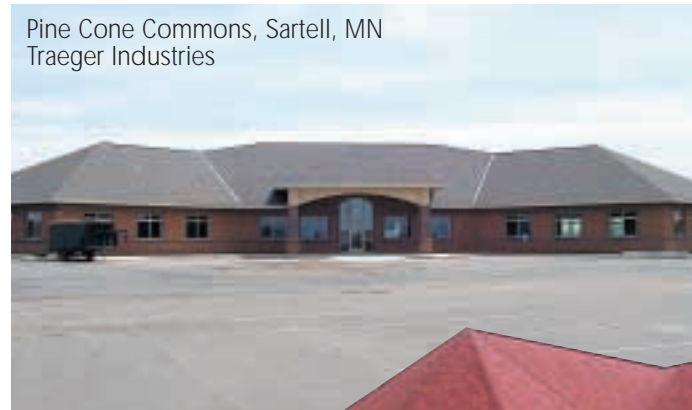


EPS Panels Make Construction Easier and More Energy Efficient

- EPS panels provide the greatest possible energy efficiency at truly affordable costs
- Pre-built panels assure faster construction
- Individual panels can be designed to your decor and finishing desires
- Your entire project, including roof panels, can be built right to your specifications

EPS stands for Energy Panel Structures—not to be confused with expanded polystyrene. EPS is the center core panel material.



Central Bank, Spirit Lake, IA, Hasselhoff Construction, 6,000 sq. ft., 2003 Commercial Building of the Year (SIPA)

EPS Pre-Engineered Buildings & Tilt-Up Panel System

Graettinger, IA 51342
Phone 712.859.3219 or
Toll Free 1.800.967.2130
FAX 712.859.3275
www.epsbuildings.com



Authorized Dealer:

SOLID CORE

PRE-ENGINEERED BUILDINGS

Using Structural Insulated Panels

- Proven to be the highest, energy efficient and cost effective design
- Proven stronger and straighter walls
- Proven faster construction
- Proven more air and water tight
- Every building comes completely engineered



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CMYK

Solid Core Buildings

(Structural Insulated Panels)

Energy Panel Structures was established in 1981 as a division of the MacArthur Company, St. Paul, MN. Since then, EPS has produced thousands of pre-engineered buildings for commercial, agricultural and industrial markets.

One mainstay of our success has been our pre-engineered "Solid Core Buildings" using structural insulated panels.

Structural Insulated Panels join high performance rigid foam insulation to Oriented Strand Board (OSB) or plywood. The thickness of foam is adjusted to increase R-Value.

As labor sources become more scarce and costs increase in the future, building with Structural Insulated Panels will become the preferred building system.



The first Solid Core type construction was made in 1935 and the buildings are still in use today, 70 years later.

Exterior and interior facings are shown with standard OSB. CCX plywood is used when laminating aluminum, steel or FRP. Drywall is field applied as needed.

As labor becomes more scarce and energy costs continue to rise, Solid Core buildings will become the best building system



Crave Brothers Cheese Plant, Waterloo, WI
2003 Most Unique Building (SIPA)



This unique structure has a second-story attic truss office and is home to Med-Equip Pharmacy and Hey, Good Cookies of Spirit Lake, IA.



PAGE 2

Simply better buildings



2004 SIPA Building of the Year for Multi-Family Dwelling



The Ape House at the University of Iowa
"Overall I am quite pleased, the first floor went up in two days and the second floor one day. The final product is very stout and will be very energy efficient"
-Gary Klinefelte, Owner



A very happy customer!



"Solid Core Efficiency and EPS Versatility sold the Ponderosa Pines Restaurant project. The heating and cooling savings impressed our customers. R-26 panels combined with in-floor heat should realize a real savings for this facility. Pre-lined tilt-up panels for the kitchen and bathrooms added to our savings. We also used these same panels to build our two coolers. EPS versatility continued with the addition of the EPS Post Frame pavilion. The EPS pre-engineered buildings kept our cost reasonable, saved labor, kept us on schedule and gave us a happy customer."
-Skip Tenpas, Central Sands



Building in the landscape, the New Oaks Vineyard chose EPS to achieve superior climate control, energy performance and factory-applied interior finishes.

New Oak Vineyards, Wellington, MO
Champion Building Systems, 4,480 sq. ft.



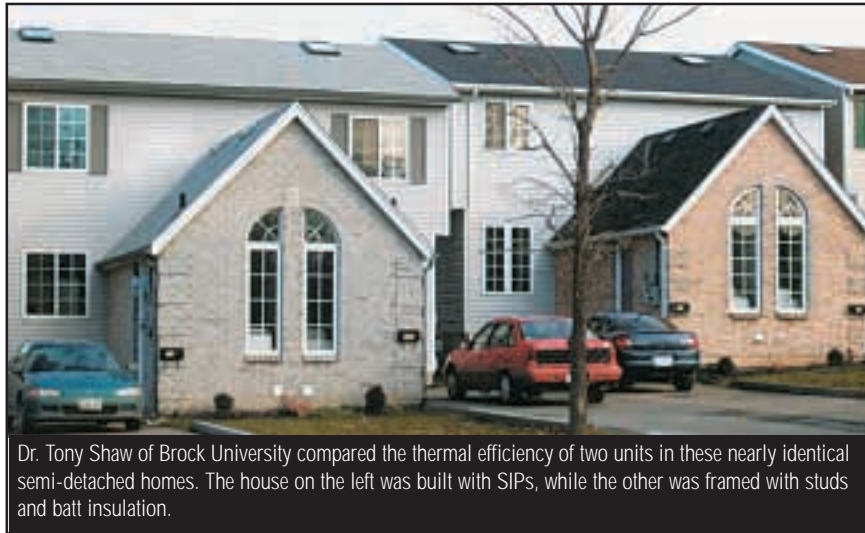
Rochester Petroleum, Rochester, MN
75' x 200' x 20' tall with 40' x 60' office, R-33 walls and R-50 ceiling



CMYK

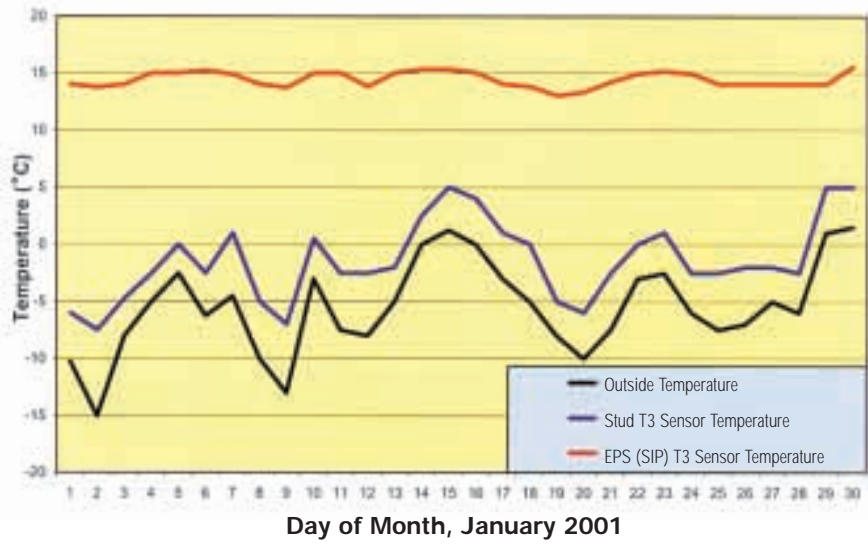
Performance

Side by side tests prove **Solid Core** buildings superior in thermal performance



Dr. Tony Shaw of Brock University compared the thermal efficiency of two units in these nearly identical semi-detached homes. The house on the left was built with SIPs, while the other was framed with studs and batt insulation.

T3 Sensor (Mid Wall) Readings, Stud Wall vs. Solid Core Walls



Several buildings with structural panels were left unblemished by a recent earthquake in Japan. No other buildings were standing within blocks.

Independent tests prove that Solid Core Panels are 2 times stronger than stick walls.

The Brock University study: comparing identical buildings

When it comes to quantifying actual heat loss in different wall systems, the Brock University study provided an excellent opportunity for accurate comparison between SIP and stick construction in the real world.

The two structures involved in the study were rental housing units, located immediately adjacent to one another. Both buildings were identical and had similar east-west orientations, ensuring the same exposure to outdoor temperature and wind conditions. Except for brief periods both houses were occupied throughout the course of the study, which took place over a 12-month period from February 2000 to January 2001. Both units were heated with a natural gas/forced air system.

One unit was constructed with 4.5" SIPs, while the other used 2x6 studs with batt insulation. Both houses were constructed according to the Ontario Building Code (OBC). The units were built by the same crews, with no one being aware that scientific tests would be conducted afterwards.

The testing resulted in the stick house having 68% more leakage than the SIP house. All other factors being equal, the SIP house would use less energy for heating, would be more comfortable, have better heat retention and be less drafty.

Wall Type	Plate Thickness	Panel Thickness	Panel Make Up	WHOLE WALL R-VALUE at 75° outside at 40°
R-18	3-5/8	4-11/16	7/16 OSB, 3-5/8 EPS, 5/8 OSB	18.0 20.6
R-26	5-5/8	6-11/16	7/16 OSB, 5-5/8 EPS, 5/8 OSB	22.8 24.1
R-33	7-3/8	8-7/16	7/16 OSB, 7-3/8 EPS, 5/8 OSB	30.1 31.8

OSB and plywood increase in thickness depending on loads and spans. (See the EPS Solid Core detail brochure)
PAGE 10

Versatility



Pearl Creek School, classrooms and gymnasium



- USDA finishes on interior
- Impact-resistant walls
- Continuous plywood surface



Business Park #1, Heritage Homes, Gillette, WY
60' x 170' x 16'



Commercial Buildings

- Office Buildings
- Storage Buildings and Mini-Storage
- Churches and Fellowship Halls
- Freezers and Coolers (see our Tuffy brochure)
- Community Centers
- Private Schools
- Convenience Stores
- Assisted Living and Elderly Housing
- Recreation Facilities and Gymnasiums
- Meat Processing Facilities



ABC Landscaping, Ames, IA, Rotert Construction,
60' x 120' x 16'



The Beaver Group Buildings of Johnston, IA,
70' x 170' x 18'



Versatility

ENERGY EFFICIENCY

The biggest benefit of Solid Core Design versus stick built is energy efficiency:

- The EPS (Expanded polystyrene) insulation is solid and does not allow air movement.
- The EPS resists water whereas batt insulation absorbs water.
- The stick frame has framing thermal shorts but Structural Insulated Panels don't.
- The closed cell panel walls prevent dust and allergens from penetrating the building.

Solid Core Walls have 50% better R Values than steel or stick built walls.



Joe Stevermer, Easton, MN, 60'x180'x16' two-story office/rec room with .060 FRP fully lined shop for power washing.



Kaiser Horse Complex, Granger, IA - 2003 Agricultural Building of the Year (SIPA), 72' x 228'. Complete equestrian facility, including tack room, riding arena, office and training center.

Gotta Golf, Sheboygan, WI, Moraine Builders, 60' x 140' x 12' Complete golf training center with interior finish and sound acoustic quiet walls.



Performance

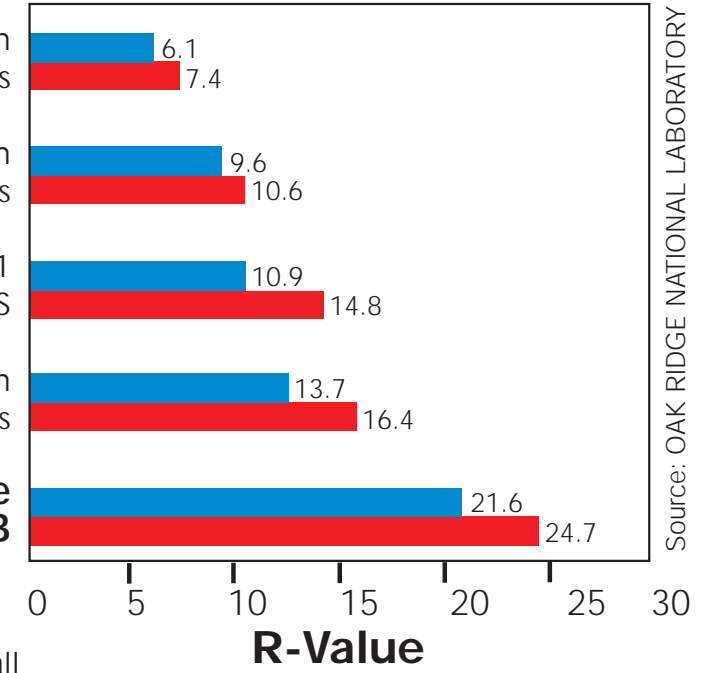
The Habitat For Humanity ran a blower door test on identical buildings. Solid Core was 1.8 air exchanges per hour compared to 3.9 for stick built.

COMPETITION

- Steel 3-1/2" metal studs 16" o.c. with R- 11 batts
- Stick 2" x 4" studs 16" o.c. with R-11 batts
- Steel 4" metal studs 24" o.c. with R-11 batts, 1" EPS
- Stick 2" x 6" studs 24" o.c. with R-19 batts

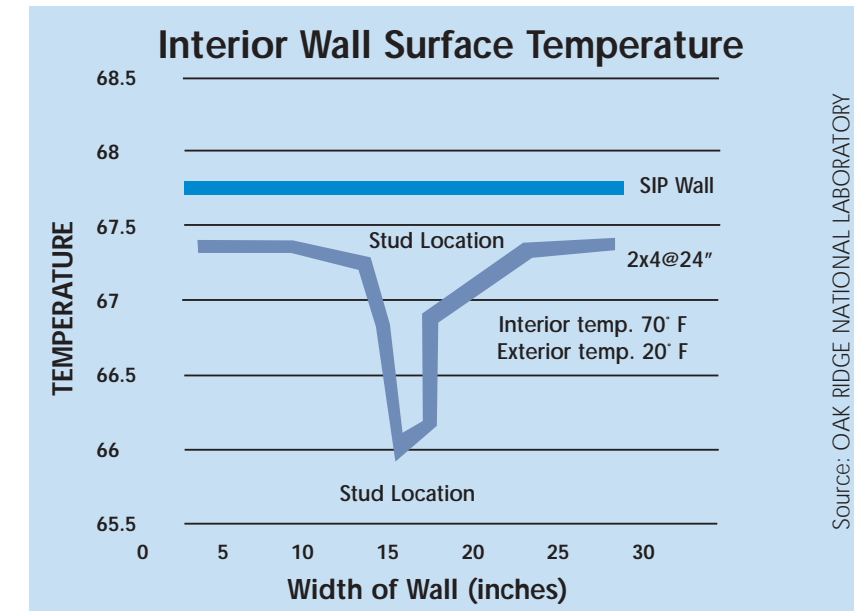


SIP with 6" EPS core and 1/2" OSB



■ Whole Wall = Clear wall area plus corners, foundation & windows
 ■ Clear Wall R-Value = Only the center section of a wall

WE PROMOTE REAL R-VALUES - NOT JUST INSULATION FIGURES!



National Tests Verify Air Filtration Performance

Results are in! Solid Core Panels are 15 times better at stopping air filtration!

Air Loss Perimeter 9 CFM

SIP

Air Loss Perimeter 126 CFM

This stick built room leaked 126 cubic feet a minute and SIPs at 9 cubic feet a minute.

STICK

Whole Room Air Filtration - ORNL Testing

Look at these advantages:

- No sagging insulation
- No purlins or girts to compress insulation and reduce R-value
- No air infiltration
- Translates into large savings on your utility bills



Savings

The average 2000 square foot building can be put up within 24 hours.

The average material thrown away on Solid Core projects is measured in a barrel or two. Most stick built projects use several dumpsters.

CHECK OUT THESE ADVANTAGES

LABOR SAVINGS

- ✔ Less field labor hours
- ✔ Do more projects
- ✔ Less parts means less risk and mistakes in the field
- ✔ Improve quality with a better finished product

ADMINISTRATION SAVINGS

- ✔ One stop shopping - save office time
- ✔ Easy computer pricing
- ✔ Less office follow up and expediting
- ✔ Friendly company to do business with

COMPETITIVE PRICE

- ✔ Win more jobs
- ✔ Lower cost to the customer

UNIQUE AND EASY SYSTEM

- ✔ Not everyone has it
- ✔ Better R-Value (50% higher than stick built)
- ✔ Stronger wall
- ✔ Build bigger buildings
- ✔ Variety of factory finishes (FRP, aluminum, steel)

ENGINEERED DRAWINGS

- ✔ Reduce outside engineering fees
- ✔ Reduce cutting & waste
- ✔ Increase labor efficiency using planned jobs
- ✔ More professional look for the customer

Let's look at some more features and benefits of Solid Core Buildings using Structural Insulated Panels:

FASTER CONSTRUCTION

Framing, insulation and sheathing are combined into one panel and allows builders to frame more projects per year.

FEWER CARPENTERS

Less cutting and fabricating in the field means smaller crews are needed. There is a huge savings in waste at the job site, as disposal of a Solid Core Building project is measured in number of bags, not Dumpsters. SIPs will also reduce framing and fabrication errors in the field. Less job site fabrication means improved profits and consistent field costs. It is much easier to maintain your expected field hours as there are less variables that can go wrong.

STRENGTH

Much larger clear spans can be designed over stick built projects using Solid Core Buildings. The panel loads are distributed over the entire panel due to the continuous bond between the sheathing and rigid insulation. Eighty foot clear spans with freedom of design are true benefits of the pre-engineered Solid Core Building.

GUARANTEED R-VALUES

Rigid EPS will not absorb moisture and has no gaps to allow air infiltration. Interior air moving within a wall containing fibrous insulation can cause condensation, moisture build-up and loss of R-Value.

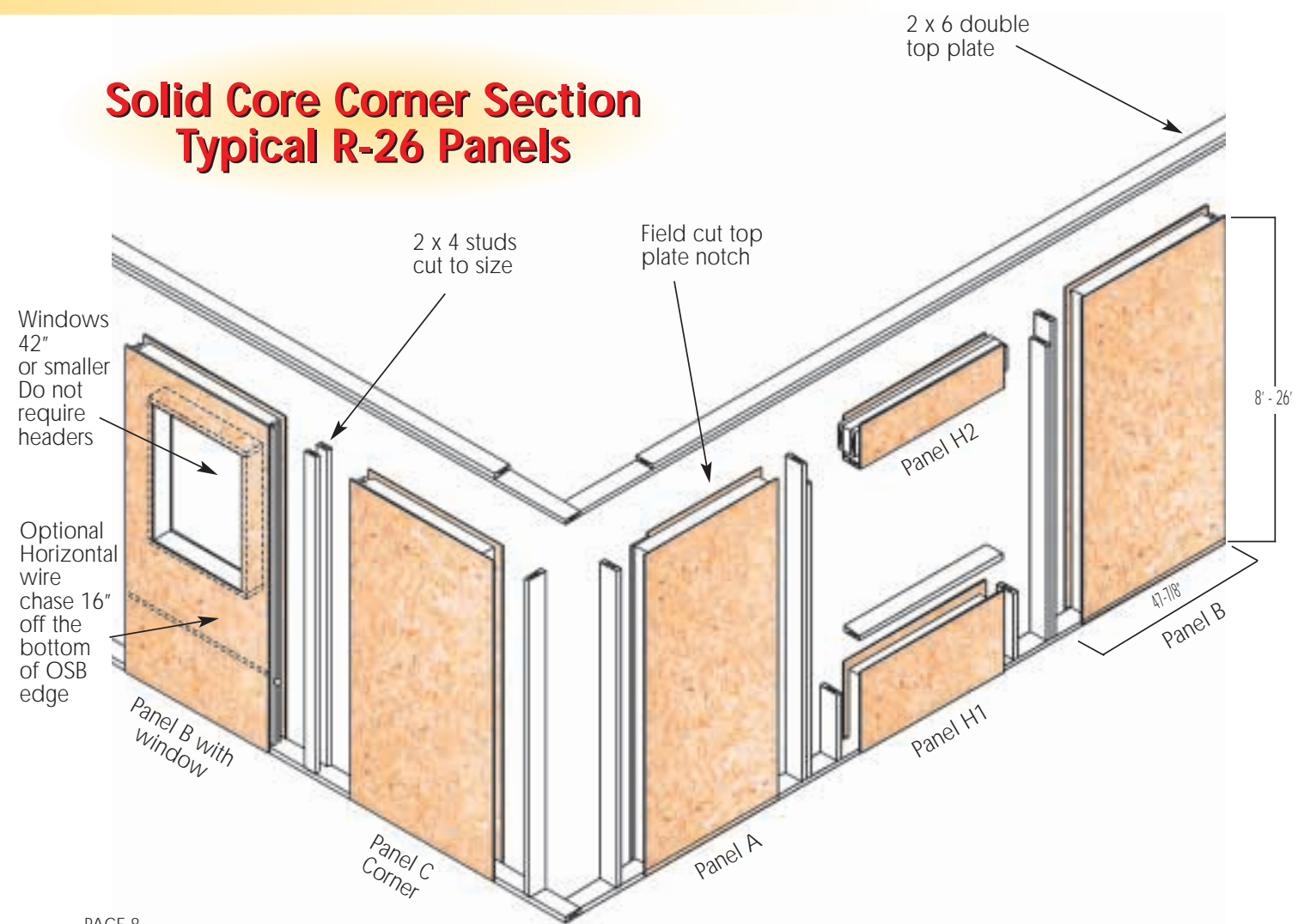
NICHE MARKET

Separate your business from the everyday stick builder. As you see, SIPs offer a long list of features and benefits that are far superior to conventional construction.



Part of the EPS production facility as seen from a Solid Core Building going up.

Solid Core Corner Section Typical R-26 Panels



PAGE 8



Rose Creek City Hall, JD Driver, Rose Creek, MN, 56' x 126'



Forest Township Building, Millersburg, MN, ProCon, 54' x 112' x 18
PAGE 5



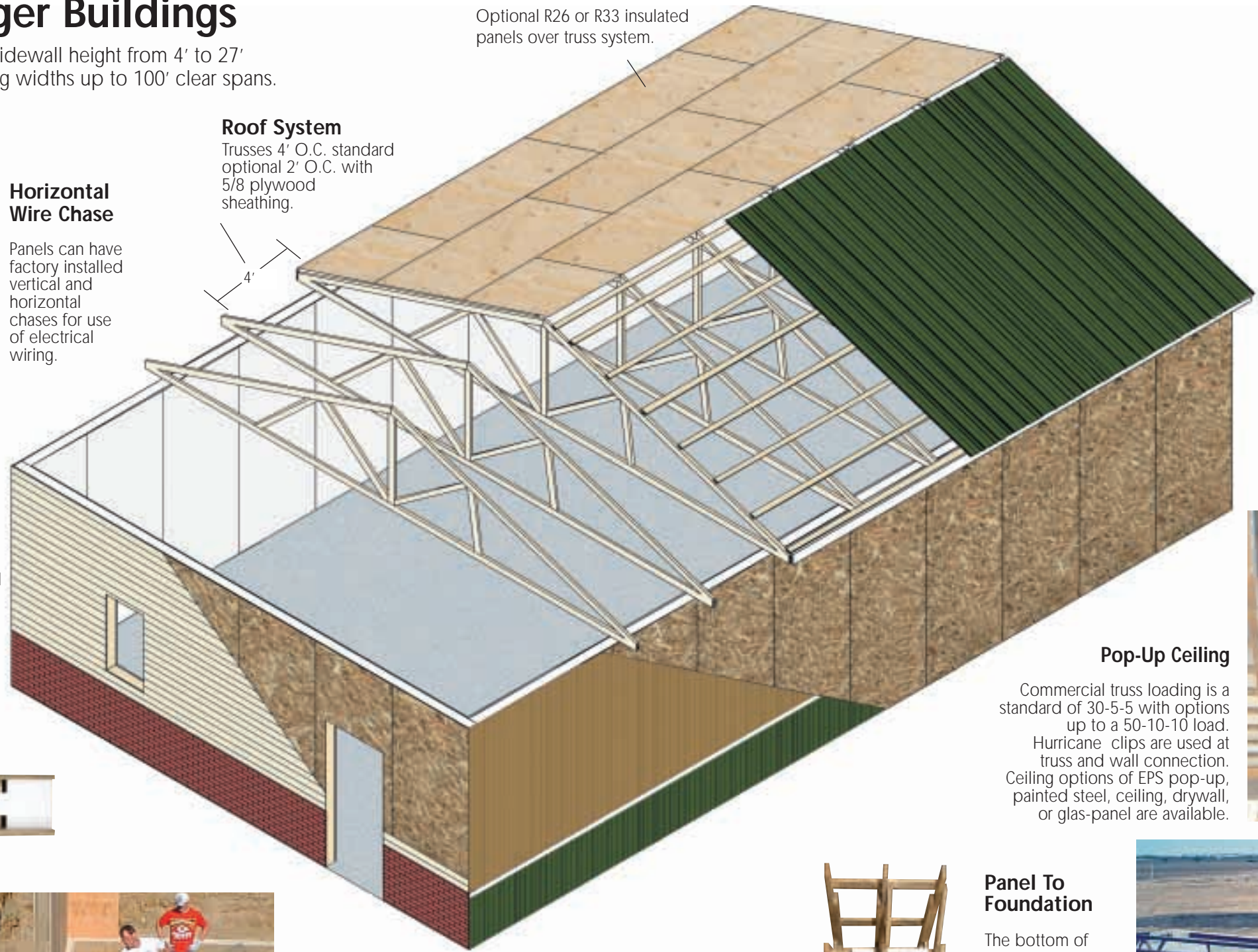
CMYK

Unique Features of Solid Core Construction

Solid Core Buildings do not require a stud finder to hang objects. The entire wall has a wood face.

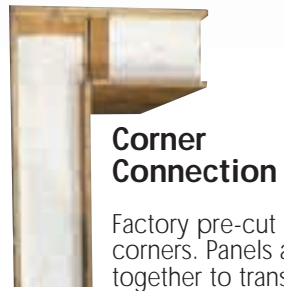
Bigger Buildings

- Panel sidewall height from 4' to 27'
- Building widths up to 100' clear spans.



EPS Permanent Wood Foundations using Structural Insulated Panels

- Warmer and dryer walls
- Faster to install
- Higher R-Value



Corner Connection

Factory pre-cut structural corners. Panels are tied together to transfer load.



Panel To Foundation

The bottom of panels are cut out to accept a treated sill plate, sill seal, sill trim and sealants. Anchor bolt spacing is engineered for uplift.



Pop-Up Ceiling

Commercial truss loading is a standard of 30-5-5 with options up to a 50-10-10 load. Hurricane clips are used at truss and wall connection. Ceiling options of EPS pop-up, painted steel, ceiling, drywall, or glas-panel are available.



Riverview Greens Country Club & Restaurant, Stewartville, MN

- EPS Solid Core panel roof using a Glue-Laminated truss system 12' oc bays that can clear-span up to 120' wide
- No exposed fasteners or connection plates resulted in a dramatic view



Raise your roof line with the look of natural wood and Solid Core panels

Panels are perfect for roof applications over bar joists or trusses. Vaulted finished ceilings remain energy efficient for years to come.

