

## PROJECT DESCRIPTION

### *Machnica Community Center*

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**Location:**  
Buffalo, New York

**Client:**  
BHNT Architects

**Client Contact:**  
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#### ***Forms for Spread Footings in the Community Center Basement***

MMCE reviewed preliminary test boring data for this proposed building on the east side of Buffalo and prepared a supplemental exploration plan due to the very soft clay deposit shown in the preliminary boring data. The supplemental data identified the thickness of the soft clay and the elevation of groundwater at the site.

Shelby tube samples of the soft clay collected in this second phase were measured for consolidation properties. This subsurface information allowed estimation of stress profiles before and after construction of the building. Laboratory analysis of the Shelby tube samples showed that the soft clay deposit was slightly overconsolidated. We developed foundation design recommendations to limit the foundation bearing pressure to less than the preconsolidation stress to allow the building to be supported on spread footings.

MMCE developed a subbasement drainage plan to depress groundwater levels and eliminate uplift pressure on the basement floor slab. This allowed a more costly mat foundation to be avoided.