



Northeast Ohio Areawide Coordinating Agency

NOACA

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Request for Proposals (RFP) for a Signal Timing Optimization Program

Issue Date: September 18th, 2017

Closing Date: October 18th, 2017

NOACA is seeking a qualified person or firm to contract for consulting services for the signal timing optimization program pilot phase. The deadline for submittals is 12:00PM ET on October 18, 2017. Please read entire RFP for specific information and requirements.

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1. THE NORTHEAST OHIO AREAWIDE COORDINATING AGENCY (NOACA)

The Northeast Ohio Areawide Coordinating Agency (NOACA) is a Cleveland-based transportation and environmental planning organization that serves as the metropolitan planning organization (MPO) and designated areawide water quality management agency for the counties of Cuyahoga, Geauga, Lake, Lorain, and Medina in Ohio.

In these capacities it:

- Works with other organizations to help address northeast Ohio's transportation, air quality, and water quality needs.
- Conducts metropolitan planning for various modes of transportation, including vehicles, freight, transit, bicycle, pedestrian, etc., while considering the transportation system's impact on the environment and land use.
- Prepares the region's long-range transportation plan and short-range transportation improvement program, which is the region's capital budget for federally funded transportation projects.
- Conducts studies that address congestion, improve safety and strengthen community livability.

The vision of NOACA is as follows: NOACA will **STRENGTHEN** regional cohesion, **PRESERVE** existing infrastructure, and **BUILD** a sustainable multimodal transportation system to **SUPPORT** economic development and **ENHANCE** quality of life in Northeast Ohio.

NOACA is directed by a 45-member Board of Directors, representing the City of Cleveland and all five NOACA counties and their communities, plus transit agencies, the Northeast Ohio Regional Sewer District (NEORS), the Cleveland-Cuyahoga County Port Authority, the Ohio Environmental Protection Agency (Ohio EPA), and the Ohio Department of Transportation (ODOT). The NOACA region is home to 2.1 million people and over 150 units of government. The region is anchored by several urban core cities with the largest being Cleveland. More information about NOACA is available on our website at www.noaca.org

2. BACKGROUND

Today, there are more than 272,000 traffic signals in the United States. They play an important role in the transportation network and are a source for significant frustration for the public when not operated efficiently. As the era of freeway building draws to a close, urban arterials are being called upon to carry more users than ever before at a time when the users of these facilities are growing more complex (older drivers, more distractions, larger vehicles, etc.) and the demand for such use continues to outpace transportation supply. Traffic signal timing efficiency degrades over time as volume patterns and magnitude change, development occurs, or infrastructure changes. Outdated or poor traffic signal timing accounts for a significant portion of traffic delay on urban arterials and traffic signal optimization is one of the most cost effective ways to reduce emissions, improve mobility, reduce delays and improve corridor safety.

One solution to inefficient traffic signal timing is NOACA's signal timing optimization program (STOP). NOACA will utilize a consultant to implement signal timing corridor projects to provide technical assistance that includes minor equipment upgrades to improve the safe and efficient operation of traffic signal systems and corridors in Northeast Ohio.

NOACA will administer and manage this Program, but the projects will not be implemented without the approval of the agencies that own, operate and/or maintain the project signals. NOACA will work closely with the project sponsors and consultants to successfully complete the STOP projects.

3. SCOPE & PROJECT DETAILS

NOACA is seeking proposals from qualified persons or firms to contract for consulting to improve the safe and efficient operation of certain traffic signal systems and corridors. The role of NOACA will be to provide streamlined program administration, project management, and facilitation of inter-agency communication and coordination. The STOP aims to provide high-quality technical assistance and project management in a cost-effective manner.

The project consists of Part I and Part II with Part II being “if authorized”.

Part I consists of two corridors:

- SOM Center Rd from Vine St. to Chardon Rd. (US 6) in the Cities of Eastlake, Willoughby, and Willoughby Hills (3.8 miles, 20 signalized intersections)
- West 150th/Warren Rd., from Madison Ave. to Brookpark Rd. in the Cities of Lakewood, Cleveland, and Brookpark (4.1 miles, 26 signalized intersections)

Part II, if authorized, will consist of a two corridors/grid of similar length and number of intersections, with the scope to be developed by NOACA, to begin after Part I has been finalized.

The goals of the STOP are to help Northeast Ohio achieve the following outcomes:

- I. **Goal: Improve air quality** through decreased motor vehicle emissions and fuel consumption.
 - a. Develop and implement signal coordination plans (a.m., p.m., midday, weekend and off peak (if needed)) that reduce travel time and delay.
 - b. Develop and implement signal coordination plans that reduce starts and stops of vehicles and promote uniform travel speeds.
- II. **Goal: Improve reliability** and predictability of travel along arterials.
 - a. Collect peak period turning movement counts at all study intersections, including pedestrian and bicycle counts
 - b. Develop specialized timing plans to address mobility issues during school start and end times, special events, construction projects, etc.
- III. **Goal: Improve the safety** of motorists, pedestrians, and bicyclists.
 - a. Collect pedestrian and bicyclist volume data
 - b. Develop and implement signal coordination plans that promote uniform travel speeds, possibly reducing rear-end collisions.
 - c. Review existing pedestrian crossing times and bicycle timings at intersections to be coordinated, and update them to current Ohio Manual of Uniform Traffic Control Devices (OH MUTCD) and/or federal standards.
 - d. Review crash history for patterns that can be corrected through signal timing coordination and recommend any changes as necessary.

The focus of this program is to accomplish these goals by implementing optimized signal timing plans, low-cost equipment repairs, or additions that have direct impact on safety or operational improvements of the signal system (e.g., vehicle detection, pushbuttons, GPS time clock). The program focus is on making more efficient use of the existing signal equipment, and addressing needed repairs. Although all-inclusive, high-cost signal equipment upgrades are not the focus of this program, the consultant should evaluate the existing equipment for any potential needed upgrades.

The primary purpose of the program is to achieve a high benefit to cost ratio, relative to other types of roadway improvements.

Consultant tasks will include the following (Part I and II will follow the same task list):

1. Kickoff meeting

The successful consultant shall hold the meeting within (20) working days of the effective date of the agreement at 1299 Superior Avenue, Cleveland, Ohio 44114. Minutes of the meeting shall be submitted to NOACA for approval within (5) working days. The kickoff meeting will include a discussion of expectations for the project. The agenda for the meeting will be developed by the NOACA project manager.

2. Develop project management plan

The project management plan (PMP) is the main planning document describing how the project will be managed. The PMP is a living document and should be updated throughout the project.

At a minimum the plan should contain:

- a. Project overview
- b. Scope
- c. Methodology
- d. Schedule
- e. Budget
- f. Project team
- g. Risk management
- h. Data collection plan
- i. Communication/Public Involvement

The completed PMP should be submitted to NOACA within 2 months of contract execution.

3. Data collection

- a. Conduct field inspection of all signalized intersections
- b. Conduct existing travel time runs, in a passenger car and on the local bus route (if applicable), using Tru Traffic (minimum of 6 runs per corridor, per mode)
- c. Conduct turning Movement counts using Miovision, or equivalent, equipment and processing, where recent turning movement counts do not exist. Process the counts to include passenger vehicles, heavy vehicles, buses, bicycles on road, bicycles in crosswalk, and pedestrians.
- d. Obtain recent turning movement counts
- e. Obtain traffic signal as-built drawings
- f. Obtain signal timing plans
- g. Obtain 3-year crash history from GCAT
- h. Obtain bus schedules
- i. Obtain relevant planning, operations, safety or other corridor studies that are completed or ongoing.

The consultant should include, at a minimum, one public participation activity per corridor during this task. This task should be completed within 4 months of contract execution.

4. Review data from Task 3 and document any needed equipment repairs, or additional equipment needs that would impact the ability to improve signal timings for efficiency or safety based on the following:
 - a. SAFETY; Coordinate with the local safety forces to review crash data to determine if any crash patterns could be improved via signal timing adjustments and/or minor striping or lane configuration adjustments (e.g., adding a turn lane, adjusting alignment of existing lanes, advance stop bar placement, high-visibility crosswalks). Use turning movement counts to assess road diet feasibility, if applicable.
 - b. PEDESTRIAN SAFETY: Review all signal timings with regard to safe pedestrian crossing. Consider if a slower pedestrian walking speed should be accommodated at certain locations
 - c. PEDESTRIAN PRIORITY: Identify any signals in the study area that should prioritize pedestrian travel, or improve pedestrian safety, by adjusting the signal phasing (e.g., Leading Pedestrian Interval, Lagging Left Turns, or other strategies outlined in the NACTO Urban Street Design Guide, NHI Designing for Pedestrian Safety training
 - d. BICYCLE: Determine if any intersections are part of a bicycle route, or otherwise should be sensitive to bicycle needs. Review these intersections for bicycle detection capabilities and clearance intervals that are appropriate for bicycle travel speeds
 - e. TRANSIT: Coordinate with transit agencies to consider any changes they have planned for, such as consolidating stops, moving stops to the far-side of an intersection, transit signal priority, bus-only lanes, and any other known issues with existing signal operations
 - f. REPAIRS: Broken equipment (e.g. vehicle detection, vehicle and pedestrian signal heads, pushbuttons, signal coordination equipment)
 - g. IMPROVEMENTS: Missing equipment (e.g. pedestrian crosswalks and equipment, signal coordination equipment, protected turn signals)
 - h. WARRANTS: Use latest HCM Warrant procedures to justify removals of signals that are no longer needed
 - i. COST: Develop cost estimates for proposed equipment upgrades, and review with NOACA and the municipalities involved

5. Develop signal timing plan
 - a. Use Synchro/SimTraffic and Tru Traffic software to assess existing conditions. These results will be the baseline for calculating benefits of the signal timing adjustments
 - b. Use Synchro/SimTraffic and Tru Traffic software to develop optimized signal timing plans that require no equipment upgrades or lane reconfigurations
 - c. Use Synchro/SimTraffic and Tru Traffic software to develop optimized signal timing plans that require minor equipment upgrades and/or decommissioned traffic signals (if applicable, per Task 4)
 - d. Use Synchro/SimTraffic and Tru Traffic software to develop optimized signal timing plans that require minor equipment upgrades and/or decommissioned traffic signals and/or minor striping adjustments and/or future road diet (if applicable, per Task 4).

Any recommendations for additional turn lanes must be justified by applicable warrant procedures beyond the software analysis

Tasks 4 and 5 should be completed within 9 months of contract execution.

6. Conduct meeting to review proposed improvement options with NOACA and the municipalities involved
7. Implement the selected proposed improvements identified in Task 6, and field adjust the timings.
 - a. Coordinate timing plan implementation, equipment upgrades, and/or minor striping adjustments with local municipalities
 - b. Fine-tune the timings based on field observation
 - c. Conduct additional travel time runs using Tru Traffic, in a passenger car and on the local bus route (if applicable). Minimum of 6 runs per corridor, per mode.

The consultant should include, at a minimum, one public notification activity per corridor in this task.

8. Video Recording
 - a. Video record for each corridor by driving the corridor during peak times, before and after signal timing adjustments are made
 - b. Edit the video to produce a simple comparison of before/after conditions, demonstrating the travel time and number of stops benefits
9. Before/After analysis
 - a. Prepare final report documenting Tasks 1 through 8
 - b. Before/After measures of effectiveness shall include vehicle delay, number of stops, travel time, local bus travel time and number of stops, emissions, Level of Service, and benefit/cost ratio
 - c. Presentation of final report including before and after analysis to the Board of Directors and the Safety and Operations Council.

Tasks 6 through 9 should be completed within 12 months of contract execution.

4.0 COST

A proposed budget is not being requested at this time and will not be considered as part of the selection criteria. However, be aware that due to the procurement timeline, the selected consultant should be prepared to submit a formal fee proposal within a short time frame and would be advised to have a proposed budget of no more than 1 page, including detailed project costs, by task, staff member, and estimated hours prepared in advance. If selected please be prepared to negotiate costs/budget based on this detail. Actual compensation is subject to contract negotiation.

5.0 QUALIFICATIONS

Consultant Team must demonstrate experience with the tasks included in the scope of services including programming signal controllers, have completed the NHI Designing for Pedestrian Safety course, and have valid prequalification status from ODOT for the following:

- Basic Signal Design
- Traffic Signal System Design
- Bicycle Facilities & Enhancement Design
- Complex Roadway Design
- Safety Study
- Traffic and Electrical Inspector (for inspection of existing equipment to make recommendations)
- Cost Accounting System - Unlimited (Prime consultant and subconsultants that provide engineering and design related services must meet this prequalification requirement)

6.0 PROCUREMENT TIMELINE

NOACA's process and timeline for selection of a consultant are as follows:

October 18th, 2017. 12:00 noon - Deadline for Submittals.

Submittals must be received at NOACA by the above deadline. Digital proposals are to be submitted via e-mail to procurement@mpo.noaca.org, but NOACA assumes no responsibility for formatting or transmission errors. Submittals received after the deadline will not be considered. Please reference, "STOP RFP" in email subject line.

October 18th-20th, 2017. Consideration of Submittals and Selection of Interview Candidates

An evaluation team will select candidate(s) from submittals received for interview(s). This process will include review of submittals, references, and other information as necessary, as well as rating of submittals.

October 23rd -24th, 2017. Interviews with Selected Candidates (If Needed).

Interviews will provide an opportunity for NOACA and selected candidates to further gauge their fit and ability to work with each other.

Please ensure that the appropriate representative, including the designated Project Manager, will be available to attend an interview if selected as a finalist.

November, 2017. NOACA Committee Review Process

December 8th, 2017. Approval of Contract by NOACA Board of Directors.

7.0 SELECTION PROCEDURES

NOACA will directly select a consultant based on the Letter of Interest (LOI) and interview. The requirements for the LOI and the Consultant evaluation are contained in this document.

Firms interested in being considered for selection should respond by submitting (1) copies of the Letter of Interest electronically to procurement@mpo.noaca.org by **12:00 PM on the response due date** listed above:

Responses received after 12:00 PM on the response due date will not be considered.

Please ensure that the appropriate representative, including the designated Project Manager, will be available to attend an interview if needed (October 23th-24th, 2017) if selected as a finalist. Interviews may occur via conference call.

7.1 Requirements for Letters of Interest

- A. Instructions for Preparing and Submitting a Letter of Interest
1. Provide the information requested in the Letter of Interest Content (Item B below), in the same order listed, in a letter signed by an officer of the firm. Do not send additional forms, resumes, brochures, or other material.
 2. The Letters of Interest shall be limited to twelve (12) 8½" x 11" single-sided pages.
 3. Adhere to the following requirements in preparing letters of interest:
 - a. Use a minimum font size of 11-point and maintain margins of 1" on all four sides.
 - b. Page numbers must be centered at the bottom of each page.
 - c. Use 8½" x 11" paper only.
- B. Letter of Interest Content

Firm & Staff:

- Team Personnel – List the Project Manager and other key staff members, including key sub consultant staff. Include personnel for important disciplines and staff members that will be responsible for the work, and the project responsibility of each. Address the experience of the key staff members on similar projects, and the staff qualifications relative to the selection sub factors noted. Provide resumes of each firm/team member along with a list of major services offered by each team member.
- Firm Experience – Provide detail of the firm's qualifications as well as success with projects of similar programs, budgets, and/or clients. Describe the capacity of your staff and their ability to perform the work in a timely manner, relative to present workload, and the availability of the assigned staff. List significant sub consultants, their current prequalification categories, and the percentage and areas of work to be performed by each sub consultant.

Project Approach:

- Provide a description of your Project Approach, not to exceed four pages. Address your firm's: 1) Technical approach; 2) Understanding of the project; 3) Your firm's qualifications for the project; 4) Innovative ideas; 5) Your firm's project specific plan for ensuring increased quality, reduced project delivery time and reduced project costs; 6) Schedule for completing the tasks.

The above items must be included within the 12-page body of the LOI. Remaining space within the twelve (12) pages may be utilized to provide additional information concerning general qualifications.

8.0 EVALUATION CRITERIA:

Criteria	Weight %
Project Approach: Exhibit 1, Note 1	35
Demonstrated experience with similar projects-Exhibit 1, Note 2	35
Qualifications of Staff- Exhibit 1, Note 3	30
Total	100

Exhibit 1 - Consultant Selection Rating Form Notes

1. Project Approach - Each consultant shall be evaluated based on the approach presented in the proposal to complete the project. Factors for evaluation shall include project schedules; demonstration of understanding for the project; methods and strategies to best accomplish the project; creativity; viability; and implementation. Proposals should clearly describe how each task or deliverable will be completed.

2. Demonstrated Experience with Similar Projects – The proposal must demonstrate each consultant's experience and established competence related to this procurement. Each consultant shall be ranked, with the highest ranked consultant and proposed subconsultants receiving the greatest number of points, and lowest ranked consultant and proposed subconsultants receiving commensurately lower scores. The rankings and scores will be based on each firm's experience on similar projects and past performance for NOACA and other appropriate agencies. The selection team will consider documented performance ratings if available, and consult other agencies as appropriate. The use of documented ratings shall place emphasis on the specific type of services requested.

3. Qualification of Staff - The Proposal must demonstrate that the Consultant has the organizational capability and experience to complete the project. Identify the project team members, the role of the prime consultant, and any subconsultant(s). The rankings and scores will be based on the Staff's experience on similar projects and past performance for other agencies.

Differential scoring will consider the relative importance of the Project Managers role in the success of a given project. The Project Manager's role in a simple project may be less important than for a complex project, and differential scoring will reflect this, with higher differentials assigned to projects that require a larger role for the Project Manager.

9. ADMINISTRATIVE PROCEDURES AND CONDITIONS

- A. It is the policy of NOACA, as required by the Federal Highway Administration (FHWA), that Disadvantaged Business Enterprises (DBEs) shall have equal opportunity to compete for contracts and/or subcontract with another consultant to perform the requested services. The Consultant must use its best efforts to solicit from and to utilize DBE subcontractors with meaningful minority groups and female representation among their employees. The Consultant must ensure that the DBE sub-consultant(s) is performing a "commercially useful function" as defined in CFR 26.55. **This agreement includes a DBE Goal of 13%. At least this percent of the agreement shall be subcontracted to certified DBE firms. However, in the event the Consultant is unable to meet the DBE goal placed on this project, a good faith effort must be demonstrated, which documents the effort made to secure the services of DBE subcontractors. This documentation must be included with the proposer's submittal, which is not part of the 12 page limit.** The percentage goal may be met if the awarded Consultant is DBE certified. Consultant proposals that do not include the minimum percentage of DBE participation noted above, or that cannot demonstrate good faith efforts to include a DBE, **WILL be rejected.** If selected, the Consultant's price proposal shall reflect the required level of DBE participation, or provide an explanation of how the requirement will be met in later phases of the work.
- B. Consultants agree not to discriminate against any employee or applicant for employment because of race, color, religion, age, creed, sex, sexual orientation or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultants further agree to comply with all requirements of Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d et seq., 49 C.F.R. Part 21.
- C. All proposals received by NOACA in response to this RFP shall remain valid for 90 days from the date of submittal.
- D. An RFP does not constitute an offer or a contract. No contract may be awarded without a resolution by the NOACA Board of Directors.
- E. NOACA reserves the right to cancel or reissue the RFP or to revise the timeline at anytime. NOACA reserves the right to reject any and all proposals and to waive minor irregularities in the proposal process. NOACA may accept any proposal if such action is believed to be in the best interest of the agency.
- F. NOACA is not liable for any cost incurred by the proposer prior to execution of a contract.
- G. The contract between the successful proposer and NOACA shall include all documents mutually entered into specifically including the contract instrument, the RFP, and the response to the RFP. The contract must include, and be consistent with, the provisions stated in the RFP.
- H. The prime consultant or system provider will be required to assume the responsibility for all services offered in the proposal whether or not directly performed by the prime consultant. Further, the prime consultant will be the sole point of contact for NOACA with regard to contractual matters.
- I. The consultant project team shall be approved by NOACA. NOACA must approve any changes in the project team.
- J. Any award of contract will be to the consultant or contractor that provides the highest value relative to costs.
- K. Consultants must show proof of liability insurance.
- L. NOACA reserves the right to cancel or reissue the RFP or to revise the timeline at anytime.

M. The Ohio Department of Transportation's Specifications for Consultant Services 2016 Edition will be included in all agreements under this request for letters of interest.

Suspended or Debarred Firms

Firms included on the current Federal list of firms suspended or debarred are not eligible for selection.

10. QUESTIONS

For questions regarding the RFP, please contact procurement@mpo.noaca.org. All questions must be submitted by email and be submitted by October 6th, noon. All answers will be publicly posted on www.NOACA.org.

11. SUBMITTALS

Submissions must be made electronically by **12:00 noon on Monday, October 18th, 2017**, using a PDF or Microsoft Office format. To submit the proposal, please email the proposal to procurement@mpo.noaca.org. If the proposal is a large file, greater than 65MB, please instead request the Dropbox site and password for posting the proposal materials.

Submit proposed budget to procurement@mpo.noaca.org **separately labeled as STOP Program Project Cost Proposal**. If submitting by mail, submit proposed budget in a **separately sealed envelope**.

NOACA supports environmental consciousness and discourages mailed submissions for this RFP. However, for material that must be mailed, use:

Susanna Merlone, Director of Administrative Services
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