Application *(Page 1 of 4)*

PARTICIPANT INFORMATION

Company Name: Energy Panel Structures, Inc.

Contact Name: Kevin Zadow

Address: 603 N. Van Gordon Ave.

City: Graettinger State: IA Zip: 51342

Phone: 712-859-3219

Email: kzadow@epsbuildings.com Website: www.epsbuildings.com

CATEGORY ENTRY *(check one category)*

- ☐ Single Family Homes (over 3,000 sq. ft.)
- ☐ Single Family Homes (under 3,000 sq ft.)
- ☐ Multifamily
- ☐ Agricultural
- ☐ Commercial/Industrial/Institutional Buildings under 10,000 sq. ft.
- ☐ Commercial/Industrial/Institutional Buildings over 10,000 sq. ft.
- ☐ Renovations
- [4] Affordable Housing

PROJECT INFORMATION

Project Name: Greystones Homes

Address: (7)-Various Lot Locations in the Martin Luther King Parkway Residential Area

City: Des Moines State: IA Zip: 50302

Date completed: Winter/Spring of 2014

Total cost of project (exclusive of land): $190,000

Dimensions of building (all floors of multi-story building):

20x40-Basement / 1st Floor / 2nd Floor

Asking price/purchase price (Affordable Housing only): $660 per month with a 20 year rent to own contract.

Total sq. ft. of conditioned space: 2,200 sq. ft.

BUILT BY *(if different than applicant)*

Company Name: Koester Construction Company, Inc.

Contact Name: Branton Smith Phone: 515-986-5500

Address: 6810 Maryland Dr.

City: Urbandale State: IA Zip: 50322

PANELS MANUFACTURED BY *(members only)*

Company Name: Energy Panel Structures, Inc.

Continued

Application *(Page 2 of 4)*

DESIGNED BY *(if different than applicant – SIPA will only recognize members)*

Company Name: Simonson & Associates L.L.C.

Contact Name: Clark Snyder Phone: 515-440-5626

Address: 1717 Ingersoll Avenue, Suite 117

City: Des Moines State: IA Zip: 50309

Please answer each question with as much detail as possible to help in the judging process.

Attach additional sheets if necessary.

Describe the end use of the building:

**********SEE ATTCHED**********

How did SIP construction help you get this job?

The project was originally proposed using tilt-up concrete panels, but those costs put the project over budget and in jeopardy of being canceled. Converting to SIP construction substantially brought the cost down and the project was able to move forward. Also, other savings were immediately gained in the process of converting to SIP construction; HVAC equipment was downsized, (1)-geothermal well was eliminated and (1)- fresh air intake in lieu of (3). Eliminated the separate process of insulating the exterior walls and associated air sealing issues. Better energy savings were able to be made to qualify for Mid American Energy Rebate Program because of the tighter building envelope using SIPs in lieu of the the original design with tilt-up concrete.

SIP wall thickness and core material: 6-5/8" Panel Thickness / 5-5/8" Expanded Polystyrene Core

SIP roof thickness and core material: N/A

Describe the benefits of using SIPs on this project. Did SIPs help save time, labor, construction costs, or energy?

SIPs allowed the framing sub to complete the homes on schedule.
More time in the schedule was saved in two other areas; insulating the exterior walls and the drywall. Drywall was able to be installed using adhesive and fewer screws, no waste on the exterior walls, because of not needing to end up on a stud, resulting in saving time and money on the installation in materials and labor.
A major portion of the construction process took place in colder months with below freezing temperatures; using SIPs reduced the amount and cost of energy for temporary heat during the construction process was considerably lower than originally projected.
One geothermal well was eliminated per home and the HVAC equipment was able to be downsized.

Describe any innovative design elements or structural engineering involved:

The top of the sidewall exterior wall panels were manufactured at a taper to follow the low pitch, mono-slope roof. Thinner parapet panels were manufactured that had a tapered bottom to follow the roof slope and the top of the panels were made to create a level top.
This provided a quick, labor saving method to frame the parapet, at the same time providing an insulated rim for the ceiling/roof framing.
A "white" Kevlar roof was used that reduces the amount of heat gain through the roof.

Continued

Application *(Page 3 of 4)*

Please list any certifications the project received, such as ENERGY STAR, LEED, National Green Building Standard, or local green building programs. Only list certifications that are completed:

Units qualified for Energy Star 2.5 / Mid American Energy Rebate Program

HERS Index (residential projects):

Blower door test results (ACH50) (residential projects):

Energy use intensity in kBtu/ft2 (commercial projects):

Describe the HVAC system used on the project:

A new version of a Geothermal HVAC system: A combination of a conventional furnace heat and cooling system that uses ground source heat pump to subsidize the energy usage from the conventional furnace system. In the event the ground source heat pump shuts down, for any reason, this system allows the furnace system to run without the need or use of emergency heat coils.

Describe any other energy-saving materials used in the building envelope other than SIPs. List U-values of windows used and the R-value of any insulation materials.

Jeld-Wen Vinyl Windows: U-value/ .30

Ceiling Insulation: R-40 Blow-in Cellulose

Please list any energy-efficient products or design features, such as lighting, hot water heating, appliances, passive solar:

1) White Kevlar Roofing
2) Energy Star Appliances: Refrigerator, Dish Washer, Range/Oven, Washer, Dryer, Microwave.
3) Water Sense Fixtures: Toilet, Shower Heads, Faucets, (40) Gallon Water Heater, Exterior Hose Bib
4) Mid American Energy approved outdoor light fixtures / All indoor light bulbs-CFL

Were any solar panels installed on the project? If so, indicate the size of the system:

NO

Continued

Please list any sustainable materials or design features not listed above, such as recycled materials, low-VOC finishes, landscaping, etc.:

Project landscaping used lawn seed and plants that are native to Iowa and will require less water and maintenance.;

Any additional comments on the project:

**********SEE ATTACHED**********

CHECKLIST

- [4] My company is a SIPA member. Panels for this project were manufactured by a SIPA member.
- [4] I have answered ALL the questions completely
- [4] I have enclosed the two required electronic images of the completed project meeting the requirements stated in the SIPA Building Excellence Awards guidelines
- [ ] I have indicated the HERS Index as determined by a RESNET certified home energy rater (residential projects)

PLEASE CONFIRM: I have read and understand the rules for this competition. This entry is structural insulated panel construction as defined in the SIPA Building Excellence Awards guidelines. I understand by making this submission that my pictures will be used by the Structural Insulated Panel Association (SIPA) to promote the use of structural insulated panels. I hereby give permission to SIPA to use the enclosed pictures for any use they see fit in that endeavor. I understand that where possible, SIPA will give credit for pictures used to my company as listed above.

Signature: Date: 4-16-14

Entries that do not contain all required materials or are received after April 11, 2014 will not be considered

Complete application and submit electronically to chris@schwindcommunications.com

Or send hard copy applications to SIPA office: 1201 Pacific Ave, Suite 600
Tacoma, WA 98402

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