Exhibit A – Scope of Work for Request for Proposals (RFP)

Carver County

Highway 30 Project – Goose Lake Area

CSAH 30 from Trunk Highway 25 to CSAH 10

County Project No. 218904

10/23/2025

Carver County will be widening CSAH 30 from the TH 25 to the CSAH 10 and needs professional engineering services. This project will involve verifying horizontal and vertical curve design compliance, superelevations, verifying sightlines at all intersections and driveways, design of wider shoulders and pavement rehabilitation. The shoulder widening will consist of grading the existing shoulders and ditches to meet state aid standards and county standards for width and slope, establish a clear zone, extend or replace all drainage facilities affected by the shoulder widening, and utilize the existing horizontal alignment and vertical profile to the greatest extent possible. Pavement rehabilitation will likely include full depth reclamation.

The Project Specific Tasks are the main work items anticipated, however responders are encouraged to propose additional or different tasks or activities if they will substantially further and improve the results of the project towards reaching the project's respective goals. The responder can rearrange or add additional tasks in an order that works for the organization of the work. For County invoicing purposes, the responders work tasks will be assigned to one of the following accounting codes and the main work tasks proposed should align with this system to the extent practical:

29-0100 (Project Management)
29-0200 (Design)
29-0300 (Surveying)
29-0400 (Planning)
29-0500 (Communications)
29-0600 (Utility Relocation)
29-0700 (Geotech & Material Testing)
29-0800 (Environmental & Permitting)
29-0900 (Construction Administration & Inspection
28-0100 (Professional Services Right of Way)
29-0111 (Professional Services Miscellaneous)

PROJECT GENERAL REQUIREMENTS

Project Overview

The following items are general terms that will apply to work under this contract.

1.1 Independent Contractor

The Consultant ("Responder" or "Contractor") agrees it is acting in the role of an independent contractor. The Consultant, and its employees and subcontractors, will not be considered employees of Carver County for any

reason. The Consultant acknowledges that it is responsible for its own financial control. The Consultant will negotiate the payment for this contract with Carver County, which may result in a profit or loss for the Consultant. The Consultant also acknowledges that it is responsible for the behavioral control of itself, its operations, and its staff. The Consultant is solely responsible for determining the means, methods, and sequence of performing the work covered by this contract. Carver County has included deliverable dates in this contract, not to provide a "sequence" of work but because Carver County must coordinate these deliverables with the Carver County capital improvement plan, other contracts managed by Carver County, and work performed by Carver County's own staff. The Consultant remains responsible for determining the means and methods of performing the work to meet or exceed those requirements. Carver County will not directly supervise the Consultant's work but will provide oversight and monitoring, as required, to ensure compliance with the terms, conditions, and specifications of this contract.

1.2 Obstruction Permit Required for Lane or Shoulder Closures

The Consultant will be required to obtain an Obstruction Permit from Carver County Public Works for any field work that requires the closure of a county highway travel lane, shoulder, pedestrian sidewalk and trail for surveying, geotechnical, environmental investigations, or other similar work activities. The Consultant will be required to follow the terms, conditions and requirements of the permitted work activity. The Consultant shall include any necessary traffic control within the scope of work, unless noted otherwise herein. The Consultant shall notify the County's Project Manager and Communications Manager a minimum of 2 business days prior to any closures to provide public communications of said work.

1.3 Web-Based Teleconferencing

The Consultant must provide the means for the project team to meet via web-based teleconferencing that allows participants to view the desktop of the meeting organizer. Participants must be able to "share screens" as needed to collaborate.

1.4 Standards and Guidance

a. All deliverables must be provided in electronic file format.
b. All field data must be provided in Global Information/Positioning Systems (GIS/GPS)/County Coordinates – NAD83 (2011) County Datum and NAVD 88 vertical datum, unless otherwise directed by the county project manager.
c. Design work be done in Bentley Microstation and OpenRoads Designer or Autocad and Civil 3D, subject to approval by the county project manager.
d. All engineering design for this project must be conducted by or under the direct supervision of a Professional Engineer licensed in the State of Minnesota.
e. All land surveying work for this project must be conducted by or under the direct supervision of a Professional Land Surveyor licensed in the State of Minnesota.
f. Carver County Public Works uses the critical path method (CPM) for scheduling. Scheduling deliverables must be compatible with this process. Use of Microsoft Project is encouraged. The Consultant will recommend changes to the schedule to reflect change in the scope or flow of work to achieve the project goals.
g. Failure of this scope of work to list a specific standard under a specific deliverable does not absolve the Consultant's obligation to comply with all laws, regulations, and standards that apply to highway projects within the State of Minnesota. The Consultant must comply with all state, federal, and local standards, laws, and regulations related to the scope of work and project area. Work must comply with the latest edition or revision of that standard in effect on the proposal due date, including any amendments in effect on that date, unless otherwise specified in the contract or otherwise directed by the project manager for Carver County.
h. Additional requirements for standards may be provided within the scope tasks that follow.

1.5 Items Provided by Carver County

See RFP Proposal Content, Item 5. Deliverables.

1.6 Milestones and Contract Completion Timeline

The project contractual due dates for the contract are as follows:

Anticipated Contract Start Date: December 2, 2025

Deliverables Finish Dates
Project Construction Limits for Parcel Sketches (60% Design): May 6, 2026
Approved Construction Plans, Specifications, Estimate and Permits (100% Design): February 15, 2027
Bid Opening: March 15, 2027

PROJECT SPECIFIC TASKS

Project Specific Tasks

Task 1.0 - Project Management, Coordination and Meetings

This task focuses on effective communication and coordination of the contract work to expedite the decision-making process and maintain the scheduled completion dates and project budget. The Consultant's Project Manager or their primary duties will not be reassigned without the written consent of the County's Project Manager.

Task 1.1 Bi-Weekly Progress Meetings

Consultant's Project Manager (PM) will meet virtually with County's Project Manager every other week. Meetings will alternative between Microsoft Teams and in-person, and will include a review of the progress of the work, schedule and budget status, and other key upcoming initiatives. Assume 1 hour meetings. In person meetings will alternate between the County's office and the Consultant's Office. Pending the Consultant's progress, meetings may be reduced to 1 per month.

Task 1.2 Project Management and Quality Assurance

Develop and implement tools such to establish budgets, roles, and responsibilities for the project team members and subcontractors throughout the project. Provide project oversight, leadership to the project team, and facilitate team meetings. Perform Quality Assurance/Quality Control (QA/QC) functions throughout the project duration to ensure delivery of a quality product. Develop resource utilization tool to indicate "burn rate" to aid in budget management.

Task 1.3 Subcontractor Management and Oversight

Manage, coordinate, direct, and monitor subcontractor services. This includes review of progress reports, deliverables, schedule, and invoices. This includes subcontractor scheduling, clarification of scope of services, subcontractor agreements and amendments.

Task 1.4 Action Item Log

Create and maintain a running action item log in excel format, to include action item, assignment, assignment date, due date, comments and note whether the item is open or closed.

Task 1.5 CPM Scheduling

Prepare and maintain a Critical Path Method (CPM) schedule that includes anticipated design, bidding and construction phases. The CPM schedule shall be managed in Microsoft Project software or in excel via bar chart style schedule. The baseline schedule will be approved by the County's Project Manager. Consultant's Project Manager and the County's Project Manager will manage the schedule to maintain positive float. The project schedule will be defined by the early dates in the CPM schedule developed by the Contract and approved by the County's Project Manager.

Task 1.6 Risk Analysis and Tracking

Develop and manage a project risk register to track and mitigate large cost and schedule risks in the project. This will be an additional excel tab on the Action Item log.

Task 1.7 Agency Coordination, Emails, Phone Calls

Coordinate and communicate with County, City of Mayer and MnDOT State Aid on project related issues. This task includes scheduling, meeting, coordinating with agencies and necessary email responses and phone calls for project management.

Mayer City Council Meetings (assume 1)
Carver County Plan Review Meetings (assume 2 meetings, 2 hours in length each)
MnDOT Plan Review Meeting (assume 1 meeting, two hours in legnth)

Task 2.0 – Public Involvement and Engagement

This task defines project related work following strategies, templates, and direction from the County's Communication Manager and the County's Project Manager. Consultant to perform the Public Involvement Plan (PIP) tactics to engage, inform, and gather input from all stakeholders throughout the corridor evaluation and design, including both the general public, residents and businesses, and agency representatives.

Task 2.1 Public Involvement Plan

Develop and implement a Public Involvement Plan (PIP) to include both public and agency stakeholders. Design the PIP to engage, inform, and gather input from all stakeholders throughout the project area, including both the general public, residents and businesses, and agency representatives.

Task 2.2 Open Houses, Neighborhood Meetings, and Community Events

Assist in meeting logistics including planning, organizing, and creating materials for in-person community meetings, open houses, and engagement activities. Includes securing a venue. Create graphics and materials to receive the public's concerns for the corridor including a project layout, property and environmental impacts, sightlines, staging, traffic impacts, parcel owner names, cross sections and other necessary informational materials. Assume up to 2 Open House events that includes written summaries after each event. All communication graphics and materials will follow applicable ADA accessibility requirements.

Task 2.3 Communication Content Production

This work includes on-going preparation and updating of public-facing media to be posted and distributed by the County's Communications Manager. All communication graphics and materials will follow applicable County ADA accessibility requirements.

2.3.1 Event, Website, Email, and Social Media Content

Create specific content for the website, email distribution with GovDelivery, and social media sites. This can include graphics and informational updates. The project website will be maintained by the County's Communications Manager.

2.3.2 Business and Resident Mailings

The consultant will create content in coordination with the County's Communications Manager and follow the County's standards and templates. The County's Communications Manager will then distribute notices to local businesses and residents. These notices will highlight upcoming engagement activities and share the project contacts and website information.

Task 3.0 – Environmental Investigation and Environmental Documentation

This task includes all work necessary to complete the environmental investigation and environmental documentation including all necessary approvals for a state aid funded construction project. Some additional review and considerations

above the normal requirements of a state aid funded construction project are detailed below to ensure Carver County can respond to public inquiry on whether considerations were made. The county has an already completed wetland delineation report prepared and will provide CAD linework for the delineation. The report is included as Attachment A to this RFP. Carver County intends to purchase wetland credits through BWSR (see Task 8.0 - Permits).

Task 3.1 Threatened & Endangered Species/Section 7

Coordinate with the DNR for a Natural Heritage Information System (NHIS) review regarding potential concerns associated with threatened and endangered species through the MN Conservation Explorer, Natural Heritage Review (https://mce.dnr.state.mn.us/). A Cultural, Noise, and Threatened and Endangered Species Review Request form should not be submitted to the MnDOT Environmental Assessment Unit, as this is not a Federally funded project.

Task 3.2 Cultural Resources

A desktop review should be conducted by the Consultant to verify for any historic sites along the proposed project limits.

Task 4.0 - Preliminary & 60% Design

The Consultant will design this project using a 3D model(s) for use of machine control grading. This 3D requirement is in addition to the required layouts and plan sheets for the project. See Table 1 for plan submittal requirements.

Task 4.1 Plan Production

See Table 1 for plan production submittal requirements. Multiple sections of the plan are detailed for submittal at 60% to ensure Consultant progresses toward a completed plan, to facilitate clear right-of-way acquisition with key design elements thought out and planned for, to facilitate permit applications and complete utility coordination.

Task 4.2 Drainage Design

The project will need to manage runoff from increased impervious surface and provide rate control according to State, watershed, and local requirements. Stormwater treatment will meet all applicable water quality standards of the Minnesota Pollution Contract Agency (MPCA) National Pollutant Discharge Elimination System (NPDES) and Carver County WMO in the corridor. See Attachment C for additional information required by the CCWMO.

Task 4.2.1 Drainage Report

1. Consultant will prepare a Preliminary and Final Drainage Report/Stormwater Management Plan for areas impacted by the project area. Assume 10 iterations/submittals to the CCWMO. Do not underestimate the level of effort this will require.

2. HydroCAD, XPSWMM, GEOPAK Drainage, Flowmaster, CulvertMaster, HY8 and HEC-RAS are acceptable software for the hydrologic and hydraulic modeling of the drainage infrastructure and the stormwater Best Management Practices (BMPs) for the existing condition and specified project areas. Coordinate software modeling choice with the permitting agencies before beginning design.

3. Tabulate data as much as practical to reduce the length of the report and include short discussions on engineering options reviewed for rate reduction, justifications on proposed pond/basin locations and include writeups for other relevant considerations and adjustments made throughout the design/permitting process to document the path to an approved CCWMO permit. Document any agreed-upon deviations, waivers, or alternative compliance methods supported by CCWMO.

Task 4.2.2 Existing and Proposed Hydraulics

1. Prepare a drainage overview map(s) for the project, including existing storm drain, tile, and culvert infrastructure, hydrologic boundaries, existing stormwater treatment BMPs, and surface flow direction. A level of detail is needed to describe and compute where the water is coming

from, where the water is going to, how large the storm water treatment facilities need to be and where they are located, including if they need to be in areas where R/W must be acquired. Hydraulic modeling will be required to ensure enough detail to compute costs in the cost estimates. The storm water treatment facilities will be shown on all geometric layouts.

2. Collect and review all applicable data and permitting requirements relating to water resources. Prepare regulatory criteria matrix with the watershed management organization Rules/Standards and the MPCA NPDES permit requirements and submit for review. Data to be collected includes: Stormwater Rules/Standards, as-built plans or other record drawings for the project area, Federal Emergency Management Agency (FEMA) floodplain, MnDNR Public Waters Inventory, National Wetland Inventory (wetland delineation has already been completed for the corridor), impaired waters, special waters, contaminated soil areas, groundwater table elevations where treatment areas are proposed, Emergency Response Areas (ERAs), Drinking Water Supply Management Areas (DWSMAs) including the degree of vulnerability of each and municipal utilities (storm drain, watermain and sanitary sewer).
3. Perform a field walk to review existing conditions.
4. Prepare hydraulic model of existing conditions to use as a baseline for the design of the proposed condition. Model storms for the two-, ten-, and hundred-year events.
5. Determine the volume of stormwater treatment required, type of BMPs needed to meet treatment requirement, potential storm water BMP locations and sizes, as required to meet watershed management organization and NPDES permit requirements. Review and discuss potential BMP locations with project staff. This work includes providing existing and proposed contours on the layout and detailed information in cross sections to identify treatment and rate control locations. This should show how these elevations fit with detailed culvert and storm sewer information.
6. Review proposed ditch locations and update based on review of preliminary cross sections.
7. Perform preliminary storm sewer and culvert sizing and show proposed locations to verify feasibility of BMP locations, drainage patterns, and roadway elevations. Includes drafting of trunk line or culvert profiles.
8. Review soils and geological features and evaluate potential BMP locations for limitations to BMP types (infiltration in particular). Assess likelihood of impacts to groundwater. Request Soil Borings/Infiltration tests/Piezometers.
9. Prepare preliminary cost estimates for each BMP and proposed preliminary storm sewer.
10. Identify R/W needs for identified BMPs.

Task 4.2.3 Identify Floodplain and Ordinary High Water Level Lake Impacts

Collect preliminary information from desktop resources to identify if floodplain issues exist within the corridor. Consultant will develop hydrologic and hydraulic modeling of floodplain impacts for FEMA and DNR regulated floodplain areas and confirm compliance with Federal, State, and Carver County WMO floodplain regulations.

Task 4.2.4 CCWMO Coordination

Meet with regulatory and permitting agencies to confirm permitting requirements and design approach. The Contractor should anticipate ten each, 2 hour meetings with the CCWMO

Task 4.3 Geometric Layouts

Task 4.3.1 Preliminary Geometric Layout & Profile

1. Prepare and process for review a draft agency approved layout with profiles and construction limits for the project. Show coordinate-correct aerial photography. Assume three submittals, where each submittal incorporates comments from the prior submittal.
2. Cross sections will be submitted with each layout, including profile grades and cross sections for all driveways and intersecting roadways.
3. Layouts will also be roll printed and submitted/mailed to the County's Project Manager.

4. The layout will be updated throughout the project design to reflect the proposed improvements to the public.
5. Prepare and process the final layout (fourth layout) prior to construction bidding.

Task 4.3.2 R/W Construction Limits

Construction limits will incorporate the grading, structural, utility and water resources needs and also account for construction staging and erosion control needs. Create a construction limit file that shows the construction limits.

Task 4.3.3 Developer Coordination

Incorporate developer roundabout designs for a roundabout into the CSAH 10 / CSAH 30 intersection. Assume receiving 4 iterations and adjust project limits accordingly.

Task 4.4 Design Memorandum

Prepare and process for documentation summarizing critical design decisions in excel format as a tab within the Action Item Log or equivalent. This will be kept up to date and submitted after each Agency coordination meeting.

Task 4.5 Local Utility Evaluation and Design

Identify and evaluate current and future local utility needs. Coordinate with applicable municipalities to determine existing facilities impacted by the proposed design and facilitate future needs.

Task 4.6 Cost Estimates

Prepare total project cost estimates showing agency cost shares (including construction, right-of-way, and professional services) and updates with 60% and 100% submittals of the project.

Task 4.7 Lead Designer Site Walk

The Consultant's lead designer will review the entire project in person and document all existing conditions via photograph. Special attention is called to stop and review each driveway, field access, wetland areas and centerline pipe crossings. The County's Project Manager and Engineering Manager will join in the field review. Assume 8 hours for this task, including drive time. Failure to complete this task by April 30, 2026 will result in removal of the lead designer from the project.

Task 5.0 – Final Design (100% Design)

The Consultant will design this project using a 3D model(s) for use of machine control grading. This 3D requirement is in addition to the required layouts and plan sheets for the project.

Task 5.1 Detailed Design

Prepare final construction plans for the proposed roadway improvements that are consistent with horizontal and vertical alignments, typical sections, and construction limits identified in the County approved geometric layout. The road plans prepared will also be consistent with the findings and recommendations identified in the design memorandum, geotechnical report and other applicable reports. See Table 1 for plan production submittal requirements.

Table 1. Required Submittals for Prelim Design, 60%, and 100% Plan Submittals.			
Submittals	**Preliminary Design**	**60% Construction Plans**	**100% Construction Plans**
Additional Submittals			
Updated Itemized Engineers Estimate of Costs		X	X
Project Layouts	X	X	X
Photo Documentation of Existing Above Ground Conditions	X		
Hydraulic layout/maps	X	X	
Drainage Report/Stormwater Management Plan	X	X	
Determination of ROW and Easement Needs / Construction Limits Drawing		X	X
Utility Relocation Process		X	X
Finished Grade Surface in Autodesk C3D format for Machine Control Grading			X
Electronic Files at Request of County			X
MnDOT Plan Review Checklists			X
Project Specifications & Bid Proposal			X
Plan Requirements			
Title Sheet	X	X	X
General Layout			X
Statement of Estimated Quantities		X	X
Soils and Construction Notes, Standard Plates & Index of Tabulations		X	X
Earthwork Tabulation			X
Earthwork Summary		X	X
Quantity Tabulations			X
Typical Sections	X	X	X
Miscellaneous Details			X
Standard Plan Sheet Table		X	X
Construction Staging Plan		X	X
Traffic Control Plans and Tabulations		X	X
Existing Topography and Utility Plans (With Utility Conflicts Noted)		X	X
Removal Plans		X	X
Alignment Plan and Tabulations		X	X
Construction Plan/Profile Sheets (H: 1” = 100’)		X	X
Roadway, Street, and Driveway Profile Sheets (each location)		X	X
Intersection and Ped Ramp Details		X	X

Superelevation Plan		X	X
Existing Drainage Tabulation			X
Proposed Drainage Tabulation			X
Drainage and Superelevation Plans and Profiles		X	X
Storm Sewer Lateral Profile Sheets		X	X
Grading Plan (for ponds/infiltration basins)		X	X
Temporary Erosion / Sediment Control Plans			X
Turf Establishment and Permanent Erosion / Sediment Control Plans			X
SWPPP			X
Attenuator & Traffic Barrier Plan (if necessary)		X	X
Signing and Striping Plans			X
Landscaping Plans			X
Retaining Wall Plans, Profiles, Details, Sections and Notes (if necessary)		X	X
Detailed Cross-Sections		X	X

Task 5.2 Engineers Estimate of Probable Construction Cost

Create and submit Engineer's Estimate of Probable Construction Cost showing agency cost shares for each design stage (60%, 100%) based on quantities and information available. The cost estimates will use the latest cost data available.

Task 5.3 Project Manual and Special Provisions

Create and submit a complete Project Manual including Special Provisions for the entire project, utilizing Carver County templates/standard practices as provided. Submit a copy of the Project Manual and associated Special Provisions for review with the 100% Construction Plan submittals.

Task 5.4 Plan Review and Approval (60%, 100%)

Submit one set of plans in electronic format showing for each design stage (60%, 100%) and make any necessary revisions noted by agency staff. Agency review will be completed using a Bluebeam Studio session. Upon making revisions to the 100% Construction Plan submittal, submit one signed and certified set of final plans. These plans will be submitted to MnDOT State Aid for review and approval (and resubmittal as required). The Consultant will submit an electronic copy of the project's 3D design files to be used by the construction contractor. The electronic files shall represent all final alignments, profiles, geometry and 3D surfaces of subgrade, grading grade and finished grade as shown in the final construction plans. The final file format for surface models will be in a format acceptable to the County for use in construction activities.

Task 6.0 - Geotechnical Investigation

Task 6.1 Review Existing Geotechnical Data for Project Area

Review available sources of geotechnical data for the project area.

Task 6.2 Geotechnical Investigation

Develop a geotechnical investigation plan and prepare a geotechnical recommendation. Meet with County's Program Manager to finalize number location and types of borings and other investigative techniques needed to develop a comprehensive evaluation. Then perform all required field geotechnical testing to determine the material requirements for the construction of roadway, widened shoulders and drainage facilities for the project area.

The location and density of the tests shall be established such that they can be used to create a 3D model of the bottom of the pavement, aggregate base, muck areas, topsoil and excavation depths for the project. This work may require additional

mobilizations during preliminary and final design. All cores and borings through will be backfilled and patched with the same material, i.e., bituminous road then a bituminous patch, and as required by the Minnesota Department of Health.

Task 6.2.1 Cores:

1. Conduct 6 cores per mile (3 per driving lane per mile) within primary driving lanes. Additional bituminous sampling/cores needed to complete an SFDR design is outside of this scope.
2. All cores will be photographed with a ruler for reference.
3. Consultant will include GPS coordinates at each core location.
4. Consultant will provide a core map and summary table of all coring results including core number, recovered core thickness, core condition and coordinates. Tabulation will include average core thickness.

Task 6.2.2 Hand Auger Borings:

Complete 2' deep, shallow hand auger borings at each coring location to validate aggregate depth.

Task 6.2.3 Borings:

1. Centerline Borings:
    a. Conduct 15' deep borings every 250' through roadway sags/wetland/lake areas (10 locations (see wetland delineations in Attachment A) and every 1,000' throughout the rest of the project.
2. Shoulder Widening Borings:
    a. On both sides of the roadway, conduct 15' deep borings, 6-8' off existing pavement edge, every 250' through roadway sages/wetland/lake areas and every 1,000' throughout the rest of the project.
3. Combination Shoulder Widening Borings and Centerline borings will create a cross section of the underlying material at each stationing that testing occurs at.
4. All mounted drill rig borings will include standard penetration tests (SPTs) with the n-values measured every 3 feet, along with moisture contents, water table levels and soil composition(s) at each boring location.
5. Visually classify boring samples and log by geotechnical engineer.
    a. The Consultant will perform laboratory testing in general accordance with the MnDOT Geotechnical Manual and classify the materials encountered based on their engineering properties. Specific laboratory testing program will depend on the soils encountered in the borings and at the discretion of the geotechnical engineer.
    b. Collect a minimum of two samples from each soil type per roadway boring for laboratory testing at an AMRL accredited lab. Laboratory testing will include but not limited to Atterberg limits, particle size (full gradation and gradation of material passing the #200 sieve), and organic content. Specific laboratory testing will depend on the soils encountered and be at the discretion of the geotechnical engineer.
6. If highly compressible soil is discovered (heavy organics, peat, muck, etc), immediately notify Project Manager at Carver County. Continue boring beyond required depths until stable ground is reached. Include a minimum of 300' of additional muck boring beyond the 15' depth requirement in the proposal. Any additional boring through muck will be considered out of scope and will require an additional fee, which Carver County will support an amendment to complete due to the necessity of the information and to minimize remobilizations to boring sites.
7. Consultant will provide boring map and logs, a summary table of all boring results, specifically including bore number, bituminous pavement thickness, aggregate thickness(s) and description, uppermost fill layer thickness and description, n values and water table depths (if any).
8. Consultant will include GPS coordinates at each bore location.

Task 6.2.4 Cone Penetration Testing

Conduct CPT tests at up to 20 locations, 20' deep as necessary to finalize geotechnical estimates after completion of project borings. Tip stress, sleeve stress and pore pressure measurements will be utilized by the Consultant to determine cohesiveness of soils and global stability analysis if muck areas will be left in place.

Task 6.2.5 Infiltration Rate Testing

1. Conduct infiltration testing at each proposed basin. Assume eight basins throughout the project.
2. Initially complete a boring at proposed basin locations to obtain soil samples. Estimate infiltration rates by running a gradation on samples and completing a gradation-sieve analysis using the Kozeny-Carman Equation.
3. Final infiltration rate testing will occur in 2027 during construction at each basin location. This will include double-ring tests to validate initial infiltration rate estimates.

Task 6.2.6 Piezometer Testing

Consultant to install piezometers at each proposed basin location (8 locations assumed) to determine groundwater elevations needed for design and permitting purposes.

Task 6.2.7 Ground Penetrating Radar

Consultant will include ground penetrating radar for each traveled lane for the full length of the project to validate existing pavement and aggregate layer thickness to be used for the design of the anticipated full depth reclamation work.

Task 6.2.8 Falling Weight Deflectometer

Consultant will complete Falling Weight Deflectometer testing for existing R-value estimate, GE and load carrying capacity estimates of roadway.

Task 6.2.9 Traffic Control

Consultant will provide traffic control for the proposed geotechnical exploration.

Task 6.2.10 Field Testing Coordination and Permits

1. Receive permits on State, County, or City owned property. Notification must be given to County's Project Manager prior to commencing work.
2. Locate and stake proposed boring locations in the field. Meet with County's Project Manager to review boring locations.
3. Clear utilities using the Gopher State One Call System.
4. Adjust boring locations if proposed borings conflict with utilities. Provide comments on the boring logs giving distance and direction that borings were moved regarding the staked location.

Task 6.3 Reporting and Recommendations

Classify soil samples collected in the field using the State Triaxial Textural Soils Classification System. Each soil boring will coincide with an individual soil electronic boring log. Each log will be stored in electronic database format.

Task 6.4 Materials Design Recommendation

Prepare and submit a Material Design and Recommendation (MDR) report for the roadway in accordance with requirements set forth by Carver County, MnDOT State Aid, and the most recent version of the MnDOT Pavement Design Manual. This report will include preparation of final boring logs and analyses or subsurface conditions and materials. These reports will include but not limited to locations of unsuitable soils, subcut depths and type of backfill, muck excavation limits and treatment, estimated long term settlements, pavement designs, culvert treatments, preliminary slope stability analyses, global stability analyses, and geologic recommendations.

Task 6.5 Pavement Recommendation

Prepare pavement recommendations. The pavement analysis shall use the Granular Equivalency (GE) calculation method. The pavement recommendation is intended to address all grading, base, and pavement features including subcuts, removals, mainline pavement, and shoulders at representative locations.

Task 7.0 - Utility Engineering

Consultant will conduct all work necessary to meet the requirements for creating Subsurface Utility Engineering (SUE) Plans, which includes designating underground, above ground, and overhead utilities. Consultant will identify all utility conflicts. Consultant will conduct this scope of work within the project including adjacent streets.

Task 7.1 Gopher State One Call

Consultant will complete a Gopher State One call to receive maps of all existing utilities and validate the existing survey data is all inclusive of inplace utilities. Consultant will coordinate with the County's Project Manager to obtain additional survey on any missing utilities.

Task 7.2 Utility Coordination

Private utility relocations and adjustments shall be coordinated accordingly with each affected owner and annotated on the utility relocation plan. This scope of work will include two utility relocation meetings to occur throughout the design process. Consultant to verify that relocated facility designs will not conflict with proposed roadway/stormwater design. Early contact with utility owners requiring relocation is necessary to determine if design modifications can be done to avoid relocations.

Task 7.3 Utility Permit Review

Consultant will provide input on utility relocation permits submitted by each utility. Anticipate 20 hours of support for this effort.

Task 8.0 - Permitting

Task 8.1 National Pollutant Discharge Elimination System (NPDES) Construction Stormwater (CSW) General Permit

The Consultant will prepare and provide the Minnesota R100001 NPDES Construction General Permit application on behalf of the County for this project. The Consultant will submit the permit applications electronically on behalf of the County's Project Manager to the Minnesota Pollution Control Agency. The Consultant will complete the permit transfer to the awarded Construction Contractor and also submit the notice of termination on behalf of the County when directed.

Task 8.2 Carver County Watershed Management Organization (CCWMO) Permit

The Consultant will prepare and provide the CCWMO Erosion and Sediment Control and Stormwater Permit applications for this project, along with all supporting documentation required by the CCWMO for each permit. The Consultant will submit the permit applications electronically on behalf of the County's Project Manager to the CCWMO. The Consultant should anticipate three submittals of WMO permit applications before final approval from the CCWMO. Attachment C includes a high level review of CCWMO requirements.

Task 8.3 Wetland Conservation Act (WCA), DNR and U.S. Army Corp of Engineers (COE) Section 401/404 Permit Applications

Consultant will be responsible for completing a Joint Application Permit in MPARS (MN Interagency Water Resource Application Form), Transaction Form to Withdraw Credits and coordinate purchase agreement for wetland banking credits. The Consultant will prepare and provide the necessary WCA and COE permit application form(s) and any other related permit application forms that may be required for the project. The Consultant will submit the permit applications electronically on behalf of the County's Project Manager to the LGU and COE. The Consultant will facilitate purchase of private bank wetland credits if wetland mitigation through BWSR's local road wetland bank program is not allowed or

insufficient to cover all the required mitigation. The Consultant will review whether a Water Quality Certification is required for fill placed near Swan Lake.

Task 9.0 – Construction Bidding Support

Consultant will answer questions proposed by contractors bidding on the project. Consultant will create addendum necessary to address concerns. The County's Project Manager will post the addendum during bidding. The Consultant will also answer design questions throughout the construction project if unforeseen issues arise. Anticipate 20 hours to answer bid questions/issue addendum and 80 hours of support during construction. This contract does not include construction administration or project inspection.

Responders are encouraged to propose additional tasks or activities if they will substantially improve the results of the project.