

AG Rolin Consulting

11300 SE Linny Lane, Boring, OR 97009
(503) 663-9960 Fax (503) 663-5647
AGROLIN@AOL.COM

STRUCTURAL DESIGN, ENGINEERING & CONSULTING

To: STEPHEN GEMMELL
29 July 2013

Re: GRANSHAW RESIDENCE - PORTLAND, OR

DEAR STEPHEN;

To upgrade the seismic stability of the residence at 3211 NE 50th AVENUE add the following CONNECTORS;

- Use Simpson "UFP" CONNECTORS AT 4' ON CENTER AS ACCESSIBLE. Use 1/2" DIAMETER Hilti TZ ANCHORS, with a minimum EMBEDMENT OF 3 1/2".
- AT THE EXTERIOR USE Simpson "FAP" CONNECTORS AT 4' ON CENTER AS NEEDED. Use 1/2" DIAMETER Hilti TZ ANCHORS, with a minimum EMBEDMENT OF 3 1/2".
- WHERE JOISTS ARE PERPENDICULAR TO THE FOUNDATION, USE A Simpson "FJA" AT EVERY 3rd CONNECTOR IN PLACE OF THE UFP. Use 1/2" DIAMETER Hilti TZ ANCHORS, with a minimum EMBEDMENT OF 3 1/2".

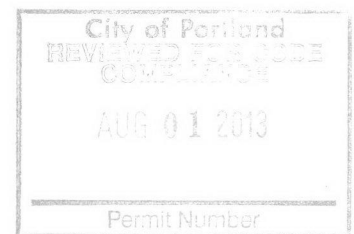
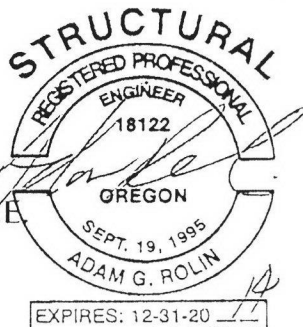
ALTERNATE

- Use Hilti HY 200 with a minimum EMBEDMENT OF 4" IN PLACE OF THE Hilti TZ ANCHORS. ENGINEER DOES NOT REQUIRE SPECIAL INSPECTION OF THE EPOXY INSTALLATION.

If you HAVE ANY OTHER QUESTIONS OR CONCERNS please call me to discuss them.

Very Truly Yours,

Adam G. Rolin, P.E., S.E.
G1306



13-187821RS