AECOM HUNT

Building Envelope Coordination Meeting

01.04.2025

This Meeting is good for 6.0 Hours AIA-HSW Credit

Building Enclosure Coordination Meeting GUIDE

The building enclosure coordination meeting aims to enhance the delivery of the proposed construction project by fostering collaboration among key stakeholders, including the owner, designer, and construction teams. The focus is specifically on the building enclosure, which comprises foundation waterproofing, opaque wall assemblies, glazing, and roof assemblies. While the principles outlined in this document can be applied by anyone to improve design and construction practices, it is strongly recommended that the discussion be led by individuals or groups with a solid understanding of building enclosure systems and building science.

Recommended Participants

- Owner's Representative(s)
- Architect / Engineer of Record
- General Contractor / Construction Manager
- Trade Contractor
- Building Enclosure Subcontractors
- Manufacturer Representatives
- Building Enclosure Consultant(s)
- Commissioning Agent

Meeting Agenda

- Introductions
- Specific Roles
- Review Project Details Relevant to Building Enclosure
- Additional Enclosure Considerations

Owner's Project Requirements

- Schedule of installation
- Special Owner Directives
- Materials to be Included / Excluded
- Insurance Requirements

Review Details, such as

- Underslab to Below Grade
- Below Grade to Wall
- Wall to Window (Sill, Jamb & Head)
- Wall to Roof
- Roof to Window
- Canopies
- Inside and Outside Corners
- Dissimilar Materials
- Expansion & Control Joints (another meeting will be held for complex detailing)
- Cladding Transitions

Enclosure Considerations

- Confirm continuity of the four control layers (priority) – Water (1st), Air (2nd), Thermal (3rd), Vapor (4th)
- Confirm all materials shown in the details, including flashing and accessories, are included in a Trades scope of work
- Confirm various subcontractors' shop drawings accurately represent the contract drawings and specifications
- Review constructability issues with the details
- Confirm interfacing materials in the details are compatible
- Is adhesion / compatibility testing required for interfacing materials and how long will that take for results
- Review if the detail can be revised to improve constructability, durability, schedule, etc. with sacrificing OPR requirements or performance
- Confirm the following:
  - Sequencing
  - CFMF / Structural Steel Coordination
  - Blocking
  - Fastener Penetrations
  - Flashing Back and End Dams
  - Substrate Preparation Requirements
  - Performance Testing Requirements
  - Manufacturer Warranty Requirements
  - Manufacturer-Required Training/Certification
  - Owner Maintenance Considerations
  - Weather/Site Limitations
  - Potential Material Sourcing Issues

The project's contract documents take precedence over any discussions or materials produced during the building enclosure coordination meeting. It is strongly advised that any deviations from the contract documents be reviewed by the architect or engineer of record and formally issued as a revision to the contract documents (e.g., through a Request for Information response) before implementation in the field. Furthermore, any proposed revisions that could affect the project's schedule or budget should be coordinated with the general contractor prior to execution.

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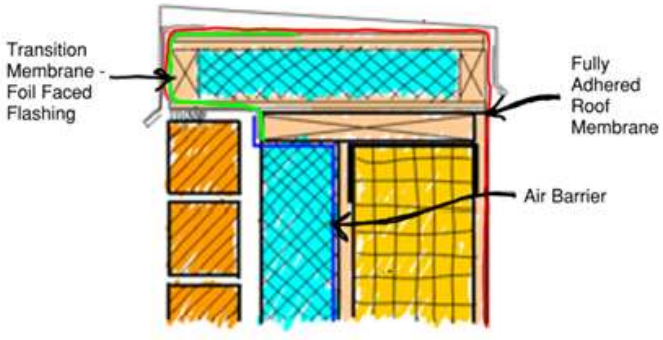
Roof Edge / Parapet Considerations



Continuity:

- How will the air barrier connect to the roof membrane?
  Recommend to run the air barrier under a transition membrane that is extended on top of the parapet blocking, 4"-6", under the roof membrane (as shown by the green line in the example detail).

- Is the thermal insulation continuous to protect all 3 sides of the parapet?
  If the parapet cap is not protected by insulation or spray foam in the framing cavity, it is susceptible to condensation with the sun in the winter and if interior air infiltrates up into the cap. Fully insulate the parapet framing cavity with spray foam and seal the cavity off at the building to reduce this risk.

Compatibility:

- Is the air barrier compatible with the roof membrane, including the roof adhesive?
  Typically, installing a compatible transition membrane, such as a stainless steel self-adhered product to go underneath the roof membrane and air barrier is the easiest to confirm material compatibility.

Sequencing:

- Reviewing the example detail, the blocking and air barrier above need to be installed *before* the masonry.

Additional Considerations:

- Does the parapet cap meet ANSI/SPRI ES-1 wind uplift requirements for both the design and fabrication as required by building code? (IBC 2012-2024)

- Is the blocking the proper thickness and orientation to meet ANSI/SPRI ES-1 requirements?
  Wood blocking is required to be 1.5" thick per ANSI/SPRI ES-1. If two layers of ¾" plywood are used, confirm that the parapet cap fastener is not attached to the edge of the plywood as it will not have the same pull-out strength as if attached into the face of the plywood. Note in the example detail, there is a solid 2x at the face for proper attachment.

- Does the roofing go over the coping with a non-ES-1 tested coping (such as 1/8" aluminum)?
  This will not meet ES-1 testing; however, if the roof is terminated on the top edge of the parapet on the vertical, the coping no longer needs to meet ES-1 testing requirements.

- Is the blocking extending beyond 2" past the support?
  Wood is to be independently supported over 2". The support could be 14 ga LGS or similar.

- Is the blocking exterior treated?
  If the wood blocking is being covered, exterior treated wood is not generally needed or desired because of the metal incompatibility concerns and the moisture content. If exterior treated wood is insisted upon, there will need to be an ice and water shield separation between the wood and galvanized or aluminum metal.

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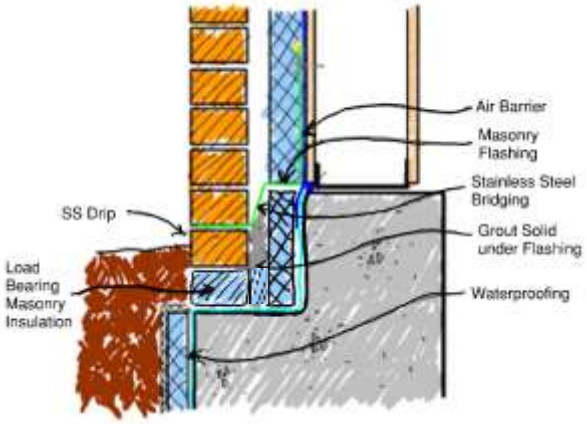
Wall Foundation Considerations



Continuity:

- Air barrier transition to the waterproofing?
- Will the wall have a cavity, such as a masonry or rainscreen need to be flashed at the bottom of the wall?

  The air barrier should always run down to the foundation and the flashing to run over the top (after confirming compatibility) and properly sealed between the two materials.

- How is the insulation continuous from the wall to the foundation?

Compatibility:

- Is the air barrier compatible with the waterproofing membrane?

  Often waterproofing membranes are asphalt based, and not compatible with many air barriers. Stainless-steel peel and stick transition membrane is compatible with most products and therefore works well as a transition flashing if it is installed under all other materials.

- Is the masonry flashing, primer and sealant compatible with the air barrier?
- Always review seasons and time of day and compare with the material's properties.

Sequencing:

- Reviewing the example detail, the air barrier and waterproofing need to be complete and sealed together prior to starting the masonry. The waterproofing should be installed with a transition membrane at the top of the system for an air barrier overlap.

General:

- Will the foundation insulation be exposed?

  Insulation is often required for continuity at the top of the wall, but needs to be covered for UV exposure and aesthetics. Consider a heavy gage stainless steel sheet metal flashing as an option to cover insulation or a specialty insulation coated with cementitious layer.

- How does the detail change if there is a condition with a sidewalk or pavement instead of landscaping?
- Does the exterior cladding allow for installation with contact with the ground?

  Cladding such as EIFS require a minimum clearance above ground or sidewalk.

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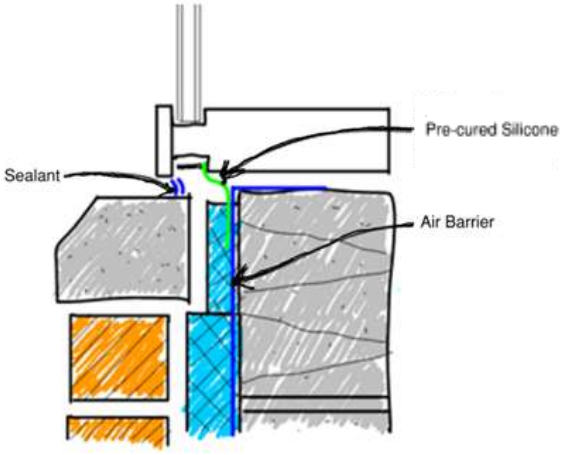
Wall Foundation Considerations



Continuity:

- What air barrier flashing is being installed in the openings to allow the window to seal?
  The air barrier membranes might have an adhesion issue with sealant – review compatibility.

- What is the window type (i.e., curtainwall, storefront, architectural, flanged, etc.) and what is the window's "primary" seal location?
  For curtainwall (shown) the primary seal is typically directly behind the glazing pocket – always confirm with the manufacturer. For storefront, the interior side of the framing is the primary air seal, or both the front and back are needed, as determined by the window manufacturer's testing.

- How will the window seal directly to the air barrier at the window's primary seal location?
  The example shows a precured silicone glazed into the curtainwall – this is a good solution if the primary seal is outboard of the air barrier. If the curtainwall primary seal aligns or is inboard of the air barrier, the precured silicone could be replaced with a sealant joint, if differential movement between the window and building structure is not an issue.

Compatibility:

- Is the air barrier compatible with the window sealant?
  Often air barriers have a polyethylene facer to which silicone sealants do not have good adhesion. The sealant manufacturer can provide testing for the specific air barrier and recommend an appropriate product. Typically a stainless steel peel and stick is recommend that is compatible with most materials.

- Does the air barrier contain an asphalt-based adhesive on the back side that will be exposed at the joints?
  Asphalt is not compatible with silicones, and therefore the joints would need to be covered with a sealant compatible with both the air barrier, asphalt, and silicone sealant.

- Does the window sealant need a primer?
  Primer testing is required and provided by the sealant manufacturer.

Sequencing:

- Review the example detail, the air barrier, curtainwall, and precured silicone would be best installed prior to the masonry. If sequencing needs to change – review the installation with the team.

General:

- Will the exterior cladding at the sill properly flash water and be durable for the long term?
  Cladding such as EIFS, precast concrete, row-lock masonry do not make good long-term sills, and a metal flashing should be considered to protect the cladding.

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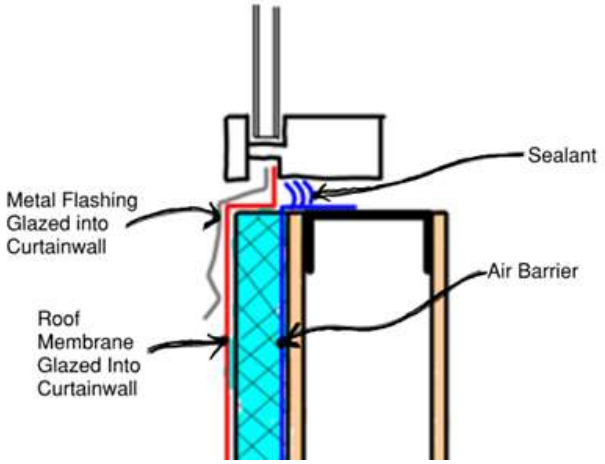
Roof to Wall Considerations



Continuity:

- How will the window seal directly to the air barrier at the window's primary seal location?
  The example shows the roof membrane and flashing glazed into the curtainwall, which achieves water barrier continuity, and the sealant behind provides air barrier continuity.

- How is the air barrier installed to allow the window to seal?
  Sealant typically will not properly seal to most roofing membranes. If the roofing is not able to be glazed in, install a stainless steel transition membrane in the opening for a proper seal to the roofing and the window system.

Compatibility:

- Is the air barrier compatible with the window sealant?
  If the roof membrane is the air barrier, sealants are not compatible with most roofing systems, and therefore turning the roof membrane into the opening is typically not a good solution – it should be glazed in (as shown) or a stainless steel peel and stick transition membrane would need to be installed under all products.

- Is the roof membrane shown to contact the air barrier, and if so, is it compatible?
  Typically these two membranes are not compatible and need a stainless steel transition membrane.

- Are there any dissimilar metals, such as aluminum and galvanized sheet metal, that need to be separated?

Sequencing:

- Review the example detail, the air barrier and curtainwall (without pressure plates) are installed before the roof membrane, and then the curtainwall pressure plates are installed. The roof membrane could also go before the curtainwall and left long for the curtainwall installer to glaze in the roof membrane and sheet metal.

General:

- How will the roof membrane be properly terminated, and is additional metal strapping or blocking required to achieve this termination?

- What will be required at this detail when it is re-roofed in the future?

Material Compatibility Considerations

Common Incompatible Building Material Combinations

(Note: This is not an exhaustive list – always confirm compatibility with the manufacturer)

Bitumens & Polystyrene	Bituminous-based products & EPDM
Bitumens & Polyethylene	Bituminous-based products & TPO
Solvent-based sealants & Polystyrene (EPS & XPS)	Bituminous-based products & PVC
Solvent-based sealants & Polyethylene	Rubberized Asphalt & plasticized PVC *(Most Peel-N-Stick Materials) & (window nailing flange)*
Asphalt roofing & Polyurethane sealants	Rubberized Asphalt & Uncured Neoprene (Most Peel-N-Stick Materials)
	Rubberized Asphalt & EPDM (Most Peel -N-Stick Materials)
Butyl blend adhesives & Plasticized PVC *(window nailing flange) (Typically, arched & round windows use plasticized PVC nailing flange)*	Rubberized Asphalt & TPO (Most Peel-N-Stick Materials)
	EPDM & Solvents, Vegetable Oil, Mineral Oil, Animal Based Oils, & Animal Fats.
Polyurethane sealants & Polystyrene (EPS & XPS)	Polyurethane sealants and other sealant types *(other than silicone) on silicone have poor adhesion*
Silicone & EPDM *(cause discoloration and/or loss of sealant adhesion to the substrate of light-colored silicone sealants – Contact Manufacturer of Sealant) If adhesion is not affected, consider a dark colored sealant*	Polyurethane sealant & polyethylene sheet *have poor adhesion*
Silicone & Neoprene *(cause discoloration and/or loss of sealant adhesion to the substrate of light-colored silicone sealants – Contact Manufacturer of Sealant) If adhesion is not affected, consider a dark colored sealant*	Polyurethane sealant & PVC *have poor adhesion*
Silicone & Bitumens *(cause discoloration and/or loss of sealant adhesion to the substrate of light-colored silicone sealants – Contact Manufacturer of Sealant) If adhesion is not affected, consider a dark colored sealant*	Polyurethane sealant & Vinyl *have poor adhesion*
Silicone & Asphalt *(cause discoloration and/or loss of sealant adhesion to the substrate of light-colored silicone sealants – Contact Manufacturer of Sealant) If adhesion is not affected, consider a dark colored sealant*	
Silicone & Silicone Compatible Rubber *(cause discoloration and/or loss of sealant adhesion to the substrate of light-colored silicone sealants – Contact Manufacturer of Sealant) If adhesion is not affected, consider a dark colored sealant*	Acetic-Cure Silicone Sealants & Mirror Backs

Base Metal \ Fastener Metal	Alum	Copper	Stainless Steel 302/304	Stainless Steel 410	Steel	Zinc & Galv.
Alum	A	C	B	NR	B	A
Copper	AE	A	B	A	AE	ADE
Stainless Steel 302/304	AE	AE	A	A	AE	ADE
Steel	A	C	B	C	A	AD
Tern-plated Steel	AE	C	B	C	AE	ADE
Zinc & Galv.	B	C	C	C	B	A

A= The corrosion of the base metal is not increased by the fastener

B= The corrosion of the base metal is marginally increased by the fastener

C= The corrosion of the base metal may be increased by the fastener material

D= The plating of the fastener is rapidly consumed, leaving the bare fastener metal

E= The corrosion of the fastener is increased by the base metal

NR= Not recommended