



## **EXISTING BUILDING AND PLAZA FOUNDATION INSPECTION**

### **Existing Construction**

The existing Detroit Boat Club building, and outdoor pool and plaza are presumably supported on a series of pile supported grade beams. The grade beams form a grid-like arrangement and appear to support the major bearing elements of the building.

Due to the presence of water below the building (within 1' +/- of the basement floor) and the fact that the access to the foundations was through various hatches in the building floor, a team of divers from Underwater Construction Corporation was used to access the confined spaces and to observe the existing foundation system. An engineer from Northwest Design Group was present and watching the live video stream from the diver's helmet mounted video camera during the underwater inspections. Observations revealed that the grade beams in orthogonal directions formed cells and that each cell had an access hatch or manhole in the original floor or plaza deck. Some of the access hatches or manholes were not able to be opened due to walls or other construction being built over them. The existing ground surface within each cell that was accessed was above the bottom of the grade beams. In many cases, the divers observed notches that were formed in the bottom of the grade beams that permitted the equalization of water levels between the various cells. Many of the cells, both within the building and outdoors below the plaza, contained piping of various sizes and configurations.

### **Existing Condition**

In general, the existing concrete grade beams and supported floor slab appeared to be in good condition. In some locations, usually around the perimeter of a floor hatch, the floor slab was spalled which appeared to have possibly been due to the installation of the hatch after the placement of the floor slab. The piles that are suspected to be supporting the grade beams were not observed since the ground surface was above the bottom of the grade beams.

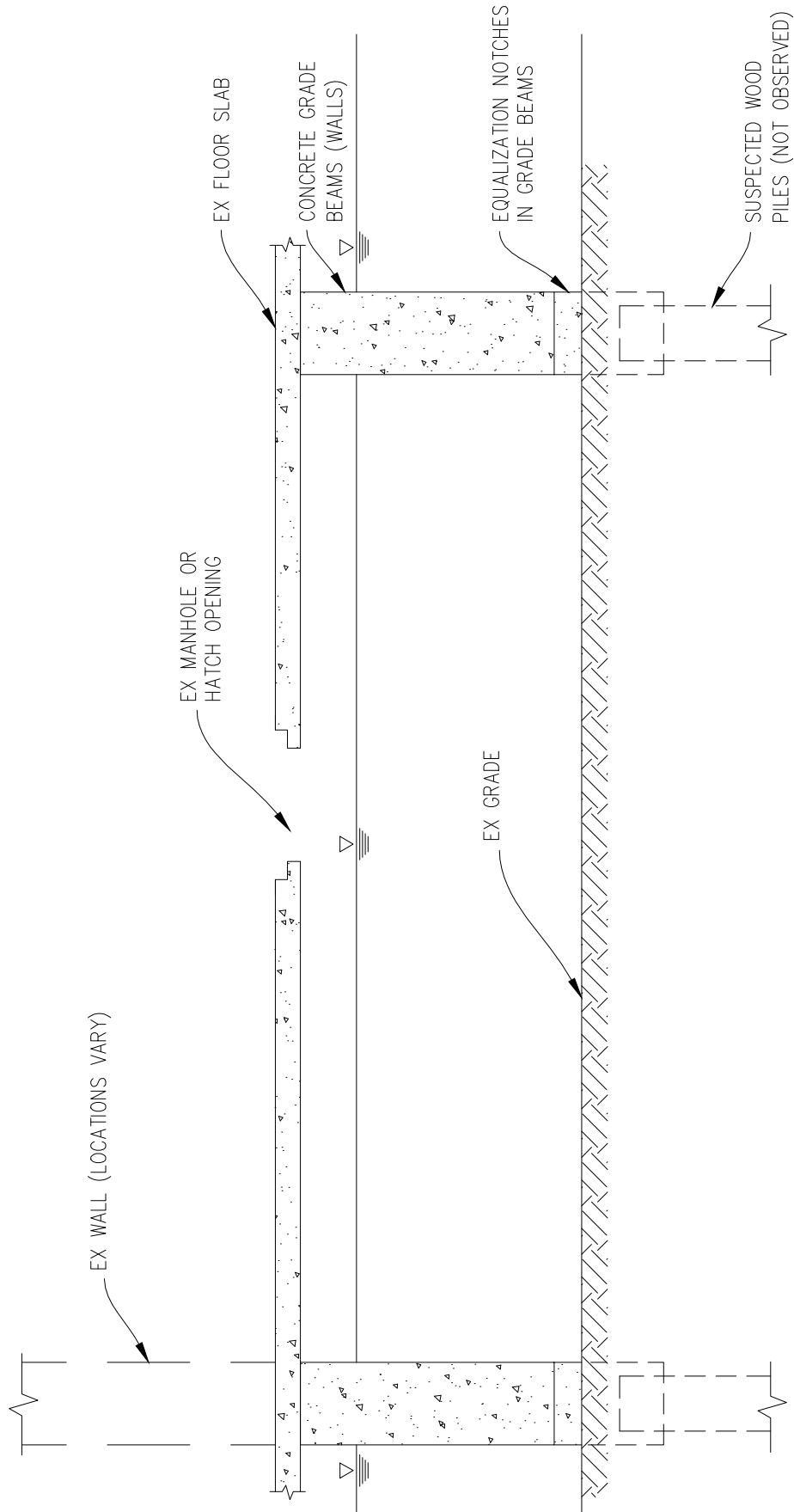
In addition to the foundation observations, the functionality of the doors and windows was discussed with the building's tenants. It was reported that there were no known problems with racked (out-of-square) door or window openings (a likely indicator of differential settlement).

### **Conclusions**

Based on the observations and discussions, there did not appear to be any major problems or differential settlement associated with the building foundations at this time.

### **Recommendations**

1. Continue to periodically observe/monitor the existing building for potential signs of settlement.



## SECTION – TYPICAL BOAT CLUB BUILDING FOUNDATION

NOT TO SCALE

SECTION

BELLE ISLE BOAT CLUB

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