Wood Frame Construction up to 4 Storeys: Lightweight 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.
Alternate insulation location, ROCKWOOL COMFORTBATT® to fill stud cavity**

2x3 uninsulated service cavity

Polyethylene sealed to wall (AB)

Polyethylene sheet below slab, all laps and edges sealed (AB,WRB)**

Concrete slab on grade

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

Foundation dampproofing/waterproofing (WRB)

Free-draining backfill

Drainage mat c/w integral geotextile fabric (optional)

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

Foundation dampproofing/waterproofing (WRB)

Polyethylene sealed to wall (AB)

Capillary break

AB = Air Barrier
WRB = Water Resistive Barrier

WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- LIGHTWEIGHT HORIZONTAL CLADDING

FOUNDATION WALL AT FOOTING (BASEMENT)

Detail 02

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

** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT®.
[3½" (89mm) ROCKWOOL COMFORTBATT® also available]

2x6 framed wall

Acoustic caulking

Plywood/OSB subfloor

Plywood/OSB sheathing

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

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

Vapor permeable membrane (AB/WRB)**

Self-adhesive through-wall flashing membrane w/ sealant at top edge (WRB)

Insect screen

Pre-finished metal flashing over top of cover board

Drainage mat c/w integral geotextile fabric

Insulation cover board

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

Tape (AB)

Foundation dampproofing/ waterproofing (WRB)

Alternate insulation location, ROCKWOOL COMFORTBATT® to fill stud cavity**

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

2" Closed cell spray foam insulation**

TYPICAL WALL AT FOUNDATION WALL (BASEMENT)

WOOD FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT HORIZONTAL CLADDING

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WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- LIGHTWEIGHT HORIZONTAL CLADDING

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** Typical Wall at Floor **

- Plywood/OSB subfloor
- 2x6 framed wall
- Acoustic caulking
- Vapor permeable membrane (AB/WRB)**
- Self adhesive through-wall flashing membrane w/ sealant at top edge (WRB)
- Insect screen
- Metal cross-cavity flashing c/w end dams (optional)
- 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Plywood/OSB sheathing
- 3½" (89mm) ROCKWOOL COMFORTBATT® also available
- 5½" (140mm) ROCKWOOL COMFORTBATT®
- 2" Closed cell spray foam insulation**
- 3½" ROCKWOOL thermal barrier (as drawn) or approved barrier by local building code
- Acoustic caulking
- Vapor permeable membrane (AB/WRB)
- Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.
- 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- 3½" (89mm) ROCKWOOL COMFORTBATT® also available
- 5½" (140mm) ROCKWOOL COMFORTBATT®
- Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT®
- Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT®
Preformed metal flashing c/w drip edge over sheathing lip and extend to edge of soffit cladding.

Vapor permeable membrane (AB/WRB)**

Plywood/OSB sheathing

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

2¼" (64mm) ROCKWOOL COMFORTBOARD™

80/110 insulation

Vapor permeable membrane (AB/WRB)**

Self adhesive through-wall flashing membrane w/ sealant at top edge (WRB)

2½" (64mm) ROCKWOOL COMFORTBATT®

Lightweight horizontal cladding installed over 3/4" strapping.

2½" (64mm) ROCKWOOL COMFORTBOARD™

80/110 insulation

Insect screen

Intermittent blocking attached to soffit strapping

Preformed metal flashing c/w drip edge over sheathing lip and extend to edge of soffit cladding

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**Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
Self-adhered membrane to lap from roof membrane, up over parapet (WRB)

Fill void with ROCKWOOL COMFORTBATT®

Roofing membrane installed as per manufacturers instructions (2-ply SBS illustrated slope approach not shown)

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

Fully adhered air and vapor control layer (AB)**

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

2" Closed cell spray foam insulation**

Roof structure

Acoustic caulking

Insect screen

Lap parapet cap membrane over wall WRB

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

Fill cavity with 5 1/2" (140mm) ROCKWOOL COMFORTBATT®, [3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

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

Vapor permeable membrane (AB/WRB)**

Fill void with 5 1/2" (140mm) ROCKWOOL COMFORTBATT®, [3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

Plywood/OSB sheathing

2x6 framed wall

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** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
WOOD FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT HORIZONTAL CLADDING

TYPICAL SLOPE ROOF (ATTIC) AT EAVE

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** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
Self-adhesive vapor permeable membrane (AB)**

2 layers 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation, joints offset and staggered

Shingles

Self-adhered eave protection membrane (WRB)

Metal eave flashing and gutter

Wood fascia trim board

Vapor permeable membrane (AB/WRB)**

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

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT® [3½" (89mm) ROCKWOOL COMFORTBATT® also available]

Plywood/OSB sheathing

Vapor control layer **

VAPOR CONTROL LAYER **

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** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
Backer rod and sealant joint from window frame to membrane (compatible with/adhering to prestrip membrane) (AB)

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

Acoustic caulking

2x6 framed wall

Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT®.

[3½" (89mm) ROCKWOOL COMFORTBATT® also available]

Vapor control layer **

Double glazed, flange-mounted window

2" Closed cell spray foam insulation**

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

Vapor permeable head prestrip membrane (AB/WRB)

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

Self adhesive through-wall flashing membrane w/sealant at top edge (WRB)

Tape (AB)

Intermittent metal clips to retain window flange

Insect screen

Vapor permeable membrane (AB/WRB)

Plywood/OSB sheathing

Window trim drip flashing

TYPICAL FLANGE-MOUNTED WINDOW HEAD

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

** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
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]
Sealant
Double glazed, flange-mounted window
Metal cross-cavity flashing c/w end dams
Insect screen
1/2" intermittent shims
Self-adhered pan flashing membrane to extend into rough
opening and up and over metal back dam angle
Window trim surround
Self-adhered sub-sill drainage flashing membrane (optional)
Vapor permeable membrane (AB/WRB)
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
Plywood/OSB sheathing

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** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
Plywood/OSB sheathing

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

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

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

Vapor permeable membrane taped to prestrip (AB/WRB)**

Vapor control layer **

Fill cavity with 5½" (140mm) ROCKWOOL COMFORTBATT®
[3½" (89mm) ROCKWOOL COMFORTBATT® 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 continuity

Foil-faced self-adhered membrane

Double glazed, flange-mounted window

Pre-finished sill flashing below

Window trim surround

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** Interior vapor control for cold climates shown. For further climate zone specific considerations for thermal, air and vapor control methodologies and requirements, please contact ROCKWOOL™ Building Science.
Backer rod and sealant joint from window frame to membrane (compatible with/adhering to prestrip membrane) (AB)

Double glazed window c/w subclip

2" Closed cell spray foam insulation**

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

Vapor control layer **

Vapor permeable membrane (AB/WRB)

Plywood/OSB sheathing

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

2½" (64mm) ROCKWOOL COMFORTBOARD™

80/110 insulation

Vapor permeable membrane (AB/WRB)

Window trim drip flashing

Tape (AB)

Insect screen

Self-adhered membrane to wrap into rough opening

TYPICAL FLANGELESS WINDOW HEAD

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

Continuous metal back dam angle

Blocking to suit gypsum board return or interior trim

Acoustic caulking

Interruption shims for drainage at 12" o.c. (thickness as req'd \( \frac{3}{4} \)" min.)

Vapor control layer **

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

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

Double glazed window c/w subclip

Sealant joint from window frame to membrane/angle for air continuity

Sealant

Metal cross-cavity flashing c/w end dams

Insect screen

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

Vapor permeable membrane (AB/WRB)**

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

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

Plywood/OSB sheathing

Acoustic caulking

Window trim surround

Sealant joint from window frame to membrane/angle for air continuity

Double glazed window c/w subclip

Sealant

Metal cross-cavity flashing c/w end dams

Insect screen

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

Vapor permeable membrane (AB/WRB)**

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

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

Plywood/OSB sheathing
Plywood/OSB sheathing

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

Fill cavity with 5 1/2" (140mm) ROCKWOOL COMFORTBATT®
[3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

Vapor permeable start strip to extend into rough opening

ROCKWOOL COMFORTBATT®

3 1/2" (89mm) ROCKWOOL COMFORTBOARD™ insulation

Lightweight horizontal cladding (fiber-cement, wood, vinyl siding) installed over 3/4" vertical strapping. Strapping fastened through insulation to framing.

Vapor permeable membrane taped to prestrip (AB/WRB)**

Acoustic caulking

Blocking to suit gypsum board return or interior trim

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

Foil-faced self-adhered membrane

Double glazed window c/w subclip

Pre-finished sill flashing below

Window trim surround

Vapor control layer **

Foil-faced self-adhered membrane

Joint from window frame to membrane for air continuity

Blocking to suit gypsum board return or interior trim

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

Pre-finished sill flashing below

Window trim surround

TYPICAL FLANGELESS WINDOW JAMB

WOOD FRAME CONSTRUCTION UP TO 4 STOREYS
- LIGHTWEIGHT HORIZONTAL CLADDING

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