



Signal Hill Professional Center

MANASSAS, VIRGINIA

<http://www.arche.psu.edu/thesis/eportfolio/current/portfolios/hjh139>

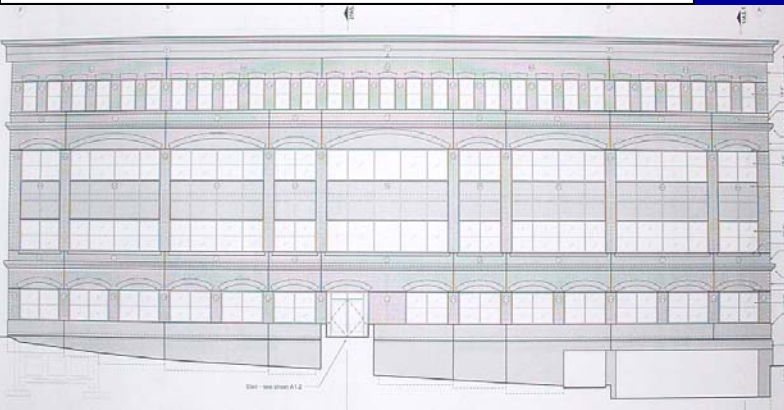
Joseph Henry, Structural Option

A TRADITIONAL SUBURBAN OFFICE BUILDING.

45,000 square feet for office condos and a bank with four floors above grade and one floor of underground parking close to the Manassas Town Center to be completed in 2006

PROJECT TEAM.

OWNER	Mid-Atlantic Real Estate Investments
GC	R.W. Murray Co.
ARCHITECT	The M Group Architects
STRUCTURAL	Morabito Consultants
MEP	K.T.A. Group Inc.
CIVIL	Bowman Consulting



MECHANICAL FEATURES.

HVAC—Two rooftop units each with 75-ton chillers, and 43-ton heating coils, with ductwork and VAV unit locations flexible per tenant requests

PARKING AREA—277V 3-phase wires placed in ground surface used as ice-melting system

PLUMBING—Three stacks throughout building designed for future tenant expansion

ARCHITECTURAL FEATURES.

SITE—Underground parking roof sloped to match site topography and to support fire engine loads



ENVELOPE—Traditional Virginian brick detail on exterior achieved through slender wall pre-cast concrete panel system, allowing 25% less thermal transfer than traditional walls

STRUCTURAL FEATURES.

OFFICE BUILDING—Composite steel frame with 3.5" lightweight concrete slab

PARKING STRUCTURE—Traditional steel framing with W10 infill beams angled to match the topography of the site; 4.5" normal weight concrete slab with 4" topping

CONNECTIONS—Unique system of coped beams, varied connection heights, and W6 hangers to allow the driveway surface to connect to the building at varying elevations



ELECTRICAL/LIGHTING FEATURES

POWER—Three panelboards for floor for 480/277V and 208/120V loads, with much room for expansion

LIGHTING—System of 277V HID, fluorescent, and compact fluorescent lights throughout the parking area, surrounding grass area, common areas, and basic office lighting.