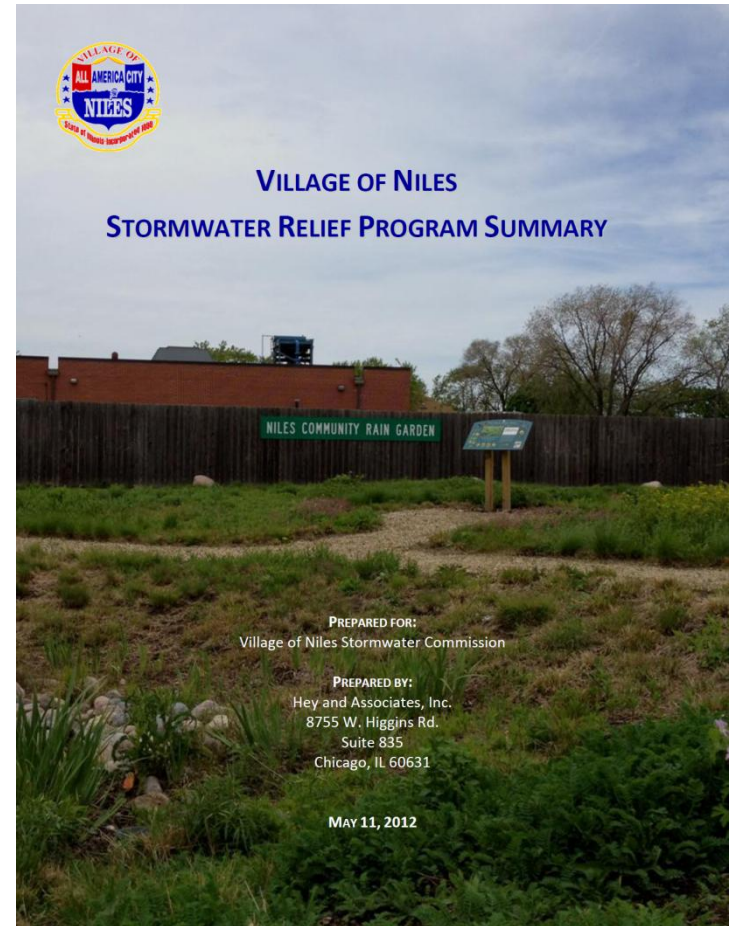


Niles Stormwater Relief Program

Cleveland Relief Storm Sewer

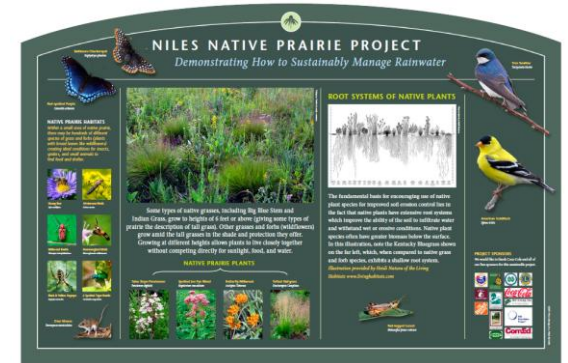
Nov. 18, 2014



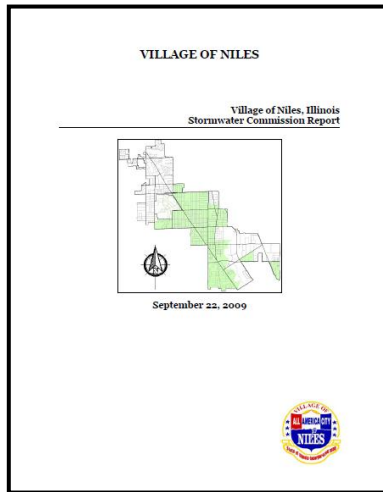
2009 Stormwater Commission Report

Recommendations

- Develop Homeowner Education Program
- Village Operations
- Village Capital Programs
- Village Ordinance Amendments
- Improvements on Key Large Parcels



Rain Garden Signage



Parcel Improvements

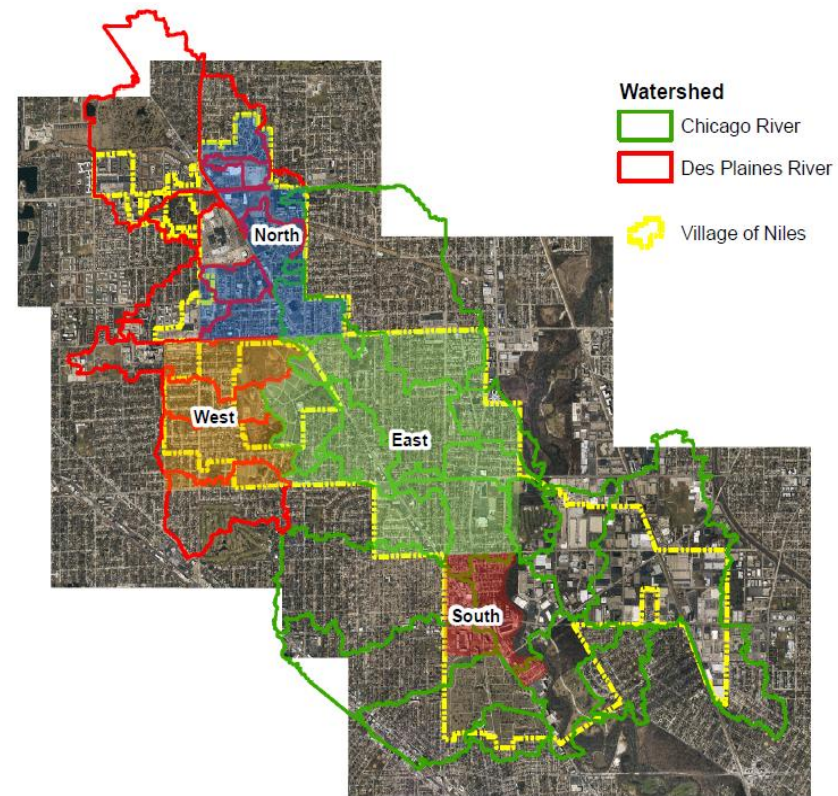


Cable Channel 6 Homeowner Education



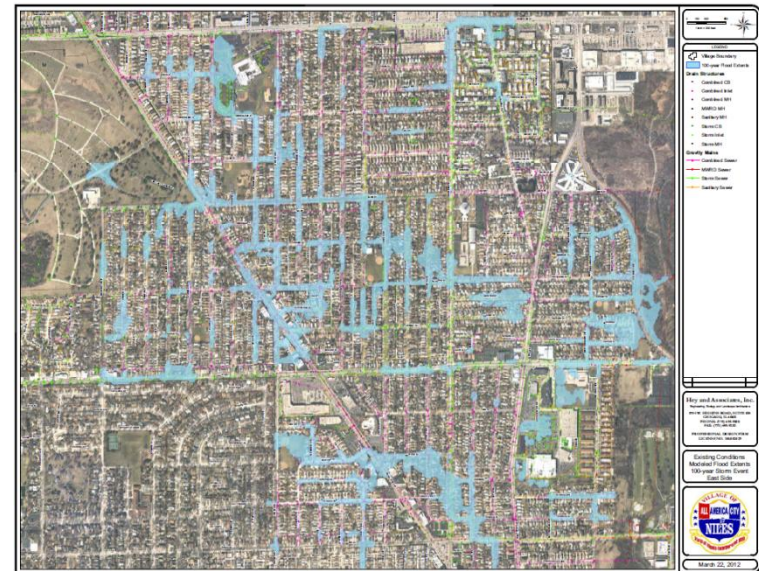
Sewer Analysis

- Reviewed historical flooding and complaint files
- Conducted extensive field work
- Utilized state-of-the-art XP-SWMM model for both sewer flow and overland flooding



Sewer Analysis

- Evaluated 2-, 5-, 10-, 25-, 50- and 100-year storm events
- Sewer performance consistent with observed flooding during recent storm events
- Prepared exhibits (North, South, East, West) depicting overland flooding risk



Engineering Analyses

- **Diagnosed each significant problem area**
 - Overland flooding and basement backups
 - Causes (overland flow to depressions, low pipe capacity, etc.)
- **Identified and Screened Potential Solutions with Commission**
 - Pipe Capacity
 - Stormwater Storage
 - Improve overland flow route
- **Prioritized Solutions**
- **Established Tier 1 based on allocated funding**

Stormwater Relief Program

Regulatory Program

- Niles Ordinance
- County Ordinances
- State/Federal Regulations

Maintenance and Monitoring

- Slip lining
- Catch basin cleaning
- Flow monitoring

Village of Niles
Stormwater Relief Program

Capital Improvements

- Tier 1 Projects
- Tier 2 Projects
- Small Projects

Flood Control Assistance

- Flood control systems
- Floodproofing

Regulatory Program

- **Niles' Stormwater Ordinance dovetails with County Watershed Management Ordinance (WMO)**
- **Performance Requirements**
 - Runoff Management
 - Detention required for developments impacting over 15,000 square feet
- **21 projects have applied for Village of Niles Stormwater Permits since 2011**

Maintenance and Monitoring

Slip lining sewers

Continue slip lining program. Focus on pipes with highest rehabilitation needs. Preemptive lining is not a priority at this time.



Sewer inspection

Continue sewer identification and inspection program. Video pipes and inspect sanitary manholes in problem areas.



Maintenance and Monitoring

Smoke Testing

Conduct smoke testing for key subareas experiencing highest sanitary sewer backups.



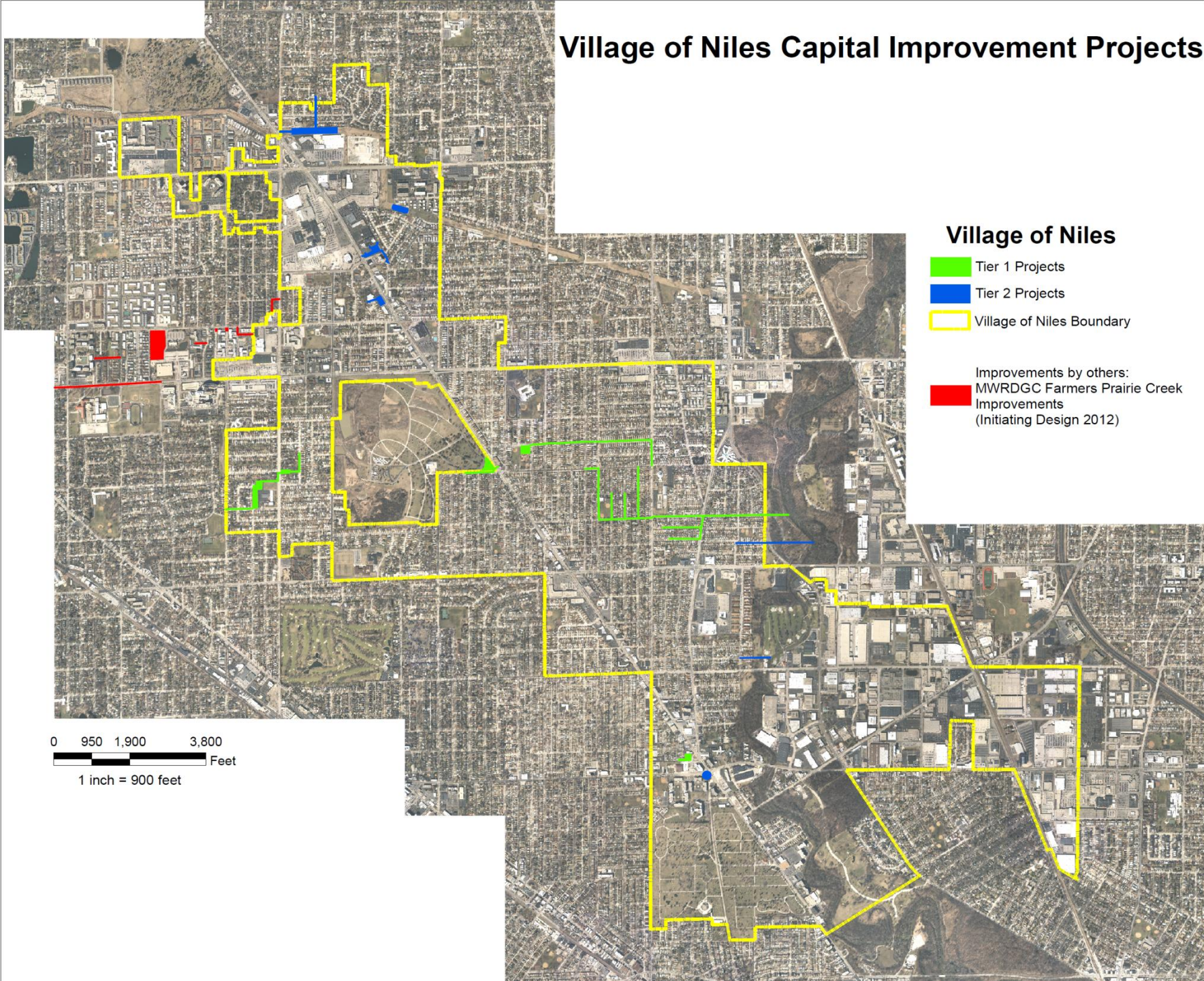
Village of Niles Capital Improvement Projects

Village of Niles

-  Tier 1 Projects
-  Tier 2 Projects
-  Village of Niles Boundary

Improvements by others:
 MWRDGC Farmers Prairie Creek
Improvements
(Initiating Design 2012)

0 950 1,900 3,800
Feet
1 inch = 900 feet



Tier 1 Capital Improvements

Alternative	Description
Cleveland Relief Sewer	Cleveland Relief Sewer with connections into Grennan Heights, Keeney and Monroe
Lee Street Relief Sewer and Storage	Provide storage facility and storm sewer improvements at Milwaukee / Main. Provide storage facility and storm sewer improvements at Lee / Ottawa. Improve Lee St. combined sewer reach.
West Side Storage Basin	Construction of detention basins and new sewers at Our Lady of Ransom and Greenwood Park
Niles IGIG Bioinfiltration Basin	Bioinfiltration basin near Milwaukee Ave. and Touhy Ave.



Stormwater Relief Basins



Maryhill Basin



Our Lady of Ransom Basin

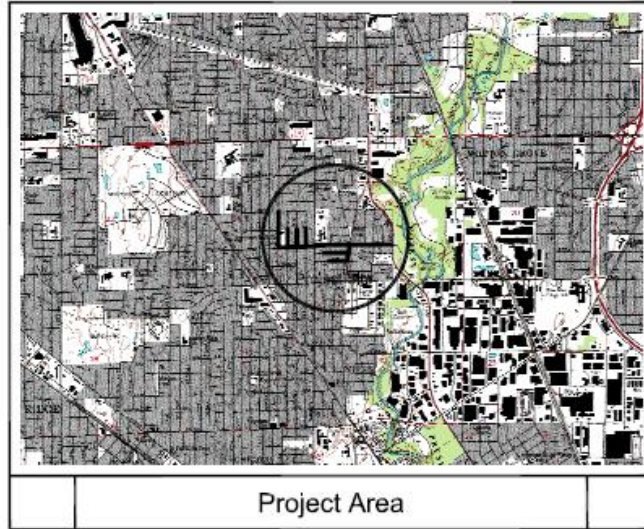
Niles IGG Bioinfiltration Basin



Stormwater Commission
Village of Niles, Illinois

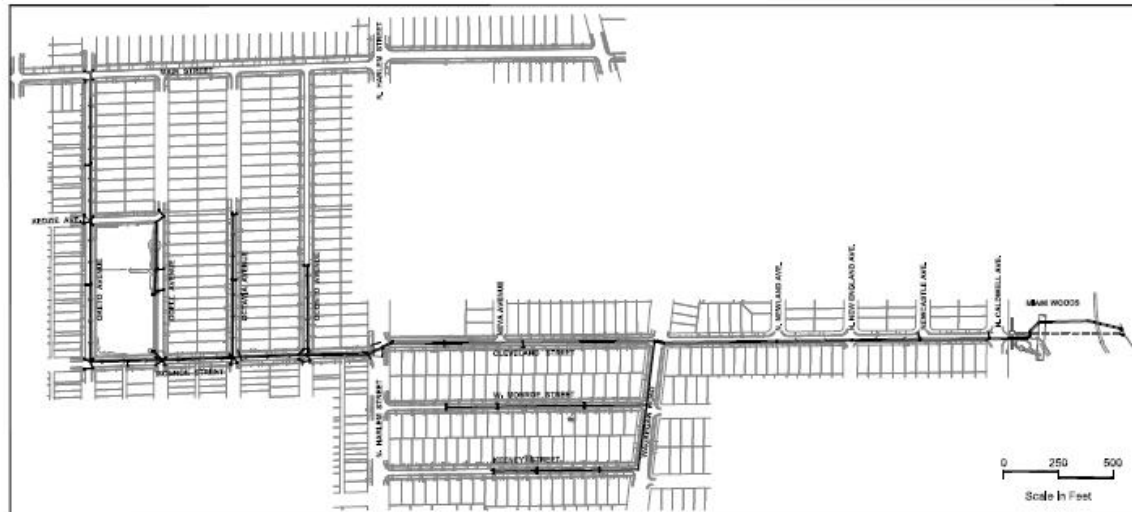
Hey and Associates, Inc.

Cleveland Relief Storm Sewer

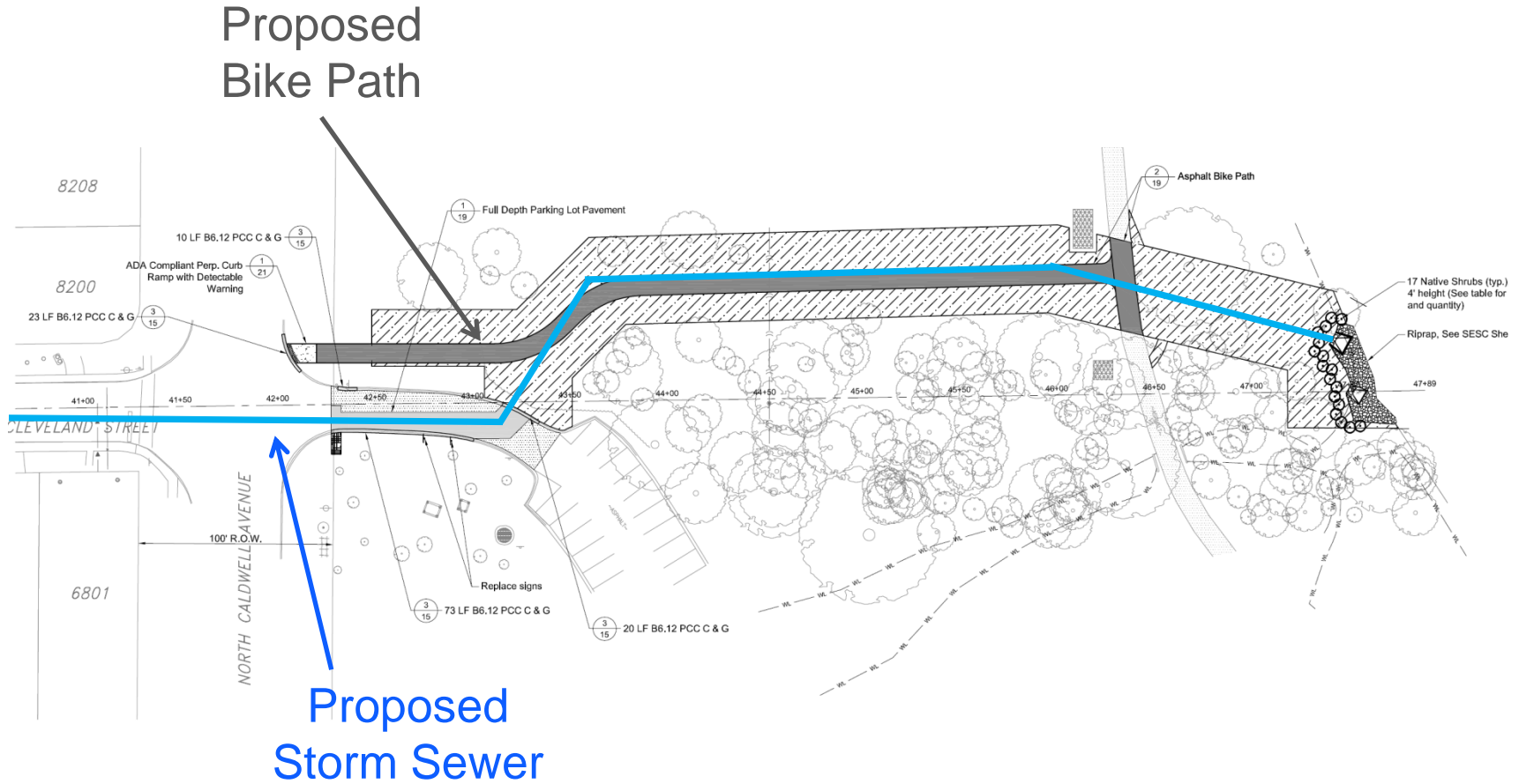


Cleveland Avenue Relief Sewer Project Summary (10,600 feet of Sewer Improvements)

1. 72-inch Storm Sewers at Miami Woods.
2. 12-inch, 15-inch, and 72-inch Storm Sewers on Cleveland Street.
3. 12-inch, 15-inch, 18-inch, 54-inch, 60-inch, and 66-inch Storm Sewers on Monroe Street (b/w Glute and Harlem).
4. 24-inch and 30-inch Storm Sewers on Waukegan Road.
5. 15-inch, 18-inch, and 24-inch Storm Sewers on Keeney Road.
6. 15-inch, 18-inch, and 24-inch Storm Sewers on Monroe Street (b/w Harlem and Waukegan).
7. 12-inch, 15-inch, and 36-inch Storm Sewers on Oconto Avenue.
8. 15-inch and 24-inch Storm Sewers on Octavia Avenue.
9. 12-inch, 15-inch, 18-inch, and 24-inch Storm Sewers on Odell Avenue.
10. 12-inch, 15-inch, 30-inch, and 36-inch Storm Sewers on Oketo Avenue.



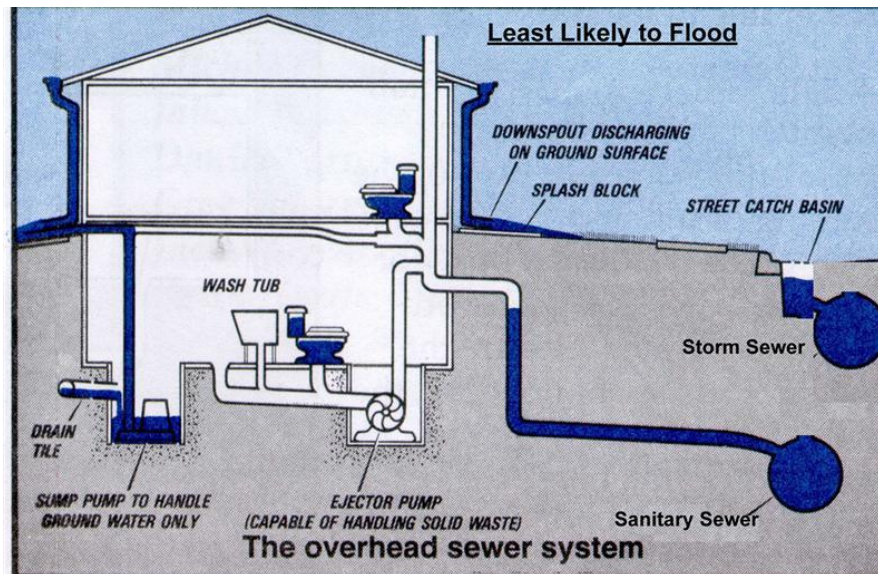
Cleveland Relief Storm Sewer



Flood Control Assistance

Flood control systems

1. Overhead sewer or backflow prevention valve installation.
2. 50/50 cost share with maximum benefit of \$4,000.



Flood Control Assistance

Floodproofing

1. Dry floodproofing of buildings.
2. 50/50 cost share with maximum benefit of \$4,000.



Questions and Answers