Hoffman Estates District
Hoffman Estates, Illinois

South Ridge Community Park Enhancement Plan 2019 Earthwork

Enhancement Plan 2019

Project Manual
Bid Proposal and Specifications

February 21, 2020

Bids are due and will be opened and read aloud on March 12, 2020 at 10:30 AM at the Hoffman Estates Park District's Triphahn Center which is located at 1685 West Higgins Road in Hoffman Estates, Illinois.

WT Group
Engineering • Design • Consulting

2675 Pratum Avenue
Hoffman Estates, IL 60192
(224) 293-6333 Fax (224) 293-6444

Index

Section	Title of Section	Pages
A	Hoffman Estates Form Proposal	12
B	Bid Instructions	2
C	Special Conditions	4
D	AIA General Conditions	1
	AIA A201- 2017 General Conditions	40
	AIA A101- 2017 Contract	7
E	Supplemental General Conditions	3
F	Bid Proposal Form	2
G	Specifications	
	02050 General Site Conditions	2
	02100 Site Preparation	2
	012200 Unit Prices	2
	311000 Site Clearing	6
	312000 Earth Moving	13
	312213 Rough Grading	4
	312319 Dewatering	5
	315000 Excavation and Support	5
	329200 Lawns and Grasses	7
H	Geotechnical Report	12
I	Wetland Report	65
J	Stormwater Pollution Prevention Plan	40

Bidder Name: _____

Address: _____
_____

Telephone #: _____
Facsimile: _____

NAME OF PROJECT

Earth Work at South Ridge Park

BID DATE: 3/12/2020 **BID TIME: 10:30AM**

PREPARED BY:

HOFFMAN ESTATES PARK DISTRICT
1685 W. Higgins Road
Hoffman Estates, IL 60169-2998
Telephone: (847) 885-7500
Facsimile: (847) 885-7523

February 20, 2020

Dear Bidder:

Enclosed you will find the plans, specifications and bidding materials for **Earth Work at South Ridge Park.** All pertinent information is included in the attached package. Please submit the Proposal Forms, Certification, References, and Bid Bonds. Please copy your proposal and retain one copy for your records.

Bidders will be required to meet all State bidding requirements.

I look forward to reviewing your bid proposal and working with you on this project. If you have further questions or need to meet at the site, please contact me 847-285-5465. I can be reached Monday through Friday from 7:00 a.m. until 4:00 p.m.

Sincerely,
Dustin Hugen

Dustin Hugen

Director of Parks, Planning & Maintenance

INVITATION TO BIDS

Sealed bids for the **Earth Work at South Ridge** will be received by the Hoffman Estates Park District at our office; 1685 West Higgins Road, Hoffman Estates, Illinois 60169 until **exactly 10:30A.M., 3/12/2020** and then publicly opened and read. Bids submitted after the closing time will be returned unopened. No oral or telephone proposals or modifications will be considered.

The Hoffman Estates Park District Board of Commissioners will make the final award.

Proposals shall be submitted on the attached Form of Proposal and returned in the envelope, if provided. No bidder may withdraw his proposal after the hour set for the opening thereof, or before award of the contract, unless said award is delayed for a period exceeding sixty (60) calendar days.

The Hoffman Estates Park District requires all bidders to comply with all provisions of the Park District Prevailing Wage Ordinance O. This ordinance specifies that no less than the general prevailing rate of wages as found by the Park District or Department of Labor or determined by a court on review shall be paid each draft type of worker or mechanic needed to execute the contract or perform the work.

The Hoffman Estates Park District may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim, or cause of action by any unsuccessful Bidder against the Hoffman Estates Park District.

Bid results and the award of the bid will be published on the Hoffman Estates Park District website www.heparks.org.

Sincerely,

Dustin Hugen

Dustin Hugen
Director of Parks, Planning & Maintenance
Hoffman Estates Park District
dhugen@heparks.org
847-285-5465

HOFFMAN ESTATES PARK DISTRICT

INSTRUCTIONS TO BIDDERS

1. Identification of Project

The official name and location of the project shall henceforth be known as:

Earth Work at South Ridge Park
1450 Freeman Road
Hoffman Estates, IL 6019

The official name and address of the project owner shall henceforth be known as:

HOFFMAN ESTATES PARK DISTRICT
1685 West Higgins Road
Hoffman Estates, IL 60169-2998

Bid Opening: DATES **3/12/2020**

Committee Approval: DATES **3/17/2020**

Board Approval: DATES **3/24/2020**

Contract Awarded: DATES **3/25/2020**

Commencement of Work: Commencement of paperwork shall begin immediately upon notification of award. Actual work shall commence immediately after contract is awarded (weather dependent) according to timelines set by HEPD (owner).

Construction Timeline: **April 2, 2020 – May 4, 2020 (For Proposed Hardscape Areas)**

100 % Completion Date: **June 15, 2020**

FORM OF PROPOSAL

Proposal of _____, hereinafter called the "BIDDER", (a) / (an) _____,
(Corporation, Partnership,
individual) doing business as _____, to Hoffman Estates Park District, hereinafter called the "OWNER."

*** * ***

The Bidder, in response to your advertisement for bids for **South Ridge Park Playground Install** having examined the Specifications and other Documents and being familiar with all of the conditions surrounding the proposed work (purchase/sale) including availability of materials and labor, hereby proposes to furnish all labor, materials and supplies and to construct the project in accordance with the Contract Documents, within the time set forth therein and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents of which this proposal is a part.

Bidder acknowledges receipt of the following Addenda, which are a part of the Contract

Document: Numbers: _____, _____, _____, _____.

HOFFMAN ESTATES PARK DISTRICT

BY: _____
(Sign and Date)

COMPANY _____

ADDRESS _____

_____

PHONE _____

EMAIL: _____

BY: _____

FORM 1 – BID

CERTIFICATION

I, _____ (Officer), having been first duly sworn on Oath, state that I am the duly authorized principal, officer or agent of _____ (Name of Contractor) and do hereby certify to Hoffman Estates Park District, its Commissioners, Officers and Employees that neither I nor _____ (Name of Contractor) are barred from bidding on the Contract for which this bid is submitted, and as a result of violation of either Section 33E-3 (Bid-rigging") or Section 33E-4 ("Bid-rotating") of Article 33E of the Criminal Code of 1961 of the State of Illinois approved July 28,1961, as amended.

_____
On behalf of Contractor

Subscribed and sworn to before me

this _____ day of _____, 20___

_____
- Notary Public -

My Commission Expires:

_____

SUBCONTRACTORS

The following list includes all Subcontractors who will perform work representing five percent (5%) or more of the total base bid. The Bidder represents that the Subcontractors are qualified to perform the work required.

Category	**Subcontractor Name**	**Address**
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

REFERENCES

_____

Hoffman Estates IL 60169

References for:

1. Company Name: _____

   Address: _____

   City-state: _____

   Phone Number: _____

   Contact Person: _____

2. Company Name: _____

   Address: _____

   City/State: _____

   Phone Number: _____

   Contact Person: _____

3. Company Name: _____

   Address: _____

   City/State: _____

   Phone Number: _____

   Contact Person: _____

4. Company Name: _____

   Address: _____

   City/State: _____

   Phone Number: _____

   Contact Person: _____

STATEMENT OF EXPERIENCE

The Bidder shall list all recent projects for which he provided services of a similar nature to the subject project.

Project/Location	Contract Amount	Reference/Phone #
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

HOFFMAN ESTATES PARK DISTRICT
Hoffman Estates, Illinois

Please list all of the equipment you will be using on this specific job.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

SUSTAINABILITY STATEMENT

Introduction

The Hoffman Estates Park District is committed to green and sustainable practices and good environmental stewardship. Consequently, we are asking bidders to provide a Statement of Sustainability to ensure our bidders are also incorporating sustainability into their firm's practices.

Instructions

Provide a clear description of your firm's sustainable practices, policies or procedures to the below sections or attach a copy of your practice. These practices may include but are not limited to:

Waste Minimization within the office or facilities through recycling programs, double-sided copying, electronic internal communications, recycled content in materials, reusable cups, limited printing, electronic document management, green purchasing policies, green cleaning supplies or reduced packaging in materials procured or supplied. _____

_____

_____

_____

Energy Efficiency within office, facilities or firm through lighting retrofits, photo sensor switches for lighting, use of day lighting, Energy Star rated appliance or equipment, alternative fuel or efficient fleet, anti-idling policy, or indoor temperature management.
_____

_____

_____

Water Efficiency in office, facilities or firm through faucet or fixture retrofits, switch individual bottled water to office water coolers or drinking fountains, drought tolerant landscaping. _____

_____

_____

Staff are encouraged to be sustainable and supported by your firm through public transit benefits, bicycle accommodations, telecommuting options, support to attend green seminars, US Green Building Council LEED accredited or the creation of an internal green team. _____

_____

_____

Education of your staff about green practices, your business peers of your green accomplishments, your community of your sustainability, or any environmental awards your firm has achieved. _____

_____

_____.

---

2. Contract Documents

   The Notice to Bidders, the Instructions to Bidders, the Supplementary Conditions, Drawings, and Specifications, the supplied Form of Proposal, the accepted Bid Sheet and certification comprise the Contract Documents. Copies of these documents can be obtained in person from the office of the Hoffman Estates Park District, 1685 W. Higgins Road, Hoffman Estates IL 60169-2998.

3. Explanation to Bidders

   Any explanation desired by a bidder regarding the meaning or interpretation of the invitation for bids, drawings, specifications, etc., must be requested in writing and with sufficient time allowed for a reply to reach bidders before the submission of their bids.

   Any interpretation made will be in the form of an amendment of the invitation for bids, drawings, specifications, etc., and will be furnished to all prospective bidders. Its receipt by the bidder must be acknowledged in the space provided on the Bid Form or by letter or telegram received before the time set for opening of bids. Oral explanations or instructions given before the award of the contract will not be binding.

4. Conditions Affecting the Work

Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the Work, the general and local conditions, which can affect the Work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the Work.

5. Bid Guarantee, Bonds and Required Paperwork

   A. A Bid Guarantee, five (5%) percent, is required by the invitation for bids. Failure to furnish a Bid Guarantee in the proper form and amount by the time set for opening of bids may be cause for rejection of the bid in the absolute discretion of the Owner.

   B. A Bid Guarantee shall be the form of a bid bond, postal money order, certified check, or cashier's check made payable to the Owner. Bid guarantees, other than those stated, will be returned to the bidder upon opening of bids. Such bids will not be considered for award (a) to unsuccessful bidders as soon as practical after the award of the job, and (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bid as accepted.

   C. The successful bidder, upon being given a "Written Notice to Proceed", will have five (5) calendar days to provide the required Labor and Material Payment Bond, Performance Bond, and Insurance Policies or certificates for same, and commence with the Work. Failure to comply with the conditions set forth in the Contract Documents shall result in the termination of the contract for default. In such event, the Contractor may be liable for any costs of performing the work which exceed the amount of his bid, and the Bid Guarantee shall be available toward offsetting such difference, if not previously returned to the Contractor.

6. <u>Preparation and Submission of Bids</u>

   Before submitting proposal, each bidder shall carefully examine all documents pertaining to the Work and visit the site to verify conditions under which Work will be performed.

   Submission of bid will be considered presumptive evidence that the Bidder has visited the site and is conversant with local facilities and difficulties, the requirements of the documents and of pertinent State or Local Codes, State of Labor and Material Markets, and has made due allowance in his bid for all contingencies. Include in bid all costs of labor, material, equipment, contractor's license, permits, guarantees, applicable taxes (sales tax does not apply), insurance and contingencies, with

overhead and profit necessary to produce a completed project, or to complete those portions of the Work necessary to produce a completed project, or to complete those portions of the Work covered by the specifications on which proposal is made, including all trades, without further cost to the Owner. The Owner shall be responsible for the building permit fee.

No compensation will be allowed by reason of any difficulties which the Bidder could have discovered reasonably, prior to bidding.

All proposals must be made upon the Proposal Form furnished by the Owner attached hereto and should give the amounts bid for work, in numbers, and must be signed and acknowledged by the contractor. The Proposal should be enclosed in the envelope marked "Bid Proposal for Hoffman Estates Park District **"Earth Work at South Ridge Park"** to be received until **10:30A.M., March 12, 2020** showing the return address of the sender and addressed to: Hoffman Estates Park District, 1685 W. Higgins Road, Hoffman Estates, Illinois 60169. Bids should be sealed, marked and addressed as directed above. Failure to do so may result in a premature opening of or a failure to open such bid.

The proposal submitted must not contain erasures, inter-lineations, or other corrections unless each correction is suitably authenticated by affixing in the margin immediately opposite the correction the surname or surnames of the person or persons signing the bid.

Modifications of bids already submitted will be considered if received at the office designated in the invitation for bids by the time set for opening of bids. Telegraphic modifications will be considered, but should not reveal the amount of the original or reversed bid.

7. Prices

The prices are to include the furnishing of all materials, equipment, tools, insurance, bonds, warranties, and all other facilities, and the performance of all labor and services necessary for the proper completion of the Work except as may be otherwise expressly provided in the Contract Documents.

8. Time Schedule

The timely execution of any project is extremely important. The successful bidder shall take every means to meet the completion date stated above except for extensions granted by the Owner in writing for circumstances beyond the control of the Bidder.

9. Late Bids and Modifications or Withdrawals

Bids and modifications or withdrawals thereof received at the office designated in the invitation for bids after the exact time set for opening of bids will not be considered.

10. Withdrawal of Bids

Bids may be withdrawn by written or telegraphic request received from bidders prior to the time set for opening of bids.

11. Public Opening of Bids

Bids will be publicly opened at the time set for opening in the invitation for bids. Their content will be made public for the information of bidders and others interested, who may be present either in person or by representative.

12. Award of Contract

A. Award of Contract will be made to the lowest responsible bidder, as determined by the Board of Commissioners of the Hoffman Estates Park District, whose bid conforms to the invitation for bid.
B. The Board of Park Commissioners may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim, or cause of action by any unsuccessful bidder against the Hoffman Estates Park District.

13. Contract and Insurance

The written contract between the accepted bidder and the Owner shall be considered finalized and entered into between the parties upon the Park District Board's approval and award of the contract to the accepted bidder and the Park District's execution of the accepted bidder's Form of Proposal, and said written contract shall be comprised by the Contract Documents. The accepted bidder shall provide the Owner with a Labor and Material Payment Bond, Performance Bond, and copies of applicable Insurance Policies and endorsements and certificates for same within five (5) calendar days of the "Written Notice to Proceed" and prior to the commencement of work.

14. Postponement of Date for Opening Proposals

The Owner reserves the right to postpone the date of presentation and opening of proposals and will give telegraphic notice of any such postponement to each interested party.

SUPPLEMENTARY CONDITIONS

SECTION I – GENERAL

1. Application

   These Supplementary Conditions shall be used in conjunction with and are a part of any and all Sections of the Specifications and all Contracts and Subcontracts that may be made for the completion of the work in all its parts as identified and described in the Contract Documents.

2. Definitions

   Owner: The Hoffman Estates Park District, Board of Commissioners, Staff and its appointed Owner's representative.
   Contractor: A firm, corporation or individual with whom the Owner makes a direct Contract for the construction of all or any portion of the work.
   Architect/Engineer: The authorized representative of the Owner.
   Subcontractor: A firm, corporation or individual other than employees of a Contractor with whom a Contractor or Subcontractor makes a contract to furnish labor, and/or materials, and/or services in connection with the project.
   Owner Representative: An employee of the Hoffman Estates Park District responsible for the coordination of the work involved on the project.

   The words "approve", "equal to", "as directed", etc., are interpreted and will be taken to mean "to the satisfaction of the Owner." Samples shall be submitted and approvals shall be requested in ample time to avoid any delays should resubmission of an item be necessary.

3. Contract Documents

   The Contract Documents shall consist of the Notice to Bidders, the Instructions to Bidders, the Supplementary Conditions, the Drawings, the Specifications, the supplied Form of Proposal, and the accepted Bid Sheet and certification.

4. Bonds

   A. With proposal, and attached hereto, each Bidder shall furnish Bid Security payable to the Owner in the amount of 5% of bid.
   B. Include allowance in Lump Sum Proposal for Performance Bond and Labor and Materials Payment Bond in the amount of 100% of Contract Price.
      1. The Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Bond. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing

materials in connection with the Contract Documents. Such bonds shall be on standard AIA Documents, issued by the American Institute of Architect/Engineers, shall be issued by a surety satisfactory to the Owner, and shall name the Owner as a primary co-obligee. The cost of the bonds is to be included in the Bid Proposal. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. Each Bidder shall list the name of the surety company that will be furnishing the Bonds on its Bid Proposal. The failure of a Bidder to list the name of its surety company on its Bid Proposal shall be a non-responsive bid. The failure of the successful Bidder to supply the required Bonds within five (5) days after the Notice of Award or within such extended period as the Owner may grant if the forms do not meet its approval shall constitute a default, and the Owner may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids. A charge against the defaulting Bidder may be made for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guarantee.

2. The Contractor shall deliver the required bonds to the Owner not later than five (5) days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the owner that such bonds will be furnished.
3. The contractor shall require the attorney-in-fact who executed the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.
4. Whenever the Contractor shall be and is declared by Owner to be in default under the Contract, the Surety and the Contractor are each responsible to make full payment to the Owner or any and all extra Work incurred by the Landscape Architect as a result of the Contractor’s default, and to pay to Owner all attorney’s fees and court costs incurred by Owner as a result of the Contractor’s default, and in protecting Owner’s rights under the Agreement to remedy Contractor’s default.
5. The Contractor shall (i) furnish all Surety Company’s bonds through Surety Company’s local agents approved by and/or as directed by Owner; (ii) fully covered and guarantee with said bond the faithful performance and completion of the entire Contract, including without limitation, the faithful performance of prevailing wage requirements; and (iii) guarantee with said bond payment in all cases by the Contractor or by the Surety Company for all labor performed, material and supplies furnished with the entire Work in the Contract. Said Bond shall remain in full force and effect during the entire period of all general guarantees given by the Contractor with the Contract as called for in the Specifications and Contract, except in cases where other bonds are specifically called for in the specifications and Contract in connection with special guarantees.

5. Payment

The Contractor may present estimate of work for which he desires payment no later than the first Monday of each month, based on cost of labor and material incorporated into the work. Estimate shall be a Sworn Statement and shall show relative amount of each item completed. Submit Partial Waivers of Lien, including for first payout, from Contractors, Subcontractors and Material Suppliers with Sworn Statement for monthly payout. Payments will be made within approximately thirty (30) days after review by the Owner. Notwithstanding, anything to the contrary contained in the Contract Documents, payouts are to be made by checks payable to the Contractor. The Contractor will be required to submit a sworn payroll statement according to the Illinois Department of Labor documenting his compliance with the Illinois Prevailing Wage Act.

Final Payment will be made within approximately thirty (30) days of final inspection and approval and receipt of all waivers, sworn statements, guarantee statements, and other documents set forth in the Contract Documents.

6. Preparation of Bids

Before submitting proposal, each bidder shall examine carefully all documents pertaining to the work and visit the sites to verify conditions under which work will be performed. Submittal of the Bid Proposal by the Contractor is a representation by the Contractor, that the Contract Documents are full and complete, are sufficient to enable the Contractor to determine the cost of the Work and that the Contract Documents are sufficient to enable it to construct the Work outlined therein, in accordance with applicable laws and regulations, and otherwise to fulfill all its obligations hereunder, including, but not limited to, Contractor's obligations to construct the Work for an amount not in excess of the contract Sum on or before the date(s) of Completion established in the Agreement. The Contractor further acknowledges and declares that it has visited and examined the Project site, examined all physical and other conditions affecting the Work and is fully familiar with all of the conditions thereon and thereunder affecting the same. In connection therewith, Contractor specifically represents and warrants to Owner that prior to the submission of its bid it has: (a) thoroughly examined the location of the work to be performed, is familiar with local conditions, and has read and thoroughly understands the Contract Documents as they relate to the physical conditions prevalent or likely to be encountered in the performance of the work at such location; (2) examined the nature, location and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (3) examined the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time frame required by the Contract Documents.

Submission of bid will be considered presumptive evidence that the Bidder has visited the site and is conversant with local facilities and difficulties, the requirements of the documents and of pertinent State, County or Local Codes, State of Labor and Material Markets, and has made due allowance in his bid for all contingencies.

Include in bid all costs of labor, material, equipment, allowance, fees, permits, guarantees, applicable taxes (**sales tax does not apply**), insurance and contingencies, with overhead and profit necessary to complete those portions of the work covered by the specifications on which proposal is made, including all trades, without further cost to the Owner. Obtain all permits and arrange for all inspections. Pay all fees, permits and costs incurred.

No compensation will be allowed by reason of any difficulties, which the Bidder could have discovered prior to bidding.

7. Fees and Inspection

The Contractor is responsible for all license fees and arrangements for all inspections required by State, County, Local and other authorities having lawful jurisdiction. The Owner is responsible for all building permit fees associate with the Work.

8. Subcontracts

Contractors operating under direct Contracts with the Owner may let Subcontracts for the performance of such portions of the work as are usually executed by special trades. All such Subcontracts shall be based on conformance with all pertinent conditions set forth in the Contract Documents, including the Supplementary Conditions as well as the detailed requirements of the portions of the drawings and specifications which depict or describe the work (labor and materials) covered by the Subcontract.

No Work may be sublet without approval of the Owner, who reserves the right to disapprove any proposed Subcontractor whose record does not establish his experience, competence, and financial ability to perform the work.

9. Materials

Materials shall conform to the drawings, specifications, manufacturer's specifications for all products incorporated into the work, and all applicable standards and guidelines.

Some specific equipment and materials have been specified for use on this project to establish minimum performance requirements or desired features. To receive consideration of alternate equipment or materials, the Bidder must submit

all appropriate product data and receive pre-bid approval from the Owner. All materials are subject to the approval by the Owner both before and after incorporation in the project.

All condemned material or work shall be removed from the premises and properly disposed of.

10. Law Compliance

All project construction work shall comply with all State and Municipal Laws and Regulation, and with all Local Ordinances and Rules pertaining to this work. Such Laws, Regulations, Ordinances and Rules shall be considered a part of these specifications.

A. The Contractor warrants that it is familiar with and shall comply with Federal, State and local laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Contract including without limitation Workers Compensation Laws, minimum salary and wage statutes and regulations, laws with respect to permits and licenses and fees in connection therewith, laws regarding maximum working hours. No plea of misunderstanding or ignorance thereof will be considered.
B. Whenever required, the Contractor or Subcontractor shall furnish the Architect/Engineer and Owner with satisfactory proof of compliance with said Federal, State and local laws, statutes, ordinances, rules, regulations, orders, and decrees.
C. Contractor shall carefully examine the Occupational Safety and health Act as issued by the Federal Register (OSHA), and the specific regulations governing procedures, techniques, safety precautions, equipment design, and the configuration of the same as required under this Act and shall comply with all terms of the Act and to perform and complete in a workmanlike manner all work required in full compliance with said Act.
D. Contractor shall comply with all terms of the Illinois Preference Act and all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission.
E. At all times Contractor shall remain in compliance with the Illinois Public Works Employment Discrimination Act (775 ILCS 10/1, et seq.,) and the Illinois Human Rights Act (775 ILCS 5/2-101, et seq.,), and in addition shall at all times comply with Section 2-105 of the Illinois Human Rights Act requiring a written sexual harassment policy as defined therein.
F. Contractor and all subcontractors shall be solely responsible for complying with the Substance Abuse Prevention on Public Works Projects Act, Public Act 095-06345.
G. Contractor agrees to maintain all records and documents for projects of the District in compliance with the Freedom of Information Act, 5 ILCS 140/1 et seq. In addition, Contractor shall produce records which are responsive to a

request received by the District under the Freedom of Information Act so that the District may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then Contractor shall so notify the District and if possible, the District shall request an extension so as to comply with the Act. In the event that the District is found to have not complied with the Freedom of Information Act due to Contractor's failure to produce documents or otherwise appropriately respond to a request under the Act, then Contractor shall indemnify and hold the District harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorney's fees and penalties.

H. Contractor understands, represents and warrants to the Owner that the Contractor and its Subcontractors (for which the Contractor takes responsibility to insure that they comply with the above-mentioned Acts) are in compliance with all requirements provided by the Acts set forth in Article 15 and that they will remain in compliance for the entirety of the Work. A violation of any of the Acts set forth in this Article is cause for the immediate cancellation of the Contract. However, any forbearance or delay by the Owner in canceling this Contract shall not be considered as, and does not constitute, Owners consent to such violation and a waiver of any rights the Owner may have, including without limitation, cancellation of this Contract.

I. Contractor and each of its Subcontractors shall pay prevailing wages as established by the Illinois Department of Labor for each craft or type of work needed to execute the contract in accordance with 820 ILCS 130/.01 et seq. The Contractor shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to the Contractor due to changes in the prevailing rate of wage during the terms of any contract shall be at the expense of the Contractor and not at the expense of the Owner. The change order shall be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. The Contractor shall be solely responsible to maintain accurate records as required by the prevailing wage statute and shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work

11. <u>Supervision</u>

The Contractor shall maintain a highly qualified technician on the job site at all times. The Contractor shall enforce strict discipline and good order among his employees and the Subcontractors at all times work is in progress. The

Contractor shall not employ any unfit person or anyone not skilled in the work assigned to him.

12. Equipment and Tools

Furnish and maintain all equipment tools and apparatus, scaffolding, and all temporary work and materials necessary to perform the work.

13. Expediting

Place orders for materials and equipment immediately upon receipt of Contract or Notice to Proceed and follow up vigorously to insure adequate and timely supply to the work. Perform all tracings and expediting actions and arrange to get workmen in the job at the proper time to avoid delays.

14. Sanitary

The Contractor shall provide suitable, temporary toilet facilities at a specified location, for workmen on the project, complying in every respect with Local and County requirements. Unit shall be chemically treated, serviced at regular intervals, and maintained in a sanitary condition at all times.

15. Existing Utilities

The Contractor shall be responsible for locating and protecting all existing utilities, public and private, for the duration of the job. Prior to the commencement of any work, the Contractor shall notify all public and private utilities for the purpose of verifying, marking, and recording the locations of all underground or overhead utilities, temporary or permanent. Any repair/replacement costs or associated damage will be the responsibility of the Contractor.

16. Testing and Observations

The Contractor shall give the Owner, Village Inspector, and Manufacturer's Representative proper notice of readiness of Work for all required observations, tests, or reviews.

If Laws or Regulations of any public body having jurisdiction requires any Work (or part thereof) to specifically observe or tested, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish Engineer with the required certificates of inspection, testing, or approval. Contractor shall be responsible for and pay all costs in connection with any inspection or testing required in connection with Owner's or Manufacturer's agreed to Supplier of materials or equipment proposed to be incorporated into the Work, or of

materials or equipment submitted for approval prior to the Contractor's purchase thereof for incorporation in the Work.

The cost of all observations, tests, and approvals in addition to the above which are required by the Contract Documents shall be paid by the Owner (unless otherwise specified).

All observations, tests, or reviews other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations agreed to by Owner and Contractor (or Manufacturer if so specified).

Should testing reveal deficiencies due to Contractor error, subsequent testing costs shall be paid by Contractor.

If any work (including the work of others) that is to be observed or tested is covered without the written concurrence of the Owner, it must, if requested by the Landscape Architect, be uncovered of observation. Such uncovering shall be at the expense of the Contractor unless Contractor has given Owner or Village Inspector timely notice of Contractor's intention to cover such work and the Landscape Architect has not acted with reasonable promptness in response to such notice. Neither observations by Owner nor observations, tests, nor reviews by others shall relieve the Contractor from his obligations to perform the work in accordance with the Contract Documents.

17. Acceptance Preceding Work (if applicable)

Before starting any operation, the Contractor and Subcontractors shall examine work performed by others to which his work adjoins or is applied and report any condition that will prevent satisfactory accomplishment of his Contract. Failure to notify the Owner in writing of deficiencies or faults in preceding work will constitute acceptance thereof and waiver of any claims and its unsuitability.

18. Cutting and Patching

When necessary to cut or alter completed work to accommodate another trade, the Contractor or Subcontractor for work in places, shall do all cutting for and repair of portions of the work so disturbed. Where cutting is necessitated by fault or negligence of another Contractor, all costs of cutting and repairing shall be borne by the party at fault.

19. Damage to Current

Each Contractor shall adequately protect all preceding work from damage caused by him or his works. All breakage or damage will be repaired by trade

concerned at the cost of the party causing damage. Each Contractor, however, shall be responsible for adequate protection of his own work against normal construction risks.

20. Housekeeping

Keep site of operations free from accumulations of rubbish and waste materials at all times. See that Subcontractors remove and dispose of their rubbish. Arrangements for removal and disposition of rubbish will be made by Contractors concerned at no cost to the Owner.

Should any Contractor or Subcontractor allow rubbish or waste material to accumulate on any portion of the site or in any portion of the building to such extent that the accumulation constitutes a hazard or obstructs the prosecution of the work in any way. The Owner may, if Contractor or Subcontractor at fault fails to remove such rubbish or waste materials within three (3) days after written notice to clear up the accumulation, engage prior labor or services of another Contractor to make necessary removal and disposition and to charge cost against monies due to Contractor or Subcontractor at fault.

21. Protection

A. Property: Each Contractor and Subcontractor shall take such precaution as are necessary adequately to protect from damage or deterioration and to safeguard from theft or pilferage, all materials, tools and equipment pertaining to his work which is on the site, whether stored or incorporated in the structure.

B. Safety: Provide all barricades or other temporary protection as may be required by local authorities having lawful jurisdiction, or be considered of general safety, around all openings in floors and walls of the structure, and around all open pits or trenches in its vicinity.

C. Weather: Each Contractor and Subcontractor shall at all times provide protection against rain, snow, wind storms, frost or heat so as to maintain all work, materials, apparatus, and fixtures, free from injury or damage.

At the end of each day's work, all new work subject to damage by the elements and all points where water or frost may enter any part of the structure or work shall be covered.

D. Water: General Contractor shall at all times protect excavations, trenches, and building from damage from rain water, snow, spring water, ground water backing up of drains or sewers and all other water. He shall provide all pumps and equipment enclosures required for such protection.

He shall also construct and maintain any temporary drainage necessary to direct or lead water away from the work and shall do all pumping necessary to keep excavation and lowest floor free of water at all times.

E. Damage: All work damaged by failure to provide protection shall be removed and replaced with new work at the expense of the Contractor at fault.

22. Guarantee

The Contractor and/or manufacturer shall provide a minimum of one (1) year warranty for all materials and workmanship associated with the project or work performed under the Contract.

23. Insurance

- **Worker's Compensation**
  - State: Statutory
  - Applicable Federal (e.g., Longshoremen's): Statutory
  - Employer's Liability
    - $1,000,000.00 Per Occurrence
    - $500,000.00 Disease, Policy Limit
    - $500,000.00 Disease, Each Employee
- If written under **Commercial General Liability Policy** Form
  - $2,000,000.00 General Aggregate
  - $1,000,000.00 Products Completed Operations Aggregate
  - $1,000,000.00 Personal and Advertising Injury
  - $1,000,000.00 Each Occurrence
  - $ 50,000.00 Fire Damage (any one fire)
  - $ 50,000.00 Medical Expense (any one person)
- **Business Automobile Liability** (including owned, non-owned and hired vehicles):
  - Bodily Injury
    - $1,000,000.00 Per Person
    - $1,000,000.00 Per Accident
  - Property Damage
    - $1,000,000.00 Per Occurrence
- **Umbrella Excess Liability**
  - $2,000,000.00 over Primary Insurance
  - $2,000,000.00 Retention for Self-Insured Hazards Each Occurrence

A. General: The Contractor shall not commence work under the Contract until he has obtained all insurance required, and it has been approved by the Owner, nor shall Contractor allow any Subcontractor to commence work on any portion of the work until all insurance required of the Subcontractor and Sub-subcontractor has been similarly approved by the Owner.

All such insurance shall be purchased only from companies licensed and duly authorized by the Department of Insurance of the State of Illinois to do business in Illinois and to write the types of insurance policies as herein specified. Insurance companies must have a minimum policy holder's rating of A+ and a financial rating of AAAAA as stated in the latest edition of Best's Insurance Guide.

The insurance coverages must be maintained by the Contractor and the Subcontractor until all work is completed by the Contractor and accepted by the Owner. If the policy is written on claims made basis, then the Contractor shall purchase such additional insurance as may be necessary to provide specified coverage to the District for a period of not less than five (5) years from the completion of the work.

B. Automobile Liability: Contractor shall obtain at his expense and keep in force at all times during the performance of the work, Comprehensive Automobile Liability Insurance providing for bodily injury, personal injury and property damage, limits of an amount not less than $1,000,000 per occurrence and $2,000,000 per annual aggregate.

C. General Liability Insurance: Contractor shall obtain at his expense and keep in force at all times during the performance of the work, Comprehensive General Liability Insurance providing for bodily injury, personal injury and property damage, limits of not less than $1,000,000 per occurrence and $2,000,000 annual aggregate.

D. Worker's Compensation and Employer's Liability Insurance: Contractor shall obtain at his expense and keep in force at all times during the performance of work, worker's compensation and related insurance coverage at amounts required by statute and employer's liability with limits of not less than $1,000,000 per occurrence.

E. Certificates of Insurance: Within five (5) calendar days after receipt of the "Written Notice to Proceed", the Contractor shall file with the Owner, a Certificate of Insurance and Policy Endorsement showing complete coverage of all insurance required by this Section signed by the insurance companies or their authorized agents, certifying to the name and address of the party insured, the description of the work covered by such insurance, the insurance policy numbers, the limits of liability of the policies and the dates of their expirations, with a further certification from said insurance companies that their policies will not be modified, amended, changed, cancelled or terminated without thirty (30) business days prior written notice to the Owner. If any form of umbrella or excess coverage policy is utilized by the Contractor, the Owner reserves the right to require a copy of the entire policy.

F. All policies of insurance purchased or maintained in fulfillment of this paragraph 24 shall name the Owner and Architect/Engineer as additional insureds thereunder.

G. Failure of Owner to demand any certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance. The Contractor agrees that the obligation to provide the insurance required by these documents are solely its responsibility and that this is a requirement which cannot be waived by any conduct, action, inaction or omission by the Owner.

H. Nothing contained in the insurance requirements of the Contract Documents is to be construed as limiting the liability of the Contractor, the liability of any Subcontractor or any tier or either of their respective insurance carriers. The Owner, does not in any way, represent that the coverages or limits of insurance specified is sufficient or adequate to protect the Owner, Contractor, Architect/Engineer, or any Subcontractor's interests or liabilities but are merely at minimums. The obligation of the Contractor, the Architect/Engineer, and any Subcontractor of any tier to purchase insurance, shall not, in any way, limit their obligations to the Owner in the event the Owner should suffer an injury or loss in excess of the amount recoverable through insurance, or any loss or portion of the loss which is not covered by either the Contractors or any Subcontractor insurance.

I. On the Certificate of Insurance, delete in the cancellation provision the following words, "Endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives."

J. All the insurance required of the Contractor shall state that the coverage afforded to the additional insureds shall be primary insurance of the additional insureds with respect to claims arising out of operations performed by or on their behalf. If the additional insureds have other insurance or self-insured coverage which is applicable to the loss, it shall be on an excess or contingent basis.

K. All insurance required of the Contractor shall provide that any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Owner or Architect/Engineer or any of their officers, directors, commissioners, officials, employees, consultants, volunteers, or agents. l. All insurance required of the Contractor shall provide that the insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

L. In the event the Contractor fails to furnish and maintain the insurance required by this contract, the Owner may purchase such insurance on behalf of the Contractor, and the Contractor shall pay the cost thereof to the Owner upon demand or shall have such cost deducted from any payments due the Contractor. The Contractor agrees to furnish to the Owner the information needed to obtain such insurance.

M. In order to protect the Owner and Architect/Engineer the Contractor shall require that all its Subcontractors purchase insurance protecting the Owner and Architect/Engineer to the same extent they are protected by the insurance required herein from the Contractor.

N. Owner's Liability Insurance

1. The Contractor shall purchase and maintain insurance covering the Owner's liability for claims which may arise from operations under the Contract and that will protect the Owner and the Architect/Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury or to destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (2) is cause in whole or in part by any negligent act of omission of the Contractor, and Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party to whom insurance is afforded pursuant to this paragraph. The minimum limits of liability purchased for such coverage shall be equal to the aggregate of the limits required for the Contractor's Liability Insurance under 24 above.
2. In any and all claims against the Owner or the Landscape Architect or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the insurance obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Workmen's Compensation Acts, disability benefit acts or other employee benefit acts.
3. The insurance obligations of the Contractor under this paragraph shall not extend to the liability of the Landscape Architect, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications or (2) the giving of or failure to give directions or instruction by the Landscape Architect, his agents or employees provided that such giving or failure to give is the primary cause of the injury damage.
4. The Contractor shall provide the Owner with the Original policy and shall furnish the Architect/Engineer a memorandum copy of said policy. The

named insured in the Protective Liability Policy shall be: Hoffman Estates Park District

24. Indemnification

To the fullest extent permitted by law, the Contractor shall waive any right of contribution against the Owner and shall indemnify and hold harmless the Owner and the Landscape Architect and their officers, officials, employees, volunteers and agents from and against all claims, damages losses and expenses, including, but not limited to, legal fees (attorney's and paralegal's fees, expert fees and court costs), arising out of or resulting from the performance of the Contractor's work provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or injury to or destruction of property, other than the work itself, including the loss of use resulting therefrom, or is attributable to misuse or improper use of trademark or copyright protected material or otherwise protected intellectual property, to the extent it is caused in whole or in part by any wrongful or negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right to indemnity which the Owner would otherwise have. The Contractor shall similarly, protect, indemnify and hold and save harmless, the Owner, its officers, officials, employee, volunteers and agents against and from any and all claims, costs, causes, actions and expenses, including, but not limited to, legal fees, incurred by reason of Contractor's breach of any of its obligations under, or Contractor's default of any provisions of the Contract. The indemnification obligations under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Workers' Compensation or Disability Benefit Acts or Employee Benefit Acts

25. Labor Law

The Contractor and each and every Subcontractor performing work at the site of the project to which this Contract relates shall comply with applicable and provisions of all pertinent Federal, State, and Local Labor Laws.

26. Final Cleaning

Just prior to delivery of the job to the Owner, the Contractor shall perform a final cleaning of the equipment and haul away from the job site all debris created by his work on the site and surrounding area.

27. Time Schedule/Major Repairs

Work under the Contract shall commence within five (5) calendar days after given "Written Notice to Proceed" by Owners (or date specified) and shall continue with due diligence until due completion.

Each Contractor or Subcontractor shall and does hereby agree that he will start and prosecute his work so as to cause no delay to the Contractor and that he will complete all work under his Contract coincidentally with completion of Contractor's work.

The Contractor shall submit an estimated time schedule setting up order of procedure and time allowed for each branch of work. Contractor shall make every effort to adhere to these schedules, but reasonable modifications will be permitted from time to time to compensate for delays due to strikes or conditions beyond Contractor's control, exclusive of weather.

28. Avoidance of Delays (Major Repairs)

Each Contractor and Subcontractor shall be furnished a copy of the "Time Schedule" referred to above, and each shall so prosecute his work that he not only maintains his progress in accordance with the said Time Schedule but also shall cause no delays to other Contractors, either in person or through a Subcontractor, fail to maintain progress according to the approved Time Schedule or cause delay to another Contractor or Subcontractor, he shall furnish such additional labor and/or services or work such overtime as may be necessary to bring his operation up to schedule with no additional cost to Owner. Failure to maintain schedule or to the above steps to regain the agreed time schedule shall constitute default within the terms of the Contract and grounds on which the Owner may have recourse to the Contractor's Surety for remedial action.

29. Unit Prices and Measurement (if applicable)

Upon completion of the work, a final measurement will be conducted by the Contractor and Owner. Unit prices included in the bid proposal will be applied to the units measured to determine the final/total price of the work.

30. Assignment

The Contractor or any Subcontractor shall not assign the Contract nor any monies due to become due to him hereunder, to any Person, Firm, or Corporation without previous written consent of the Owner.

31. Extras

No extra work shall be allowed or paid for unless a Change Order is made and accepted by the Owner in writing.

32. Examination of Site

Before submitting proposal, contractors shall examine site. Such an examination will be presumed and no allowance will be made for extra labor or materials due to Contractor's failure to do so. Any information furnished by the Owner shall not constitute a representation concerning site conditions and the Contractor shall bear, solely and exclusively, all costs due to concealed, unknown, unusual or otherwise unforeseen conditions at the site. Contractor is aware that all such risk concerning site conditions is borne by it, has considered such in making its bid, and therefore freely waives all of its rights under the Illinois Public Construction Contract Act of 1999 .

33. Safety

The Contractor is responsible for the safe passage of pedestrian traffic for the duration of the job. Any precautionary measures, necessary warning signs, barricades, etc., required to inform the general public of potential hazards or dangers and as necessary to assist the Contractor in the performance of the work, shall be at his expense and provided for in his quoted price. **Public safety is a foremost concern of the Owner, therefore failure by the Contractor to take a pro-active approach to safety is unacceptable**. **If necessary, the Owner will take whatever steps deemed appropriate, at the cost of the Contractor, to ensure the safety of the general public and our employees**.

34. Personnel

If any person employed on the work site be, in the opinion of the Owner, intemperate, disorderly, incompetent, willfully negligent or dishonest in the performance of his duties, he shall be directed to cease work and vacate the job site immediately.

35. Liens

No payment shall become due until the Contractor, if required, shall deliver to Owner a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information, the releases and receipts include all the labor and material for which a lien could be filed. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

36. Default

In case of default by the Contractor, the Owner may procure the articles or services from other sources and hold the Contractor responsible for any excess cost occasioned thereby.

37. Cancellation of Contract

If the Contractor or any of his Sub-contractors shall, in the judgment of the Hoffman Estates Park District, be unable to carry on the work satisfactorily, or if the Contractor or any of his Sub-contractors shall violate any of the provisions of this contract, or in case of bankruptcy of the Contractor, or failure of the Contractor to pay for supplies or workmen, or a work-stoppage, or a failure by the Contractor to provide sufficient workmen or sufficient material for the job, the Owner may serve written notice upon the Contractor and his Surety of his intention to terminate the Contract, and, if within seven (7) days after the service of such notice, the Contractor or the Sub-contractor or the Surety have not proceeded to carry on the work in accordance with this Contract and to the satisfaction of the Owner, this Contract shall cease and terminate and the Owner shall have the right to take over the work and prosecute the same to completion by Contract for the account and at the expense of the Contractor and the Surety; and the Contractor and Surety shall be liable to the Owner for any excess costs occasioned by the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work such materials, appliances, and plants as may be on the site of the work and necessary therefore; provided, however, that in the event the Owner determines that the failure of the Contractor, Sub-contractor or Surety to carry on the work in accordance with this Contract has resulted in an emergency which will require that the Owner take over the work immediately, to avoid loss or waste of a substantial part of the work already performed, the Owner may immediately take over the work and prosecute the same at the expense of the Contractor and Surety to the extent necessary to avoid damage, and may prosecute the same at the expense of the Contractor and Surety to the extent necessary to avoid damage, and may prosecute the same to completion at the expense of the Contractor and the Surety unless within seven (7) days after the services of the above described notice, the Contractor, Sub-contractor or Surety has proceeded to carry on the work in accordance with this Contract and to the satisfaction of the Hoffman Estates Park District.

38. Lien Waivers (if applicable)

Neither by partial nor final payment will the Owner be deemed to have waived any remedy for defective work or negligence on the part of the Contractor or any other portion of the Contract which, by its nature, survives after time of payment.

Supporting partial Waivers of Lien for each Subcontractor, supplier and prime contractor must accompany each request for progress payment.

Waivers must spell out exact description of work performed for which Waiver is issued and state whether dollar amount is full amount received or amount of work less retainage, held by prime contractor.

For final payment it is necessary to submit final waivers in the full amount of the Contracts for all Subcontractors, suppliers and prime contractors.

Waivers must be accompanied by a sworn statement listing Subcontractors and suppliers, the amount of their Contracts and the amount requested.

39. Line and Grade Stakes (if applicable)

Stakes for lines and grades shall be provided once by the Owner. Costs for replacement of damaged stakes shall be paid by the Contractor. Prior to commencing work and before pouring or finally adjusting any structure or closing any excavation, the Contractor shall verify the correctness of any grades so as to conform to the Contract Documents.

40. Construction Observation

A Consultant may be called upon to observe the work on behalf of the Owner and will provide general assistance during construction insofar as proper interpretation of the Contract Documents is affected. The consultant shall not be responsible for the acts or omissions of the Contractor's superintendent or other employees.

All materials used and all completed work by the Contractor shall be subject to the observation of the Owner/Owner's representative. The Contractor shall furnish such samples of materials for examination and tests as may be requested by the Owner and shall furnish any information required concerning the nature or source of any materials or equipment, which he proposes to use. Any material, equipment, or work which does not satisfactorily meet the Contract Documents may be rejected by the Owner by giving written notice to the Contractor. All rejected materials, equipment, or work shall be promptly removed and replaced at the Contractor's expense.

41. Field Representatives

Field representatives may be appointed by the Owner, Landscape Architect to see that the work is performed in accordance with the Contract Documents. Field representatives shall have the authority to condemn and/or reject defective work materials. Only the Owner shall have authority to suspend work. Field representatives shall have no authority to permit deviation from the Contract

Documents and Owner; the Contractor shall be liable for any deviations made without a written order from the Landscape Architect

Bid Instructions Earthwork

Bids are due and will be opened and read aloud on **Thursday March 12 at 10:30 AM** at 1685 West Higgins Road in Hoffman Estates, Illinoi s.

A Certified Check, Cashier's Check or Bid Bond payable to the Hoffman Estates Park District for not less than five (5) percent of the total bid amount will be required for each bid.

The successful bidder will be required to furnish a satisfactory Performance Bond and Labor and Material Payment Bond for the total Contract Amount. The successful bidder will also be required to execute AIA Form A101 – 2017 as the contract between the parties.

All questions should be directed to Dustin Hugen at the Hoffman Estates Park District via email at dhugen@heparks.org.

The earthwork contractor will be responsible for all site demolition shown on the Site Demolition Plans however will not be responsible for the removal of the existing identification sign (note # 11 on the Site Demolition Plan), the milling of the asphalt pavement (this will be included by the asphalt contractor) or the removal of the existing flared end section.

This bid includes all earthwork necessary for the installation of all proposed improvements. The earthwork contractor shall prepare the site subgrade for the installation of all of the proposed subbase material. The subgrade shall be proof rolled following completion of the earthwork operations. All stone subbase (CA-6, CA-7, Vulcan 210, etc.) will be installed by the concrete, asphalt, playground, and utility contractors with the exception of the gravel infiltration basin (Storm Note # 13 on the Site Utility Plan). The earthwork contractor shall excavate the basin and backfill it as shown on the Site Utility Plan and Utility Detail Sheet C-6.6. The earthwork contractor shall coordinate the installation of the proposed utilities within the infiltration basin with the site utility contractor.

It will be the earthwork contractor's responsibility to haul all excess material (soil and debris created by earthwork operations) from the site and to dispose of it legally. The earthwork contractor will be responsible for environmental testing necessary to dispose of the excess material. The utility contractor will be responsible for hauling trench spoils from the site. The contractor shall plan to haul up to 600 cubic yards of clean topsoil to the Park District Facility located at 1450 Poplar Creek Drive in Hoffman Estates, Illinois.

The earthwork contractor shall also include all erosion control and storm water pollution prevention measures included within the construction plans and the storm water pollution prevention plan included within this project manual.

The earthwork contractor will be responsible for providing a minimum of 6" of topsoil in all landscape areas and will also be responsible for the installation of the volleyball court sand as shown in the details. Final landscape installation/restoration and the installation of seeding and blanketing will be installed by the owner. However, the earthwork contractor will be responsible for the installation of temporary erosion control measures as outlined within the construction plans and the storm water pollution prevention plan.

The earthwork contractor will also be responsible for the installation of all proposed retaining walls shown on the construction plans.

Note: the Hoffman Estates Park District will be construction managing the overall project.

Bid Instructions

Preparation of Bid Proposals

The bidder shall submit his prices on the attached proposal forms. The proposal shall be executed properly and all writing shall be with blue or black ink.

The bidder shall specify in figures, in the places provided, a price for each of the separate items called for in the proposal forms.

The bidder shall return all of the project manual "specifications" with the bid, and **no sheets shall be detached from any part of the bid documents**.

Scope of Work

The scope of work includes demolition and earthwork as described within this project manual and the proposed construction plans.

Beginning and Completion Dates

Begin Construction:	April 2, 2020
End Construction:	May 4, 2020 (For Hardscape Areas)
100 % Completion:	June 15, 2020

Project Contact
Mr. Dustin Hugen
(847) 285-5465
dhugen@heparks.org

Please Submit All Technical Questions in Writing to Above Email Address

Special Conditions

Specification or Information Conflicts

Should any Specifications, Information, Directives, Notes, Tags or Provisions contained in the Construction Documents conflict with any other Specification, Information, Directives, Notes, Tags or Provisions contained in the Construction Documents, then the more stringent Specification, Information, Directive, Note, Tags or Provision shall apply.

Limit of Construction

Construction traffic and material staging shall be permitted only within the Limit of Construction area as shown on the Construction Plans. The Contractor shall repair, at no additional cost to the Owner, any areas disturbed outside of this limit. Turf repairs will be made with sod.

Excess Materials and Debris

All excess materials and debris etc., generated by this work, shall be considered an incidental item to the Bid, and hauled from the site. Large amounts of debris will not be permitted to accumulate on the site and must be hauled from the site on a continuous basis.

Construction Access

Construction access shall be permitted only through the access point as shown on the plan. No other access will be permitted. The Contractor shall be responsible for protection of existing curbs and pavements and for replacement of any damage, at no additional expense to the Owner.

Existing Utility Structures and Utility Lines

The Contractor will be responsible for locating all existing utility structures and utility lines prior to any excavation or demolition. These include but are not limited to water, sanitary, drainage, telephone, fiber optics, cable television, natural gas, and electrical structures and lines. Contact J.U.L.I.E., the Village of Hoffman Estates prior to construction. Private site underground utility locating services shall be provided as specified on the plans.

Traffic Control

The Contractor will be responsible for controlling traffic when construction vehicles are entering or exiting the site. The Contractor will be responsible for the erection and maintenance of barricades, signage and miscellaneous traffic control measures to insure that vehicular traffic flows smoothly and safely within the site and on the streets surrounding the site.

Dust and Noise Control

The Contractor will be responsible for control of dust throughout the duration of the project. The Contractor will also be required to conform with any applicable Village of Hoffman Estates noise ordinances.

Street Cleaning

The Contractor will be responsible for cleaning surrounding streets of any mud or debris at the end of each workday. Street sweeping equipment may be used to fulfill this requirement.

Hold Harmless

The Contractor agrees to indemnify, save harmless and defend the Hoffman Estates Park District, its consultants, agents and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses or expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to any property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this contract. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the negligence or fault of the Hoffman Esates Park District, its consultants, agents, servants, or employees or any other person indemnified hereunder.

Prevailing Wage

In all work performed under this Contract, the Contractor and all of its subcontractors shall comply with the current provisions of the Prevailing Wage Act of the Illinois Revised Statutes, Chapter 48, Sections 39s-1 *et seq.* Certified Payrolls are to be delivered to the Owner with each Application for Payment. Union labor per say is not required by the Park District, however prevailing wage is required. It is the contractor's responsibility to ensure that construction delays are avoided due to union issues.

Sexual Harassment

The Contractor and all of its subcontractors shall comply with the Sexual Harassment provisions of the Illinois Human Rights Act (775 ILCS 5/1-101 *et seq*.). Certified Payrolls are to be delivered to the Owner with each Application for Payment.

Equal Opportunity

In all work performed under this Contract, the Contractor and all of its subcontractors shall certify that they are an "Equal Opportunity Employer" as defined by Section 2000 (e) of Chapter 21, Title 42 of the United States Code, Annotated and Federal Executive Orders #11246 and #11375.

Licenses and Permits

The Contractor will be responsible for obtaining a Contractor's License and all applicable Permits from the Village of Hoffman Estates, and any other regulatory agencies or governmental bodies, prior to beginning any work on this project. Contractor shall contact the village to determine what fees will be required for inspections and the appropriate licenses, and shall include these costs within the bid.

Protection of Existing Trees

The Contractor shall be responsible for protection of all existing trees to remain on the project site. The Contractor may, at his own cost, fence any trees that may be in danger of damage or be near active construction. Any damage to an existing tree will result in a back-charge to the Contract of $100 per caliper inch of the damaged tree. The caliper of the damaged tree will be measured 1.0' above existing grade.

Concrete Testing

The Contractor will be required to provide samples of all concrete used for this project. One test cylinder will be required from each truckload of concrete delivered to the site. Each test cylinder must be clearly marked with the date of the pour, load ticket number, the name of the concrete supplier and the location where the concrete was used. The Owner, at their own cost, will test these cylinders to determine if concrete meets project specifications. The Contractor will be responsible for disposing of all untested cylinders.

Protection of Existing Features

The Contractor will be responsible for protecting all existing features in the work area including walks, pavements, curbs, site furnishings, and utilities, etc. Damage to any existing features will be repaired or replaced by the Contractor at no additional expense to the Owner. Turf repairs will be made with sod.

Grading and Compaction

All grading performed for this project shall conform to the specifications. Mechanical compacting devices as outlined in the specifications must be utilized to perform the compacting that is necessary for this project.

Employer Liability

The Contractor (and each subcontractor and sub-subcontractor into whose subcontracts this clause shall be incorporated) agrees to assume the entire liability for all personal injury claims suffered by its own employees, including but without limitation claims under the Illinois Structural Work Act, asserted by persons allegedly injured on the Project; waives any limitation of liability defense based upon Worker's Compensation Act, court interpretation of said Act or otherwise; agrees to indemnify and defend Owner, Engineer, Construction Manager and their agents, employees and consultants (the "Indemnitees") from and against all such loss, expense, damage or injury, including reasonable attorney's

fees, that the Indemnitees may sustain as a result of such claims, except to the extent that Illinois Law prohibits indemnity for the Indemnitees' own negligence.

Bid Document Review

Bidders are encouraged to review the Bid Documents immediately upon receipt. The Owner and Engineer will be available to make interpretations regarding the Bid Documents and answer any questions that may arise during the Bid process. No inquiries will be accepted by the Engineer within two (2) working days of the Bid Opening. All questions shall be submitted in writing to the following email address:

dhugen@heparks.com

Pavement Quantities

The contractor will be responsible for collecting asphalt tickets for submission to the engineer for review. The engineer will use these tickets to ensure that the proper thickness of asphalt pavement is provided. A unit weight of 112 lbs / sq. yd. / in. will be used to verify asphalt quantities.

Reservation of Rights

Hoffman Estates Park District reserves the right to act in its own best interest and award the work to the Contractor, or Contractors it deems best able to complete the work in an appropriate and timely manner.

Construction Layout

All construction staking will be the responsibility of the contractor.

AIA General Conditions and AIA Contract Forms

The General Conditions of this contract are the American Institute of Architects' Standard Document No. A-201, "General Conditions of the Contract for Construction," 2017, as modified by the Supplementary General Conditions. The document is hereby specifically made apart of the contract documents with the same force and effect as though set forth in full. The Contract for this project is the American Institute of Architects' Standard Document No. A-101, "Standard form of Agreement Between Owner and Contractor, where the basis of payment is a Stipulated Sum", 2017. The document is hereby specifically made apart of the contract documents with the same force and effect as though set forth in full.

Copies of these documents are on file at the office of the Engineer and maybe referred to at any time during normal business hours.

The Contractor is directed to the Supplementary Conditions, which modify the General Conditions.

2019 Hoffman Estates Park District
South Ridge Community Park Enhancement Plan 2019

CONTRACTOR'S CERTIFICATION

As required under Article 33E of The Criminal Code of
1961 (Ill. Rev. Stat. Ch 38, Paras. 33E-1 through 33E-11)

_____a _____
Name of Contractor *Corporation, Partnership, etc.*

as part of its bid on the above sole referenced Contract, hereby certifies that the Contractor is not barred from bidding on the above referenced Contract as a result of a violation of either Section 33E-3 (Bid-Rigging) or 33E-4 (Bid-Stating) of Article 33E of the Illinois Criminal Code of 1961, as amended.

Dated:_____

Contractor:

By:_____

As its:_____

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

I, the undersigned, a notary public in and for the State and County aforesaid, hereby certify that _____ appeared before me this day in person, and being first duly sworn an oath, acknowledged that he/she executed the foregoing certification as his/her free act and deed.

Dated:_____Notary Public:_____

Project References

(Failure to complete will result in disqualification of Bid.)

Please submit at least five (5) references for similar projects completed within the past two (2) years.

1. Project Name:_____

   Contact Person/Title/Phone: _____

   Project Cost :_____ Date of Completion:_____

2. Project Name:_____

   Contact Person/Title/Phone:_____

   Project Cost :_____ Date of Completion: _____

3. Project Name:_____

   Contact Person/Title/Phone:_____

   Project Cost :_____ Date of Completion:_____

4. Project Name:_____

   Contact Person/Title/Phone:_____

   Project Cost :_____ Date of Completion:_____

5. Project Name:_____

   Contact Person/Title/Phone:_____

   Project Cost :_____ Date of Completion:_____

Company Name:_____

Bidder's Signature:_____
Title

Sub-Contractor and Supplier List

(Failure to complete will result disqualification of Bid.)

The sub-contractors and suppliers listed below will be involved in this contract work in the assignments listed. We understand that any deviation from this list must be requested in writing and approved by the Owner one (1) week prior to the start of the work that is involved.

Sub-Contractor (Including Address & Phone Number)	**Work Performed**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Material Supplier	**Material Supplied**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Company Name:_____

Bidders Signature:_____

Title

Bid Proposal Form

South Ridge Community Park 2019 Enhancement Plan
Hoffman Estates Park District

#	Item/Description	Cost

1.Base Bid: All earthwork and demolition at South Ridge Community Park depicted on the construction plans dated 2-21-20 and 2-17-20 entitled South Ridge Community Park 2019 Enhancement Plan as well as all documents included within this project manual.

Total Bid Cost $_____

Winning Bidder will also be required to furnish a project construction schedule.

Note: please include all unit prices included within the unit price section. During construction the owner reserves the right to reduce or increase quantities of proposed improvements. These changes will be based on the unit prices that are included within the unit price section.

Bidder Information

Company Name: _____

Address: _____

City/State/Zip: _____

Telephone: _____ Fax: _____

E-Mail Address: _____

Bidder's Signature: _____
Title

Bidder's Name: (Printed) _____

SECTION 2050

GENERAL SITE CONDITIONS

Locating Existing Utilities: It is the Contractors responsibility to have all existing utilities located before construction begins. This information can be obtained by calling JULIE (Joint Utilities Locating Information for Excavators) toll free at 1-800-892-0123, the Village of Hoffman Estates Water Department for water lines and shut-off location and for street light cables, the Village's Traffic Engineer's office.

Permits: The Contractor shall obtain and pay for all necessary permits and shall make all necessary arrangements for carrying out the work with the utility companies and any authorities involved.

Street Light Cables During progress of the work, constant contact should be maintained with the Village of Hoffman Estates Engineering Department for the purpose of locating buried cables. Cables shall be maintained in service.

A. PLANT MATERIALS

All existing trees, shrubs, lawns and other plant material, unless otherwise specified, shall be protected from mechanical injury. There shall be full protection of all plants including all limbs, trunks and exposed roots, and relief from soil compaction.

Any trees damaged during the course of construction by either the General Contractor or a qualified nurseryman shall repair any of his subcontractors at the Contractor's expense. All repairs must be done to the satisfaction of the Superintendent.

If any tree is damaged beyond repair, it shall be removed by the Contractor and replaced with a new tree of equivalent size and species as designated by the Superintendent of Parks at the cost of the Contractor.

The Contractor shall repair all tracks and ruts in the lawn left by his vehicle or the vehicles of his subcontractors. All repairs shall be done to the satisfaction of the Superintendent

B. PAVEMENTS AND WALKS

Any pavement areas damaged by the Contractor during the construction operation shall be replaced to the satisfaction of the Superintendent at Contractor's expense.

C. TRAFFIC SIGNS

The Contractor when authorized by the Village's Traffic Engineer may remove any traffic sign within the limits of construction, which interferes with construction operations. Any traffic sign which has been removed shall be re-erected immediately by the Contractor at the temporary location designated by the Traffic Engineer, and as soon as construction operations permit, the sign shall be set at its permanent location. The cost of all materials required and all labor necessary to comply with this provision will not be paid for separately but shall be considered as incidental to contract.

The Contractor shall replace at his own expense any traffic signs or posts, which have been damaged due to his operations.

Any traffic sign designated as critical by the traffic sign owner shall not be disturbed and no additional compensation will be allowed the Contractor for any delays, inconvenience, or damage sustained by him due to any special construction methods required in prosecuting his work due to the existence of such traffic signs.

END OF SECTION 02050

SECTION 2100 - SITE PREPARATION

1.0 GENERAL

1.1 Description

This work shall consists of the complete removal of all items called for in the plans and specifications or as otherwise implied in a safe and orderly manner creating as little disturbance as possible.

All areas indicated for construction of any kind shall be cleared of any debris, undergrowth, weeds, stumps, roots, and marked trees which might interfere with the progress of that work. Unmarked trees or any plant material indicated to be saved by the Owner or owner's representative shall be given special protection as specified.

2.0 PRODUCTS (not applicable)

3.0 EXECUTION

3.1 Safety of Operations

During removal operations, proper signs and security fence shall be installed by the Contractor prior to commencing work. Barricades shall be used to warn and protect the public against hazards. If a street must be temporarily closed to traffic, it shall be the Contractor's obligation to make arrangements for permission from the Village Traffic Engineer. After such approval is obtained, the Contractor shall notify both the Village Police and Fire Departments of actual times and dates of closure.

3.2 Protection of Items to Remain

Extreme care shall be utilized when removing any item adjacent to structures, utilities, paving, vegetation or any item not indicated for removal or relocation. These items shall be properly protected as required to keep them from damage or other disturbance of any kind during the course of work. Existing utilities to remain shall be protected and maintained to prevent leakage, settlement or other damage. Damage to any of the above shall be repaired or replaced to former condition as required by the utility company or Owner at the Contractor's expense. Repair of damaged utility shall be completed within 48 hours of damage occurring.

During the excavation for any new walks, pavements and the play area, it can be assumed that some root structure from the nearby existing trees will be encountered. Before cutting major roots exceeding 3 inches in diameter, notify the Owner's representative for approval. Care must be exercised during the excavation to minimize damage to existing trees.

The contractor shall protect all existing trees to remain by clearly identifying each tree. No traffic, excavation or filling shall take place within the drip line of each tree unless indicated on plan.

3.3 Plant Damage Compensation

The contractor will be penalized $100 per diameter inch for any tree damaged during construction. Diameter shall be measured twelve inches (12") above grade.

3.4 Removal Responsibility

All debris, trees, stumps, sod or soil to be cleared and removed from the project area shall be legally disposed of off site at the arrangement and expense of the Contractor. No materials will be stockpiled on site for future disposal; materials used for fill or topsoil may be stored on site. No excavation areas will be left in unsafe or unsightly conditions at days end.

The Contractor will be responsible for all transportation and disposal fees associated with this work. Burning of any materials on site is prohibited.

As a result of Public Act 90-761, which amends the Environmental Protection Act concerning general construction or demolition debris, new restrictions have been placed on material that is removed within the limits of a construction contract.

The revisions to the Act place specific requirements on construction or demolition debris, clean or general, or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities, structures and roads that is not commingled with any waste. When this material is removed from a job site and disposed of, certain criteria must be met as follows:

1. Either the Local Agency or the Contractor must ensure that load tickets and manifests that document the transfer, disposal, or other disposition of all debris leaving the construction site are completed.

2. The load ticket and manifest shall:

a. Identify the hauler, generator, and place of generation of the debris or soil.

b. Identify the weight or volume of the debris or soil.

c. Identify the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled, or treated.

3. The generator, transporter or recycler must maintain this documentation for 3 years.

A sample form has been attached that may be used to monitor all construction and demolition debris leaving the job site.

In accordance with Section 107.01 of the “Standard Specifications for Road and Bridge Construction”, a Contractor is required to observe and comply with all Federal and State laws, local laws, ordinances, and regulations when performing contract construction.

If a local agency desires to assign the documentation responsibility to the Contractor, the attached Special Provision should be inserted into the contract plans.

END OF SECTION 02100

Section 012200-Unit Prices

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Sections:

1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
2. Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

1. Excavate and remove to offsite location unsuitable soils and replace with CA-1 limestone compacted over Mirafi 140N geotextile fabric
   - Price per cubic yard of soil removed offsite and replaced with CA-1

   $_____/C.Y.

END OF SECTION

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping or sealing, removing site utilities abandoning site utilities in place.
7. Temporary erosion- and sedimentation-control measures.

B. Related Sections:

1. Division 01 Section "Temporary Facilities and Controls" for temporary utility services, construction and support facilities, security and protection facilities, and temporary erosion and sedimentation-control measures.
2. Division 01 Section "Execution" for field engineering and surveying.
3. Division 01 Section "Construction Waste Management and Disposal for additional LEED requirements.

1.3 DEFINITIONS

A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.

D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.

E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and indicated on Drawings.

F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.

1. Use sufficiently detailed photographs or videotape.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.

1. Do not proceed with work on adjoining property until directed by Architect.

C. Utility Locator Service: Notify “Julie” for area where Project is located before site clearing.

D. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.

E. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

F. Do not direct vehicle or equipment exhaust towards protection zones.

G. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

H. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Division 31 Section "Earth Moving."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly identify trees, shrubs, and other vegetation to remain. Flag each tree trunk at 54 inches (1372 mm) above the ground.

C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.

B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.

D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

A. General: Protect trees and plants remaining on-site according to requirements in Division 01 Section "Temporary Tree and Plant Protection."

B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

3.4 EXISTING UTILITIES

A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.

1. Verify that utilities have been disconnected and capped before proceeding with site clearing.

B. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.
2. Owner will arrange to shut off indicated utilities when requested by Contractor.

C. Locate, identify, and disconnect utilities indicated to be abandoned in place.

D. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Architect not less than two (2) days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect's written permission.

E. Excavate for and remove underground utilities indicated to be removed.

3.5 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches (450 mm) below exposed subgrade.
3. Use only hand methods for grubbing within protection zones.
4. Chip removed tree branches and stockpile in areas approved by Architect or dispose of off-site.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip in a manner to prevent intermingling with underlying subsoil or other waste materials.

1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
2. Do not stockpile topsoil within protection zones.
3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.

2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property. See plans for additional instructions.

B. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Preparing subgrades for slabs-on-grade walks pavements, and turf and grasses
2. Excavating and backfilling for buildings and structures.
3. Drainage course for concrete slabs-on-grade.
4. Subbase course for concrete walks pavements.
5. Subbase course and base course for asphalt paving.
6. Subsurface drainage backfill for walls and trenches.
7. Excavating and backfilling trenches for utilities and pits for buried utility structures.

B. Related Sections:

1. Division 01 Section "Construction Progress Documentation" for recording pre-excavation and earth moving progress.
2. Division 01 Section "Temporary Facilities and Controls" for temporary controls, utilities, and support facilities; also for temporary site fencing if not in another Section.
3. Division 03 Section "Cast-in-Place Concrete" for granular course if placed over vapor retarder and beneath the slab-on-grade.
4. Division 31 Section "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
5. Division 31 Section "Dewatering" for lowering and disposing of ground water during construction.
6. Division 31 Section "Excavation Support and Protection" for shoring, bracing, and sheet piling of excavations.
7. Division 32 Section "Turf and Grasses" for finish grading in turf and grass areas, including preparing and placing planting soil for turf areas.

1.3 UNIT PRICES

A. Work of this Section is affected by unit prices for earth moving specified in Division 01 Section "Unit Prices."

B. Quantity allowances for earth moving are included in Division 01 Section "Allowances."

1.4 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

K. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.5 SUBMITTALS

A. Product Data: For each type of the following manufactured products required:

1. Geotextiles.
2. Warning tapes.

B. Samples for Verification: For the following products, in sizes indicated below:

1. Geotextile: 12 by 12 inches.

1.6 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Utility Locator Service: Notify “Julie” for area where Project is located before beginning earth moving operations.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487 Groups A-1, A-2-4, A-2-5, and A-3 according to AASHTO M 145, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

1. Liquid Limit: Per IDOT Specifications.
2. Plasticity Index: Per IDOT Specifications.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487 Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent

passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.

F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.

H. Drainage Course: Narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.

I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.

J. Sand: ASTM C 33; fine aggregate.

K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 GEOTEXTILES

A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 157 lbf ; ASTM D 4632.
3. Sewn Seam Strength: 142 lbf; ASTM D 4632.
4. Tear Strength: 56 lbf; ASTM D 4533.
5. Puncture Strength: 56 lbf; ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.2 per second, minimum; ASTM D 4491.
8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent;

complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
3. Sewn Seam Strength: 222 lbf ; ASTM D 4632.
4. Tear Strength: 90 lbf; ASTM D 4533.
5. Puncture Strength: 90 lbf ; ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 ACCESSORIES

A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches (150 wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:

a. 12 inches outside of concrete forms at footings.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches (300 mm) each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. For pipes and conduit less than 6 inches in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe or conduit circumference. Fill depressions with tamped sand backfill.
3. For flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support conduit on an undisturbed subgrade.
4. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

D. Trench Bottoms: Excavate trenches 4 inches deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.

1. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

E. Trenches in Tree- and Plant-Protection Zones:

1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.
3. Cut and protect roots according to requirements in Division 01 Section "Temporary Tree and Plant Protection."

3.7 SUBGRADE INSPECTION

A. Notify Architect when excavations have reached required subgrade.

B. If Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 1 mph.
2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Architect, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.8 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Architect.

1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.9 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.11 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Division 03 Section "Cast-in-Place Concrete Miscellaneous Cast-in-Place Concrete."

D. Trenches under Roadways: Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course. Concrete is specified in Division 03 Section "Cast-in-Place Concrete Miscellaneous Cast-in-Place Concrete."

E. Backfill voids with satisfactory soil while removing shoring and bracing.

F. Place and compact initial backfill of subbase material, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

G. Place and compact final backfill of satisfactory soil to final subgrade elevation.

H. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.12 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.13 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.14 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.15 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch.
2. Walks: Plus or minus 1 inch.
3. Pavements: Plus or minus 1/2 inch

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.16 SUBSURFACE DRAINAGE

A. Subdrainage Pipe: Specified in Division 33 Section "Subdrainage."

B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 6-inch course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 12 inches of filter material, placed in compacted layers 6 inches thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches

1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698.

C. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches of final subgrade, in compacted layers 6 inches thick. Overlay drainage backfill with one layer of subsurface drainage geotextile, overlapping sides and ends at least 6 inches

1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698.
2. Place and compact impervious fill over drainage backfill in 6-inch- thick compacted layers to final subgrade.

3.17 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:

1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Place base course material over subbase course under hot-mix asphalt pavement.
3. Shape subbase course and base course to required crown elevations and cross-slope grades.
4. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
5. Place subbase course and base course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches or less than 3 inches thick.
6. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

C. Pavement Shoulders: Place shoulders along edges of subbase course and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.18 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:

1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Place drainage course 6 inches or less in compacted thickness in a single layer.
3. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
4. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.19 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.

D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.20 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specify tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.21 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000

SECTION 312213 - ROUGH GRADING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division I Specifications Sections apply to this entire section.

B. The work of this section shall consist of layout, excavation, backfilling, disposal of excess materials, compaction and grading.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 321216.16 – Athletic Asphalt Paving

1.3 QUALITY ASSURANCE

A. Installers' Qualifications: Firm with at least 3 years of successful installation experience on projects with work similar to that required for this project.

B. Submittals

1. Record Drawings: At project close-out, submit record drawings of installed work. Especially note located utilities, areas of over-excavation, removal of unsuitable soils, and backfill.

1.4 PROJECT CONDITIONS

A. Verify all existing utility locations prior to beginning earthwork operations.

B. Protect existing features designated to remain as part of the final landscape work.

C. Promptly repair damage to adjacent facilities caused by earthwork operations. Cost of repairs at Contractor's expense.

D. Promptly notify Architect and Construction Manager of unexpected sub-surface conditions.

1.5 QUALITY ASSURANCE

A. Codes and Standards: Perform earthwork and site grading in compliance with applicable requirements of governing authorities having jurisdiction.

1.6 PROTECTION

A. Protect trees, shrubs, lawns, and other features remaining.

B. Protect bench marks and existing structures.

C. Protect above or below grade utilities which are to remain.

D. Protect existing pavement and curbs

E. Repair damage.

1.7 TESTS

A. The Owner will employ a qualified testing laboratory to furnish all of the soil engineering and testing services.

1.8 REFERENCES

A. ANSI/ASTM D1557 - Moisture-Density Relations of Soils and Soil-Aggregate Mixture.

PART 2 - PRODUCTS

2.1 FILL MATERIALS

A. Engineered fill shall consist of a granular material meeting IDOT specifications.

B. When necessary, compact subsoil surfaces to density requirements for backfill material.

C. Moisten fill material to optimum moisture content prior to compaction.

D. Do not place backfill of fill material on surfaces that are muddy or frozen.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine the areas and conditions under which earthwork for site is to be performed and notify the Architect and Construction Manager in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum. Employ registered

Professional Surveyor for layout. Review layout in field with Construction Manager.

B. Identify known below grade utilities. Stake and flag locations. Notify “Julie” for area where Project is located before beginning earth moving operations.

C. Identify and flag above grade utilities.

D. Maintain and protect existing utilities which pass through work area.

E. Upon discovery of unknown utility or concealed conditions, discontinue affected work; notify Construction Manager.

F. When necessary, compact subsoil surfaces to density requirements for backfill material.

3.3 SUBGRAGE PREPARATION

A. After stripping the existing unsuitable material and prior to placing specified fill, materials, the exposed subgrade soils should be thoroughly compacted to 95% modified proctor density ASTM D1557. The subgrade shall then be proof-rolled using a fully loaded dump truck or other suitable piece of pneumatic-tired construction equipment. The purpose of the proof roll is to locate areas of unsuitably loose or soft subgrade and to uniformly compact the surface. Areas of unsuitable subgrade revealed during proof rolling should be mechanically stabilized (compacted) in place. If it is not possible to compact the unsuitable soil, it may be necessary to remove the unsuitable soil and replace with engineered fill.

3.4 ROUGH GRADE ELEVATION

A. Finish grades are shown on plans by solid contour lines and/or spot elevations. The rough grade shall be held down to allow for the finish as indicated on the plans.

3.5 EXCAVATION

A. General: Excavation consists of removal and disposal of materials encountered when establishing required grade elevations.

B. Unauthorized excavation consists of removal of material beyond indicated elevations or side dimensions without the specific direction of Construction Manager. Replace unauthorized excavation by backfilling and compacting as specified for authorized excavations of same classification, unless otherwise directed by Construction Manager. Cost of unauthorized excavation and remedial back-fill shall be borne by Contractor.

C. Additional Excavation: When excavation has reached required subgrade elevations, notify Construction Manager to allow for inspection of conditions.

1. If unsuitable materials are encountered at required subgrade elevations, carry excavations deeper and replace excavated material as directed by

Soils Engineer and Construction Manager.

2. Removal of unsuitable material and its replacement as directed will be paid on basis of contract conditions relative to changes in work.

D. Dewatering: Prevent surface water and subsurface or ground water from flowing into excavations, and flooding project site and surrounding areas.

1. Do not allow water to accumulate in excavation. Remove water from excavations to prevent softening and soil changes detrimental to subgrades. Provide and maintain pumps, well points, sumps, suction and discharge lines and other de-watering system components necessary to convey water away from site.

2. Establish and maintain temporary drainage ditches or diversions to convey water removed from excavations and rainwater to collecting or run-off areas. Do not use excavations for permanent piping as temporary drainage ditches.

3. Provide, inspect periodically and maintain proper erosion and silt control procedures.

3.6 BACKFILLING

A. Backfill areas to contour and elevations. Use unfrozen materials.

B. Fill lowest elevation first and the fill shall be spread in approximately horizontal layers.

C. Backfill systematically, as early as possible, to allow maximum time for any natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces. Remove unsuitable materials before backfilling.

D. Place and compact fill material in continuous layers not exceeding 8 inches loose depth.

E. Employ a placement method so not to disturb or damage drainage utilities in trenches.

F. The surface of the fill shall be finished to such contour that it will not impound water. If at the end of the day’s work it appears that there may be rain prior to the next working day, the surface shall be finished smooth.

G. Maintain optimum moisture content of backfill materials to achieve 95% modified proctor density ASTM D1557.

H. Dispose of excess material off-site.

3.7 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 0.05 foot.

END OF SECTION 312213

SECTION 312319 - DEWATERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes construction dewatering.

B. Related Sections:

1. Division 01 Section "Construction Progress Documentation" for recording preexisting conditions and dewatering system progress.
2. Division 31 Section "Earth Moving" for excavating, backfilling, site grading, and for site utilities.
3. Division 31 Section "Excavation Support and Protection" for shoring, bracing, and sheet piling of excavations.

1.3 PERFORMANCE REQUIREMENTS

A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.

1. Delegated Design: Design dewatering system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
2. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.
3. Prevent surface water from entering excavations by grading, dikes, or other means.
4. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.
5. Remove dewatering system when no longer required for construction.

1.4 SUBMITTALS

A. Shop Drawings: For dewatering system. Show arrangement, locations, and details of wells and well points; locations of risers, headers, filters, pumps, power units, and discharge lines; and means of discharge, control of sediment, and disposal of water.

1. Include layouts of piezometers and flow-measuring devices for monitoring performance of dewatering system.
2. Include a written plan for dewatering operations including control procedures to be adopted if dewatering problems arise.

B. Field quality-control reports.

C. Other Informational Submittals:

1. Photographs: Show existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by dewatering operations.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer that has specialized in design of dewatering systems and dewatering work.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to dewatering including, but not limited to, the following:

a. Inspection and discussion of condition of site to be dewatered including coordination with temporary erosion control measures and temporary controls and protections.
b. Geotechnical report.
c. Proposed site clearing and excavations.
d. Existing utilities and subsurface conditions.
e. Coordination for interruption, shutoff, capping, and continuation of utility services.
f. Construction schedule. Verify availability of Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
g. Testing and monitoring of dewatering system.

1.6 PROJECT CONDITIONS

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Notify Architect and Owner no fewer than two days in advance of proposed interruption of utility.
2. Do not proceed with interruption of utility without Architect's or Owner's written permission.

B. Project-Site Information: A geotechnical report has been prepared for this Project and is available for information only. The opinions expressed in this report are those of geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by geotechnical engineer. Owner will not be responsible for interpretations or conclusions drawn from this data.

1. Make additional test borings and conduct other exploratory operations necessary for dewatering.
2. The geotechnical report is included elsewhere in the Project Manual.

C. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements, establishing exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

1. During dewatering, regularly resurvey benchmarks, maintaining an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Architect if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.

1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.
2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.

B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. Provide temporary grading to facilitate dewatering and control of surface water.

D. Monitor dewatering systems continuously.

E. Promptly repair damages to adjacent facilities caused by dewatering.

F. Protect and maintain temporary erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing" during dewatering operations.

3.2 INSTALLATION

A. Install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.

1. Space well points or wells at intervals required to provide sufficient dewatering.
2. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.

B. Before excavating below ground-water level, place system into operation to lower water to specified levels. Operate system continuously until drains, sewers, and structures have been constructed and fill materials have been placed or until dewatering is no longer required.

C. Provide an adequate system to lower and control ground water to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.

1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.

D. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.

1. Maintain piezometric water level a minimum of 24 inches (1500 mm) below surface of excavation.

E. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others. Provide sumps,

sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.

F. Provide standby equipment on site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to Owner.

1. Remove dewatering system from Project site on completion of dewatering. Plug or fill well holes with sand or cut off and cap wells a minimum of 36 inches (900 mm) below overlying construction.

G. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

3.3 FIELD QUALITY CONTROL

A. Observation Wells: Provide, take measurements, and maintain at least the minimum number of observation wells or piezometers indicated; additional observation wells may be required by authorities having jurisdiction.

1. Observe and record daily elevation of ground water and piezometric water levels in observation wells.
2. Repair or replace, within 24 hours, observation wells that become inactive, damaged, or destroyed. In areas where observation wells are not functioning properly, suspend construction activities until reliable observations can be made. Add or remove water from observation-well risers to demonstrate that observation wells are functioning properly.
3. Fill observation wells, remove piezometers, and fill holes when dewatering is completed.

B. Provide continual observation to ensure that subsurface soils are not being removed by the dewatering operation.

END OF SECTION 312319

SECTION 315000 - EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes temporary excavation support and protection systems.

B. Related Sections:

1. Division 01 Section "Construction Progress Documentation" for recording preexisting conditions and excavation support and protection system progress.
2. Division 01 Section "Temporary Facilities and Controls" for temporary utilities and support facilities.
3. Division 31 Section "Dewatering" for dewatering system for excavations.

1.3 PERFORMANCE REQUIREMENTS

A. Furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and of resisting soil and hydrostatic pressure and superimposed and construction loads.

1. Prevent surface water from entering excavations by grading, dikes, or other means.
2. Install excavation support and protection systems without damaging existing buildings, structures, and site improvements adjacent to excavation.
3. Monitor vibrations, settlements, and movements.

1.4 SUBMITTALS

A. Shop Drawings: For excavation support and protection system.

B. Delegated-Design Submittal: For excavation support and protection system indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Coordinate first paragraph below with qualification requirements in Division 01 Section "Quality Requirements."Qualification Data: For qualified and professional engineer.

D. Other Informational Submittals:

1. Photographs or Videotape: Show existing conditions of adjacent construction and site improvements that might be misconstrued as damage caused by the absence of, the installation of, or the performance of excavation support and protection systems. Submit before Work begins.
2. Record Drawings: Identifying and locating capped utilities and other subsurface structural, electrical, or mechanical conditions.

    a. Note locations and capping depth of wells and well points.

1.5 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to excavation support and protection system including, but not limited to, the following:

    a. Geotechnical report.
    b. Existing utilities and subsurface conditions.
    c. Proposed excavations.
    d. Proposed equipment.
    e. Monitoring of excavation support and protection system.
    f. Working area location and stability.
    g. Coordination with waterproofing.
    h. Abandonment or removal of excavation support and protection system.

1.6 PROJECT CONDITION

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Notify Architect and Owner no fewer than two days in advance of proposed interruption of utility.
2. Do not proceed with interruption of utility without Architect's or Owner's written permission.

B. Project-Site Information: A geotechnical report has been prepared for this Project and is available for information only. The opinions expressed in this report are those of geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by geotechnical engineer. Owner will not be responsible for interpretations or conclusions drawn from the data.

1. Make additional test borings and conduct other exploratory operations necessary for excavation support and protection.
2. The geotechnical report is included elsewhere in the Project Manual.

C. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements; establish exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

1. During installation of excavation support and protection systems, regularly resurvey benchmarks, maintaining an accurate log of surveyed elevations and positions for comparison with original elevations and positions. Promptly notify Architect if changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials that are either new or in serviceable condition.

B. Structural Steel: ASTM A 36/A 36M, ASTM A 690/A 690M, or ASTM A 992/A 992M.

C. Steel Sheet Piling: ASTM A 328/A 328M, ASTM A 572/A 572M, or ASTM A 690/A 690M; with continuous interlocks.

1. Corners: Roll-formed corner shape with continuous interlock.

D. Wood Lagging: Lumber, mixed hardwood, nominal rough thickness of size and strength required for application.

E. Cast-in-Place Concrete: ACI 301, of compressive strength required for application.

F. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

G. Tiebacks: Steel bars, ASTM A 722/A 722M.

H. Tiebacks: Steel strand, ASTM A 416/A 416M.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation support and protection system operations.

1. Shore, support, and protect utilities encountered.

B. Install excavation support and protection systems to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. Locate excavation support and protection systems clear of permanent construction so that forming and finishing of concrete surfaces are not impeded.

D. Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage, or other evidence of movement to ensure that excavation support and protection systems remain stable.

E. Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

3.2 SOLDIER PILES AND LAGGING

A. Install steel soldier piles before starting excavation. Extend soldier piles below excavation grade level to depths adequate to prevent lateral movement. Space soldier piles at regular intervals not to exceed allowable flexural strength of wood lagging. Accurately align exposed faces of flanges to vary not more than 2 inches (50 mm) from a horizontal line and not more than 1:120 out of vertical alignment.

B. Install wood lagging within flanges of soldier piles as excavation proceeds. Trim excavation as required to install lagging. Fill voids behind lagging with soil, and compact.

C. Install walls horizontally at locations indicated on Drawings and secure to soldier piles.

3.3 SHEET PILING

A. Before starting excavation, install one-piece sheet piling lengths and tightly interlock to form a continuous barrier. Accurately place the piling, using templates and guide frames unless otherwise recommended in writing by the sheet piling manufacturer. Limit vertical offset of adjacent sheet piling to 60 inches. Accurately align exposed faces of sheet piling to vary not more than 2 inches from a horizontal line and not more than 1:120 out of vertical alignment. Cut tops of sheet piling to uniform elevation at top of excavation.

3.4 TIEBACKS

A. Tiebacks: Drill, install, grout, and tension tiebacks. Test load-carrying capacity of each tieback and replace and retest deficient tiebacks.

1. Test loading shall be observed by a qualified professional engineer responsible for design of excavation support and protection system.

2. Maintain tiebacks in place until permanent construction is able to withstand lateral soil and hydrostatic pressures.

3.5 BRACING

A. Bracing: Locate bracing to clear columns, floor framing construction, and other permanent work. If necessary to move brace, install new bracing before removing original brace.

1. Do not place bracing where it will be cast into or included in permanent concrete work unless otherwise approved by Architect.
2. Install internal bracing, if required, to prevent spreading or distortion of braced frames.
3. Maintain bracing until structural elements are supported by other bracing or until permanent construction is able to withstand lateral earth and hydrostatic pressures.

3.6 REMOVAL AND REPAIRS

A. Remove excavation support and protection systems when construction has progressed sufficiently to support excavation and bear soil and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils or damaging structures, pavements, facilities, and utilities.

1. Remove excavation support and protection systems to a minimum depth of 48 inches below overlaying construction and abandon remainder.
2. Fill voids immediately with approved backfill compacted to density specified in Division 31 Section "Earth Moving."
3. Repair or replace, as approved by Architect, adjacent work damaged or displaced by removing excavation support and protection systems.

B. Leave excavation support and protection systems permanently in place.

END OF SECTION 315000

SECTION 329200 – LAWNS AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Seeding.
2. Sodding.
3. Erosion-control material(s).

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

E. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

C. Product Certificates: For soil amendments and fertilizers, from manufacturer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn establishment.

1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
2. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.

B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

C. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.

B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.8 MAINTENANCE SERVICE

A. Initial Lawn Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until satisfactory lawns are established as defined in Section 3.6.

1. When initial maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.

B. Grass Seed Mix: Unless otherwise noted on the plans, use IDOT Class 1 seed mix as follows:

1. Mix shall be Blue Tag certified:
   50% Ky Bluegrass- (Choose 2 varieties below- 25% Each)
   - Rugby, Touchdown, Award, Bluestone
   20% Creeping Red Fescue (Choose 1 varieties below)
   - Aruba, Jasper, Dawsen, Cindy
   30% Perennial Ryegrass (Choose 1 varieties below)
   - Enterprise, Montgomery, Caddie Shack, Accent

   Seed at 6 lbs per 1,000 SQ. FT.

2.2 TOPSOIL

A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, free of stones 1/2 inch or larger in any dimension and other extraneous materials harmful to plant growth.

1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

   a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.3 SOD

A. Turfgrass Species: Sod of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:

1. Athletic Fields: Proportioned by weight as follows:

   a. 60% Blue Grass- (Choose 3 Varieties below- 20% Each) - Rugby 2, Award, Perfection, Bluestone, Denim Kentucky

      40% Rye Grass- (Choose 2 Varieties below- 20% Each)

2.4 FERTILIZER

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

2.5 MULCHES

A. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic; free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.

2.6 EROSION-CONTROL MATERIALS

A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended Bio-Stakes® staples, 6 inches long.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

C. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

1. Protect adjacent and adjoining areas from hydromulching overspray.
2. Protect grade stakes set by others until directed to remove them.

D. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.2 LAWN PREPARATION

A. Limit lawn subgrade preparation to areas to be planted.

B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply fertilizer directly to subgrade before loosening.

C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.

D. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

E. Before planting, restore areas if eroded or otherwise disturbed after finish grading.

3.3 PREPARATION FOR EROSION-CONTROL MATERIALS

A. Prepare area as specified in "Lawn Preparation" Article.

B. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.

C. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.4 SEEDING

A. Sow seed with seeding machine. Do not drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.

1. Do not use wet seed or seed that is moldy or otherwise damaged.

B. Sow seed at a total rate of 6 lb/1000 sq. ft.

C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.

D. Protect seeded areas with erosion-control blankets installed and stapled according to manufacturer's written instructions and as shown on the drawings.

3.5 SODDING

A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

1. Lay sod across angle of slopes exceeding 1:3.
2. Anchor sod on slopes exceeding 1:6 with wood pegs spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.

Saturate sod with fine water spray within two hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.6 HYDROMULCH

A. Hydromulch: Mix specified fertilizer and fiber mulch in water, using equipment specifically designed for hydromulch application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

1. Mix slurry with **fiber-mulch manufacturer's recommended** tackifier.
2. Apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than **1500-lb/acre** dry weight.

3.7 LAWN MAINTENANCE

A. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.

1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.

B. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches. Water as required keeping soil moist to insure proper and even germination. Condition of soil moisture should be checked daily to insure proper germination and keep the lawn area actively growing.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water lawn with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

C. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

1. Mow grass to a height of 2 1/2 inch.

D. Lawn Post-fertilization: Apply fertilizer after initial mowing and when grass is dry.

1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. to lawn area.

3.8 SATISFACTORY LAWNS

A. Lawn installations shall meet the following criteria as determined by Architect:

1. Satisfactory Seeded Lawn: Is defined when, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 95 percent over any 10 sq. ft. and bare spots not exceeding 3” by 3” inches.

B. Use specified materials to reestablish lawns that do not comply with requirements and continue maintenance of lawns until lawns are determined satisfactory as defined in Section 3.7-A.

3.9 CLEANUP AND PROTECTION

A. Promptly remove soil and debris, created by lawn work, from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after lawn is established.

C. Remove non-degradable erosion-control measures after grass establishment period.

END OF SECTION 329200

REPORT NO. 19234

JULY 23, 2019
(Rev. 08/08/19)

REPORT OF SOIL INVESTIGATION

PROJECT

Proposed Improvements
South Ridge Community Park
1350 Freeman Road
Hoffman Estates, Illinois

CLIENT

Hoffman Estates Park District

Hoffman Estates, Illinois

ILLINOIS DRILLING & TESTING CO., INC.
1752 ARMITAGE COURT - ADDISON, ILLINOIS 60101.4207
Phone 630.629.7645
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Since 1958

ILLINOIS DRILLING & TESTING CO., INC.

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July 23, 2019

Mr. Dustin Hugen
Hoffman Estates Park District
dhugen@heparks.org

RE: Report No. 19234 - Proposed Improvements
South Ridge Community Park
1350 Freeman Road
Hoffman Estates, Illinois

Dear Mr. Hugen:

Our Report of Soil Investigation No. 19234, performed at the above referenced site in Hoffman Estates, Illinois, are herewith submitted. Five (5) test borings were performed to depths of 5.0' to 15.0' below existing grades at the locations indicated on the attached plot plan. The results of these borings along with the location diagram are included with this letter report. The purpose of the subsurface investigation was to determine the physical properties of the soil at the site, analyze the results and submit preliminary recommendations regarding foundation construction of the proposed shelter, parking lot expansion and additional play areas.

SOIL CONDITIONS - FOUNDATION RECOMMENDATIONS

Boring 1 was performed to a depth of 15.0' below existing grade within the proposed shelter area. We have included the depth and elevation to firm soil for a net allowable 3,000 PSF soil bearing capacity in the soil boring log and the summary, which can be utilized to support the loads of the foundation system. Suitable bearing soil was encountered at a depth of 6.5' below existing grade. The soil conditions encountered are described in detail on the soil boring logs. In general, surface topsoil was encountered overlying clay fill to a depth of 6.5' below existing grade. Below these materials, the soil consists of a natural, very tough/hard, brown silty clay extending through the depth of the test boring.

On the basis of the field and laboratory investigation, the proposed shelter to be constructed on this site may utilize the most economical type of foundation. All footings should extend through the surface topsoil and clay fill in order to expose the underlying, natural, brown clay. Any additional excavated soil may be replaced with either 3" rock up to the designed bottom of footing level or with additional concrete. The bottom of the footings should be located at a minimum of 42" below final exterior grade for sufficient frost protection.

PARKING LOT EXPANSION & PLAY AREAS

Borings 2 through 5 were performed to depths of 5.0' below existing grades in the proposed various play areas and expanded parking lot. The depth and elevation of cut are indicated on the soil boring logs and summary. The soil conditions are described in detail on the soil boring logs. In general, Borings 2 and 3 indicated a surface layer of topsoil overlying hard/very tough, brown clay fill. Boring 4 indicated original topsoil overlying hard, brown clay. Boring 5 indicated 2.0' of clay, topsoil and gravel fill overlying a natural, hard, brown clay.

In these various play and parking lot areas, it is recommended that all surface vegetation and topsoil be completely removed to expose the underlying clay fill or natural clay. A proof-roll with a heavily loaded truck of the exposed material should be performed prior to placement of any additional fill. Any loose or soft areas detected by the proof-roll should be excavated and replaced. The depth of undercut will depend on final grading plans and can be determined on-site by our soil engineer. Any additional cohesive fill utilized to achieve desired grades should be placed in 9.0" lifts of loose thickness and be compacted to 95% of the maximum dry density, as determined by the Modified Proctor density test, ASTM D1557.

Once final subgrade levels are achieved, a final proof-roll should be performed in order to detect the presence of soft or unstable soil types due to weather conditions, construction traffic, etc., prior to placement of the subbase material. Any soft or unstable areas should be removed and replaced, as indicated above. Base course materials should conform to IDOT gradation CA-6 and be compacted to 95% of the above indicated Proctor method. Bituminous materials should be compacted to between 93% and 97% of their theoretical maximum density.

SEASONAL HIGH WATER LEVEL

Boring 1 was performed to a depth of 15.0' below existing grade. The following table summarizes the soil conditions, estimated permeability rates, and the SHWT:

Depth		Soil Description	Permeability Rate * (in/hr)	SHWT
From	To			
0.0' EL: 849.0+/-	0.7'	Topsoil FILL - Black	0.2 - 0.6 (est.)	-
0.7'	6.5'	Silty Clay FILL - Brown	0.06 - 0.2 (est.)	-
6.5'	15.0' EL: 834.0+/-	Silty CLAY - Brown	0.06 - 0.2	-

*Notes: * - Saturated hydraulic conductivity estimate is derived from the USDA Cook County Soil Survey*

SHWT level is anticipated to be below the boring depth based on the boring data (i.e., deeper than 15.0' below existing grade)

COMMENTS

Based on the limited scope of the investigation, some variation in the soil conditions should be anticipated. The analyses and recommendations submitted in this report are based upon the data obtained from the five soil borings performed at the locations indicated on the Plot Plan. This report does not reflect any variations which may occur between these borings. The nature and extent of the variations between borings may not become evident until the course of construction is underway.

If variations then appear evident, it will be necessary that a re-evaluation of the recommendations of this report be made after performing on-site observations during the construction period and noting the characteristics of any variations. It is recommended that a representative from Illinois Drilling & Testing Co., Inc. be present during footing excavation, fill placement, proof-rolls, etc. in order to verify the soil conditions and to ensure that proper remedial measures are being implemented.

We have welcomed the opportunity to be of service to you on this project. If there are any questions regarding the information presented, please do not hesitate to contact us.

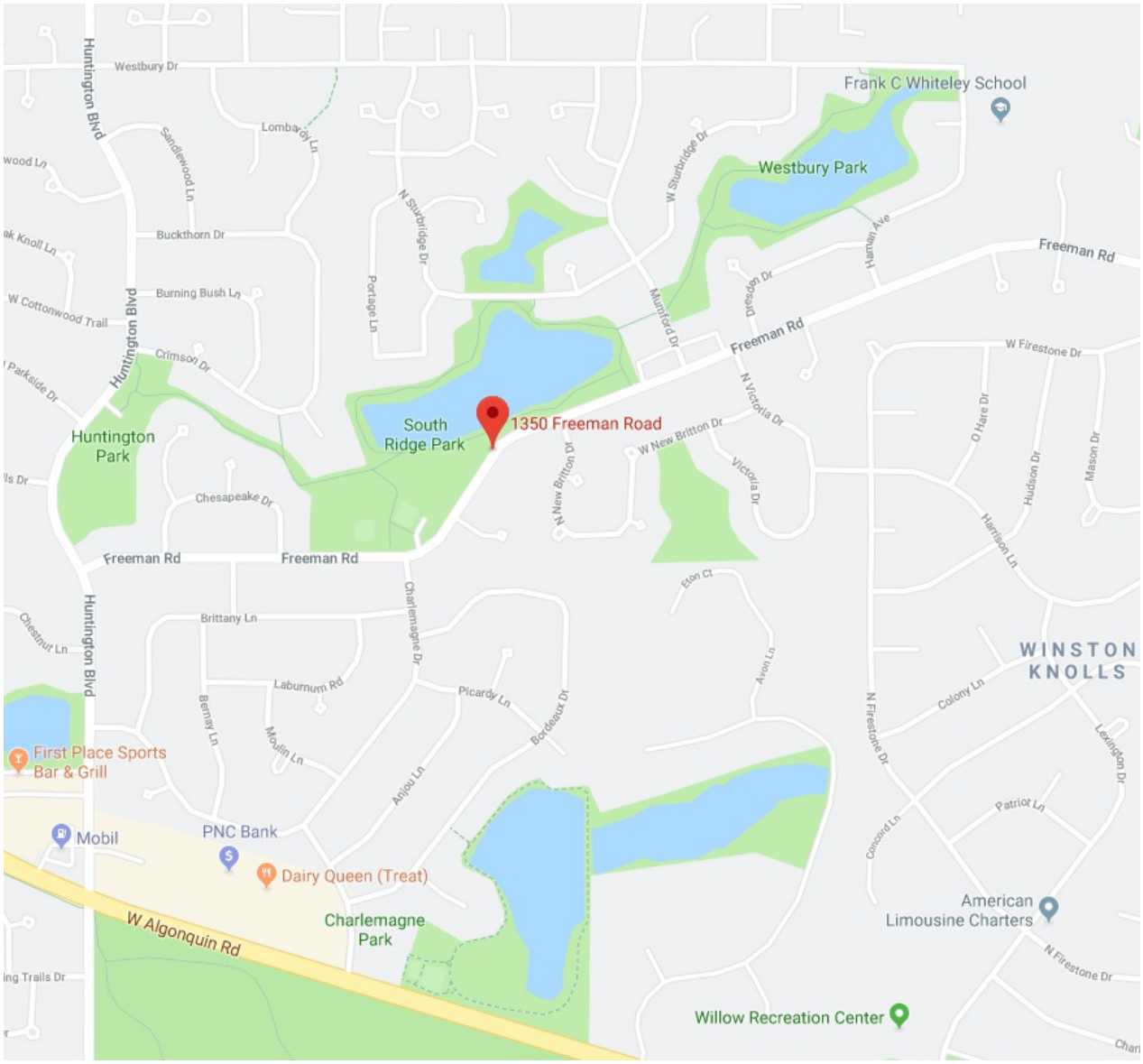
Sincerely,

ILLINOIS DRILLING & TESTING COMPANY, INC.

Anthony Cipriani
Project Manager

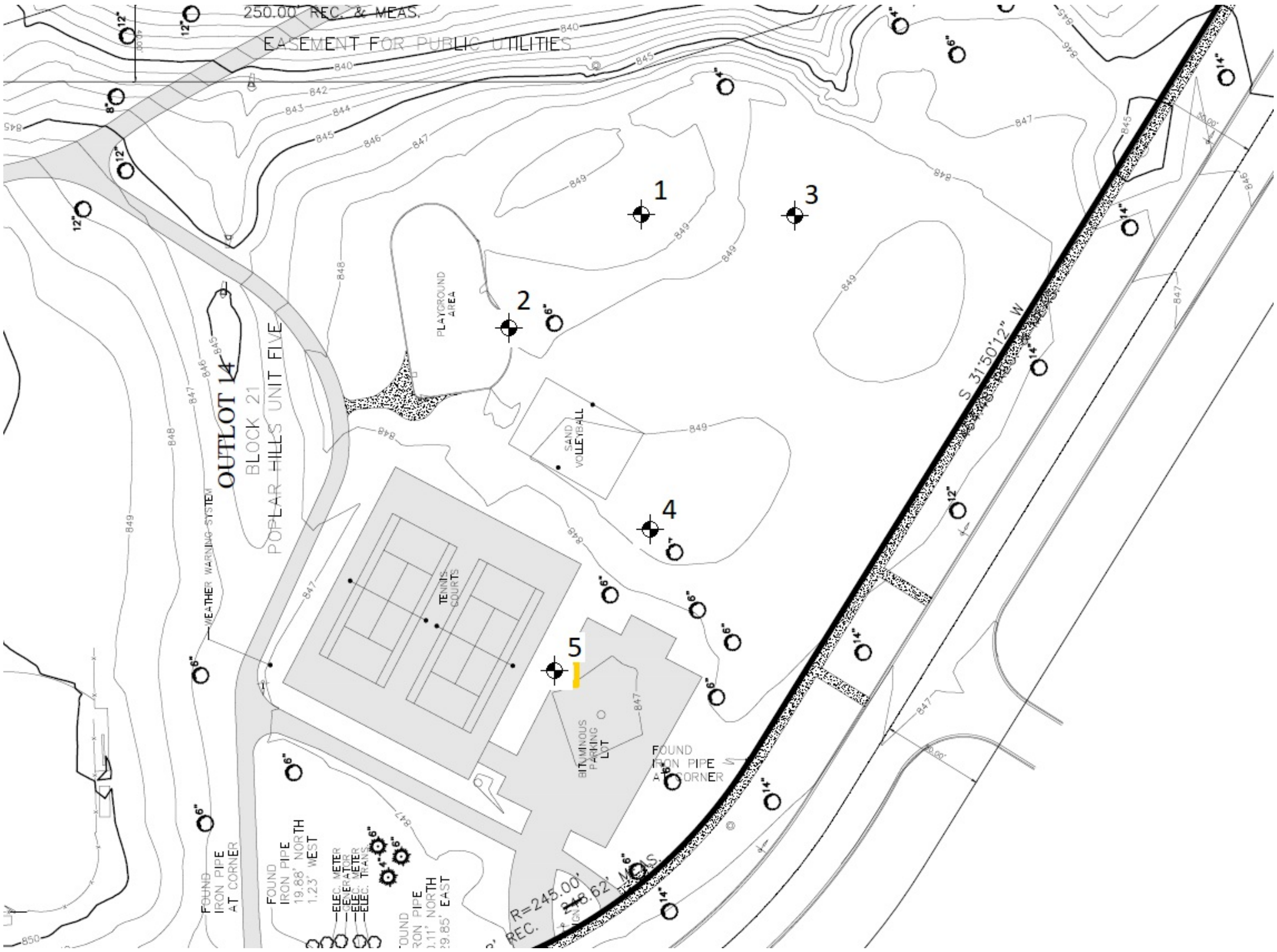
Chang H. Choi, P.E.
Illinois No. 62-28807

AC:CHC:rc



July 23, 2019	By: rc	SITE LOCATION	Job No. 19234	Scale: NTS

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL



SUMMARY OF THE TEST BORINGS

Boring Number	Ground Surface Elevation	Depth to Firm Soil 3,000 PSF	Elevation to Firm Soil 3,000 PSF	Depth of Cut	Elevation of Cut	Approximate Location
1	849.0+/-	6.5'	842.5+/-	-	-	Shelter
2	849.0+/-	-	-	0.6'	848.4+/-	Spray Park
3	849.0+/-	-	-	0.5'	848.5+/-	Playground
4	849.0+/-	-	-	0.3'	848.7+/-	Parking
5	847.0+/-	-	-	0.0'	847.0+/-	Parking

July 23, 2019	By: rc	PLOT PLAN	Job No. 19234	Scale: NTS

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

ILLINOIS DRILLING & TESTING COMPANY, INC.

1752 Armitage Court - Addison, IL 60101.4207

Report No.	19234	Rig	45C	Crew	AC/SC	Date of Boring	07-16-19

BORING NO.	1	WATER LEVELS:	While Sampling	6.0'	After Boring	8.0'

Depth O.O'	Description of Material (Ground Surface)	SN	TS	SD	Elevation 849.0+/-	Q_u	Q_p	MC	N
0.7'	FILL: TOPSOIL - Black								
	Fill; Silty CLAY Brown - Some Gray - Very Tough	1	S				2.7	20	
		2	S				2.8	20	
6.5'		3	S		842.5+/-		3.2	19	
	Silty CLAY Brown - Very Tough/Hard (CL)	4	S				4.2	17	
		5	S				4.0	18	
15.0'					834.0+/-				

END OF BORING

NOTE: Net Allowable Soil Bearing Capacity of 3,000 PSF encountered at a depth of 6.5' below existing grade.

SOIL BORING LOG RECORD SHEET

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

ILLINOIS DRILLING & TESTING COMPANY, INC.

1752 Armitage Court - Addison, IL 60101.4207

Report No.	19234	Rig	45C	Crew	AC/SC	Date of Boring	07-16-19

BORING NO.	2	WATER LEVELS:	While Sampling	NE	After Boring	NE

Depth O.O'	Description of Material (Ground Surface)	SN	TS	SD	Elevation 849.0+/-	Q_u	Q_p	MC	N
0.6'	FILL: TOPSOIL - Black				848.4+/-				
	FILL: Silty CLAY Brown - Trace Gray - Hard/Very Tough	1	S				4.0	18	
		2	S				2.6	20	
5.0'					844.0+/-				

END OF BORING

SOIL BORING LOG RECORD SHEET

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

ILLINOIS DRILLING & TESTING COMPANY, INC.

1752 Armitage Court - Addison, IL 60101.4207

Report No.	19234	Rig	45C	Crew	AC/SC	Date of Boring	07-16-19

BORING NO.	3	WATER LEVELS:	While Sampling	NE	After Boring	NE

Depth O.O'	Description of Material (Ground Surface)	SN	TS	SD	Elevation 849.0+/-	Q_u	Q_p	MC	N
0.5'	FILL: TOPSOIL - Black				848.5+/-				
	FILL: Silty CLAY Brown - Trace Gray - Hard/Very Tough	1	S				4.3	17	
		2	S				2.6	21	
5.0'					844.0+/-				

END OF BORING

SOIL BORING LOG RECORD SHEET

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

ILLINOIS DRILLING & TESTING COMPANY, INC.

1752 Armitage Court - Addison, IL 60101.4207

Report No.	19234	Rig	45C	Crew	AC/SC	Date of Boring	07-16-19

BORING NO.	4	WATER LEVELS:	While Sampling	NE	After Boring	NE

Depth O.O'	Description of Material (Ground Surface)	SN	TS	SD	Elevation 849.0+/-	Q_u	Q_p	MC	N
0.3'	TOPSOIL - Black (OL)				848.7+/-				
	Silty CLAY Brown - Hard (CL)	1	S				4.5+	17	
		2	S				4.5+	17	
5.0'					844.0+/-				

END OF BORING

SOIL BORING LOG RECORD SHEET

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

ILLINOIS DRILLING & TESTING COMPANY, INC.

1752 Armitage Court - Addison, IL 60101.4207

Report No.	19234	Rig	45C	Crew	AC/SC	Date of Boring	07-16-19

BORING NO.	5	WATER LEVELS:	While Sampling	NE	After Boring	NE

Depth 0.0'	Description of Material (Ground Surface)	SN	TS	SD	Elevation 847.0+/-	Q_u	Q_p	MC	N
	FILL: Silty CLAY & TOPSOIL - Some Gravel Brown, Gray & Black - Hard								
2.0'		1	S				4.0	21	
	Silty CLAY Brown - Hard (CL)	2	S				4.5+	16	
5.0'					842.0+/-				

END OF BORING

SOIL BORING LOG RECORD SHEET

CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

ILLINOIS DRILLING & TESTING COMPANY, INC. 1752 Armitage Court - Addison, IL 60101.4207							
Report No.	19234	Rig	45C	Crew	AC/SC	Date of Boring	07-16-19

NOTES

Abbreviation		Units
NE	Not Encountered	-
SN	Sample Number	-
TS	Type of Sampling	-
S	Split Spoon	-
SD	Sampling Distance	-
Q_u	Unconfined Compression test	Tons/ft^2
Q_p	Calibrated Penetrometer test	Tons/ft^2
MC	Moisture Content test	% Dry Weight
N	Penetration Test	Blows/Foot

SOIL BORING LOG RECORD SHEET			
CLIENT	Hoffman Estates Park District Hoffman Estates, IL	PROJECT	Proposed Improvements South Ridge Community Park 1350 Freeman Road Hoffman Estates, IL

Wetland Delineation of the South Ridge Community Park

Located in

Hoffman Estates, Illinois, in Cook County

Olson Ecological Solutions, LLC

tallgrass RESTORATION, LLC

Created for: Dustin Hugen, Hoffman Estates Park District
Created by: Kristin Adams, Tallgrass Restoration

July 1, 2019

ACKNOWLEDGEMENTS

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tallgrass RESTORATION, LLC

QUALIFICATIONS OF STAFF

Kristin Adams performed the delineation, wrote the report, and prepared both preliminary review and post-delineation mapping. Kristin completed her Bachelor's degree of Science in Biology at Illinois State University in 2010, obtained a GIS certification from Elmhurst College in 2015, and attended the Wisconsin DNR's Wetland Delineation course in 2016. Kristin works for Tallgrass Restoration as their GIS Specialist. Kristin has worked with OES for many years on numerous mapping and ecological design projects related to wetland and watershed planning and conducting wetland delineations.

Rebecca Olson, the Founder and President of OES, holds a Master of Science degree in wildlife biology from Colorado State University. Her experience extends from wetland and stream delineation, restoration, and mitigation to ecological consulting and land conservation. Most of her time is balanced between wetland and stream mitigation and banking, writing and implementing Environmental Protection Agency-sponsored watershed based plans, and designing green infrastructure projects related to stormwater runoff. She also assists land transactions for conservation purposes.

For more information, visit the websites for OES and Tallgrass at the following links:

www.olsonecosolutions.com **www.tallgrassrestoration.com**

INTRODUCTION

In June of 2019, Tallgrass Restoration represented Olson Ecological Solutions (OES) in conducting a wetland delineation for an 18.1-acre parcel planned for the South Ridge Community Park enhancements by the applicant in Section 19, Township 42 North, Range 10 East, located in Hoffman Estates, Illinois in Cook County. At the time of investigation, the land use at the site was currently a lake with a concrete trail surrounding it. Historically, the land use where the lake was created was wetland according to the 1938 aerial (ISGS, 1938).

Dustin Hugen requested wetland delineation of the site approximately bounded on the north and east side by residential properties, the south by Freeman Road and a recreational park. The location of the site was summarized in the Property Location Map (Figure 1). The purpose of the wetland delineation was to determine the location and size of wetlands associated with South Ridge Park enhancement project.

As reviewed in the section OES DELINEATED WETLANDS below, all regulatory decisions and final determinations rest with the U.S. Army Corps of Engineers (ACOE). This report summarizes the process of our investigations and submits our findings. Marking the wetland boundaries with flagging and recording GPS points allow us to communicate a complex boundary to the ACOE. Due to the variance by the GPS unit, recorded GPS data is considered secondary to the flags placed in the field, which may be revised by the ACOE.

METHODS

Consultants from OES and Tallgrass conducted the wetland delineation in June 2019 using the technical guidelines as described in the Army Corps of Engineers Wetland Delineation Manual (ACOE, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (ACOE, 2010). This process included off-site procedures and a field investigation.

The off-site review of the study area included an analysis of the maps and aerial photography, determination of normal precipitation, and a review of wetness signatures on recent aerial photography.

We determined if the delineation time frame was drier than normal, normal, or wetter than normal using recent precipitation recorded at the local Barrington 3SW, IL Weather Station for the months of March, April, and May compared to historic precipitation norms as determined by a W.E.T.S. Table created for years 1971 through 2000. We also considered antecedent precipitation from the Agricultural Applied Climate Information website from the Barrington 2SW Station from the week prior to the delineation date (USDA eFOTG, 2007a).

Field investigation for the data points took place during three days over a duration period of June 11 through June 13, 2019. Wetland A's boundary was marked on June 13. After confirming the project boundary, we examined the site for the presence of natural or human induced changes affecting vegetation, soils, and hydrology, and we traversed the site. We explored suspected wetland areas with mapped hydric soils, saturation or inundation visible on aerial imagery, areas indicated as wetlands by the National Wetlands Inventory, floodplains, and areas appearing as wetlands on historic imagery. We looked for drainage patterns and depressions in the landscape, and we conducted a final walk-through of the entire site.

We recorded data on a Midwest Regional Supplement Data Sheet, marked a data point with a pink "Wetland Delineation" flag, and recorded a GPS point for each data point in all suspected wetland areas. For areas with mapped hydric soils, we looked for coinciding wetland vegetation and hydrology and confirmed hydric soils. In areas found to have the hydrology indicator of saturation or inundation visible on aerial imagery or if an area was a floodplain, drainage area, or indicated as wetland on the NWI map or historic aerial, we first looked for wetland vegetation and if found, we explored for additional hydrology indicators and then hydric soils.

When wetland conditions were found, we took data at a point within the correlating upland and delineated the wetland boundary between the upland and wetland data points, dictated by site-specific wetland indicators. We labeled all data points with letters (e.g. AW and AU for wetland and upland in Wetland A) and wetland boundaries with sequentially numbered flags (e.g. 1, 2, 3), noting the numbers on GPS points.

RESULTS

Historical and Current Site Environmental Conditions

The subject property located at 1450 Freeman Road in Hoffman Estates was once wetlands. It is currently used as a public recreation space, with a trail surrounding the man-made South Ridge Lake which was once a wetland. We gleaned the historic conditions from 1939 aerial photography (ISGS, 2008).

The topography present at the site showed the lowest area on the property being within the lake, as it ascended towards the lake's edges (Figure 2 and Figure 3). There was a steep climb between the northern lake area and the southern park section.

National Wetlands Inventory (NWI) was used to understand what existing wetlands were present at the site. The recorded wetlands were classified as a riverine and a freshwater pond, created because Salt Creek flowed into South Ridge Lake (Figure 4). The Federal Emergency Management Agency (FEMA) supplied flood hazard maps which speculated areas prone to flooding. The area directly around the lake presented flood hazards at this site (Figure 5).

Hydric soils were observed from data provided from the Natural Resources Conservation Service's Web Soil Survey. It showed three types of soils potentially found on site with varying hydric levels present and 3 soil types with no hydric soils (Figure 6). The soil with the greatest hydric presence of 100% was Peotone silty clay loam, 0 to 2% slopes (330A), located along the north bank of the lake. The other two soil types only had 4% hydric soils and were also located along the lake. They were Elliott silt loam, 2 to 4% slopes, and Markham silt loam, 2 to 4% slopes (USDA NRCS, 2019).

Most of the data points taken from this delineation showed hydric soils present in the form of Redox Dark Surfaces (F6) while only one upland point had no hydric soils present. Sections of the site were located in mowed turf grass. Despite that, most of the grass species could be identified based on a few overgrown sections as well as the presence of lawn weeds. Water tables and saturation were found around the lake at most points.

The upland points were defined by a lack of hydrological features as well as predominantly upland plant species. One set of data points, DU and DW, had interesting hydrological issues. The point taken at DU had a deep water table and saturation present below twelve inches. At a lower elevation point, a few feet away, point DW there was no present water table or saturation. Despite this, DU did not qualify for hydrology while DW did qualify with secondary indicators.

Climate in the three-month window before the investigation was wetter than normal. According to the AgACIS found at the eFOTG website, it rained 2.3 inches over the seven days prior to the delineation. Between three delineation days, there was 0.02 inches of precipitation. It rained at the end of the last day and accumulated 0.93 inches by the end of the day, however there was no accumulating precipitation before the final data points were recorded (USDA eFOTG, 2007b).

Wetlands

The chart below describes the wetland basins found on the site in terms of topography, drainage, and wetland indicators:

Wetland Basins		
Wetland(s)	**Description**	**Representative Data Point(s)**
A	This wetland was located surrounding South Ridge Lake. It was shown as having the lowest elevation on site and being in the 0.2% Annual Chance Flood Hazard. It contained the Freshwater Pond indicated from NWI as South Ridge Lake as well as the riverine, Salt Creek , that fed into it.	AU, AW, BU, BW, DU, DW, EU, EW, HU, HW

More detail regarding each wetland indicator is found in the following charts that describe vegetation, hydrology, and soils for each wetland basin and associated uplands.

Vegetation

The vegetation immediately around the pond was native vegetation, andmowed lawn grasses and yard weeds extended beyond the native buffer. The lawn was predominantly upland with some wetland pockets dictated by the presence of *Eleocharis palustris* or *Agrostis stolonifera*.

For each wetland basin and associated uplands, details of the vegetation are described below:

Vegetation			
Wetland(s)	**Hydrophytic Vegetation Present**	**Description**	**Representative Data Point(s)**
A	*Acer rubrum, Eleocharis palustris, Solidago gigantea, Poa pratensis, Rorippa palustris, Bidens frondosa, Epilobium coloratum, Verbena hastata, Asclepias incarnata, Agrostis stolonifera*	The vegetation around the pond were native species. *Solidago gigantea* and *Eleocharis palustris* were good indicators of wetlands in the naturalized area. The upland species were characterized by *Melilotus alba, Ambrosia artemisiifolia, Schedonorous arundinaceus,* and *Monarda fistulosa.*	AU, AW
A	*Agrostis stolonifera, Poa pratensis*	A majority of this site was in mowed turf grass. The shift to upland occurred when *Elymus repens* and *Trifolium repens* became frequent.	BU, BW
A	*Quercus palustris, Taxodium distichum, Agrostis stolonifera, Poa pratensis, Plantago major*	*Agrostis stolonifera* dominated the lawn grass present in this extension of Wetland A. The boundary followed the presence of this grass, extending from the bank of the lake to across the trail.	DU, DW

Vegetation (Continue)			
Wetland(s)	**Hydrophytic Vegetation Present**	**Description**	**Representative Data Point(s)**
A	*Betula nigra, Eleocharis palustris, Rumex crispus, Poa pratensis, Plantago major*	This extension of Wetland A occurred in a microdepression on the northwest side of the lake. Plant cover was only at 82%, however *Eleocharis palustris* held a strong presence.	EU, EW
A	*Taxodium distichum, Solidago gigantea, Eleocharis palustris, Mentha arvensis, Juncus tenuis, Rorippa palustris, Poa pratensis, Carex stipata, Fraxinus pennsylvanica, Veronica peregrina, Vernonia fasciculata, Rumex crispus, Ambrosia trifida, Phalaris arundinacea, Zizia aurea*	This data point set was similar to AU and AW. The dominant species within the community type were *Solidago gigantea* and *Eleocharis palustris.* This community type was followed in the vegetated shoreline around the lake, except where the wetland extended into the mowed grasses.	HU, HW

Hydrology

Overall, wetland hydrology on the site was defined by the vegetation that qualified for the FAC-Neutral test, the presence of algal crusts, and the geomorphic position. A water table and saturation were present at most data points sampled around the lake.

For each wetland basin and associated uplands, details of the hydrology are described below:

Hydrology				
Wetland(s)	**Wetland Hydrology Present**	**Indicators**	**Description**	**Representative Data Point(s)**
A	Yes	Primary: High Water Table (A2), Saturation (A3) Secondary: Geomorphic Position (D2), FAC-Neutral Test (D5)	The wetland hydrology was present in the form of saturation and a high water table that extended almost all the way to the surface. It was located at the toe slope of a hill, right next to the edge of a lake. The upland point was more elevated. A water table and saturation were present but did not qualify the hydrology as it started at 15."	AU, AW
A	Yes	Primary: High Water Table (A2), Saturation (A3) Secondary: None	A water table was present at this wetland points at 7.5" and saturation was visible to the surface. Although the upland point also had these features, it was starting at a depth of 20.5" therefore not qualifying the hydrology.	BU, BW
A	Yes	Primary: None Secondary: Geomorphic position (D2), FAC-Neutral Test (D5)	This was an interesting set of data points. The higher elevation upland point had saturation and a water table present, although it was too deep to qualify. The wetland point, taken in the toeslope of a hill, was completely dry despite being lower and on about ten feet away from the upland point. This section of Wetland A crossed the trail and extended into the turf grass.	DU, DW

Hydrology (Continue)				
Wetland(s)	**Wetland Hydrology Present**	**Indicators**	**Description**	**Representative Data Point(s)**
A	Yes	Primary: Saturation (A3), Secondary: Geomorphic position (D2), FAC-Neutral Test (D5)	Although a water table was found at the wetland point, it was at 15" which was too deep to qualify. However, saturation was found at both upland and wetland points, although it only qualified on EW at 6". The concave depression along with qualifying FAC-Neutral vegetation confirmed the presence of wetland hydrology.	EU, EW
A	Yes	Primary: Saturation (A3), Secondary: FAC-Neutral Test (D5)	Both points within this dataset found a water table and saturation. The only qualifying hydrological indicator was saturation, which began at the surface, at point HW.	HU, HW

Soils

The site contained both hydric and non-hydric soils. The most common indicator was Redox Dark Surface (F6). Soils were not a critical indicator in delineating the wetland boundary, because every point except for one had hydric soils which indicated that wetlands were more dependent on the present hydrology and vegetation.

The site exhibited four mapped series of hydric soils and two series of non-hydric soils as summarized below per basin.

Soils				
Wetland(s)	**Mapped Soil Type**	**Hydric Status**	**Field Indicator**	**Representative Data Point(s)**
A	531C2 (Markham silt loam, 4-6% slopes, eroded)	Hydric	Redox Dark Surface (F6)	AU
A	531C2 (Markham silt loam, 4-6% slopes, eroded)	Hydric	Redox Dark Surface (F6)	AW
A	531C2 (Markham silt loam, 4-6% slopes, eroded)	Non-Hydric	N/A	BU
A	531C2 (Markham silt loam, 4-6% slopes, eroded)	Hydric	Redox Dark Surface (F6)	BW
A	531C2 (Markham silt loam, 4-6% slopes, eroded)	Hydric	Redox Dark Surface (F6)	DU
A	531C2 (Markham silt loam, 4-6% slopes, eroded)	Hydric	Redox Dark Surface (F6)	DW
A	330A (Peotone silty clay loam, 0-2% slopes)	Hydric	Redox Dark Surface (F6)	EU
A	330A (Peotone silty clay loam, 0-2% slopes)	Hydric	Redox Dark Surface (F6)	EW
A	330A (Peotone silty clay loam, 0-2% slopes)	Hydric	Redox Dark Surface (F6)	HU
A	330A (Peotone silty clay loam, 0-2% slopes)	Hydric	Redox Dark Surface (F6)	HW

OES Delineated Wetland Boundaries and Waters of the United States

Wetlands on the subject property were indicated by vegetation, hydrology, and soils as described above. As anticipated based on the observation of the National Wetlands Inventory, the area surround South Ridge Lake was considered to be a wetland and was discovered to be an expansion of the freshwater basin listed on the inventory. The FEMA Flood Hazard map also suggested that the shoreline surrounding the lake would support wetland habitat, although the boundary observed from this delineation was more undulating than the flood zone predicted. On the southern shoreline of Wetland A, the wetland boundary crossed the trail and extended into the turf in two areas that were originally classified as non-hydric.

The indicators that were most important for delineating wetland boundaries were the presence of facultative wet or obligate vegetation. Just as important as the wetland species present, were the upland species. *Schedonorous arundinaceus* and *Trifolium repens* were often used to determine the extent of a wetland boundary. Hydrology was very important as well. Usually a water table or saturation qualified the wetland supported by geomorphic position and qualifying FAC-Neutral wetland vegetation. One wetland point did not hold water at the time of inspection but demonstrated both secondary indicators.

North Ridge Lake was connected to South Ridge Lake by a culvert that ran underneath North Sturbridge Drive. Salt Creek flowed from Westbury Lake from the northeast into South Ridge Lake. Salt Creek stretched across the Chicago region before it connected to the Des Plaines River near Brookfield, Illinois.

Stream Area		
Type	**Acres**	**Linear Feet**
Open Water	9.9	1,664.4
Dry Channel	-	-
Total:	**9.9**	**1,664.4**

The boundaries of the wetland basin were reflected in the Delineated Wetland Boundaries Map (Figure 7 shows the entirety of the wetland found on site, Figure 8 shows close ups of the data points). The wetland found was described as “Wetland A” and was 11.0370 acres.

OES notes that final authority regarding regulatory jurisdiction rests with the USACOE and that the delineation is not final until so designated by the Corps. Notification of a final Jurisdictional Determination should be received from the Corps prior to any construction on the property. If any construction is planned for areas within a wetland it may require the filing of a joint permit to the USACOE and Illinois Department of Natural Resources.

ATTACHMENTS

Figure 1: Location Map 15
Figure 2: Topography Map 16
Figure 3: 1-Meter Elevation Map 17
Figure 4: National Wetlands Inventory Map 18
Figure 5: FEMA Flood Hazard Map 19
Figure 6: Hydric Soils Map 20
Figure 7: OES Delineated Wetland Boundaries Map 21
Figure 8: Wetland A Data Points Detail Map 22
Figure 9: 2012 Aerial Photography 23
Figure 10: 2015 Aerial Photography 24
Figure 11: 2016 Aerial Photography 25
Figure 12: 2017 Aerial Photography 26
Figure 13: 2018 Aerial Photography 27
Figure 14: 1938 Historical Aerial Photography 28
Figure 15: Rainfall Determination for Field Observation Dates 29

Appendix A: Data Forms for Data Points
Appendix B: Site Photos
Appendix C: 2017 USACE Chicago Region Floristic Quality Assessments for all wetlands

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Figure 1: Location Map

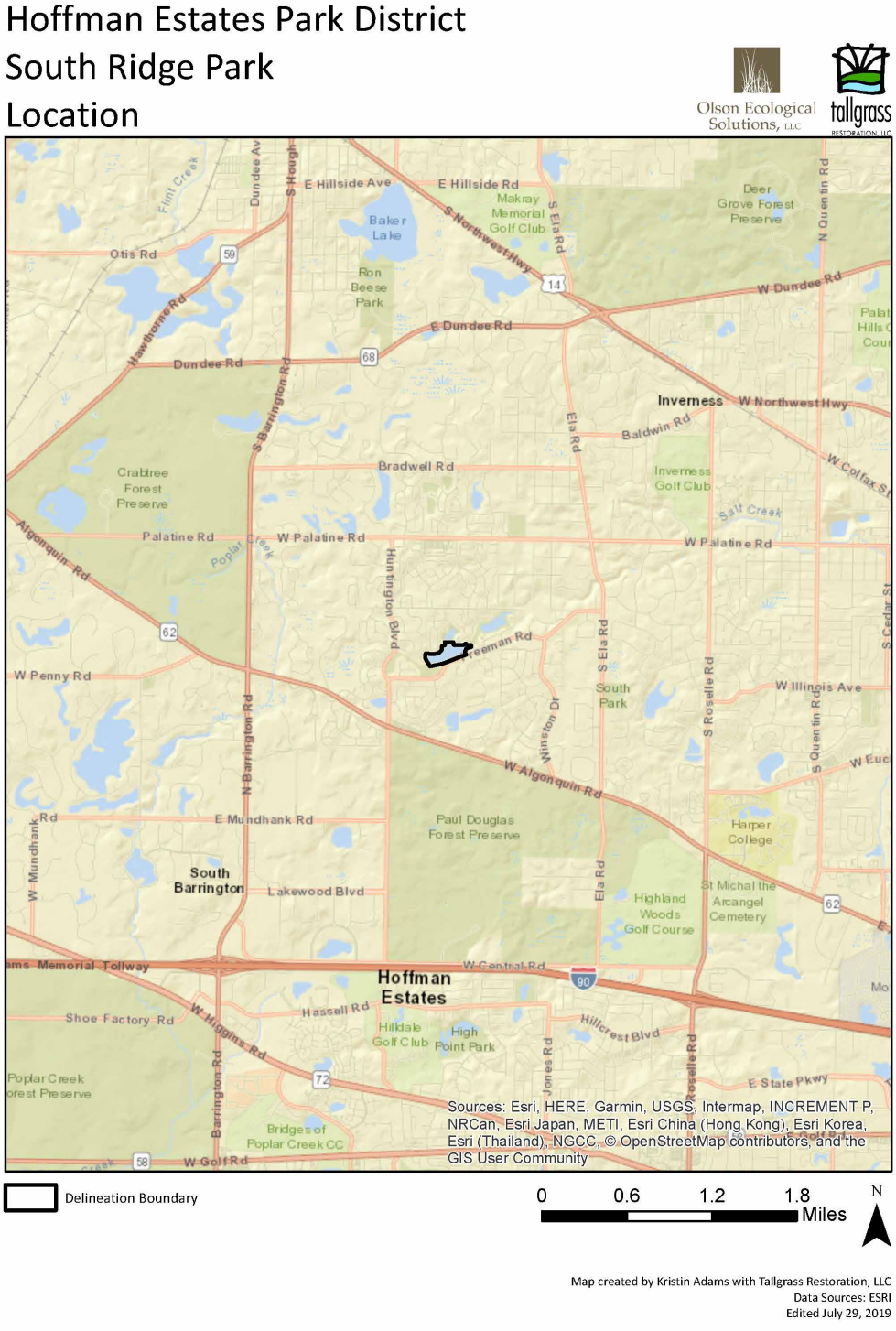

Figure 2: Topography Map

Figure 3: 1-Meter Elevation Map

Figure 4: National Wetlands Inventory Map

Figure 5: FEMA Flood Hazard Map

Figure 6: Hydric Soils Map

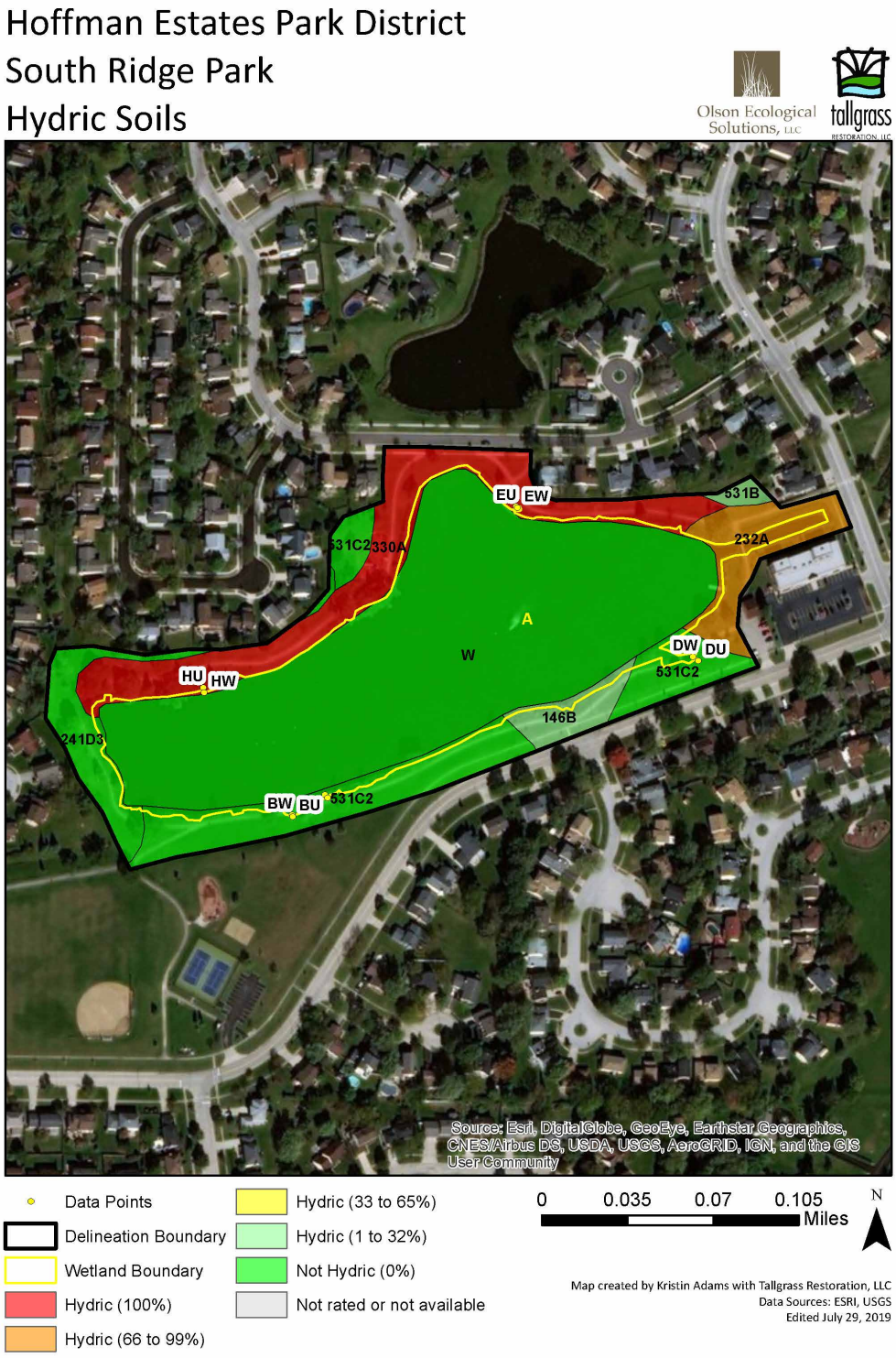

Figure 7: OES Delineated Wetland Boundaries Map

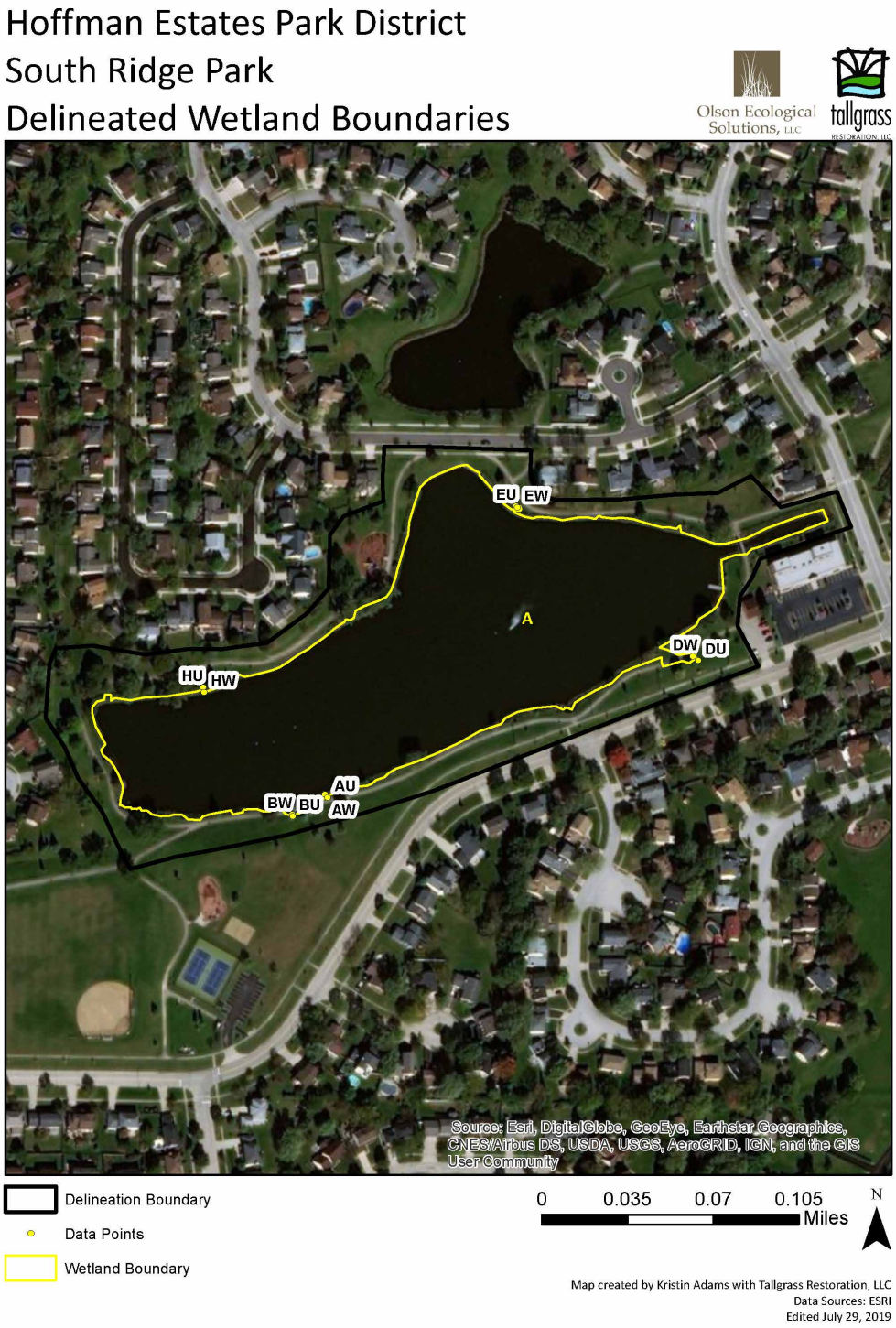

Figure 8: Wetland A Data Points Detail Map

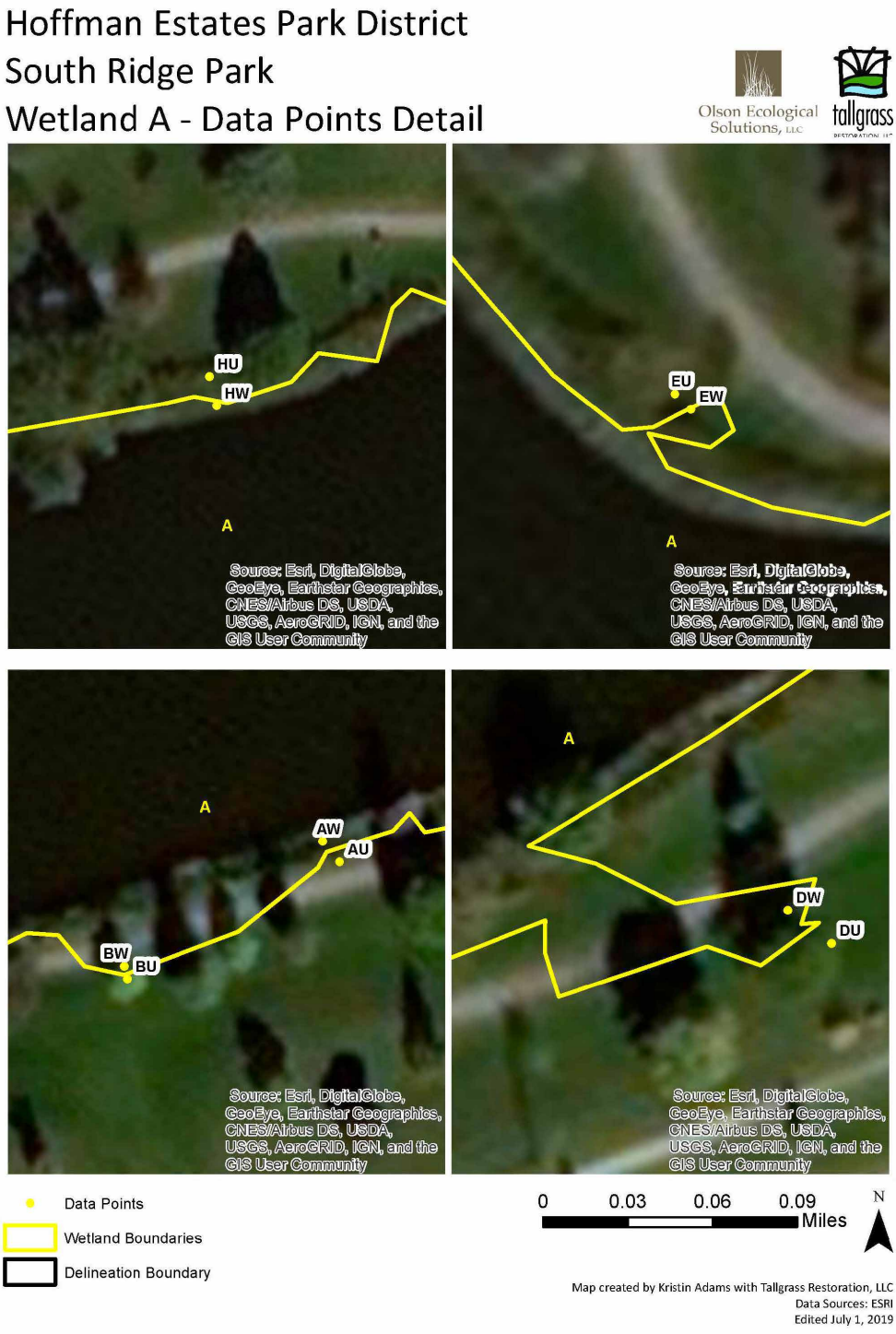

Figure 9: 2012 Aerial Photography

Figure 10: 2015 Aerial Photography

Figure 11: 2016 Aerial Photography

Figure 12: 2017 Aerial Photography

Figure 13: 2018 Aerial Photography

Figure 14: 1938 Historical Aerial Photography

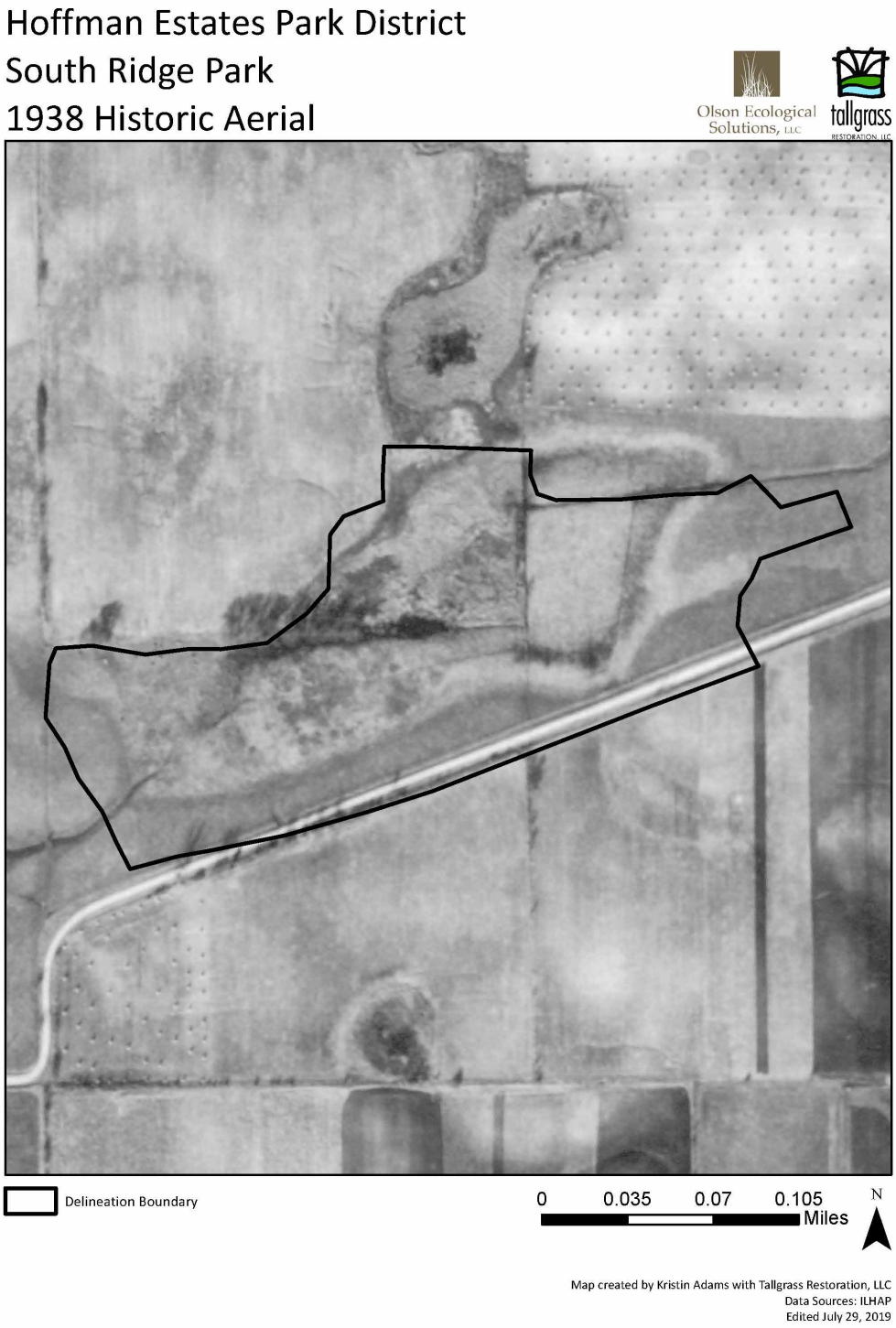

Figure 15: Rainfall Determination for Field Observation Dates

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	6/5/2019	**Landowner/Project**	Hoffman Estates PD - South Park
Weather Station	Barrington 3SW	**State**	IL
County	Cook	**Growing Season**	Yes
Photo/obs Date	6/10-13/2019	**Soil Name**	Various, see Soils map

shaded cells are locked or calculated

Long-term rainfall statistics (from WETS table or State Climatology Office)

	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	May	2.34	4.82	7.53	W	3	3	9
2nd Prior Month*	April	2.36	4.25	4.79	W	3	2	6
3rd Prior Month*	March	1.43	2.85	2.24	N	2	1	2
	*compared to photo/observation date						**Sum**	**17**

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: **prior period has been wetter than normal**

APPENDIX A

DATA FORMS FOR DATA POINTS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park | City/County: Hoffman Estates, Cook Co | Sampling Date: 6/10/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District | State: IL | Sampling Point: AU

Investigator(s): Kristin Adams | Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Concave

Slope (%): 40% | Lat: -88.11453 | Long: 42.097887 | Datum: N American 1983

Soil Map Unit Name: 531C2 | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	
Hydric Soil Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	2%	N	FAC
2.			
3.			
4.			
5.			
	2% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Melilotus alba	40%	Y	UPL
2. Schedonorous arundinaceus	15%	Y	FACU
3. Ambrosia artemisiifolia	15%	Y	FACU
4. Daucus carota	10%	N	UPL
5. Solidago gigantea	10%	N	FACW
6. Mondarda fistulosa	10%	N	FACU
7. Solidago canadensis	5%	N	FACU
8. Verbena hastata	5%	N	FACW
9. Poa pratensis	5%	N	FAC
10. Cirsium arvense	5%	N	FACU
	137% = Total Cover		
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	17	x 2 =	34
FAC species	9	x 3 =	27
FACU species	52	x 4 =	208
UPL species	57	x 5 =	285
Column Totals:	137 (A)		556 (B)

Prevalence Index = B/A = 4.06

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Con't Herb Stratum (None Dom): Echinacea purpurea 5% UPL, Leucanthemum vulgare 2% UPL, Erigeron annuus 2% FACU, Juncus tenuis 2% FAC, Vernonia fasciculata 2% FACW, Rorippa palustris 2% OBL

SOIL

Sampling Point: AU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 2/2	99%	2.5YR 2/6	1%	C	M	SCL	Roots & rocks
6-14"	10YR 2/2	85%	10YR 6/6	15%	C	M	SCL	
			5YR 5/8	5%	C	M	SCL	
14+"	10YR 2/1	93%	7.5YR 4/4	2%	C	M	SCL	Saturated
			5YR 5/8	5%	C	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 27"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 17.5"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 15"

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral FAIL 0:3 Dominants

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/10/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: AW

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave

Slope (%): 10% Lat: -88.114552 Long: 42.097907 Datum: N American 1983

Soil Map Unit Name: 531C2 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	2%	N	FAC
2.			
3.			
4.			
5.			
	2%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Eleocharis palustris	45%	Y	OBL
2. Solidago gigantea	20%	Y	FACW
3. Poa pratensis	15%	Y	FAC
4. Rorippa palustris	15%	Y	OBL
5. Bidens frondosa	15%	Y	FACW
6. Epilobium coloratum	10%	N	OBL
7. Schedonorous arundinacea	5%	N	FACU
8. Ambrosia artemisiifolia	5%	N	FACU
9. Agrostis stolonifera	5%	N	FACW
10. Verbena hastata	2%	N	FACW
	154%	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)
Con't Herb Stratum (None Dom): Ratibida pinnata 1% UPL, Asclepias incarnata 1% OBL

SOIL

Sampling Point: AW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	5Y 3/2	98%	2.5Y 5/3	2%	C	M	S	Very mucky, roots
4-15"	5Y 2.5/1	93%	7.5YR 6/1	1%	C	M	SC	
			2.5Y 6/3	5%	C	M	SC	
			2.5YR 5/6	1%	C	M	SC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 18"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes X No ___ Depth (inches): 0.5"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

By the end of the day the water table was super high in this pit. FAC Neutral PASS 0:4 Dominants

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/10/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: BU

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Shoulder Local relief (concave, convex, none): Convex

Slope (%): 30% Lat: -88.114807 Long: 42.097774 Datum: N American 1983

Soil Map Unit Name: 531C2 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet. Mowed lawn grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	60%	Y	FACU
2. Acer saccharinum	15%	N	FACW
3. Acer rubrum	2%	N	FAC
4.			
5.			
	77%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	70%	Y	FAC
2. Elymus repens	25%	Y	FACU
3. Erigeron annuus	10%	N	FACU
4. Trifolium repens	10%	N	FACU
5. Cerastrium fontanum	5%	N	FACU
6. Glechoma hederacea	5%	N	FACU
7.			
8.			
9.			
10.			
	125%	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	72	x 3 =	216
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals:	202 (A)		706 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: BU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18"	7.5YR 3/2	97%	7.5YR 4/3	2%	C	M	SCL	
			5YR 6/6	1%	C	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Pit dug to 28"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 22"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 20.5"

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral FAIL 0:2 Dominants

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/10/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: BW

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Concave

Slope (%): 30% Lat: -88.114811 Long: 42.097786 Datum: N American 1983

Soil Map Unit Name: 531C2 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet. Mowed lawn grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	55%	Y	FACU
2. Acer saccharinum	15%	N	FACW
3. Acer rubrum	2%	N	FAC
4.			
5.			
	72%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Agrostis stolonifera	100%	Y	FACW
2. Poa pratensis	35%	Y	FAC
3. Glechoma hederacea	3%	N	FACU
4. Elymus repens	2%	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	140%	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: BW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 2/2	100%					SCL	Roots
2-15+"	10YR 2/1	79%	7.5YR 5/8	20%	C	M	SCL	
			Gley2 5/5BG	1%	D	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 18"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 7.5"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral FAIL 2:3 Non-dominants

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/11/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: DU

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear

Slope (%): 30% Lat: -88.1116 Long: 42.098727 Datum: N American 1983

Soil Map Unit Name: 531C2 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet. Mowed lawn grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	25%	Y	FACW
2. Taxodium distichum	5%	N	OBL
3.			
4.			
5.			
	30%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Poa pratensis	40%	Y	FAC
2. Schedonorus arundinaceus	35%	Y	FACU
3. Trifolium repens	20%	Y	FACU
4. Plantago major	2%	N	FAC
5. Veronica peregrina	2%	N	FACW
6.			
7.			
8.			
9.			
10.			
	99%	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	27	x 2 =	54
FAC species	42	x 3 =	126
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	129 (A)		405 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 3/4	20%	10YR 2/1	5%	C	M	SCL	
	10YR 3/2	60%	10YR 5/6	1%	C	M	SCL	
4-20"	10YR 2/1	55%	Gley1 5/10Y	20%	D	M	C	
			7.5YR 4/6	15%	C	M	C	
			5YR 5/8	10%	C	M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 20"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 18"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 14.5"

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral FAIL 1:2 Dominants

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/11/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: DW

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Toe Slope Local relief (concave, convex, none): Concave

Slope (%): 10% Lat: -88.111645 Long: 42.098752 Datum: N American 1983

Soil Map Unit Name: 531C2 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet. Mowed lawn grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	25%	Y	FACW
2. Taxodium distichum	5%	N	OBL
3.			
4.			
5.			
	30%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Agrostis stolonifera	65%	Y	FACW
2. Poa pratensis	40%	Y	FAC
3. Schedonorus arundinaceus	20%	N	FACU
4. Trifolium repens	2%	N	FACU
5. Plantago major	2%	N	FAC
6.			
7.			
8.			
9.			
10.			
	125%	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 3/1	100%					SCL	Roots
2-6"	10YR 3/2	90%	10YR 2/1	5%	C	M	SCL	
			7.5YR 5/6	5%	C	M	SCL	
6-20"	10YR 2/1	70%	Gley1 5/10Y	15%	D	M	SC	
			10YR 3/6	10%	C	M	SC	
			5YR 5/8	5%	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 20"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral PASS 2:0 Dominants.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/11/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: EU

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex

Slope (%): 10% Lat: -88.113065 Long: 42.099627 Datum: N American 1983

Soil Map Unit Name: 330A NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	
Hydric Soil Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet. Mowed lawn grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula nigra	10%	Y	FACW
2.			
3.			
4.			
5.			
	10% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Schedonorus arundinaceus	80%	Y	FACU
2. Trifolium repens	15%	N	FACU
3. Poa pratensis	10%	N	FAC
4. Solidago canadensis	5%	N	FACU
5. Ambrosia trifida	5%	N	FAC
6. Cerastium fontanum	2%	N	FACU
7. Daucus carota	2%	N	UPL
8. Ambrosia artemisiifolia	2%	N	FAC
9.			
10.			
	121% = Total Cover		
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	15	x 3 =	45
FACU species	104	x 4 =	416
UPL species	2	x 5 =	10
Column Totals:	131 (A)		491 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: EU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	5YR 2.5/1	100%					SCL	Roots
2-20"	5YR 2.5/1	80%	10YR 4/4	10%	C	M	SCL	
	10YR 2/1	4%	10YR 5/8	5%	C	M	SCL	
			5YR 5/8	1%	C	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 20"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 19"

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral PASS 1:5 Non-dominants.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/11/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: EW

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Concave

Slope (%): 0-2% Lat: -88.113053 Long: 42.099619 Datum: N American 1983

Soil Map Unit Name: 330A NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet. Mowed lawn grass.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula nigra	10%	Y	FACW
2.			
3.			
4.			
5.			
	10% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Eleocharis palustris	60%	Y	OBL
2. Poa pratensis	10%	N	FAC
3. Schedonorus arundinaceus	5%	N	FACU
4. Plantago major	5%	N	FAC
5. Rumex crispus	2%	N	FAC
6.			
7.			
8.			
9.			
10.			
	82% = Total Cover		
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: EW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15"	10YR 2/1	78%	7.5YR 5/8	15%	C	M	SCL	
			10YR 5/8	5%	C	M	SCL	
			2.5YR 3/6	2%	C	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 20"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 15"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 6"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral PASS 2:0 Dominants.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/12/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: HU

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear

Slope (%): 10% Lat: -88.115532 Long: 42.09853 Datum: N American 1983

Soil Map Unit Name: 330A NWI classification: PUBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	
Hydric Soil Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Wetland Hydrology Present?	Yes _____	No X	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Taxodium distichum	5%	Y	OBL
2.			
3.			
4.			
5.			
	5%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. Solidago canadensis	80%	Y	FACU
2. Mondarda fistulosa	20%	N	FACU
3. Vernonia fasciculata	5%	N	FACW
4. Phalaris arundinaceae	5%	N	FACW
5. Zizia aurea	5%	N	FAC
6. Rudbeckia subtomentosa	5%	N	FACU
7. Eleocharis palustris	5%	N	OBL
8. Solidago gigantea	5%	N	FACW
9. Ratibida pinnata	2%	N	UPL
10. Daucus carota	2%	N	UPL
	141%	= Total Cover	
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	_____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	10	x 2 =	20
FAC species	15	x 3 =	45
FACU species	107	x 4 =	428
UPL species	4	x 5 =	20
Column Totals:	146 (A)		523 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Herb Stratum Con't: Ambrosia artemisiifolia 2% N FACU

SOIL

Sampling Point: HU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 2/1	100%					SCL	Roots
2-15"	10YR 2/1	75%	10YR 6/1	10%	C	M	SCL	
			7.5YR 5/8	10%	C	M	SCL	
			5YR 5/6	5%	C	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 25.5"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 21"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 13.5"

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral FAIL 5:5 Non-dominants.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: South Ridge Park City/County: Hoffman Estates, Cook Co Sampling Date: 6/12/2019

Applicant/Owner: Dustin Hugen, Hoffman Estates Park District State: IL Sampling Point: HW

Investigator(s): Kristin Adams Section, Township, Range: S19 T42N R10E

Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Concave

Slope (%): 5% Lat: -88.115523 Long: 42.098502 Datum: N American 1983

Soil Map Unit Name: 330A NWI classification: PUBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
Wetter season than normal according to Rainfall Determination Worksheet.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Taxodium distichum	5%	Y	OBL
2.			
3.			
4.			
5.			
	5% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Eleocharis palustris	45%	Y	OBL
2. Solidago gigantea	30%	Y	FACW
3. Rorippa palustris	10%	N	OBL
4. Schedonorus arundinaceus	8%	N	FACU
5. Veronica peregrina	8%	N	FACW
6. Solidago canadensis	5%	N	FACU
7. Carex stipata	5%	N	OBL
8. Poa pratensis	5%	N	FAC
9. Rudbeckia subtomentosa	5%	N	FACU
10. Juncus tenuis	5%	N	FAC
	139% = Total Cover		
Woody Vine Stratum (Plot size: 15 ft)			
1. None			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Herb Stratum Con't (No dominant species): Mentha arvensis 5% FACW, Fraxinus pennsylvanica 2% FACW,Vernonia fasciculata 2% FACW, Rumex crispus 2% FACW, Ambrosia trifida 2% FAC

SOIL

Sampling Point: HW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 2/1	100%					SCL	Roots
2-15"	10YR 2/1	84%	2.5YR 4/6	15%	C	M	SCL	
			2.5Y 4/3	1%	C	M	SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Pit dug to 24"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 17"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral PASS 3:0 Dominants.

APPENDIX B

SITE PHOTOS

Wetland A, Data Point AU




Wetland A, Data Point AW




Wetland A, Data Point BW




Wetland A, Data Point BU




Wetland A, Data Point DW




Wetland A, Data Point DU




Wetland A, Data Point EW




Wetland A, Data Point EU




Wetland A, Data Point HW

Wetland A, Data Point HU




Wetland A




APPENDIX C

2017 USACE CHICAGO REGION

FLORISTIC QUALITY ASSESSMENT

FOR ALL WETLANDS

Wetland A

6/13/2019

South Ridge Park
Hoffman Estates
Cook
IL
United States

FQA DB Region:	Chicago Region USACE
FQA DB Publication Year:	2017
FQA DB Description:	https://www.lrc.usace.army.mil/Missions/Regulatory/FQA.aspx
Practitioner:	Kristin Adams
Latitude:	
Longitude:	
Weather Notes:	
Duration Notes:	
Community Type Notes:	Community was mostly lake shoreline, extended into grass at some points.
Other Notes:	
Private/Public:	Private

Conservatism-Based Metrics:		
Total Mean C:	2.2	
Native Mean C:	3.4	
Total FQI:	17.6	
Native FQI:	21.8	
Adjusted FQI:	27.2	
% C value 0:	48.4	
% C value 1-3:	18.8	
% C value 4-6:	23.4	
% C value 7-10:	9.4	
Native Tree Mean C:	4	
Native Shrub Mean C:	n/a	
Native Herbaceous Mean C:	3.4	

Species Richness:		
Total Species:	64	
Native Species:	41	64.10%
Non-native Species:	23	35.90%

Species Wetness:		
Mean Wetness:	0	
Native Mean Wetness:	-0.4	

Physiognomy Metrics:		
Tree:	2	3.10%
Shrub:	1	1.60%
Vine:	0	0%
Forb:	44	68.80%
Grass:	10	15.60%
Sedge:	6	9.40%
Rush:	0	0%
Fern:	1	1.60%
Bryophyte:	0	0%

Duration Metrics:		
Annual:	6	9.40%
Perennial:	55	85.90%
Biennial:	3	4.70%
Native Annual:	5	7.80%
Native Perennial:	35	54.70%
Native Biennial:	1	1.60%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Achillea millefolium	Asteraceae	ACHMIL	non-native	0	1	forb	perennial	common yarrow
Agrostis stolonifera	Poaceae	AGRALBP	native	2	-1	grass	perennial	spreading bent
Ambrosia artemisiifolia	Asteraceae	AMBART	native	0	1	forb	annual	annual ragweed
Ambrosia trifida	Asteraceae	AMBTRI	native	0	0	forb	annual	great ragweed

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Asclepias incarnata	Asclepiadaceae	ASCINC	native	3	-2	forb	perennial	swamp milkweed
Bidens frondosa	Asteraceae	BIDFRO	native	1	-1	forb	annual	devils-pitchfork
Bromus arvensis	Poaceae	BROARV	non-native	0	1	grass	annual	field brome
Carex molesta	Cyperaceae	CXMOLE	native	2	0	sedge	perennial	troublesome sedge
Carex stipata	Cyperaceae	CXSTIP	native	4	-2	sedge	perennial	stalk-grain sedge
Carex vulpinoidea	Cyperaceae	CXVULP	native	2	-1	sedge	perennial	common fox sedge
Cerastium fontanum	Caryophyllaceae	CERFON	non-native	0	1	forb	perennial	common mouse-ear chickweed
Convolvulus arvensis	Convolvulaceae	CONARV	non-native	0	2	forb	perennial	field bindweed
Dactylis glomerata	Poaceae	DACGLO	non-native	0	1	grass	perennial	orchard grass
Daucus carota	Apiaceae	DAUCAR	non-native	0	2	forb	biennial	queen annes lace
Echinacea purpurea	Asteraceae	ECHPUR	native	10	2	forb	perennial	purple conefower
Echinochloa crus-galli	Poaceae	ECHCRU	native	0	-1	grass	annual	large barnyard grass
Eleocharis palustris	Cyperaceae	ELEERY	native	1	-2	sedge	perennial	common spike-rush
Elymus repens	Poaceae	AGRREP	non-native	0	1	grass	perennial	creeping wild rye
Epilobium coloratum	Onagraceae	EPICOL	native	3	-2	forb	perennial	purple-leaf willowherb
Equisetum arvense	Equisetaceae	EQUARV	native	0	0	fern	perennial	field horsetail
Erigeron annuus	Asteraceae	ERIANN	native	0	1	forb	biennial	eastern daisy fleabane
Eutrochium purpureum	Asteraceae	EUPPUR	native	6	0	forb	perennial	sweet-scented joe-pye-weed
Fraxinus pennsylvanica	Oleaceae	FRAPEN	native	4	-1	tree	perennial	green ash
Glechoma hederacea	Lamiaceae	GLEHED	non-native	0	1	forb	perennial	groundivy
Helianthus grosseserratus	Asteraceae	HELGRO	native	4	-1	forb	perennial	saw-tooth sunflower
Heliopsis helianthoides	Asteraceae	HELHEL	native	7	1	forb	perennial	smooth oxeye
Hordeum jubatum	Poaceae	HORJUB	native	0	0	grass	perennial	fox-tail barley
Juncus nodosus	Juncaceae	JUNNOO	native	8	-2	forb	perennial	knotted rush
Juncus tenuis	Juncaceae	JUNTEN	native	0	0	forb	perennial	lesser poverty rush
Leucanthemum vulgare	Asteraceae	CHRLEU	non-native	0	2	forb	perennial	ox-eye daisy
Lotus corniculatus	Fabaceae	LOTCOR	non-native	0	1	forb	perennial	garden birds-foot-trefoil
Lycopus americanus	Lamiaceae	LYCAME	native	4	-2	forb	perennial	cut-leaf water-horehound
Melilotus albus	Fabaceae	MELALB	non-native	0	2	forb	biennial	white sweet-clover
Mentha arvensis	Lamiaceae	MENARV	native	5	-1	forb	perennial	american wild mint
Monarda fistulosa	Lamiaceae	MONFIS	native	4	1	forb	perennial	oswego-tea
Parthenium integrifolium	Asteraceae	PARINT	native	8	2	forb	perennial	wild quinine
Phalaris arundinacea	Poaceae	PHAARU	non-native	0	-1	grass	perennial	reed canary grass
Phragmites australis ssp. australis	Poaceae	PHRAUSU	non-native	0	-1	grass	perennial	common reed
Plantago major	Plantaginaceae	PLAMAJ	non-native	0	0	forb	perennial	great plantain
Poa pratensis	Poaceae	POAPRA	non-native	0	0	grass	perennial	kentucky blue grass
Ratibida pinnata	Asteraceae	RATPIN	native	4	2	forb	perennial	yellow coneflower
Rorippa palustris	Brassicaceae	RORPAL	native	4	-2	forb	perennial	bog yellowcress
Rudbeckia subtomentosa	Asteraceae	RUDSUB	native	8	1	forb	perennial	sweet coneflower
Rumex crispus	Polygonaceae	RUMCRI	non-native	0	0	forb	perennial	curly dock
Schedonorus arundinaceus	Poaceae	SCHARU	non-native	0	1	grass	perennial	tall false rye grass
Schoenoplectus fluviatilis	Cyperaceae	SCHFLU	native	4	-2	sedge	perennial	river club-rush
Scirpus pendulus	Cyperaceae	SCIPEN	native	2	-2	sedge	perennial	rufous bulrush
Securigera varia	Fabaceae	CORVAR	non-native	0	2	forb	perennial	crown vetch
Silphium laciniatum	Asteraceae	SILLAC	native	5	2	forb	perennial	compass-plant
Silphium perfoliatum	Asteraceae	SILPER	native	5	-1	forb	perennial	cup-plant
Solidago canadensis	Asteraceae	SOLCAN	native	1	1	forb	perennial	canadian goldenrod
Solidago gigantea	Asteraceae	SOLGIG	native	4	-1	forb	perennial	late goldenrod
Symphyotrichum novae-angliae	Asteraceae	ASTNOV	native	3	-1	forb	perennial	new england american-aster
Syringa vulgaris	Oleaceae	SYRVUL	non-native	0	2	shrub	perennial	common lilac
Taxodium distichum	Taxodiaceae	TAXDIS	non-native	0	-2	tree	perennial	southern bald-cypress
Trifolium pratense	Fabaceae	TRIPRA	non-native	0	1	forb	perennial	red clover
Trifolium repens	Fabaceae	TRIREP	non-native	0	1	forb	perennial	white clover
Typha angustifolia	Typhaceae	TYPANG	non-native	0	-2	forb	perennial	narrow-leaf cat-tail
Verbena hastata	Verbenaceae	VERHAS	native	4	-1	forb	perennial	simplers-joy
Verbena urticifolia	Verbenaceae	VERURT	native	2	0	forb	perennial	white vervain
Vernonia fasciculata	Asteraceae	VERFAS	native	8	-1	forb	perennial	prairie ironweed
Veronica peregrina	Scrophulariaceae	VERPEE	native	0	-1	forb	annual	neckweed
Viola sororia	Violaceae	VIOSOR	native	3	0	forb	perennial	hooded blue violet
Zizia aurea	Apiaceae	ZIZAUR	native	5	0	forb	perennial	golden alexanders

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

South Ridge Community Park
1450 Freeman Road
Hoffman Estates, IL 60169
WT Project #1911354C

SWPPP Prepared For:

Hoffman Estates Park District
1685 W. Higgins Road
Hoffman Estates, IL 60169
ph. 847-885-7500

SWPPP Prepared By:

The W-T Group, LLC
2675 Pratum Ave.
Hoffman Estates, IL 60192
ph. 224-293-6333
fax 224-293-6444

SWPPP Preparation Date:

January 6, 2020

Estimated Project Dates:

Project Start Date: 03/01/2020
Project Completion Date: 12/30/2020

Contents

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES 1
1.1 Operator(s) / Subcontractor(s) 1
1.2 Stormwater Team 2
SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING 3
2.1 Project/Site Information 3
2.2 Discharge Information 4
2.3 Nature of the Construction Activity 5
2.4 Sequence and Estimated Dates of Construction Activities 5
2.5 Allowable Non-Stormwater Discharges 6
2.6 Site Maps 6
SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS 7
3.1 Endangered Species Protection 7
3.2 Historic Preservation 8
3.3 Safe Drinking Water Act Underground Injection Control Requirements 10
SECTION 4: EROSION AND SEDIMENT CONTROLS 11
4.1 Natural Buffers or Equivalent Sediment Controls 11
4.2 Perimeter Controls 12
4.3 Sediment Track-Out 12
4.4 Stockpiled Sediment or Soil 13
4.5 Minimize Dust 13
4.6 Minimize the Disturbance of Steep Slopes 13
4.7 Topsoil 14
4.8 Soil Compaction 14
4.9 Storm Drain Inlets 14
4.13 Dewatering Practices 15
4.14 Other Stormwater Controls 15
4.15 Site Stabilization 15
SECTION 5: POLLUTION PREVENTION STANDARDS 17
5.1 Potential Sources of Pollution 17
5.2 Spill Prevention and Response 18
5.3 Fueling and Maintenance of Equipment or Vehicles 18
5.4 Washing of Equipment and Vehicles 18
5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes 18
5.6 Washing of Applicators and Containers used for Paint, Concrete or Other Materials 20
5.7 Fertilizers 20
5.8 Other Pollution Prevention Practices 20
SECTION 6: INSPECTION AND CORRECTIVE ACTION 22
6.1 Inspection Personnel and Procedures 22
6.2 Corrective Action 22
6.3 Delegation of Authority 22
SECTION 7: TRAINING 23
SECTION 8: CERTIFICATION AND NOTIFICATION 24
SWPPP APPENDICES 25

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Contractor(s) / Subcontractor(s)

Contractor(s):

Company Name:
Contact:
Address:
City, State, Zip Code:
Telephone:
Fax / Email:
Area of Control:

Company Name:
Contact:
Address:
City, State, Zip Code:
Telephone:
Fax / Email:
Area of Control:

Subcontractor(s): (See Appendix G for Subcontractor Agreements)

Company Name:
Contact:
Address:
City, State, Zip Code:
Telephone:
Fax / Email:
Area of Control:

Company Name:
Contact:
Address:
City, State, Zip Code:
Telephone:
Fax / Email:

Company Name:
Contact:
Address:
City, State, Zip Code:
Telephone:
Fax / Email:

Company Name:
Contact:
Address:
City, State, Zip Code:
Telephone:
Fax / Email:
Area of Control:

1.2 Stormwater Team (Each team member must have access to the 2012 CGP and the SWPPP)

Role or Responsibility : Owner
Position : Director of Parks, Planning and Maintenance
Name : Dustin Hugen- Hoffman Estates Park District
Telephone Number: 847-285-5465
Email: dhugen@heparks.org

Role or Responsibility : Civil Engineer / SWPPP Designer
Position : President
Name : Todd Abrams, P.E., CFM – The W-T Group, LLC, Civil Engineering Division
Telephone Number : 224-293-6333
Email : todd.abrams@wtengineering.com

Role or Responsibility :
Position :
Name :
Telephone Number :
Email :

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1 Project/Site Information

Project Name and Address

Project/Site Name: South Ridge Community Park- Enhancement Plan 2019
Project Street/Location: 1450 Freeman Road
City: Hoffman Estates
State: Illinois
ZIP Code: 60169
County or Similar Subdivision: Cook County

Project Latitude/Longitude

(Use **one** of three possible formats, and specify method)

Latitude: 42 ° 5' 50" N	Longitude: -88 ° 6' 55" W
1. 42 ° 5 ' 50" N (degrees, minutes, seconds)	1. -88 ° 6 ' 55" W (degrees, minutes, seconds)
2. _ _ ° _ _ . _ _' N (degrees, minutes, decimal)	2. _ _ ° _ _ . _ _' W (degrees, minutes, decimal)
3. _ _ . _ _ _ _ ° N (decimal)	3. _ _ . _ _ _ _ ° W (decimal)

Method for determining latitude/longitude:
☐ USGS topographic map (specify scale:) ☐ EPA Web site ☐ GPS
☒ Other (please specify): www.geocommunicator.gov

Horizontal Reference Datum:
☐ NAD 27 ☐ NAD 83 or WGS 84 ☒ Unknown

If you used a U.S.G.S topographic map, what was the scale? _____

Additional Project Information

Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? ☐ Yes ☒ No

If yes, provide the name of the Indian tribe associated with the area of Indian country (including the name of Indian reservation if applicable), or if not in Indian country, provide the name of the Indian tribe associated with the property:

If you are conducting earth-disturbing activities in response to a public emergency, document the cause of the public emergency *(e.g., natural disaster, extreme flooding conditions)*, information substantiating its occurrence *(e.g., state disaster declaration)*, and a description of the construction necessary to reestablish effective public services:

Are you applying for permit coverage as a "federal operator" as defined in Appendix A of the 2012 CGP? ☐ Yes ☒ No

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☒ Yes ☐ No

Are there any surface waters that are located within 50 feet of your construction disturbances?
☒ Yes ☐ No

Table 1 – Names of Receiving Waters

Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4 (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)
1. Salt Creek

Table 2 – Impaired Waters / TMDLs (Answer the following for each surface water listed in Table 1 above)

	Is this surface water listed as "impaired"?	If you answered yes, then answer the following:			
		What pollutant(s) are causing the impairment?	Has a TMDL been completed?	Title of the TMDL document	Pollutant(s) for which there is a TMDL
1.	☒ YES ☐ NO	**Dissolved Oxygen, Iron, Nitrogen, Oil and Grease, Phosphorus, PCBs**	☐ YES ☒ NO		

Table 3 – Tier 2, 2.5, or 3 Waters (Answer the following for each surface water listed in Table 1 above)

	Is this surface water designated as a Tier 2, Tier 2.5, or Tier 3 water? (see Appendix F)	If you answered yes, specify which Tier (2, 2.5, or 3) the surface water is designated as?
1.	☐ YES ☒ NO	

2.3 Nature of the Construction Activity

General Description of Project

Provide a general description of the construction project:

The Hoffman Estates Park District is proposing a new spray pad, a 25 +/- parking lot addition, removal and reconstruction of the existing on-site bike path, a new open air shelter, a new playground, two (2) fitness challenge courses, new sand volleyball court, new filter/bathroom building and natural planting areas to the existing South Ridge Park located at 1450 Freeman Road in Hoffman Estates. Total land disturbance will be approximately 4.4 acres.

Size of Construction Project

What is the size of the property (in acres), the total area expected to be disturbed by the construction activities (in acres), and the maximum area expected to be disturbed at any one time?

Size of Property : 24.9 Acres

Total Area of Construction Disturbance : 4.4 Acres

2.4 Sequence and Estimated Dates of Construction Activities

1. Installation of the inlet protection devices – prior to any earth moving operations. The temporary perimeter controls and inlet protection devices will not be removed until all construction activities at the site are complete and soils have been permanently stabilized.
2. Water pumped or otherwise discharged from the site during construction dewatering shall be filtered.
3. Removal of the existing pavement and all other items to be removed as shown in the construction plans.
4. Stripping and stockpiling of topsoil and rough grading. Temporary stabilization shall be applied immediately once grading operations have temporarily or permanently stopped.
5. Installation of detention system, storm sewers, and outlet control structure.
6. Rough grading.
7. Installation of proposed underground utilities. Install new inlet protection devices on new storm inlets. Areas around rims should be excavated to raise rim above ground surface.
8. Construction of site improvements. Inlet protection devices must be removed before installation of the proposed tiles.
9. Remove soil stockpile and dispose excess soil off-site. Rough grade and construct parking lot as shown on the construction plans.
10. Final grading and landscaping installation.
11. Permanent landscape installation or temporary stabilization shall be provided immediately following final grading.
12. Install volume control facilities.
13. Remove sediment from detention basins.
14. Permanent landscape installation.
15. Permanent landscape installation or temporary stabilization shall be provided immediately following final grading.
16. Erosion and sedimentation control measures shall be the responsibility of the general contractor, and shall be continually maintained as follows:
17. The entrance shall be maintained in a condition, which will prevent tracking or flowing of sediment onto public Rights-of-Way. This may require repair and/or cleanout of any measures used to trap

sediment. All sediment spilled, dropped, washed or tracked onto public Rights-of-Way shall be cleaned immediately.

18. Temporary cover shall be continuously maintained until permanent cover is established. (Landscaping/grass seed is considered temporary until it is capable of surviving severe weather conditions.)
19. Inlets and drainage ways shall be inspected and cleaned periodically and before maintenance responsibility expires.

I2.5 Allowable Non-Stormwater Discharges

List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	**Likely to be Present at Your Site?**
Discharges from emergency fire-fighting activities	☐ YES ☒ NO
Fire hydrant flushings	☒ YES ☐ NO
Landscape irrigation	☒ YES ☐ NO
Waters used to wash vehicles and equipment	☒ YES ☐ NO
Water used to control dust	☒ YES ☐ NO
Potable water including uncontaminated water line flushings	☒ YES ☐ NO
Routine external building wash down	☐ YES ☒ NO
Pavement wash waters	☒ YES ☐ NO
Uncontaminated air conditioning or compressor condensate	☐ YES ☒ NO
Uncontaminated, non-turbid discharges of ground water or spring water	☐ YES ☒ NO
Foundation or footing drains	☒ YES ☐ NO
Construction dewatering water	☒ YES ☐ NO

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan are described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

Landscape Watering – Water used for new seed and landscape installation will be applied at a rate that will be absorbed into the soil, and not create surface runoff. If runoff occurs, the silt fences and inlet protection fabric will remove sedimentation.

Dust Control Watering - Water used for the purpose of controlling airborne dust as necessary shall be pumped and filtered before it is allowed to leave the site.

Vehicle and Equipment Cleaning - Use off-site commercial washing businesses as much as possible. If washing of vehicles and equipment must occur onsite, use designated bermed wash areas to prevent wash water contact with receiving waters, with the area to be clearly marked as "Concrete wash out area". The wash area can be sloped for wash water collection and subsequent infiltration into the ground. The contractor shall use phosphate-free biodegradable soaps. The contractor shall educate employees and subcontractors on pollution prevention measures. Steam cleaning will not be permitted onsite. Use siphon system to pump out water.

2.6 Site Maps- Site Engineering Plans contain all required site maps.

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 Endangered Species Protection

Eligibility Criterion

Under which criterion listed in Appendix D are you eligible for coverage under this permit?

☒**A** ☐**B** ☐**C** ☐**D** ☐**E**

For reference purposes, the eligibility criteria listed in Appendix D are as follows:

Criterion A. No federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's "action area" as defined in Appendix A of this permit.

Criterion B. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under eligibility Criterion A, C, D, E, or F and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify your eligibility under this Criterion, there must be no lapse of NPDES permit coverage in the other operator's certification. By certifying eligibility under this Criterion, you agree to comply with any effluent limitations or conditions upon which the other operator's certification was based. You must include in your NOI the tracking number from the other operator's notification of authorization under this permit. If your certification is based on another operator's certification under Criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C in your NOI form.

Criterion C. Federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your site's "action area,"and your site's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. This determination may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect listed species and critical habitat. To make this certification, you must include the following in your NOI: 1) any federally listed species and/or designated habitat located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles). You must also include a copy of your site map with your NOI.

Criterion D. Coordination between you and the Services has been concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in a written concurrence from the relevant Service(s) that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion E. Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat. The result of this consultation must be either:

i. a biological opinion that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or

ii. written concurrence from the applicable Service(s) with a finding that the site's discharges and discharge-related activities are not likely to adversely affect federally-listed species or federally-designated habitat.

You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion F. Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and this authorization addresses the effects of the site's discharges and discharge-related activities on federally-listed species and federally-designated critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Supporting Documentation

Provide documentation for the applicable eligibility criterion you select in Appendix D, as follows:

For criterion A, indicate the basis for your determination that no federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's action area (as defined in Appendix A of the permit). Check the applicable source of information you relied upon:

☐ Specific communication with staff of the U.S. Fish & Wildlife Service or National Marine Fisheries Service.
☐ Publicly available species list. US Fish and Wildlife Species List
☒ Other source: Illinois ECOCAT

For criterion B, provide the Tracking Number from the other operator's notification of permit authorization:

Provide a brief summary of the basis used by the other operator for selecting criterion A, B, C, D, E, or F:

For criterion C, provide the following information:

Also, provide a brief summary of the basis used for determining that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat:

For criterion D, E, or F, attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding consultation or coordination activities.

3.2 Historic Preservation

Appendix E, Step 1

Do you plan on installing any of the following stormwater controls at your site? Check all that

apply below, and proceed to Appendix E, Step 2.

- ☐ Dike
- ☐ Berm
- ☒ Catch Basin
- ☐ Pond
- ☒ Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- ☐ Culvert
- ☐ Other type of ground-disturbing stormwater control:

Appendix E, Step 2

If you answered yes in Step 1, have prior surveys or evaluations conducted on the site already determined that historic properties do not exist, or that prior disturbances at the site have precluded the existence of historic properties? ☒ YES ☐ NO

- If yes, no further documentation is required for Section 3.2 of the Template.
- If no, proceed to Appendix E, Step 3.

Appendix E, Step 3

If you answered no in Step 2, have you determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on historic properties? ☐ YES ☐ NO

If yes, provide documentation of the basis for your determination.

If no, proceed to Appendix E, Step 4.

Appendix E, Step 4

If you answered no in Step 3, did the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), or other tribal representative (whichever applies) respond to you within 15 calendar days to indicate whether the subsurface earth disturbances caused by the installation of stormwater controls affect historic properties? ☐ YES ☐ NO

If no, no further documentation is required for Section 3.2 of the Template.

If yes, describe the nature of their response:

- ☐ Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions.
- ☐ No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls.
- ☒ Other: A letter from the IHPA has been received stating that no historic properties area affected.

3.3 Safe Drinking Water Act Underground Injection Control Requirements

Do you plan to install any of the following controls? Check all that apply below.

☒ Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

☐ Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow

☐ Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

SECTION 4: EROSION AND SEDIMENT CONTROLS

4.1 Natural Buffers or Equivalent Sediment Controls

Buffer Compliance Alternatives

Are there any surface waters within 50 feet of your project's earth disturbances? ☒ YES ☐ NO

Check the compliance alternative that you have chosen:

☐ I will provide and maintain a 50-foot undisturbed natural buffer.

☒ I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

☐ It is infeasible to provide and maintain an undisturbed natural buffer of any size, therefore I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

☐ I qualify for one of the exceptions in Part 2.1.2.1.e. (If you have checked this box, provide information on the applicable buffer exception that applies, below.)

Buffer Exceptions

Which of the following exceptions to the buffer requirements applies to your site?

☐ There is no discharge of stormwater to the surface water that is located 50 feet from my construction disturbances.

☐ No natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for this project.

☐ For a "linear project" (defined in Appendix A), site constraints (e.g., limited right-of-way) make it infeasible formeto meet any of the CGP Part 2.1.2.1.a compliance alternatives.

☐ The project qualifies as "small residential lot" construction (defined in Part 2.1.2.1.e.iv and in Appendix A).

For Alternative 1 (see Appendix G, Part G.2.3.2.a):

For Alternative 2 (see Appendix G, Part G.2.3.2.b):

☒ Buffer disturbances are authorized under a CWA Section 404 permit.

☐ Buffer disturbances will occur for the construction of a water-dependent structure or water access area (e.g., pier, boat ramp, and trail).

4.2 Perimeter Controls

General

- Silt filter fencing will be installed downstream of all proposed earth moving activities prior to construction. Installation may be subject to Section 404 of the Clean Water Act.

Specific Perimeter Controls

Perimeter Control # 1

Perimeter Control Description

- Silt filter fencing will be installed downstream of all proposed earth moving activities prior to construction.
- Details are included within the plan set.

Installation

- Prior to commencement of land disturbing activities.

Maintenance Requirements

- Removal of sediment before it has accumulated to one-half of the above ground height of the fence. Inspect fencing at least once every 7 days and within 24 hours of each rainfall event of 0.5 inches or greater.

4.3 Sediment Track-Out

General

- All construction traffic entering and exiting the site will be limited to the use of the stabilized construction entrance.

Specific Track-Out Controls

Track-Out Control # 1

Track-Out Control Description

- A 70' x 14' stabilized construction entrance will be constructed of 2 inch or larger rock, and access to the site from the public right of way, street, alley sidewalk, parking area will be limited to this entrance. A stabilized Construction Entrance is intended to reduce off-site sedimentation and improve public safety by eliminating the tracking or other movement of sediment onto public rights-of-way.
- See the plan set for details.

Installation

- Prior to the commencement of earth disturbing activities

Maintenance Requirements

- Where sediment has been tracked-out from your site onto the surface of off-site streets, other paved areas, and sidewalks, you must remove the deposited sediment by the end of the same work day in which the track-out occurs or by the end of the next work day if track-out occurs on a non-work day. You must remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance (unless it is connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface

water.

4.4 Stockpiled Sediment or Soil

General

- Silt filter fencing will be used surrounding the proposed soil stockpile area along with temporary stabilization seeding.

Specific Stockpile Controls

Stockpile Control # 1
Stockpiled Sediment/Soil Control Description

- Stockpiling is the salvaging, storing, protecting, and use of topsoil to enhance final site stabilization and support selected vegetation. The stabilized stockpile shall be located such that it will not erode, block drainage, or interfere with work on the site. Topsoil stockpiles should be located on flat ground if possible, and protected by a silt fence or other sediment barrier on the down gradient sides. Topsoil that will not be used for more than 3 days should be seeded as noted in section 4.15 below.
- See the plan set for details and specifications.

Installation

- As necessary during earth moving activities.

Maintenance Requirements

Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water.)

4.5 Minimize Dust

General

- Provide dust control watering as necessary.

Specific Dust Controls

Dust Control # 1
Dust Control Description

- Provide dust control watering according the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction. Water used for the purpose of controlling airborne dust as necessary shall be pumped and filtered before it is allowed to leave the site.

Installation

- As required during construction.

4.6 Minimize the Disturbance of Steep Slopes

General

- Follow the grading plan, which has been designed to minimize disturbance and creation of steep slopes. The steep slopes that will be created shall be restored as shown on the plans, immediately following the completion of grading operations.

Specific Steep Slope Controls

Steep Slope Control # 1
Steep Slope Control Description

- Minimize disturbance of steep slopes by following the Grading Plan, which has been designed to minimize the disturbance to and creation of steep slopes. Stabilize all disturbed green spaces as shown in the construction plans.

4.7 Topsoil

General

- Existing topsoil will be stripped and stockpiled to south of parking lot to be demolished. This soil will be re-spread on the site following the completion of rough grading operations.

4.8 Soil Compaction

General

- 6" of topsoil will be spread in all green spaces following construction. Surface preparation will follow IDOT Standard Specifications.

Specific Soil Compaction Controls

Soil Compaction Control # 1
Soil Compaction Control Description

- 6" of topsoil will be spread in all green spaces following construction. Surface preparation will follow IDOT Standard Specifications. Clean up and grade the work area to eliminate the concentration of runoff.

4.9 Storm Drain Inlets

General

- Catch-All inlet Devices, and silt fence inlet protection will be installed on all new and existing storm inlet structures.

Specific Storm Drain Inlet Controls

Storm Drain Inlet Control # 1
Storm Drain Inlet Control Description

- Catch-All inlet protection devices or silt fence inlet protection will be installed on all new and existing storm inlet structures.
- See the plan set for details.

Installation

- Inlet protection devices shall be installed on all existing inlet structures prior to the start of construction, and on all new structures once they are installed.

Maintenance Requirements

- Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, you must remove the deposited sediment by the end of the same work day in which it is found or by the end of the following work day if

removal by the same work day is not feasible.

4.13 Dewatering Practices

General

- All dewatering discharge shall be pumped through a sediment filter bag prior to discharging from the site.

Specific Dewatering Practices

Dewatering Practice # 1
Dewatering Practice Description

- Dewatering discharge shall be pumped through an appropriate filter bag.
- Follow the manufacturer's specifications.

Installation

- As necessary.

Maintenance Requirements

- With backwash water, either haul it away for disposal or return it to the beginning of the treatment process; and replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

4.14 Other Stormwater Controls

General

- Soil Erosion

Specific Stormwater Control Practices

Stormwater Control Practice # 1
Description

- Temporary Erosion Control Blanket - Erosion control blankets will be utilized to protect sloped areas of exposed soil from erosion until permanent ground cover has been established.
- See manufacturer's specifications for installation requirements.

Installation

- Following final grading and seeding installation.

Maintenance Requirements

- Per manufacturers recommendations.

4.15 Site Stabilization

Site Stabilization Practice(only use this if you are not located in an arid, semi-arid, or drought-stricken area)
☒*Vegetative* ☐*Non-Vegetative*
☒*Temporary* ☒*Permanent*

Description of Practice

- Temporary Seeding

- General grass seed will be applied to all disturbed areas immediately once work has temporarily stopped in the area.
- Install per IDOT Standard Specifications article 280.04

Installation
- Install as necessary during construction.

Maintenance Requirements
- Provide additional seeding as necessary to promote vegetated growth.

Description of Practice
- Permanent Seeding - Permanent landscape seeding will be installed in all green spaces per the Landscape Plan. Temporary erosion control blanket will also be installed once the seeding has been placed.
- Install per Landscape plan specifications.

Installation
- Following final grading and topsoil installation.

Maintenance Requirements
- Provide additional seeding as necessary to promote vegetated growth.

4.16 General Maintenance

During Construction the contractor shall

- Cover the open ends of pipes in trenches at the close of each working day

Prior to final landscaping and restoration work the contractor shall
- Remove and dispose of silt retained by the temporary ditch checks and silt fencing
- Reinstall temporary ditch checks after cleaning, remove and replace plugged filter fence storm drain protection devices.
- All maintenance of erosion control systems will be the responsibility of the contractor.

Following construction, the owner shall
- Clean sedimentation out of the storm sewer system as necessary
- Remove trash from the detention facility and mow the grass as necessary

- **SECTION 5: POLLUTION PREVENTION STANDARDS**

5.1 Potential Sources of Pollution

Construction Site Pollutants

Pollutant-Generating Activity	**Pollutants or Pollutant Constituents** (that could be discharged if exposed to stormwater)	**Location on Site** (or reference SWPPP site map where this is shown)

5.2 Spill Prevention and Response

Storage of Hazardous or Toxic Materials - Toxic or hazardous materials must be stored in a controlled area using best management practices to minimize potential for soil or storm water contamination. All materials shall be stored in an area that is not accessible to the public such as locked boxes, locked vehicles, inside buildings under construction or in fenced area. No toxic or hazardous materials shall be stored up gradient of any storm drainage structure unless spill containment controls such as sandbags are in place. The contractor shall report any spillage or leak to appropriate agencies and site remediation shall be performed to remove all contamination from the site.

5.3 Fueling and Maintenance of Equipment or Vehicles

Vehicle maintenance and Storage - If maintenance must occur onsite, the contractor will use designated areas located away from drainage courses to prevent the run on of storm water and the runoff of spills. The contractor shall use secondary containment, such as drip pans or drop cloths to catch spills or leaks. Onsite vehicles and equipment will be inspected regularly and repaired immediately.

Vehicle and Equipment Fueling - Use off-site fuelling station as much as possible. If fueling of vehicles and equipment must occur onsite, use designated areas, located away from drainage course, to prevent the run-on of storm water and the runoff of spills. "Topping off" fuel tanks will be discouraged. The contractor shall use secondary containment. (Double lined tanks are considered secondary containment.)

Subcontractor Equipment - All subcontractors shall be notified regarding the SWPPP and shall be advised as to how it pertains to their activities on the site. Specifically, all vehicles shall be required to utilize the stabilized site entrance and parking and to use the controlled wash down area. All supplies that pose a threat to storm water quality shall be kept in vehicles or inside structures under construction. All waste material is to be disposed of property.

General

5.4 Washing of Equipment and Vehicles

General

Vehicle and Equipment Cleaning - Use off-site commercial washing businesses as much as possible. If washing of vehicles and equipment must occur onsite, use designated bermed wash areas to prevent wash water contact with receiving waters. Area to be clearly marked as "Concrete wash out area". The wash area can be sloped for wash water collection and subsequent infiltration into the ground. The contractor shall use phosphate-free biodegradable soaps. The contractor shall educate employees and subcontractors on pollution prevention measures. Steam cleaning will not be permitted onsite. Use siphon system to pump out water.

5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes

5.5.1 Building Products

No Solid materials, including building materials, shall be discharged into waters of the state, except as authorized by a Section 404 permit. Dispose of all building materials according to all local, state and federal regulations.

5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials

General

- All pesticides, herbicides, insecticides, and landscape materials shall be stored in water tight containers away from all open sewers to prevent discharge to downstream waters. Fertilizers shall not be stored on the site beyond the day they will be used, and shall be kept in water tight containers when they are not actively being applied.

5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals

General

- Use off-site fueling station as much as possible. If fueling of vehicles and equipment must occur onsite, use designated areas, located away from drainage course, to prevent the run-on of storm water and the runoff of spills. "Topping off" fuel tanks will be discouraged. The contractor shall use secondary containment. (Double lined tanks are considered secondary containment.)
- If maintenance must occur onsite, the contractor will use designated areas located away from drainage courses to prevent the run on of storm water and the runoff of spills. The contractor shall use secondary containment, such as drip pans or drop cloths to catch spills or leaks. Onsite vehicles and equipment will be inspected regularly and repaired immediately.
- Any spills or leaks shall be cleaned up immediately upon being discovered.

5.5.4 Hazardous or Toxic Waste

General

- Toxic or hazardous materials must be stored in a controlled area using best management practices to minimize potential for soil or storm water contamination. All materials shall be stored in an area that is not accessible to the public such as locked boxes, locked vehicles, inside buildings under construction or in fenced area. No toxic or hazardous materials shall be stored up gradient of any storm drainage structure unless spill containment controls such as sandbags are in place. The contractor shall report any spillage or leak to appropriate agencies and site remediation shall be performed to remove all contamination from the site.

5.5.5 Construction and Domestic Waste

General

- All construction and domestic waste, including packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, Styrofoam, concrete, and other trash or building materials shall be disposed of in a proper receptacle (Dumpster, Trash Can, Etc.) and legally dumped or recycled off site.

5.5.6 Sanitary Waste

General

- The contractor shall provide and maintain temporary bathroom facilities (Portable Toilets) during construction to accommodate all workers. These facilities shall be self-contained with no discharge. Waste removed from these facilities shall be disposed of properly offsite.

Specific Pollution Prevention Practices

Installation

- Install Portable Toilets on the first day of construction.

Maintenance Requirements
- Maintain according to OSHA standards and manufacturer's recommendations.

5.6 Washing of Applicators and Containers used for Paint, Concrete or Other Materials

General
- All concrete, paint and other material washout shall be limited to designated bermed wash areas to prevent wash water contact with receiving waters. Area to be clearly marked as "wash out area". The contractor shall use phosphate-free biodegradable soaps. The contractor shall educate employees and subcontractors on pollution prevention measures. Steam cleaning will not be permitted onsite. Use siphon system to pump out water.

Specific Pollution Prevention Practices

Installation
- As Necessary

Maintenance Requirements
- Clean out or remove and replace washout areas when they are 50% full.

5.7 Fertilizers

General
- Fertilizer shall not be stored onsite before the day it will be used. Store in water tight containers to prevent discharge to the downstream waters. Refer to section 5.5.2 for additional requirements.

5.8 Other Pollution Prevention Practices

Approved State or local Plans

(i) The management practices, controls and other provisions contained in the storm water pollution prevention plan must be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, latest edition. Facilities which discharge storm water associated with construction site activities must include in the storm water pollution prevention plan procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials. Requirements specified in sediment and erosion site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit. The plans shall include all requirements of this permit and include more stringent standards required by any local approval. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued to the construction site.

(ii) Dischargers seeking alternative permit requirements are not authorized by this permit and shall submit an individual permit application in accordance with 40 CFR 122.26 at the

address below, along with a description of why requirements in approved local plans of permits should not be applicable as a condition of an NPDES permit.

Illinois Environmental Protection Agency
Division of Water Pollution Control, Mail Code #15
Attention: Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SECTION 6: INSPECTION AND CORRECTIVE ACTION

6.1 Inspection Personnel and Procedures

Personnel Responsible for Inspections

Qualified personnel (provided by the contractor) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and location where vehicles enter or exit the site. Qualified personnel means a person knowledgeable in the principles and practices of erosion and sediment control measures, such as a licensed Professional Engineer (P.E.) and a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion Sediment and Storm Water Inspector (CESSWI) or other knowledgeable person who possesses the skills to assess conditions at the construction site that should impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activities.

Inspection Schedule

Specific Inspection Frequency

Every seven (7) calendar days, or within 24 hours of the end of any storm of 0.25 inches or equivalent snowfall.

Rain Gauge Location (if applicable)

Rain gauge shall be installed in an area of the site that is exposed to the sky away from all overhangs and trees.

Inspection Report Forms

See Appendix D for a sample Inspection Report Form

6.2 Corrective Action

Personnel Responsible for Corrective Actions

General Contractor is responsible for all Corrective Measures

Corrective Action Forms

Contractor to Provide

6.3 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Company or Organization Name:
Name:
Position:
Address:
City, State, Zip Code:
Telephone Number:
Fax/Email:

SECTION 7: TRAINING

Table 7-1: Documentation for Completion of Training

Name	Date Training Completed

SECTION 8: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

[Repeat as needed for multiple construction operators at the site.]

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – Site Maps

Appendix B – Copy of 2012 CGP

Appendix C – NOI and EPA Authorization Email

Appendix D – Inspection Form

(Note: EPA is in the process of developing a sample inspection form for use by CGP permittees. The form will be made available at http://cfpub.epa.gov/npdes/stormwater/cgp.cfm.)

Appendix E – Corrective Action Form

(Note: EPA is in the process of developing a sample corrective action form for use by CGP permittees. The form will be made available at http://cfpub.epa.gov/npdes/stormwater/cgp.cfm.)

Appendix F – SWPPP Amendment Log

Appendix G – Subcontractor Certifications/Agreements

Appendix H – Grading and Stabilization Activities Log

Appendix I – Training Log

Appendix J – Delegation of Authority

Appendix K – Endangered Species Documentation

Appendix L – Historic Preservation Documentation

Appendix A – Site Maps - See Plan Set for Site Maps

Appendix B – Copy of 2012 CGP - Available online at http://www.epa.gov/npdes/stormwater/cgp.

Appendix C – Copy of NOI and EPA Authorization email

Appendix D – Copy of Inspection Form

Appendix E –Copy of Corrective Action Form

Appendix F - SWPPP Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Appendix G – Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: South Ridge Community Park- Enhancement Plan 2019

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

Appendix H – Grading and Stabilization Activities Log

Date Grading Activity Initiated	**Description of Grading Activity**	**Description of Stabilization Measure and Location**	**Date Grading Activity Ceased** (Indicate Temporary or Permanent)	**Date When Stabilization Measures Initiated**

Appendix I – SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date:_____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**

Specific Training Objective:_____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Appendix J – Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix I of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix I.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Appendix K – Endangered Species Documentation

Appendix L – Historic Properties Documentation