	***	***	***	***	***	***	***	20.7
2	255.1	71.4	24.0	21.4	24.3	21.3	24.6	21.4	***	***	***	***	***	***	***	***	***	***	***	***	20.3
3	365.8	82.0	26.0	23.2	25.5	21.9	26.7	21.8	***	***	***	***	***	***	***	***	***	***	***	***	19.7
4	377.4	79.6	33.0	34.6	31.0	25.9	36.0	24.5	***	***	***	***	***	***	***	***	***	***	***	***	19.5
5	541.1	92.1	38.0	40.8	37.1	30.6	42.2	29.9	***	***	***	***	***	***	***	***	***	***	***	***	19.5
6	580.2	101.2	46.2	51.1	42.7	37.0	49.8	37.1	***	***	***	***	***	***	***	***	***	***	***	***	19.5
7	591.6	109.8	49.3	57.5	48.1	51.1	55.1	48.1	***	***	***	***	***	***	***	***	***	***	***	***	19.5
8	640.3	117.7	53.0	58.4	51.2	50.3	58.0	52.2	***	***	***	***	***	***	***	***	***	***	***	***	19.6
9	665.3	123.2	57.2	62.3	54.5	55.0	61.8	56.6	***	***	***	***	***	***	***	***	***	***	***	***	19.8
10	697.1	126.9	61.0	65.7	57.8	61.1	65.1	61.3	***	***	***	***	***	***	***	***	***	***	***	***	20.4
11	716.0	129.5	64.7	68.8	61.0	66.2	67.9	65.7	***	***	***	***	***	***	***	***	***	***	***	***	20.6
12	722.7	131.8	67.8	71.8	63.7	71.2	70.2	69.5	***	***	***	***	***	***	***	***	***	***	***	***	21.2
13	735.7	135.5	70.2	74.0	66.0	74.4	71.9	72.5	***	***	***	***	***	***	***	***	***	***	***	***	21.7
14	747.1	147.8	71.2	74.3	67.7	75.3	72.6	73.6	***	***	***	***	***	***	***	***	***	***	***	***	22.3
15	754.0	167.9	70.0	75.5	69.4	75.8	72.7	73.5	***	***	***	***	***	***	***	***	***	***	***	***	23.1
16	764.7	228.0	67.1	71.3	70.1	72.3	71.3	71.4	***	***	***	***	***	***	***	***	***	***	***	***	22.7
17	772.9	295.5	67.3	68.5	68.8	68.7	68.7	68.1	***	***	***	***	***	***	***	***	***	***	***	***	23.4
18	775.2	358.9	67.2	67.9	69.3	70.1	67.9	66.7	***	***	***	***	***	***	***	***	***	***	***	***	24.1
19	783.7	424.9	67.9	67.3	79.4	71.0	67.3	65.4	***	***	***	***	***	***	***	***	***	***	***	***	24.4
20	793.0	463.7	72.0	69.2	124.2	81.6	68.1	65.4	***	***	***	***	***	***	***	***	***	***	***	***	25.8
21	799.0	494.6	81.8	80.5	167.2	103.8	76.5	68.2	***	***	***	***	***	***	***	***	***	***	***	***	29.3
22	801.1	525.6	123.5	101.1	209.4	130.5	98.7	80.7	***	***	***	***	***	***	***	***	***	***	***	***	35.5
23	806.5	551.1	144.2	119.7	277.2	158.7	121.3	95.1	***	***	***	***	***	***	***	***	***	***	***	***	36.6
24	813.4	573.4	159.2	136.9	329.7	186.6	139.4	108.4	***	***	***	***	***	***	***	***	***	***	***	***	37.5
25	817.6	591.3	172.9	153.7	352.4	207.7	153.8	120.7	***	***	***	***	***	***	***	***	***	***	***	***	38.8
26	825.4	603.3	186.9	172.3	383.8	218.4	166.1	131.2	***	***	***	***	***	***	***	***	***	***	***	***	40.4
27	825.6	608.6	201.8	185.9	438.9	218.5	177.5	139.0	***	***	***	***	***	***	***	***	***	***	***	***	42.1
28	832.5	618.7	219.0	205.3	505.0	230.4	189.0	154.7	***	***	***	***	***	***	***	***	***	***	***	***	43.9
29	835.6	656.3	246.1	414.4	546.1	396.2	200.4	267.7	***	***	***	***	***	***	***	***	***	***	***	***	45.6
30	841.6	675.1	299.2	509.4	575.1	465.9	210.8	354.3	***	***	***	***	***	***	***	***	***	***	***	***	47.6
31	853.5	751.0	432.9	646.7	634.4	572.1	220.1	446.0	***	***	***	***	***	***	***	***	***	***	***	***	48.6
32	856.3	830.4	820.4	781.0	661.8	747.3	228.6	666.4	***	***	***	***	***	***	***	***	***	***	***	***	52.8
33	859.3	864.2	874.5	804.0	739.2	818.0	239.3	750.6	***	***	***	***	***	***	***	***	***	***	***	***	51.0
34	861.3	889.9	878.9	889.5	819.4	862.4	262.9	828.1	***	***	***	***	***	***	***	***	***	***	***	***	24.7
35	869.2	921.8	905.6	991.9	908.2	901.2	309.8	876.4	***	***	***	***	***	***	***	***	***	***	***	***	22.7
36	867.8	939.4	893.0	1011.0	884.0	908.2	524.4	889.6	***	***	***	***	***	***	***	***	***	***	***	***	22.4
37	872.4	953.7	817.6	1011.0	828.8	917.4	841.3	904.6	***	***	***	***	***	***	***	***	***	***	***	***	20.3

Table 20. Temperatures Measured in Wood Stud Shear Wall Assembly F-24 (Cont.)

Time (min)	T(Fav) (°C)	Temperature at Thermocouple Number																		
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
0	25.8	21.9	24.5	21.7	24.3	21.6	24.7	21.7	24.7	21.7	25.4	***	23.4	23.4	22.8	22.8	21.8	20.4	20.8	20.7
1	52.4	21.9	24.5	21.7	24.3	21.5	24.7	21.7	24.7	21.6	25.4	***	23.4	23.4	22.8	22.8	21.8	21.6	20.8	20.7
2	255.1	21.9	24.5	21.7	24.3	21.6	24.7	21.7	24.7	21.7	25.4	***	23.5	23.4	22.9	22.9	22.0	21.6	20.8	20.7
3	365.8	21.9	24.5	21.7	24.3	21.6	24.7	21.7	24.8	21.7	25.4	***	24.2	23.9	24.1	23.2	23.8	21.5	21.2	21.0
4	377.4	21.9	24.5	21.7	24.3	21.6	24.7	21.7	24.7	21.7	25.4	***	26.4	25.0	26.9	24.1	25.5	22.1	22.1	21.6
5	541.1	22.1	24.6	21.7	24.3	21.6	24.9	21.8	24.7	21.7	25.6	***	28.8	26.4	29.8	25.4	28.7	23.4	23.1	22.4
6	580.2	22.7	24.7	21.7	24.4	21.6	25.2	22.0	24.7	21.7	25.9	***	31.8	28.2	34.2	27.2	33.8	26.3	24.7	23.8
7	591.6	23.5	24.9	21.8	24.4	21.6	25.6	22.4	24.7	21.7	26.4	***	35.6	30.3	38.2	29.3	35.4	27.4	26.9	26.1
8	640.3	24.8	25.3	21.8	24.5	21.6	26.3	23.1	24.8	21.8	27.3	***	38.0	32.1	41.4	31.3	38.0	29.1	28.7	28.2
9	665.3	26.3	26.1	21.9	24.6	21.7	27.0	24.0	24.9	21.8	28.2	***	40.3	34.0	45.0	33.4	41.7	31.7	31.1	30.6
10	697.1	27.7	27.2	22.0	24.8	21.8	27.9	25.1	24.9	21.9	29.3	***	42.3	35.9	48.4	35.7	45.1	38.4	33.9	33.5
11	716.0	29.3	28.6	22.2	25.1	21.9	28.7	26.4	25.0	22.1	30.4	***	44.1	37.8	51.5	37.9	47.7	40.9	37.1	36.7
12	722.7	30.8	30.3	22.4	25.5	22.1	29.7	27.8	25.2	22.2	31.7	***	46.0	39.7	54.2	40.1	49.8	40.3	40.6	39.9
13	735.7	32.4	32.0	22.7	26.2	22.3	30.6	29.4	25.3	22.5	32.9	***	48.1	41.6	56.0	42.1	51.8	44.1	43.7	42.7
14	747.1	34.0	33.8	23.1	27.2	22.7	31.5	31.1	25.5	22.8	34.2	***	50.1	43.5	57.2	43.8	53.9	47.8	46.3	45.1
15	754.0	35.5	35.4	23.6	28.2	23.0	32.4	32.7	25.7	23.1	35.4	***	52.7	45.4	58.0	45.2	55.4	49.2	48.2	47.0
16	764.7	36.9	36.8	24.1	29.3	23.4	33.3	34.3	26.0	23.5	36.6	***	53.8	46.8	58.3	46.4	56.4	49.5	49.4	48.5
17	772.9	38.2	38.0	24.7	30.1	23.9	34.2	35.8	26.3	23.9	37.6	***	53.4	47.9	58.7	47.5	57.4	48.0	49.9	49.3
18	775.2	39.0	38.8	25.4	30.8	24.4	35.1	37.0	26.6	24.4	38.5	***	54.3	49.2	59.6	48.9	59.1	48.8	50.3	50.1
19	783.7	39.7	39.5	26.0	31.4	24.9	35.9	37.9	27.0	24.8	39.2	***	55.8	50.5	60.7	50.5	61.7	50.3	51.6	51.8
20	793.0	40.3	40.0	26.6	31.9	25.5	36.7	38.8	27.3	25.4	39.8	***	57.6	51.9	61.9	52.0	64.8	50.3	55.0	55.2
21	799.0	40.8	40.5	27.2	32.4	26.1	37.6	39.6	27.7	25.8	40.4	***	60.3	53.6	63.2	53.7	70.3	50.9	58.8	58.4
22	801.1	41.3	41.1	27.7	33.0	26.7	38.8	40.4	28.2	26.3	40.9	***	63.7	55.5	64.9	55.4	78.5	53.2	62.2	61.8
23	806.5	42.0	41.8	28.3	33.8	27.3	40.6	41.3	28.7	26.8	41.5	***	67.6	57.9	66.8	57.2	89.8	58.3	65.6	66.1
24	813.4	43.0	42.8	28.9	34.9	28.0	43.1	42.5	29.2	27.4	42.4	***	72.6	60.7	69.1	59.3	101.4	64.9	68.8	71.7
25	817.6	44.3	43.8	29.5	36.2	28.7	46.9	44.0	29.8	28.0	43.4	***	79.2	64.0	71.7	61.5	113.6	74.6	71.9	78.0
26	825.4	45.9	44.8	30.2	37.7	29.6	51.4	45.7	30.4	28.7	44.7	***	86.5	68.1	74.7	63.9	125.8	81.8	75.1	84.5
27	825.6	47.8	45.8	30.9	39.3	30.5	56.4	47.6	31.1	29.4	46.1	***	94.2	73.2	78.2	66.6	137.0	93.5	78.5	91.3
28	832.5	49.9	46.8	31.8	41.1	31.4	62.8	49.7	31.9	30.3	47.7	***	102.3	78.8	83.1	69.8	154.2	104.2	88.1	101.9
29	835.6	52.2	47.7	32.8	43.1	32.4	80.2	52.0	32.9	31.2	49.6	***	111.0	85.5	89.4	73.7	453.7	329.0	177.2	197.0
30	841.6	54.6	48.6	33.8	45.9	33.4	89.8	54.5	33.9	32.2	51.7	***	121.2	94.1	96.3	78.4	553.9	399.3	192.9	247.4
31	853.5	57.2	49.4	34.9	50.3	34.4	97.8	57.1	35.1	33.3	54.1	***	137.6	114.5	105.9	84.7	700.2	611.5	342.7	411.5
32	856.3	59.9	50.2	36.1	56.3	35.5	109.6	59.6	36.4	34.4	56.7	***	772.0	800.7	620.3	460.0	774.0	732.6	460.0	560.6
33	859.3	63.9	51.1	37.4	64.1	36.6	123.7	61.8	37.7	35.6	59.5	***	924.9	898.4	883.1	882.7	813.0	779.3	554.9	645.6
34	861.3	82.9	53.0	39.2	72.1	37.7	141.7	64.0	39.1	36.8	62.4	***	901.9	902.0	879.6	897.2	849.5	846.4	663.2	728.8
35	869.2	92.9	56.6	61.7	79.2	38.9	160.7	67.0	40.5	38.0	65.6	***	910.6	912.2	890.5	904.2	877.5	871.3	729.1	777.4
36	867.8	97.3	62.0	64.6	86.5	40.4	177.8	75.8	42.2	39.6	69.3	***	912.4	920.1	908.4	903.7	887.4	889.5	762.6	802.2
37	872.4	109.9	81.2	68.4	93.0	44.5	197.2	92.2	44.1	54.3	75.2	***	872.9	881.1	903.6	893.0	911.5	903.4	816.3	850.5

Table 21. Average Temperatures Measured in Wood Stud Shear Wall Assembly F-24

Legend: BL - Base Layer, FL - Face Layer, Cav. - Cavity, WStd. - Wood Stud, Av - Average, Exp. - Exposed Side, UnExp. - Unexposed Side

Time (min)	T(Fav) (°C)	BL/Cav. (Exp.) Av(36,37,38, 39,40,41)	BL/WStd. Av(24,25,26, 27,28,29)	Mid. WStd. Av(16,17,18,19, 20,21,22,23)	BL/Cav. (UnExp.) Av(42,43,44, 45,46,47)	BL/WStd. (UnExp.) Av(30,31,32, 33,34,35)	BL/FL (UnExp.) Av(60,61,62,63,64, 65,66,67,68,69)	UnExp. Av(1,2,3,4, 5,6,7,8,9)
0	25.8	22.1	22.1	22.0	22.8	22.8	22.7	22.7
1	52.4	25.5	22.9	22.0	22.8	22.8	22.7	22.7
2	255.1	71.8	55.4	22.2	22.8	22.8	22.7	22.7
3	365.8	81.2	71.4	24.5	24.2	22.9	22.6	22.7
4	377.4	78.6	66.0	30.5	30.8	22.9	22.6	22.6
5	541.1	90.1	81.8	34.4	36.4	23.1	22.7	22.6
6	580.2	94.1	80.4	44.1	44.0	23.4	22.8	22.6
7	591.6	99.4	78.1	49.2	51.5	23.9	23.0	22.6
8	640.3	106.9	84.5	52.5	53.9	24.6	23.3	22.7
9	665.3	113.1	87.0	57.3	57.9	25.6	23.8	22.8
10	697.1	117.6	89.7	61.6	62.0	27.0	24.4	23.0
11	716.0	121.0	92.2	65.3	65.7	28.8	25.0	23.3
12	722.7	123.9	94.0	68.2	69.0	30.9	25.7	23.6
13	735.7	127.7	96.2	70.2	71.5	33.0	26.5	24.1
14	747.1	136.5	100.5	71.1	72.4	35.4	27.4	24.6
15	754.0	153.4	107.4	71.4	72.8	36.9	28.3	25.2
16	764.7	212.4	130.8	68.9	70.6	37.6	29.0	25.9
17	772.9	308.0	172.5	67.6	68.4	38.4	29.8	26.6
18	775.2	393.1	224.7	69.1	68.2	39.1	30.6	27.4
19	783.7	461.9	300.5	70.5	69.7	39.8	31.2	28.1
20	793.0	499.2	372.3	73.7	80.1	40.6	31.8	28.9
21	799.0	531.4	424.9	78.8	96.3	41.9	32.7	29.7
22	801.1	565.4	465.1	86.1	124.0	43.8	33.9	30.4
23	806.5	594.1	497.2	95.2	152.7	46.6	34.7	31.1
24	813.4	614.8	525.8	106.7	176.7	49.3	35.7	31.9
25	817.6	631.0	551.6	120.6	193.5	51.5	37.0	32.7
26	825.4	644.6	577.1	134.1	209.8	53.2	38.5	33.5
27	825.6	656.9	613.0	147.6	226.9	54.5	40.1	34.3
28	832.5	673.0	661.7	165.2	250.6	58.8	42.0	35.2
29	835.6	703.9	728.2	332.6	345.2	225.6	45.0	36.2
30	841.6	730.5	754.4	409.0	402.5	277.5	47.4	37.2
31	853.5	795.8	805.7	499.7	492.0	384.5	49.8	38.3
32	856.3	844.3	827.9	698.2	650.9	625.7	53.1	39.5
33	859.3	864.7	840.8	760.5	704.3	691.1	56.3	40.8
34	861.3	895.4	880.4	805.8	756.9	707.9	59.1	42.2
35	869.2	921.6	900.5	884.0	815.5	824.7	65.8	43.7
36	867.8	914.6	900.2	908.4	851.7	864.2	70.9	45.4
37	872.4	896.6	903.9	917.0	886.8	889.4	80.5	47.3

Table 22. Deflections Measured in Wood Stud Shear Wall F19

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	-0.1	-0.1
1	0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	-0.1	-0.1
2	0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1
3	0.1	0.0	-0.1	0.1	0.0	0.1	0.0	0.0	-0.1
4	0.1	0.0	-0.1	0.1	0.0	0.1	0.1	0.0	0.0
5	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
6	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.0
7	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.0
8	0.2	0.1	0.0	0.2	0.1	0.2	0.2	0.1	0.0
9	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1	0.1
10	0.3	0.2	0.0	0.3	0.2	0.2	0.2	0.2	0.1
11	0.3	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.1
12	0.3	0.3	0.1	0.3	0.3	0.3	0.2	0.2	0.1
13	0.4	0.3	0.1	0.3	0.3	0.3	0.3	0.2	0.1
14	0.4	0.3	0.1	0.3	0.3	0.3	0.3	0.2	0.1
15	0.4	0.3	0.1	0.3	0.3	0.3	0.2	0.2	0.1
16	0.3	0.3	0.1	0.3	0.2	0.3	0.2	0.2	0.1
17	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1
18	0.3	0.3	0.1	0.2	0.2	0.1	0.1	0.2	0.1
19	0.3	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.0
20	0.3	0.3	0.0	0.1	0.2	0.1	0.1	0.2	0.0
21	0.3	0.3	0.0	0.1	0.2	0.1	0.1	0.2	0.0
22	0.3	0.3	0.0	0.1	0.2	0.1	0.2	0.2	0.0
23	0.3	0.3	0.0	0.1	0.3	0.1	0.2	0.2	0.0
24	0.3	0.3	0.0	0.1	0.2	0.1	0.2	0.2	0.0
25	0.3	0.3	0.0	0.2	0.2	0.1	0.2	0.2	0.0
26	0.3	0.3	0.0	0.2	0.2	0.1	0.2	0.2	0.1
27	0.3	0.3	0.0	0.2	0.2	0.2	0.2	0.2	0.1
28	0.3	0.3	0.0	0.2	0.2	0.2	0.2	0.2	0.1
29	0.3	0.3	0.0	0.2	0.3	0.2	0.2	0.3	0.1
30	0.3	0.4	0.0	0.2	0.3	0.2	0.2	0.3	0.1
31	0.3	0.4	0.0	0.2	0.3	0.2	0.2	0.3	0.1
32	0.3	0.4	0.0	0.1	0.4	0.2	0.2	0.3	0.1
33	0.3	0.4	0.0	0.1	0.4	0.2	0.2	0.4	0.1
34	0.3	0.4	0.0	0.1	0.4	0.1	0.2	0.4	0.1
35	0.3	0.4	-0.1	0.1	0.4	0.1	0.2	0.4	0.1
36	0.3	0.3	-0.1	0.1	0.4	0.1	0.2	0.4	0.1
37	0.2	0.3	-0.1	0.1	0.3	0.0	0.1	0.3	0.0
38	0.2	0.2	-0.2	0.0	0.2	0.0	0.1	0.3	0.0
39	0.1	0.1	-0.3	-0.1	0.0	-0.2	0.0	0.2	-0.1
40	0.0	-0.1	-0.5	-0.2	-0.2	-0.3	0.0	0.0	-0.2
41	-0.1	-0.3	-0.6	-0.5	-0.5	-0.5	-0.2	-0.1	-0.3
42	-0.3	-0.5	-0.9	-0.7	-0.9	-0.7	-0.3	-0.3	-0.5
43	-0.6	-0.8	-1.2	-1.1	-1.3	-1.1	-0.5	-0.7	-0.7
44	-1.0	-1.3	-1.6	-1.8	-2.1	-1.5	-0.9	-1.1	-1.0
45	-1.8	-1.9	-2.2	-2.9	-3.2	-2.1	-1.6	-1.8	-1.3
46	-2.9	-2.9	-3.2	-4.8	-5.0	-3.1	-2.7	-3.0	-2.0
47	-4.9	-4.9	-5.6	-8.4	-8.4	-5.8	-4.7	-5.1	-3.7
48	-9.4	-7.1	-12.1	-17.8	-16.2	-12.7	-9.7	-9.8	-7.7

Table 23. Deflections Measured in Wood Stud Shear Wall F20

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	-0.2	-0.1	-0.2	***	0.0	0.0	0.0	0.0	0.0
1	-0.1	-0.1	-0.1	***	0.0	0.1	0.1	0.0	0.1
2	-0.1	-0.1	-0.1	***	0.0	0.1	0.1	0.0	0.1
3	-0.1	-0.1	-0.1	***	0.0	0.1	0.1	0.0	0.1
4	-0.1	-0.1	-0.1	***	0.0	0.1	0.1	0.0	0.1
5	-0.1	0.0	0.0	***	0.1	0.2	0.1	0.1	0.2
6	-0.1	0.0	0.0	***	0.1	0.2	0.1	0.1	0.2
7	-0.1	0.0	0.0	***	0.1	0.2	0.2	0.1	0.2
8	-0.1	0.0	0.0	***	0.1	0.2	0.2	0.1	0.2
9	-0.1	0.0	0.0	***	0.1	0.2	0.2	0.1	0.2
10	0.0	0.0	0.0	***	0.2	0.2	0.2	0.2	0.2
11	0.0	0.1	0.0	***	0.2	0.2	0.2	0.2	0.2
12	0.0	0.1	0.0	***	0.2	0.2	0.2	0.2	0.2
13	0.0	0.1	0.0	***	0.2	0.3	0.3	0.2	0.2
14	0.0	0.1	0.0	***	0.2	0.3	0.3	0.2	0.2
15	0.0	0.1	0.1	***	0.2	0.3	0.3	0.2	0.2
16	0.0	0.1	0.1	***	0.2	0.3	0.3	0.2	0.2
17	0.0	0.1	0.0	***	0.2	0.2	0.2	0.2	0.2
18	0.0	0.1	0.0	***	0.2	0.2	0.2	0.2	0.2
19	0.0	0.1	0.0	***	0.2	0.2	0.3	0.2	0.2
20	0.0	0.1	0.0	***	0.2	0.2	0.3	0.3	0.2
21	0.0	0.1	0.0	***	0.3	0.2	0.3	0.3	0.2
22	0.0	0.1	0.0	***	0.3	0.2	0.3	0.3	0.2
23	0.0	0.1	0.0	***	0.3	0.2	0.3	0.3	0.2
24	0.0	0.1	0.0	***	0.3	0.2	0.3	0.3	0.2
25	0.0	0.1	0.0	***	0.3	0.2	0.3	0.3	0.2
26	0.0	0.1	0.0	***	0.2	0.2	0.3	0.3	0.2
27	0.0	0.1	0.0	***	0.2	0.2	0.3	0.3	0.2
28	0.0	0.1	0.0	***	0.2	0.2	0.3	0.2	0.2
29	-0.1	0.1	-0.1	***	0.1	0.2	0.3	0.2	0.2
30	-0.1	0.0	-0.1	***	0.1	0.2	0.2	0.2	0.2
31	-0.1	0.0	-0.1	***	0.1	0.1	0.2	0.2	0.2
32	-0.1	0.0	-0.2	***	0.0	0.1	0.2	0.1	0.2
33	-0.1	0.0	-0.2	***	0.1	0.0	0.2	0.2	0.1
34	-0.1	0.0	-0.3	***	0.1	0.0	0.2	0.2	0.1
35	-0.2	0.0	-0.3	***	0.0	0.0	0.2	0.1	0.1
36	-0.2	-0.1	-0.2	***	-0.1	0.1	0.1	0.1	0.1
37	-0.3	-0.2	-0.3	***	-0.2	0.0	0.1	0.0	0.2
38	-0.4	-0.3	-0.4	***	-0.3	0.0	0.0	0.0	0.2
39	-0.5	-0.4	-0.4	***	-0.4	-0.1	-0.1	-0.1	0.1
40	-0.6	-0.5	-0.5	***	-0.6	-0.1	-0.2	-0.2	0.1
41	-0.8	-0.7	-0.7	***	-0.8	-0.3	-0.4	-0.3	0.0
42	-1.1	-1.0	-0.9	***	-1.1	-0.5	-0.6	-0.5	-0.1
43	-1.7	-1.4	-1.1	***	-1.7	-0.7	-1.1	-0.9	-0.3
44	-2.4	-2.2	-1.6	***	-2.8	-1.2	-1.7	-1.5	-0.6
45	-3.6	-3.6	-2.5	***	-4.7	-2.5	-2.8	-2.7	-1.4
46	-5.6	-5.8	-3.7	***	-7.9	-5.0	-4.6	-4.5	-3.0
47	-11.6	-11.4	-8.9	***	-16.4	-12.5	-9.7	-9.3	-7.3

Table 24. Deflections Measured in Wood Stud Shear Wall F21

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	0.0	0.0	***	***	0.0	0.1	0.0	0.0	0.0
1	0.1	0.1	***	***	0.2	0.1	0.1	0.1	0.1
2	0.1	0.1	***	***	0.1	0.1	0.0	0.0	0.1
3	0.1	0.1	***	***	0.1	0.1	0.0	0.0	0.1
4	0.1	0.1	***	***	0.2	0.2	0.1	0.1	0.1
5	0.0	-0.1	***	***	0.0	-0.1	0.0	0.0	0.1
6	-0.1	-0.1	***	***	0.0	-0.1	0.0	0.0	0.1
7	-0.1	-0.1	***	***	0.0	0.0	0.0	***	0.1
8	-0.1	-0.1	***	***	0.1	0.0	0.0	0.0	0.1
9	-0.1	-0.1	***	***	0.1	0.0	0.0	0.0	0.1
10	-0.1	-0.1	***	***	0.0	0.0	0.0	0.0	0.1
11	-0.1	-0.1	***	***	0.0	0.0	0.0	0.0	0.1
12	-0.1	-0.1	***	***	0.0	0.0	0.0	0.0	0.1
13	-0.1	-0.1	***	***	0.1	0.0	0.0	0.0	0.1
14	-0.1	-0.1	***	***	0.1	0.0	0.1	0.0	0.1
15	-0.1	-0.1	***	***	0.1	0.0	0.0	0.0	0.2
16	-0.1	-0.2	***	***	0.1	-0.1	0.0	0.0	0.2
17	-0.2	-0.2	***	***	0.1	-0.1	0.0	0.0	0.2
18	-0.2	-0.2	***	***	0.0	-0.1	***	***	0.2
19	-0.2	-0.2	***	***	***	-0.2	0.0	0.0	0.1
20	-0.3	-0.3	***	***	***	-0.2	0.0	0.0	0.1
21	-0.3	-0.3	***	***	-0.1	-0.3	-0.1	0.0	0.1
22	-0.4	-0.3	***	***	-0.1	-0.3	-0.1	-0.1	0.1
23	-0.4	-0.4	***	***	-0.1	-0.4	-0.1	-0.1	0.1
24	-0.5	-0.4	***	***	-0.2	-0.4	-0.1	-0.2	0.0
25	-0.5	-0.5	***	***	-0.2	-0.5	-0.2	-0.2	***
26	-0.6	-0.5	***	***	-0.3	-0.6	-0.2	-0.3	0.0
27	-0.7	-0.6	***	***	-0.3	-0.7	-0.3	-0.3	-0.1
28	-0.8	-0.7	***	***	-0.4	-0.8	-0.4	-0.4	-0.1
29	-0.9	-0.8	***	***	-0.5	-0.9	-0.5	-0.5	-0.2
30	-1.1	-0.9	***	***	-0.7	-1.1	-0.6	-0.7	-0.3
31	-1.3	-1.1	***	***	-0.8	-1.3	-0.8	-0.8	-0.4
32	-1.5	-1.3	***	***	-1.0	-1.6	-0.9	-1.0	-0.6
33	-1.7	-1.5	***	***	-1.3	-1.9	-1.2	-1.3	-0.7
34	-2.0	-1.8	***	***	-1.7	-2.4	-1.4	-1.6	-1.0
35	-2.4	-2.2	***	***	-2.1	-2.9	-1.7	-1.9	-1.3
36	-2.8	-2.5	***	***	-2.6	-3.5	-2.1	-2.3	-1.7
37	-3.2	-3.0	***	***	-3.2	-4.1	-2.5	-2.8	-2.1
38	-3.8	-3.6	***	***	-4.1	-5.0	-3.1	-3.4	-2.7
39	-4.5	-4.1	***	***	-4.8	-5.8	-3.6	-3.9	-3.3
40	-5.3	-4.8	***	***	-5.8	-6.9	-4.4	-4.6	-3.9
41	-6.8	-5.9	***	***	-7.2	-8.6	-5.8	-5.7	-4.9
42	-15.8	-14.6	***	***	-19.4	-23.6	-13.6	-14.4	-15.5

Table 25. Deflections Measured in Wood Stud Shear Wall F21A

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	***
1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
2	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	***
3	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	***
4	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
5	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	***
6	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
7	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
8	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
9	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
10	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
11	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	***
12	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	***
13	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.1	***
14	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.1	***
15	0.0	0.0	0.1	0.1	-0.1	0.2	0.0	0.1	***
16	0.0	0.0	0.1	0.1	-0.1	0.1	0.0	0.0	***
17	0.0	0.0	0.0	0.0	-0.1	0.1	0.0	0.0	***
18	-0.1	-0.1	0.0	0.0	-0.2	0.1	0.0	0.0	***
19	-0.1	-0.1	0.0	0.0	-0.2	0.1	-0.1	-0.1	***
20	-0.1	-0.2	0.0	-0.1	-0.3	0.1	-0.1	-0.1	***
21	-0.1	-0.2	-0.1	-0.1	-0.4	0.0	-0.1	-0.1	***
22	-0.2	-0.2	-0.1	-0.1	-0.4	0.0	-0.2	-0.2	***
23	-0.2	-0.3	-0.1	-0.2	-0.5	0.0	-0.2	-0.2	***
24	-0.2	-0.3	-0.2	-0.2	-0.5	-0.1	-0.2	-0.3	***
25	-0.3	-0.4	-0.2	-0.3	-0.6	-0.1	-0.3	-0.3	***
26	-0.3	-0.4	-0.2	-0.4	-0.7	-0.1	-0.3	-0.4	***
27	-0.4	-0.5	-0.3	-0.4	-0.7	-0.1	-0.4	-0.4	***
28	-0.4	-0.6	-0.3	-0.5	-0.8	-0.2	-0.4	-0.5	***
29	-0.4	-0.6	-0.4	-0.6	-1.0	-0.2	-0.5	-0.6	***
30	-0.5	-0.8	-0.4	-0.7	-1.1	-0.3	-0.6	-0.7	***
31	-0.6	-0.9	-0.6	-0.8	-1.3	-0.4	-0.7	-0.8	***
32	-0.7	-1.1	-0.7	-1.0	-1.5	-0.5	-0.8	-1.0	***
33	-0.9	-1.3	-0.8	-1.1	-1.8	-0.6	-0.9	-1.2	***
34	-1.0	-1.6	-0.9	-1.4	-2.2	-0.7	-1.1	-1.4	***
35	-1.2	-1.9	-1.1	-1.7	-2.7	-0.9	-1.3	-1.7	***
36	-1.5	-2.3	-1.3	-2.1	-3.2	-1.1	-1.6	-2.0	***
37	-1.8	-2.7	-1.6	-2.5	-3.8	-1.4	-1.9	-2.4	***
38	-2.1	-3.2	-1.9	-2.9	-4.4	-1.8	-2.2	-2.8	***
39	-2.5	-3.7	-2.3	-3.5	-5.1	-2.1	-2.6	-3.2	***
40	-3.0	-4.4	-2.8	-4.3	-6.0	-2.6	-3.2	-3.8	***
41	-4.0	-5.8	-3.8	-5.6	-7.9	-3.4	-4.0	-4.8	***
42	-5.4	-8.1	-5.3	-7.5	-10.7	-4.5	-5.2	-6.2	***
43	-8.0	-11.4	-8.1	-10.6	-14.5	-6.7	-6.9	-8.2	***

Table 26. Deflections Measured in Wood Stud Shear Wall F22

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	-0.2	-0.2	***	***	-0.1	-0.3	-0.2	-0.1	-0.1
1	-0.2	-0.1	***	***	-0.1	-0.2	-0.1	0.0	-0.1
2	-0.2	-0.1	***	***	-0.1	-0.2	-0.1	0.0	-0.1
3	-0.2	-0.1	***	***	-0.1	-0.2	-0.1	0.0	-0.1
4	-0.2	-0.1	***	***	0.0	-0.2	-0.1	0.0	-0.1
5	-0.2	-0.1	***	***	0.0	-0.2	-0.1	0.0	-0.1
6	-0.2	-0.1	***	***	0.0	-0.2	-0.1	0.0	0.0
7	-0.2	-0.1	***	***	0.0	-0.2	-0.1	0.0	0.0
8	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
9	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
10	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
11	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
12	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
13	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
14	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.0	0.0
15	-0.2	-0.1	***	***	0.0	-0.1	-0.1	0.1	0.0
16	-0.3	-0.1	***	***	0.0	-0.1	-0.1	0.1	0.0
17	-0.3	-0.1	***	***	0.0	-0.2	-0.1	0.0	0.0
18	-0.3	-0.1	***	***	-0.1	-0.2	-0.1	0.0	0.0
19	-0.3	-0.1	***	***	-0.1	-0.2	-0.1	0.0	0.0
20	-0.3	-0.2	***	***	-0.1	-0.2	-0.1	0.0	0.0
21	-0.4	-0.2	***	***	-0.1	-0.2	-0.2	0.0	0.0
22	-0.4	-0.2	***	***	-0.1	-0.3	-0.2	0.0	-0.1
23	-0.4	-0.2	***	***	-0.1	-0.3	-0.2	0.0	-0.1
24	-0.5	-0.2	***	***	-0.2	-0.4	-0.2	0.0	-0.1
25	-0.5	-0.3	***	***	-0.2	-0.4	-0.2	0.0	-0.1
26	-0.5	-0.3	***	***	-0.3	-0.4	-0.3	0.0	-0.1
27	-0.6	-0.3	***	***	-0.3	-0.5	-0.3	-0.1	-0.2
28	-0.6	-0.4	***	***	-0.4	-0.5	-0.3	-0.1	-0.2
29	-0.7	-0.4	***	***	-0.5	-0.6	-0.4	-0.2	-0.3
30	-0.8	-0.5	***	***	-0.5	-0.6	-0.4	-0.2	-0.3
31	-0.8	-0.6	***	***	-0.7	-0.7	-0.5	-0.3	-0.4
32	-0.9	-0.7	***	***	-0.8	-0.8	-0.6	-0.4	-0.4
33	-1.1	-0.8	***	***	-0.9	-0.9	-0.7	-0.5	-0.5
34	-1.2	-1.0	***	***	-1.2	-1.1	-0.8	-0.6	-0.6
35	-1.4	-1.2	***	***	-1.5	-1.2	-1.0	-0.8	-0.7
36	-1.5	-1.5	***	***	-1.9	-1.5	-1.2	-1.1	-0.9
37	-1.8	-1.8	***	***	-2.4	-1.7	-1.4	-1.5	-1.1
38	-2.2	-2.3	***	***	-3.0	-2.1	-1.8	-1.9	-1.4
39	-2.7	-2.8	***	***	-3.8	-2.6	-2.2	-2.5	-1.8
40	-3.2	-3.3	***	***	-4.6	-3.1	-2.8	-3.1	-2.2
41	-4.2	-4.1	***	***	-5.7	-3.8	-3.6	-3.8	-2.8
42	-5.6	-5.2	***	***	-7.4	-5.1	-4.9	-4.9	-3.8
43	-22.4	-21.3	***	***	-18.9	-23.0	-16.8	-17.8	-16.7

Table 27. Deflections Measured in Wood Stud Shear Wall F22A

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	0.0	0.0	0.0	-0.1	***	0.0	-0.1	0.0	0.0
1	0.0	0.1	0.0	0.1	***	0.1	0.0	0.1	0.0
2	0.0	0.1	0.0	0.0	***	0.0	0.0	0.1	0.0
3	0.0	0.1	0.0	0.0	***	0.0	0.0	0.1	0.0
4	0.0	0.1	0.0	0.0	***	0.0	0.0	0.1	0.0
5	0.0	0.1	0.0	0.1	***	0.1	0.1	0.1	0.1
6	0.0	0.1	0.0	0.1	***	0.1	0.1	0.1	0.1
7	0.0	0.1	0.0	0.1	***	0.1	0.1	0.2	0.1
8	0.0	0.1	0.0	0.1	***	0.1	0.1	0.2	0.1
9	0.0	0.2	0.0	0.1	***	0.1	0.1	0.2	0.1
10	0.0	0.2	0.0	0.1	***	0.1	0.1	0.2	0.1
11	0.0	0.2	0.0	0.1	***	0.1	0.1	0.2	0.1
12	0.0	0.2	0.0	0.1	***	0.2	0.1	0.2	0.2
13	0.0	0.2	0.0	0.1	***	0.2	0.1	0.2	0.2
14	0.0	0.2	0.0	0.1	***	0.2	0.1	0.2	0.2
15	0.0	0.2	0.0	0.1	***	0.2	0.1	0.2	0.2
16	0.0	0.2	0.0	0.1	***	0.2	0.1	0.2	0.2
17	0.0	0.2	0.0	0.1	***	0.2	0.1	0.3	0.2
18	0.1	0.2	0.0	0.1	***	0.2	0.1	0.2	0.2
19	0.1	0.2	0.0	0.1	***	0.2	0.1	0.3	0.2
20	0.1	0.1	0.0	0.1	***	0.2	0.1	0.3	0.2
21	0.0	0.1	0.0	0.1	***	0.2	0.1	0.2	0.3
22	0.0	0.1	0.0	0.1	***	0.2	0.1	0.3	0.3
23	0.0	0.0	0.0	0.0	***	0.2	0.0	0.2	0.3
24	0.0	0.0	0.0	0.0	***	0.1	0.0	0.2	0.2
25	-0.1	0.0	0.0	0.0	***	0.1	0.0	0.2	0.2
26	-0.1	0.0	0.0	-0.1	***	0.1	-0.1	0.2	0.2
27	-0.1	-0.1	0.0	-0.1	***	0.1	-0.1	0.2	0.2
28	-0.2	-0.1	-0.1	-0.2	***	0.0	-0.1	0.2	0.2
29	-0.2	-0.2	-0.1	-0.2	***	0.0	-0.1	0.1	0.2
30	-0.3	-0.2	-0.1	-0.3	***	0.0	-0.2	0.1	0.1
31	-0.3	-0.3	-0.1	-0.3	***	-0.1	-0.2	0.1	0.1
32	-0.4	-0.4	-0.2	-0.4	***	-0.1	-0.3	0.0	0.1
33	-0.4	-0.4	-0.2	-0.4	***	-0.2	-0.3	0.0	0.0
34	-0.5	-0.5	-0.3	-0.5	***	-0.2	-0.4	0.0	0.0
35	-0.6	-0.6	-0.3	-0.6	***	-0.3	-0.4	-0.1	-0.1
36	-0.7	-0.7	-0.4	-0.7	***	-0.4	-0.5	-0.2	-0.1
37	-0.7	-0.8	-0.4	-0.8	***	-0.4	-0.6	-0.3	-0.2
38	-0.8	-1.0	-0.5	-0.9	***	-0.5	-0.7	-0.3	-0.2
39	-0.9	-1.1	-0.6	-1.0	***	-0.7	-0.7	-0.5	-0.3
40	-1.0	-1.3	-0.7	-1.2	***	-0.8	-0.8	-0.6	-0.4
41	-1.0	-1.5	-0.9	-1.3	***	-1.0	-1.0	-0.8	-0.6
42	-1.1	-1.7	-1.0	-1.5	***	-1.2	-1.1	-1.0	-0.7
43	-1.2	-2.0	-1.2	-1.7	***	-1.4	-1.3	-1.2	-0.9
44	-1.4	-2.3	-1.4	-1.9	***	-1.7	-1.4	-1.5	-1.1
45	-1.6	-2.7	-1.7	-2.2	***	-2.1	-1.7	-1.8	-1.4
46	-1.9	-3.1	-2.0	-2.6	***	-2.5	-1.9	-2.2	-1.7
47	-2.1	-3.5	-2.3	-2.9	***	-3.0	-2.2	-2.6	-2.1
48	-2.4	-4.0	-2.7	-3.4	***	-3.5	-2.5	-3.0	-2.5
49	-2.8	-4.5	-3.1	-3.9	***	-4.1	-2.8	-3.5	-2.9
50	-3.2	-5.1	-3.5	-4.4	***	-4.7	-3.3	-3.9	-3.4
51	-3.7	-5.8	-4.2	-5.2	***	-5.7	-3.8	-4.6	-4.0
52	-4.4	-6.9	-5.1	-6.1	***	-6.8	-4.4	-5.6	-4.8
53	-5.5	-8.1	-6.3	-7.5	***	-8.3	-5.3	-6.7	-5.8
54	-10.3	-12.0	-9.8	-14.2	***	-12.8	-9.7	-9.9	-8.5

Table 28. Deflections Measured in Wood Stud Wall F23

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	-0.2	0.0	-0.2	-0.1	-0.1	0.0	-0.1	0.1	0.0
1	-0.2	0.1	-0.2	-0.1	-0.1	0.1	-0.1	0.2	0.0
2	-0.2	0.1	-0.2	-0.1	-0.1	0.0	-0.1	0.2	0.0
3	-0.2	0.1	-0.2	-0.1	-0.1	0.0	-0.1	0.2	0.0
4	-0.2	0.1	-0.2	-0.1	-0.1	0.1	-0.1	0.2	0.0
5	-0.1	0.1	-0.2	-0.1	0.0	0.1	0.0	0.2	0.1
6	-0.2	0.1	-0.2	-0.1	0.0	0.1	-0.1	0.2	0.1
7	-0.1	0.1	-0.1	0.0	0.0	0.1	0.0	0.2	0.1
8	-0.1	0.1	-0.2	0.0	0.0	0.1	0.0	0.2	0.1
9	-0.1	0.1	-0.1	0.0	0.0	0.1	0.0	0.3	0.1
10	-0.1	0.1	-0.2	0.0	0.1	0.1	0.0	0.3	0.1
11	-0.1	0.1	-0.2	0.0	0.1	0.1	0.0	0.3	0.1
12	-0.1	0.2	-0.2	0.0	0.1	0.1	0.0	0.4	0.2
13	-0.1	0.2	-0.2	0.0	0.1	0.2	0.0	0.4	0.2
14	-0.1	0.2	-0.2	0.0	0.2	0.2	0.0	0.4	0.2
15	-0.1	0.2	-0.2	0.0	0.2	0.2	0.0	0.4	0.2
16	-0.2	0.2	-0.2	-0.1	0.1	0.1	-0.1	0.4	0.2
17	-0.2	0.1	-0.2	-0.2	0.1	0.0	-0.1	0.4	0.2
18	-0.3	0.1	-0.3	-0.4	0.0	-0.1	-0.2	0.3	0.1
19	-0.5	0.0	-0.4	-0.6	-0.1	-0.2	-0.4	0.3	-0.1
20	-0.6	-0.1	-0.5	-0.8	-0.2	-0.4	-0.6	0.2	-0.2
21	-0.8	-0.2	-0.7	-1.1	-0.4	-0.7	-0.8	0.1	-0.4
22	-1.0	-0.4	-1.0	-1.5	-0.6	-1.1	-1.1	-0.1	-0.7
23	-1.4	-0.6	-1.4	-2.0	-0.9	-1.6	-1.4	-0.4	-1.1
24	-1.8	-1.0	-1.9	-2.7	-1.6	-2.2	-1.9	-0.8	-1.5
25	-2.2	-1.7	-2.3	-3.4	-2.4	-3.0	-2.4	-1.3	-2.0
26	-2.9	-2.7	-3.1	-4.6	-3.9	-4.1	-3.2	-2.3	-2.8
27	-3.9	-3.9	-4.1	-6.0	-5.8	-5.5	-4.1	-3.5	-3.9
28	-5.2	-5.8	-5.5	-8.3	-8.6	-7.7	-5.6	-5.2	-5.5
29	-10.4	-14.1	-14.7	-16.8	-20.9	-21.0	-11.1	-11.9	-15.5

Table 29. Deflections Measured in Wood Stud Wall F23A

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	0.1	0.2	0.1	0.3	0.2	0.1	0.3	0.3	0.2
1	0.3	0.2	0.2	0.5	0.3	0.3	0.4	0.3	0.3
2	0.2	0.2	0.1	0.4	0.2	0.2	0.4	0.3	0.2
3	0.2	0.2	0.1	0.4	0.3	0.2	0.4	0.3	0.2
4	0.3	0.3	0.2	0.5	0.3	0.3	0.4	0.4	0.3
5	0.3	0.3	0.2	0.6	0.4	0.3	0.5	0.5	0.4
6	0.4	0.4	0.3	0.6	0.5	0.4	0.5	0.5	0.4
7	0.4	0.4	0.3	0.7	0.5	0.4	0.6	0.5	0.4
8	0.4	0.4	0.3	0.7	0.5	0.5	0.6	0.6	0.4
9	0.4	0.5	0.3	0.7	0.5	0.5	0.6	0.6	0.5
10	0.4	0.5	0.4	0.7	0.5	0.5	0.6	0.6	0.5
11	0.4	0.5	0.4	0.7	0.6	0.5	0.6	0.6	0.5
12	0.4	0.5	0.4	0.7	0.6	0.5	0.6	0.6	0.5
13	0.4	0.5	0.4	0.7	0.6	0.5	0.6	0.6	0.5
14	0.4	0.5	0.4	0.6	0.6	0.6	0.6	0.6	0.5
15	0.4	0.5	0.4	0.6	0.6	0.6	0.5	0.6	0.5
16	0.4	0.5	0.4	0.6	0.6	0.6	0.5	0.6	0.5
17	0.4	0.5	0.4	0.6	0.6	0.6	0.5	0.6	0.5
18	0.3	0.5	0.4	0.6	0.6	0.6	0.5	0.6	0.5
19	0.3	0.5	0.4	0.5	0.6	0.6	0.4	0.6	0.5
20	0.2	0.4	0.4	0.4	0.5	0.6	0.3	0.6	0.5
21	0.1	0.4	0.4	0.3	0.5	0.5	0.2	0.5	0.5
22	0.1	0.3	0.4	0.2	0.4	0.5	0.1	0.5	0.4
23	-0.1	0.2	0.4	0.0	0.2	0.4	-0.1	0.4	0.4
24	-0.2	0.1	0.3	-0.2	0.1	0.4	-0.3	0.3	0.3
25	-0.5	0.0	0.3	-0.5	-0.1	0.3	-0.5	0.2	0.2
26	-0.7	-0.2	0.2	-0.9	-0.3	0.2	-0.8	0.0	0.1
27	-1.0	-0.4	0.1	-1.4	-0.7	0.1	-1.2	-0.3	0.0
28	-1.4	-0.7	0.0	-2.0	-1.4	-0.2	-1.7	-0.7	-0.2
29	-2.0	-1.4	-0.3	-2.9	-2.4	-0.6	-2.3	-1.4	-0.6
30	-2.7	-2.3	-0.8	-4.0	-3.9	-1.3	-3.1	-2.4	-1.3
31	-3.6	-3.3	-1.6	-5.3	-5.7	-2.8	-4.1	-3.6	-2.5
32	-4.8	-4.6	-2.9	-7.0	-7.8	-4.9	-5.3	-5.0	-4.3
33	-7.6	-6.9	-5.1	-11.4	-11.6	-8.6	-8.7	-7.6	-7.4
34	-11.8	-11.2	-9.2	-18.4	-19.5	-16.5	-13.7	-12.8	-15.3

Table 30. Deflections Measured in Wood Stud Wall F23B

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	***	***	0.5	-0.5	0.5	-0.5	0.5	***	-0.5
1	***	***	0.5	-0.5	0.5	-0.5	0.5	***	-0.5
2	***	***	0.5	-0.5	0.5	-0.5	0.5	***	-0.5
3	***	***	0.5	-0.5	0.5	-0.5	0.5	***	-0.5
4	***	***	0.5	-0.5	0.5	-0.5	1.1	***	-0.5
5	***	***	0.5	0.0	0.5	-0.5	0.5	***	-0.5
6	***	***	0.0	-0.5	0.5	-0.5	0.5	***	-0.5
7	***	***	0.0	0.0	0.0	0.0	0.5	***	-0.5
8	***	***	0.0	0.0	0.5	0.0	0.5	***	0.0
9	***	***	0.5	0.0	0.5	-0.5	0.5	***	-0.5
10	***	***	0.5	-0.5	0.5	-0.5	0.5	***	0.0
11	***	***	0.5	0.0	0.5	-0.5	0.5	***	0.0
12	***	***	0.5	-0.5	0.5	-0.5	1.1	***	-0.5
13	***	***	0.5	-0.5	0.5	-0.5	1.1	***	-0.5
14	***	***	0.5	-0.5	0.5	-0.5	1.1	***	-0.5
15	***	***	0.0	0.0	0.0	0.0	0.5	***	-0.5
16	***	***	0.5	-0.5	0.5	-0.5	1.1	***	-0.5
17	***	***	0.0	0.0	0.0	0.0	0.5	***	0.0
18	***	***	0.0	0.0	0.0	0.0	0.5	***	-0.5
19	***	***	0.0	0.0	0.0	0.0	0.5	***	-0.5
20	***	***	0.0	0.0	0.0	0.0	0.5	***	-1.1
21	***	***	0.0	0.0	0.0	-0.5	0.5	***	-0.5
22	***	***	0.0	0.0	0.0	0.0	0.0	***	-0.5
23	***	***	-0.5	0.0	0.0	-0.5	0.0	***	-0.5
24	***	***	0.0	-0.5	0.0	-1.1	0.5	***	-0.5
25	***	***	0.0	-1.1	0.0	-1.1	0.0	***	-1.1
26	***	***	-0.5	-1.1	-0.5	-1.1	0.0	***	-1.1
27	***	***	0.0	-1.1	0.0	-1.7	0.0	***	-1.1
28	***	***	-0.5	-1.1	-0.5	-1.7	-0.5	***	-1.7
29	***	***	-0.5	-1.7	-0.5	-2.3	-1.1	***	-1.7
30	***	***	-0.5	-2.3	-1.1	-2.8	-1.7	***	-1.7
31	***	***	-1.1	-2.3	-1.7	-3.4	-2.8	***	-2.3
32	***	***	-1.7	-3.4	-2.3	-4.0	-4.0	***	-3.4
33	***	***	-2.8	-4.6	-2.8	-5.1	-5.7	***	-3.4
34	***	***	-3.4	-5.7	-4.0	-7.0	-7.4	***	-5.1
35	***	***	-4.6	-7.4	-4.6	-8.7	-9.3	***	-5.1
36	***	***	-8.1	-10.4	-7.0	-13.9	-14.4	***	-8.7

Table 31. Deflections Measured in Wood Stud Shear Wall F24

Time (min)	DFLN-1 cm	DFLN-2 cm	DFLN-3 cm	DFLN-4 cm	DFLN-5 cm	DFLN-6 cm	DFLN-7 cm	DFLN-8 cm	DFLN-9 cm
0	0.0	-0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0
1	0.1	-0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.0
2	0.0	-0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
3	0.0	-0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0
4	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.0
5	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.0
6	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.0
7	0.1	0.0	0.1	0.3	0.2	0.2	0.2	0.3	0.0
8	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.3	0.1
9	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
10	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
11	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
12	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
13	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
14	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
15	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1
16	0.1	0.1	0.1	0.4	0.3	0.2	0.3	0.3	0.1
17	0.1	0.1	0.1	0.4	0.3	0.2	0.3	0.3	0.1
18	0.1	0.0	0.1	0.4	0.3	0.2	0.3	0.3	0.1
19	0.1	0.0	0.1	0.3	0.2	0.2	0.3	0.3	0.1
20	0.1	0.0	0.1	0.3	0.2	0.2	0.3	0.3	0.1
21	0.1	-0.1	0.0	0.3	0.2	0.2	0.3	0.3	0.1
22	0.1	-0.1	0.0	0.3	0.2	0.1	0.2	0.3	0.0
23	0.1	-0.1	0.0	0.2	0.1	0.1	0.2	0.2	0.0
24	0.1	-0.1	0.0	0.2	0.1	0.1	0.2	0.2	0.0
25	0.1	-0.2	0.0	0.2	0.1	0.0	0.2	0.2	0.0
26	0.0	-0.2	0.0	0.2	0.0	0.0	0.2	0.2	-0.1
27	0.0	-0.2	-0.1	0.1	0.0	-0.1	0.1	0.2	-0.1
28	0.0	-0.3	-0.1	0.1	0.0	-0.1	0.1	0.2	-0.1
29	-0.1	-0.3	-0.2	0.1	-0.1	-0.1	0.1	0.1	-0.1
30	-0.1	-0.4	-0.2	0.0	-0.1	-0.2	0.0	0.1	-0.2
31	-0.1	-0.4	-0.2	-0.1	-0.2	-0.3	0.0	0.1	-0.2
32	-0.2	-0.5	-0.3	-0.1	-0.3	-0.3	-0.1	0.0	-0.2
33	-0.3	-0.7	-0.4	-0.3	-0.5	-0.4	-0.3	-0.1	-0.3
34	-0.5	-0.9	-0.5	-0.5	-0.8	-0.6	-0.4	-0.3	-0.4
35	-0.8	-1.4	-0.7	-1.0	-1.4	-0.9	-0.9	-0.7	-0.7
36	-1.8	-2.7	-1.4	-2.9	-3.5	-2.1	-2.7	-2.3	-1.6
37	-4.1	-5.4	-4.0	-7.4	-8.5	-6.7	-7.2	-6.3	-5.7