

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

MDOT PROJECT MANAGER			JOB NUMBER (JN)	CONTROL SECTION (CS)
DESCRIPTION				
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				
TIER I (\$25,000-\$99,999)	TIER II (\$100,000-\$250,000)	TIER III (>\$250,000)		
			Understanding of Service	
			<i>Innovations</i>	
			<i>Safety Program</i>	
N/A			Organizational Chart	
			Qualifications of Team	
			Past Performance	
Not required As part of Official RFP	Not required As part of Official RFP		Quality Assurance/Quality Control	
			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		Presentation	
N/A	N/A		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	PROPOSAL/BID DUE DATE	TIME DUE
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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

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

Lansing Regular Mail	OR	Lansing Overnight Mail
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
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

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet

5100J - Consultant Data and Signature Sheet (Required only for Non-Prequalified Work)

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

Michigan Department of Transportation

**SCOPE OF SERVICE
FOR
INTELLIGENT TRANSPORTATION SYSTEMS**

CONTROL SECTION: 84912

JOB NUMBER: 107598C

PROJECT LOCATION:

I-75 corridor and connecting state routes from Grayling in Crawford County to Mackinaw City in Emmet County

PROJECT DESCRIPTION:

This scope is to provide design for an ITS project, develop a final bid package based on 100% complete plans, provide a cost estimate for construction, and serve as the MDOT representative and system manager, through construction phase.

The Consultant will be responsible to scope the project, refine locations of equipment, develop plans to 100% completion, define known or anticipated Right of Way needs, define known or anticipated environmental issues, provide necessary geotechnical information, define known or anticipated utility issues and define known or anticipated traffic concerns. This project will focus on expanding the ITS system along the I-75 corridor and on connecting state routes between Grayling and Mackinaw City. The system shall include, but is not limited to, the following:

- A. Road Weather Information Systems (RWIS)
 - 1. Expansion on existing system through installation of mini-RWIS, additional sensors, etc.
 - 2. Bridge De-icing at two or more locations
 - 3. Bridge, pavement and/or atmospheric sensors linked to static signs with warning beacons

- B. Closed loop traffic signal system on M-32 in Gaylord (7 signals)
 - 1. Change the controller at M-32 & I-75 SB Off ramp/Dickerson Rd from EPAC to MOD50 to act as master controller for the system
 - 2. Completely modernize 2 locations with a box span design, if feasible: M-32 at Murner/McVannel Rd. and M-32 at Wisconsin Ave.
Sidewalk ramp design will be required at M-32 & Murner/McVannel Rd.
 - 3. Add radio interconnect with appropriate additional controller cabinet equipment for four locations; M-32 at Meecher Rd., M-32 at I-75 NB off ramp, M-32 at Otsego Ave and M-32 at Center St.

4. Complete radio survey
 5. Include 4 radio kits, 4 plug strips and 4 modem boards at the four locations where only radio interconnect is being added; equipment will be added as part of the controller at the other 3 locations, including the master controller.
- C. Small Dynamic Message Signs (DMS) on non-freeway (i.e. M-32)
- D. Closed Circuit Television (CCTV) cameras

Conceptual Operations (Con-Ops) have been developed for the North Region ITS Architecture and Deployment Plan and shall be referenced by the Consultant during design.

ANTICIPATED SERVICE START DATE: October 3, 2011

ANTICIPATED SERVICE COMPLETION DATE: August 9, 2013

PRIMARY PREQUALIFICATION CLASSIFICATION(S):

Intelligent Transportation Systems

SECONDARY PREQUALIFICATION CLASSIFICATION(S):

Traffic Signal Design
Geotechnical Engineering Services
Road Design Surveys
Roads and Streets
Utility Coordination

DBE REQUIREMENT: There is no DBE requirement for this project.

MDOT PROJECT MANAGER:

Garrett Dawe, P.E.
North Region Office
1088 M-32 East
Gaylord, MI 49738
Phone: 989-731-5090
Fax: 989-731-0536
daweg@michigan.gov

The Consultant shall contact the MDOT Project Manager prior to beginning any work on the project.

The Consultant Project Manager shall be an engineer licensed in the State of Michigan with relevant experience in ITS systems engineering and design services and traffic

signal design services. The Consultant Project Manager shall be an employee of the primary consulting firm responding to the RFP and not a sub-consultant.

CONSTRUCTION COST:

- A. The estimated cost of construction is: \$1,849,444
- B. The estimated cost of real estate is: \$0

The above construction total is the amount of funding programmed for this project.

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road 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, etc.).

NOTE: A process change mandated by federal audit of MDOT’s design process puts the Omissions and Errors Check Meeting after the Plan Completion. Please keep this in mind when preparing your schedule. See MDOT Road Design Manual, Chapter 14 – Procedures – Section 14.54 for corroboration. See “For Your Information” contacts at the end of this document for more info or questions.

The Consultant is required to use MDOT’s current version of Bentley MicroStation for CADD applications. The Consultant shall comply with all MDOT CADD standards and file naming conventions.

GENERAL INFORMATION:

The Consultant shall have substantial ITS conception and design and traffic signal design experience. The Consultant should be prepared to demonstrate their background and experience, as this will be a major part of the selection for this RFP.

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 staff shall conduct themselves with professionalism in carrying out their duties.

The Consultant shall notify the MDOT 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 by the MDOT Project Manager.

If steel strain poles are required for the traffic signal modernizations, soil boring information must be included on the plans. Soil boring information shall be provided by the Consultant.

During construction, if it is determined that the design is not constructible due to design error by the Consultant, the Consultant will be responsible for correcting the design at no additional cost to the Department. If the constructability issue is based on changes made by MDOT, the Consultant will be compensated for additional design work.

CONSULTANT RESPONSIBILITIES:

The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job and perform field operations in accordance with the Department's Personal Protective Equipment (PPE) policy as stated in the MDOT Guidance Document #10118.

The Consultant shall meet with the MDOT Project Manager to review the project, location of data sources and contact persons, and relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time, such as geotechnical requirements, utility conflict resolution, local agency meetings, etc.

The Consultant shall complete the design of this project including, but not limited to the following:

- A. Provide conceptual layouts for the corridor. This may include holding stakeholder meetings to seek input on device locations and system functionality.
- B. Perform design surveys.
- C. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.
- D. Perform required design and functional technical specification writing to expand the ITS facilities in the project area. The proposed facilities shall include, but not be limited to, ESS, traffic signals, CCTV, DMS, cabinets, detectors, bridge de-icing systems and communications infrastructure.

- E. Compute and verify all plan quantities.
- F. Prepare staging plans and special provisions for maintaining traffic during construction.
- G. Provide solutions to any unique problems that may arise during the design of this project.
- H. Develop component and acceptance tests and work with MDOT to perform all tests.
- I. The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.
- J. Maintain a Design Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.
- K. If excavation is required, submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Preliminary Project Assessment (PPA).
- L. Prepare and submit a CPM network for the construction of this project.
- M. Record and submit type-written minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees. MDOT will provide and distribute official meeting minutes for the Plan Review Meeting.
- N. Provide to MDOT at the scheduled submittal dates, copies of the required specifications and plan set materials for distribution by MDOT for all reviews for this project with the exception of The Plan Review. The Consultant shall contact the MDOT Project Manager prior to the submittal dates for the exact number of copies that will be required for submittal. The following is an estimate of the number of copies that will be needed; 20 sets – Pre-OEC, 20 sets - OEC Review.
- O. Prepare and submit electronically (native format or Adobe PDF) any information, calculations or drawings required by MDOT for acquiring any permit (i.e. NPDES, DEQ, etc), approvals (i.e. county drain commission) and related mitigation. MDOT will submit permit requests.

- P. Attend any project-related meetings as directed by the MDOT Project Manager.
- Q. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.
- R. Assist in the review of utility permit requests, incorporate the information in the design plans, and respond within 2 weeks from receipt of the permit.
- S. Determine the availability of electric service to the proposed facilities as identified in the conceptual stage. Coordinate with the electric company to provide power and service addresses to the proposed facilities. Any potential problems with utility electric service shall be brought to MDOT's attention as soon as they are known.
- T. Determine the availability of communications services to the proposed facilities as identified in the conceptual stage. Coordinate with the cable or wireless company to provide communications service to the proposed facilities. Any potential problems with the communications service shall be brought to MDOT's attention as soon as they are known.
- U. The MDOT Project Manager will be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project**. The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.
- V. Contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.
- W. Prepare and incorporate all documents for E-Proposal Submittal.

UTILITIES

The Consultant shall be responsible for obtaining, and showing on the plans, the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project. The Consultant will be responsible for miscellaneous staking of utilities.

TRAFFIC CONTROL

The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Scope of Design Services.

MDOT PERMITS

The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Joe Rios, Utilities/Permits Section, Real Estate Division at (517) 241-2103.

MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to the MDOT Project Manager.

TRAFFIC SIGNAL DESIGN

- A. Field Utility/Design Meeting
 - 1. In order to help expedite the design and to avoid and/or identify utility conflicts, the MDOT TSC Utility Coordinator will lead an on-site utility coordination/design field meeting. The consultant shall provide available dates and times for the field utility/design meeting to the MDOT Project Manager.
 - 2. Provide a base plan to the MDOT Project Manager at least 14 days prior to the field utility/design meeting. The MDOT Project Manager will confirm the meeting date and time and fax a letter to the utilities at least 14 days prior to the meeting date.
 - 3. Call in a design/survey MISS DIG for the site (a minimum of 14 days notice is required to obtain a design/survey MISS DIG). The utilities must be marked by MISS DIG prior to the field utility meeting. If the consultant is also performing soil borings, a construction MISS DIG should be utilized (a minimum of 3 working days notice is required to obtain a construction MISS DIG).
 - 4. Provide meeting minutes.
 - 5. Provide the utility meeting sign-in sheet to the MDOT utility coordinator at the field utility/design meeting including any utility company responses prior to the field meeting.

- B. Schedule, attend, and provide meeting minutes for any additional meetings as required, including but not limited to, the following:

1. Radio Interconnect field survey (as required) - Document results on the Signal Radio Survey Form #1516: http://mdotwas1.mdot.state.mi.us/public/webforms/detail.cfm?ALLFORMS_FormNumber=1516
 2. Any additional utility coordination field meetings as required (coordinate scheduling with utility engineer) - The Consultant shall stake proposed foundation locations in the field prior to any additional field utility coordination meeting.
- C. Develop any non-typical pedestrian detour plans that are not covered by the typical pedestrian detour plan provided by MDOT.
- D. Proposed plan views must have a 1"=30' scale when plotted to 11"x17". Full traffic signals must also include quadrant details at a 1"=10' scale showing all utilities and proposed facilities.
- E. Perform strain pole foundation design as required. The MDOT has developed a strain pole foundation design table for box span signals. This table can be found on the Traffic and Safety website in the signals correspondence and guidelines area. A special foundation design may be necessary depending on site specific soil properties and proposed signal layout and geometry.
- F. Perform design service including the design and preparation of **base plans**, preliminary (75%) plans, final plans, and cost estimates based on as-bid prices. **Special provisions are only required if a pay item was not included in the as-bid project pay items.**
- G. In the performance of design service, govern all project design and plan work by the applicable codes, standards, and practices of the Michigan Department of Transportation, hereinafter referred to as the department, and the current *Michigan Manual of Uniform Traffic Control Devices*.
- H. All documents prepared by the Consultant, including, drawings, estimates, specifications, field notes, investigation studies, etc., are the property of the department.
- I. Refer to Suggested Traffic Signal Design Procedure: MDOT website.
- J. Plans are to be designed using the **current version** of the MDOT Standard Specifications.
- K. Perform any design/coordination tasks with any railroad company involved within the project limits, including (but not limited to):
1. Determine railroad contact person(s)

2. Complete any applications required by the railroad company to perform the proposed traffic signal work
 3. Include related notes and special provisions as required in the proposal.
- L. Any existing or proposed pedestrian pushbuttons and ramps must be accessible per ADA guidelines and MDOT design practices including:
1. **Show proposed grades on ADA ramp designs**
 2. Pushbutton must be within 24" from edge of sidewalk
 3. The pushbutton must be located in the middle of a 4' pushbutton landing (maximum slope of 2%).
 4. ADA ramps are required at every crosswalk controlled by a pedestrian signal head.
 5. Sidewalk is required to connect ADA ramps on a quadrant.
- M. Perform sidewalk and ramp design as needed to comply with MDOT design practices and ADA requirements. For all stop and go traffic signals, all ADA ramps will be replaced unless the existing ramps are compliant with MDOT design practices and ADA guidelines.
- N. Perform survey as needed in compliance with MDOT survey practices and standards.

Soil Borings

- O. **Provide the TSC Traffic and Safety engineer and the Region Soils Engineer at least three working days notice prior to beginning soil borings.**
- P. **Provide the preliminary report to the Region Soils Engineer and to the Project Manager for review and approval.**
- Q. Perform Design Service for drilled shaft foundations as required including soil boring information, identification of any suspected contamination of the boring site, and preliminary foundation investigation. (Refer to MDOT's website.) The following information must be provided for proper analysis of strain pole foundations:
1. Accurate pole location information
 2. Soil classification
 3. Standard penetration values every 2.5 feet (750 mm) extending **25 feet** (7.6 m) below the ground surface elevation (blows/foot in accordance with ASTM D1586)
 4. **Undrained shear strength** (PSF, for cohesive soils)
 5. Ground water table elevation

MDOT RESPONSIBILITIES:

- A. Schedule and/or conduct the following:
 - 1. Project related meetings.
 - 2. The Plan Review
 - 3. Utility Meetings.
 - 4. Quantity summary sheets and final item cost estimates.
 - 5. Packaging of plans and proposal.

- B. Furnish Special Details and pertinent reference materials.

- C. Furnish old plans of the area, if available.

- D. Obtain all permits for the project as outlined in the previous section.

- E. Coordinate any necessary utility relocation.

- F. The Department will review and comment on the preliminary (75%) and final plans, and special provisions/specifications. Additional plan review may be required depending on completeness and accuracy of the preliminary (75%) plans submitted.

- G. Information services to be provided by MDOT are:
 - 1. Control section numbers
 - 2. Job numbers
 - 3. Contact information for TSC/Region/C&T personnel
 - 4. Available signal design plans and/or layout drawings for each location
 - 5. Available signal phasing or operational information for each location
 - 6. **Items available on MDOT's website - www.michigan.gov/mdot -**
(Select: Doing Business with MDOT, Traffic & Safety Services, Typical/Details/Guides)

- H. Traffic Consultant Files
 - 1. Cell libraries
 - 2. Microstation information
 - 3. CAD instructions for consultants
 - 4. MDOT sample layouts
 - 5. MDOT Suggested Traffic Signal Design Procedure
 - 6. MDOT Requirements for Preliminary Geotechnical Investigations for Signal Foundations
 - 7. As-bid pay items prices.

8. Signal Span Calculation Program (non-disclosure statement required)

I. Traffic Guidelines

1. Traffic Signal Head Placement Diagrams
2. Signal special provisions are now available on the Design IRS menu.

DELIVERABLES:

The Consultant shall deliver all computer files associated with the project in their native format (spreadsheets, CADD files, GEOPAK files, etc.) on DVD, CD or uploaded to ProjectWise, as directed by the MDOT Project Manager. All CADD files shall be created and identified with standard MDOT file names as shown in Appendix A of the Road Design Manual. It is the Consultant's responsibility to obtain up to date MicroStation seed/configuration files necessary to comply with MDOT's CADD standards which are posted to the bulletin board system. Any CADD files that do not conform to MDOT standards will be returned to the Consultant for correction at the Consultant's expense.

Proposal documents shall be submitted in their native format with standard naming conventions as well as combined into one Adobe PDF file in the sequence specified by MDOT. To provide text search capabilities, the combined proposal shall be created by converting native electronic files to PDF. Scanning to PDF is discouraged except in instances where it is necessary to capture a legally signed document or a hard copy version of a document is all that exists.

Plan files shall be submitted in their native dgn format with standard naming conventions as well as plotted into a combined Adobe PDF file. Plan sheets shall be plotted to Adobe PDF with full text search and level on/off capabilities in half size (11" x 17") formats. A half size title sheet shall be plotted, stamped and signed then scanned for inclusion with the Adobe PDF set. The original title sheet shall be sent to the MDOT Project Manager.

Stand Alone Proposal Estimator's Worksheet (SAPW) shall be used to generate the txt and csv files necessary for import into the Trns*port bid letting software. The SAPW files shall be transmitted electronically by the method specified by the MDOT Project Manager.

Other plan sheets that are required for this project shall be completed by the Consultant. These include, but are not limited to the following plan sheets:

- A. The title sheet. MDOT will provide a map of the area on a disk in our workstation format. If the map is not available, MDOT will provide a map that could be used. The Consultant shall be responsible for any revisions to the title sheet. The title sheet and map shall meet MDOT format and layout guidelines.

- B. Project Information Sheet.
- C. Note Sheet.
- D. Typical Cross-Sections.
- E. Project specific Special Details.
- F. Construction staging and traffic control plans.
- G. Detail grade sheets for critical areas.
- H. Witness and benchmark sheet(s).
- I. Soil boring log sheet(s).
- J. Foundation details sheet(s).

All plans, special provisions, estimates, and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the Project Manager. All plans, specifications, and other project related items are subject to review and approval by MDOT.

DELIVERABLES – TRAFFIC SIGNAL DESIGN

Task 1: Base Plan Preparation

- A. The primary purpose of base plans for the ID design process is to identify the location of proposed foundations prior to the field utility/design meeting. Base plans include (but are not limited to):
 1. Dimensioned locations of all proposed foundations (including pushbutton pedestals, poles, and controller)
 2. Existing road rights-of-way (ROW)
 3. Surveyed locations of any visible utilities and all MISS DIG markings
 4. All utility information received from MDOT soliciting utility companies
 5. Proposed traffic and pedestrian signal head types and locations
 6. Proposed phasing (as required)
 7. POCH diagram for proposed attachments to wood poles (not required for steel pole attachments)
- B. Where applicable, the intersection and ADA ramp survey will be used to develop base plans

- C. If existing or proposed equipment appear to be outside existing right-of-way, contact Douglas Adelman (517-373-2363), Traffic Signal Unit in Lansing.

Task 1: Deliverables (Base Plans)

- A. Proposed signal plans in the following format:
 - 1. One 11x17 pdf file distributed as follows:
 - a. All local agencies: Pdf file
 - b. MDOT Project Manager: Pdf file
 - c. Traffic Signals Unit: Pdf file
 - d. TSC Delivery Engineer: Pdf file
 - e. TSC Traffic & Safety Engineer: Pdf file
 - f. TSC Utilities Engineer: Pdf file
 - g. Region Soils Engineer: Pdf file
 - h. Region Traffic & Safety Engineer: Pdf file
 - i. Utility company supplying power: Pdf file

Task 2: Preliminary (75%) Plan Preparation

- A. Design and develop preliminary (75%) contract plans necessary for new installation or modernization of electronic traffic control devices to be installed via indefinite delivery project. Preliminary plans include (in addition to base plan information):
 - 1. All utility and design information received from MDOT soliciting utility companies and resulting from field utility/design meeting (show on both removal and proposed plans).
 - 2. ADA ramp and pushbutton design including proposed slopes, ramp types, landing locations, and final elevation
 - 3. Radio interconnect plan sheet (if the scope requires Radio Interconnect Design): Show location of antennas, masters, repeaters, and remotes per the completed radio survey.
 - 4. Field measured road and lane geometry and posted speed limits
 - 5. Utility note sheet listing the contact names and phone numbers for each utility having facilities within the project limits.
 - 6. Proposed pushbuttons, traffic loops, and antennas
 - 7. Proposed traffic signal removal (if required) and installation plan(s)
 - 8. List of Materials and Quantities
 - 9. Point of Contact Height (POCH) diagram(s)
 - 10. Appropriate note blocks for contact persons, etc.
 - 11. Proper file names, levels, and text sizes
 - 12. Any additional right-of-way required for existing and proposed traffic signal appurtenances
 - 13. Soil boring information including depths, soil description, water level, and depth of foundation (if required)

Task 2: Deliverables Preliminary (75%) Plans

- A. A summary spreadsheet listing utility conflicts by location and quadrant including the following:
 - 1. Specify utility conflicts as overhead or underground
 - 2. Specify utility and owner (if unknown label as such)
 - 3. Specify locations and utilities for which inadequate information was received
- B. Preliminary pedestrian detour plans must be included as 8 ½"x11" sheets within the maintaining traffic special provision or in the plans as 11"x17" sheets.
- C. All traffic signal plan and interconnect sheets including details
- D. Any required special provisions, and specifications (only for items **which were not included in the as-bid project pay items**)
- E. Checklist of "typical" signal details to be used
- F. One copy of Field utility meeting sign in sheet
- G. Format of Task 3 Deliverables
 - 1. One electronic 11x17 pdf file (filename: Job#PLANHALF.pdf)
- H. Distribute Task 3 Deliverables as follows:
 - 1. **All local agencies**
 - 2. **MDOT Project Manager**
 - 3. Traffic Signals Unit
 - 4. TSC Delivery Engineer
 - 5. TSC Traffic & Safety Engineer
 - 6. TSC Utilities Engineer
 - 7. Region Soils Engineer
 - 8. Region Traffic & Safety Engineer
 - 9. Lansing Signal Shop
 - 10. Utility company supplying power

Task 3: Final Plan Preparation

- A. Incorporate the department's comments on the plans and prepare complete detailed construction final plans, measurement and payment items, estimates of quantities, span calculations, and engineer's final estimates **(based on as-bid prices)** of cost for all necessary construction and related work included in this project, **supplemental specifications, special provisions are only required for items which were not included in the as-bid project pay items**
- B. During preparation of the final plans, make such alterations, corrections, and revisions to plans and supporting materials as are deemed necessary and desirable by the department to ensure conformance of plans to good design and standard practices.
- C. Final pedestrian detour plans must be included as 11"x17" plan sheets as required.

Task 3: Deliverables (Final Plans):

- A. Upon completion of design services for this project and final approval thereof by the Department, deliver final plans and supporting documents. All CAD files must be "Intergraph Microstation Version 8 file format" and all PDF files must be Adobe Acrobat version 8.
- B. **Format of Task 3 Deliverables (Final Plans):**
 - 2. Electronic files of all signal plans
 - 3. Electronic (pdf) 11"x17" plan file (filename: Job#PLANHALF.pdf)
 - 4. Electronic (pdf) files of all required supporting documents
 - 5. Editable electronic files of all supporting documents.
 - 6. Construction Cost Estimate based on as-bid prices **(Excel format)**.
 - 7. One copy of all design computations as required for use by the department.
 - 8. Upon request by the department, make available thereto all notes utilized in preparation of the plans, supplemental specifications, and cost estimates.
 - 9. Checklist of "typical" signal details to be used
- C. **Distribute Task 3 Deliverables to MDOT Project Manager and Lansing Traffic Signals Unit as follows:** All electronic files to be delivered on a compact disk (CD) and sent via email

PROJECT MANAGEMENT:

This project will require close interaction and good communication between the Consultant and MDOT.

If there are any major deviations from the original scope of this assignment, these changes shall be documented and jointly approved by the Consultant and MDOT.

The Consultant shall provide all necessary project management services, including monthly and quarterly progress reports, developing and maintaining a project schedule, and providing invoices in a timely manner.

Consultants should provide a description of their management team for this project as well as a listing of all key personnel responsible for the deliveries of this RFP.

STATUS REPORTS/ MEETINGS:

There will be regular meetings between MDOT representatives and the Consultant to review work product, and to communicate progress, issues, ideas, and expectations.

The Consultant shall provide copies of all project reports, correspondence, and meeting announcements to the MDOT Project Manager. The Consultant shall also provide the minutes of all meetings attended and shall distribute them to the MDOT Project Manager via email.

PROJECT SCHEDULE:

The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts.

**MDOT PRECONSTRUCTION
TASKS
CONSULTANT CHECKLIST**

STUDY (EARLY PRELIMINARY ENGINEERING)

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY
YES	NO		(mm/dd/yyyy)
		CONSULTANT CONTRACT AUTHORIZATION/EXECUTION	_/_/___
		<u>EPE SCOPING ANALYSIS</u>	
<input type="checkbox"/>	<input type="checkbox"/>	2120 Prepare Traffic Analysis Report	_/_/___
<input type="checkbox"/>	<input type="checkbox"/>	2130 Prepare Project Justification	_/_/___
<input type="checkbox"/>	<input type="checkbox"/>	<i>213M <u>Concurrence by Regulatory Agencies with the Purpose and Need</u></i>	_/_/___
<input type="checkbox"/>	<input type="checkbox"/>	2140 Develop and Review Illustrative Alternatives	_/_/___
<input type="checkbox"/>	<input type="checkbox"/>	2155 Request/Perform Safety Analysis	_/_/___
<input type="checkbox"/>	<input type="checkbox"/>	2160 Prepare and Review EIS Scoping Document	_/_/___

<input type="checkbox"/>	<input type="checkbox"/>	<u>211M Public Information Meeting</u>	__/__/__
<u>EPE DRAFT ANALYSIS</u>			
<input type="checkbox"/>	<input type="checkbox"/>	2310 Conduct Technical SEE Studies	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2321 Prepare for Aerial Photography	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2322 Finish/Print Aerial Photography	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2330 Collect EPE Geotechnical Data	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2340 Develop and Review Practical Alternatives	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>233M Aerial Photography Flight</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2360 Prepare and Review EA or DEIS	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>231M Draft Submission to FHWA</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2380 Circulate EA or DEIS	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>232M Public Hearing</u>	__/__/__
<u>EPE FINAL ANALYSIS</u>			
<input type="checkbox"/>	<input type="checkbox"/>	2510 Determine and Review Recommended Alternative	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>250M Concurrence by Regulatory Agencies with Recommended Alternatives</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2525 Prepare and Review Engineering Report	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2530 Prepare and Review Request for FONSI or FEIS	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>252M Final Submission to FHWA</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2550 Obtain FONSI or ROD	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2570 ITS Concept of Operations	__/__/__
<u>CONTAMINATION INVESTIGATION</u>			
<input type="checkbox"/>	<input type="checkbox"/>	2810 Project Area Contamination Survey (PCS)	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	2820 Preliminary Site Investigation (PSI) for Contamination	__/__/__

PRELIMINARY ENGINEERING – DESIGN

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)
YES	NO		
<u>DESIGN SCOPE VERIFICATION AND BASE PLAN PREPARATION</u>			
X	<input type="checkbox"/>	3130 Verify Design Scope of Work and Cost	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3310 Prepare Aerial Topographic Mapping	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3320 Conduct Photogrammetric Control Survey	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3321 Set Aerial Photo Targets	__/__/__
X	<input type="checkbox"/>	3330 Conduct Design Survey	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3340 Conduct Structure Survey	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3350 Conduct Hydraulics Survey	__/__/__
X	<input type="checkbox"/>	3360 Prepare Base Plans	__/__/__
X	<input type="checkbox"/>	<u>331M Utility Notification</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3361 Review and Submit Preliminary ROW Plans	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>331M Preliminary ROW Plans Distributed</u>	__/__/__
X	<input type="checkbox"/>	3365 Pre-Conceptual ITS Design and Meeting	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3370 Prepare Structure Study	__/__/__

<input type="checkbox"/>	<input type="checkbox"/>	3375	Conduct Value Engineering Study	__/__/__
X	<input type="checkbox"/>	3380	Review Base Plans	__/__/__
X	<input type="checkbox"/>	<u>332M</u>	<u>Base Plan Review (Pre-GI Inspection)</u>	__/__/__
X	<input type="checkbox"/>	3390	Develop the Maintaining Traffic Concepts	__/__/__
			<u>PRELIMINARY PLANS PREPARATION</u>	
X	<input type="checkbox"/>	3510	Perform Roadway Geotechnical Investigation	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3520	Conduct Hydraulic/Hydrologic and Scour Analysis	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3522	Conduct Drainage Study, Storm Sewer Design, and use Structural Best Management Practices	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3530	Conduct Structure Foundation Investigation	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3535	Conduct Structure Review for Architectural and Aesthetic Improvements	__/__/__
X	<input type="checkbox"/>	3540	Develop the Maintaining Traffic Plan	__/__/__
X	<input type="checkbox"/>	3551	Prepare/Review Preliminary Traffic Signal Design Plan	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3552	Develop Preliminary Pavement Marking Plan	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3553	Develop Preliminary Non-Freeway Signing Plan	__/__/__
X	<input type="checkbox"/>	3554	Develop Preliminary Freeway Signing Plan	__/__/__
X	<input type="checkbox"/>	3555	Prepare/Review Preliminary Traffic Signal Operations	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3570	Prepare Preliminary Structure Plans	__/__/__
X	<input type="checkbox"/>	3580	Develop Preliminary Plans	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3581	Review and Submit Final ROW Plans	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>351M</u>	<u>Final ROW Plans Distributed</u>	__/__/__
X	<input type="checkbox"/>	3585	Final ITS Concept Design and Meeting	__/__/__
X	<input type="checkbox"/>	3590	Review Preliminary Plans (Hold Plan Review Meeting)	__/__/__
X	<input type="checkbox"/>	<u>352M</u>	<u>THE Plan Review (Grade Inspection)</u>	__/__/__
X	<input type="checkbox"/>	3595	Conduct ITS Structure Foundation Investigation	__/__/__
			<u>UTILITIES</u>	
X	<input type="checkbox"/>	3610	Compile Utility Information	__/__/__
X	<input type="checkbox"/>	3615	Compile ITS Utility Information	__/__/__
X	<input type="checkbox"/>	3650	Coordinate RR Involvement for Grade Separations	__/__/__
X	<input type="checkbox"/>	3655	Coordinate RR Involvement for At-Grade Crossings	__/__/__
X	<input type="checkbox"/>	3660	Resolve Utility Issues	__/__/__
X	<input type="checkbox"/>	<u>360M</u>	<u>Utility Conflict Resolution Plan Distribution</u>	__/__/__
X	<input type="checkbox"/>	<u>361M</u>	<u>Utility Meeting</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3670	Develop Municipal Utility Plans	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3672	Develop Special Drainage Structures Plans	__/__/__
X	<input type="checkbox"/>	3675	Develop Electrical Plans	__/__/__
X	<input type="checkbox"/>	3680	Preliminary ITS Communication Analysis	__/__/__
X	<input type="checkbox"/>	3690	Power Design (Power Drop in Field)	__/__/__
			<u>MITIGATION/PERMITS</u>	
<input type="checkbox"/>	<input type="checkbox"/>	3710	Develop Required Mitigation	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3720	Submit Environmental Permit Applications	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3730	Obtain Environmental Permit	__/__/__
			<u>FINAL PLAN PREPARATION</u>	
X	<input type="checkbox"/>	3821	Prepare/Review Final Traffic Signal Design Plan	__/__/__

<input type="checkbox"/>	<input type="checkbox"/>	3822	Complete Permanent Pavement Marking Plan	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3823	Complete Non-Freeway Signing Plan	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3824	Complete Freeway Signing Plan	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3825	Prepare/Review Final Traffic Signal Operations	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3830	Complete the Maintaining Traffic Plan	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3840	Develop Final Plans and Specifications	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>380M</u>	<u>Plan Completion</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3850	Develop Structure Final Plans and Specifications	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3870	Hold Omissions/Errors Check (OEC) Meeting	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>387M</u>	<u>Omissions/Errors Checks Meeting</u>	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>389M</u>	<u>Plan Turn-In</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	3880	CPM Quality Assurance Review	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3890	Final ITS Communication Analysis	__/__/__

PRELIMINARY ENGINEERING – RIGHT OF WAY

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)
YES	NO		
<u>EARLY RIGHT OF WAY WORK</u>			
<input type="checkbox"/>	<input type="checkbox"/>	4120 Obtain Preliminary Title Commitments	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4130 Prepare Marked Final Right Of Way Plans	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>413M</u> <u>Approved Marked Final ROW</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4140 Prepare Property Legal Instruments	__/__/__
<u>ROW ACQUISITION</u>			
<input type="checkbox"/>	<input type="checkbox"/>	4411 Preliminary Interviews	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>441M</u> <u>Post-Decision Meeting</u>	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4412 Real Estate Services Assignment Proposal and Fee Estimate (Form 633s) for Appraisal Work Authorization	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4413 Appraisal Reports	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4420 Appraisal Review Reports	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4430 Acquire Right Of Way Parcels	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4510 Conduct Right Of Way Survey & Staking	__/__/__
<u>ROW RELOCATION</u>			
<input type="checkbox"/>	<input type="checkbox"/>	4710 Relocation Assistance	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4720 Prepare Improvement Removal Plan	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	<u>442M</u> <u>ROW Certification</u>	__/__/__

POST LETTING/AWARD TASKS (for reference only)

		P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)
YES	NO		
<input type="checkbox"/>	<input type="checkbox"/>	4810 Complete Acquisition Process	__/__/__

<input type="checkbox"/>	<input type="checkbox"/>	4820	Manage Excess Real Estate	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4830	Provide Post-Certification Relocation Assistance	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	4910	Conduct ROW Monumentation	__/__/__
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5010	Construction Phase Engineering and Assistance	__/__/__
<input type="checkbox"/>	<input type="checkbox"/>	5020	Prepare As-Built Drawings	__/__/__

FOR YOUR INFORMATION

For questions on specific tasks, refer to the P/PMS Task Manual located on the MDOT Bulletin Board System. For assistance in accessing this manual, please contact one of following:

Dennis Kelley: (517) 373-4614

CONSULTANT PAYMENT – Actual Cost Plus Fixed Fee:

Compensation for this project 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, subconsultant costs, and applied fixed fee.

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 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 in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior

written approval by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager.

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