The engineer responsible for designing the lateral load resisting system of the structure should reference the design values given in IBC 2006 (Table 2306.3.1) or NDS 2005 Special Design Provisions For Wind and Seismic (Appendix A). This design approach only utilizes the capacity of the sheathing on the underside of the roof panel. Be sure to incorporate all footnotes associated with the tables and utilize the modification allowed in IBC 2006 section 2306.3.2.

The following assumptions should be used to determine the applicable values in the documents identified above. The justification for each assumption can be found below in italics.

**Panel Grade:** Sheathing, single floor and other grades covered in DOC PS 1 and PS 2

*The sheathing on the underside of our panels is rated as APA PR-N610, which is a higher quality.*

**Common Nail Size:** 8d (2 ½” x 0.131”)

*Our roof details require the sheathing to be fastened to the supporting member with a SIPTP, SIPLD, or SIPHD fastener. As indicated on page 34 of our 2010-2011 Product Catalog, the lateral load resistance of a SIPTP, SIPLD, or SIPHD fastener through our panel into an SPF 2x4 is 943 lb. According to Table 11Q in 2005 NDS, the lateral load resistance of an 8d (2 ½” x 0.131”) in the same scenario, including all applicable factors, is less than 200 lb. Therefore, at a minimum, our connection will provide the same capacity.*

**Minimum Fastener Penetration:** 1 3/8”

*Our roof details require the SIPTP fastener penetrate into the framing a minimum of xyz which, at a minimum, will provide the same capacity.*

**Minimum Nominal Panel Thickness:** 7/16”

*As indicated in section 4.2.1 in the NTA Listing Report numbered PSC121907-22, the underside of our roof panel has a thickness of 7/16” which will provide the same capacity.*

**Minimum Nominal Width of Framing:** To be determined by the design engineer for each specific project.
Roof Diaphragm Capacity

**Diaphragm Type:** Blocked

*Diaphragms constructed with our panels are all fully blocked because all edges are fastened to wood splines between panels.*

**Fastener Spacing:** 6”

*Our roof details require the SIPTP fasteners to have a 6” minimum spacing.*

**Case:** 6

*This must be assumed to provide our designers flexibility when laying out the panels.*