



Application Instructions

For complete application instructions refer to the technical data sheet for PAB Liquid found at www.graceconstruction.com

1. Prepare substrate

- All surfaces must be sound and free from spalled areas, loose aggregate, loose nails or screws, sharp protrusions or other matter.
- Cementitious surfaces must be wood float or shutter finish and free from frost, dirt, grease, oil, or other contaminants.
- Surface irregularities and voids greater than 0.5 in (13 mm) in depth should be pretreated with Bituthene Liquid Membrane or with a concrete mix or grout.
- It may be necessary to apply Procor Concrete Sealer or a scratch coat of PAB Liquid to highly porous or dusty substrates.
- CMU surfaces should be smooth and free from projections. Strike all mortar joints full and flush and fill all voids and holes with a lean mortar mix or non-shrinking grout.
- Avoid deflection at exterior sheathing panel (OSB, plywood, glass faced wall board) joints; fasten corners and edges with appropriate screws as per manufacturer's recommendations. Tape the board butt joints with either 2 in (50 mm) wide reinforced or mesh-style wallboard tape (i.e. FibaTape® brand products).
- Gaps greater than ¼ in. (6 mm) should be filled with a compatible sealant, allowing sufficient time for the sealant to fully cure before application of the tape

and Perm-A-Barrier Liquid. Refer to Technical Letter # 5 for compatible sealants and caulks.

- Refer to Technical letter # 6 "Substrate Preparation for Perm-A-Barrier Liquid Applications" for greater detail.

2. Application to "Green" or Damp Concrete Substrates

- PAB Liquid may be applied to "green" concrete or over surfaces that are damp to the touch.
- It may be necessary to apply Procor Concrete Sealer or a scratch coat of PAB Liquid to "green" or damp concrete substrates.
- Remove any visible water prior to application.
- Do not apply PAB Liquid in wet weather.
- Once applied, light rain showers will not affect the membrane.

3. Application Temperature

- It is possible to work at temperatures below 40°F (4°C) provided there is no frost or condensation on the substrate.
- The minimum temperature for spray application is 20°F (-7°C).
- Refer to Technical Letters # 9 and # 10 for spraying PAB Liquid at high and low temperatures, or contact your Grace Construction Products representative for details.

4. Detailing

- Detailing should be completed prior to applying the full coverage of PAB Liquid.
- The continuous field application should completely cover the detail areas to provide double thickness coverage.
- Transitions to beams, columns, window and door frames, etc. should be made with a strip of PAB Detail Membrane or PAB Wall Flashing.



PERM-A-BARRIER® (PAB) LIQUID

AIR AND VAPOR BARRIER

- Optimum adhesion will be achieved when the tape is lapped onto the cured PAB Liquid. Refer to technical letter # 11 for further information.
- Gaps around penetrations should be caulked with a compatible sealant. Consult technical letter # 5 for further information.

5. Thickness Control

- Marking the area and spot-checking the thickness with a wet film thickness gauge control thickness.
- Swipe marks on the PAB Liquid membrane are acceptable as long as the minimum thickness is maintained.
- It is also possible that excessive exotherming (heat build-up) could occur on the substrate if PAB Liquid is applied too thickly in a single application.

6. Visual Work Inspection

- Review all work.
- Damaged PAB Liquid should be repaired by cutting away the affected area to solid, fully adhered membrane. The exposed area should then be patched with PAB Liquid to give a minimum overlap of 6 in (150 mm) onto the existing PAB Liquid.
- Where the surrounding area of damaged PAB is contaminated with dirt or is more than seven days old, it should be pressure washed or lightly abraded with a wire brush, coarse sanding disc or similar method to ensure good adhesion.

7. Application of Insulation and Finishes

- PAB Liquid is not suitable for permanent exposure and should be protected from the effects of sunlight.
- Insulation boards may be bonded to the PAB Liquid by pressing them into place after the PAB Liquid has set enough to hold their weight but is still tacky.
- Insulation clips are recommended for long-term attachment.
- If the insulation cannot be applied within 60 days of application of PAB Liquid, temporary protection should be used to protect the product from the effects of sunlight.

8. Cleaning

- Tools and equipment are most effectively cleaned by allowing the material to cure and simply peeling it off the next day.
- Procor Flushing Oil is available to clean spray equipment.

9. Storage and Handling Information

- PAB Liquid containers should be stored under cover in original sealed containers above 40°F (4°C) and below 100°F (38°C).
- Keep Part B from freezing during storage. The shelf life is 9 months in unopened containers.

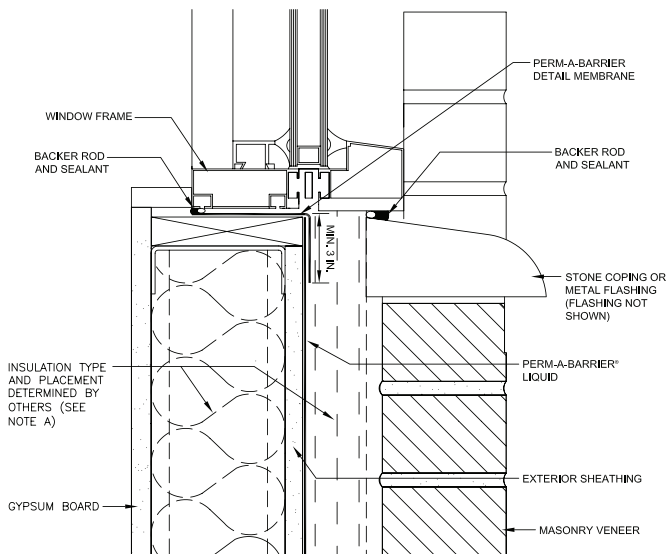
10. Limitations

- PAB membranes should not be used in areas where they will be permanently exposed to sunlight, weather or traffic.
- Maximum exposure period is 60 days.
- Some asphaltic coatings may not be compatible with PAB Liquid.



■ PLQ-001 – Window Sill

(Option A)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Apply PAB Detail Membrane as shown extending a minimum of 3 in (75 mm) onto the vertical surface of the PAB Liquid.
3. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

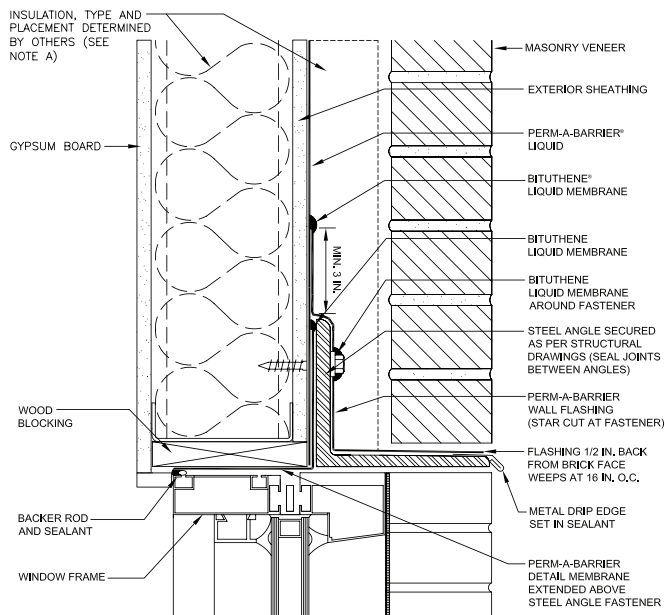
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-002 – Window Head

(Option A)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Apply PAB Detail Membrane as shown extending the membrane above the steel angle/fastener; seal termination with Liquid Membrane.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel angle, extending down over the steel angle stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets.

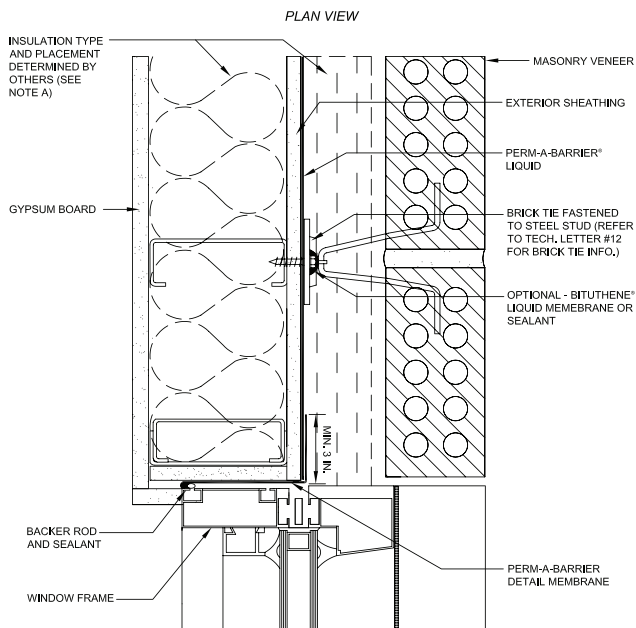
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-003 – Window Jamb

(Option A)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Apply PAB Detail Membrane as shown extending a minimum of 3 in (75 mm) onto the PAB Liquid.
3. Optional: Apply Liquid Membrane or sealant at brick tie fastener.
4. Apply PAB Liquid, and Detail Membrane according to the installation instructions found on the appropriate data sheets.

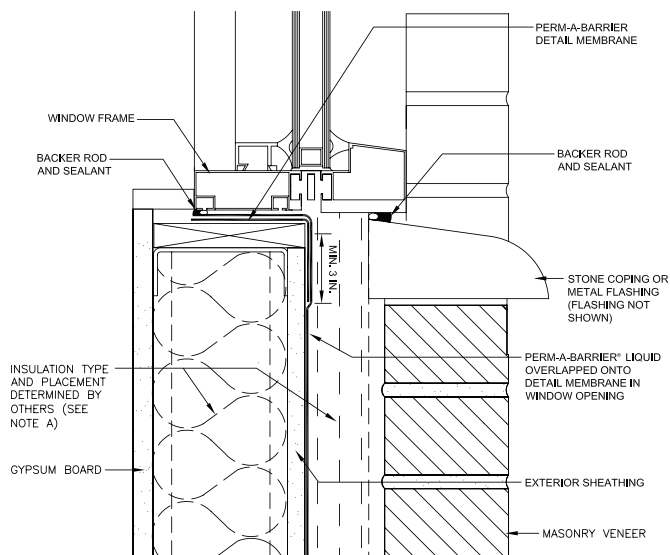
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-004 – Window Sill

(Option B-1)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown extending down onto the vertical substrate a minimum of 3 in (75 mm).
2. Apply PAB Liquid as shown ensuring a minimum 3 in (75 mm) overlap onto the vertical portion of Detail Membrane, extend onto the horizontal surface covering the Detail Membrane to create a double membrane layer.
3. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

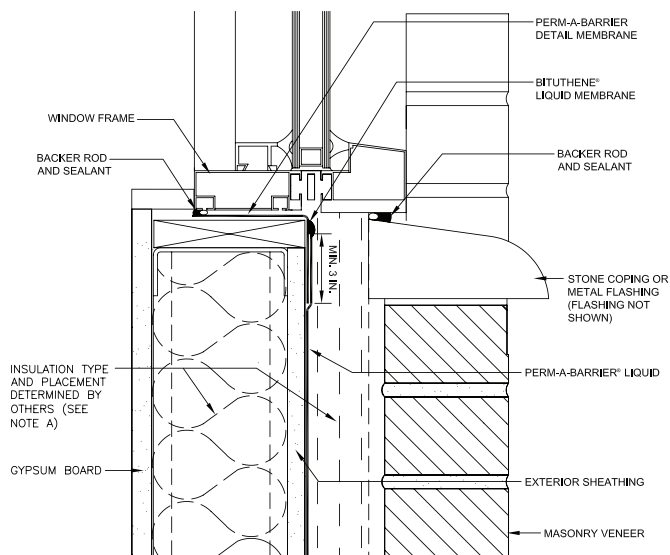
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-005 – Window Sill

(Option B-2)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown extending down onto the vertical substrate a minimum of 3 in (75 mm).
2. Apply PAB Liquid as shown ensuring a minimum 3 in (75 mm) overlap onto the vertical portion of Detail Membrane.
3. Seal PAB Liquid termination with Liquid Membrane.
4. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

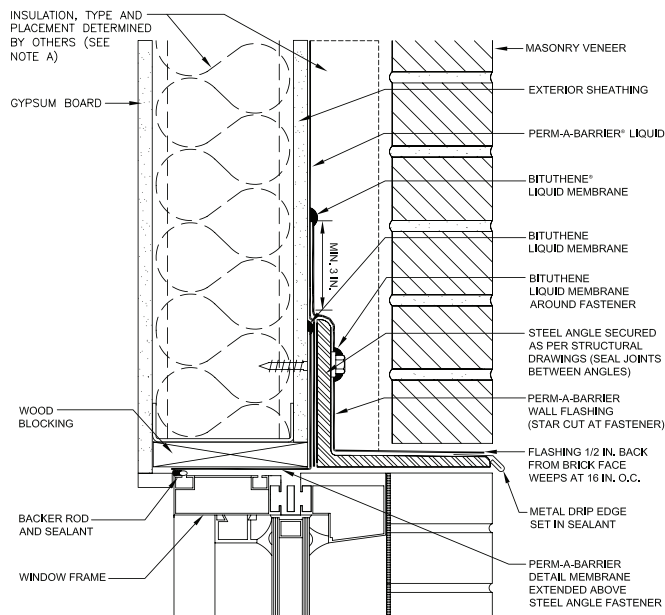
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-006 – Window Head

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown extending the membrane above the steel angle/fastener; seal termination with Liquid Membrane.
2. Apply PAB Liquid onto substrate overlapping the PAB Detail Membrane.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel angle, extending down over the steel angle stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets

Special Notes

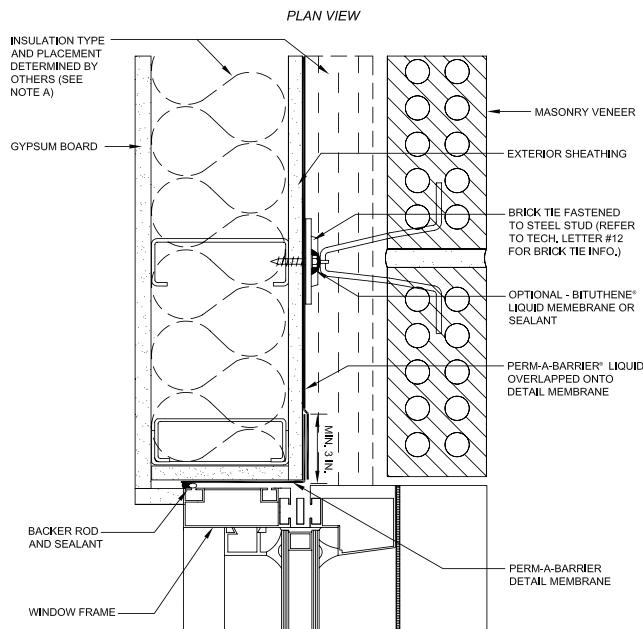
- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-007 – Window Jamb

(Option B)



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown extending a minimum of 3 in (75 mm) onto the exterior sheathing.
2. Apply PAB Liquid onto substrate overlapping the PAB Detail Membrane by a minimum of 3 in (75 mm).
3. Optional: Apply Liquid Membrane or sealant at brick tie fastener.
4. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

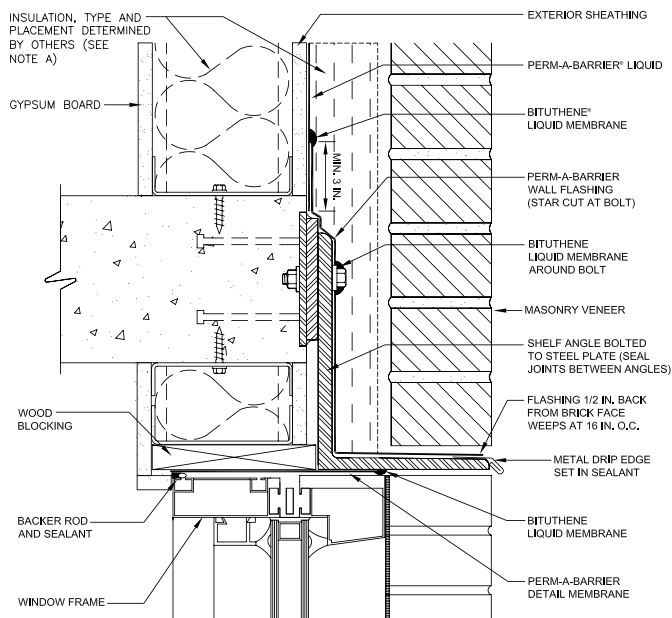
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-008 – Window Head at Floor

(Option A)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown, sealing termination against the steel angle with Liquid Membrane.
2. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets.

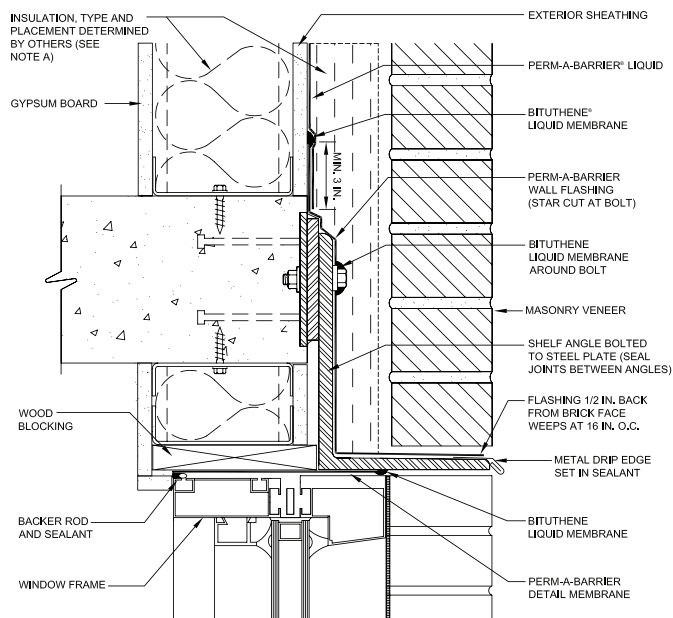
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-009 – Window Head at Floor

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown, sealing termination against the steel angle with Liquid Membrane.
2. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
3. Seal PAB Wall Flashing terminations with Liquid Membrane.
4. Apply PAB Liquid onto substrate overlapping the PAB Wall Flashing a minimum of 3 in (75 mm).
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets.

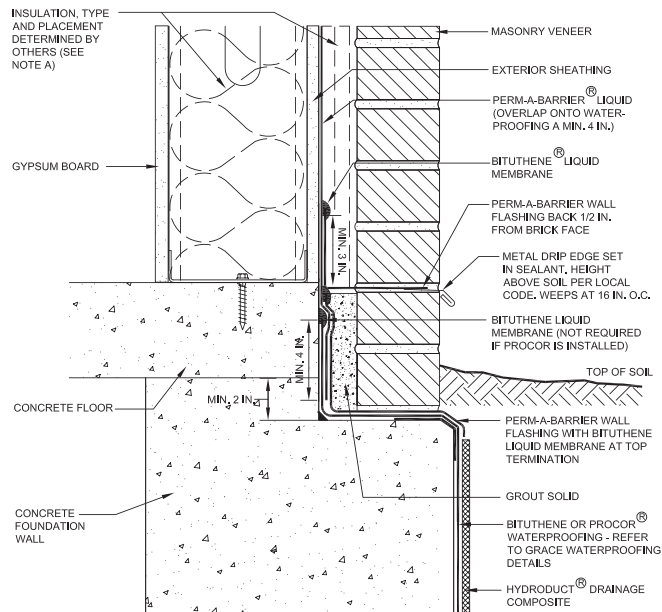
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-010 – Foundation

(Option A)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

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Detailing

1. Install a 0.75 in (20 mm) fillet of Liquid Membrane in corner extending 2.5 (65 mm) onto the vertical and horizontal portion of brick shelf.
2. Extend Bituthene® or Procor® from the foundation onto the horizontal brick shelf and vertically up the foundation and or concrete slab a minimum of 6 in (150 mm). If Bituthene is used the termination must be sealed with Liquid Membrane.
3. Apply PAB Liquid onto substrate overlapping the foundation waterproofing a minimum of 4 in (100 mm).
4. Apply PAB Wall Flashing from the top of the cavity to be grouted extending over the brick shelf and onto the vertical face of the below grade wall, seal the PAB Wall Flashing top termination with Liquid Membrane.
5. Apply Hydroduct Drainage Composite according to Hydroduct data sheet.
6. Grout space below weeps as shown.
7. Apply PAB Wall Flashing overlapping the PAB Liquid by a minimum of 3 in (75 mm) on the vertical surface and extending through the wall and stopping the 0.5 in (13 mm) from the brick face. Seal PAB Wall Flashing terminations with Liquid Membrane.
8. Apply PAB Liquid, Wall Flashing, Bituthene, Procor and Hydroduct according to the installation instructions found on the appropriate data sheets.



- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

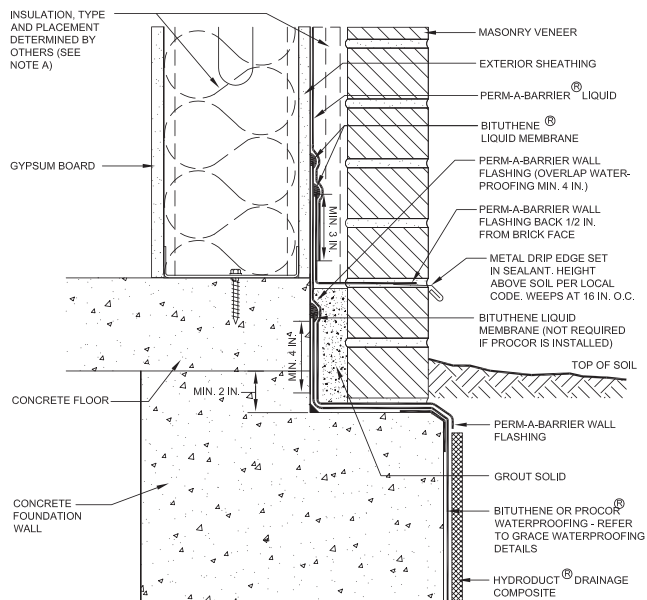


NOTES



■ PLQ-011 – Foundation

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

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Detailing

1. Install a 0.75 in (20 mm) fillet of Liquid Membrane in corner extending 2.5 in (65 mm) onto the vertical and horizontal portion of brick shelf.
2. Extend Bituthene® or Procor® from the foundation onto the horizontal brick shelf and vertically up the foundation and or concrete slab a minimum of 6 in (150 mm). If Bituthene is used the termination must be sealed with Liquid Membrane.
3. Apply PAB Wall Flashing as shown onto substrate overlapping the foundation waterproofing a minimum of 4 in (100 mm) and extend over the brick shelf and onto the vertical face of the below grade wall, seal the PAB Wall Flashing top termination with Liquid Membrane.
4. Apply Hydroduct Drainage Composite according to Hydroduct data sheet.
5. Grout space below weeps as shown.
6. Apply PAB Wall Flashing overlapping the previously installed PAB Wall Flashing by a minimum of 3 in (75 mm) on the vertical surface and extending through the wall and stopping the 0.5 in (13 mm) from the brick face. Seal PAB Wall Flashing terminations with Liquid Membrane.
7. Apply PAB Liquid onto substrate overlapping the PAB Wall Flashing a minimum of 3 in (75 mm).
8. Apply PAB Liquid, Wall Flashing, Bituthene, Procor and Hydroduct according to the installation instructions found on the appropriate data sheets.



Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



NOTES



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

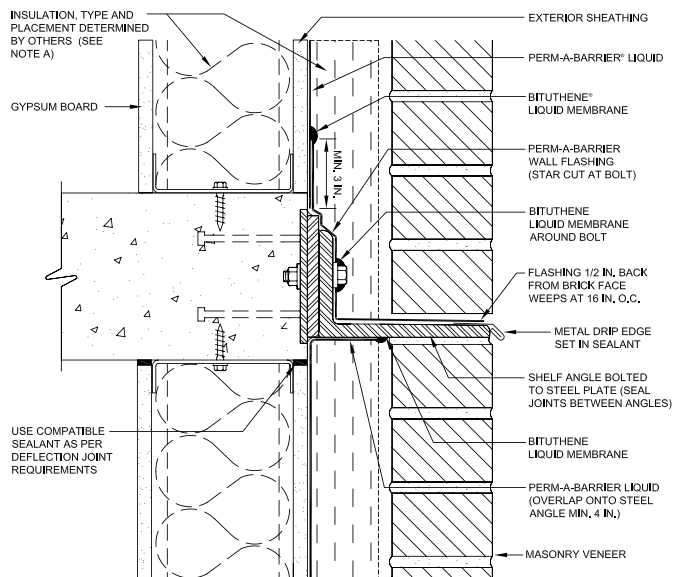
1. Apply PAB Liquid onto substrate below steel angle overlapping onto the steel angle by a minimum of 4 in (100 mm). Seal termination with Liquid Membrane.
2. Apply PAB Liquid onto substrate above steel angle as shown.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid and Wall Flashing according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

■ PLQ-012 – Shelf Angle

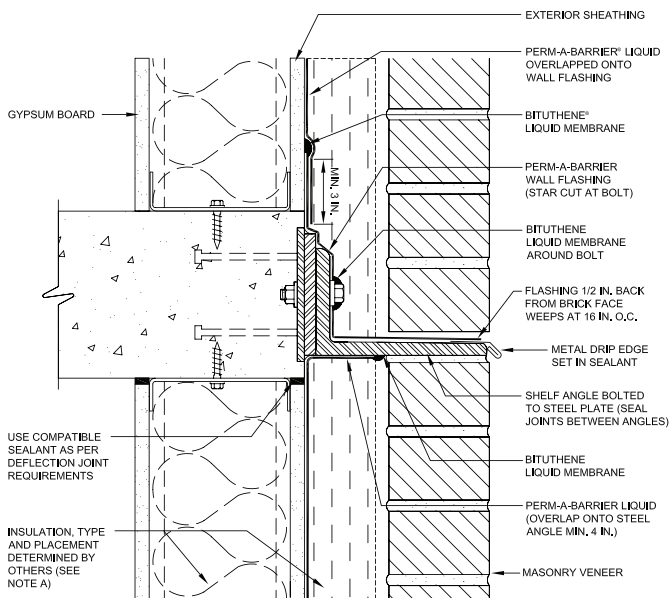
(Option A)





■ PLQ-013 – Shelf Angle

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

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Detailing

1. Apply PAB Liquid onto substrate below steel angle overlapping onto the steel angle by a minimum of 4 in (100 mm). Seal termination with Liquid Membrane.
2. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
3. Seal PAB Wall Flashing terminations with Liquid Membrane.
4. Apply PAB Liquid onto substrate overlapping the vertical portion of PAB Wall Flashing by a minimum of 3 in (75 mm).
5. Apply PAB Liquid and Wall Flashing according to the installation instructions found on the appropriate data sheets.

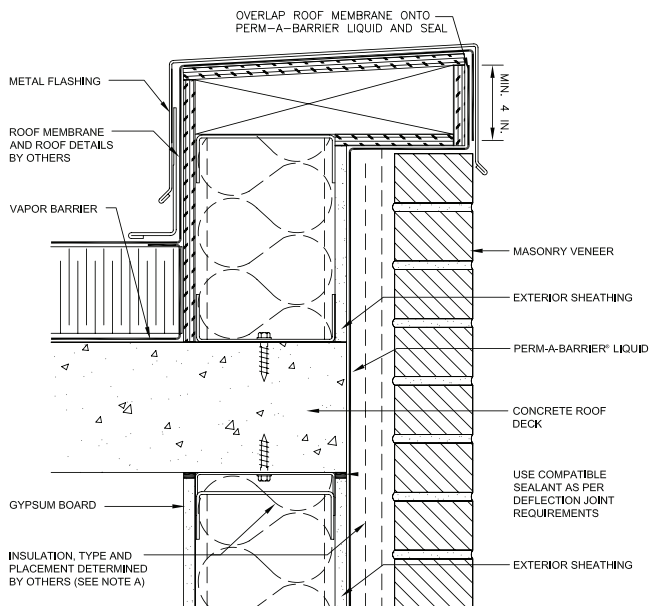
Special Notes

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- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-014 – Parapet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Roofing membrane (by others) should overlap PAB Liquid by a minimum of 4 in (100 mm).
3. Apply PAB Liquid according to the installation instructions found on the appropriate data sheets.

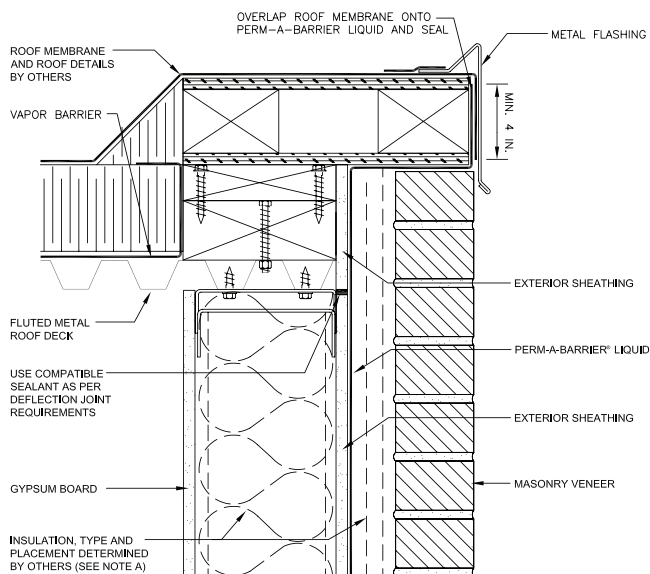
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-015 – Roof Edge



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Roofing membrane (by others) should overlap PAB Liquid by a minimum of 4 in (100 mm).
3. Apply PAB Liquid according to the installation instructions found on the appropriate data sheets.

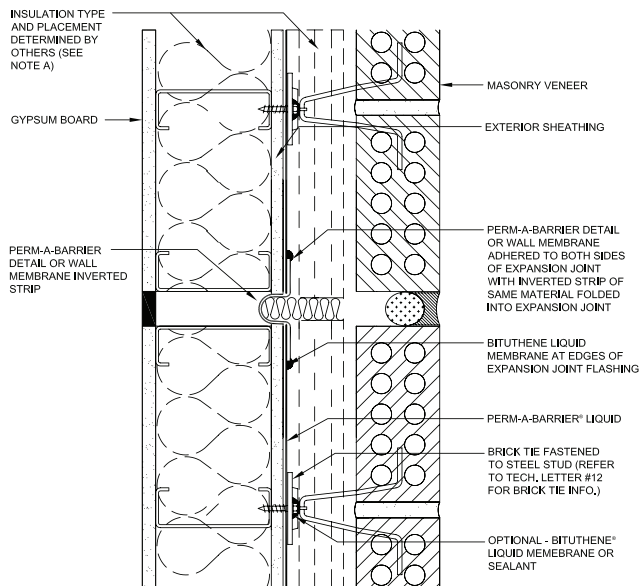
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-016 – Expansion Joint

PLAN VIEW



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate as shown in accordance with the data sheet section on installation.
2. Apply PAB Wall or Detail Membrane so that it is adhered to both sides of the expansion joint with an inverted strip of same material folded into the expansion joint as shown.
3. Seal the edges of the expansion joint flashing with Liquid Membrane.
4. Optional: Apply Liquid Membrane or sealant at brick tie fastener.
5. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

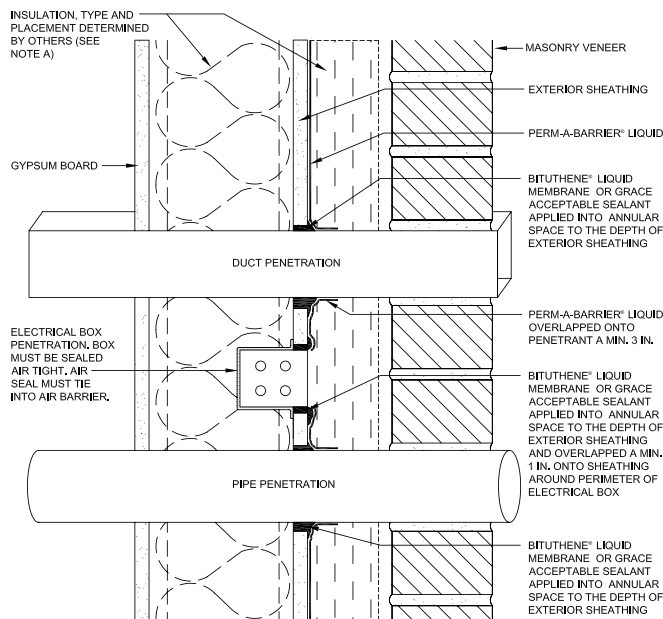
Detailing

1. Apply Liquid Membrane or Grace acceptable sealant into the annular space to the depth of the exterior sheathing and overlap 1 in (25 mm) onto sheathing around perimeter of penetration.
2. Apply PAB Liquid as shown overlapping onto penetration a minimum of 3 in (75 mm) if applicable.
3. Apply PAB Liquid according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

■ PLQ-017 – Penetration

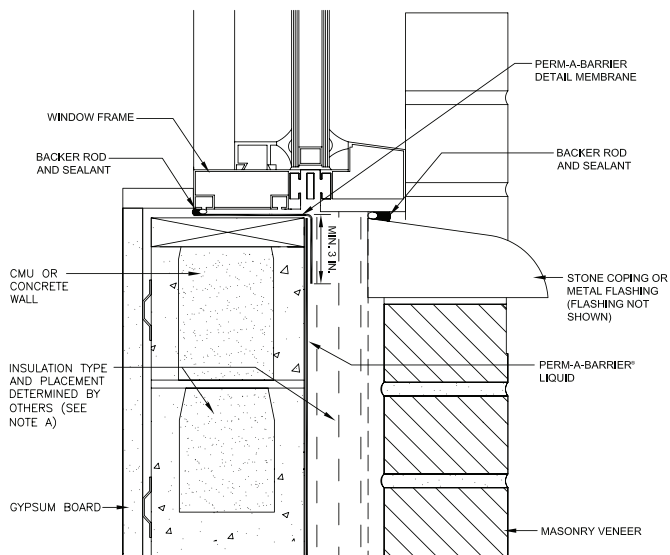




Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-101 – Window Sill

(Option A)



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Apply PAB Detail Membrane as shown extending a minimum of 3 in (75 mm) onto the vertical surface of the PAB Liquid.
3. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

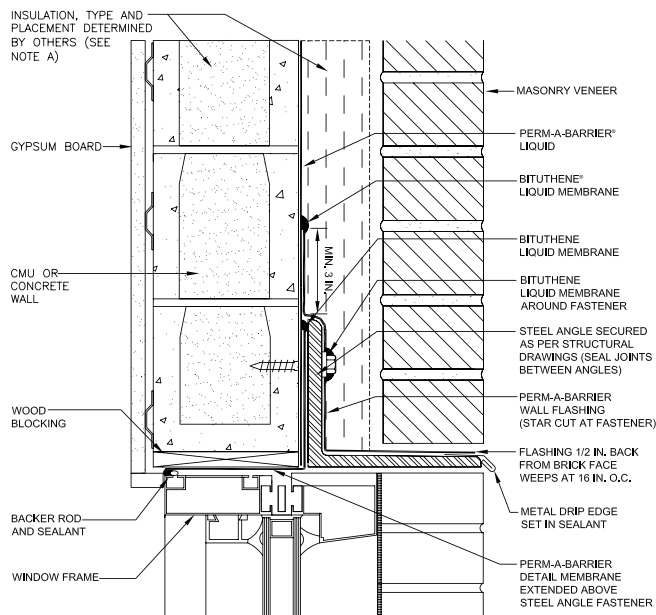
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-102 – Window Head

(Option A)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Apply PAB Detail Membrane as shown extending the membrane above the steel angle/fastener; seal termination with Liquid Membrane.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel angle, extending down over the steel angle stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets.

Special Notes

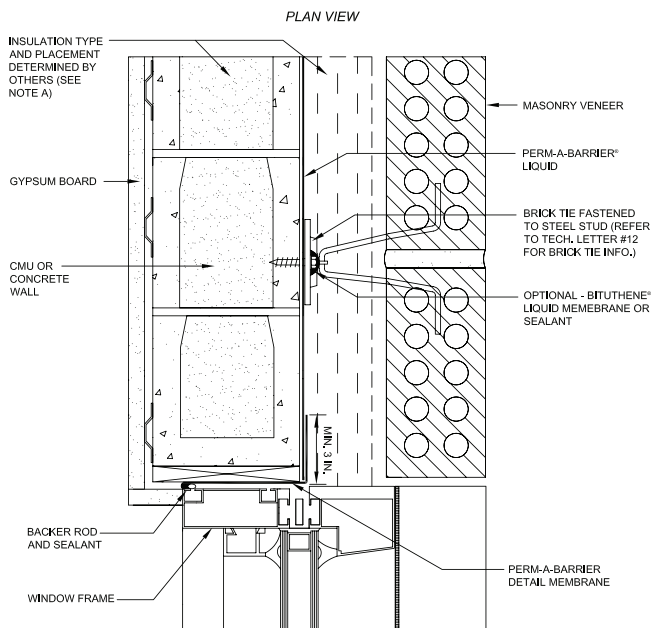
- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-103 – Window Jamb

(Option A)



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Apply PAB Detail Membrane as shown extending a minimum of 3 in (75 mm) onto the PAB Liquid.
3. Optional: Apply Liquid Membrane or sealant at brick tie fastener.
4. Apply PAB Liquid, and Detail Membrane according to the installation instructions found on the appropriate data sheets.

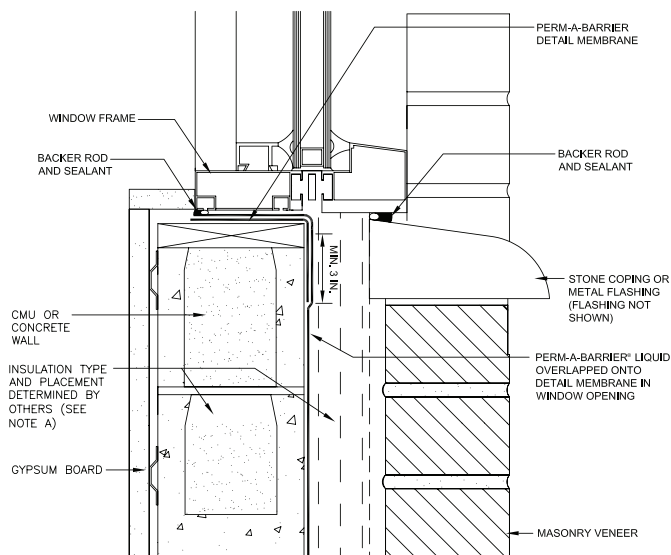
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-104 – Window Sill

(Option B-1)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

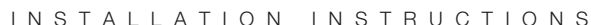
1. Apply PAB Detail Membrane as shown extending down onto the vertical substrate a minimum of 3 in (75 mm).
2. Apply PAB Liquid as shown ensuring a minimum 3 in (75 mm) overlap onto the vertical portion of Detail Membrane, extend onto the horizontal surface covering the Detail Membrane to create a double membrane layer.
3. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



(Option B-2)

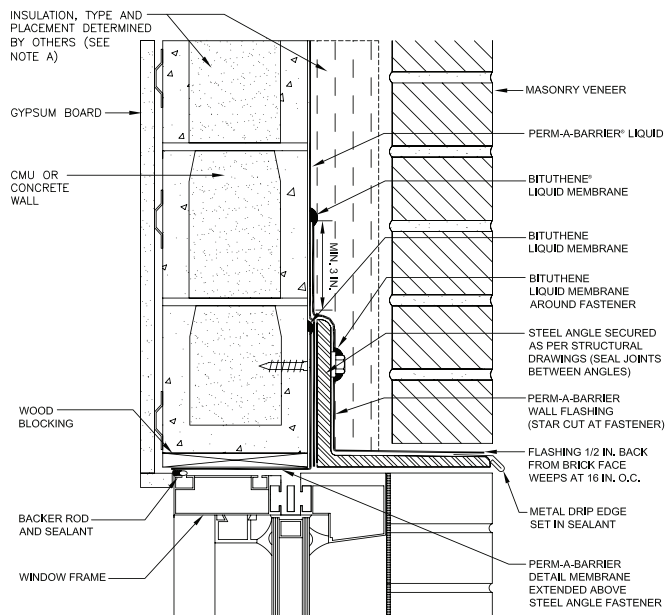


- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-106 – Window Head

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown extending the membrane above the steel angle/fastener; seal termination with Liquid Membrane.
2. Apply PAB Liquid onto substrate overlapping the PAB Detail Membrane.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel angle, extending down over the steel angle stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets.

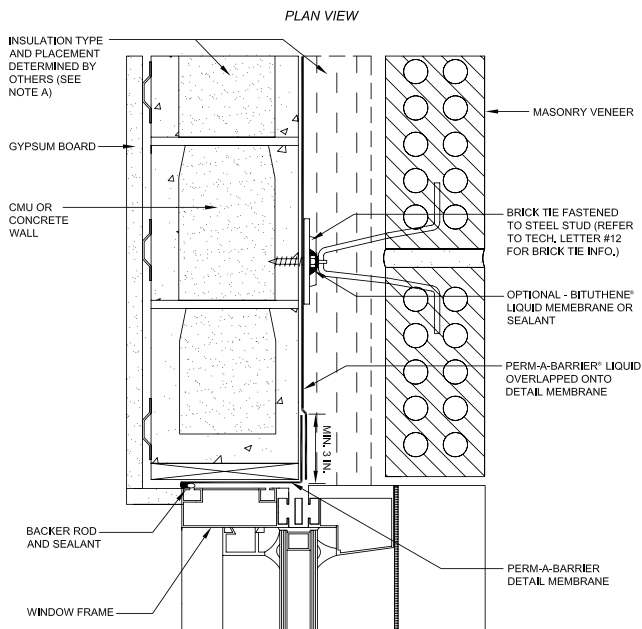
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-107 – Window Jamb

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

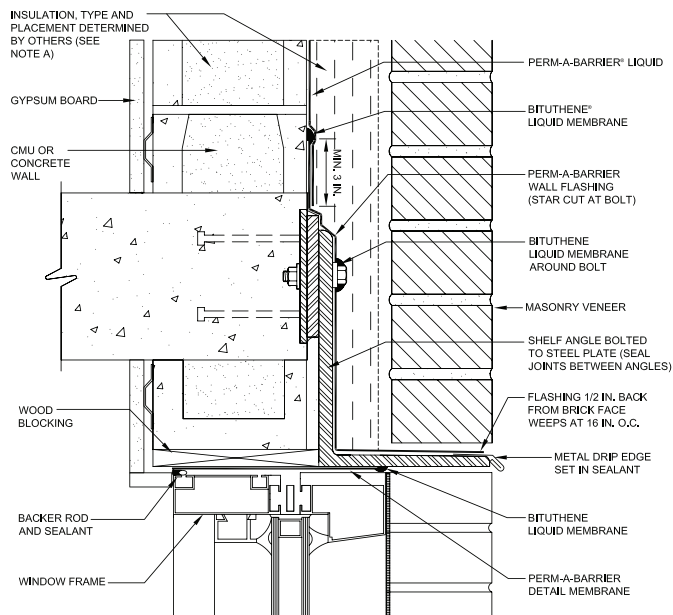
1. Apply PAB Detail Membrane as shown extending a minimum of 3 in (75 mm) onto the exterior face of the CMU or concrete wall.
2. Apply PAB Liquid onto substrate overlapping the PAB Detail Membrane by a minimum of 3 in (75 mm).
3. Optional: Apply Liquid Membrane or sealant at brick tie fastener.
4. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

■ PLQ-109 – Window Head at Floor

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Detail Membrane as shown, sealing termination against the steel angle with Liquid Membrane.
2. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
3. Seal PAB Wall Flashing terminations with Liquid Membrane.
4. Apply PAB Liquid onto substrate overlapping the PAB Wall Flashing a minimum of 3 in (75 mm).
5. Apply PAB Liquid, Wall Flashing and Detail Membrane according to the installation instructions found on the appropriate data sheets.

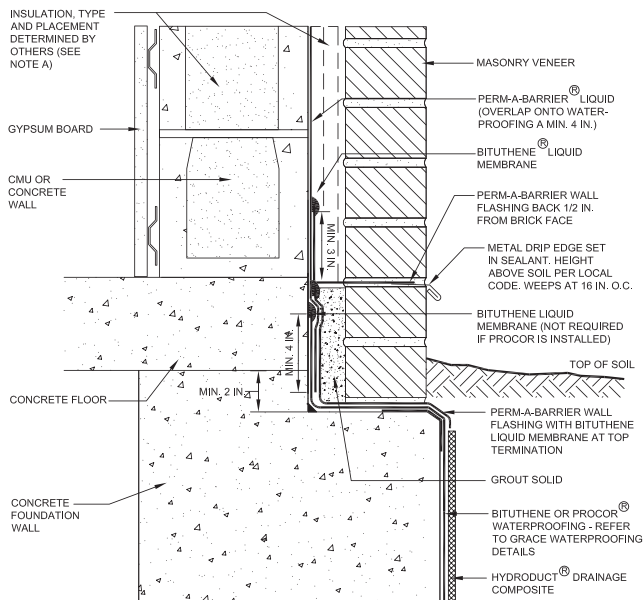
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Ensure window system is properly aligned with wall insulation and installed per the window manufacturer's recommendation to ensure continuity of the air barrier system.
- D. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



■ PLQ-110 – Foundation

(Option A)



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Install a 0.75 in (20 mm) fillet of Liquid Membrane in corner extending 2.5 (65 mm) onto the vertical and horizontal portion of brick shelf./
2. Extend Bituthene® or Procor® from the foundation onto the horizontal brick shelf and vertically up the foundation and or concrete slab a minimum of 6 in (150 mm). If Bituthene is used the termination must be sealed with Liquid Membrane.
3. Apply PAB Liquid onto substrate overlapping the foundation waterproofing a minimum of 4 in (100 mm).
4. Apply PAB Wall Flashing from the top of the cavity to be grouted extending over the brick shelf and onto the vertical face of the below grade wall, seal the PAB Wall Flashing top termination with Liquid Membrane.
5. Apply Hydroduct Drainage Composite according to Hydroduct data sheet.
6. Grout space below weeps as shown.
7. Apply PAB Wall Flashing overlapping the PAB Liquid by a minimum of 3 in (75 mm) on the vertical surface and extending through the wall and stopping the 0.5 in (13 mm) from the brick face. Seal PAB Wall Flashing terminations with Liquid Membrane.
8. Apply PAB Liquid, Wall Flashing, Bituthene, Procor and Hydroduct according to the installation instructions found on the appropriate data sheets.



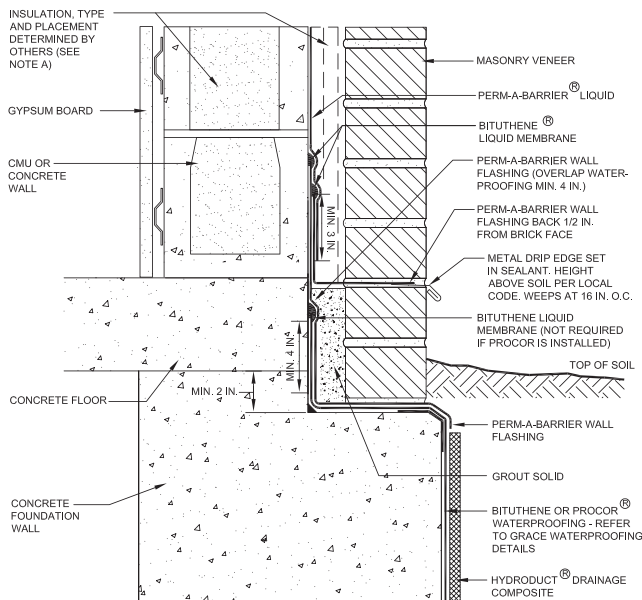
- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

NOTES



■ PLQ-111 – Foundation

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Install a 0.75 in (20 mm) fillet of Liquid Membrane in corner extending 2.5 in (65 mm) onto the vertical and horizontal portion of brick shelf.
2. Extend Bituthene® or Procor® from the foundation onto the horizontal brick shelf and vertically up the foundation and or concrete slab a minimum of 6 in (150 mm). If Bituthene is used the termination must be sealed with Liquid Membrane.
3. Apply PAB Wall Flashing as shown onto substrate overlapping the foundation waterproofing a minimum of 4 in (100 mm) and extend over the brick shelf and onto the vertical face of the below grade wall, seal the PAB Wall Flashing top termination with Liquid Membrane.
4. Apply Hydroduct Drainage Composite according to Hydroduct data sheet.
5. Grout space below weeps as shown.
6. Apply PAB Wall Flashing overlapping the previously installed PAB Wall Flashing by a minimum of 3 in (75 mm) on the vertical surface and extending through the wall and stopping the 0.5 in (13 mm) from the brick face. Seal PAB Wall Flashing terminations with Liquid Membrane.
7. Apply PAB Liquid onto substrate overlapping the PAB Wall Flashing a minimum of 3 in (75 mm).
8. Apply PAB Liquid, Wall Flashing, Bituthene, Procor and Hydroduct according to the installation instructions found on the appropriate data sheets.



PERM-A-BARRIER® (PAB) LIQUID

AIR AND VAPOR BARRIER

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



NOTES

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Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

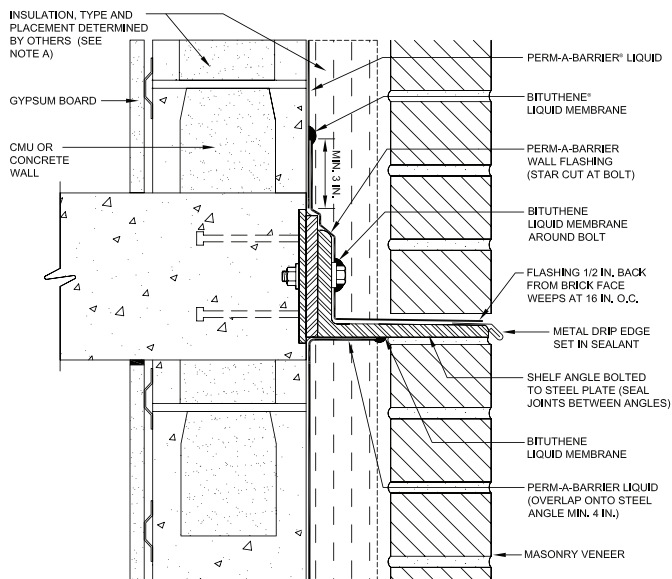
1. Apply PAB Liquid onto substrate below steel angle overlapping onto the steel angle by a minimum of 4 in (100 mm). Seal termination with Liquid Membrane.
2. Apply PAB Liquid onto substrate above steel angle as shown.
3. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
4. Seal PAB Wall Flashing terminations with Liquid Membrane.
5. Apply PAB Liquid and Wall Flashing according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

■ PLQ-112 – Shelf Angle

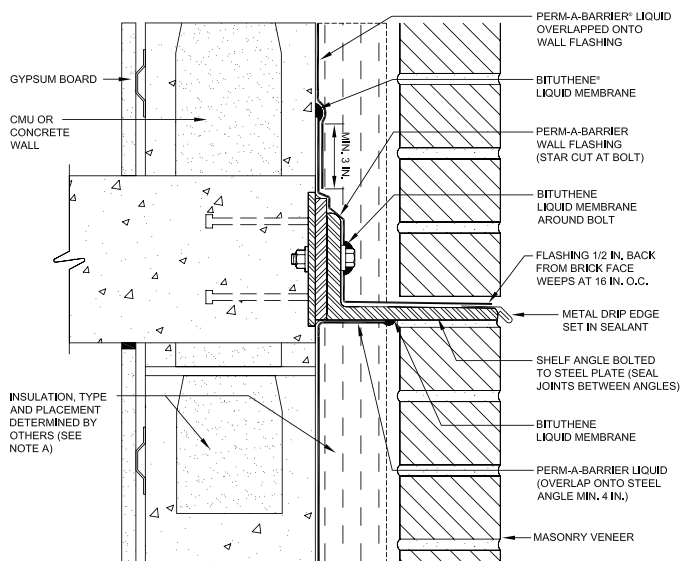
(Option A)





■ PLQ-113 – Shelf Angle

(Option B)



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate below steel angle overlapping onto the steel angle by a minimum of 4 in (100 mm). Seal termination with Liquid Membrane.
2. Apply PAB Wall Flashing a minimum of 3 in (75 mm) above the steel, extending down over the steel stopping the flashing 0.5 in (13 mm) from the brick face. Star cut the membrane at fastener and seal with Liquid Membrane.
3. Seal PAB Wall Flashing terminations with Liquid Membrane.
4. Apply PAB Liquid onto substrate overlapping the vertical portion of PAB Wall Flashing by a minimum of 3 in (75 mm).
5. Apply PAB Liquid and Wall Flashing according to the installation instructions found on the appropriate data sheets.

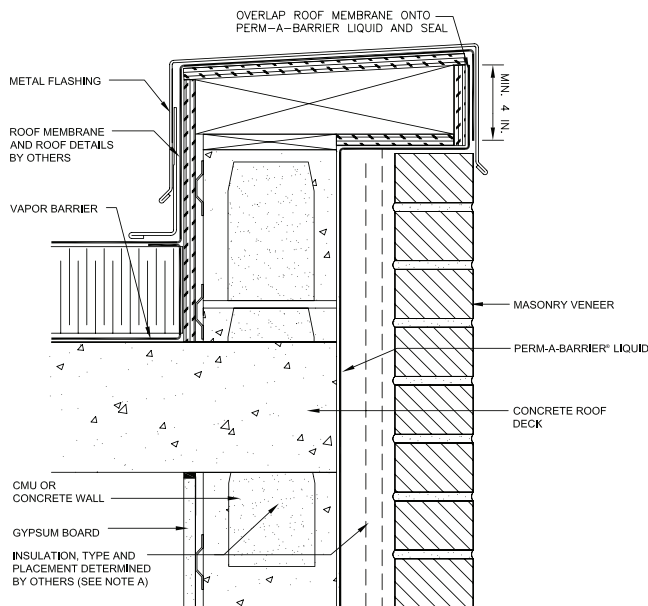
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-114 – Parapet



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Roofing membrane (by others) should overlap PAB Liquid by a minimum of 4 in (100 mm).
3. Apply PAB Liquid according to the installation instructions found on the appropriate data sheets.

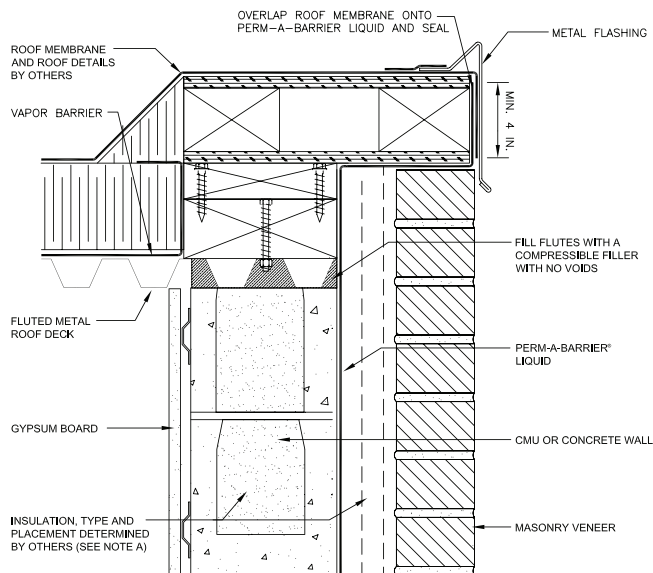
Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-115 – Roof Edge



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply PAB Liquid onto substrate in accordance with the data sheet section on installation.
2. Roofing membrane (by others) should overlap PAB Liquid by a minimum of 4 in (100 mm).
3. Apply PAB Liquid according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.



Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

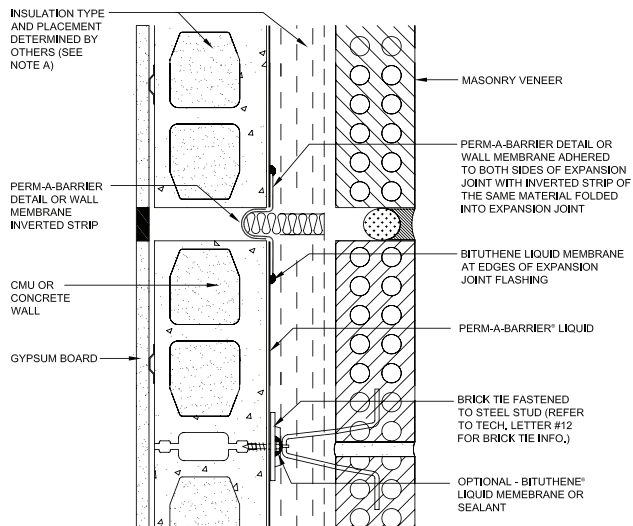
1. Apply PAB Liquid onto substrate as shown in accordance with the data sheet section on Installation.
2. Apply PAB Wall or Detail Membrane so that it is adhered to both sides of the expansion joint with an inverted strip of same material folded into the expansion joint as shown.
3. Seal the edges of the expansion joint flashing with Liquid Membrane.
4. Optional: Apply Liquid Membrane or sealant at brick tie fastener.
5. Apply PAB Liquid and Detail Membrane according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.

■ PLQ-116 – Expansion Joint

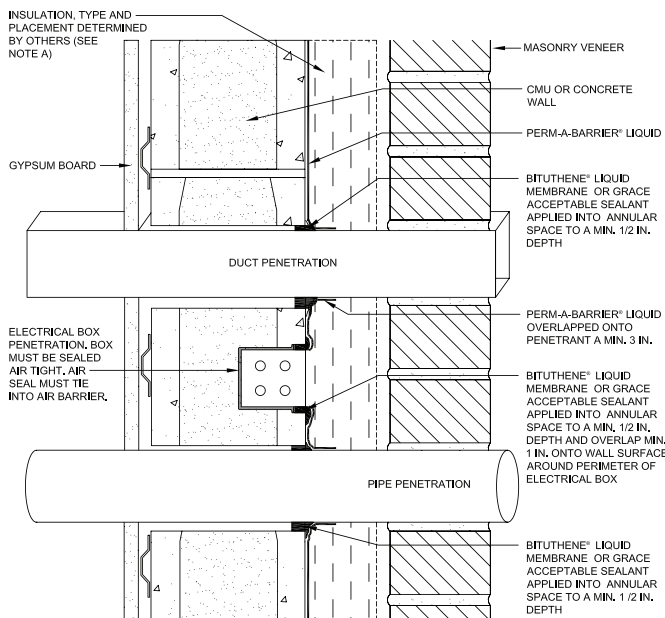
PLAN VIEW





Prior to Membrane Installation, Review the Perm-A-Barrier® Liquid Data Sheet

■ PLQ-117 – Penetration



Surface Prep

All surfaces must be structurally sound and free from spalled areas, loose aggregate, sharp protrusions or other matter that will hinder the adhesion or regularity of the Perm-A-Barrier® (PAB) membrane installation. The surface should also be free from frost, dirt, grease, oil or other contaminants as outlined in the Perm-A-Barrier® Liquid Data Sheet section on Surface Preparation. Clean loose dust and dirt from the surface and prime with appropriate primer if applicable.

Detailing

1. Apply Liquid Membrane or Grace acceptable sealant into the annular space to the depth of the exterior sheathing and overlap 1 in (25 mm) onto sheathing around perimeter of penetration.
2. Apply PAB Liquid as shown overlapping onto penetration a minimum of 3 in (75 mm) if applicable.
3. Apply PAB Liquid according to the installation instructions found on the appropriate data sheets.

Special Notes

- A. Detail not suitable for all climates. Avoiding excessive moisture accumulation in exterior walls is dependent on many factors including proper placement of insulation and air and vapor barriers in the wall. For assistance with exterior wall design, consult with a building science professional or a Grace representative.
- B. To ensure a continuous air barrier across the building envelope, a fully continuous connection should be made to the roof system and Grace waterproofing system.
- C. Install all Grace products in accordance with Grace product data sheets and Grace recommendations.