

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

MDOT PROJECT MANAGER Andrew J. Zeigler			JOB NUMBER (JN) 102074	CONTROL SECTION (CS) 82291
DESCRIPTION traffic microsimulation study of construction staging plan for deck replacement				
MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED GRAY SHADING = OPTIONAL			CONSULTANT: Provide only checked items below in proposal	
Check the appropriate Tier in the box below				
<input checked="" type="checkbox"/> TIER I (\$25,000-\$99,999)	<input type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Understanding of Service	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Safety Program</i>	
N/A	<input type="checkbox"/>	<input type="checkbox"/>	Organizational Chart	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Past Performance	
Not required As part of Official RFP	Not required As part of Official RFP	<input type="checkbox"/>	Quality Assurance/Quality Control	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.	
N/A	N/A	<input type="checkbox"/>	Presentation	
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)	
3 pages (MDOT Forms not counted) (No Resumes)	7 pages (MDOT Forms not counted)	19 pages (MDOT Forms not counted)	Total maximum pages for RFP not including key personnel resumes	

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

BUREAU OF HIGHWAYS BUREAU OF TRANSPORTATION PLANNING ** OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

NO YES DATED _____ THROUGH _____

Prequalified Services – See page ___ of the attached Scope of Services for required Prequalification Classifications.

Non-Prequalified Services - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed. **(Form 5100J Required with Proposal)**

Qualifications Based Selection – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the section team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

****For RFP's that originate in Bureau of Transportation Planning only**, a priced proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning (see address list, page 2). The priced proposal must be submitted in a sealed envelope, clearly marked "**PRICE PROPOSAL.**" The vendor's name and return address **MUST** be on the front of the envelope. The priced proposal will only be opened for the highest scoring proposal. Unopened priced proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your priced proposal being opened erroneously by the mail room.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

Qualifications Review / Low Bid - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

Best Value - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

Low Bid (no qualifications review required - no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked "**SEALED BID.**" The vendor's name and return address **MUST** be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

PROPOSAL SUBMITTAL INFORMATION

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER 5	PROPOSAL/BID DUE DATE 9/17/10	TIME DUE 4:00 pm
--	----------------------------------	---------------------

PROPOSAL AND BID SHEET MAILING ADDRESSES

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

- MDOT Project Manager MDOT Other

Andrew J. Zeigler, Region Planner
 MDOT Metro Region office
 18101 West Nine Mile Road
 Southfield, Michigan 48075

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

Lansing Regular Mail	OR	Lansing Overnight Mail
<input checked="" type="checkbox"/> Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
<input type="checkbox"/> Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

The following two American Recovery and Reinvestment Act of 2009 (ARRA) notifications, **ARRA MONTHLY EMPLOYMENT REPORTS** and **REQUIRED CONTRACT PROVISIONS TO IMPLEMENT AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SECTIONS 902 AND 1515**, are attached to this Request For Proposal for your understanding. These two notifications are only applicable for those projects/contracts funded with ARRA funds and will be included in contract Exhibits.

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

- 5100D** – Request for Proposal Cover Sheet
- 5100G** – Certification of Availability of Key Personnel
- 5100I** – Conflict of Interest Statement
- 5100J** - Consultant Data and Signature Sheet (Required only for Non-Prequalified Work)

(These forms are not included in the proposal maximum page count.)

Notification
ARRA MONTHLY EMPLOYMENT REPORTS
Note: This Notification is only applicable for those projects/contracts funded with ARRA funds. If you have questions, please contact MDOT Contract Services Division at (517) 335-0071.

The American Recovery and Reinvestment Act of 2009 (ARRA), requires states receiving stimulus funds for highway projects to provide monthly reports to the Federal Highway Administration (FHWA) regarding the number of employees of the prime contractors, all-tier subcontractors and consultants on ARRA funded projects.

The cost for complying with this Notification must be borne by the prime contractor, and all-tiers of subcontractors and consultants, as part of their overhead and is deemed to be included in the payments made under this contract.

Within 10 days after the end of each month in which work is performed on this contract, all prime contractors and consultants must provide the Engineer a monthly report on MERS at <https://sso.state.mi.us/> providing employment information on each ARRA project, which will include, for work performed in that preceding month:

- The total number of employees who performed work on this contract.
- The total number of hours worked by employees who performed work on this contract.
- The total wages of employees who performed work on this contract.

Prime Consultants are responsible for reporting on all subconsultants' employment information in MERS, as the sub consultants will not have access to do so.

In addition, the prime contractor must provide a total payment amount made to any subcontractor who is a certified DBE in that preceding month.

This Notification shall be included as a part of each subcontract executed by the prime contractor, and all-tiers of subcontractors and consultants.

If necessary to conform to guidance provided by FHWA concerning the ARRA reporting requirements, the prime contractor, and all-tiers of subcontractors and consultants will revise their reporting as directed by the Engineer.

Failure to comply with the reporting requirements under ARRA would jeopardize the Department's continued receipt of ARRA funding.

Accordingly, if a contractor or any-tier of subcontractor or consultant fails to comply with this Notification, the Department may withhold contract payments until compliance is achieved. If the Department is compelled to incur costs because of such a breach, the amount of those costs may be deducted from payments otherwise to be made under this contract. Additional sanctions may include reduction or elimination of prequalification ratings and removal of bidding privileges.

**NOTIFICATION
REQUIRED CONTRACT PROVISIONS TO IMPLEMENT AMERICAN
RECOVERY AND REINVESTMENT ACT (ARRA) SECTIONS 902 AND 1515**

Note: This notification is only applicable for those projects/contracts funded with ARRA funds. If you have questions, please contact MDOT Contract Services Division at (517) 335-0071.

In accordance with requirements under section 902 of the American Recovery and Reinvestment Act of 2009 (ARRA), the following language is made a part of this contract and is to be made a part of all tier subcontracts or consultant contracts:

The U.S. Comptroller General and his representatives have the authority:

- (1) To examine any records of the contractor or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and
- (2) To interview any officer or employee of the contractor or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.

The Comptroller General and his representatives have the authority and rights provided under Section 902 of the ARRA with respect to this contract. As provided in section 902, nothing in section 902 shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General.

In accordance with the requirements of section 1515(a) of the ARRA any representatives of the Inspector General have the authority:

- (1) To examine any records of the contractor or grantee, any of its subcontractors or sub-grantees, or any State or local agency administering such contract, that pertain to, and involve transactions relating to the contract, subcontract, grant, or sub-grant; and
- (2) To interview any officer or employee of the contractor, grantee, sub-grantee or agency regarding such transactions.

Nothing set forth in section 1515 of the ARRA shall be interpreted to limit or restrict in any way any existing authority of an inspector general.

Michigan Department of Transportation

**SCOPE OF SERVICE
FOR
TRAFFIC AND SAFETY SERVICES
Micro-simulation Study**

CONTROL SECTION: 82291

JOB NUMBER: 102074

PROJECT LOCATION: I-94 over I-275, City of Romulus, Wayne County

DESCRIPTION OF WORK:

The purpose of this Study is to test closure scenarios as part of a Maintenance of Traffic (MOT) and construction staging plan, during the replacement of the I-94-over-I-275 bridge deck, in the summer of 2011. The product of this work will be a simulation of the interchange and comparison of traffic operations on I-94 under four closure scenarios. The comparison will produce qualitative and quantitative measures of operations of I-94 over I-275 under each scenario in terms of how well the facility accommodates the traffic demand and maintains acceptable speeds, occupancies, and safety.

I-94 is one of the two most important international, interstate and regional truck routes in the State of Michigan, carrying large volumes of US-Canada trade, Michigan-Indiana trade, as well as Michigan trade to other states such as Illinois, California, and Texas. Maintaining mobility, particularly for long distance trucks, is the primary objective of this project.

Figures 1 and 2, display the project area.

ANTICIPATED START DATE: November 1, 2010

ANTICIPATED COMPLETION DATE: February 1, 2011

REQUIRED CONSULTANT QUALIFICATIONS:

The CONSULTANT will need to be a licensed civil engineer with demonstrable experience in the following:

- A. Building microsimulation models using advanced software packages such as Paramics or VISSIM.
- B. Primarily traffic operations with an understanding of design.
- C. Familiarity with the Southeast Michigan road network and traffic operations.

DBE REQUIREMENT: N/A.

MDOT PROJECT MANAGER:

Andrew J. Zeigler
Region Planner
MDOT Metro Region Office
1801 West Nine Mile Road
Southfield, Michigan 48075
Email: zeiglera@michigan.gov
Phone: 248-483-5108
Fax: 248-569-7718

GENERAL INFORMATION:

The CONSULTANT shall furnish all services and labor necessary to conduct and complete this study as described herein. The CONSULTANT shall also furnish all software, equipment, supplies, and incidentals necessary to perform the services (other than those designated in writing to be furnished by the MDOT), in carrying out this work. The services shall be performed to the satisfaction of the MDOT consistent with applicable professional standards.

- A. The CONSULTANT's principal contact with MDOT shall be through the designated Project Manager.
- B. The Services described herein are financed with public funds. The CONSULTANT shall comply with all applicable Federal and State laws, rules, and regulations
- C. The CONSULTANT agrees to demonstrate knowledge and performance in compliance with, the standard practices of the MDOT; and any and all other references, guidelines, and procedures manuals needed to carry out the work described herein in an appropriate manner.

CONSULTANT RESPONSIBILITIES:

Prior to beginning the Project Study work, the CONSULTANT shall provide the MDOT Project Manager with a work schedule covering responsibilities and completion of deliverables delineated herein to the satisfaction of the MDOT Project Manager. The CONSULTANT shall meet with the MDOT Project Manager to discuss location of data sources and contact persons. The CONSULTANT shall review and clarify project issues, data needs and availability, the sequence of events and meetings that are essential to complete the Project Study. Attention shall be given to critical or interim target dates, and those that may require a larger lead time.

- A. The CONSULTANT shall maintain a Project Study Record which includes a history of significant events (changes, comments, etc.) which influenced the study and recommendations;
- B. The CONSULTANT shall record and submit type-written minutes for all Project Study related meetings with MDOT to the MDOT Project Manager for approval within two weeks of the meeting, and distribute the approved minutes to all meeting attendees;
- C. The CONSULTANT is to attend Project Study-related meetings as directed by the MDOT Project Manager. This may include up to two presentations to MDOT management of Project Study results and recommendations;

- D. Unless otherwise designated, the MDOT Project Manager shall be the official MDOT contact person for the CONSULTANT. The CONSULTANT must either address or send a copy of all correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all significant communications regarding this project;
- E. The CONSULTANT shall contact the MDOT Project Manager whenever discoveries or alternative evaluations have the potential to require changes in the scope, limits, costs, or delay to the Project Study; and
- F. The CONSULTANT is to prepare a final Project Study Report documenting the study and recommendations.

CONSULTANT RESPONSIBILITIES:

This Study is to use micro-simulation to test alternative staging and closure plans, with the aim of maintaining mobility during the construction of the I-94 bridge deck over I-275. MDOT Metro Region will identify up to four alternatives to be modeled. These will likely include comparing maintaining two versus three lanes of traffic on I-94, on both the CD road and the mainline roadbed. These scenarios may likely involve closing one or more of the I-275/I-94 ramps, and detouring traffic (However these detours are not part of this scope of work.) Although the micro-simulation area to be modeled is not extensive, these scenarios will require 1.) A fine resolution of geometric detail to be specified, and 2.) A high degree of operational sensitivity, especially of large trucks, to be calibrated.

Tasks:

1. Traffic Data: Obtain traffic data from MDOT staff. Review existing traffic data including traffic.com data and available MDOT counts. Identify segments where truck or passenger vehicle counts are not available, and suggest a plan to collect this data. The priority is on large trucks.
2. Model Scope: In consultation with MDOT staff, define the model area, which shall include the I-94/I-275 interchange, as well as the adjacent legs of I-275 and I-94. These legs should be sufficiently long to capture the traffic impacts of the proposed closures.
3. Meeting 1: Kick-off meeting. Review scope and requirements of work. Review findings from of Tasks 1 and 2.
4. Micro-simulation Model: In consultation with MDOT staff, develop two, base-year micro-simulation models for the 6 to 9 AM and for the 3-7 PM peak periods, using either VISSIM or Paramics software, for which Metro Region holds licenses. The base models will be used to test up to four closure scenarios. There are two choices for traffic inputs: 1.) A Sub-Area of the SEMCOG Model may be used, or 2.) Balanced traffic volumes based upon MDOT data sensors may be used. Data should be based upon one hour or 15 minutes counts. If 15 minutes count data is not available, then 15 minute profiles or volumes should be estimated based upon analysis of traffic patterns. In addition, a warm-up period for traffic loading should be included in the model. Submit to MDOT for review.

5. Coordination and Training: This simulation project will require working closely with the MDOT Transportation Service Center (TSC) staff, which may not have the same level of working familiarity with the VISSIM and/or Paramics software as the Consultant. Upon submittal of the base models in Task 4, the Consultant should be prepared to meet one-on-one with the TSC staff, in order to provide a hands-on demonstration of the features of the software that are core to this analysis. The goal is for the TSC staff to have enough working knowledge of the simulation model to: 1.) Download and run a simulation file on his/her computer 2.) Examine the simulation files, and provide feedback and guidance to the Consultant, and 3.) Be able give demonstrations to the Public or other Stakeholders.
6. Meeting 2: 1. Present results of Task 4, above. 2. Receive feedback from MDOT in preparation for final base models calibration. 3. Receive detailed instructions of up to four closure scenarios alternatives to be modeled. General discussion of traffic issues and modeling details.
7. Calibrate Base Year Models: Upon receiving feedback from the MDOT staff, calibrate the two base year models according to accepted practices. Submit to MDOT for final review.
8. Model the four closure alternatives: Submit to MDOT staff for review and feedback before finalizing.

Geometric Detail: The closure alternatives may include use of CD roads, narrower lanes, concrete barriers, limited shy distance, and lower speeds. If the simulation software does not explicitly include these capabilities, a plan to adjust settings to approximate these features should be developed.

Operational Detail: Because of the constraints listed above, it will be necessary to carefully specify large truck operating characteristics and to closely detail how such vehicles would operate under the proposed conditions, and to adjust saturation flow rates and headways accordingly.

Proposers should describe how they would approach or model the technical issues and constraints described above.

9. Extract Results and produce Measures of Effectiveness (MOE): The primary objective is to maintain mobility, especially truck mobility in the project area. User delay or the cost of user delay spreadsheets do not adequately demonstrate mobility, and should not form the primary basis for evaluating alternatives. Other qualitative and quantitative MOE's should be produced. Examples include a.) A "hotspots" or similar graphical analysis b.) Travel time and queue length, per movement, or per OD pair c.) Reliability measures such as 95% planning time, broken down by movement or by OD pair and by vehicle type. Related to this, the simulation should be executed a statistically valid number of times, and the range, as well as average output should be reported.
10. Meeting 3: Present results of Tasks 8 and 9.

11. Prepare Technical Report and submit electronic files to MDOT.

PROJECT SCHEDULE:

Date	Authorization To Proceed
TBD	<p style="text-align: center;">Task 3 Kick Off Meeting (1) Tasks 1 and 2 Complete Discussion of modeling issues.</p>
TBD	<p style="text-align: center;">Task 4 & 5 Submit un-calibrated Base AM and PM Models. Instruct 1-2 MDOT staff on how to use the software to review the models.</p>
TBD	<p style="text-align: center;">Task 6 Meeting 2 Present and receive feedback on Task 4 – Base Models Receive detailed instructions on closures alternatives to be modeled. General discussion of geometric and traffic issues.</p>
TBD	<p style="text-align: center;">Task 7 Finalize and calibrate Base Models and submit to MDOT</p>
TBD	<p style="text-align: center;">Task 8 Model up to four closure scenarios. Submit to MDOT for review and comment.</p>
TBD	<p style="text-align: center;">Task 9 Extract results and prepare report on Measures of Effectiveness of Mobility for each scenario.</p>
TBD	<p style="text-align: center;">Task 10 Meeting 3 Present Results of Tasks 8 and 9</p>
TBD	<p style="text-align: center;">Task 11 Prepare Technical Report Submit electronic files to MDOT</p>

MDOT RESPONSIBILITIES:

- A. Work with Consultant to schedule and/or conduct the Project Study related meetings;
- B. Coordinate activities that require MDOT personnel;
- C. Assist the CONSULTANT in obtaining existing or available traffic data and model information;
- D. Review interim and major deliverables to facilitate and assure CONSULTANT Project Study responsibilities are met.

CONSULTANT PAYMENT :

Compensation for this Scope of Services shall be on an Actual Cost plus Fixed Fee Basis. This basis of payment typically includes an estimate of labor hours by classification or employee, hourly labor rates, applied overhead, other direct costs, sub-consultant costs, and applied fixed fee. The CONSULTANT will not be reimbursed for costs associated with correcting errors or omissions by the CONSULTANT.

All billings for services must be directed to the MDOT Project Manager.

Payment to the CONSULTANT for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the CONSULTANT. Typically, billings must be submitted within 60 days after the completion of services for the current billing. The final billing must be received within 60 days of the completion of services. Refer to your contract for your specific contract terms.

Direct expenses, if applicable, will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

All billings for services must be directed to the Department and follow the current guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's website. This document contains instructions and forms that must be followed and used for billing. Payment may be delayed or decreased if the instructions are not followed.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

MONTHLY PROGRESS REPORT

Monthly Progress Report will be required for this project and emailed to the Project Manager. These will include at a minimum the following information:

- a. Work Accomplished During the Previous Period
- b. Anticipated Work Items for the Upcoming Month
- c. Real or Anticipated Problems on the Project
- d. Update or Previously Approved Detail Project Schedule, including Explanations for Any Delays or Changes
- e. Items needed from MDOT
- f. Log-in/Log-Out and Verbal Contact Records to Date

FORMAT

The Technical Report shall be presented on regular letter size paper (8½" x 11") with the exception of maps, sketches and diagrams which shall be on 11" x 17" paper (and folded to match the 8½" x 11" paper). This report shall also be saved in an Adobe Acrobat file format and delivered electronically. Traffic VISSIM or Paramics models files shall be delivered electronically. Files for final delivery containing physical features shall have elements with GIS identification consistent with the Michigan Framework, version 10 Caliper geographic layers shall be created.

A cover sheet indicating Control Section, Job Number, Route, and location description shall also be included. There shall be **2** paper copies of the Traffic Technical Reports.

All project related items are subject to review and approval by the Project Manager.

Presently, MDOT does not have a category for pre-qualifying consultants for advanced micro-simulation modeling. However, a Consultant seeking to perform micro-simulation modeling under this contract should be able to demonstrate experience in creating and using network microsimulation models to develop work zone staging and mitigation plans.

All subcontractor communications with the Department shall be through the CONSULTANT to the MDOT Project Manager. This requirement may be waived if a written communication plan is approved by the MDOT Project Manager.

The Department may direct the immediate removal of any subcontractor working in violation of this subsection. Any costs or damages incurred are assumed by the CONSULTANT by acceptance of the contract. It is further understood that the CONSULTANT'S responsibilities in the performance of the contract, in case of an approved subcontract, are the same as if the CONSULTANT had handled the work with the CONSULTANT'S own organization.

**FIGURE 1
PROJECT LOCATION
Romulus, Wayne County, Michigan**

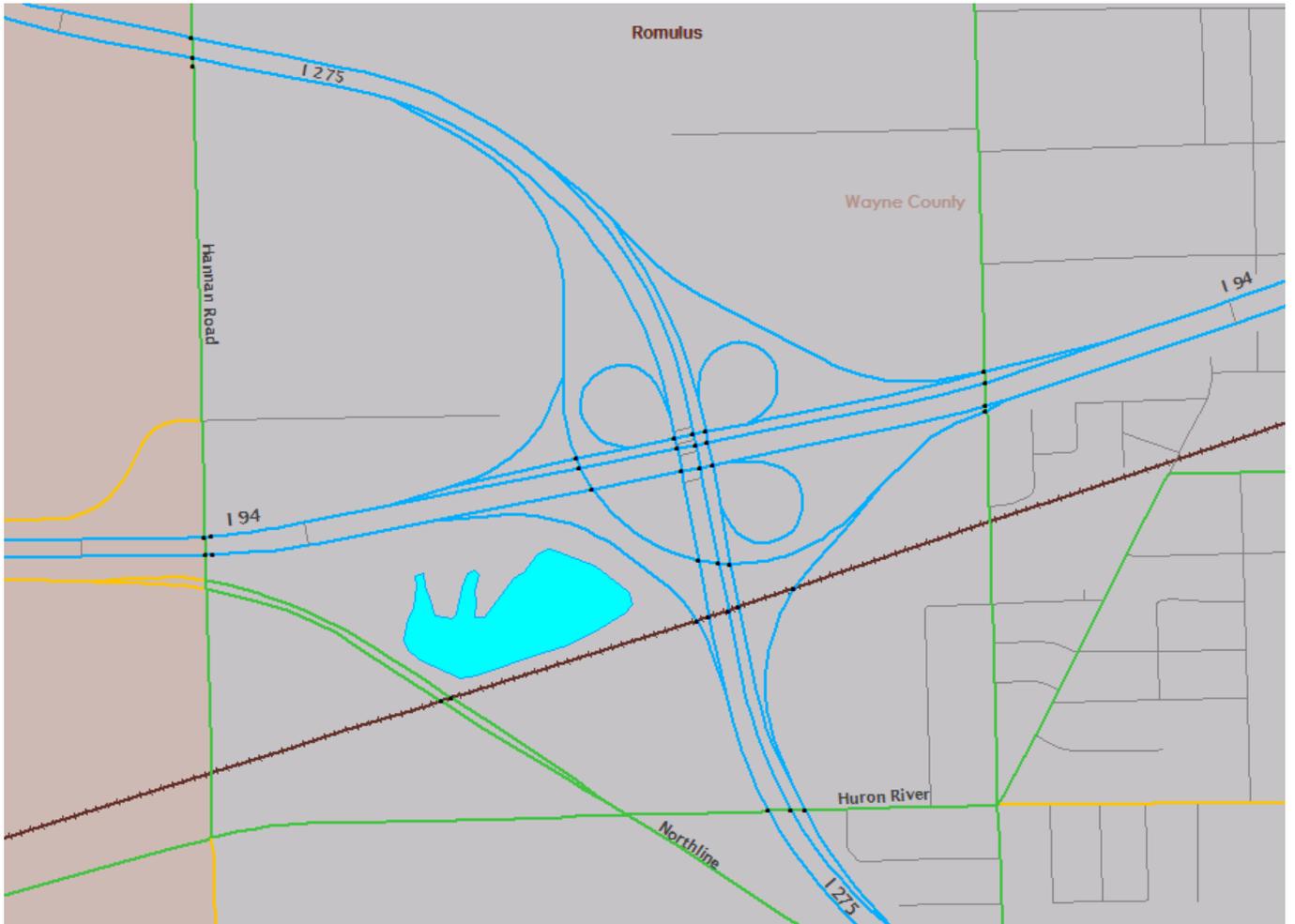


Figure 2

