THE BUILDERS' CHOICE

3100 9TH AVENUE SE
WATERTOWN, SD 57201
USA
www.enercept.com

ENERCEPT WALL SYSTEM

STRUCTURAL INSULATED PANELS

(SIPS)

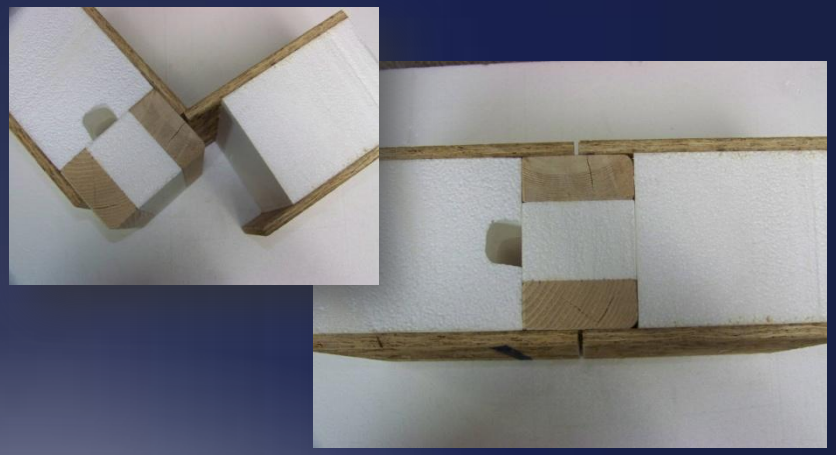
WHAT ARE ENERCEPT STRUCTURAL INSULATED PANELS?

- AN INSULATING CORE OF EXPANDED POLYSTYRENE (EPS) SANDWICHED BETWEEN TWO SHEETS OF ORIENTED STRAND BOARD (OSB)
- ASSEMBLED ON THE JOB SITE IN A TONGUE AND GROOVE FASHION TO FORM THE EXTERIOR SHELL OF A BUILDING OR STRUCTURE
- THE RECESSED BOTTOM OF EACH PANEL FITS OVER THE SILL PLATE AND IS NAILED INTO PLACE
- THE TOP OF EACH PANEL IS ALSO RECESSED TO ACCOMMODATE TWO TOP PLATES OR 2X LUMBER
- THE WINDOW ROUGH OPENINGS CONSIST OF 4 MEMBERS: THE BOTTOM PANEL, TWO SIDE PANELS AND AN INSULATED HEADER.
- DOOR ROUGH OPENINGS CONSIST OF 3 MEMBERS: THE TWO SIDE PANELS AND AN INSULATED HEADER

SUPER ENERGY EFFICIENT

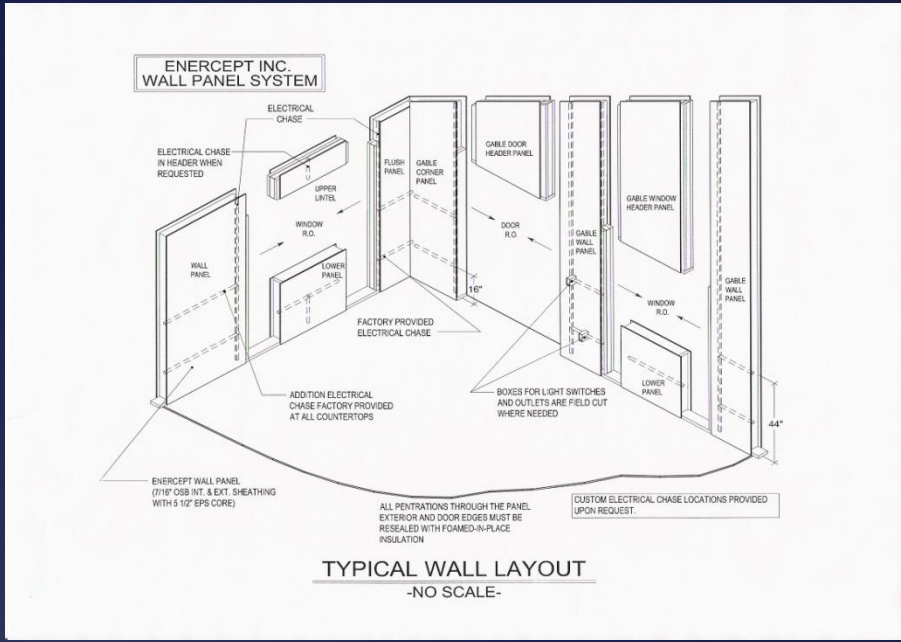
- SAVE 40% TO 60% ON HEATING AND COOLING COSTS
- SOLID ENVELOPE OF INSULATION
- THERMALLY BROKEN CONNECTION POSTS ELIMINATE COLD SPOTS AND DRAFTS
- RESISTS HEAT TRANSFER BY BOTH CONDUCTION AND CONVECTION
- ENERCEPT R-24 WALL PANELS OFFER SIMILAR PROTECTION TO R-40 WALL WITH FIBERGLASS INSULATION

INSULATION THICKNESS	5 1/2	7 1/4	9 1/4	11 1/4
"R" VALUE	23.1	30.5	38	46
WEIGHT PSF	3.75	4.2	4.6	4.9



QUICK, CONVENIENT INSTALLATION

- CUSTOM MANUFACTURED TO YOUR SPECIFICATIONS WITH ROUGH OPENINGS PRE-BUILT AND FRAMED AT THE FACTORY
- FACTORY INSTALLED ELECTRICAL CHASES
- BOTTOM SILL PLATES, DOUBLE TOP PLATES AND PANEL SEALANT INCLUDED WITH ENERCEPT BUILDING PACKAGE
- LAMINATED DIAGRAM WITH NUMBERED PANELS GUIDE THE INSTALLATION PROCESS
- FACTORY INSTALLED CONNECTION POSTS WITH SMOOTH, ROUNDED EDGE HELP PANELS FIT TOGETHER EASILY



STANDARD WALL PANEL BEING INSTALLED

GABLE END WALL BEING INSTALLED

WALL PANELS IN PLACE

FROM A SIMPLE PLAN TO A COMPLEX DESIGN ENERCEPT SIPS CAN WORK FOR YOU

LEFT: 900 SQ. FT. HOMES BUILT BY HABITAT FOR HUMANITY
RIGHT: 8,138 SQ. FT. CUSTOM HOME IN COLORADO

ENVIRONMENTALLY FRIENDLY

- MADE WITH ORIENTED STRAND BOARD (OSB) PRODUCED FROM FAST GROWING, UNDERUTILIZED AND LESS EXPENSIVE TREES GROWN ON TREE FARMS
- ENERCEPT UTILIZES UP TO 25% RECYCLED EPS INSULATION. SCRAP FOAM AND WOOD FROM OUR PRODUCTION CYCLE IS GROUND AND RECYCLED
- MINIMAL ON-SITE WASTE PUTS LESS STRESS ON AREA LAND FILLS
- ENERCEPT SIPS CONTAIN NO CFC'S OR FORMALDEHYDE
- AIR TIGHT STRUCTURE KEEPS POLUTANTS OUT OF THE HOME FOR A HEALTHIER INDOOR ENVIRONMENT
- SIPS MADE WITH FSC CERTIFIED WOOD PRODUCTS ARE AVAILABLE (CERTIFICATE #SCS-COC-001525)

ENERCEPT PANELS USED IN PASSIVE HOUSE CONSTRUCTION

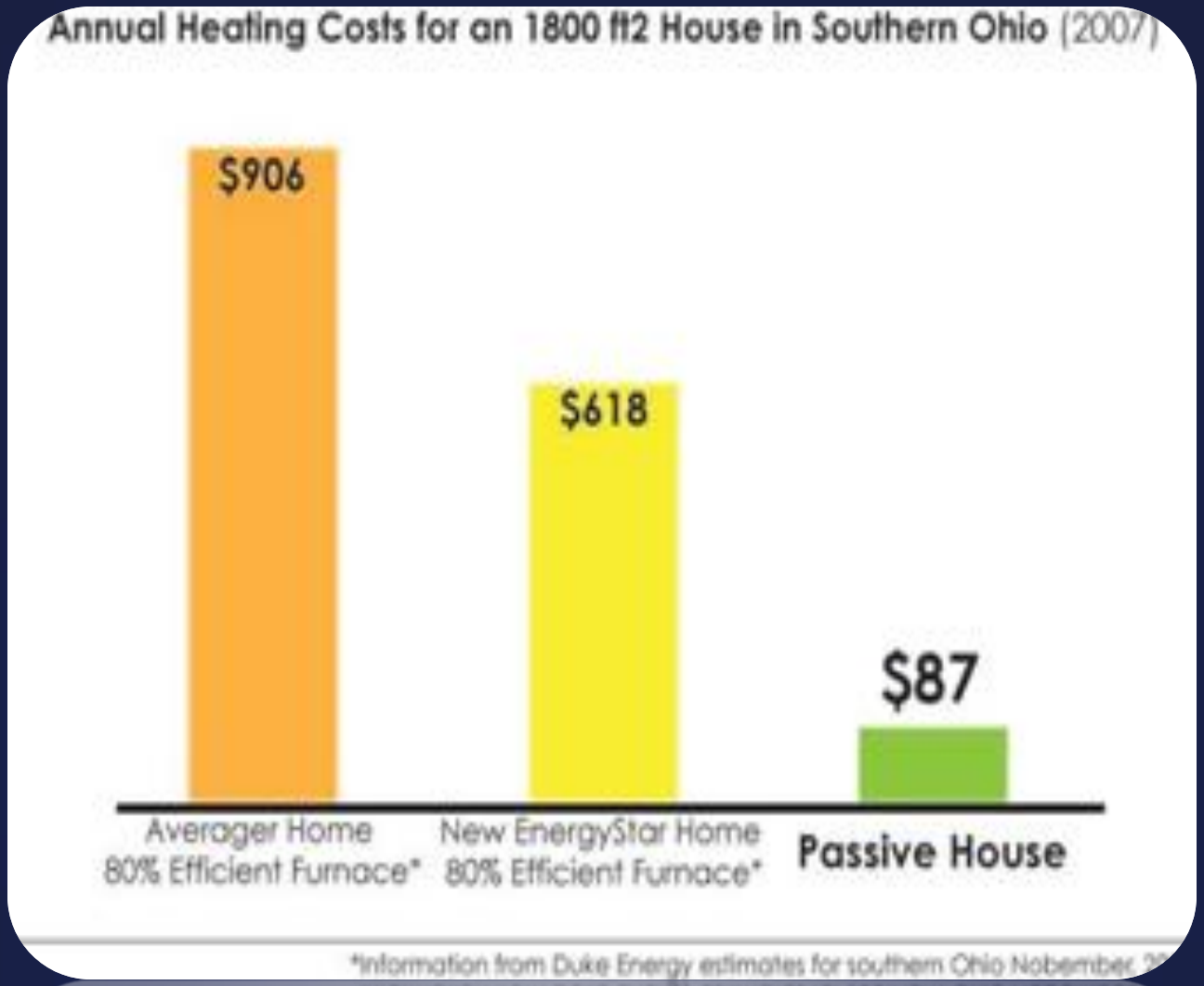
What is a Passive House?
Passive House goes beyond green architecture to green engineering.
Because these houses are uniquely engineered, their comprehensive
building systems rely on solar gain and ambient heat sources for nearly all of their heating needs.
Through careful planning and engineering, a home's central heating source,
and thus it's largest green house gas emissions, can be comfortably eliminated.

A few of the main characteristics of Passive Houses are:

* An air tight envelope (.6 air changes/hour at 50 pascals)
* Super-insulated (R-50 walls and floor, R-100 roof)
* Fresh air heat exchanger with ducting to all living areas
* Limited thermal bridges in walls, floors, roof, and utility penetrations
* The latest technology in energy efficient windows and doors

The result is a home that is approximately 90% more efficient than homes built with standard construction methods, and roughly 60% more efficient than homes built to the U.S. Government's Energy Star standard.
It is better for you and better for the planet.

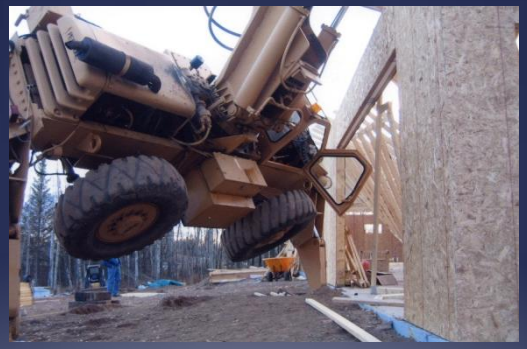
Yellow Springs Passive House is Ohio's first Passive House.

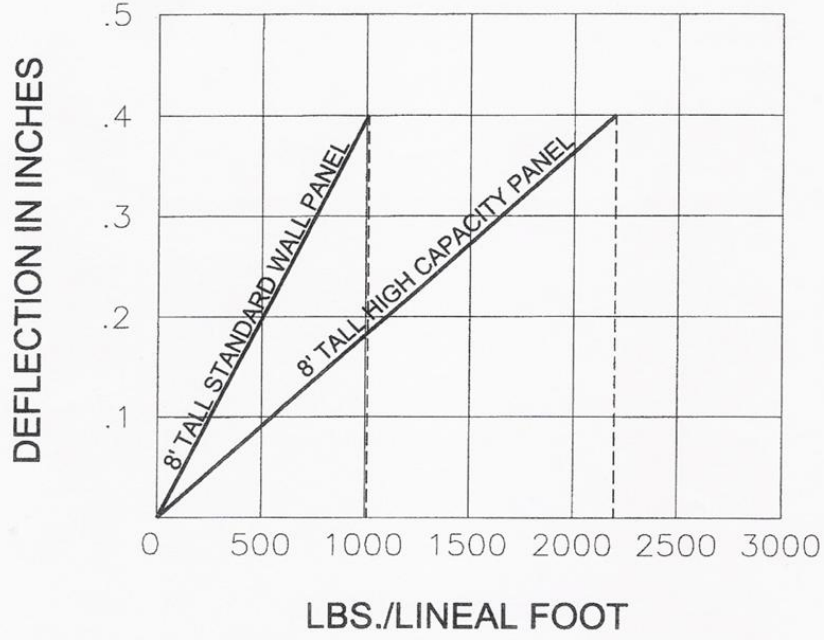

Annual Heating Costs for an 1800 ft2 House in Southern Ohio (2007)
$906
$618
$87
Averager Home
80% Efficient Furnace*
New EnergyStar Home
80% Efficient Furnace*
Passive House
*Information from Duke Energy estimates for southern Ohio November

2 ½ TIMES STRONGER THAN STICK FRAMING

- ICC CERTIFIED #ESR-1780
- RADCO TESTING DIVISION
  - TRAVERSE LOAD, REPORT #RAD-2090
  - AXIAL LOAD, REPORT #RAD-3912
  - SHEAR LOAD, REPORT #RAD-2555
- APA SEISMIC MEASUREMENT TESTING #APA T2004P-82

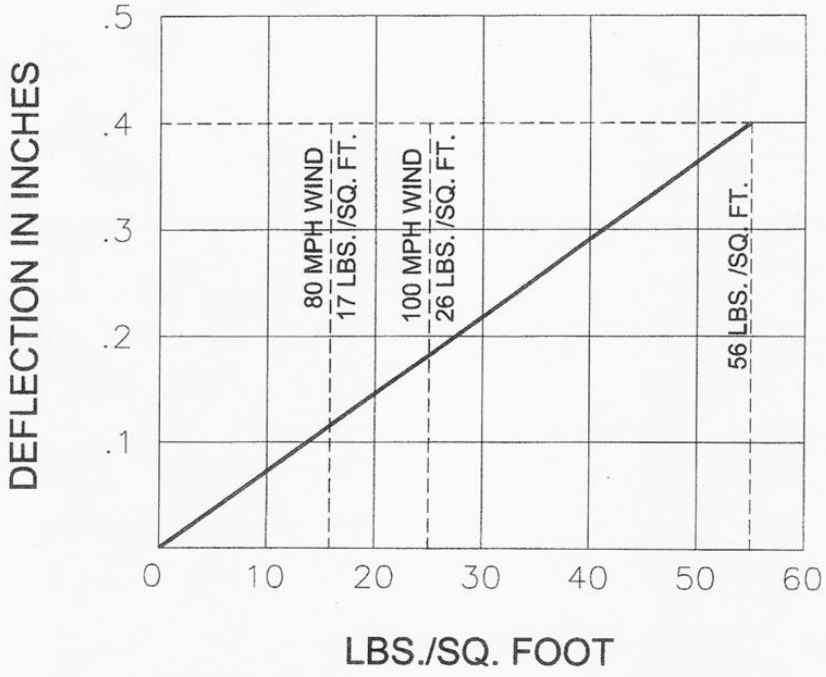
Pictures from crane accident – crane fell on Enercept SIP wall. Trusses collapsed but Enercept wall remained in tack.





ALLOWABLE PANEL LOADS

ENERCEPT, INC.



ALLOWABLE PANEL DEFLECTION

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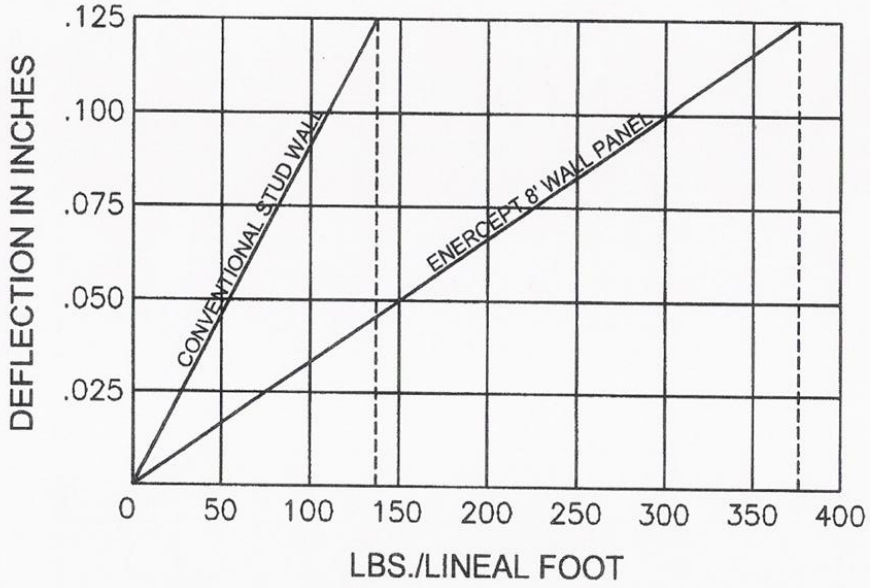

ENERCEPT PANEL VS. CONVENTIONAL FRAMING

ENERCEPT, INC.

4.0 TEST RESULTS

The appendix contains the raw load vs. deflection data collected during the test, and a chart that shows the load vs. deflection curves. All tests were conducted at RADCO's Long Beach, California facility on June 27-29, 2000. The density of the EPS core was determined in accordance with ASTM C-303. Samples were taken from several panels after the racking shear test. The average density was found to be 1.0 pcf.

ULTIMATE LOAD AT FAILURE

TEST SPECIMEN	LBS.	LBS./LINEAL FT.	LOAD @ ⅛" DEFLECTION (LBS.)
1	12,300	1537.5	2,469
2	12,480	1560.0	2,091
3	12,670	1583.8	2,435
AVERAGE	12,483	1560.4	2,332

Mode of Failure

In all three tests, failure occurred when the bottom lumber plate split and the test specimen stopped resisting further loading at the ultimate load noted.

5.0 CONCLUSION

When tested in accordance with ASTM E-72 and the Acceptance Criteria for Sandwich Panels, the average ultimate racking load of the Enercept sandwich panels from three tests was 12,483 lbs. Since hold down rods were used, the allowable shear load is determined from the racking load at which a net horizontal deflection of ⅛" occurs. This load was 2,332 lbs. or 292 lbs./lineal foot.

****END OF REPORT****

INTERNATIONAL EXPERIENCE

- ENERCEPT PROVIDED ALL SIP PANELS FOR THE SOUTH POLE SCIENCE STATION
- ENERCEPT PROJECTS EXPORTED TO CANADA, MEXICO, SPAIN, FRANCE, SWITZERLAND AND JAPAN

THANK YOU!

ENERCEPT, INC.

RON GLEYSTEEN, REGIONAL SALES MANAGER

3100 9TH AVENUE SE

WATERTOWN, SD 57201 USA

PHONE: 1-800-658-3303

EMAIL: rgleysteen@enercept.com

Direct line to Ron Gleysteen: 1-605-695-4840