

Facilities Condition Assessment Program



1000 N. Water Parking Garage

May 2011



Facilities Condition Assessment Program—1000 N. Water

Introduction

1000 N. Water parking structure is located at 1000 North Water Street. The parking structure is bounded by State Street to the south, Water Street to the west, and Market Street to the east. The structure was developed in 1991.

The parking structure contains eight parking levels made accessible by entrances/exits at Market Street. 1000 N. Water parking structure comprises approximately 613,000 square feet of floor area and 1,493 parking spaces. The building atop 1000 N. Water is privately owned. Therefore, capital expenditure collaboration is required for certain components.

The overall condition of the 1000 North Water parking structure is good, as indicated by the Facility Condition Index rating of 0.01. The near term repairs at 1000 N. Water are nearly of equal magnitude.

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 1000 N. Water are categorized as follows:

City of Milwaukee Responsibility

Structural Components

- Concrete, Elevated, Partial Replacements
- Concrete, Elevated, Sealer Application
- Concrete, On-Grade
- Expansion Joints
- Paint Finish Application
- Pavement Markings
- Sealant, Joints

Services Components

- Carbon Monoxide Detection System, Replacement
- Carbon Monoxide Detection System, Upgrades
- Electrical, Primary Distribution
- Electrical, Secondary Distribution
- Electrical, Branch Circuits and Panels
- Elevators, Traction, Hoist and Controls



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- Exhaust Fans
- Fire Suppression System
- Fire Warning System
- Generator, Emergency
- Light Fixtures, Replacement
- Operators and Pay Stations
- Security System, Cameras Only

Facility Interior Finish Components

- Doors, Replacement
- Hallways, Market Street, Renovation

O+M Responsibility

- Elevator Penthouse, HVAC
- Paint Finishes, Touch-Up and Stairwells
- Routine Diagnostics/Maintenance
- HVAC Units, Hallways, Stairwells, Elevator Lobbies
- HVAC Units, Interim Repairs and Maintenance
- Pipes, Fire Suppression, Partial Replacements
- Waterproof Membrane (limited amounts)

Long Lived

- Fire Pump
- Façade, Exterior (including Windows)

Others

- Office Tower (Building Owner)

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



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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.



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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:

Condition	FCI Rating
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

1000 N. Water comprises 570,000 square feet of elevated floor slabs. The concrete is treated with a water sealer.

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

The sealer is scheduled for application in 2011.

The elevated structural slab exhibits very few areas of deterioration in the form of cracks.

The useful life of sealer application is up to three years. Parking should apply the sealer every six years beginning in 2011. In conjunction with sealer applications, parking should budget for partial replacements of elevated concrete floor slab.

Photographs



Elevated concrete floor slab at 8th level

Concrete On-Grade

1000 N. Water comprises approximately 43,000 square feet of on-grade concrete at the basement level parking. The concrete is in good condition with isolated areas of deterioration. Minor cracks were observed.

Parking should budget for partial replacement of on-grade concrete by 2022.

Expansion Joints, Replacement

1000 N. Water contains approximately 1,600 LF of expansion joints. The useful life of an expansion joint is 15 years. Parking should budget for expansion joint replacements by 2016 and again by 2031.

Photographs



Expansion joint

Paint Finish Application, Pipes

1000 N. Water contains a dry fire suppression sprinkler system that covers approximately 590,000 square feet of surface area. The pipes exhibit a consistent rust coat. Bare metal pipes exposed to uncontrolled atmospheric conditions have a useful life of up to 40 years.

Periodic paint finish applications can significantly increase the useful life of fire suppression pipes.

Parking should apply a paint finish application to the fire suppression system pipes by 2012 and again by 2027.

Photographs



Typical condition of sprinkler pipes

Pavement Markings

1000 N. Water contains approximately 1,500 parking stalls. Many pavement markings at the stalls exhibit deterioration.

The useful life of pavement markings is up to six years. Parking should conduct pavement marking application every six years beginning in 2011 in conjunction with sealer application.

Photographs



Worn pavement markings

Sealants, Joints

1000 N. Water contains a modular façade. Where module units come together, sealant (caulk) bridges the threshold. Sealant is also located at the perimeters of the windows.

The useful life of sealant is up to 15 years. The useful life is dependent greatly on exposure to UV-radiation. Therefore, isolated locations of accelerated sealant deterioration is likely. Based on this condition, partial sealant replacement is recommended.

Parking should conduct partial replacement of up to 5,000 linear feet of sealant every five years beginning by 2011.

Carbon Monoxide Detection System

The carbon monoxide detection system is in good condition at an age of seven years. Parking should anticipate system upgrades due to routine maintenance and technological upgrades by 2016. Replacement of the system is anticipated by 2026.

Electrical

1000 N. Water comprises three levels of electrical distribution: Primary, Secondary, Branch Circuits/Panels. The condition of these components is reported as fair/poor.

The useful lives for the electrical systems is as follows: Primary = 45 years, 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 Primary and Secondary distributions by 2031. Replacement of the Branch Circuits/Panels is anticipated by 2021.



Elevators, Traction

Four elevators serve 1000 N. Water parking. The useful life of traction elevators hoists and controls is up to 45 years. Parking should anticipate their upgrade by 2031.

Photographs



Elevator hoist and controls

Exhaust Fans, Motors

Eighteen exhaust fans serve the parking garage. The motors are 5HP have a useful life of up to 30 years. Parking should anticipate motor replacement by 2021. The housing unit and interim repairs are considered O+M expenditures.

Photographs



Typical exhaust fans

Fire Suppression System

The fire suppression sprinkler system covers approximately 590,000 square feet of floor area. These systems require routine maintenance to achieve a long useful life of 65+ years. Currently, the piping system does not contain a protective paint coating. Therefore, the useful life of this system is only projected at 40 years.

Without a paint finish application to the pipes, Parking should budget it the system replacement by 2028.

Fire Warning System

The fire warning system is comprised of a central alarm panel and various detection alarm devices. The useful life for this system is up to 25 years. Parking should anticipate its replacement by 2018.

Photographs

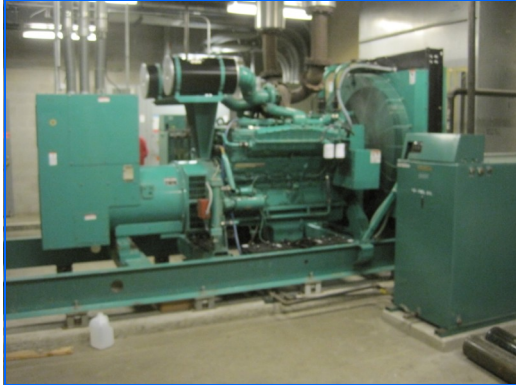


Fire warning system detection devices

Generator, Emergency

1000 N. Water Parking and Commercial space share an emergency generator that has a 750kVa capacity. The useful life of this component is up to 40 years. Parking should anticipate its replacement by 2027.

Photographs



Emergency generator

Light Fixtures, Replacement

1000 N. Water contains approximately 1,000 light fixtures. The useful life of light fixtures is up to 25 years. Based on condition, Parking should fund light fixture replacement by 2020.

Photographs



Light fixture

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Operators and Pay Stations

1000 N. Water contains:

Item	Quantity
Entrance Ticket Operator	5
Exit Ticket Operator	6
Gate Operators	11
Ticket Pay Station	2

The useful life of these components and operating systems is up to 12 years. Parking should anticipate its replacement by 2019 and 2031. Interim repairs/replacements and upgrade to individual components should be funded by O+M.

Security System, Cameras Only

1000 N. Water has 60 security cameras. Video recording devices are the property of the Commercial entity. The useful life of security cameras is up to 12 years. Parking should plan for security camera replacement by 2015 and 2027.

Photographs



Security camera

Doors, Replacement

1000 N. Water comprises 36 steel doors and 16 glass doors

The useful life of metal exterior doors is up to 35 years. Based on the varied conditions, Parking should anticipated phased replacement of 14 doors every six years beginning by 2018.

Photographs



Glass and metal door

Hallways, Market Street, Renovations

1000 N. Water contains two finished hallways off Market Street. Parking should budget for hallway renovation every 15 years beginning by 2028.

Photographs



Typical hallway finishes

1000 N. Water Parking Structure	Quantity	Units	2011 Unit Cost	2011 Captial Cost	UL	RUL	20 Year Total Cost	First Year Funds Requested	Deferred Capital	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Structural Components																			
Concrete, Elevated, Partial Replacements	1	LS	\$140,000	\$140,000	15	9	\$178,000	2020	\$0										\$178,000
Concrete, Elevated, Sealer Application	1	LS	\$280,000	\$280,000	6	0	\$1,446,000	2011	\$280,000	\$280,000						\$329,000			
Concrete, On-Grade Repairs	1	LS	\$40,000	\$40,000	90+	11	\$54,000	2022	\$0										
Expansion Joints, Replacement	1	LF	\$170,000	\$170,000	15	5	\$484,000	2016	\$0					\$194,000					
Paint Finish Application, Pipes	1	LS	\$210,000	\$210,000	15	1	\$498,000	2012	\$0		\$216,000								
Pavement Markings	1,500	EA	\$12	\$18,000	6	0	\$93,000	2011	\$18,000	\$18,000						\$21,000			
Sealant, Joints, Replacement, Phased	5,000	LF	\$9	\$45,000	15	0	\$233,000	2011	\$45,000	\$45,000						\$53,000			
Services Components																			
Carbon Monoxide Detection System, Replacement	1	LS	\$120,000	\$120,000	20	15	\$179,000	2026	\$0										
Carbon Monoxide Detection System, Upgrades	1	LS	\$75,000	\$75,000	10	5	\$86,000	2016	\$0					\$86,000					
Electrical, Primary Distribution	1	LS	\$100,000	\$100,000	45	20	\$170,000	2031	\$0										
Electrical, Secondary Distribution	1	LS	\$450,000	\$450,000	45	20	\$767,000	2031	\$0										
Electrical, Branch Circuits and Panels	1	LS	\$120,000	\$120,000	25	10	\$157,000	2021	\$0										
Elevators, Traction, Hoist and Controls	4	EA	\$190,000	\$760,000	45	20	\$1,295,000	2031	\$0										
Exhaust Fans	18	EA	\$12,000	\$216,000	30	10	\$282,000	2021	\$0										
Fire Supression System	590,000	SF	\$2	\$1,327,500	45	17	\$2,088,000	2028	\$0										
Fire Warning System	1	LS	\$185,000	\$185,000	25	7	\$223,000	2018	\$0							\$223,000			
Generator, Emergency	1	EA	\$175,000	\$175,000	40	16	\$268,000	2027	\$0										
Light Fixtures, Replacement	1,000	EA	\$260	\$260,000	25	9	\$330,000	2020	\$0										\$330,000
Operators and Pay Stations	1	EA	\$330,000	\$330,000	12	8	\$970,000	2019	\$0									\$408,000	
Security System, Cameras Only	60	EA	\$2,400	\$144,000	12	4	\$381,000	2015	\$0				\$160,000						
Interior Finishes Components																			
Doors, Replacement, Phased	14	EA	\$2,800	\$39,200	35	7	\$167,000	2018	\$0							\$47,000			
Hallways, Market Street, Renovation	1	LS	\$30,000	\$30,000	15	17	\$47,000	2028	\$0										
Total 20 Year Cost							\$10,396,000	Total Annual Cost		\$343,000	\$216,000	\$0	\$0	\$160,000	\$280,000	\$403,000	\$270,000	\$408,000	\$508,000
Notes								CRV		\$30,056,264	\$30,867,783	\$31,701,213	\$32,557,146	\$33,436,189	\$34,338,966	\$35,266,118	\$36,218,303	\$37,196,198	\$38,200,495
1) FY is Fiscal Year. FY is the calendar year.								FCI		0.01									
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%												

**1000 N. Water
Parking Structure**

	Quantity	Units	2011 Unit Cost	2011 Captial Cost	UL	RUL	20 Year Total Cost	First Year Funds Requested	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
Structural Components																				
Concrete, Elevated, Partial Replacements	1	LS	\$140,000	\$140,000	15	9	\$178,000	2020												
Concrete, Elevated, Sealer Application	1	LS	\$280,000	\$280,000	6	0	\$1,446,000	2011			\$385,000						\$452,000			
Concrete, On-Grade Repairs	1	LS	\$40,000	\$40,000	90+	11	\$54,000	2022		\$54,000										
Expansion Joints, Replacement	1	LF	\$170,000	\$170,000	15	5	\$484,000	2016											\$290,000	
Paint Finish Application, Pipes	1	LS	\$210,000	\$210,000	15	1	\$498,000	2012		\$282,000										
Pavement Markings	1,500	EA	\$12	\$18,000	6	0	\$93,000	2011			\$25,000						\$29,000			
Sealant, Joints, Replacement, Phased	5,000	LF	\$9	\$45,000	15	0	\$233,000	2011			\$62,000						\$73,000			
Services Components																				
Carbon Monoxide Detection System, Replacement	1	LS	\$120,000	\$120,000	20	15	\$179,000	2026						\$179,000						
Carbon Monoxide Detection System, Upgrades	1	LS	\$75,000	\$75,000	10	5	\$86,000	2016												
Electrical, Primary Distribution	1	LS	\$100,000	\$100,000	45	20	\$170,000	2031											\$170,000	
Electrical, Secondary Distribution	1	LS	\$450,000	\$450,000	45	20	\$767,000	2031											\$767,000	
Electrical, Branch Circuits and Panels	1	LS	\$120,000	\$120,000	25	10	\$157,000	2021	\$157,000											
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Exhaust Fans	18	EA	\$12,000	\$216,000	30	10	\$282,000	2021	\$282,000											
Fire Supression System	590,000	SF	\$2	\$1,327,500	45	17	\$2,088,000	2028								\$2,088,000				
Fire Warning System	1	LS	\$185,000	\$185,000	25	7	\$223,000	2018												
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Light Fixtures, Replacement	1,000	EA	\$260	\$260,000	25	9	\$330,000	2020												
Operators and Pay Stations	1	EA	\$330,000	\$330,000	12	8	\$970,000	2019											\$562,000	
Security System, Cameras Only	60	EA	\$2,400	\$144,000	12	4	\$381,000	2015							\$221,000					
Interior Finishes Components																				
Doors, Replacement, Phased	14	EA	\$2,800	\$39,200	35	7	\$167,000	2018				\$55,000						\$65,000		
Hallways, Market Street, Renovation	1	LS	\$30,000	\$30,000	15	17	\$47,000	2028							\$47,000					
Total 20 Year Cost							\$10,396,000	Total	\$439,000	\$336,000	\$472,000	\$55,000	\$0	\$179,000	\$489,000	\$2,135,000	\$554,000	\$65,000	\$3,084,000	
Notes								CRV	\$39,231,908	\$40,291,170	\$41,379,031	\$42,496,265	\$43,643,664	\$44,822,043	\$46,032,238	\$47,275,109	\$48,551,537	\$49,862,428	\$51,208,714	
1) FY is Fiscal Year. FY is the calendar year.								FCI												
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%													

1000 N. Water
20 Year Projected Capital Needs

