



Architects are always challenged with providing strong and durable, yet economical buildings. This is especially true when the building being designed represents fire safety for the community. Designing the new East Providence Fire Station was no different. Architects from The Providence Partnership selected brick, stone and cement stucco masonry as the materials of choice for the exterior veneer because of their strength, durability, and reputation as the safest building materials in the industry.

The architects incorporated all three materials into a unified design. Cast stone masonry was used to form the base of

[continued]

FIRE STATION NO. 3 **East Providence, Rhode Island**

OWNER: City of East Providence

ARCHITECT: The Providence Partnership
Providence, Rhode Island

STRUCTURAL ENGINEER: Odeh Engineers, Inc.
North Providence, Rhode Island

GENERAL CONTRACTOR: DePasquale Builders
Warwick, Rhode Island

MASON CONTRACTOR: Spino Brothers, Inc.
Smithfield, Rhode Island

LOCAL UNION: International Union of Bricklayers and
Allied Craftworkers, Local #1, Rhode Island

PROJECT COST: \$2,700,000

MASONRY: 22,000 modular brick, 500 pieces of decorative cast stone, 400 linear feet of cast stone sills, 4,000 CMU

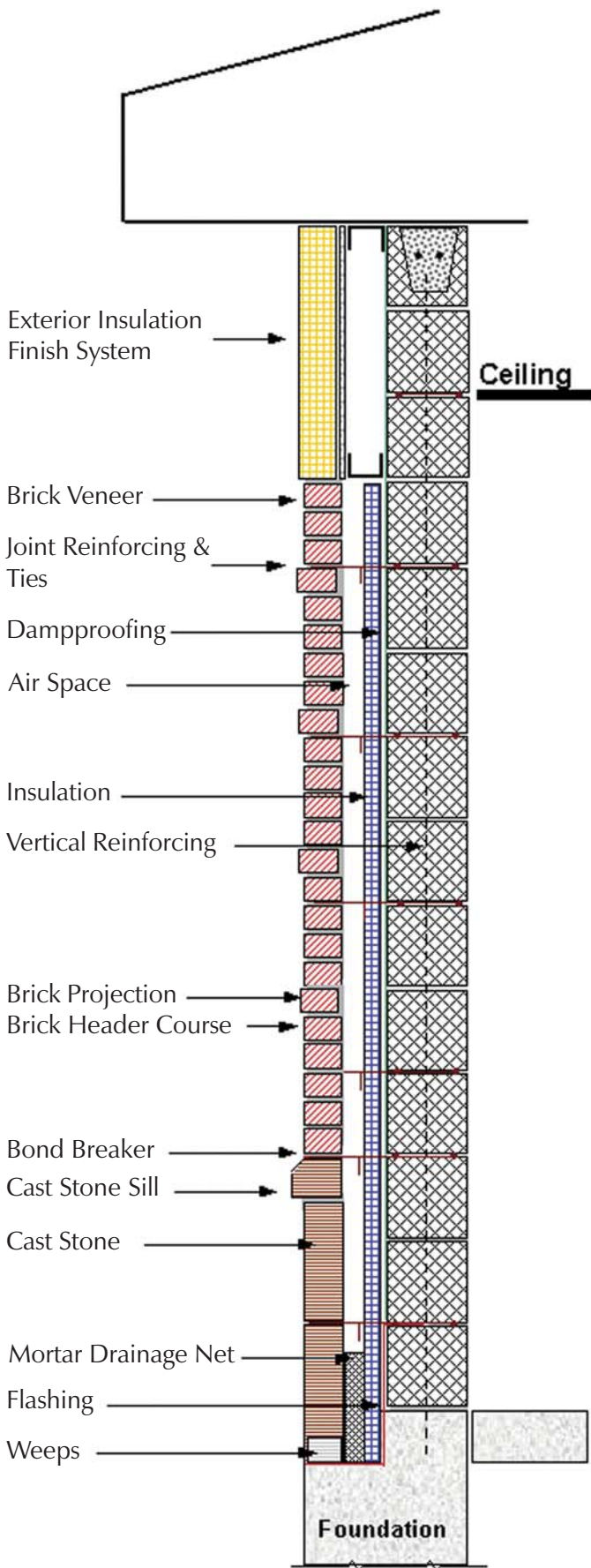
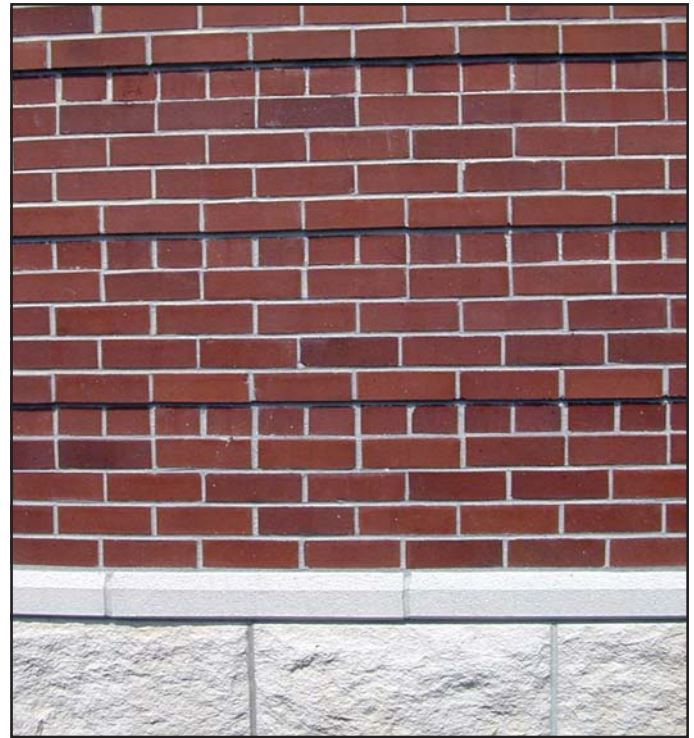


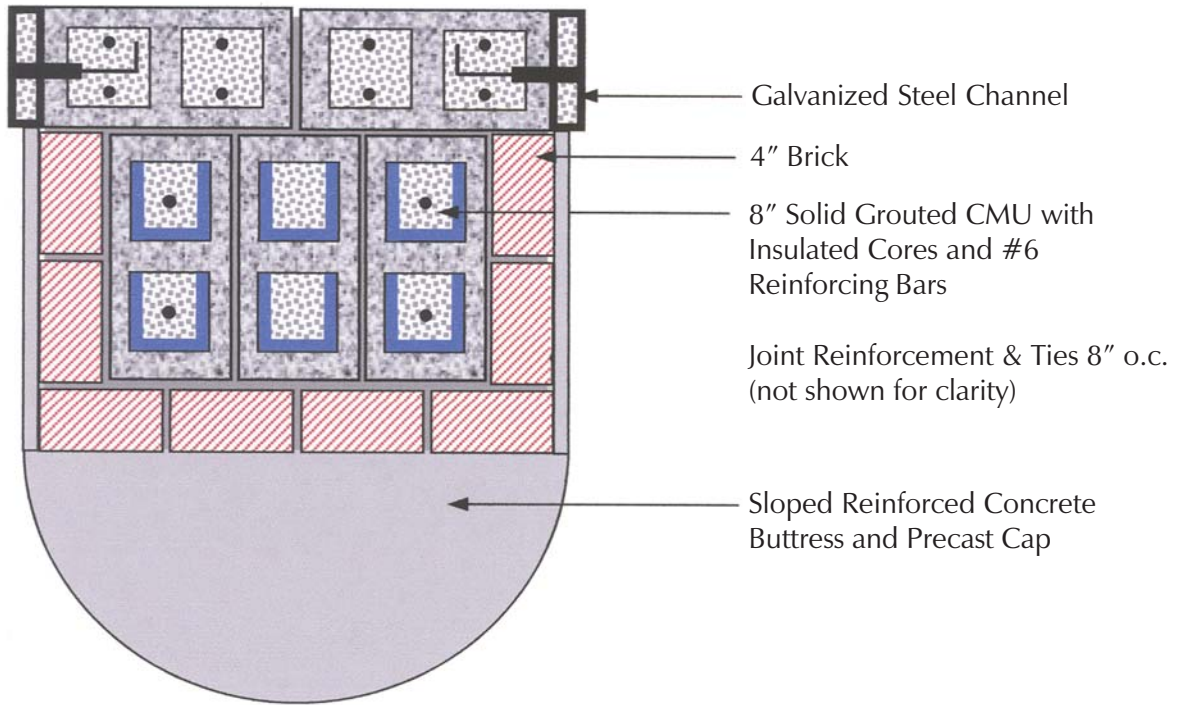
Figure 1
Exterior Wall Section



the building, and a cast stone sill was designed to create a transition from the stone units to the brick veneer. The brick veneer was comprised of a running bond with a header accent band and a projecting band course. The headers were aligned with the brick head joints. Brick piers and cement stucco were also used as design elements to provide aesthetic appeal. Tall brick piers with stone bases were built to support the high bay structure housing the fire trucks, and decorative columns and cast stone walls were designed to support the canopies at the station entrances. Loadbearing concrete masonry walls and piers were used to support the roof trusses and provide shear resistance for the large open truck bays.

Composite Wall Piers were constructed of 4" brick and 8" insulated, solid grouted CMU. The CMU were laid in an interlocking pattern and reinforced with #6 bars. Steel channels were grouted into the ends of the CMU to protect the piers from possible collision damage. The masonry piers provided the

Figure 2 - Composite Wall Piers



necessary mass to support the structure above the sectional overhead doors, while providing aesthetic relief to the North and South elevations. Matching precast caps covered the buttresses.

The architects worked with structural engineer, David Odeh of Odeh Engineers, to assist in keeping down building costs. David and Mike Spino of Spino Brothers Mason Contractors worked closely with DePasquale Builders to ensure a quality masonry project.





Masonry was the natural choice for the East Providence Fire Station, as it not only meets the necessary structural requirements, but provides durability and fire resistance as well.

For additional information on the project detailed in this IMI Case Study, contact:

Richard Filloramo, Area Director of Market Development and Technical Services
IMI New England Region
225 Grandview Drive, Glastonbury, CT 06033
Ph: (860) 659-5813 Fax: (860) 659-5884 rfilloramo@imiweb.org

© IMI 2003. All Rights Reserved.



**International
Masonry Institute**

42 East Street, Annapolis, MD 21401
800-IMI-0988
Fax 301-261-2855
www.imiweb.org

The International Masonry Institute is a labor/management cooperative serving the interests of the International Union of Bricklayers and Allied Craftworkers and the contractors who employ its members.

The International Masonry Institute presents programs in four broad categories: apprenticeship and training, market development and technical services, research and development, and labor/management relations.

To reach the IMI office nearest you in North America, call 800.464.0988.