Wood Frame Construction up to 4 Storeys: Heavyweight Cladding.

Intended Use of this Document

This document provides example key assembly interface details showing the use of ROCKWOOL™ products within a split-insulated wall assembly for commercial buildings up to 4 stories.

The example details could be modified for other building types or applications. The intended use has been limited to 4 stories for the sole purpose of creating boundaries around the detail development. The example details are designed to be generally applicable across North America; however, specific end use applications vary widely as to design, materials, and environments. Therefore, what is appropriate in any specific end use application is a determination that must be made independently by the experienced Project Architect and/or Engineer in their own professional judgment. ROCKWOOL™ fully disclaims any liability for any of the content contained herein whether such liability be premised on a theory of contract, tort, or otherwise.

These example details are intended to provide architects, builders, and contractors with general guidance on the best practice approach to maintain:

- Air barrier continuity,
- Water resistant barrier (moisture barrier) continuity,
- Thermal continuity and minimizing thermal bridges,
- Cladding attachment and detailing, and
- Adequate drainage and ventilation of the wall cavity.

It is important to note these details show one method of constructing a split-insulated, exterior air barrier wall assembly; however, subtle changes at interface locations could be made to achieve the same intent. Review the building code requirements for your jurisdiction to ensure that all wall assembly detailing is in general conformance, or contact ROCKWOOL™ Building Science Support for support on your project.
WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- HEAVYWEIGHT CLADDING

TYPICAL WALL AT FOUNDATION WALL (CRAWLSPACE)

* For thermal performance of ROCKWOOL™ products, please refer to ROCKWOOL™ technical data sheets

** For climate zone specific considerations for thermal, air and vapor control layer properties and requirements, please contact ROCKWOOL™ Building Science for support.
Gypsum board c/w 2 layers latex paint

Vapor control layer**

2x4 framed wall

Construction adhesive

Acoustic caulking

Concrete slab on grade

Air and vapor control layer, all joints lapped and taped

2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

2½" (89mm) ROCKWOOL COMFORTBOARD™

Free-draining backfill

Gypsum board c/w 2 layers latex paint

Vapor control layer**

2x4 framed wall

Construction adhesive

Acoustic caulking

Concrete slab on grade

Air and vapor control layer, all joints lapped and taped

2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

Drainage mat c/w integral geotextile fabric (optional)

Foundation dampproofing/waterproofing (WRB)

Perforated drain pipe with filter fabric

Capillary break

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WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- HEAVYWEIGHT CLADDING

Typical Wall at Foundation Wall

- Plywood/OSB subfloor
- Acoustic caulking
- 2x6 framed wall
- Plywood/OSB sheathing
- 2½” (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Heavy cladding (brick, stone, etc.)
- Vapor permeable membrane (AB/WRB)**
- Mortar catching device (optional) at base/drainage point of all masonry walls
- Mortar tying with (optional) insulation retention washer
- Self-adhered through wall flashing membrane, held 1/2” back from face of brick
- Vent & drain @ 24” o.c.
- Pre-finished stainless steel metal flashing
- Vapor control layer**
- Capillary break
- Foundation dampproofing/waterproofing (water, air, and vapor control layer)

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- Plywood/OSB sheathing
- Brick-tie with (optional) insulation retention washer
- Min. 1" drainage gap
- Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.
- 2 1/2" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Vapor permeable membrane (AB/WRB)**
- Self-adhered membrane, held 1/2" back from face of cladding
- Insect screen
- Pre-finished metal flashing c/w end dams
- Precast sill, (anchoring not shown)
- Drip profile
- Vent at 24" o.c.
- Heavy cladding (brick, stone, etc.)
- Brick-tie with (optional) insulation retention washer
- 2 1/2" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Plywood/OSB sheathing

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Shelf angle attached to structural joists

Min. 1" drainage gap

Stainless steel drip flashing

Vent & drain @ 24" o.c.

Heavy cladding (brick, stone, etc.)

Vapor permeable membrane (AB/WRB)**

ROCKWOOL COMFORTBOARD™ 80/110 insulation

Vapor control layer**

Gypsum board c/w 2 layers latex paint

Fill cavity with 5\(\frac{1}{2}\)" (140mm) ROCKWOOL COMFORTBATT®

[3\(\frac{1}{2}\)" (89mm) ROCKWOOL COMFORTBATT® also available]

2x6 framed wall

Acoustic caulking

Plywood/OSB subfloor

5\(\frac{1}{2}\)" (140mm) ROCKWOOL COMFORTBATT®

2\(\frac{1}{2}\)" (64mm) ROCKWOOL COMFORTBOARD™

Mortar catching device (optional) at base/drainage point of all masonry walls

Self-adhered through wall flashing membrane, held 1/2" back from face of brick

Vent & drain @ 24" o.c.

Stainless steel drip flashing

Shelf angle attached to structural joists

Lightweight soffit cladding installed over 3/4" strapping.

ROCKWOOL COMFORTBATT® also available

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WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- HEAVYWEIGHT CLADDING

TYPICAL WALL AT CANTILEVERED BALCONY

2\(\frac{1}{2}\)" (64mm) ROCKWOOL COMFORTBOARD™
80/110 insulation

Vapor control layer**

Gypsum board c/w 2 layers latex paint

Fill cavity with 5\(\frac{1}{2}\)"
(140mm) ROCKWOOL COMFORTBATT®

[3\(\frac{1}{2}\)" (89mm)
ROCKWOOL COMFORTBATT® also available]

2x6 framed wall

Acoustic caulking

Plywood/OSB subfloor

2" Closed cell spray foam insulation

3\(\frac{1}{2}\)" ROCKWOOL™
thermal barrier (as drawn) or approved barrier by local building code

Acoustic caulking

Vapor control layer**

Fill cavity with 5\(\frac{1}{2}\)"
(140mm) ROCKWOOL COMFORTBATT®

[3\(\frac{1}{2}\)" (89mm)
ROCKWOOL COMFORTBATT® also available]

Continuous vapor permeable membrane (AB/WRB) between cantilevered joists. Seal perimeter of joist to air barrier membrane with tape.

2\(\frac{1}{2}\)" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

Insect screen

Stainless steel drip flashing

Lightweight soffit cladding

Brick-tie with (optional) insulation retention washer

Heavy cladding (brick, stone, etc.)

2\(\frac{1}{2}\)" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

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Self-adhered membrane to lap from roof membrane, up over parapet (WRB)

Fill void with ROCKWOOL COMFORTBATT®

Roofing membrane installed as per manufacturer’s instructions (2-ply SBS illustrated, sloped approach not shown)

2 1/2” (64mm) ROCKWOOL TOPROCK® DD insulation

2 1/2” (64mm) ROCKWOOL TOPROCK® DD PLUS insulation, joints offset and staggered

Fully adhered air and vapor control layer

Pre-strip membrane under parapet lapped and adhered onto wall sheathing membrane (AB)

2” Closed cell spray foam insulation**

2x10 roof structure

Acoustic caulking

Vapor control layer**

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WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- HEAVYWEIGHT CLADDING

TYPICAL SLOPE ROOF (CATHEDRAL) AT EAVE

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Blocking between cantilevered joists

2" Closed cell spray foam insulation**

3½" ROCKWOOL™ thermal barrier (as drawn) or approved barrier by local building code

Vapor control layer**

Backer rod and sealant joint from window frame to membrane

Double glazed, flange-mounted window

Plywood/OSB sheathing

Vapor permeable membrane (AB/WRB)**

Self-adhered through wall flashing membrane, held 1/2" back from face of brick

Brick-tie with (optional) insulation retention washer

2 1/2" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

Vapor permeable membrane (AB/WRB)**

Self-adhered through wall flashing membrane, held 1/2" back from face of brick

Vent & drain @ 24" o.c.

Stainless steel drip flashing

Loose lintel

Frame extension with continuous backer rod and sealant

Int. metal clips to retain window flange

Jamb closure flashing beyond

Min. 1" drainage gap

Heavy cladding (brick, stone, etc.)

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Vapor control layer

Intermittent shims for drainage at 12" o.c. (thickness as req’d 1/4" min.)

Backer rod and sealant joint from window frame to membrane for air continuity

Blocking to suit gypsum board return or interior trim

Acoustic caulking

Intermittent shims for drainage at 12" o.c. (thickness as req’d 1/4" min.)

Vapor control layer

Fill cavity with 5 1/2" (140mm) ROCKWOOL COMFORTBATT®

[3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

Gypsum board c/w 2 layers latex paint

Self-adhered pan flashing membrane to extend into rough opening

Vent & drain @ 24" o.c.

Self-adhered sub-sill drainage flashing membrane (optional)

Brick-tie with (optional) insulation retention washer

Vapor permeable membrane (AB/WRB)**

2 1/2" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

Min. 1" drainage gap

Heavy cladding (brick, stone, etc.)

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Typical Flange-Mounted Window Jamb

- Plywood/OSB sheathing
- Heavy cladding (brick, stone, etc.)
- Min. 1" drainage gap
- Vapor permeable membrane jamb prestrip (AB/WRB)**
- Brick-tie with (optional) insulation retention washer
- 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Double glazed, flange-mounted window
- Pre-finished metal closure flashing
- Precast concrete sill below
- Pre-finished sill flashing below
- Continuous backer rod and sealant
- Acoustic caulking
- Vapor control layer**
- Block to suit gypsum board return or interior trim
- Backer rod and sealant joint from window frame to membrane for air barrier continuity
- Vapor permeable start strip to extend into rough opening
- Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT® [3½" (89mm) ROCKWOOL COMFORTBATT® also available]
- Gypsum board c/w 2 layers latex paint

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** For climate zone specific considerations for thermal, air and vapor control layer properties and requirements, please contact ROCKWOOL™ Building Science for support.
Backer rod and sealant joint from window frame to membrane for air barrier continuity

2" Closed cell spray foam insulation**

3½" ROCKWOOL™ thermal barrier (as drawn) or approved barrier by local building code

Vapor permeable membrane (AB/WRB)**

Plywood/OSB sheathing

Brick-tie with (optional) insulation retention washer

2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

Vapor permeable membrane (AB/WRB)**

Self-adhered through wall flashing membrane, held 1/2" back from face of brick

Vent & drain @ 24" o.c.

Tape (AB)

Stainless steel drip flashing

Loose lintel

Frame extension with continuous backer rod and sealant

Self-adhered membrane to wrap into rough opening

Jamb closure flashing beyond

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Self-adhered pan flashing membrane to extend into rough opening and up and over metal back dam angle.

Precast sill, (anchoring not shown)

Pre-finished sill flashing c/w end dams

Continuous metal back dam angle

Sealant joint from window frame to membrane for air continuity

Blocking to suit gypsum board return or interior trim

Acoustic caulking

Intermittent shims for drainage at 12" o.c. (thickness as req'd 3/4" min.)

Vapor control layer**

Fill cavity with 5 1/2" (140mm) ROCKWOOL COMFORTBATT®

[3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

Sealant joint from window frame to membrane for air continuity

Jamb closure flashing beyond

Double glazed window c/w subclip

Sealant

Pre-finished sill flashing c/w end dams

Insect screen

Pre-cast sill, (anchoring not shown)

Self-adhered pan flashing membrane to extend into rough opening and up and over metal back dam angle

Vent & drain @ 24" o.c.

Self-adhered sub-sill drainage flashing membrane (optional)

Brick-tie with (optional) insulation retention washer

Vapor permeable membrane (AB/WRB)**

2 1/2" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation

Min. 1" drainage gap

Heavy cladding (brick, stone, etc.)

Plywood/OSB sheathing

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Gypsum board c/w 2 layers latex paint

Vapor control layer**

Fill cavity with 5\(\frac{1}{2}\)" (140mm) ROCKWOOL COMFORTBATT\textsuperscript{®}

[3\(\frac{1}{2}\)" (89mm) ROCKWOOL COMFORTBATT\textsuperscript{®} also available]

Vapor permeable start strip to extend into rough opening

Acoustic caulking

Blocking to suit gypsum board return or interior trim

Backer rod and sealant joint from window frame to membrane for air barrier continuity

Double glazed window c/w subclip

Continuous backer rod and sealant

Pre-finished sill flashing below

Pre-finished metal closure flashing

Precast concrete sill below

Min. 1" drainage gap

Plywood/OSB sheathing

Heavy cladding (brick, stone, etc.)

Vapor permeable membrane jamb prestrip (AB/WRB)**

2\(\frac{1}{2}\)" (64mm) ROCKWOOL COMFORTBOARD\textsuperscript{TM}

80/110 insulation

Brick-tie with (optional) insulation retention washer

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