Illinois Department of Transportation

Local Public Agency
Engineering Services Agreement

Using Federal Funds? ☒ Yes ☐ No

Agreement For: Federal PE

Agreement Type: Original

LOCAL PUBLIC AGENCY

Local Public Agency	County	Section Number	Job Number
County of McHenry	McHenry	23-00567-00-BR	

Project Number	Contact Name	Phone Number	Email
P-91-XXX-XXX	Joyce J. DeLong	(815) 334-4980	jjdelong@mchenrycountyil.gov

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
Charles Road	FAS 0026	0.42 miles	056-3006

Location Termini: over Slough Creek

Add Location | Remove Location

Project Description:

Preliminary engineering to determine the rehabilitation or replacement of the structure carrying Charles Road over Slough Creek and improvements to the intersection of Charles Road, Alden Road, and Nelson Road.

Engineering Funding: ☒ Federal ☐ MFT/TBP ☐ State ☐ Other

Anticipated Construction Funding: ☒ Federal ☐ MFT/TBP ☐ State ☐ Other

AGREEMENT FOR

☒ Phase I - Preliminary Engineering ☐ Phase II - Design Engineering

CONSULTANT

Prime Consultant (Firm) Name	Contact Name	Phone Number	Email
RS&H, Inc.	James Shaw, PE	(630) 364-5246	james.shaw@rsandh.com

Address	City	State	Zip Code
2580 Foxfield Road, Suite 301	St Charles	IL	60174

THIS AGREEMENT IS MADE between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Project funding allotted to the LPA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT," will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Since the services contemplated under the AGREEMENT are professional in nature, it is understood that the ENGINEER, acting as an individual, partnership, firm or legal entity, qualifies for professional status and will be governed by professional ethics in its relationship to the LPA and the DEPARTMENT. The LPA acknowledges the professional and ethical status of the ENGINEER by entering into an AGREEMENT on the basis of its qualifications and experience and determining its compensation by mutually satisfactory negotiations.

WHEREVER IN THIS AGREEMENT or attached exhibits the following terms are used, they shall be interpreted to mean:

Regional Engineer	Deputy Director, Office of Highways Project Implementation, Regional Engineer, Department of Transportation
Resident Construction Supervisor	Authorized representative of the LPA in immediate charge of the engineering details of the construction PROJECT
In Responsible Charge	A full time LPA employee authorized to administer inherently governmental PROJECT activities
Contractor	Company or Companies to which the construction contract was awarded

AGREEMENT EXHIBITS

The following EXHIBITS are attached hereto and made a part of hereof this AGREEMENT:

☒ EXHIBIT A: Scope of Services

☒ EXHIBIT B: Project Schedule

☒ EXHIBIT C: Qualification Based Selection (QBS) Checklist

☒ EXHIBIT D: Cost Estimate of Consultant Services (CESCS) Worksheet (BLR 05513 or BLR 05514)

☒ Exhibit E: Workhour Summary

☒ Exhibit F: Subconsultant CECS and Direct Costs

☐ _____

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA for Preliminary and/or Design Engineering: The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.
7. To submit a completed BLR 05613, Engineering Payment Report, to the DEPARTMENT within three months of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement. The form shall be submitted with the final invoice.
8. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of United States Department of Transportation (US DOT) assisted contract. Failure by the Engineer to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LPA deems appropriate.
9. That none of the services to be furnished by the ENGINEER shall be sublet assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
10. For Preliminary Engineering Contracts:
    (a) To attend meetings and visit the site of the proposed improvement when requested to do so by representatives of the LPA or the DEPARTMENT, as defined in Exhibit A (Scope of Services).
    (b) That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by the ENGINEER and affix the ENGINEER's professional seal when such seal is required by law. Such endorsements must be made by a person, duly licensed or registered in the appropriate category by the Department of Professional Regulation of the State of Illinois. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the DEPARTMENT.
    (c) That the ENGINEER is qualified technically and is thoroughly conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated in Exhibit A (Scope of Services).
11. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COST tab in BLR 05513 or BLR 05514).

II. THE LPA AGREES,

1. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the following:
    (a) Professional Services Selection Act (50 ILCS 510), The Brooks Act (40 USC 11), and the Procurement, Management, and Administration of Engineering, and Design Related Services (23 CFR part 172). Exhibit C is required to be completed with this AGREEMENT.
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.

3. To pay the ENGINEER:
   (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
   (b) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and DEPARTMENT a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.
4. To pay the ENGINEER as compensation for all services rendered in accordance with the AGREEMENT on the basis of the following compensation method as discussed in 5-5.10 of the BLR Manual.

   Method of Compensation:

☐ Lump Sum

☐ Specific Rate

☒ Cost plus Fixed Fee:

Total Compensation = DL + DC + OH + FF

Where:

DL is the total Direct Labor,
DC is the total Direct Cost,
OH is the firm's overhead rate applied to their DL and
FF is the Fixed Fee.

Where FF = (0.33 + R) DL + %SubDL, where R is the advertised Complexity Factor and %SubDL is 10% profit allowed on the direct labor of the subconsultants.

The Fixed Fee cannot exceed 15% of the DL + OH.

5. The recipient shall not discriminate on the basis of race, color, national original or sex in the award and performance of any US DOT assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by US DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this AGREEMENT. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C 3801 et seq.).

III. IT IS MUTUALLY AGREED,

1. No work shall be commenced by the ENGINEER prior to issuance by the IDOT of a written Notice to Proceed.
2. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amount, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General, and the DEPARTMENT: the Federal Highways Administration (FHWA) or any authorized representative of the federal government, and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the DEPARTMENT for the recovery of any funds paid by the DEPARTMENT under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
3. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the DEPARMTENT, and their officers, agents, and employees from all suits, claims, actions or damage liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

   The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.
4. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.
5. In the event that the DEPARMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this

   AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred as a result

of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.

6. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.

7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

8. The ENGINEER and LPA certify that their respective firm or agency:

   (a) has not employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for the LPA or the ENGINEER) to solicit or secure this AGREEMENT,
   (b) has not agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
   (c) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
   (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
   (e) has not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
   (f) are not presently indicated for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph e and
   (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State or local) terminated for cause or default.

   Where the ENGINEER or LPA is unable to certify to any of the above statements in this certification, an explanation shall be attached to this AGREEMENT.

9. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the ENGINEER no claim for damages shall be made by either party. Termination of the AGREEMENT or adjustment of the fee for the remaining services may be requested by either party if the overall delay from the unforeseen causes prevents completion of the work within six months after the specified completion date. Examples of unforeseen causes include but are not limited to: acts of God or a public enemy; act of the LPA, DEPARTMENT, or other approving party not resulting from the ENGINEER's unacceptable services; fire; strikes; and floods.

   If delays occur due to any cause preventing compliance with the PROJECT SCHEDULE, the ENGINEER shall apply in writing to the LPA for an extension of time. If approved, the PROJECT SCHEDULE shall be revised accordingly.

10. This certification is required by the Drug Free Workplace Act (30 ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the DEPARTMENT unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to suspension of contract on grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

    For the purpose of this certification, "grantee" or "Contractor" means a corporation, partnership or an entity with twenty-five (25) or more employees at the time of issuing the grant or a department, division or other unit thereof, directly responsible for the specific performance under contract or grant of $5,000 or more from the DEPARTMENT, as defined the Act.

    The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

    (a) Publishing a statement:

        (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.

        (2) Specifying actions that will be taken against employees for violations of such prohibition.

        (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
            (a) abide by the terms of the statement; and
            (b) notify the employer of any criminal drug statue conviction for a violation occurring int he workplace no later than (5) days after such conviction.

    (b) Establishing a drug free awareness program to inform employees about:

        (1) The dangers of drug abuse in the workplace;
        (2) The grantee's or contractor's policy of maintain a drug free workplace;

(3) Any available drug counseling, rehabilitation and employee assistance program; and
(4) The penalties that may be imposed upon an employee for drug violations.

(c) Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

(d) Notifying the contracting, or granting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) above from an employee or otherwise, receiving actual notice of such conviction.

(e) Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program.

(f) Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act, the ENGINEER, LPA and the Department agree to meet the PROJECT SCHEDULE outlined in EXHIBIT B. Time is of the essence on this project and the ENGINEER's ability to meet the PROJECT SCHEDULE will be a factor in the LPA selecting the ENGINEER for future project. The ENGINEER will submit progress reports with each invoice showing work that was completed during the last reporting period and work they expect to accomplish during the following period.

11. Due to the physical location of the project, certain work classifications may be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.).

12. For Preliminary Engineering Contracts:

(a) That tracing, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LPA and that basic survey notes, sketches, charts, CADD files, related electronic files, and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request to the LPA or to the DEPARTMENT, without restriction or limitation as to their use. Any re-use of these documents without the ENGINEER involvement shall be at the LPA's sole risk and will not impose liability upon the ENGINEER.

(b) That all reports, plans, estimates and special provisions furnished by the ENGINEER shall conform to the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Manual or any other applicable requirements of the DEPARTMENT, it being understood that all such furnished documents shall be approved by the LPA and the DEPARTMENT before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.

AGREEMENT SUMMARY

Prime Consultant (Firm) Name	TIN/FEIN/SS Number	Agreement Amount
RS&H, Inc.	59-2986466	$511,356.00

Subconsultants	TIN/FEIN/SS Number	Agreement Amount
Sanchez & Associates P.C.	20-2703329	$70,568.00
Kaskaskia Engineering Group, LLC	20-5080586	$110,212.00
	Subconsultant Total	$180,780.00
	Prime Consultant Total	$511,356.00
	Total for all work	$692,136.00

AGREEMENT SIGNATURES

Executed by the LPA:

The Local Public Agency Type: County of Local Public Agency: County of McHenry

Attest:

By (Signature & Date)

By (Signature & Date)

Name of Local Public Agency: County of McHenry

Local Public Agency Type: County

Clerk

Title

(SEAL)

Executed by the ENGINEER:

Attest:

Prime Consultant (Firm) Name: RS&H, Inc.

By (Signature & Date): James Shaw Digitally signed by James Shaw Date: 2023.08.15 14:10:09 -05'00'

Title: Vice President

By (Signature & Date): Cathy Scott Digitally signed by Cathy Scott Date: 2023.08.15 15:29:22 -04'00'

Title: Assistant Corporate Secretary

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
County of McHenry	RS&H, Inc.	McHenry	23-00567-00-BR

To perform or be responsible for the performance of the engineering services for the LPA, in connection with the PROJECT herein before described and enumerated below

EXHIBIT A
SCOPE OF SERVICES

FOR FEDERAL PARTICIPATION PROJECTS

Route	FAS 0026 (Charles Road)
Local Agency	County of McHenry
Section	23-00567-00-BR
Job No.	P-91-XXX-XX
Project No.	_____
Type of Funding	LBFP
Existing Structure No.	056-3006

PHASE I - PRELIMINARY ENGINEERING FOR THE REHABILITATION / REPLACEMENT OF THE CHARLES ROAD BRIDGE OVER SLOUGH CREEK
S.N. 056-3006

MCHENRY COUNTY DIVISION OF TRANSPORTATION

EXHIBIT A - SCOPE OF SERVICES

The McHenry County Division of Transportation, hereafter referred to as Local Public Agency (***LPA***), has initiated a project requiring professional engineering services by RS&H, Inc. (***ENGINEER***) for Phase I - Preliminary Engineering of the subject project.

UNDERSTANDING OF THE PROJECT

Existing Structure(s). The existing structure (SN 056-3006) is a single span concrete slab bridge supported on closed concrete abutments that are founded on spread footings. The bridge measures 35 feet ¾ inches back-to-back abutments and is approximately 40 feet wide. The bridge was originally constructed in 1947 and was designed for HS-20 loading. The bridge is located on a 1,280-foot horizontal curve with 5.0% superelevation. The concrete bridge slabs are overlaid with a 1 ½ inch hot-mix asphalt overlay.

Sufficiency Rating. According to the Illinois Department of Transportation's ***(DEPARTMENT)*** *Structure Summary Report,* the structure(s) had a Sufficiency Rating of 61.7 in 2022. The Sufficiency Rating is a numerical value used to evaluate data of the structure by calculating four different factors: structural adequacy and safety; serviceability and functional obsolescence; essentiality for public use; and special reduction factors.

Roadway Functional Class. The ***DEPARTMENT*** *Structure Summary Report* also indicates that the roadway functional class is Major Collector with an average daily traffic of 6,300 vehicles per day in 2021 for Charles Road.

Preliminary Structure Design. The structure design will adhere to the requirements of Chapter 36 – Bridge/Structure Design of the ***DEPARTMENT*** *Bureau of Local Roads and Streets* (*BLRS) Manual* and the ***DEPARTMENT*** *Bridge Manual*. The structure hydraulic opening will be designed for the natural WSE for the 30 -year flood event and provide for a minimum one (1) foot of clearance to the low beam of the bridge superstructure.

Roadway Improvements. The bridge is located 400 feet south of the Nelson Road intersection. North of the intersection Charles Road becomes Alden Road. Due to the proximity to the bridge, intersection improvements will be analyzed. Other roadway improvements approaching the structure include, but are not limited to, approach paving, shoulder reconstruction, pavement markings, maintenance of traffic, erosion control and ditch and drainage design. The design will be in general conformance to criteria, guidelines, and standards presented in Chapter 32 of the *BLRS Manual*.

Environmental Impact Classification. It is assumed that the project will be processed as a Categorical Exclusion according to Chapter 19 of the *BLRS Manual*.

Submittals. All project submittals shall be submitted to the ***LPA*** for review and comment prior to being submitted to the ***DEPARTMENT*** and other agencies. An electronic copy of all deliverables shall be provided to the ***LPA***. The ***ENGINEER*** shall copy the ***LPA*** on all submittals to the ***DEPARTMENT*** and other agencies. Each deliverable shall be uploaded to the ***LPA***'s ProjectWise and is assumed to have three reviews by the ***LPA*** using Bluebeam. The schedule should assume the first two reviews are three weeks and the third is one week.

Correspondence. The ***ENGINEER*** shall maintain for a minimum of three (3) years after acceptance of Affadavit of Completion and the last action on the contract all project correspondence to the ***LPA*** and other outside agencies.

Stakeholders. Coordination is anticipated with the following stakeholders, agencies and utilities:

- McHenry County Division of Transportation
- Federal Highway Administration
- Illinois Department of Transportation District 1
    - Bureau of Local Roads and Streets
    - Bureau of Traffic
- Illinois Department of Transportation Bureau of Bridges and Structures
- Illinois Depart of Natural Resources (IDNR)
- Greenwood and Hartland Townships
- McHenry County Planning & Development
- McHenry-Lake County Soil & Water Conservation District
- McHenry County Farm Bureau
- McHenry County Conservation District
- Federal Emergency Management Association (FEMA) (if applicable)
- U.S. Fish and Wildlife Service (if applicable)
- U.S. Army Corps of Engineers – Chicago District
- U.S. Postal Service
- Fire districts
- School districts
- Property owners
- Utility companies

Subconsultants. The following subconsultants are anticipated to be used for the following services:

- Sanchez & Associates, P.C.
    - Survey Control
    - Topographic Survey
    - Route and Hydraulic Survey
    - Right-of-way Survey
    - Preparation of Plat of Highway and Legal Descriptions
- Kaskaskia Engineering Group, LLC (***KEG***)
    - Environmental Studies
    - Wetland Delineation Report
    - Tree Inventory
    - Bridge Bat Assessment
    - Asbestos Determination
    - Photo Log
    - PESA
    - Geotechnical Subsurface Investigation
    - Structural Geotechnical Report
    - Roadway Geotechnical Report

Summary. The *Scope of Services* for the Phase I engineering involves a comprehensive preliminary engineering and environmental study that results in design approval from the ***DEPARTMENT***. Included in this scope are the following tasks:

1. Data Collection and Review
2. Route and Hydraulic Surveys
3. Utility Identification and Coordination
4. Environmental Studies
5. Bridge Inspection and Bridge Condition Report
6. Preliminary Bridge Analysis and Type, Size & Location Drawing (TS&L)
7. Stream Hydraulic Analysis and Report
8. Geotechnical Subsurface Investigation
9. Geometric Analysis
10. Preliminary Bridge Design and Hydraulic Report
11. Abbreviated Location Drainage Study
12. Permit Coordination
13. Traffic Management Analysis
14. Public Involvement
15. Project Development Activities and Report
16. Meetings
17. Project Administration and Management
18. Alternative Alignment and Intersection Studies
19. Right-of-Way and Easement Plats

TASK 1 – DATA COLLECTION AND REVIEW

Coordinate with local agencies and verify project pertinent data.

Review Existing Data. Available information from ***LPA*** will be obtained and reviewed including existing right-of-way, existing County roadway and bridge plans, County-based GIS digital topographic survey data and aerial photography, bridge inspection reports, crash data, traffic projections from the Chicago Metropolitan Agency for Planning (CMAP), and existing maintenance and flooding records.

Prepare Photo Log. Photograph the features of the project site and prepare a photo log.

Site Visit. Staff will visit the site to familiarize themselves with the existing topography, above ground utilities and underground markers, and assessment of existing site issues. These conditions will be documented for consideration when designing the roadway and bridge improvements.

Tile Investigation. An existing drain tile investigation, including staking, mapping, and trenching to verify the existence of drain tile will be performed in accordance with McHenry County Stormwater Ordinance Standards. An aerial markup of the investigation limits will be provided to the ***LPA*** for approval.

TASK 2 – ROUTE AND HYDRAULIC SURVEYS

Preliminary design and stream surveys will be required and performed to document existing field conditions that will serve as the basis for the preliminary engineering and design. An aerial markup of the topographic survey limits and stream survey cross section locations is included in this proposal for approval.

Horizontal and Vertical Control

- Horizontal control will be based on McHenry County Geodetic Monuments jointly established by the ***LPA*** and the ***DEPARTMENT***. These coordinates are referenced to NAD 83.
- Vertical control will be based on McHenry County Benchmarks and orthometric elevations derived from GPS observations, based on NAVD 88. The correlation of the nearest Elevation Reference Marks that have been established in the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) and Flood Insurance Rate Maps with NGVD 88 datum will be referenced.

Topographic Survey

- The topographic survey will consist of a survey of the bridges on Charles Road and old Charles Road over Slough Creek and roads within the project limits. This survey will include benchmarks with references, visible utilities, driveways and field entrances, drainage structures, landscaping elements including trees (per tree inventory requirements), fences, pavement location and type.
- Roadway cross sections will be taken at 50-foot intervals and critical locations for approximately 900 feet along Nelson Road, 500 feet along Alden Road and 1000 feet along Charles Road, all measured from the road intersection. Cross sections will extend beyond existing right-of-way of the roads, to a minimum distance that is 100 feet on either side of the roadway centerline beyond anticipated proposed right-of-way or easements. These cross sections shall identify the right-of-way, centerline of the roadway, edges of pavement, edges of shoulders, visible structures and the slope of the embankment on each side. Additional survey will be taken as determined in the field.
- Wetland delineations performed as part of this study will be surveyed.
- A JULIE field locate will be called in before the survey so that existing in-ground and aerial utility locations can be surveyed.
- Geotechnical soil boring locations and elevations will be located and surveyed.

Existing Right-of-Way

- Monument reconnaissance will be performed in the field to find the physical monumentation to determine the existing right-of-way within the topographic survey limits.
- Necessary courthouse research will be performed that will include all the plats, deeds, and right-of-way documents for each parcel within the project limits and adjoining the project.
- Perform a boundary analysis to determine the existing right-of-way based on found property corners and record right-of-way documents.
- Right-of-way lines will be provided only in MicroStation CADD format.

Hydraulic Survey. A stream survey will be conducted. This stream survey will follow the current guidelines of the **DEPARTMENT** Drainage Manual and McHenry County Stormwater Management Ordinance for the development of the hydraulic model.

- Floodplain stream cross sections will be taken upstream and downstream of the Charles Road bridge structure at intervals of approximately 50 feet, 500 feet and 1,000 feet. An additional cross section will be taken approximately 250 feet upstream.
- Full topographic survey within 50 feet upstream and downstream of the two bridge structures, additional topographic features will be surveyed and as directed by the drainage engineer.
- Within 50 feet upstream and downstream of the bridge structure, additional topographic features will be surveyed and as directed by the drainage engineer.
- Critical low openings of adjoining drainage structures within the project limits will be located with elevations.
- Streambed profile will be surveyed at 100' interval a distance of 1,000 feet up and downstream of the structure.
- Normal water surface elevation will be surveyed throughout survey limits.
- Waterway opening sketches upstream and downstream will be prepared for the structure.
- The vertical and horizontal limits of the cross-section elevations will be one foot above the anticipated 100-year floodplain elevation.
- The anticipated 100-year floodplain elevation will be obtained from the hydraulic analysis for the project. Survey datum shall be the same as outlined in Horizontal and Vertical Control.

Quality Control/Quality Assurance of Topographic Survey

- Perform a quality assurance of survey control and level circuits to verify observations do not exceed tolerance established for this project.
- Perform a field verification of surveyed data to verify all field surveys were completed within the tolerances established for project and verify no topographic features were omitted to surveyed.
- Perform a verification of boundary calculations, legal descriptions, and Plat of Highway
- Report to ***LPA*** if any deviations in quality or scope of work occurred during the survey.

Deliverables:

- Provide Topographic Survey in MicroStation CADD format.
- Provide Surface in MicroStation CADD format.
- Coordinate file in ASCII format containing all surveyed points.
- Copies of field book with detail sketches in PDF format.

TASK 3 – UTILITY IDENTIFICATION AND COORDINATION

Utility Investigation. Pertinent utility information will be collected for the project area to locate utilities that may affect design or construction of the bridge(s).

- Coordinate a Joint Utility Locating Information for Excavators (JULIE) Design Stage Request for buried facilities.
- Prepare and send utility notification letters per ***LPA*** template to identified utility companies.
- Prepare a Quality Level C base drawing using information obtained from utility companies, surveyed structures, and observed overhead and underground utility lines. Compare facilities in relation to the proposed improvement for potential conflicts. Compile and summarize available utility information in a spreadsheet per the formatting requirements for Phase II utility documentation.
- Prepare and send follow-up letters with plan sheets showing potential conflicts to utility companies.

TASK 4 – ENVIRONMENTAL STUDIES

Environmental Survey Request. The Environmental Survey Request (ESR) and attachments will be prepared and submitted electronically in accordance with *BLRS Manual Section 20-2*. An aerial markup of the ESR limits will be provided to the ***LPA*** for approval prior to submittal to the ***DEPARTMENT***.

Wetland Delineation and Report. Wetland and/or waters are anticipated to be present in the study area. The following tasks will be performed:

- Obtain preliminary information including aerial photos, wetland maps, United States Geological Survey (USGS), soils mapping, FEMA map, hydrologic atlas, and other data necessary for the wetland delineation.
- Conduct wetland and water delineations based on methodology approved by United States Army Corps of Engineers (USACE). Wetland and waters will be differentiated to determine impacts to each.
- Field stake perimeter of wetlands and survey their locations.
- Prepare wetland delineation report, including resource evaluation, support data, and graphics.

Wetland Impact Evaluation. Based on the wetland delineation report and proposed improvements, a Wetland Impact Evaluation (WIE) will be prepared as follows:

- Prepare wetland impact exhibit and evaluate wetland impacts.
- Prepare and submit the ***DEPARTMENT*** Wetland Impact Evaluations (WIE) forms electronically.

Tree Inventory. For projects where right-of-way or easements are expected to have adverse impact or require removal of the trees of three (3) inches or greater as measured at Diameter at Breast Height (DBH), a tree survey will be conducted in accordance with current ***DEPARTMENT*** policies and D&E-18.

- Trees will be tagged, surveyed, identified, and evaluated for condition and form.
- The trees will be shown on the plans.

- The data should be in table format and the table headings should include tree species, size (DBH), station, offset, health, structure, impact status, and suitability for preservation.

Bridge Bat Assessment. Conduct bat assessment according to ***DEPARTMENT*** Circular Letter 2022-28. The Bridge/Structure Bat Assessment form, with photographs, will be completed, signed, and submitted with the ESR.

Special Waste Assessment. A Special Waste Assessment (SWA) for the project area will be prepared to screen for potential contamination and to determine whether a Preliminary Environmental Site Assessment (PESA) is required. The SWA will be prepared following the guidelines in Section 20-12.03 of the *BLRS Manual*.

- Obtain a Radius Report from a company that provides search results of public and proprietary databases to identify any nearby CERCLIS, LUST, UST, RCRA, and other sites that may pose a risk of contamination.
- A Memorandum will be prepared that summarizes the findings of the SWA for inclusion in the Project Development Report (PDR).

Preliminary Environmental Site Assessment (PESA). A PESA will be performed for the study area not within ***DEPARTMENT*** jurisdiction in accordance with the following policies and standards:

- A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Infrastructure Projects (Erdmann et al., 2012)
- ASTM International (ASTM) standard 1527-13
- *BLRS Manual*, Chapter 20-12, Special Waste Procedures

Tasks include:

- Historical Research. The site's historical land use/ownership record will be developed from standard historical sources. Sanborn Fire Insurance Maps and historic aerials will be requested from the records review provider. Available Sanborn Fire Insurance Maps and historic aerials will be reviewed to identify land use over time and potential areas of environmental concern, such as areas of surface disturbance and outside storage.

- Site Evaluation. Current environmental features and conditions of sites adjacent to the right-of-way/project area will be evaluated. A site walkover of potential right-of-way/project areas designated for excavation and/or acquisition will be conducted for first-hand evaluation of current environmental conditions within the project limits. All of the features and conditions listed above will be investigated and, as appropriate, documented in photographs. The land-use and housekeeping practices of adjacent properties also will be recorded and evaluated in accordance with ASTM protocols.

- Records Review. A records review will be conducted to determine potential environmental concerns within the study area. It will include a search of standard state and federal environmental record databases in accordance with the specifications of ASTM standards. This search is based on the outline of the study area. Specifically, each database will be searched to identify any potential sources requiring further investigation. As appropriate, Freedom of Information Act (FOIA) requests will be filed with the IEPA to obtain additional data pertaining to identified sites.

- Report Preparation. One report summarizing the results of the evaluation will be prepared. The following information will be included in this report:

- The project location and description
- Historical uses of corridor
- The area geology and hydrology
- The environmental status of sites adjacent to the corridor regarding chemical use and storage, underground and aboveground storage tanks, solid waste, special waste, and hazardous waste, and PCBs
- An analysis of the site inspection
- A summary of the findings regarding any environmental concerns.
- List of locations for recommended Preliminary Site Investigation (PSI) to be performed in Phase II.

PESA Validation. PESAs need to be validated if six months or more elapse after the date of the PESA completion. This scope assumes one validation of the PESA for design approval, which includes a site visit, records review and memorandum of validation preparation.

PESA Response. Identify sites to be avoided and, after evaluation, complete ***DEPARTMENT*** form BDE 2735 and required attachments.

Section 4(f) Document. Not anticipated.

TASK 5 – BRIDGE INSPECTION AND BRIDGE CONDITION REPORT

The bridge inspection and Bridge Condition Report will conform to the requirements of the ***DEPARTMENT*** *Bridge Condition Report Procedures & Practices*, the *Bridge Manual*, the ***DEPARTMENT*** *Structural Services Manual*, the *BLRS Manual* and National Bridge Inspection Standards (NBIS) standards.

Bridge Inspection. A bridge inspection will be performed to assess the current condition of the bridge and provide the data for the Bridge Condition Report. The inspection team will consist of personnel under the direction of a certified NBIS engineer. The ***ENGINEER*** will complete and submit the required documentation for the inspection. Preparation for the bridge inspection will include:

- Review of existing structural plans.
- Development of exhibits for logging findings during inspection.

Bridge Condition Report. The Bridge Condition Report (BCR) will be written to document the current physical condition and functionality of the bridge and recommend bridge rehabilitation or bridge replacement for approval. The BCR will be prepared under the supervision of an Illinois Licensed Structural Engineer.

- A structural analysis will be completed to determine the scope of work for the bridge. The analysis will be limited to evaluating the existing superstructure and substructure for reuse as well as determining a comparable replacement structure for cost comparison. The evaluation of the existing substructure will be limited to the abbreviated analysis as described in the ***DEPARTMENT*** Design Guide: Existing Foundation Load Carrying Capacity. A detailed analysis is not included.
- Alternatives evaluated within the BCR will be limited to three.
- The BCR will be submitted to ***DEPARTMENT*** for review and concurrence of the proposed scope of work.

TASK 6 – PRELIMINARY BRIDGE ANALYSIS AND TYPE, SIZE & LOCATION DRAWING (TS&L)

Preliminary calculations for the scope of work approved in the BCR will be performed. Type, Size and Location Drawing(s) will be prepared and submitted to the ***DEPARTMENT*** *Bureau of Bridges and Structures* as an attachment to the Preliminary Bridge Design and Hydraulic Report (PBDHR) for concurrence and approval. The TS&L will serve as the basis for design in Phase II.

Develop Design Parameters. Bridge design parameters will be developed in accordance with the *Bridge Manual and BLRS Manual* based on roadway functional classification and traffic projections. The design parameters will include roadway classification data, waterway information, profile grade data, horizontal curve data, and design specifications, loading, allowable stresses, and seismic data.

Preliminary Bridge Design. Preliminary design calculations will be performed to establish structure and foundation types, sizes and appropriate details.

Structure Alternatives Analysis Memorandum. The findings of the preliminary bridge design will be presented in Memorandum format for the ***LPA***'s selection of a preferred alternative. Three (3) alternatives, pre-approved by the ***LPA***, will be evaluated and the memorandum will include a narrative, exhibits (aerial plan with impacts identified, profile, and elevation), evaluation matrix, preliminary cost estimates, and supporting documentation. Accelerated Bridge Construction (ABC) methods will be considered to reduce the duration of construction and traffic detours. Detailed evaluation of time and cost differences between standard construction methods and ABC methods will not be provided.

Type, Size and Location (TS&L) Drawing(s). General plan and elevation, sections and details will be provided. TS&L drawing content will adhere to the ***DEPARTMENT*** Bridge Manual 2023, Section 2.3.13.1. TS&L drawings will be prepared only for the preferred alternative identified from the Structure Alternatives Analysis Memorandum.

TASK 7 – STREAM HYDRAULIC ANALYSIS AND REPORT

A stream hydrology/hydraulic analysis and hydraulic report will be prepared for calculating a bridge size which meets ***DEPARTMENT*** and regulatory requirements. *The report will only be required for a full bridge replacement or superstructure replacement that changes the existing bridge opening.*

Tasks include:

- Field review and data collection for the project will be performed including field inspection and field interviews
- Development of existing hydraulic model to include surveyed stream cross sections and structure information and preparation of existing conditions, natural conditions, and proposed conditions hydraulic models. The results of the analysis will be used in developing the waterway information table. The hydraulic model will be developed using FEMA regulatory model, if available, and updated with the hydraulic survey. If the FEMA regulatory model is not available, a new hydraulic model will be developed using the hydraulic survey and the design flow rates in the Flood Insurance Study (FIS) will be used to correlate the new model to the regulatory model.
- The site hydrology (at Slough Creek) will reference and use the peak flow rates discussed in the FIS.
- A review of existing FEMA and USGS records will be conducted

- Impacts to the floodplain will be determined and the need for compensatory storage
- A HEC-18 scour analysis will be performed
- Develop and evaluate three alternatives and determine required waterway opening
- The Hydraulic Report will contain the following:
    - Location Map
    - Permit Summary for Floodway Construction in Northeastern Illinois (D1 PD0024)
    - Narrative – Description of services that includes flooding history, correlation of datum, discussion of hydraulic analysis, description of area and sensitive flood receptor considerations
    - FIS Datum Correlation with Survey
    - Hydraulic Report Data Sheets
    - Waterway Information Table (WIT)
    - Stream Profile & Cross Sections
    - Plan & Profile of roadway
    - FIRM Map excerpt
    - Floodway and floodplain fill and compensatory storage calculations
    - Modeling Calculations
    - HGL for 10, Design, 50 and 100-Year events

The hydraulic report will be submitted to ***DEPARTMENT*** as an attachment to the Preliminary Bridge Design and Hydraulic Report (PBDHR) and also be used as supporting documentation for the IDNR-OWR floodway construction permit and McHenry County Stormwater Management Permit.

TASK 8 – GEOTECHNICAL SUBSURFACE INVESTIGATION

Structure borings, soil borings, pavement cores, and design recommendations will be performed and/or provided. Geotechnical services and report will conform to the requirements of the ***DEPARTMENT*** *Geotechnical Manual*. An aerial markup of the boring and core locations will be provided to the ***LPA*** for approval. An ***LPA*** Facility Installation Permit is required prior to performing this work.

Bridge Deck Sampling. The bridge deck has a bituminous overlay. The existing structure was not on the original waiver list the EPA exempted from investigation but has since been determined to meet the original waiver criteria. Therefore, no further investigation is required. Form BLR 10220 will be completed and submitted.

Structure Borings. Structure borings and a scour boring are to be performed for the geotechnical investigation. The boring locations shall be based on the proposed bridge layout.

- Two borings will be located diagonally across the bridge structure at the proposed abutments to a depth of 75 feet. An additional boring is estimated for a proposed pier to a depth of 75 feet, if needed. Based on geologic maps of the area and on ***DEPARTMENT*** accepted procedures, geotechnical subconsultant will determine the depth of the borings.
- One (1) streambed scour boring will be taken as close as possible to the edge of the creek to a depth of 30 feet. If a center pier is proposed, that additional boring to a depth of 75 feet will also be used as the streambed scour boring.

Roadway (Subgrade) Borings. Seven roadway borings drilled to a depth of 10 feet are to be performed to determine topsoil and unsuitable soil depths, groundwater and soil conditions for the reconstruction of the existing roadway.

Pavement Cores. Four pavement cores will be taken to identify the existing pavement materials and thickness and to determine the properties of the underlying aggregate and soil.

Laboratory Testing. The scope will include per AASHTO/ASTM guidelines testing for soil index, particle size distribution, Atterberg limits, soil settlement and collapse potential, shear strength of soil and soil classification.

Coordination. The ***ENGINEER*** anticipates and has allotted for one (1) field meeting with the geotechnical subconsultant to layout and coordinate final location of bridge so the geotechnical firm can locate cores and borings.

Potentially Impacted Property (PIP) Evaluation. To be completed in Phase II in conjunction with the Preliminary Site Investigation.

Traffic Control. The geotechnical subconsultant's scope of service will include all necessary traffic control and flagman required to complete subsurface drilling and testing operations. Any required permits will be obtained from the ***LPA*** or Township.

Structure Geotechnical Report

A Structure Geotechnical Report will be prepared to document findings and recommendations in accordance with ***DEPARTMENT*** Geotechnical Manual dated 2020, and All Geotechnical Manual User Memos (AGMU). Design recommendations for foundation type, allowable loads, slope stability, settlement, and constructability will be provided for the structure.

Roadway Geotechnical Report

- A Roadway Geotechnical Report (RGR) for the roadway improvements along Charles Road within the project limits will be developed utilizing relevant available information provided by the ***ENGINEER***, ***LPA***, and ***DEPARTMENT***.

- The RGR will present information required as stated in the IDOT Geotechnical Manual dated 2020, and all current applicable Department AGMUs. The RGR will include:
    - Project description, location and scope
    - Geology and Pedology
    - Generalized subsurface conditions from subsurface exploration
    - A generated soil profile sheet
    - Geotechnical evaluations, including settlement, slope stability, and seismic considerations, as required
    - Construction considerations
    - Unsuitable soil removal estimates

TASK 9 – GEOMETRIC ANALYSIS

Preliminary Design. A preliminary roadway design will be developed in accordance with criteria prescribed in the *BLRS Manual*. Plan and profile sheets (1"=40' at 11"x17") and roadway typical sections will be developed based on the proposed elevation of the bridge(s). The roadway geometry and plans will be prepared in accordance with the applicable requirements of *BLRS Manual Section IV – Project Design*. Preliminary cross sections will be prepared to the extent

necessary so that right-of-way and easement needs, wetland impacts, floodplain and floodway impacts, and compensatory stormwater requirements can be identified and evaluated.

Design Exceptions. Elements to be constructed at less than the design guidelines will be identified, and a clear description of required exceptions and appropriate justification will be provided (*BLRS Manual Section 27-7*). ***DEPARTMENT*** form BLR 22120 will be completed. These items will be discussed at the FHWA meeting.

Barrier Warrant Analysis. A barrier warrant analysis will be performed and presented for review in a memorandum that includes a narrative, plan, calculations and documentation.

Sight Distance Analysis. A sight distance analysis will be performed and presented for review in a memorandum that includes a narrative, plan, calculations and documentation.

TASK 10 – PRELIMINARY BRIDGE DESIGN AND HYDRAULIC REPORT (PBDHR)

The PBDHR contains the necessary information for use by ***DEPARTMENT*** *District 1 and Bureau of Bridges and Structures (BBS)* to review the preliminary bridge design and hydraulics for local agency bridge construction projects, and for obtaining floodway construction permits from the IDNR Office of Water Resources (OWR).

A package will be completed, assembled and submitted which includes the following:

- Form BLR 10210
- Type, Size and Location Drawing(s)
- Scour Critical Evaluation Coding Report Form
- Scour analysis data
- Structure Geotechnical Report (SGR)
- Hydraulic Report
- Roadway Plan and Profile sheet(s)
- Asbestos Determination Certification form(s) (BLR 10220)
- USGS Quadrangle map

It is assumed submittals will be made electronically to the ***DEPARTMENT***.

TASK 11 – ABBREVIATED LOCATION DRAINAGE STUDY

An analysis will be performed to determine existing drainage patterns, identify existing drainage problems, assessment of site outfalls, and the proposed drainage associated with the proposed bridge and roadway rehabilitation.

- Identification of drainage design criteria used for project improvement limits.
- Evaluate the existing drainage, determine existing drainage deficiencies, and assess existing stormwater outlets in accordance with the ***DEPARTMENT*** *Drainage Manual*, as well as coordinated efforts with the McHenry County Stormwater Management Ordinance.
- Perform an evaluation of the need for storm water detention, ditch capacity calculations, bridge deck spread calculations, and design the proposed drainage improvements with considerations for best management practices (BMPs).

- Prepare an Abbreviated Location Drainage Study memorandum. Contents are anticipated to include a narrative, general location drainage map, existing drainage plan, proposed drainage plan and profile, ditch profiles, major culvert analysis, sideroad and driveway culvert sizing, BMPs, compensatory storage, and correspondence. The hydraulic report will be referenced.

TASK 12 – PERMIT COORDINATION

The following permits are anticipated to be prepared in Phase II. Phase I tasks include the following:

Section 404 Permit. Coordination with the U.S. Army Corps of Engineers, including a pre-application meeting.

Floodway Construction Permit. Coordination with the Illinois Department of Natural Resources – Office of Water Resources (IDNR-OWR) is anticipated in the case of a full bridge replacement or rehabilitation that changes the existing bridge opening.

McHenry County Stormwater Management Permit. Coordination with the McHenry County Planning and Development, including a preliminary jurisdictional determination request and a pre-application meeting with McHenry-Lake County Soil and Water Conservation District.

TASK 13 – TRAFFIC MANAGEMENT ANALYSIS

Due to deteriorated condition of the bridge deck and the limited existing roadway width, the project improvements will be designed anticipating roadway closure. Analyze aspects of traffic management including traffic capacity, detour concepts, roadway or route limitations, motoring public impacts, stakeholder coordination, and documentation.

- Detour analysis, exhibits and stakeholder coordination for full bridge closure. Upon analysis, submit finding and recommendation to the ***LPA*** for concurrence.
- For detours anticipated using ***DEPARTMENT*** routes, a presentation at a ***DEPARTMENT***/*District1* Detour Committee meeting and processing of the ***DEPARTMENT*** Transportation Management Plan form (D1 OP0042) will be required. An impact analysis will be required if the ***DEPARTMENT*** route is significant per the ***DEPARTMENT*** Work Zone Safety and Mobility Policy.

The ***ENGINEER*** will coordinate with the ***DEPARTMENT*** for their concurrence.

TASK 14 – PUBLIC INVOLVEMENT

Coordinate and obtain input from property owners and public on potential improvements.

Impacted Property Coordination. Per *BLRS Manual Section 21-3.01*, projects with minimal right-of-way (ROW) acquisition shall contact affected property owners via certified mail. Letters and exhibits depicting proposed ROW or easements will be prepared and provided to the ***LPA*** to mail.

Public Meeting. Prepare for and lead one (1) open house public informational meeting in accordance with Chapter 21 of the BLRS Manual. The following tasks are included.

- Prepare a schedule, project brochure, display exhibits, and newspaper ad

- Identify stakeholders, compile a mailing list, and determine the location of the meeting
- Attend a dry run, and the meeting. Two (2) staff will attend the meeting to answer public questions
- Prepare a meeting summary and responses to comments.
- Prepare letters to property owners within project area for the LPA to mail.
- Attend three meetings with impacted property owners.
- The meeting will be advertised by the ***LPA*** in local papers, on the LPA's website and social media.
- A public hearing is not anticipated.

TASK 15 – PROJECT DEVELOPMENT ACTIVITIES AND REPORT

Prepare a Project Development Report (PDR) using ***DEPARTMENT*** form BLR 22210 including exhibits and documentation to obtain design approval for the project. The PDR will follow the guidelines outlined in the *BLRS Manual Section 22-2.11*.

Existing Condition Analysis. Evaluate existing conditions and design criteria, and determine deficiencies. Develop project purpose and need. (*BLRS Manual Section 22-2.11(b)(2-5)).*

Crash Analysis. Crash data obtained from the ***LPA*** for the past five years will be summarized, including a spot map showing crash locations. This is anticipated to be updated once during the Phase I Study as more recent information becomes available. The types of crashes will be detailed and include collision diagrams, especially at cluster sites. Provide recommendations to address crash issues. (*BLRS Manual Section 22-2.11(b)(9)).*

Draft Project Development Report. The draft PDR with exhibits and documentation will be assembled and submitted to the ***LPA*** for review and comment. The ***LPA*** comments will be addressed before submitting the draft report to ***DEPARTMENT***. A disposition of comments will be prepared.

Final Project Development Report. The final PDR will be revised based on review comments from ***DEPARTMENT*** and resubmitted to ***DEPARTMENT*** for design approval. A disposition of comments will be prepared.

TASK 16 – MEETINGS

Meetings will serve to discuss and resolve issues in the preliminary design process. Meeting materials will be prepared and provided to the ***LPA*** in advance for review. The ***ENGINEER*** will lead meetings. Minutes of all meetings will be prepared and distributed within five working days of the meeting. A list of action items will be maintained and updated at each meeting. The following meetings are anticipated:

- One (1) project initiation meeting with the ***LPA***
- One (1) project initiation meeting at the ***DEPARTMENT***
- One (1) project site meeting with the ***LPA***
- One (1) FHWA/***DEPARTMENT*** meeting
- One (1) meeting with ***DEPARTMENT*** District 1 Detour Committee

- One (1) pre-application meeting with the McHenry County P&D
- One (1) pre-application meeting with U.S. Army Corps of Engineers
- One (1) meeting with the McHenry County Farm Bureau
- One (1) meeting with the IDNR-OWR

TASK 17 – PROJECT ADMINISTRATION AND MANAGEMENT

The successful management of a Phase I project requires scheduling and reporting of the progress of the project. Services will include the following tasks:

- Project setup including contract administration, budget control and internal project team meetings.

- Prepare and submit monthly invoices and progress reports during months when engineering activities occur, and invoices are due. Progress reports are due by the first of the month.

- Provide phone and email updates and general project coordination with the ***LPA*** as necessary to advance the progress of the project. A one hour video meeting is assumed per month.

- Prepare and monitor a project schedule and update quarterly as tasks or project scheduling change, as well as perform scope of services reviews, resource planning, internal team coordination and contract administration and invoicing.

- Establish, submit to the ***LPA***, and adhere to an approved project QA/QC plan. Submit certification of QA/QC for each submittal attesting the QA/QC plan has been implemented on the contract documents.

TASK 18 – ALTERNATIVE ALIGNMENT AND INTERSECTION STUDIES

Traffic Analysis & Intersection Design Study. The ***ENGINEER*** will prepare a traffic analysis and intersection design studies utilizing the existing traffic data as well as the proposed design year projections. The analysis will include developing a traffic model of the intersection utilizing HCS 7 software, with current traffic data and conducting a Level of Service (LOS) analysis using HCM methodology for the AM and PM peak periods. Current traffic data will be projected for the 2050 design year. 2050 forecasted traffic will be analyzed for LOS. The traffic analysis results will be utilized to design the intersection. Any roundabout analysis will be completed in Sidra, version 9.0.

The following items are anticipated to be included in this task:

- Review and analyze the existing traffic data and traffic counts.
- Determine the current year Average Annual Daily Traffic (AADT), AM and PM peak Design Hour Volumes (DHV), and truck percentages for all turn movements at the intersection.
- Develop a traffic model for current year. Determine LOS, queue, and delay for the existing geometry.
- Create a traffic model for design year (2050). The design year model will be developed using the same format as for the current year, with the appropriate growth rates. The design year traffic analysis will be used for the design of proposed intersection geometry.
- Apply the proposed design year traffic model to the alternatives. Determine back of queue, delay and LOS.

- Prepare technical memorandum narrative and create exhibits, including turn movement diagrams, from the analysis results to be included in the project report.
- Upon completion of the above items, Intersection Design Study (IDS), if required, will be prepared based on the preferred alternative configuration. IDS will conform to the requirements of the ***DEPARTMENT*** BLR Manual and will utilize the ***DEPARTMENT's*** standard base sheets. Capacity analyses will be shown on the drawings in ***DEPARTMENT*** format.

Alternative Studies. Three alignment and intersection alternatives pre-approved by the ***LPA*** will be evaluated. They include but are not limited to a combination of:

- Widen Charles Road/Alden Road to install left-turn lane in the westbound direction to Nelson Road and a dedicated left-turn and right-turn lanes from Nelson Road.
- Realign Charles Road/Alden Road with a flatter horizontal curve
- Construct a modern-day roundabout

These preliminary concept alternatives will be developed to the extent necessary to develop comparative costs, impacts, and benefits with consideration given to constructability, maintenance of traffic, hydraulics, floodway/floodplain impacts, environmental mitigation, and anticipated safety benefits. Each preliminary alternative will be developed for comparison until it is screened out due to fatal flaws or comparatively less benefits than another alternative to be carried forward. The preliminary screening process will be coordinated with the County and documented in the Project Development Report. It is anticipated that the preliminary alternatives will be presented on 50 scale strip map exhibits and include basic profile information, typical sections, and approximate limits of construction.

If necessary, all preliminary alternatives not screened out above will be developed with more detail to further differentiate the costs, impacts, and benefits. This information will be the basis of a recommendation for the Preferred Improvement to be carried forward to a Public Informational Meeting.

TASK 19 – RIGHT-OF-WAY AND EASEMENT PLATS

Plat of Highways and legal descriptions will be prepared in accordance with DEPARTMENT and LPA standards. Right-of-way acquisition and/or easements will potentially impact the following parcels:

1. PIN: 07-24-200-005
2. PIN: 07-24-200-007
3. PIN: 07-24-200-015
4. PIN: 07-24-200-008
5. PIN:08-19-100-002
6. PIN: 08-19-300-001
7. PIN: 07-24-200-018

- Necessary courthouse research will be performed that will include all the plats, deeds, and right-of-way documents for each parcel within the project limits and adjoining the project.
- Plat of Highways and legal descriptions will be prepared for the right-of-way acquisitions and easements, as determined by ownership.
- Plat of Highways and legal descriptions will be submitted to the ***DEPARTMENT*** for review and comment.
- Ordering title commitments for impacted parcels

EXCLUSIONS TO THE SCOPE OF SERVICES

The following tasks or items were deemed unnecessary and would be considered as additional services if required:

- Public hearing
- Traffic noise analysis
- COSIM modeling
- Wetland bank fee
- Land acquisition services (appraisals, negotiations, closings, and certification) (By ***LPA***)
- Conditional Letter of Map Revision (CLOMR)/Letter of Map Revision (LOMR)
- BIM modeling
- Section 4(f) coordination
- Section 6(f) or 106 coordination
- Incidental Take Authorization/coordination
- Roadway Lighting (to be completed if needed in Phase II)

TOPOGRAPHIC SURVEY LIMITS AND STREAM SURVEY CROSS SECTION LOCATIONS

creek channel flow line

old bridge upstream and downstream sections

1000' downstream

500' downstream

50' downstream

50' upstream

250' upstream

500' upstream

1000' upstream

TOPO SURVEY BOUNDARY

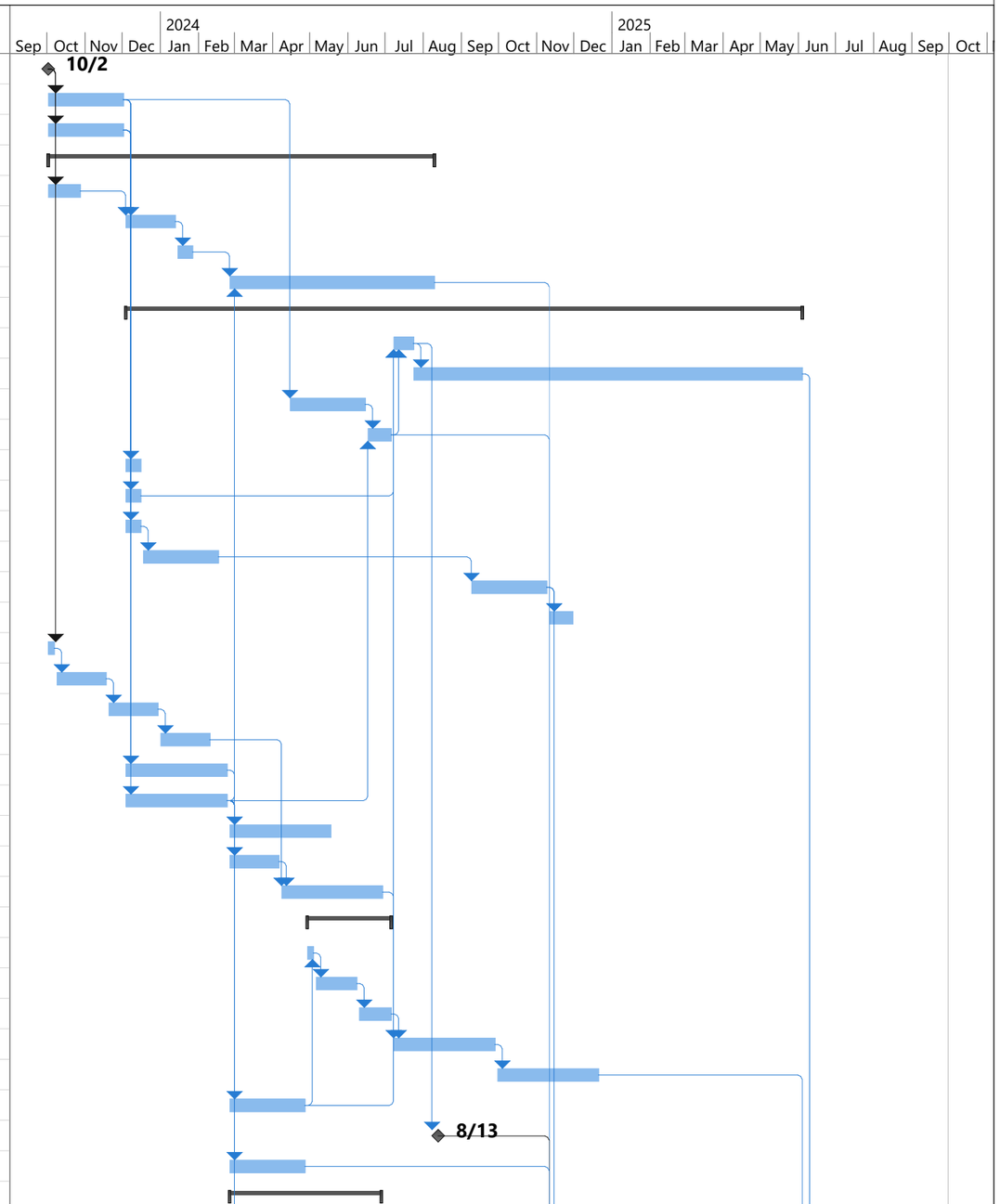
HYDRAULIC SECTIONS

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
County of McHenry	RS&H, Inc.	McHenry	23-00567-00-BR

EXHIBIT B
PROJECT SCHEDULE

McHenry County Division of Transportation
Charles Road Bridge over Slough Creek

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Notice to Proceed**	0 days	Mon 10/2/23	Mon 10/2/23	
2	**Data Collection and Review**	45 days	Mon 10/2/23	Fri 12/1/23	1
3	**Route and Hydraulic Survey**	45 days	Mon 10/2/23	Fri 12/1/23	1
4	**Utility Indentification and Coordination**	**225 days**	**Mon 10/2/23**	**Fri 8/9/24**	
5	JULIE Design Stage Locate	20 days	Mon 10/2/23	Fri 10/27/23	1
6	Utility Nothifcation Letters and Coordination	30 days	Mon 12/4/23	Fri 1/12/24	3,5
7	Review/Incorperate Data from Utility Companies	10 days	Mon 1/15/24	Fri 1/26/24	6
8	Follow-Up Conflict Coordinaiton	120 days	Mon 2/26/24	Fri 8/9/24	25,7
9	**Environmental Studies**	**392 days**	**Mon 12/4/23**	**Tue 6/3/25**	
10	ESR Preparation (Cultural and Bio)	12 days	Mon 7/8/24	Tue 7/23/24	15,35,13
11	IDOT Processing of ESR	225 days	Wed 7/24/24	Tue 6/3/25	10
12	Wetland Delineation and Report	45 days	Mon 4/15/24	Fri 6/14/24	2
13	Wetland Impact Evaluation	15 days	Mon 6/17/24	Fri 7/5/24	12,25
14	Tree Inventory	10 days	Mon 12/4/23	Fri 12/15/23	2
15	Bridge Bat Assessment	10 days	Mon 12/4/23	Fri 12/15/23	2
16	Special Waste Assessment	10 days	Mon 12/4/23	Fri 12/15/23	2
17	PESA	45 days	Mon 12/18/23	Fri 2/16/24	16
18	PESA Validation	45 days	Mon 9/9/24	Fri 11/8/24	17FS+145 days
19	PESA Response	15 days	Mon 11/11/24	Fri 11/29/24	18
20	**Bridge Inspection**	5 days	Mon 10/2/23	Fri 10/6/23	1
21	**Bridge Condition Report**	30 days	Mon 10/9/23	Fri 11/17/23	20
22	**Structural Alternative Analysis**	30 days	Mon 11/20/23	Fri 12/29/23	21
23	**MCDOT Review of BCR and Alternative Analysis**	30 days	Mon 1/1/24	Fri 2/9/24	22
24	**Stream Hydraulic Analysis and Report**	60 days	Mon 12/4/23	Fri 2/23/24	3
25	**Alternative Alignment and Intersection Studies**	60 days	Mon 12/4/23	Fri 2/23/24	3
26	**Abbrviated Location Drainage Study**	60 days	Mon 2/26/24	Fri 5/17/24	25
27	**PBDHR**	30 days	Mon 2/26/24	Fri 4/5/24	24,25
28	**MCDOT/IDOT BB&S Review of PBDHR**	60 days	Mon 4/8/24	Fri 6/28/24	27,23
29	**Geothechnical Subsurface Investigation**	**50 days**	**Mon 4/29/24**	**Fri 7/5/24**	
30	Borings and Cores	5 days	Mon 4/29/24	Fri 5/3/24	35
31	Lab Testing	25 days	Mon 5/6/24	Fri 6/7/24	30
32	RGR and SGR	20 days	Mon 6/10/24	Fri 7/5/24	31
33	**Preliminary Type, Size & Location**	60 days	Mon 7/8/24	Fri 9/27/24	32,28
34	**IDOT BB&S Review and Coordination of TS&L**	60 days	Mon 9/30/24	Fri 12/20/24	33
35	**Geometric Analysis**	45 days	Mon 2/26/24	Fri 4/26/24	25
36	**IDOT/FHWA Meeting**	0 days	Tue 8/13/24	Tue 8/13/24	10
37	**Traffic Management Analysis**	45 days	Mon 2/26/24	Fri 4/26/24	25
38	**Public Involvement**	**89 days**	**Mon 2/26/24**	**Thu 6/27/24**	

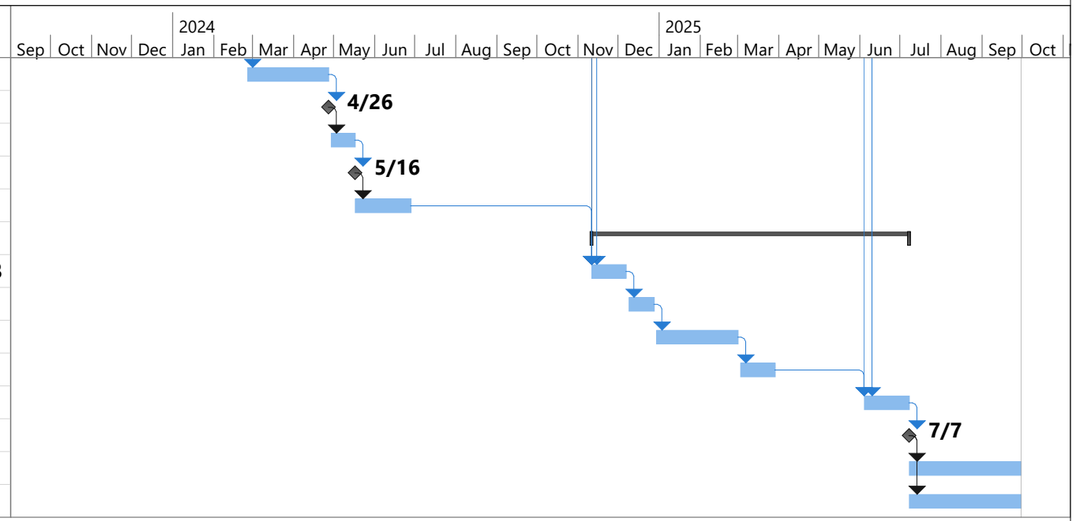


Project: MCDOT Charles Road S
Date: Mon 8/14/23

Task Split Milestone Summary

McHenry County Division of Transportation
Charles Road Bridge over Slough Creek

ID	Task Name	Duration	Start	Finish	Predecessors
39	Public Meeting Preparation/Impacted Property Coordination	45 days	Mon 2/26/24	Fri 4/26/24	25
40	Dry Run	0 days	Fri 4/26/24	Fri 4/26/24	39
41	Final Public Meeting Preparation	14 days	Mon 4/29/24	Thu 5/16/24	40
42	Public Meeting	0 days	Thu 5/16/24	Thu 5/16/24	41
43	Meeting Summary/Responses to Comments	30 days	Fri 5/17/24	Thu 6/27/24	42
44	**PDR**	**171 days**	**Mon 11/11/24**	**Mon 7/7/25**	
45	Compile PDR	20 days	Mon 11/11/24	Fri 12/6/24	18,13,8,37,36,43
46	MCDOT PDR Review	15 days	Mon 12/9/24	Fri 12/27/24	45
47	IDOT PDR Review	45 days	Mon 12/30/24	Fri 2/28/25	46
48	Final PDR Revisions	20 days	Mon 3/3/25	Fri 3/28/25	47
49	IDOT Final Review of PDR	24 days	Wed 6/4/25	Mon 7/7/25	48,34,11
50	**Design Approval**	0 days	Mon 7/7/25	Mon 7/7/25	49
51	**Preparation of Plat of Highway and Legal Description**	60 days	Tue 7/8/25	Mon 9/29/25	50
52	**Scope, Negotiate, and Board Approval for Phase II**	60 days	Tue 7/8/25	Mon 9/29/25	50



Project: MCDOT Charles Road S
Date: Mon 8/14/23

Task Split Milestone Summary

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
County of McHenry	RS&H, Inc.	McHenry	23-00567-00-BR

Exhibit C
Qualification Based Selection (QBS) Checklist

The LPA must complete Exhibit D. If the value meets or will exceed the threshold in 50 ILCS 510, QBS requirements must be followed. Under the threshold, QBS requirements do not apply. The threshold is adjusted annually. If the value is under the threshold with federal funds being used, federal small purchase guidelines must be followed.

☐ Form Not Applicable (engineering services less than the threshold)

Items 1-13 are required when using federal funds and QBS process is applicable. Items 14-16 are required when using State funds and the QBS process is applicable.

		No	Yes
1	Do the written QBS policies and procedures discuss the initial administration (procurement, management and administration) concerning engineering and design related consultant services?	☐	☒
2	Do the written QBS policies and procedures follow the requirements as outlined in Section 5-5 and specifically Section 5-5.06 (e) of the BLRS Manual?	☐	☒
3	Was the scope of services for this project clearly defined?	☐	☒
4	Was public notice given for this project?	☐	☒

If yes Due date of submittal 01/13/23

Method(s) used for advertisement and dates of advertisement

McHenry County Purchasing Department website (12/13/2022 to 01/13/2023)
Daily Herald Newspaper Classified (12/15/2022)

5	Do the written QBS policies and procedures cover conflicts of interest?	☐	☒
6	Do the written QBS policies and procedures use covered methods of verification for suspension and debarment?	☐	☒
7	Do the written QBS policies and procedures discuss the methods of evaluation?	☐	☒

Project Criteria	Weighting
1. Technical Approach	30%
2. Firm Experience	20%
3. Specialized Expertise	20%
4. Staff Capabilities	10%
5. Work Load Capacity	10%
6. Past Performance	10%
7. In-State/Local Presence	0%

8	Do the written QBS policies and procedures discuss the method of selection?	☐	☒

Selection committee (titles) for this project

Design Manager, Design Engineer III, Design Engineer II

	Top three consultants ranked for this project in order
1	RS&H
2	Engineering Resources Associates, Inc.
3	BLA, Inc.

9	Was an estimated cost of engineering for this project developed in-house prior to contract negotiation?	☐	☒
10	Were negotiations for this project performed in accordance with federal requirements.	☐	☒
11	Were acceptable costs for this project verified?	☐	☒
12	Do the written QBS policies and procedures cover review and approving for payment, before forwarding the request for reimbursement to IDOT for further review and approval?	☐	☒

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
County of McHenry	RS&H, Inc.	McHenry	23-00567-00-BR

13	Do the written QBS policies and procedures cover ongoing and finalizing administration of the project (monitoring, evaluation, closing-out a contract, records retention, responsibility, remedies to violations or breaches to a contract, and resolution of disputes)?	☐	☒
14	QBS according to State requirements used?	☐	☒
15	Existing relationship used in lieu of QBS process?	☒	☐
16	LPA is a home rule community (Exempt from QBS).	☒	☐

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
McHenry County Division of Transportation	McHenry	23-00567-00-BR

Prime Consultant (Firm) Name	Prepared By	Date
RS&H, Inc.	MCW	8/14/2023

Consultant / Subconsultant Name	Job Number
RS&H, Inc.	P-91-XXX-XX

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS	OVERHEAD RATE	167.04%
START DATE	10/1/2023		COMPLEXITY FACTOR	0
RAISE DATE	6/3/2024		% OF RAISE	2.00%
END DATE	9/30/2025			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	10/1/2023	6/3/2024	8	33.33%
1	6/4/2024	6/3/2025	12	51.00%
2	6/4/2025	10/3/2025	4	17.34%

The total escalation = 1.67%

Local Public Agency	County	Section Number
McHenry County Division of Transportati	McHenry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
RS&H, Inc.	P-91-XXX-XX

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	**86.00**
ESCALATION FACTOR	**1.67%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal	$85.92	$86.00
Engineer V	$84.79	$86.00
Engineer IV	$70.67	$71.85
Engineer III	$52.84	$53.72
Engineer II	$41.45	$42.14
Engineer I	$32.74	$33.29
Technician/Designer IV	$49.19	$50.01
Admin Assistant II	$26.18	$26.62

Local Public Agency	County	Section Number
McHenry County Division of Transportation	McHenry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
RS&H, Inc.	P-91-XXX-XX

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant
Sanchez & Associates P.C.	27,180.00	2,718.00
Kaskaskia Engineering Group, LLC	22,331.00	2,233.10

Total	49,511.00	4,951.10

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency	County	Section Number
McHenry County Division of Transportation	McHenry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
RS&H, Inc.	P-91-XXX-XX

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	1100	$0.66	$720.50
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day			$0.00
Vehicle Rental	Actual Cost (Up to $55/day)			$0.00
Tolls	Actual Cost	44	$0.75	$33.00
Parking	Actual Cost			$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00
Shift Differential	Actual Cost (Based on firm's policy)			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)	30	$25.00	$750.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)	870	$1.00	$870.00
Project Specific Insurance	Actual Cost			$0.00
Monuments (Permanent)	Actual Cost			$0.00
Photo Processing	Actual Cost			$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			$0.00
CADD	Actual Cost (Max $15/hour)			$0.00
Web Site	Actual Cost (Submit supporting documentation)			$0.00
Advertisements	Actual Cost (Submit supporting documentation)	1	$200.00	$200.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)	390	$7.50	$2,925.00
Recording Fees	Actual Cost			$0.00
Transcriptions (specific to project)	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Testing of Soil Samples	Actual Cost			$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Drain Tile Investigation	Actual Cost	1	$8,360.00	$8,360.00
Traffic Counts	Actual Cost			$0.00
GPS Rental	Actual Cost	1	$200.00	$200.00
				$0.00
			TOTAL DIRECT COSTS:	**$14,058.50**

Local Public Agency
McHenry County Division of Transportation

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
RS&H, Inc.

Job Number
P-91-XXX-XX

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 167.04%

COMPLEXITY FACTOR 0

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Data Collection and Review	8,628	42	2,257	3,770	745		6,772	0.98%
Route and Hydraulic Survey		8	400	668	132		1,200	0.17%
Utility Identification and Review	1,125	51	2,324	3,882	767		6,973	1.01%
Environmental Studies		50	2,549	4,258	841		7,648	1.10%
Bridge Inspection and Bridge Condition	69	200	11,548	19,290	3,811		34,649	5.01%
Preliminary Bridge Analysis and TS&L		302	17,659	29,498	5,827		52,984	7.66%
Stream Hydraulic Analysis and Report	69	566	27,375	45,727	9,034		82,136	11.87%
Geotechnical Subsurface Investigation	69	6	431	720	142		1,293	0.19%
Geometric Analysis		234	13,053	21,803	4,307		39,163	5.66%
Preliminary Bridge Design and Hydraulic Report (PBDHR)		32	1,458	2,436	481		4,375	0.63%
Abbreviated Location Drainage Study (LDTM)		180	8,716	14,559	2,876		26,151	3.78%
Permit Coordination	120	68	3,644	6,087	1,203		10,934	1.58%
Traffic Management Analysis		52	2,798	4,673	923		8,394	1.21%
Public Involvement	3,637	187.5	10,750	17,957	3,547		32,254	4.66%
Project Development Activities and Report		112	6,023	10,061	1,988		18,072	2.61%
Meetings	343	76.5	5,259	8,785	1,735		15,779	2.28%
Alternate Analysis and Intersection Studies		462	22,837	38,147	7,536		68,520	9.90%
Plat of Highway		4	200	334	66		600	0.09%
Project Administration and Management		340	24,813	41,448	8,188		74,449	10.76%
			-	-	-		-	
			-	-	-		-	
Kaskaskia Engineering Group, LLC			-	-	-	110,212	110,212	15.92%
Sanchez & Associates, P.C.			-	-	-	70,568	70,568	10.20%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
Subconsultant DL							$4,951.10	0.72%
Direct Costs Total ===>	$14,058.50						**$14,058.50**	2.03%
TOTALS		2973	164,094	274,103	54,149	180,780	692,136	100.00%

438,197

Local Public Agency
McHenry County Division of Transportation

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
RS&H, Inc.

Job Number
P-91-XXX-XX

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Data Collection and Review			Route and Hydraulic Survey			Utility Identification and Review			Environmental Studies			Bridge Inspection and Bridge Condition Report		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00	28.0	0.94%	0.81															
Engineer V	86.00	337.0	11.34%	9.75	12	28.57%	24.57				7	13.73%	11.80	6	12.00%	10.32			
Engineer IV	71.85	662.0	22.27%	16.00													105	52.50%	37.72
Engineer III	53.72	495.0	16.65%	8.94										18	36.00%	19.34			
Engineer II	42.14	684.0	23.01%	9.70	18	42.86%	18.06				20	39.22%	16.53				95	47.50%	20.02
Engineer I	33.29	332.0	11.17%	3.72	8	19.05%	6.34				8	15.69%	5.22	14	28.00%	9.32			
Technician/Designer IV	50.01	303.0	10.19%	5.10	4	9.52%	4.76	8	100.00%	50.01	8	15.69%	7.85	12	24.00%	12.00			
Admin Assistant II	26.62	132.0	4.44%	1.18							8	15.69%	4.18						
		0.0																	
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TOTALS		2973.0	100%	$55.20	42.0	100.00%	$53.74	8.0	100%	$50.01	51.0	100%	$45.57	50.0	100%	$50.98	200.0	100%	$57.74

Local Public Agency
McHenry County Division of Transportation

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
RS&H, Inc.

Job Number
P-91-XXX-XX

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Preliminary Bridge Analysis and TS&L			Stream Hydraulic Analysis and Report			Geotechnical Subsurface Investigation			Geometric Analysis			Preliminary Bridge Design and Hydraulic Report (PBDHR)			Abbreviated Location Drainage Study (LDTM)		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00																		
Engineer V	86.00				6	1.06%	0.91				50	21.37%	18.38				3	1.67%	1.43
Engineer IV	71.85	166	54.97%	39.50	87	15.37%	11.04	6	100.00%	71.85				4	12.50%	8.98	29	16.11%	11.58
Engineer III	53.72				81	14.31%	7.69				92	39.32%	21.12	7	21.88%	11.75	19	10.56%	5.67
Engineer II	42.14	136	45.03%	18.98	236	41.70%	17.57				24	10.26%	4.32	4	12.50%	5.27	72	40.00%	16.86
Engineer I	33.29				78	13.78%	4.59				36	15.38%	5.12	12	37.50%	12.48	29	16.11%	5.36
Technician/Designer IV	50.01				70	12.37%	6.19				32	13.68%	6.84	4	12.50%	6.25	26	14.44%	7.22
Admin Assistant II	26.62				8	1.41%	0.38							1	3.13%	0.83	2	1.11%	0.30
TOTALS		302.0	100%	$58.47	566.0	100%	$48.37	6.0	100%	$71.85	234.0	100%	$55.78	32.0	100%	$45.57	180.0	100%	$48.42

Local Public Agency
McHenry County Division of Transportation

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
RS&H, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 3 **OF** 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Permit Coordination			Traffic Management Analysis			Public Involvement			Project Development Activities and Report			Meetings			Alternate Analysis and Intersection Studies		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00													8	10.46%	8.99			
Engineer V	86.00	4	5.88%	5.06	12	23.08%	19.85	40	21.33%	18.35	14	12.50%	10.75	28	36.60%	31.48	20	4.33%	3.72
Engineer IV	71.85	22	32.35%	23.25				34	18.13%	13.03	10	8.93%	6.42	12	15.69%	11.27	42	9.09%	6.53
Engineer III	53.72				16	30.77%	16.53	38	20.27%	10.89	56	50.00%	26.86	20	26.14%	14.05	148	32.03%	17.21
Engineer II	42.14	31	45.59%	19.21				8	4.27%	1.80							40	8.66%	3.65
Engineer I	33.29	4	5.88%	1.96	12	23.08%	7.68	23	12.27%	4.08	8	7.14%	2.38				100	21.65%	7.21
Technician/Designer IV	50.01	4	5.88%	2.94	8	15.38%	7.69	23	12.27%	6.13	8	7.14%	3.57				92	19.91%	9.96
Admin Assistant II	26.62	3	4.41%	1.17	4	7.69%	2.05	21.5	11.47%	3.05	16	14.29%	3.80	8.5	11.11%	2.96	20	4.33%	1.15
TOTALS		68.0	100%	$53.59	52.0	100%	$53.80	187.5	100%	$57.33	112.0	100%	$53.78	76.5	100%	$68.74	462.0	100%	$49.43

Local Public Agency
McHenry County Division of Transportation

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
RS&H, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 4 **OF** 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Plat of Highway			Project Administration and Management									Kaskaskia Engineering Group, LLC			Sanchez & Associates, P.C.		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00				20	5.88%	5.06												
Engineer V	86.00				135	39.71%	34.15												
Engineer IV	71.85				145	42.65%	30.64												
Engineer III	53.72																		
Engineer II	42.14																		
Engineer I	33.29																		
Technician/Designer IV	50.01	4	100.00%	50.01															
Admin Assistant II	26.62				40	11.76%	3.13												
TOTALS		4.0	100%	$50.01	340.0	100%	$72.98	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00

Charles Road Bridge over Slough Creek
EXHIBIT E - Workhour Summary

	Task and Description		Total	RS&H	Sanchez	Kaskaskia
Task 1	**Data Collection and Review**					
	Review Existing Data		44	20		24
	Prepare Photo Log		2	2		
	Site Visit		34	16		18
	Tile Investigation		4	4		
		Subtotal:	**84**	**42**	**0**	**42**
Task 2	**Route and Hydraulic Surveys**					
	Horizontal and Vertical Control		40	8	32	
	Topographic Survey		147		147	
	Existing Right-of-Way		66		66	
	Hydraulic Survey		89		89	
		Subtotal:	**342**	**8**	**334**	**0**
Task 3	**Utility Identification and Coordination**					
	JULIE Design Locate		9	9		
	Utility Notification Letters		6	6		
	Base Drawing and Conflict Identification.		18	18		
	Follow-Up Letters		18	18		
		Subtotal:	**51**	**51**	**0**	**0**
Task 4	**Environmental Studies**					
	Environmental Survey Request		38	38		
	Wetland Delineation and Report		49			49
	Wetland Impact Evaluation		12	12		
	Tree Inventory		9			9
	Bridge Bat Assessment		5			5
	Special Waste Assessment		9			9
	PESA		41			41
	PESA Validation		4			4
	PESA Response		5			5
	Section 4(f) Document		5			5
		Subtotal:	**177**	**50**	**0**	**127**
Task 5	**Bridge Inspection and Bridge Condition Report**					
	Bridge Inspection		40	40		
	Bridge Condition Report		160	160		
		Subtotal:	**200**	**200**	**0**	**0**
Task 6	**Preliminary Bridge Analysis and Type, Size & Location Drawing (TS&L)**					
	Develop Design Parameters		28	28		
	Preliminary Bridge Design		56	56		
	Structure Alternatives Analysis Memorandum		90	90		
	Type, Size, and Location (TS&L) Drawings		128	128		
		Subtotal:	**302**	**302**	**0**	**0**
Task 7	**Stream Hydraulic Analysis and Report**					
	Field Review and Data Collection		56	56		
	Develop Existing Hydrologic/Hydraulic Models		192	192		
	Review FEMA and USGS Records		8	8		
	Determine Floodplain Impacts and Comp. Storag		16	16		
	Perform HEC-18 Scour Analysis		24	24		
	Develop and Evaluate 3 Alternatives		90	90		
	Hydraulic Report and Exhibits		180	180		
		Subtotal:	**566**	**566**	**0**	**0**

Task 8	**Geotechnical Subsurface Investigation**				
	Bridge Deck Sampling	0			Direct Exp
	Structure Borings	0			Direct Exp
	Roadway (Subgrade) Borings	0			Direct Exp
	Pavement Cores	0			Direct Exp
	Laboratory Testing	0			Direct Exp
	Coordination	0			Direct Exp
	Potentially Impacted Property Evaluation	0			Direct Exp
	Traffic Control	0			Direct Exp
	Structure Design Recommendations	82	6		76
	Geotechnical Reports	188			188
	Subtotal:	**270**	**6**	**0**	**264**
Task 9	**Geometric Analysis**				
	Preliminary Design	30	30		
	Plan & Profile (5 at 16 Hrs/Sheet)	80	80		
	Typical Sections (5 at 8 Hrs Each)	40	40		
	Cross Sections (60 at 0.5 Hrs Each)	30	30		
	Design Exceptions	10	10		
	Barrier Warrant Analysis	24	24		
	Sight Distance Analysis	20	20		
	Subtotal:	**234**	**234**	**0**	**0**
Task 10	**Preliminary Bridge Design and Hydraulic Report**				
	Form BLR 10210	16	16		
	Scour Critical Evaluation Coding Report	16	16		
	BLR 10220 (Asbestos form)	0			
	Subtotal:	**32**	**32**	**0**	**0**
Task 11	**Abbreviated Location Drainage Study**				
	Evaluate Existing Drainage and Determine Defici	56	56		
	Perform Stormwater Detention Analysis	24	24		
	Design Proposed Drainage Improvements	60	60		
	Prepare Abbreviated LDS	40	40		
	Subtotal:	**180**	**180**	**0**	**0**
Task 12	**Permit Coordination**				
	USACE Section 404 Joint Permit Coordination	24	24		
	IDNR-OWR Floodway Permit Coordination	28	28		
	McHenry County P&D Stormwater Permit Coordi	16	16		
	Subtotal:	**68**	**68**	**0**	**0**
Task 13	**Traffic Management Analysis**				
	Traffic Management and Detour Analysis	32	32		
	IDOT Coordination and TMP Submittal	20	20		
	Subtotal:	**52**	**52**	**0**	**0**
Task 14	**Public Involvement**				
	Impacted Property Coordination	20	20		
	Stakeholder Meetings (if required)	25.5	25.5		
	Public Informational Meeting (if required)	142	142		
	Public Hearing (if required)	0			
	Website	0			
	Subtotal:	**187.5**	**187.5**	**0**	**0**
Task 15	**Project Development Activities and Report**				
	Existing Condition Analysis	20	20		
	Crash Analysis	44	44		

	Draft Project Development Report	32	32		
	Final Project Development Report	16	16		
	Subtotal:	**112**	**112**	**0**	**0**
Task 16	**Meetings**				
	MCDOT Kick-off Meeting	8.5	8.5		
	IDOT Kick-off Meeting	8.5	8.5		
	Project Site Meeting	8.5	8.5		
	FHWA/IDOT Meeting	8.5	8.5		
	IDOT District One Detour Meeting	8.5	8.5		
	McHenry P&D Pre-application Meeting	8.5	8.5		
	USACE Pre-application Meeting	8.5	8.5		
	McHenry County Farm Bureau Meeting	8.5	8.5		
	IDNR-OWR Meeting	8.5	8.5		
	McHenry County Conservation District Meeting	0	0		
	Subtotal:	**76.5**	**76.5**	**0**	**0**
Task 17	**Project Administration and Management**				
	Project Startup	19	16		3
	Monthly Invoices and Progress Reports (24 mont	82	72		10
	Project Coordination and Monthly Calls (24 montl	40	30		10
	Project Schedule Monitoring	72	72		0
	QA/QC	201	150	28	23
	Subtotal:	**414**	**340**	**28**	**46**
Task 18	**Alternative Alignment and Intersection Studies**				
	Traffic Data Collection	8	8		
	Traffic Analysis and Intersection Design Studies	240	240		
	Alternative Studies	214	214		
	Subtotal:	**462**	**462**	**0**	**0**
Task 19	**Right-of-Way and Easement Plats**				
	ROW Document Search (7 at 5.5 hours each)	38.5		38.5	
	Legal Descriptions (7 at 3 hours each)	21		21	
	Plat of Highways (Cover, section corner, parcel, t	192.5	4	188.5	
	Subtotal:	**252**	**4**	**248**	**0**
	Total:	**4,062**	**2,973**	**610**	**479**

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
County of McHenry	Mc Henry	23-00567-00-BR

Prime Consultant (Firm) Name	Prepared By	Date
RS & H	Gerardo P. Sanchez	5/12/2023

Consultant / Subconsultant Name	Job Number
Sanchez & Associates, P.C.	P-91-XXX-XX

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	**24**	**MONTHS**	**OVERHEAD RATE**	**79.62%**
START DATE	**10/1/2023**		**COMPLEXITY FACTOR**	**0**
RAISE DATE	**1/1/2024**		**% OF RAISE**	**2.00%**
END DATE	9/30/2025			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	10/1/2023	1/1/2024	3	12.50%
1	1/2/2024	1/1/2025	12	51.00%
2	1/2/2025	10/1/2025	9	39.02%

The total escalation = 2.52%

Local Public Agency	County	Section Number
County of McHenry	Mc Henry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
Sanchez & Associates, P.C.	P-91-XXX-XX

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	**86.00**
ESCALATION FACTOR	**2.52%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal	$74.26	$76.13
Project Manager, PLS	$57.70	$59.15
Survey Crew Chief III	$40.31	$41.32
Survey Instrument Person III	$30.00	$30.75
CAD Manager	$50.00	$51.26
CADD Technician III	$35.00	$35.88

Local Public Agency	County	Section Number
County of McHenry	Mc Henry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
Sanchez & Associates, P.C.	P-91-XXX-XX

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant
None		

Total **0.00** **0.00**

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency	County	Section Number
County of McHenry	Mc Henry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
Sanchez & Associates, P.C.	P-91-XXX-XX

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day	19	$65.00	$1,235.00
Vehicle Rental	Actual Cost (Up to $55/day)			$0.00
Tolls	Actual Cost			$0.00
Parking	Actual Cost			$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00
Shift Differential	Actual Cost (Based on firm's policy)			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)	2	$80.00	$160.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)	4	$15.00	$60.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			$0.00
Project Specific Insurance	Actual Cost			$0.00
Monuments (Permanent)	Actual Cost	30	$10.00	$300.00
Photo Processing	Actual Cost			$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			$0.00
CADD	Actual Cost (Max $15/hour)			$0.00
Web Site	Actual Cost (Submit supporting documentation)			$0.00
Advertisements	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			$0.00
Recording Fees	Actual Cost	7	$10.00	$70.00
Transcriptions (specific to project)	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Testing of Soil Samples	Actual Cost			$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Title Commitments	Actual Cost	7	$1,800.00	$12,600.00
				$0.00
				$0.00
				$0.00
			TOTAL DIRECT COSTS:	**$14,425.00**

Local Public Agency
County of McHenry

County
Mc Henry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
Sanchez & Associates, P.C.

Job Number
P-91-XXX-XX

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE **79.62%**   **COMPLEXITY FACTOR** **0**

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
2.1 Survey Control	65	32	1,246	992	336		2,574	3.65%
2.2 Topographic Survey	325	129	5,005	3,985	1,348		10,338	14.65%
2.3 Hydraulic Survey	325	89	3,323	2,646	895		6,864	9.73%
2.4 Right-of-Way Survey	325	66	3,386	2,696	912		6,994	9.91%
2.5 Plats of Highways	13,320	248	11,765	9,367	3,170		24,302	34.44%
2.6 Location of Soil Borings	65	18	672	535	181		1,388	1.97%
2.7 QA/QC		28	1,783	1,420	480		3,683	5.22%
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Subconsultant DL							$0.00	
Direct Costs Total ===>	$14,425.00						**$14,425.00**	20.44%
TOTALS		610	27,180	21,641	7,322	-	70,568	100.00%
			48,821					

Local Public Agency
County of McHenry

County
Mc Henry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
Sanchez & Associates, P.C.

Job Number
P-91-XXX-XX

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 1 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			2.1 Survey Control			2.2 Topographic Survey			2.3 Hydraulic Survey			2.4 Right-of-Way Survey			2.5 Plats of Highways		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	76.13	79.0	12.95%	9.86	0			0			0			24	36.36%	27.68	41	16.53%	12.59
Project Manager, PLS	59.15	65.0	10.66%	6.30	4	12.50%	7.39	13	10.08%	5.96	5	5.62%	3.32	2	3.03%	1.79	40	16.13%	9.54
Survey Crew Chief III	41.32	146.0	23.93%	9.89	14	43.75%	18.08	38	29.46%	12.17	42	47.19%	19.50	16	24.24%	10.02	28	11.29%	4.67
Survey Instrument Person III	30.75	146.0	23.93%	7.36	14	43.75%	13.46	38	29.46%	9.06	42	47.19%	14.51	16	24.24%	7.46	28	11.29%	3.47
CAD Manager	51.26	36.0	5.90%	3.03	0			4	3.10%	1.59	0			0			18	7.26%	3.72
CADD Technician III	35.88	138.0	22.62%	8.12	0			36	27.91%	10.01	0			8	12.12%	4.35	93	37.50%	13.46
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TOTALS		610.0	100%	$44.56	32.0	100.00%	$38.93	129.0	100%	$38.80	89.0	100%	$37.34	66.0	100%	$51.30	248.0	100%	$47.44

Local Public Agency
County of McHenry

County
Mc Henry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
Sanchez & Associates, P.C.

Job Number
P-91-XXX-XX

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	2.6 Location of Soil Borings			2.7 QA/QC														
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	76.13	0			14	50.00%	38.06												
Project Manager, PLS	59.15	1	5.56%	3.29	0														
Survey Crew Chief III	41.32	8	44.44%	18.37	0														
Survey Instrument Person III	30.75	8	44.44%	13.67	0														
CAD Manager	51.26	0			14	50.00%	25.63												
CADD Technician III	35.88	1	5.56%	1.99	0														
TOTALS		18.0	100%	$37.31	28.0	100%	$63.69	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
County of McHenry	McHenry	23-00567-00-BR

Prime Consultant (Firm) Name	Prepared By	Date
RS&H	EJL	8/2/2023

Consultant / Subconsultant Name	Job Number
Kaskaskia Engineering Group, LLC	P-91-XXX-XX

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	**24**	**MONTHS**	**OVERHEAD RATE**	**168.78%**
START DATE	**10/1/2023**		**COMPLEXITY FACTOR**	
RAISE DATE	**1/1/2024**		**% OF RAISE**	**2.00%**
END DATE	9/30/2025			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	10/1/2023	1/1/2024	3	12.50%
1	1/2/2024	1/1/2025	12	51.00%
2	1/2/2025	10/1/2025	9	39.02%

The total escalation = 2.52%

Local Public Agency	County	Section Number
County of McHenry	McHenry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
Kaskaskia Engineering Group, LLC	P-91-XXX-XX

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	**86.00**
ESCALATION FACTOR	**2.52%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Manager	$86.00	$86.00
Prinicpal Engineer	$83.77	$85.88
Senior Engineer	$69.48	$71.23
Project Manager	$54.83	$56.21
Project Engineer	$42.74	$43.81
Staff Engineer	$31.33	$32.12
Technician	$46.71	$47.88
Bio/Scientist	$33.94	$34.79
GIS Manager	$46.56	$47.73
Construction Administrator	$30.19	$30.95
Administrative Personnel	$43.53	$44.62
Intern	$17.81	$18.26

Local Public Agency	County	Section Number
County of McHenry	McHenry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
Kaskaskia Engineering Group, LLC	P-91-XXX-XX

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant
Total	**0.00**	**0.00**

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency	County	Section Number
County of McHenry	McHenry	23-00567-00-BR

Consultant / Subconsultant Name	Job Number
Kaskaskia Engineering Group, LLC	P-91-XXX-XX

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)	7	$85.00	$595.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost	7	$17.00	$119.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	2090	$0.66	$1,368.95
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day			$0.00
Vehicle Rental	Actual Cost (Up to $55/day)			$0.00
Tolls	Actual Cost			$0.00
Parking	Actual Cost			$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00
Shift Differential	Actual Cost (Based on firm's policy)			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			$0.00
Project Specific Insurance	Actual Cost			$0.00
Monuments (Permanent)	Actual Cost			$0.00
Photo Processing	Actual Cost			$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			$0.00
CADD	Actual Cost (Max $15/hour)			$0.00
Web Site	Actual Cost (Submit supporting documentation)			$0.00
Advertisements	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			$0.00
Recording Fees	Actual Cost			$0.00
Transcriptions (specific to project)	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Testing of Soil Samples	Actual Cost	1	$40,149.00	$40,149.00
Lab Services	Actual Cost (Provide breakdown of each cost)			$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
EDR Radius Report	Actual Cost	1	$350.00	$350.00
Per Diem	Per State Guidance (after 6a, before Noon: 3/4 day)	2	$21.00	$42.00
Per Diem	Per State Guidance (full days)	7	$28.00	$196.00
				$0.00
			TOTAL DIRECT COSTS:	**$42,819.95**

Local Public Agency
County of McHenry

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
Kaskaskia Engineering Group, LLC

Job Number
P-91-XXX-XX

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 168.78%

COMPLEXITY FACTOR 0

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Task 4 - Data Collection		24	1,006	1,699	332		3,037	2.76%
Task 4 - Wetland Delineation/Tree Inventory/BBA/PESA: Site Visit	774	18	626	1,057	207		1,890	1.71%
Task 4 - Wetland Delineation Report		49	1,886	3,183	622		5,691	5.16%
Task 4 - Tree Inventory: Data Table		9	335	565	110		1,010	0.92%
Task 4 - BBA Forms and Photo Log		5	195	330	64		589	0.53%
Task 4 - Special Waste Assessment	350	9	335	565	110		1,010	0.92%
Task 4 - PESA		41	1,574	2,656	519		4,749	4.31%
Task 4 - PESA Validation Site Visit		4	139	235	46		420	0.38%
Task 4 - PESA Validation Memorandum		5	195	330	64		589	0.53%
Task 4 - PESA Response		5	195	330	64		589	0.53%
Task 8 - Geotechnical Field Exploration	41,696	76	3,440	5,805	1,135		10,380	9.42%
Task 8 - SGR		92	4,421	7,462	1,459		13,342	12.11%
Task 8 - RGR		96	4,636	7,825	1,530		13,991	12.69%
Task 8 - Geotech QA/QC		15	1,009	1,703	333		3,045	2.76%
Task 8 - Geotech Admin		15	1,009	1,703	333		3,045	2.76%
Task 4 - QAQC		8	643	1,086	212		1,941	1.76%
Task 4 - Project Administration		8	687	1,160	227		2,074	1.88%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
Subconsultant DL							$0.00	
Direct Costs Total ===>	$42,819.95						**$42,819.95**	38.85%
TOTALS		479	22,331	37,694	7,367	-	110,212	100.00%

60,025

Local Public Agency
County of McHenry

County
McHenry

Section Number
23-00567-00-BR

Consultant / Subconsultant Name
Kaskaskia Engineering Group, LLC

Job Number
P-91-XXX-XX

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Task 4 - Data Collection			Task 4 - Wetland Delineation/Tree Inventory/BBA/PESA:			Task 4 - Wetland Delineation Report			Task 4 - Tree Inventory: Data Table			Task 4 - BBA Forms and Photo Log		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Manager	86.00	11.0	2.30%	1.97															
Prinicpal Engineer	85.88	12.0	2.51%	2.15															
Senior Engineer	71.23	38.0	7.93%	5.65															
Project Manager	56.21	90.0	18.79%	10.56	8	33.33%	18.74				8	16.33%	9.18	1	11.11%	6.25	1	20.00%	11.24
Project Engineer	43.81	126.0	26.30%	11.53															
Staff Engineer	32.12	48.0	10.02%	3.22															
Technician	47.88	0.0																	
Bio/Scientist	34.79	138.0	28.81%	10.02	16	66.67%	23.20	18	100.00%	34.79	40	81.63%	28.40	8	88.89%	30.93	4	80.00%	27.83
GIS Manager	47.73	4.0	0.84%	0.40															
Construction Administrator	30.95	0.0																	
Administrative Personnel	44.62	12.0	2.51%	1.12							1	2.04%	0.91						
Intern	18.26	0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
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		0.0																	
TOTALS		479.0	100%	$46.62	24.0	100.00%	$41.93	18.0	100%	$34.79	49.0	100%	$38.49	9.0	100%	$37.17	5.0	100%	$39.08

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AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Task 4 - Special Waste Assessment			Task 4 - PESA			Task 4 - PESA Validation Site Visit			Task 4 - PESA Validation Memorandum			Task 4 - PESA Response			Task 8 - Geotechnical Field Exploration		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Manager	86.00																		
Prinicpal Engineer	85.88																		
Senior Engineer	71.23																4	5.26%	3.75
Project Manager	56.21	1	11.11%	6.25	4	9.76%	5.48				1	20.00%	11.24	1	20.00%	11.24			
Project Engineer	43.81																72	94.74%	41.51
Staff Engineer	32.12																		
Technician	47.88																		
Bio/Scientist	34.79	8	88.89%	30.93	32	78.05%	27.16	4	100.00%	34.79	4	80.00%	27.83	4	80.00%	27.83			
GIS Manager	47.73				4	9.76%	4.66												
Construction Administrator	30.95																		
Administrative Personnel	44.62				1	2.44%	1.09												
Intern	18.26																		
TOTALS		9.0	100%	$37.17	41.0	100%	$38.38	4.0	100%	$34.79	5.0	100%	$39.08	5.0	100%	$39.08	76.0	100%	$45.26

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AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Task 8 - SGR			Task 8 - RGR			Task 8 - Geotech QA/QC			Task 8 - Geotech Admin			Task 4 - QAQC			Task 4 - Project Administration		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Manager	86.00							5	33.33%	28.67	5	33.33%	28.67	1	12.50%	10.75			
Prinicpal Engineer	85.88													4	50.00%	42.94	8	100.00%	85.88
Senior Engineer	71.23	10	10.87%	7.74	11	11.46%	8.16	5	33.33%	23.74	5	33.33%	23.74	3	37.50%	26.71			
Project Manager	56.21	32	34.78%	19.55	33	34.38%	19.32												
Project Engineer	43.81	26	28.26%	12.38	28	29.17%	12.78												
Staff Engineer	32.12	24	26.09%	8.38	24	25.00%	8.03												
Technician	47.88																		
Bio/Scientist	34.79																		
GIS Manager	47.73																		
Construction Administrator	30.95																		
Administrative Personnel	44.62							5	33.33%	14.87	5	33.33%	14.87						
Intern	18.26																		
TOTALS		92.0	100%	$48.05	96.0	100%	$48.29	15.0	100%	$67.28	15.0	100%	$67.28	8.0	100%	$80.40	8.0	100%	$85.88

GEOTECHNICAL SERVICES
UNIT PRICES
2023

Name: Charles Road Realignment
Client: Kaskaskia Engineering LLC
Scope: 3 to 75', 1 to 30', 7 to 10', and 4 pavement cores

Date: 07/31/2023
Wang No.: P230410

		Task Description	Units	Unit Price	Extended Cost
		DRILLING, SAMPLING & INSITU TESTING			
		Drilling Coordination, Utilities Clearance, Site Access, Permitting	2.0 Hours	$120.00 /Hour	$240.00
		Site Mobilization	1	$1,000.00 /Each	$1,000.00
		Drilling & Sampling - Hourly			
		Two-man crew - normal working hrs	40.0 Hours	$485.00 /Hour	$19,400.00
		Two-man crew - overtime	10.0 Hours	$535.00 /Hour	$5,350.00
		Hand Augering, Pavement/ Deck Coring & Testing			
		Two-man crew - normal working hrs	2.0 Hours	$485.00 /Hour	$970.00
		Two-man crew - overtime (2 hrs per day)	0.0 Hours	$535.00 /Hour	$0.00
		Asbestos content testing on deck cores	2 Tests	$200.00 /Test	$400.00
					$27,360.00
		LABORATORY TESTING			
T265	D2216	Water Content	110 Tests	$14.00 /Test	$1,540.00
Particle Size Distribution					
T88	D422	Combined Sieve and Hydrometer	16 Tests	$157.00 /Test	$2,512.00
Atterberg Limits					
T89, T90	D4318	Liquid and Plastic Limits	16 Tests	$96.00 /Test	$1,536.00
Soil Settlement, Swelling, and Collapse Potential					
T216	D2435	One-Dimensional Consolidation	1 Tests	$700.00 /Test	$700.00
Laboratory Compaction Tests					
T193	D1883	California/Illinois Bearing Ratio (3 points)	1 Tests	$1,186.00 /Test	$1,186.00
Additional Sample Preparation Procedures					
		Extrusion & Preservation of Undisturbed Samples	1 Samples	$35.00 /Sample	$35.00
					$7,509.00
		TRAFFIC CONTROL			
		Roadway Flagmen (two-man crew)			
		Port-to-Port-Regular-	24.0 Hours	$220.00 /Hour	$5,280.00
		Port-to-Port-Overtime-	6.0 Hours	$250.00 /Hour	$1,500.00
					$5,280.00

Note: Prices are for weekday only (Monday though Friday). Weekend rates (Saturdays and Sundays) are higher and will be provided per project

SUMMARY

DRILLING, SAMPLING & INSITU TESTING	$27,360.00
LABORATORY TESTING	$7,509.00
TRAFFIC CONTROL	$5,280.00
FIELD VEHICLES & MILEAGE	$0.00
OUT-OF-TOWN EXPENSES	$0.00
TOTAL	**$40,149.00**

1126 N Main Street
Lombard, IL 60148
630-519-4269

Direct Expenses By Tasks

	Mileage ($0.655/mi)	Tolls ($0.75 ea)	FedEx ($25.0/ea)	Ad	Copies (outside)	PIM Exh/Rend	GPS Rental	Traffic Counts	Tile Investigation	
Task 1	100	4								
	$65.50	$3.00					$200.00		$8,360	$8,628.50
Task 3			15		750					
			$375.00		$750.00					$1,125.00
Task 5	100	4								
	$65.50	$3.00								$68.50
Task 7	100	4								
	$65.50	$3.00								$68.50
Task 8	100	4								
	$65.50	$3.00								$68.50
Task 12					120					
					$120.00					$120.00
Task 14	200	8	15			390				
	$131.00	$6.00	$375.00	$200.00		$2,925.00				$3,637.00
Task 16	500	20								
	$327.50	$15.00								$342.50
	$720.50	$33.00	$750.00	$200.00	$870.00	$2,925.00	$200.00	$0.00	$8,360.00	$14,058.50