

Liberty Hyde Bailey Museum  
Facility Survey/Needs Assessment  
September 2013



## EXTERIOR

Roof  
Wall/other  
Site Features

## INTERIOR

Building Code and General Construction  
Structural  
HVAC/Plumbing  
Electrical

## PLANS

Roof  
Exterior Elevations  
Floor Plans

95 West Main Street  
Benton Harbor, MI 49022  
269.927.2295

361 First Street  
Manistee, MI 49660  
231.723.1198

503 Quaker Street  
South Haven, MI 49090  
269.637.1293

750 Lincoln Way East  
South Bend, IN 46601  
574.232.8700

3177 Willowcreek Road  
Portage, IN 46368  
219.850.4624

## EXTERIOR

### Roofs

Overall the shingle roofing is in very good condition. It appears that the roof shingles have 15-20 years of wear remaining.

The north and south roofs of the original home do have shed dormers that need to be replaced. The dormers are not properly flashed into the shingle roofing and are showing signs of wood rot at all contact points with the roof.

Other minor roof-related repairs are needed including tuck pointing brick at both chimneys and installing exposed sheet metal flashing at the four lookouts-at the north and south ends.

### Walls/Other

The exterior walls are in good condition but need to be painted. We recommend removing all layers of paint, requiring the under layers of lead based paint be properly abated to EPA standards. Though this will cost several thousand dollars more than leaving all paint in place (except for that that can be scraped off), we feel the long term benefits are worth the cost. This will eliminate continued peeling and extend the time between future re-paintings. Windows should be re-puttied with the re-painting of the siding and trim.

Miscellaneous work required at exterior walls includes installing missing handrails at south porch, repairing curb at access hatch to basement and replacing 2 storm doors with historically accurate ones. The south gable end louver should be removed and filled in at the meeting room. The railing at the north ADA ramp is partially missing and the existing railing does not comply with ADA.

## INTERIOR

### Building Code

Since the purpose of the museum is to preserve the home as it was when lived in our review of the state building code ignored any issues that would impact the architectural integrity of the original home. The museum currently has a fire alarm system and its electrical system is in the process of being upgraded/replaced.

The only code-related issues we believe are lacking related to the meeting room. This room has no exit sign over the exterior door or emergency lighting. It also has no means to bring in fresh air, required by the current mechanical code. An "HRV" (heat recovery ventilation) unit could be installed with the future addition of an ADA accessible toilet, which should be provided if the meeting space is used by the "general public".



The connector between the museum and the meeting room is just wide enough for the construction of a future ADA/accessible unisex toilet. One window is impacted by this addition-consultation with the state historic preservation office will be needed to review this issue. Addition space is available with the toilet for a small closet. This closet would provide a space to install an "HRV" unit (to serve the conference room).

Air conditioning with supplemental heating can be provided for the meeting room with a wall mounted, high efficiency, piped AC/heating unit. The ground mounted cooling condenser could be located in the adjacent courtyard.

### Structural

Overall the museum is structurally sound. The only area of concern is the first floors at the east side-with crawl space below. All other floors have been reinforced with additional joists installed adding support beams. Similar work is needed for the floors above the east crawl space. The floor is presently braced/reinforced in some locations with poorly constructed supports resting on fill material in the crawl space. The report from Villa Environmental has confirmed that the fill material contains lead. Since this fill material must be removed to properly reinforce the floors, special precautions will be required with any removal of this fill. Even after proper removal of fill, the crawl space has limited height-making needed structural work difficult and expensive.

### HVAC/Plumbing

The existing furnace is relatively new and will not require replacement for some time. Ehen replace, fresh air should also be provided. We have budgeted adding an "HRV" unit somewhere in the building-with the furnace replacement. Since the museum is a "public building" we recommend that compliance with the state mechanical code be met-when the furnace is replaced.

The existing water heater also is "nearly new" and will not need replacement for many years. A smaller unit can be used when the heater is replace-due to the low demand for hot water in this building.

### Electrical

At the time of our inspections, the electrical wiring in the museum was in the process of being upgraded. A new main panel is installed in the basement and installation of new wiring is in progress at the second floor. Work appeared almost complete-wiring was installed to most breakers in the panel.

