

## Summary of Engineer's Report for 42 Maple Ave. dated Dec. 22, 2008

Existing Conditions	Conclusions	Recommendations
<p><b>General</b></p> <ul style="list-style-type: none"> <li>Requirements within the NYS Building Code are minimum standards and that building/industry practices are supposed to meet or exceed those standards.</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li>There was a pervasive lack of construction management throughout the alteration project.</li> <li>The degree of workmanship falls below the minimum levels of care and responsibility that needs to be applied to a project.</li> </ul> <p>(Code violations listed in parenthesis)</p>	<p><b>General</b></p> <ul style="list-style-type: none"> <li>Architect and local Code Enforcement Officer (CEO) take a more proactive approach to project management based upon the complete lack of compliance with standard building practice and compliance with minimum Code requirements to date.</li> </ul>
<ol style="list-style-type: none"> <li>There is no evidence that columns prescribed by the Architect to support the additional dead load of the addition were installed.</li> <li>The main beam in the basement has not been 'sistered' with LVL nor re-supported by columns/footings as required by the Architect.</li> <li>Plaster conditions at the existing first floor walls indicate the current load exceeds the installed structural member's integrity.</li> </ol>	<p>The Architect's specifications to install supporting structural members prior to adding substantial load on the existing framing was completely disregarded.</p> <p>(Res. Code Ch. R3) (Bldg. Code Ch. K6)</p>	<ol style="list-style-type: none"> <li>Architect of record to determine if the load applied by the second level is greater than 5% as per Bldg. Code Ch. K6. If so, Architect must decide whether:             <ol style="list-style-type: none"> <li>Entire additional load must be removed prior to installation of proper supporting columns/footings, <b>or</b></li> <li>Structural support installation may continue without removing 2<sup>nd</sup> floor, in which case dead load should be relieved prior to installation of proper supports.</li> </ol> </li> <li>Install the 4 columns on the 1<sup>st</sup> floor immediately to transfer the dead load directly above with lally columns transferring that load directly to footings below the existing concrete slab.</li> </ol>
<ol style="list-style-type: none"> <li>Only sections of the siding are completed.</li> <li>Plastic tarps cover only some of the construction work.</li> <li>Stucco siding is damaged, unevenly cut and not properly protected.</li> <li>Furring strips show evidence of water staining.</li> <li>Loose builder's felt paper is</li> </ol>	<ol style="list-style-type: none"> <li>Addition is not in weather-resistant condition.</li> <li>Adequate flashings and a weather-resistant barrier are absent.</li> </ol> <p>(Res. Code Ch. R7 Sec. RR703.1 and 703.2)</p> <ol style="list-style-type: none"> <li>The probability of moisture penetration through the exposed areas is extremely high, especially considering that 44.81 inches of</li> </ol>	<p>Address the weather resistance of the building envelope.</p> <ol style="list-style-type: none"> <li>Remove all recently installed and existing siding.</li> <li>Remove newly installed windows/doors.</li> <li>Apply flashings and weather resistant sheathing in conformance with Res. Code Ch. R7.</li> <li>Ensure sheathing material wraps inside the window and door cavities.</li> <li>Retain APA certified testing firm to evaluate integrity of OSB siding and fasteners exposed to</li> </ol>

<p>exposed.</p> <p>6. Weather resistant sheathing paper was not installed between plank siding and OSB with sufficient overlap.</p> <p>7. The OSB, rated only for short-term exposure, has been exposed for more than 138 days and may now be detrimental to the structure.</p> <p>8. The non-flashing type windows were not installed with sheathing paper wrapped inside the framing cavity. This may encourage moisture penetration.</p> <p>9. Subflooring on 2<sup>nd</sup> floor is warped and uneven suggesting high moisture exposure.</p> <p>10. First floor interior walls show evident water stains, cracking and swelling areas at the ceilings and walls throughout.</p>	<p>precipitation occurred during the 138 day exposure period. (Bldg. Code App. K) (Maint. Code Ch. PM3)</p>	<p>weather more than 138 days. If indicated, replace.</p> <p>6. Reinstall windows/doors according to mfg's recommendations.</p> <p>7. Install stucco siding in accordance with Bldg. Code Sec. 2512.</p> <p>8. Reinstall all remaining siding and trim to ensure building envelope is weather resistant.</p>
	<ol style="list-style-type: none"> <li>1. All of the water staining/damage in the existing structure [first floor] is a direct result of the construction process at the addition.</li> <li>2. The existing stucco and its underside components must be considered as failed condition or a condition that is extremely likely to fail.</li> <li>3. By not following proper methods of installation and not protecting the existing elements, the exposure has created possible structural concerns as well as health related issues.</li> </ol>	<p>Before proceeding to interior work, have both Architect and CEO inspect for compliance.</p> <ol style="list-style-type: none"> <li>1. Remove all moisture affected plaster, sheetrock and finishing materials on first and second floors to the framing members.</li> <li>2. Remediate any existing mold/mildew per Remediation Guidelines.</li> <li>3. Since first floor's remediation is a direct effect from the new addition, it is subject to compliance with the same Codes as used for the 2<sup>nd</sup> floor.</li> <li>4. Ensure CEO inspects first and second floors for compliance with current Energy Conservation Codes, Electric Codes, etc.</li> <li>5. Evaluate 2<sup>nd</sup> floor sub-flooring for moisture damage. If found, replace.</li> <li>6. Ensure 2<sup>nd</sup> floor plywood installed per Plans.</li> <li>7. Test new construction areas prior to installing finish materials to ensure moisture levels conform to Remediation Guidelines.</li> <li>8. Proceed from this point with construction according to proper methods and Code compliance.</li> </ol>

References

Bldg. Code App. K – Building Code of New York State, Appendix K – Rehabilitation of Existing Structures.

Bldg. Code Ch. K6 – Building Code of New York State, Appendix K – Rehabilitation of Existing Structures, Chapter K6 Alterations.

Bldg. Code Sec. 2512 – Building Code of New York State, Section 2512 Exterior Plaster.

Maint. Code Ch. PM3 – Property Maintenance Code of New York State, Chapter PM3 Minimum Conditions, Sec. PM303 Exterior Structure.

Remediation Guidelines – New York City Department of Health and Mental Hygiene's *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*.

Res. Code Ch. R7 – Residential Code of New York State, Part III – Building Planning and Construction, Chapter R7 Wall Covering.

Res. Code Ch. R3 – Residential Code of New York State, Part III – Building Planning and Construction, Chapter R3 Building Planning, Sec. RR301 Design Criteria.