



April 8, 2015

Bryan W. Taberner, AICP
Planning Director
Town of Franklin Municipal Building
355 East Central Street
Franklin, MA 02038

Re: Former Nu-Style Property

Dear Mr. Taberner:

As requested by the Town, BETA visited the former Nu-Style property located at 87 Grove Street on Wednesday March 25, 2015. The purpose of the visit was to assess the common wall shared by the former Nu-Style building and the building occupied by World Marble & Granite prior to the Town letting a contract to demolish the Nu-Style buildings. The goal of this assessment was to assist the Town with the development of potential restrictions and/or precautions required prior to, or during, the demolition of the former Nu-Style buildings.

Existing Building Summary

The former Nu-Style buildings consist of several structures constructed at various times. The front building sharing the common wall consists of a single story timber framed structure with the front portion having a slab on grade and the rear portion a crawl space. This building was observed to be in an advanced state of decay. The rear building sharing the common wall also consists of a single story timber framed building, but has a full basement that extends beyond the limits of the adjacent World Marble & Granite building. The adjacent World Marble & Granite building consists of a two-story CMU block structure with a slab on grade.

Field Observations

World Marble & Granite Building

The rear foundation wall was observed to have a 1" wide vertical crack with the wall shifted towards the Nu-Style building. In addition, a large step crack (approximately 1" wide) within the rear CMU wall was observed extending the full height of the wall. The concrete floor slab, towards the rear of the building, had been cut and a small section removed to create what appears to be a floor drain. This may have created, or exacerbated the cracks in the foundation and CMU walls. An attempt was made to determine the depth of the foundation wall at the time of our visit via a metal bar. The bar was inserted to a depth of approximately 7 feet below the top of the concrete foundation wall however the bottom of the foundation wall was not reached.

Nu-Style Building

From our initial observations, the front section of the Nu-Style building appears to offer no support to the World Marble & Granite building. However, due to the shifting of the World Marble & Granite building foundation wall, the rear section of building does appear to be providing a level of support and lateral bracing. This support is evident from the position of the first floor and roof timber framing (being tight to the common wall) along with the fact that the basement wall is integral to the foundation wall of the adjacent building. The basement concrete floor slab may also be providing some level of lateral restraint.

Recommendations

Based upon the cracking and shifting of the World Marble & Granite foundation and CMU walls; its unknown foundation conditions; and the evident lateral support being provided by the rear Nu-Style building that shares the common wall, we recommend that the Town temporarily suspend any plans to demolish any of the Nu-Style buildings.

In order to determine building stabilization measures that would allow for the demolition of the Nu-Style buildings, the following actions are recommended.

1. Crack Monitoring
Obtain permission from the owner of the World Marble & Granite building for the installation of crack monitoring gauges. These will allow for the periodic monitoring for further movement of the building's foundation and CMU walls.
2. Subsurface Exploration
Perform two drive sample borings within the basement of the Nu-Style building with low-headroom equipment. These borings will provide information regarding the make-up of the underlying soils, their presumptive bearing capacity, and level of ground water. This information is required for the design of the building stabilization measures.
3. Field Investigation
Obtain permission from the owner of the World Marble & Granite building to hand dig along the rear foundation wall to determine the depth and make-up of the building's foundation. In addition, perform limited demolition of the apparent CMU facing wall within the basement of the Nu-Style building to confirm that the wall is indeed the foundation wall of the World Marble & Granite building.
4. Building Stabilization Measures
Design and detail measures to stabilize the World Marble & Granite building prior to the demolition of the Nu-Style buildings. Such measures are likely to include the installation of helical piles; wall reinforcement straps; and the potential buttressing and backfilling of the foundation wall. These stabilization measures will be detailed and included as an addendum to the Town's current building demolition contract.

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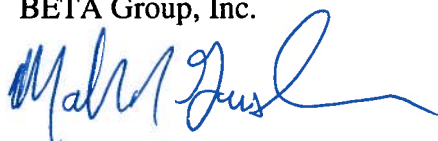
The estimated lump sum fee for the design of the above recommendations is \$24,400 which includes \$6,000 in direct expenses for travel and the subsurface exploration. The estimated construction phase services is \$6,000, which includes the review and approval of contractor submissions and performing four (4) site visits during the installation of the building stabilization measures.

The estimated probable construction cost for the installation of the building stabilization measures is \$37,500. This includes the likely installation and testing of helical anchors, installation of wall straps, and buttressing and backfilling the foundation wall. No repairs to the World Marble & Granite building foundation or CMU walls have been included.

If the Town wishes to proceed with the design of the above recommendations, we will provide a formal agreement.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.



Mark R. Gershman, P.E.
Senior Associate