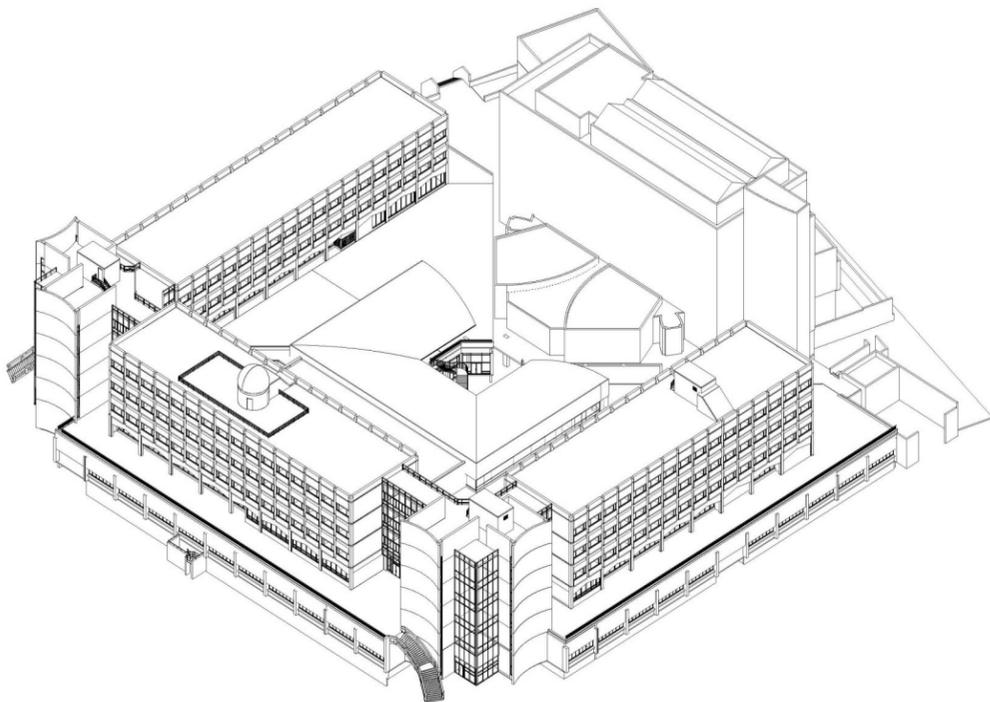


The Gant Gazette

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Revit® MODEL INITIATED

The days of putting pen to paper (or vellum or Mylar®) to create design and construction drawings are history. The current industry standard uses Building Information Modeling, or BIM, to create accurate, coordinated building models to plan, design, construct and manage building projects. These models are three-dimensional; the building is a virtual depiction of the actual building which will be constructed. Proprietary software known as Revit is being employed to build the Gant model.

While the Gant project is still in the pre-design phase, a Revit model of the existing building has been built. The building exterior, plaza and surrounding site have been modeled by Goody Clancy Architects. The building structure and interior spaces are modeled by Mitchell Giurgola Architects. At regular intervals, the exterior and interior models are merged. This process confirms the accuracy of modeling development and informs decisions as more information is incorporated into the model.

In addition to documenting existing conditions, the Revit® model will be used to develop design alternatives. For example, different façade treatments can be created and applied to the model for study. Laboratory modules can be built and dropped into the model to see how they fit within the existing constraints of the building's structure. Renderings can be made directly from the model. During this process, additional information is added to describe mechanical and electrical systems and other building components.

Once decisions have been finalized and the model completed, 2D construction drawings can be created to form the bidding and construction documents. The Revit model is also useful as a coordination tool for the construction team. As an example, "clash detection" identifies areas where structural, mechanical

ductwork, piping and electrical conduits are not coordinated. Contractors and subcontractors can take off various components for pricing; the Construction Manager can confirm these quantities and prices. With the inclusion of additional information, the model can be adapted for building management purposes after the project is completed.

One issue which must be addressed by the design team is file size. BIM models are by nature very big file sets. The initial Gant model is over 100MB. It will grow to approximately 500MB as components are added.

In short, BIM is a powerful collaboration tool for design and documentation and an ongoing resource for building operation and maintenance.

THIS & THAT

Reconstruction of the Gant science complex is one of the first major projects scheduled under the University's *Next Generation Connecticut* (NextGenCT) program. The purpose of NextGen is to elevate and enhance the University's stature as a premier educational and research institution.

Three hundred fifty faculty and staff and approximately 9500 students are housed in or visit the Gant science complex every day.

The University's primary Data Center will remain occupied and functional, without interruption, during the entire course of construction.

A big *thank you* shout out to the Department Representatives who have been coordinating the design team's work to evaluate existing conditions in Gant:

Tammy Prentice - Math
Dave Perry - Physics
Deb Perko - Institute of Materials Science

SUSTAINABLE WORKSHOP IDENTIFIES GREEN PRIORITIES

The initial Sustainability Workshop, led by Mark Loeffler and Lynne Panagotopoulos of Atelier Ten, was held on September 10, 2015 to identify priorities, drivers, aspirations, concerns, and metrics for sustainability. University stakeholders and the design team engaged in a collaborative brainstorming session in which topics under six main categories were discussed:

- Renovation Impacts to Site and Landscape
- Water Conservation
- Energy Efficiency, Operations, and Controls;
- Materials: Specifications and Construction Processes;
- Indoor Environmental Quality; and
- Innovation Opportunities.

These topics will help the design team to properly prioritize and address sustainability issues.

In general, the Gant renovation project is committed to achieving LEED Gold Certification and CT High Performance Building Compliance. It is also expected to contribute to UConn's overall goal of carbon neutrality. The sustainability strategies developed for the reconstructed Gant complex will address the five main Areas of Focus (Energy, Water, Land, Materials, and Movement), as well as five key Sustainability Attributes (Adaptability, Scalability, Vitality, Connectivity, and Resilience) which were identified in the 20 Year Master Plan for future campus development. In addition, these strategies support the ongoing recognition of UConn as one of the Sierra Club's "Coolest Schools" for campus sustainability leadership.

For more information on the Workshop discussion, please visit: <http://paes.uconn.edu/recentpresentations.html>

LOOK AHEAD

October 8

- Bi-weekly progress meeting: 10 – Noon
- Department programming meeting: 1 – 5

October 9

- Department programming meeting: 9:30 – 11

October 15

- Construction Manager interviews: All Day

October 22

- Bi-weekly progress meeting: 10 – Noon

November 5

- Bi-weekly progress meeting: 10 – Noon

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