

**MINNESOTA DEPARTMENT OF TRANSPORTATION
MASTER PARTNERSHIP WORK ORDER****State Project Number (SP):** 6215-117**Trunk Highway Number (TH):** 51**Project Identification:** TH 51/ Snelling Ave – Signal and Lighting Design

This Work Order Contract is issued under the authority of State of Minnesota, Department of Transportation (MnDOT) Master Partnership Contract No. 1028167 between the state of Minnesota acting through its Commissioner of Transportation (“State”) and City of Saint Paul, a political subdivision of the State of Minnesota (“Local Government/Agency”) and is subject to all applicable provisions and covenants of that Agreement which are incorporated herein by reference.

Contract

1. Term of Work Order Contract; Incorporation of Exhibits

- 1.1. **Effective Date:** This Work Order Contract will be effective on the date that all required signatures are obtained by State, pursuant to Minnesota Statutes Section 16C.05, subdivision 2. The Local Government/Agency must not begin work under this contract until ALL required signatures have been obtained and the Local Government/Agency has been notified in writing to begin such work by the State’s Authorized Representative.
- 1.2. **Expiration Date:** This Work Order Contract will expire on **June 30, 2023**, or when all obligations have been satisfactorily fulfilled, whichever occurs first.
- 1.3. **Exhibits:** Exhibits A through C are attached and incorporated into this Work Order Contract.

2. Nature of Work

- 2.1. X the blanks below to indicate the nature of the work to be performed. See Article 3, Services Requiring a Work Order Contract, of the Master Partnership Contract for applicable definition.

Construction Administration
 Emergency Services
 Professional/Technical Services
 Roadway Maintenance

3. Scope of Work

- 3.1. The Local Government/Agency will perform all services under this Work Order Contract in accordance with the Standard Terms described in Exhibit A.
- 3.2. The Local Government/Agency will perform services under this Work Order Contract summarized generally as follows: The Local Government/Agency, will perform the tasks and provide the deliverables described in Exhibit B.

4. Items provided or completed by the State

- 4.1. The following will be provided or completed by the State: See Exhibit B (1.4.1, 2.4.1, 3.2.1, and 4.1.7) for items that will be provided or completed by the State.

5. Consideration of Payment

- 5.1. The State will pay for all services performed by the Local Government/Agency on a Lump Sum basis upon satisfactory completion of the work under this Work Order Contract and acceptance by the State’s Project Manager.
- 5.2. The Local Government/Agency will submit an invoice for payment in accordance with the following schedule: Upon Completion and State’s Acceptance of All Services.
- 5.3. The State’s total obligation for all compensation and reimbursements to the Local Government/Agency will be **\$42,000.00**.

6. Terms of Payment

- 6.1. The State will promptly pay all valid obligations under this Work Order Contract as required by Minnesota Statutes §16A.124.
- 6.2. Local Government/Agency must submit invoices electronically for payment, using the format set forth in Exhibit C. The State will pay the Local Government/Agency a Lump Sum completion of the work and invoicing. The Local Government/Agency will submit signed invoices, and the signature will attest that the services have actually been performed, and that the claimed amounts have not been previously claimed or paid. Upon request of the State, the Local Government/Agency must provide documentation showing the actual costs incurred.
- 6.3. If the “Professional and Technical Services” box is checked in Article 2.1, the State will retain up to 10% of the final amount due to the Local Government, as required by Minnesota Statutes §16C.08, until the work and deliverables have been approved by the State.
- 6.4. The Local Government/Agency must submit the signed invoice, for review and payment, to the State’s Consultant Services Section, at ptinvoices.dot@state.mn.us. If the Local Government/Agency cannot support electronic submission of the invoice package, the Local Government/Agency must contact the State’s Authorized Representative for possible alternatives.
- 6.5. All invoices are subject to audit, at the State’s discretion.

7. Authorized Representatives:

- 7.1. The Local Government/Agency’s Project Manager for this Work Order is

Name: Ben Hawkins
Address: City of Saint Paul
25 West Fourth Street, 800 CHA
Saint Paul, MN 55102
Telephone: 651-266-6256
E-Mail: ben.hawkins@ci.stpaul.mn.us

The Local Government/Agency’s Project Manager for this Work Order Contract is responsible for overseeing the Local Government/Agency’s fulfillment of its obligations under this Work Order Contract, reviewing and approving invoices, resolving disputes related to this Work Order Contract, and for giving or receiving any notices required or permitted by this Work Order Contract.

- 7.2. The State’s Authorized Representative, for this Work Order is

Name: Lenny Traxler
Address: Minnesota Department of Transportation
1500 West County Road B2
Roseville, MN 55113
Telephone: 651-234-7688
E-Mail: leonard.traxler@state.mn.us

The State’s Authorized Representative, or his/her successor, will monitor the Local Government/Agency’s performance and has the authority to accept or reject the services provided under this Work Order Contract.

- 7.3. The State’s Project Manager for this Work Order is

Name: Elizabeth Burton
Address: Minnesota Department of Transportation
1500 West County Road B2
Roseville, MN 55113
Telephone: 651-366-4512
E-Mail: elizabeth.burton@state.mn.us

The State's Project Manager is responsible for overseeing the State's fulfillment of its obligations under this Work Order Contract, reviewing and approving invoices, resolving disputes related to this Work Order Contract, and for giving or receiving any notices required or permitted by this Work Order Contract.

8. Termination

- 8.1. **Termination by the State or Local Government/Agency.** The Local Government/Agency, the State or the Commissioner of Administration may terminate this Work Order at any time, with or without cause. Upon termination, the Local Government/Agency will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed.
- 8.2. **Termination for Insufficient Funding.** The State may immediately terminate this Work Order if it does not obtain funding from the Minnesota Legislature, or other funding source; or if funding cannot be continued at a level sufficient to allow for the payment of the services covered here. Termination must be by written or fax notice to the Local Government/Agency. The State is not obligated to pay for any services that are provided after notice and effective date of termination. However, the Local Government/Agency will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that funds are available. The State will not be assessed any penalty if the Work Order is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State must provide the Local Government/Agency notice of the lack of funding within a reasonable time of the State's receiving that notice.

9. Title VI/Non-discrimination Assurances.

- 9.1. The Local Government/Agency agrees to comply with all applicable US DOT Standard Title VI/Non-Discrimination Assurances contained in DOT Order No. 1050.2A, and in particular Appendices A and E, which can be found at: https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=11149035. The Local Government/Agency will ensure the appendices and solicitation language within the assurances are inserted into contracts as required. State may conduct a review of the Local Government/Agency's compliance with this provision. The Local Government/Agency must cooperate with State throughout the review process by supplying all requested information and documentation to State, making the Local Government/Agency's staff and officials available for meetings as requested, and correcting any areas of non-compliance as determined by State.

10. Additional Provisions

- 10.1 **Counterparts.** The parties may sign this Agreement in counterparts, each of which constitutes an original, but all of which together constitute one instrument.
- 10.2 **Electronic Signatures.** The parties agree that the electronic signature of a party to this Agreement shall be as valid as an original signature of such party and shall be effective to bind such party to this Agreement. The parties further agree that any document (including this Agreement and any attachments or exhibits to this Agreement) containing, or to which there is affixed, an electronic signature shall be deemed (i) to be "written" or "in writing," (ii) to have been signed and (iii) to constitute a record established and maintained in the ordinary course of business and an original written record when printed from electronic files. For purposes hereof, "electronic signature" also means a manually signed original signature that is then transmitted by any electronic means, including without limitation a faxed version of an original signature or an electronically scanned and transmitted version (e.g., via PDF) of an original signature. Any party's failure to produce the original signature of any electronically transmitted signature shall not affect the enforceability of this Agreement.

STATE ENCUMBRANCE VERIFICATION

Individual certifies that funds have been encumbered as required by Minnesota Statutes §16A.15 and §16C.05.

Signed:

Date:

DEPARTMENT OF TRANSPORTATION (with delegated authority)

Signed:

Title:

Date:

LOCAL GOVERNMENT/AGENCY

Local Government/Agency certifies that the appropriate person(s) have executed the agreement on behalf of Local Government/Agency as required by applicable articles, bylaws or resolutions.

COMMISSIONER OF ADMINISTRATION

Signed:

Date:

By: _____
Director of Public Works

Date: _____

By: _____
Assistant City Attorney

Date: _____

By: _____
Director of Financial Services

Date: _____

By: _____
Mayor

Date: _____

**EXHIBIT A
STANDARD TERMS**

STANDARD TERMS FOR PROFESSIONAL AND TECHNICAL SERVICES

1. The Local Government/Agency will prepare all documents in accordance with Minnesota law, applicable Federal laws and regulations, and geometric design standards for trunk highway plans as described in the current versions of MnDOT Manuals, available through the State's State Aid Division or on the State's website, www.dot.state.mn.us.
2. The Local Government/Agency will, as applicable in developing plans, include the standard specifications from the latest edition of MnDOT Standard Specifications for Construction, and all amendments thereto.
3. The Local Government/Agency will furnish the personnel, services, supplies, and equipment necessary to properly perform, supervise, and document the work for the project(s). The services of the Local Government/Agency to be performed hereunder may not be assigned, sublet, or transferred unless approved in writing by MnDOT. This written consent will in no way relieve the Local Government/Agency from its primary responsibility for performance of the work.

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Purpose

State needs continuous roadway lighting on Trunk Highway (TH) 51 from Montreal Ave to Ford Parkway in the City of Saint Paul and a new signal system at the intersection of TH 51/ Snelling Ave and Montreal Ave.

The overall intent/purpose of this scope of work is to effectively coordinate the design of both the continuous roadway lighting and the necessary signal components, prepare all necessary engineering documents to complete the lighting and signal design process on schedule for State Project (SP) 6215-117, TH 51, and submit the appropriate project documentation to State's Project Manager.

The lighting design will provide the level and uniformity of light suggested in the American Association of State Highway and Transportation Officials (AASHTO) guide. Lighting analysis shall be conducted using AGI32 lighting software. Lighting will be designed utilizing State's design standards and appropriate units (English).

The Signal must be designed to the appropriate City of St. Paul and Manual on Uniform Traffic Control Devices (MUTCD) standards and appropriate project unites (English).

The initial project schedule has been established by the State's Project Manager and will be maintained by the Local Government/Agency. SP 6215-117 project has a plan turn-in to Central Office on November 2, 2022, and a bid letting of March 24, 2023.

Project Schedule

Lighting Design – TH 51/ Snelling Ave from Montreal Ave to Ford Parkway

1. 30% Complete Submittal including lighting layout and photometrics due on or before May 15, 2022
2. 95% Complete Submittal due on or before August 1, 2022
3. Final plan submittal due on or before August 23, 2022 (submit complete plans/special provisions/estimate)

Signal Design – Intersection of TH 51/Snelling Ave and Montreal Ave

1. Preliminary Signal Plan – June 1, 2022
2. 90% Complete Plan Submittal – August 1, 2022
3. 100% Complete Plan Submittal – August 23, 2022

Project Letting on March 24, 2023.

The schedule will be fully developed after meeting with State within five days after the contract is fully signed and will be adjusted during the design process based on project decisions. Schedules must be submitted to and approved by the State's Project Manager.

1. Project Management

1.1 Meetings

- 1.1.1 Local Government/Agency Will: Set up meeting(s) as needed with affected agencies to determine: pay

items, cost participation, signal operations and maintenance, state/county/city furnished materials and labor, design standards, etc. Send meeting minutes, letters, emails, notes, etc. to affected parties summarizing project decisions.

- 1.1.2 Meetings will be held once per month during the signal/ lighting design. With the Local Government/Agency's Project Manager and task leaders present, the project schedule and budget status will be reviewed. Issues that may affect the schedule, budget, or work quality will be presented. A summary of issues brought forth will be included in the Bi-Weekly Update to the State's Project Manager as appropriate. Three meetings are planned to be held at State's Office.

1.2 **Coordination**

- 1.2.1 Local Government/Agency Will: Coordinate design details/standards with various affected agencies and State functional areas (Bridge Office, Signing, Final Design, Traffic Management Center (TMC), etc.). Field review each intersection to gather project information as needed. Utilize State's Traffic website for appropriate reference materials (checklists, sample plan, Computer Aided Design and Drafting (CADD) detail sheets, etc.), and additional materials to be provided by the City of St. Paul. For signal plans included within a road plan, notify the lead designer of applicable standard plates, appropriate signal pay items and cost participation needed for the statement of estimated quantities.

1.3 **Quality Control Management**

- 1.3.1 The Local Government/Agency will submit a project specific Quality Management Plan (QMP) to State within five days of Notice to Proceed with contracted services. The QMP must specify how the Local Government/Agency will perform Quality Assurance (QA) and Quality Control (QC) activities throughout the duration of the project to ensure delivery of a quality product in a timely manner that conforms to established contract requirements.

1.3.2 Design and Plan Sheet Check

- 1.3.2.1 The Local Government/Agency is responsible for the completeness and accuracy of its work. Design calculations and plan sheets must be independently checked and reconciled prior to submittal to State. Review comments from State on the Government/Agency's various plan review submittals does not relieve the Local Government/Agency of liability for an inaccurate or incomplete plan.

1.3.3 Quality Assurance Verification

- 1.3.3.1 The Local Government/Agency Project Manager or QA Manager must review the entire design and production process to ensure the complete and accuracy of the Local Government/Agency's work and conformance with the Government/Agency's QA procedures.

1.4 **Deliverables**

1.4.1 State's Deliverables:

- 1.4.1.1 Review and respond to submittals
- 1.4.1.2 Coordinate internal reviews
- 1.4.1.3 Provide copies of project correspondences and project information
- 1.4.1.4 Attend meetings
- 1.4.1.5 Receive and accept deliverables

1.4.1.6 Monitor QC

1.4.2 The Government/Agency's Deliverables:

1.4.2.1 Schedule and attend meetings

1.4.2.2 Hold bi-weekly update meeting or conference call with State's Project Manager

1.4.2.3 Prepare meeting agendas, displays, and minutes

1.4.2.4 Prepare and submit monthly progress and status reports

1.4.2.5 Maintain project schedule

1.4.2.6 Provide timely copies of critical correspondences and project issue data

1.4.2.7 Submit electronic project files at the project completion

1.4.2.8 Provide Bidding Assistance

2. Signal Design

2.1 Signal Plans

2.1.1 Preliminary Signal Plan

2.1.1.1 This will be considered a 30% complete plan

2.1.1.2 Signal plans will be in the State plan format, coordinate correct, and will contain all necessary design information including (but not limited to) the following: Quantity Tabulation (to be included within road design projects), Signature Block, Abbreviations, Symbols, Details (standard & special), Intersection Layout(s) and Wiring Diagrams and "Existing Plan Sheets" for the existing Signal Plans. Incorporate all special needs (bridge design needs, District-specific requirements, etc.) into the signal design as needed.

2.1.2 90% Complete Plan Submittal

2.1.2.1 This will be considered a 100% complete plan by Local Government/Agency, meaning that all pertinent information about the project or in the plan will have been reviewed by the Local Government/Agency prior to submittal. All project coordination will be complete and action items resolved prior to the 90% complete plan turn in. Local Government/Agency will complete and incorporate final detail checking of plans prior to the 90% complete plan turn in. Information in the special provisions that require special attention or generate discussion must be reviewed prior to this turn in to allow review time.

2.1.2.2 Local Government/Agency will submit 90% plans for review to State's Project Manager. The guidelines to be followed for the 90% plan submittal can be found at the following website: <http://www.dot.state.mn.us/metro/finaldesign/resources.html>

2.1.2.3 Local Government/Agency will submit a draft copy of the special Provisions as they pertain to the tasks prescribed by this document at this time (see Special Provisions section below).

2.1.2.4 Local Government/Agency will submit a construction cost estimate with cost participation detail.

2.1.3 100% Complete Plan Submittal

2.1.3.1 Local Government/Agency will submit final signed plans. In addition, one complete set of computations and quality calculations will be submitted for review and comment to State's

Project Manager.

- 2.1.3.2 Local Government/Agency will also submit the signed Special Provision as they pertain to the tasks prescribed by this document and a detailed construction cost estimate at this deliverable.
- 2.1.3.3 After State's review of the plans. Local Government/Agency will incorporate any necessary changes and submit revised original plan sheets along with a revised complete plan set and a CADD format copy. In addition, when available, Local Government/Agency will also incorporate State's Central Office review comments.

2.2 Cost Estimate

- 2.2.1 The estimate will include: Each pay item detailing funding splits (state aid funds, local funds, etc.) a separate tabulation of non-contract items (State/County/City furnished materials & labor) with funding splits, and a separate detailed listing of costs for each intersection. Lump sum pay items require an itemized cost estimate to demonstrate how the lump sum cost was determined.

2.3 Bidding and Construction Assistance

- 2.3.1 Local Government/Agency will be available for necessary plan interpretation/questions during bidding and construction. Local Government/Agency will not be responsible for review of shop drawing submittals as part of this work scope.

2.4 Deliverables

2.4.1 State Deliverables

- 2.4.1.1 Base mapping, utilities, layout & construction plans
- 2.4.1.2 State website (<https://www.dot.state.mn.us>) and State traffic engineering website
- 2.4.1.3 Review of Preliminary, 90% and 100% plans
- 2.4.1.4 Review of cost estimates and special provisions
- 2.4.1.5 Technical assistance as requested

2.4.2 Local Government/Agency Deliverables

- 2.4.2.1 In-place signal plans (electronic copies in PDF format)
- 2.4.2.2 Current detail design plans/layout
- 2.4.2.3 City of St. Paul special provisions
- 2.4.2.4 Documentation (meeting minutes, notes, emails, etc.) of major project decisions
- 2.4.2.5 Field walk as needed with State and/or City staff.
- 2.4.2.6 Preliminary, 90%, and 100% signal plans
- 2.4.2.7 Cost Estimates at 90%, and 100% submittals including "back sheet estimates" for source of power and State provided materials
- 2.4.2.8 Special Provisions at 90%, and 100% submittals
- 2.4.2.9 Final corrected & certified Plans, Specifications, and Estimates (PS&E) for submittal
- 2.4.2.10 QA/QC documentation
- 2.4.2.11 Attend project meetings as needed.
- 2.4.2.12 Working copies of electronic design and plan files at 100% submittal. All signal design work will be combined into one file for each signal system. Final electronic files must be approved by

State's Metro Traffic Signal Design & Lighting Management Engineer and City of St. Paul before completion of contract.

- 2.4.2.13 Electronic files will be submitted in the following file formats: CADD Design (MicroStation), Special Provisions (Word), and Estimate (Word and/or Excel) and other documentation Word or Excel as appropriate.

3. LIGHTING DESIGN

3.1 Data Collection

The Local Government/Agency will perform sufficient data collection, field investigation and analysis to provide appropriate removal and utility drawings for the design.

3.1.1 Data Collection includes but is not limited to:

- 3.1.1.1 State provides base mapping including existing utilities.
- 3.1.1.2 In-place lighting plans (pdf or CADD files as available).
- 3.1.1.3 Request data clarification: request clarification on unclear items or apparent conflicting data.

3.1.2 Existing Partial Lighting

The Local Government/Agency will:

- 3.1.2.1 Identify locations of existing light units.
- 3.1.2.2 Coordinate removal drawings with continuous roadway lighting design documents.

3.1.3 Utilities

The Local Government/Agency will:

- 3.1.3.1 Identify locations of existing feed point cabinets. Determine if feed point can remain at current location or if feed point is required to be relocated based on new project requirements.
- 3.1.3.2 Request utility standard operating procedure (SOP) at new proposed feed point cabinet locations.
- 3.1.3.3 Document the outcome via letter to power company with copies to operating and owning agency(s).

3.2 Deliverables

3.2.1 State's Deliverables:

- 3.2.1.1 Base Mapping including Existing Utilities
- 3.2.1.2 In-place lighting plans

3.2.2 The Local Government/Agency's Deliverables:

- 3.2.2.1 Identify possible construction impacts to utilities.
- 3.2.2.2 Identify existing light unit locations and develop removal plans.
- 3.2.2.3 Identify locations of existing feed points.
- 3.2.2.4 Identify locations and document new source of power locations for new lighting feed point cabinets.

4. CONSTRUCTION DOCUMENTS AND DESIGN CALCULATIONS

- 4.1 The Local Government/Agency will provide in the proper State plan format, coordinate correct, and all necessary design information including (but not limited to) the following: Title Sheet, Statement of Estimated Quantities, Signature Block, Abbreviations, Symbols, Details (standard & special), Removals, Lighting Plan Layout, Wiring Diagram(s), Utility Plans Sheets and "For Information Only" Lighting Plan Sheet(s) for the above mentioned project(s). The Local Government/Agency will prepare graphics file(s) in MicroStation format
- 4.2 Permanent Lighting Drawings
 - 4.2.1.1 The Local Government/Agency will design continuous lighting for all roadway and ramps within the project limits. Lighting will be designed to the current State design standards and will utilize fixtures/equipment on the State's approved products list.
 - 4.2.2 Removal Drawings
 - 4.2.2.1 The Local Government/Agency will develop removal drawings that will assume that all existing lighting units will be removed. The existing direct burial cabling between lighting units will be shown as removed.
 - 4.2.3 Utility Plan Drawings
 - 4.2.3.1 The Local Government/Agency will provide utility plan sheets that indicate existing utilities within the project area. Plans will indicate source of power locations for new, modified, and existing lighting feed point locations.
 - 4.2.4 Photometric Analysis
 - 4.2.4.1 The Local Government/Agency will submit with the 30% and Final plan designs detailed photometric drawings indicating the light levels achieved based on fixture placement and overall uniformity of lighting on specific roadways. Analysis will be broken down into specific areas. AGI32 software will be utilized to provide photometric analysis.
 - 4.2.5 Voltage Drop Calculations
 - 4.2.5.1 The Local Government/Agency will perform voltage drop calculations on all lighting branch circuits.
 - 4.2.6 Special Provisions
 - 4.2.6.1 The Local Government/Agency will write special provisions utilizing the appropriate State standards and in the appropriate hard copy and electronic format. These special provisions will include state furnished materials.
 - 4.2.7 Engineer's Estimate
 - 4.2.7.1 The Local Government/Agency will provide a written engineer's estimate to the appropriate agency standards and in the appropriate hard copy and electronic format.
- 4.3 Deliverables

4.3.1 State's Deliverables:

4.3.1.1 Review and respond to submittals

4.3.2 The Local Government/Agency's Deliverables:

4.3.2.1 Final Drawings for Review

4.3.2.2 Utility Source of Power letter

4.3.2.3 Light Level Calculations

4.3.2.4 Voltage Drop Calculations

4.3.2.5 Special Provisions

4.3.2.6 Engineers Estimate

4.3.2.7 Final Corrected and Certified Plans/Special Provisions/Estimate for Submittal

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INVOICE NO. _____
 Estimated Completion: __%
 Final Invoice? Yes No

Invoice Instructions:

Contractor must:

1. Complete the invoice and, if applicable, the progress report, in their entirety
2. Sign the invoice and progress report
3. Attach supporting documentation
4. Scan the entire invoice package*, **in the following order:**
 - a. Completed, Signed Invoice Form
 - b. Completed, Signed Progress Report Form (if applicable)
 - c. Supporting Documentation

Note: Whenever possible, convert landscape pages to portrait pages and optimize the document to decrease the size.
5. E-mail the invoice package, in .pdf, to ptinvoices.dot@state.mn.us

MnDOT Contract Number: 1028167W13
 Contract Expiration Date: June 30, 2023
 SP Number: 6215-117 TH Number: 51

Billing Period: From _____ to _____
 Invoice Date: _____

	Total Contract Amount	Total Billing to Date	Amount Previously Billed	Billed This Invoice
1. Lump Sum Amount	\$42,000.00			
Net Earning Totals:	\$42,000.00			
Total Amount due this invoice:				\$

Contractor: Complete this table when submitting an invoice for payment

Source Type	Total Billing to Date	Amount Previously Billed	Billed This Invoice
1251			
Total**			

I certify that the statements contained on this invoice, and its supporting documents, are true and accurate and that I have not knowingly made a false or fraudulent claim or used a false or fraudulent record in connection with this Invoice. I understand that this invoice is subject to audit.

Contractor: City of Saint Paul

Signature: _____

Print Name: _____

Title: _____

*If you are unable to support electronic submission of Invoices, you must contact the Authorized Representative for possible alternatives.