

Metropark Hood Apartments Burlington, Vermont

Owner: Metropark, LLC
Architect: Time Line Architecture
Services Provided: Structural and Geotechnical Engineering.
2006 ACEC Grand Award for Engineering Excellence

Project Description: 8 unit residential with commercial space on the lower floor. The structure consists of a 4 story wood frame utilizing wood shear and bearing walls supported on a steel and concrete structure below. The building is located on the site of an old ravine that was partially filled-in and leveled in 1890. The structure is built on top of, and adjacent to, the historic Hood Plant.

The Metropark residential project was built on top of the existing slab and foundation of the old Hood plant. The original Hood Plant had experienced distress due to differential settlements. The distress along King Street was apparently due to the replacement of the ravine sewer. The slight to moderate interior slab settlement was apparently due to the presence of 2" of cork and 24" of cinders beneath the existing slab.

Project demonstrates the use of mat foundations in order to make use of a "fill" site with low allowable soil bearing pressures to build a tall narrow structure; a traditional foundation design would not have supported more than a one or two-story structure.

Curved glulam arches were designed and sized to provide 1-hr fire rating, in order to allow the beams to be exposed as an architectural element.

