



Using Federal Funds? ☐ Yes ☒ No

Agreement For
Non-MFT PE

Agreement Type
Original

LOCAL PUBLIC AGENCY

Local Public Agency	County	Section Number	Job Number
Lake County Division of Transportation	Lake	24-00249-05-GM	
Project Number	Contact Name	Phone Number	Email
	David Pugliese	(847) 377-7502	dpugliese@lakecountyil.gov

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
Buffalo Grove Road		0.6 miles	
Location Termini			Add Location
IL-83 to Deerfield Parkway			Remove Location

Project Description

Repairing concrete pavement and making ADA improvements.

Engineering Funding	<input type="checkbox"/> MFT/TBP	<input type="checkbox"/> State	<input checked="" type="checkbox"/> Other	Matching Tax	
Anticipated Construction Funding	<input type="checkbox"/> Federal	<input type="checkbox"/> MFT/TBP	<input type="checkbox"/> State	<input checked="" type="checkbox"/> Other	Matching Tax

AGREEMENT FOR

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

CONSULTANT

Prime Consultant (Firm) Name	Contact Name	Phone Number	Email
Horner & Shifrin, Inc.	Brian Pawula	(847) 922-6125	blpawula@hornershifrin.com
Address	City	State	Zip Code
8755 W. Higgins Rd., Suite 325	Chicago	IL	60631

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 Contractor	A full time LPA employee authorized to administer inherently governmental PROJECT activities 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 (BLR 05513 or BLR 05514)
- ☒ EXHIBIT E : Direct Costs Check Sheet (attach BDE 436 when using Lump Sum on Specific Rate Compensation)
- ☐ _____
- ☐ _____
- ☐ _____

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, 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. 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 US 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.
8. 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.
9. 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 affixed 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).
10. 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 Professional Services Selection Act (50 ILCS 510) (Exhibit C).
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.

(c) For Non-Federal County Projects - (605 ILCS 5/5-409)

- (1) 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 in all previous partial payments made to the ENGINEER.
- (2) 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 STATE, a sum of money equal to the basic fee as determined in the 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:

☐ Percent

☐ Lump Sum

☐ Specific Rate

☒ Cost plus Fixed Fee: Fixed

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 origin 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. 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.
2. That the ENGINEER shall be responsible for any all damages to property or persons 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 DEPARTMENT, and their officers, agents and 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.

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.
3. 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 materials 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.

4. In the event that the DEPARTMENT 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 prior to receipt of notice of suspension. In addition, upon the resumption of services the LPA shall compensate the ENGINEER, for 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.
5. 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.
6. 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.
7. 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 and
 - (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State, local) terminated for cause or default.

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

8. 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 included but are not limited to: acts of God or a public enemy; acts 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.

9. 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 statute conviction for a violation occurring in the 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 to 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 projects. 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.

- 10. 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.).
- 11. 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
Horner & Shifrin, Inc.	43-0861661	\$140,000.00
Subconsultants	TIN/FEIN/SS Number	Agreement Amount
None		
Subconsultant Total		
Prime Consultant Total		\$140,000.00
Total for all work		\$140,000.00

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The

Local Public Agency Type
County

 of

Local Public Agency
Lake

By (Signature & Date)

By (Signature & Date)

Local Public Agency

Lake

Local Public Agency Type

County

Clerk

Title

Chair, Lake County Board

(SEAL)

Recommended for Execution

Shane Schneider, P.E.

Director of Transportation/County Engineer

Executed by the ENGINEER:

Prime Consultant (Firm) Name

Attest:

Horner & Shifrin, Inc.

By (Signature & Date)

	10/14/2024
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Title

Assistant Regional Manager - Transportation

By (Signature & Date)

	10/14/2024
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Title

Assoc. VP, Regional Manager - Transportation

APPROVED:

Regional Engineer, Department of Transportation (Signature & Date)

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake	Horner & Shifrin, Inc.	Lake	24-00249-05-GM

**EXHIBIT A
SCOPE OF SERVICES**

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

See attached Scope of Services (ten pages, dated 10/02/2024).

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake	Horner & Shifrin, Inc.	Lake	24-00249-05-GM

**EXHIBIT B
PROJECT SCHEDULE**

The design and letting schedules will be determined after

- 1) completion of the Data Collection task,
- 2) concurrence by Lake County DOT on the pavement repairs, and
with consideration to the construction Estimate of Time.

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake	Horner & Shifrin, Inc.	Lake	24-00249-05-GM

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?	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>
3	Was the scope of services for this project clearly defined?	<input type="checkbox"/>	<input type="checkbox"/>
4	Was public notice given for this project?	<input type="checkbox"/>	<input type="checkbox"/>
5	Do the written QBS policies and procedures cover conflicts of interest?	<input type="checkbox"/>	<input type="checkbox"/>
6	Do the written QBS policies and procedures use covered methods of verification for suspension and debarment?	<input type="checkbox"/>	<input type="checkbox"/>
7	Do the written QBS policies and procedures discuss the methods of evaluation?	<input type="checkbox"/>	<input type="checkbox"/>
	Project Criteria	Weighting	
8	Do the written QBS policies and procedures discuss the method of selection?	<input type="checkbox"/>	<input type="checkbox"/>
Selection committee (titles) for this project			
Top three consultants ranked for this project in order			
1			
2			
3			
9	Was an estimated cost of engineering for this project developed in-house prior to contract negotiation?	<input type="checkbox"/>	<input type="checkbox"/>
10	Were negotiations for this project performed in accordance with federal requirements.	<input type="checkbox"/>	<input type="checkbox"/>
11	Were acceptable costs for this project verified?	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>
14	QBS according to State requirements used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Existing relationship used in lieu of QBS process?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	LPA is a home rule community (Exempt from QBS).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

EXHIBIT D

Cost Estimate of Consultant Services

MAN-HOUR SUMMARY FORM

Project: **Buffalo Grove Road Pavement Preservation**
 Client: **Lake County Division of Transportation**
 LCDOT PM/PE: **Michael Z. and David P.**
 H&S PM/PE: **Brian P. & Raciell O.**



TASK	ITEM	TOTAL MH'S	Distribution of Hours	
			H&S Transpo	H&S Geomatics
1.00	Data Collection	122	74	48
1.00	Data Collection	24	24	0
1.01	Survey: Pavement [Field Visit & Markups]	38	32	6
1.02	Survey: PAR [Topographic Survey]	38	8	30
	Survey: PAR [Field Visit]	8	8	0
1.03	Survey: Weiland Road Intersection	14	2	12
2.00	Plan Development	394	394	0
2.01	Cover Sheet , Index, IDOT & LCDOT Highway Standards (1 sht x 8hrs)	8	8	0
2.02	General Notes & Project Commitments (2 sht x 4hrs)	8	8	0
2.03	Summary of Quantities (1 sht x 16hrs)	16	16	0
2.04	Schedule of Quantities (4 shts x 10hrs)	40	40	0
2.05	Typical Sections (2 shts x 8hrs)	16	16	0
2.06	Alignment, Ties and Benchmarks (2 shts x 12hrs)	24	24	0
2.07	Pavement Repair Plans & Details: Buffalo Rd (3 dbl shts x 16hrs)	48	48	0
2.08	Pavement Repair Plans & Details: Weiland Rd (2 dbl shts x 12hrs)	24	24	0
2.09	ADA / Sidewalk Details (8 shts x 5.75hrs)	46	46	0
2.10	MOT: TMP (Forms, Exhibits, & IL 83 capacity analysis)	16	16	0
2.11	MOT (Buff Gr Rd): Gen Notes / Sequence of Construction (1 sht x 12hrs)	12	12	0
	MOT (Buff Gr Rd): Typical Section (1 sht x 12hrs)	12	12	0
	MOT (Buff Gr Rd): Plans (18 dbl shts x 4hrs)	72	72	0
2.12	MOT (Weiland Rd): Plans (4 plan shts x 8hrs)	32	32	0
2.13	LCDOT Details (20 shts x 0.5hrs)	10	10	0
	IDOT Details (20 shts x 0.5hrs)	10	10	0
3.00	Special Provisions	20	20	0
4.00	Estimates	26	26	0
	Estimate of Cost (5 separate estimates: 4 Pre-Final & 1 Final)	20	20	0
	Estimate of Time (1 Pre-Final & 1 Final)	6	6	0
5.00	PS&E Submittals	40	40	0
	Pre-Final & Final (20 Pre-Final & 20 Final)	40	40	0
6.00	Meetings	26	26	0
	LCDOT Meetings (3 mtgs x 4 eng x 1hrs + Agenda & Minutes)	16	16	0
	Internal Team Meetings (2 mts x 5 eng x 1 hr)	10	10	0
7.00	Construction Support	44	44	0
8.00	Traffic Signal: Cable Diagrams	40	40	0
Sub-Total		712	664	48
9.00	QC/QA (5% of Sub-Total)	34	34	0
10.00	Project Management & Administration (5% of Sub-Total)	34	34	0
Total		780	732	48

Percent of Manhours

93.8%

6.2%

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME	Horner & Shifrin, Inc.
PRIME/SUPPLEMENT	Prime (LCDOT - Buffalo Grove Road)
Prepared By	Horner & Shifrin, Inc.
Work Order #(if applicable)	N/A

DATE	10/02/24
PTB-ITEM#	213-00

CONTRACT TERM	10	MONTHS
START DATE	11/1/2024	
RAISE DATE	1/1/2025	
END DATE	9/1/2025	

OVERHEAD RATE	183.55%
COMPLEXITY FACTOR	0
% OF RAISE	2%
CURRENT SALARY CAP	\$86.00

ESCALATION PER YEAR

year	First date	Last date	Months	% of Contract
0	11/1/2024	1/1/2025	2	20.00%
1	1/2/2025	9/1/2025	8	81.60%

The total escalation = 1.60%

PAYROLL RATES

FIRM NAME
PRIME/SUPPLEMENT
PTB-ITEM #
Work Order #

Horner & Shifrin, Inc.
Prime (LCDOT - Buffalo Grove Road)
213-00
N/A

DATE 10/02/24

ESCALATION FACTOR	1.60%
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JOB SPECIFIC - Classifications and Average Payrates need to match current payrolls submitted to the Department.

WORK ORDERS - Classifications and Average Payrates need to match the master work order agreement.

CLASSIFICATION	DEPARTMENT AVG. PAYROLL RATES ON FILE	CALCULATED RATE (\$86.00 CAP)
TP02 TRANSPORTATION PROF	\$79.60	\$80.87
TP03 TRANSPORTATION PROF	\$64.96	\$66.00
TP04 TRANSPORTATION PROF	\$62.84	\$63.85
TP06 TRANSPORTATION PROF	\$55.10	\$55.98
TP11 TRANSPORTATION PROF	\$40.91	\$41.56
GT01 GEOMATICS TECHNICAL	\$55.88	\$56.77
GT05 GEOMATICS TECHNICAL	\$26.50	\$26.92
GP04 GEOMATICS PROF	\$37.58	\$38.18

SHEET 1 OF 5

					TASK			TASK			TASK			TASK			TASK		
PAYROLL CLASSIFICATION	CALC. AVG. RATES	TOTAL	TOTAL	TOTAL	Data Collection			Plan Development			Special Provisions			Estimates			PS&E Submittals		
		HOURS	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
TP02 TRANSPORTATION #	\$80.87	147.0	18.85%	15.24	32	26.23%	21.21	14	3.55%	2.87	16	80.00%	64.70	15	57.69%	46.66	4	10.00%	8.09
TP03 TRANSPORTATION #	\$66.00	199.0	25.51%	16.84	22	18.03%	11.90	108	27.41%	18.09	4	20.00%	13.20	11	42.31%	27.92	8	20.00%	13.20
TP04 TRANSPORTATION #	\$63.85	48.0	6.15%	3.93				8	2.03%	1.30									
TP06 TRANSPORTATION #	\$55.98	20.0	2.56%	1.44															
TP11 TRANSPORTATION #	\$41.56	318.0	40.77%	16.95	20	16.39%	6.81	264	67.01%	27.85							28	70.00%	29.10
GT01 GEOMATICS TECHN	\$56.77	6.0	0.77%	0.44	6	4.92%	2.79												
GT05 GEOMATICS TECHN	\$26.92	36.0	4.62%	1.24	36	29.51%	7.94												
GP04 GEOMATICS PROF	\$38.18	6.0	0.77%	0.29	6	4.92%	1.88												
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TOTALS		780.0	100%	\$56.36	122.0	100.00%	\$52.54	394.0	100%	\$50.11	20.0	100%	\$77.90	26.0	100%	\$74.58	40.0	100%	\$50.38

EXHIBIT E

Direct Costs Check Sheet



Direct Costs Check Sheet

Prime Consultant Name	PTB Number	State Job Number(s)
Horner & Shifrin, Inc.		
<input checked="" type="checkbox"/> Prime <input type="checkbox"/> Supplement Date <u>10/02/24</u>		

Consultant
Horner & Shifrin, Inc.

Item	Allowable	Utilize W.O. Only	Quantity J.S. Only	Contract Rate	Total
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	<input type="checkbox"/>	1	\$74.00	\$74.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)	<input type="checkbox"/>	1	\$233.00	\$233.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost	<input type="checkbox"/>			
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval	<input type="checkbox"/>			
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	<input type="checkbox"/>	786	\$0.67	\$526.62
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day	<input type="checkbox"/>			
Vehicle Rental	Actual cost (Up to \$55/day)	<input type="checkbox"/>			
Rental Vehicle Fuel	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Tolls	Actual cost	<input type="checkbox"/>			
Parking	Actual cost	<input type="checkbox"/>			
Overtime	Premium portion (Submit supporting documentation)	<input type="checkbox"/>			
Shift Differential	Actual cost (Based on firm's policy)	<input type="checkbox"/>			
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Project Specific Insurance	Actual cost	<input type="checkbox"/>			
Monuments (Permanent)	Actual cost	<input type="checkbox"/>			
Photo Processing	Actual cost	<input type="checkbox"/>			
2-Way Radio (Survey or Phase III Only)	Actual cost	<input type="checkbox"/>			
Telephone Usage (Traffic System Monitoring Only)	Actual cost	<input type="checkbox"/>			

Item	Allowable	Utilize W.O. Only	Quantity J.S. Only	Contract Rate	Total
CADD	Actual cost (Max \$15/hour)	<input type="checkbox"/>			
Website	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Advertisements	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)	<input type="checkbox"/>			
Recording Fees	Actual cost	<input type="checkbox"/>			
Transcriptions (specific to project)	Actual cost	<input type="checkbox"/>			
Courthouse Fees	Actual cost	<input type="checkbox"/>			
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)	<input type="checkbox"/>			
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)	<input type="checkbox"/>			
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)	<input type="checkbox"/>			
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)	<input type="checkbox"/>			
Testing of Soil Samples*	Actual cost (Provide breakdown of costs to the Department for approval)	<input type="checkbox"/>			
Lab Services*	Actual cost (Provide breakdown of cost for each lab service to the Department's PM for approval)	<input type="checkbox"/>			
Equipment and/or Specialized Equipment Rental*	Actual cost (Rental - 2-3 quotes needed / Owned - provide depreciated value for IDOT approval)	<input type="checkbox"/>			
		<input type="checkbox"/>			
		<input type="checkbox"/>			
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		<input type="checkbox"/>			
		<input type="checkbox"/>			
Total Direct Cost					\$833.62

*If other allowable costs are needed and not listed, please add in the above spaces provided.

LEGEND

W.O. = Work Order

J.S. = Job Specific

ATTACHMENT 1

Scope of Services

Buffalo Grove Road Pavement Preservation: IL 83 to Deerfield Parkway

Contract

10/02/2024

Phase II
Buffalo Grove, IL
Lake County

Section No. 24-00249-05-GM

Services for: Lake County Division of Transportation



▪ SCOPE OF SERVICES ▪

PROJECT: Buffalo Road Pavement Preservation
CLIENT: Lake County Division of Transportation
SECTION: 24-00249-05-GM
SCOPE: Phase II Design Engineering Services
DATE: October 2, 2024

Horner & Shifrin, Inc. (H&S) is hereby contracted by the Lake County Division of Transportation (LCDOT) to complete Phase II for concrete pavement preservation and repair on Buffalo Grove Road, between Deerfield Parkway and IL Route 83 (McHenry Road) – approximately 0.56 miles in length. In addition, services are required to correct the southbound lanes of Weiland Road at the Deerfield Parkway intersection.

H&S shall adhere to LCDOT's Plan Preparation Guidelines to develop plans, specifications, and a cost estimate for the proposed improvements with the intent to extend the service life of the existing pavement. H&S shall utilize the LCDOT Workspace and Power GeoPAK / Microstation SS10 to meet the County's goals and expectations, H&S shall provide LCDOT with the services described within the following sections.

Insight

- » Deerfield Parkway Intersection. H&S developed Phase II bid documents along Deerfield Parkway (July 2024 letting) which included sidewalk curb ramp and traffic signal improvements at the Deerfield Parkway and Buffalo Grove intersection. Therefore, improvements to this intersection are omitted from the subject contract.
- » Target Letting. H&S and LCDOT are targeting a May 2025 letting; therefore, Final PS&E submittal is anticipated to be submitted to the County in April of 2025.

1.00 DATA COLLECTION

H&S will obtain and review existing information supplied by LCDOT such as, but not limited to as-builts, pavement assessments, surveys, reports, etc. related to the existing roadway and pavement. The relevant information will be reviewed, analyzed, and considered throughout the design process. Any information deemed important or significant will be utilized during the development of the Phase II bid documents or coordination with the County.

1.01 Survey: Pavement

LCDOT's intends to improve and extend the service life of the Buffalo Grove Road corridor pavement which will require the H&S team to document and analyze the conditions of the roadway. This analysis will be completed through field inspection which includes the evaluation of the roadway pavement, curb & gutter, and raised medians. Existing driveways will not be analyzed nor documented for proposed improvements.

To thoroughly evaluate the condition of the pavement, two H&S engineers will walk the project limits with plan-in-hand exhibits and markup the approximate patching improvement locations. To assist with the accuracy of the patching location, Geotagged photos will be taken at the patching locations. These photos will be utilized to develop a CAD file depicting the patching locations; thus, used to develop the Proposed Improvements Plan/Plan sheets.

Distresses to be identified include cracking of slabs, joint deterioration, shattered slabs, spalling, separated joints, joint/crack faulting, and curbing failures or deterioration. The locations of the distresses will be utilized to develop the pavement patching schedule.



1.02 Survey: Pedestrian Access Route (PAR)

H&S will complete a field survey at the intersections and driveways listed below to document the existing elevations, features, and appurtenances to assist the design of the PAR improvements. This information will be utilized to develop the Phase II 'Sidewalk Details' plan sheets. Conventional ground survey techniques and equipment will be utilized as appropriate.

The H&S survey scope does not include any land acquisition survey, research, analysis, calculation, determination of right-of-way, property boundaries, or easement limits. H&S will not be responsible for the development or review of parcel plats or monument records. This scope assumes that all existing survey information including field books and notes, control points, centerline monumentation, and any other available data will be provided to H&S. This includes horizontal and vertical survey control information utilized previously and any available electronic files which include survey, right-of-way, alignment, utility, topography, and DTM surface information.

Two H&S engineers will conduct a field survey and take photos of the existing facilities (curb ramps, cross walks, and sidewalks) by walking the corridor and compile field notes to supplement the PAR reconstruction limits. Traffic signal improvements, such as pedestrian push button improvements are not included in the subject project scope of services and will not be analyzed.

1.03 Survey: Southbound Weiland Road Pavement

The County is interested in improving the Southbound Weiland Road lanes at the Deerfield Parkway intersection which may be completed through diamond grinding to reduce or remove the existing crown within the intersection concrete panels. The use of diamond grinding may be limited due to the depth of the reinforcement bars.

Therefore, H&S is to survey the edges of the concrete panels within the intersection. The last page of this document displays the intersection limits for reference. The elevations depicted from the survey will be utilized to analyze the cross slopes and determine the pavement reconstruction limits to flatten the intersection grading to improve the rideability for Southbound traffic. LCDOT shall provide traffic control and protection to complete the survey which is anticipated to take no longer than 1-2 hours.

2.00 PLAN DEVELOPMENT

H&S will prepare and assemble contract plans based upon the direction provided by LCDOT and the information obtained from the data collection task and the surveys. A max of two submittals will be made, Pre-Final and Final milestones for LCDOT to review and comment. H&S will be responsible to incorporate or thoroughly dispose all review comments. The contract documents will conform to LCDOT standards and the development will commence once the areas of pavement are assessed and all locations in need of pavement repair or curb ramp reconstruction are identified. All plan sheets are to utilize the LCDOT border plan sheets are expected to include:

2.01 Cover Sheet, Index of Sheets, and State / LCDOT Standards

H&S is to utilize the standard LCDOT Cover Sheet and fill in the relevant contract information, Index of Sheets, IDOT Highway Standards, LCDOT Standards, and the Engineer(s) of Record seal and signature. One non-scaled plan sheet is anticipated.

2.02 General Notes and Project Commitments

H&S is to download, review, and utilize the applicable LCDOT general notes while adding project specific notes and commitments into the plan sheet. Two non-scaled plan sheets are anticipated.



2.03 Summary of Quantities (SOQ)

Hours for preparing the Summary of Quantity sheets will consist of formatting the summary of quantity tables and inputting the required information. If applicable, LCDOT will assist H&S with the construction type fund coding. The SOQ will be single-spaced with the following columns: Item Number, Estimated Quantity checkbox, Contingency or Nominal Quantity checkbox, Special Provision checkbox, Specialty Item checkbox, Pay Code number (IDOT or LCDOT), Item Description, Unit, and Total Quantity. H&S is to develop and provide LCDOT with electronic copies of the Quantity Calculations Reports prior to the Pre-Construction Meeting. One non-scaled plan sheet is anticipated covering up to 80 pay items.

2.04 Schedule of Quantities

Roadway schedules will be developed for the roadway improvements to assist LCDOT and the contractor validate the SOQ. Schedules will be prepared for most roadway items such as: pavement patching, curb & gutter, sidewalk removal, proposed sidewalk, detectable warnings, landscape restoration, etc.), but not for lump sum items and will be shown in a tabular format in the Schedule of Quantities. Pavement markings (removals or placement) will not be detailed through a schedule of quantities; these quantities will be estimated. Four non-scaled plan sheets are anticipated.

2.05 Typical Sections

Typical Sections will be prepared for the existing roadway conditions along Buffalo Grove Road only, with special focus on the existing and proposed pavement design. The typical sections shall provide an estimated measurement of existing conditions (thicknesses, widths, and materials) along with the proposed pavement, curb & gutter, and sidewalk thicknesses, materials, and pay items. The typical sections will be displayed using a 2:1 vertical and 1:1 horizontal scale; the typical sections will be proportioned in such a manner that all information will be adequately conveyed. Two scaled sheets are anticipated; one for existing and one for proposed.

The proposed patching improvements will impact some of the existing permanent pavement markings. However, due to the spot and inconsistent locations, permanent pavement marking sheets will not be provided. The proposed typical shall provide the permanent pavement marking pay items on the proposed typical and nominal quantities will be provided for the permanent pay items.

2.06 Alignment, Ties, and Benchmarks

H&S is to download aerial imagery from an online database, *Nearmap US*, and develop a MicroStation DGN dedicated to serve as the project aerials (aerials.dgn) file. Once the aerials have been downloaded, organized, and embedded into the CAD software H&S is to estimate and develop an existing alignment representing the center of the roadway alignment. Through a previous contract, H&S is aware of the LCDOT Workspace issues which require H&S to create manual adjustments to the configuration files to alleviate scaling inconsistencies. H&S will utilize any existing as-build information, if available.

A 100' (1" = 100') scaled drawing will be utilized to display the Buffalo Grove alignment (approximately 0.56 miles) utilized to develop the bid documents. In addition, any Benchmark(s) utilized during the development of the survey will be noted and tables will be developed and presented displaying the alignment critical points, tangents, and curves. Two scaled sheets are anticipated.

2.07 Pavement Repair Plans & Details: Buffalo Grove Road

After the pavement and curb conditions are assessed, potential methods of repair or preservation will be reviewed with LCDOT, virtually or in person, to evaluate cost and traffic impacts for specific repair methods or types. Once the stakeholder's preferred repair methods are known, H&S will develop the pavement repair plans detailing the locations of the pavement repairs.

The Buffalo Road project limits extend approximately 0.56 miles or 2,950 feet. A 20 scale (1" = 20') sheet can portray 500 - 600 tangential feet into one view port. H&S proposes the use of a stacked or double viewports



in which one sheet will portray 1,000 tangential feet. The alignment consists of a few flat curves which should not impact the number of sheets required for the pavement repair plans:

- » 2,950 ft project limits / 1,000 feet per sheet = 2.95 => 3 double plan sheets

Three sheets will be created to display the 0.56-mile project limits and due to the scope of work these sheets will depict numerous elements such as the (1) patching areas, (2) pavement repair treatments, (3) PAR improvements, (4) landscape restoration, and (5) patching ID numbers.

H&S will be responsible for creating any pavement repair detail sheets to supplement the pavement repair sheets, applicable standards, and specifications.

The following insight will be utilized as part of the pavement repair treatments, but is not limited to the following:

- » Mid-slab transverse cracks (low to moderate severity): sealing or dowel bar retrofitting may be the preservation techniques to consider.
- » Transverse cracks (high severity), failed joints, shattered slabs, or possible faulting: full depth Class B type concrete patching may be warranted. The selection of concrete class for each Class B patch will depend on the Maintenance of Traffic preferred by the stakeholders for the locations identified.
 - IDOT standard class concrete mixes may be applied to extended lane closures.
 - IL Tollway accelerated concrete mixes may be considered for weekend closures.
 - IL Tollway rapid set concrete mixes or IDOT precast concrete repairs may be applicable to locations where only overnight lane closures are possible.
- » Diamond grinding of surfaces to remediate existing rideability issues or for aesthetic/smoothness issues as a result of dowel bar retrofitting will be considered.
- » Full removal and replacement of concrete pavement slabs will only be considered if consecutive slab full depth patching is extensive and costs more than if total pavement lane removal and replacement occurs within an area of extensive patching needs.

2.08 Pavement Repair Plans & Details: Weiland Road Intersection

Once the survey at the intersection is completed, the H&S engineers will evaluate the cross slopes and develop a 10 or 20 scaled plan view intersection detail depicting the existing and proposed elevations, cross slopes, and dimensions of proposed patches to correct the rideability. One scaled plan sheet and one detail sheet is anticipated.

2.09 ADA / Sidewalk Details

LCDOT intends to improve the curb ramps within their ROW and adjacent sidewalk panels required to achieve ADA / PROWAG compliance or to the maximum extent practicable. General sidewalk maintenance falls under the responsibility of the local agency (Village of Buffalo Grove).

H&S shall be responsible for providing the design of the Pedestrian Access Route (PAR) along Buffalo Grove Road to adhere to the Americans with Disabilities Act (ADA) and either meet or improve the existing facilities to nearly meet the County's legal requirements which include, but are not limited to the sidewalk, intersection and driveway curb ramps.

H&S will be responsible for (1) verifying the existing topography and elevation information, (2) designing the new curb ramps per the LCDOT ADA highway standards, and (3) preparing the sidewalk detail sheets. The detail sheets shall provide elevations at the existing or proposed edge of pavement, back of existing or proposed curb, along the edge of the PAR, critical PAR locations, 'tie in' points, cross slopes, and running slopes. A table shall be provided for each corner proposed to be improved highlighting the reference point, station, offset, and elevation for each critical point. An H&S engineer will review the ADA detail sheets, labels, slopes, detectable warnings, landings, transitions, and the right-of-way impacts for each deliverable.



The following table highlights the areas and curb ramps anticipated to be improved, designed, and detailed. These locations were derived from the latest Google Maps Street View information. Any curb ramps or sidewalk not listed in this table will require additional compensation. Sheets are anticipated to be provided at 5 scale (1" = 5'). Improvements to any pedestrian push buttons are not anticipated for this contract.

Street or Driveway	X-Walk	Corners	Ramps	Shts	Hrs	Notes
IL 83 (McHenry Rd) *	2	3	5	0	0	Intersection omitted to avoid IDOT Design permit.
Indeck Building Entrance	1	2	2	2	12	Update curb ramps; north curb ramp may be removed from scope.
Fox Hill Drive	1	2	2	2	12	Will need complex perpendicular/diagonal ramps.
Bike Path	0	1	1	0	0	Bike path under local agency jurisdiction; not in LCDOT ROW.
Mike Rylko Comm. Park	1	2	2	2	10	Verify slopes and proper landing on each side of driveway.
Hidden Lake Drive	1	2	2	2	12	Will need complex perpendicular/diagonal ramps.
Deerfield Parkway*	1	2	4	0	0	ADA improvements completed in separate contract (July 2024)
SCOPE TOTALS	4	9	9	8	46	5.75 hrs / sht (46 hrs for 8 shts)
LEGEND						
* Requires pedestrian push button coordination						

2.10 Maintenance of Traffic – Concept Submittal and TMP

The MOT design will be based on the ability to maintain one through lane in each direction to complete the proposed improvements which will require overnight (permanent) lane closures. LCDOT and H&S understand the combination of staged construction plan sheets and IDOT Highway Standards (Section 700: Work Zone Traffic Control and Protection) will be required for this contract.

As part of H&S's initial pavement analysis, the Northbound Buffalo Grove Road lanes are suffering from failing longitudinal joints which will require improvements between both lanes. LCDOT provided H&S with bid documents from Arlington Heights Road which maintained one 10-foot lane in each direction, utilizing overnight lane closures, while also improving the joints. It is assumed the same maintenance of traffic scenario will be applied for the subject contract.

To complete the Northbound pavement improvements just north of the IL 83 intersection, lane closures of the Northbound lanes south of the IL 83 intersection will be required. This intersection is under IDOT – D1 jurisdiction which will require IDOT approval. As a result, a brief Transportation Management Plan (TMP) is anticipated.

H&S will be responsible for providing the following tasks under the assumption of (a) two major stages, (b) one sub-stage, and (c) the improvements will be completed in one section.

- [1] Transportation Management Plan: H&S submits to LCDOT; LCDOT submits to IDOT – D1
 - a. IDOT Form OP0042
 - b. Intersection Capacity Analysis (HCS or Synchro) for MOT closures at IL 83 intersection
- [2] Dispositions to TMP
- [3] Resubmittal of TMP to LCDOT; LCDOT submit to IDOT – D1

Any extra coordination, meeting, or exhibits not covered in the scope of services may require additional compensation. LCDOT is to coordinate with IDOT – District 1 to attain the permit approving the temporary lane closure(s) at the IL 83 intersection.



2.11 Maintenance of Traffic (MOT) – Plan Development: Buffalo Grove Road

The proposed patching improvements within the through lanes, outside of intersections or driveways, along Buffalo Grove Road can be completed through overnight lane closures utilizing multiple stages. The need for overnight lane closures will require detailed MOT plans.

H&S will be responsible for providing the following tasks under the assumption of (a) two major stages, (b) one sub-stage, and (c) the improvements will be completed in one section. The intent is to rely on the use of drums only rather than the use of temporary pavement markings.

No. of Sheets: 2,950ft (Limits) + 1,400ft (South closures) + 1,000ft (North closures) = 5,350ft per Stage;

Double plan 20-scaled sheets: 1,000ft per sheet => 5.35 sheets => 6 sheets per stage

- [1] MOT General Notes / Sequence of Construction. 1 non-scaled plan sheet is anticipated.
- [2] MOT Typical Section. 1 non-scaled plan sheet is anticipated.
- [3] Stage 1 Plan View. Proposed pavement improvement shapes and side road / entrance traffic control for outside NB / SB lanes. Six double plan sheets at 20 scale are anticipated.
- [4] Stage 2 Plan View. Proposed pavement improvement shapes and side road / entrance traffic control for inside NB / SB lanes. Six double plan sheets at 20 scale are anticipated.
- [5] Stage 2A Plan View. Proposed pavement improvement shapes and side road / entrance traffic control for the left turn lanes. Six double plan sheets at 20 scale are anticipated.

MOT Notes:

- » ADA improvements will be completed as part of Stage 2 or through the use IDOT Highway Standards during a Stage 4; no plan sheets will be developed for Stage 4.

2.12 Maintenance of Traffic (MOT) – Plan Development: Weiland Road

To complete the intersection improvements, multiple through lane and turn lane closures will be required to provide the contractor with a sufficient and safe work zone area. H&S anticipates the proposed improvements may be completed within one calendar day, but traffic control will significantly impact the intersection. The intersection closures will need to initiate early in the morning to provide the contractor with the maximum daylight hours to complete the removals, pour the new patches, and account for curing time. The improvements are anticipated to be completed over two stages which may be completed on consecutive calendar days or over a weekend.

H&S is to develop staged construction traffic control for two stages to assist the contractor and the County prepare and execute the required lane closures to improve the intersection while minimizing impacts to the local traffic. Four 20, 40, or 50 scaled plan sheets are anticipated depicting the lane closures, temporary traffic control devices, patching improvement limits, and a brief sequence of construction and/or notes. Two sheets for the intersections and two sheets for the four legs / approaches.

2.13 Details

H&S will be responsible for inserting the applicable IDOT D1, IL Tollway, and LCDOT detail sheets to the plans.

- » Assume 20 LCDOT detail sheets will be added to the plan set.
- » Assume 20 IDOT standard sheets will be added to the plan set.



3.00 SPECIAL PROVISIONS

H&S will prepare and compile specifications related to the scope of work for two submittals. Submittals will be made at the Pre-final and Final milestones for LCDOT review. H&S will ensure the contract documents will conform to the LCDOT specifications document format and use the applicable LCDOT special provisions. Specific tasks for each submittal are expected to include:

- » Preparation of latest Recurring and BDE check sheets
- » Assembly of latest applicable IDOT D1 SPs
- » Preparation of Project Specific SPs

The County has experienced sudden stops and major delays on pavement preservation contracts when a contractor pours concrete from the lane maintaining traffic during staged construction. The County requested H&S enhance the bid documents to alleviate queueing, public frustration, and safety concerns.

H&S is to investigate and propose verbiage into the special provisions to limit or eliminate the contractor's ability to complete operations from the single through lane (live traffic lane) to be maintained in each stage.

4.00 ESTIMATES: COST AND TIME

H&S will gather the pay items and quantities associated with the contract and prepare the Engineer's Estimate of Probable Construction Cost and the Estimate of Time. H&S is to develop five cost estimates to assist the County in their decision to prioritize the use of accelerated or rapid pavement patches within the corridor. Items a, b, & c will be developed and submitted at Pre-Final; whereas, item d will be submitted with the Final PS&E. The estimate of time will be submitted twice, one at Pre-Final and one for the Final PS&E.

- | | |
|-----------------------------|--|
| a. All patches: accelerated | d. Pre-Final: Combination of patch suggested types |
| b. All patches: rapid | e. Final: Combination of patch suggested types |
| c. All patches: standard | |

The original scope of services accounted for the use of standard, accelerated, and rapid patches. In the case the County decides all patches are to be accelerated, rapid, or a combination of both, H&S may require additional compensation to revise the plans (proposed patching and maintenance of traffic), quantities, schedules, and special provisions.

5.00 PS&E SUBMITTALS

H&S will compile, package, and electronically submit the following for no more than two (2) milestones (Pre-Final and Final):

- | | |
|------------------------|------------------------------------|
| a. Plan set | c. Estimate of Time (PDF & Static) |
| b. Special Provisions | d. Dispositions |
| c. Cost Estimate (PDF) | |

6.00 MEETINGS

H&S is to meet with the County two times throughout the project to discuss the proposed improvements. The first meeting is to occur after Task 1.00 (Data Collection) to discuss the pavement deterioration and proposed patch locations. The second meeting is to discuss the Pre-Final PS&E review comments and coordinate any tasks leading into the final PS&E.

H&S is to meet internally to coordinate the patching improvements and maintenance of traffic, the development of the schedule and correlating pay items, and to coordinate internal and LCDOT review comments.



7.00 CONSTRUCTION SUPPORT

H&S will provide construction support to LCDOT's Resident Engineer including, but not limited to:

- » Request for information/clarification.
- » Design revisions due to unforeseen conditions.

This task will include up to 40 hours, any work that exceeds these hours will be considered supplemental.

8.00 TRAFFIC SIGNAL: CABLE DIAGRAMS

H&S to develop the cable diagrams for the Deerfield Parkway at (1) Buffalo Grove Road, (2) Highland Grove Drive, (3) Commerce Court, (4) Buffalo Grove Fire Station, and (5) Busch Parkway.

9.00 QC/QA

H&S has established a Quality Control /Quality Assurance (QC/QA) Plan to ensure attainment of LCDOT's objectives, budget goals, schedules and elimination of errors, omissions, and conflicts. H&S will review the project at the pre-final and final milestones for:

- | | |
|-----------------------------------|---------------------------------------|
| » Contract requirement compliance | » Interferences / conflicts |
| » Scope of work completeness | » Compliance with standards |
| » Design correctness | » Conformance with the specifications |

This task was estimated to require 5% of the total H&S hours.

10.00 PROJECT MANAGEMENT & ADMINISTRATION

The H&S Project Manager is to undertake all management and administrative duties necessary to support the supplemental tasks. Tasks may include but are not limited to planning, scheduling, and organizing resources to achieve completion within the original and supplemental schedule and budget.

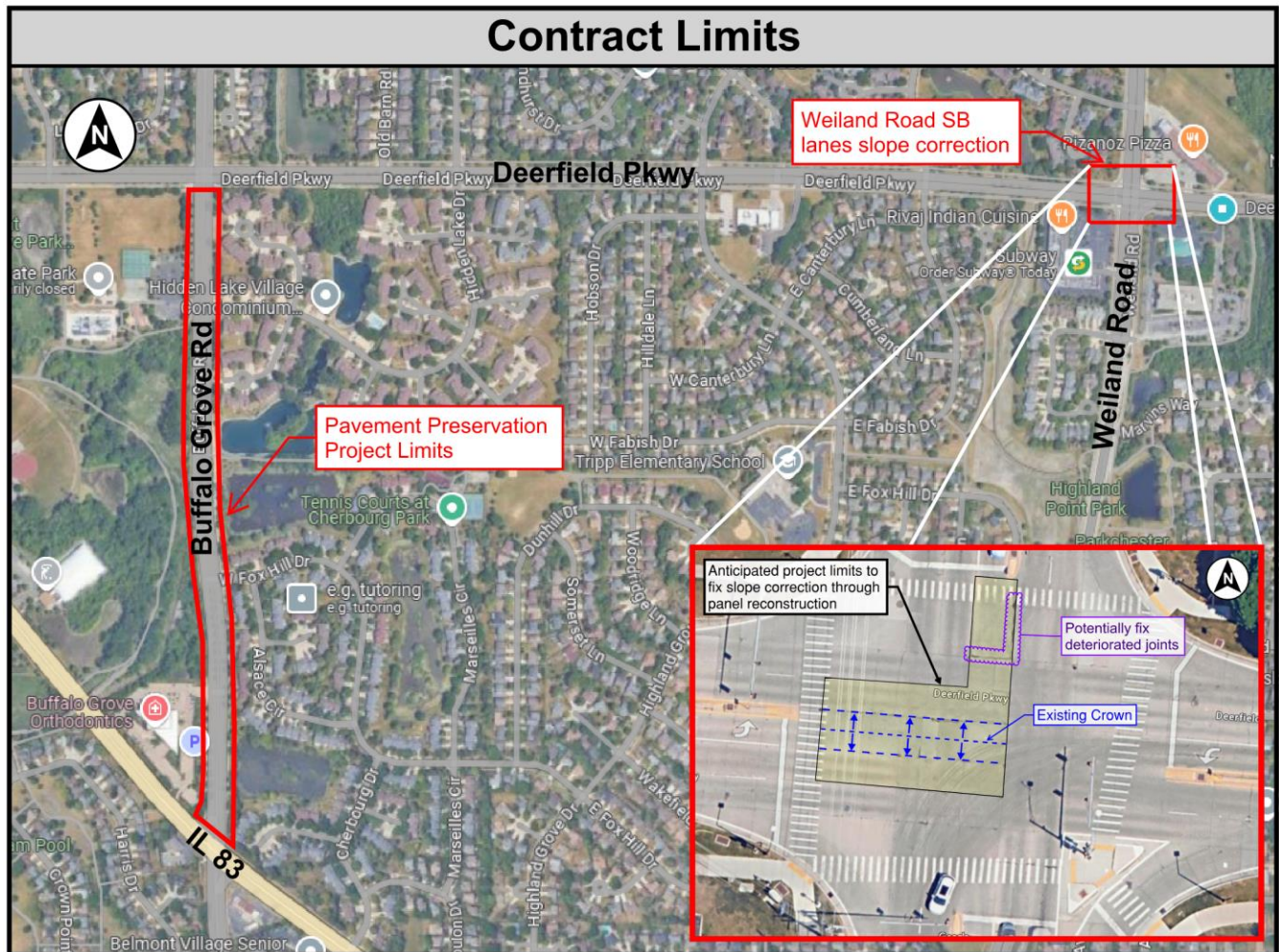
Monthly progress reports and invoices shall be prepared and include a summary statement of the work performed during the reporting period and an outline of the work anticipated to be performed during the following period as a part of the monthly invoices submitted.

This task was estimated to require 5% of the total H&S hours.



ASSUMPTIONS

- [1] Deliverables will be limited to a Pre-Final and Final submittal. Each deliverable will include the plans, special provisions, engineer's estimate, and the Transportation Management Plan (LCDOT to submit to IDOT); all submittals will be electronic.
- [2] The Deerfield Parkway at Buffalo Grove Road intersection will be improved by the 2024 Pavement Preservation contract and shall not be included in the scope of services.
- [3] The following plan sub-sets or items will not be required for this contract based on the scope:
 - Removals. The pavement is anticipated to improved in place through the use of HMA or Concrete patches. The removal limits are the same as the proposed patching limits. Therefore, removal sheets are not required for pavement. Similarly, the ADA curb ramp and sidewalk improvements are nearly in the same location. H&S is to provide detailed ADA schedules portraying the sidewalk removal, proposed sidewalk, and landscape restoration quantities. This is determined to be enough information for the contractor. Removal sheets for ADA or curb & gutter reconstruction will not be provided.
 - Pavement Marking & Signing. To be covered through the typical section and through nominal quantities.
 - Plan & Profiles. There will not be any alterations to the roadway alignment or profile. Review or alterations to the roadway geometry is not included in this scope.
 - Proposed Drainage Plan & Erosion Control. Alterations to the drainage system is not anticipated. If a drainage structure requires an adjustment due to the proposed ADA improvements, the proper pay item will be provided to satisfy this alteration.
 - Lighting or Utility Relocation. If ADA improvements require relocation, H&S is to coordinate with LCDOT to determine if these services are required. In that case, a separate contract will be required.
 - Cross Sections. Pavement improvements are limited to the same removal limits. ADA improvements are minor and should not require significant earthwork excavation. Nominal excavation and furnished excavation quantities will be provided.
 - Acquisition. Right-of-way coordination, acquisitions, relocations, or easements will not be required.



Signatures

Brian L. Pawula

Horner & Shifrin | Brian L. Pawula, PE, PMP

10/02/2024

Date

[Signature]

Lake County Representative

10/09/2024

Date