

Facility Report for Madison Public Library



Roof: The approximately 25,000 sq. foot roof of this structure is a rubber membrane on concrete style roof. Somewhere beneath the rubber membrane the concrete has cracked, compromising the moisture barrier. This is evident by the leaks that occur throughout the second floor, most frequently on the west side of the second floor lobby. This is not necessarily, or even probably, the location of the leak on the roof. As water will seek its lowest point, the leak could be thousands of square feet away from where it manifests itself inside the building. This means that spot repairs are not an option, and that only total roof replacement will remedy the situation.

Front doors: The mechanisms that operate the front doors are original to the building. The pivots, switches, and other door equipment are obsolete and no longer readily obtainable as spare parts. The door repair vendor, therefore, is forced to scavenge for spare parts or fabricate suitable replacement parts. This is an expensive and cost-ineffective way to maintain the doors, as repairs are frequent and rarely “routine.” Only complete replacement of the door system will remedy the situation and allow the library to pursue warranty repairs or cost-effective maintenance.

Elevators: Many of the elevators still function on their original 1965 parts. There have been piece-meal replacements and upgrades, most notably to the center staff elevator at a cost of almost \$15,000. The elevators therefore pre-date the 1975 codes that applied to new elevator construction. To bring our elevators up to code would require expenditures around the mid six figures per elevator, for a total cost in the low seven figures. Our designated “freight” elevator does not truly live up to the name; large items often must often be carried up the stairs.

Heating: Heat is provided to the building by a circa 1965 boiler that operates far below the upper 90% efficiencies found in modern boilers, thereby adding to both maintenance and energy costs. The air handler’s heating coils are broken/inoperable and beyond repair. This is comparable to attempting to heat one’s home with candles after the furnace has broken.

Cooling: Cooling is provided by a circa 1995 chiller that utilizes standard rather than magnetic ball bearings. This means that rather than friction-free, high-efficiency performance, the chiller wastes energy combating friction, is extremely noisy, and requires expensive, frequent maintenance. The chiller is served by an increasingly corroded cooling tower that adds to the roof problem by leaking, at times profusely.

Air Handling: Air is supplied to the building by two air handlers whose ability to remove or add moisture to the air ceased operation some time in the mid 1980’s. This means that there is no humidity control for the facility, and no way to keep humidity levels at the prescribed 30% to 50% that is optimal for books. An unhealthy side effect

of this lack of humidity control is that in the summer months books and other paper materials are subject to mold proliferation.

Lighting: Primary lighting is supplied to the facility by hundreds of fluorescent fixtures that utilize T-12 fluorescent bulbs. T-12 bulbs have been superseded by T-8 and T-5 bulbs which are vastly more energy efficient. Operation of the facility is therefore unnecessarily expensive.

Electrical/Wiring: Several zones of the building are at or above recommended circuit capacity. Several zones will trip breakers by the simple use of such appliances as microwave ovens or space heaters. As a result, upgrades in equipment are often accompanied by expensive electrical modifications. The only alternative is a complete re-wiring of the building that will allow for future, predicted growth. In 1965 it was not envisioned that the library would be the public hub of computer use that it has become. This requires modern data cabling, yet the building's design ensures that re-cabling is an expensive and laborious process each time it is necessary.

Acoustic Ceiling Tile: The ceiling tile is an expensive form of 12" x 12" tile that hides the suspension grid. Any extensive work above the ceiling that requires removal of tile also requires the retention of a ceiling tile vendor who averages \$25 to \$50 per tile, an extremely expensive rate. Modern, exposed-grid 24" x 24" acoustic ceiling tile is a much more cost-effective tile type.

Asbestos: Many of the pipes are insulated with friable, asbestos based insulation. This means that each repair or modification job that involves those pipes not only employs a plumber or steam-fitter, but asbestos abatement professionals as well. This at least doubles the cost of each and every task involving those pipes. The floors are laid with 9" x 9" asbestos floor tiles and held in place by asbestos-laden mastic. Any floor modifications also require asbestos abatement professionals.

Security: Access to staff areas is controlled by an aging swipe card system that relies on nodes reporting to a centralized computer. Spare parts are rapidly disappearing, meaning that each repair requires scavenging or fabrication by an expensive security professional. Proximity sensors would be an ideal upgrade but would be extremely expensive to refit into this facility.

Windows: The weather stripping on the windows has completely deteriorated, with total square footage interior air loss comparable to leaving a set of double doors permanently open.

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