



LAKE COUNTY FOREST PRESERVES
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Preservation, Restoration, Education and Recreation

DATE: January 9, 2017

MEMO TO: Carol Calabresa, Chair
Planning Committee

Agenda Item# 9.7

S. Michael Rummel, Chair
Finance Committee

FROM: James L. Anderson
Director of Natural Resources

RECOMMENDATION: Recommend approval of a Resolution awarding a Contract for Hydrologic Restoration Planning at Ray Lake Forest Preserve (Cuneo, White, and Diebold sites) to Hey and Associates, Inc., Volo, Illinois, in the Contract Price of \$82,600.00.

STRATEGIC DIRECTION SUPPORTED: Public Access and Connections; Conservation

FINANCIAL DATA: This project is being partially funded by a grant from the Illinois Clean Energy Foundation in the amount of \$66,524.00 (69644100-803200-56055). The remaining \$16,076.00 will be charged to the Farmland Management Budget (28644000-705100-56055).

BACKGROUND: In 2015, the District applied for and received funding from an Illinois Clean Energy Community Foundation grant. A portion of the grant funds were allocated by the grantor to be used for the initial analysis and planning for future restoration projects. A hydrological analysis to determine wetland restoration potential was specifically identified in the grant documents. Hey and Associates, Inc. has submitted a proposal to the District to provide hydrologic analysis and design services to the District to aid in planning restoration activities for Ray Lake Forest Preserve (including the former Cuneo, White, and Diebold sites), including land surveying, wetland delineation, analysis of existing conditions, design for wetland restoration (removal of agricultural drain tiles, installation of berms/water control structures, hydrologic studies for potential surface flows).

Staff recommends that Hey and Associates, Inc. be awarded the contract as they are a professional service contractor skilled in this type of project. Work is anticipated to begin in February 2017 and be completed by December 31, 2017

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

PRESENTER: James L. Anderson

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

**A RESOLUTION AWARDING A CONTRACT FOR
HYDROLOGIC RESTORATION PLANNING AT RAY LAKE FOREST PRESERVE
(CUNEO, WHITE AND DIEBOLD SITES) TO HEY AND ASSOCIATES, INC.**

WHEREAS, the Lake County Forest Preserve District (the "District") desires to purchase hydrologic restoration planning services (the "Services") at Ray Lake Forest Preserve; 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 from Hey and Associates, Inc.; and

WHEREAS, the District's staff, the Purchase Manager, Director of Natural Resources, the Planning Committee, and the Finance Committee have reviewed the proposal and recommend that the Board of Commissioners (i) find the proposal submitted by Hey and Associates, Inc. to be the most advantageous to the District, and (ii) award a contract for the Services to Hey and Associates, Inc. (the "Contract") in the amount of \$82,600.00 (the "Contract Price"); and

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

WHEREAS, the District has a satisfactory relationship with Hey and Associates, Inc. for engineering 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. A Contract for the Services in the amount of the Contract Price 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, in substantially the form attached hereto, for the Services in the amount of the Contract Price.

Section 4. Payments. The 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 _____ 2017

AYES:

NAYS:

APPROVED this ____ day of _____ 2017

ATTEST:

Ann B. Maine, President
Lake County Forest Preserve District

Julie 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 RESTORATION PLANNING

AT

RAY LAKE FOREST PRESERVE

(CUNEO, WHITE, AND DIEBOLD SITES)

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HYDROLOGIC RESTORATION PLANNING
RAY LAKE FOREST PRESERVE (CUNEO, WHITE AND DIEBOLD)

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**CONTRACT BETWEEN
LAKE COUNTY FOREST PRESERVE DISTRICT
AND
HEY AND ASSOCIATES, INC.
FOR THE
HYDROLOGIC RESTORATION PLANNING
RAY LAKE FOREST PRESERVE (CUNEO, WHITE AND DIEBOLD)**

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 January 17, 2017 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, Restoration Ecologist

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: _____

Title: _____

By: _____
Thomas L. Polzin
Title: President

ATTACHMENT A - SUPPLEMENTAL SCHEDULE OF CONTRACT TERMS

1. Project:
Provide Hydrologic Restoration Planning services at Ray Lake Forest Preserve (Cuneo, White and Diebold sites).

The 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, 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:
January 24, 2017
4. Completion Date:
December 31, 2017
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>

6. Contract Price:
 Schedule of Prices – Lump Sum

For providing, performing, and completing all Services, Consultant shall be compensated the total Contract Price of:

Eighty-two thousand, six hundred Dollars and Zero Cents
 (in writing)

\$82,600 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:

HYDROLOGIC RESTORATION PLANNING
 RAY LAKE FOREST PRESERVE (CUNEO, WHITE AND DIEBOLD)

A.	Project Administration and General Requirements	\$ 13,000
B.	Surveying and Data Preparation	\$ 9,400
C.	Bathymetric Survey and Water Quality Assessment	\$ 8,000
D.	Wetland Delineation and Jurisdictional Determination	\$ 5,600
E.	Hydrologic Restoration Design Concepts	\$ 23,900
F.	Hydrology and Hydraulics Studies and Design	\$ 15,400
G.	Project Narrative	\$ 2,900
H.	Monitoring Well Installation	\$ 4,400
TOTAL		\$ 82,600

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

HYDROLOGIC RESTORATION PLANNING SERVICES

1. Provide land surveying, data collection, agency coordination, design concepts, hydrologic/hydraulic analysis, and summary report for the Hydrologic Restoration Planning Services at Ray Lake Forest Preserve (Cuneo, White and Diebold sites). This project includes: analysis of existing drainage conditions; identification of conceptual modifications to restore hydrology to prairie and wetland habitats with particular emphasis on the creation and enhancement of hemi-marsh conditions; summary report of conceptual modifications and potential permitting requirements to identify potential projects for future design refinement; installation of piezometers to monitor ground water.
2. In general, the following assessments will be made and opportunities identified to:
 - remove, abandon and manipulate current drain tile systems to minimize loss of hydrology,
 - reconfigure, enhance and stabilize overland flow paths,
 - assess functionality and modification potential of an existing 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
 - identify opportunities and strategies to maximize the creation of hemi-marshes within select basins
 - assess an existing pond for soft sediment depths and water quality
 - prepare a summary of anticipated future permit requirements from the Lake County Stormwater Management Commission (LCSMC), and United States Army Corps of Engineers (USACE).

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 Basin characteristics and general project goals and considerations for each follows:

A. BASIN A:

- Located in the northwest portion of the site.
- Existing drain tiles originate on-site
- The existing pond within Basin A has approximately 39 acres of open water within LCFPD holdings and an additional 8 acres of open water extending beyond LCFPD holdings
- The pond water levels within Basin A are controlled by an earthen embankment with a water level control structure and/or culvert at the southeast corner.
- Surface flow discharges to the surface from Basin A and enters a tile through a riser within Basin F.

General Project Goals and Considerations

HYDROLOGIC RESTORATION PLANNING
RAY LAKE FOREST PRESERVE (CUNEO, WHITE AND DIEBOLD)

- Assess the potential to achieve LCFPD target of 39.19 acres of hemi-marsh habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Collect bathymetry to determine water depths, depth of soft sediment and calculate pond bottom contours for the pond both within LCFPD and outside of LCFPD (pending LCFPD obtained adjacent landowner consent)
- Assess water quality pertaining to, but not necessarily limited to, pH, suspended solids, DO, BOD, salinity/conductivity, nitrogen and phosphorous, etc.
- Assess current pond outlet structure and identify options to modify outlet for water level control and stabilizing downstream surface discharge
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option

B. BASIN B:

- Located in the northeast portion of the site adjacent to Chardon Road
- Existing drain tiles originate on-site
- Two mainline drain tiles originate off-site north of Basin B and service Chardon Road and development north of Chardon Road
- Receives runoff from Chardon Road and discharges to Basin C

General Project Goals and Considerations

- LCFPD target of 4.29 acres of hemi-marsh habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify water level control structure applicability and characteristics
- Identify drain tiles originating on-site that can be disabled
- Identify options to modify drain tiles originating off-site by replacing portions or all of line with solid pipe and discharging to surface within Basin C where feasible or to Squaw Creek if necessary
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option
- Install 1 piezometer (5 to 8 feet deep); survey top of piezometer and adjacent surface elevation; record water level at time of installation

C. **BASIN C:**

- Located along the eastern portion of the site north of Erhart Road
- Squaw Creek enters Basin C from the south under Erhart Road and exits Basin C through an existing farm crossing along the eastern edge of LCFPD property
- Existing drain tiles originate on-site
- In addition to the two mainline drain tiles originating off-site north of Basin C, an additional mainline tile enters Basin C from the north near the building site south of Chardon Road.
- A storm sewer and mainline tile discharge to Squaw Creek within Basin C and originate off-site west of Basin H.
- Additional drain tiles not currently inventoried are anticipated to occur within Basin C and will be considered based on the findings of separate drainage investigation work
- Receives discharge from Basins B, D, E, F and G

General Project Goals and Considerations

- LCFPD target of 87.72 acres of hemi-marsh habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify options to modify drain tiles originating off-site by replacing portions or all of line with solid pipe and discharging to surface within Basin C where feasible or to Squaw Creek if necessary
- Identify locations along existing storm sewer for manhole construction to document storm sewer location, allow for future maintenance and provide surface inlet opportunities
- Identify feasibility for additional structures within Squaw Creek to raise water surface elevations within Basin C
- Identify feasibility of installing low berms outside of Squaw Creek to increase water surface elevations within Basin C
- Identify feasibility of excavating within Basin C to create open water pockets
- Identify feasibility of re-routing Squaw Creek alignment to east edge of Basin C.
- Identify feasibility of converting Squaw Creek open channel to closed storm sewer through Basin C.
- Identify additional grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option
- Install 5 piezometers (5 to 8 feet deep); survey top of piezometer and adjacent surface elevations; record water level at time of installation

D. BASIN D:

- Located along the northern portion of the site south of Chardon Road
- Existing drain tiles originate on-site
- An existing off-site tile enters LCFPD property and Basin D from the west
- Receives runoff from Chardon Road and discharges to Basin C

General Project Goals and Considerations

- LCFPD target of 1.52 acres of marsh/sedge habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify options to modify drain tiles originating off-site by replacing portions or all of line with solid pipe and discharging to surface within Basin D where feasible
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests

E. BASIN E:

- Located west of Basin C
- Existing drain tiles originate on-site
- Discharges to Basin C

General Project Goals and Considerations

- LCFPD target of 3.59 acres of hemi-marsh habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify water level control structure applicability and characteristics
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values
- Create concept plan for LCFPD internal use based on LCFPD preferred option

F. BASIN F:

- Located in the southeast portion of the site north of Erhart Road
- Existing drain tiles originate on-site
- Discharges to Basin C

General Project Goals and Considerations

HYDROLOGIC RESTORATION PLANNING
RAY LAKE FOREST PRESERVE (CUNEO, WHITE AND DIEBOLD)

- LCFPD target of 1.14 acres of hemi-marsh habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option

G. BASIN G:

- Located in the south portion of the site north of Erhart Road
- Existing drain tiles originate on-site
- Discharges to Basin C

General Project Goals and Considerations

- LCFPD target of 3.22 acres of marsh/sedge habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option

H. BASIN H:

- Located along the western portion of the site
- Existing drain tiles originate on-site
- A mainline tile enters Basin H from Basin I and continues west off-site
- A mainline tile enters Basin H and the site from the West and continues through Basin C, discharging to Squaw Creek
- A storm sewer enters Basin H and the site from the West and continues through Basin C, discharging to Squaw Creek
- Receives discharge from Basin I
- Appears to discharge solely through tile and storm sewer with overflow routing to Basin C

General Project Goals and Considerations

- LCFPD target of 22.70 acres of hemi-marsh habitat

HYDROLOGIC RESTORATION PLANNING
RAY LAKE FOREST PRESERVE (CUNEO, WHITE AND DIEBOLD)

- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify options to modify drain tiles originating off-site by replacing portions or all of line with solid pipe and discharging to surface within Basin C where feasible or to existing storm sewer
- Identify locations along existing storm sewer for manhole construction to document storm sewer location, allow for future maintenance and provide surface inlet and tile connection opportunities
- Identify feasibility of installing low berms to increase water surface elevations within Basin H
- Identify feasibility of excavating within Basin H to create open water pockets
- Identify additional grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option
- Install 1 piezometer (5 to 8 feet deep); survey top of piezometer and adjacent surface elevation; record water level at time of installation

I. **BASIN I:**

- Located in the central portion of the site north of Erhart Road
- Existing drain tiles originate on-site
- Receives discharge from Basin A
- Discharges to Basin H

General Project Goals and Considerations

- LCFPD target of 0.64 acres of marsh/sedge habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option
- Install 1 piezometer (5 to 8 feet deep); survey top of piezometer and adjacent surface elevation; record water level at time of installation

J. **BASIN J:**

- Located in the north central portion of the site adjacent to an existing building site

- Existing drain tiles originate on-site
- Discharges to Basin C

General Project Goals and Considerations

- LCFPD target of 1.24 acres of marsh/sedge habitat
- Collect wetland boundary location and site specific topography to support analysis and concept planning
- Identify drain tiles originating on-site that can be disabled
- Identify grading opportunities to enhance hydrology and maintain necessary surface flow conveyance
- Analyze existing and potential basin characteristics to determine discharge values and protect off-site interests
- Create concept plan for LCFPD internal use based on LCFPD preferred option

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 documents for other uses. 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 vector information in the files shall be current and pertinent to the design.

- 7) Concept Plan Set: The drawings shall illustrate all information necessary to convey the design concepts. 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 design concept documents in both MicroStation readable format and as a PDF file. At a minimum, the plan set should include:
 - a) Cover Sheet with project name, project number, location map, and index of sheets.
 - b) General Notes
 - c) Overall Site Plan(s) showing design concepts, property lines, roads, access points, wetlands, drainage infrastructure, and grading.
 - d) Grading and Drainage Plans showing conceptual drainage improvements, including grading.
 - e) Restoration/Planting Plans showing targeted vegetation communities. The Owner will provide seeding and planting lists.
 - f) Details, Sections, Elevations, and Manufacturer's Sheets as necessary to convey design concept intent.

B. 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 at select locations as needed during the topographic survey work.
- 3) 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 47 acre +/- pond located within Basin A 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 influence the design concepts
- 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.

C. Wetland Delineation and Jurisdictional Determination

- 1) The Consultant shall provide complete wetland consulting services for project planning purposes. 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.

D. Bathymetric Survey and Water Quality Assessment

- 1) The Consultant shall collect bathymetry for the portions of the Basin A pond that are within LCFPD property (39 acres +/-) to determine water depths, depth of soft sediment and calculate pond bottom contours
- 2) The Consultant shall collect additional bathymetry for the remaining portions of the Basin A pond that are outside of LCFPD property (8 acres +/-) to determine water depths, depth of soft sediment and calculate pond bottom contours
- 3) The Consultant shall assess water quality for the Basin A pond pertaining to, but not necessarily limited to, pH, suspended solids, DO, BOD, salinity/conductivity, nitrogen and phosphorous, etc.
- 4) 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.

E. Hydrologic Restoration Design Concepts

- 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.
- 2) The concept planning shall include all Basins previously described.

- 3) The concept planning shall reflect the General Project Goals and Considerations previously outlined.
- 4) Cost opinions are not included in this scope of work.

F. Hydrology and Hydraulics Studies

Except as noted below, the Consultant shall perform a complete hydrologic and hydraulic study and analysis of the project area to guide the conceptual design of 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.

An existing conditions hydrologic and hydraulic modeling for the Squaw Creek watershed was recently approved by the Lake County Stormwater Management Commission (LCSMC), the Illinois Department of Natural Resources – Office of Water Resources (IDNR-OWR), and the Federal Emergency Management Agency (FEMA). Hydrologic modeling was performed using HEC-HMS software, and the hydraulic modeling was performed using HEC-RAS software. The current effective modeling from the LCSMC will be recovered for use in this project.

Model updates will be required to assess the proposed hydrologic restoration design concepts and their effect on the subject property. The sub-basins used in the effective model will be further subdivided utilizing the Lake County one-foot contour data. Hydrologic parameters including Runoff Curve Numbers and Times of Concentration will be recalculated. Reservoir routing information for each new sub-basin will either be revised or added using site specific survey and available information from the District. These updates will include a maximum of ten (10) new subareas, representative of proposed Basins A through J. The model will be rerun for the full critical duration of storms from five minutes through 240- hours for the 2, 5, 10, 25, 50, and 100 year events.

The existing effective HEC-RAS hydraulic model will be updated to include site specific cross sections taken along Squaw Creek. A maximum of five (5) new cross sections will be added using site specific topographic survey and Lake County one-foot contour information. The existing bridges at Erhart Road and the Farm crossing at the eastern property boundary will be reviewed to confirm the model geometry matches the surveyed existing condition, and make any necessary edits to these two bridge crossings. The effective approved discharge values will be utilized in the hydraulic modeling. Updated discharge values based upon the revised hydrologic modeling are not anticipated or included within this scope.

G. Project Narrative

- 1) The Consultant will prepare a project narrative describing the design concepts, analysis and potential permitting requirements.

H. Piezometer Installation

- 1) The Consultant will install between five (5) and eight (8) piezometers within Basins B, C, H and I to monitor shallow ground water levels. The piezometers will be five (5) to ten (10) feet in length and extend above the surface one (1) to two (2) feet. The piezometer material will be slotted, 2-inch screened PVC bedded in well sand to within one (1) foot of the surface. The final one (1) foot of backfill will be a bentonite material to help prevent surface water input. The top of the piezometer and adjacent ground surface will be surveyed after installation. One

(1) reading of the ground water depth (if any) will be recorded and corresponding elevation noted immediately following installation.

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. Provide Consultant with copies of title commitments, record documents and old plat of surveys for the property.

ATTACHMENT C - KEY PERSONNEL

1. Key Project Personnel – Owner

NAMES	TELEPHONE NUMBERS
Matt Ueltzen	O: 847-968-3290 C: 847-276-6230

2. Key Project Personnel – Consultant

NAMES	TELEPHONE NUMBERS
Kevin Kleinjan	O: 847-740-0888 C: 847-921-5531
Thomas Polzin	O: 847-740-0888 C: 847-404-3383

ATTACHMENT D – WORK SITE MAP

