Mechanical and Electrical Systems
Existing Conditions Narrative

Visitor's Center
Madison, Connecticut

3/11/10

Prepared By
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CES Project No. 29066.00

A. ***PLUMBING NARRATIVE***

APPLICABLE CODES AND STANDARDS

The plumbing systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

1. 2005 Connecticut State Building Code
2. 2005 Connecticut State Fire Safety Code
3. 2003 International Building Code(IBC)
4. 2003 International Plumbing Code
5. 2003 International Energy Conservation Code
6. NFPA, Latest Version
7. ASHRAE 90.1

PLUMBING UTILITIES

1. Domestic Water:
   a. Existing Domestic Water Service: The building is currently served by a domestic water branch fed from Memorial Hall (adjacent building).
2. Natural Gas:
   a. Existing Natural Gas Service: There is currently no natural gas service to the building.
3. Sanitary:
   a. Existing Sanitary Service: The building's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the building. The sanitary waste piping discharges to a septic tank and leaching field.
4. Storm:
   a. Existing Storm System: Building is served primarily by gutters.

PLUMBING FIXTURES AND SPECIALTIES

1. Existing plumbing fixtures are as follows:
   a. In general, fixtures are in good condition.
   b. The water closet is a floor mounted; tank type, vitreous china.
   c. The lavatory is vitreous china.

DOMESTIC HOT WATER SYSTEMS

1. Existing Domestic Hot Water System: The domestic hot water is generated by an electric water heater which is in good condition. The water heater is located in a partial basement area which is not easily accessible.

B. ***FIRE PROTECTION NARRATIVE***

FIRE PROTECTION SERVICE

1. There is no central fire protection system (sprinklers) currently at the facility.

C. ***MECHANICAL NARRATIVE***

APPLICABLE CODES AND STANDARDS

The mechanical systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

1. 2005 Connecticut State Building Code
2. 2005 Connecticut State Fire Safety Code
3. 2003 International Building Code(IBC)
4. 2003 International Mechanical Code
5. 2003 International Energy Conservation Code
6. NFPA, Latest Version
7. ASHRAE 90.1

EXISTING SYSTEMS

1. The building is served by underground hot water piping fed from Memorial Hall (adjacent building). Refer to Memorial Hall Narrative for additional information.

2. The hot water system feeds cast iron radiators.
3. Ventilation is provided by means of natural ventilation through operable windows.
4. Air Conditioning is provided by means of window air conditioners.
5. Temperature controls for the heating system are local, stand alone thermostats. There is no DDC system controls in the building.

D. ***ELECTRICAL NARRATIVE***

APPLICABLE CODES AND STANDARDS

The electrical power, interior lighting, and fire alarm systems will be reviewed in conformance with the requirements of the following codes and regulations and all applicable local authority requirements.

1. 2005 Connecticut State Building Code
2. 2005 Connecticut State Fire Safety Code
3. 2003 International Building Code(IBC)
4. 2003 International Energy Conservation Code
5. 2005 National Electrical Code, NFPA 70 (NEC)
6. Illuminating Engineering Society Lighting Handbook (IESNA), 9th Edition
7. ASHRAE 90.1

EXISTING SYSTEMS

1. The building is served by an underground feeder fed from Memorial Hall (adjacent building). Refer to Memorial Hall Narrative for additional information. The feeder is served by a 100 amp, 3 pole breaker at Memorial Hall. There is a disconnect switch in the basement which feeds a panel located on the first floor.

2. Lighting, in general, consists of fixtures with older style T12 fluorescent lamps.
3. Site lighting has fair to good coverage with pole mounted and building mounted fixtures.
4. There is no fire alarm system and there is no emergency lighting.

E. ***MEP SYSTEMS CONCLUSION***

In general, the MEP systems are in good condition. Miscellaneous recommendations regarding improvements are:

1. Add a backup pump to the hot water heating system.
2. Add temperature sensors for low temperature alarm to be connected to the SNE Building Systems/Barber Coleman DDC system at Memorial Hall.
3. Replace cast iron radiators with fin tube radiation.
4. Upgrade A/C systems and provide ducted mechanical ventilation to all spaces.
5. Replace light fixtures.
6. Provide improved access to the basement.

Town of Madison

Capital Needs Survey Form

Total Floor Area (sf):

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Note: The "System Priority Rating" (1 to 4 rating) and "Condition of the Existing System Rating" (1 to 5 rating) are to be reviewed together to assist in prioritizing replacement and/or upgrades. As an example, we recommend line items with a System Priority rating of 1 and Existing Conditions rating of 1 be prioritized for replacement and/or upgrades.

SYSTEM	System Priority 1 to 4 (1-Highest Priority, 4-Lowest Priority)	Condition of the Existing System 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit Price	Current Replacement Cost	REMARKS
Division 2 - Site Construction								
Site - Lighting								
Site - General								N/A
Division 15 -Plumbing								N/A
Water Distribution System								
Plumbing Fixtures								
Water Heater								
Division 15 - HVAC								
Add Backup Hot Water Pump	1	2		2010			$10,000	Add backup pump and controls
Add space temp sensors - alarm thru DDC	1	1		2010			$3,000	
Replace cast iron radiators with fin tube	3	3		2020			$20,000	includes upgrade of temp controls
Upgrade Mech Ventilation inc A/C	4	3		2020			$20,000	
Division 16 - Electrical								
Lighting								
Replace fixtures	1	1		2012			$5,000	
Lighting Controls	1	1		2012			$3,000	Add occupancy sensors
Add Fire Alarm System	3	N/A		2015			$5,000	
							$ 66,000	(total)
Provide Improved Access to the Basement								
Architectural and Structural Upgrades	1	1						Values to be itemized in arch/str report
MEP renovations	1	1					$3,000	