

HOPPER ENGINEERING ASSOCIATES

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June 4, 2015

VIA ELECTRONIC MAIL

Mr. Robert Nary
Hollywood Mobile Systems
7021 Hayvenhurst Avenue
Van Nuys, CA 91406

Subject: Roof Capacity on Stage 2 at 7021 Hayvenhurst Avenue, Van Nuys, CA

Reference: Site Visit with R. Nary, W. Brown, and J. Maas; May 4, 2015.

Dear Mr. Nary:

Hopper Engineering Associates conducted a visual inspection and subsequent structural analysis of the existing roof structure on Stage 2 at 7021 Hayvenhurst Avenue, Van Nuys, CA. Hollywood Mobile Systems has proposed using the roof structure to support production loads. Please allow this letter to serve as a summary of our inspection, analysis, and subsequent recommendations.

The roof in question is located on Stage 2 and covers a room roughly 80'-0" wide and 96'-0" long. The roof is clad with composition roofing material over 3/4" plywood supported by 2x4 wood rafters spaced at 2'-0" on center. The rafters are supported by 1'-4" deep open web joists spaced at 4'-0" on-center which span 18'-8" between 10-3/4"x37-1/2" glued laminated timber girders. Each glued laminated girder spans 80'-0" between walls at the north and south ends of the room. Figure 1 shows several of these roof structural elements.



Figure 1: Existing Roof Structure (2x4 Rafters Are Covered by Fireproofing)

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Our analysis has shown that the existing roof is structurally adequate to support the following mutually exclusive distributed live loads for a maximum duration of 3 months:

- 7.5 pounds per square foot (psf) of uniformly distributed live load over the entire roof area
- 150 pounds per foot (plf) uniformly distributed on each of the glued laminated timber girders
- 30 plf uniformly distributed on each of the open web joists.

We have also calculated maximum allowable point live loads for the open web joists and glued laminated timber girders, for a maximum duration of 3 months. Table 1 shows the maximum allowable point live loads applied to panel points on each of the open web joists. Table 2 shows the maximum allowable point live loads applied to each of the glued laminated timber girders.

Table 1 – Open Web Joist Allowable Point Loads (Rigged to Panel Points Only)

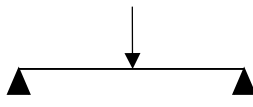
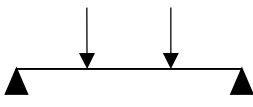
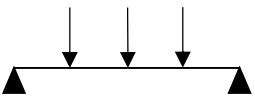
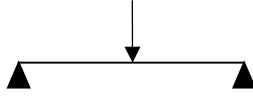
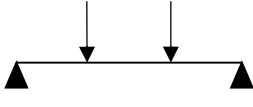
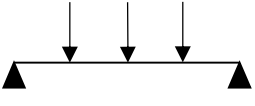
MAXIMUM ALLOWABLE POINT LOADS		
CENTER POINT	THIRD POINT	QUARTER POINT
		
1 @ 430 LBS	2 @ 300 LBS	3 @ 200 LBS

Table 2 – Glued Laminated Timber Girder Allowable Point Loads

MAXIMUM ALLOWABLE POINT LOADS		
CENTER POINT	THIRD POINT	QUARTER POINT
		
1 @ 6000 LBS	2 @ 4500 LBS	3 @ 3000 LBS

The distributed live load ratings and the point live load ratings for both the open web joists and the glue laminated timber girders are mutually exclusive. To obtain load ratings for durations longer than 3 months but less than 1 year, multiply the allowable load ratings above by 0.95.

These load ratings will reduce the live load capacity of the roof for other loads. Therefore any additional roof live load such as large numbers of people, equipment, or ponding water must be minimized. All roof drainage must be checked for blockage to avoid rain water retention.

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Thank you for your consideration in this matter. If you have any questions, please contact the undersigned.



Very truly yours,

A handwritten signature in black ink that reads "Wesley B".

Wesley Brown
Professional Engineer
CA PE License 28979