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Existing Central Heating Plant

- Provides steam to approximately 2.4M sqft
- Peak steam load – 100,000 lbs/hr (observed winter 2015)
- (3) existing boilers in CHP—(2) are 37 years old, the 3rd is 50 years old
  - Installed capacity = 100,000 lbs/hr
  - Firm capacity = 62,000 lbs/hr (assumes largest boiler is out of service)
Existing Central Heating Plant

- Building Condition
  - Original construction – 1948
  - Aged masonry (stack and building facades)
  - Non-seismic resistant design
  - Life-safety limitations (fire protection, FA, ADA compliance)
  - Non-compliant elect. infrastructure and insufficient E-power
  - Service Building FCI – 0.65
Central Heating Plant Upgrade & Purpose

- Increase firm capacity to meet peak load – long-term firm capacity = 120,000 lbs/hr
- Improve steam distribution reliability
- Defer replacement of existing boilers
- Accommodate Master Plan timeline & uncertainties
- Upgrade building’s electrical infrastructure
Exterior Development
Existing View from Conte Circle
Proposed East Elevation
Proposed East Elevation – Alternate Brick Penthouse
Proposed Bi-Folding Doors
View from Conte Circle – without trees
Alternate Brick Penthouse
View from Conte Circle
Proposed West Elevation – Alternate Brick Penthouse
View from Higgins Hall
View from Higgins Hall – Alternate Brick Penthouse
Proposed North Elevation
View from the Conte Forum Campus Walk
Existing and Proposed Stacks
Proposed Stack Design Options

Tapered

Pilastered

Stepped
Tapered (Basis of Design)
Pilastered Alternate
Pilastered Alternate with Ornament
Stepped Alternate
Proposed Materials – Metal Panels and Frames

Service Bldg.   Higgins Hall   Conte Frm.   Stokes Hall   St. Mary’s Hall

Existing Campus Buildings

CHP Addition
Floor Plans
Floor Plans

Level 1

✓ Existing Boiler Plant
✓ New Boiler Plant
✓ Fuel Tank Enclosure
Level 2 - Mezzanine

- Open to Existing Boiler Plant
- Open to New Boiler Plant
- Open to Fuel Tank Enclosure
- Existing Utility Tunnel
- Existing Boiler Plant Electrical Room
- Office
- Existing Tel/Data Hub
Floor Plans

Level 3

✓ Existing Service Building
✓ New Boiler Plant Addition
✓ New Exhaust Stack
✓ Fuel Tank Enclosure
Floor Plans

Level 4

✓ Existing Service Building
✓ New Boiler Plant Addition
✓ New Exhaust Stack
✓ New Fuel Tank Enclosure
Floor Plans

Level 5

- Existing Service Building
- New Boiler Plant Addition
- New Exhaust Stack
- New Fuel Tank Enclosure