

# AERCOUSTICS ENGINEERING LIMITED

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March 9, 2006

Mr. Anthony Biglieri  
The Living Wall inc.  
20 Leslie Street, Suite 211  
Toronto, Ontario M4M 3L4

## Re: Surface Density Assessment of The Living Wall

Dear Mr. Biglieri,  
The following will confirm our review of the surface density for the subject living wall. The test section was assessed on March 3, 2006. The surface density of a 'sound' barrier is a key property that generally dictates its acoustic effectiveness. The typical minimum standard that is enforced by the Ministry of Environment is 20 kg/sq. m. (i.e. 4 lb./sq. ft.).

### TEST SAMPLE DESCRIPTION

The wall comprises of a top soil core that is 50 cm deep along from its base to summit. A root and vegetation network complements the top soil barrier so as to provide a 'green' and aesthetic surface that also exhibits sound absorption properties.

The test section that was assessed comprised a particle board box that had interior dimensions of 30cm x 30cm x 50cm (height, width, depth, respectively). This test section effectively represented 1 sq. ft of Living Wall Surface Area. The corresponding weight of the 1 sq. ft surface assembly would then represent its surface density. The assembly was weighed at the office of Aercoustics Engineering Limited with a Tanita digital scale both in the empty box state and full with top soil.

It is noteworthy that the weight of the full box did not take into account the vegetative rooted portion of the wall nor was the top soil compressed as it would be in situ. For instance, the soil is both physically compressed by the contractor as it is configured and the weight of the soil itself provides further loading for additional soil compression, the degree of which is subject to the overall height of the structure. Therefore, the sample that was weighed is likely to be lighter than the in situ condition of the Living Wall.

### RESULTS OF WEIGHT MEASUREMENTS

The empty box was weighed in at 15 lb. and the full box weighed in at 77.5 lb for an effective weight of 62.5 lb. The resultant surface density is therefore 62.5 lb/sq. ft or a surface density of about 280 kg/sq.m.

### CONCLUSIONS

The Living Wall therefore exhibits a surface density of approximately 280 kg/sq.m or about 60 lb/sq.ft. This surface density therefore exceeds the 20 kg/sq.m and the 4 lb/ sq. ft standard that is stipulated by MOE.

Please feel free to contact us if any additional information is required.

Sincerely,

AERCOUSTICS ENGINEERING LIMITED



Vince Gambino, P.Eng.