



Memorandum

To: Scott Brown *Date:* January 29, 2021
Address: Ryan Rhodes Designs *From:* Beth Brown
303 Nickerson Street
Seattle, WA

Project: Wisenteiner Residence

Hello Scott,

We received the permit comments from Mercer Island for the Wisenteiner Residence project. This letter serves as our response to the comments:

Page	Comment
9	<i>Provide shearwall schedule</i> Shear Wall schedule has been provided
9	<i>Provide interconnectedness</i> Detail has been added to show the connection of the existing structure to the new structure.
9	<i>It appears that the intent may be to cantilever the floor and roof lateral load back into the garage shearwall line. Please justify. Any attachment of the existing structure would appear to increase the lateral load to the house shearwall line. Please address</i>

	<p>In order to not overload the existing walls along grid 1 as indicated in lateral calculations, a new shear wall was added in the addition to support the lateral loads at the roof for the new addition. This force is then dragged into the north garage wall below. Minimum existing condition requirements are listed on plan, as well as upgrade requirements if the wall does not minimum requirements.</p>
9	<p><i>Provide interconnectedness, chord continuity and reentrant corner reinforcing, typical.</i></p> <p>Additional details have been added to show the connection of the addition to the existing structure.</p>
9	<p><i>Indicate as new wall</i></p> <p>Wall has been indicated as a new wall</p>
9	<p>New header required? Confirm adequate existing lateral capacity. Address removal of existing wall as well as tributary of new addition.</p> <p>Location is non-load bearing, no new header required. Additional lateral load from addition is supported along Grid 2 and not Grid 1 as outlined in the lateral calculations so as to not overload the existing walls. Existing walls along grid 1 were examined with reduced wall length and were found to still be adequate.</p>
9	<p><i>Provide wall section through this area. Indicate complete lateral load path</i></p> <p>Additional detail has been added.</p>
9	<p><i>Provide calculations demonstrating capacity of new rim joist to resolve overturning forces. Include overstrength factor.</i></p> <p>Refer to calculation on page V1.</p>
9	<p><i>Detail upgrade requirements for existing walls.</i></p> <p>Requirements have been added for upgrade requirements.</p>
9	<p><i>Provide detail at roof parapet. Show lateral load path.</i></p> <p>Details have been added showing parapet at the roof.</p>
9	<p><i>Provide collector to drag load diaphragm load to remote shearwalls, resolve chord forces and resolve reentrant corner forces. Ensure collectors length meets minimum diaphragm aspect ratio (typical).</i></p> <p>Collector element has been added to the plans.</p>

9	<p><i>Provide detail. Include offset at rim. Coordinate with architectural drawings.</i></p> <p>Detail has been added.</p>
9	<p><i>What is this? Callout all details used.</i></p> <p>This is the 5/8" diameter all-thread that is called out in detail 2. The plans have been clarified to better callout this detail.</p>
9	<p><i>Provide gravity framing calculations.</i></p> <p>Gravity framing calculations have been provided. Refer to V1 and V2.</p>
9	<p><i>is this an existing bearing line? Please detail to clearly indicate floor joists will not increase load on existing structure.</i></p> <p>This is an existing beam below. New joists are spanning from the west garage wall to the west exterior wall and therefore not adding additional load to the existing beam line.</p>
9	<p><i>Include an additional 5 psf wet snow load on roofs with less than 5 percent slope.</i></p> <p>An additional 5 psf wet snow load was included.</p>
9	<p><i>Provide details as necessary to fully describe construction.</i></p> <p>Additional details have been provided.</p>
9	<p><i>Callout all details.</i></p> <p>Details have been called out on plan.</p>
9	<p><i>Provide lateral design. This area is mapped with a wind speed up value of 1.6</i></p> <p>Lateral design has been provided. Per calculations on criteria sheets 4-6 Kzt was calculated to be 1.42</p>
9	<p><i>Roof Framing Plan?</i></p> <p>Plans have been revised to indicate as roof framing plans.</p>
10	<p><i>Revise detail to show accurate location of continuous rim joist.</i></p> <p>Detail is already coordinated with architectural drawings.</p>
10	<p><i>Provide calculations to justify design.</i></p> <p>Calculations have been provided on L4</p>
10	<p><i>What is the minimum dept of sheathing? Does the sheathing run full length?</i></p>

	The sheathing runs the full length of the shearwall above. The depth of the plywood is the full cavity space between the depth of the LSL 1 3/4 beam above and the existing 2x8 joist below.
10	<i>Indicate minimum plywood nailing to act as drag strut.</i> As indicated in the detail the plywood nailing requires 8d's at 4" oc to both the LSL and the 2x8, the length of the plywood. Refer to L4 for associated calculations.

If you have any other questions regarding this issue, please feel free to give me a call at (253) 284-9470.

Sincerely,

SWENSON SAY FAGÉT
A Structural Engineering Corporation



Bethany Brown, PE
Project Manager