



## Guideline Specifications for EnerSIP Structural Insulated Panels (EnerSIPs)

### Part 1 – General

#### 1.01 Description of Work

- A. Provide structural insulated panels as shown in drawings
- B. EnerSIPs are pressure laminated composites of approved oriented strand board (OSB) facers and UL Certified expanded polystyrene (EPS) insulation core.

#### 1.02 Submittals

- A. Provide evidence of compliance with code requirements. Contact EnerSIP Corporation for applicable code compliance report.
- B. The SIP manufacturer shall provide structural calculations reviewed by a registered engineer/architect for each panel type.
- C. Manufacturer shall certify that panels have been tested in accordance with ASTM E-72, ASTM E-119, UBC 17-5, and other applicable tests
- D. All submissions shall be attached to bid in order for bid to be considered.

#### 1.03 Product Storage and Handling

- A. All panels shall be stored in a protected area and supported to be protected from the ground.
- B. Prior to installation panels shall be covered and protected from exposure to sunlight and moisture.

### Part 2 – Products

#### 2.01 Description of Work

- A. EnerSIPs – A pressure laminated panel consisting of the following:
  - 1) Expanded Polystyrene (EPS) Core – minimum of .95 pcf complying with ASTM C-578 Type 1.
  - 2) Oriented Strand Board (OSB) – shall be identified on the panel with an APA or PFS performance rating mark, with an exposure 1 durability rating; minimum physical properties shall be tested and as described in APA PRP-108 or PFS PRP-133.
  - 3) Adhesives – class 2, type II designed for structural lamination as supplied by L.V. Lomas M-647

#### 2.02 Performance Characteristics

- A. Sizes – panels are available from 4' x 8' to 8' x 24'
- B. Thermal Resistance

R-Value Chart		
Panel Thickness	R-Value at 75 deg. F	R-Value at 40 deg. F
4 1/2"	15.2	16.3
6 1/2"	24.7	26.4
8 1/4"	33.0	35.3
10 1/4"	42.5	46.4
12 1/8"	48.0	51.4

\*The above values are approximate values for marketing purposes – contact EnerSIP directly for exact values\*

Typical EnerSIPs section – 7/16" OSB both sides, Type 1 certified EPS core R-Values are for panels alone and do not include air films, cladding materials or reflective barrier.

- C. Structural Testing – Each panel type shown on the drawings shall meet or exceed performance standards when tested for:

Transverse Load  
Axial Compressive Load  
Racking Shear

Tested values shall meet or exceed those stated on the manufacturer's load design charts and applicable technical data report.

- D. Fire Testing – The panel with approved finishes shall have successfully passed the following fire tests as conducted by fire agencies approved and listed by NES.

- 1) ASTM E-84 – 1 hour fire resistant wall assembly
- 2) UBC 17-5 – corner room test

- E. Wind uplift shall be calculated for recommended fastening of roof panels by certified engineering professional.

#### 2.03 Manufacturers/Contractors

- A. All components called for in this section to be obtained from the panel manufacturer or its approved supplier.
- B. Manufactures approved to supply panels and materials called for in this section are:
  - 1) Enersip Corporation  
Box 182, Dominion City  
Manitoba, Canada ROA OHO  
1-877-363-7747
  - 2) or Equal

### Part 3 – Installation

#### 3.01 General

- A. The contractor shall inspect conditions of substrate, grade, foundation and other conditions, which may affect the proper installation of panels. Any adverse conditions are to be reported in writing to the construction manager. Do not proceed with installation until adverse conditions are corrected.
- B. Installation shall be in strict accordance with manufacturer's published instructions, details and drawings, which are part of the contract documents for the project. Any conflict between these documents shall be resolved in writing. Deviations from manufacturer's standard details and load design values shall be calculated and signed/or sealed by a registered architect/engineer.

#### 3.02 Protection

- A. When storing panels do not allow them to come into ground contact. Stored panels must remain dry. Do not allow panels to be stored in an unsupported manner. Improper storage may cause tolerance problems in the field.
- B. Roof panels must be fully protected from weather by roofing materials to provide temporary protection at the end of the day or when rain or snow is imminent.
- C. Remove and replace insulated wall and roof panels, which have become excessively wet or damaged before proceeding with installation of additional panels or other work.
- D. The Construction Manager shall remove all refuse created the installation of the work in this section.