EXHIBIT A

SCOPE OF WORK AND DELIVERABLES

The Design Build Verification Consultant (DBVC) will utilize efficient and cost effective control procedures that will assure that design and construction of the Project are performed in reasonable conformity with the plans, specifications and contract provisions for the Project.

All services will be performed in accordance with the established standard procedures and practices of MnDOT. Prior to furnishing any services, the DBVC will become familiar with those departmental standard procedures and practices as set forth in the documents listed in the General Requirements section of this RFP. The DBVC will become familiar with informal procedures and practices for construction, engineering and contract administration used by MnDOT. The DBVC will maintain close coordination with MnDOT and the Design Build Contractor in order to minimize rescheduling of the DBVC's activities due to construction delays or changes in scheduling of the Design Build Contractor's activities.

The DBVC will be fully responsible for carrying out all functions as described in this RFP. All activities and decisions of the DBVC relating to the project will be subject to review by the Design Project Manager.

The DBVC will provide coordination of all activities, correspondence, reports and other communications related to its responsibilities for this Project.

The DBVC will be advised of the official notice of award of the Design Build Contract and will be ready to fully staff for the project within one week after notification. No personnel will be assigned until written notification by the Design Project Manager has been issued.

Design Review will be required of the DBVC at all times while the Design Build Contractor is working on the project. If the Design Build Contract is suspended for any reason, the DBVC's forces will be adjusted to correspond with the type of cessation, either complete or partial suspension.

<u>Cooperation and Performance of the DBVC:</u> During the life of the Project, the Design Project Manager will conduct reviews of the various phases of the DBVC's operations.

Reviews will be conducted in accordance with established MnDOT policy on work phases to determine compliance and the sufficiency with which procedures are being effectively applied to assure that the design reviews, construction work and administrative activities are being performed in substantial conformity with MnDOT policies, plans, specifications, and contract provisions. The DBVC will cooperate and assist the Design Project Manager, or his representative(s), in the conduct of the reviews.

When deficiencies are indicated in a review, remedial action will be immediately implemented by the DBVC in conformance with the Design Project Manager's recommendations. The Design Project Manager's remedial recommendations and the DBVC's actions will be properly documented by the Design Project Manager. In general, remedial action will be required commensurate with the degree and nature of the deficiencies cited. Additional compensation will not be allowed for remedial action taken to correct deficiencies by the DBVC. Remedial actions may include any or all of, but are not necessarily limited to, the following actions:

- Further subdivide assigned design review or construction verification responsibilities, reassign design review or construction verification personnel or assign additional personnel. The DBVC will comply with this action within 24 hours of notification by the Design Project Manager.
- Replace personnel whose performance has been determined by the Design Project Manager to be

inadequate. When directed by the Design Project Manager, any person whose performance has been determined to be unsatisfactory will be immediately removed.

The general list of the responsibilities and requirements for the DBVC are outlined below. These are broken into three subsections. General – Services, responsibilities and requirements by both the Design and the Contract Administration, Design – Design Review identifies the required services to be performed under the Design phase of the Project, and Contract Administration under the Construction phase of the contract

When examining the plans from the Design Build Contractor, use the following criteria to check and review the plans:

- Review – A comparative analysis for agreement with standard practice, conformance to the contract requirements, agreement with similar structures, all with application of professional judgment. Mathematical analysis is not specifically required, but may be necessary where a discrepancy appears likely. Will include an analysis of the Design Build Contractor's methods, assumptions, and calculations.
- Check –Mathematical computations provided by the contractor and provide independent calculations when an issue occurs during the check.

<u>General</u>

1. Attend any conferences or meetings necessary for close coordination during day-to-day progress of the work or as required to carry out the Project.

2. Become familiar with the standard design practices of MnDOT, the Design Build RFP, and the Design Build Contractor's proposed schedule of operations prior to beginning design review services under the Project.

3. Assign a sufficient number of technically qualified and experienced personnel to the Project to perform the services described in this RFP in a timely manner to avoid delay to the Design Build Contractor.

4. Notify the Design Project Manager immediately of any unanticipated project conditions.

5. Withdraw any personnel or halt any services no longer required, at the request of MnDOT, or within a reasonable time after the lack of need becomes apparent to the DBVC.

6. Prepare and submit such periodic, intermediate and final data and records as may be required by MnDOT and as are applicable to the Project.

7. Collect, properly label or identify, and deliver to MnDOT all original calculations, drawing and sketches, electronic design files, records, reports, and other documents prepared by the DBVC in the performance of the work as described in this RFP upon completion or termination of the Project.

8. Provide interpretations of the plans, specifications and contract provisions to the Design Build Contractor. The DBVC will consult with the Design Project Manager when an interpretation involves complex issues or may have an impact on the cost of performing the work. When warranted, the Design Project Manager may request an interpretation from the DBVC.

9. Evaluate potential Design-Build Contract changes, in cooperation with the Design Project Manager, and provide conclusions as to whether or not proposed changes are structurally equal to

the planned construction as well as the validity of estimated savings to MnDOT and the Design Build Contractor.

10. Analyze changes to the plans, specifications or contract provisions and extra work, which appear to be necessary to carry out the intent of the Project. When it is determined that a change or extra work is necessary, the DBVC will make recommendations to the Design Project Manager for approval.

11. Perform systematic and independent examinations to determine whether the Design Build Contractor's quality activities and related results comply with planned arrangements including the Design Build RFP, are implemented effectively, and are suitable to achieve the project objectives.

12. Maintain records of utilities meetings, utility relocation activities and utility agreements

13. To prevent delays in the Design Build Contractor's operations, promptly produce reports, verify quantity calculations and/or write communications.

14. Upon identification of a proposed changed condition or Design Build Contract change, the extent of change will be analyzed and an order of magnitude estimate of cost and time change, if any, will be prepared. Prepare the fair cost estimate prior to receipt of the Design Build Contractor's estimate.

15. All services will be coordinated through the Design Project Manager.

Upon identification of a proposed changed condition or Design Build Contract change, the extent of change will be analyzed and an order of magnitude estimate of cost and time change, if any, will be prepared. Prepare the fair cost.

Design – Design Review

The Design Build Contractor will complete the final plans based on the preliminary plans provided by MnDOT. The DBVC will review the plans for conformance to the design concept upon which the preliminary plans were prepared. The DBVC will verify that the final plans will be prepared in accordance with the Design Build RFP including current MnDOT standards and practices.

1. It is the responsibility of the DBVC to make sure that the plans coming from the Design Build Contractor are complete and correct. The DBVC will review and check the Contractor's plans. These reviews will include over-the-shoulder plans, release for construction plans, and as-built plans.

2. Provide design review services on a full time basis during all pertinent construction activities. The DBVC staff will be required to co-house with MnDOT staff and the Design Build Contractor's staff

3. To prevent delays in the Design Build Contractor's operations, promptly check and review plans, calculations, and specifications, produce reports, and/or write communications.

Contract Administration: The DBVC will perform all Contract Administration services necessary to assure that proper coordination of the activities of all parties involved in accomplishing completion of the project; to maintain complete, accurate records of all activities and events relating to the projects; to properly document all significant changes to the projects; to provide interpretations of the plans, specifications and contract provisions; to make recommendations to the Department to resolve disputes

which arise in relation to the construction contracts; and to maintain an adequate level of surveillance of the Contractor's activities.

The DBVC will also perform any other Contract Administration services that are required to fulfill its responsibilities as described in this RFP. All record keeping and documentation will be in accordance with standard Department procedures, formats and content.

1. Provide for DBVC personnel transportation.
2. Review the Design Build Contractor's as-built plans.
3. Assist appropriate MnDOT offices in preparing for arbitration hearings or litigation that may occur during the DBVC's contract time in connection with the Project.
4. Perform DBVC field operations in accordance with OSHA regulations and accepted safety practices.
5. Assist in reviewing, coordinate and process contractor Prepare Partial Estimate pay vouchers.
6. In the event that the Design Build Contractor for the Project submits a claim for additional compensation, analyze the submittal and prepare a recommendation to the Design Project Manager covering validity and reasonableness of charges. Maintain complete and accurate records of work involved in claims.
7. In the event that the Design Build Contractor for the project submits a request for extension of the allowable contract time, assist in the analysis of the request.
8. Monitor the Project to the extent necessary to determine whether construction activities violate the requirements of any permits. Notify the Design Contractor of any violations or potential violations and require its immediate resolution of the problem. Violations must be reported to the Design Project Manager immediately.
9. As required by the Design Build Project Manager, provide inspection of utility work including reimbursable utilities that are shown in the Design Build Contract. This will also include all required documentation.

Other Services

The DBVC, upon written authorization from MnDOT, will perform additional Design Build verification related services as may be required by MnDOT. The following items may be required by MnDOT to supplement the DBVC's services for the Project. Fees for such services will be negotiated.

1. The DBVC will, upon written request, assist MnDOT in preparing documents for arbitration hearings or litigation that occur after the basic Contract Administration services are complete, in connection with the Project.

2. The DBVC will, upon written request from MnDOT, provide qualified professionals to serve as engineering witnesses, provides exhibits, and otherwise assist MnDOT in any litigation or hearing in connection with the Design Build Contract.

3. The DBVC will, upon written request by MnDOT, provide on/off site Project related inspection services, above those specified in this Scope of Work.

Design and Construction Claims

Claim resolution and/or containment of exposure are most efficient at the time of occurrence. It is prudent policy that all discrepancies that have an impact on the Project and that are incurred by the Design Build Contractor be dealt with immediately.

On an as-needed basis, the DBVC will perform discovery of documentation involved in any claim filed

by the Design Build Contractor providing claim defense strategy for MnDOT to use in resolution of the claim.

If a discrepancy cannot be resolved and the Design Build Contractor files a claim, the DBVC will have complete documentation and schedule and planning data conclusive for counsel's use and defense procedures. If necessary the DBVC will act as an expert witness in defense of claims for MnDOT.

Post-Construction Claims Review
In the event the Design Build Contractor for the Project submits a claim for additional compensation and/or time after the DBVC has completed its contract, the DBVC will, at the written request from MnDOT, analyze the claim, prepare a recommendation to the Design Project Manager covering validity and reasonableness of charges and/or assist in negotiations leading to settlement of the claim. Compensation will be negotiated and reimbursed by a separate contract.

Additional Tasks
Responders are encouraged to propose additional tasks or activities if they will substantially improve the results of the project. These items must be separated from the required items on the cost proposal.

Responders must answer to all of the requested tasks and services listed in this RFP, no more, no less (basic services). Additional proposed services, alternative approaches, or services the responder does not deem necessary are to be addressed separately. The purpose of this requirement is to ensure a consistent comparison between proposals.

PERSONNEL

The DBVC will provide satisfactory number of qualified technical and administrative personnel in a timely manner to effectively meet the requirements set forth in this Scope of Work to ensure that the responsibilities described in this RFP are effectively carried out.

The tasks outlined in the Scope of Work described in this RFP will be performed under tight time constraints. Design reviews will be conducted in a specified time frame,. The DBVC will staff as required to prevent delays to the overall project. It is anticipated that the DBVC will be required to work extended hours and weekends to meet the schedule demands of the project.

It is estimated that seven people will be necessary during peak activity to carry out the various tasks described in this Scope of Work. This number includes approximately three Design, and four Contract Administration personnel needed during the Project. It is anticipated that the number of personnel in each discipline will change as the project progresses. These numbers are to be used as a guideline only. It will be the responsibility of the DBVC to staff the project as required.

<u>Personnel Qualifications:</u> The DBVC will utilize only personnel who are qualified by experience and education. The DBVC will submit in writing to the Design Project Manager the names of professional personnel listed to be considered for assignment to the project, together with detailed resumes with respect to salary, education, experience and qualification of each individual. Minimum qualifications for the DBVC personnel are set forth in this RFP. MnDOT may require that these minimum qualifications be altered in instances when the unique nature of the work requires specific specialized skills.

<u>Staffing</u>: The DBVC will adequately staff the job in advance of the beginning of work to be properly prepared to satisfy its responsibilities, and will maintain an appropriate staff after completion of

construction to complete the Final Estimate. Responsible personnel, thoroughly familiar with all aspects of design, construction and final measurements of the various pay items, must be available to resolve disputed final pay quantities until the appropriate contract has been paid off. No personnel will be assigned to this project by DBVC until the qualifications of each person proposed have been reviewed and approved in writing by the Design Project Manager. The DBVC's personnel approval request will be submitted at least two weeks prior to the date an individual is scheduled to report to work.

An individual previously approved by the Design Project Manager whose performance is later determined by MnDOT to be unsatisfactory will be replaced by the DBVC as described on page 1 of this scope of work.

Personnel identified in the DBVC's technical proposal will be assigned to the Project as proposed by the DBVC and are considered by MnDOT to be committed to performing services for the Project. Any changes will require written approval from the Design Project Manager.

When the Contractor's operations on the Project diminish, the DBVC will reduce the number of its personnel assigned to the Project as appropriate. Any adjustment of DBVC forces as recommended by the Design Project Manager will be accomplished within one week after notification. The Design Project Manager will provide said notification to the DVBC in writing, and the DVBC will provide confirmation of notification in writing.

Licensing for Equipment Operation: The DBVC will be responsible for obtaining proper licenses for equipment and personnel operating equipment when licenses are required.

Design Personnel Required Training and Experience (Three Staff Projected)

Design Engineer (full time during design, one-quarter time during construction):
This position will assist the MnDOT Roadway Engineer. Responsibilities include, but are not limited to, participating in plan and over-the-shoulder reviews, reviewing design changes, consulting with MnDOT design-build Project Manager and staff. Minimum desired qualifications include:

- A Civil Engineering degree and registration by the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design (AELSLAGID) as a Professional Engineer, plus at least five years of engineering experience in designing major road projects.
- Ability to communicate effectively (verbally and in writing)
- Experience designing highway projects as part of a design-build team or experience with assisting an owner with design verification on a design-build transportation project.
- Exercises initiative and independent judgment in the solution of work problems.

Drainage Engineer (full time during design, one-quarter time during construction):
This position will assist the MnDOT Roadway Engineer with the review of hydraulic and water resource related aspects of the project. Responsibilities include, but are not limited to, participating in plan and over-the-shoulder reviews, reviewing the design-build contractor's plans and procedures, addressing field design changes, and coordinating water resource issues with MnDOT Water Resources Engineering unit. Minimum desired qualifications include:

- A Civil Engineering degree and registration by the Minnesota Board of AELSLAGID as a Professional Engineer, plus at least five years of engineering experience in urban roadway drainage design (e.g., roadway and storm sewer design, catch basin spacing, culvert design, wet stormwater pond design, infiltration and filtration basin design, etc.)

- Experience with hydraulic and hydrologic software used with a minimum of XP-SWMM, HydroCAD, and GeoPak Drainage
- Ability to correctly interpret permit requirements
- Ability to communicate effectively (verbally and in writing) and work as a team
- Ability to exercises initiative and independent judgment in the solution of work problems.
- A master's degree in a related field of study may be substituted for one year of experience.

Utility Cooordinator (three-quarter time during design, one-half time during construction):
This position will assist the MnDOT Roadway Engineer with the review of utility related issues on the project. Responsibilities include, but are not limited to, participating in utility coordination, plan reviews, reviewing the design-build contractor's plans and procedures, and addressing field design changes. Minimum desired qualifications include:

- Experience with utility coordination with the project stakeholders
- Ability to communicate effectively (verbally and in writing)
- Ability to exercises initiative and independent judgment in the solution of work problems.

Quality Audit and Verification Testing Personnel Required Training and Experience (Four Staff Projected)

Before the Project begins, all DBVC staff must have a working knowledge of the current Contract Administration Manual and MnDOT's current Construction Specifications book, and must possess all the knowledge, skills and abilities required in obtaining the necessary certifications for performing the duties of the position they hold. The DBVC will ensure that MnDOT's current practices, policies and procedures are met throughout the course of the project. Cross training of the DBVC's staff is highly recommended to ensure a knowledgeable and versatile project team. The following training and experience standards are expected, as a minimum, for all DBVC personnel under each category.

Bridge Inspector (1 full time position during construction):
These positions will assist the MnDOT Lead Inspector with ensuring that all construction related to bridge inspection, noise walls and minor retaining walls are in accordance with approved plans, specifications and special provisions, that compliance with MnDOT construction standards and policies are maintained, as well as any other applicable laws.

This positions will assist the MnDOT Lead Inspector in quality assurance material testing, inspecting piling, driven pile and/or drilled shafts, inspecting reinforcing steel, inspecting concrete pours, concrete form inspecting, concrete painting and other minor structural inspection. This position will also resolve field problems and ensure that the solutions are pursued and implemented as quickly as possible to minimize delays and costs while achieving an acceptable result. When field problems are encountered, this position will be responsible for assembling all relevant information in a concise and orderly manner, reviewing all the information and circumstances, and reporting recommendations to the MnDOT Lead Inspector.

Minimum desired MnDOT certifications include:

- Concrete Field and I and II.
- Bridge Construction I and II
- Grading and Base I and II
- Bituminous Street
  Erosion Control Installer/Inspector

Minimum desired qualifications include

- 3 Years' experience inspecting bridge construction
- Experience with TRACS
- Experience in Design-Build Projects

Roadway Inspector (2 full time positions during construction):
This position will assist the MnDOT Lead Inspector with ensuring that all construction is in accordance with approved plans, specifications and special provisions, that compliance with MnDOT construction standards and policies are maintained, as well as any other applicable laws.

These positions will assist the MnDOT Lead Roadway Inspector in quality assurance material testing, inspecting grading, curb and gutter, bituminous and concrete paving, storm sewer installation, utility installation, signal, concrete pour, retaining walls, and landscape installation. This position will also resolve field problems and ensure that the solutions are pursued and implemented as quickly as possible to minimize delays and costs while achieving an acceptable result. When field problems are encountered this position will be responsible for assembling all relevant information in a concise and orderly manner, reviewing all the information and circumstances, and reporting recommendations to the MnDOT Lead Roadway Inspector.

Minimum desired MnDOT certifications include:
- Concrete Field and I and II.
- Grading and Base I and II
- Bituminous Street I and II
- Signal and Lighting
- Erosion Control Installer/Inspector

Minimum desired qualifications include:
- 2 Years' experience inspecting roadway construction
- Experience with TRACS
- Experience in Design-Build Projects

Other responsibilities include, but are not limited to, contract administration, traffic control compliance, project certification, and project finalization.

Inspector/Tester (1 full time position during construction)
This position will assist the MnDOT Lead Inspector and the Bridge or Roadway Inspectors with ensuring that all construction is in accordance with approved plans, specifications and special provisions, that compliance with MnDOT construction standards and policies are maintained, as well as any other applicable laws.

This position will assist the MnDOT Lead Inspector and the Bridge or Roadway Inspectors in quality assurance material testing, inspecting grading, paving, storm sewer installation, concrete pour, retaining walls, minor bridge inspection. This position will also resolve field problems where appropriate, report issues to MnDOT staff and ensure that the solutions are pursued and implemented as quickly as possible to minimize delays and costs while achieving an acceptable result. When field problems are encountered, this position will take appropriate action and reporting recommendations to the MnDOT Lead Inspector.

Minimum desired MnDOT certifications include:
- Concrete Field and I and II.
- Grading and Base I and II

- Bituminous Street I

Minimum desired qualifications include:

- 2 Years' experience inspecting roadway construction
- Experience with TRACS
- Experience in Design-Build Projects

ITEMS TO BE OBTAINED BY THE DBVC FROM MNDOT AND/OR THE DESIGN BUILD CONTRACTOR

Office Space:

The Design Build Contractor, DVBC and MnDOT will be housed in a common facility. It is anticipated that the co-housed facility will be located adjacent to the project. Other options include having the Design Builder provide the office space at their facility for "over the shoulder" reviews. The facility will provide office space and basic furniture for the projected seven on-site DVBC staff members. Basic furniture does NOT include computer(s). The DVBC must supply IBM-compatible computers that can be networked to the MnDOT network for all employees as determined by MnDOT. The purpose of co-housing all three entities in one facility at the same time is to aid the continuous design, construction and review process, while keeping lag times to a minimum.

Network Requirement:

MnDOT will provide each contractor with its own separate network that is connected to the Internet. MnDOT will manage the firewall of all networks, and will provide support for Outbound VPN service should contractor personnel need to connect back to their company/corporate networks. The contractor will be expected to provide their own computers and peripherals to include but not limited to: servers, network switches for data, workstations, laptops, wireless access points, keyboards, mice, printers, plotters and any other accessories. The contractor is responsible for providing any and all technical support for their own desktops, servers, applications and peripherals.

MnDOT will oversee the contract for the wiring of the facility, and provide support for all network wiring necessary within the St. Croix Project Office. MnDOT will supply and manage all IP Addresses used on MnDOT's network, as well as for the networks provided for contractor use within the St. Croix Bridge Project Office.

MnDOT will provide VOIP telephone and voicemail services to all personnel assigned to the St. Croix Bridge Design Build Project Office. This will include all MnDOT personnel and assigned contractor personnel.

Safety

The contractor is required to supply personal safety equipment for their employees. The contractor must also supply their own trucks, gas, insurance and maintenance. The name of the company must be identified on both sides of each vehicle. All Contractor's, subcontractors' and suppliers' mobile equipment, operating within the limits of the Project with potential exposure to passing traffic, must be equipped with operable warning lights which meet the appropriate requirements of the SAE specifications. This includes closed roads that are open to local traffic only. This also includes any vehicle which enters the traveled roadway at any time. The SAE specification requirements are as follows:

- 360 degree rotating lights – SAE Specification J845
- Flashing lights – SAE Specification J595

- Flashing strobe lights – SAE Specification J1318

Lights must be mounted so that at least one light is visible at all times from a height of 3.5 feet and from a 100-foot radius about the equipment. In order to meet the 360 degree at 18 m (60 foot) radius requirements supplemental lighting may be used in addition to the lights on the Approved Products List. All supplemental lights must be SAE Class 1 certified. This specification is to be used for both day and night operations. All costs incurred to provide warning lights will be at no cost to MnDOT. These warning lights must also be operating and visible when a vehicle decelerates to enter a construction work zone and enters the traveled traffic lane.

The contractor will equip their vehicles with lights that are on the Approved Products List which can be found at: http://www.dot.state.mn.us/products/workzone/vehiclelights.html.