Master Wall Inc.®
Building a Culture of Excellence

Technical Bulletin

Corporate: P.O. Box 397 • Fortson • Georgia • 31808 • 800-755-0825 • FAX 706-569-6704

MW# 103-200101

Topic: NFPA 285 Assemblies

Multi-story fire testing more commonly referenced as NFPA 285 are the line of assembly-specific testing where a fire starts in one room and then tries to burn up the exterior of the building. Systems and components must resist this form of fire and flame spread. Building codes require compliance to this test for building heights over 40 feet in height.

EIFS has had co comply with this requirement for several years and now other cladding materials and insulated assemblies are now required to pass these requirements as well. Initially testing was performed over specific assemblies and lately building officials have been recognizing other forms of compliance, such as a review by a fire engineer.

Individual Component Results

Master Wall® offers several individual products that are resistive to fire or tested as the only combustible product used in the assembly:

Product	Test	Results
Surface Burning Characteristics—Base Coat, Mesh and Finish	ASTM E84	Flame Spread = 0 Smoke Developed = 0
Surface Burning Characteristics—Rollershield	ASTM E84	Flame Spread = 5 Smoke Developed = 5
Combustibility	ASTM E136 Standard Test Method for Assessing Combustibility of Materials in a Vertical Tube Furnace at 750°C, Option A	Pass
Heat and Smoke Release Rates for Rollershield Air/Water Barrier	ASTM E1354, IBC Section 1403.5, Exception 2 Requirements, Peak Heat Release Rate <150 kWm2, Total Heat Release Rate <20 MJ/m2, Effective Heat of Combustion <18 MJ/kg	RS: Peak Heat Release Rate = 32 kWm2, Total Heat Release Rate = 3.6 MJ/m2, Effective Heat of Combustion = 2.5 MJ/kg, VB: Peak Heat Release Rate = 336 kWm2, Total Heat Release Rate = 8.8 MJ/m2, Effective Heat of Combustion = 9.3 MJ/kg

Master Wall Inc.®
Building a Culture of Excellence

Technical Bulletin

Corporate: P.O. Box 397 • Fortson • Georgia • 31808 • 800-755-0825 • FAX 706-569-6704

MW# 103-200101

Topic: NFPA 285 Assemblies

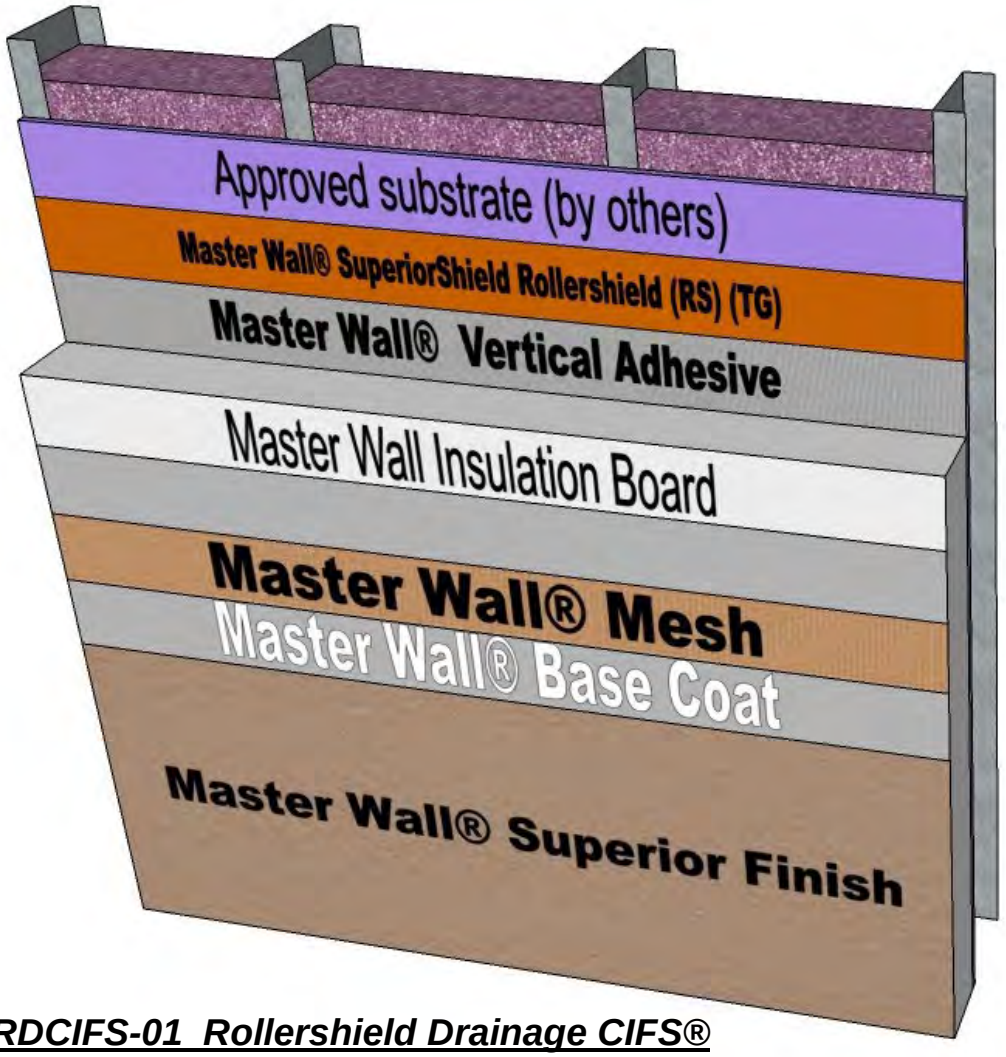
Attached are some common assemblies of our standard systems and those with various forms of insulation. These can vary depending upon individual components and review of the local building official. If you have any specific assemblies, please contact us at 800-755-0825 or tech@masterwall.com.

Master Wall Inc.
Building a Culture of Excellence

System Detail

Wall Assembly Components

- Interior Drywall, 5/8” Type X
- Metal Framing, 18ga C-studs max. 24” o.c.
- Insulation (optional), Fiberglass Batt (faced/unfaced) or any other noncombustible such as mineral wool
- ASTM C1177 Exterior Sheathing, 5/8” thick
- **Rollershield Air/Water Barrier**
- **Master Wall® Adhesive**
- **Master Wall® Insulation Board, max 4” thick**
- **Master Wall Base Coat**
- **Master Wall Reinforcing Mesh**
- **Superior Finish**



Wall System Reference

- IAPMO UES ER-0433

NFPA-RDCIFS-01 Rollershield Drainage CIFS®

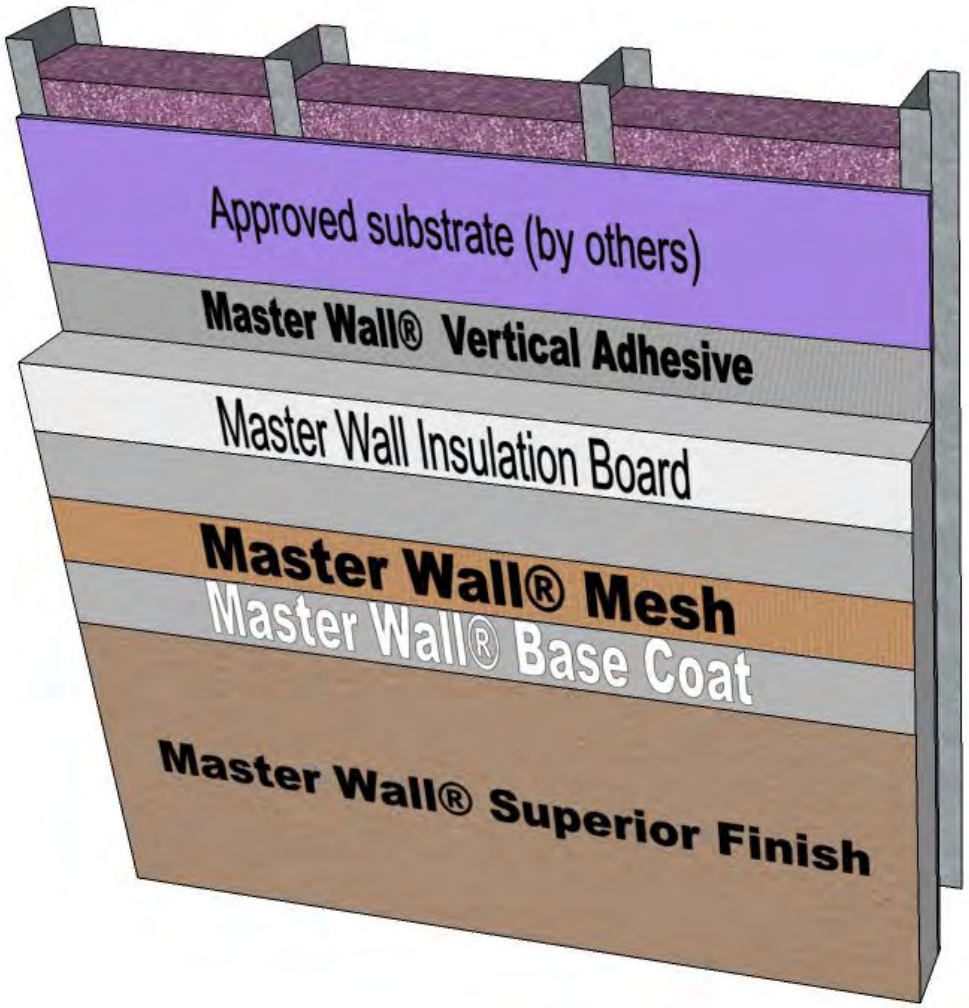
These drawings relay the conceptual conditions of Master Wall® Systems and are not the construction drawings. Ultimately the design and detailing of an entire wall system is the responsibility of a professional. These details will guide the design professional in the use of Master Wall® Products. Master Wall disclaims design, warranty or construction intent or responsibility. Bold or Brand Name = Master Wall® Product.

Master Wall Inc.
Building a Culture of Excellence

System Detail

Wall Assembly Components

- Interior Drywall, 5/8” Type X
- Metal Framing, 18ga C-studs max. 24” o.c.
- Insulation (optional), Fiberglass Batt (faced/unfaced) or any other noncombustible such as mineral wool
- Type X Exterior Sheathing, 1/2” thick
- **Rollershield Air/Water Barrier**
- **Master Wall® Adhesive**
- **Master Wall® Insulation Board, max 4” thick**
- **Master Wall Base Coat**
- **Master Wall Reinforcing Mesh**
- **Superior Finish**



Wall System Reference

- IAPMO UES ER-0433

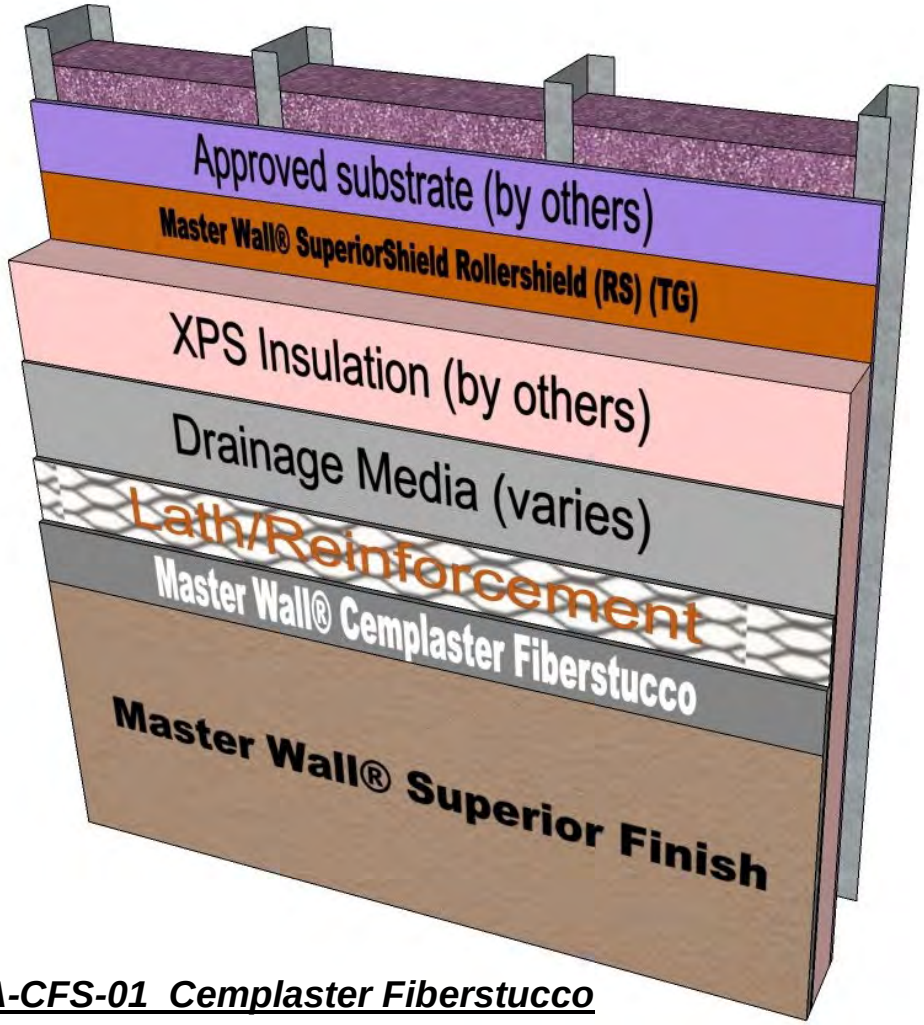
NFPA-AFEIFS-01 Aggre-flex EIFS

Master Wall Inc.
Building a Culture of Excellence

System Detail

Wall Assembly Components

- Interior Drywall, 5/8" Type X
- Metal Framing, 18ga C-studs max. 24" o.c.
- Insulation (optional), Fiberglass Batt (faced/unfaced) or any other noncombustible such as mineral wool
- Type X Exterior Sheathing, 1/2" thick
- Noncombustible substrates such as FRT wood, masonry, or concrete (see individual reports)
- **Rollershield Air/Water Barrier** or other water barrier
- ASTM D226 water barrier or slip sheet as needed
- Insulation Board, XPS or Polyisocyanurate, up to 2" thick (optional)
- **Drainage Media, Keene® 020-1**
- **Cemplaster Fiberstucco, minimum ½" thick**
- **Superior Finish**



Wall System Reference

- Hunter Panels NFPA 285 Assembly Brochures
- Keene® Drainage Mat NFPA 285 Assemblies

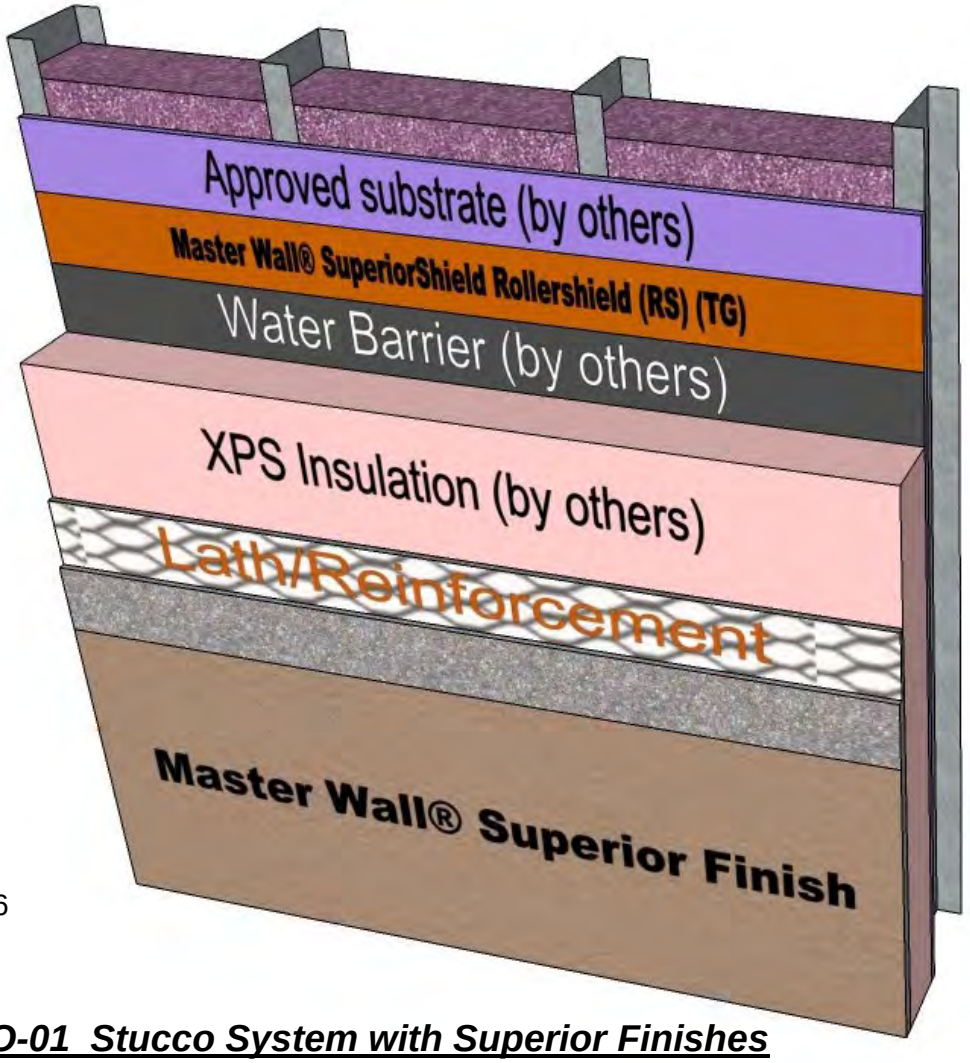
NFPA-CFS-01 Cemplaster Fiberstucco

Master Wall Inc.
Building a Culture of Excellence

System Detail

Wall Assembly Components

- Interior Drywall, 5/8” Type X
- Metal Framing, 18ga C-studs max. 24” o.c.
- Insulation (optional), Fiberglass Batt (faced/unfaced) or any other noncombustible such as mineral wool
- Type X Exterior Sheathing, 1/2” thick
- Noncombustible substrates such as FRT wood, masonry or concrete (see individual reports)
- **Rollershield Air/Water Barrier** or other water barrier
- ASTM D226 water barrier or slip sheet as needed
- Insulation Board, XPS or Polyisocyanurate, up to 2” thick
- Stucco and Lath, typically 7/8” thick (1/2” with Hunter Panel Polyisocyanurate)
- **Superior Finish**



Wall System Reference

- DOW® NFPA 285 Assembly Brochure
- Hunter Panels NFPA 285 Assembly Brochures
- Owens Corning® NFPA 285 Assembly Brochure
- IBC 2018 Chapters 25 and 26

NFPA-STUCCO-01 Stucco System with Superior Finishes