

Breadth Work Proposal

Breadth Topic: Electrical

The integration of the other building systems is extremely important when designing mechanical systems. The proposed new mechanical systems will have a large impact on the electrical load in the building.

For the equipment of System I, the electrical load will be considerably less than for the current equipment. The proposal is to calculate the difference in electrical equipment cost based on the actual mechanical load in the building.

The electrical load for System II may or may not be less than what is currently in the building. This depends on the electrical requirements for the different chiller plant equipment. The proposal for System II is to calculate the electrical load for the chiller plant equipment, size the new electrical equipment based on this load, and compare the cost of electrical equipment for System I and System II.

Breadth Topic: Constructability

Because the PSD Administration Headquarters is an existing building, constructability was a concern with where to place the new mechanical equipment. This issue will be explored with the newly sized mechanical equipment of System I. The possibility of reducing the amount of mechanical room space will be investigated with the hope of allowing more office space for the School District.

System II will reduce the amount of equipment in the mechanical rooms on each floor but will require the chiller plant to be located in a centralized location in the building. Space usage and occupancy will be considered when inspecting the proper placement of this new equipment.