

## *The School of Forest Resources Building*

### *Breadth Work- Structural Design*

For my redesign I am incorporating new skylights between the four trusses supporting the roof in the Atrium area. Removing the current ceiling system and replacing it with sections of glazing requires analyses of the structural systems. I will be performing calculations on existing and new structural members to ensure that the ceiling system can support itself, the glazing, and the trellises being used in the new lighting system.

### *Breadth Work- Mechanical Design*

The large amount of existing glazing in the atrium combined with the new skylights allows a high amount of sunlight to penetrate into the space. Utilizing the glazing and mechanical systems to deal with the solar gains will affect the cooling and heating loads in the building. I will be examining the loads in this space during the next semester and adjusting the equipment accordingly. Any equipment adjustments will require analyses of the electrical systems that support them, possibly impacting panelboard layouts and branch circuit sizing.