

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

	REQUISITION NUMBER	DUE DATE	TIME DUE
MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)	
DESCRIPTION			
MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED ** = OPTIONAL Check the appropriate Tier in the box below		CONSULTANT: Provide only checked items below in proposal	
<input type="checkbox"/> TIER I (\$50,000 - \$150,000)	<input type="checkbox"/> TIER II (\$150,000-\$1,000,000)	<input type="checkbox"/> TIER III (>\$1,000,000)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Understanding of Service **
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Organizational Chart
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team
Not required as part of Official RFP	Not required as part of Official RFP	<input type="checkbox"/>	Quality Assurance/Quality Control **
<input 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 p=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)	14 pages (MDOT forms not counted)	Total maximum pages for RFP not including key personnel resumes. Resumes limited to 2 pages per key staff personnel.

PROPOSAL AND BID SHEET EMAIL ADDRESS – mdot-rfp-response@michigan.gov

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 five (5) 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.

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet

5100J – Consultant Data and Signature Sheet (Required only for firms not currently prequalified with MDOT)

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

REQUEST FOR PROPOSAL

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 Services Contracts" and "Guideline for Completing a Low Bid Sheet(S)*, if a low bid is involved as part of the selection process. **Reference Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

ENGINEERING SERVICES BUREAU OF TRANSPORTATION PLANNING OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

NO YES DATED _____ THROUGH _____

Prequalified Services – See 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 is required with Proposal for firms not currently prequalified with MDOT**

Qualifications Based Selection – Use Consultant/Vendor Selection Guidelines

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

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.

Qualification Based Selection / 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. The vendor that has met established qualification threshold and with the lowest bid will be selected.

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

Bid Sheet(s) must be submitted in accordance with the "Guidelines for Completing a Low Bid Sheet(s)* (available on MDOT's website). Bid Sheet(s) are located at the end of the Scope of Services. Submit bid sheet(s) with the proposal, to the email address: mdot-rfp-response@michigan.gov. Failure to comply with this procedure may result in your bid being rejected from consideration.

PARTNERSHIP CHARTER AGREEMENT

MDOT and ACEC created a Partnership Charter Agreement which establishes guidelines to assist MDOT and Consultants in successful partnering. Both the Consultant and MDOT Project Manager are reminded to review the [ACEC-MDOT Partnership Charter Agreement](#) and are asked to follow all communications, issues resolution and other procedures and guidance's contained therein.

**NOTIFICATION
MANDATORY ELECTRONIC SUBMITTAL**

Proposals submitted for this project must be submitted electronically.

The following are changes to the Proposal Submittal Requirements:

- Eliminated the Following Requirements:
 - Safety Program
 - Communication Plan
 - Past Performance as *a separate section*
 - Separate section for DBE Statement of goals. Include information in Qualification of Team section

- Implemented the Following Changes:
 - All proposals require an Organization Chart
 - Resumes must be a maximum of two pages
 - Only Key (lead) staff resumes may be submitted
 - Tier III proposal reduced from 19 to 14 pages
 - Forms 5100D, 5100I, and 5100G combined – 5100D
 - Forms 5100B and 5100H combined – 5100B
 - RFP's will be posted on a weekly basis -- on Mondays

The following are Requirements for Electronic Submittals:

- Proposals must be prepared using the most current guidelines
- The proposal must be bookmarked to clearly identify the proposal sections (See Below)
- For any section not required per the RFP, the bookmark must be edited to include “N/A” after the bookmark title.
Example: Understanding of Service – N/A
- Proposals must be assembled and saved as a single PDF file
- PDF file must be 5 megabytes or smaller
- PDF file must be submitted via e-mail to MDOT-RFP-Response@michigan.gov
- MDOT's requisition number and company name must be included in the subject line of the e-mail. The PDF shall be named using the following format:
 - Requisition#XXX_Company Name.PDF
- MDOT will not accept multiple submittals
- Proposals must be *received* by MDOT on or before the due date and time specified in each RFP

If the submittals do not comply with the requirements, they may be determined unresponsive.

The Consultant's will receive an e-mail reply/notification from MDOT when the proposal is received. Please retain a copy of this e-mail as proof that the proposal was received on time. **Consultants are responsible for ensuring the MDOT receives the proposal on time.**

****Contact Contract Services Division immediately at 517-373-4680 if you do not get an auto response****

Required Bookmarking Format:

- I. Request for Proposal Cover Sheet Form 5100D
 - A. Consultant Data and Signature Sheet, Form 5100J (if applicable)
- II. Understanding of Service
 - A. Innovations
- III. Qualifications of Team
 - A. Structure of Project Team
 - 1. Role of Firms
 - 2. Role of Key Personnel
 - B. Organization Chart
 - C. Location
- IV. Quality Assurance / Quality Control Plan
- V. Resumes of Key Staff
- VI. Pricing Documents/Bid Sheet (if applicable)

2/14/12

**NOTIFICATION
E-VERIFY REQUIREMENTS**

E-Verify is an Internet based system that allows an employer, using information reported on an employee's Form I-9, Employment Eligibility Verification, to determine the eligibility of that employee to work in the United States. There is no charge to employers to use E-Verify. The E-Verify system is operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. E-Verify is available in Spanish.

The State of Michigan is requiring, under Public Act 200 of 2012, Section 381, that as a condition of each contract or subcontract for construction, maintenance, or engineering services that the pre-qualified contractor or subcontractor agree to use the E-Verify system to verify that all persons hired during the contract term by the contractor or subcontractor are legally present and authorized to work in the United States.

Information on registration for and use of the E-Verify program can be obtained via the Internet at the DHS Web site: <http://www.dhs.gov/E-Verify>.

The documentation supporting the usage of the E-Verify system must be maintained by each consultant and be made available to MDOT upon request.

It is the responsibility of the prime consultant to include the E-Verify requirement documented in this NOTIFICATION in all tiers of subcontracts.

9/13/12

Michigan Department of Transportation

**SCOPE OF SERVICE
FOR
INTELLIGENT TRANSPORTATION SYSTEMS
Real-time Traffic Data
REVISED 3.18.14**

CONTROL SECTION(S): 84900

JOB NUMBER(S): 113441, 113521, 113527

PROJECT LOCATION: Statewide

DESCRIPTION OF WORK: Provide real-time traffic data for selected freeway routes in the State of Michigan for use by the Michigan Department of Transportation (MDOT) and its partners.

ANTICIPATED START DATE: July 1, 2014

ANTICIPATED COMPLETION DATE: June 30, 2017

PRIMARY PREQUALIFICATION CLASSIFICATION(S): N/A

SECONDARY PREQUALIFICATION CLASSIFICATION(S): N/A

PREFERRED CONSULTANT QUALIFICATIONS: The consultant shall have a minimum of five related projects working with state government, local municipalities, or international equivalent over the past five years providing real-time traffic data for freeway routes.

DBE REQUIREMENT: N/A

MDOT PROJECT MANAGER:

Luke Biernbaum
Michigan Department of Transportation
8885 Ricks Rd.
P.O. Box 30049
Lansing, MI, 48917
517-636-5021
BiernbaumL@michigan.gov

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Bridge Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, 2012 Standard Specifications for Construction, the Design Survey Manual, etc.).

BACKGROUND:

Traffic data may come from a variety of sources and bidders are encouraged to propose innovative approaches to traffic data collection that fulfill the requirements of MDOT as detailed in this Request For Proposals (RFP). It is intended that this data will support the provision of inter-city traveler information, system performance measures and support MDOT's ability to manage traffic in the coverage area. The successful bidder will enter into an agreement with MDOT for the provision of real-time traffic data for three years on routes specified in this RFP, with the potential contract terms.

The Consultant shall have substantial experience in the area of real-time traffic data. The Consultant shall furnish all services and labor necessary to conduct and complete the services described herein. The Consultant shall also furnish all materials, equipment, supplies, and incidentals necessary to perform the Services (other than those designated in writing to be furnished by the Department) and check and/or test the materials, equipment, supplies and incidentals as necessary in carrying out this work. The Services shall be performed to the satisfaction of the Department consistent with applicable professional standards.

The Consultant shall comply with all applicable Federal and State laws, rules, and regulations. The Consultant's staff shall conduct themselves with professionalism in carrying out their duties.

The Consultant shall notify the Project Manager, in writing, prior to any personnel changes from those specified in the Consultant's original approved proposal. Any personnel substitutions are subject to review and approval of the MDOT Project Manager. At the request of the Department, the Consultant, during the progress of the Services, shall furnish information or data relating to the Services described herein. These may be required by the Department to enable it to carry out or to proceed with related phases of the Project not described herein, or which may be necessary to enable the Department to furnish information to the Consultant upon which to proceed with further Services.

ADDITIONAL INFORMATION:

MDOT's ITS program has historically focused on the State's urban centers of Detroit and Grand Rapids where two of the four existing transportation operations centers (TOCs) and the vast majority of ITS assets are located. Beyond these two urban centers, however, MDOT has been expanding its ITS footprint throughout the entire State, recognizing that safe and efficient recreational and inter-city travel is critical to the state's economy. Advanced Traveler Information System (ATIS) is being deployed throughout the state to provide better traveler information to assist drivers with making more informed route choices. In order for the system to function properly the necessary data must be collected to make accurate and timely traffic management decisions. These decisions are made possible through the use of innovative nonintrusive traffic data collection techniques.

There are two primary objectives of this procurement:

The first objective of the project is for the acquisition of a subscription-based real-time, travel time service for MDOT routes. The data being supplied should be accurate, real-time, and reliable and must reflect actual traffic conditions. This data will enhance MDOT operations and provide for a more informed and reliable driving experience through the dissemination of information. The accuracy and timeliness of the data will play a major role in the public perception of the system. Therefore, in order for the system to be effective the data reported must reflect the actual conditions. The provided traffic data will be displayed in real-time on a publicly available web-based traveler information system such as the Mi Drive website (www.michigan.gov/drive). The traffic data will also be used to calculate travel times for MDOT routes on Dynamic Message Signs (DMS) in real time using MDOT's Advanced Traffic Management System (ATMS) software.

The second objective is for access to a historical archive of traffic data for operational planning and research purposes. The regional TOCs and statewide departments will utilize the traffic data to enhance their operations to include guidance with decision making in response to traffic impacting events, both planned and unplanned. The historical data will be a rich source of traveler information and will also offer invaluable inputs for existing and future traffic management tools, including trip planning based on historical data. This data will also be used to analyze MDOT's highway performance to determine if the department is meeting its performance measurement goals utilizing the Regional Integrated Transportation Information System (RITIS) or similar software.

COVERAGE AREA:

System Coverage Area

This section identifies the MDOT coverage area. Tables 1, 2, and 3 illustrate the system coverage on Interstate, US, and Michigan routes respectively. The tables display the route with the miles of system coverage as well as the start and end point of the coverage using cross streets.

The Consultant shall propose the coverage system on a segment by segment basis to include freeways and ramps. Any variations or limitations between the proposer's coverage and that identified in Tables 1, 2 and 3 should be indicated by the Consultant and a reason given for the absence of coverage. The Consultant may also propose additional segments of coverage at no additional cost to MDOT. However, any additional coverage will be subjected to all requirements including validation.

Table 1 - Interstate Route Coverage

Road	Mileage	Start	End
I-75	395	Entire Length	
I-94	274	Entire Length	
I-69	202	Entire Length	
I-96	192	Entire Length	
I-196	80	Entire Length	
I-275	36	Entire Length	
I-696	29	Entire Length	
I-475	17	Entire Length	
I-675	7	Entire Length	
I-375	1	Entire Length	

TOTAL:	1233	
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Table 2 - US Route Coverage

Road	Mileage	Start	End
US-127	176	M-50	I-75
US-131	171	Eliza St.	Moors Fire Line Rd.
US-31	123	Indiana Border	Amber Rd.
US-23	88	Ohio Border	I-75
US-10	57	Cadillac Dr.	I-75
US-24	34	Eureka Rd.	Dixie Hwy.
TOTAL:	649		

Table 3 - Michigan Route Coverage

Road	Mileage	Start	End
M-59	23	Paddock Rd.	I-94
M-6	19	Entire Length	
M-53	18	18 Mile	34 Mile
M-14	17	Entire Length	
M-10	17	Entire Length	
M-39	16	Entire Length	
M-44	13	M-11	Belding Rd.
M-11	12	I-196	I-96
M-37	10	100th St.	M-11
M-5	5	I-96	Tuck Rd.

M-8	2	M-10	Joseph Campau St.
TOTAL:	152		

Independent Validation

The Consultant shall agree to cooperate with data validation either by MDOT or an independent Consultant of MDOTs choosing. The independent validation tests may use any combination of floating car runs, vehicle detection technology, Bluetooth and/or Wi-Fi re-identification technology to verify Consultant data.

MDOT will enforce the data quality requirements and the quality targets included with testing. MDOT will impose data quality requirements short of contract termination for the first infraction. If validation tests indicate that the Consultant has not met the data requirements for a particular time frame, a percentage of or the entire payment for that period shall be retained by MDOT. Included in Appendix A is a detailed metric as to how validation is to be accomplished and the associated payment penalties. The Consultant shall disclose any changes that may improve or reduce data quality including, but not limited to gaining or losing a key fleet of vehicles or a cellular carrier contract. In the event that a key data source becomes unavailable, data quality requirements will still remain in place.

Data Usage

All data provided by the Consultant shall be available for full use by MDOT, its partners and consultants for any traveler information purposes including DMS, potential future 511 services, potential future Connected Vehicle (CV) applications, websites including, but not limited to, MI Drive, highway performance measurement tools including the RITIS or similar software, for archiving to be used in future MDOT planning, evaluation and research, and for future unforeseen uses.

MDOT cannot resell any data provided by the Consultant. The Consultant retains the right to use the collected data for any use including traveler information and reselling and archiving. In the event the Consultant resells or makes public data that employs MDOT-owned detectors, credit or recognition shall be given identifying MDOT in connection with the data.

Data may be made available to a consultant or systems integrator on the basis that the data is to be used strictly for planning and or engineering purposes to benefit MDOT. Non-MDOT agencies wishing to use the data may be subject to a non-disclosure clause. However, MDOT will not be held liable nor will be responsible to develop or enforce a non-disclosure clause. All data shall be available for viewing in real time.

The Consultant shall provide a daily set of data meeting the requirements described in **PROJECT RESPONSIBILITIES: Real Time Traffic Data Requirements** of this RFP to MDOT each 24 hours. In addition, at the end of each quarter-year, while the contract is active, the Consultant shall provide MDOT with a CD(s), DVD(s), or USB flash drive(s) containing all of the collected data within that year in CSV format for continued use according to the conditions described above.

Valid Sources of Data

The Consultant shall clearly explain the proposed sources of data where they will apply, and how one or more will be used to derive a single estimate for each segment in each reporting period. MDOT will allow any combination of the following data sources:

- Real-time probe based data;
- Historical data;
- Forecasting or modeling; and
- MDOT owned real-time infrastructure-based data (access to live MDOT microwave vehicle detection system (MVDS) data via MDOT File Transfer Protocol (FTP) website)-access provided by MDOT.

The Consultant is required to integrate the real-time data from MDOT detectors (MVDS) in existing formats or schemas into the Consultant's real-time data feed. Documentation on real-time detector locations and data access via the MDOT FTP website will be supplied to the Consultant upon request. Any processing or formatting required additional to the FTP supplied data will be the responsibility of the Consultant. The Consultant shall ultimately be held responsible for meeting all data requirements. **MDOT is not liable for failed or inaccurate data from its detectors.**

In the event that the Consultant obtains new sources of data, these may be incorporated into the system at no additional cost to MDOT. Additionally, MDOT may make available to the Consultant new data sources where feasible.

Schedule, Length of Contract Time Period

The contract term shall be for three years to meet internal MDOT funding requirements.

PROJECT RESPONSIBILITIES:

The Consultant shall provide a Project Work Plan within ten business days of notice to proceed. The project work plan will include:

- A project schedule that outlines all necessary steps required to provide the real-time traffic data in this RFP. This includes the identification of interim deliverables and reviews required of MDOT. The schedule will include key milestones and the commencement date for the delivery of real-time traffic data feed will be part of the schedule.
- A quality assurance/quality control (QA/QC) plan that describes the Consultant's plan for monitoring and maintaining data quality and coordination with MDOT and any potential independent validation Consultant.

The Consultant shall submit monthly progress reports by the fifth business day of the next month. Monthly progress reports will include, at a minimum, all key information affecting the quality, availability or reliability of the data feed in the previous month. For any issues that arise, the Consultant shall present a plan for how they will be resolved. Any formal request made to the Consultant to investigate inconsistent or questionable data must be responded to within seven calendar days. The monthly progress reports must also include any changes made to the real-time traffic data such as mapped segments and reference speeds.

The project will begin with a formal in person kick-off meeting, to review the project work plan and provide an opportunity for MDOT and the Consultant to share expectations for the project.

Real Time Traffic Data Requirements

a. Data Format.

1. The real-time data shall be provided in Extensible Markup Language (XML) format, using an MDOT approved schema.
2. The real-time data shall be provided in Comma Separated Values (CSV) format.
3. The real-time data files shall be delivered via Hypertext Transfer Protocol (HTTP) or another standard protocol.

b. Data Elements.

1. Raw segment speed in miles per hour to the nearest integer shall be a reported data element. This shall be “raw” data, without processing for smoothing.
2. Smoothed segment speed in miles per hour to the nearest integer shall be a reported data element. At a minimum, the smoothing process shall cap speeds at the speed limit.
3. Raw segment travel time to the nearest whole second shall be a reported data element. This shall be “raw” data, without processing for smoothing.
4. Smoothed travel time to the nearest whole second shall be a reported data element. At a minimum, the smoothing process shall truncate travel times to not imply greater than speed limit travel
5. A confidence interval shall be a reported data element. The confidence interval shall indicate the reliability of each segment speed and travel time. A definition of the confidence interval must also be supplied.

c. Definition of Segments.

1. Segment definition shall be based on logical breaks in facilities where one would expect the potential for differing traffic conditions such as an interchange, a lane drop or a major at grade intersection.
2. At a minimum freeway segments shall break at each interchange.
3. Segment definitions shall at a minimum contain beginning and ending latitude, longitude, heading, common name or route number, and a unique identifier (such as a Traffic Message Channel (TMC) code).
4. A segment definition file shall be provided and updated as changes are made (ie when ramps are added and geometry changes).
5. Segment definitions shall conform to applicable standards or comparable open and published data standards.

6. Segmentation shall be translatable to the Michigan Geographic Framework (see <http://www.michigan.gov/cgi>).

7. The segment definition file shall be in XML format in an MDOT approved schema.

8. The segment definition file shall be in CSV format.

d. Route Coverage. The Consultant shall provide, at a minimum, traffic data for all routes identified in Tables 1, 2 and 3.

e. Update Interval. The data shall be updated once every 2 minutes.

f. Accuracy.

1. Absolute average speed error shall be evaluated individually in separate speed buckets of 0-30 MPH, 31-50 MPH and 51+ MPH.

2. The average speed error shall be within +/- 10 MPH for each speed bucket.

g. Completeness.

1. The Consultant shall provide data quality indicators on completeness for each speed bucket.

2. Completeness shall be reported as the percent of segments with data per update interval.

3. Traffic data shall be provided for at least 95% of all segments at all required time reporting intervals.

h. Data Availability.

1. The Consultant shall provide traffic data 24 hours a day 7 days a week, with allowances made for up to 40 hours of scheduled system maintenance per year during off hours. The Consultant shall not perform scheduled maintenance without prior approval from MDOT 24 hours before the scheduled maintenance.

2. Apart from scheduled downtime, the Consultant shall maintain an overall data availability of at least 99.5 percent in each calendar month of the contract.

i. Latency.

1. The Consultant shall maintain a maximum data latency of 10 minutes or less (minimum).

2. The Consultant shall maintain a maximum data latency of 5 minutes or less (desired).

Historical Traffic Data Requirements

a. Data Access and Archive.

1. The Consultant shall provide MDOT with a set of raw (not smoothed or capped) travel time data collected over the past 24 hours delivered once each 24 hours.
2. The data will be available electronically through a user login and password protected FTP website.
3. At the end of each contract year, the Consultant shall provide MDOT with a CD(s), DVD(s) or USB flash drive containing all of the collected data within that year in CSV format.

Optional Real Time Traffic Data

a. Data Forecasts. The Consultant shall have the option to provide short-term forecasts of travel times over long distance routes which factor in the anticipated change in traffic conditions while a vehicle is en-route.

CONSULTANT PAYMENT – Unit Price:

Compensation for this project shall be on a **unit price** basis. This basis of payment typically includes a maximum quantity of units and a maximum reimbursable cost per unit.

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.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract and 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.

MDOT will reimburse the consultant for vehicle expenses and the costs of travel to and from project sites in accordance with MDOT's Travel and Vehicle Expense Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Travel_Guidelines_05-01-13_420289_7.pdf?20130509082418. MDOT's travel and vehicle expense reimbursement policies are intended primarily for construction engineering work. Reimbursement for travel to and from project sites and for vehicle expenses for all other types of work will be approved on a case by case basis.

MDOT will pay overtime in accordance with MDOT's Overtime Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Overtime_Guidelines_05-01-13_420286_7.pdf?20130509081848. MDOT's overtime reimbursement policies are intended primarily for construction engineering work. Overtime reimbursement for all other types of work will be approved on a case by case basis.

INTELLIGENT TRANSPORTATION SYSTEMS
 REAL-TIME TRAFFIC DATA
**MDOT STATEWIDE
 PAYMENT ITEMS**

ALL ENTRIES MADE ON THIS PAGE SHALL BE HANDWRITTEN IN INK.

ITEMS OF WORK		UNIT	QUANTITY	PRICE/UNIT	TOTAL PRICE
1	Real-time Traffic Data Year 1	Month	12		
2	Real-time Traffic Data Year 2	Month	12		
3	Real-time Traffic Data Year 3	Month	12		

CHECK UNIT PRICE COLUMN FOR OMISSIONS BEFORE ENTERING BID TOTAL

Bid Price for the above listed items and quantities:

\$ _____

CONSULTANT'S NAME: _____

CONSULTANT'S SIGNATURE: _____

DATE: _____

Appendix A

VALIDATION PROCESS AND PAYMENT PENALTIES

In accordance with section 6.1 of the RFP, data validation is required and subsequently if the data requirements are not met then penalties will be assessed. The following section details how these penalties are assessed and the necessary actions that MDOT may take to provide the best possible traffic data for the State. Data validation shall be tested based on several components, each with their respective percentage. If the subscription data does not fall within the allotted limits of the ground truth validation data a percentage of the maximum award fee shall be withheld up to 100 percent of the maximum award fee for that component. Validation will be performed on the raw (non-smoothed) data provided by the Consultant.

Award Fee Component:	Max Reduction	Actual Reduction	
1. Data Availability < 99.5%	40 %	%	
2. Data Accuracy +/- 10 MPH	40 %	%	
3. Data Latency > 5 Minutes*	20 %	%	
Total Reduction		%	
Max Payment		\$	(from cost proposal)
Actual Payment		\$	(max payment X total reduction)

* A latency of 5 minutes or less is desired, however if the selected offer is only able to propose a maximum latency of 10 min, this payment structure shall be modified to not penalize a latency under 10 minutes.

Data Availability:

The Consultant is required to maintain overall data availability on a per monthly basis of 99.5 percent, which does not include any scheduled maintenance. If MDOT should receive 99.5 percent of all the data reports for a particular month the vendor shall be award the maximum allotted amount reserved for the data availability component. Should the Consultant report less than 99.5 percent of the total reports for that particular month the maximum monthly payment shall be reduced based on the following table.

Percent Available	Reduction
99.5 or greater	0 %
99.49 or less	40 %

Data Accuracy:

System accuracy shall be evaluated based on the average absolute speed error. Section 2.1 of the RFP requirements states that the average speed error shall be +/- 10 MPH within each of the three ranges of speeds. The calculation method for the average absolute error is as follows:

Let: A_{ij} = Speed data for link i at time j from the data service.
 B_{ij} = Corresponding speed from the validation data

$$\text{Average Absolute Speed Error} = \text{mean}(|A_{ij} - B_{ij}|)$$

Ground truth speed data shall be collected at various times on MDOT selected segments which shall coincide with the Consultant’s segment definitions. These segments will then be compared with the Consultants reported data to verify its accuracy. For all evaluation data the speeds shall be rounded to the nearest whole integer. The following table is provided as a guide for the evaluation process.

Sample No.	Date	Day	Time	Length (mi)	Route No.	Limits		Data Comparison (MPH)		
						From	To	Consultant Data	Validation Data	Error
1	MM/DD/YY	Mon	00:00	0	#	A	B	0	0	0
2	MM/DD/YY	Mon	00:00	0	#	B	C	0	0	0
3	MM/DD/YY	Mon	00:00	0	#	C	D	0	0	0
4	MM/DD/YY	Mon	00:00	0	#	D	F	0	0	0
5	MM/DD/YY	Mon	00:00	0	#	F	G	0	0	0
6	MM/DD/YY	Mon	00:00	0	#	G	H	0	0	0
Average of the absolute values of the errors:										Avg.

Average Difference	Reduction
+/- 10 or less MPH	0 %
+/- 10 or greater MPH	40 %

In addition to ensuring the average reported data is with an acceptable range, anomalies may occur in the reported data. These will be defined as instances when errors exceed 20 MPH. These anomalies may not raise the average enough to be greater than +/- 10 MPH. However, when reporting travel times to the public it is imperative that these anomalies not be reported at all. Therefore if data anomalies of 20 MPH or greater are reported then a percent reduction off the maximum attainable amount is incurred. The penalty shall be assessed on a percent basis which the following table identifies.

% Of Data Records with Absolute Error > 20 MPH	Percent Reduction
0-5 %	5 %
5-10 %	10 %
10-20 %	20 %
Greater than 20 %	40 %

Data Latency:

System latency shall be validated using the three speed buckets outlined in the requirements table. These speed buckets are as follows: of 0-30 MPH, 31-50 MPH and 51+ MPH. The determiner of latency will be the time it takes for the subscription data to recognize a change from one bucket to the next, as compared to ground truth data. The following table outlines the percent reduction off the maximum available payment for this component based on latency.

Time Difference	Percent Reduction
5 Minutes or less	0 %
5+ Minutes	20 %

* - A latency of 5 minutes or less is desired, however if the selected offer is only able to propose a maximum latency of 10 min, this payment structure shall be modified to not penalize a latency under 10 minutes.

Appendix B

ITS REALTIME TRAFFIC DATA SCORING POINT ASSIGNMENT

1. PROJECT APPROACH (30 Points)

1.1 Project Management Approach

- 10 pts: Thoroughly explained project specific management approach above expectations, custom tailored for this project.
- 7 pts: Adequately explained project specific management approach meets minimum expectations, well explained tailored for all project.
- 5 pts: Generic project management approach meets minimum expectations, not related to the project or subConsultants.

1.2 Subscription Based Real-Time Travel Time Service

- 10 pts: Meets all Subscription Based Real-Time Travel Time Service requirements.
- 7 pts: Meets all but one of the Subscription Based Real-Time Travel Time Service requirements.
- 5 pts: Meets all but two or more of the Subscription Based Real-Time Travel Time Service requirements.

1.3 Historical Archive

- 10 pts: Meets all of the Historical Traffic Data Requirements.
- 7 pts: Meets all but one of the Historical Traffic Data Requirements.
- 5 pts: Meets all but two or more of the Historical Traffic Data Requirements.

2. PROPOSER QUALIFICATIONS (35 Points)

2.1 Project Manager

- 20 pts: Project Manager shows minimum of three (3) directly related Real-time Traffic Data projects.
- 10 pts: Project Manager shows minimum of one to two (1-2) directly related Real-time Traffic Data projects.
- 0 pts: Project Manager shows no directly related Real-time Traffic Data projects.

2.2 Key Task Leader and Key Staff

- 15 pts: Key Task Leader and Key Staff show an exceeding amount of experience in the areas of ITS integration, installation, and corresponding electrical work.
- 8 pts: Key Task Leader and Key Staff show a minimum amount of experience in the areas of ITS installation, and corresponding electrical work.
- 0 pts: Key Task Leader and Key Staff show no experience in the areas of ITS installation, and corresponding electrical work.

3. PAST PERFORMANCE (30 Points)

- 30 pts: Designated five (5) or more successfully active or completed projects relevant to the anticipated scope of work for this project.**
- 20 pts: Designated three to four (3-4) or more successfully active or completed projects relevant to the anticipated scope of work for this project.**
- 10 pts: Designated one to two (1-2) or more successfully active or completed projects relevant to the anticipated scope of work for this project.**

** Successfully active or completed projects will be defined through reference checks by review team.

4. LOCATION (~~30 Points~~) (5 Points)

95-100%	5 points
80-94%	4 points
50-79%	3 points
25-49%	2 points
10-24%	1 points
Less than 10%	0 points

5. EVALUATION CRITERIA

Proposals will be scored using the following criteria. The Technical proposal must score a minimum of 80 points prior to the bid being opened and scored.

Criterion Maximum Points

	Maximum Points
Technical Proposal	
1. Project Approach	30 points
• Project Management Approach	
• Subscription Based Real-Time Travel Time Service	
• Historical Archive	
2. Proposer Qualifications	35 points
• Project Manager Qualifications	
• Key Task Leader and Key Staff Qualifications	
3. Past Performance	30 points
4. Location	5 points
Total	100 points

Proposals that do not meet the requirements of the Michigan Department of Transportation Consultant/Vendor Selection Guidelines for Service Contracts will be considered non-response to this RFP.