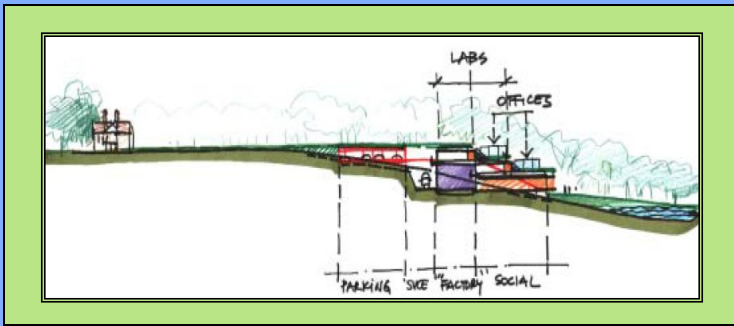


HOWARD HUGHES MEDICAL INSTITUTE AT JANELIA FARM Ashburn, VA

ARCHITECTURE

- ◆ World Class Biomedical Research Facility to promote unconstrained scientific research.
- ◆ 546,436 SF, 3-story building carved into a hillside overlooking the Potomac River.
- ◆ Triple-glazed glass façade and green roof.



PROJECT INFORMATION

- ◆ **Owner:** Howard Hughes Medical Institute.
- ◆ **Architect:** Rafael Vinoly.PC.
- ◆ **PM:** Jacobs Facilities, Inc.
- ◆ **MEP:** Burt Hill Kosar Rittleman Assoc.
- ◆ **Structural:** Thornton Tomasetti Engr.
- ◆ **Delivery Method:** Fast-Track Bid-Build.
- ◆ **Estimated Building Cost:** \$500 Million.



MECHANICAL SYSTEM

- ◆ 44,828 MBH total heating load.
- ◆ 5,479 ton total cooling load.
- ◆ VAV with reheat coils in all spaces.
- ◆ (1) 50,210 MBH & (2) 30,125 MBH boilers.
- ◆ (2) 28,339 & (1) 1,251 MBH heat exchangers.
- ◆ (7) 1,200 ton chillers & one back up.
- ◆ \$3.5M Operating Cost.

ELECTRICAL SYSTEM

- ◆ Primary 34.5kV, 600A, 3 Φ , 3 wire service from Old Dominion Electric.
- ◆ 4 Substations with VPI 3000kVA dry transformers step down to 277/480V, 3 Φ , 4 wire service.

STRUCTURAL SYSTEM

- ◆ 6 in to 24 in Concrete Slab Floor.
- ◆ Reinforced Concrete and Masonry Walls.
- ◆ Structural and Post-Tensioned Beams and Columns.
- ◆ Structural Glass windows in the garden courtyards/atriums.

JULIE THORPE

MECHANICAL OPTION

◆ www.arche.psu.edu/thesis/eportfolio/current/portfolios/jat280/ ◆