

Facilities Condition Assessment Program



Milwaukee/Michigan Parking Garage

May 2011



Introduction

Milwaukee/Michigan parking structure is located at 535 North Milwaukee Street. The parking structure is bounded by Michigan Avenue to the north, Milwaukee Street to the east and Clybourn Street to the south. It was constructed in 1956.

The parking structure contains six parking levels made accessible by an entrance/exit at Milwaukee Street. Milwaukee/Michigan parking structure comprises approximately 178,000 square feet of floor area and 500 parking spaces.

The overall condition of the Milwaukee/Michigan parking structure is good overall, as indicated by the Facility Condition Index rating of 0.03. Fiscal Year 2015 pertains to the most significant year of repairs and relates to paint finish application to the structure including lead paint abatement.

Procedures

The Facilities Condition Assessment Program (FCAP) is a 20 year-forecast of the property and analysis of the capital improvement expenditures. It involves two aspects: the physical analysis and financial analysis. The physical analysis includes an onsite inventory and condition assessment of components that will require capital improvement expenditures within the scope of the 20 year study. The financial analysis includes project scheduling/coordination and cost estimation of these projects.

FCAP includes information about the property components and the project schedules. The report serves as a long-term strategic tool to position property fiduciaries to make decisions to best serve its owners.

Component Inventory

The information within the Facility Condition Assessment Program is derived from:

- On-site, visual, non-invasive inspections
- Review of consultant's reports
- Facilities Development and Management historic data

The components inventoried and scheduled for capital improvement within this report meet the following criteria:

- City of Milwaukee responsibility
- Limited Useful Life (UL) expectancy
- Predictable Remaining Useful Life (RUL) expectancy
- Greater than \$25,000 minimum threshold (some exceptions apply)
- Requirements by local codes

*Note: The property lease was unavailable at the time of our report. Therefore, the report can not ascertain City of Milwaukee property ownership.



Categorization of Components

This report inventories the physical property components located at the facility. The inventoried property components are organized into one of the following categories:

- City of Milwaukee Responsibility
- O+M Responsibility
- Long Lived
- Others

City of Milwaukee Responsibility pertains to components that are funded by the City of Milwaukee capital expenditures. These components are the primary focus within this report and the coordinated capital budget.

O+M Responsibility pertains to those components that require maintenance or replacement less than the minimum capital threshold of \$25,000. These components are usually repaired or replaced from O+M funds.

Long Lived pertains to components that are funded through the City of Milwaukee capital program. However, these expenditures are projected beyond the 25 year scope of capital budget.

Others pertains to components that are repaired/replaced/maintained by an entity other than City of Milwaukee.

Component Inventory

The property components at Milwaukee/Michigan are categorized as follows:

City of Milwaukee Responsibility

Structural Components

- Concrete, Elevated, Membrane Application
- Concrete, Elevated, Surface Repairs
- Concrete, On-Grade
- Paint Finish Application

Services Components

- Electrical, Secondary Distribution
- Electrical, Branch Circuits and Panels
- Elevators, Traction, Hoist and Controls
- Light Poles and Fixtures, 6th Floor
- Operators and Pay Stations

Finishes Components

- Doors, Metal
- Offices/Rest Rooms, Upgrade



Facilities Condition Assessment Program—Milwaukee/Michigan

- Ramp, Overhead Structures

O+M Responsibility

- Routine Diagnostics/Maintenance
- HVAC Units
- Boiler, Interim Repairs and Maintenance
- Roof Replacement, Elevator Penthouse

Long Lived

- Light Fixtures
- Elevator, Hydraulic, Cylinders

Others

- Fence
- Security System
- Annual Preventative Maintenance
- Split System, Security Office
- Paint Finishes, Touch-Up and Stairwells

Report Information

The written report includes a combination of information about the City of Milwaukee Responsibility components, including:

- Component Inventory
- Condition Assessment
- Photo-documentation

This information is intended to serve as a summary from the aggregation of in-house inspections, consultants reports, historic data, and the capital budget. In addition, projects funded for ADA compliance are included within the anticipated costs of capital projects.

Capital Budget

The capital budget for the property is included on two spreadsheets. The first spreadsheet contains the anticipated capital projects for years 2011 through 2023. The second spreadsheet contains the anticipated capital projects for years 2024 through 2036. Information on the spreadsheets includes:

- Component Name
- Quantity
- Units
- 2011 Unit Cost
- 2011 Replacement Cost
- Useful Life (UL)
- Remaining Useful Life (RUL)
- First Year Funds Requested



Component Name pertains to the element which is projected for capital improvement.

Quantity includes the measured amount of each component at the property.

Units pertains to the measurement used to determine quantity. The units within the report are as follows:

- LF = Linear Feet
- SF = Square Feet
- EA = Each
- LS = Lump Sum

2011 Unit Cost pertains to the estimated cost per unit measurement for capital improvement. These costs are derived from RS Means Cost Works, Marshall & Swift/Boeckh, AME, Inc., historic data, and other resources.

2011 Replacement Cost pertains to the estimated cost of the capital improvement project. It is derived by multiplying the *Quantity* by *2011 Unit Cost*.

Useful Life (UL) pertains to the time frame in years wherein a component is anticipated to remain functional provided it receive proper maintenance. UL is also referred to as Service Life.

Remaining Useful Life (RUL) pertains to the estimated service life remaining for any given component. It coincides with the anticipated year of the capital expenditure.

First Year Funds Requested pertains to the year in which the capital expenditure is anticipated.

Deferred Capital pertains to projects that have been identified for capital repairs but have yet to be completed. The aggregated summation of deferred maintenance projects corresponds to the FCI.

CRV Current Replacement Value is the insurance estimate for reconstruction of the facility in today's dollars.

FCI Facilities Condition Index is the relationship between the aggregated summation of deferred capital projects divided by the Current Replacement Value of the facility. This proportion provides a measure to analyze the condition of the property, compare with other properties, and cross reference with City of Milwaukee guidelines. The City of Milwaukee guidelines are as follows:

Rating	Industry
Good	0.0-0.099
Fair	0.10-0.20
Poor	>0.20

Limitations of Inspection

The inspection conducted by City of Milwaukee Facilities Development and Management Section and its representatives is limited to those components that are observed and identified by mere visual observation. Inspections conducted by the City of Milwaukee Facilities Development and Management Section does not include:

- (a) Any probing, boring, excavation, or other invasive means of property inspection
- (b) Testing for or identification of any hazardous materials in any form
- (c) Identification of construction, structural, design, or other defects that may violate local, state, international, or other building codes and/or regulations, or any kind
- (d) Identification of any defects that are not readily apparent by mere visual observation including, but not limited to structural defects, leaking pipes, foundational damage, and electrical wiring hazards or defects.



Concrete, Elevated

Milwaukee/Michigan comprises 135,000 square feet of elevated concrete parking and an additional 7,000 square feet of elevated floor ramps. The concrete parking contains a membrane, whereas the concrete ramps contain sealer application

The waterproof membrane and sealer protects solvents, liquids, etc. from penetrating into the concrete, thereby increasing the longevity of the elevated concrete structure.

The membrane application at Floors 5 and 6 is scheduled for replacement in 2011. Parking should plan for membrane replacement at Floors 2 through 4 by 2017. Subsequent membrane replacements should be anticipated every 15 years.

Elevated concrete surface repairs should be conducted in coordination with membrane replacement. Sealer should be applied to ramps at this time.

Photographs



Membrane floor with prior repairs

Concrete On-Grade

Milwaukee/Michigan comprises approximately 27,000 square feet of on-grade concrete at the lower level. The concrete is in fair condition with cracks were observed.

Parking should budget for partial replacement of on-grade concrete by 2018.

Photographs



On-grade concrete

Paint Finish Application

The structural steel frame, concrete walls, and EIFS at south all contain a paint finish application. The finish application is in fair overall condition. Isolated locations of rust are located throughout the garage.

The existing paint finish application requires lead abatement or encapsulation. Therefore, the initial paint finish application is projected at a higher cost. Subsequent paint finish applications are expected to be less costly.

The useful life of a paint finish application is up to 15 years. Parking should budget for the initial lead abatement paint finish application by 2015, and subsequent paint finish application by 2030. Johnson Controls , Inc. conducts touch paint finishes annually.

Photographs



Paint finish with rust

Electrical

Milwaukee/Michigan comprises two levels of electrical distribution: Secondary and Branch Circuits/Panels. The condition of these components is reported as good/fair.

The useful lives for the electrical systems is as follows: Secondary = 45 years, Branch Circuits/Panels = 25. The useful life is dependent upon function and environment.

Based on condition, parking should anticipate replacement of the Secondary Distributions and Branch Circuits/Panels 2021.

Photographs



Secondary distribution

Elevator, Traction

One elevator serves Milwaukee/Michigan parking structure. The useful life of traction elevators hoists and controls is up to 45 years. Parking should anticipate its upgrade by 2024.

Photographs



Elevator controls

Light Fixtures, Replacement

Milwaukee/Michigan contains approximately 145 light fixtures. The useful life of light fixtures is up to 35 years. Based on condition, Parking should fund light fixture replacement by 2021.

Photographs



Light fixture

Light Poles and Fixtures

Milwaukee/Michigan contains four light poles and fixtures at the 6th level. The useful life of light fixtures is up to 35 years. Based on condition, Parking should fund light fixture replacement by 2021.

Operators and Pay Stations

Milwaukee/Michigan contains:

Item	Quantity
Entrance Ticket Operator	1
Exit Ticket Operator	1
Gate Operators	2

The useful life of these components and operating systems is up to 12 years. Parking should anticipate it replacement by 2018 and 2030. Interim repairs/replacements and upgrade to individual components should be funded by O+M.

Photographs



Gate arm at exit



Doors, Replacement

Milwaukee/Michigan comprises 16 steel doors. The useful life of metal exterior doors is up to 35 years. Based on the varied conditions, Parking should anticipated phased replacement of 16 doors by 2020.

Photographs



Typical metal door

Rest Rooms/Offices, Upgrades

Milwaukee/Michigan comprises two lightly used offices/storage rooms, and two rest rooms. Interior renovations should be conducted every 30 years. Parking should budget for the next interior renovation by 2020.

Photographs



Typical rest room finishes

Ramps, Overhead Structures

Milwaukee/Michigan comprise four metal framed, fiber-glass roofed structures at the 6th floor (roof level). The useful life of these structures is up to 40 years. Parking should budget for their replacement by 2027. Interim repairs should be funded from O+M.

Photographs



Ramp/roof structure

**Milwaukee/Michigan
Parking Structure**

	Quantity	Units	2011 Unit Cost	2011 Captial Cost			20 Year Total Cost	First Year Funds Requested	Deferred Capital	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
					UL	RUL													
Structural Components																			
Concrete, Elevated, Membrane Application, 2nd-4th Floors	1	SF	\$246,000	\$246,000	15	6	\$289,000	2017	\$0							\$289,000			
Concrete, Elevated, Membrane Application, 5th-6th Floors	1	LS	\$176,000	\$176,000	15	0	\$438,000	2011	\$176,000	\$176,000									
Concrete, Elevated, Surface Repairs, 2nd-4th	1	LS	\$34,000	\$34,000	15	6	\$40,000	2017	\$0							\$40,000			
Concrete, Elevated, Surface Repairs, 5th-6th	1	LS	\$23,000	\$23,000	15	0	\$57,000	2011	\$23,000	\$23,000									
Concrete, On-Grade, Partial Replacement	1	LS	\$28,000	\$28,000	90+	7	\$78,000	2018	\$0								\$34,000		
Paint Finish Application, Lead Abatement	1	LS	\$1,100,000	\$1,100,000	15	4	\$1,224,000	2015	\$0				\$1,224,000						
Paint Finish Application, Subsequent	1	LS	\$190,000	\$190,000	15	19	\$315,000	2030	\$0										
Services Components																			
Electrical, Secondary Distribution	1	LS	\$85,000	\$85,000	45	10	\$111,000	2021	\$0										
Electrical, Branch Circuits and Panels	1	LS	\$50,000	\$50,000	25	10	\$138,000	2021	\$0										
Elevator, Traction, Hoist and Controls	1	EA	\$145,000	\$145,000	45	13	\$205,000	2024	\$0										
Light Fixtures, Replacement	145	EA	\$350	\$50,750	35	10	\$66,000	2021	\$0										
Light Poles and Fixtures, 6th Floor	4	EA	\$5,500	\$22,000	35	10	\$59,000	2021	\$0										
Operators and Pay Stations	1	EA	\$41,000	\$41,000	12	7	\$117,000	2018	\$0								\$49,000		
Finishes Components																			
Doors, Replacement, Phased	16	EA	\$2,100	\$33,600	35	9	\$43,000	2020	\$0										\$43,000
Offices/ Rest Rooms, Upgrade	1	LS	\$15,000	\$15,000	30	9	\$19,000	2020	\$0										\$19,000
Ramp Overhead Structures, 6th Floor	4	EA	\$13,000	\$52,000	40	16	\$80,000	2027	\$0										
Total 20 Year Cost							\$3,279,000	Total Annual Cost	\$199,000	\$0	\$0	\$0	\$1,224,000	\$0	\$329,000	\$83,000	\$0	\$62,000	
Notes									CRV	\$7,120,829	\$7,313,091	\$7,510,545	\$7,713,330	\$7,921,589	\$8,135,472	\$8,355,130	\$8,580,719	\$8,812,398	\$9,050,333
1) FY is Fiscal Year. FY is the calendar year.									FCI	0.03									
2) UL is Useful Life and RUL is Remaining Useful Life																			
3) The annual building materials inflation rate estimate is estimated at																			
4) Current Replacment Value (CRV) growth rate is estimated at																			

**Milwaukee/Michigan
Parking Structure**

	Quantity	Units	2011 Unit Cost	2011 Captial Cost	UL		20 Year Total Cost	First Year Funds Requested	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
					UL	RUL													
Structural Components																			
Concrete, Elevated, Membrane Application, 2nd-4th Floors	1	SF	\$246,000	\$246,000	15	6	\$289,000	2017											
Concrete, Elevated, Membrane Application, 5th-6th Floors	1	LS	\$176,000	\$176,000	15	0	\$438,000	2011						\$262,000					
Concrete, Elevated, Surface Repairs, 2nd-4th	1	LS	\$34,000	\$34,000	15	6	\$40,000	2017											
Concrete, Elevated, Surface Repairs, 5th-6th	1	LS	\$23,000	\$23,000	15	0	\$57,000	2011						\$34,000					
Concrete, On-Grade, Partial Replacement	1	LS	\$28,000	\$28,000	90+	7	\$78,000	2018								\$44,000			
Paint Finish Application, Lead Abatement	1	LS	\$1,100,000	\$1,100,000	15	4	\$1,224,000	2015											
Paint Finish Application, Subsequent	1	LS	\$190,000	\$190,000	15	19	\$315,000	2030										\$315,000	
Services Components																			
Electrical, Secondary Distribution	1	LS	\$85,000	\$85,000	45	10	\$111,000	2021	\$111,000										
Electrical, Branch Circuits and Panels	1	LS	\$50,000	\$50,000	25	10	\$138,000	2021	\$65,000				\$73,000						
Elevator, Traction, Hoist and Controls	1	EA	\$145,000	\$145,000	45	13	\$205,000	2024			\$205,000								
Light Fixtures, Replacement	145	EA	\$350	\$50,750	35	10	\$66,000	2021	\$66,000										
Light Poles and Fixtures, 6th Floor	4	EA	\$5,500	\$22,000	35	10	\$59,000	2021	\$29,000		\$30,000								
Operators and Pay Stations	1	EA	\$41,000	\$41,000	12	7	\$117,000	2018										\$68,000	
Finishes Components																			
Doors, Replacement, Phased	16	EA	\$2,100	\$33,600	35	9	\$43,000	2020											
Offices/ Rest Rooms, Upgrade	1	LS	\$15,000	\$15,000	30	9	\$19,000	2020											
Ramp Overhead Structures, 6th Floor	4	EA	\$13,000	\$52,000	40	16	\$80,000	2027							\$80,000				
Total 20 Year Cost							\$3,279,000	Total	\$271,000	\$0	\$30,000	\$205,000	\$73,000	\$296,000	\$80,000	\$44,000	\$0	\$383,000	\$0
								CRV	\$9,294,692	\$9,545,648	\$9,803,381	\$10,068,072	\$10,339,910	\$10,619,088	\$10,905,803	\$11,200,260	\$11,502,667	\$11,813,239	\$12,132,196
								FCI											

Notes
 1) FY is Fiscal Year. FY is the calendar year.
 2) UL is Useful Life and RUL is Remaining Useful Life
 3) The annual building materials inflation rate estimate is estimated at 2.70%
 4) Current Replacment Value (CRV) growth rate is estimated at 2.70%

Milwaukee/Michigan 20 Year Projected Capital Needs

