

MEMORANDUM

PROCESSED
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Date: July 14, 2010
Attention: Mr. Dan Killinger
Company: Soho Properties
From: Nat Oppenheimer

Project Name: 76 East Houston Street
RSA Project #: 12983
RE: 76 East Houston Street Mural
cc:

RE: Mural, 76 East Houston Street
Date: July 14, 2010
Project: 12983
Subject: Mural

At the request of your office, the writer issued a Test Pit Location Plan and test pits were excavated during the week of 5 July 2010 and Geoff Smith, of our office, visited the site on 7 July and 8 July to observe the test pits.

We noted that the existing masonry/concrete wall is founded on a continuous concrete footing that is 2' thick and bears on soil 2' below grade (bottom of footing, therefore, is 4' below grade). The footing extends 2' in front of the wall and 3' behind the wall (abutting the neighboring building). We do not know if the footing is reinforced or what the connection between the wall and footing is, although the footing appeared to be in good and stable condition and there has never been any signs of movement or structural distress in the wall.

The existing wall is approximately 16' tall and has not experienced any structural deterioration or significant movement since it was erected in the 1980's (or earlier). A new metal stud and plywood wall was added to the existing masonry/concrete wall and extended the top approximately 4'. As part of an earlier feasibility study for the site, Robert Alperstein performed a comprehensive soil analysis and found that the soils were generally satisfactory and could support a minimum 1-ton per square foot load. A subway vent shaft runs directly below the location of the sign and is approximately 10' below grade (meaning the top of the subway structure is 6' below the bottom of the sign footing).

Taking a design wind load of 22.5 psf (15 psf for a sign less than 50' tall multiplied by a shape factor of 1.5 based on the 1968 New York City Building Code plus amendments), we find that the current foundation configuration is stable and that the pressure exerted on the soil under the footing is less than 1 ton per square foot under the design wind load. The empirical evidence indicates that the sign has remained stable and true throughout its lifetime as well.

Within the past six months a horizontal extension was built on the south face of the wall and was constructed in light gage metal framing and plywood. The added weight and eccentricity from the face of the existing wall are structurally acceptable and the surface area of the new extension does not change the load on the footing relative to what was present previously.

For these reasons, we find that the sign and its foundation are structurally stable. If there are any remaining concerns on the building department's part, we recommend that some type of monitoring equipment be installed at the top of the wall. There is equipment available that can be monitored remotely (through a digital connection) and can show the tilt of the wall at the top at any time (and can be correlated with wind speeds on the site).

If you have any further questions or would like to discuss this memo in any way, please do not hesitate to contact our office.

