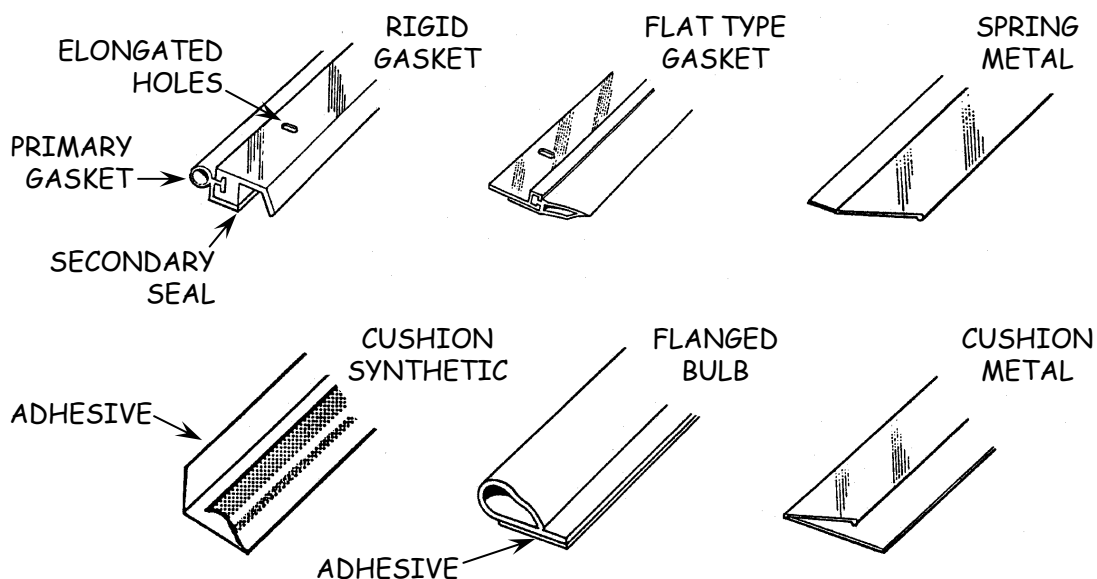


## WEATHERSTRIPPING STANDARDS

### 1. APPROVED MATERIALS FOR DOORS

- **Rigid Gasket (Aluminum Carrier)**
  - Solid extruded aluminum carrier 0.05" thick, minimum.
  - Pliable gasket of vinyl, thermoplastic elastomer (TPE), or silicone.
  - Carrier shall have elongated mounting holes, 9" OC maximum.
  - Secondary seal between carrier and mounting surface shall be a minimum of 1/8" wide and extend the full length of the carrier.
- **Spring and Cushion Metal**
  - Brass, bronze, or stainless steel only; aluminum not allowed.
- **Cushion Synthetic Pressure sensitive Door Gasketing**
  - Polypropylene, TPE, or silicone.
  - L-shaped stabilizer with self-adhesive backing.
- **Flanged Bulb (Compression Bulb)**
  - Pliable gasket of TPE or silicone.
  - Minimum 3/8" wide with self-adhesive stabilizer flange.
- **Round Tube**
  - Pliable gasket of TPE or silicone.
  - For use in compression applications only.



## Section 2

### 1. APPROVED MATERIALS FOR DOORS (cont'd)

#### - Foam Tape

- Shall be used only in compression applications; not allowed where shear/friction movement occurs.
- Closed Cell Foam Tape
  - Shall be UV-resistant with self-adhesive backing.
  - Acceptable for sealing entrance doors with metal jambs.
- Open Cell Foam Tape
  - Shall have self-adhesive backing.
  - Cooler vent covers and attic access only.

#### - V-shape Fin Seal

- Durable V-seal of silicone or equivalent material, with stabilizer flange and adhesive backing (different from "Vinyl V-strip").

#### - Replacement Kerf-in Bulb and Foam

- Properly sized for retaining channel.

#### - Replacement Pile

- Fin seal type when feasible.
- Properly sized for retaining channel; fin seal recommended.

#### - Corner Pads

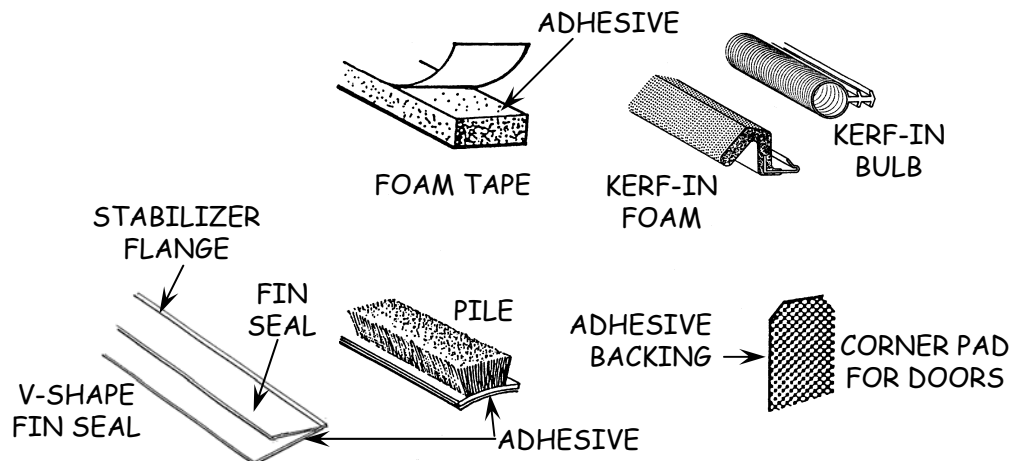
- Pile pad with self-adhesive backing.

#### - Mechanical Attachments

- All screws, nails, staples, and other fasteners shall be metal and noncorrosive.
- Shall be properly-sized for each application.

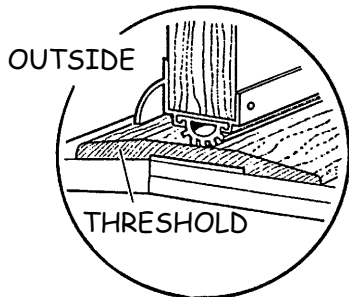
#### - Pressure-Sensitive Adhesive

- Minimum adhesion strength of 65 oz. /in.
- Required on all self-adhesive products.



1. APPROVED MATERIALS **FOR DOORS** (cont'd)

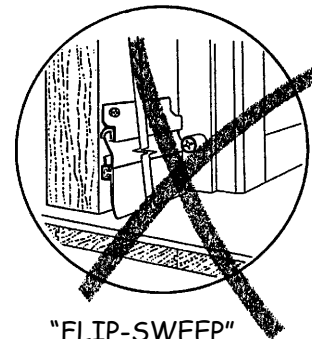
- **Door Shoe, Automatic Door Bottom, Stationary Sweep, Metal Saddle Threshold, and Bumper Threshold**
  - Solid aluminum extrusions.
  - Gaskets: pliable vinyl, TPE, silicone, or equivalent.
- **All Door Shoes, Door Bottoms, and Sweeps**
  - Solid aluminum carrier 0.05" nominal thickness or greater, with elongated mounting holes 9" OC maximum.
- **Automatic Door Bottom**
  - Retractable type only; flip sweep not allowed.
- **Stationary Sweep**
  - Pliable gasket of vinyl or silicone attached to an extruded aluminum carrier.
  - Shall have elongated mounting holes, 9" OC maximum.
- **Metal Saddle Threshold**
  - All-aluminum only; "gasket saddle" with vinyl top gasket not allowed.
  - Shall have floor-sealer gasket of vinyl, TPE, or silicone.
- **Wooden Saddle Threshold**
  - Hardwood only; "gasket saddle" with vinyl top gasket not allowed.



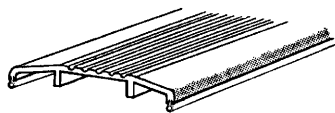
U-TYPE DOOR SHOE  
OVER SADDLE THRESHOLD



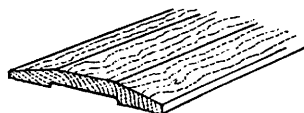
RETRACTABLE  
BOTTOM



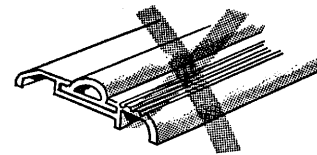
"FLIP-SWEEP"  
DOOR BOTTOM



ALUMINUM



HARDWOOD



VINYL GASKET  
THRESHOLD

## Section 2

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### 2. WARRANTY

- Minimum 3 year warranty required on all materials.

### 3. ENTRANCE DOOR JAMBS

#### - Materials for Wooden Door Jambs

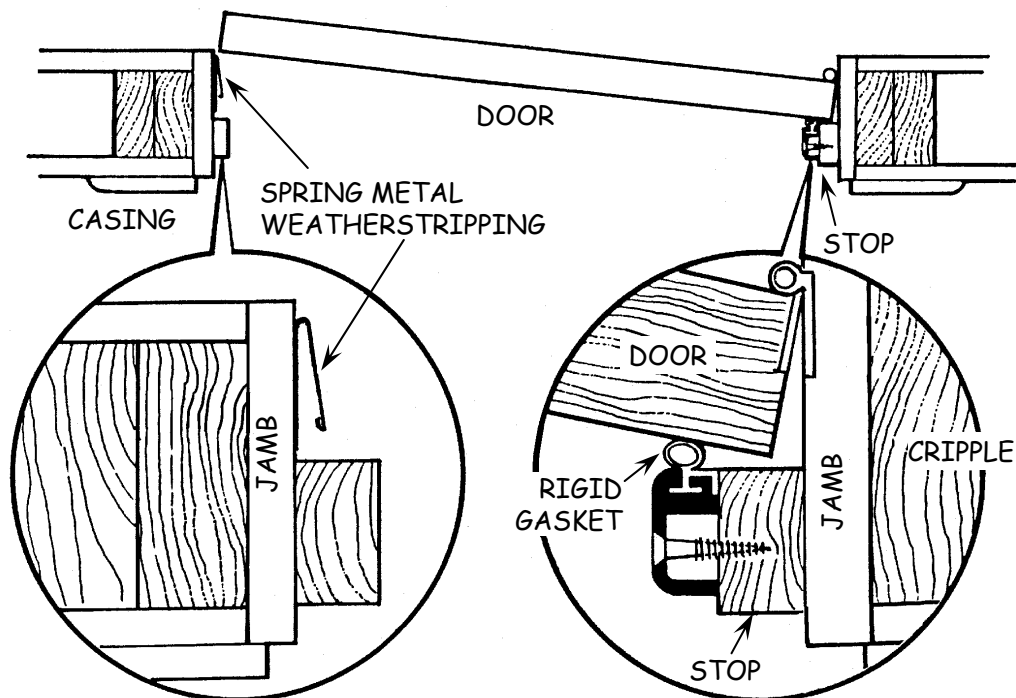
- Rigid Gasket.
- Spring or Cushion Metal.
- Replacement Kerf-in Bulb and Foam.

#### - Materials for Metal Door Jambs

- Rigid Gasket.
- Cushion Synthetic.
- Flanged Bulb.
- Closed Cell Foam.

#### - Metal or Wooden Jamb with Fire Rating Over 20 Minutes

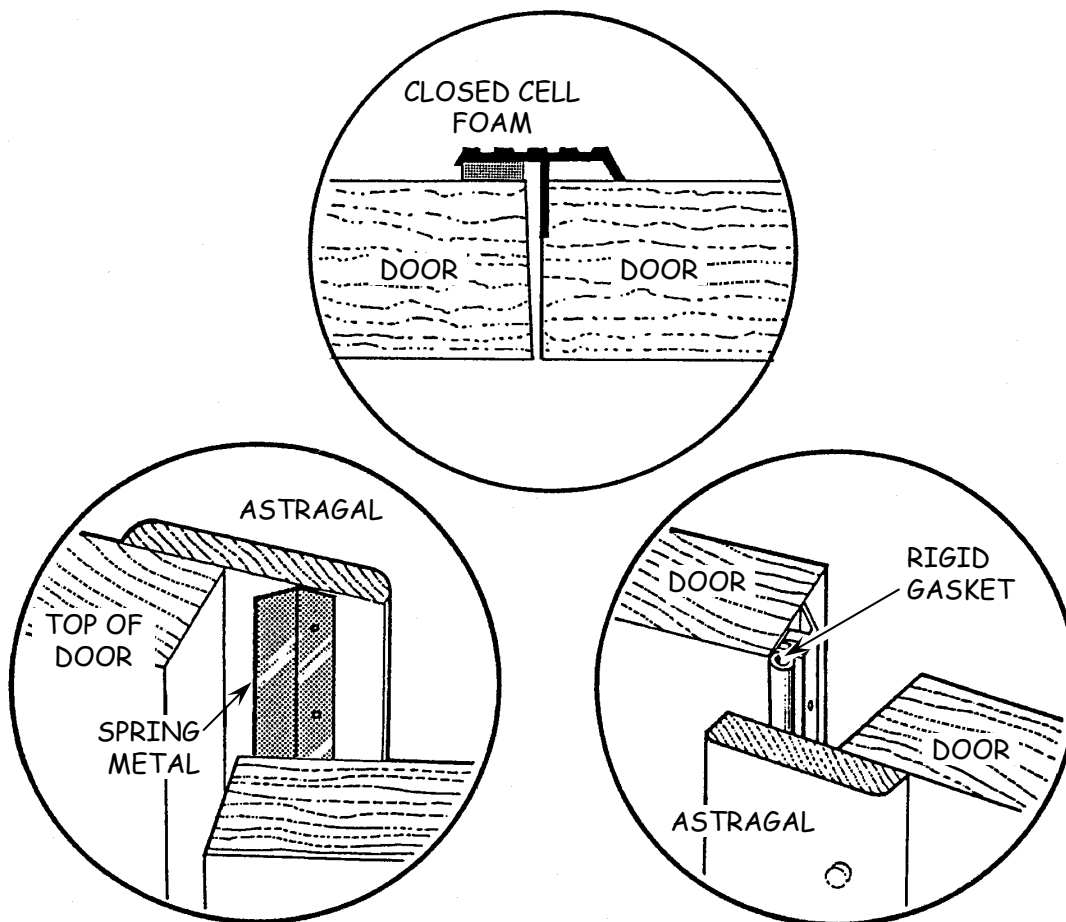
- Shall not be weatherstripped.



4. ENTRANCE **DOUBLE DOORS**DOOR ASTRAGAL

- **Astragal** Weatherstripping Materials

- Rigid Gasket.
- Spring or Cushion Metal.
- Cushion Synthetic.
- Flanged Bulb.
- Replacement Kerf-in Bulb and Foam.
- Closed Cell Foam and Compression Bulb (in compression only).



## Section 2

### 5. EXISTING WEATHERSTRIPPING

#### ~~-Doors With Factory-Installed Weatherstripping~~

- ~~• Includes interlock and kerf-in bulb and magnetic types.~~
- ~~• Removal of Existing weatherstripping not required if existing material does not interfere with proper operation of the door and the new weatherstripping, and if the Program P&P does not specify removal of such material.~~
- ~~• Retrofit weatherstripping shall be added, as needed, to complete a proper seal around the door.~~

#### ~~-All Other Doors~~

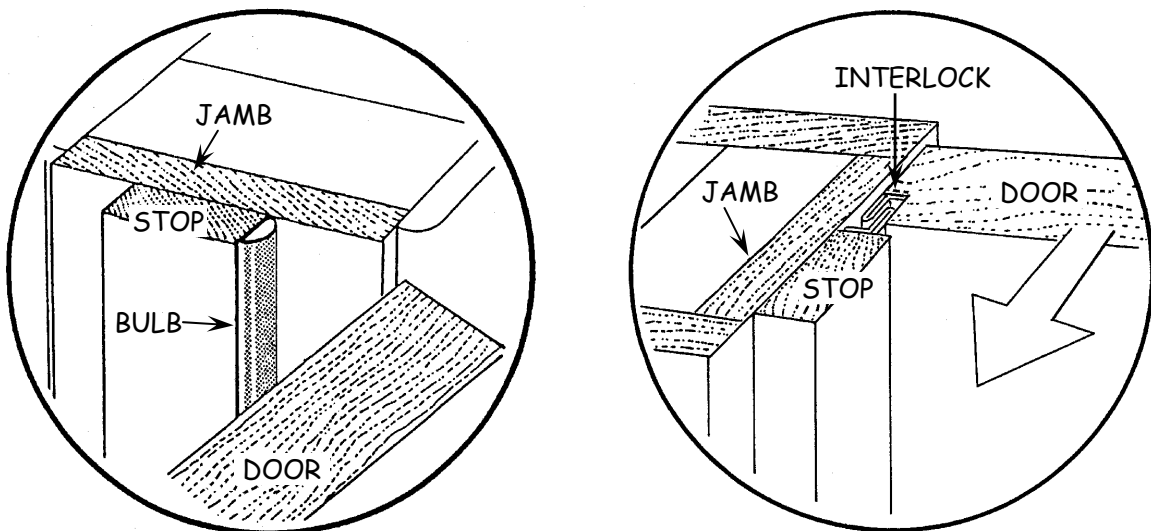
- ~~• Retrofit weatherstripping shall not be added until faulty weatherstripping is removed.~~

### 5. SAFETY PRACTICES

#### - When metal stock is cut or trimmed:

- Burs shall be removed.
- Sharp edges and ends (e.g., on rain drips) shall be rounded and smoothed.

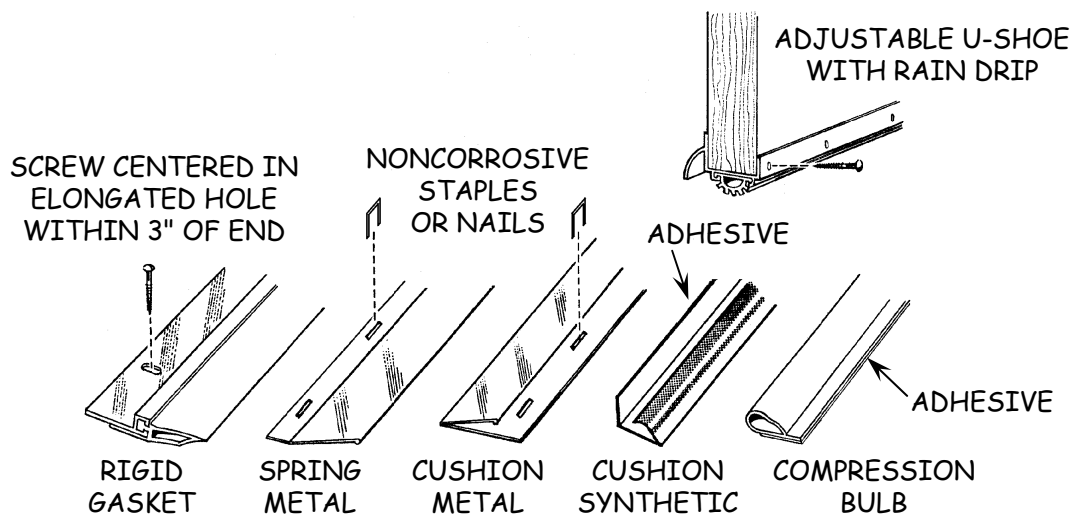
~~-Lead-safe weatherization practices shall be employed when working with pre-1979 painted materials (see Item 14).~~



REMOVAL NOT REQUIRED FOR  
FACTORY INSTALLED WEATHERSTRIPPING  
SUCH AS INTERLOCK AND BULB TYPES

6. ATTACHMENT

- **All Types**
  - Manufacturer's instructions shall be followed.
- **Rigid Gasket, Shoes and Sweeps**
  - Shall be adjustable and attached with screws located within 3" of each end and at intervals not exceeding 9".
- **Spring and Cushion Metal**
  - Mechanical attachments (e.g., 1/4" x 3/8" staples) shall be placed within 1" of each end and at intervals not exceeding 4".
- **Cushion Synthetic, Flanged Bulb, and Foam Tape**
  - Mounting surface shall be thoroughly cleaned.
  - Existing adhesive residue shall be removed with solvent.
- **Corner Pads**
  - Adhesive backing shall be supplemented with staples, tacks, etc. which penetrate wood 3/8" minimum.
- **Replacement pile**
  - Shall fit snugly into retaining channel.
- **Mechanical Attachment**
  - Rigid gaskets, shoes and sweeps shall be attached with metal pan head Phillips screws.
    - Head diameter shall be no larger than 2 times the width of the elongated mounting hole.
    - Manufacturer-supplied Phillips-head screws may be used.



## Section 2

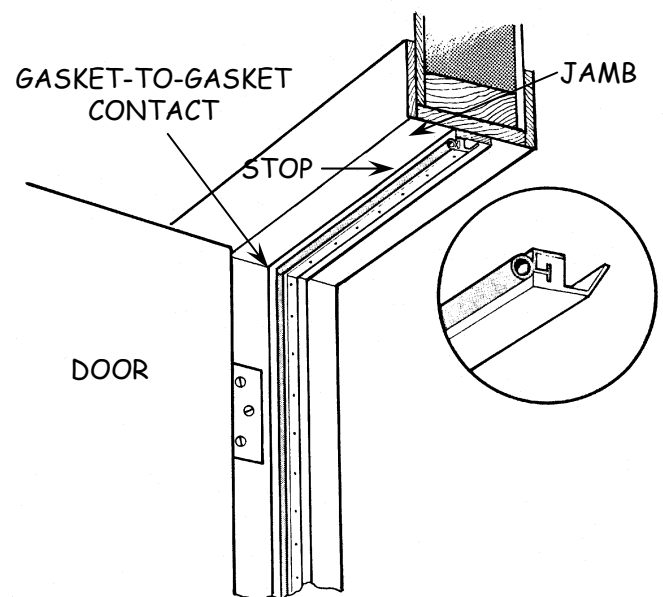
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### 7. FIRE-RATED DOORS AND JAMBS

- **All Listed/Labeled Metal and Wooden Doors and Jambs with a Fire Rating of 20 Minutes or Greater**
  - Only fire-rated weatherstripping meeting the following requirements may be installed.
    - Weatherstripping shall be UL Classified fire-rated (e.g., with adhesive backing, per UL 10B/10C and/or NFPA 80), and
    - The material and installation shall meet specifications and Listing requirements of the door and jamb manufacturers, with written documentation placed in job file.
  - Screws shall not be installed in the door or jamb.

### 8. DOOR JAMB WEATHERSTRIPPING INSTALLATION

- **All Materials**
  - Corners and joints shall be trimmed to provide a continuous barrier to infiltration without gaps between adjoining legs.
- **Rigid Gasket**
  - Screws shall be positioned to allow for adjustment of carrier.
  - Each leg shall be one continuous strip.
  - **Gasket Contact**
    - Gasket-to-gasket contact required at corners.
    - Gasket-to-threshold contact required at bottom.
    - Contact shall not be achieved by the addition of caulk.
- **Spring and Cushion Metal, and Cushion Synthetic**
  - Sealing surfaces shall be mitered at the corners.
  - Ends shall be overlapped when possible to provide a seal when compressed.
- **Foam Tape and Flanged Bulb**
  - Material shall be joined at corners, and mitered as needed to seal joint.; miter joint recommended.





## 9. THRESHOLD INSTALLATION

### - All Thresholds

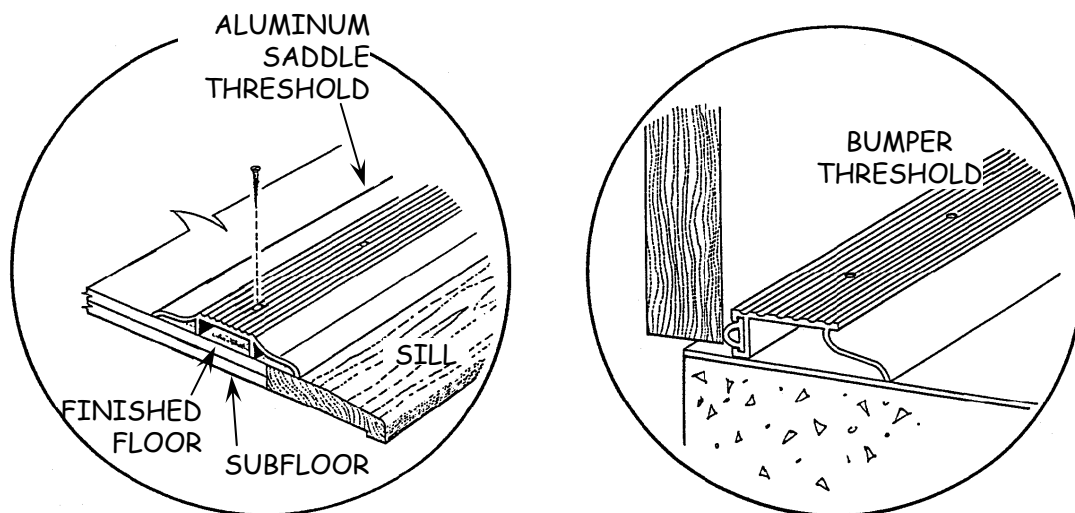
- Shall be installed full length; splicing not allowed.
- Shall extend above the interior finished floor a maximum of 1", or 1/2" if any occupant is physically handicapped.
- Ends of threshold shall be cut to match the contour of the jamb (i.e., notched to fit snugly around jamb, stop, trim, etc.).
- The perimeter shall be sealed (e.g., by caulking the ends and, where applicable, the front and back edges).
- Saddle threshold shall be installed where possible.

### - Metal Thresholds

- Saddle threshold shall have floor-sealer gaskets in place.
- A bumper threshold may be used on outswinging door for which a threshold-and-shoe combination cannot be feasibly installed (e.g., when closed door does not cover floor surface).
- Threshold shall be permanently screwed in place.

### - Wooden Saddle Thresholds

- Threshold shall be sealed to the floor with glue, or elastomeric caulk, or floor-sealer gasketing.
- Threshold shall be mechanically fastened with nails or screws.
- Nails shall be countersunk and holes filled with exterior grade filler/putty.



## Section 2

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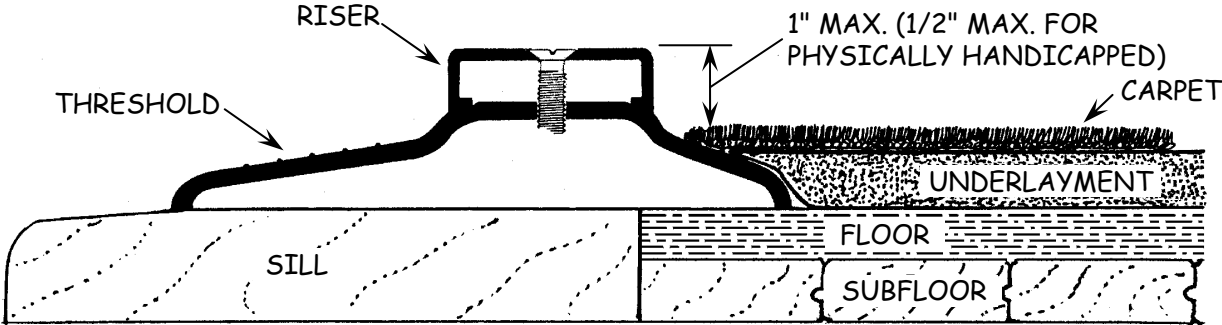
### 9. THRESHOLD INSTALLATION (cont'd)

- **Low-Profile Thresholds (Maximum 1/4" Height)**
  - May be installed at interior doors without existing threshold, such as: interior-Located Doors Without Existing Threshold
  - Threshold with maximum 1/4" height ("low-profile" aluminum threshold) may be installed in the following locations:
    - At a step-down from the living space to an unconditioned area (e.g., kitchen to garage).
    - On a floor continuing flat into an unconditioned area (e.g., from kitchen into utility room or, in an apartment complex, from the living area into an unheated common hallway).
  - May be installed to replace an existing defective low-profile threshold.

### 10. THRESHOLD RISERS AND ELEVATORS/SHIMS

- **All Thresholds**
    - When a riser is installed on top of an existing threshold: ~~when no other treatment is feasible.~~
      - Riser It shall be installed full length; splicing not allowed.
      - Only a commercially-Available riser It must be compatible with the threshold ~~shall be used.~~
      - Field-fabricated, when allowed, shall:
        - Be made of solid stock that: (a) equals threshold length, (b) is 80% to 100% of the width of the top surface, and (c) has evenly rounded or beveled top edges.
        - Have a minimum of 4 countersunk holes, located within 3" of each end and equally spaced in the field.
    - Top of riser shall extend above the interior finished floor a maximum of 1", or 1/2" if any occupant is physically handicapped uses a wheelchair or walker.
    - Riser shall be securely attached with countersunk screws.
  - **Metal Riser material shall be compatible with threshold**
    - Metal risers ~~shall be used on~~ metal thresholds, and
    - Hardwood risers on wooden thresholds.
- Wooden Thresholds**
- ~~Hardwood risers shall be used.~~

**(Graphic on next page)**

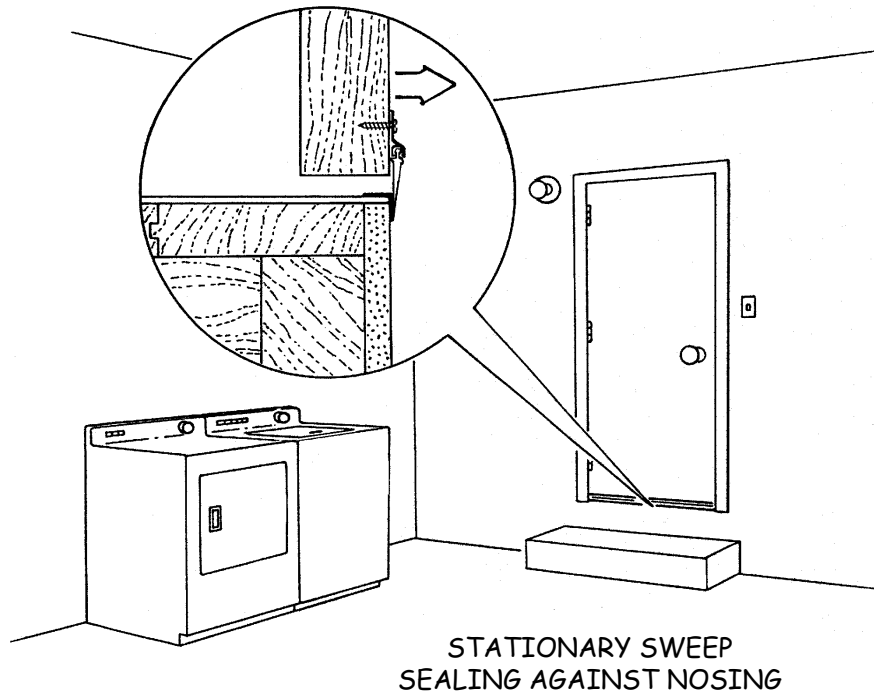


## Section 2

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### 11. ENTRANCE DOOR BOTTOM INSTALLATIONS

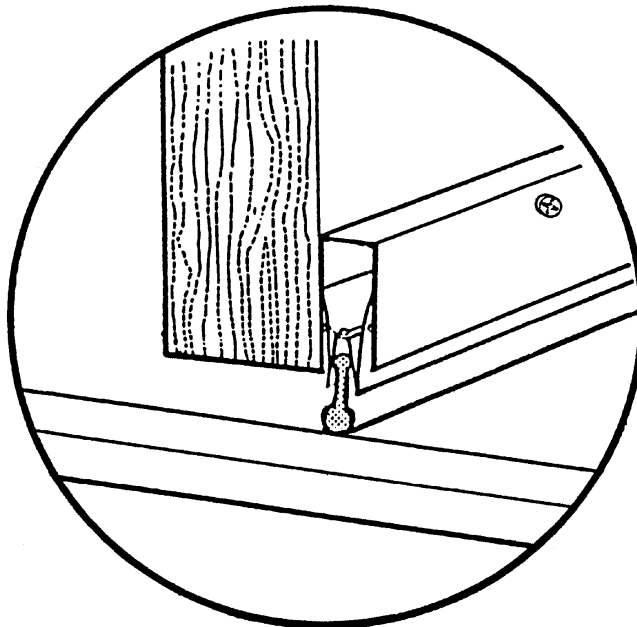
- **Shoe-and-Saddle-Threshold Combination**
  - Shoe-and-saddle combination shall be used where possible.
  - L-shoe may be installed only where U-shoe can not be installed (e.g., non-standard door thickness or metal-clad door).
  - Rain drip required on shoes in exposed exterior locations.
- **Stationary Sweeps**
  - Allowed only when no other door bottom treatment is feasible.
  - Sweep shall seal along the entire length of the gasket.
  - In-Swinging Doors
    - Sweeps shall be installed on the interior side of an exposed exterior door.
  - Out-Swinging Doors in Sheltered Locations (e.g., Inside Garage)
    - Sweeps shall seal against a threshold or other vertical surface (e.g., stair nosing).
    - Sweep may be installed on the outward side of the door.



### 11. ENTRANCE DOOR BOTTOM INSTALLATIONS (cont'd)

- **Retractable Sweeps (Automatic Door Bottoms)**
  - An automatic door bottom shall be installed only when:
    - There is no threshold over the finished floor, and/or
    - A shoe-and-saddle combination is not feasible.
  - Sweep shall seal against floor or existing threshold along entire length of gasket.
    - Exception: 100% seal is not required at ceramic tile grout lines.
  - Ends of gasket shall be trimmed long enough to extend from jamb to jamb when door is closed.
  - Unit shall be attached securely with screws which penetrate solid wood.
- **All Door Bottoms**
  - Weatherstripping material shall not drag on the floor covering (wood, tile, carpet, etc.).
  - Unit shall be installed full length; splicing not allowed.

AUTOMATIC DOOR BOTTOM



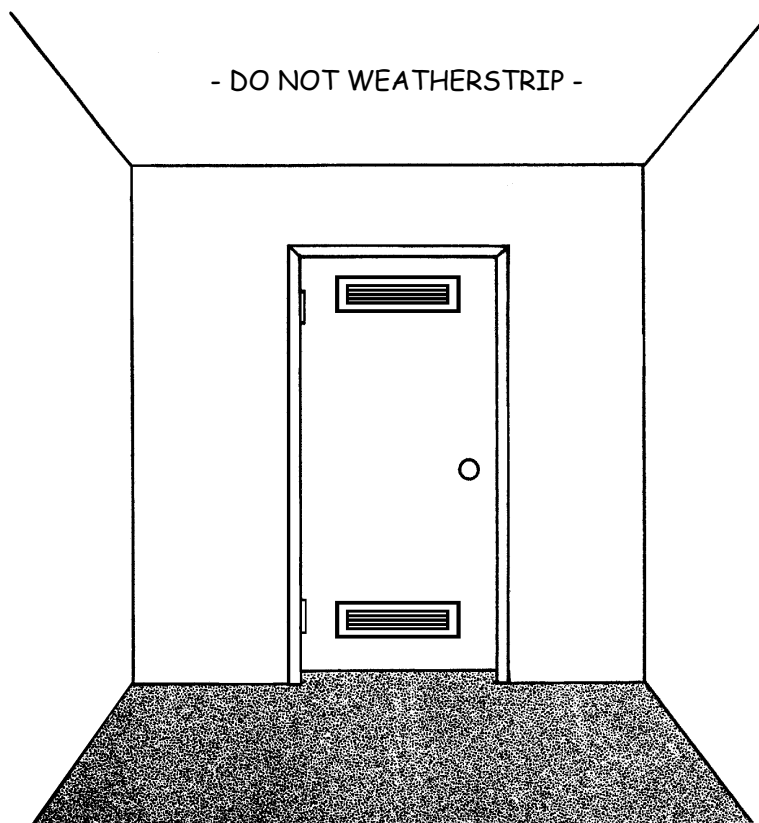
RETRACTABLE SWEEP GASKETS  
MUST SEAL ALONG ENTIRE WIDTH OF DOOR

## Section 2

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### 12. APPLIANCE ENCLOSURE DOORS

- **Weatherstripping shall be installed only when:**
  - It is as needed to isolate the enclosure from the living space.
  - The enclosure is vented outdoors, and
  - Combustion and ventilation air (CVA) is adequate (per Appendix A).
- **Weatherstripping shall not be installed if:**
  - ~~The appliance requires air from conditioned space (i.e., door or wall contains one or more combustion air vents), or~~
  - ~~Combustion air being supplied to the appliance is not adequate (see Appendix A).~~
- **Jamb Materials**
  - Rigid Gasket, Spring and Cushion Metal, Cushion Synthetic, Flanged Bulb, or Closed Cell Foam Tape.
- **Door Bottom and Threshold Material**
  - Materials approved for entrance doors shall be used.

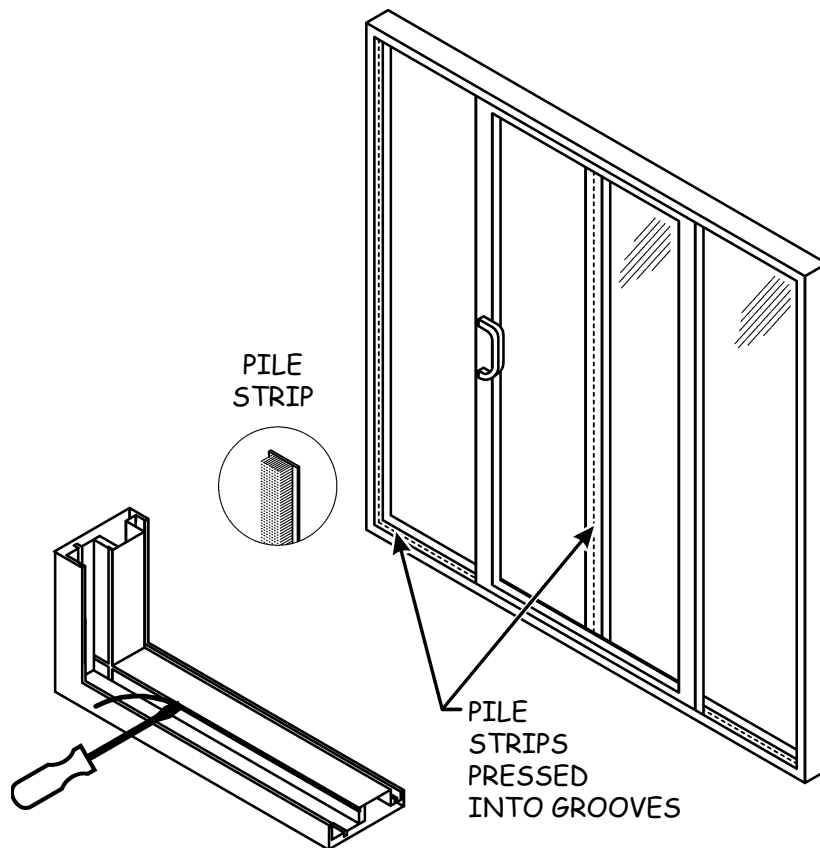


APPLIANCE ENCLOSURE DOOR  
CONTAINING COMBUSTION AIR VENTS

**13. SLIDING GLASS DOORS**

- **Pile shall be replaced when feasible.**

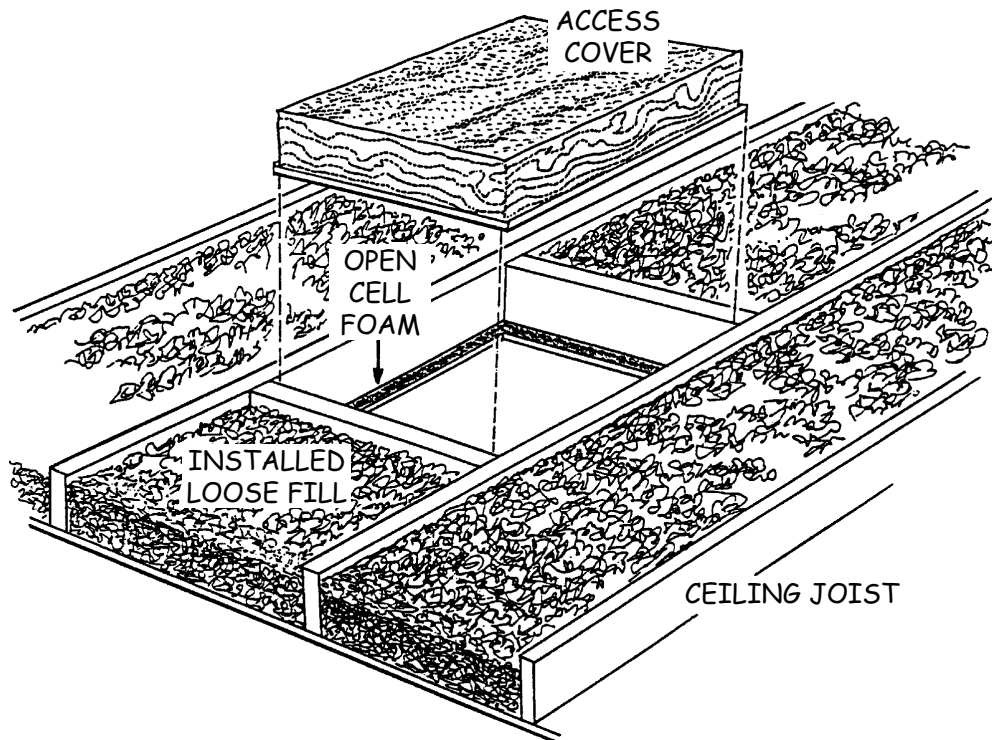
- Existing pile shall be removed from retaining channels.
- Replacement pile shall be installed in the retaining channels.



## Section 2

### 14. ATTIC AND CRAWLSPACE ACCESS DOORS/COVERS

- **Location**
  - Entry doors/covers accessed from conditioned space.
- **Materials**
  - Horizontal Access Doors/Covers
    - Open Cell Foam.
    - Closed cell foam and flanged bulb acceptable if thickness does not create more than 3/16" gap between door and retaining surface.
  - Vertical Access Doors (i.e., Knee Wall Door)
    - Materials approved for entrance doors shall be used.
- **Mounting Surface**
  - Weatherstripping shall be installed on surface providing best adhesion (i.e., smooth wood trim rather than textured drywall lid).
  - Mounting surface shall be free of dust, dirt, and debris.





WEATHERSTRIPPING FOR HORIZONTAL ATTIC ACCESS



**15. LEAD-SAFE WEATHERIZATION AND POST-INSTALLATION REQUIREMENTS**

- **Lead-safe practices shall be:**
  - Employed when working with pre-1978 painted materials per state codes T8 Section 1532.1 and T17 Section 36000, et seq.
  - Applied in accordance with guidelines in Appendix E.
- **Clean-up**
  - Paint dust and chips, scraps, and other debris resulting from weatherization activities shall be cleaned up and removed from the premises—utilizing lead-safe practices when applicable.
  - Furniture and other household items moved for weatherization work shall be returned to their original positions.
- **Locks**
  - All functional locks shall latch properly.

 <p><b>CALIFORNIA DEPARTMENT OF HEALTH SERVICES</b></p> <p>Childhood Lead Poison Prevention Program  Lead-Related Construction Information Hot-Line  1-800-597-LEAD (1-800-597-5323)  www.childlead.com</p>	
<p><b>NATIONAL LEAD INFORMATION CENTER</b>  <b>1-800-424-LEAD</b></p>	
 <p><b>US EPA Region IX</b>  75 Hawthorne St.  San Francisco, CA 94105</p> <p>Region IX Contact: Don Lanier  (415) 744-1123</p>	<p><b>U.S. Department of Housing and Urban Development</b>  Office of Lead Hazard Control  451 7th Street, S.W., Room B-133  Washington, DC 20410  PH: 202-755-1785  FAX: 202-755-1000</p>
<p><a href="http://www.epa.gov/lead/index.html">www.epa.gov/lead/index.html</a></p>	<p><a href="http://www.hud.gov/lea/leahome.html">www.hud.gov/lea/leahome.html</a></p>

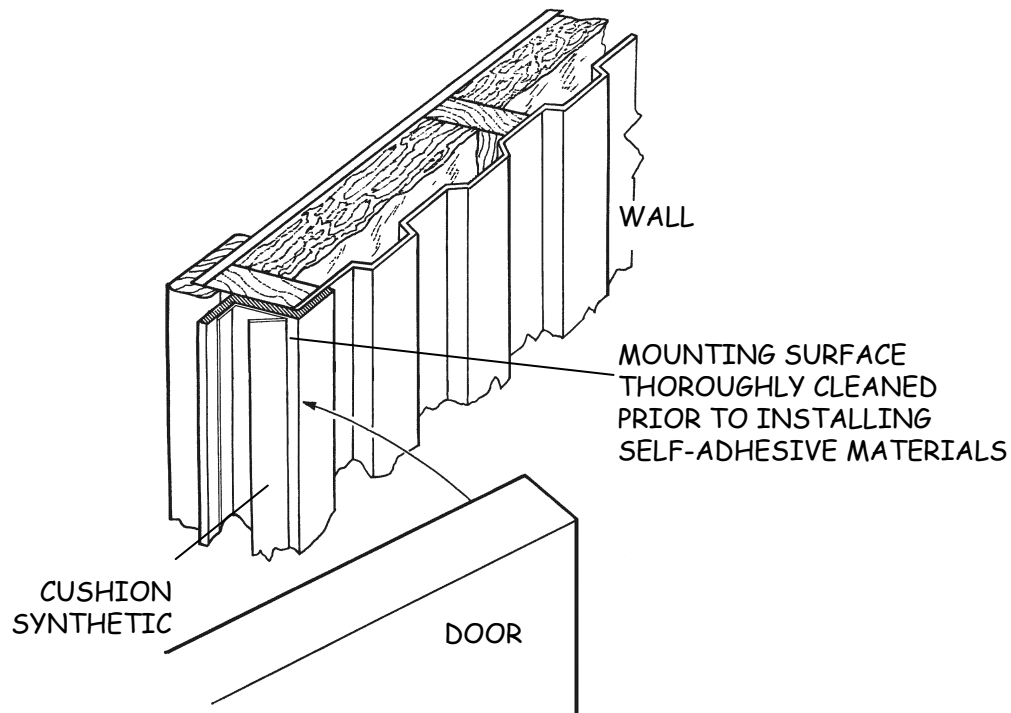
## Section 2

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### MOBILE HOME CRITERIA

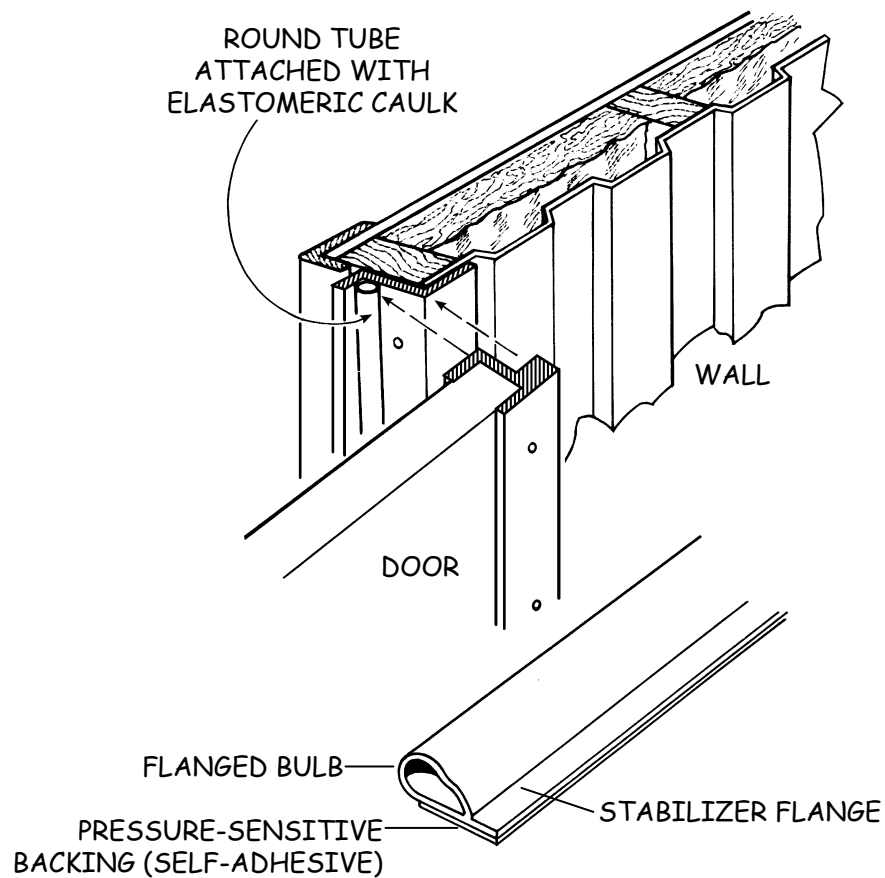
#### 16. INSTALLATION AND ATTACHMENT

- **Replacement Pile**
  - Shall fit snugly into retaining channel.
- **Materials Attached With Adhesive**
  - Self-adhesive backing shall have a minimum adhesion strength of 65 oz./in.
  - Pre-existing weatherstripping materials and adhesive shall be removed to the extent feasible.
  - Mounting surface shall be thoroughly cleaned.



### 17. INSTALLATION AND ATTACHMENT (cont'd)

- **Flanged Bulb (i.e., Silicone or TPE Gasket with Stabilizer Flange)**
  - Material shall be installed as prescribed by manufacturer.
- **Round Tube Without Flange (e.g. Silicone or TPE Tube)**
  - Material shall be installed in compression application only.
  - Tube shall be attached with elastomeric sealant (e.g., silicone caulk) or other method specified by manufacturer.
  - Tube shall be placed only in a corner formed by two perpendicular surfaces.



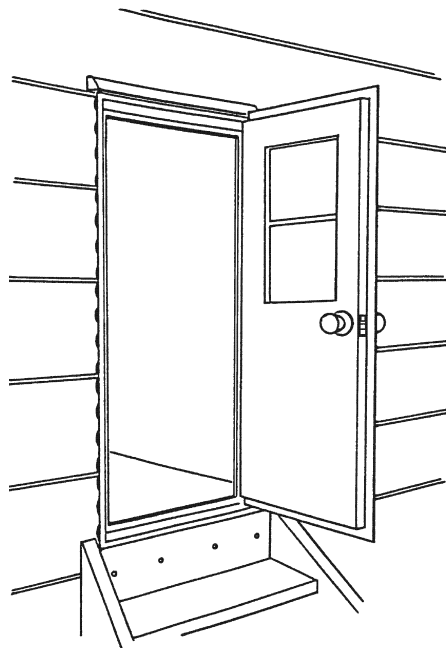
## Section 2

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### 17. FLUSH-MOUNT DOORS

#### - Weatherstripping

- Shoe-and-threshold combination shall be utilized when feasible.
- Bumper threshold is allowed when a door shoe or a shoe-and-threshold combination cannot be installed.
- When mechanically-attached materials are not feasible, the most effective and durable of the following alternatives shall be used:
  - Cushion Synthetic.
  - Flanged Bulb.
  - Closed-Cell Foam Tape.
  - Round Tube.
  - Vinyl-shape Fin Seal.



FLUSH-MOUNT MOBILE HOME DOOR

### NONFEASIBILITY FOR WEATHERSTRIPPING DOORS

1. The existing weatherstripping is functioning properly, even if not installed in accordance with current Installation Standards.
2. Door is located between two conditioned or two unconditioned spaces.
3. Door is in a multi-unit dwelling and separates the living space from a heated hallway.
4. Door and/or frame is labeled to have a fire rating greater than 20 minutes, and installation of appropriate fire-rated weatherstripping is not feasible.
5. Functional storm door is present.
6. Customer refuses.

### NONFEASIBILITY FOR WEATHERSTRIPPING APPLIANCE CLOSET DOORS

1. Combustion appliance receives air from conditioned space (i.e. combustion air grilles present in the enclosure door or wall).
2. Combustion air being supplied to the appliance is Inadequate (as defined in Appendix A).