

RESILIENT

Home Building Conference

March 19-21, 2010  Convention Center, Biloxi, MS



RESILIENT FLOOR, WALL AND ROOF FRAMING

David Perkes, AIA

GCCDS Gulf Coast Community Design Studio





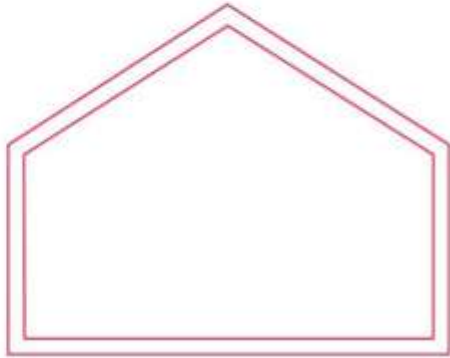
09/19/2007

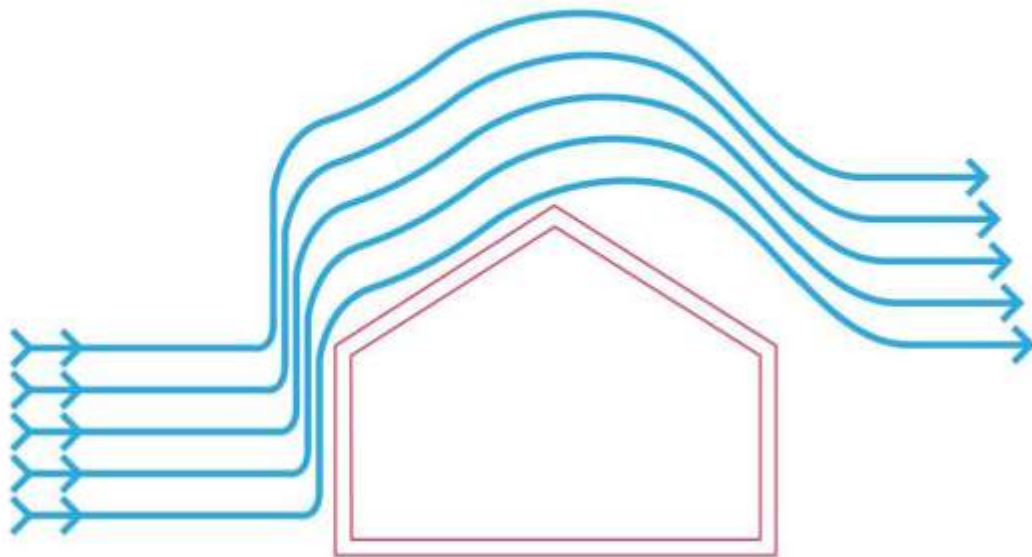


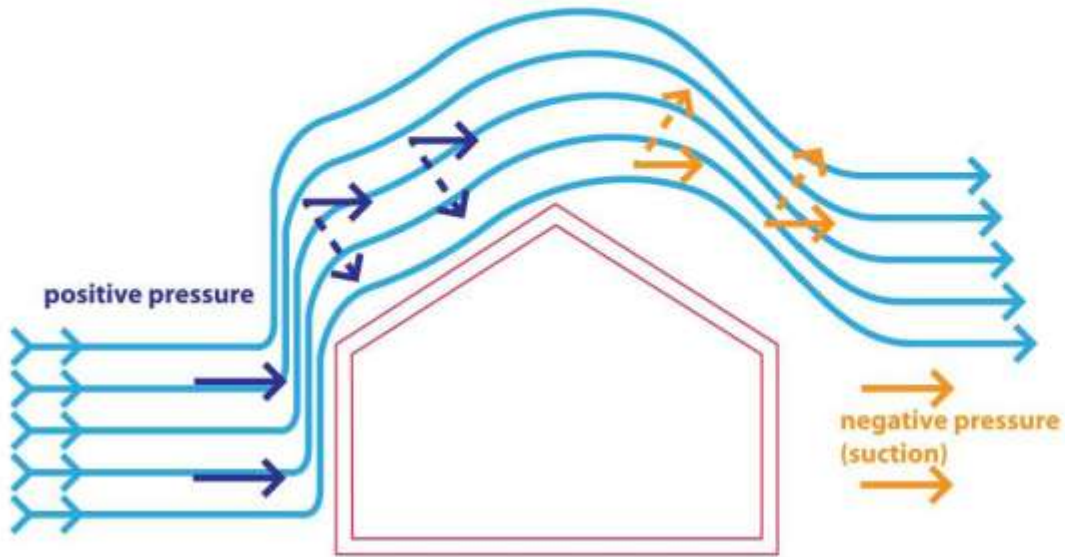
10/03/2007

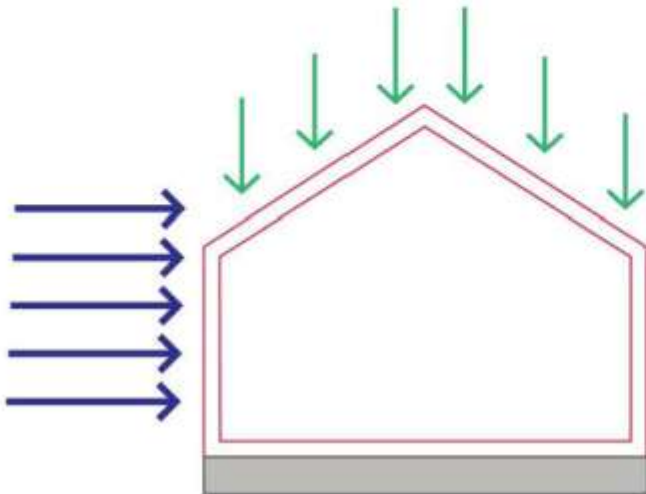


09/19/2007



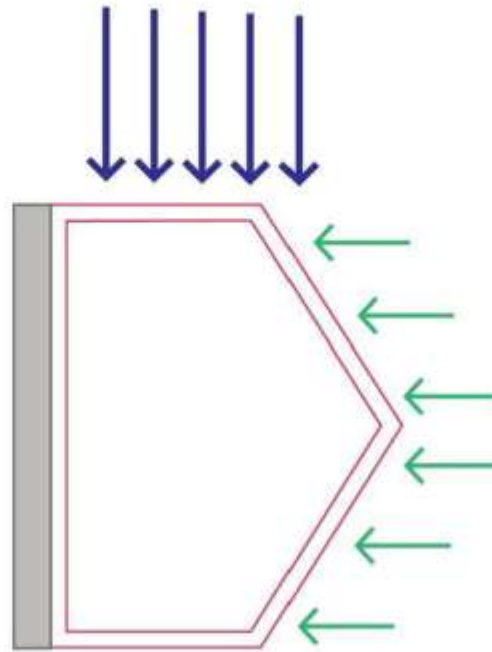






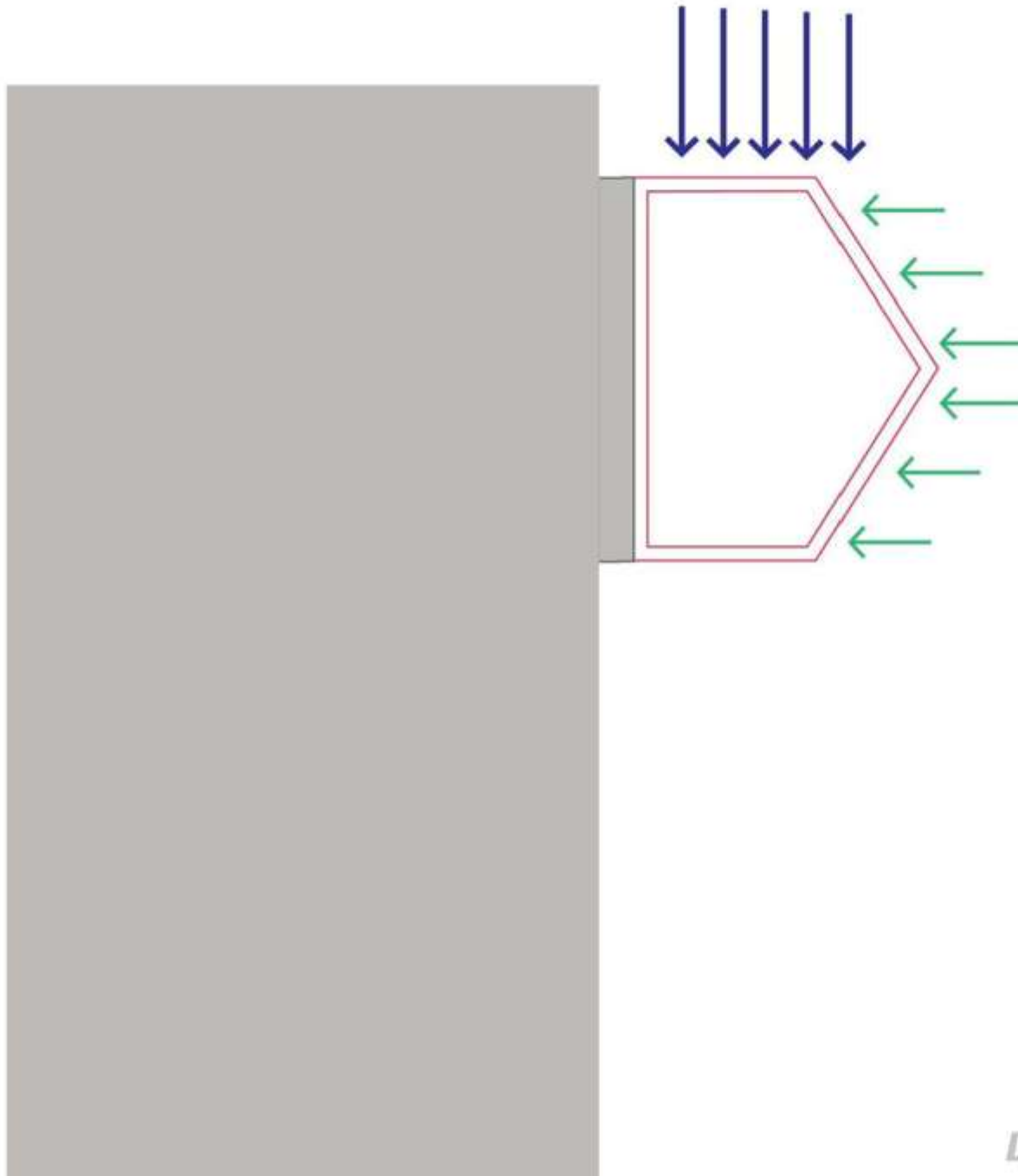
140-150 MPH wind
35-40 psf
(depending on exposure)

Vertical Load 2006 IBC
20 psf

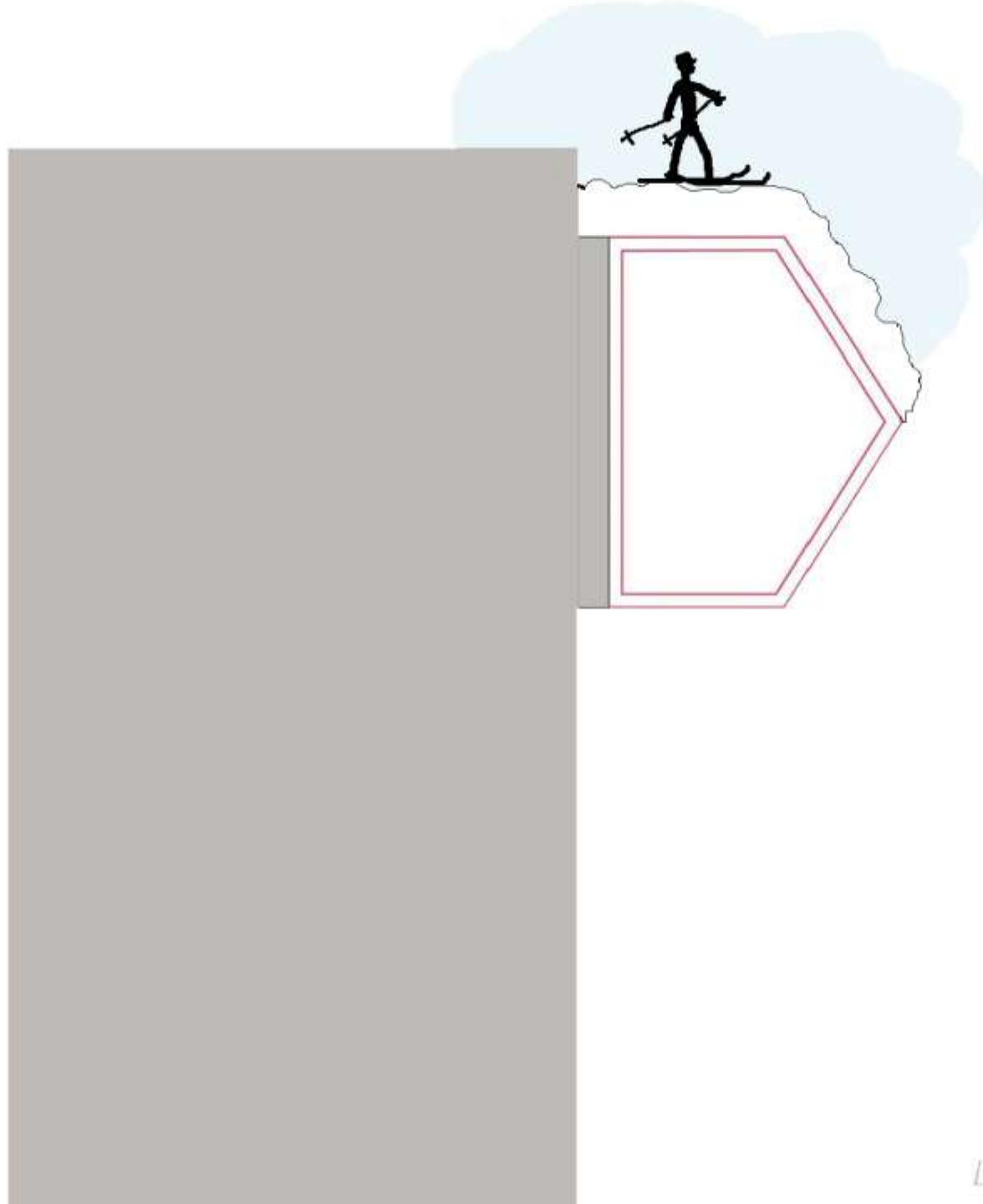


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LATERAL FORCES - WIND LOAD



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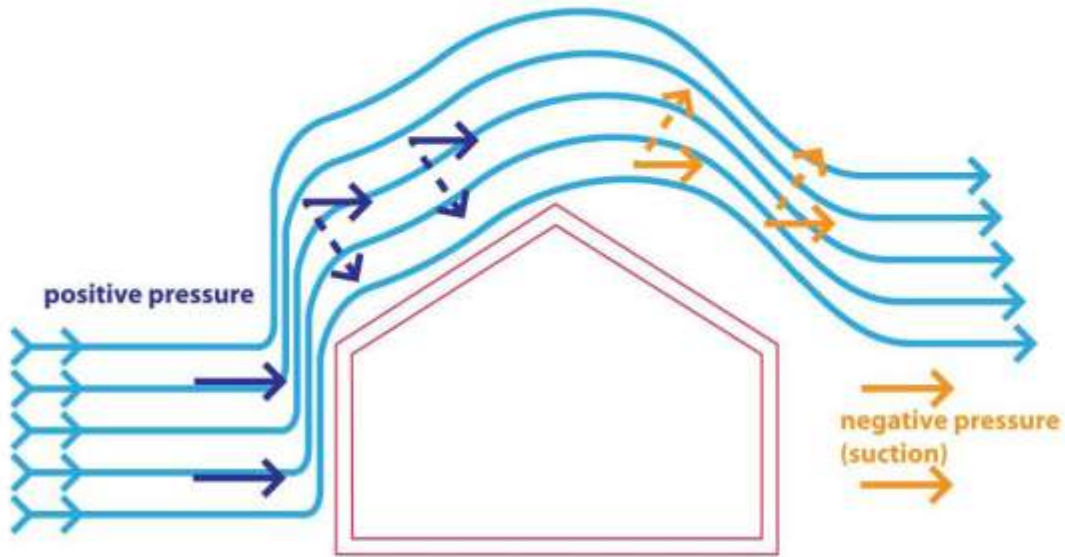
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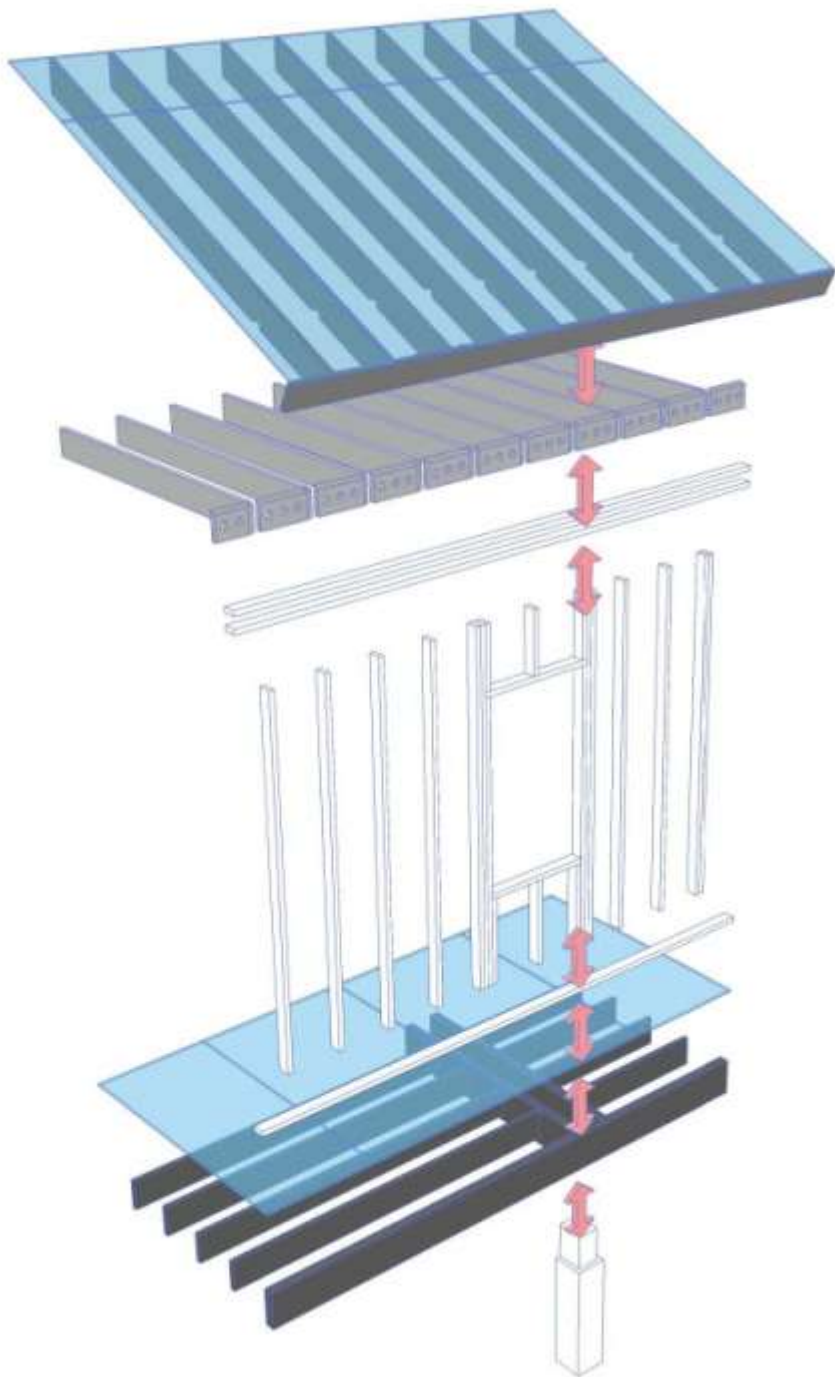


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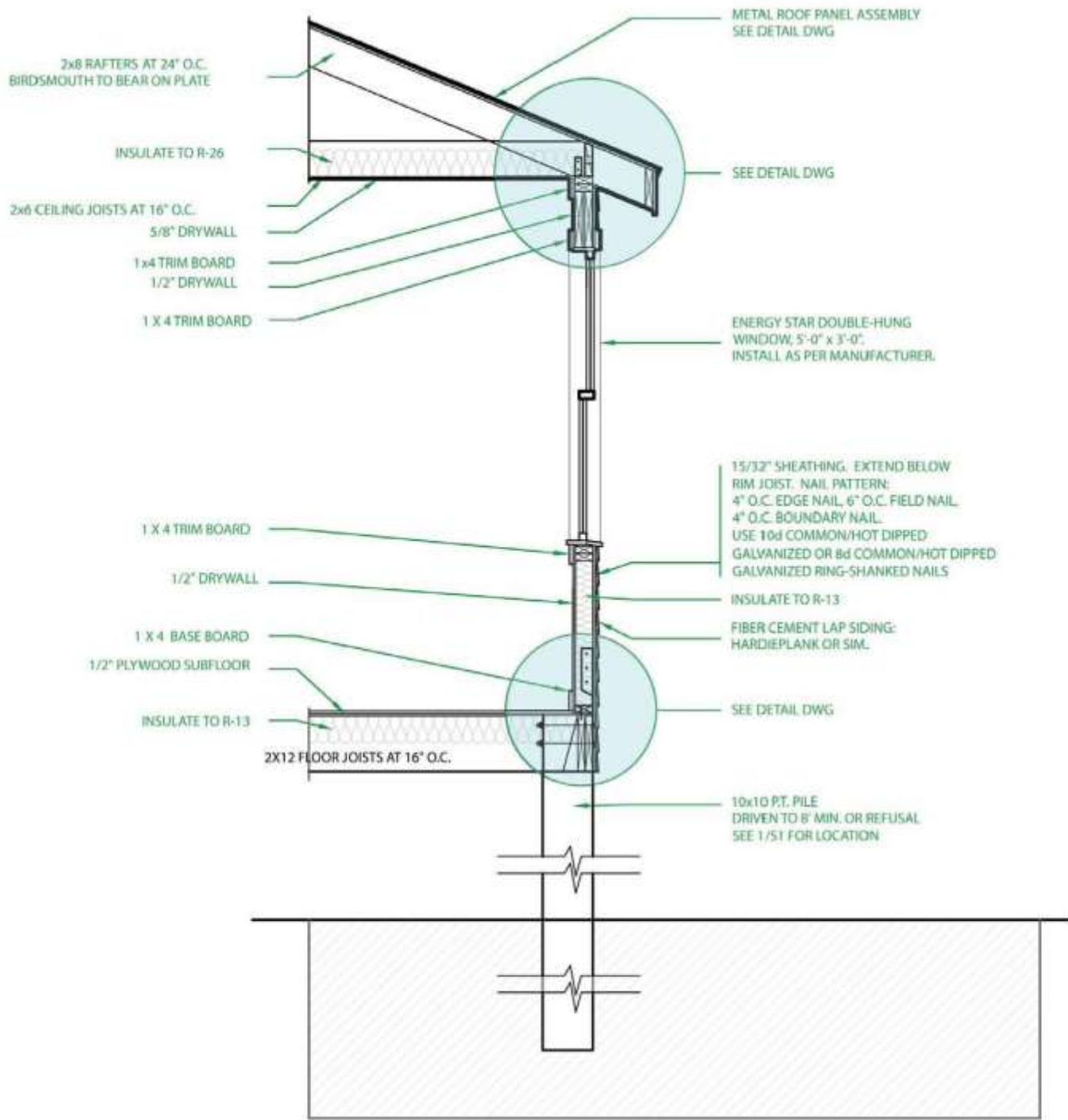


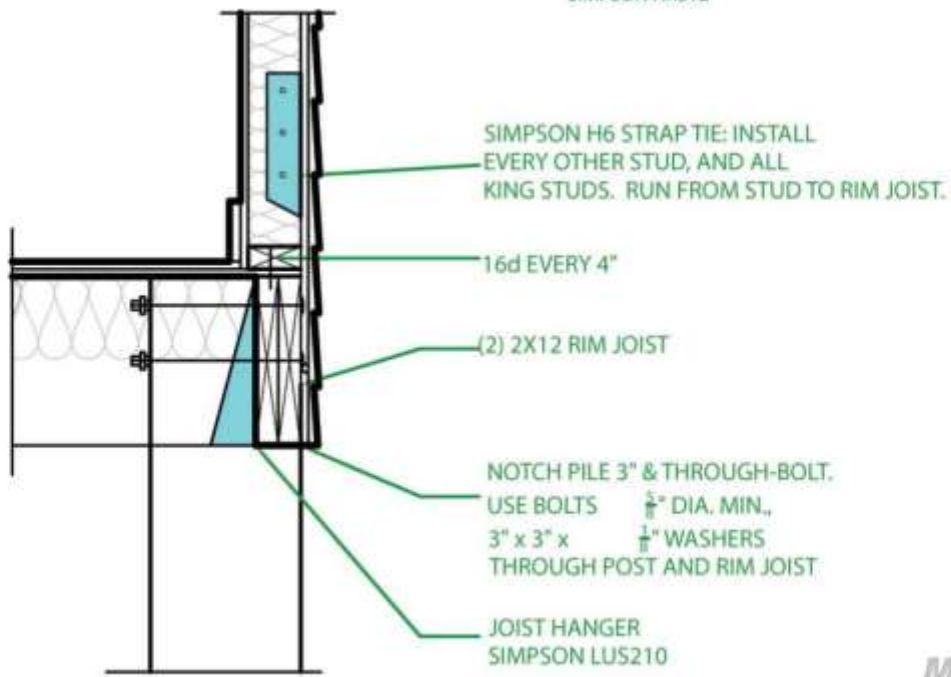
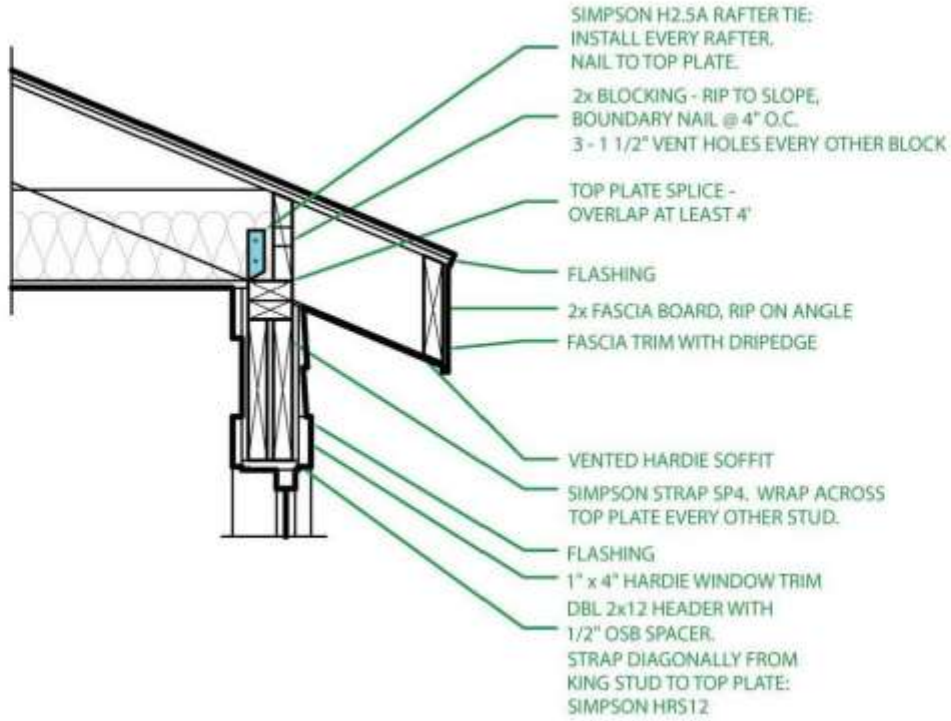
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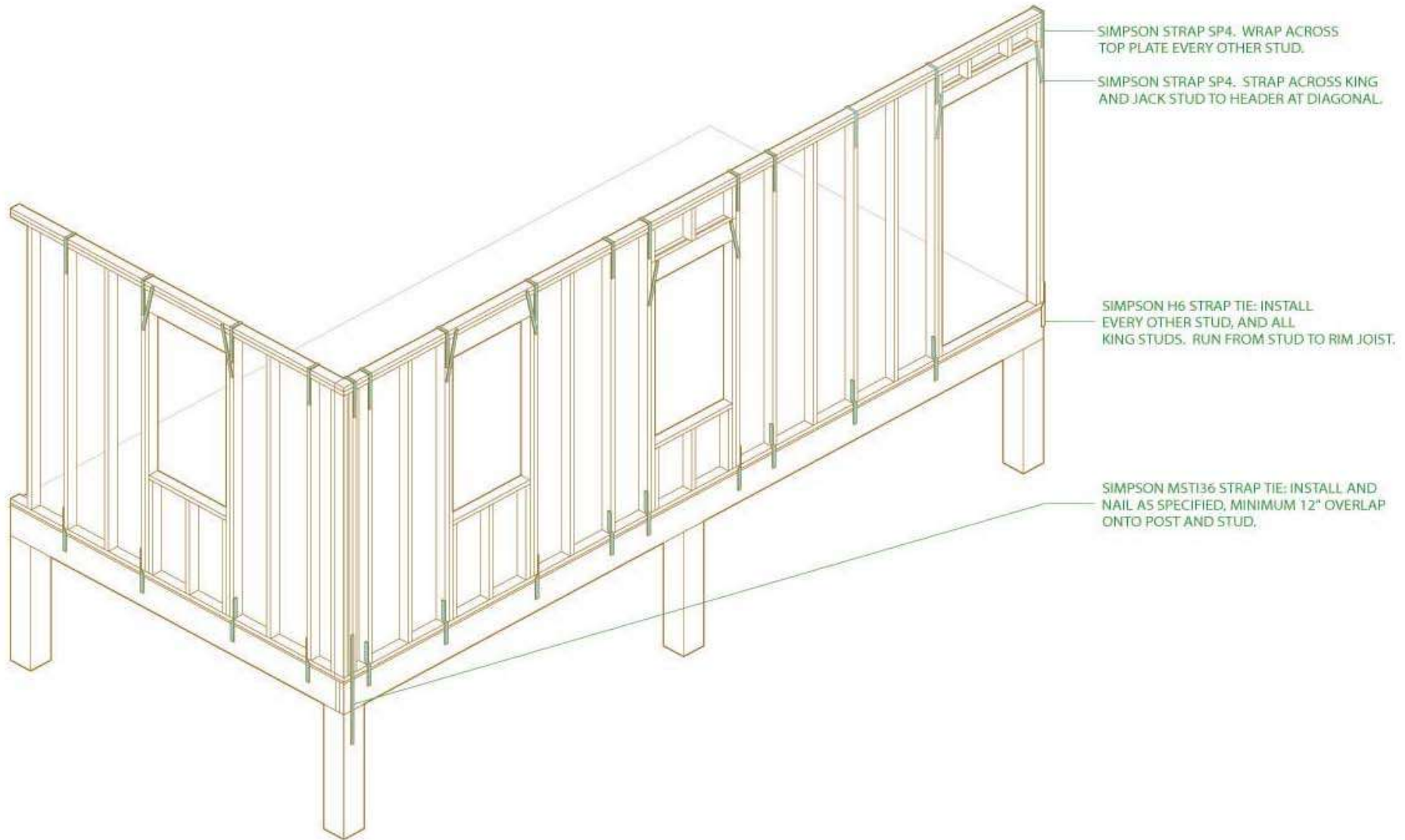




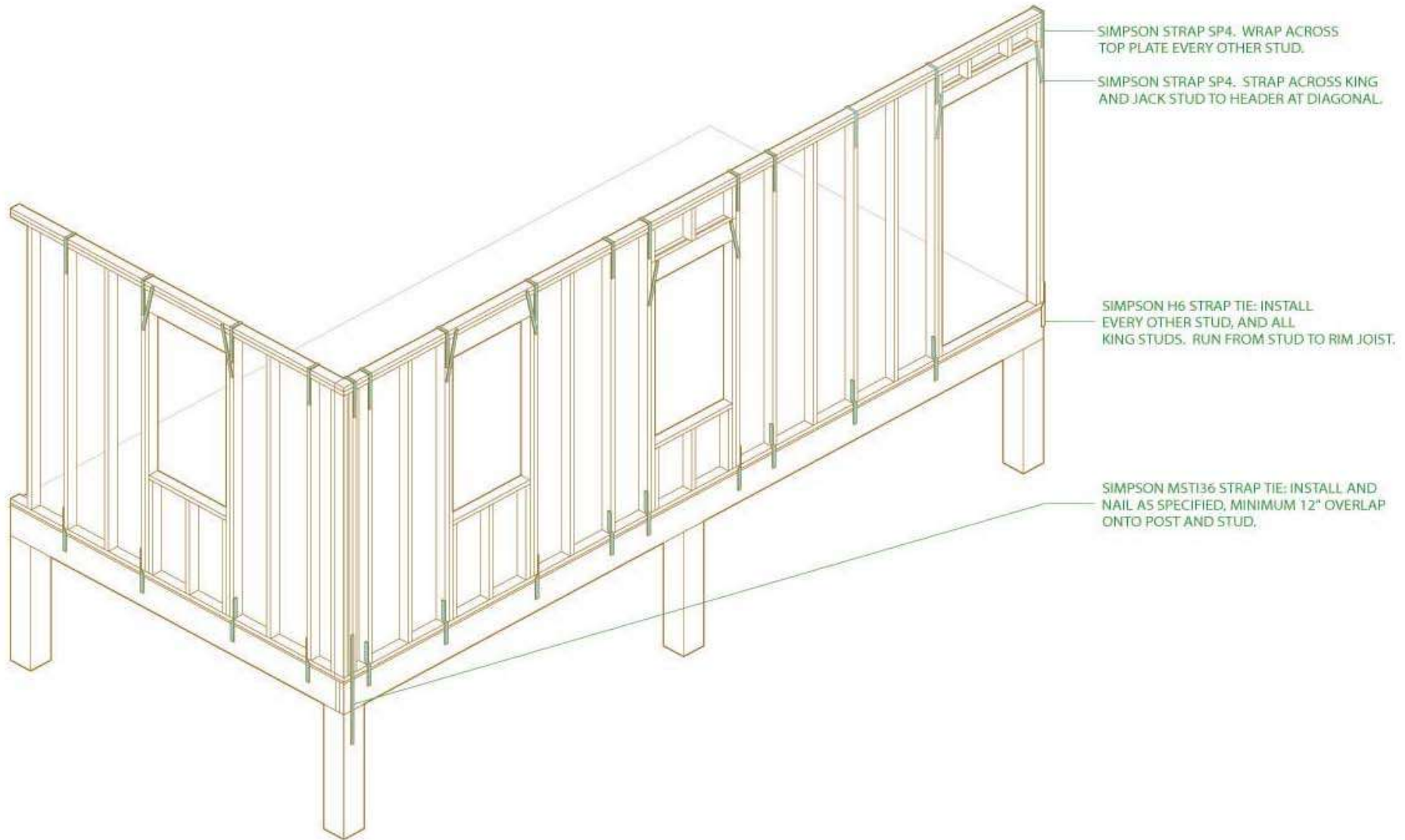
VERTICAL LOAD PATH (UPLIFT)



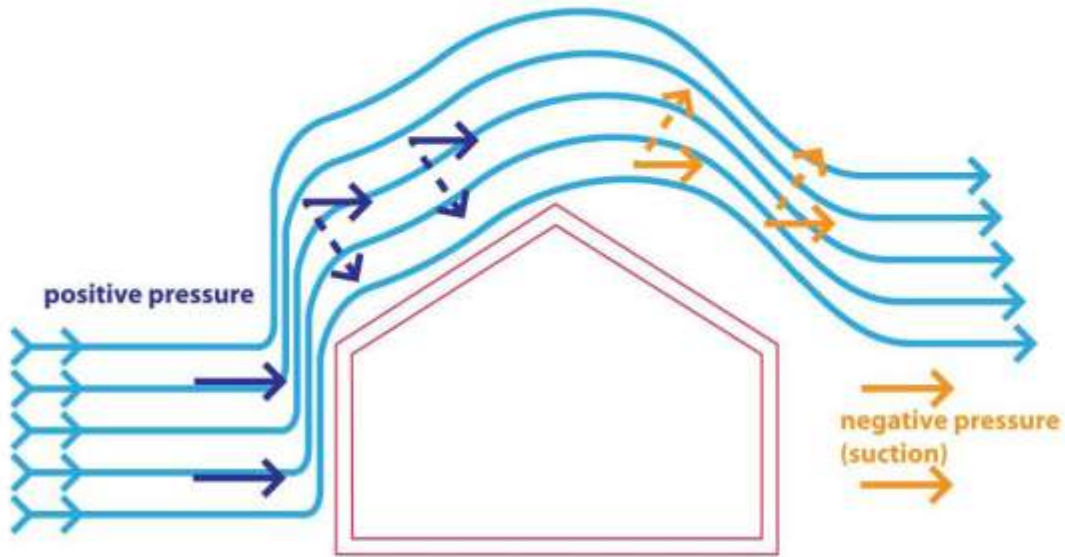


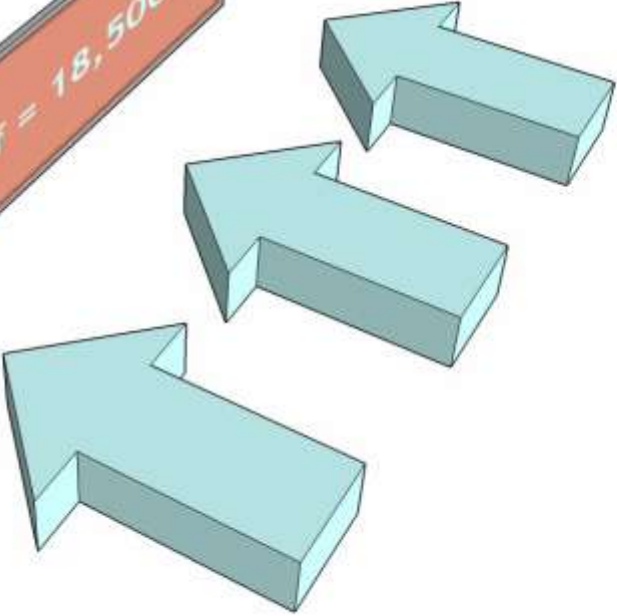
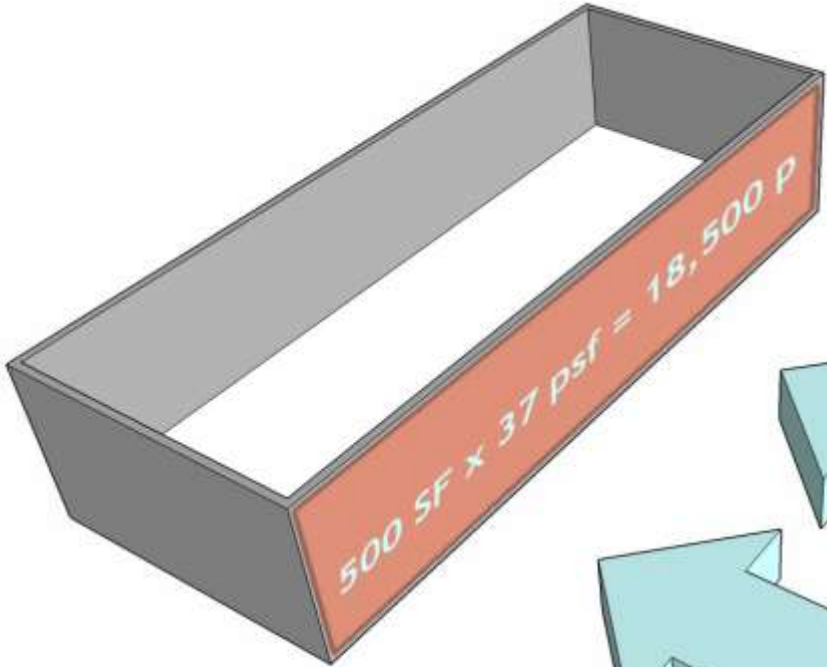


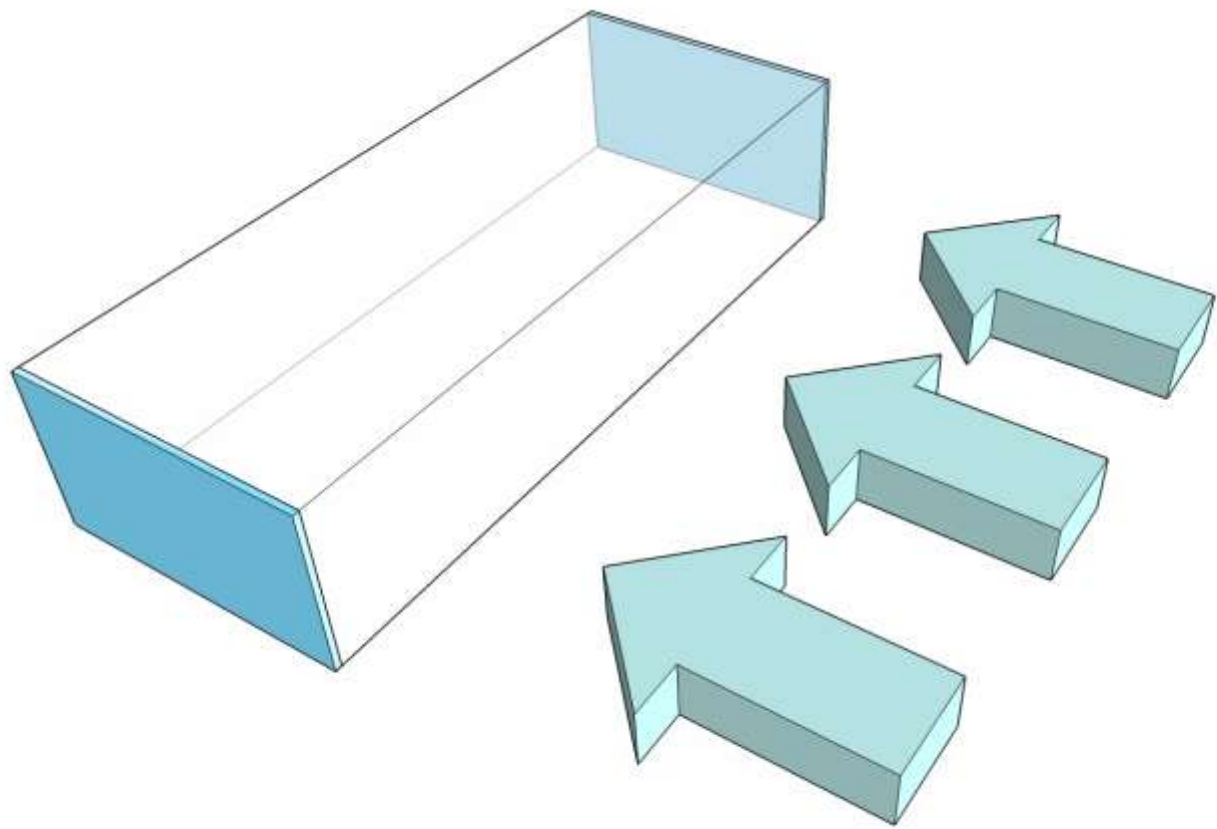


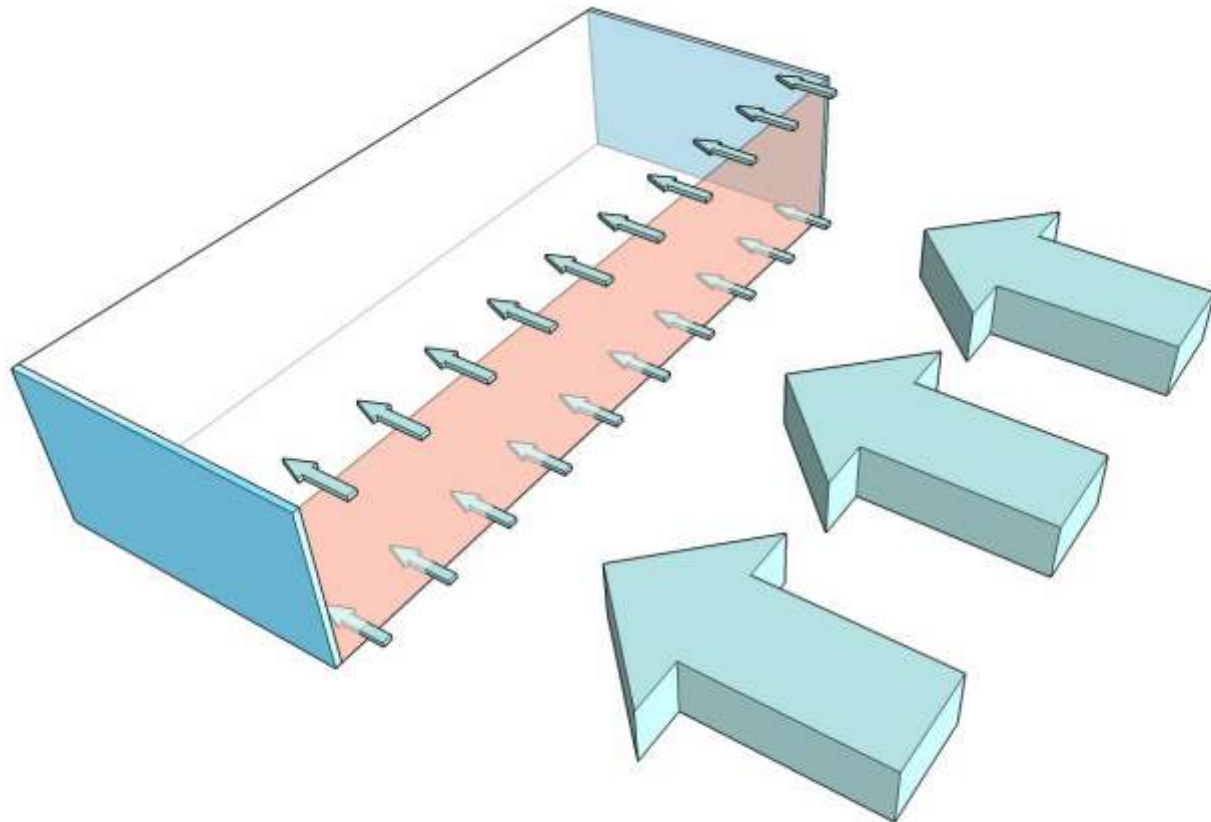


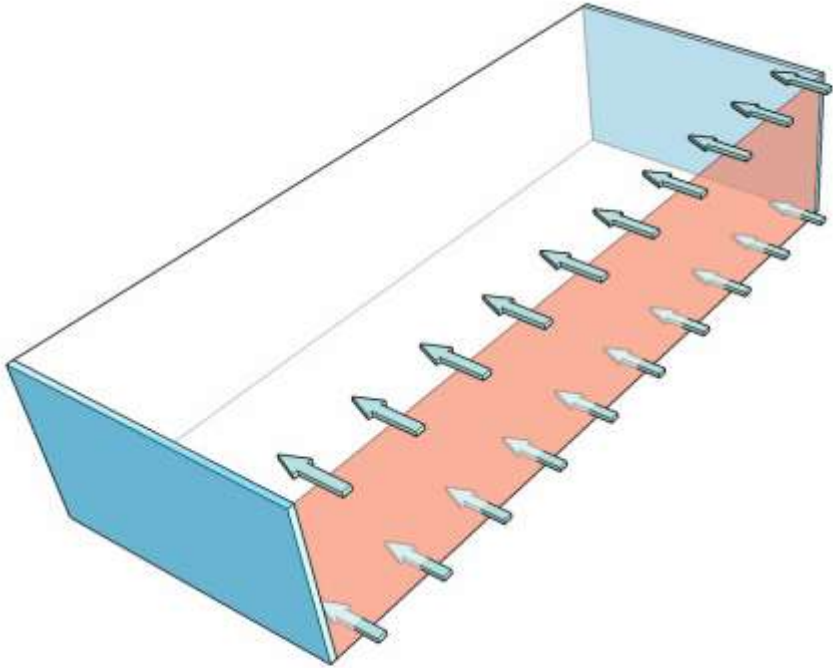


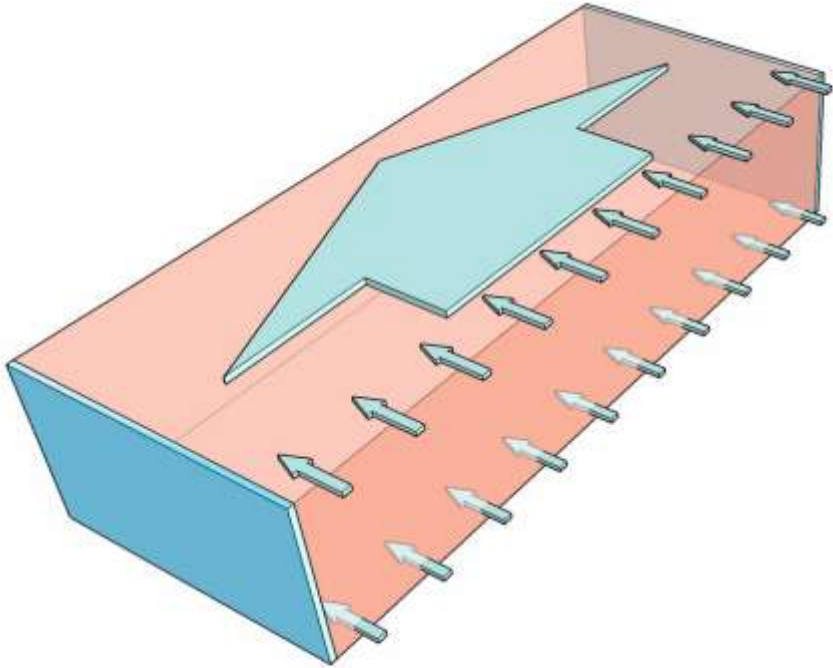


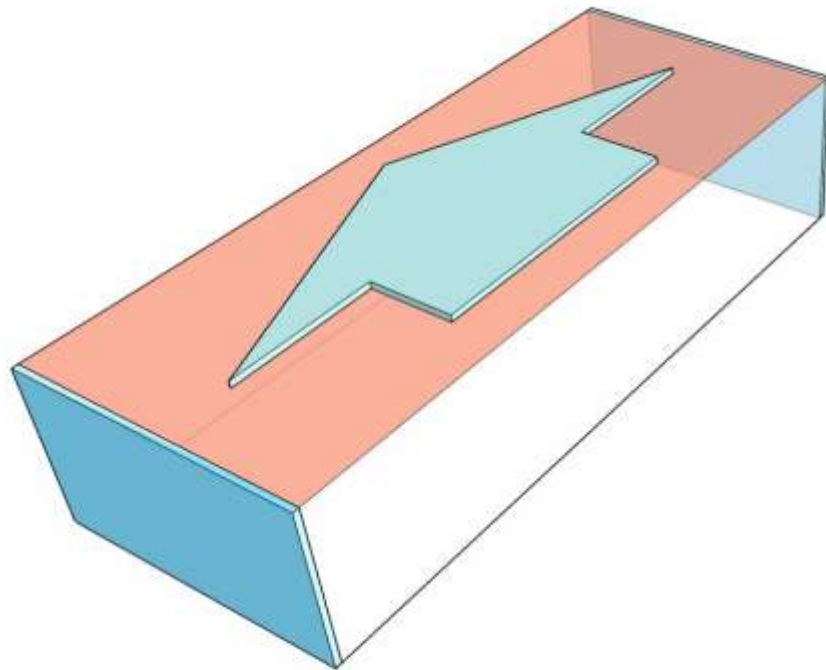


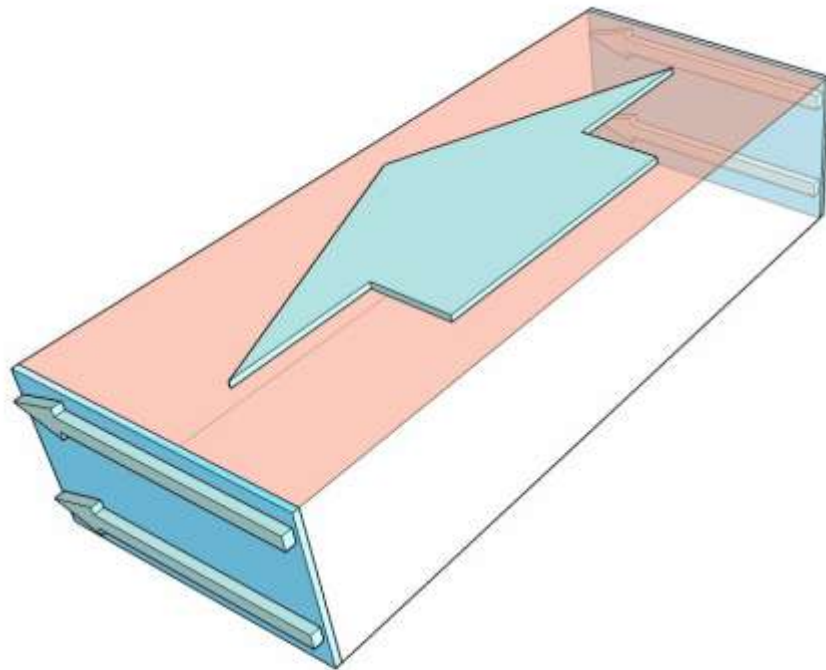


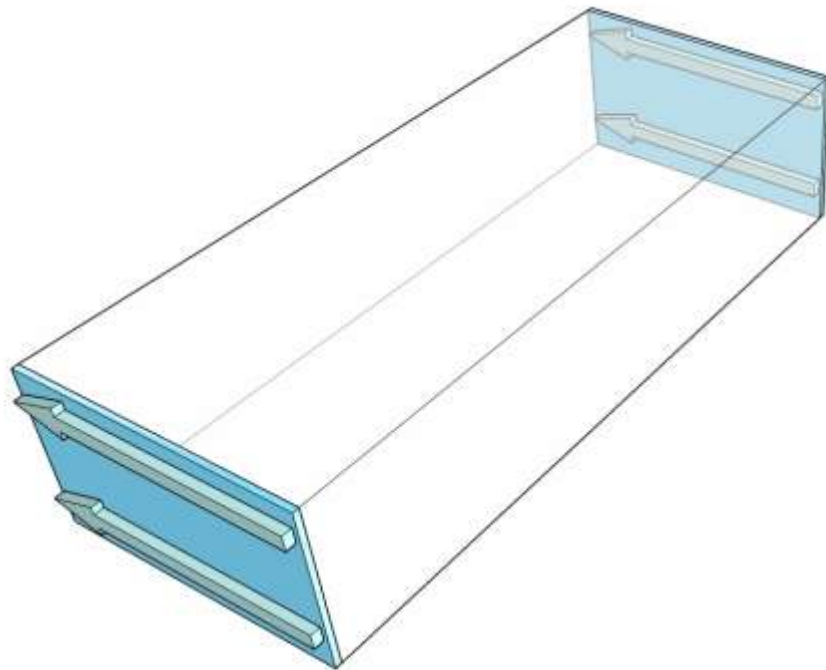


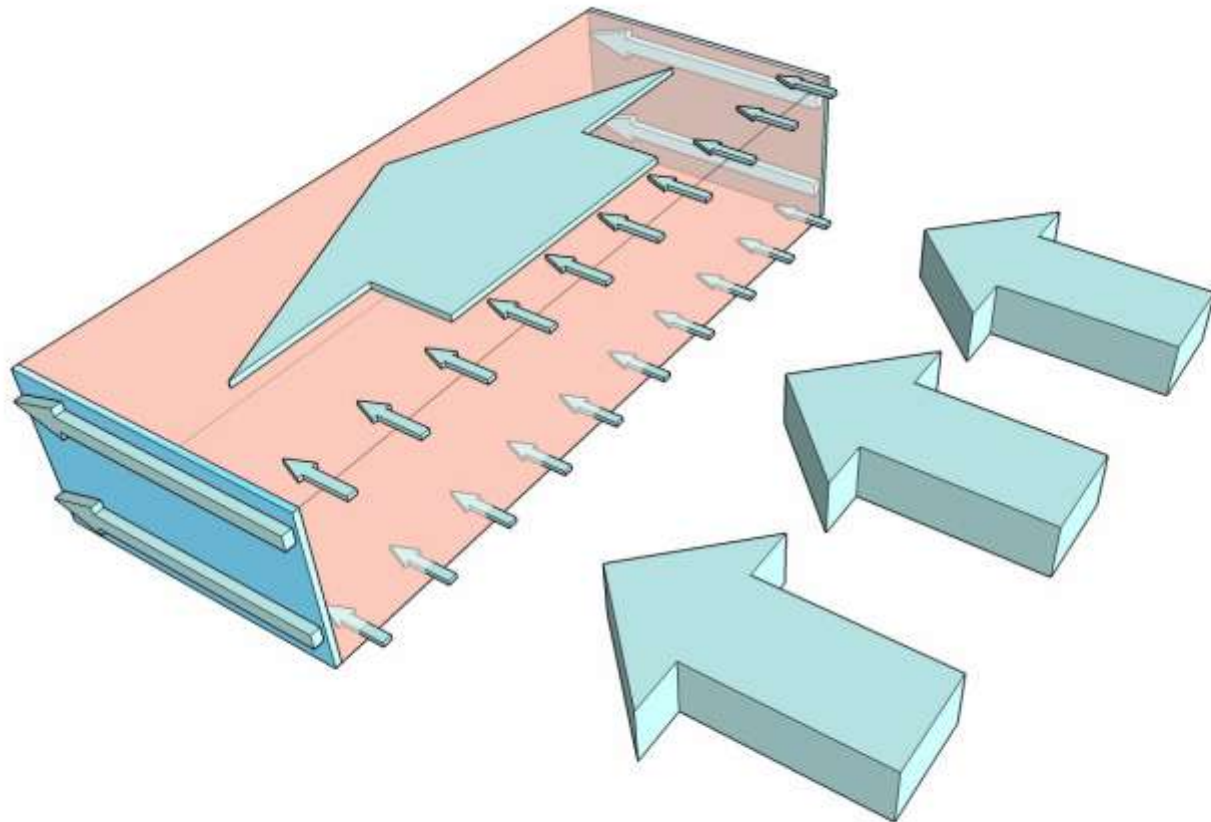


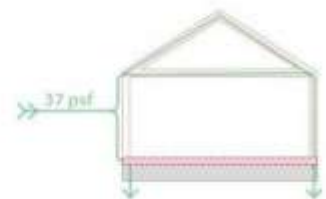
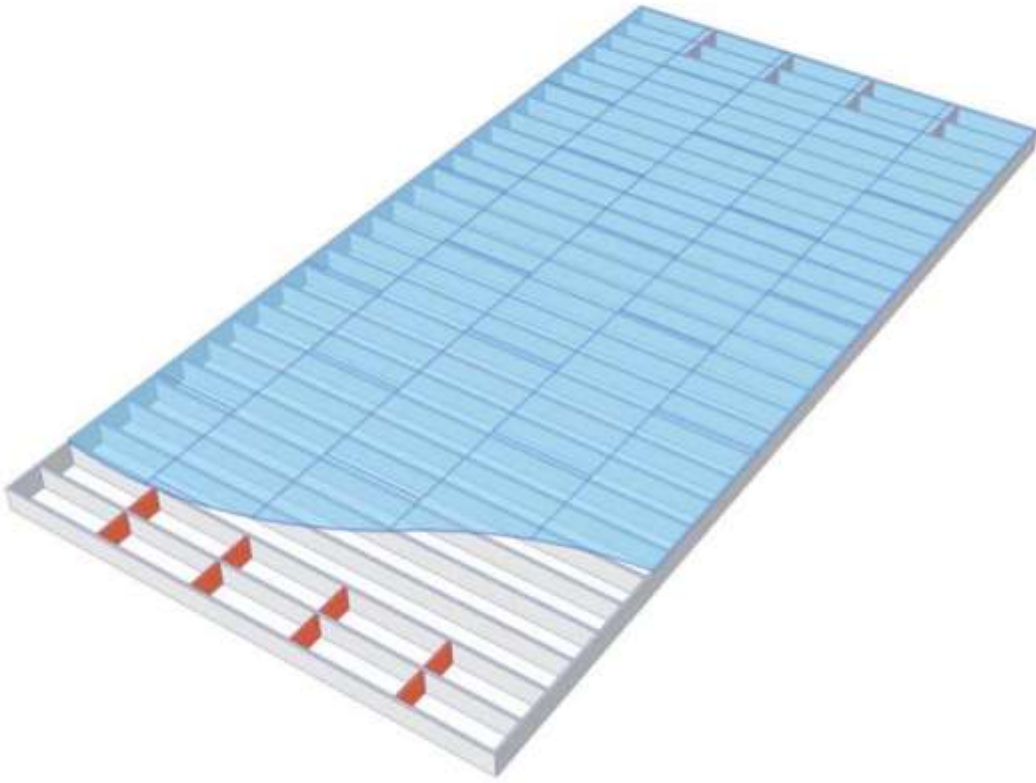




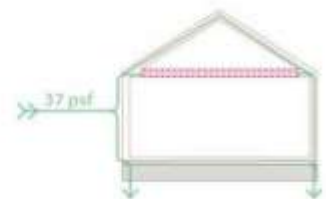
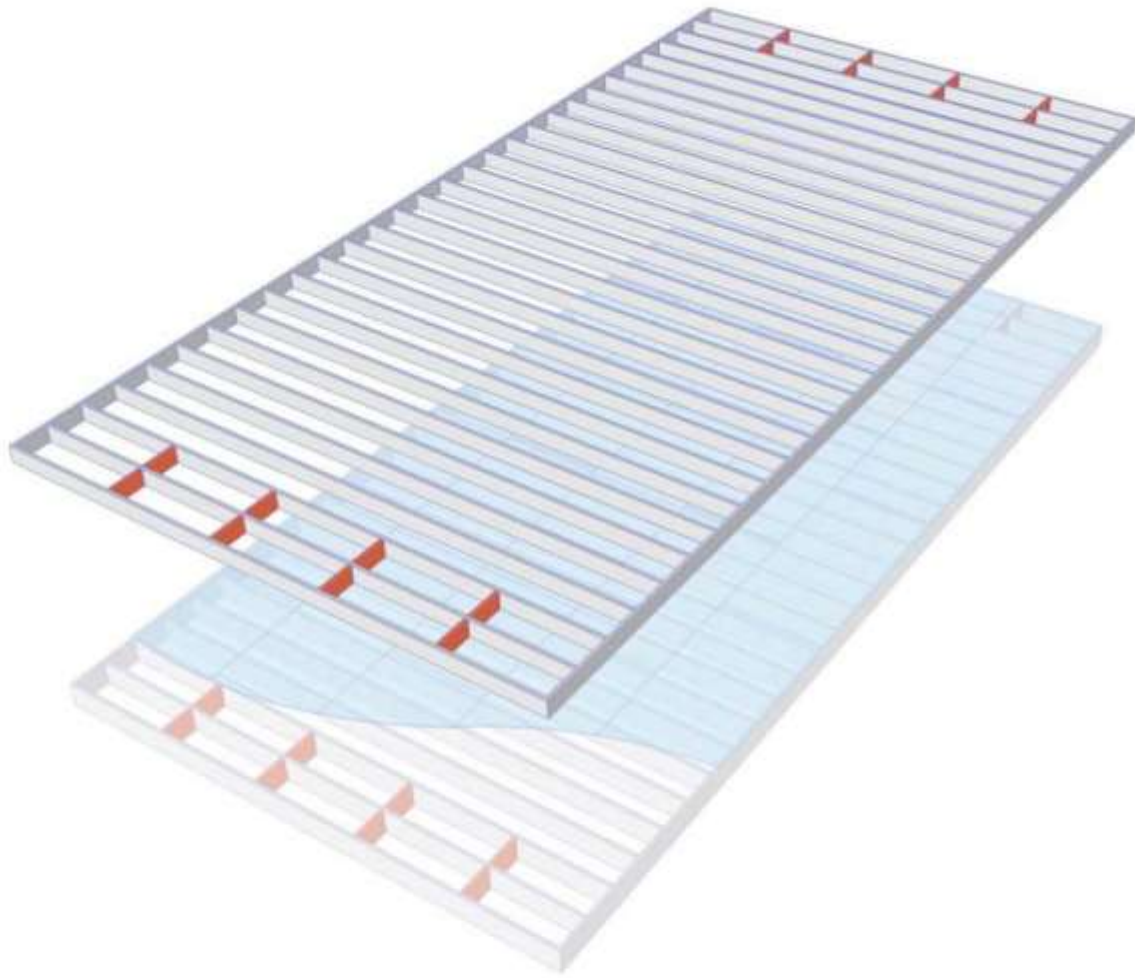




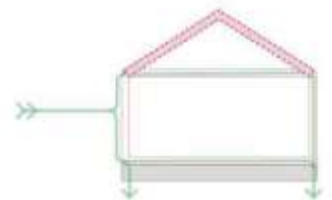
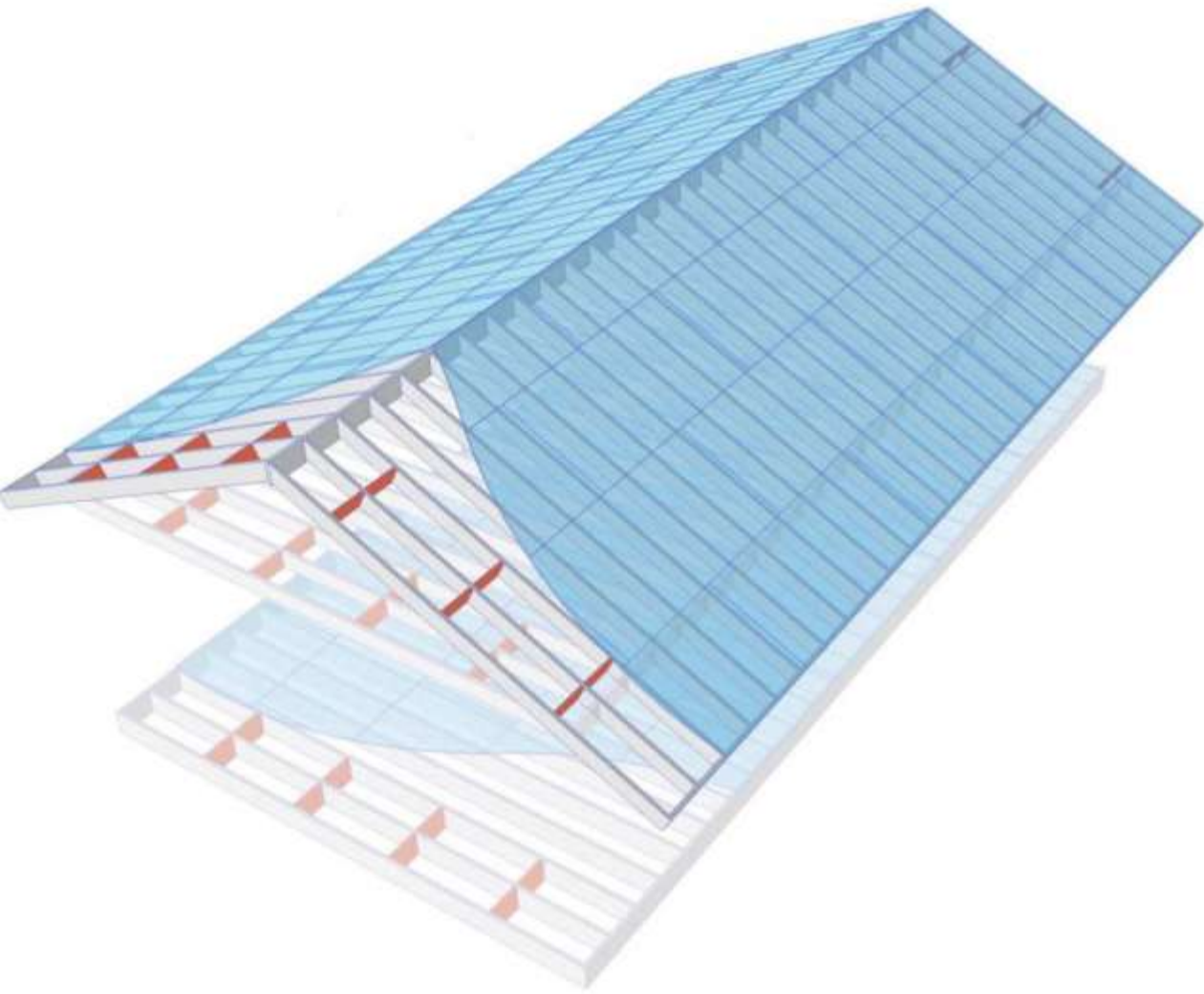




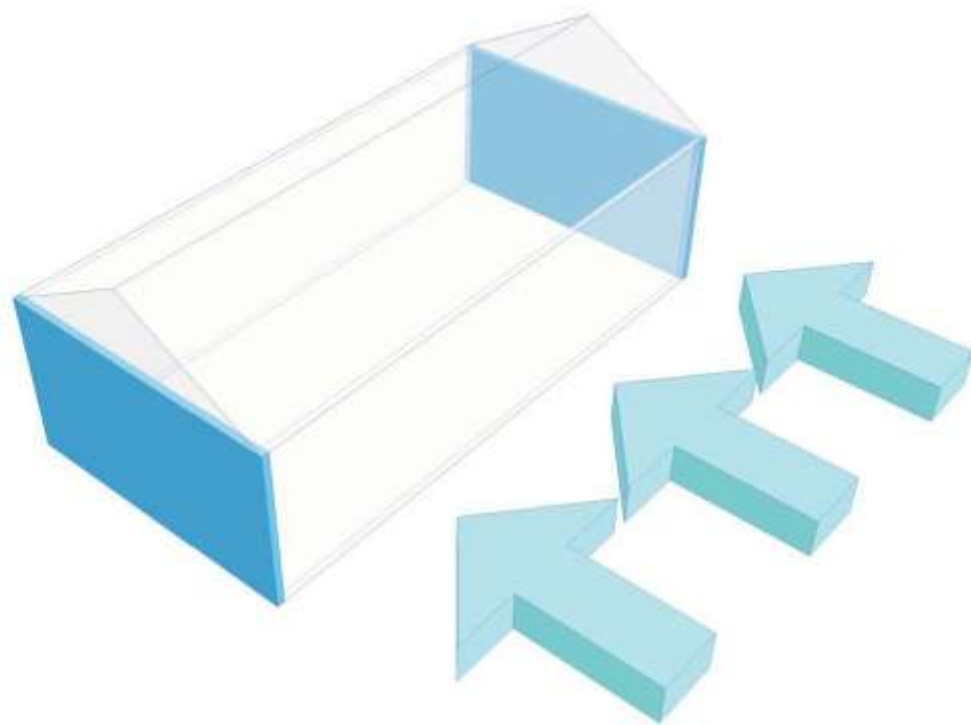
HORIZONTAL LOAD PATH - DIAPHRAGMS



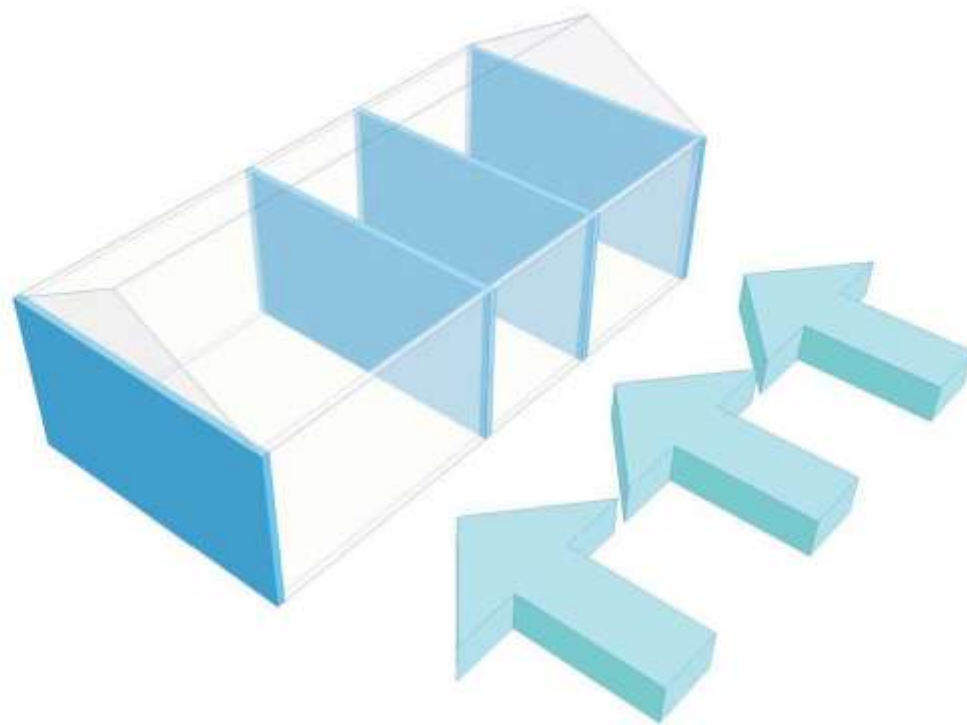
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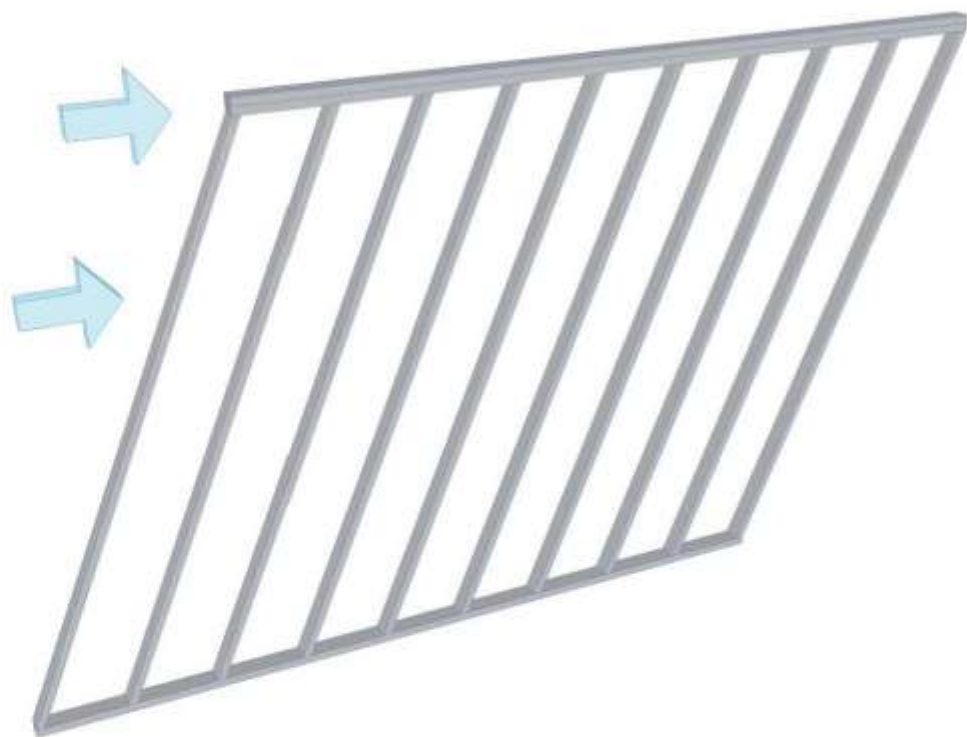
SHEAR RESISTANCE PERPENDICULAR TO LOAD



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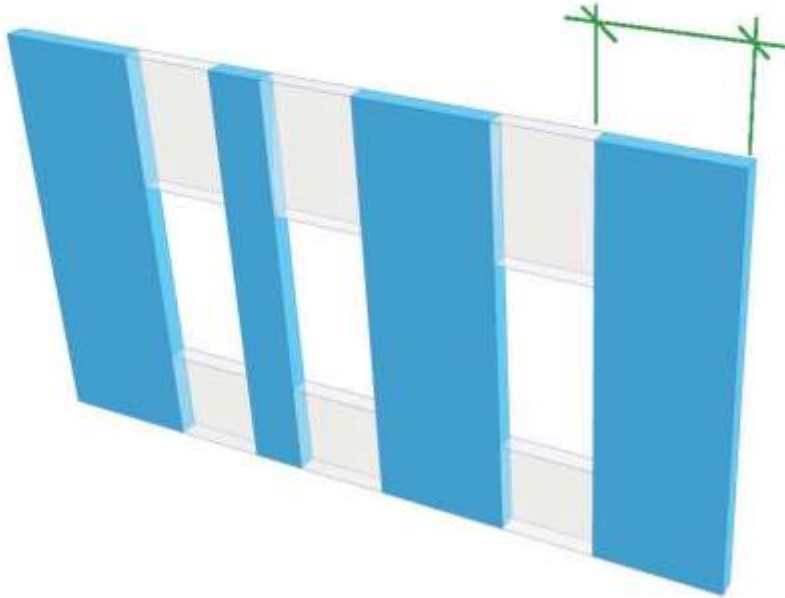


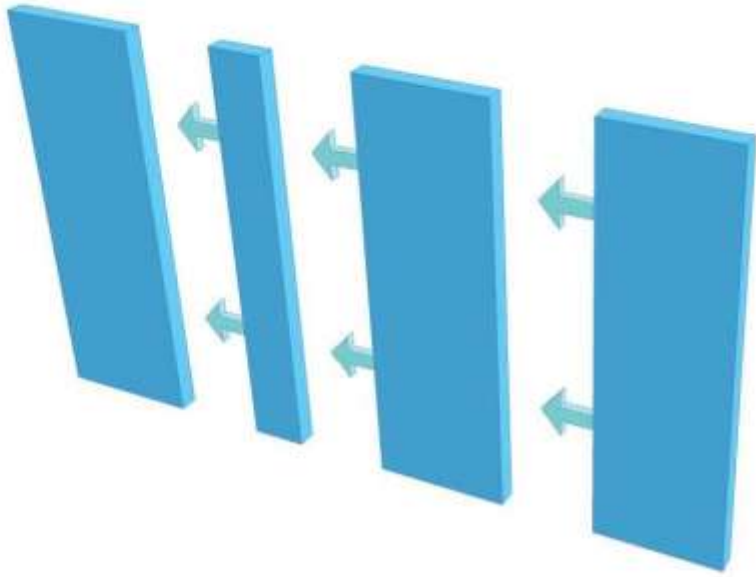
HORIZONTAL LOAD PATH

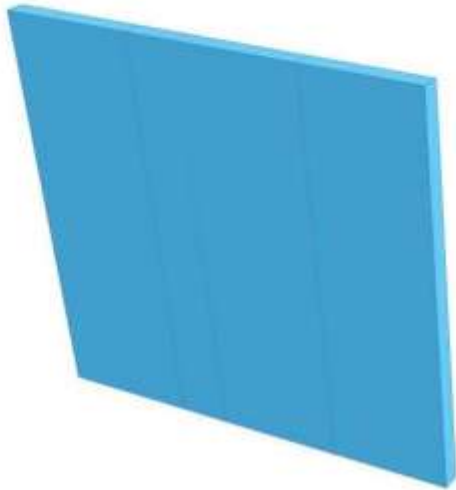


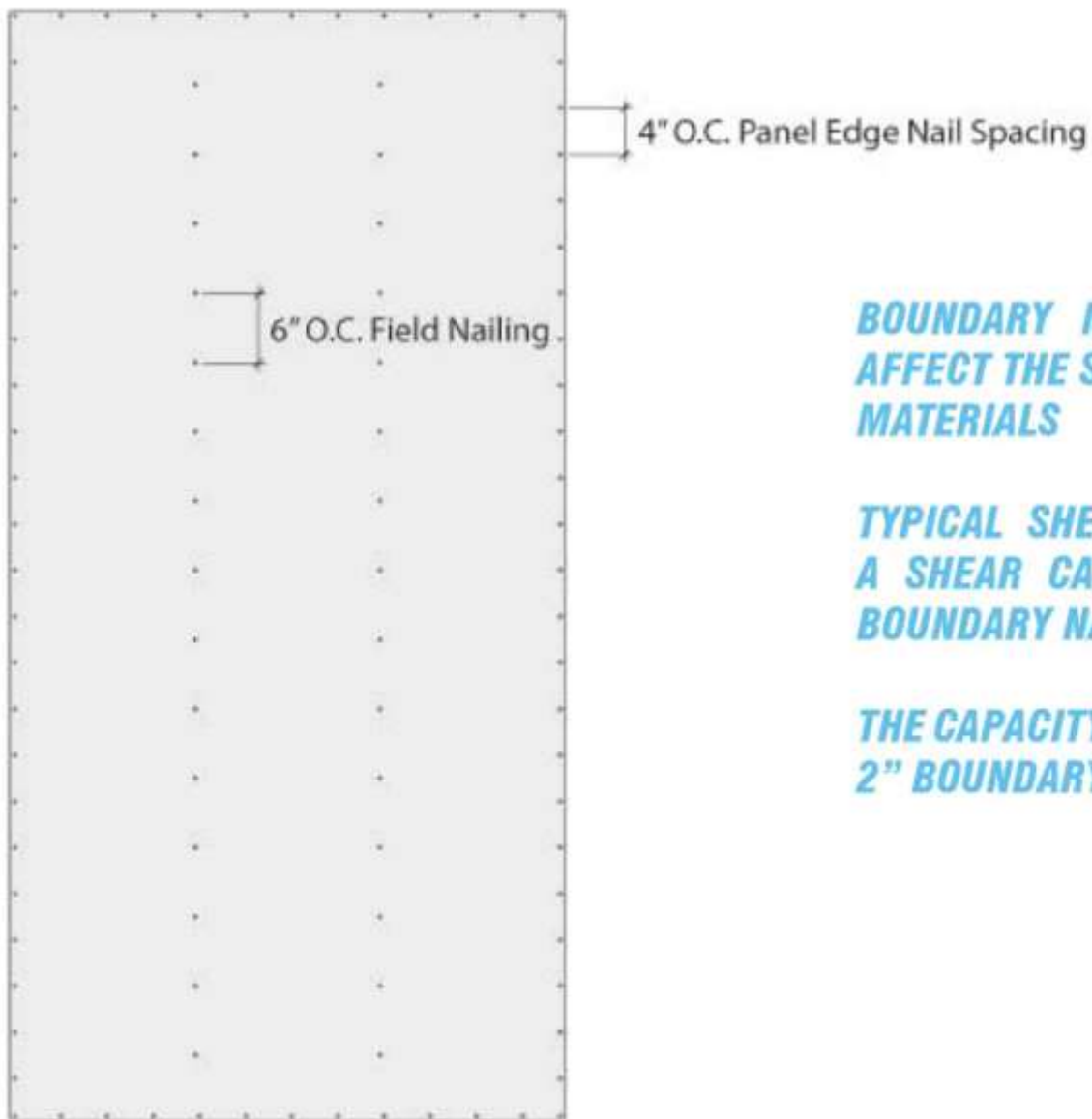
HORIZONTAL LOAD PATH

**MIN. SEGMENT LENGTH AT CORNER
MUST BE 34" FOR A 9' WALL**









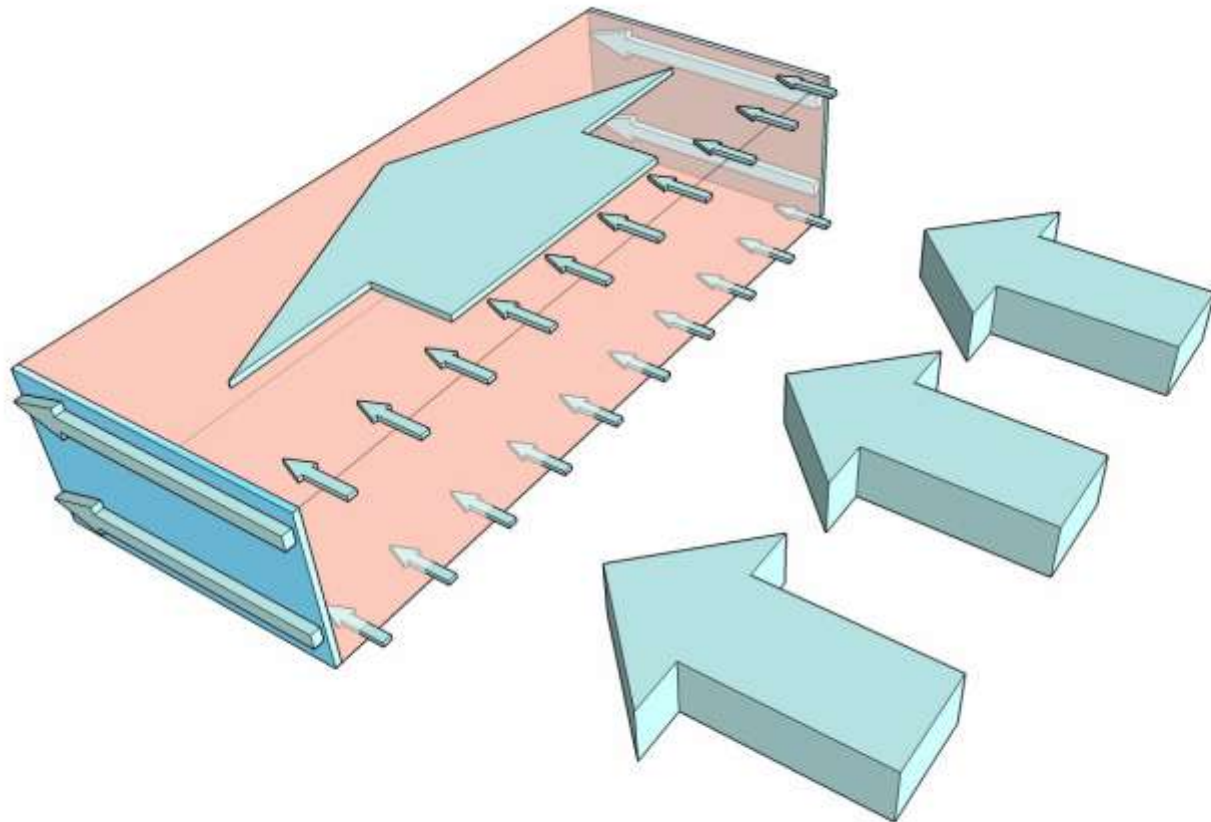
BOUNDARY NAILING CONDITIONS GREATLY AFFECT THE SHEAR CAPACITY OF SHEARWALL MATERIALS

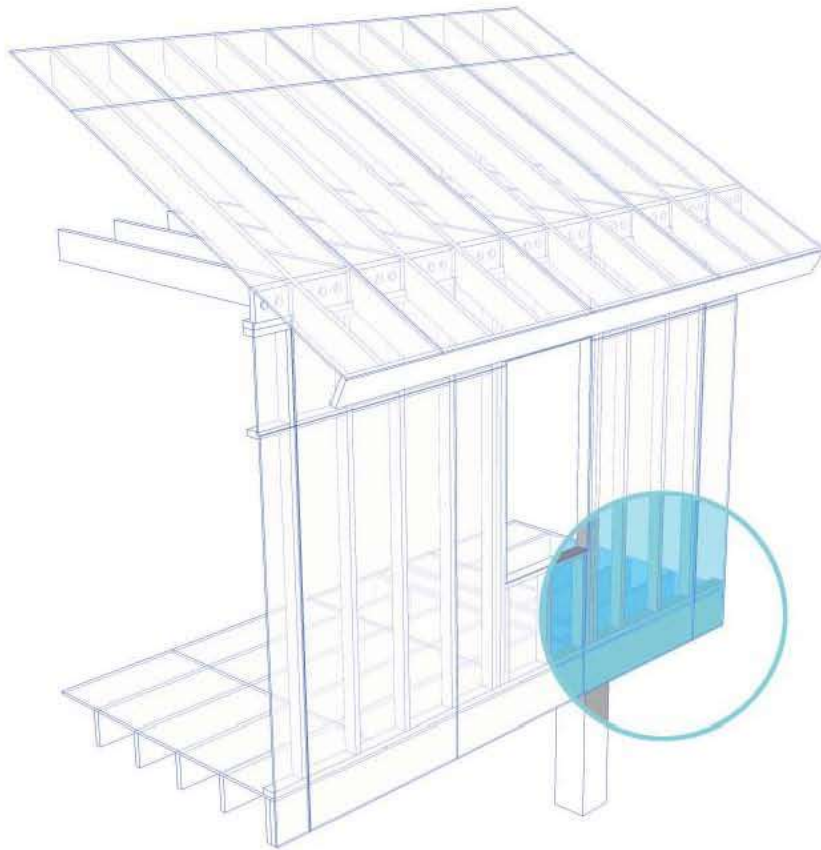
TYPICAL SHEATHING GRADE PLYWOOD HAS A SHEAR CAPACITY OF 320 plf USING 6" BOUNDARY NAILING

THE CAPACITY IS INCREASED TO 840 plf USING 2" BOUNDARY NAILING

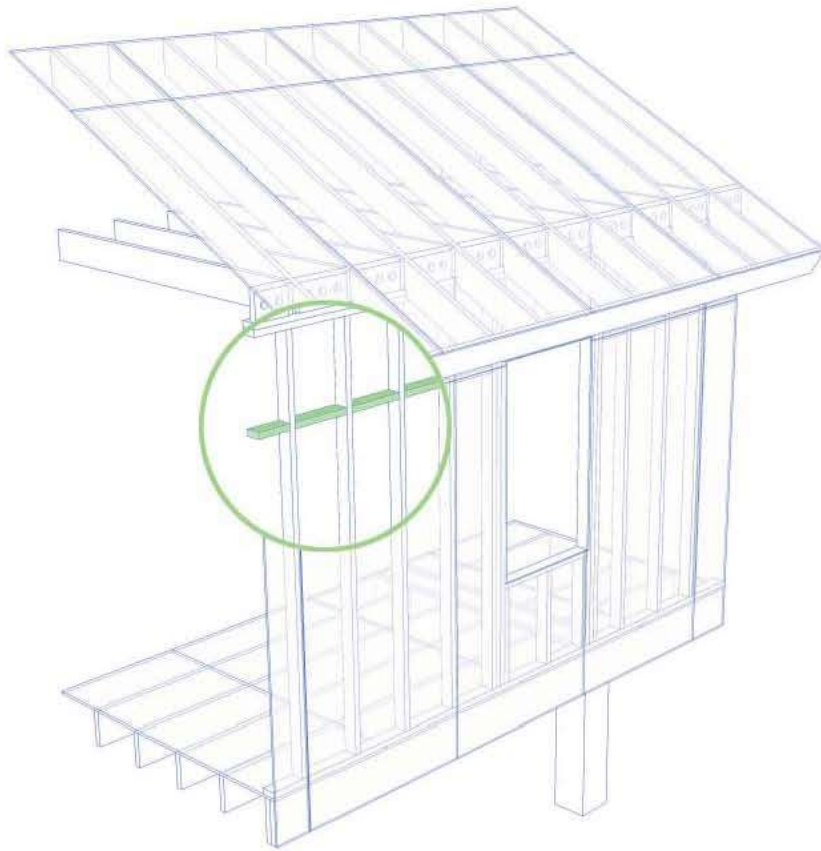
SSTD 10-99

Panel Edge Nail Spacing varies from 2" O.C. to 6" O.C.
Intermediate nailing varies from 6" O.C. to 12" O.C.

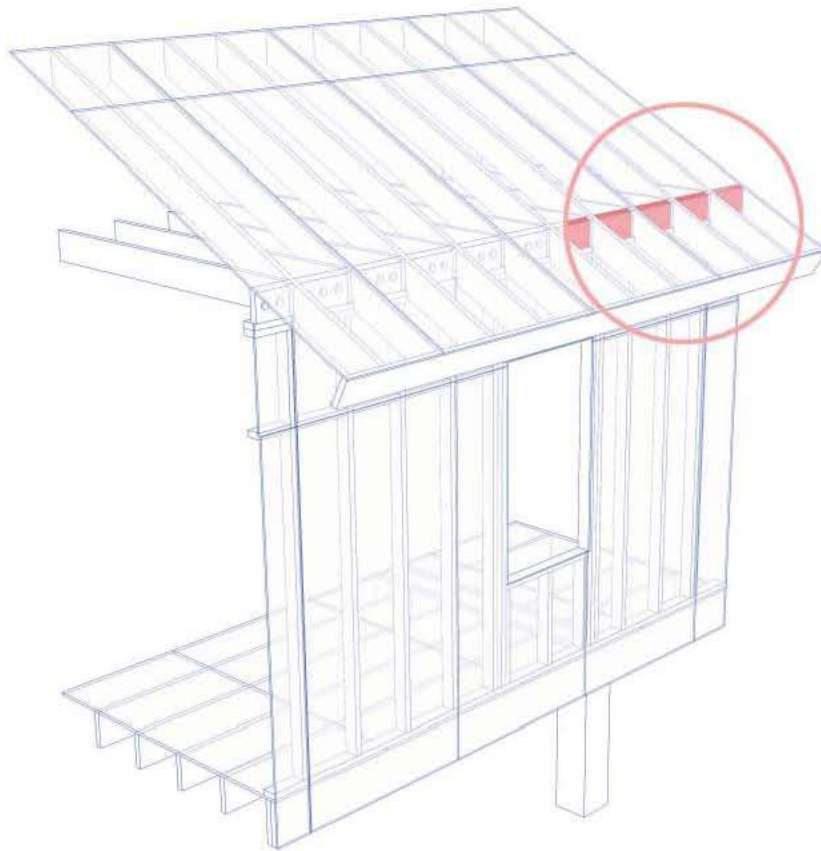




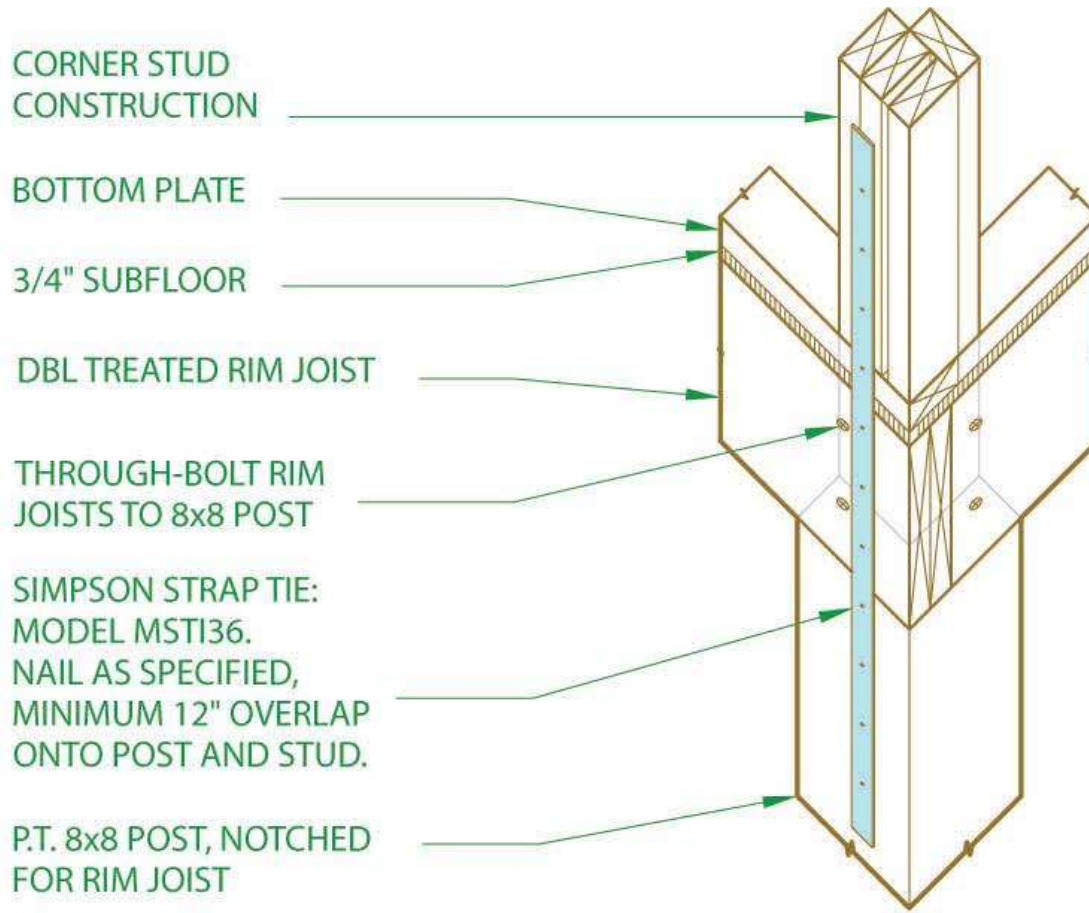
***SHEATHING TO LAP RIM BOARD
- BOUNDARY NAILING INTO SOLE
PLATE***



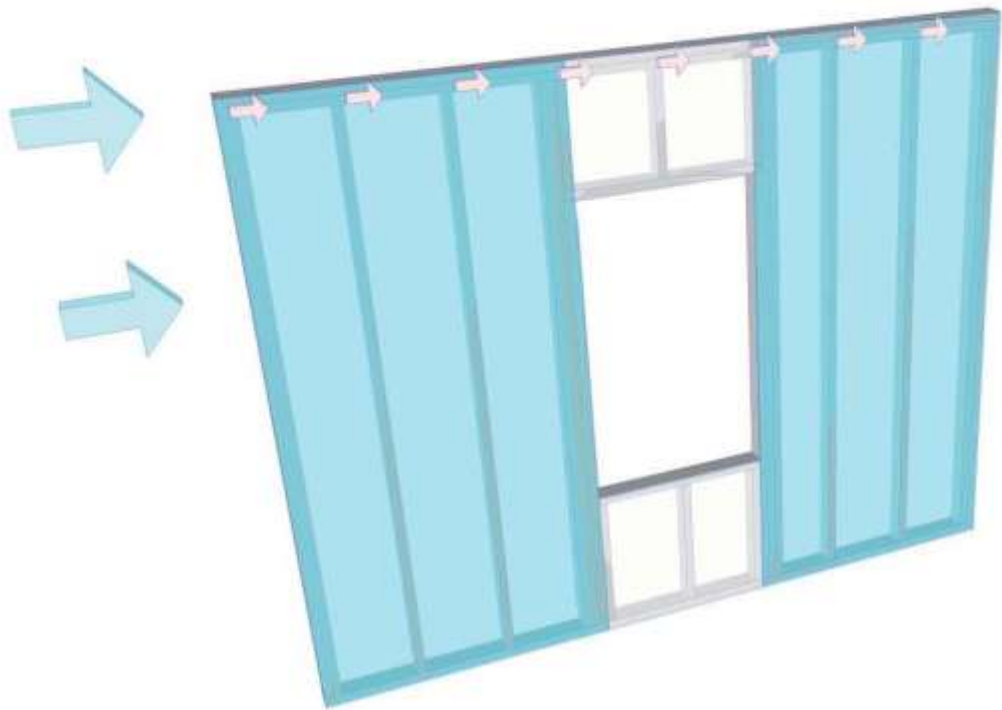
ADD SOLID 2x BLOCKING AT SHEATHING JOINTS



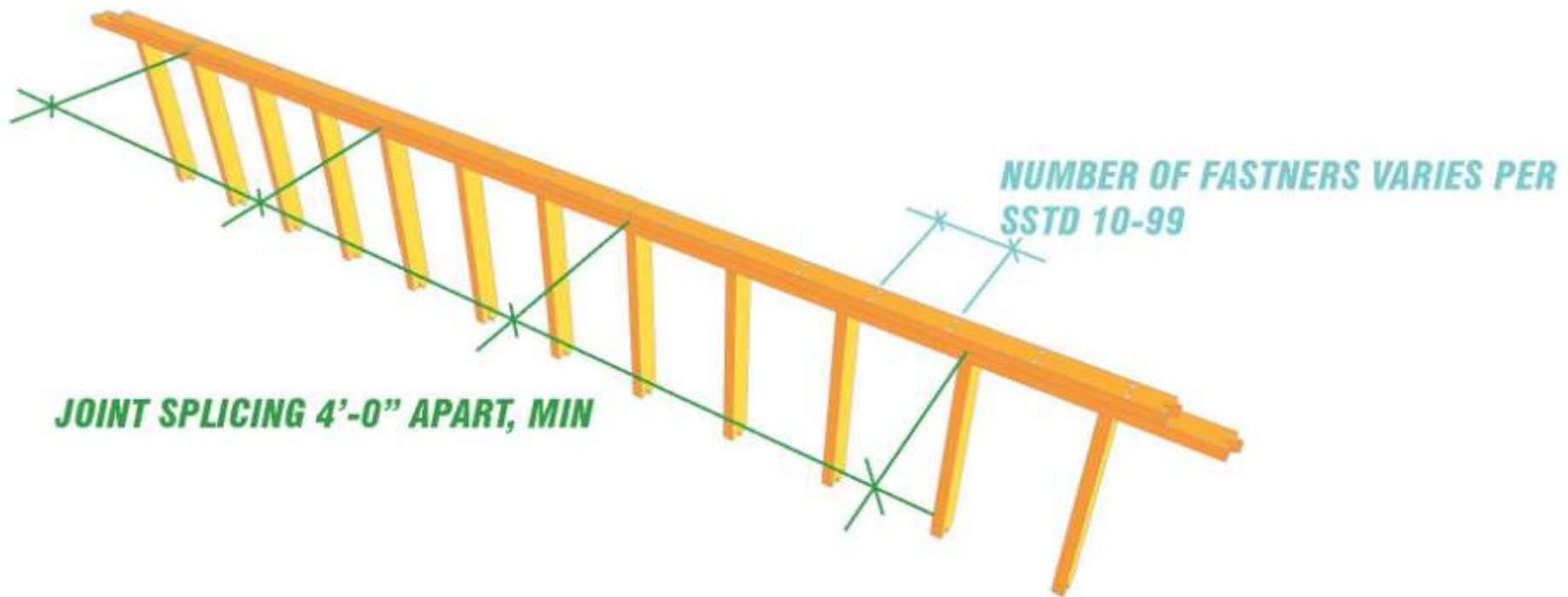
***SHEATHING MUST BE USE BOUND-
ARY NAILING PATTERN THRU VENT-
ED BLOCKING***



NOTE: EXTERIOR SHEATHING TO RUN
FROM BOTTOM OF RIM JOIST TO TOP
OF WALL PLATE; NAIL AS PER SPECS.



TOP PLATE - DRAG STRUT





09/19/2007

RESOURCES

SSTD 10-99: STANDARD FOR HURRICANE RESISTANT RESIDENTIAL CONSTRUCTION

SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL

ACSE 7-98: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

AMERICAN SOCIETY OF CIVIL ENGINEERS

FEMA COASTAL CONSTRUCTION MANUAL

INTERNATIONAL BUILDING CODE - IBC 2003/2006