



LAKE COUNTY FOREST PRESERVES
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Preservation, Restoration, Education and Recreation

DATE: June 27, 2016

MEMO TO: Bonnie Thomson Carter, Chair
Planning and Restoration Committee

Agenda Item# 8.6

S. Michael Rummel, Chair
Finance and Administrative Committee

FROM: James L. Anderson
Director of Natural Resources

RECOMMENDATION: Recommend approval of a Resolution awarding a Contract for Hydrologic and Agricultural Drain Tile Investigation at Cuba Marsh, Ray Lake and Wadsworth Savanna Forest Preserves to Hey and Associates, Inc., Volo, Illinois, in the Contract Price of \$99,265.00.

STRATEGIC DIRECTION SUPPORTED: Conservation

FINANCIAL DATA: This item was approved as part of the adopted FY2016/2017 Budget in the amount of \$100,000.00. The actual cost of \$99,265.00 will be charged to the Farmland Management Fund (28644000-705100-62805).

BACKGROUND: The contract with the proposed consultant will provide a hydrological analysis of wetlands at Cuba Marsh and develop a hydrological restoration plan to create hemimarshes for wetland birds and waterfowl. The contract will also identify drain tiles and drainage patterns at Ray Lake and Wadsworth Savanna Forest Preserves in order to facilitate future planning and restoration efforts. Drain tile investigations are necessary to identify the locations of and assess the condition and functionality of aging drain tiles and drainage systems within artificially drained lands. Additionally, analysis of tile and surface flows is necessary to ensure future planning and restoration efforts do not cause impacts to non-Forest Preserve lands.

REASON FOR RECOMMENDATION: Committee recommendation and Board approval are required in accordance with District policy.

REVIEW BY OTHERS: Executive Director, Chief Operations Officer, Director of Finance, Corporate Counsel

PRESENTER: James L. Anderson

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

**BOARD OF COMMISSIONERS
LAKE COUNTY FOREST PRESERVE DISTRICT
REGULAR JULY MEETING
JULY 13, 2016**

MADAM PRESIDENT AND MEMBERS OF THE BOARD OF COMMISSIONERS:

Your **PLANNING AND RESTORATION COMMITTEE**; and **FINANCE AND ADMINISTRATIVE COMMITTEE** present herewith "A Resolution Awarding a Contract for Hydrologic and Agricultural Drain Tile Investigation at Cuba Marsh, Ray Lake and Wadsworth Savanna Forest Preserves to Hey and Associates, Inc.," and request its adoption.

PLANNING AND RESTORATION COMMITTEE:

Date: 6/27/16 Roll Call Vote: Ayes: _____ Nays: _____
 Voice Vote Majority Ayes; Nays: 0

FINANCE AND ADMINISTRATIVE COMMITTEE

Date: 6/30/16 Roll Call Vote: Ayes: _____ Nays: _____
 Voice Vote Majority Ayes; Nays: 0

**LAKE COUNTY FOREST PRESERVE DISTRICT
LAKE COUNTY, ILLINOIS**

**A RESOLUTION AWARDING A CONTRACT FOR
HYDROLOGIC AND AGRICULTURAL DRAIN TILE INVESTIGATION AT
CUBA MARSH, RAY LAKE AND WADSWORTH SAVANNA FOREST PRESERVES TO HEY
AND ASSOCIATES, INC.**

WHEREAS, the Lake County Forest Preserve District (the "District") desires to retain a firm to perform hydrologic analysis and design services and agricultural drain tile investigation services (the "Services"); and

WHEREAS, the Director of Natural Resources and the Purchasing Manager have determined that the Services require personal confidence; and

WHEREAS, the Purchasing Manager has solicited a proposal for the Services; and

WHEREAS, the District's staff, the Purchasing Manager, the Director of Natural Resources, the Planning and Restoration Committee, and the Finance and Administrative Committee have reviewed the proposal and recommend that the Board of Commissioners (i) find that the proposal submitted by Hey and Associates, Inc. be determined to be advantageous to the District; and (ii) award a contract for the Services to Hey and Associates, Inc. (the "Contract") in the amount of \$99,265.00 (the "Contract Price"); and

WHEREAS, the Board of Commissioners hereby finds that the proposal for the Services submitted by Hey and Associates, Inc. is the proposal that is the most advantageous to the District; and

WHEREAS, the District has a satisfactory relationship with Hey and Associates, Inc., for engineering services, including hydrologic analysis and design services and agricultural drain tile investigation services;

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Lake County Forest Preserve District, Lake County, Illinois THAT:

Section 1. Recitals. The recitals set forth above are incorporated as a part of this Resolution by this reference.

Section 2. Award of Contract. The Contract for the Services in the amount of the Contract Price, in substantially the form attached hereto, is hereby awarded to Hey and Associates, Inc.

Section 3. Execution of Contract. The Executive Director of the District is hereby authorized and directed to execute the Contract for the Services in substantially the form attached hereto in the amount of the Contract Price.

Section 4. Payments. The District Treasurer shall make payments under the Contract only pursuant to and in accordance with the Contract terms.

Section 5. Effective Date. This Resolution shall be in full force and effect from and after its passage and approval in the manner provided by law.

PASSED this ____ day of _____ 2016

AYES:

NAYS:

APPROVED this ____ day of _____ 2016

ATTEST:

Ann B. Maine, President
Lake County Forest Preserve District

Julie A. Gragnani, Secretary
Lake County Forest Preserve District

Exhibit _____

Lake County Forest Preserves

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CONTRACT BETWEEN

LAKE COUNTY FOREST PRESERVE DISTRICT

AND

HEY AND ASSOCIATES, INC.

FOR THE

HYDROLOGIC ANALYSIS WITH DESIGN SERVICES

AND AGRICULTURAL DRAIN TILE INVESTIGATION

AT

MULTIPLE FOREST PRESERVES

PROJECT NO.: 62805-138-841

TABLE OF CONTENTS

| | |
|---|---|
| ARTICLE I - THE SERVICES | 1 |
| 1.1 Performance of the Services | 1 |
| 1.2 Commencement and Completion Dates..... | 1 |
| 1.3 Required Submittals | 2 |
| 1.4 Review and Incorporation of Contract Provisions..... | 2 |
| 1.5 Financial and Technical Ability to Perform | 2 |
| 1.6 Time..... | 2 |
| 1.7 Consultant's Personnel and Sub-Consultants | 2 |
| 1.8 Owner's Responsibilities | 3 |
| 1.9 Owner's Right to Terminate or Suspend Services for Convenience..... | 3 |
| ARTICLE II - CHANGES AND DELAYS | 4 |
| 2.1 Changes | 4 |
| 2.2 Delays..... | 4 |
| 2.3 No Constructive Change Orders | 4 |
| ARTICLE III - CONSULTANT'S RESPONSIBILITY FOR DEFECTIVE SERVICES..... | 5 |
| 3.1 Representation of Compliance | 5 |
| 3.2 Corrections | 5 |
| 3.3 Risk of Loss | 5 |
| ARTICLE IV - INSURANCE; INDEMNIFICATION | 5 |
| 4.1 Insurance..... | 5 |
| 4.2 Indemnification | 6 |
| ARTICLE V - PAYMENT | 6 |
| 5.1 Contract Price..... | 6 |
| 5.2 Taxes, Benefits and Royalties | 6 |
| 5.3 Progress Payments | 6 |
| 5.4 Final Acceptance and Final Payment | 7 |
| 5.5 Deductions..... | 7 |
| 5.6 Accounting..... | 7 |
| ARTICLE VI - REMEDIES | 8 |
| 6.1 Owner's Remedies | 8 |
| 6.2 Terminations and Suspensions by Owner Deemed for Convenience | 8 |

HYDROLOGIC ANALYSIS WITH DESIGN SERVICES AND
AGRICULTURAL DRAIN TILE INVESTIGATION
MULTIPLE FOREST PRESERVES
PROJECT NO: 62805-138-841

ARTICLE VII - LEGAL RELATIONSHIPS AND REQUIREMENTS 8

7.1 Binding Effect 8

7.2 Relationship of the Parties 9

7.3 No Collusion 9

7.4 Assignment 9

7.5 Confidential Information 9

7.6 No Waiver 10

7.7 No Third Party Beneficiaries 10

7.8 Notices 10

7.9 Governing Laws 11

7.10 Changes in Laws 11

7.11 Compliance with Laws and Grants 11

7.12 Ownership of Documents 11

7.13 Time 11

7.14 Severability 11

7.15 Entire Agreement 12

7.16 Amendments 12

ATTACHMENT A – SUPPLEMENTAL SCHEDULE OF CONTRACT TERMS

ATTACHMENT B – CONSULTANT'S SCOPE OF WORK

ATTACHMENT C – KEY PERSONNEL

ATTACHMENT D – WORKSITE MAPS

**CONTRACT BETWEEN
LAKE COUNTY FOREST PRESERVE DISTRICT
AND
HEY AND ASSOCIATES, INC.
FOR THE
HYDROLOGIC ANALYSIS WITH DESIGN SERVICES AND
AGRICULTURAL DRAIN TILE INVESTIGATION
AT MULTIPLE FOREST PRESERVES**

In consideration of the agreements set forth below, the Lake County Forest Preserve District, a body corporate and politic and unit of local government organized and existing under the Downstate Forest Preserve District Act, 70 ILCS 805/001 et seq., 1899 West Winchester Road, Libertyville, Illinois 60048, ("Owner") and Hey and Associates, Inc. a(n) Illinois Corporation, 26575 West Commerce Drive, Suite 601, Volo, Illinois 60073, ("Consultant") make this Contract as of July 13, 2016 and hereby agree as follows:

ARTICLE I - THE SERVICES

1.1 Performance of the Services

Consultant shall, at its sole cost and expense, provide, perform, and complete all of the following professional services, all of which is referred to in this Agreement as the "Services":

- A. Professional Services. Provide, perform, and complete, in the manner described and specified in this Contract, all professional services necessary to accomplish the "Project," as defined in Attachment A, in accordance with the Scope of Services attached hereto as Attachment B.
- B. Approvals. Procure and furnish all approvals and authorizations specified in Attachment A.
- C. Insurance. Procure and furnish all required certificates and policies of insurance specified in Attachment A.
- D. Standard of Performance. Provide, perform, and complete all of the foregoing in full compliance with this Contract, in a professional manner, and in accordance with the standards of professional practice, care, and diligence in existence at the time of performance of the Services applicable to recognized and qualified consulting firms in the Chicago Metropolitan Area (the "Standard of Performance").

1.2 Commencement and Completion Dates

Consultant shall commence the Services not later than the "Commencement Date" set forth in Attachment A, and shall diligently and continuously prosecute the Services at such a rate as will allow the Services to be fully provided, performed and completed in full compliance with this Contract not later than the "Completion Date" or, if the Services are to be performed in separate phases, the "Completion Dates," set forth in Attachment A. The time of commencement, rate of progress, and time of completion are referred to in this Contract as the "Contract Time."

1.3 Required Submittals

A. Submittals Required. Consultant shall submit to Owner all reports, documents, data, and information required to be submitted by Consultant under this Contract ("Required Submittals").

B. Time of Submission and Owner's Review. All Required Submittals shall be provided to Owner no later than the time, if any, specified in Attachment A, or otherwise in this Contract. If no time for submission is specified for any Required Submittal, then that Submittal shall be submitted within a reasonable time in light of its purpose and, in all events, in sufficient time, in Owner's opinion, to permit Owner to review that Submittal same prior to the commencement of any part of the Services to which that Submittal may relate. Owner shall have the right to require such corrections as may be necessary to make any Required Submittal conform to this Contract. No Services related to any Required Submittal shall be performed by Consultant until Owner has completed review of such Required Submittal with no exception noted. Owner's review and approval of any Required Submittal shall not relieve Consultant of the entire responsibility for the performance of the Services in full compliance with, and as required by or pursuant to this Contract, and shall not be regarded as any assumption of risk or liability by Owner. The Consultant shall not be held liable for claims of delay caused by the Owner's failure to timely review and approve any Required Submittal.

C. Responsibility for Delay. Consultant shall be responsible for any delay in the Services resulting from Consultant's, or its Sub-consultant's, delay in providing Required Submittals conforming to this Contract.

1.4 Review and Incorporation of Contract Provisions

Consultant represents and declares that it has carefully reviewed, and fully understands, this Contract, including all of its Attachments, all of which are by this reference incorporated into and made a part of this Contract.

1.5 Financial and Technical Ability to Perform

Consultant represents and declares that it is financially solvent, and has the financial resources necessary, and has sufficient experience and competent, and has the necessary capital, facilities, organization, and staff necessary to provide, perform, and complete the Services in full compliance with, and as required by or pursuant to, this Contract.

1.6 Time

Consultant represents and declares that the Contract Time is sufficient time to permit completion of the Services in full compliance with, and as required by or pursuant to, this Contract for the Contract Price.

1.7 Consultant's Personnel and Sub-Consultants

A. Consultant's Personnel. Consultant shall provide all personnel necessary to complete the Services, including without limitation, the "Key Project Personnel" identified in Attachment C. Consultant shall provide to Owner telephone numbers at which the Key Personnel can be reached on a 24-hour basis. Consultant and Owner may, by mutual agreement, make changes and additions to the designations of Key Project Personnel. Consultant shall have no claim for a Change Order, for compensation in excess of the Contract Price, or for a delay or extension of the Contract Time as a result of any such termination, reassignment, resignation, or substitution of Key Project Personnel.

B. Approval and Use of Sub-Consultants. Consultant shall perform the Services with its own personnel and under the management, supervision, and control of its own organization unless otherwise approved by Owner in writing. All sub-consultants and subcontracts used by Consultant shall be acceptable to, and approved in advance by, Owner. Owner's approval of any sub-consultant or subcontract shall not relieve Consultant of full responsibility and liability for the provision, performance, and completion of the Services in full compliance with, and as required by or pursuant to, this Contract. All Services performed under any subcontract shall be subject to all of the provisions of this Contract in the same manner as if performed by employees of Consultant. Every reference in this Contract to "Consultant" shall be deemed also to refer to all sub-consultants of Consultant. Every subcontract shall include a provision binding the sub-consultant to all provisions of this Contract.

C. Removal of Personnel and Sub-Consultants. If any personnel or sub-consultant fails to perform the part of the Services undertaken by it in compliance with this Contract or in a manner reasonably satisfactory to Owner, Consultant, immediately upon notice from Owner, shall remove and replace such personnel or sub-consultant. Consultant shall have no claim for damages, for compensation in excess of the Contract Price, or for a delay or extension of the Contract Time as a result of any such removal or replacement.

1.8 Owner's Responsibilities

Owner shall, at its sole cost and expense: (i) designate in writing a person with authority to act as Owner's representative and on Owner's behalf with respect to the Services except those matters that may require approval of Owner's Board of Commissioners; (ii) provide to Consultant all criteria and full information as to Owner's requirements for the Project or work to which the Services relate, including Owner's objectives and constraints, schedule, space, capacity and performance requirements, and budgetary limitations relevant to the Project; (iii) provide to Consultant all existing studies, reports, and other available data relevant to the Project; (iv) arrange for access to and make all provisions for Consultant to enter upon public and private property as reasonably required for Consultant to perform the Services; (v) provide surveys describing physical characteristics, legal limitations, and utility locations for the Project and the services of geotechnical engineers or other consultants when such services are reasonably requested by Consultant and are necessary for the performance of the Services, and are not already provided for in this Contract; (vi) provide structural, mechanical, chemical, air and water pollution tests, test for hazardous materials, and other laboratory and environmental tests, inspections, and reports required by law to be provided by Owner in connection with the Project; (vii) review Required Submittals and other reports, documents, data, and information presented by Consultant as appropriate; (viii) except as otherwise provided in Attachment A, provide approvals from all governmental authorities having jurisdiction over the Project when such services are reasonably requested by Consultant; (ix) attend Project related meetings; and (x) give prompt written notice to Consultant whenever Owner observes or otherwise becomes aware of any development that affects the scope or timing of the Services, provided, however, that failure to give such notice shall not relieve Consultant of any of its responsibilities under this Contract.

1.9 Owner's Right to Terminate or Suspend Services for Convenience

A. Termination or Suspension for Convenience. Owner shall have the right, at any time and for its convenience, to terminate or suspend the Services in whole or in part at any time by written notice to Consultant. Every such notice shall state the extent and effective date of such termination or suspension. On such effective date, Consultant shall, as and to the extent directed, stop Services under this Contract, cease all placement of further orders or subcontracts, terminate or suspend Services under existing orders and subcontracts, and cancel any outstanding orders or subcontracts that may be canceled.

B. Payment for Completed Services. In the event of any termination pursuant to Subsection 1.9A above, Owner shall pay Consultant (i) such direct costs, including overhead, as Consultant shall have paid or incurred for all Services done in compliance with, and as required by or pursuant to, this Contract up to the effective date of termination; and (ii) such other costs pertaining to the Services, exclusive of overhead and profit, as Consultant may have reasonably and necessarily incurred as the result of such termination. Any such payment shall be offset by any prior payment or payments and shall be subject to Owner's rights, if any, to withhold and deduct as provided in this Contract.

ARTICLE II - CHANGES AND DELAYS

2.1 Changes

Owner shall have the right, by written order executed by Owner, to make changes to the timing or scope of the Services to be provided pursuant to this Contract (a "Services Change Order"). When a Change Order causes an increase or decrease in the amount of the Services, an equitable adjustment in the Contract Price or Contract Time may be made. No decrease in the amount of the Services caused by any Change Order shall entitle Consultant to make any claim for damages, anticipated profits, or other compensation. Consultant shall not undertake any change in the Services without receipt of an executed Change Order from Owner.

2.2 Delays

For any delay resulting from a cause that Consultant could not reasonably avoid or control, Consultant, upon timely written application, shall be entitled to issuance of a Change Order providing for an extension of the Contract Time for a period of time equal to the delay resulting from such unavoidable cause. No extension of the Contract Time shall be allowed for any other delay in completion of the Services.

2.3 No Constructive Change Orders

No claims for equitable adjustments in the Contract Price or Contract Time shall be made or allowed unless embodied in a Change Order. If Owner fails to issue a Change Order including or fully including an equitable adjustment in the Contract Price or Contract Time to which Consultant claims it is entitled or, if Consultant believes that any requirement, direction, instruction, interpretation, determination or decision of Owner entitles Consultant to an equitable adjustment in the Contract Price or Contract Time that has not been included or fully included in a Change Order, then Consultant shall submit to Owner a written request for the issuance of or revision of a Change Order including the equitable adjustment or the additional equitable adjustment in the Contract Price or Contract Time that Consultant claims has not been included or fully included in a Change Order. Such request shall be submitted before Consultant proceeds with any Work for which Consultant claims an equitable adjustment is due and shall, in all events, be submitted no later than two (2) business days after receipt of such Change Order or receipt of notice of such requirement, direction instruction, interpretation, determination or decision. Notwithstanding the submission of any such request, Consultant shall, unless otherwise directed by Owner within two (2) business days after receipt by Owner of such request, proceed without delay to perform the Work in compliance with the Change Order or as required, directed, instructed, interpreted or decided by Owner, and shall, pending a final resolution of the issue, keep a daily record of such Work. Unless Consultant submits such a request within two (2) business days after receipt of such Change Order or receipt of notice of such requirement, direction, instruction, interpretation, determination or decision, Consultant shall be conclusively deemed (i) to have agreed that such Change Order, requirement, direction, instruction, interpretation, determination or decision does not entitle Consultant to an equitable adjustment in the Contract Price or Contract Time; and (ii) to have waived all claims based on such Change Order, requirement, direction, instruction, interpretation, determination or decision.

ARTICLE III - CONSULTANT'S RESPONSIBILITY FOR DEFECTIVE SERVICES

3.1 Representation of Compliance

A. Scope of Representation. Consultant shall perform all Services in conformance with this Contract, free from defects and flaws in design, and in accordance with the Standard of Performance (the "Representation of Compliance").

B. Opinions of Cost. It is recognized that neither Consultant nor Owner has control over the costs of labor, material, equipment or services furnished by others or over competitive bidding, market or negotiating conditions, or construction contractors' methods of determining their prices. Accordingly, any opinions of probable Project costs or construction costs provided for herein are estimates only, made on the basis of Consultant's experience and qualifications and represent Consultant's best judgment as an experienced and qualified professional, familiar with the industry. Consultant does not guarantee that proposals, bids or actual Project costs or construction costs will not vary from opinions of probable cost prepared by Consultant.

3.2 Corrections

Consultant shall be responsible for the quality, technical accuracy, completeness and coordination of all Services under this Contract. Consultant shall correct and remedy all of its errors, omissions, and negligent acts related to the Services, promptly and without charge.

3.3 Risk of Loss

The Services shall be provided, performed, and completed at the risk and cost of Consultant. Consultant shall be responsible for any and all damages to property or persons as a result of Consultant's errors, omissions, or negligent acts and for any losses or costs to repair or remedy any work undertaken by Owner based on the Services as a result of any such errors, omissions, or negligent acts. Notwithstanding any other provision of this Contract, Consultant's obligations under this Section 3.3 shall exist without regard to, and shall not be construed to be waived by, the availability or unavailability of any insurance, either of Owner or Consultant, to indemnify, hold harmless, or reimburse Consultant for such damages, losses, or costs.

ARTICLE IV - INSURANCE; INDEMNIFICATION

4.1 Insurance

Contemporaneous with Consultant's execution of this Contract, Consultant shall provide certificates and policies of insurance evidencing at least the minimum insurance coverage and limits set forth in Attachment A. For good cause shown, Owner may extend the time for submission of the required policies of insurance upon such terms, and with such assurances of complete and prompt performance, as Owner may impose in the exercise of its sole discretion. Such policies shall be in a form reasonably acceptable to Owner and from companies with a general rating of A-, and a financial size category of Class V or better, in Best's Insurance Guide and otherwise reasonably acceptable to Owner. Such insurance shall provide that no change to or cancellation of any insurance, nor any reduction in limits or coverage or other modifications affecting this Agreement, shall become effective until the expiration of thirty (30) days after written notice thereof shall have been given by the insurance company to Owner. Consultant shall, at all times while providing, performing, or completing the Services, including without limitation at all times while providing corrective Services pursuant to Section 3.2 of this Contract, maintain and keep in force, at Consultant's expense, at least the minimum insurance coverage and limits set forth in Attachment A.

4.2 Indemnification

Consultant, without regard to the availability or unavailability of any insurance, either of Owner or Consultant, shall, to the fullest extent permitted by law, indemnify, save harmless, and reimburse Owner against any and all lawsuits, claims, demands, damages, liabilities, losses, and expenses, including reasonable attorneys' fees, that may arise or be alleged to have arisen out of or in connection with Consultant's negligent acts, errors, or omissions, except only to the extent caused by the negligence of Owner.

ARTICLE V - PAYMENT

5.1 Contract Price

Owner shall pay to Consultant, in accordance with and subject to the terms and conditions set forth in this Article V and Attachment A, and Consultant shall accept in full satisfaction for providing, performing, and completing the Services, the amount or amounts set forth in Attachment A ("Contract Price"), subject to any additions, deductions, or withholdings provided for in this Contract.

5.2 Taxes, Benefits and Royalties

The Contract Price includes applicable federal, state, and local taxes of every kind and nature applicable to the Services as well as all taxes, contributions, and premiums for unemployment insurance, old age or retirement benefits, pensions, annuities, or other similar benefits and all costs, royalties, and fees arising from the use on or the incorporation into the Services of patented equipment, materials, supplies, tools, appliances, devices, processes, or inventions. Consultant waives and releases any claim against Owner arising from the payment of any such tax, contribution, premium, benefit, cost, royalty, or fee.

5.3 Progress Payments

A. Payment in Installments. The Contract Price shall be paid in installments in the manner set forth in Attachment A ("Progress Payments").

B. Pay Requests. Consultant shall, as a condition precedent to its right to receive each Progress Payment, submit to Owner an invoice accompanied by such receipts, vouchers, and other documents as may be necessary to reasonably establish Consultant's prior payment for all labor, material, and other things covered by the invoice and the absence of any lien or other interest of any party in regard to the Services performed under this Contract. In addition to the foregoing, such invoice shall include (i) employee classifications, rates per hour, and hours worked by each classification, and, if the Services are to be performed in separate phases, for each phase; (ii) total amount billed in the current period and total amount billed to date, and, if the Services are to be performed in separate phases, for each phase; (iii) the estimated percent completion, and, if the Services are to be performed in separate phases, for each phase; and (iv) Consultant's certification that all prior Progress Payments have been properly applied to the Services with respect to which they were paid. Owner may, by written notice to Consultant, designate a specific day of each month on or before which pay requests must be submitted.

5.4 Final Acceptance and Final Payment

The Services or, if the Services are to be performed in separate phases, each phase of the Services, shall be considered complete on the date of final written acceptance by Owner of the Services or each phase of the Services, as the case may be, which acceptance shall not be unreasonably withheld or delayed. The Services or each phase of the Services, as the case may be, shall be deemed accepted by Owner if not objected to in writing within sixty (60) days after submission by Consultant of the Services or such phase of Services for final acceptance and payment plus, if applicable, such additional time as may be considered reasonable for obtaining approval of governmental authorities having jurisdiction to approve the Services, or phase of Services, as the case may be. Within thirty (30) days after final acceptance, Owner shall pay to Consultant the balance of the Contract Price or, if the Services are to be performed in separate phases, the balance of that portion of the Contract Price with respect to such phase of the Services, after deducting therefrom charges, if any, against Consultant as provided for in this Contract ("Final Payment"). The acceptance by Consultant of Final Payment with respect to the Services or a particular phase of Services, as the case may be, shall operate as a full and complete release of Owner of and from any and all lawsuits, claims, or demands for further payment of any kind for the Services or, if the Services are performed in separate phases, for that phase of the Services.

5.5 Deductions

A. Owner's Right to Withhold. Notwithstanding any other provision of this Contract and without prejudice to any of Owner's other rights or remedies, Owner shall have the right at any time or times, whether before or after approval of any pay request, to deduct and withhold from any Progress or Final Payment that may be or become due under this Contract, such amount as may reasonably appear necessary to compensate Owner for any actual or prospective loss due to: (i) Services that are defective, damaged, flawed, unsuitable, nonconforming or incomplete; (ii) damage for which Consultant is liable under this contract; (iii) liens or claims of lien, regardless of merit; (iv) claims of Sub-consultants, suppliers or other persons, regardless of merit; (v) delay in the progress or completion of the Services; (vi) inability of Consultant to complete the Services; (vii) failure of Consultant to perform any of its obligations under this Contract; (viii) any other failure of Consultant to perform any of its obligations under this Contract; (ix) the cost to Owner including attorneys' fees and administrative costs of correcting any of the aforesaid matters or exercising any one or more of Owner's remedies set forth in Section 6.1 of this Contract.

B. Use of Withheld Funds. Owner shall be entitled to retain any and all amounts withheld pursuant to Subsection 5.5A above until Consultant shall have either performed the obligations in question or furnished security for such performance satisfactory to Owner. Owner shall be entitled to apply any money withheld or any other money due Consultant under this Contract to reimburse itself for any and all costs, expenses, losses, damages, liabilities, suits, judgments, awards, attorneys' fees and administrative expenses incurred, suffered or sustained by Owner and chargeable to Consultant under this Contract.

5.6 Accounting

Consultant shall keep accounts, books, and other records of all its billable charges and costs incurred in performing the Services in accordance with generally accepted accounting practices, consistently applied, and in such manner as to permit verification of all entries. Consultant shall make all such material available for inspection by Owner, at the office of Consultant during normal business hours during this Contract and for a period of three years after termination of this Contract. Copies of such material shall be furnished, at Owner's expense, upon request.

ARTICLE VI - REMEDIES

6.1 Owner's Remedies

If it should appear at any time prior to Final Payment that Consultant has failed or refused to prosecute, or has delayed in the prosecution of the Services with diligence at a rate that assures completion of the Services in full compliance with the requirements of this contract, or has attempted to assign this Contract or Consultant's rights under this contract, either in whole or in part, or has falsely made any representation or warranty in this Contract, or has otherwise failed, refused or delayed to perform or satisfy any other requirement of this Contract, or has failed to pay its debts as they come due ("Event of Default"), and has failed to cure any such Event of Default within five (5) business days after Consultant's receipt of written notice of such Event of Default, Owner shall have the right, at its election and without prejudice to any other remedies provided by law or equity, to pursue any one or more of the following remedies:

- A. Owner may require Consultant, within such reasonable time as may be fixed by Owner, to complete or correct all or any part of the Services that are defective, damaged, flawed, unsuitable, nonconforming or incomplete to accelerate all or any part of the Services, and to take any or all other action necessary to bring Consultant and the Services into strict compliance with this Contract.
- B. Owner may accept the defective, damaged, flawed, unsuitable, nonconforming, incomplete or dilatory Services as part thereof and make an equitable reduction in the Contract Price.
- C. Owner may terminate this Contract without liability for further payment of amounts due or to become due under this Contract.
- D. Owner may withhold from any Progress Payment or Final Payment, whether or not previously approved, or may recover from Consultant any and all costs including attorneys' fees and administrative expenses incurred by Owner as the result of any Event of Default or as a result of actions taken by Owner in response to any Event of Default.
- E. Owner may recover any damages suffered by Owner.

6.2 Terminations and Suspensions by Owner Deemed for Convenience

Any termination or suspension by Owner of Consultant's rights under this Contract for an alleged Event of Default that is ultimately held unjustified shall automatically be deemed to be a termination or suspension for the convenience of Owner under Section 1.9 of this Contract.

ARTICLE VII - LEGAL RELATIONSHIPS AND REQUIREMENTS

7.1 Binding Effect

This Contract shall be binding on Owner and Consultant and on their respective heirs, executors, administrators, personal representatives, and permitted successors and assigns. Every reference in this Contract to a party shall also be deemed to be a reference to the authorized officers, employees, agents, and representatives of such party.

7.2 Relationship of the Parties

Consultant shall act as an independent contractor in providing and performing the Services. Nothing in, nor done pursuant to, this Contract shall be construed (i) to create the relationship of principal and agent, partners, or joint ventures between Owner and Consultant or (ii) to create any relationship between Owner and any sub-consultant of Consultant.

7.3 No Collusion

Consultant hereby represents and certifies that Consultant is not barred from contracting with a unit of state or local government as a result of (i) a delinquency in the payment of any tax administered by the Illinois Department of Revenue unless Consultant is contesting, in accordance with the procedures established by the appropriate revenue Act, its liability for the tax or the amount of the tax, as set forth in 65 ILCS 5/11-42.1-1; or (ii) a violation of either Section 33E-3 or Section 33E-4 of Article 33E of the Criminal Code of 1961, 720 ILCS 5/33E-1 et seq. Consultant hereby represents that the only persons, firms, or corporations interested in this Contract as principals are those disclosed to Owner prior to the execution of this Contract, and that this Contract is made without collusion with any other person, firm, or corporation. If at any time it shall be found that Consultant has, in procuring this Contract, colluded with any other person, firm, or corporation, then Consultant shall be liable to Owner for all loss or damage that Owner may suffer thereby, and this Contract shall, at Owner's option, be null and void.

Consultant hereby represents and warrants that neither Consultant nor any person affiliated with Consultant or that has an economic interest in Consultant or that has or will have an interest in the Work or will participate, in any manner whatsoever, in the Work is acting, directly or indirectly, for or on behalf of any person, group, entity or nation named by the United States Treasury Department as a Specially Designated National and Blocked Person, or for or on behalf of any person, group, entity or nation designated in Presidential Executive Order 13224 as a person who commits, threatens to commit, or supports terrorism, and neither Consultant nor any person affiliated with Consultant or that has an economic interest in Consultant or that has or will have an interest in the Work or will participate, in any manner whatsoever, in the Work is, directly or indirectly, engaged in, or facilitating, the Work on behalf of any such person, group, entity or nation.

7.4 Assignment

Consultant shall not (i) assign this Contract in whole or in part, (ii) assign any of Consultant's rights or obligations under this Contract, or (iii) assign any payment due or to become due under this Contract without the prior express written approval of Owner, which approval may be withheld in the sole and unfettered discretion of Owner; provided, however, that Owner's prior written approval shall not be required for assignments of accounts, as defined in the Illinois Commercial Code, if to do so would violate Section 9-318 of the Illinois Commercial Code, 810 ILCS 5/9-318. Owner may assign this Contract, in whole or in part, or any or all of its rights or obligations under this Contract, without the consent of Consultant.

7.5 Confidential Information

All information supplied by Owner to Consultant for or in connection with this Contract or the Services shall be held confidential by Consultant and shall not, without the prior express written consent of Owner, be used for any purpose other than performance of the Services.

7.6 No Waiver

No examination, inspection, investigation, test, measurement, review, determination, decision, certificate or approval by Owner, nor any order by Owner for the payment of money, nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the Services by Owner, nor any extension of time granted by Owner, nor any delay by Owner in exercising any right under this Contract, nor any other act or omission of Owner shall constitute or be deemed to be an acceptance of any defective, damaged, flawed, unsuitable, nonconforming or incomplete Services, nor operate to waive or otherwise diminish the effect of any warranty or representation made by Consultant or of any requirement or provision of this Contract or of any remedy, power or right of Owner.

7.7 No Third Party Beneficiaries

No claim as a third party beneficiary under this Contract by any person, firm, or corporation (other than Owner and Consultant) shall be made or be valid against Owner or Consultant.

7.8 Notices

All notices required or permitted to be given under this Contract shall be in writing and shall be deemed received by the addressee thereof when delivered in person on a business day at the address set forth below or on the third business day after being deposited in the United States mail, for delivery at the address set forth below by properly addressed, postage prepaid, certified or registered mail, return receipt requested.

Notices and communications to Owner shall be addressed to, and delivered at, the following address:

Lake County Forest Preserve District
1899 West Winchester Road
Libertyville, Illinois 60048
Attention: Matt Ueltzen

Notices and communications to Consultant shall be addressed to and delivered at the following address:

Hey and Associates, Inc.
26575 W. Commerce Dr. Suite 601
Volo, Illinois 60073
Attention: Kevin Kleinjan

The foregoing shall not be deemed to preclude the use of other non-oral means of notification or to invalidate any notice properly given by any such other non-oral means.

By notice complying with the requirements of this Section 7.8, Owner and Consultant each shall have the right to change the address or addressee or both for all future notices to it, but no notice of a change of address or addressee shall be effective until actually received.

7.9 Governing Laws

This Contract and the rights of Owner and Consultant under this Contract shall be interpreted according to the internal laws, but not the conflict of laws rules, of the State of Illinois.

7.10 Changes in Laws

Unless otherwise explicitly provided in this Contract, any reference to laws shall include such laws as they may be amended or modified from time to time.

7.11 Compliance with Laws and Grants

Consultant shall perform, or cause its Sub-consultants to perform, the Services in accordance with all required governmental permits, licenses, or other approvals and authorizations, and with applicable statutes, ordinances, rules, and regulations. This requirement includes, but is not limited to, compliance with the Fair Labor Standards Act; any statutes regarding qualification to do business; any statutes prohibiting discrimination because of, or requiring affirmative action based on, race, creed, color, national origin, age, sex, or other prohibited classification, including, without limitation, the Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101 et seq., and the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq. Consultant shall also comply with applicable conditions of any federal, state, or local grant received by Owner or Consultant with respect to this Contract or the Services.

Consultant shall be liable for any fines or civil penalties that may be imposed or incurred by a governmental agency with jurisdiction over the Services as a result of Consultant's or its sub-consultants' improper performance of, or failure to properly perform, the Services or any part thereof.

Every provision of law required by law to be inserted into this Contract shall be deemed to be inserted herein.

7.12 Ownership of Documents

Consultant and Consultant's sub-consultants shall be deemed the original authors and owners respectively of materials produced pursuant to this Contract and shall retain all common law, statutory and other reserved rights, including copyrights. Consultant hereby grants and conveys to Owner perpetual, irrevocable non-exclusive rights and license to use all Required Submittals and other materials produced under this Contract for District purposes and no other purposes. The Owner agrees to defend and hold the Consultant and the Consultant's sub-consultants harmless from any causes of action, claims, losses, damages and expenses of any nature whatsoever, including reasonable attorney's fees, resulting from any unauthorized re-use of the Consultant's and Consultant's sub-consultants' materials.

7.13 Time

The Contract Time is of the essence of this Contract. Except where otherwise stated, references in this Contract to days shall be construed to refer to calendar days.

7.14 Severability

The provisions of this Contract shall be interpreted when possible to sustain their legality and enforceability as a whole. In the event any provision of this Contract shall be held invalid, illegal, or unenforceable by a court of competent jurisdiction, in whole or in part, neither the validity of the remaining part of such provision, nor the validity of any other provisions of this Contract shall be in any way affected thereby.

7.15 Entire Agreement

This Contract sets forth the entire agreement of Owner and Consultant with respect to the accomplishment of the Services and the payment of the Contract Price therefore, and there are no other understandings or agreements, oral or written, between Owner and Consultant with respect to the Services and the compensation therefore.

7.16 Amendments

No modification, addition, deletion, revision, alteration, or other change to this Contract shall be effective unless and until such change is reduced to writing and executed and delivered by Owner and Consultant.

IN WITNESS WHEREOF, Owner and Consultant have caused this Contract to be executed as of the day and year first written above.

(SEAL)

Attest/Witness

LAKE COUNTY FOREST PRESERVE DISTRICT

By: _____

Julie A. Gragnani
Title: Secretary

Alex Ty Kovach
Title: Executive Director

Attest/Witness

HEY AND ASSOCIATES, INC.

By: _____

By: _____

Thomas L. Polzin

Title: _____

Title: President _____

ATTACHMENT A - SUPPLEMENTAL SCHEDULE OF CONTRACT TERMS

1. Project: This project is divided into two projects, A & B with different project scopes, the first (A) for hydrologic analysis and design services, the second (B) for agricultural drain tile investigation services.

PROJECT A: HYDROLOGIC ANALYSIS AND DESIGN SERVICES

Provide land surveying, data collection, agency coordination, design, engineering, hydrologic/hydraulic analysis, preparation of concept plans, and permit documents for the Hydrologic Analysis and Design Services – Phase A at the Cuba Marsh Forest Preserve site. This project includes: analysis of existing drainage conditions; development and refinement of conceptual modifications to restore hydrology to prairie and wetland habitats with particular emphasis on the creation and enhancement of hemi-marsh conditions; and final engineering and permitting of select modifications. In general, solutions will be developed to:

- remove, abandon and manipulate current drain tile systems to minimize loss of hydrology,
- reconfigure, enhance and stabilize overland flow paths,
- replace functionality of an existing failed water level control structure (WCS),
- maintain and improve critical drainage systems and culverts to protect on-site and off-site concerns,
- reconfigure necessary culvert and overland flow paths to maintain suitable conveyance,
- research and design additional WCS measures to improve management of hydrology
- submit for any/all permits from the Lake County Stormwater Management Commission (LCSMC), United States Army Corps of Engineers (USACE), and others, as necessary for project implementation.

The work will include pertinent portions of the basin areas depicted on the overall project scoping exhibit provided by the Lake County Forest Preserve District (Owner). A brief description of the Basins and general project goals and considerations for each follows:

A. Basin A: NOT-IN-PROJECT

- Activities will not occur within Basin A and it is excluded from this scope of services.

B. Basin B: NOT-IN-PROJECT

- Activities will not occur within Basin B and it is excluded from this scope of services.

C. **Basin C:**

- Basin C is the downstream receiving area for all of the other Basins that are included within the project.
- Basin C discharges to the west at the railroad.
- Basin C receives direct inputs from Basin E and Basin D.
- Modifications are not proposed within Basin C.
- The channel between Basin C and Basin E will be examined to determine if channel erosion is occurring.
- Wetland boundary location and site specific topography will be collected if necessary to support the design and permitting of proposed improvements described in Basin E.
- Analysis will be performed to ensure discharge values do not increase into Basin C resulting from proposed improvements and to protect off-site interests.

D. **Basin D: NOT-IN-PROJECT**

E. **Basin E:**

- Basin E discharges to Basin C.
- Basin E receives discharge from Basin F.
- Potential improvements include:
 - 1) installing a berm and WCS at the downstream discharge point from Basin E to facilitate water level management
 - 2) stabilizing eroded channel sections
 - 3) establishment of hemi-marsh
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to ensure discharges values do not increase into Basin C resulting from proposed improvements and to protect off-site interests.

F. **Basin F:**

- Basin F discharges to Basin E.
- Basin F receives discharge from Basin G and Ela Road.
- Potential improvements include:
 - 1) Replacing the berm and WCS at the downstream discharge point from Basin F to facilitate water level management
 - 2) removing and abandoning drain tiles with minor grading and/or a structure on the tile near Ela Road
 - 3) establishment of hemi-marsh
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to protect off-site interests.

G. Basin G:

- Basin G discharges to Basin F.
- Basin G receives discharge from Cuba Road.
- Potential improvements include:
 - 1) installing a WCS and/or new culvert at the downstream discharge point from Basin G at Ela Road to facilitate water level management
 - 2) removing and abandoning drain tiles with minor grading and/or a structure on the tile near the connection to properties NE of the basin.
 - 3) establishment of hemi-marsh
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to protect off-site interests.

H. Basin H: NOT-IN-PROJECT

I. Basin I: NOT-IN-PROJECT

J. Basin J: NOT-IN-PROJECT

K. Basin K: NOT-IN-PROJECT

L. Basin L:

- Basin L is not depicted on the Owner provided exhibit and has been added by Consultant. Basin L is located adjacent to Basin G, Basin I and Basin J.
- Basin L discharges to Ela Road.
- Potential improvements include:
 - 1) removing and abandoning drain tile and improving the surface connection to the existing drainage structure the tile connects to
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to protect off-site interests.

The Services include, but are not limited to, all of the Services provided in Consultant's detailed Scope of Work. See Attachment B.

PROJECT B: DRAIN TILE INVESTIGATION SERVICES

Provide drain tile investigation and mapping services at Ray Lake (White and Diebold acquisitions) and Wadsworth Savanna Forest Preserves. Services include, but are not limited to, all of the Services provided in Consultant's detailed Scope of Work. See Attachment B.

2. Approvals and Authorizations:

It is anticipated the Consultant will coordinate with the following agencies during design, apply for permits for select proposed project components and provide a memorandum outlining anticipated required future permitting needs for the proposed projects that are not being permitted with this project:

- A. USACE for Regional Permit RP5 – Wetland and Stream Restoration and Enhancement
- B. Illinois Department of Natural Resources (IDNR) for Threatened and Endangered Species consultation and Interagency Wetland Policy Act
- C. IDNR Office of Water Resources (OWR) for permitting of any work within the floodway of Flint Creek, if required (work in floodway is not anticipated)
- D. Federally listed Threatened and Endangered Species and Critical Habitat Review (Required by Lake County Watershed Development Ordinance (WDO) and if U. S. USACE permit needed)
- E. LCSMC for Preliminary Wetland Jurisdictional Determination, Watershed Development Permit (WDP), Floodway, and Letter of No Impact (LONI) if no USACE permit is needed
- F. Illinois Environmental Protection Agency (IEPA) for NPDES
- G. Illinois Historic Preservation Agency (IHPA) for cultural and historical resources

3. Commencement Date:

July 27, 2016

4. Completion Date:

- A. **June 30, 2017**, plus extensions, if any, authorized by a Change Order issued pursuant to Section 2.1 of this Contract, for the completion of the following:
 - 1) Land Surveying
 - 2) Wetland Studies and initial meetings with permit agencies
- B. **July 15, 2017**, plus extensions, if any, authorized by a Change Order issued pursuant to Section 2.1 of this Contract, for the completion of the following:
 - 1) Hydrology and Hydraulics Studies and Design
 - 2) Draft submittal of all plan sheets (90% completion).
- C. **July 30, 2017**, plus extensions, if any, authorized by a Change Order issued pursuant to Section 2.1 of this Contract, for submittals to all permitting agencies.

5. Insurance Coverage:

A. Worker's Compensation and Employer's Liability with limits not less than:

- (1) Worker's Compensation: Statutory
- (2) Employer's Liability:
 - a. \$1,000,000.00 injury-per-occurrence
 - b. \$1,000,000.00 disease-per-employee
 - c. \$1,000,000.00 disease-policy limit

Such insurance shall evidence that coverage applies in the State of Illinois.

B. Comprehensive Motor Vehicle Liability with a combined single limit of liability for bodily injury and property damage of not less than \$1,000,000.00 for vehicles owned, non-owned or rented. All employees shall be included as insured's.

C. Comprehensive General Liability with coverage written on an "occurrence" basis and with limits no less than:

- (1) General Aggregate: \$2,000,000.00
- (2) Bodily Injury: \$2,000,000.00 per person
\$2,000,000.00 per occurrence
- (3) Property Damage: \$2,000,000.00 per person
\$2,000,000.00 aggregate

Coverages shall include:

- ❖ Broad Form Property Damage Endorsement
- ❖ Blanket Contractual Liability (must expressly cover the indemnity provisions of the Contract)

D. Professional Liability Insurance with a limit of liability of not less than \$1,000,000.00 per claim and aggregate, and covering Consultant against all sums that Consultant may be obligated to pay on account of any liability arising out of the Contract.

E. Umbrella Policy. The required coverages may be in any combination of primary, excess and umbrella policies. Any excess or umbrella policy must provide excess coverage of underlying insurance on a following-form basis such that when any loss covered by the primary policy exceeds the limits under the primary policy, the excess or umbrella policy becomes effective to cover such loss.

F. Owner as Additional Insured. Owner shall be named as an Additional Insured on all policies except for:

- ❖ Worker's Compensation Policy

G. Other Parties as Additional Insured. In addition to Owner, the following parties shall be named as Additional Insured on the following policies:

| Additional Insured | Policy or Policies |
|--------------------|--------------------|
| <u>NA</u> | <u>NA</u> |

HYDROLOGIC ANALYSIS WITH DESIGN SERVICES AND
 AGRICULTURAL DRAIN TILE INVESTIGATION
 MULTIPLE FOREST PRESERVES
 PROJECT NO: 62805-138-841

6. Contract Price:

Schedule of Prices - Lump Sum

For providing, performing and completing all Services, the total Contract Price of:

Ninety Nine Thousand Two Hundred Sixty Five Dollars and Zero Cents
 (in writing)

\$99,265. Dollars and 00 Cents
 (in figures)

Lump sum amount includes all travel, living and direct project expenses including printing, postage and handling. There shall be no additional costs.

For providing, performing and completing each component of Services, the following Breakdown Schedule amount, set forth opposite each component:

PROJECT A: HYDRO ANALYSIS AND DESIGN SERVICES

| | | |
|--------------|---|------------------|
| A. | Project Administration and Reimbursables | \$ 14,435 |
| B. | Land Surveying (supplement Lake County 1-foot) & Bathymetry | \$ 10,835 |
| C. | Wetland Assessment | \$ 4,000 |
| D. | Geotechnical Studies and Structural Engineering | \$ 5,000 |
| E. | Drainage Improvement Design Concepts and Analysis | \$ 14,210 |
| F. | Drainage Improvement Engineering | \$ 11,425 |
| G. | Hydrology and Hydraulics Studies and Design | \$ 20,250 |
| H. | Permits / Approvals | \$ 6,350 |
| TOTAL | | \$ 86,505 |

PROJECT B: DRAIN TILE INVESTIGATION SERVICES

| | | |
|--------------|---|------------------|
| A. | Ray Lake Forest Preserve Parcels | \$ 5,930 |
| B. | Wadsworth Savanna Forest Preserve Parcels | \$ 6,830 |
| TOTAL | | \$ 12,760 |

PROJECT A & B: TOTALS

| | | |
|--------------|--|------------------|
| TOTAL | | \$ 99,265 |
|--------------|--|------------------|

7. Payments:

Regardless of whether the Contract Price is based upon hourly rates or a lump sum, Consultant shall, not later than ten (10) days after execution of the Contract and before submitting its first pay request, submit to Owner a schedule showing the value of each component part or phase of the Services in form and with substantiating data acceptable to Owner ("Breakdown Schedule"). The sum of the items listed in the Breakdown Schedule shall equal the lump sum Contract Price or the not to exceed Contract Price, as the case may be. An unbalanced Breakdown Schedule providing for overpayment of Consultant on component parts or phases of the Services to be performed first will not be accepted. The Breakdown Schedule shall be revised and resubmitted until acceptable to Owner. No payment shall be made for Services until Consultant has submitted, and Owner has approved, an acceptable Breakdown Schedule. When a component or phase of the Services, as identified in the Breakdown Schedule, is complete, Owner will pay Consultant the value of such component or phase as provided in the Breakdown Schedule; however, Owner shall not be required to make payments more frequently than once per month.

All pay requests from Consultant shall be made using the pay request format supplied by Owner.

Owner may require that the approved Breakdown Schedule be revised based on developments occurring during the provision and performance of the Services. If Consultant fails to submit a revised Breakdown Schedule that is acceptable to Owner, Owner shall have the right either to suspend Progress and Final Payments for Services or to make such payments based on Owner's determination of the value of the Services completed.

ATTACHMENT B
CONSULTANT'S SCOPE OF WORK

PROJECT A: HYDROLOGIC ANALYSIS AND DESIGN SERVICES

1. **PROJECT DESCRIPTION**

Provide land surveying, data collection, agency coordination, design, engineering, hydrologic/hydraulic analysis, preparation of concept plans, and permit documents for the Hydrologic Analysis and Design Services – Phase A at the Cuba Marsh Forest Preserve site. This project includes: analysis of existing drainage conditions; development and refinement of conceptual modifications to restore hydrology to prairie and wetland habitats with particular emphasis on the creation and enhancement of hemi-marsh conditions; final engineering and permitting of select modifications. In general, solutions will be developed to:

- remove, abandon and manipulate current drain tile systems to minimize loss of hydrology,
- reconfigure, enhance and stabilize overland flow paths,
- replace functionality of an existing failed water level control structure (WCS),
- maintain and improve critical drainage systems and culverts to protect on-site and off-site concerns,
- reconfigure necessary culvert and overland flow paths to maintain suitable conveyance,
- research and design additional WCS measures to improve management of hydrology
- submit for any/all permits from the LCSMC, USACE, and others, as necessary for project implementation.

The work will include pertinent portions of the basin areas depicted on the overall project scoping exhibit provided by the Owner. A brief description of the Basins and general project goals and considerations for each follows:

A. **Basin A: NOT-IN-PROJECT**

- Activities will not occur within Basin A and it is excluded from this scope.

B. **Basin B: NOT-IN-PROJECT**

- Activities will not occur within Basin B and it is excluded from this scope.

C. **Basin C:**

- Basin C is the downstream receiving area for all of the other Basins that are included within the project.
- Basin C discharges to the west at the railroad.
- Basin C receives direct inputs from Basin E and Basin D.
- Modifications are not proposed within Basin C.
- The channel between Basin C and Basin E will be examined to determine if channel erosion is occurring.
- Wetland boundary location and site specific topography will be collected if necessary to support the design and permitting of proposed improvements described in Basin E.
- Analysis will be performed to ensure discharge values do not increase into Basin C resulting from proposed improvements and to protect off-site interests.

D. **Basin D: NOT-IN-PROJECT**

E. **Basin E:**

- Basin E discharges to Basin C.
- Basin E receives discharge from Basin F.
- Potential improvements include:
 - 1) installing a berm and WCS at the downstream discharge point from Basin E to facilitate water level management
 - 2) stabilizing eroded channel sections
 - 3) establishment of hemi-marsh
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to ensure discharges values do not increase into Basin C resulting from proposed improvements and to protect off-site interests.

F. **Basin F:**

- Basin F discharges to Basin E.
- Basin F receives discharge from Basin G and Ela Road.
- Potential improvements include:
 - 1) replacing the berm and WCS at the downstream discharge point from Basin F to facilitate water level management
 - 2) removing and abandoning drain tiles with minor grading and/or a structure on the tile near Ela Road
 - 3) establishment of hemi-marsh
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to protect off-site interests.

G. **Basin G:**

- Basin G discharges to Basin F.
- Basin G receives discharge from Cuba Road.
- Potential improvements include:
 - 1) installing a WCS and/or new culvert at the downstream discharge point from Basin G at Ela Road to facilitate water level management
 - 2) removing and abandoning drain tiles with minor grading and/or a structure on the tile near the connection to properties NE of the basin.
 - 3) establishment of hemi-marsh
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to protect off-site interests.

H. **Basin H: NOT-IN-PROJECT**

I. **Basin I: NOT-IN-PROJECT**

J. **Basin J: NOT-IN-PROJECT**

K. **Basin K: NOT-IN-PROJECT**

L. **Basin L:**

- Basin L is not depicted on the Owner provided exhibit and has been added by Consultant. Basin L is located adjacent to Basin G, Basin I and Basin J.
- Basin L discharges to Ela Road.
- Potential improvements include:
 - 1) removing and abandoning drain tile and improving the surface connection to the existing drainage structure the tile connects to
- Wetland boundary location and site specific topography will be collected to support the design and permitting of proposed improvements.
- Analysis will be performed to protect off-site interests.

2. **CONSULTANT'S RESPONSIBILITIES**

A. Project Administration and General Requirements

- 1) **Meetings:** Meet with Owner's staff to initiate the project, review existing documents and aerial photography and discuss project goals and design intent. Attend other meetings as necessary to gather and/or present information, review Consultant's progress and discuss project issues.
- 2) **Site Inspection:** Inspect the entire site to become familiar with all aspects of the work area, compare existing conditions with the proposed design intent, and to identify any special or unusual constraints. Consultant shall re-examine the site as often as needed to properly perform the responsibilities of this Contract.
- 3) **Data Collection:** Collect and/or review data and documents relevant to the project, including those related to utilities, wetlands, soils, legal issues, land uses and zoning, etc.
- 4) **Coordination:** Conduct preliminary and ongoing meetings as needed with all relevant approval agencies, stakeholders and consultants and act as the prime coordinator for the project.
- 5) **Administrative Costs:** Administrative costs which are known to be typical to projects of this nature by industry standards or are specified in this Contract, commonly known as Reimbursable Expenses or Direct Costs, shall be included in Project Administration and shall not be billed separately. These costs include local travel expenses, telecommunication and internet-based service fees, postage and shipping (including overnight or rush shipping), graphics services, plotting, copying (including color copying), plan and drawing reproduction and presentation preparation. The Owner shall be responsible for reproducing the contract documents distributed to bidders. In the case of any non-typical administrative costs that may be required, the Consultant shall notify the Owner of the nature and cost of those expenses for review and approval by the Owner prior to incurring said costs.
- 6) **CAD Standards:** All design and engineering shall be completed in a format readable by MicroStation V8 or V8i. All design and engineering information shall be located in separate files by discipline as specified in the provided standards. All vector information in the files shall be current and pertinent to the design.

- 7) Permit Plan Set: The drawings shall illustrate all information required to permit the project. All land survey elements shall be included on the appropriate sheets. Upon the completion of this contract, the consultant shall deliver to the Owner the complete plan set and contract documents in both MicroStation readable format and as a PDF file with all sheets formatted per the final "For Permit" plan set and containing the stamp of the Professional Engineer. At a minimum, the plan set should include:
 - a) Cover Sheet with project name, project number, location map, and index of sheets, information required by permitting agencies, date and stamp of the Professional Engineer.
 - b) General Notes, Construction Notes and Permitting Notes
 - c) Overall Site Plan(s) showing improvements, property lines, roads, access points, wetlands, drainage infrastructure, and grading.
 - d) Grading and Drainage Plans showing detailed documentation of proposed drainage improvements, including grading.
 - e) Restoration/Planting Plans showing any required site restoration to disturbed areas or planned naturally restored areas. The Owner will provide seeding and planting lists.
 - f) Soil Erosion and Sediment Control Plans showing soil erosion and sediment control measures required to meet permit conditions.
 - g) Details, Sections, Elevations, and Manufacturer's Sheets as necessary to permit, bid and construct the improvements.

B. Land Surveying

- 1) Qualifications: Supplemental field surveying shall be performed under the direction of a State of Illinois Professional Engineer in order to obtain data necessary for design, permitting, and construction. Surveying shall include the following:
- 2) Control Data and Standards: Control points will be set near the Basin F WCS and at additional critical locations as needed during the topographic survey work.
- 3) Land Survey Area Limits: These areas shall include:
 - a) Supplemental spot elevations and cross sections to be determined by Consultant within project area as needed to supplement the Lake County 1-foot topography.
 - b) Supplemental drainage structures and culverts to be determined by Consultant within project area as needed.
 - c) Bathymetry for the 30 acre +/- pond located within Basin F to determine pond water depths and to calculate pond bottom contours. It is assumed that access to pond is available to accommodate a 14-foot Jon boat equipped with either an electric trolling or small outboard motor. Measurements will be taken on a grid with spacing suitable to accurately cover the pond area with one (1) survey shot taken at each grid point. The grid points will be collected with a survey grade GPS and additional supporting survey equipment. The surveyed data will be post-processed in the office. 3-dimensional modeling software (CAD or GIS based) will analyze the data set to generate pond bottom contours.
- 4) Survey Elements: The following existing site features where data is not currently available and where they may impact proposed improvements shall be surveyed, with both horizontal and vertical data recorded:
 - a) Spot topography and transects

- b) Drainage structures
 - c) Culverts with invert elevations
 - d) Wetland boundaries flagged in the field
 - e) Any other elements which could impact the proposed improvements
- 5) Boundary Lines: Boundary lines will not be surveyed and planning will utilize existing District provided boundary information.
- 6) Digital File Standards: All field survey data shall be adjusted to the horizontal and vertical standards as set forth in B.2 and imported to a format readable by MicroStation V8 or V8i. The Consultant shall obtain the Owner's seed file for use with all MicroStation files. No other seed files shall be used for the project.
- C. Wetland Delineation and Jurisdictional Determination
- 1) The Consultant shall provide complete wetland consulting services for the purposes of obtaining permits and approvals from all relevant agencies. All work shall meet the criteria of the Lake County WDO.
 - 2) The Wetland Delineation Report, a signed Preliminary Jurisdictional Determination / Boundary Verification request form shall be submitted to LCSMC if prior Jurisdictional Boundary determination has not been received from the USACE that indicates all wetlands are jurisdictional.
 - 3) If the project will require wetland impacts, the consultant shall submit to LCSMC for any isolated wetland impacts and to the USACE for jurisdictional wetland impacts.
- D. Geotechnical Studies and Structural Engineering
- 1) The Consultant shall coordinate professional soil testing and analysis for the following:
 - a) Outlet discharge point from Basin F (1 Boring 10-Foot Deep)
 - 2) The Consultant shall engage a licensed professional geotechnical engineer to provide field sampling, testing, analyses and construction recommendations specific to the planned improvements. All structural borings shall be conducted in accordance with the requirements of the Illinois Department of Transportation (IDOT) Specifications for Structure Borings. Upon completion of this work, the Consultant shall provide the Owner with two (2) copies of the testing report, which shall include a map of the sampling locations, description of the sampling and testing procedures, standard boring logs for each location indicating sample depths, soils classification, sample number and field and laboratory test results, testing summaries and structure recommendations. The testing report shall also be included in the contract documents for construction.
 - 3) An allowance has been included to engage a Structural Engineer if necessary based on the results of the Geotechnical Report and the final type and configuration of structure selected for the Water Level Control Structure (WCS) at Basin F.
- E. Drainage Improvement Design Concepts and Analysis
- 1) The Consultant shall prepare concept plans with supporting analyses to restore hydrology to prairie and wetland habitats with particular emphasis on the creation and enhancement of hemi-marsh conditions and to stabilize eroding areas.
 - 2) The concept planning shall include all Basins previously described.
 - 3) Select Basins and proposed improvements will be advanced to final Engineering and submitted for permit.

- 4) The concept planning shall consider the following proposed improvements listed by Basin:
- a) **Basin E:**
 - i. installing a berm and WCS at the downstream discharge point from Basin E to facilitate water level management
 - ii. stabilizing eroded channel sections
 - iii. establishment of hemi-marsh
 - b) **Basin F:**
 - i. replacing the berm and WCS at the downstream discharge point from Basin F to facilitate water level management
 - ii. removing and abandoning drain tiles with minor grading and/or a structure on the tile near Ela Road
 - c) **Basin G:**
 - i. installing a WCS and/or new culvert at the downstream discharge point from Basin G at Ela Road to facilitate water level management
 - ii. removing and abandoning drain tiles with minor grading and/or a structure on the tile near the connection to properties NE of the basin.
 - iii. establishment of hemi-marsh
 - d) **Basin L:**
 - i. removing and abandoning drain tile and improving the surface connection to the existing drainage structure the tile connects to

Cost opinions are not included in this scope of work.

- F. Drainage Improvement Engineering (includes permit level plan set – excludes specifications, costs, bidding and construction)
- 1) The Consultant shall advance select proposed improvements from the concept planning to final Engineering.
 - 2) The proposed improvements shall be selected, sized and configured to meet industry standards.
 - 3) Supporting calculations shall be prepared for inclusion with permit submittal.
 - 4) Permit plans shall be prepared for submitted for permit.
 - 5) The final engineering and permit components anticipated, listed by Basin include:
 - a) **Basin E:**
 - i. installing a berm and WCS at the downstream discharge point from Basin E to facilitate water level management
 - ii. stabilizing eroded channel sections
 - b) **Basin F:**
 - i. replacing the berm and WCS at the downstream discharge point from Basin F to facilitate water level management
 - ii. removing and abandoning drain tiles with minor grading and/or a structure on the tile near Ela Road

c) **Basin G:**

- i. removing and abandoning drain tiles with minor grading and/or a structure on the tile near the connection to properties NE of the basin.

d) **Basin L:**

- i. removing and abandoning drain tile and improving the surface connection to the existing drainage structure the tile connects to

Cost opinions are not included in this scope of work.

G. Hydrology and Hydraulics Studies and Design

Except as noted below, the Consultant shall perform a complete hydrologic and hydraulic study and analysis of the project area as required to satisfy permitting requirements by the pertinent agencies such as the LCSMC and to properly design drainage structures and culverts, swales, overland flow paths, or any other proposed improvement which impacts water flow and drainage. Stormwater detention is assumed to not be required for this project.

Existing maps, aerial photos, land surveys and data shall be utilized to identify drainage area tributaries and the most appropriate hydrologic model selected to correctly design and engineer the proposed improvements.

The study area limits shall extend upstream and downstream for an appropriate distance to assure an accurate analysis of the conditions within the area of proposed improvements. The study shall include locations and data on existing drain tiles where appropriate.

- 1) Existing Conditions modeling will be based on the HEC-HMS model prepared for the Village of Barrington's Village-wide flood reduction study prepared by Hey. We assume that the Village of Barrington will release the modeling for use for this project. If appropriate, input data from the HEC-HMS modeling will be converted for use in an XP-SWMM hydrologic and hydraulic model that represents the full project area. Particular attention will be paid to upstream and downstream boundary conditions to demonstrate that the proposed project does not negatively affect adjacent properties. The existing conditions modeling will include all project basins and tributary off-site areas that may impact drainage.
- 2) Proposed Conditions modeling will be performed to evaluate proposed drainage improvements. Modeling will be prepared to evaluate and document any proposed modifications to drainage. Modeling will be used to size infrastructure and document that detrimental off-site impacts to flood elevations will not occur as a result of the proposed modifications. The existing conditions model will be modified to include the proposed drainage improvements and will be evaluated to determine if increased downstream discharges occur. Drainage modifications will be evaluated iteratively to demonstrate that there are no negative off-site impacts.
- 3) Floodplain/Floodway Analyses of Flint Creek Tributary are assumed not to be required for this project. We assume no work will occur within the mapped floodway or floodplain of Flint Creek. Modeling as described above will document that discharge values to the Flint Creek Tributary will not increase as a result of the proposed projects.

Much of the project area is mapped as FEMA Zona A Unnumbered floodplain, and other portions may meet Lake County regulations for flood-prone areas. As part of the existing conditions analysis we will determine which of the depressions and channels located within the project area are regulatory flood-prone areas, and determine existing conditions Base Flood Elevations (BFEs) for these areas. We will also determine proposed conditions BFEs for the areas determined to be regulatory flood-prone, and

document that any increases in BFE are allowable based upon adjacent off-site areas and elevations.

We assume that no permitting through FEMA or IDNR will be required for the projects.

- 4) Stormwater/Floodplain Report will be prepared documenting the above information for submittal to the LCSMC for use at the time permitting is engaged. Consultant does not believe any other submittals will be necessary to document stormwater and floodplain management portions of the project.

Permitting

- 1) The project is anticipated to require permanent and/or temporary impacts to jurisdictional wetlands and isolated wetlands. The project is assumed to be eligible for a Regional Permit and an Isolated Wetland Permit.
- 2) It is anticipated the Consultant will apply for permits and coordinate with the following agencies:
 - i. USACE for Regional Permit
 - ii. IDNR for Threatened and Endangered Species consultation and Interagency Wetland Policy Act
 - iii. IDNR-OWR for permitting of any work within the Flint Creek Floodway, if required (work in floodway not anticipated)
 - iv. Federally listed Threatened and Endangered Species and Critical Habitat Review (Required by WDO and if USACE permit needed)
 - v. LCSMC for Preliminary Wetland Jurisdictional Determination, WDP, Floodway, and LONI if no USACE permit is needed
 - vi. IEPA for NPDES
 - vii. IHPA for cultural and historical resources

3. Owner's Responsibility

Throughout the progress of the Work, as described in this Contract, Owner shall:

- A. Notify Consultant in writing to proceed with the Work described herein and designate in writing a person to act as Owner's representative with respect to the Services to be rendered under this Contract.
- B. Assist Consultant by placing at its disposal all available information pertinent to the project sites including previous boundary surveys (CAD format), reports, records, standard details and specifications, drawings (CAD and paper formats), 1-foot Lake County topography and other available GIS information in CAD format, maps, and other data that may be useful to Consultant in the preparation of the Work.
- C. Arrange for access to and make provisions for Consultant to enter upon the site as required to perform the Work.
- D. Provide conceptual site plan component preferences.
- E. Define study area boundaries prior to Consultant commencing survey work.
- F. Obtain, conduct and manage utility or access and easements.
- G. Pay any and all permit, inspection, utility connection and approval fees that may be required.
- H. Provide Consultant with copies of title commitments, record documents and old plat of surveys for the property.

PROJECT B: AGRICULTURAL DRAIN TILE INVESTIGATION SERVICES

Performance Standards. If this Contract/Quote is accepted, Vendor proposes and agrees that the Work shall strictly comply with the following specifications:

1. All work and reports must adhere to the Lake County Stormwater Management Commission's Watershed Development Ordinance.
2. Field work is intended to identify any and all drain tiles, drainage systems, drainage ditches, and any other artificial drainage features within the designated project areas. This includes lateral, feeder, submain, and mainline tile lines, regardless of size or location. During the project, the Contractor may use standard practices of investigation trenches, probing, ground penetrating radar, and visual searches for surface cavitations and discharge points. Any additional investigation methods must be pre-approved by the District. Investigation trenches shall be excavated and backfilled in a manner that restores the original soil profile and restores a fine, smooth grade.
3. Any tile lines that are disturbed, broken, or severed during the investigation shall be repaired by the contractor to their original functioning state.
4. As tile lines are encountered, the Contractor shall identify them in the field according to the following:
 - Tile lines shall be marked with a labeled stake at beginning and end points, as well as at junctions with other tile lines. Tile lines that originate or terminate outside of the project areas shall be staked at preserve boundaries. Stakes shall be clearly labeled, flagged, and visible.
 - Tile lines found within actively farmed parcels, including hay fields, shall not be marked with flags/stakes. Tile lines in these areas shall be marked with wooden lath only at the edges of fields and property boundaries to avoid conflicts with farm operations.
 - Tile lines found within or outside of actively farmed areas may be marked with pin flagging to facilitate Contractor investigations and mapping; however, all flagging materials shall be removed from the site upon completion of the mapping to reduce inquires and complaints from the general public/farmers/neighboring property owners.

Deliverables/Final Report:

The final report shall consist of one (1) electronic copy and three (3) hard copies of the investigation results. Electronic copy shall be provided to the District in a shape file format that is compatible with ESRI ArcGIS version 10.1.

Coordinates shall be in NAD 83 format with the appropriate global origins for Lake County, Illinois. The District can provide the appropriate seed file to the contractor if necessary. The hard copies shall be maps/drawings printed on "Arch D" sized paper (24" X 36") or larger, at a scale between 2400 (1" = 200') and 4800 (1" = 400').

The final reports (electronic and paper) shall include all of the following information:

- Location of all tile lines, regardless of size, condition, or location
- Type of tile line (clay, concrete, plastic)
- Location and depth of investigation trenches
- **Length of Tile Line**
- Direction of flow

HYDROLOGIC ANALYSIS WITH DESIGN SERVICES AND
AGRICULTURAL DRAIN TILE INVESTIGATION
MULTIPLE FOREST PRESERVES
PROJECT NO: 62805-138-841

- Depth to tile lines at key locations
- Diameter of tile lines at regular intervals
- Condition of individual tile lines and tile systems
- Flow rate and silt percentage of individual tile lines at time of exposure
- Surface cavitations, tile exposures, or other points of tile failure that are causing overland flow, excessive erosion or soil loss
- Location of labeled stakes (with identification number or letter) that correspond with beginning, end, surface inlets/outlets, and junctions of tile lines marked in the field
- Drainage ditches, water control structures, or any other artificial hydrologic features
- Any other relevant notes, observations, or findings

ATTACHMENT C - KEY PERSONNEL

1. Key Project Personnel – Owner

| NAMES | TELEPHONE NUMBERS |
|-------------------------------|-------------------|
| Matt Ueltzen, Project Manager | 847-968-3290 |

2. Key Project Personnel – Consultant

| NAMES | TELEPHONE NUMBERS |
|---|---------------------------------|
| Kevin Kleinjan – Project Manager | O: 847-740-0888 C: 847-921-5531 |
| Tom Polzin – Project Principal and Engineer | O: 847-740-0888 C: 847-404-3383 |

ATTACHMENT D – WORK SITE MAPS

Figure 1: Project A: Hydrologic Analysis and Design Services – Cuba Marsh Forest Preserve



HYDROLOGIC ANALYSIS WITH DESIGN SERVICES AND
 AGRICULTURAL DRAIN TILE INVESTIGATION
 MULTIPLE FOREST PRESERVES
 PROJECT NO: 62805-138-841

Figure 2: Project B: Agricultural Drain Tile Investigation Services – Ray Lake Forest Preserve

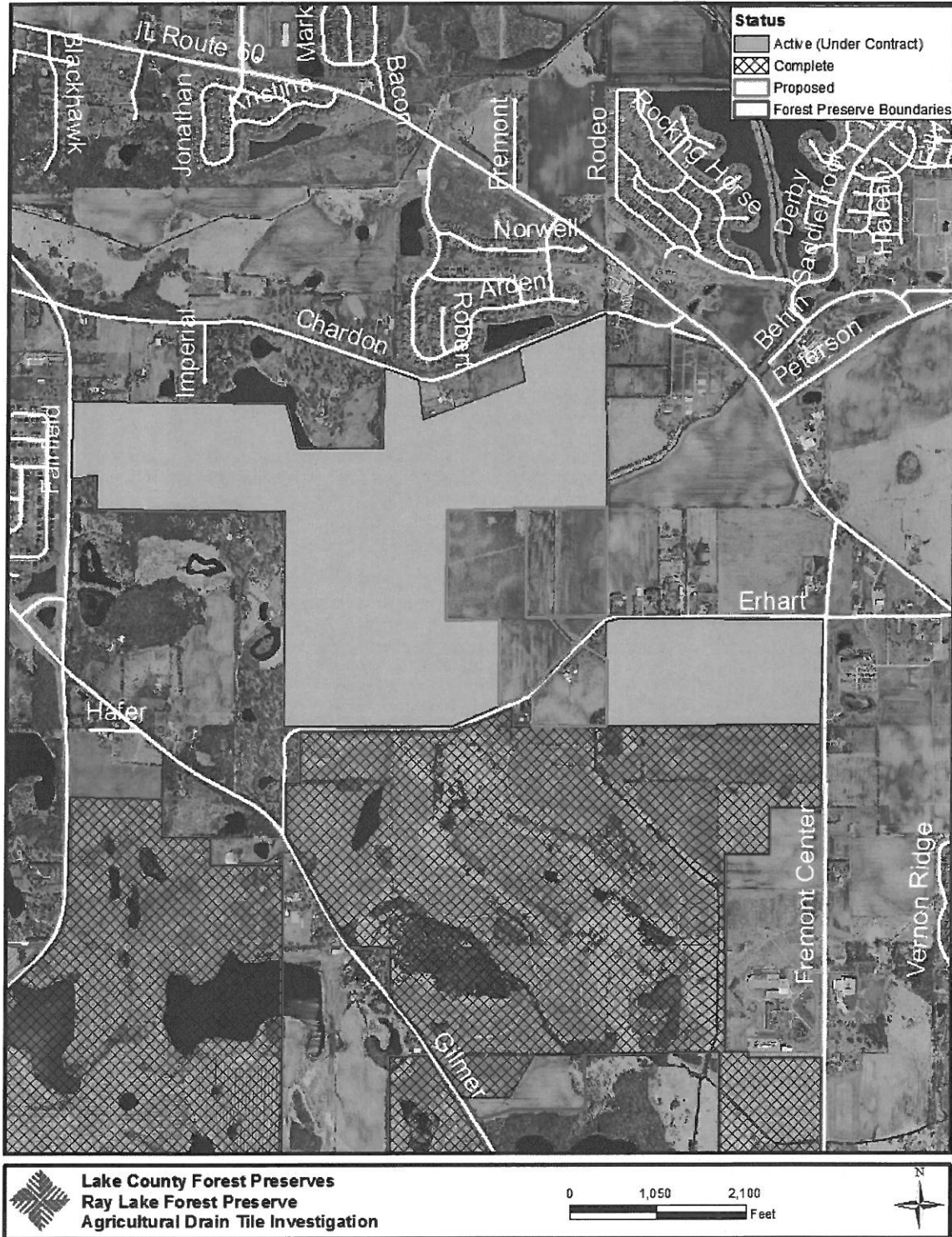


Figure 3: Project B: Agricultural Drain Tile Investigation Services – Wadsworth Savanna Forest Preserve

