

WEST LAFAYETTE CITY HALL INSPECTION EXECUTIVE SUMMARY

In Early 2014 the City Hall Building, located at 609 W. Navajo St., West Lafayette, IN, was vacated by all staff due to extensive disruption in the building and the eventual discovery of widespread mold. Shortly thereafter, Tecton Construction Management, Inc. was hired to perform a complete building inspection and analysis.

The purpose of the building inspection and analysis included the following:

- Find source of mold propagation and quantify repairs
- Research other environmental hazards (if any)
- Define all building and site needed repairs
- Define all code, ADA, and energy deficiencies
- Determine “end of useful life” replacement needs
- Provide budgets for multiple building options:
 - A. Full building renovation
 - B. Building repair and code compliance renovation only
 - C. Clear site and demolish building for redevelopment

A detailed site and building inspection proved to be very revealing. Virtually every component on the site has either failed or is at the end of its useful life. Complete replacement of asphalt, sidewalks, and curbs would be required. The costly surprise of the inspection was the apparent failure, for many reasons, of the masonry retaining walls throughout the site. These masonry retaining walls were utilized around the entire building for grade changes, stair and sidewalk protection and architectural aesthetic purposes. In addition to the masonry problems (reference picture summary) present in these walls, many show signs of significant differential settlement. For these reasons the walls will need to be rebuilt.

The site is very small with only a 45 car parking lot. The 1.16 acre site is about 40% too small for an 18,000 SF building. A loose rule of thumb is 10,000sf of building for every acre of land.

The building envelope and superstructure create other challenges. The structural integrity; footings, foundations, structural steel skeleton, double “T” concrete floor planks, and precast exterior walls were found to be in excellent shape. There are however, significant issues with the building’s thermal and moisture protection.

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The basement exterior water proofing system has failed. There is clear evidence of chronic long term water/moisture migration into the basement occupied spaces. Additionally, the exterior walls above grade are only partially insulated and where the insulation is present, it is inadequate. This condition causes condensate to form within the occupied space on the inside face of the exterior walls. The singled glazed windows also create condensate conditions on both the glass/aluminum surface and within the walls surrounding them.

All of these water/moisture breaches have created the ideal circumstances for mold propagation. This is the real cause of the mold problem. The two most recent back to back water leaks/floods only exacerbated the existing problem and made it more identifiable.

In order to fix these problems there are a number of things that will need to happen. This includes; replacing the roof (due to age), the removal of all inside “exterior walls” to properly insulate, and the replacement of all single glazed windows with energy efficient, thermally broken, insulated windows. Additionally, the basement wall waterproofing system will need to be replaced, which will require excavating around the entire building in order to obtain access to the basement walls for new water proofing to be installed.

The mechanical, electrical, and plumbing systems will require renovations as well. The heating and cooling systems do not meet fresh air code requirements and are in very rough shape. A complete replacement along with a modern building energy management system is recommended.

To meet current ADA and water consumption standards, as well as proper fixture counts, the plumbing fixtures would need to be replaced and standardized. The restrooms on the first and second floors would need to be renovated to accommodate these standards.

All new lighting (inside and outside) that meet current energy consumption standards is recommended. Many electrical panels have been updated but the electrical service and gear will be evaluated when a full renovation is contemplated. All new communication and technology upgrades will also be required to meet current and foreseeable future needs.

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Many life safety deficiencies exist including; smoke detectors, exit signs, strobes, emergency lights, pull stations, fire extinguishers, hand rails, and door hardware all need to be upgraded. The single biggest life safety standard addition to the building will be a fire sprinkler system.

The interior finishes show signs of age. The original wallpaper and wood paneling still exist after 44 years of use. It seems appropriate that if all of the other repair elements take place, that the interior finishes also get upgraded at the same time.

After reviewing available space for city staff vs. public space, it is evident that the current building is approximately 10% too small for current city needs. Cramped office work spaces and computer servers in the hallways are all indications of no available room. Storage space is insufficient as evidenced by boxes/records stored in hallways and stairwells.

The building does not meet or even address most “Green” building minimum industry standards. One simple example is the quantity of exterior windows needed for Daylighting. City Hall has approximately 6% glass on the exterior wall while by comparison West Lafayette Library (built in 2004) has approximately 50% glass and the Morton Center (Built is 1929) has approximately 20% glass. The Green Industry Standard of “Daylighting” attempts to bring significant natural light to 75% of the interior occupied spaces. That is clearly not possible when the City Hall Building exterior windows are so small and so few in number.

The environmental issues within the building can all be reversible. Asbestos can be remediated from the building. Since I believe we have identified the ultimate source of water/moisture migration into the building, the building mold can be eradicated. The cost to prevent future problems is not insignificant but a reliable solution is achievable. Lead paint was tested for and was not found in this building.

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The Critical Project Factors Are:

<u>Building Issues</u>	<u>Fixable or not Fixable</u>
-Mold infestation of building	Fixable
-Water/Moisture infiltration	Fixable (expensive)
-Building 10% too small for City staff	Not Fixable
-Site 40% too small for building and expansion possibilities	Not Fixable
-Building needs significant renovation/ updating	Fixable (expensive)
-Meet “Green” building standards	Fixable

By taking the long view of the current building situation, it seems prudent to abandon this site and move to a larger property that has expandable possibilities well into the future. Even though all the building issues can be corrected, the fact remains that the site and building are too small for current needs and provide no opportunity for growth to support the city in the future.