

## MEMORANDUM

DATE: December 20, 2024

TO: Brian Townsend, Village Manager

FROM: Marisa Krawiec, AICP, Transportation Program Manager

FOR: Transportation Committee

SUBJECT: Recommendation to Authorize the Village's Participation in the Illinois Department of Transportation Advanced Traffic Management System (ATMS) Project

### Introduction

In December 2022, the Village Board authorized the Village President to execute a Letter of Intent with the Illinois Department of Transportation (IDOT) to participate in the Advanced Traffic Management System (ATMS) project. The ATMS project will improve the operations of existing signalized intersections throughout northwest Cook County, though primarily on the Golf Road (IL-58) and Higgins Road (IL-72) corridors. The project will be completed in multiple phases and will allow IDOT to communicate with and control field devices remotely. The proposed project includes improvements to 15 village-owned signals. Now that construction is underway, IDOT is requesting the village execute additional project documents, including a Letter of Understanding, a contract agreement and an Intergovernmental Agreement.

### Discussion

IDOT is utilizing Congestion Mitigation and Air Quality (CMAQ) grant funds to improve the operation of existing signalized intersections in northwest Cook County. The ATMS project represents an opportunity for the village to reap the benefits of a regional traffic management system. Regional traffic management systems are being implemented throughout the country in order to provide safe and efficient traffic flow, reduce congestion and establish a single system for a real-time, integrated view of traffic operations. With the upgrades to the traffic signals, IDOT will have a web-based system for controlling and monitoring signalized intersections remotely to provide those benefits.

### *Project Phasing*

IDOT originally anticipated the project to begin construction in 2023; however, there have been delays with the project start. As of December 2024, IDOT has let the project to bid, and the village's traffic signal consultant reviewed the plans prior to execution of the Letter of Intent. The project will be completed in two phases:

- Phase 1 - Contract 62R81  
The first phase of the ATMS project includes Higgins Road (IL-72), Golf Road (IL 58), and Roselle Road. The village is not directly involved in this phase of the project; however, based on the current system configuration, two village signals will be integrated into the new ATMS system at no cost to the village. The intersections of Plum Grove Road and Woodfield Road and Plum Grove Road and American Lane are currently part of the Higgins Road and Golf Road interconnect systems. Including them in the ATMS allows for these complete systems to be monitored remotely as needed. IDOT is requesting that the Village President execute a Letter of Understanding agreeing to the scope of the project.

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- Phase 2 - Contract 62T54

The second phase of the project primarily includes Algonquin Road (IL-62), Barrington Road, Irving Park Road (IL-19), Lake Street (IL-20), and Meacham Road. During the second phase of the project, IDOT plans to install fiber optic cable along Meacham Road between Algonquin Road (IL-62) and Higgins Road (IL-72). IDOT approached the village with an opportunity to participate in this phase. There are 13 village traffic signals located along the identified roadways. These signals include the Meacham Road signals between Algonquin and Higgins as well as the village traffic signals at the IL-390 Frontage Roads at Rodenburg Road, Springinsguth Road, and Wright Boulevard.

The 13 traffic signals include the following locations:

- Rodenburg Road at Frontage Road (North)
- Rodenburg Road at Frontage Road (South)
- Springinsguth Road at Frontage Road (North)
- Springinsguth Road at Frontage Road (South)
- Wright Boulevard at Frontage Road (North)
- Wright Boulevard at Frontage Road (South)
- Meacham Road at Progress Parkway/Drummer Drive
- Meacham Road at Thoreau Drive/Zurich Way
- Meacham Road at I-90
- Meacham Road at McConnor Parkway/Tower Road
- Meacham Road at Remington Road
- Meacham Road at American Lane
- Meacham Road at Woodfield Drive

The Letter of Intent previously executed by the Village included a cost estimate for the village's share of the project. The original cost estimate was \$379,500, which included a 15% engineering fee for design. In discussions with the village's contractor for the Meacham Road Fiber Install/Laterals project, it was determined that it would be best for splicing of the fiber optic cable to occur outside the cabinet. Village staff shared this request with IDOT who determined that the cost of this additional work would be \$86,000, which would increase the project cost from \$379,500 to \$465,500. IDOT has agreed to include this work in the project scope and the agreement for Contract 62T54 reflects the updated price.

With IDOT already completing the fiber installation, it makes sense for IDOT to include this work. Additionally, the increased cost was less than the cost estimate provided by the contractor hired for the Meacham Road Fiber Install/Laterals project.

The Traffic Signal Inventory Report completed in FY22 identified that many of the village traffic signals are aging and in need of replacement to improve reliability and accommodate new traffic signal technologies. With the information from the signal inventory report, the village developed a multi-year CIP project that would upgrade the village's signal equipment. Participation in the IDOT ATMS project requires the replacement of the existing signal controllers to make them compatible with the ATMS technology. These replacements have been planned for and are included in the village's Capital Improvement Plan (CIP).

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### *Fiber Optic Cable Installation*

As part of the ATMS project, the village requested, and IDOT agreed, to run a separate fiber optic cable as part of the project. IDOT will install 144 single mode fiber optic cable dedicated for use by the village. The fiber will be installed along Meacham Road between Higgins Road (IL-62 and IL-72). With installation of a village owned fiber cable along Meacham Road as part of the IDOT ATMS project, the village has an opportunity to create a fiber network that in the future can connect to the 90 North District, the Police Department's Real Time Information Center, the Woodfield Corridor and other village-owned buildings and facilities. Completing the fiber connection back to existing VOS fiber provides a robust high-capacity connection for existing and future village facilities, while allowing the village to implement systems such as security cameras, facility access controls, and public and private Wi-Fi connectivity.

The Information Technology Department is coordinating a separate FY25 CIP project (Meacham Road Fiber Install/Laterals) that will leverage the IDOT fiber optic cable installation to establish a backbone of fiber to key areas of the village. Included in the project is the connection between the Meacham Road fiber and existing village fiber on Schaumburg Road, which will complete a fiber loop for many village assets and eliminate ongoing services fees. This will activate the village's Meacham Road fiber, provide a lateral connection to Fire Station 52 and the Senior and Nursing facility, and move these facilities and the traffic signals along Meacham Road from Comcast Metro E service to fiber, resulting in an annual cost savings to the village. Currently the village pays \$540 per year for each signalized intersection with video detection and approximately \$1,000 per month for Metro E service at Fire Station 52. The project will also lay the groundwork for the connectivity of planned and future developments like the 90 North Park, the Entertainment District and any future village facilities in the area, including parking decks and traffic signals.

### *Intergovernmental Agreement*

IDOT is also requesting the village enter into an Intergovernmental Agreement with IDOT to identify maintenance responsibilities. Participating in this project will provide the village with access to control and manage all village traffic signals and will also provide view only access to IDOT signals on the system. In turn, IDOT would be granted view only access to the village signals. The agreement outlines maintenance responsibilities of the signals and the fiber optic cable.

### *Conclusion*

Integrating the village's signals into the IDOT system will provide for greater regional coordination between signals and will also allow village staff to monitor IDOT signals for issues when complaints are received. The ATMS project also represents a unique opportunity to install village fiber along Meacham Road as part of a larger IDOT contract. In addition, upgrades to the village's signal equipment as part of the larger IDOT contract will control costs and ensure that the project is completed more quickly than if the work was undertaken as a smaller, multi-year village project.

Staff recommends the village execute the three documents requested by IDOT to participate in this project:

- Letter of Understanding for Contract 62R81
- Agreement for Contract 62T54
- Intergovernmental Agreement

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**Recommendations**

Staff recommends the Transportation Committee recommend the Village Board authorize the Village Manager to execute a Letter of Understanding for Contract 62R81, an Agreement for Contract 62T54 and an Intergovernmental Agreement with the Illinois Department of Transportation for the Advanced Traffic Management System and approve the required Resolution.