



MMSD GREEN INFRASTRUCTURE MAINTENANCE ANALYSIS & LESSONS LEARNED FOR MUNICIPALITIES

PROJECT OVERVIEW

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OVERVIEW



PROJECT OVERVIEW



SCOPE



GOALS & OBJECTIVES



MAINTENANCE STANDARDS



MUNICIPAL NEEDS & LESSONS LEARNED



PROJECT SUCCESS

SCOPE

- Develop GI Maintenance Standards
- Develop GI Lessons Learned Document & Maintenance Needs
- Planning, Design, Construction, Post Construction
- Interview Municipalities



PROJECT GOALS AND OBJECTIVES

- Develop & share technical, understandable, & practical GI maintenance standards
- Develop a clear understanding of municipal maintenance needs
- Gather, synthesize & share a compilation of GI lessons learned



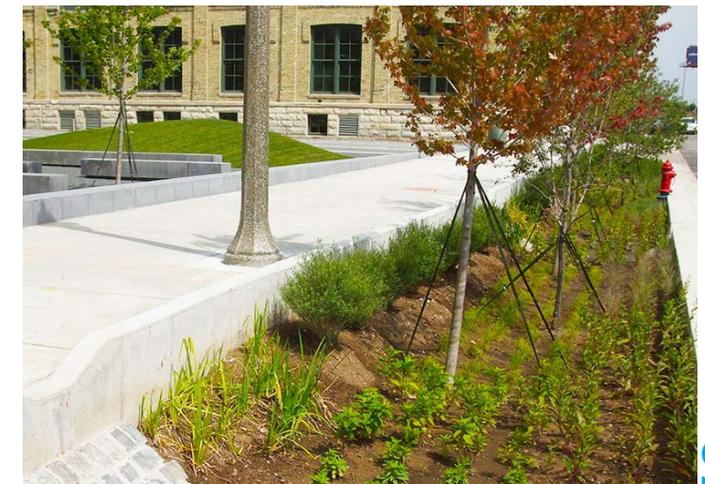
MAINTENANCE STANDARDS

- Research Existing O&M Standards & Guidance
 - DNR Technical Standards
 - The District's Sizing Tool
 - Research from Past Projects
 - Resources from other Regions



MAINTENANCE STANDARDS: GREEN INFRASTRUCTURE STRATEGIES

- 1) Bioswales
- 2) Green Roofs
- 3) Rain Gardens
- 4) Porous Pavement
- 5) Wetlands
- 6) Stormwater Trees
- 7) Rainwater Harvesting (Cisterns)
- 8) Native Landscaping
- 9) Soil Amendments



MAINTENANCE STANDARDS: PEER REVIEW COMMITTEE



Peer Reviewer Disciplines

Project Consultant (Technical and Coordination)

MMSD Project Manager

Ecologist

DNR

Milwaukee County

Landscape Architect

Municipal

Landscaper / Contractor

MAINTENANCE STANDARDS: SCHEDULE

DELIVERABLES	
Prepare Maintenance Standards	Duration of Project
Peer Review Committee Meeting	Week of April 22, 2019
Maintenance Standards Outline to MMSD	May 3, 2019
Maintenance Standards Draft to MMSD	May 30, 2019
Maintenance Standards Draft to TAT	June 18, 2019
Present Maintenance Standards Draft to TAT	June 20, 2019
TAT Review of Maintenance Standards Draft	June 18 – July 1, 2019
Complete Final Standards to MMSD	July 15, 2019

MUNICIPAL NEEDS & GI LESSONS LEARNED

1) Develop GI Maintenance Needs Assessment

- Develop and Distribute Initial Maintenance Survey to Municipal Representatives
- Interview Participating Municipalities

2) Develop Green Infrastructure Lessons Learned Document

- Collect information on past successes and problems



MUNICIPAL NEEDS & GI LESSONS LEARNED: MUNICIPALITIES & ENTITIES



- 20 GI Municipalities
- Milwaukee County
- Milwaukee County Zoo
- Miller Park
- State Fair Park
- UW-Milwaukee

MUNICIPAL NEEDS & GI LESSONS LEARNED: SCHEDULE

DELIVERABLES	
Conduct Online Survey	June 3 – June 21, 2019
Prepare Online Survey Report	June 21 – July 15, 2019
Interviews with Municipalities	June 24 – September 20, 2019
Lessons Learned Outline to MMSD	July 15, 2019
Conclude Interviews with Municipalities	September 20, 2019
Lessons Learned Draft to MMSD	October 15, 2019
Maintenance Needs Report to MMSD	October 15, 2019
Final Reports to MMSD	November 18, 2019

PROJECT SUCCESS

User-friendly and Usable Document

Technical Standards for Contracts Bid Documents

Develop Baseline for GI Maintenance Needs

Further Develop Existing and Future MMSD Programs

Questions?

Thank you!

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MAINTENANCE ANALYSIS & LESSONS LEARNED