

## **Welcome to the Engineering Solutions Team Annual Newsletter.**

Merry Christmas to all Engineering Solutions Team Clients, Family and Friends!

Engineering Solutions Team continues to move forward and completed some challenging project this year. A sincere thank you to the clients that have entrusted Engineering Solutions Team to assist with Improving their Infrastructure Problems. The Clients who work with Engineering Solutions Team on a regular basis are the foundation of the Company's success and their needs are the Top Priority to all at Engineering Solutions Team. Developing a Win-Win relationship with the Client is the Primary Goal of the Company.

In 2017; Engineering Solutions Team serviced 12 clients, including 4 new clients.

Services in 2017 differed a little bit from previous years' deliverables. The focus in 2017 mostly was surrounded in getting big projects built. Other engineering services delivered included easement negotiations, sewer studies, ADA transition plans, Metra station studies, and building improvement work.

This Newsletter presents a summary of our Year 2017.

If you have questions or seek assistance, please do not hesitate to contact us.

Engineering Solutions Team hopes that all enjoy a Merry Christmas and look forward to a Happy, Healthy and Successful New Year.

Thank you. Edward Kalina.

**2017 Assignments:** The following is a Brief Report of the Assignments Completed by **Engineering Solutions Team** in 2017:



### **WARWICK AVENUE STORM SEWER IMPROVEMENT PROJECT – PHASE 2/PHASE 3:**

Engineering Solutions Team completed the Design Plans and Contract Documents to construct the 36" diameter storm sewer under Warwick Avenue from Norfolk Street to Melrose Avenue and crossing under Chicago Avenue, over 3,000 lineal feet. Bids were opened on April 18, and 11 contractors submitted bids. Elanar Construction Company was awarded the contract with a low bid of \$950,000. Construction was to begin immediately in May and to be completed by November 2017. .... STEPPING BACK .....

During the Design Phase, it became apparent that the project corridor and the proposed storm sewer alignment was home to numerous utility crossings. The Design maintained the invert of the proposed 36" RCP at approximately 11' deep to stay below the utilities. The Utility Companies responded politely to Design Engineers' requests for information, but they know that few municipalities actually build 36" storm sewers today. When the Plan was complete and advertised - Engineering Solutions Team then received numerous communications and updates from the Utility Companies.

The advertised design plan was to auger the 36" RCP under Chicago Avenue. As the communications from the Utility Companies increased during April, it became more apparent that the Utility Companies were not confident of the exact location of their infrastructure. It was becoming clear that the project success would hinge on sneaking the proposed 36" RCP through the existing utilities. And, anyone who has installed pipe knows that it is really not possible to "sneak" a 36" RCP anywhere.



# Recent Solutions



Installing the Storm Sewer under Chicago Avenue.



Installing the Storm Sewer Under Warwick Avenue.



Chicago Avenue – Restored.

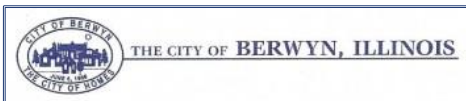


Restoring – Warwick Avenue.

The pre-construction meeting was conducted on April 25. At that meeting, because of the recent communications from Utilities, Elanar was requested to prepare a Change Order to install the pipe under Chicago Avenue by conventional trench and fill method, as opposed to the trenchless auger method. Chicago Avenue would be closed during construction of the storm sewer and again during construction of the new Chicago Avenue concrete pavement. Construction began on June 5, and the utility interferences were addressed as follows:

- ✚ T-Mobile and Zayo Communication relocated their fiber lines on the north side of Chicago Ave. in June.
- ✚ Elanar relocated various 8" sanitary sewers owned by FCWRD.
- ✚ AT&T relocated its fiber line located in the alley during July.
- ✚ Elanar was shut down for 1 week in July, while NICOR was forced to Cut & Cap its 4" high pressure main located on the south side of Chicago Avenue.
- ✚ Elanar relocated 12" water mains owned by the Village of Westmont.
- ✚ Field design change was required in July to avoid a COM ED duct bank located on the north side of Chicago Avenue, which was larger and deeper than anticipated by all.
- ✚ AT&T relocated its fiber line on North Warwick in August.
- ✚ NICOR re-established its 4" high pressure gas main on the south side of Chicago Avenue in September.

Completion of the new storm sewer was completed in September and correctly installed. Then; local drainage improvements were made, sidewalks were built, Chicago Avenue was reconstructed, Warwick Avenue was paved and landscaped. Final Inspection and Project Acceptance was conducted on November 9!



## Harlem Avenue Metra Station:

Engineering Solutions Team performed the Phase 1 Engineering Services for the City of Berwyn, to completely replace the platform lighting at the Harlem Avenue Metra Depot.



*The Harlem Avenue Metra Depot.*



## THE A.D.A. TRANSITION PLAN

**Engineering Solutions Team** completed the ADA Transition Plan for Public Sidewalks for the Village of Villa Park.



## **Fire House #3: Building and Site Rehabilitation:**

For several years the Fire House #3 suffered from poor drainage characteristics on several fronts. The deficiencies included: leaking roof, leaking windows, trapped drainage water behind the exterior walls, leaking foundation walls, and suspect underdrain systems. Situations culminated with major flooding after storm in November 2015 when Servpro was required to restore the building. The Village of Bolingbrook retained **The Engineering Solutions Team** to provide Complete A/E Services to correct these problems at Fire House #3.

### The Conditions and Deficiencies are summarized as follows:

- ❖ Outside infrastructure. Proper storm sewer system for this parcel was not in place. Further; lots from the north and east naturally drain through this parcel. Therefore; there is approximately 5.5 acres of properties that naturally drain through the Fire House #3 Lot. Also, the landscaping is established to direct the local drainage to the walls of the building. In summary, much storm water is directed toward Fire House #3 and there is no system in place to move that storm water away from the building. In summary, the storm water generally gathers to the building and sits there.
- ❖ The windows leak. The Brick Work allows storm water to traverse through wall cavities.
- ❖ The existing roof has a history of leaking for several years now.
- ❖ The Inside of the Building has a number of problems. Problems include that the original designed Fire House was intended to accommodate only men. Improving the inside of the building will require a safer living condition for both men and women.

**Engineering Solutions Team** approach to deliver the complete required A/E Services to facilitate the required rehabilitation to Fire House #3 is to break down the required improvements into 4 separate and distinct projects. The 4 projects are as follows:

**Project #1: Stormwater Management and Landscaping Improvements Project.** Contractor: Performance Construction & Engineering. Project Included: 1] New storm sewer was constructed 30-feet outside the perimeter of the building to capture all local surface drainage and to prevent this storm water from approaching the building foundation area. 2] East foundation wall was excavated to re-establish the underdrain system and properly backfilled with CA6 to relieve horizontal stresses. 3] The sump pump outlet pipe was reconstructed and re-established. 4] The roof downspout drainage system was reconstructed to drain to the new perimeter sewer system. 5] Grounds were landscaped to drain away from the building. 6] All large trees were saved. *Construction was completed in Dec. 2016.*

**Project #2: Complete Building Tuck Pointing & Window Replacement Project.** Contractor: Fisher Construction Co. Project Included: All bricks and blocks were pointed and replaced as necessary. 2] Windows and exterior doors were replaced. 3] the header beam over the sliding doors and dining room windows was removed and replaced. 4] Finally, the main beam supporting the front garage bay was required to be removed and replaced. *Construction of this project was completed in August 2017.*

**Project #3: Complete New Roof Project.** Contractor: Malcor Roofing. Project Included: The newly constructed roof is a new gable roof system, Gutters were constructed appropriately into the building system, and downspouts are fitted appropriately into the building system and outlet and drain away from the building according with the new landscaping. *Construction of this project was completed in November 2017.*

**Project #4: Building Interior and Improvements Project.**

Project Includes: The Proposed Floor Plan will be designed to better accommodate women firefighters. Project will also include: new furnace and heating system, new air conditioner and cooling system, upgraded kitchen and new counter tops, New epoxy flooring throughout the building, Replace the interior doors, replace the ceiling system as appropriate, paint the entire building interior, paint the bay floor, remove the door jamb from the hose tower, and new generator. *This Project will be advertised in January 2018.*





# Recent Solutions



## THE HOLT ROAD UTILITY PROJECT

The Village of Minooka retained **The Engineering Solutions Team Co.** to negotiate 10 different required Easement Acquisitions to facilitate the utility construction along the Holt Road Corridor.



## SAFETY AND SECURITY IMPLEMENTATION

The Downers Grove Township retained **The Engineering Solutions Team Co.** to assist with the implementation of the Safety and Security Report for its Administration Building.



## HVAC REHABILITATION AT THE PUBLIC WORKS ADMINISTRATION CENTER

The City of Geneva retained **The Engineering Solutions Team Co.** to deliver the Phase 1 Study and Engineering Report to Rehabilitate and Improve the HVAC System at its Public Works Administration Center.



## CLCJAWA WEST GROUP EXPANSION

CDM Smith retained **The Engineering Solutions Team Co.** to assist with the negotiation of required easements to facilitate the construction of the CLCJAWA West Group Expansion Project.



## MAIN STREET PEDESTRIAN BRIDGE

The Village of Lisle retained **The Engineering Solutions Team Co.** to provide design plan and contract documents to replace the Main Street Pedestrian Bridge.



## THE TAYLOR AVENUE UNDERPASS PROJECT

The Village of Glen Ellyn retained **The Engineering Solutions Team Co.** to provide appraisal and easement negotiation services to facilitate the construction of the Taylor Avenue Underpass Project.



## CONSTRUCTION ASSISTANCE

The Bensenville Elementary School District 2 retained **The Engineering Solutions Team Co.** to provide professional assistance with the 2017 Parking Lot Rehabilitation Program.



## THE OUTFALL SEWER REHABILITATION PROJECT

The Downers Grove Sanitary District retained **The Engineering Solutions Team Co.** to deliver the Phase 1 Study and Engineering Report for its Outfall Sewer Rehabilitation Project.



## THE SANITARY SEWER CONNECTION STUDY

The City of Rolling Meadows retained **The Engineering Solutions Team Co.** to deliver the Phase 1 Study and Engineering Report for the Sanitary Sewer Connection Study for its Sunset/Brookview Subdivision.

### Visibility:

**Engineering Solutions Team** will have article featuring the Warwick Avenue Project published in August 2018 *Reporter*.

**Engineering Solutions Team** displayed its Booth at the following Trade Shows in 2017:

- ISAWWA Watercon.
- American Public Works Association; in Villa Park.

**Engineering Solutions Team** will attend and/or display booth at the following conferences in 2018:

- ISAWWA Watercon in Springfield, on March 19 thru March 21.
- American Public Works Association in Villa Park, on May 23 and May 24.

### Close:

Thank you for your trust and confidence in the **Engineering Solutions Team**. We look forward to assisting you solve your future infrastructure needs. Please feel free to contact us.

***Happy New Year!!***

*Respectfully*

*Edward Kalina, President*

*Engineering Solutions Team*