

WILLOW ROAD STORMWATER RELIEF TUNNEL – PROJECT SUMMARY

What is the proposed project?

- Construction of an 8-foot diameter storm sewer underneath Willow Road from approximately Glendale Avenue to Lake Michigan, a distance of some 7,900 feet.
- Approximately 3,800 feet would be constructed by tunneling, the remainder by open cut methods.
- Construction of additional storm sewer connected to the tunnel to provide relief to 5 drainage basins affected by frequent and/or severe stormwater flooding.
- Construction of a structure to address water quality at the Lake outlet
- Construction of an outlet structure to control water velocity and prevent erosion.

Why is the tunnel project being considered?

- Winnetka suffered severe flooding in 2008, and again in 2011, and has engaged Christopher B. Burke Engineering, Ltd. (CBBEL) to develop possible improvements to reduce flooding of certain areas of the Village.
- Multiple scenarios involving detention were evaluated, however detention would be located on various open-space parcels owned by the Winnetka Park District, New Trier High School, the Winnetka School District, and the Cook County Forest Preserve.
- The cost and uncertainty involved in obtaining permission to use these parcels is significant, and renders feasibility in doubt.
- The proposed tunnel project provides more effective relief, less uncertainty, and can be constructed at a lower cost to provide 100-year relief.

What are the benefits of the project?

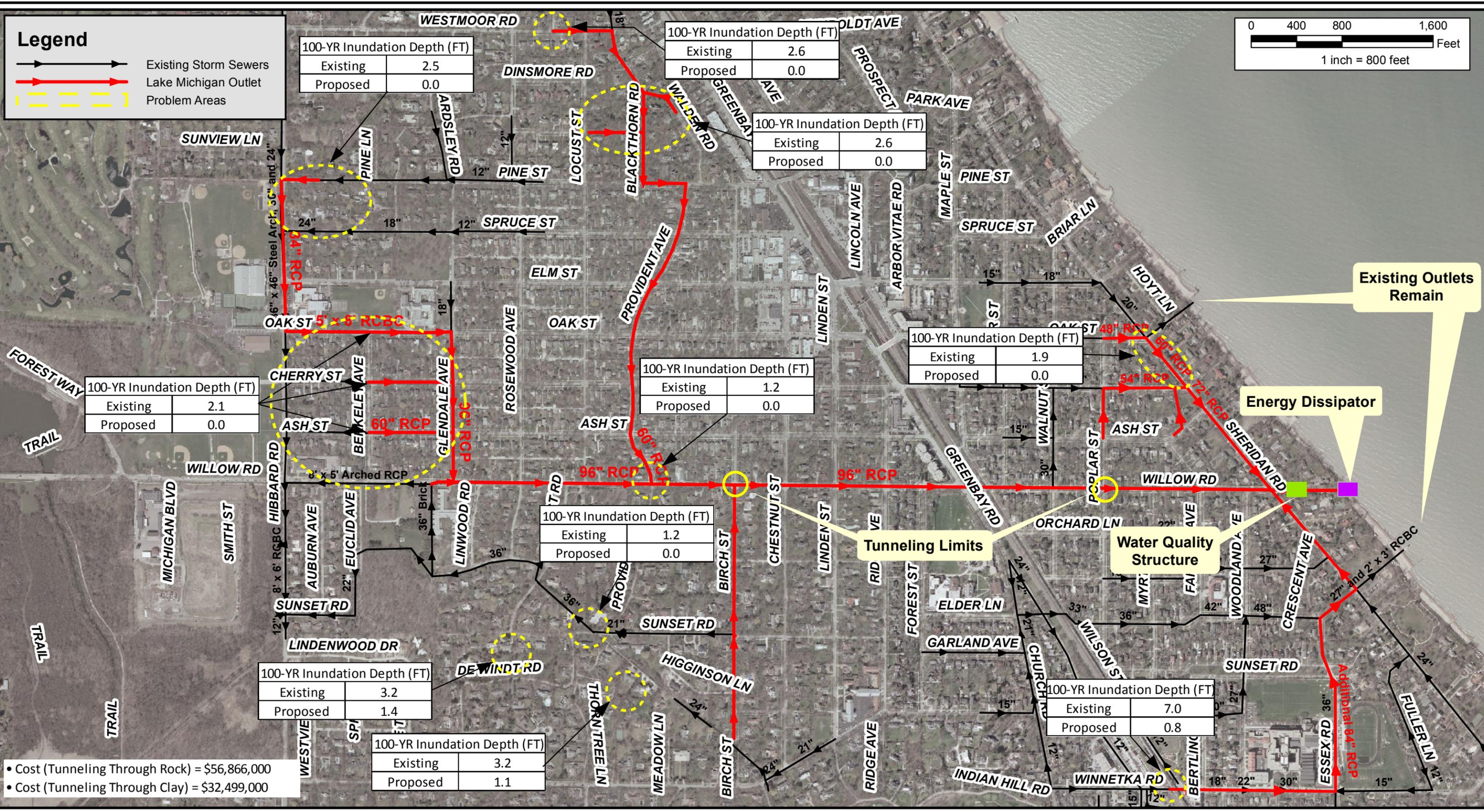
- Project as designed will provide flood damage relief from the 100-year rainfall event for 5 different drainage areas across the Village

What are the challenges involved?

- There are multiple regulatory agencies with jurisdiction over Lake Michigan
 - Metropolitan Water Reclamation District
 - Illinois EPA
 - Illinois DNR
 - US Army Corps of Engineers
- The proposed route runs beneath the Union Pacific Railroad tracks at Willow Road
- Portions of Willow Road are under IDOT's jurisdiction
- Water quality requirements are unknown at this time
- Hydrodynamic forces at the Lake outlet are significant, and a suitable structure needs to be designed to dissipate them.

What will the project cost and how will the project be financed?

- CBBEL has estimated a project cost of \$32.5 million (\$56.8 million if tunneling must be done through rock).
- The project will likely be funded through a combination of reserves and debt. Debt repayment likely through property taxes or a stormwater utility.



 <p>Christopher B. Burke Engineering, Ltd. 9575 West Higgins Road, Suite 600 Rosemont, IL 60018 (847) 823-0500 / FAX (847) 823-0520</p>	<p>CLIENT</p> <p>Village of Winnetka</p>	<p>PROJECT NO.</p> <p>08-0671</p>	<p>DSGN.</p> <p>MJB</p> <p>CHKD.</p>
	<p>TITLE</p> <p>Lake Michigan Outlet - 100 Year Protection</p>		<p>DATE</p> <p>9/20/11</p>