

Conditions Report

Preliminary

**Oregon Water Tower
Pump Building**

Report prepared by

**Mead
& Hunt**

Date 12.16.13

Meeting date December 3, 2013
Time 4:00 p.m.

Location Oregon, WI at the water tower

Mead & Hunt was asked by the historic society representative Randy Glysch, to review the existing historic Water Tower pump house located in Oregon Wisconsin on Janesville Street. The Historic Society would like to refurbish the pump house and possible use part of it as an information center for the Village of Oregon. Mead & Hunt's review consisted of taking pictures of the exterior and interior space and doing a visual review of the current facilities. We did not do any testing or detailed inspection of the building, building systems or review the basement.

We offer the following findings:

1. General Conditions

- a. The building is situated under the existing historic water tower. Several bracing members for the water tower penetrate the pump house including tie rods and a connector beam.
- b. The building construction appears to be load bearing brick construction with a wood frame roof systems and composite shingles which do not appear to be original. The interior finishes are plaster with an exposed concrete slab. The foundation system is unknown however there is a basement, but we did not review the basement so the extent of the basement and condition is unknown.
- c. The building has had several modifications made in the past including the addition of glass block windows on the south and east side and a new composite roof system. In addition there appears to be major repairs made to the front half of the building where the tower connector beam penetrates. The repairs fill in cracks caused by either foundation or beam action causing the front to the building to move in a downward direction. The cracks are continuing to be an issue as we were able to see inside the building on the east side as the crack was at least ¼" in size.
- d. The brick on the front of the building needs to be repointed, the windows on the front need replacement as the wood sash and mullions are failing. The front door is weathers and cracking and needs replacement.
- e. The interior in the back of the building appears to be in better shape than the front. The front has a major crack in slab near the front door. The ceiling system in the back needs to be refinished but in general is in fair shape. The front ceiling system is buckled and has water damaged. During our review we saw water coming into the front section of the pump house, we believe the water is coming from the tie rods as they penetrate the roof and it appeared that the flashing did not allow movement of the tie rods. The walls on the front half needed a major re-patch due to the cracking caused by the front portion movement previously discussed.
- f. The electrical system is a combination of several eras, with some of the systems looking as original and some looking more modern. Conduit to fixtures and outlets was surface mounted with heavy rust.
- g. Sidewalks around the building are cracking and buckling.

2. Conclusions and Recommendations

- a. The foundation system for the front of the building needs to be examined in great detail and a repair/stabilization program should be implemented. The building has been

moving and continues to move as evident in the wall cracks and the slab failure at the front door. Patching wall/brick cracks will not solve the problem, in fact if the repairs/stabilization are not implemented a major failure to the front of the building is inevitable.

- b. Repointing of the brick is critical to keeping water out of the building. The current mortar is in failure mode allowing water to get inside the wall and further damage the building.
- c. The roof appears to be in good shape but the flashing around the tie rods needs to be redesigned and replaced. The rods move, so the flashing system must be flexible to allow for that movement. Because the front of the building is moving in a downward direction at the line of the tie rods that also puts pressure on the current flashing system. Again, another reason to repair/stabilize the foundation system.
- d. The electrical systems need to be reviewed by a qualified electrical engineer. It is highly likely that they will need to be replaced to meet current code if the space is used for a visitor center.
- e. The front door and front windows need to be replaced.
- f. The existing sidewalks need to be removed and replaced as part of the foundation repair/stabilization program.

3. Pictures with comments.



Brick needs to be repointed and cleaned.



East side exterior wall crack that has been repaired and continue to move in a downward direction. The crack is at least ¼" at the top and the interior space could be seen from the outside.



West side exterior wall crack that has been repaired and continue to move in a downward direction.



The floor at the door is broken in a number of places indicating foundation movement.



Existing electrical system should be reviewed by an electrical engineer for compliance with current codes if the pump house is to be used for a public function.