



January 17th, 2014

Mr. John Ingram
Infrastructure Maintenance Director
Village of Orland Park
Public Works Department
15655 Ravinia Ave.
Orland Park, IL 60462
(708) 403-6350

Subject: **Proposal for Pavement Management System (PMS) Update**

Dear Mr. Ingram:

Applied Research Associates (ARA), Inc., appreciates the opportunity to submit this letter proposal to the Village of Orland Park to update the Village's PMS.

If you have any questions or need additional information, please do not hesitate to contact us.

Sincerely,

Joseph A. Stefanski, P.E.
Senior Engineer

William R. Vavrik, Ph.D., P.E.
Vice President & Principal Engineer

PROJECT UNDERSTANDING

In 2012, ARA was chosen to provide services to implement a pavement and asset management system (PMS) for the Village of Orland Park. Using ARA's digital survey vehicle (DSV), ARA conducted a complete coverage pavement condition survey of all streets within the Village jurisdiction. Using a combination of sensor data, GPS, and high-resolution imagery, ARA was able to gather all of the necessary data to assess the current pavement condition using the Condition Rating System (CRS). The CRS data was combined with historical data about the pavement network to develop a PMS using ARA's own RoadCare system. Pavement deterioration models were developed to project the life of roads in the future. Recommendations, in the form of a preliminary 5-year project selection, were made to help improve the effectiveness of the Village's pavement management practices.

ARA understands Orland Park plans to maintain their PMS using the Condition Rating System (CRS) to rate the pavements in their network, possibly on a four or five year schedule. In addition, ARA understands Orland Park would like to update the PMS in years where no condition survey occurs, to project an updated 5-year capital improvement plan.

This proposal will allow for an update of the PMS without an updated condition survey. This will include gathering information on projects performed since the last condition survey and programming this information into the PMS. Also included will be a refinement of pavement management components including the treatment matrix (treatment choices and their trigger levels), treatment consequences, treatment unit costs, and annual budget levels to aid in the update of a 5-year capital improvement plan.

The following project scope illustrates the tasks and milestones required to update the Orland Park PMS successfully.

SCOPE OF SERVICES

A task-by-task summary of ARA's proposed scope of work is provided in the following sections.

Task 1. Update projects performed since last condition survey

The Village of Orland Park will provide to ARA all relevant project information for review and inclusion into the PMS. For each project this includes:

- Year work was performed
- Treatment used
- Location of work performed (Route/Segment/From/To)

ARA will review this information to gain an understanding of the work completed since the last condition survey. Along with the parameters that will be updated in Task 2, this information will serve as the base for bringing the condition of the network from the last condition survey performed in 2012 to the present so that future predictions can be made on the network.

Task 2. Develop updated 5-year capital improvement plan

ARA will work with Orland Park to update the PMS simulation parameters so that an updated 5-year capital and maintenance plan can be developed.

This will start with entering into the PMS the information on projects gathered in Task 1 including year, location and treatment type. ARA will then work with Orland Park to consider refinement of all pavement management simulation components including the treatment matrix and the monitoring of treatment choices and consequences. The treatment matrix will be reevaluated by looking at routes that received maintenance and rehabilitation strategies and comparing this with the performance-model-predicted pavement condition for that year. By comparing the recommended pavement strategy to the actual strategy used, the treatment matrix can be validated and/or areas of concern highlighted. If applicable, trigger levels or consequences for treatment selection may be adjusted or new strategies may be incorporated into the treatment matrix.

Also included will be updating any necessary parameters in the RoadCare simulation such as treatment unit costs (to reflect current market conditions and expected outcomes), and expected annual budgets for the 5-year period to aid in the update of the capital improvement plan.

Using the updated parameters, ARA will work with the Village to develop a 5-year capital improvement plan under the Village's expected funding scenarios. The results of the optimization simulation will include project recommendations for the 5-year period to serve as a guide in the Village's project selection process.

As a part of this task, ARA will meet with Orland Park staff to discuss the needs and direction of updating the PMS system.

Task 3: Project results memo

Following the completion of work with Orland Park, ARA will deliver a project memorandum detailing the work completed and the results of the 5-year capital improvement plan. ARA will review this document with the Village of Orland Park and revise as necessary.

PROJECT COSTS

ARA's firm fixed price proposal to perform this project is \$23,100. These costs include our labor, overhead, any equipment charges, travel, and other direct costs. These costs do not include any fees or expenses for traffic control, which is understood to be provided by the Village of Orland Park, but is not anticipated for this project. ARA will invoice monthly on a percent complete basis, for payment to be made within 30 days of receipt of invoice.

PROJECT SCHEDULE

ARA is available to perform the work as outlined within 3 months of receipt of written notice to proceed. We will deliver the final project results memo at the completion of the project.

REQUIRED SUPPORT

ARA requires the following support to successfully complete this project in an efficient and effective manner:

- ④ Past project information as described in Task 1
- ④ Provide input on updating simulation parameters as outlined in Task 2

We appreciate the opportunity to provide you these services and look forward to working with you on this project. If you have any questions or comments, please do not hesitate to contact us.

ACCEPTANCE OF PROPOSAL

To accept this proposal as an agreement to provide professional services in accord with the scope, cost, schedule, required support, and terms & conditions, please sign this proposal in the space below. This acceptance will act as a notice to proceed.

ACCEPTANCE AND AUTHORIZATION	
Name (print)	
Title	
Signature:	
Date:	

TERMS & CONDITIONS

Applied Research Associates, Inc. (ARA) agrees to perform the specified work in accordance with the accepted professional standards.

COMPLIANCE WITH LAW

In the performance of services, it is mutually agreed that the Client and ARA will comply with applicable terms and regulations of the United States Government which are by law or regulation to be included in agreements of this nature and are incorporated herein by reference.

INDEPENDENT CONTRACTOR

ARA will act as an independent contractor and not as Client's agent for any purpose whatsoever, and will have no authority to make any commitments on behalf of Client or to bind Client in any way whatsoever.

PROJECT SUPERVISION AND ASSIGNMENT

ARA shall have wide discretion in the methods used to perform any assigned tasks unless specified otherwise. ARA will exercise sound professional judgment, use the standard of care as required in the industry, and strive for high quality performance and products and service delivery. ARA will cooperate with the Client to the extent possible to arrange for consultations between the Client, ARA personnel, and others engaged in rendering services to the client related to ARA's performance under this agreement. ARA agrees that no tasks shall be performed or expenses incurred without specific authorization of the Client.

OWNERSHIP OF DOCUMENTS

All data, information, software, hardware, and documents produced by ARA under this agreement shall remain the property of ARA and may not be used by the Client for any endeavor outside of the scope of this agreement without the written consent of ARA, unless otherwise noted in this agreement.

ACCESS TO PROJECT SITE

ARA will be granted access to the project site for the activities necessary for the performance of the services. If traffic control is required for the site visit, it shall be provided by the Client or specific provisions will be made for ARA to provide traffic control at an additional cost. ARA will take precautions to minimize damage when performing its work, but ARA is not responsible for any items destroyed as a necessary part of the work.

CONFIDENTIALITY

Each party agrees not to use the other's proprietary information for any purpose other than for the performance of this Agreement. Proprietary information is defined as information concerning techniques, processes, inventions, research and development, and cost data in written form with each sheet thereof marked with an appropriate legend

indicating its proprietary nature and delivered by one party to another. Any other use of such proprietary information by the recipient shall be made only upon receipt of the prior written consent from an authorized representative of the other party.

INDEMNIFICATION

The Client shall indemnify and hold harmless ARA from and against any and all (including third party) claims, damages, losses and expenses (including reasonable attorney's fees) arising out of or resulting from the performance of services, provided that any such claims, damage, loss or expense is caused in whole or in part by the negligent act or omission and/or liability of the Client, anyone directly or indirectly employed by the Client (except ARA).

RISK ALLOCATION

It is agreed between the parties and in recognition of the relative risks, rewards, and benefits of the project to both the Client and ARA, the risks have been allocated so that the Client agrees that, to the fullest extent permitted by law, ARA's total liability to the Client, for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this agreement, from any cause or causes, shall not exceed the total amount of \$50,000 or the amount of ARA's fee (whichever is smaller). Such causes include, but are not limited to, ARA's negligence, errors, omissions, strict liability, breach of contract or breach of warranty.

DISPUTE RESOLUTION

Any controversy or claim arising out of or relating to this agreement, or breach thereof, which may be properly submitted to arbitration, shall be settled by arbitration.

TRAVEL

Travel costs are actual project expenses for meals, incidentals, motels, airfare, mileage, rental car, parking, and other travel costs.

PAYMENT

Payment for ARA invoices are due net 30 days. Interest will be charged on amounts outstanding more than 30 days. The interest rate will be 1½ percent per month, compounded until paid. In the event of late payment, the Client agrees to pay all collection costs, legal expenses and attorneys' fees incurred by ARA in collecting payment, including interest.