Commercial Steel 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.
Gypsum board c/w 2 layers latex paint

Service cavity (2x3)

Perimeter bond break

Concrete slab on grade

Free-draining backfill

Drainage mat c/w integral geotextile fabric (optional)

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

Foundation dampproofing/waterproofing (WRB)

Perforated drain pipe with filter fabric

Vapor control layer, all joints lapped and taped**

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

Capillary break

Acoustic caulking

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.
TYPICAL WALL AT SLAB-ON-GRADE

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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.**
Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®

Vapor control layer**
6" steel stud framed wall
Acoustic caulking

Steel decking with concrete topping
Fill space with ROCKWOOL COMFORTBATT®
6" steel stud framed wall
Backer rod and sealant joint

Acoustic caulking
Vapor control layer**
Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®
[3¾" (89mm) ROCKWOOL COMFORTBATT® also available]

Mortar catching device (optional) at base/drainage point of all masonry walls
Min. 1" drainage gap
Heavy cladding (brick, stone, etc.)
Self-adhered vapor permeable membrane (AB/WRB)**
3¾" (89mm) ROCKWOOL CAVITYROCK® insulation
Exterior gypsum board sheathing
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 supported on stand-offs attached to structural beams
Brick-tie with (optional) insulation retention washer

COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING

TYPICAL BRICK SHELF ANGLE AT STUD WALL

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COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING

TYPICAL BRICK TO CLADDING TRANSITION

- Precast sill, (anchoring not shown)
- 6" steel stud framed wall
- Exterior gypsum board sheathing
- Gypsum board c/w 2 layers latex paint
- Vapor control layer**
- Pre-finished metal flashing c/w clips and end dams
- Self-adhered through wall flashing membrane (WRB)
- Insect screen
- Self-adhered vapor permeable membrane (AB/WRB)**
- Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT® (3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available)
- Air space
- Composite metal panel cladding system over vertical metal hat tracks fasteners to steel studs
- Self-adhered vapor permeable membrane (AB/WRB)**
- Precast sill, (anchoring not shown)
- Drip profile
- Vent @ 24" o.c.
- Brick-tie with (optional) insulation retention washer
- Exterior gypsum board sheathing
- 3 1/2" (89mm) ROCKWOOL CAVITYROCK® insulation
- Min. 1" drainage gap
- Heavy cladding (brick, stone, etc.)

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**COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING**

**TYPICAL WALL AT CANTILEVER FLOOR SECTION**

- **Vapor control layer**
- **Gypsum board c/w 2 layers latex paint**
- **Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®**
- **(3½" (89mm) ROCKWOOL COMFORTBATT® also available)**
- **6" steel stud framed wall**
- **Acoustic caulking**
- **Self-adhered vapor permeable membrane (AB/WRB)**
- **Exterior gypsum board sheathing**
- **Min. 1" drainage gap**
- **Brick-tie with (optional) insulation retention washer**
- **Self-adhered vapor permeable membrane (AB/WRB)**
- **Heavy cladding (brick, stone, etc.)**
- **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 (attachment not shown for clarity)**

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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 manufacturers instructions (2-ply SBS illustrated)

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

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

Pre-finished parapet cap flashing c/w wind clips, both sides, for attachment

Min. 1" drainage gap

Pre-finished parapet cap

Insect screen

Lap parapet cap membrane over wall WRB

Brick-tie with (optional) insulation retention washer

Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®, [3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

3 1/2" (89mm) ROCKWOOL CAVITYROCK® insulation

Heavy cladding (brick, stone, etc.)

Self-adhered vapor permeable membrane (AB/WRB)**

Exterior gypsum board sheathing

3 1/2" (89mm) ROCKWOOL CAVITYROCK® insulation

Min. 1" drainage gap

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

Exterior gypsum board decking

Pre-strip membrane under parapet (AB)

Fill space with ROCKWOOL COMFORTBATT®

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Min. 1" drainage gap

3½" (89mm) ROCKWOOL CAVITYROCK® insulation

Heavy cladding (brick, stone, etc.)

Self-adhered vapor permeable membrane (AB/WRB)**

Backer rod and sealant joint from window frame to membrane (compatible with/ adhering to prestrip membrane) (AB)

Fill void with insulation, by window manufacturer

Double glazed thermally broken window

Vent & drain @ 24" o.c.

Stainless steel drip flashing

Loose lintel

Frame extension with continuous backer rod and sealant

Self-adhered membrane

Jamb closure flashing beyond

COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING

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COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING

TYPICAL FLANGELESS WINDOW SILL

Sealant joint from window frame to membrane for air continuity

Continuous metal back dam angle

Blocking to suit gypsum board return or interior trim

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

Vapor control layer**

Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®
[3 1/2" (89mm) ROCKWOOL COMFORTBATT® also available]

6" steel stud framed wall

1/2" gypsum board c/w 2 layers latex paint

Self-adhered membrane to extend into rough opening and up and over metal angle

Jamb closure flashing beyond

Precast sill, (anchoring not shown)

Pre-finished sill flashing c/w end dams

Drip profile

Double glazed thermally broken window

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

Brick-tie with (optional) insulation retention washer

Self-adhered vapor permeable membrane (AB/WRB)**

3 1/2" (89mm) ROCKWOOL CAVITYROCK® insulation

Min. 1" drainage gap

Heavy cladding (brick, stone, etc.)

Exterior gypsum board sheathing

Sealant joint from window frame to membrane for air continuity

COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING

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COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - HEAVYWEIGHT CLADDING

TYPICAL FLANGELESS WINDOW JAMB

Gypsum board c/w 2 layers latex paint

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

Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®
[3½" (89mm) ROCKWOOL COMFORTBATT® also available]

Vapor permeable start strip to extend into rough opening

Vapor control layer**

Fill void with insulation, by window manufacturer

Double glazed thermally broken window

Min. 1" drainage gap

Continuous backer rod and sealant

Heavy cladding (brick, stone, etc.)

Pre-finished metal closure flashing

Precast concrete sill below

Brick-tie with (optional) insulation retention washer

Pre-finished sill flashing below

Exterior gypsum board sheathing

3½" (89mm) ROCKWOOL CAVITYROCK® insulation

Self-adhered vapor permeable membrane jamb prestrip (AB/WRB)**

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