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
4” concrete wythe
12” EPS foam
2x6 pt nailer
4” concrete wythe
air barrier
drainage plane

Exterior Face

2x6 pt nailers
¾x2 batten
vertical hemlock 2x10 rough sawn
4” Concrete wythe
Connector plate
Embedded Electrical
12” EPS foam
2x6 pt nailers

Interior Face
**Interior Face**

- Pigment powder troweled into wet mix
- Electrical embedded
- Floor slab rebar tie-in
- Footing rebar tie-in
Footing

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
Assembled wall ready for tilt-up

Mock-Up Wall #1
Wall Assembly designed for 48 unit net-zero project in Newburyport, MA. PHIUS standards achievable per WUFI modeling of phase I
Thank You!

David Hall
ddh@hallandmoskow.com
Hall and Moskow Corp

Hillside Center for Sustainable Living
http://www.hillsidecenterforsustainableliving.com/
- rough hemlock 2x10
- drainage mat
- air barrier
- eps foam 12"
- concrete wythe 4"
- triple glazed u15 SHGC
- pt nailer 2 x 6
- precast veneer