RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 04/27/17

STRUCTURAL DESIGN CONSULTING INC.

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Unit 130
Gilford, NH 03249-6219
Phone: (603) 293-8038

MEMORANDUM

Date: **Mar 05, 2017**
Project: **250 Commercial Street, Portland, ME**
From: **David Tetreault**
Subject: **Structural Evaluation of 2nd Floor**

I have performed a structural analysis of a portion of the 2nd floor of the building located at 250 Commercial Street. The area that I analyzed is bound by grids 4 and 5 and grids B and D as shown on a framing plan dated 7/2/70 prepared for the Cudahy Company. The area is designated as Liquid Riot Bottling Company - Barrel Room Storage in recent renovation plans prepared by Archetype, P.A.

The existing framing consists of W12x53 beams spanning from grid 4 to grid 5 spaced at approximately 7' on center. The beams are supported by a W21x112 girders on grid 4 and W21x62 girders on grid 5. All steel members are A-36 structural steel. The steel framing supports a 4½"thick, 3000 psi concrete one-way slab. The framing is assumed to be non-composite. The total load of barrels and racks in the Barrel Room is 67,600 pounds distributed over five of the W12x53 beams. Live loading for other areas of the floor was based on IBC requirements for light manufacturing, 125 psf.

The results of my analysis show that the beams and girders have sufficient capacity to support the Barrel Room Storage loads noted above. Percent of allowable shear and bending stresses are as follows:

Member	% of Allowable Shear Stress	% of Allowable Bending Stress
W12x53 Beam	32	63
W16x62 Girder	16	54
W16x112 Girder	23	55

Please contact me if there is any question.

STATE OF MAINE
DAVID J. TETREAULT
No. 4840
LICENSED
PROFESSIONAL ENGINEER

David J. Tetreault, P.E.
Structural Design Consulting, Inc.