



**Task Order #2**

**To: City of Windsor Heights  
Atten: Brett Klein  
1145 66<sup>th</sup> Street, Suite 1  
Windsor Heights, Iowa 50324**

**Date of Issuance: March 15, 2016**

**MSA Project No.: 09412008**

This task order will acknowledge that MSA Professional Services, Inc. (MSA) is authorized to begin work on the following project:

- Project Name:** University Avenue Traffic Study
- The scope of the work authorized is:** See Attached Scope of Services
- The schedule to perform the work is:** approximate start: March 21, 2016  
approximate completion: July 1, 2016
- The lump sum fee for the work is:** \$24,750

This authorization for the work described above shall serve as the Agreement between MSA and OWNER. All services shall be performed in accordance with the Master Professional Services Agreement currently in force. Any attachments or exhibits referenced in this Agreement are made part of this Agreement. Payment for these services will be on a lump sum basis.

**Approval:** MSA shall commence work on this project in accordance with your written authorization. This authorization is acknowledged by signature of the authorized representatives of the parties to this Agreement. A copy of this Agreement signed by the authorized representatives shall be returned for our files.

**CITY OF WINDSOR HEIGHTS**

**MSA PROFESSIONAL SERVICES, INC.**

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City of Windsor Heights  
Date: \_\_\_\_\_

  
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Kevin Ruhland, P.E.  
Traffic Engineering Team Leader  
Date: 3/15/16

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## **TRAFFIC ANALYSIS SCOPE OF SERVICES**

University Avenue Transportation Improvement Concept  
City of Windsor Heights, IA  
March 15 2016

At the request of the City of Windsor Heights, MSA Professional Services (MSA) proposes to complete a Traffic Analysis for University Avenue between 73<sup>rd</sup> Street and 63<sup>rd</sup> Street. The City is working with Alta Planning & Design on a concept plan for reconstructing University Avenue. The concept plan this scope of services is based upon was provided by the City on January 29, 2016 in a pdf titled "University Ave Concept Plan v2 2.pdf". The plan sheets within the pdf are titled "University Ave Separated Bike Lane Concept Plan."

The purpose of the study is to quantitatively assess the difference in vehicular traffic operations between the existing roadway configuration and the concept plan. The study will also qualitatively discuss changes to pedestrian and bicycle traffic and review the design concept from an engineering and operational perspective.

The final deliverable for the study will be a report summarizing the analyses completed for the project. The report will include tables, exhibits and appendix material as appropriate.

### **Task 1 - Turning Movement Traffic Counts**

MSA has the ability to collect traffic turning movement counts utilizing Miovision equipment at up to six intersections per day. Based on existing traffic control and comments from the City, the six locations identified for traffic counts along the corridor are as follows:

1. 73<sup>rd</sup> Street (Existing Signal)
2. Hy-Vee Access (Existing Signal)
3. 70<sup>th</sup> Street (Existing Signal)
4. 69<sup>th</sup> Street (Side Street Stop Control)
5. 66<sup>th</sup> Street (Existing Signal)
6. 63<sup>rd</sup> Street (Existing Signal)

Traffic counts will be collected on a typical weekday (Tuesday through Thursday) during the AM and PM peak hours. The counts will be collected on a weekday with a typical schedule (no special events, non-typical school closures, etc.) and average, precipitation free weather conditions. Counts will be collected in 15 minute intervals and include vehicle classification (cars, trucks and buses), bicycle, and pedestrian counts.

MSA will utilize Miovision traffic data collection units to record fifteen hours of data from 6 AM to 9PM. However turning movement counts will only be processed from 6-9 AM and 3-6 PM.

### **Task 2 - Field Observations**

MSA will review intersection geometric data, distances between intersections, turn bay lengths, traffic control, and other geometric information for the corridor based on site observation and aerial photography. This data will be used to build the baseline traffic model. The concept plan provided by the City will be utilized to build the alternative traffic model for analysis purposes.

Additionally, MSA staff will also observe pedestrian traffic at the intersection of 64<sup>th</sup> Street and University Avenue for one hour during the AM peak and one hour during the afternoon school peak. The goal is to identify the number of school age pedestrians utilizing this intersection. The data will be collected manually, summarized and provided to the City. No additional analysis will be performed with the pedestrian data at this location.

### **Task 3 – Traffic Operational Analysis**

MSA will analyze the six study area intersections identified in Task 1A for the following scenarios during the AM and PM peak hour using Synchro software. Analysis will show level of service (LOS), average delays, volume/capacity ratios and 95% queue lengths for vehicular traffic.

#### Capacity/LOS Analysis, Current Traffic Volumes

1. Existing Geometric Configuration
2. Concept Plan Geometrics

MSA will also complete a sensitivity analysis showing how much additional traffic could pass through each intersection before operations fall below LOS D. The traffic increase will be presented as a percentage of current traffic for each intersection. The number of years before this volume is reached will be estimated based on historical linear growth rates. This analysis is intended to show the capacity or “operational lifespan” of either configuration.

### **Task 4 – Concept Plan Review**

In addition to the quantitative operational analysis, MSA will review the concept plan and provide qualitative feedback on aspects of the proposal. Items that may be reviewed or discussed in the analysis include right of way impacts, safety, seasonal and long term maintenance, parking, multimodal features, and design standards.

The intent of this task is not to critique the design to provide comments or changes to the plan, but rather identify pros and cons of the particular design for the City to consider when assessing the value of choosing this alternative to existing conditions or other potential solutions that may be considered in the future.

### **Task 5 – Final Report**

A final report documenting the findings of the analysis will be prepared by MSA and an electronic copy submitted to the City for review and comment. The report will include figures, exhibits, tables and appendices MSA deems pertinent to the study development and parameters.

Upon approval, MSA shall provide one final hard copy and one final electronic copy to the City of Windsor Heights. It is noted that review comments by the City could require additional work efforts to address. A revised cost of services would be prepared at that time, if necessary.

### **Task 6 – Meetings**

To assist with project coordination, MSA has included attendance by two staff members at two teleconferences, as well as attendance by two staff in person for one public or city related

meeting. It is assumed for estimating purposes that all meetings have a maximum duration of 2 hours per meeting, whether by teleconference or in person.

## **Schedule**

It is recommended that all traffic counts be completed prior to the end of the school year this spring to obtain traffic counts that are consistent with conditions that occur for the majority of the calendar year. Counts and Field Observations are tentatively scheduled for April pending an approved contract and notice to proceed by the City. Remaining tasks should be completed within two months of the traffic data being processed and received by MSA.

Work tasks discussed during the scoping process but not explicitly listed in this scope are not included at this time. These tasks include additional traffic counts, ADT counts, analysis of proposed development impacts, improvement analyses, roundabout analysis, and signal warrant studies. Should these tasks or any other effort not explicitly described above be requested at any time during the project, a revised cost estimate and contract amendment will be provided to the client prior to the start of the additional services.