



Building Inspection for MEP Systems
Food World Building
6032 Hwy. 90
Milton, FL

July 8th, 2016

Presented by:



General Overview

The scope of this project is to investigate and document the existing mechanical and electrical systems in the old Food World building located on Hwy. 90 in Milton, Florida for the Santa Rosa County School District. The intent of this inspection is to supplement information provided by the building's current owner, as well as to give an overall view of the existing building systems. On-site inspections were conducted on June 28th and July 7th of 2016. This report is based on visual observations. In addition, any stated life expectancies of the existing equipment and the indicated costs contained herein are based on opinion only and are order of magnitude costs presented for discussion purposes. The costs do not include any engineering services or permitting fees that may be required.

The building is a 1-story facility of approximately 48,000 square feet. Mechanically, the building is served by a main air conditioning unit located on the roof with one supplemental split system unit that served the original bakery area. Cooling and heating is provided via DX heat pump operation with supplemental electric heat. The heating, ventilating, and air conditioning (HVAC) systems are controlled with standard factory controls.



Electrically, the building is served by a single 1600A service which comes in at the rear of the building to a 480V main switchboard. The lighting for the building is a mixture of recessed and surface mounted fluorescent and decorative incandescent.

Mechanical Inspections



Existing water heater located back of house.

Domestic Hot Water Heating System

The domestic hot water heating system is composed of an electric water heater with heat recovery tank located at the back of house area on the NW portion of the building. This unit has not been operational for several years and is considered to be past its' useful life. Replacement of the domestic hot water heating system is recommended, however a replacement cost is not able to be determined at this time as the new system will be contingent on the layout of the renovated building spaces.

The existing plumbing fixtures have not been in operation for several years and their operation could not be ascertained. However, since the units have not been operated for several years, it is anticipated that the degree of maintenance required to bring them back to service levels would preclude their reuse. Hence,

removal of the existing fixtures is recommended and new fixtures provided within the renovated space for future occupancy.

The existing cold and hot water piping appears to be in good condition, but an investigation of the piping interior was not possible without a “destructive investigation.” No replacement are noted as being required, however the size of the existing water line may need to be adjusted/upsized, as well as the routing of the mains, based on the requirements of future renovations. Estimated plumbing renovation costs would be in the \$5.50-\$6.50 per square foot range.

Air Conditioning Systems

There are two air-cooled heat pump systems that serve the cooling and heating demands for the building’s HVAC system. The evaluation of the existing system was based on visual observations.

The majority of the building is served by a single custom packaged rooftop unit (Seasons-4). This unit is in poor condition and is past its estimated useful life. In addition, the unit utilizes the older R-22



Existing unit on rooftop.

refrigerant based equipment which has been phased out of commercial production for several years, which would further exacerbate maintenance issues in the future. It is recommended that this unit be replaced with equipment that meets the new energy efficiency requirements.



Existing split system condensing unit on rooftop.

The second split system unit is in similar condition, and again operates with the older refrigerant type. It is recommended that this unit be removed and the areas originally served by this unit be consolidated in with the new system recommended above.

Air Distribution

The supply and return ductwork installed within the facility was exterior wrap ductwork that was noted to be in fair condition on the exterior, however the interior of the ductwork is very dirty from the limited observations available. Furthermore, evaluation of the existing air devices indicates dirt markings on all of the supply and return registers. These observations, coupled with the lack of ventilation and cleaning over several years of non-operation and the requirement to replace the existing air conditioning system lead to the recommendation for removal of the existing ductwork system in its' entirety and replacement with a new externally insulated ductwork system.



Existing exterior wrap ductwork noted above existing ceiling.

The estimated replacement cost for the new HVAC system (including ductwork, equipment, and controls) is anticipated to be in the \$15-\$18 per square foot.

Fire Suppression System

The existing fire suppression system serving the facility is a wet pipe system with the main riser located in the NE corner of the back of house area in receiving. The existing system is in good condition, however it is noted that the certification of the existing system does not appear to be current. Also, the existing system comes into the building as a 6" pipe and then reduces to a 4" fire riser and distribution main. Future system modifications may require upsizing the riser and/or main distribution piping based on current water flow test results. Estimated fire suppression system renovation costs would be in the \$2.00-\$3.00 per square foot range.



Existing fire riser.

Electrical Inspections

Electrical Main and Distribution Systems

The building was currently fed from an existing 1600A GE Spectra Series 480V switch board that serves the large mechanical equipment loads and lighting. There are dry-type step down transformers currently suspended from the existing structure that serve the 208Y/120V panelboards which serve the receptacle loads. The 1208Y/120V panelboards are located primarily in the rear of the building adjacent to the main switchboard. There are a few other panels located in the bakery, meat processing and admin areas. The existing main switchboard and most of the existing panelboards are in good condition and new circuit breakers are available for them to serve new loads.



Existing main GE electrical gear.



Example of panelboards.

It is recommended that these panels and switchboard be reused to the greatest extent possible. New panelboards would have to be provided to serve additional loads where necessary. It is further recommended that the existing dry-type transformers be removed and replaced with new transformers. The new transformers would be located in new electrical rooms distributed throughout the building to serve the loads in the areas where there are located. Estimated interior power costs would be in the \$7.50-\$9.00 per square foot range.

Lighting Systems

The majority of the lighting throughout the building consists of T8 and T12 fluorescent fixtures with some incandescent decorative fixtures in a few locations. The majority of the lighting fixtures are linear fluorescent strip lights. The strip lights do not provide adequate lighting for an office type environment. It is recommended that all of the lighting fixtures be removed and replaced with new LED lighting fixtures. The LED lighting fixtures will provide energy savings as well as reduced maintenance. Estimated interior lighting



Example of existing fluorescent strip lighting fixtures.

costs would be in the \$3.50-\$5.00 per square foot range. The existing parking lot lighting appears to be in good condition and operational. There may be a few fixtures that require lamp or ballast replacement. It is recommended that all of the parking lot lighting fixtures and pole remain and be reused.

Emergency Power Equipment

There currently is no emergency power electrical service for the building. If emergency power is required for any parts of the building, a new emergency generator and transfer switches will have to be added with the associated electrical distribution.

Fire Alarm System

The existing fire alarm system is a FCI zone system. The existing system is outdated and cannot be expanded. It is recommended that the fire alarm system be removed in it's entirety and be replaced with a new multiplexed addressable fire alarm system with new devices as required on the renovated floor plan. Estimated fire alarm system costs would be in the \$3.00-\$4.00 per square foot range.



Existing fire alarm system.