

NFPA[®] 285

Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components

2025 Edition



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NFPA® 285

Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components

2025 Edition

This edition of NFPA 285, *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components*, was prepared by the Technical Committee on Fire Tests. It was issued by the Standards Council on November 16, 2024, with an effective date of December 6, 2024, and supersedes all previous editions.

This edition of NFPA 285 was approved as an American National Standard on December 6, 2024.

Origin and Development of NFPA 285

The 1998 edition was the first for this standard. It established a test method, developed through a consensus process, for determining the flammability characteristics of exterior non-load-bearing wall assemblies or panels. The Committee's intention was to establish a standard that could be adopted or referenced by other applicable documents, such as the model building codes. The standard was introduced to regulate and address the introduction of combustible materials into exterior walls of all construction types.

The 2006 edition included a complete editorial rewrite for compliance with the *Manual of Style for NFPA Technical Committee Documents*. Further organizational and editorial changes were made to improve the application of the test method, and the scope and purpose of the document were revised to clarify the document's intent. Technical changes addressed details about the test specimen, documentation of the fire test, and testing instrumentation. Historical information describing the development of NFPA 285 was also added as annex material.

The 2012 edition included organizational, editorial, and technical changes that addressed clarifications and corrections of both requirements and figures. The changes provided consistency throughout the document and updated the standard to reflect current construction and testing practices. Technical changes included new requirements, acceptance criteria, and diagrams for thermocouple locations for new types of wall systems.

The 2019 edition included many substantial changes. The document was revised to include both load-bearing and non-load-bearing assemblies. Additionally, the scope was expanded to apply to buildings of any construction type. New sections were also added in Chapter 5 to address joint and seam locations and window header construction.

The 2023 edition included a revised scope to clarify that this is an assembly test method. Additional changes included new limits on wall projections and details on sealing the tops and sides of walls. This edition also included a new Annex B on the extension of results from assemblies that meet NFPA 285 test requirements.

The 2025 edition contains a new Chapter 12, which provides guidance on performing engineering analyses/judgements on test results. Annex B has also been edited to reflect the new guidance in Chapter 12. Editorial corrections were made throughout for clarity.



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Information on referenced and extracted publications can be found in Chapter 2 and Annex C.

Chapter 1 Administration

1.1* Scope.

1.1.1* This standard provides a test method for determining the fire propagation characteristics of exterior wall assemblies that are constructed using combustible materials or that incorporate combustible components.

1.1.2* The fire propagation characteristics are determined for post-flashover fires of interior origin.

1.2 Purpose. The purpose of this standard is to provide a standardized fire test procedure for evaluating the suitability of exterior wall assemblies that are constructed using combustible materials or that incorporate combustible components for installation on buildings.

1.3 Application.

1.3.1 This standard shall be used to evaluate the fire propagation characteristics of exterior wall assemblies and panels used

as components of curtain wall assemblies that are constructed using combustible materials or that incorporate combustible components within the wall assemblies as specified in the following:

- (1) The ability of the wall assembly to resist flame propagation over the exterior face of the wall assembly
- (2) The ability of the wall assembly to resist vertical flame propagation within the combustible components from one story to the next
- (3) The ability of the wall assembly to resist vertical flame propagation over the interior surface of the wall assembly from one story to the next
- (4) The ability of the wall assembly to resist lateral flame propagation from the compartment of fire origin to adjacent compartments or spaces

1.3.2 The application of this standard to actual field installations of exterior wall assemblies and panels used as components of curtain wall assemblies shall not limit the use of the methods and materials employed to seal the gap between the edge of the second floor slab and the interior surface of the test specimen during the test, provided approved sealing methods and materials are used in the field.

1.3.3 This standard requires both visual observations made by laboratory personnel conducting the test and temperature data recorded during the test.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 259, *Standard Test Method for Potential Heat of Building Materials*, 2023 edition.

2.3 Other Publications.

2.3.1 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM C1396/C1396M, *Standard Specification for Gypsum Board*, 2017.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, 2023d.

ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*, 2024a.

ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*, 2022.

ASTM E2965, *Standard Test Method for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Consumption Calorimeter*, 2022a.

2.3.2 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

UL 723, *Test for Surface Burning Characteristics of Building Materials*, 2018, revised 2023.

2.3.3 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2020.

2.4 References for Extracts in Mandatory Sections.

NFPA 5000®, *Building Construction and Safety Code*®, 2024 edition.

Chapter 3 Definitions

3.1 General.

3.1.1 The definitions contained in this chapter shall apply to the terms used in this standard.

3.1.2 Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used.

3.1.3 *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* **Approved.** Acceptable to the authority having jurisdiction.

3.2.2* **Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4 Shall. Indicates a mandatory requirement.

3.2.5 Should. Indicates a recommendation or that which is advised but not required.

3.2.6 Standard. An NFPA standard, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA manuals of style. When used in a generic sense, such as in the phrases "standards development process" or "standards development activities," the term "standards" includes all NFPA standards, including codes, standards, recommended practices, and guides.

3.3 General Definitions.

3.3.1 Air Cavity. A void space between two layers of material intentionally included within a wall assembly for the movement of air or water.

3.3.2 Base Wall. A load-bearing or non-load-bearing exterior wall that is used as an enclosing wall for a building and that

provides a base for the attachment of other wall system components.

3.3.3 Combustible Insulation. Combustible material used as insulation.

3.3.4 Combustible (Material). A material that, in the form in which it is used and under the conditions anticipated, will ignite and burn; a material that does not meet the definition of noncombustible or limited-combustible. [5000, 2024]

3.3.5 Engineering Decision. A documented decision based on a successful NFPA 285 test that provides component substitutions or installation deviations from the tested assembly or component based on a comparative assessment.

3.3.6* Exterior Cladding. A material or assembly of materials applied on the exterior side of exterior walls.

3.3.7 Exterior Insulation. A material or system installed on the exterior side of a base wall that provides thermal insulation.

3.3.8* Exterior Wallcovering. A material or assembly of materials applied on the exterior side of exterior walls for the purpose of providing a weather-resisting barrier or insulation or for aesthetics.

3.3.9 Exterior Wall Assembly. A wall system providing protection of the building interior space from the effects of the exterior environment that includes, but is not limited to, exterior wall covering, framing, weather-resistive barriers, and insulation. [5000, 2024]

3.3.10 Limited-Combustible (Material). See Section 4.2.

3.3.11 Noncombustible Material. See Section 4.1.

3.3.12 Stud Cavity. The space formed by vertical and/or horizontal steel or wood studs that are used to frame a wall.

3.3.13 Test Specimen. The exterior wall assembly to be tested in accordance with this fire test method.

Chapter 4 Test Facility and Apparatus

4.1 Noncombustible Material. A material that complies with any one of the following shall be considered a noncombustible material:

- (1) The material, in the form in which it is used, and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat.
- (2) The material is reported as passing ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*.
- (3) The material is reported as complying with the pass/fail criteria of ASTM E136 when tested in accordance with the test method and procedure in ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*. [5000:7.1.4.1.1]

4.2 Limited-Combustible Material. A material shall be considered a limited-combustible material where both of the following conditions of 4.2(1) and 4.2(2), and the conditions of either 4.2.1 or 4.2.2 are met:

- (1) The material does not comply with the requirements for a noncombustible material in accordance with Section 4.1.

- (2) The material, in the form in which it is used, exhibits a potential heat value not exceeding 3500 Btu/lb (8141 kJ/kg), when tested in accordance with NFPA 259. [5000:7.1.4.2]

4.2.1 The material shall have a structural base of noncombustible material with a surfacing not exceeding a thickness of $\frac{1}{8}$ in. (3.2 mm) where the surfacing exhibits a flame spread index not greater than 50 when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, or UL 723, *Test for Surface Burning Characteristics of Building Materials*. [5000:7.1.4.2.1]

4.2.2 The material shall be composed of materials that in the form and thickness used, neither exhibit a flame spread index greater than 25 nor evidence of continued progressive combustion when tested in accordance with ASTM E84 or UL 723 and are of such composition that all surfaces that would be exposed by cutting through the material on any plane would neither exhibit a flame spread index greater than 25 nor exhibit evidence of continued progressive combustion when tested in accordance with ASTM E84 or UL 723. [5000: 7.1.4.2.2]

4.2.3 Materials shall be considered limited-combustible materials where tested in accordance with ASTM E2965, *Standard Test Method for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Consumption Calorimeter*, at an incident heat flux of 75 kW/m² for a 20-minute exposure, and both the following conditions are met:

- (1) The peak heat release rate shall not exceed 150 kW/m² for longer than 10 seconds.
- (2) The total heat released shall not exceed 8 MJ/m². [5000:7.1.4.2.3]

4.3 Test Facility.

4.3.1 The test apparatus described in Section 4.4 shall be located inside a test facility.

4.3.2 The test facility shall have minimum dimensions of 30 ft wide × 30 ft deep × 23 ft high (9.1 m × 9.1 m × 7.0 m).

4.3.3 The test facility shall have provisions for supplying combustion makeup air taken from the outside during the test.

4.3.4 The test facility shall be constructed to allow for the exhaust of the combustion by-products during the test while not inducing an airflow on the exterior face of the test specimen.

4.3.5 The test facility shall protect the test apparatus and test specimen from exposure to wind and precipitation.

4.4 Test Apparatus.

4.4.1 The test apparatus shall consist of a two-story structure having a height of 15 ft 8 in. ± 1 in. (4.8 m ± 25 mm) with a test room on each story.

4.4.2 Each test room shall have unfinished inside dimensions of 10 ft ± 0.5 in. wide × 10 ft ± 0.5 in. deep (3.05 m ± 13 mm × 3.05 m ± 13 mm) with an unfinished floor-to-ceiling height of 7 ft ± 0.5 in. (2.13 m ± 13 mm).

4.4.3* The test apparatus shall be constructed in accordance with Figure 4.4.3.

4.4.4 The slabs shall be constructed of reinforced concrete.

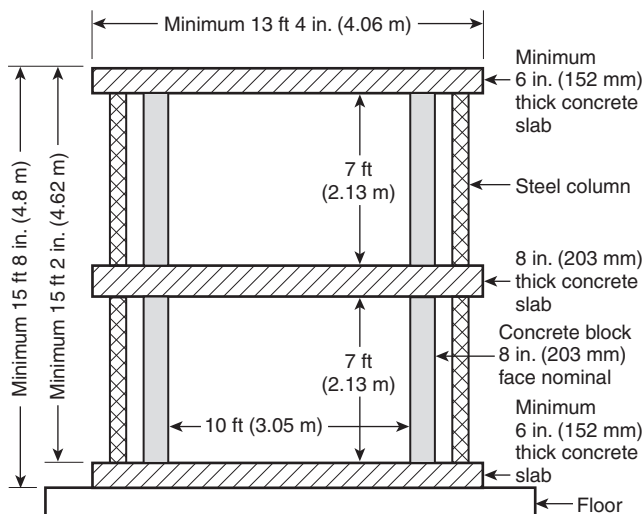


FIGURE 4.4.3 Front View of Test Apparatus Structure (not to scale). For exact dimensions, see 4.4.1 through 4.4.7.

4.4.5 The upper two slabs shall be supported by steel columns designed to support the loads, and the columns shall not be located inside the test rooms.

4.4.6 The thickness of the concrete slabs shall be as follows:

- (1) The first-story slab shall be not less than 6 in. (152 mm) thick.
- (2) The second-story slab shall be 8 in. ± 0.5 in. (203 mm ± 13 mm) thick.
- (3) The top slab shall be not less than 6 in. (152 mm) thick.

4.4.7 The three permanent walls (one rear wall and two side walls) that form each test room shall be constructed of nominal 8 in. (203 mm) concrete block or equivalent construction.

4.4.8 The interior surfaces of the first-story test room shall be protected as follows:

- (1) The walls and ceiling shall be covered with one layer of nominal $\frac{5}{8}$ in. (16 mm) thick Type X gypsum wallboard conforming to ASTM C1396/C1396M, *Standard Specification for Gypsum Board*, and one layer of nominal 1.5 in. (38 mm) thick nominal 8 lb/ft³ (128 kg/m³) density ceramic fiber insulation on the interior face.
- (2) The slab shall be covered with two layers of nominal $\frac{5}{8}$ in. (16 mm) thick gypsum wallboard.

4.4.9 Insulation shall not be required in the second-story test room.

4.4.10 Each story shall have one access opening approximately 3.5 ft wide × 6.75 ft high (1.1 m × 2.1 m).

4.4.11 The first-story access opening shall be located in one of the side walls, and the second-story access opening shall be located in the rear wall of the test room.

4.4.12 The access door opening for the first-story test room shall be capable of being closed during the fire test.

4.4.13 Additional access openings shall be permitted in the second-story test room walls for instrumentation and video recording.

4.5 Movable Test Frame.

4.5.1 The movable test frame shall comply with 4.5.1.1 through 4.5.1.3.

4.5.1.1 The frame shall be designed such that the nominal 4 in. $\times$ 4 in. $\times$ $\frac{3}{16}$ in. (102 mm $\times$ 102 mm $\times$ 5 mm) angles meet at the top of the respective floor lines on the test apparatus.

4.5.1.2 The frame shall be constructed to prevent racking or movement of the wall assembly during movement of the frame and fastening of the frame to the test apparatus.

4.5.1.3 The frame shown in Figure 4.5.1.3 shall be used to determine the minimum size of the wall assembly.

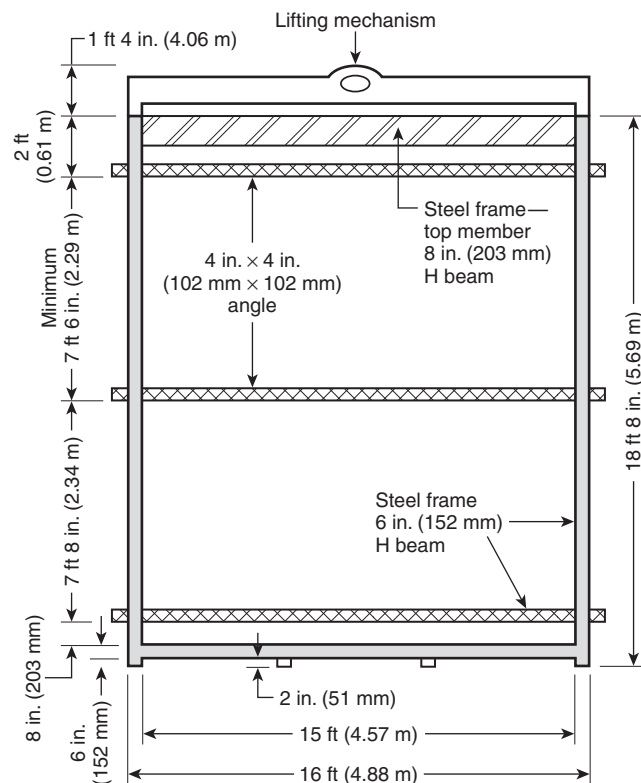


FIGURE 4.5.1.3 Front View of Movable Wall Frame (not to scale).

4.6 Burners.

4.6.1 The burner arrangement shall consist of two gas-fired burners.

4.6.2 One burner shall be placed inside the first-story test room, and the other burner shall be placed near the top of the first-story window opening of the test specimen, as required by Chapter 7.

4.6.3 The test room burner shall comply with 4.6.3.1 through 4.6.3.6.

4.6.3.1 The test room burner shall be constructed of nominal 2 in. (51 mm) outside diameter steel pipe with nominal $\frac{1}{8}$ in. (3 mm) diameter holes spaced a nominal 1 in. (25 mm) on center.

4.6.3.2 The burner holes shall be located along the top surface of the pipe.

4.6.3.3 The first hole shall be located 3.5 ft $\pm$ 1 in. (1.06 m $\pm$ 25 mm) from the rear wall on both sides of the gas supply pipes and continue across the front gas supply pipe.

4.6.3.4 The gas supply pipe located within the test room shall be wrapped with a single layer of nominal 1 in. (25 mm) thick nominal 8 lb/ft³ (128 kg/m³) density ceramic fiber blanket.

4.6.3.5 The burner shall be positioned with its centerline 2.5 ft $\pm$ 1 ft (0.8 m $\pm$ 0.3 m) above the floor surface of the test facility.

4.6.3.6* Figure 4.6.3.6 shall be used to determine the design of the first-story test room burner.

4.6.4 The window gas burner shall consist of a 60 in. $\pm$ 0.5 in. (1520 mm $\pm$ 13 mm) length of nominal 2 in. (51 mm) outside diameter pipe having a 0.5 in. $\pm$ 0.06 in. wide $\times$ 44 in. $\pm$ 0.5 in. long (13 mm $\pm$ 1.5 mm $\times$ 1118 mm $\pm$ 13 mm) slot.

4.6.5 The burner shall be supplied with gas at both ends through nominal 1 in. (25 mm) outside diameter pipe.

4.6.6 Figure 4.6.6 shall be used to determine the design of the window burner.

4.6.7 The window burner shall be wrapped with a layer of nominal 1 in. (25 mm) thick nominal 8 lb/ft³ (128 kg/m³) density ceramic fiber blanket.

4.6.8 The burner shall be permitted to be mounted on a movable trolley.

4.6.9 During the fire test, the burner shall be positioned so the slot is located on the top surface of the pipe and centered horizontally in the first-story test room window opening.

4.6.10 The horizontal centerline of the burner shall be positioned 9 in. $\pm$ 0.5 in. (230 mm $\pm$ 13 mm) below the bottom surface of the window opening header.

4.6.11 The vertical centerline of the burner shall be positioned between 0 in. and 5 in. (0 mm and 130 mm) from the exterior face of the wall assembly.

4.6.12 The final position of the window burner from the exterior face of the wall assembly shall be determined from the calibration procedure.

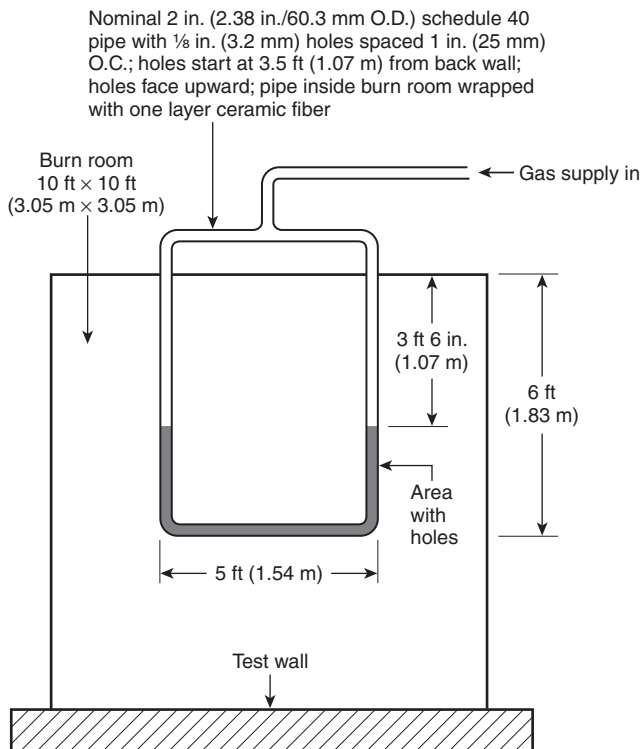


FIGURE 4.6.3.6 Burn Room Burner — Plan View (not to scale).

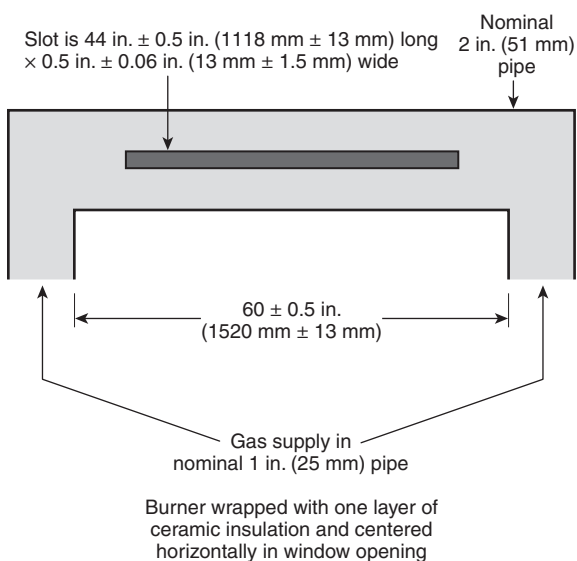


FIGURE 4.6.6 Plan View of Window Burner (not to scale).

Chapter 5 Test Specimens

5.1 Location of Test Specimens. The test specimens shall be constructed on the front face of the test apparatus or on the movable test frame specified in 4.5.1.

5.2 Specimen Mounting. Figure 5.2(a) through Figure 5.2(c) shall be used to determine the test specimen mounting on the front face of the test apparatus.

5.3 Size of Test Specimen. The test specimen shall be not less than 17.5 ft high × 13.3 ft wide (5.3 m high × 4.1 m wide).

5.4 Position of Test Specimen.

5.4.1 The edges of the test specimen shall be positioned on the test apparatus as follows:

- (1) Below the top of the first-story slab, not less than 2 in. (51 mm)
- (2) Above the top of the top slab, not less than 2 ft (0.6 m)
- (3) Beyond the outside face of each side wall, not less than 1 ft (0.305 m)

5.4.2 The test specimen shall completely cover the front face of the test apparatus except for a window opening located in the test specimen at the first story.

5.5 Window Opening.

5.5.1 The window opening shall be 30 in. ± 0.5 in. high × 78 in. ± 0.5 in. wide (760 mm ± 13 mm high × 1980 mm ± 13 mm wide), with a sill height of 30 in. ± 0.5 in. (760 mm ± 13 mm) above the top of the first-story test room slab.

5.5.2 The window opening shall be centered horizontally with respect to the test room.

5.6 Securing Test Specimen to Test Apparatus.

5.6.1 The test specimen shall be secured to the test apparatus using a girt system of replaceable nominal 4 in. × 4 in. × 3/16 in. (102 mm × 102 mm × 5 mm) steel angles.

5.6.2 A removable spandrel beam shall be mounted on the underside of the second-story floor slab where required for the attachment of the test specimen to the test apparatus.

5.6.2.1* Where used, the spandrel beam shall be a W8×21 (W200×31) wide flange steel beam.

5.6.2.2 Where used, the spandrel beam shall extend completely across the burn room compartment between the interior wall surfaces of the two side walls of the first-story test room.

5.6.2.3 Where used, the spandrel beam shall be either protected or unprotected at the discretion of the test laboratory or the client.

5.6.2.4 Where the spandrel beam is used and it has been determined that it will be protected, one layer of nominal 1 in. (25 mm) thick nominal 6 lb/ft³ (96 kg/m³) ceramic fiber blanket shall be used to protect the beam.

5.6.2.5 Outriggers and other connections provided to the spandrel beam shall not be protected.

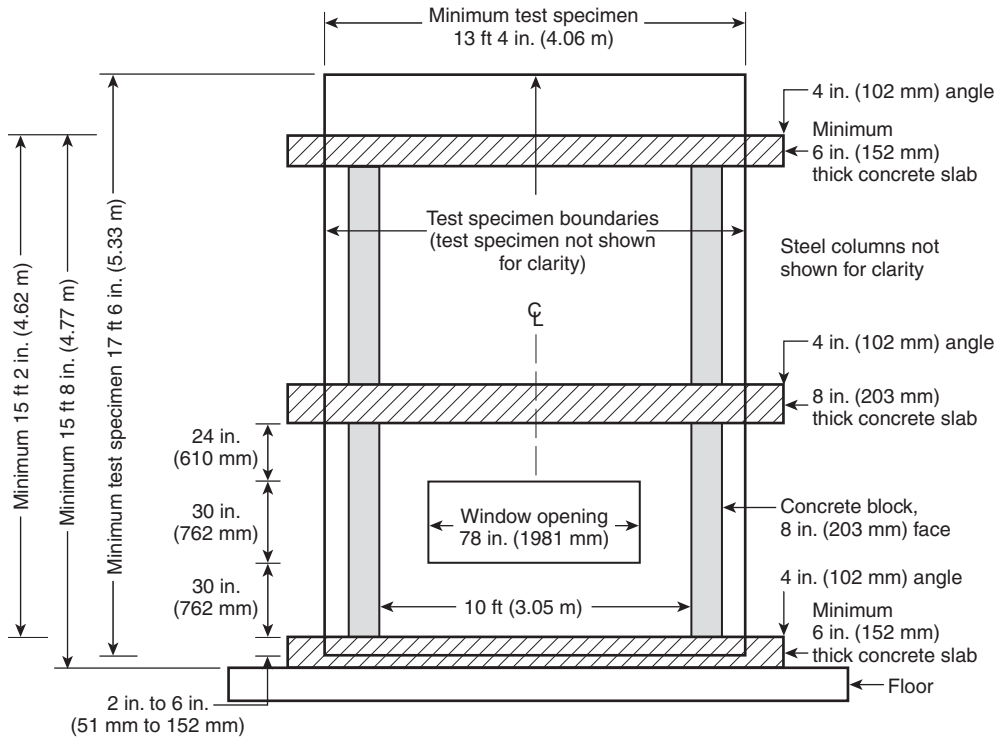


FIGURE 5.2(a) Front View of Test Specimen Superimposed over Test Apparatus (not to scale).

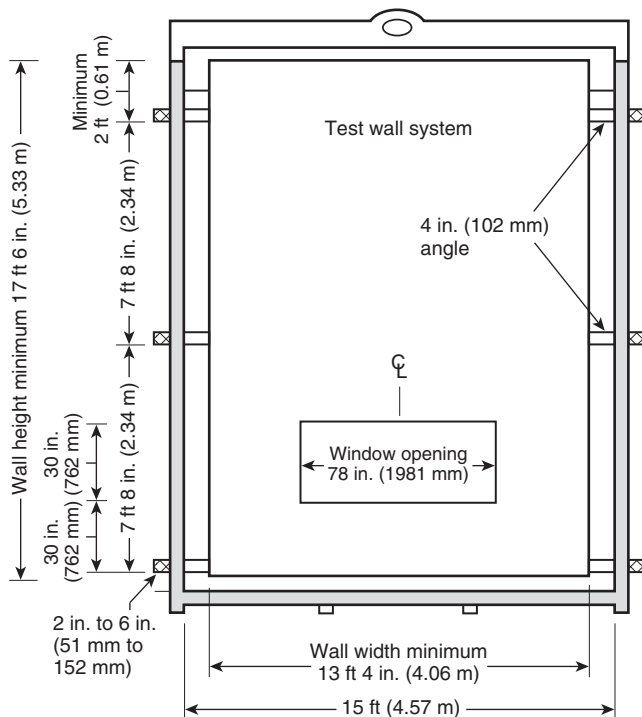


FIGURE 5.2(b) Front View of Test Specimen in Movable Test Frame (not to scale).

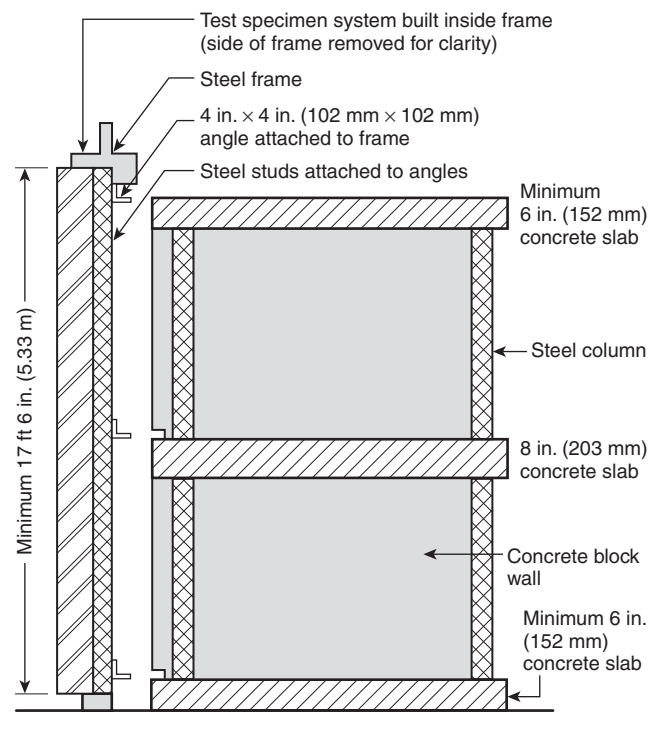


FIGURE 5.2(c) Side View of Test Apparatus with Test Specimen in Movable Test Frame (not to scale).

5.7 Construction Details of Test Specimen.

5.7.1 General.

5.7.1.1 The test specimen shall be constructed and secured to the test frame or apparatus using fastening and construction details representative of actual field installations in accordance with the manufacturer's instructions.

5.7.1.2* Details of the construction of the test specimen shall be representative of actual field installations in accordance with the manufacturer's instructions.

5.7.1.3 The sides and the top of the wall shall be sealed with noncombustible material prior to the test unless complying with 5.7.1.4.

5.7.1.4 Where the top of the wall is not completely sealed in the actual design to be constructed, the assembly shall be tested that way.

5.7.1.5 The test assembly shall not have projections added to the wall that extend beyond the outer planar surface of the wall unless they are included in the same location as in the actual construction.

5.7.1.6* The framing system used to support the wall assembly that makes up the test specimen shall consist of steel studs or wood studs unless the construction is not intended to incorporate studs.

5.7.2 Joints and Seams.

5.7.2.1 Horizontal Joints and Seams.

5.7.2.1.1 At least one horizontal joint or seam in the exterior veneer extending the full width of the test specimen shall be installed in accordance with 5.7.2.1.2, 5.7.2.1.3, and 5.7.2.1.4.

5.7.2.1.2 The horizontal joint or seam shall be located between 1 ft (305 mm) and 3 ft (914 mm) above the top of the window opening unless otherwise permitted by 5.7.2.1.3 or 5.7.2.1.4.

5.7.2.1.3 The horizontal joint or seam shall not be required in the test assembly where one of the following criteria is met:

- (1) Where the exterior veneer is exterior insulation finish systems (EIFS)
- (2) Where the exterior veneer is $\frac{3}{4}$ in. (19 mm) thick or greater standard stucco veneer
- (3) Where the actual design of the wall assembly to be used in the field will not have any horizontal joints

5.7.2.1.4 Where the wall assembly being tested is a replication of the design to be used in the field and that design will not have a horizontal joint at the location specified in 5.7.2.1, the joint shall be located as per the design.

5.7.2.2 Vertical Joints and Seams.

5.7.2.2.1 At least one vertical joint or seam in the exterior veneer shall be installed in accordance with 5.7.2.2.2, 5.7.2.2.3, and 5.7.2.2.4.

5.7.2.2.2 The vertical joint or seam shall extend upward the full height of the exterior veneer from the top of the window

opening and be located within ± 12 in. (± 305 mm) of the window opening's center line unless otherwise permitted by 5.7.2.2.3 or 5.7.2.2.4.

5.7.2.2.3 The vertical joint or seam shall not be required in the test assembly where one of the following criteria is met:

- (1) Where the exterior veneer is exterior insulation finish systems (EIFS)
- (2) Where the exterior veneer is $\frac{3}{4}$ in. (19 mm) thick or greater standard stucco veneer
- (3) Where the actual design of the wall assembly to be used in the field will not have any vertical joints
- (4)* Where the actual design of the wall assembly to be used in the field will not have any continuous vertical joints

5.7.2.2.4 Where the wall assembly being tested is a replication of the design to be used in the field and that design will not have a vertical joint at the location specified in 5.7.2.2, the joint shall be located as per the design.

5.7.2.3* Where joints or seams are required by 5.7.2, the installation of the joints and seams shall be representative of actual field installations and shall be in accordance with the manufacturer's instructions.

5.7.3 Window Headers.

5.7.3.1 The window header, jambs, and sill shall be closed using aluminum sheet metal in accordance with 5.7.3.1.1 and 5.7.3.1.2.

5.7.3.1.1 The aluminum sheet metal shall conform to the following:

- (1) Be a maximum thickness of 0.04 in. (1 mm)
- (2) Provide a maximum 2 in. (51 mm) vertical leg on the interior face only
- (3) Be flush with the exterior face

5.7.3.1.2 Fasteners used to attach the aluminum sheet metal to the window opening framing shall be spaced a minimum of 6 in. (152 mm).

5.7.3.2 No material shall be used to fill air gap cavities, if any, or further cap the header, jambs, and sill area.

5.7.3.3 As an option to 5.7.3.1, the window opening construction used in the test shall represent construction details provided by the client and installed per the manufacturers' instructions.

5.7.3.4 The window opening details, including drawings and descriptions, shall be included in the test report per Chapter 11.

5.8 Curing Period. Prior to the fire test, the test specimen shall be cured as required by the manufacturer.

5.8.1 In the case of cementitious coatings or materials, not less than 28 days shall elapse from completion of construction of the test specimen to fire testing the test specimen.

5.8.2 During the curing period, the wall assemblies shall be protected from exposure to the weather.