

DESIGN AND CONSTRUCTION GUIDELINES AND STANDARDS

DIVISION 8 • OPENINGS

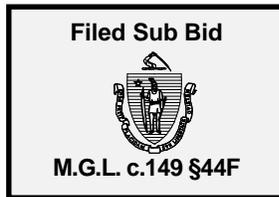
08 40 00 • ENTRANCES AND STOREFRONT

SECTION INCLUDES

Storefront
Insulated Panels
Glass and Glazing

RELATED SECTIONS

06 10 00 Rough Carpentry
06 20 00 Finish Carpentry
07 90 00 Sealants
08 10 00 Doors and Frames
08 70 00 Hardware
26 00 00 Electrical



*When furnished and installed separately from the storefront frame, glass and glazing is a stipulated filed sub-bid category under M.G.L. Chapter 149, §44F. If the cumulative estimated value of the work in this section **exceeds \$20,000** and the projects total cost is over \$100,000, it triggers the filed sub-bid requirement and must be specified in a separate filed sub-bid section of the Specifications.*

TECHNICAL STANDARDS

AAMA – American Architectural Manufacturers Association

www.aamanet.org - source of performance standards, product certification and educational programs for the window, door and skylight industry.

AWS – American Welding Society www.aws.org D 1.2 “Structural

Welding Code-Aluminum” This code contains the requirements for fabricating and erecting welded aluminum structures.

NAAMM – National Association of Architectural Metal Manufacturers

www.naamm.org - “Metal Finishes Manual for Architectural and Metal Products” Storefront

NABS – National Association of Building Sciences www.nibs.org

publishes the “Building Envelope Design Guide” offering design tips for exterior entrances (www.wbdg.org/design/env_fenestration_doors.php).

MATERIALS

Storefront entrance doors should be equal in quality to Kawneer medium style 350. Narrow style doors are not acceptable.

For heavily used doors consider balanced doors and concealed hinges for easier operation.

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Doors should have a minimum 14 inch high bottom rail to serve as a kickplate.



Include insulated panels in this section of the Specifications.

If the glass is installed in the door by the door manufacturer and arrives as one unit to the site, glass and glazing should be specified in the door section of the Specifications.

Glazing shall be high performance with low-E coating. Consult building code for locations where tempered glass and/or high impact glass may be required.

All extrusions shall be factory fabricated, and frames factory assembled where possible. Investigate use of recycled content in fabrication of extrusions. Extrusions containing post-consumer recycled materials generally accept painted finishes, but have experienced appearance and durability problems with anodized finishes.

DESIGN

Single leaf doors are sufficient to accommodate foot traffic in most applications; double doors are not as energy efficient.

Include vestibules and awnings where possible to protect the entrance against wind and rain. Otherwise, recess the door assembly as much as possible from building face, provide projecting head flashings or drips, and utilize projecting eaves to shield doors from the weather.



Consider warm air curtain ventilation with thermostatic controls coordinated with the building thermostat to reduce heat loss at locations without vestibules.

Verify the units of exit width required by the building occupancy.

Meet ADA requirements for door width, operating force, threshold design, and space requirements for door location, etc.

At flush thresholds, utilize threshold trench drains, sill and pan flashing, waterproofing membranes, water resistant vestibule floor finishes and other design devices to mitigate the entry of water.

Acceptable manufacturers of storefront and doors include ~

EFCO Corporation
Kawneer
Vistawall Architectural Products.

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Evaluate the performance of the complete door/glass assembly as well as individual components of the system when considering product substitutions.

STOREFRONT



Require shop drawings for aluminum-framed systems that include plans, elevations, sections, details, and attachments to other work, as well as ~ .

- structural analysis data signed and sealed by a qualified professional engineer registered in the Commonwealth of Massachusetts responsible for their preparation.
- structural analysis of story drift and deflection from anticipated live loads, and determination whether head receptors are required.
- details of provisions for system expansion and contraction and for draining moisture occurring within the system to the exterior.
- comparative heat loss calculations where insulated panels are being considered as substitutions for glazing in building retrofits.
- for entrances, include hardware schedule and indicate operating force, operating hardware types, functions, quantities, and locations.
- storefront and entrance systems should be constructed with thermal breaks and weatherstripping to reduce heat loss and condensation.

If steel reinforcement is required specify galvanizing or corrosion-resistant primer to protect against galvanic action.

METAL PANELS

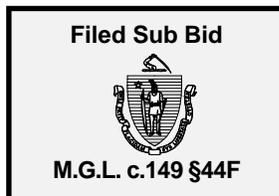
Specify insulated metal panels to be glazed into the storefront units by the storefront contractor. Include the R or U value of the metal panel units.

FINISHES

Specify painted or anodized finish for frames. Factory applied fluoropolymer thermoset coatings offer good resistance where exposed to coastal environments or deicing salts

GLASS AND GLAZING

Require shop drawings for each type of glass and glazing material including proof that units as glazed for this Project meet or exceed Code requirements for the following:~ U-value, Solar heat-gain coefficient, wind impact.



*On a project costing more than \$100,000, calculate the value for site **installed glass and glazing** to determine if the value **exceeds the \$20,000** threshold for a filed sub-bid. Doors are generally provided to the site pre-glazed and are not part of the filed sub-bid calculation.*

Operable windows may be provided to the site pre-glazed or site-glazed. Preglazed windows are not considered in the cost calculation mentioned above