



Spruce Peak
Overlook

2574 Big Spruce Rd.
Smugglers Notch, VT
05464, USA

Joan Amuasi, Angelina Popp,
& Maxwell J. Wiesenfeld

AREN3022, Architectural Design V
Building Envelope Design, C26

Advised by Professor Steven Van
Dessel & Priscilla Dunphy

Title Page
Perspective View

G000

Concept

Spruce Peak Overlook is a warm space embedded in a cold mountain landscape.

This restaurant serves as refuge from harsh conditions and a frame through which nature can be experienced.

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Graphic Standards

	Mineral Wool
	ccSPF
	XPS
	Polyiso
	Concrete
	Bedrock
	Gravel
	Top Soil
	Finished Wood
	CLT
	Stone Veneer

Data Tables

Dining Room	3010 sqft
Kitchen	1590 sqft
Terrace	2435 sqft
Bathrooms	360 sqft
Reception	455 sqft
First Floor	7850 sqft

Wine Cellar	1125 sqft
Bar	625 sqft
Seating	3420 sqft
Bathrooms	270 sqft
Ground Floor	5440 sqft

Exit Count	4
Max. Egress Distance	123 ft

Structural System: Cast concrete foundation & earth–contact walls; composite concrete deck; glulam post and beam; CLT wall panels.

Façade Construction: Stone veneer; engineered wood panels; wood mullion curtain walls.

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Project Data

G001

Climate Data

Climate Zone	6A
RH average	70%
Snow average	18”
Min Temp	20 F
Max Temp	65 F

IBC Code Information

Occupany Type	A–2
Occupant Load	400 people
Construction	Type IV
Max Height	65 feet

IECC U Value Code

Roof	0.032
Walls (AG)	0.051
Walls (BG)	0.119
Slab (OG)	0.52
Fenestration	0.36
Entrance Door	0.63

Fenestration U Values

Curtain Wall	0.11
Door	0.24

Roof, Wall, and Slab U Value tables are on pages A600–A605.

R Values per Inch

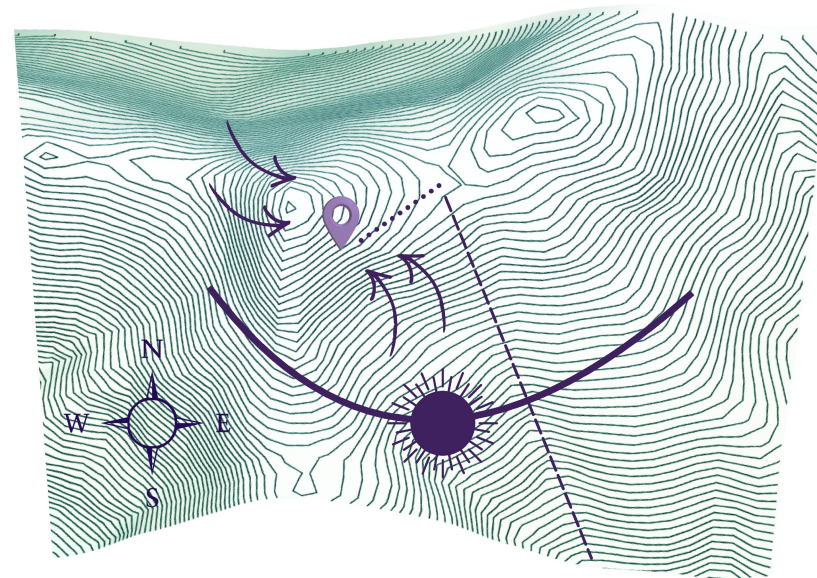
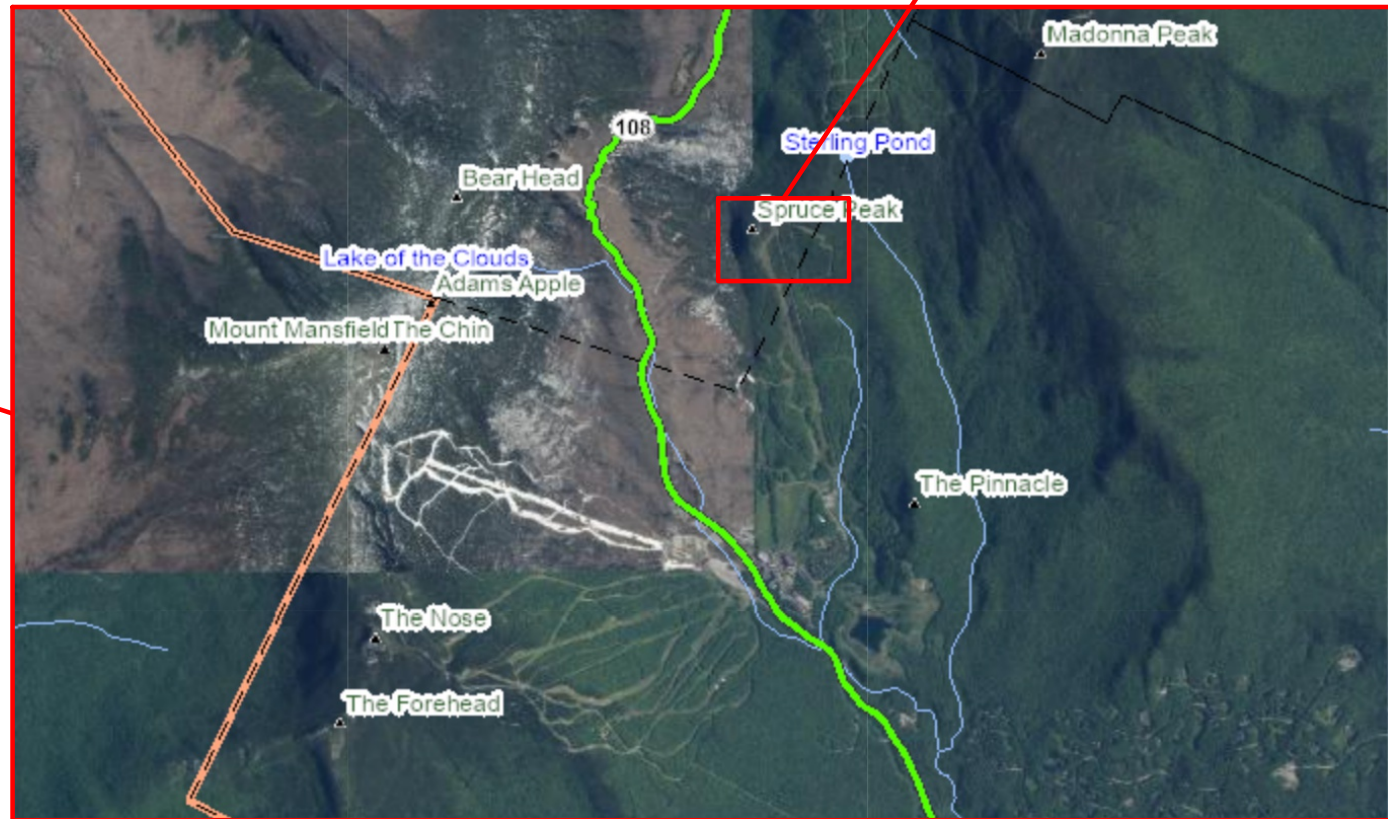
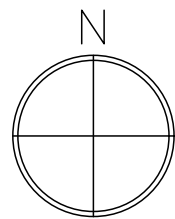
Ext Air Film	0.17
Int Air Film	0.26
Air Gap	1
Mineral Wool	3.3
XPS (closed)	5
Polyiso	6
Stone Clad	0.08
Concrete	0.08
Wood Siding	1.2
Glulam	1.3
CLT	1.3
Coverboard	1.2
Flat Seam	0.2
Course Gravel	0.027
Bedrock	0.027

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Code Analysis

G003



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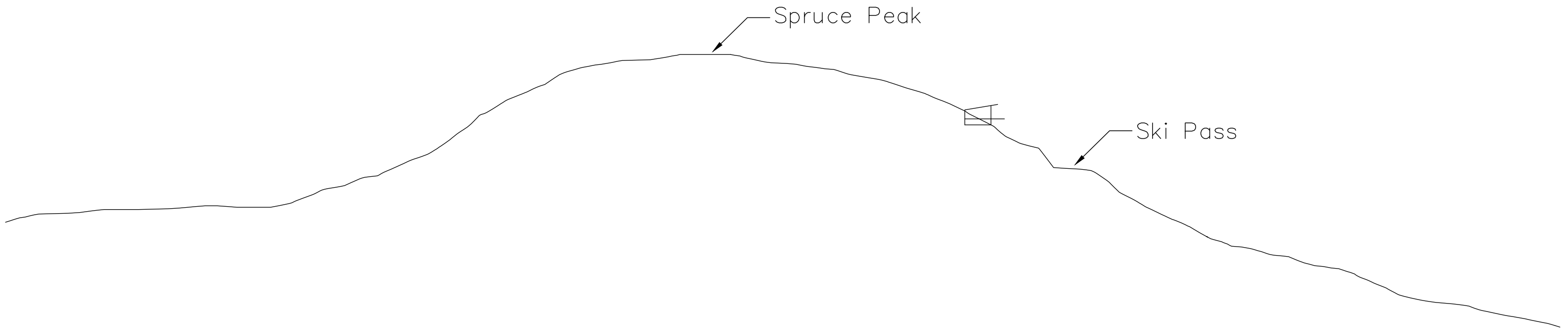
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Site Location

G011



Situated near the top of a gondola, Spruce Peak Overlook is part of the wider Stowe Mountain Resort in Stowe, Vermont.

Though there is heavy seasonal traffic, Spruce Peak Overlook was designed for year-round use.

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$\frac{1}{128}'' = 1'$

Site
Context

G012

Humbird Hotel



Sandpoint, Idaho

Crow’s Nest Restaurant



Sandpoint, Idaho

Pioneer Ranch



Sun Valley, Idaho



Wood Design & Building Awards

program celebrates excellence in wood architecture and construction.

Entries should showcase the use of wood products in any, or several, of their many forms and applications, demonstrating an understanding of the special properties of wood including strength, durability, beauty, and cost-effectiveness.

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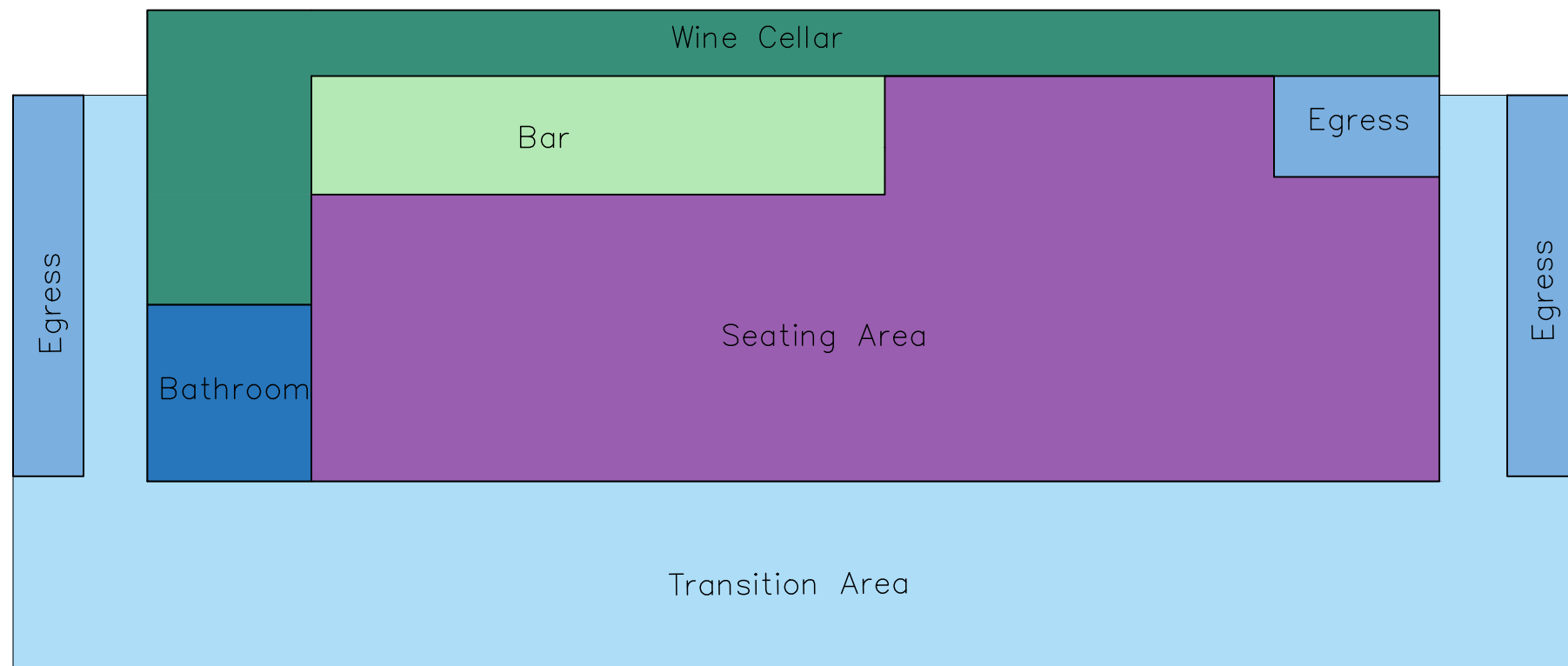
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Precendents

G020



First Floor



Ground Floor

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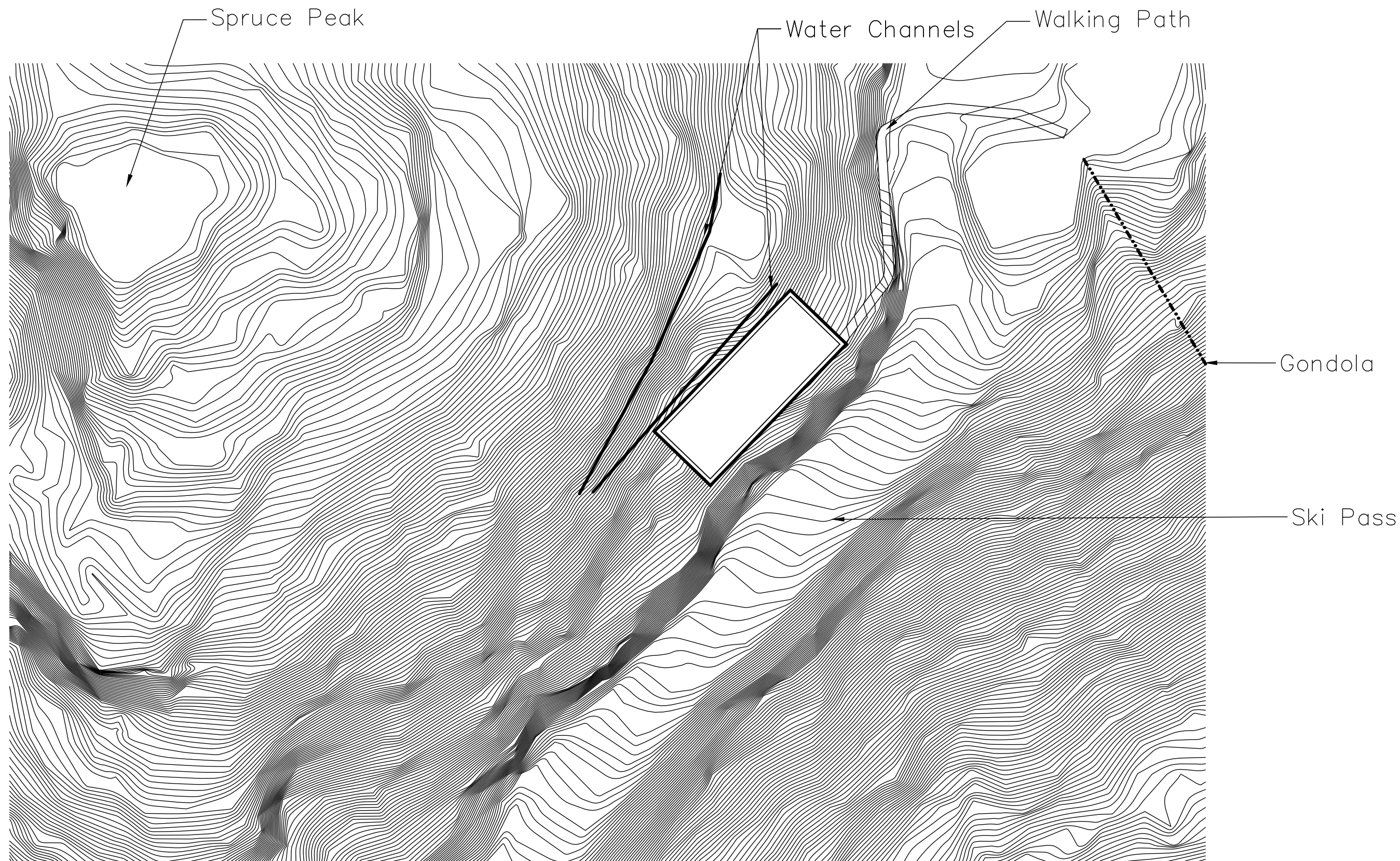
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$\frac{1}{16}'' = 1'$

Program
Plan

G031



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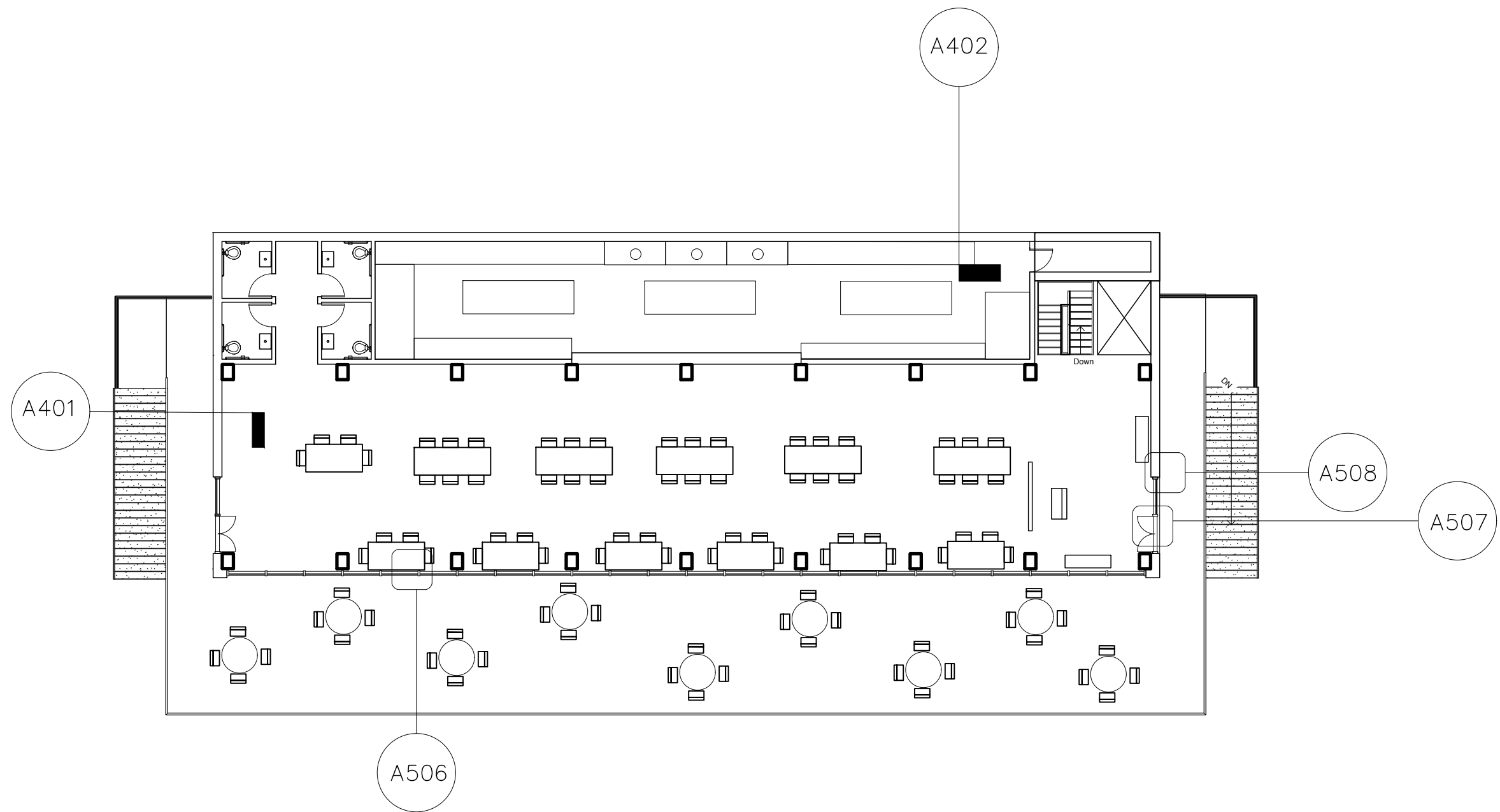
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Site Plan

A010



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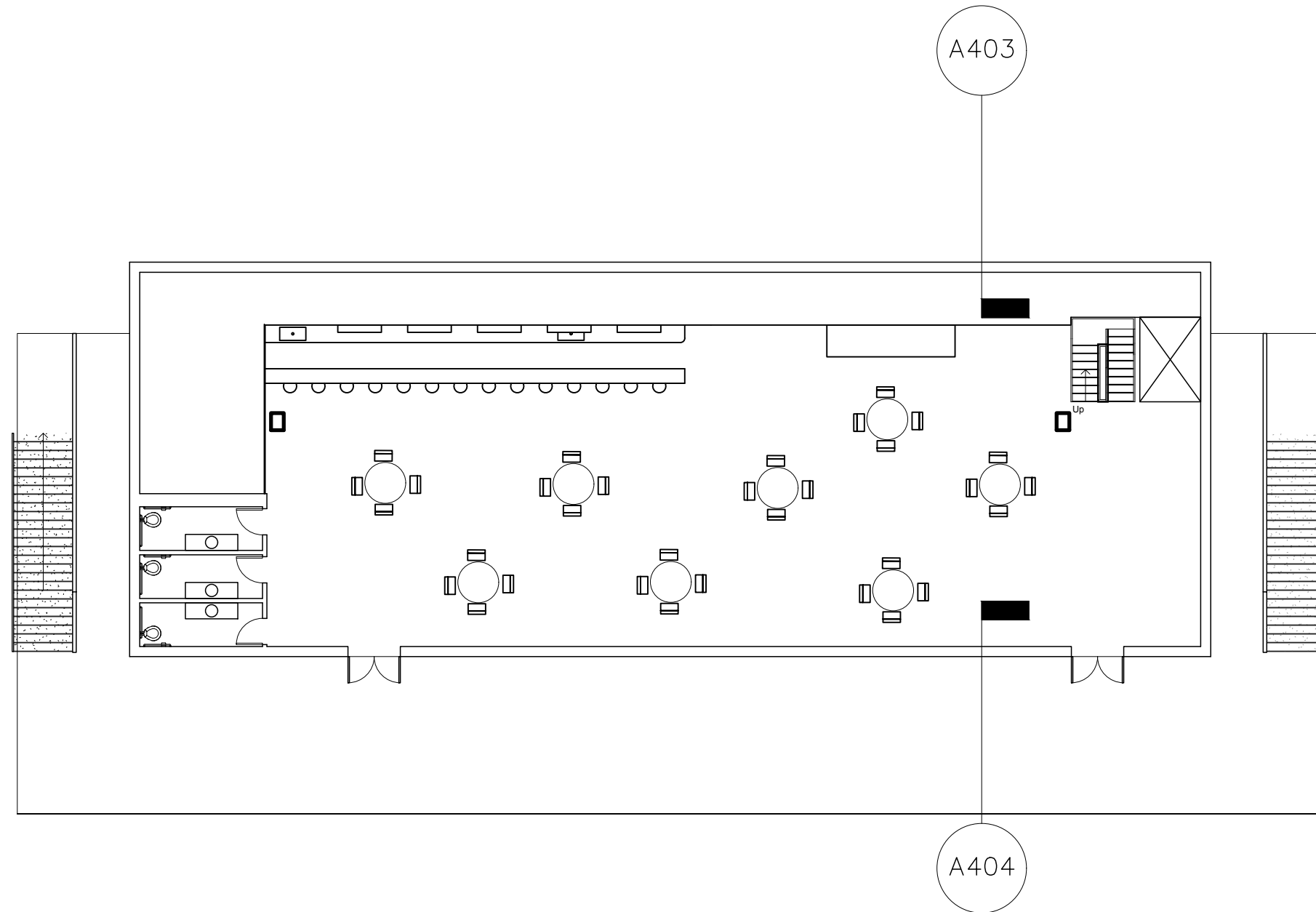
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$\frac{1}{16}" = 1'$

First Floor
Plan

A100



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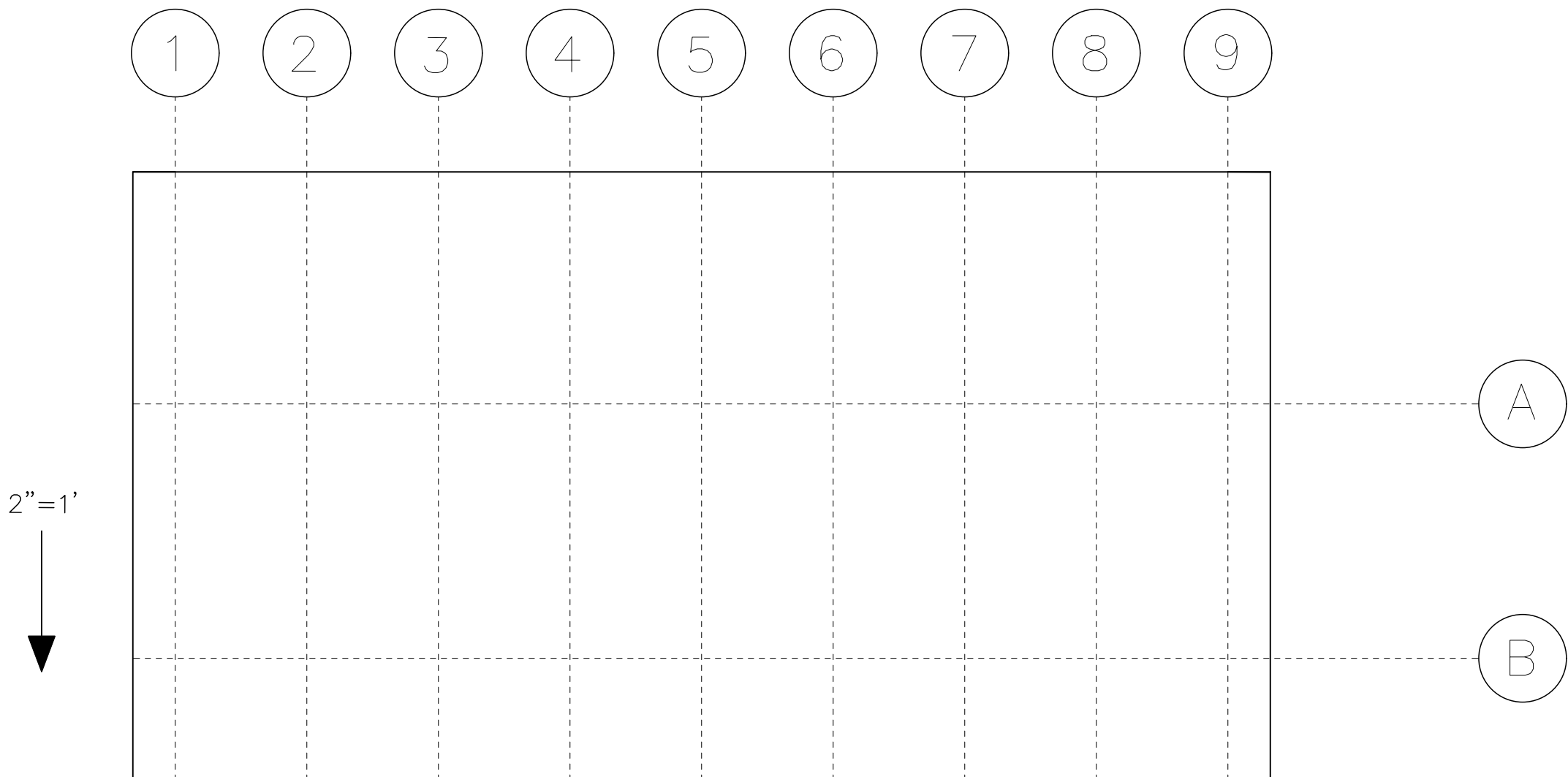
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$\frac{1}{16}'' = 1'$

Ground
Floor Plan

A101



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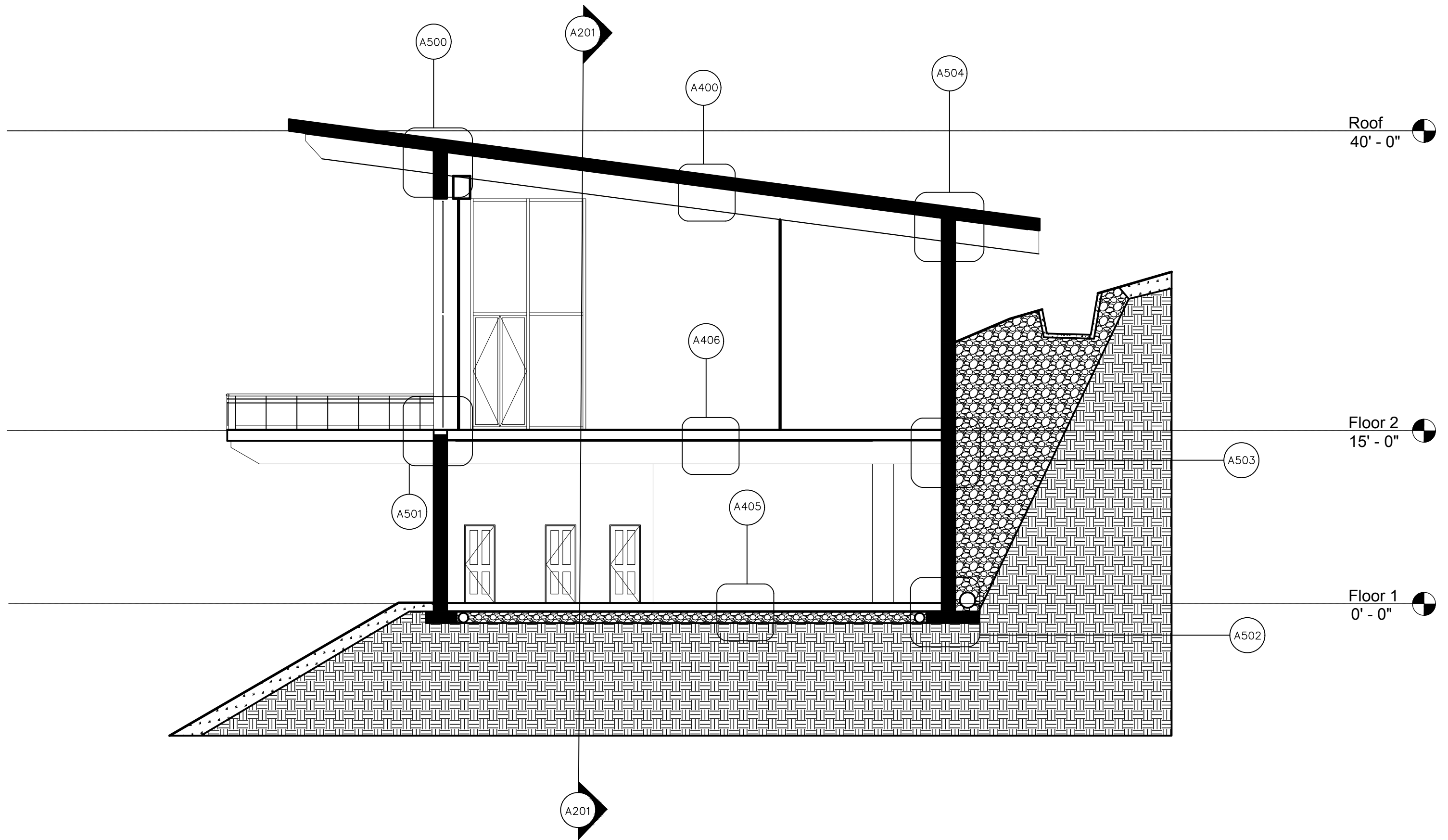
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$\frac{1}{16}" = 1'$

Roof Plan

A102



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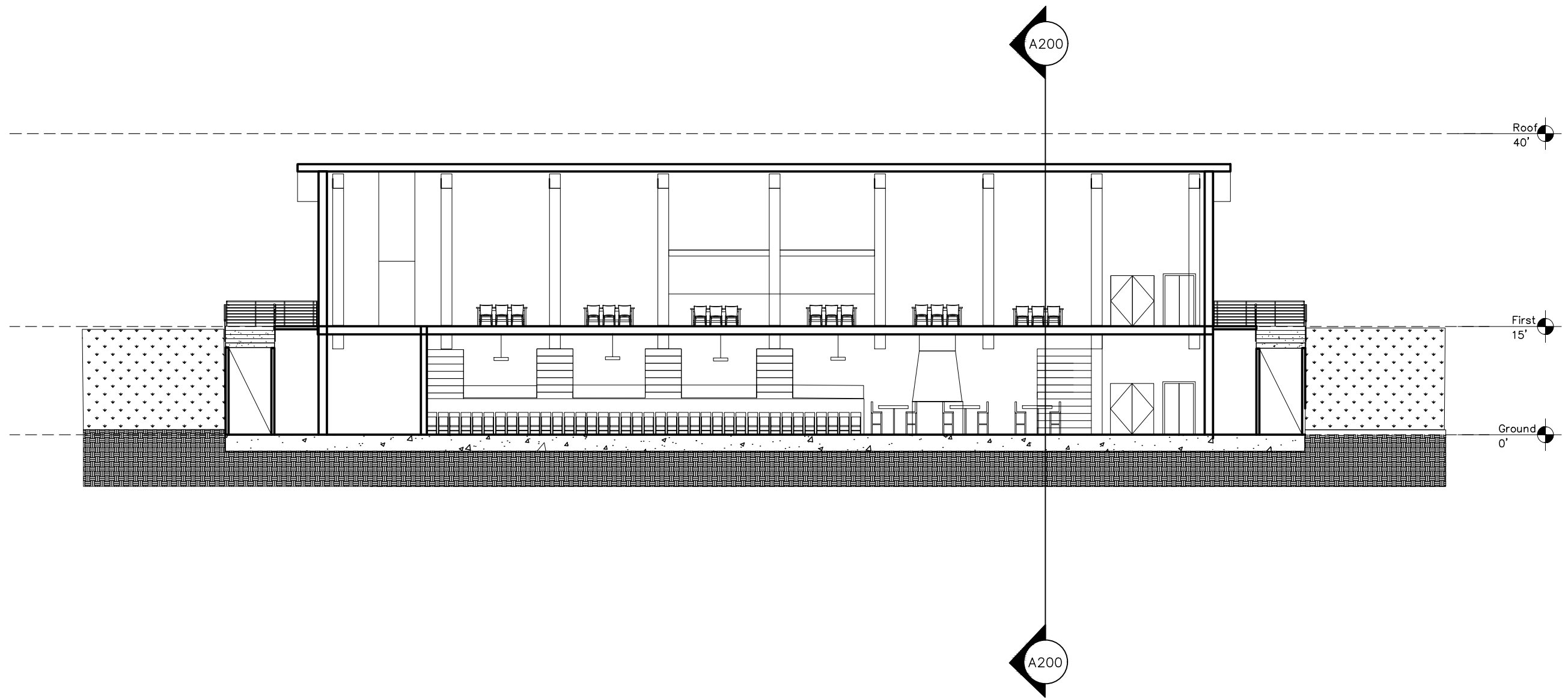
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$\frac{1}{8}'' = 1'$

SW
Section

A200



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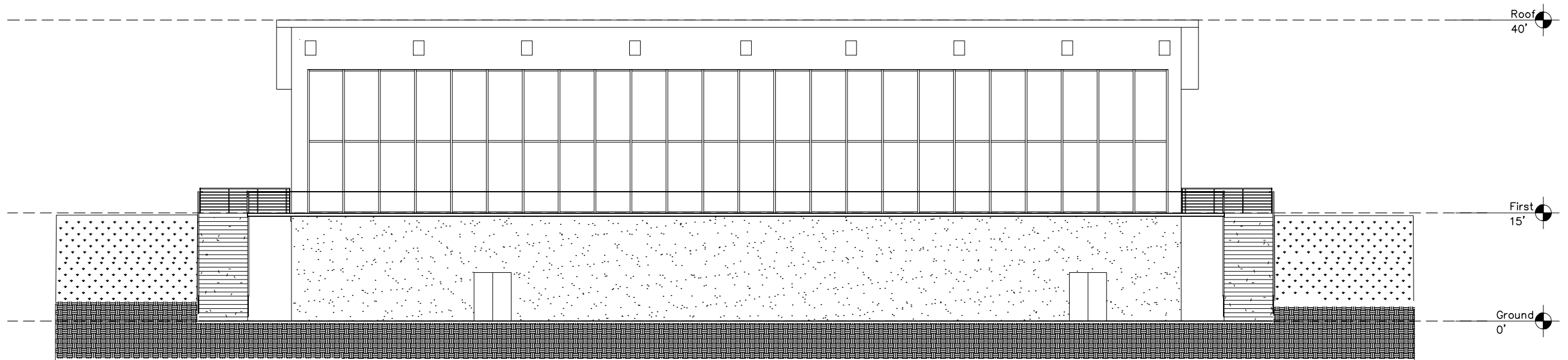
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$\frac{1}{16}'' = 1'$

NW
Section

A201



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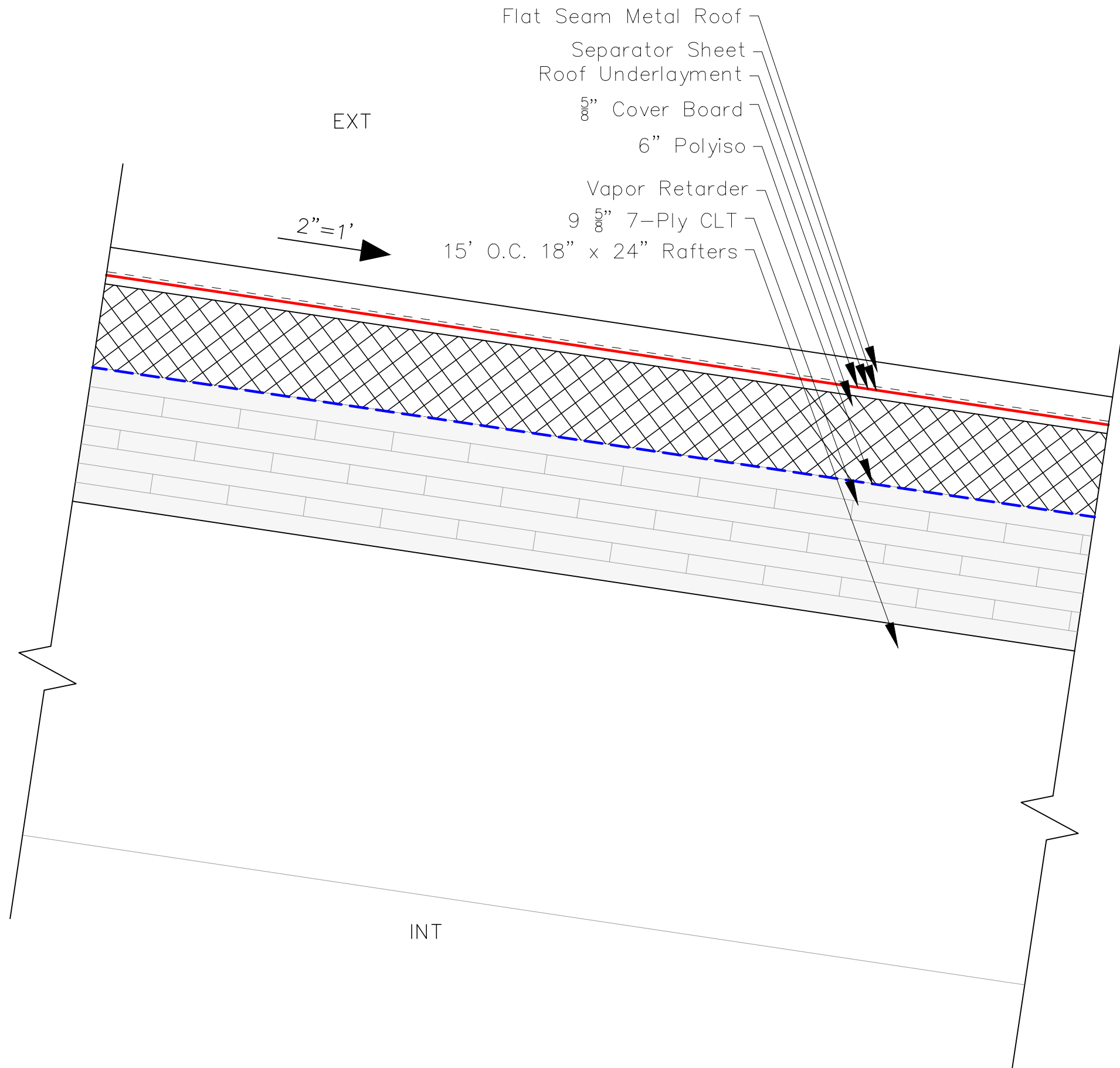
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$\frac{1}{16}'' = 1'$

NW
Elevation

A300



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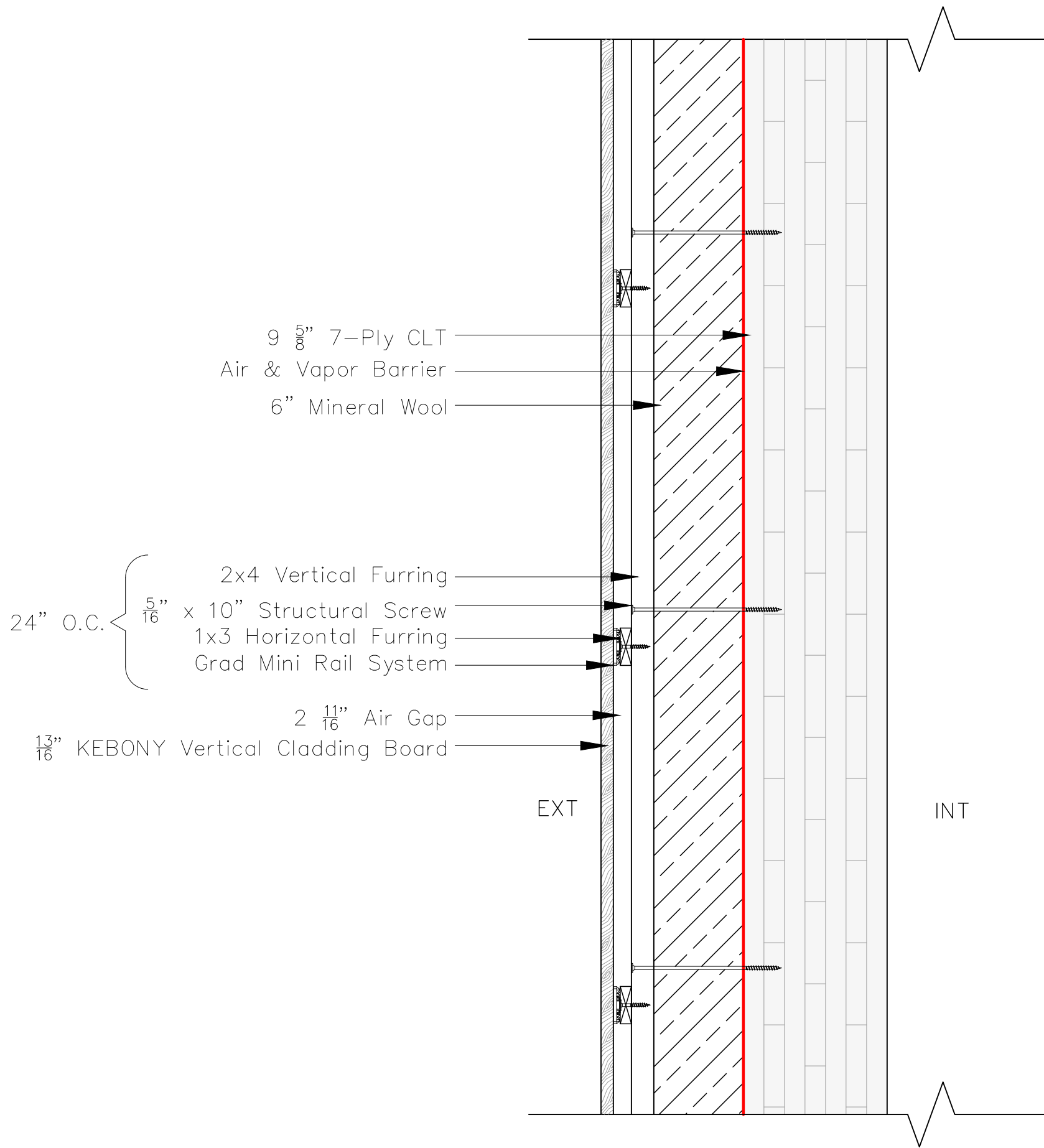
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— V Retarder

— AV Barrier

1" = 8"
Roof Section

A400



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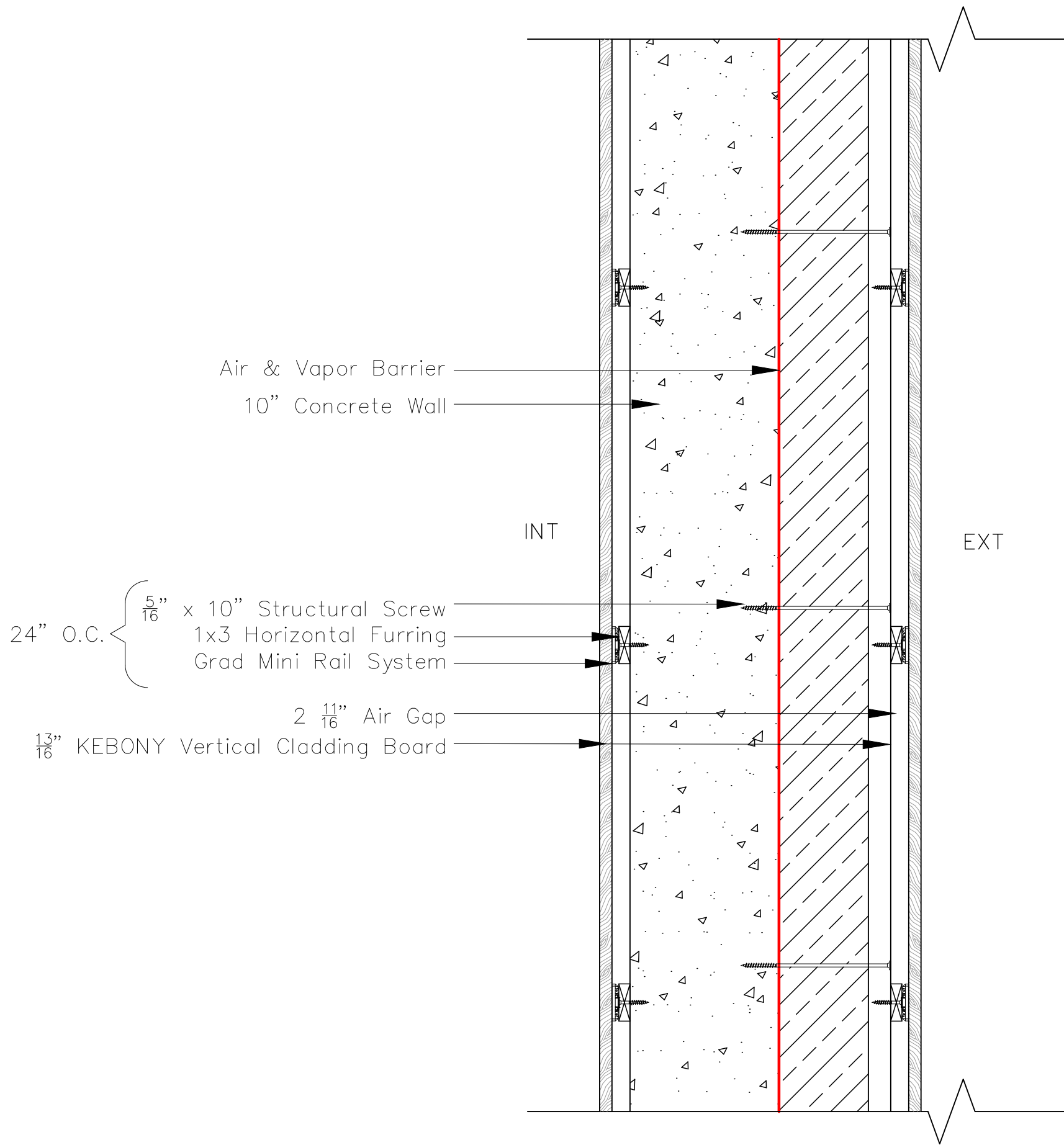
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— AVB

1" = 8"
Upper CLT
Wall Section

A401



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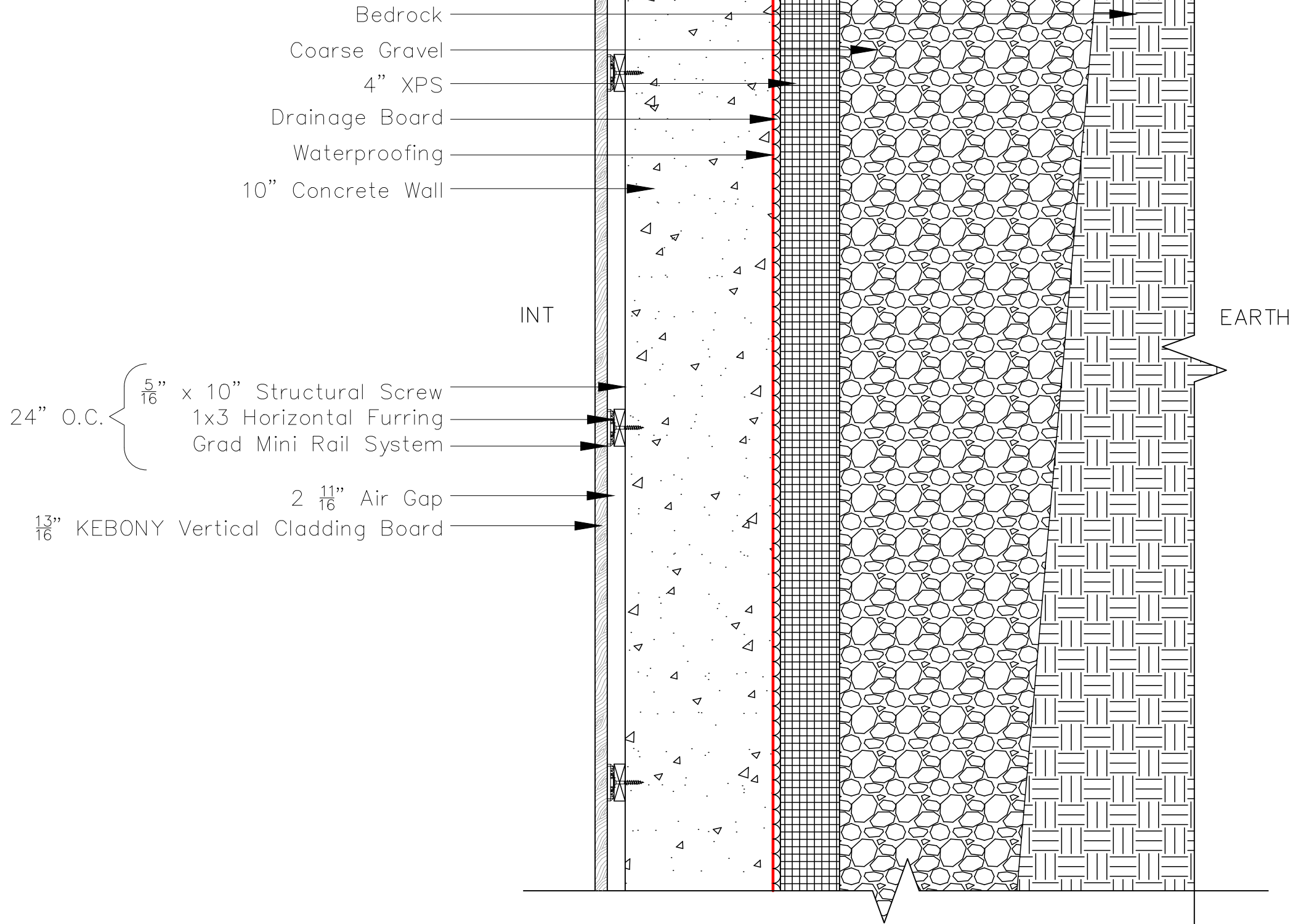
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— AVB

1" = 8"
Upper Concrete
Wall Section

A402



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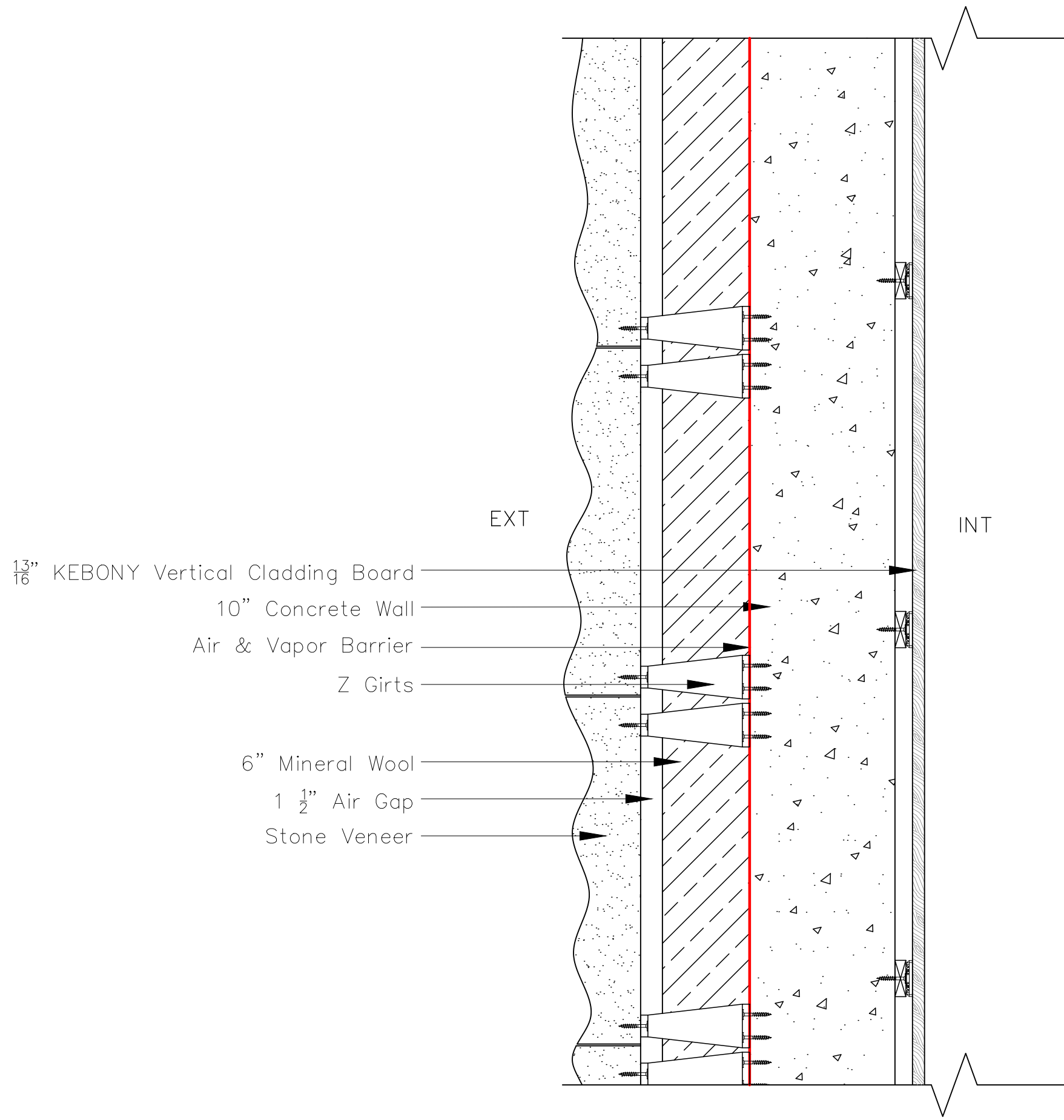
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AVB

1" = 8"
Earth-Contact
Wall Section

A403



— AVB

1" = 8"
Lower Wall Section

A404

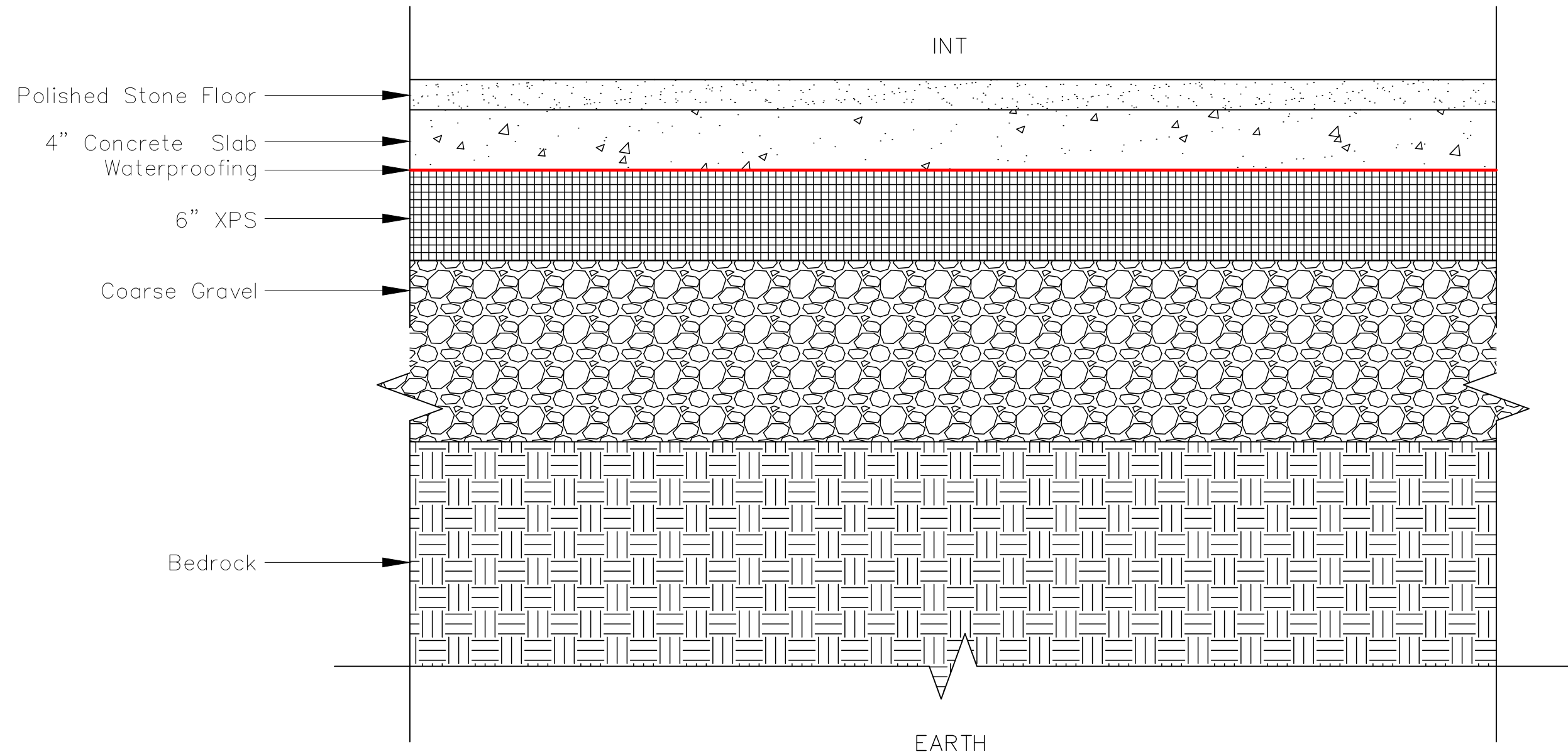
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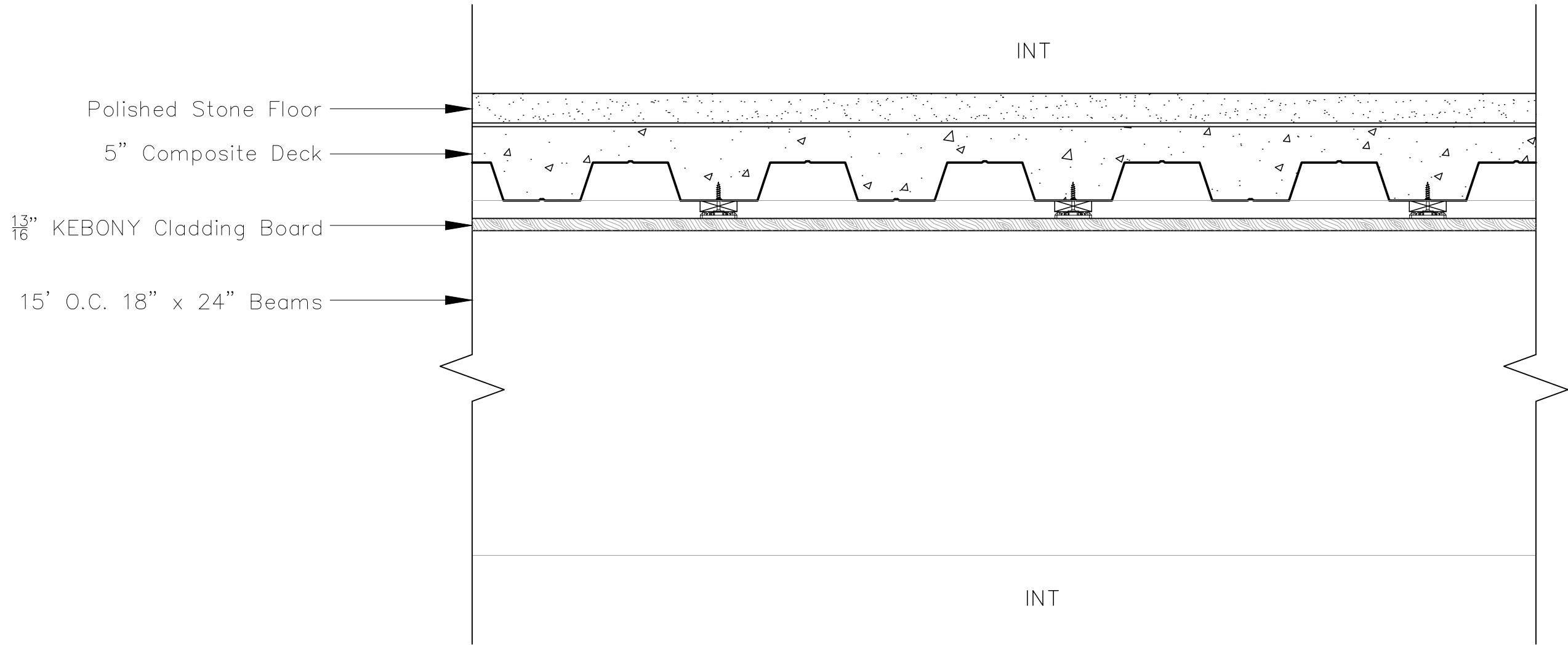
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Waterproofing

1" = 8"
Slab Floor Section

A405

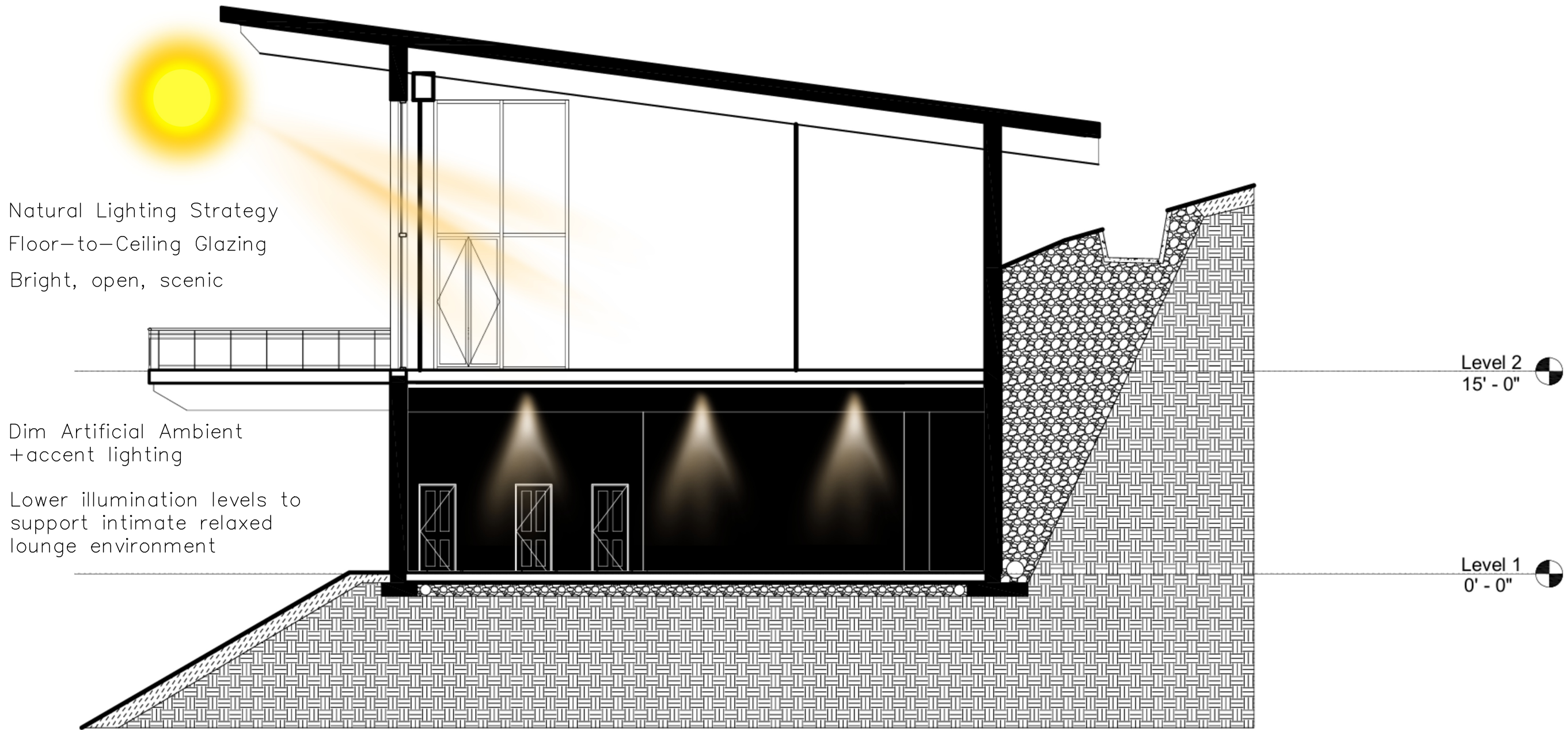


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1" = 8"
Composite Deck
Section

A406

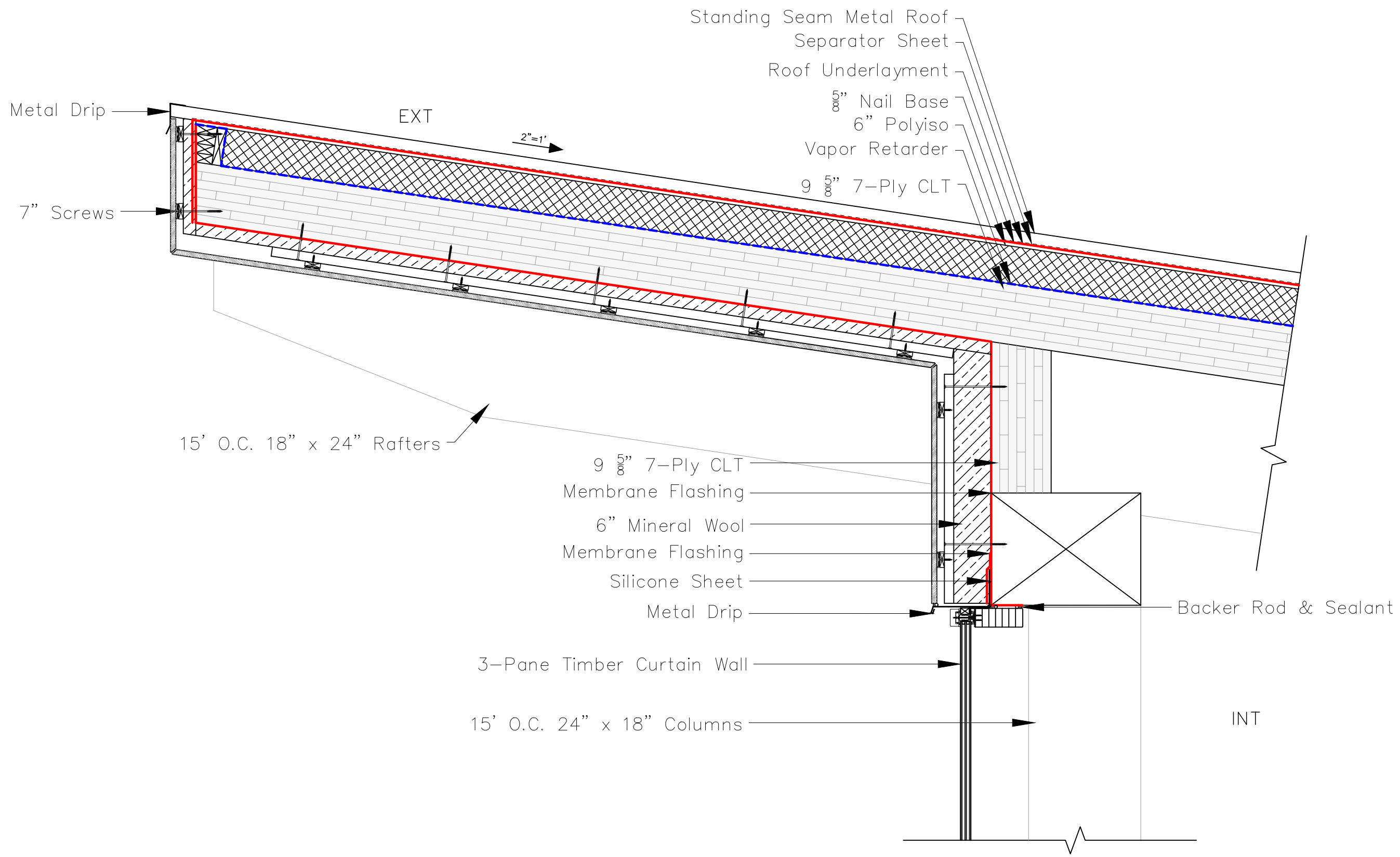


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Integrated
Section

A407



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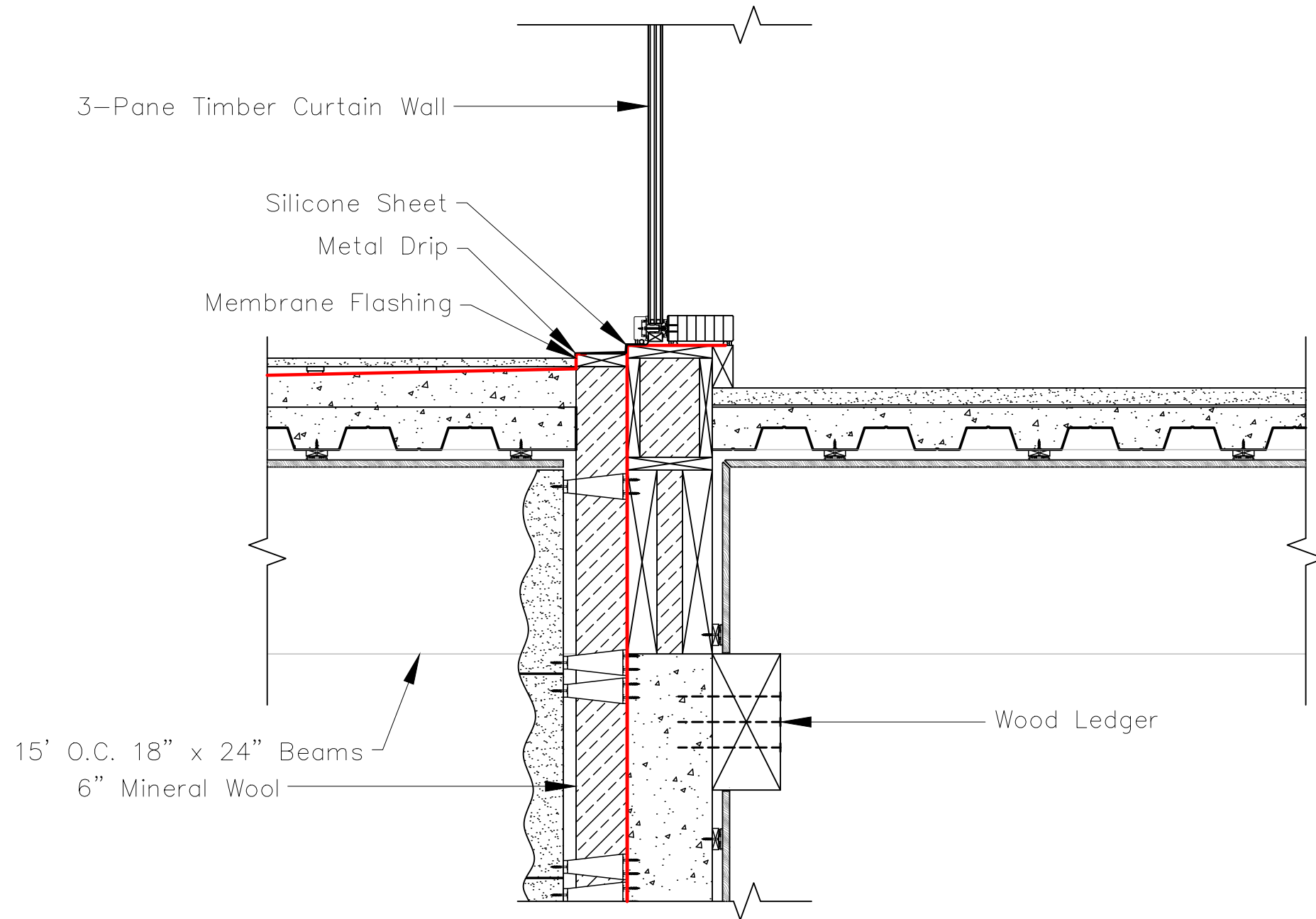
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--- V Retarder
— AV Barrier

1" = 16"
Roof-Wall Detail

A500



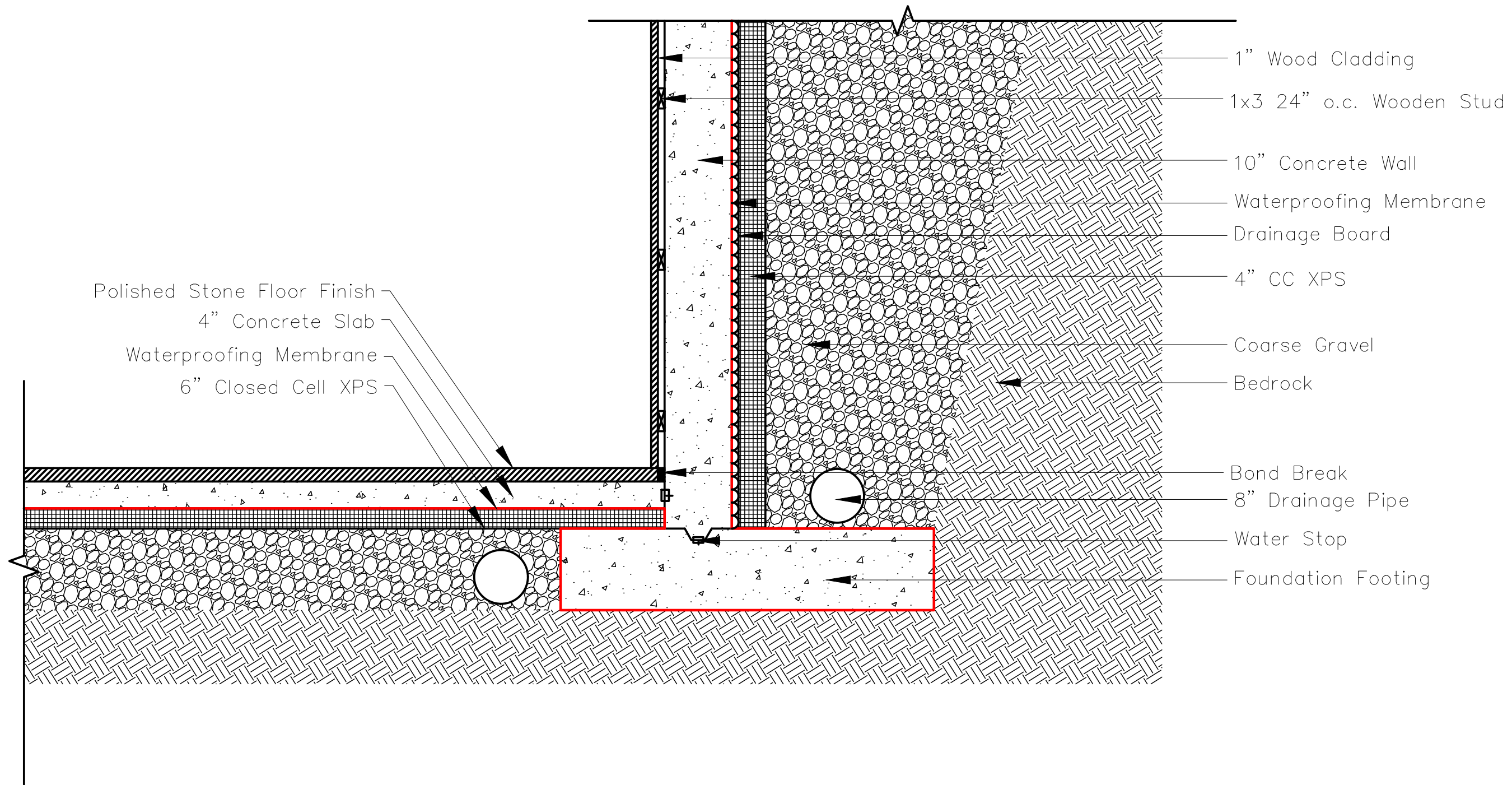
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— AV Barrier

1" = 16"
Terrace-Wall Detail

A501



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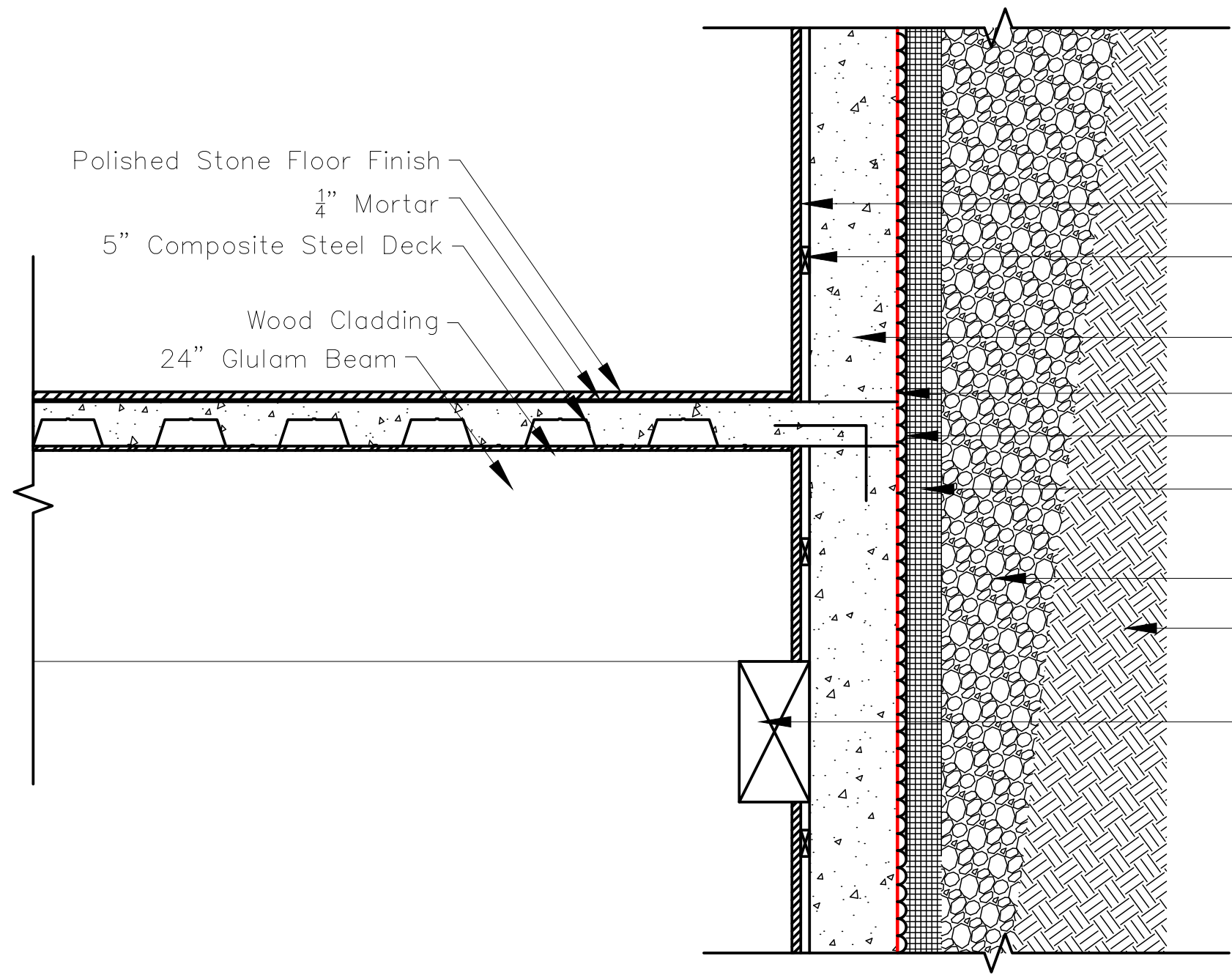
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Waterproofing

1" = 16"
Earth-Contact
Wal-Slab IDetail

A502



Polished Stone Floor Finish

1/4" Mortar

5" Composite Steel Deck

Wood Cladding

24" Glulam Beam

1" Wood Cladding

1x3 24" o.c. Wooden Stud

10" Concrete Wall

Waterproofing Membrane

Drainage Board

4" CC XPS

Coarse Gravel

Bedrock

Wood Ledger

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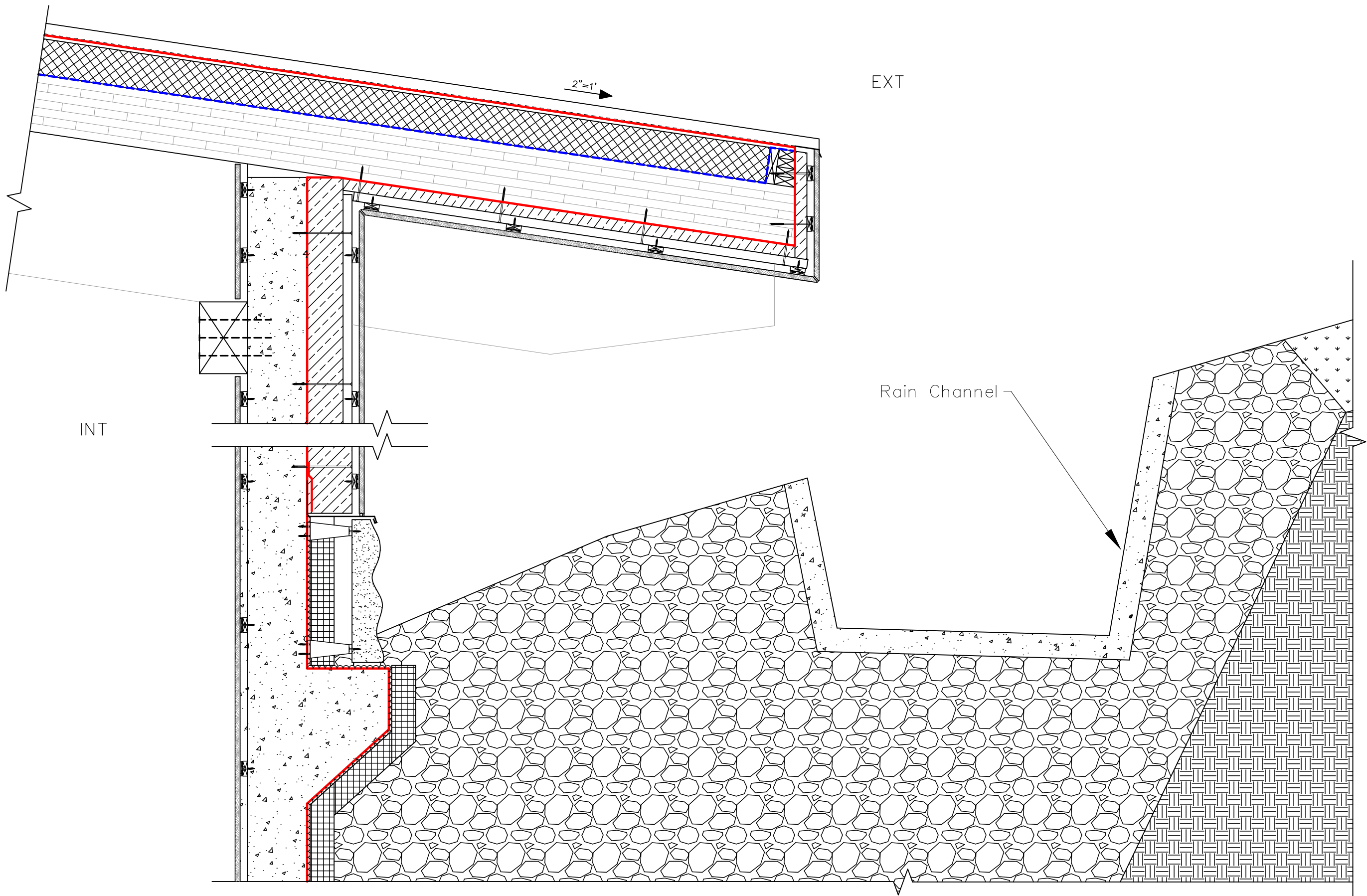
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— Waterproofing

1" = 16"
Earth-Contact
Wall-Deck Detail

A503



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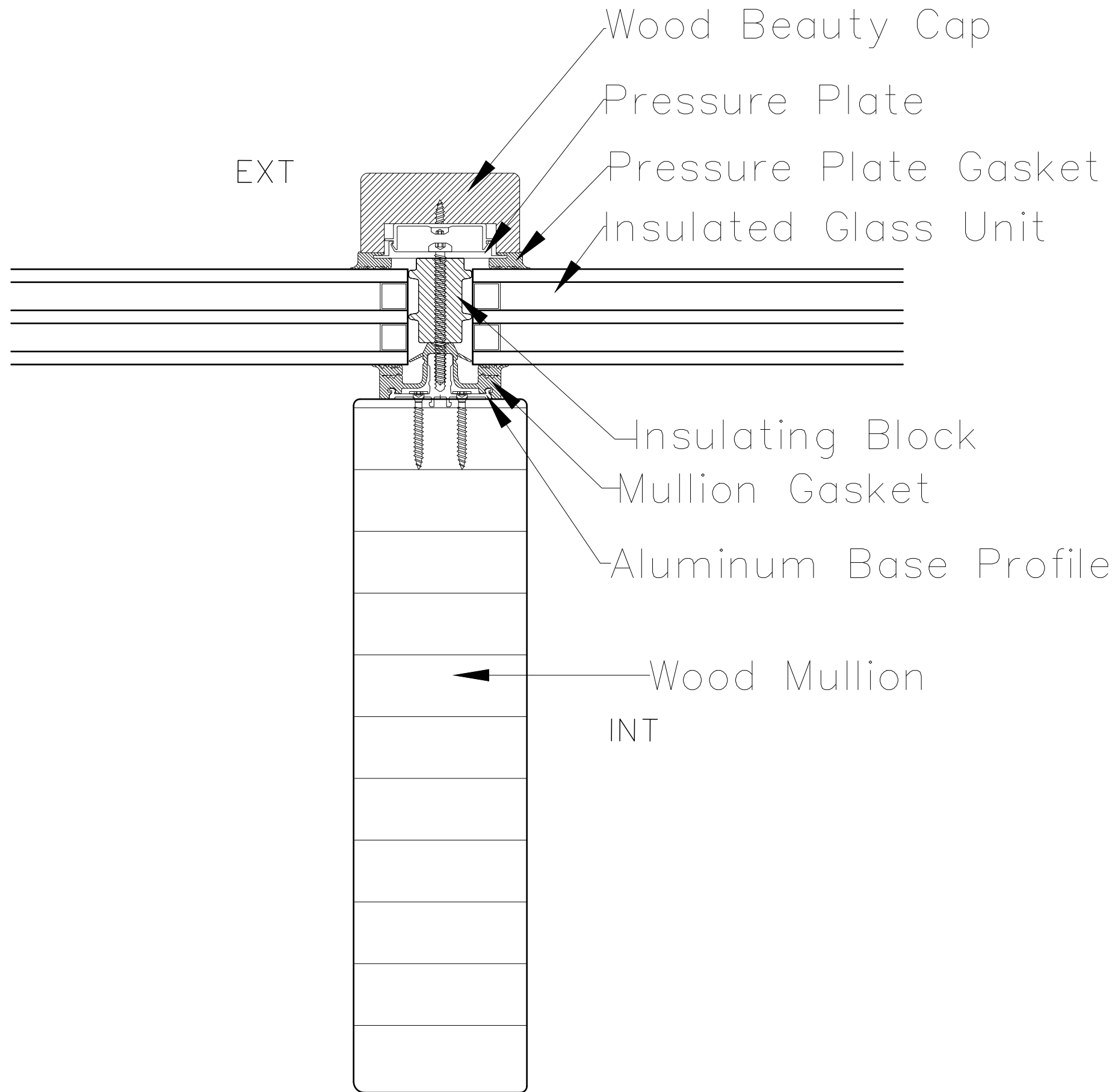
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--- V Retarder
— AV Barrier

1" = 16"
Earth-Contact
Wall-Roof Detail

A504



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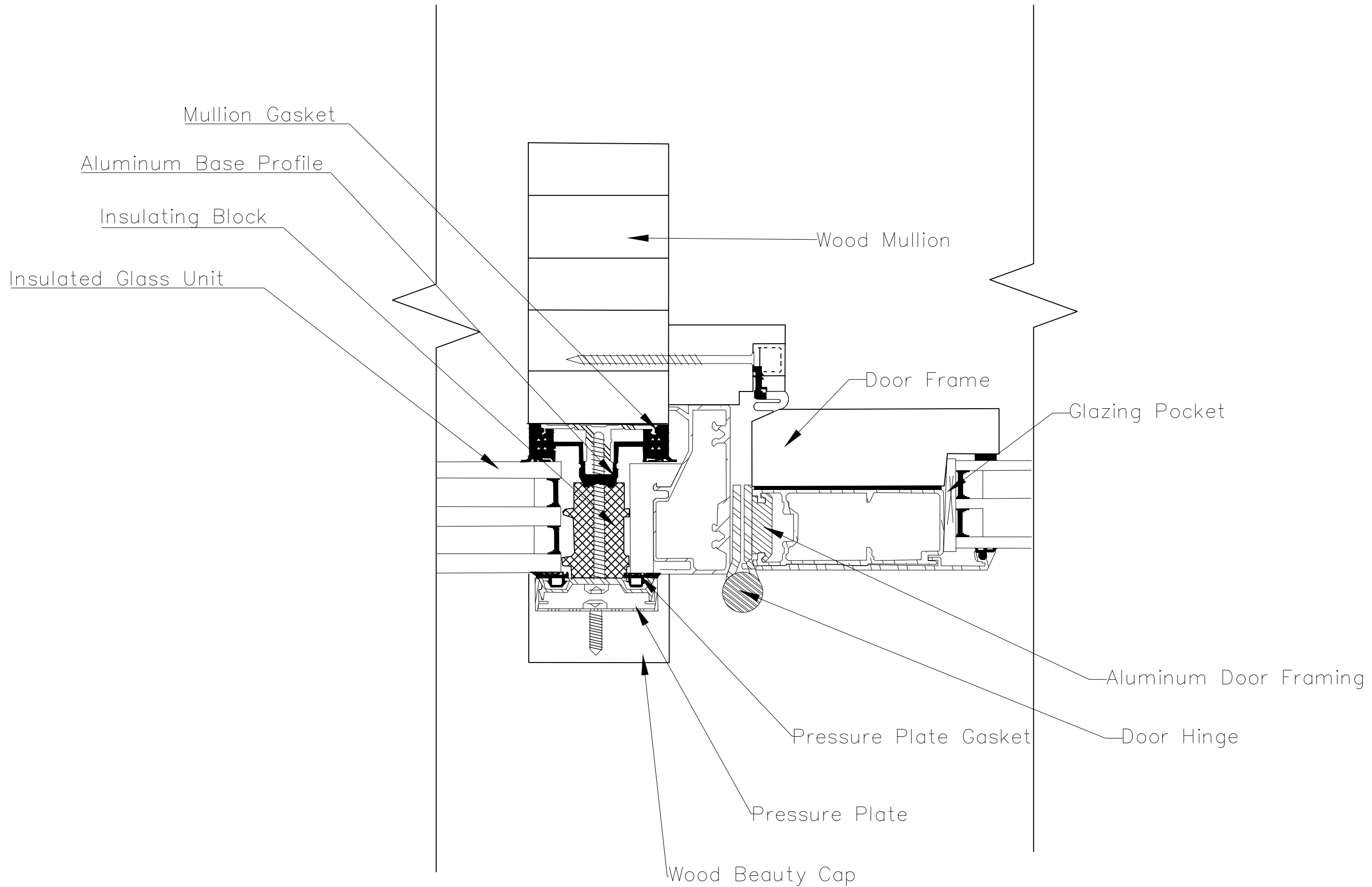
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1" = 2"
Curtain Wall Detail

A505

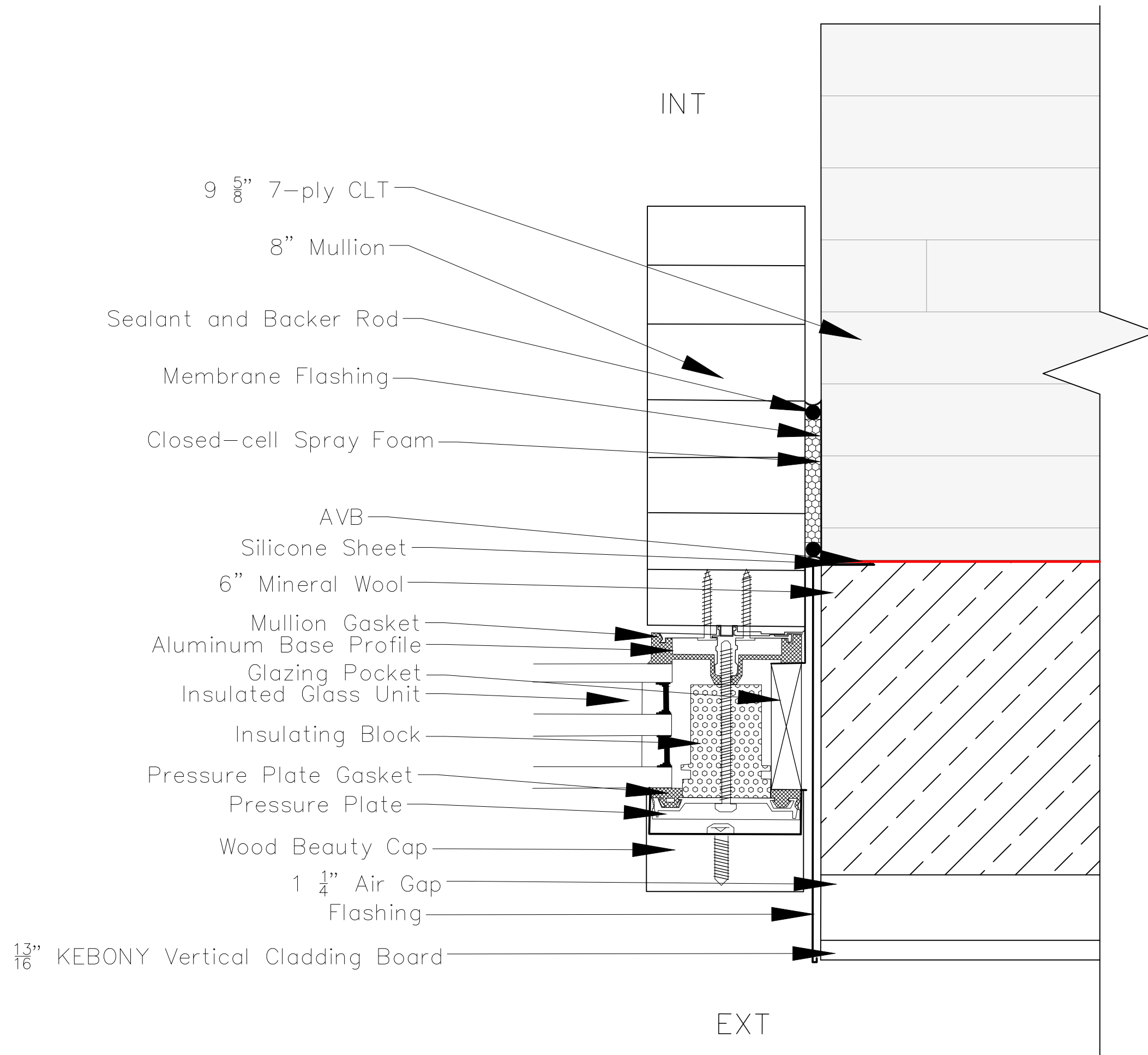


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1" = 2"
Curtain Wall–Door
Detail

A506



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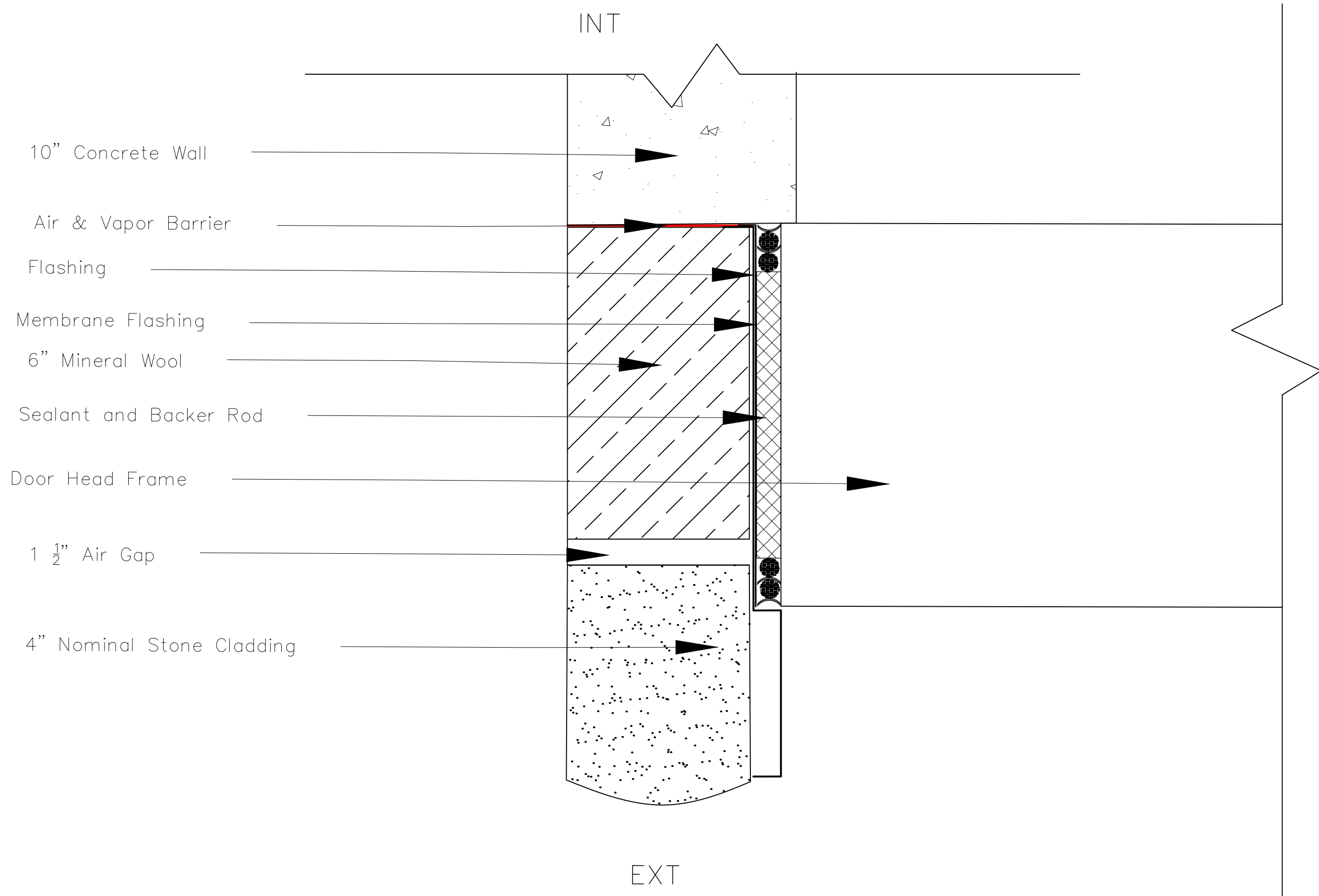
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1" = 2"
Curtain Wall-Wall
Detail

A507

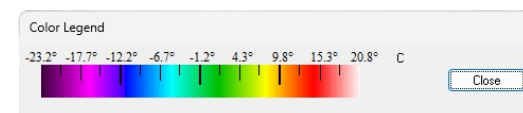
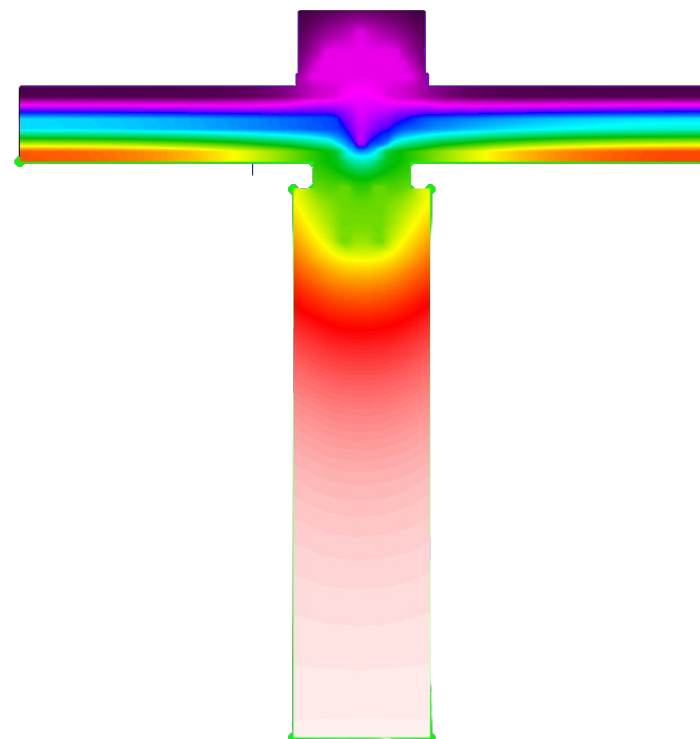
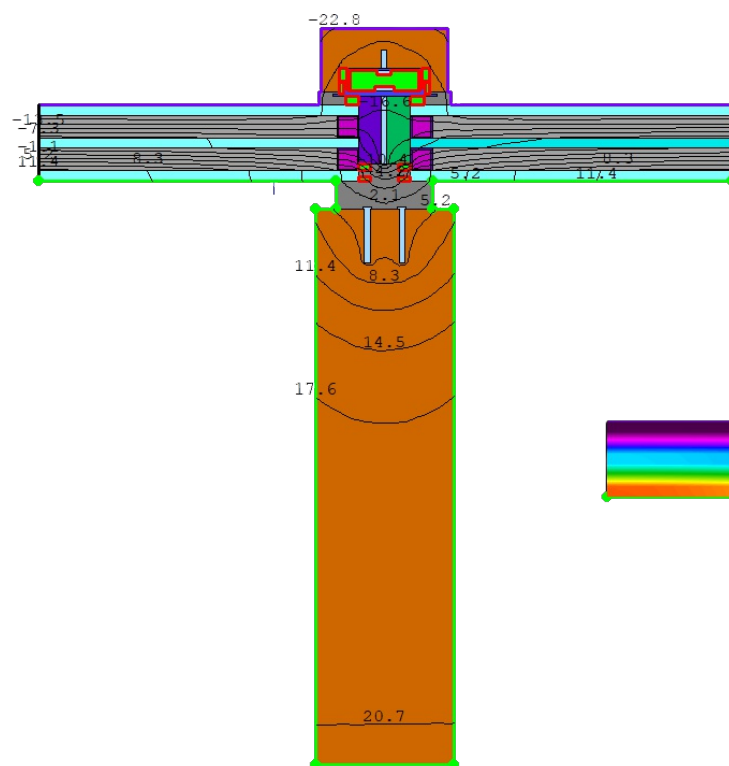
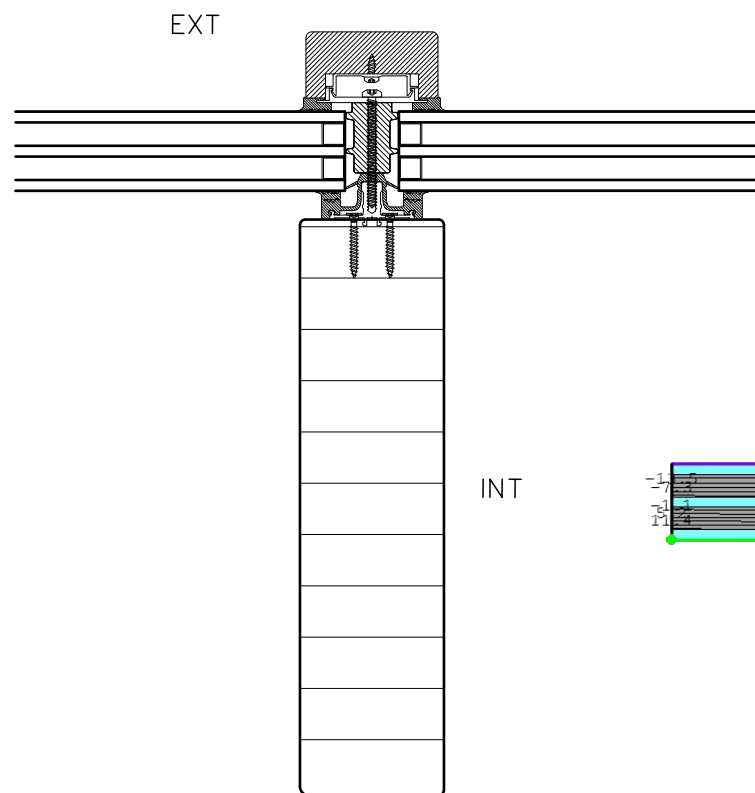


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1" = 2"
Lower Wall—Door
Detail

A508



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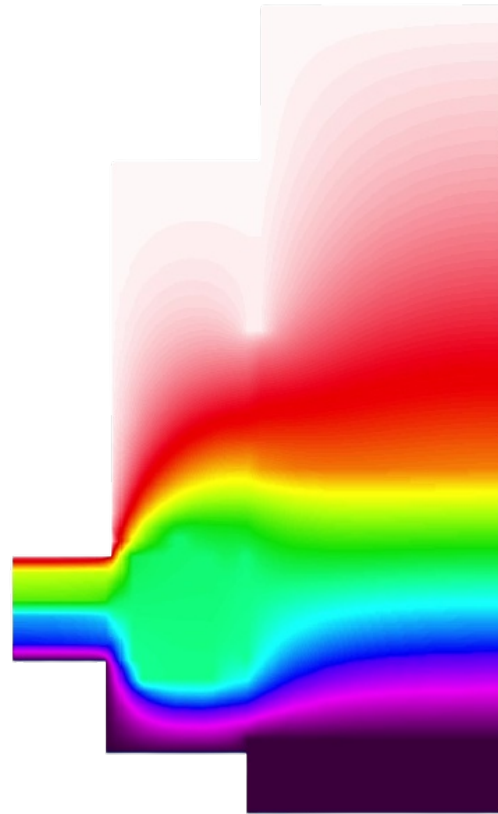
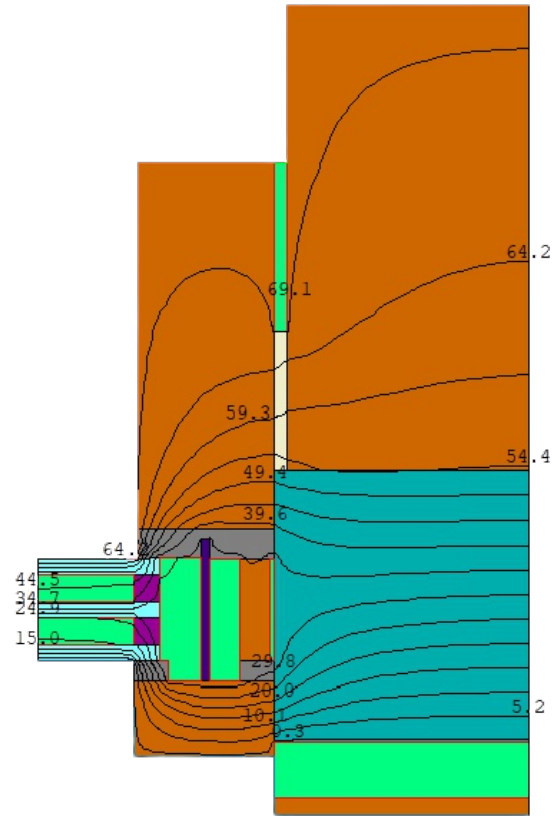
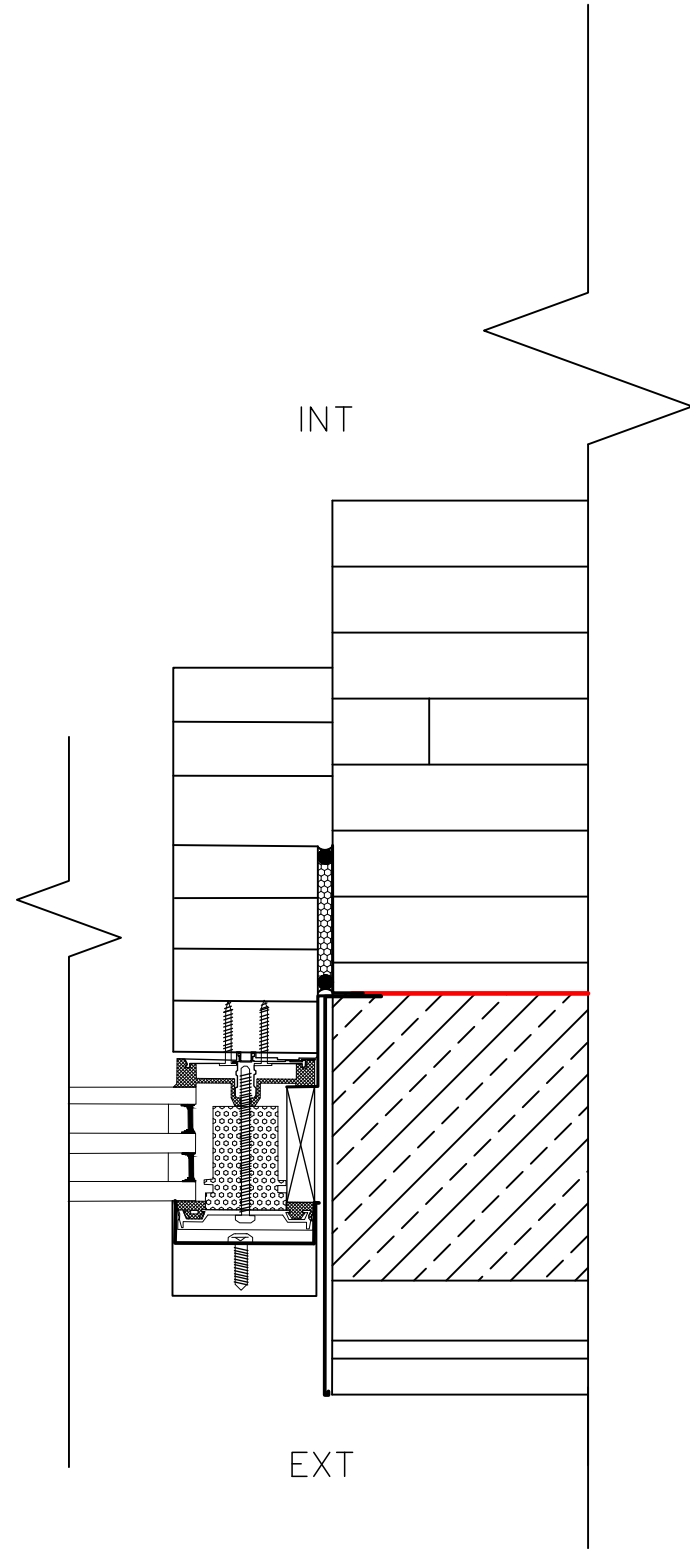
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1" = 4"
Curtain Wall
THERM

A509



1" = 4"
Curtain Wall-Wall
THERM

A510

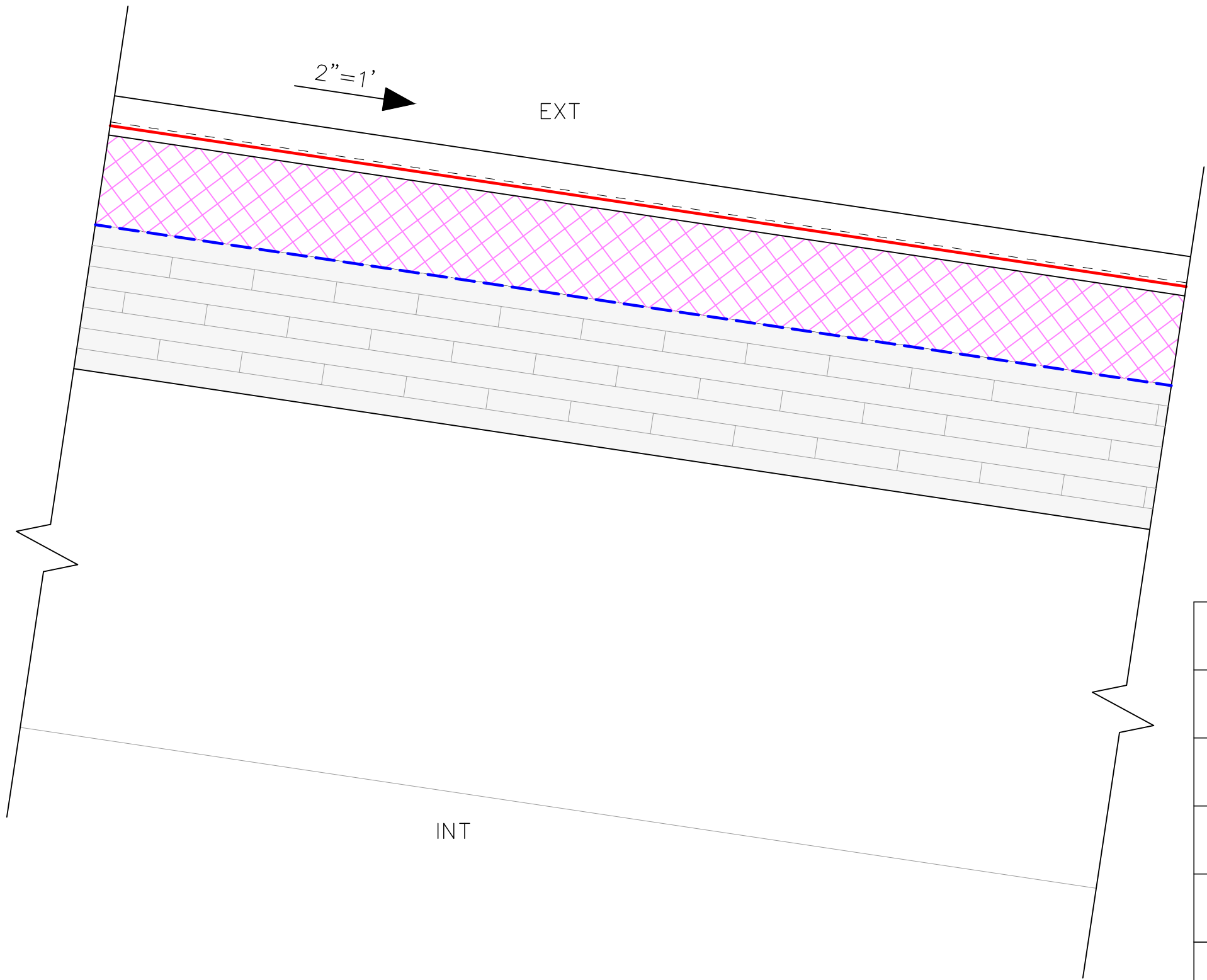
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Ext Air Film	0.17
Glulam	1.3
CLT	12.5125
Polyiso	39
Coverboard	0.75
Int Air Film	0.26
Seam Metal	0.2
R Total	84.0925
U Total	0.0119

Thermal B

V Retarder

AV Barrier

1" = 8"
Roof U-Value

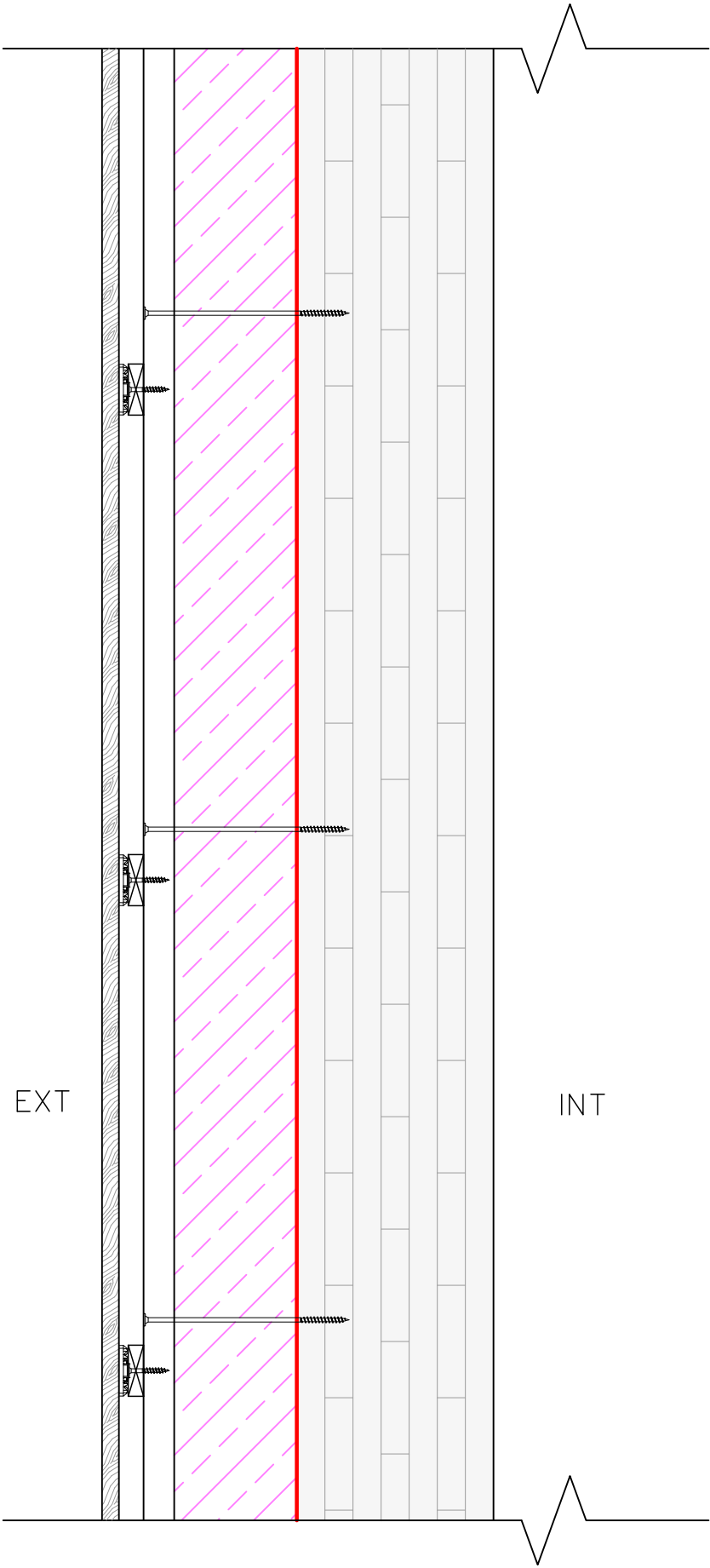
Drawn by Maxwell J. Wiesenfeld
Checked by Joan Amuasi &
Angelina Popp

AREN3022, Architectural Design V
Building Envelope Design, C26

Advised by Professor Steven Van
Dessel & Priscilla Dunphy

Spruce Peak
Overlook

2574 Big Spruce Rd.
Smugglers Notch, VT
05464, USA



Ext Air Film	0.17
Wood Siding	0.975
Air Gap	2.6875
Mineral Wool	19.8
CLT	12.5125
Int Air Film	0.26
R Total	36.405
U Total	0.0275

Thermal B

AVB

1" = 8"
Upper CLT
Wall U-Value

A601

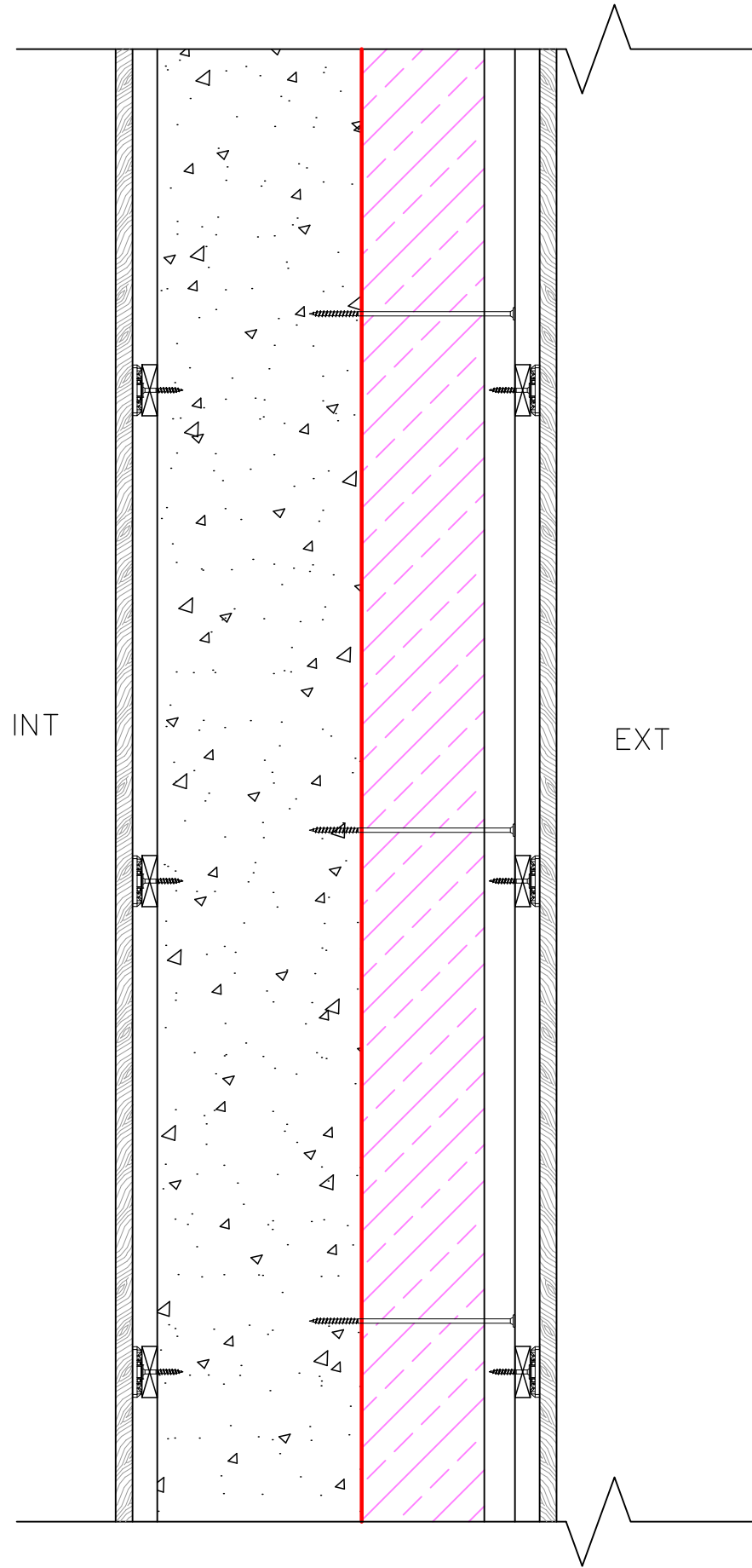
Drawn by Maxwell J. Wiesenfeld
Checked by Joan Amuasi &
Angelina Popp

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Spruce Peak
Overlook

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Smugglers Notch, VT
05464, USA



Ext Air Film	0.17
Wood Siding	0.975
Air Gap	1.25
Concrete	0.8
Mineral Wool	19.8
Air Gap	2.6875
Wood Siding	0.975
Int Air Film	0.026
R Total	28.1175
U Total	0.0356

Spruce Peak
Overlook

2574 Big Spruce Rd.
Smugglers Notch, VT
05464

Drawn by Maxwell J. Wiesenfeld

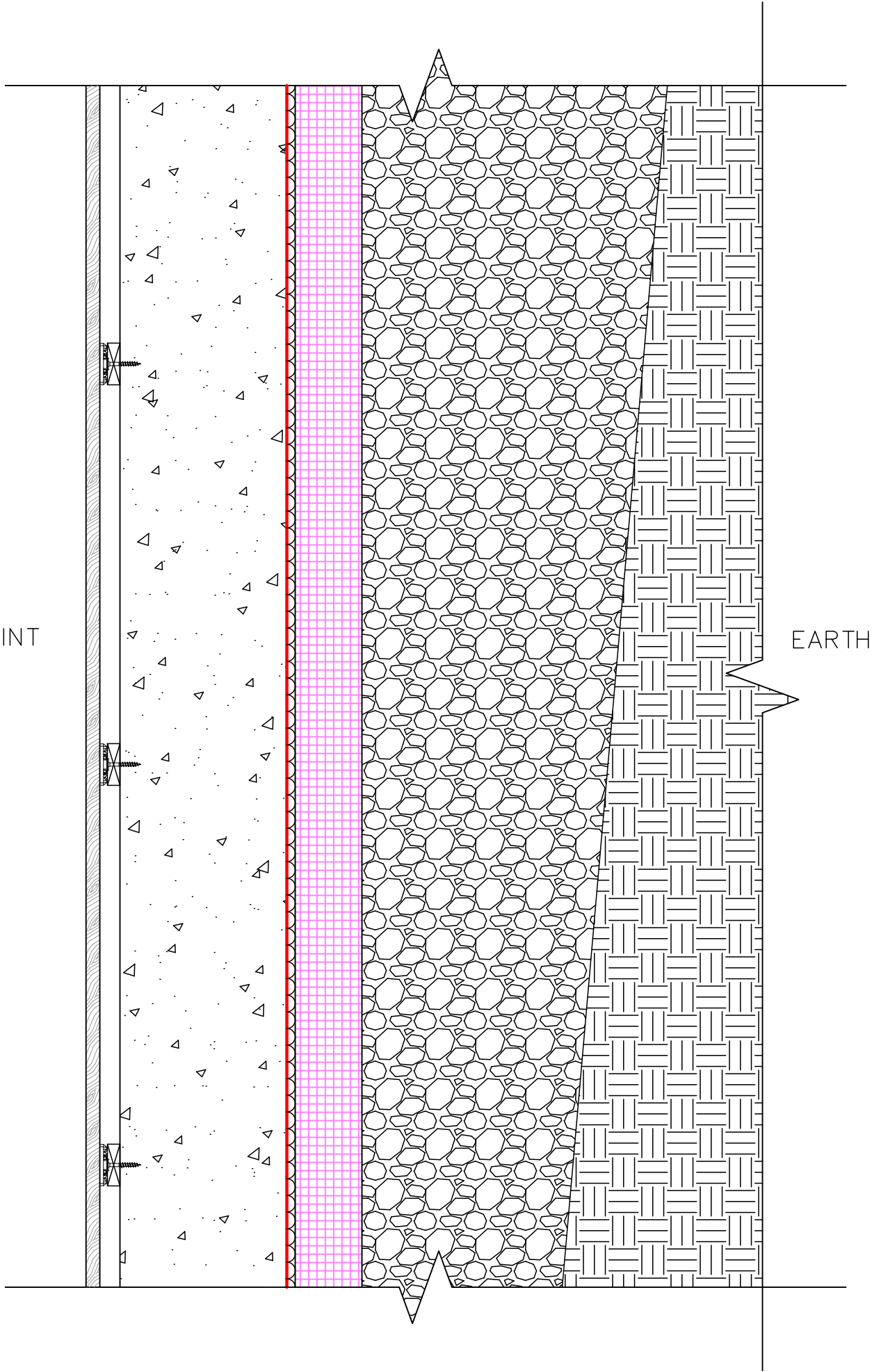
Checked by Joan Amuasi &
Angelina Popp

Thermal B

AVB

1" = 8"
Upper Concrete
Wall U-Value

A602



Bedrock	0.027
Course Gravel	0.027
XPS (closed)	20
Concrete	0.8
Air Gap	2.6875
Wood Siding	0.975
Int Air Film	0.026
R Total	24.7765
U Total	0.0404

Thermal B

Waterproofing

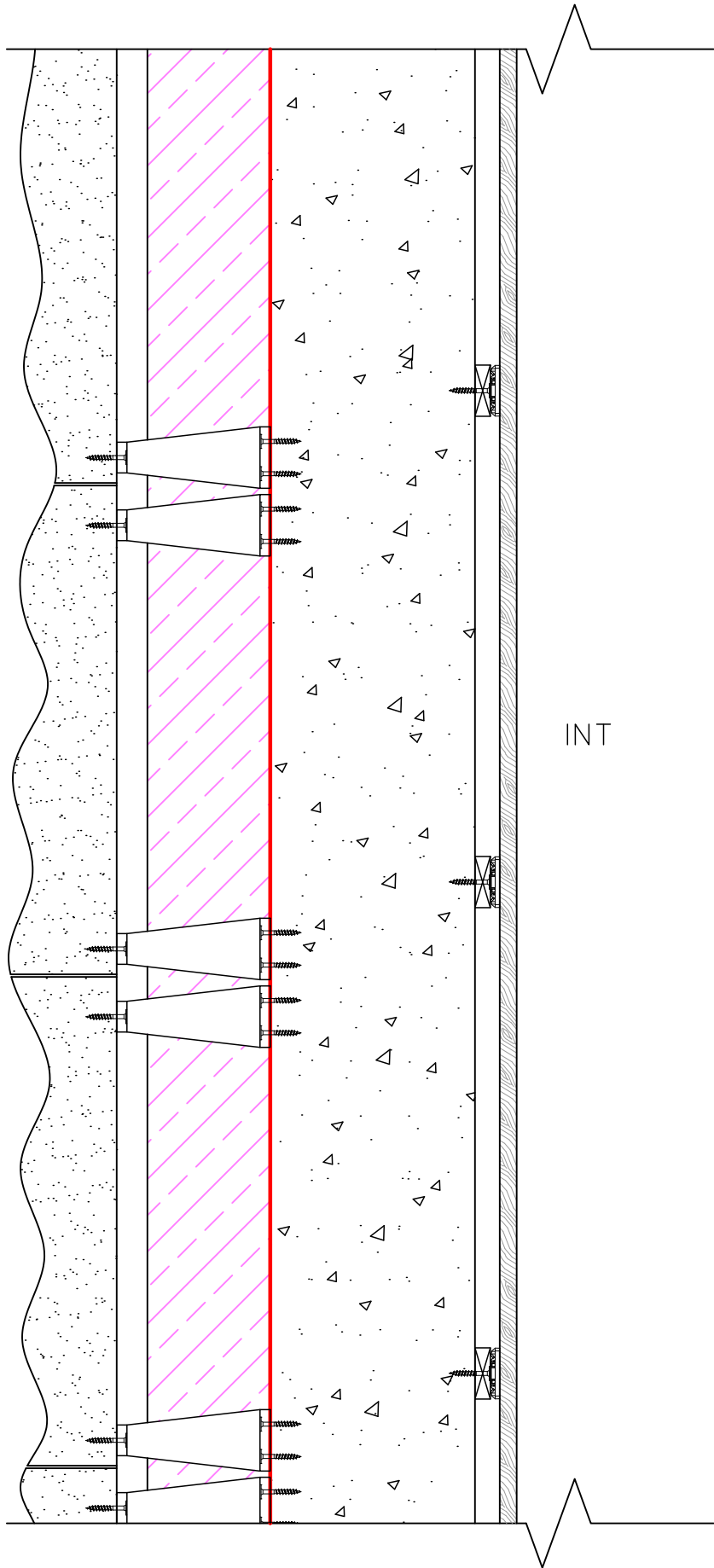
1" = 8"
Earth-Contact
Wall U-Value

A603

Drawn by Joan Amuasi
Checked by Angelina Popp
& Maxwell J. Wiesenfeld

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Advised by Professor Steven Van
Dessel & Priscilla Dunphy

EXT



INT

Ext Air Film	0.17
Stone Clad	0.24
Air Gap	1.5
Mineral Wool	19.8
Concrete	0.8
Air Gap	1.5
Wood Siding	0.975
Int Air Film	0.026
R Total	25.245
U Total	0.0396

Spruce Peak
Overlook

2574 Big Spruce Rd.
Smugglers Notch, VT
05464

Drawn by Maxwell J. Wiesenfeld

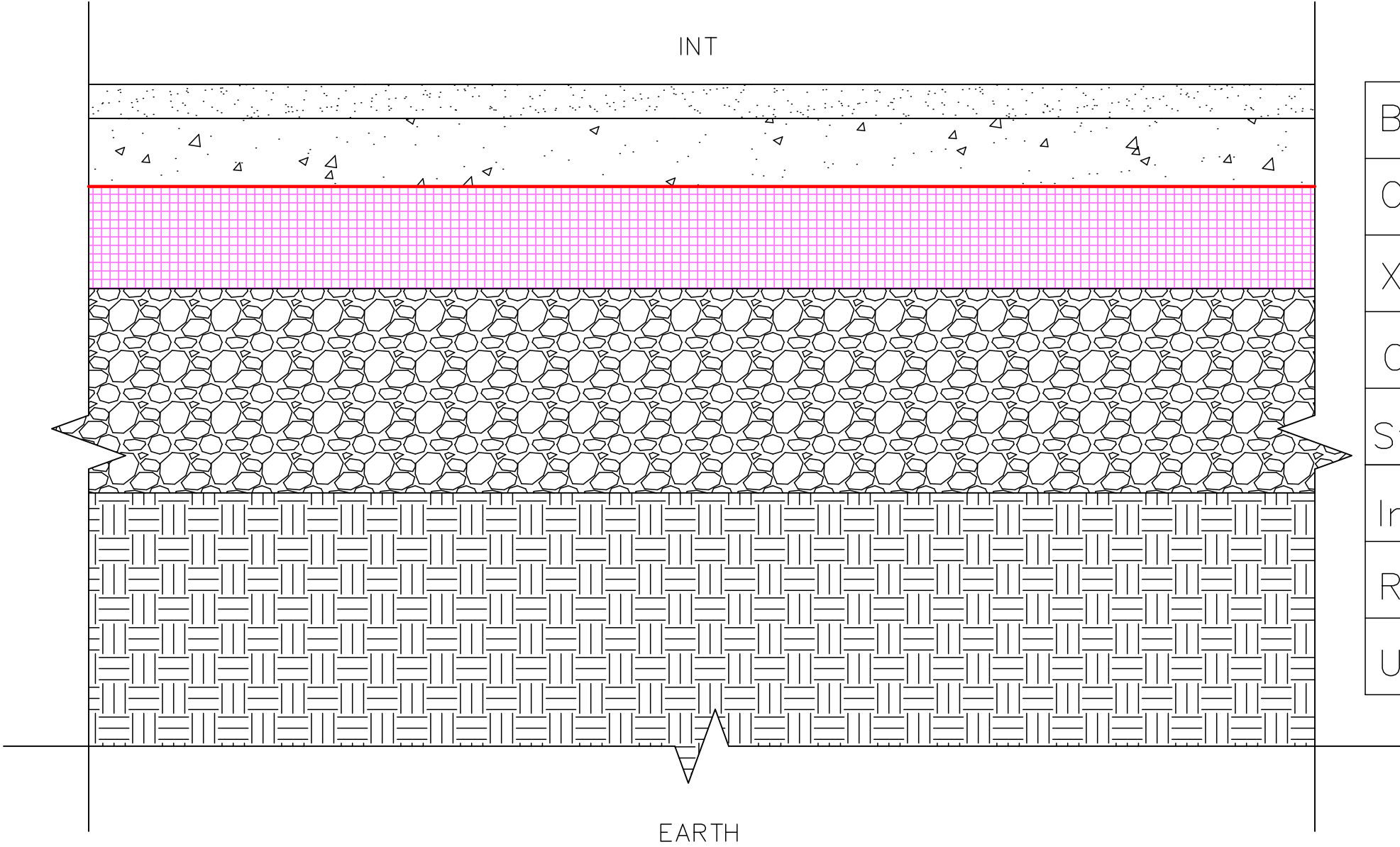
Checked by Joan Amuasi &
Angelina Popp

Thermal B

AVB

1" = 8"
Lower Wall U-Value

A604



Bedrock	0.027
Course Gravel	0.027
XPS (closed)	30
Concrete	0.8
Stone	0.16
Int Air Film	0.026
R Total	30.794
U Total	0.0324

Spruce Peak
Overlook

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Smugglers Notch, VT
05464, USA

Drawn by Joan Amuasi
Checked by Angelina Popp
& Maxwell J. Wiesenfeld

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Thermal B

Waterproofing

1" = 8"
Slab Floor U-Value

A605



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Spruce Peak Overlook

2574 Big Spruce Rd.
Smugglers Notch, VT
05464, USA

Exterior Render

A900



Spruce Peak
Overlook
2574 Big Spruce Rd.
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Terrace Render

A901



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Overlook

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Interior Renders

A902



Site Model
Photograph

Joan Amuasi, Angelina Popp,
& Maxwell J. Wiesenfeld

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A903