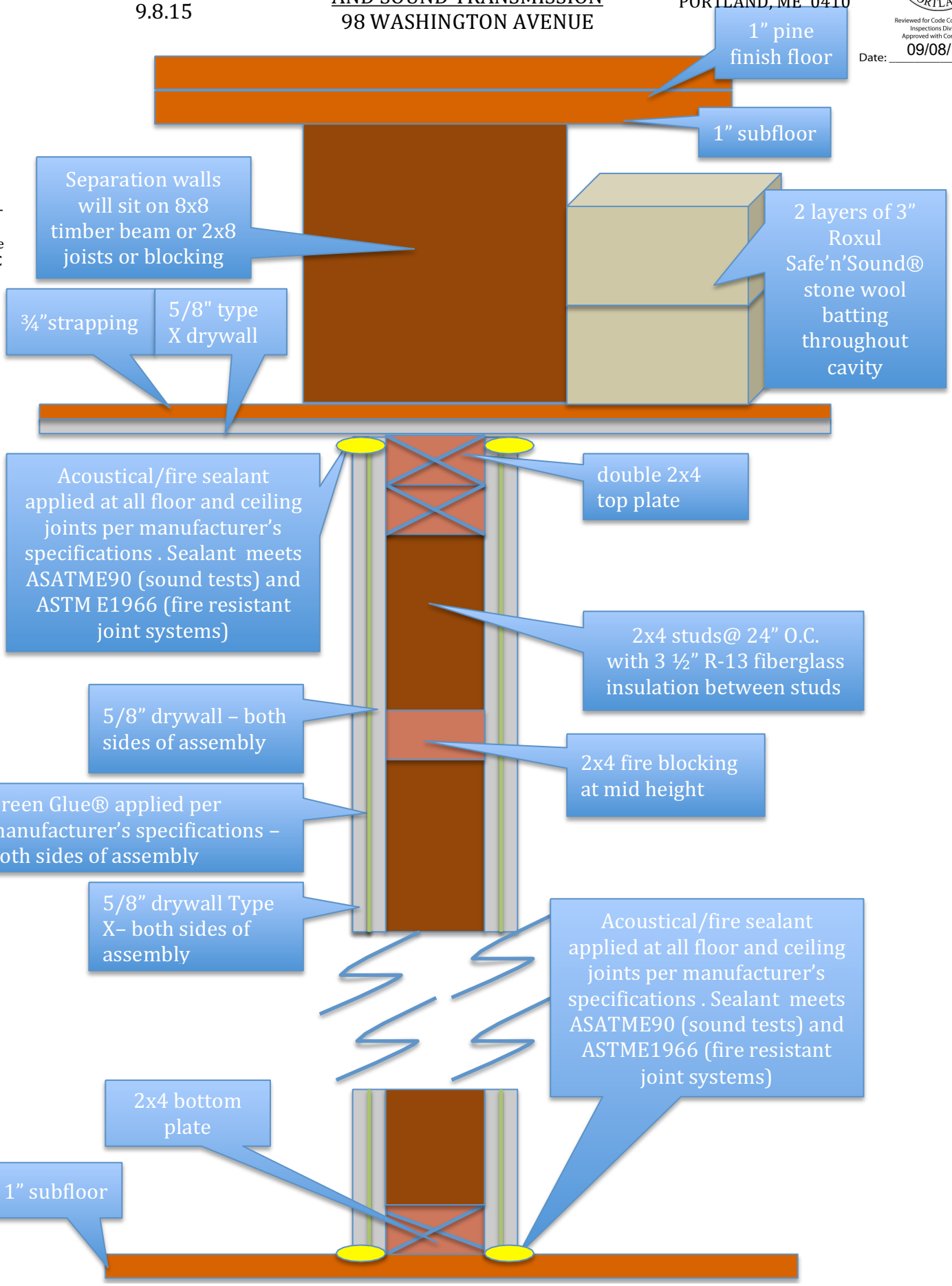
9.8.15

ASSEMBLIES: FIRE RATINGS AND SOUND TRANSMISSION
98 WASHINGTON AVENUE

MOUNT JOY LLC
49 MERRILL STREET
PORTLAND, ME 0410

CITY OF PORTLAND, MAINE — RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/08/15

The floor-ceiling assembly meets standards for both 1-hour Fire Resistance rating STC 55. See following page.



The wall assembly and the wall vertical separation meet standards for both 1-hour Fire Resistance Rating and STC at least 50. See the following page and the report of Becker Structural Engineering uploaded 8.12.15

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All SEPARATION WALLS:

- 5/8” gypsum drywall Type X, 2.5” screws @ 12” O.C.
- Green Glue, 116 oz
- 5/8” gypsum drywall, 1.625” screws @ 24” O.C.
- 2x4 wood studs @ 24” O.C.
- R13 fiber batt
- 5/8” gypsum drywall, 1.625” screws @ 24” O.C.
- Green Glue, 116 oz
- 5/8” gypsum drywall Type X, 2.5” screws @ 12” O.C.

Sound Transmission:
Wall STC is 55 and based on the results of test OL 05-1049 conducted pursuant to ASTM Standard E90.

One-hour Fire Resistance Rating:
Wall Fire Resistance Rating is 1-hour and is based on U305. To achieve the required sound transmission rating, the studs are 24” on center, however, the wall has double the required 5/8” gypsum for a 1-hour rating.

ALL FLOOR CEILNG ASSEMBLIES:

- 1” pine floor - existing
- 1” subfloor - existing
- 8x8 timber beams and - 2x8 floor joists - existing
- 2 layers of Safe’n’Sound Roxul stone wool batting in the cavity
- 3/4"strapping
- 2 layers 5/8” Type X drywall

Sound Transmission:
Floor/ceiling assembly of at least 50 is based on the results of UL L516. The L516 assembly differs from the proposed assembly somewhat. It calls for (from top to bottom): 3/4" Levelrock Brand Floor Underlayment, plywood subfloor,2x10 woo d joists, one layer of 3" mineral wool batt, resilient channel or equivalent, 5/8” Type C drywall. However, in working with an industry expert, it is the closest tested assembly.
Our assembly, provides for 2 layers of Safe’n’Sound batting, and 2 layers of Type X drywall. Given that we need only accomplish an STC of 50 and the L516 accomplishes an STC of 59, and given the constraints of the existing building, (existing joists 2x8 and existing subfloor and floor throughout) we feel confident

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that the proposed assembly will be more than adequate to meet the STC 50 requirement. The GA-610-02 Fire Resistance Rating requires that the Type X drywall be applied "framing or furring" and therefore resilient channels will not be used.

One-hour Fire Resistance Rating:
Floor/ceiling assembly is 1-hour based on GA-610-02