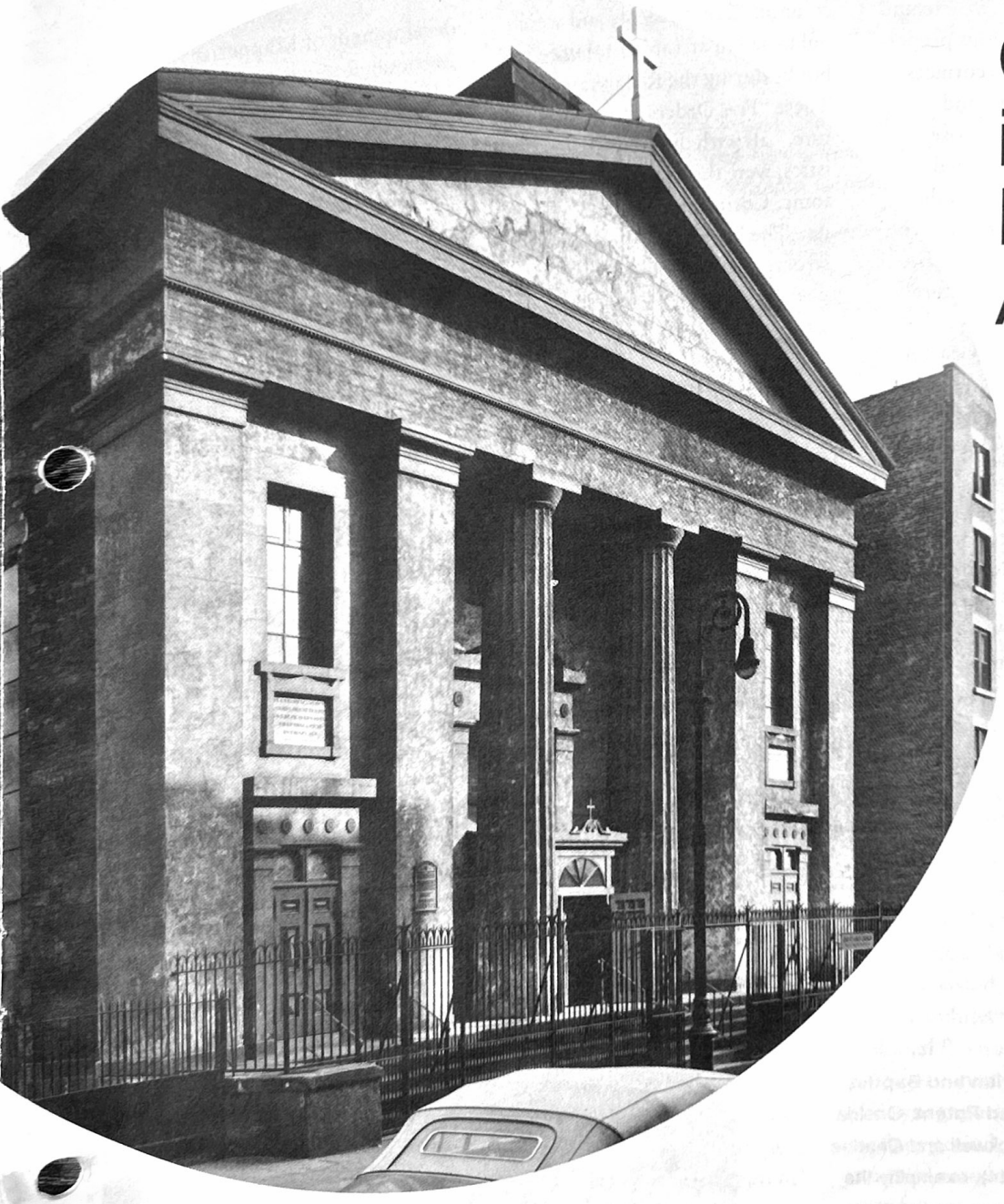
New York Landmarks Conservancy

Common Bond



Classicism in American Religious Architecture

Also in this Issue:

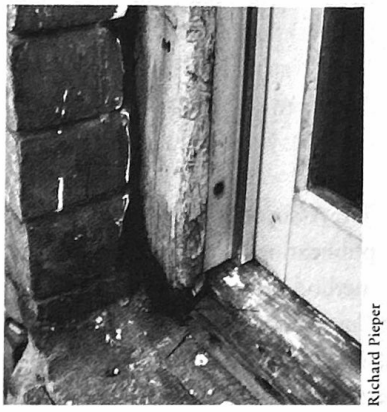
- Cemetery Preservation
- Roof Drainage Systems
- Caulking and Weather Stripping
- Fundraising
- Resources
- Financial and Technical Assistance

Volume 11, No. 2/September, 1995

Technical Tips

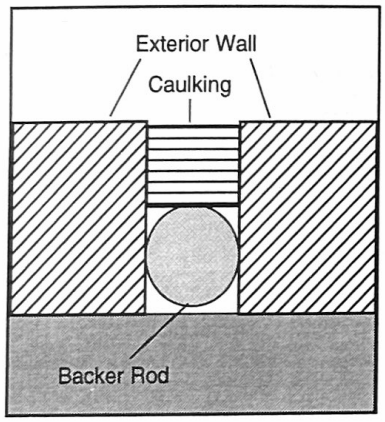
CAULKING AND WEATHER STRIPPING

Joints between different materials and building components move as the materials expand and contract because of changes in temperature and moisture content. These joints are potential entry points for water which can cause wood deterioration, peeling paint, or interior structural damage. **Caulking** (also referred to as sealant) is a compound used to fill joints and seams to make them watertight. A good caulk is durable, flexible, and resilient. Historically, caulks were made of oil-based white lead paste, sometimes backed with cotton or hemp rope. Modern caulks come in a myriad of formulations for specific applications. Latex and acrylic caulks can be painted, have excellent adhesion properties, and are suitable for use around low-movement joints on wooden door and window frames and trim. More expensive high-performance silicones come in limited colors but are often the best choice for high-movement joints on walls, metals, and glass; some types can be painted. Caulks are also used on masonry joints and many interior applications.



Richard Pieper

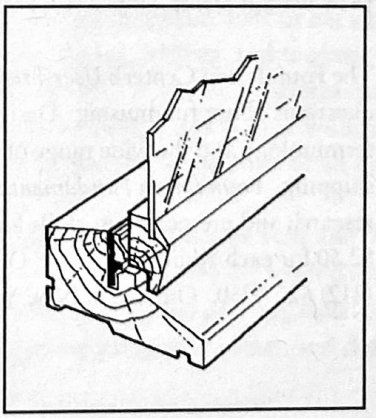
Loose or missing caulking where a wood window frame meets a masonry wall may be a major cause of air infiltration.



Back-up materials are used to control the depth and shape of caulking.

On exterior walls, look for missing, split, or deteriorated caulking at carpentry joints and seams, especially at corners and around trim and window and door frames. Scrape out existing compound and residues, and coat porous surfaces with primer before applying new caulking. Proper selection and installation of caulks are essential for good performance. Pack joints larger than 1/2" wide by 1/2" deep with back-up material -- usually polyethylene foam rods that are held in place by compression. Joints that are sheltered from water penetration, like the underside of clapboards, should be left unsealed to avoid moisture build-up in the wall cavity. Do not caulk drafty window sash shut -- use weather stripping instead.

Weather stripping around window sash can double energy efficiency at a low cost compared to window replacement. It reduces air, water, and noise infiltration as well as heat loss. For maximum effectiveness, ensure that it is installed correctly, with no breaks at the corners or anywhere else around the crack perimeter. Sliding seals are for moving parts; compression seals are for parts against stationary surfaces. Surface-mounted and recessed installations are available. The most durable types include interlocking metal strips, spring metal, or copolymer plastic strips, and extruded rubber and plastic profiles. Plastic foam and felt strips are inexpensive but have short life spans and are limited in use to horizontal surfaces.



Typical metal weather stripping includes interlocking metal strips as well as spring metal, which presses against a closed sash.