

VILLAGE OF LA GRANGE  
SPECIAL MEETING OF THE  
VILLAGE BOARD OF TRUSTEES

Village Hall Auditorium  
53 South La Grange Road  
La Grange, IL 60525

Monday, January 31, 2011 - 7:30 p.m.

AGENDA

1. CALL TO ORDER AND ROLL CALL
2. SEWER IMPROVEMENT WORKSHOP
  - A. Overview  
*Liz Asperger, Village President*
  - B. [Presentation of the following study findings and recommendations concerning potential improvements to the Village's sewer system:](#)

Macroscopic Projects

(For Studies and Reports Visit the Home Page)

- i) Feasibility study of the Maple Avenue Relief Sewer (MARS) (central drainage basin);
- ii) Feasibility study of the Ogden Avenue Relief Sewer (OARS) (northern drainage basin);
- iii) Planning study of the drainage basin south of 47<sup>th</sup> Street (southern drainage basin);

Neighborhood Projects

- iv) Poplar Place Drainage Investigation
- v) Elm Avenue and Sunset Avenue Intersection Drainage Investigation
- vi) Mason Woods Subdivision Sewer Investigation  
*Robert Pilipiszyn, Village Manager*  
*Ryan Gillingham, Director of Public Works*  
*Tom Heuer, Consulting Engineer*

C. Discussion

*Village Board, Village Staff and Consultant*

D. Village Board Consensus and Direction to Village Staff

*Liz Asperger, Village President*

3. ADJOURNMENT

Individuals with disabilities and who require certain accommodations to participate at this meeting are requested to contact the ADA Coordinator at (708) 579-2315 to allow the Village to make reasonable accommodations.

VILLAGE OF LA GRANGE  
Administrative Offices

**EXECUTIVE COMMITTEE REPORT**

TO: Village President, Village Clerk,  
Board of Trustees, and Village Attorney

FROM: Robert J. Pilipiszyn, Village Manager  
Ryan Gillingham, Director of Public Works

DATE: January 31, 2011

RE: **SEWER IMPROVEMENT WORKSHOP**

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The Village is actively engaged in a strategic evaluation of improvements to the Village sewer system. The Village operates a combined sewer system where storm water and sanitary sewage are combined into a single sewer pipe. Due to their limited size, during heavy rain events these combined sewers periodically reach capacity, which can result in flooded basements and streets. Most recently, the limited capacity of the Village sewer system has been highlighted by several storm events during the summer of 2010.

While these recent storm events have overwhelmed the Village's sewer system, these issues and proposed solutions have been discussed for many years prior. Starting in the 1970's in response to system wide capacity issues for the region, the Metropolitan Water Reclamation District (MWRD) constructed the "deep tunnel" to reduce the number of combined sewer overflows into local waterways. At the time of construction of the "deep tunnel" that serves La Grange, access points were provided to this system for future connection of relief sewers to add capacity to the existing local combined sewer system. Heuer and Associates was instrumental at the time in advocating for these connection points and the future relief sewers that were envisioned to serve the Village. The advancement of these projects has been slow since they were first conceived primarily based on the prioritization of scarce resources over time.

Most recently, the Village Board identified and has committed significant financial and staff resources towards the strategic priority of sewer improvement. Several preliminary engineering studies were authorized to assess the feasibility of several sewer improvement projects, determine the anticipated benefits derived by their implementation, and estimate the cost of construction of these projects. Due to the number and overall cost of these sewer projects and a limited pool of available resources, we feel it is appropriate at this time to discuss and fully understand the consultant's findings, opinions and recommendations on these reports. Additionally, a discussion regarding the prioritization of these projects will be beneficial in advance of the capital improvement budget discussion next week. We have framed the workshop accordingly.

The potential sewer improvement projects have been divided into regional or neighborhood issues based on whether the problem is systematic throughout an entire drainage basin or localized to a specific area. The order of the presentation and brief discussion below will be as follows:

#### Regional Relief Sewers

1. Maple Avenue Relief Sewer (MARS) Drainage Study
2. Ogden Avenue Relief Sewer (OARS) Drainage Study
3. South of 47<sup>th</sup> Street Drainage Study

#### Neighborhood Drainage Issues

1. Poplar Place Drainage Investigation
2. Sunset and Elm Drainage Investigation
3. Mason Woods Area Sewer Project

#### **Maple Avenue Relief Sewer**

The MARS project involves the construction of a relief sewer along Maple Avenue from Bluff Avenue to Peck Avenue to serve the central drainage basin of the Village, which is roughly 560 acres. Once MARS is completed the wet weather drainage from approximately 240 acres south of Maple Avenue will be intercepted by the Maple Avenue Relief Sewer and will be redirected to go directly into the deep tunnel. The preliminary engineering study indicated that the existing combination sewer system serving this area has the capacity to accommodate the one-year storm. The construction of MARS would dramatically improve the drainage characteristics of the area and the ability of the combination sewer to accommodate larger storms.

The initial stage of MARS has been constructed up to Bluff Avenue and portions of this sewer are currently operational. The estimated cost to complete construction of the remaining portion of MARS from Bluff Avenue to Peck Avenue is \$10.7 million. Due to funding limitations we recommend that the project be phased in order to provide additional sewer relief to this drainage basin, albeit at an incremental pace.

Please note in the cost assessment chart at the end of this memorandum of the relative costs of this project based on the properties and area served by the improvement. We recommend continuing with the MARS project prior to the other sewer relief projects for the following reasons:

1. The higher benefits derived from the project based on the ratio of cost to properties and area served by the improvement
2. Qualitatively, the central basin has historically been viewed by staff and consultants as the most problematic area for flooding concerns.
3. The MARS project is the most advanced in that the first stage of the project has been constructed and to bring other combined sewer areas “on-line” that would be tributary to MARS is relatively easy compared to either OARS or the area south of 47<sup>th</sup> Street.

Even with the construction of MARS or any of the other contemplated relief sewers, property owners should still be encouraged to install flood control on their properties such as overhead sewers since the sewer system would still have a finite capacity that could be exceeded in a severe rain event.

Due to the importance of this project and the significant investment contemplated by the Village, a peer review of this report was requested of Baxter & Woodman. This report has not yet been received; however they have indicated preliminarily that they believe overall the MARS project will function as intended to relieve drainage issues within the central basin.

### **Ogden Avenue Relief Sewer**

The OARS project involves the construction of a relief sewer along Ogden Avenue, Ashland Avenue and Bell Avenue to serve the northern drainage central drainage basin of the Village, which is roughly 170 acres. Once OARS is completed the wet weather drainage from approximately 82 acres will be redirected to go directly into the deep tunnel. The preliminary engineering study indicated that the existing combination sewer system serving this area has the capacity to accommodate the one-year storm. The construction of OARS would dramatically improve the drainage characteristics of the area and the ability of the combination sewer to accommodate larger storms. Additionally, a separate relief sewer serving the low lying area at the intersection of Ogden Avenue and the BNSF railroad is proposed as part of the report. We recommend that we provide this information to IDOT regarding the underpass sewer as Ogden Avenue is under their jurisdiction.

The estimated cost to complete construction of OARS is \$6.0 million. Similar to MARS, due to funding limitations we recommend that the project be phased. Since the first phase of the project involves the construction of a sewer adjacent to and within Gordon Park and the YMCA property, we recommend that the construction of the first stage of this project be coordinated with any improvements to these parcels. By doing so we would be limiting the disruption to the community and secondly, cost sharing initiatives could be explored.

We therefore recommend initiating the detailed design and construction of the first stage of the OARS project from Gordon Park to La Grange Road with the future redevelopment of the YMCA. As additional funds become available future segments of the project could be constructed. Finally any improvements will require coordination with IDOT as Ogden Avenue is under their jurisdiction.

Similar to MARS, the final peer review of this report being performed by Baxter & Woodman has not yet been received and will be forwarded to you upon receipt.

### **South of 47<sup>th</sup> Street Drainage Study**

On July 24 the Village experienced an unprecedented amount of rainfall (over six inches in a twelve hour period), which resulted in widespread flooding of streets, basements, rear yards and other low areas of the Village. While all neighborhoods were affected by the severe rain event, the area south of 47<sup>th</sup> Street between Brainard Avenue and La Grange Road, which traditionally has not experienced such wide spread flooding problems, was particularly impacted as well.

The Village commissioned Heuer and Associates to complete a drainage study of this area to (1) determine the cause of flooding (2) make recommendations for drainage improvements to the area and (3) provide cost estimates for the recommended improvements.

This report has yet to be completed by Heuer and Associates and will be forwarded to your review as soon as it is received and staff has had an opportunity to (1) evaluate the report to be sure that the scope of work is completed, (2) provide a summary of the findings, and (3) make recommendations for next steps.

### **Poplar Place Drainage Improvements**

The Poplar Place Drainage Investigation was initiated due to complaints received by residents related to street, rear yard and basement flooding occurring within the Poplar Place neighborhood, generally located north of Hillgrove Avenue, west of Edgewood Avenue, south of 41<sup>st</sup> Street, and east of Drexel Avenue. The goal of the study was to determine the cause of the flooding and make recommendations for improvements.

Heuer and Associates determined that the flooding caused within this neighborhood is mainly the result of a poorly planned and constructed sewer system built to serve this neighborhood. Heuer provides a recommendation to construct a new sewer that will drain to Edgewood Avenue at a cost of approximately \$928,000.

Similar to the MARS and OARS report, we have requested that Baxter & Woodman perform a peer review of this report to confirm the analysis and to assess other alternatives for drainage. Due to the importance of correcting this drainage issue coupled with the limited resources, we have designated \$450,000 in the draft FY2011-12 budget for this project. Our hope is that through further analysis a more economical solution can be found and implemented. If this is not possible, we would re-engage the Village Board on this project to determine the next steps.

### **Sunset and Elm Intersection Drainage Improvements**

The drainage investigation for this intersection was initiated last year due to complaints received by residents related to street flooding within the intersection of Sunset and Elm Avenues. The goal of the study was to determine the cause of the flooding and make recommendations for improvements.

The reasons for the flooding at the intersection could be summarized as follows:

1. The topography of this intersection is unique in that it is low lying depressional area. Stated another way, when the sewers are full there is no other way for the water to get out of the intersection.
2. The inlets within the intersection are prone to being clogged since leaves, twigs and other debris wash down the street and collect within the intersection.
3. The sewers downstream of the intersection within Cossitt Avenue do not have sufficient capacity to handle large rain events. This results in water backing up into the intersection.
4. The sewer segments serving the area do not have sufficient capacity to handle larger rain events due to insufficient sizing and sewer segments sloping in the wrong direction.

Based on the desire to immediately improve the drainage characteristics at this intersection, Heuer recommends reconstructing the sewers on Sunset between Elm and Cossitt at a cost of \$406,000. While these improvements would add capacity the localized sewer system for the immediate area, they do not address the underlying issue of inadequate capacity for the entire drainage basin. The MARS has been identified as solution for additional sewer capacity for the entire drainage basin. MARS would also have an impact on the drainage within this intersection by reducing the wet weather flows coming from sewers draining the neighborhoods to the south.

We recognize the topography of this intersection is unique, and that even if improvements are made to the drainage system at the intersection the sewer system is still limited by the capacity of the sewer at Cossitt Avenue. Therefore at this time we recommend the allocation of resources towards MARS as the more cost effective solution to address this localized drainage issue. The MARS project will not only benefit this intersection, but the entire drainage basin as well.

### **Mason Woods Area Sewer Project**

The drainage investigation for this area was initiated due to complaints received by the residents of 623 Mason that their sump pump system is unable to handle the amount of ground water draining into their system. Normally the issue of ground water management is a private property concern that is the responsibility of the property owner to address; however in this case a 30" storm sewer that is owned and maintained by the Village runs parallel to the house within a side yard easement. Based on the analysis by Heuer and Associates it appears that this sewer is (1) potentially draining into the private drain tile system from gaps within the sewer and (2) the plastic sewer pipe is failing and is in need of repair.

Given the pipe's current condition and that water from the pipe could be contributing to loading on the private drain tile system, we recommend that the pipe be scheduled for sewer lining. This method of sewer rehabilitation would provide a new structurally sufficient pipe inside the existing pipe without the disruption and cost associated with traditional open trench excavation methods. Heuer and Associates has estimated that the cost of lining this pipe segment is roughly \$55,000.

Funding in this amount has been designated in the draft FY2011-12 budget for this project.

**Cost-Benefit Analysis**

The following chart and data are being provided should the Village Board desire to compare the costs of this project against one another.

Project	Cost	Area (Acres)	Properties Directly Benefited	Cost / Number of Properties	Cost / Acre
MARS	\$10,600,000	560	1,800	\$5,900	\$18,900
OARS	\$6,000,000	170	614	\$9,800	\$35,300
S. of 47 <sup>th</sup>					
Poplar Place	\$928,000	6.30	16	\$58,000	\$147,300
Sunset and Elm	\$406,000	18.75	24	\$16,900	\$21,700

Please note, comparisons within the above chart may not be a fair assessment in some cases as the issues and project benefits are different. For example, comparing the MARS project against the Poplar Place project may not be an accurate reflection of the Village priorities as the drainage issues are different (inadequate capacity vs. lack of an effective drainage outlet.)

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Addressing flooding issues and sewer improvement is a high-order strategic priority for the Village Board. We are pleased to have the opportunity to dedicate an entire workshop discussion to consider and prioritize these sewer improvements. We look forward to the conversation with both the Village Board and the community.