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

Service cavity (2x3)

Acoustic caulking

Perimeter bond break

Concrete slab on grade

Perforated drain pipe with filter fabric

Drainage mat c/w integral geotextile fabric (optional)

2 1/2" (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**

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

Capillary break

* 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.
COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT CLADDING

TYPICAL BASE OF WALL AT SLAB-ON-GRADE

* 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 BASE OF WALL AT FOUNDATION

- 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
- Vapor control layer**
- Composite metal panel cladding system over vertical metal hat tracks fastened to steel studs
- Air space
- 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Exterior gypsum board sheathing
- Vapor permeable membrane (AB/WRB)**
- Self adhesive through-wall flashing membrane w/ sealant at top edge (WRB)
- Insect screen (perforated rigid metal sheet)
- Pre-finished metal flashing over top of cover board
- Cement board panel
- Alternate insulation location, ROCKWOOL COMFORTBATT® to fill stud cavity
- 2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation
- Foundation dampproofing/waterproofing (WRB)
- Drainage mat c/w integral geotextile fabric (optional)
- Service cavity (2x3)
- Gypsum board c/w 2 layers latex paint
- 3" = 1'-0"

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

Exterior gypsum board sheathing
Composite metal panel cladding system over vertical metal hat tracks fastened to steel studs

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

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

Insect screen (perforated rigid metal sheet)
Metal cross-cavity flashing c/w end dams

Fill space with ROCKWOOL COMFORTBATT®

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

Steel decking with concrete topping

Backer rod and sealant joint

Vapor control layer**

Vapor permeable membrane (AB/WRB)**

TYPICAL WALL AT FLOOR LEVEL

COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT CLADDING

* 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.
COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT CLADDING

TYPICAL WALL BRICK TO CLADDING TRANSITION

DRAWING TITLE: TYPICAL WALL BRICK TO CLADDING TRANSITION

DRAWING NO.: Detail 05

DATE: JUNE 2020

SCALE: 3" = 1'-0"

* 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.
Vapor control layer**
Gypsum board c/w 2 layers latex paint
6" steel stud framed wall
Acoustic caulking

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

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

Composite metal panel cladding system over vertical metal hat tracks fastened to steel studs
Vapor permeable membrane (AB/WRB)**

Exterior gypsum board sheathing
Self adhesive through-wall flashing membrane (WRB)
Tape (AB)

Sheet metal backer/flashling support
Insect screen (perforated rigid metal sheet)
Preformed metal flashing c/w drip edge over sheathing lip and extend to edge of soffit cladding

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.
** 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.
COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT CLADDING

**For climate zone specific considerations for thermal, air and vapor control layer properties and requirements, please contact ROCKWOOL™ Building Science for support.**

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

**Typical Flangeless Window Head**

- **Backer rod and sealant joint from window frame to membrane**
- **Fill void with insulation, by window manufacturer**
- **Double glazed thermally broken window**
- **Composite metal panel cladding system over vertical metal hat tracks fastened to steel studs**
- **Air space**
- **Exterior gypsum board sheathing**
- **2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation**
- **Self adhesive through-wall flashing membrane w/ sealant at top edge (WRB) (Optional)**
- **Insect screen (perforated rigid metal sheet)**
- **Metal cross-cavity flashing c/w end dams**
- **Vapor permeable membrane (AB/WRB)**
- **Tape (AB)**
- **Self-adhered membrane prestrip**
- **Continuous backer rod and sealant**
- **Composite metal panel closure**
- **Gypsum board c/w 2 layers latex paint**
- **Backer rod and sealant joint from window frame to membrane**
- **Fill void with insulation, by window manufacturer**
- **Double glazed thermally broken window**
- **Continuous backer rod and sealant**
- **Composite metal panel cladding system over vertical metal hat tracks fastened to steel studs**
- **Air space**
- **Exterior gypsum board sheathing**
- **2½" (64mm) ROCKWOOL COMFORTBOARD™ 80/110 insulation**
- **Self adhesive through-wall flashing membrane w/ sealant at top edge (WRB) (Optional)**
- **Insect screen (perforated rigid metal sheet)**
- **Metal cross-cavity flashing c/w end dams**
- **Vapor permeable membrane (AB/WRB)**
- **Tape (AB)**
- **Self-adhered membrane prestrip**
- **Composite metal panel closure**

**Fill space with ROCKWOOL COMFORTBATT®**

- **Fill cavity with 6" (150mm) ROCKWOOL COMFORTBATT®**
- **[3½" (89mm) ROCKWOOL COMFORTBATT® also available]**
- **Vapor control layer**
- **6" steel stud framed wall**
- **Gypsum board c/w 2 layers latex paint**
- **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.
Self adhered 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

Intermittent shims for drainage @ 12" o.c. (thickness as req'd ¼" min.)

Vapor control layer**

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

[3 ½" (89mm) ROCKWOOL COMFORTBATT® also available]

6" steel stud framed wall

Gypsum board c/w 2 layers latex paint

Double glazed thermally broken window (aluminum illustrated)

Sealant

Pre-finished sill flashing c/w clips and end dams

Insect screen (perforated rigid metal sheet)

Intermittent clip

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

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

Air space

Vapor permeable membrane (AB/WRB)**

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

Composite metal panel cladding system over vertical metal hat tracks fastened to steel studs

Exterior gypsum board sheathing

Sealant joint from window frame to membrane for air continuity

COMMERCIAL STEEL FRAME CONSTRUCTION UP TO 4 STOREYS - LIGHTWEIGHT CLADDING

TYPICAL FLANGLESS WINDOW SILL

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.
Vapor permeable start strip to extend into rough opening

Gypsum board c/w 2 layers latex paint

Vapor control layer**

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

Continuous backer rod and sealant

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

Blocking to suit gypsum board return or interior trim

Fill void with insulation, by window manufacturer

Double glazed thermally broken window (aluminum illustrated)

Pre-finished sill flashing below

Compoiste metal panel jamb closure

Composite metal panel cladding system

Exterior gypsum board sheathing

1 1/2" metal hat track fastened with long fasteners

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

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

Air space

* 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.