Kenilworth Green Streets Initiative

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Bleck Engineering
Kenilworth Overview
• Residential basement
• Intersection/street
• Overflow of Skokie Ditch
Kenilworth 2023

• 10-yr capital improvement program aimed at improving Village’s infrastructure
  • Reduce surcharge or sanitary sewers into basements, streets and Lake Michigan due to flooding
  • Improve water distribution system
• 2010 Study by HLR recommends green infrastructure to decrease surcharging of interceptor and set the stage for an eventual outfall.
HLR Study Original Design
Design Objectives

• Allow surcharge, but no flooding for the 10-year storm
• Contain runoff inside the curb line for the 100-year storm
• Allow for potential future permitting of outfall into Lake Michigan
• Analyze cost and feasibility of sustainable design features, including coordination with permitting agencies
• Attempt to reduce pipe size by incorporating green infrastructure
Design Direction

Pavement Edge Treatment

Permeable Pavement System

Swales

Rain Gardens
100-Year Storm Model Results (B&W)
Resident Concerns

• Aesthetics
• Tree Preservation
• Depth of swales
• Inundation Duration
KW2023 Information

The Kenilworth 2023 Green Streets Program is aimed at reducing flooding throughout the Village through the use of green infrastructure. We will post updates to the project on this page, however, please visit the Kenilworth 2023 website for more information.

To stay current with project updates, please subscribe to the Kenilworth Contact and by texting the term “green streets” to 781-728-9642.

Project Information

- Cumberland, Roslyn, Melrose Updated Plan Set 11/03/15
- Kenilworth Green Streets Informational Brochure

To purchase a set of plans via email, please click here. To order a plan set by phone Reproduction and Supplies at 847-387-7440.
November 2012 – Nov 2015

Outreach Efforts

- E-Newsletter: 26
- Village President's Newsletter: 2
- Public Works and Board Meetings: 8
- Neighborhood "Town Hall" Meetings: 20
- Resident Specific Outreach: 3
- Ind. Resident Meetings: 6
- Brochures: 4

[Pie chart showing the distribution of outreach efforts]
Outreach Results, design selection May 2015

- Pavers
- Porous Concrete
  - Permeable Asphalt
- Rain Gardens – Bio Swales (native grasses)
  - Porous Parkways (turf grass)
<table>
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<tr>
<th>Street</th>
<th>No</th>
<th>Species</th>
<th>Size</th>
<th>Impact</th>
<th>Type</th>
<th>Notes</th>
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<td>OPTION 1 &amp; 2</td>
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<td></td>
<td></td>
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<td>White oak</td>
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<td>Move Bl area further west? Root prune, air spade.</td>
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<td>Elm</td>
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<td>3</td>
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<td>Root prune as needed.</td>
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<tr>
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<tr>
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<td>White oak</td>
<td>15</td>
<td>1</td>
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<td>Root prune, air spade.</td>
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<tr>
<td>Melrose</td>
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<td>Sugar maple</td>
<td>25</td>
<td>1</td>
<td>R, ES</td>
<td>(Rocklin side) Root prune, air spade.</td>
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</table>
Timing

• Bid Opening 1/18/16 (0.86mi project length)
• Awarded Contract to Berger $5.8 (MWRD Grant $1.2)
• Start of Construction 4/1/16
• Phase 1 Paving 7/8/16
• Phase 2 Paving 9/9/16
• Phase 3 Paving 11/21/16
Install Fabric
Permeable subbase
(multiple lifts)
Porous Parkways
aggregate
Porous Parkways
amended soil
Curb
Paving
Final Lift
Sod
Lessons Learned

- Utility Conflicts
- Paving Equipment
Lessons Learned

• Sand Seams
Lessons Learned

- Stone type
- Weather / Temperature
- Base Course vs. Curb
- Mix Design
- Moisture Content
Lessons Learned
Lessons Learned

• Extent of amended soil
Lessons Learned

• Resident Involvement / Support Critical

Kenilworth's Green Streets Program

Welcome to Your New Green Street

We are happy to introduce you to your new green street. Unlike a traditional roadway, your street is a complex system that looks like a normal street but is capable of holding thousands of gallons of storm water underneath the surface.

In order for this new, complex system to work, the road must be well taken care of. The Village is asking for your help in caring for your new roads. Together we can ensure flooding relief is maintained in the area.

Clean Road = Less Flooding

The new porous asphalt roads function by allowing water to flow through them. This is achieved by eliminating the smaller sized aggregate that can be found in normal asphalt, and using a washed-stone base. The absence of smaller stones in the base and asphalt mix creates space for water to flow vertically through the street into an underground storm sewer. If these spaces become clogged, the system will not function as designed, and flooding may occur. The Village will vacuum your street as needed to remove debris, but your help is needed to ensure a long road life.

Questions About the Project?

Please contact Village Hall at 847-251-1666 for more information regarding this project, or submit your questions to EW2023@kenilworthill.org

Village of Kenilworth
419 Richmond Road
Kenilworth, IL 60043
(P) 847-251-1666

September 2016
Lessons Learned

• Ongoing Education Required
Lessons Learned

• Intersections - raffling
• Continue Observation
Questions?
4th Lift