

### SUBJECT: NAIL WITHDRAWAL CAPACITIES OF OSB

With the use of Premier SIPS, the attachment of finishing materials such as roof shingles, siding, drywall, etc., is required. The application of these materials is typically accomplished with conventional nail products. An independent code recognized testing agency conducted withdrawal tests following ASTM D1037 procedures to provide data on the direct withdrawal resistance of nail fasteners when driven into the 7/16" OSB face of SIP. The following is a summary of the average ultimate values achieved for various nail fasteners.

#### AVERAGE DIRECT WITHDRAWAL (PULLOUT) – LBS.

| Nail Size & Description           | Avg. Ultimate Pullout | Nominal Shank Diameter |
|-----------------------------------|-----------------------|------------------------|
| 4d ring shank-drywall nail        | 133                   | 0.109"                 |
| 6d smooth galvanized              | 59                    | 0.120"                 |
| Roofing Nail-smooth galvanized    | 51                    | 0.110"                 |
| 8d smooth coated sinker           | 150                   | 0.131"                 |
| 8d smooth galvanized spiral shank | 112                   | 0.120"                 |
| 8d galvanized ring shank          | 77                    | 0.113"                 |
| 8d smooth galvanized              | 65                    | 0.134"                 |
| 8d bright box                     | 107                   | 0.113"                 |
| 10d galvanized ring shank         | 164                   | 0.148"                 |
| 16d smooth galvanized             | 63                    | 0.165"                 |
| 16d bright box                    | 90                    | 0.135"                 |

These values are ultimate values. Appropriate safety factors should be applied to obtain design values.

This data has been compiled to provide manufacturers, designers and engineers with values for the assessment of fastener requirements.