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DRAFT Memo

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7792 UConn Gant
901803 Gant Building Renovation

September 10, 2015 Sustainability Workshop Summary

The initial Sustainability Workshop was held on September 10, 2015 to identify priorities, drivers, aspirations, concerns, and metrics for sustainability. The UConn Gant stakeholder and 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. This 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 CTHPB Compliance. It is also expected to contribute to UConn's overall goal of carbon neutrality and to 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.

The following is a summary of the Sustainability Workshop discussion and collective priorities:

Big Ideas & Innovations

- Sustainability on display: the building as teaching tool that can provide occupants building performance feedback and real-time education in sustainable techniques, technologies, and materials
- Excellent air, acoustic, and environmental quality
- Occupant engagement through training and awareness
- Culture of cooperative environmentalism
- Accountability for resource use
- Market influence on vendors and suppliers
- Balance flexibility with cost urgencies via anticipatory infrastructure
- Connect to campus infrastructure
- Building as a teaching tool and demonstration site
- Honest, functional, maintainable systems and materials
- Leverage utility partnerships
- Coordinate and capitalize on current utility and infrastructure projects/expansion.
- Heavy emphasis on improving existing access and creating new connections

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Renovation Impacts to Site and Landscape:

- Connect Gant beyond the project boundary to the rest of campus
- Ensure adjacency to greenhouses and facilities related to academic programs
- Improve connectivity for bikes and pedestrians and provide better interior and exterior bike storage
- Carefully locate convenient public showers and changing facilities for cyclists
- Address safety concerns related to deliveries
- Optimize access for service and effective maintenance – specifically accommodate large and challenging deliveries. Design loading docks/pathways with appropriate clearances.
- Ameliorate code issues and provide universal accessibility within the buildings and on-site
- Design a dark sky friendly site that addresses wildlife and human impacts of light pollution.
- Continue to increase perviousness and green roofs. Expand on previous studies at Gant
- Create excellent outdoor environmental quality with desirable landscape, linkage, and biodiversity.
- Relocation of data chiller farm in order to improve outdoor environment (also see energy)
- Maintain awareness during design of fuel burning equipment cap for outdoor air quality
- Execute a study of wind conditions on the site

Water Conservation:

- Address Gant Plaza drainage, especially those impacting sensitive infrastructure.
- Address Eagleville Brook issues related to the existing TMDL. Brook runs under Gant via pipe and unknown input analysis suggested.
- Specify and install low-flow, high-efficiency plumbing fixtures. Consider waterless technologies as they become available.
- Inventory and optimize process water usage, especially in intensive lab/laser equipment
- Connect to existing reclamation facility and incorporate greywater for sewage conveyance –infrastructure required to expand beyond current cooling tower makeup
- Minimize runoff and implement infrastructure for reuse on-site

Energy Efficiency, Operations, and Controls

- Design innovative, cost-effective and high performance façade that addresses energy, moisture, and resilience
- Develop energy efficient, integrated systems that are right-sized, serviceable, adaptable, and durable. Ducted systems are preferred.
- Design simple, but sophisticated systems with intuitive controls and ability to capture historic data
- Capitalize on heat recovery opportunities at data center and other areas with high cooling load
- Manage energy and plug loads

- Commission properly and continuously over time.
- Connect to chilled water loop
- Implement metering and verification, especially sub-metering at selected areas
- Leverage utility (Eversource) incentives
- Design versatile, adaptable, cost effective space configurations

Materials: Specification and Construction Process

- Carefully consider façade materiality and innovative envelope materials such as building integrated photovoltaics
- Ensure constructible design with minimal interruption to critical areas
- Enable the building to provide demonstration opportunities and test new materials
- Specify durable, functional, and minimal materials with sensitivity to embodied carbon

Indoor Environmental Quality

- Design for optimal thermal comfort including temperature, humidity, air speed, air pressure
- Improve air quality and ventilation – air change design, operability, variability, healthy air intake.
- Refresh policies related to smoking, idling, fuel burning equipment, etc
- Design with acoustic comfort in mind and address vibration and noise suppression issues
- Ensure visual acuity through lighting, finishes, and designing a visually appealing environment.
- Test and work within a broad band of temperature set points