IT Professional Technical Services
Master Contract Program
T#:902TS

Statement of Work (SOW)
For Technology Services
Issued By
Minnesota Department of Transportation (MnDOT)

This file contains a number of attachments. One of the attachments is the requirements specification which is also a pdf file and itself has a number of attachments. To access the attachments, click the icon on the left side of the window. If you cannot see the attachments, contact Melissa McGinnis at melissa.mcginnis@state.mn.us.

Project Title:	CSAH NEEDS II Project (P1316)
Service Categories:	Analyst – Business
	Database – Oracle
	Project Management

Project Specific Information

The Minnesota Department of Transportation (MnDOT) requests proposals to develop and implement a web-based system to automate the business processes of apportioning funds from the Highway Users Tax Distribution Fund to Minnesota counties and municipalities. This RFP seeks proposals for a solution that can be a mix of out-of-the box, off-the -shelf components and custom-built components. One component of the system will be for business process and business rules management. MnDOT prefers that the business process and business rules management component be a purchased software package instead of custom-built. **If it is determined that a "software package" will be purchased, MnDOT will make this purchase outside of this contract. However, the cost of the package should be included as part of your cost estimate for the project.**

1. Business Need

The Minnesota Department of Transportation's (MnDOT) State Aid Division is replacing its current County State Aid Highway (CSAH) NEEDS application and its Municipal State Aid Street (MSAS) application. These two applications support the business processes of apportioning funds from the Highway Users Tax Distribution Fund to Minnesota counties and cities. The current application must be replaced because of substantial changes in the apportionment process. The primary goal of this project is to implement a CSAH NEEDS II and MSAS NEEDS system.

The timeline for implementing the CSAH NEEDS II application will be the same as the timeline for implementing the MSAS NEEDs application. MnDOT therefore would like to expedite the project as much as possible by having MSAS NEEDS work proceed concurrently with CSAH NEEDS II work. For

example, CSAH requirements and design work would be done concurrently with MSAS requirements and design work. Responders should consider this when determining staffing levels.

1.1. Business Need or Problem

The purpose of the CSAH NEEDS II project is to replace an existing application that assists in the distribution of funding to counties to maintain their County State Aid Highway (CSAH) system. The current application utilizes a formula that has been rendered obsolete by changes recommended by the county engineering community. The proposed application and database will be designed to support and administer the changes recommended by the county engineers.

The project will also replace an existing MSAS NEEDS application that assists in the distribution of funding to cities to maintain their Municipal State Aid Streets (MSAS) system.

The new application and database must be flexible and easy to understand and must provide State Aid with transparent and defendable results. Additionally, it must provide State Aid a means of changing business processes and rules in response to changing business needs with minimal or no involvement from IT staff.

1.2. Project History

This project was preceded by a proof-of-concept project that tested the CSAH NEEDS II business process and rules with real world data. The results were generally regarded as positive by the county engineers who granted permission to move forward to a production system. Much of the technology developed for the proof of concept project can be leveraged for the development of the system called for by this RFP.

1.3. Business Objectives

The county and city engineering community empowers State Aid to oversee its funding of local roads. Changes mandated by the engineers must be implemented by State Aid. The paramount business need for this project is to deliver a new system that accommodates the latest changes. Ancillary benefits will be the upgrading of the application and the simplification of the current Oracle database.

The funding distribution formula changes proposed by the county engineering community and the city engineering community are a vast improvement over the legacy formula. The number of attributes in the database will be reduced by an estimated 60%. GUI input forms will be reduced similarly. Additionally, the simplicity and logical approach afforded by the latest formula will be realized with reduced maintenance costs and time savings on the part of internal State Aid staff and our external county engineer clients.

Additional Business Needs

- Allow web access to the application for non-MnDOT staff (e.g., county engineers) from outside MnDOT's firewall.

- Ensure that the results of computations and apportionments are repeatable and defendable.
- Provide an audit trail for all data edits.
- Allow for the management by the MnDOT business users of all current and future business processes and rules used for the apportionment of funds: Money Needs, Lane Miles, Equalization, Motor Vehicle Registration, etc.
- Allow for apportionment adjustments to respond to changing conditions, fairness, and geographic balance.
- Allow for the generation of reports both canned and ad-hoc.
- Support the work of the county engineers' task force. The task force is studying the merits of changes, financial effects of the changes, geographic distribution of funding across the state, political implications of changes, and other unforeseen effects of changes. The Selected Responder along with the MnDOT team should be prepared to provide support as needed to assist the task force in their deliberations.

1.4. Stakeholders

The primary stakeholder groups are:

Phase 1

- Management of MnDOT's State Aid for Local Transportation Division
- Staff of the CSAH Unit in the State Aid for Local Transportation Division
- IT Unit in the State Aid for Local Transportation Division
- County Engineers
- Engineers from the MnDOT district offices
- Staff of the MSAS Unit in the State Aid for Local Transportation Division
- City Engineers

2. **Product Requirements**: The selected responder will deliver a system that meets all of the requirements, standards, and constraints documented in the *CSAH NEEDS II Software Requirements Specification* (attached to this document) plus the requirements, standards, and constraints for MSAS NEEDS that will be developed as part of this project. MnDOT will have final approval of all deliverables. MnDOT will approve and pay for deliverables only if MnDOT determines that they satisfy all requirements, standards, and constraints.

   Responders must realize that the product requirements are largely provided by an external Minnesota county engineer task force and the city engineers who are empowered with developing alternative financial aid distribution methods. MnDOT State Aid provides the technical skills to interpret these requirements, develop procedures, and produce the application to carry out the requirements. It's important that responders create an agile, nimble working environment to react to changing requirements should they come up.

3. **MnDOT Project Requirements**

Responders must assume that the following Project Requirements will be followed. Once the MnDOT and Consultant team is in place and there is a mutual level of understanding of the requirements we expect some flexibility with a number of these requirements. In your proposal, we will ask you how you would suggest making the project as agile as possible.

3.1. Project Management:

3.1.1. Although this project will be conducted jointly by MnDOT and the Selected Responder, MnDOT requires the Selected Responder to play a lead role in managing the day-to-day activities of the project. MnDOT will maintain overall responsibility for management of the project through the MnDOT Project Manager.

3.1.2. The Selected Responder must provide a written, detailed project plan that identifies project resources and a detailed project schedule (in Microsoft Project).

3.1.2.1. The plan should follow an incremental, iterative development methodology.

3.1.2.2. The plan should include a detailed work breakdown structure for each phase and iteration.

3.1.2.3. The plan should allow for MSAS NEEDS work to be done concurrently with CSAH NEEDS II work.

3.1.3. The Selected Responder must complete all deliverables on time, within budget, and at the expected level of quality.

3.1.4. MnDOT will review and approve all deliverables. MnDOT must approve a deliverable before accepting and paying for the deliverable.

3.1.5. The Selected Responder must provide timely and informative status information, including, but not limited to: (also see the Reporting Requirements section below)

3.1.5.1. Written, monthly high-level status reports, in a format acceptable to the MnDOT Project Manager and the CSAH Unit, delivered to the MnDOT Project Manager and the CSAH Unit three business days prior to the end of the month.

3.1.5.2. Weekly status reports, in a format acceptable to the MnDOT Project Manager and the CSAH Unit, delivered to the MnDOT Project Manager and the CSAH Unit by noon on Monday for the previous week.

3.1.5.3. Periodic status review meetings

3.1.5.4. Daily stand-up meetings, scrums, or web/teleconferences If needed.

3.2. Project Approach:

3.2.1. The project must use an iterative methodology.

3.2.2. The project methodology must be as agile as possible given resource, contracting/outsourcing, and other constraints. When possible, the project would like to use pair programming, with the Selected Responder's developer working with the CSAH IT Lead.

3.2.3. The project must be broken into several iterations each lasting 2 to 8 weeks.

3.2.4. Each iteration must deliver an increment of the system that is deployable, usable and testable. (Except for visioning iterations)

3.2.5. There will be two deployments to production during the project. The first will be at the end of the iteration that implements Use Case 7, currently planned for Iteration 3 (see *Section 6, Project Milestones and Schedule*). The second will be at the end of the project.

3.2.6. Acceptance and satisfaction criteria for the project as a whole and for each iteration must be developed with the full participation of the business users. Such criteria must be

established at the start of the project and the start of each iteration and formally assessed at the end of the project and the end of each iteration. The project or iteration will not be considered complete, and MnDOT will not pay for any project or iteration deliverables, until acceptance criteria have been satisfied and approved by MnDOT.

3.2.7. Each iteration must end with a process-improvement session designed to identify changes for subsequent iterations.

3.2.8. Each iteration must include, for the requirements to be implemented by the iteration:

3.2.8.1. Completion of requirements elicitation, specification, and analysis

3.2.8.2. Design

3.2.8.3. Construction

3.2.8.4. Testing

3.2.8.5. Documentation, training, etc. as needed

3.2.8.6. Deployment (except for visioning iterations)

3.3. Requirements Management: The Selected Responder must develop and execute a requirements management plan that must ensure that:

3.3.1. all requirements are recorded using appropriate modeling or documentation techniques as approved by MnDOT

3.3.2. all requirements are of an acceptable level of quality as explicitly defined in the requirements management plan

3.3.3. the project has a requirements manager

3.3.4. all requirements are uniquely identified

3.3.5. the statuses of all requirements can be tracked

3.3.6. all requirements are testable

3.3.7. all requirements will be tested

3.3.8. all requirements will be traced to at least one test case using a traceability matrix.

3.3.9. measurements based on the number of requirements and their statuses will be collected and reported

3.3.10. all changes to approved requirements and the reasons for the changes will be documented.

3.3.11. Changes to requirements will be managed as described in Section 5 of the *CSAH NEEDS II Software Requirements Specification*.

3.4. Requirements Elicitation and Analysis

3.4.1. The Selected Responder must work with technical and business experts to develop detailed functional requirements and non-functional/quality requirements.

3.4.2. The Selected Responder must document all requirements with use cases, user stories, supplementary requirements, business rules, data models, and other modeling or documentation techniques as stipulated by MnDOT.

3.4.3. The Selected Responder must review the *CSAH NEEDS II Software Requirements Specification* and all documents it references and work with technical and business experts to perform analysis as needed.

3.4.4. The Selected Responder must elicit, document, and analyze all requirements to automate the MSAS NEEDS process.

3.4.5. For requirements that have no detailed supporting documentation, the Selected Responder must work with MnDOT staff to detail the requirements such as: database impacts, screen/ form changes, system interface changes, report changes, business process changes, data validation requirements, etc.

3.4.6. The Selected Responder must identify any new or modified business rules.

3.4.7. The Selected Responder must conduct a Minnesota Government Data Practices Act (MGDPA) review with the MnDOT MGDPA coordinator and MnDOT project manager and revise requirements as necessary to conform to the MGDPA.

3.4.8. The Selected Responder must conduct a review of the product's requirements with MnDOT's Office of Finance and revise requirements as necessary.

3.4.9. The Selected Responder must conduct a review of the product's requirements with MnDOT's Office of Communications and revise requirements as necessary.

3.4.10. The Selected Responder must conduct a review of the product's Americans with Disabilities Act (ADA) requirements. (See *Section 3.5.3.3* of the *CSAH NEEDS II Software Requirements Specification*)

3.4.11. The Selected Responder must conduct a review and analysis of the product's security requirements.

3.4.12. The Selected Responder must conduct a stakeholder analysis to identify all stakeholder groups and determine the best means of involving them in the project.

3.5. Design

3.5.1. The Selected Responder must document application design in written documentation in a format approved by MnDOT.

3.5.2. The Selected Responder must complete the application database design (diagram) showing tables, relationships, and attribute.

3.5.3. The Selected Responder must complete the system meta-data dictionary of all entities/ tables and attributes/ columns including definitions in business language.

3.5.4. The Selected Responder must complete the screen-to-table mapping document to show the mapping of database data elements to application screens and reports.

3.5.5. The Selected Responder must provide data loading and transform logs; data transform rules; and data migration rules and notes.

3.5.6. The Selected Responder must develop prototypes of user interface screens including both paper prototypes and working prototypes.

3.5.7. The Selected Responder must conduct design reviews with MnDOT technical and business experts.

3.5.8. The Selected Responder must present the application design to the MnDOT application system architect, report developer, and database administrator (DBA) for review and approval. The design must not be implemented without these approvals.

3.5.9. The Selected Responder must develop whatever UML diagrams will be required to document the proposed design for the more complex requirements.

3.6. Construction

3.6.1. The Selected Responder must provide and maintain application source code files, configuration files, developer documentation, and related artifacts in MnDOT's configuration management system (Concurrent Versioning System (CVS)).

3.6.2. The Selected Responder must periodically check code into MnDOT's CVS. MnDOT and the Selected Responder will decide if code check in will be done daily or weekly.

3.6.3. The Selected Responder must provide database scripts.

3.6.4. The Selected Responder must code, test, debug, document, and implement the application using the business rules and requirements specifications and according to the approved design and technical models.

3.6.5. The Selected Responder must implement Oracle tables according to approved design and technical models.

3.6.6. The Selected Responder must participate in data base reviews with MnDOT's database administrator and other appropriate MnDOT technical and business staff.

3.6.7. The Selected Responder must review all Java code with the PMD Java code review tool at the end of each project iteration. The Selected Responder must fix all level 1 and level 2 violations or explain why they should not be fixed. The Selected Responder must deliver a PMD report in MS Excel format to the MnDOT Project Manager at the end of each iteration. This report should be void of level 1 and level 2 violations, or an explanation should be written as to why the violation should be ignored.

3.7. Iteration Specific Project Requirements, applicable for each iteration.

3.7.1. The Selected Responder must deliver an updated project schedule that has been detailed and adjusted for the current iteration.

3.7.2. The Selected Responder must develop refined prototypes of the GUI screens that will be implemented by the current iteration

3.7.3. The Selected Responder must develop system test cases and user acceptance test cases to be executed for the current iteration.

3.7.4. The Selected Responder must deliver metadata, an updated data dictionary, and database diagram for the Oracle database.

3.7.5. The Selected Responder must deliver an updated application installed in the system test environment prior to system, regression, and user acceptance testing.

3.7.6. The Selected Responder must report all defects identified and fixed during the current iteration.

3.7.7. The Selected Responder must coordinate iteration design with MnDOT's report developer.

3.7.8. The Selected Responder must deliver a deployable, testable build that includes all previous builds.

3.8. Deployment

3.8.1. The Selected Responder must develop and implement an application deployment plan that does not adversely affect other MnDOT systems.

3.8.2. The Selected Responder must support the deployment of the application into production.

3.8.3. The Selected Responder must provide release notes and an installation guide. Release notes must include what is being delivered (requirements, change requests, defects, etc.) and all known issues. Installation guides must be specific to the development, test, and production environments.

3.8.4. The Selected Responder must support the deployment of the application into MnDOT's development and test environments prior to system and end-user acceptance testing.

3.8.5. The Selected Responder must deliver a build with no major defects prior to deployment into MnDOT's test environment. MnDOT and the Selected Responder will define "major defect" before the start of construction and testing.

3.8.6. The Selected Responder must deliver a build with **ALL** defects resolved prior to deployment to the production environment.

3.8.7. When/if MnDOT believes applicable, the Selected Responder must deliver a build that builds the application from scratch as opposed to from the previous build or builds.

3.8.8. If the application includes client (desktop) software or requires a desktop application such as a browser, the Selected Responder must work closely with the OI&TS Integrated Desktop Software Testing Service in planning for client system deployment.

3.8.9. The Selected Responder must provide documentation and software for packaging and deployment of the application. If the application includes client (desktop) software or requires a desktop application such as a browser, deployment will be done by MnDOT's OI&TS Integrated Desktop Software Testing Service.

3.9. Maintenance

3.9.1. The Selected Responder must develop information technology (IT) support documentation that includes: technical architecture, database and application design, installation procedures and other information required to support the application.

3.9.2. The Selected Responder must provide scripts to build, test, and deploy the application (including database objects).

3.9.3. The Selected Responder must provide any updates to documentation required by new features or enhancements.

3.9.4. The Selected Responder must maintain any non-standard software infrastructure required by the application (custom components) for the development, system test, and production environments.

3.10. Change Management: The Selected Responder must develop and execute a change management plan that must ensure that:

3.10.1. all changes are recorded in a single change management repository

3.10.2. all changes are uniquely identified

3.10.3. the statuses of all changes can be tracked

3.10.4. all deliverables that are to be placed under change control are identified
3.10.5. the project has a change board and/or a change manager
3.10.6. all change requests are evaluated according to a process described in the change management plan
3.10.7. all documentation updates required by change requests, defect fixes, new features, or enhancements are completed
3.10.8. measurements based on the number of change requests and their statuses must be collected and reported
3.10.9. all changes to requirements will be managed so that business users have an opportunity to use an increment of the system for a least ten business days before requirements are finalized; prior to the ten-day period, requirements changes will not be billable. After the ten-day period, they will be billable

3.11. Risk Management: The Selected Responder must work with MnDOT business and technical staff to identify risks. Based on identified risks, the selected responder will develop and execute a risk management plan that must ensure that:

3.11.1. risk management occurs continuously during the life of the project
3.11.2. all risks are recorded in a single risk management repository
3.11.3. all risks are uniquely identified
3.11.4. there is a documented mitigation plan for all high-priority risks
3.11.5. the project has a risk manager
3.11.6. all risks are communicated clearly to the MnDOT Project Manager in a timely manner
3.11.7. the statuses of all risks can be tracked
3.11.8. risk mitigation or prevention is carried out appropriately
3.11.9. measurements based on the number of risks and their statuses must be collected and reported

3.12. Issue Management: The Selected Responder must develop and execute an issues management plan that must ensure that:

3.12.1. all issues are recorded in a single issue repository
3.12.2. all issues are uniquely identified
3.12.3. the statuses of all issues can be tracked
3.12.4. the project has an issues manager
3.12.5. all issues are communicated clearly to the MnDOT Project Manager in a timely manner
3.12.6. all issues are resolved appropriately and in a timely manner
3.12.7. measurements based on the number of issues and their statuses must be collected and reported

3.13. Configuration Management: The Selected Responder must develop and execute a configuration management plan that must ensure that:

3.13.1. All deliverables are identified that are to be placed under configuration management
3.13.2. The project has a configuration manager
3.13.3. Build and deployment processes are clearly defined
3.13.4. The Selected Responder must provide Ant or Maven build scripts that build the project without any integrated development environment (IDE) dependencies.
3.13.5. The Selected Responder must provide logging of each problem during data loads and data transforms.
3.13.6. The project must follow MnDOT's Information Technology Infrastructure Library (ITIL) Change Management Process Flow before being put into production.
3.13.7. The Selected Responder must provide a Technical Application Deployment Diagram that shows all architectural-level software and hardware configuration items; the relationships between them; and the organizational units responsible for the maintenance and support of each item.
3.13.8. The Selected Responder must identify all architectural-level configuration items (CIs) that are part of the application with information that includes CI name, CI description, and the types of relationships that exist between all CIs. If the CIs will not all be deployed at the same time, indicate the deployment dates for each CI.

3.14. Quality Assurance and Test Management: The Selected Responder must develop, maintain, and execute detailed quality assurance and test management plans. The plans must focus on the verification, validation, and testing of documents, models, test cases, source code and other deliverables produced during the project. These plans must ensure that:

3.14.1. all deliverables are identified that are to be covered by the quality assurance and test plans
3.14.2. appropriate techniques such as reviews, inspections, walk-throughs, and testing must be used to ensure the quality of deliverables
3.14.3. quality acceptance criteria, agreed to by MnDOT and the Selected Responder, must be developed for all deliverables and associated tasks
3.14.4. all deliverables must meet quality acceptance criteria before being accepted and approved by MnDOT
3.14.5. quality assurance and testing are initiated in parallel with requirements work
3.14.6. The Selected Responder must complete a review of all delivered Java code with the PMD Java code review tool.
3.14.7. The Selected Responder must track all defects using MnDOT's JIRA bug tracking software.
3.14.8. All system testing, user acceptance testing, and regression testing must take place in a MnDOT test environment.
3.14.9. all defects are uniquely identified
3.14.10. the statuses of all defects can be tracked
3.14.11. the project has a defects manager
3.14.12. all defects are fixed in a timely manner

3.14.13. measurements based on the following must be collected and reported
  3.14.13.1. number of defects and their statuses
  3.14.13.2. number of reviews, test cases, etc. and their statuses
3.14.14. The Selected Responder must complete and document the results of unit testing, integration testing, system testing, user acceptance testing, and regression testing.
3.14.15. The Selected Responder must develop a test inventory.
3.14.16. The Selected Responder must use a risk-based approach to prioritize testing and quality assurance activities.
3.14.17. The Selected Responder must produce periodic reports on testing progress that show test cases planned versus test cases passed and failed.
3.14.18. The Selected Responder must provide system test cases and user acceptance test cases to MnDOT far enough in advance of testing for MnDOT to review and approve all test cases.
3.14.19. The Selected Responder must provide test cases for sanity testing prior to system testing and acceptance testing. System testing and acceptance testing will not proceed until the sanity test cases have been executed without uncovering any defects.
3.14.20. If desktop integration testing is required either because the application includes client (desktop) software or because the application requires a desktop application such as a browser, the Selected Responder must work closely with the OI&TS Integrated Desktop Software Testing Service in planning for desktop integration testing. Such planning will include identification of all test cases needed for desktop integration testing.
3.14.21. If desktop integration testing is required either because the application includes client (desktop) software or because the application requires a desktop application such as a browser, the Selected Responder must provide a copy of all desktop-integration test cases to the OI&TS Integrated Desktop Software Testing Service.
3.14.22. The Selected Responder must provide or develop test data for system testing and user acceptance testing.
3.14.23. The Selected Responder must document and report all defects discovered during system, user acceptance, and regression testing in Jira.
3.14.24. The Selected Responder must document and maintain the status of system defects, change requests, and related artifacts in JIRA, MnDOT's defect tracking tool.
3.14.25. The Selected Responder must provide monthly reports, to MnDOT's Project Manager and MnDOT's Test Manager, on defect status including number of defects open, closed, resolved, etc. (See the Reporting Requirements section below)
3.14.26. The Selected Responder must provide weekly defect reports, to MnDOT's Test Manager, on defect status including number of defects open, closed, resolved, etc. (See the Reporting Requirements section below)
3.14.27. The Selected Responder must fix all reported defects, including requirements defects, design defects, and code defects, at no extra cost, before the final system will be approved by MnDOT and accepted and deployed.

3.15. Training: The Selected Responder must develop and execute a training plan that must ensure that:

3.15.1. all user roles that require training are identified
3.15.2. training is appropriately tailored for each user role
3.15.3. appropriate training techniques and media are identified
3.15.4. training materials are developed, reviewed, and approved
3.15.5. training is scheduled and completed in a timely manner
3.15.6. the application administrator is trained in the administration of the new/modified system/application.
3.15.7. MnDOT staff are trained to use, operate, maintain, and support the new application.

3.16. Communication: The Selected Responder must develop and execute a communication plan that must ensure that:

3.16.1. all stakeholders and stakeholder groups that need to be communicated with are identified
3.16.2. each item or category, such as status, issues, or risks, that need to be communicated about is identified
3.16.3. appropriate mechanisms and mediums of communication are identified and used for each stakeholder or stakeholder group
3.16.4. appropriate periods (e.g., weekly) for delivering communications are established for each stakeholder or stakeholder group
3.16.5. responsibility for communicating with each stakeholder or stakeholder group is clearly defined
3.16.6. responsibility for each communication item is clearly defined
3.16.7. responsibility for all communication tasks is clearly defined

3.17. Documentation: The Selected Responder must develop and execute a documentation plan that must ensure that:

3.17.1. All required documentation must be identified, including but not limited to
3.17.1.1. User Help or User Manuals
3.17.1.2. System Documentation
3.17.1.3. Operations and Support Documentation
3.17.2. Responsibility for delivery of each document must be clearly established.
3.17.3. A schedule for delivering each document must be defined.
3.17.4. Each document must be delivered in accordance with the agreed upon schedule.
3.17.5. Each document must be reviewed and approved by MnDOT.

3.18. Reporting Requirements: The Selected Responder must provide the following reports periodically, with the reporting period to be agreed upon by the Selected Responder and the

MnDOT Project Manager. The reports must be combined in a single project dashboard with accompanying explanations/descriptions as necessary. The format of the dashboard will be designed collaboratively by MnDOT and the Selected Responder, with MnDOT having final approval.

3.18.1. Project Management Reports.
- 3.18.1.1. Planned schedule versus actual schedule including schedule variance
- 3.18.1.2. Planned budget versus actual budget including budget variance

3.18.2. QA and Test Reports
- 3.18.2.1. Testing progress reports
- 3.18.2.2. Review progress reports
- 3.18.2.3. Defect reports

3.18.3. Requirements Reports
- 3.18.3.1. Numbers of requirements and their statuses

3.18.4. Change and Issue Reports
- 3.18.4.1. Numbers of change requests and their statuses
- 3.18.4.2. Number of issues and their statuses.

3.18.5. Risk Reports
- 3.18.5.1. Top Ten Risk List
- 3.18.5.2. Number of risks and their statuses

4. Project Acceptance and Satisfaction Criteria: During the Initiation Stage of the project, the Selected Responder and MnDOT will work together to document acceptance criteria for the project as a whole and for each iteration.

5. Deliverables and Responsibilities (all deliverables are subject to MnDOT review and approval). The Selected Responder will be responsible for client satisfaction and successful completion and delivery of all the deliverables as indicated in the table below.

Deliverable	Responsibility	
	Selected Responder	MnDOT
Requirements Specification	✓	
Data Model, Conceptual	✓	
Data Model, Logical	✓	
Data Model, Physical	✓	
Warranty	✓	
Project Plan	✓	
Work Breakdown Structure	✓	
Project Schedule	✓	
Monthly Project Status Report – MnDOT Format	✓	
Monthly Project Status Report – Project Format	✓	
Weekly Project Status Report	✓	
Project Acceptance Criteria	✓	

Iteration Acceptance Criteria	✓	
Application Increment	✓	
Application Process and Functional Models	✓	
Application	✓	
Documentation	✓	
Requirements Traceability Matrices	✓	
Requirements Management Plan	✓	
Application Design	✓	
Database Design	✓	
Data Dictionary	✓	
User Interface Prototypes	✓	
Application Code	✓	
Configuration File	✓	
Database scripts	✓	
PMD Code Review Report	✓	
Defect Reports	✓	
Quality Assurance Plan	✓	
Test Plan	✓	
Test Inventory	✓	
Test Cases	✓	
Test Log	✓	
Test Reports	✓	
Change Requests	✓	
Issues	✓	
Risks	✓	
Training Plan	✓	
Training Materials	✓	
User Help Documentation	✓	
Service Level Agreement		✓
Data Model	✓	
Warranty	✓	
Requirements Management Plan	✓	
Configuration Management Plan	✓	
Defect Management Plan	✓	
Risk Management Plan	✓	
Change Management Plan	✓	
Issue Management Plan	✓	
Communications Management Plan	✓	
Staffing Plan	✓	

6. Project Milestones and Schedule. This schedule is based on six-week iterations. The project schedule and the iteration schedule will be reviewed and finalized during the Initiation Stage. There will be two deployments to production during the project. The first will be at the end of the

iteration that implements Use Case 7, currently planned for Iteration 3. The second will be at the end of the project.

This schedule is based on the requirements for the CSAH NEEDS II application. MnDOT assumes that a similar iteration plan will be developed for the MSAS work that will proceed concurrently with the CSAH NEED II work.

MnDOT would prefer to adhere to the schedule presented in the table below. In any event, the project must adhere to the following two schedule constraints:

- A first deployment into production schedules for the end of Iteration 3 must take place before November 15, 2012.
- The project must end with the second deployment into production before April 15, 2013.
- The schedule assumes a starting date of April 02, 2012.

MILESTONE	DELIVERABLES	DUE DATE
Completion of Initiation Stage	• All project planning documents • Technical Architecture design • Iteration Plan • Presentation and reports for the County Engineers meeting on January 16, 2012.	05/14/12
Completion of Iteration 1	Working, deployable, fully tested increment of the application that delivers the functionality described in: • Use Case 1 • Use Case 2 • Use Case 4 • Use Case 10 • Use Case 11	06/25/12
Completion of Iteration 2	Business process and business rules management engine installed. Working, deployable, fully tested increment of the application that delivers the functionality described in: • Use Case 3 • Use Case 15	08/06/12
Completion of Iteration 3	Working, fully tested increment of the application being used in the **production** environment that delivers the functionality described in: • Use Case 5	09/17/12

	• Use Case 6 • Use Case 7	
Completion of Iteration 4	Working, deployable, fully tested increment of the application that delivers the functionality described in: • Use Case 8 • Use Case 9	10/29/12
Completion of Iteration 5	Working, deployable, fully tested increment of the application that delivers the functionality described in: • Use Case 12 • Use Case 13 • Use Case 14	12/17/12
Completion of Iteration 6	Entire application, fully tested and operating in the production environment.	02/04/13

7. Selected Responder Duties. In addition to other Selected Responder duties mentioned elsewhere in this RFP, the Selected Responder:
   7.1. will be required to provide at least one person who will work on-site at MnDOT. The on-site person may vary depending on the work being done at the time. For example, the on-site person may be a business analysis, a DBA, or a developer.
   7.2. will provide a project manager who will be available during normal business hours by phone or e-mail and will be on-site at MnDOT when necessary.
   7.3. must deliver an application that satisfies all specified requirements.
   7.4. must deliver an application that conforms to all standards and follows all processes identified in this document.
   7.5. will be responsible for leading cross functional team reviews after each iteration and following each software release to review what went well, what needs improvement, etc., and to insure that the root cause is determined for problems encountered and fixes applied.
   7.6. must maintain sufficient resources (staff) to stay on schedule and support change management incidents. Change management staff must be available for potential meetings with MnDOT staff.
   7.7. must report all work plans and completed requirements to the MnDOT Project Manager.

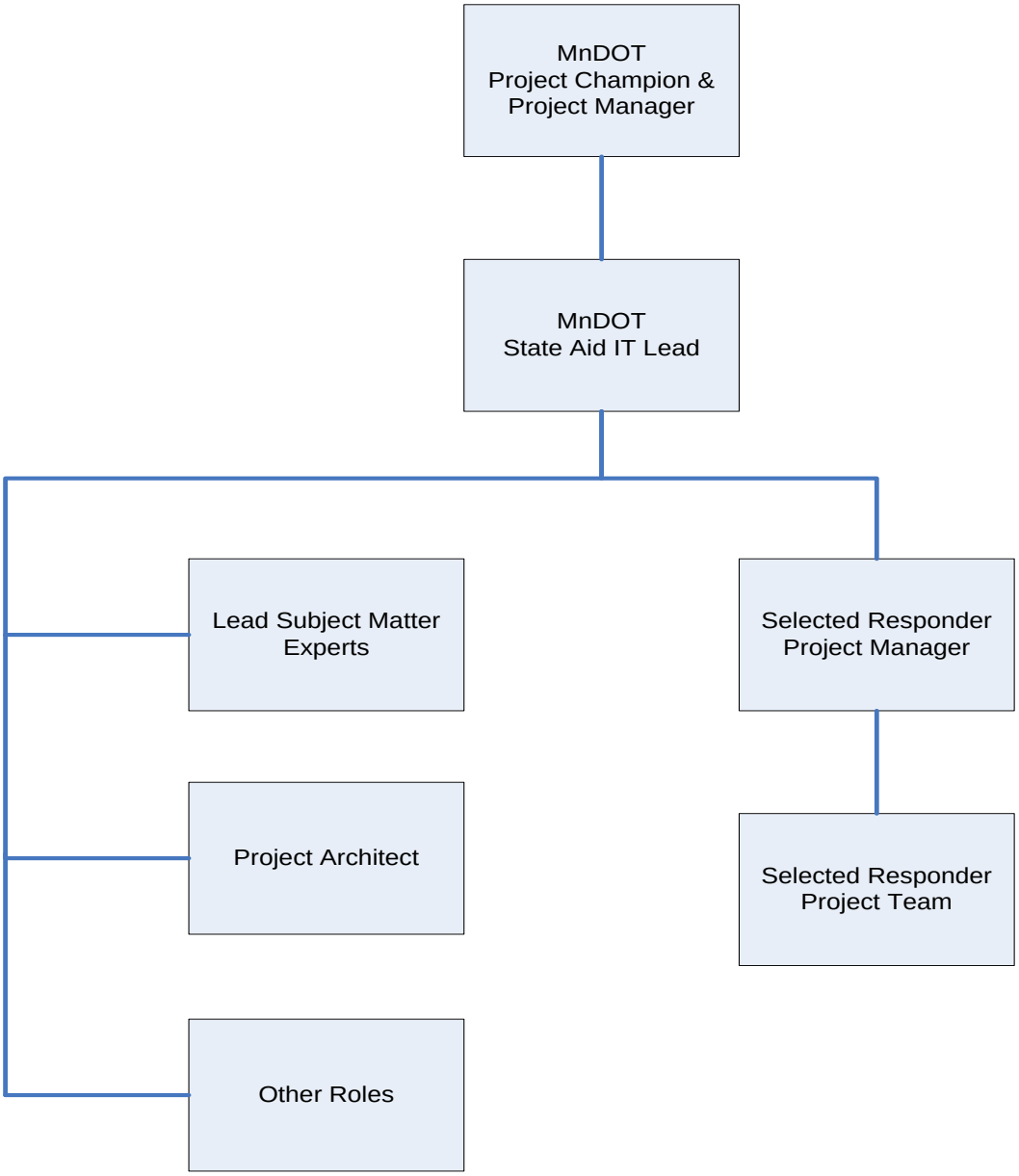
8. Project Environment (MnDOT Duties and Resources)
   8.1. MnDOT will provide technical and business resources to assist with the project as follows:
      8.1.1. Approximately 4 IT staff and 2 business staff to assist with the project, on an approximately on an as-needed basis
      8.1.2. MnDOT's Project Manager will be Holly Samshal at 651-366-4088. For all inquiries regarding this SOW contact the MnDOT Contract Administrator, Melissa McGinnis at 651-

366-4644]. Contact with any other MnDOT personnel regarding this SOW may result in disqualification.

8.1.3.The basic project organizational structure consists of

- MnDOT Project Champion & MnDOT Project Manager
- MnDOT IT Technical Lead
- MnDOT Project Architect
- MnDOT Lead Subject Matter Experts
- MnDOT Database Administrator
- MnDOT Application System Architect
- MnDOT Infrastructure System Architect
- MnDOT GIS System Architect
- MnDOT Crystal Enterprise Report Developer
- MnDOT Application Server Administrator
- MnDOT Crystal Business Objects Administrator
- MnDOT JIRA Administrator
- MnDOT JAVA Advisor
- MnDOT CVS Administrator

8.1.4.The following organizational chart displays the project's reporting structure.


MnDOT
Project Champion &
Project Manager
MnDOT
State Aid IT Lead
Lead Subject Matter
Experts
Project Architect
Other Roles
Selected Responder
Project Manager
Selected Responder
Project Team

8.2. MnDOT, for the various phases of the project, will:

8.2.1.General

8.2.1.1. Provide a core project team that includes: project champion, project manager, project architect, business subject matter experts, key business stakeholders, application system architect, and IT application and database support staff. The team will also include other MnDOT IT resources for support of the project technical infrastructure (network, system, security, etc.) and application development support.

8.2.1.2. Provide change control board members.

8.2.1.3. Provide timely resolution to business issues.

8.2.2. Analysis

8.2.2.1. Provide a list of enhancements and definitions and supporting documentation.

8.2.2.2. Provide CSAH Unit and MSAS Unit business expertise.

8.2.2.3. Provide information on the current systems and their business rules

8.2.2.4. Provide information on the interfacing external systems.

8.2.2.5. Provide deliverable templates and guidelines.

8.2.2.6. Review and approve financial requirements.

8.2.2.7. Provide MDGPA review.

8.2.3. Design

8.2.3.1. Track change requests and issues.

8.2.3.2. Review and approve database design

8.2.3.3. Review and approve design and prototype screens.

8.2.3.4. Review and approve all new application code.

8.2.4. Testing

8.2.4.1. Develop acceptance test criteria.

8.2.4.2. Perform and document user acceptance testing.

8.2.4.3. Identify defects and change requests during acceptance testing.

8.2.4.4. Provide PMD Java code review tool.

8.2.5. Deployment

8.2.5.1. Deployment desktop package development and deployment, if required, will be done by OITS Integrated Desktop Software Testing Service. The Selected Responder will be expected to provide required documentation and software for packaging and deployment.

8.2.6. Data

8.2.6.1. Provide information on the current and legacy CSAH NEEDS database and MSAS NEEDS database.

8.2.6.2. Assist in database design and implementation.

8.2.6.3. Provide Business Experts to perform cleansing of current system data during the data migration process.

8.2.7. Infrastructure

8.2.7.1. Build and maintain the development, system test, and production hardware, operating system, and database infrastructure for the application.

8.2.7.2. Provide database design and development tool access and application development tool licenses.

8.2.7.3. Provide all hardware and software licenses for the production environment.

8.2.7.4. Provide PCs, telephones, office supplies, and workspace for up to 3 Selected Responder staff working on site at MnDOT.

8.2.7.5. The computer and network hardware will be maintained by MnDOT. After the expiration of the system enhancement warranty period, the system will be maintained by MnDOT.

8.2.7.6. The current CSAH NEEDS application and MSAS NEEDS application are implemented at the MnDOT central office network center. They are accessible from offices within MnDOT through the department wide area network. The CSAH NEEDS II and MSAS NEEDS applications and databases will be implemented at a state data center and will remain accessible from offices within MnDOT through the department wide area network and from outside MnDOT's firewall.

8.2.8.Reporting

8.2.8.1. Provide Crystal Enterprise report web page and report publishing.

8.2.8.2. Code, test, and debug reports using Crystal Reports and deploy in a Crystal Enterprise environment.

9. Required Skills

Required minimum qualifications are shown in the following table. The proposal must specifically indicate how members of the Responders team meet these minimum qualifications. This portion of the proposal review will be conducted on a pass/fail basis. If MnDOT determines, in its sole discretion, that the Responder fails to meet one or more of these requirements (or that the Responder has not submitted sufficient information to make the pass/fail determination), then the proposal will be eliminated from further review.

	Minimum Number of Years of Experience	Required Skill Type
9.1	3	Use of Oracle 10g database management system
9.2	3	Structured Query Language (SQL) & PL SQL
9.3	3	Demonstrated ability to design, develop, and debug complex applications using Java 1.4. Provide a description of at least 3 applications developed.
9.4	3	Deployment of applications using JBoss Application Server
9.5	3	Development using Java/JSP/Servlets
9.6	3	JAVA EE Development
9.7	3	Development using STRUTS – controller framework

9.8	3	Development using HIBERNATE – object relational mapping
9.9	3	Design and implementation of user-friendly interfaces.
9.10	3	Use of Eclipse IDE
9.11	3	Form and Report Prototyping
9.12	3	Object Oriented Analysis and Design Techniques. Object-oriented design patterns.
9.13	3	Defect determination and tracking
9.14	3	Developing release documentation
9.15	3	Database Design
9.16	3	Systems Analysis
9.17	3	Strong communication, analytical and problem solving skills.
9.18	3	Developing work estimates
9.19	3	Entity-Relationship models or Class models
9.20	3	Business Processes
9.21	3	Project Management
9.22	3	Software Quality Assurance and Control Tools and Techniques
9.23	3	Testing methods and developing test cases
9.24	3	Test Design
9.25	3	Test Management
9.26	3	Defect Management
9.27	3	• Course Design • Courseware Development • Instructor-Led

10. Desired Skills

MnDOT desires a project team with the skills shown in the table below. The extent to which the Responder meets or exceeds the desired skills will be included as part of the qualitative evaluation of the proposal.

	Desired Skill Type
10.1	Development using VELOCITY – presentation framework
10.2	Project Management Professional (PMP) Certification from Project Management Institute (PMI)
10.3	Testing methods and developing test cases
10.4	Use of CVS Configuration Management System
10.5	Use of JIRA defect tracking software
10.6	Experience using the Spring Framework
10.7	Use of PMD Java code review tool
10.8	Unified Modeling Language (UML)
10.9	Design and preparation of electronic and print documentation Editing and proofreading skills
10.10	Planning and facilitation of meetings, reviews, requirements analysis sessions, etc.

11. Response Requirements

- Proposer will complete the Proposal Worksheet and the Cost Worksheet, both of which are attached to this document. Follow the instructions in the worksheets. The two worksheets must be saved in different files – one file for each worksheet.
- Proposer will submit a completed copy of each worksheet plus – as called for and described in the worksheets – resumes of proposed staff, a detailed project schedule, and proposed work plan. Proposer will also submit all required forms included in this SOW.
- Required forms to be returned or additional provisions that must be included in proposal

  a) Conflict of interest statement as it relates to this project
  b) Affirmative Action Certificate of Compliance (if over $100,000)
     http://www.mmd.admin.state.mn.us/doc/affaction.doc
  c) Affidavit of non-collusion
     http://www.mmd.admin.state.mn.us/doc/noncollusion.doc
  d) Certification Regarding Lobbying
     http://www.mmd.admin.state.mn.us/doc/lobbying.doc
  e) Veteran-Owned/Service Disabled Veteran-Owned Preference Form
     http://www.mmd.admin.state.mn.us/doc/vetpref.doc

Submit all required documents via e-mail to:

Contract Administrator: Melissa McGinnis
E-mail Address: melissa.mcginnis@state.mn.us

12. Contracting Process Schedule

Schedule Item	DATE
Deadline for questions	**02/01/2012 2:00 PM Central Standard Time**
Posted response to questions	**02/06/2012 2:00 PM Central Standard Time**
Proposals due	**02/10/2012 2:00 PM Central Standard Time**
Anticipated proposal evaluation begins	**02/13/2012**
Anticipated proposal evaluation and decision	**02/17/2012**

13. **Questions**
All questions regarding this SOW must be addressed to MnDOT's Contract Administrator listed below. Responders may not discuss the content of this SOW with other MnDOT staff. Any questions regarding this SOW must be received via e-mail by February 01, 2012, 2:00pm, Central Daylight Time.

Contract Administrator: Melissa McGinnis
E-mail Address: melissa.mcginnis@state.mn.us

It is anticipated that questions and answers will be posted on the Office of Enterprise Technology web site by February 06, 2012, end of business day (www.ot.state.mn.us). Note that questions may be posted verbatim as submitted.

14. **Liability for Work Performed**
The Contractor must indemnify, save, and hold the MnDOT and the State's agents and employees harmless from any claims or causes of action, including attorneys fees incurred by MnDOT, arising from the performance of this contract by the Contractor, or the Contractor's agents and employees. This clause will not be construed to bar any legal remedies the Contractor may have for MnDOT's failure to fulfill its obligations under this contract.

The "Standard Liability Clause" (see above) will apply to this project and will be incorporated into the work order issued for this project. No exceptions to, or deviations from, this clause will be permitted. Do not submit a proposal if you cannot accept this liability clause. Proposals which MnDOT determines, in its sole discretion, indicate non-acceptance of this liability clause, will be rejected by MnDOT.

15. **SOW Evaluation Process**

1. MnDOT will not consider proposals that do not include all the required documentation. The required documentation is listed below. Any other documentation that is included with a proposal will not be considered part of the proposal and will not be used in the proposal evaluation.

    a. Proposal Worksheet with references
    b. Cost Worksheet
    c. Resumes of proposed staff
    d. Detailed project schedule
    e. Proposed work plan
    f. Required forms

2. MnDOT will verify if the Proposer meets the Required Skills listed in *Section 9* above and will adhere to MnDOT technical standards. A Proposer that does not have one or more of the required skills or that does not adhere to MnDOT technical standards will not be considered further.

3. MnDOT will review and score the proposal using the non-cost and non-interview criteria listed below.

CRITERIA	PERCENT OF SCORE
Cost	40
Company background and expertise	10
Skills and experience of personnel assigned to this project	20
Proposed work plan, including the apparent ability to complete project on time and on budget	15
Standards Supported	5
Solution General Features	5
Interview	5

4. MnDOT may require the Proposers receiving the highest scores in Step 2 to participate in a structured interview. The interview will be one to two hours long and consist of structured questions prepared by MnDOT. MnDOT will designate the number and type of Proposer team members to attend the interview.

    MnDOT may require the Proposers receiving the highest scores in Step 2 to participate in a structured interview. The interview will be one to two hours long and consist of structured questions prepared by MnDOT. MnDOT will designate the number and type of Proposer team members to attend the interview. The interview will be five percent of the proposal's total score.

If interview are necessary, MnDOT plans on conducting them the week of February 27, 2012. Interview questions will be available to the Proposers fifteen minutes before the interview. The Proposer will be responsible for its own interview costs.

5. MnDOT will score the cost proposal according to the percentage listed above. Cost will not be revealed to the selection committee members until after # 2 and # 3 above have been completed.

16. Glossary

16.1. Acceptance criteria: objective criteria that must be met by a deliverable, an iteration, or the project to be considered accepted and approved
16.2. ADA: Americans with Disabilities Act of 1990.
16.3. Agile: an approach to software development based on iterative development. Agile uses best practices intended to allow for rapid delivery of high-quality software, and a business approach that aligns development with customer needs and company goals. Agile principles emphasize individuals and interactions over processes and tools; working software over comprehensive documentation; customer collaboration over contract negotiation; and responding to change over following a plan.
16.4. Analysis: the process of determining requirements for a new or modified product involving frequent communication with application stakeholders to determine specific feature requirements, resolve conflict or ambiguity in requirements, avoid scope creep, and document all requirements.
16.5. Application: a computer software program that accepts, manipulates, and outputs data.
16.6. Business rule: 1. A formal regulation or bylaw imposed by an organization. 2. The standard practices of users governing the way the organization conducts its business. Also see *system rule*.
16.7. Constraint: a restriction on the design of an application and how it is scheduled, budgeted, developed, and implemented
16.8. CSAH: County State Aid Highway
16.9. Dashboard: a report showing a high level, graphical view of trends and relationships.
16.10. Data model: a description of how data are stored, accessed, and used. Data models formally define data elements and their relationships for a domain of interest, and consist of data diagrams, descriptive text, and metadata. A data model can be a class model or an entity relationship model and can be defined at conceptual, logical, and physical levels of abstraction.
16.11. Defect: an error in any deliverable that causes the application to not satisfy a functional or non-functional requirement or that results in an incorrect outcome. Defects can occur during requirements, analysis, design and construction.
16.12. Deliverable: product that will be delivered under the terms of an agreement.
16.13. Deployment: To install, test, then implement a computer system.

16.14. Design: The process of problem solving and planning to convert a requirements specification into the design of a specific solution.
16.15. Documentation: Instructions for using, changing, or maintaining an application.
16.16. Features: Distinguishing characteristics or capabilities of an application.
16.17. Functional requirement: a requirement that specifies a function that an application must be able to perform correctly. Also see *non-functional requirement*.
16.18. Increment: a testable, working piece of an application delivered by an iteration. Also see *iteration*.
16.19. Integration testing: testing in which software components, hardware components, or both are combined and tested to evaluate the interactions between them.
16.20. Issue: a concern that threatens project objectives and cannot be resolved by the project manager. Contrast with a risk which is a potential threat that may become an issue in the future.
16.21. Issue Management: the process by which issues are identified and addressed to remove the threats they pose
16.22. Iteration: a portion of a project consisting of a distinct set of activities (requirements development, design, construction, testing, etc.) that usually delivers a deployable, testable increment of the application. See also *increment*, *realization iteration* and *visioning iteration.*
16.23. ITIL: The Information Technology Infrastructure Library (ITIL) is a set of concepts and practices for Information Technology Services Management (ITSM), Information Technology (IT) development and IT operations. ITIL gives detailed descriptions of a number of important IT practices and provides comprehensive checklists, tasks and procedures that an IT organization can tailor to its needs.
16.24. Metadata: data that provides information about data managed within an application or environment. For example, metadata would document data about data elements or attributes (name, size, data type, etc); data about records or data structures (length, fields, columns, etc); and data about data (where it is located, how it is associated, ownership, etc.). Metadata may include descriptive information about the context, quality, condition, or characteristics of the data.
16.25. MDGPA: Minnesota Government Data Practices Act
16.26. MSAS: Municipal State Aid Street
16.27. Prototype. A mockup or wireframe of a screen or form for web applications, websites, and client-server application used to help design and explain requirements to stakeholders. A prototype can be developed at the conceptual level during requirements work and refined in analysis and design with data validations, constraints, metadata, etc.
16.28. Non-functional requirement: a requirement (also known as a quality requirement) that specifies how well an application must perform its functions - it is a constraint upon the application's behavior. For example: "Display of the patient's vital signs must respond to a change in the patient's status within 2 seconds." Examples of types of non-functional requirements are: performance, security, usability, data integrity, availability, etc. Also see *functional requirement*, *supplementary requirement.*

16.29. Realization iteration: a portion of a project consisting of a distinct set of activities (requirements development, design, construction, testing, etc.) that delivers a deployable, testable increment of the application. See also *iteration* and *visioning iteration*

16.30. Regression testing: Retesting of a previously tested application following modification to ensure that defects have not been introduced or uncovered as a result of the changes made

16.31. Requirement: a business or technical condition or capability that must be met, possessed, or performed by an application to satisfy a contract, standard, specification, or other formally imposed document. Types of requirements include, but are not limited to: functional requirements, non-functional (i.e. quality) requirements, data requirements, standards, constraints, business requirements, user-interface requirements, etc.

16.32. Requirements specification: a complete description of the behavior and capabilities of the application to be developed. It includes a set of use cases that describe all the interactions the users will have with the software. Use cases are also known as functional requirements. In addition to use cases, the requirements specification also contains non-functional (or supplementary) requirements. Non-functional requirements are requirements which impose constraints on the design or implementation (such as performance requirements, quality standards, or security requirements).

16.33. Risk: a potential event that would have a negative impact on the project's schedule, budget or success if the event were to occur. Contrast with an issue that is an event that is already happening.

16.34. Risk Management: the identification, assessment, and prioritization of risks followed by actions to minimize, monitor, and control the probability and/or impact of potential events or to maximize the realization of opportunities.

16.35. Scrum: an iterative, incremental framework for project management and agile software development.

16.36. Subject Matter Expert (SME): an authority in a particular business domain

16.37. Supplementary Requirement: a generic requirement that cannot be connected to a particular use case or to a particular real-world class such as a domain or business entity class; a systemic requirement. Also see *non-functional requirement*.

16.38. System Rule: A conditional statement that describes how a system must react in a specified situation in order to implement one or more business rules. Also see *business rule*.

16.39. System testing: testing of a complete, integrated application or an increment of an application as delivered by an iteration. System testing includes the verification and validation of **all** requirements, both functional and non-functional.

16.40. Test case: a set of test data and test steps or test scripts and their expected results. A test case validates one or more requirements and generates a pass or fail.

16.41. Test inventory: a complete listing of all tests, of all types, that have been defined for the application being tested.

16.42. Testing: an activity in which an application or component of an application is executed under specified conditions, the results are observed or recorded, and an evaluation is made of some aspect of the application of component.

16.43. UML: Unified Modeling Language; a standardized general-purpose modeling language in the field of software development. UML includes a set of graphic notation techniques (class diagram, use case diagram, activity diagram, etc.) to create visual models of software-intensive systems.
16.44. Unit testing: testing of individual hardware or software components
16.45. Use Cases: a collection of related success and failure scenarios (or flows) that describe an actor using an application to obtain an observable result of value to the actor.
16.46. User acceptance testing: testing conducted by users or stakeholders to determine whether or not an application satisfies its acceptance criteria and to enable the customer to determine whether or not to accept the system.
16.47. User stories: a description of something the application needs to do, usually written on index cards, with a name and a short paragraph describing the purpose of the story.
16.48. Visioning iteration: an iteration that includes just enough visioning work to develop a clear, stable, shared vision of the application. This includes getting a better understanding of the stakeholder needs and how they can be addressed. Visioning work can include business analysis, application and/or architecture planning, prototyping, etc. The application owner/steward, the project manager, and the project team should all participate in this iteration. See also *iteration and realization iteration*.
16.49. Waterfall methodology: a type of software development process in which the constituent activities, typically a concept phase, planning phase, requirements phase, design phase, construction phase, test phase, and installation phase, are performed in that order, possibly with overlap but with little or no iteration.
16.50. Work breakdown structure: a hierarchical chart view of a project's tasks or deliverables in which each level down represents an increasingly detailed description of the tasks or deliverables

17. Exhibits: all exhibits are attached to this document.

17.1. Proposal Worksheet
17.2. Cost Worksheet
17.3. CSAH NEEDS II Requirements Specification

General Requirements

Proposal Contents

By submission of a proposal, Responder warrants that the information provided is true, correct and reliable for purposes of evaluation for potential award of a work order. The submission of inaccurate or misleading information may be grounds for disqualification from the award as well as subject the responder to suspension or debarment proceedings as well as other remedies available by law.

Indemnification

In the performance of this contract by Contractor, or Contractor's agents or employees, the Contractor must indemnify, save, and hold harmless the State, its agents, and employees, from any claims or causes of action, including attorney's fees incurred by the state, to the extent caused by Contractor's:

1) Intentional, willful, or negligent acts or omissions; or
2) Actions that give rise to strict liability; or
3) Breach of contract or warranty.

The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Contractor may have for the State's failure to fulfill its obligation under this contract.

Disposition of Responses

All materials submitted in response to this SOW will become property of the State and will become public record in accordance with Minnesota Statutes, section 13.591, after the evaluation process is completed. Pursuant to the statute, completion of the evaluation process occurs when the government entity has completed negotiating the contract with the selected vendor. If the Responder submits information in response to this SOW that it believes to be trade secret materials, as defined by the Minnesota Government Data Practices Act, Minn. Stat. § 13.37, the Responder must: clearly mark all trade secret materials in its response at the time the response is submitted,

include a statement with its response justifying the trade secret designation for each item, and defend any action seeking release of the materials it believes to be trade secret, and indemnify and hold harmless the State, its agents and employees, from any judgments or damages awarded against the State in favor of the party requesting the materials, and any and all costs connected with that defense. This indemnification survives the State's award of a contract. In submitting a response to this RFP, the Responder agrees that this indemnification survives as long as the trade secret materials are in possession of the State.

The State will not consider the prices submitted by the Responder to be proprietary or trade secret materials.

Conflicts of Interest

Responder must provide a list of all entities with which it has relationships that create, or appear to create, a conflict of interest with the work that is contemplated in this request for proposals. The list should indicate the name of the entity, the relationship, and a discussion of the conflict.

The responder warrants that, to the best of its knowledge and belief, and except as otherwise disclosed, there are no relevant facts or circumstances which could give rise to organizational

conflicts of interest. An organizational conflict of interest exists when, because of existing or planned activities or because of relationships with other persons, a vendor is unable or potentially unable to render impartial assistance or advice to the State, or the vendor's objectivity in performing the contract work is or might be otherwise impaired, or the vendor has an unfair competitive advantage. The responder agrees that, if after award, an organizational conflict of interest is discovered, an immediate and full disclosure in writing must be made to the Assistant Director of the Department of Administration's Materials Management Division ("MMD") which must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. If an organization conflict of interest is determined to exist, the State may, at its discretion, cancel the contract. In the event the responder was aware of an organizational conflict of interest prior to the award of the contract and did not disclose the conflict to MMD, the State may terminate the contract for default. The provisions of this clause must be included in all subcontracts for work to be performed similar to the service provided by the prime contractor, and the terms "contract," "contractor," and "contracting officer" modified appropriately to preserve the State's rights.

IT Accessibility Standards

Responses to this solicitation must comply with the Minnesota IT Accessibility Standards effective September 1, 2010, which entails, in part, the Web Content Accessibility Guidelines (WCAG) 2.0 (Level AA) and Section 508 Subparts A-D which can be viewed at: **http://www.mmd.admin.state.mn.us/pdf/accessibility_standard.pdf**

Nonvisual Access Standards

Nonvisual access standards require:

1) The effective interactive control and use of the technology, including the operating system, applications programs, prompts, and format of the data presented, are readily achievable by nonvisual means;
2) That the nonvisual access technology must be compatible with information technology used by other individuals with whom the blind or visually impaired individual must interact;
3) That nonvisual access technology must be integrated into networks used to share communications among employees, program participants, and the public; and
4) That the nonvisual access technology must have the capability of providing equivalent access by nonvisual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

Veteran-owned/Service Disabled Veteran-Owned Preference

In accordance with Minnesota Statute §16C.16, subd. 6a, veteran-owned businesses with their principal place of business in Minnesota and verified as eligible by the United States Department of

Veterans Affairs' Center for Veteran Enterprises (CVE Verified) will receive up to a 6 percent preference in the evaluation of its proposal.

Eligible veteran-owned small businesses include CVE verified small businesses that are majority-owned and operated by either recently separated veterans, veterans with service-connected disabilities, and any other veteran-owned small businesses (pursuant to Minnesota Statute §16C.16, subd. 6a).

Information regarding CVE verification may be found at http://www.vetbiz.gov.

Eligible veteran-owned small businesses should complete and **sign** the **Veteran-Owned Preference Form** in this solicitation. Only eligible, CVE verified, veteran-owned small businesses that provide the required documentation, per the form, will be given the preference.

Early Retirement Incentive Reemployment Prohibition

Laws of Minnesota 2010, Chapter 337, Subdivision 5, provided an early retirement incentive to some State of Minnesota employees. The law provides that an individual who received an early retirement incentive payment may not be hired as a consultant by any agency or entity that participates in the State Employee Group Insurance Program for a period of three years after termination of service. By submitting a proposal under this RFP, the responder certifies that it will not utilize any former state employee in the performance of a contract who received an retirement incentive payment under Laws of Minnesota 2010, Chapter 337, unless three years have passed from the date of the employee's separation from state service.

18. **E-Verify Certification (In accordance with Minnesota Statutes §16C.075)**

By submission of a proposal for services in excess of $50,000, responders certify that as of the date of services performed on behalf of MnDOT, responder and all its subcontractors will have implemented or be in the process of implementing the federal E-Verify program for all newly hired employees in the United States who will perform work on behalf of MnDOT. In the event of Contract award, the successful responder will be responsible for collecting all subcontractor certifications and may do so utilizing the E-Verify Subcontractor Certification Form available at http://www.mmd.admin.state.mn.us/doc/EverifySubCertForm.doc. All subcontractor certifications must be kept on file with the successful responder and made available to MnDOT upon request.

19. Pre-Award Audit Requirement

The successful responder will be required to submit pre-award audit information and comply with audit standards and failure to do so may result in disqualification.

The balance of this page has been intentionally left blank.

Conflict of Interest Checklist and Disclosure Form

Purpose of this Checklist. This checklist is provided to assist proposers in screening for potential organizational conflicts of interest. The checklist is for the internal use of proposers and does not need to be submitted to Mn/DOT, however, the Disclosure of Potential Conflict of Interest form should be submitted in a separate envelope along with your proposal.

Definition of "Proposer". As used herein, the word "Proposer" includes both the prime contractor and all proposed subcontractors.

Checklist is Not Exclusive. Please note that this checklist serves as a guide only, and that there may be additional potential conflict situations not covered by this checklist. If a proposer determines a potential conflict of interest exists that is not covered by this checklist, that potential conflict must still be disclosed.

Use of the Disclosure Form. A proposer must complete the attached disclosure form and submit it with their Proposal (or separately as directed by Mn/DOT for projects not awarded through a competitive solicitation). If a proposer determines a potential conflict of interest exists, it must disclose the potential conflict to Mn/DOT; however, such a disclosure will not necessarily disqualify a proposer from being awarded a Contract. To avoid any unfair "taint" of the selection process, the disclosure form should be provided separate from the bound proposal, and it will not be provided to selection committee members. Mn/DOT's Contract Management personnel will review the disclosure and the appropriateness of the proposed mitigation measures to determine if the proposer may be awarded the Contract notwithstanding the potential conflict. Mn/DOT's Contract Management personnel may consult with Mn/DOT's Project Manager and Department of Administration personnel. By statute, resolution of conflict of interest issues is ultimately at the sole discretion of the Commissioner of Administration.

Material Representation. The proposer is required to submit the attached disclosure form either declaring, to the best of its knowledge and belief, either that no potential conflict exists, or identifying potential conflicts and proposing remedial measures to ameliorate such conflict. The proposer must also update conflict information if such information changes after the submission of the proposal. Information provided on the form will constitute a material representation as to the award of this Contract. Mn/DOT reserves the right to cancel or amend the resulting Contract if the successful proposer failed to disclose a potential conflict, which it knew or should have known about, or if the proposer provided information on the disclosure form that is materially false or misleading.

Approach to Reviewing Potential Conflicts. Mn/DOT recognizes that proposer's must maintain business relations with other public and private sector entities in order to continue as viable businesses. Mn/DOT will take this reality into account as it evaluates the appropriateness of proposed measures to mitigate potential conflicts. It is not Mn/DOT's intent to disqualify proposers based merely on the existence of a business relationship with another entity, but rather only when such relationship causes a conflict that potentially impairs the proposer's ability to provide objective advice to Mn/DOT. Mn/DOT would seek to

disqualify proposers only in those cases where a potential conflict cannot be adequately mitigated. Nevertheless, Mn/DOT must follow statutory guidance on Organizational Conflicts of Interest.

Statutory Guidance. Minnesota Statutes §16C.02, Subdivision 10 (a) places limits on state agencies ability to Contract with entities having an "Organizational Conflict of Interest". For purposes of this checklist and disclosure requirement, the term "Vendor" includes "Proposer" as defined above. Pursuant to such statute, "Organizational Conflict of Interest" means that because of existing or planned activities or because of relationships with other persons: (1) the vendor is unable or potentially unable to render impartial assistance or advice to the state; (2) the vendor's objectivity in performing the contract work is or might otherwise be impaired; or (3) the vendor has an unfair advantage.

Additional Guidance for Professionals Licensed by the Minnesota Board of Engineering. The Minnesota Board of Engineering has established conflict of interest rules applicable to those professionals licensed by the Board (see Minnesota Rules Part 1805.0300) Subpart 1 of the rule provides "A licensee shall avoid accepting a commission where duty to the client or the public would conflict with the personal interest of the licensee or the interest of another client. Prior to accepting such employment the licensee shall disclose to a prospective client such facts as may give rise to a conflict of interest".

An organizational conflict of interest may exist in any of the following cases:

- ❑ The proposer, or its principals, own real property in a location where there may be a positive or adverse impact on the value of such property based on the recommendations, designs, appraisals, or other deliverables required by this Contract.
- ❑ The proposer is providing services to another governmental or private entity and the proposer knows or has reason to believe, that entity's interests are, or may be, adverse to the state's interests with respect to the specific project covered by this contract. **Comment:** the mere existence of a business relationship with another entity would not ordinarily need to be disclosed. Rather, this focuses on the nature of services commissioned by the other entity. For example, it would not be appropriate to propose on a Mn/DOT project if a local government has also retained the proposer for the purpose of persuading Mn/DOT to stop or alter the project plans.
- ❑ The Contract is for right-of-way acquisition services or related services (e.g. geotechnical exploration) and the proposer has an existing business relationship with a governmental or private entity that owns property to be acquired pursuant to the Contract.
- ❑ The proposer is providing real estate or design services to a private entity, including but not limited to developers, whom the proposer knows or has good reason to believe, own or are planning to purchase property affected by the project covered by this Contract, when the value or potential uses of such property may be affected by the proposer's performance of work pursuant to this Contract. "Property affected by the project" includes property that is in, adjacent to, or in reasonable proximity to current or potential right-of-way for the project. The value or potential uses of the private entity's property may be affected by the proposer's work pursuant to the Contract when such work involves providing recommendations for right-of-way acquisition, access control, and the design or location of frontage roads and interchanges.

Comment: this provision does not presume proposers know or have a duty to inquire as to all of the business objectives of their clients. Rather, it seeks the disclosure of information regarding cases where the proposer has reason to believe that its performance of work under this Contract may materially affect the value or viability of a project it is performing for the other entity.

- ❑ The proposer has a business arrangement with a current Mn/DOT employee or immediate family member of such employee, including promised future employment of such person, or a subcontracting arrangement with such person, when such arrangement is contingent on the proposer being awarded this Contract. This item does not apply to pre-existing employment of current or former Mn/DOT employees, or their immediate family members. **Comment:** this provision is not intended to supersede any Mn/DOT policies applicable to its own employees accepting outside employment. This provision is intended to focus on identifying situations where promises of employment have been made contingent on the outcome of this particular procurement. It is intended to avoid a situation where a proposer may have unfair access to "inside" information.
- ❑ The proposer has, in previous work for the state, been given access to "data" relevant to this procurement or this project that is classified as "private" or "nonpublic" under the Minnesota Government Data Practices Act, and such data potentially provides the proposer with an unfair advantage in preparing a proposal for this project. **Comment**: this provision will not, for example, necessarily disqualify a proposer who performed some preliminary work from obtaining a final design Contract, especially when the results of such previous work are public data available to all other proposers. Rather, it attempts to avoid an "unfair advantage" when such information cannot be provided to other potential proposers. Definitions of "government data", "public data", "non-public data" and "private data" can be found in Minnesota Statutes Chapter 13.
- ❑ The proposer has, in previous work for the state, helped create the "ground rules" for this solicitation by performing work such as: writing this solicitation, or preparing evaluation criteria or evaluation guides for this solicitation.
- ❑ The proposer, or any of its principals, because of any current or planned business arrangement, investment interest, or ownership interest in any other business, may be unable to provide objective advice to the state.

Disclosure of Potential Conflict of Interest

Having had the opportunity to review the Organizational Conflict of Interest Checklist, the proposer hereby indicates that it has, to the best of its knowledge and belief:

_____ Determined that no potential organizational conflict of interest exists

_____ Determined a potential organizational conflict of interest as follows:

Describe nature of potential conflict:

Describe measures proposed to mitigate the potential conflict:

_____ _____

Signature Date

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure form with Mn/DOT Contract personnel.

_____ _____

Name Phone

Sample Work Order Language

STATE OF MINNESOTA

IT Professional/Technical Services Master Contract Program Work Order
Project Identification: _____

This work order is between the State of Minnesota, acting through its Commissioner of Transportation ("State") and [GIVE THE FULL NAME OF THE CONTRACTOR INCLUDING ITS ADDRESS (STREET, CITY AND STATE) ALSO INDICATE WHETHER THE CONTRACTOR IS A CORPORATION, PARTNERSHIP, LIMITED LIABILITY COMPANY (LLC) OR SOLE PROPRIETOR] ("Contractor"). This Work Order is issued under the authority of Master Contract T-Number 902TS, CFMS Number XXXXX, and is subject to all provisions of the Master Contract which is incorporated by reference.

Recitals

1. Under Minn. Stat. § 15.061 the State is authorized to engage such assistance as deemed necessary.
2. The State is in need of [Add brief narrative of the purpose of the contract].
3. The Contractor represents that it is duly qualified and agrees to perform all services described in this work order to the satisfaction of the State.

Work Order

1 Term of Work Order; Incorporation of Exhibits; Survival of Terms

1.1 **Effective date.** This Work Order will take effect on the date the State obtains all required signatures as required by Minn. Stat. § 16C.05, subd. 2. *The Contractor must not begin work under this work order until it is fully executed and the Contractor has been notified by the State's Authorized Representative to begin the work.*

1.2 **Expiration date.** This Work Order will expire on [fill in date], or when all obligations have been satisfactorily fulfilled, whichever occurs first.

1.3 **Exhibits.** Exhibits [fill in, e.g. A – D] are attached and incorporated into this Work Order.

1.4 **Survival of terms.** All clauses which impose obligations continuing in their nature and which must survive in order to give effect to their meaning will survive the expiration or termination of this Work Order including, without limitation, Clause 5: Indemnification.

2 Contractor's Duties

2.1 The Contractor, who is not a state employee, will:

[Provide a detailed scope of services. The services must define specific duties, deliverables, and deliverable completion dates. Do not simply attach the same scope that was used in the "Statement of Work" (RFP) as a greater level of detail is needed in this work order. If using a separate attachment, use "Perform the duties specified in Exhibit A, "Scope of Services".]

3 Consideration and Payment

3.1 Consideration

The State will pay for all services performed by the Contractor under this work order as follows:

3.1.1 *Compensation.* The Contractor will be paid as follows:
[Provide a detailed explanation of how the Contractor will be paid, for example a fixed hourly rate, or a lump sum per deliverable, some examples may be: an Hourly Rate of $_____up to maximum of ____hours, but not to exceed $_____.

a Lump Sum of $_____.]**.**

[Rate: rates paid may not exceed the Contractor's rates specified in their Master Contract.]

3.1.2 *Travel Expenses*. Reimbursement for travel and subsistence expenses actually and necessarily incurred by Contractor, as a result of this Work Order, will be reimbursed for travel and subsistence expenses in the same manner and in no greater amount than provided in the current Minnesota Department of Transportation Travel Regulations. Contractor will not be reimbursed for travel and subsistence expenses incurred outside Minnesota unless it has received State's prior written approval for out of state travel. Minnesota will be considered the home state for determining whether travel is out of state. See Exhibit ____ for the current Minnesota Department of Transportation Reimbursement Rates for Travel Expenses.

3.1.3 *Total Obligation*. The total obligation of the State for all compensation and reimbursements to the Contractor under this Work Order will [not exceed / be] $ [fill in].

3.2 Payment

3.2.1 **Invoices**. Contractor must submit invoices electronically for payment, using the format set forth in Exhibit ____. Contractor will submit invoices for payment in accordance with the following schedule: [INDICATE WHEN YOU WANT THE CONTRACTOR TO SUBMIT INVOICES, FOR EXAMPLE: "MONTHLY" OR "UPON COMPLETION OF SERVICES," OR IF THERE ARE SPECIFIC DELIVERABLES, LIST HOW MUCH WILL BE PAID FOR EACH DELIVERABLE. THE STATE DOES NOT PAY MERELY FOR THE PASSAGE OF TIME.]

3.2.2 **Progress Reports.** Contractor must submit progress reports to the State's Project Manager, using the format and timeline set forth by the State's Project Manager.

3.2.3 **State's Payment Requirements**. State will promptly pay all valid obligations under this Contract as required by Minnesota Statutes §16A.124. State will make undisputed payments no later than 30 days after receiving Contractor's invoices and progress reports for services performed. If an invoice is incorrect, defective or otherwise improper, State will notify Contractor within 10 days of discovering the error. After State receives the corrected invoice, State will pay Contractor within 30 days of receipt of such invoice.

3.2.4 **Invoice Package Submittal**. Contractor must submit the signed invoice, the signed progress report and all required supporting documentation, for review and payment, to State's Consultant Services Section, at ptinvoices.dot@state.mn.us. Invoices will not be considered "received" within the meaning of Minnesota Statutes §16A.124 until the signed documents are received by State's Consultant Services Section.

3.2.4.1 Each invoice must contain the following information: Mn/DOT Contract Number, Contractor's invoice number (sequentially numbered), Contractor's billing and remittance address, if different from business address, and Contractor's signature attesting that the invoiced services and costs are new and that no previous charge for those services and goods has been included in any prior invoice.

3.2.4.2 Except for Lump Sum Contracts, direct nonsalary costs allocable to the work under this Contract, must be itemized and supported with invoices or billing documents to show that such costs are properly allocable to the work. Direct nonsalary costs are any costs that are not the salaried costs directly related to the work of Contractor. Supporting documentation must be provided in a manner that corresponds to each direct cost.

3.2.4.3 Except for Lump Sum Contracts, Contractor must provide, upon request of State's Authorized Representative, the following supporting documentation:

- Direct salary costs of employees' time directly chargeable for the services performed under this Contract. This must include a payroll cost breakdown identifying the name of the employee, classification, actual rate of pay, hours worked and total payment for each invoice period; and
- Signed time sheets or payroll cost breakdown for each employee listing dates and hours worked. Computer generated printouts of labor costs for the project must contain the project number, each employee's name, hourly rate, regular and overtime hours and the dollar amount charged to the project for each pay period.

3.2.5 **Subcontractors**. If Contractor is authorized by State to use or uses any subcontractors, Contractor must include all the above supporting documentation in any subcontractor's Contract and Contractor must make timely payments to its subcontractors. Contractor must require subcontractors' invoices to follow the same form and contain the same information as set forth above.

3.2.6 **Retainage.** Under Minnesota Statutes §16C.08, subdivision 5(b), no more than 90% of the amount due under this Contract may be paid until State's agency head has reviewed the final product of this Contract. The balance due will be paid when State's agency head determines that Contractor has satisfactorily fulfilled all the terms of this Contract.

3.2.7 **Federal Funds.** If federal funds are used, Contractor is responsible for compliance with all federal requirements imposed on these funds and accepts full financial responsibility for any requirements imposed by Contractor's failure to comply with federal requirements.

4 Authorized Representatives

4.1 **State's Authorized Representative.** State's Authorized Representative will be:

NAME, TITLE
ADDRESS
TELEPHONE NUMBER
FAX NUMBER
E-MAIL ADDRESS

State's Authorized Representative or his /her successor, will monitor Contractor's performance and has the authority to accept or reject the services provided under this Work Order.

4.2 **State's Project Manager**. State's Project Manager will be:

NAME, TITLE
ADDRESS
TELEPHONE NUMBER
FAX NUMBER
E-MAIL ADDRESS

State's Project Manager, or his/her successor, has the responsibility to monitor Contractor's performance and progress. State's Project Manager will sign progress reports, review billing statements, make recommendations to State's Authorized Representative for acceptance of Contractor's good or services and make recommendations to State's Authorized Representative for certification for payment of each Invoice submitted for payment.

4.3 **Contractor's Authorized Representative**. Contractor's Authorized Representative will be:

NAME, TITLE
ADDRESS
TELEPHONE NUMBER
FAX NUMBER
E-MAIL ADDRESS

If Contractor's Authorized Representative changes at any time during this contract, Contractor must immediately notify State.

4.4 Contractor's Key Personnel. Contractor's Key Personnel will be:

[Names, Titles]

Key Personnel assigned to this project cannot be changed without the written approval of the State's Project Manager. Contractor will submit a change request in writing to the State's Project Manager along with a resume for each potential candidate. Potential new or additional personnel may be required to participate in an interview. Upon approval of new or additional personnel, the State's Authorized Representative may issue a change order to add or delete key personnel.

5 Indemnification

In the performance of this contract by Contractor, or Contractor's agents or employees, the Contractor must indemnify, save, and hold harmless the State, its agents, and employees, from any claims or causes of action, including attorney's fees incurred by the state, to the extent caused by Contractor's:

- Intentional, willful, or negligent acts or omissions; or
- Actions that give rise to strict liability; or
- Breach of contract or warranty.

The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Contractor may have for the State's failure to fulfill its obligation under this contract.

6 Nonvisual Access Standards

Nonvisual access standards require:

- The effective interactive control and use of the technology, including the operating system, applications programs, prompts, and format of the data presented, are readily achievable by nonvisual means;
- That the nonvisual access technology must be compatible with information technology used by other individuals with whom the blind or visually impaired individual must interact;
- That nonvisual access technology must be integrated into networks used to share communications among employees, program participants, and the public; and
- That the nonvisual access technology must have the capability of providing equivalent access by nonvisual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

7 Time

The Contractor must comply with all the time requirements described in this Work Order. In the performance of this Work Order, time is of the essence.

8 Employee Status

Intentionally Omitted.

9 Additional Provisions

The Contractor will comply with the Minnesota Electronic and Information Technology Accessibility guidelines (IRM guideline 19) available at http://www.state.mn.us/portal/mn/jsp/content.do?id=-536891917&subchannel=null&sc2=null&sc3=null&contentid=536880882&contenttype=EDITORIAL&programid=536911233&agency=OETweb