

Residential Tilt-Up Wall

A Concrete Love Story: Starring
Characteristics

Thermal Mass

Air Sealing

Structure

Electrical Cavity

Pigmented Plaster Finish



Tilt-up developed from large box commercial construction

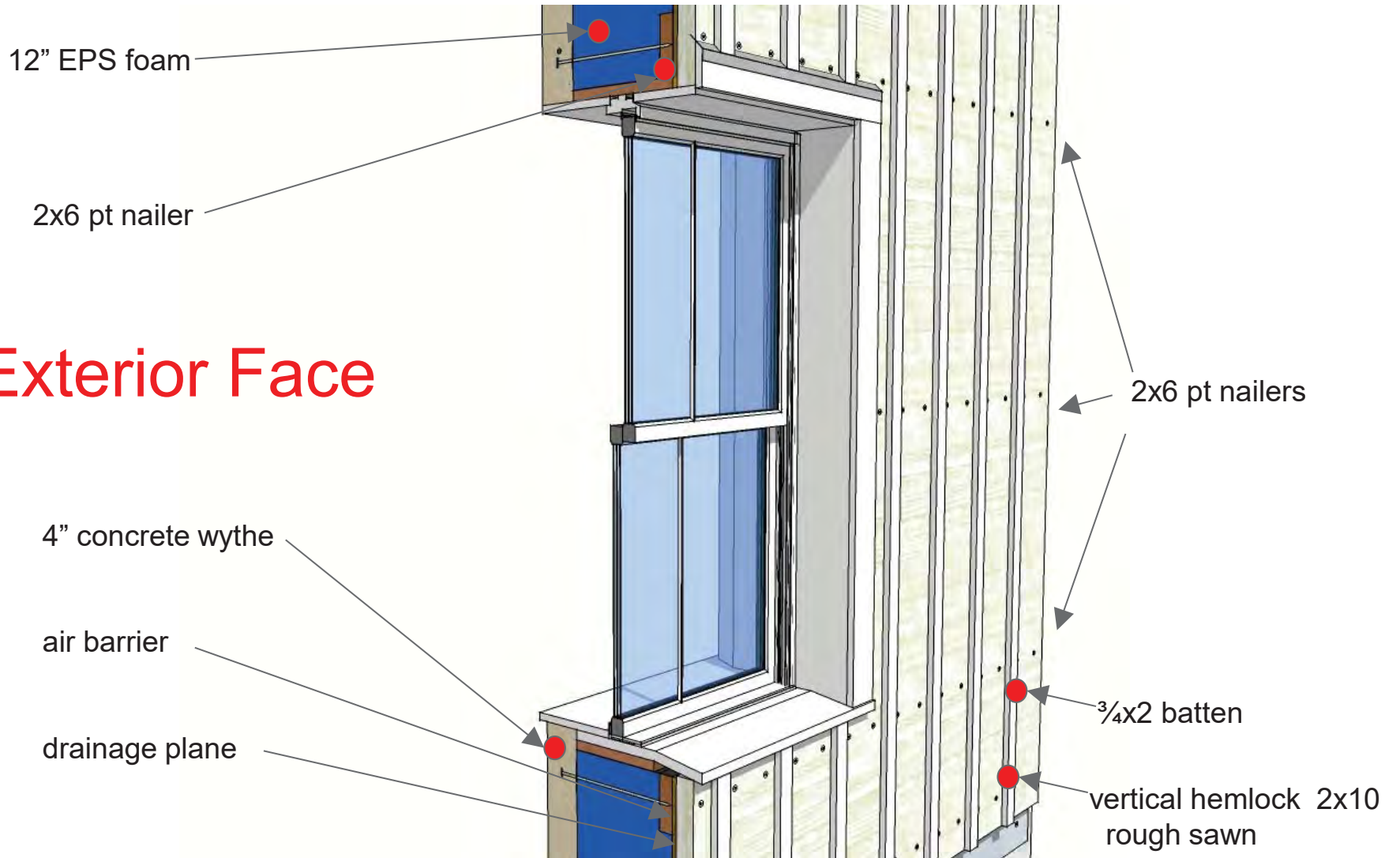


We are adapting
tilt-up for low-density
multifamily residential



Mock-Up Wall #1

Exterior Face



Interior Face

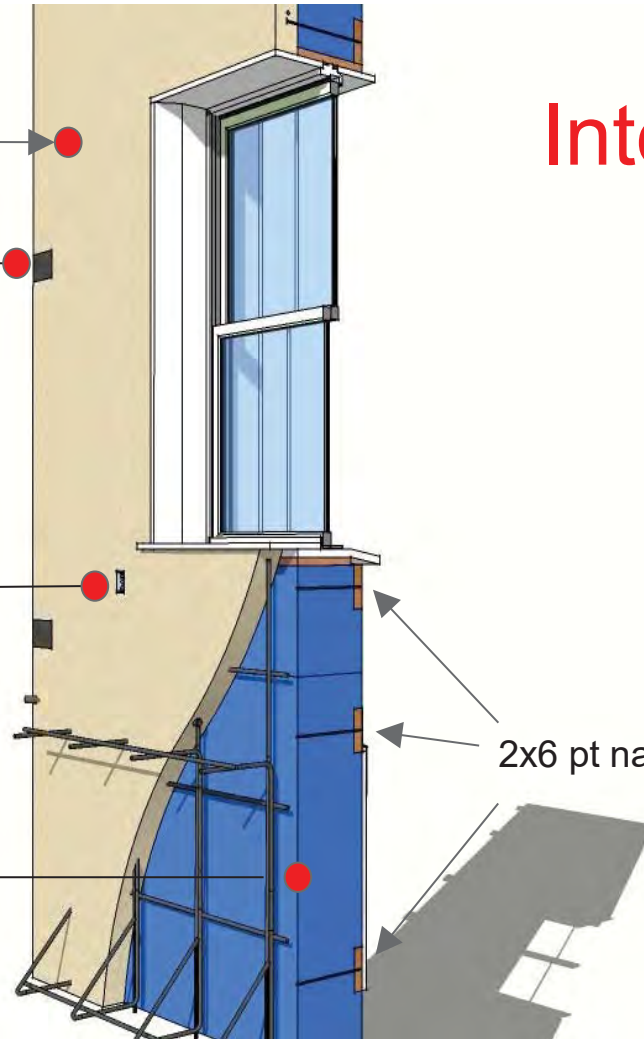
4" Concrete wythe

Connector plate

Embedded Electrical

12" EPS foam

2x6 pt nailers



Interior Face

pigment powder troweled into wet mix

electrical embedded

floor slab rebar tie-in

footing rebar tie-in



Footings

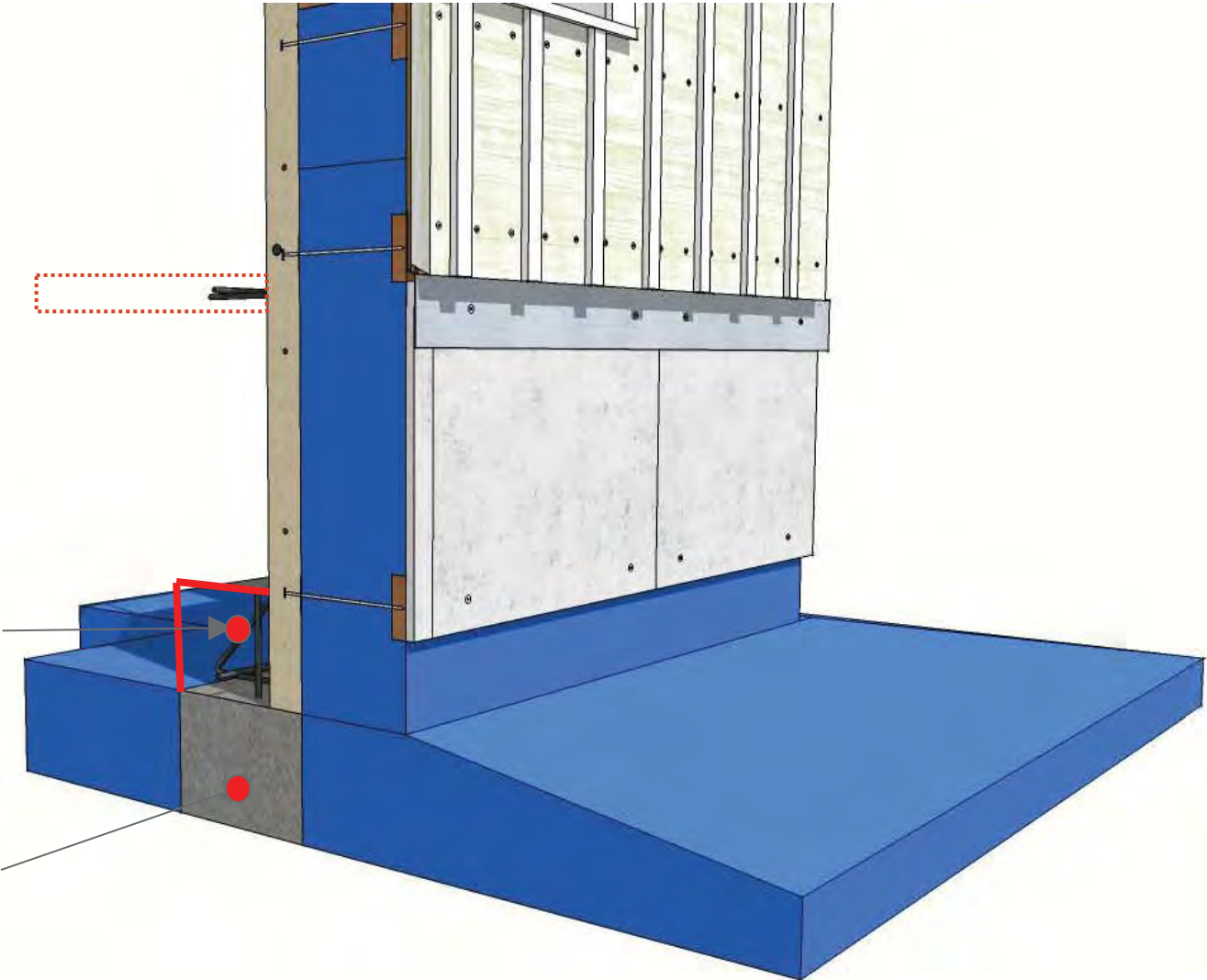
Future floor slab



Footing Pour #2 Location

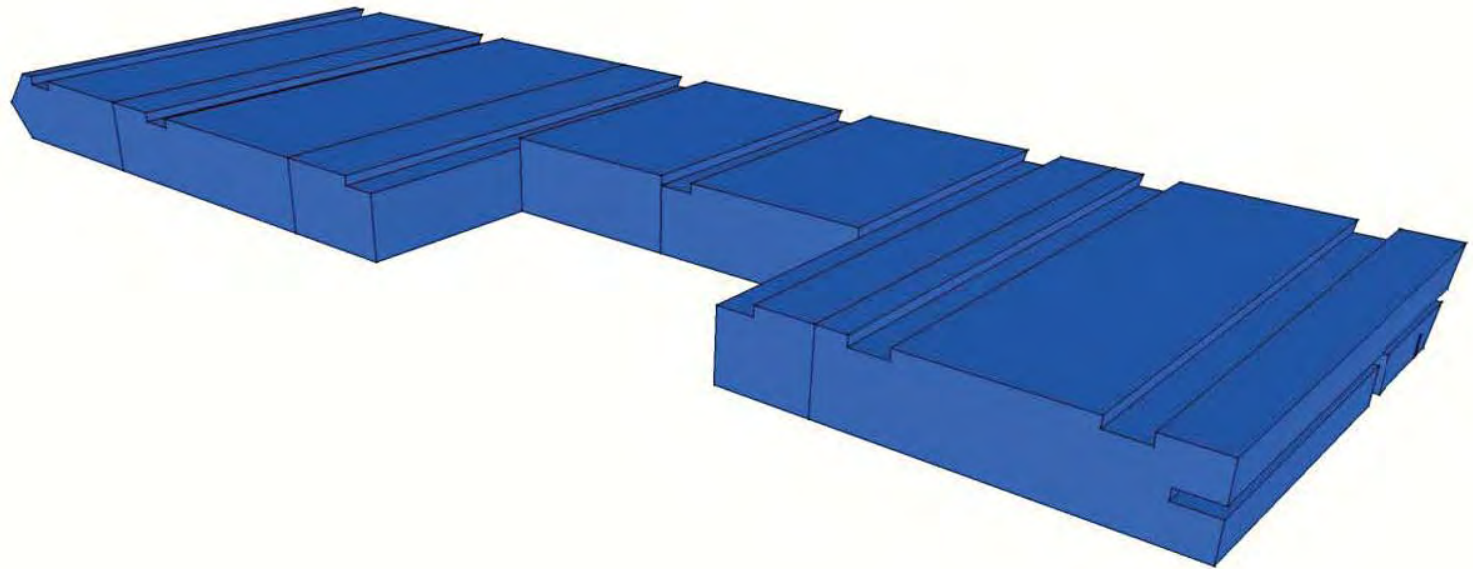


Footing Pour #1

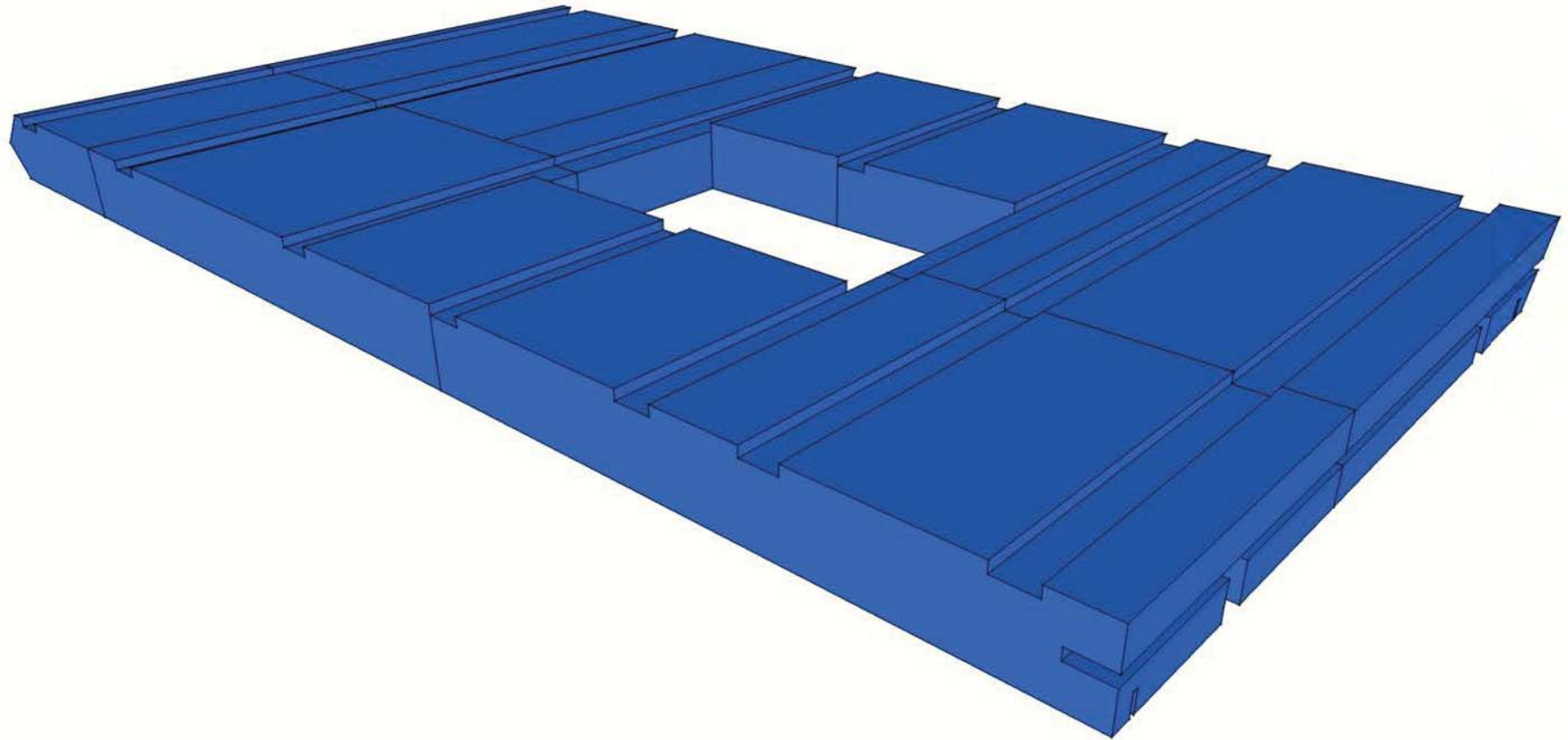


Sequence of the assembly key to costs

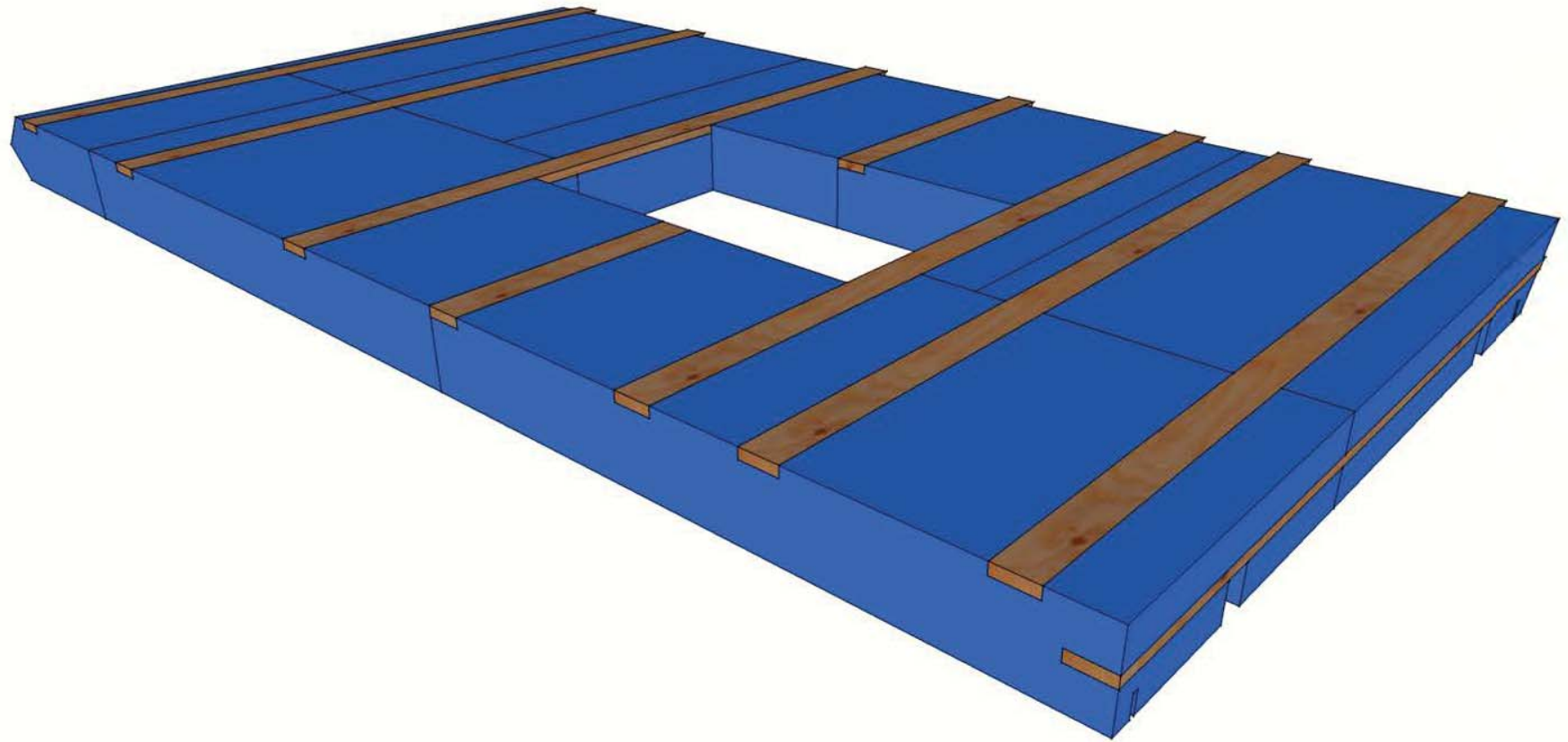




Join and adhere CAD-cut EPS Blocks



Foam serves as materials template



Insert and adhere pressure treated 2 x 6 nailers



Insert window complete with ext jamb extensions



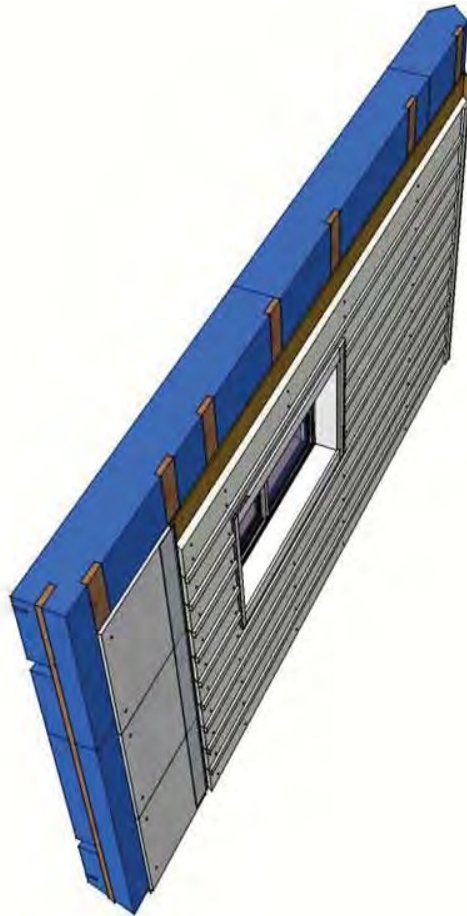
Apply air barrier (shown in black)
And seal to window and EPS



Apply drainage mat



Fasten 2x10 rough sawn vertical hemlock siding



Flip wall over



Add wall fasteners, form boards,
window extension jamb, foam window



Drop in rebar, electrical, embed plates, lifting points



Pour concrete with pigment and trowel to finish



Mock-Up Wall #1

Assembled wall ready
for tilt-up

Wall Assembly designed for 48 unit net-zero project in Newburyport, MA. PHIUS standards achievable per WUFI modeling of phase I



Thank You!

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