THE VILLAGE OF TINLEY PARK
Cook County, Illinois
Will County, Illinois

RESOLUTION
NO. 2019-R-021

A RESOLUTION APPROVING A CONTRACT BETWEEN THE VILLAGE OF TINLEY PARK PIZZO & ASSOCIATES, LTD. OF LELAND, ILLINOIS FOR THE FAIRFIELD GLEN POND RESTORATION

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KRISTIN A. THIRION, VILLAGE CLERK

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CYNTHIA A. BERG
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MICHAEL W. GLOTZ
JOHN A. CURRAN
Board of Trustees

Published in pamphlet form by authority of the President and Board of Trustees of the Village of Tinley Park

RESOLUTION NO. 2019-R-021
A RESOLUTION APPROVING A CONTRACT BETWEEN THE VILLAGE OF TINLEY PARK PIZZO & ASSOCIATES, LTD. OF LELAND, ILLINOIS FOR THE FAIRFIELD GLEN POND RESTORATION

WHEREAS, the Village of Tinley Park, Cook and Will Counties, Illinois, is a Home Rule Unit pursuant to the Illinois Constitution of 1970; and

WHEREAS, the Corporate Authorities of the Village of Tinley Park, Cook and Will Counties, Illinois, have considered authorizing an Contract with Pizzo & Associates, LTD, a true and correct copy of such Contract being attached hereto and made a part hereof as **EXHIBIT 1**; and

WHEREAS, the Corporate Authorities of the Village of Tinley Park, Cook and Will Counties, Illinois, have determined that it is in the best interests of said Village of Tinley Park that said Contract be entered into by the Village of Tinley Park;

NOW, THEREFORE, Be It Resolved by the President and Board of Trustees of the Village of Tinley Park, Cook and Will Counties, Illinois, as follows:

Section 1: The Preambles hereto are hereby made a part of, and operative provisions of, this Resolution as fully as if completely repeated at length herein.

Section 2: That this President and Board of Trustees of the Village of Tinley Park hereby find that it is in the best interests of the Village of Tinley Park and its residents that the aforesaid "contract" be entered into and executed by said Village of Tinley Park, with said Contract to be substantially in the form attached hereto and made a part hereof as **EXHIBIT 1**, subject to review and revision as to form by the Village Attorney.

Section 3: That the President and Clerk of the Village of Tinley Park, Cook and Will Counties, Illinois are hereby authorized to execute for and on behalf of said Village of Tinley Park the aforesaid Contract.

Section 4: That this Resolution shall take effect from and after its adoption and approval.

ADOPTED this 10th day of April, 2019, by the Corporate Authorities of the Village of Tinley Park on a roll call vote as follows:

AYES: Pannitto,Berg,Brady,Glotz,Curran

NAYS: None

ABSENT: Younker

APPROVED this 10th day of April, 2019, by the President of the Village of Tinley Park.

Village President Pro-Tem

ATTEST:

Village Clerk

EXHIBIT 1

VILLAGE OF TINLEY PARK

SERVICE CONTRACT

This contract is by and between the **Village of Tinley Park**, a Illinois home-rule municipal corporation (the "Village"), and **Pizzo** (the "Contractor"), for the project or work described in Exhibit A, attached hereto and made a part hereof.

1. In consideration of the compensation stated in paragraph 2, the Contractor shall provide all the services described in the Scope of Services attached hereto as Exhibit "A" and incorporated herein by reference. The express terms of this Contract shall take precedence and control over any term or provision of the Scope of Services (Exhibit A) that in any way conflicts with, differs from, or attempts to alter the terms of this Contract.

2. Except in the event of a duly authorized change order approved by the Village as provided in this Contract, and in consideration of the Contractor's final completion of all work in conformity with this Contract, the Village shall pay the Contractor an amount not to exceed **two hundred and eighty six thousand six hundred and twenty and 45/100 Dollars ($286,620.45)**. Within **seven (7)** calendar days of completion of the work, the Contractor shall submit his application for payment to the Village, and the Village shall pay Contractor for the work performed no later than **thirty (30)** calendar days from the date of the Village's receipt and the Village's approval of the work and the application for payment. No payment shall be made by the Village until the Contractor has submitted to the Village (i) a Contractor's Affidavit listing all subcontractors and material suppliers utilized on the project and (ii) final waivers of lien from the Contractor, all subcontractors and all material suppliers.

3. No changes shall be made, nor will invoices for changes, alterations, modifications, deviations, or extra work or services be recognized or paid except upon the prior written order from authorized personnel of the Village. The Contractor shall not execute change orders on behalf of the Village or otherwise alter the financial scope of the Project.

4. Written change orders may be approved by the Village Manager or his designee provided that the change order does not increase the amount set forth in paragraph 2 of this Contract to more than $10,000.00. Changes in excess of this amount must be approved by the Village Board prior to commencement of the services or work. **Any request by the Contractor for an increase in the Scope of Services and an increase in the amount listed in paragraph 2 of this Contract shall be made and approved by the Village prior to the Contractor providing such services or the right to payment for such additional services shall be waived.**

5. **Time is of the essence on this Contract.** The Contractor shall complete all work under this Contract by the dates set forth below:

6. No "Notice to Proceed" may be given nor any work commenced until this Contract is fully executed and all exhibits and other attachments are completely filled out and attached hereto.

7. It is understood and agreed by the parties that the Contractor is an independent contractor retained for the above-mentioned purpose. The Village shall not control the manner nor the means of the Contractor's performance, but shall be entitled to a work product as described herein. The term "subcontractor" shall mean and include only those hired by and having a direct contract with Contractor for performance of work on the Project. The Village shall have no responsibility to any subcontractor employed by a Contractor for performance of work on the Project, and all subcontractors and material suppliers shall look exclusively to the Contractor for any payments due. The Village will **not** be responsible for reporting or paying employment taxes or other similar levies that may be required by the United States Internal Revenue Service or other State or Federal agencies. Every subcontractor shall be bound by the terms and provisions of this Contract as far as applicable to their work. The Contractor shall be fully responsible to the Village for the acts and omissions of its subcontractors, and shall ensure that any subcontractors perform in accordance with the requirements of this Contract. Nothing contained herein shall create any contractual or employment relations between any subcontractor and the Village. The Contractor is solely responsible for the safety procedures, programs and methods of its employees and agents and shall hold the Village harmless for any and all damages resulting from violations thereof. The Contractor shall comply with all applicable federal, State and local safety laws and regulations.

8. **It is further agreed that the Contractor shall indemnify, hold harmless, and defend the Village, its officers, agents, and employees from and against any and all claims, losses, damages, causes of action, suits, and liability of every kind, including all expenses of litigation, court costs, and attorneys' fees, for injury to or death of any person or for damage to any property arising out of or in connection with the work done by the Contractor under this Contract. Such indemnity shall apply regardless of whether the claims, losses, damages, causes of action, suits, or liability arise in whole or in part from the negligence of the Village, any other party indemnified hereunder, the Contractor, or any third party.**

9. **The Contractor assumes full responsibility for the work to be performed hereunder and hereby releases, relinquishes, and discharges the Village, its officers, agents, and employees from all claims, demands, and causes of action of every kind and character, including the cost of defense thereof, for any injury to or death of any person and any loss of or damage to any property that is caused by, alleged to be caused by, arising out of, or in connection with the Contractor's work to be performed hereunder. This release shall apply regardless of whether said claims, demands, and causes of action are covered in whole or in part by insurance and regardless of whether such injury, death, loss, or damage was caused in whole or in part by the negligence of the Village, any other party released hereunder, the Contractor, or any third party. The Contractor shall maintain insurance coverage in an amount and from a carrier suitable to the Village, and the Village shall be named as an additional insured where required. Certificates of Insurance are attached hereto as Exhibit B.**

10. The Village is exempt from payment of state and local sales and use of taxes on labor and materials incorporated into the project. If necessary, it is the Contractor's responsibility to obtain a sales tax permit, resale certificate, and exemption certificate that shall enable the Contractor to buy any materials to be incorporated into the project and then resale the aforementioned materials to the Village without paying the tax on the materials at the time of purchase. In no event will the Village be liable for or pay any sales or use taxes incurred by the Contractor in performing the services under this contract.

11. The Contractor shall comply with all applicable federal, state, and local statutes, regulations, ordinances, and other laws, including but not limited to the Immigration Reform and Control Act (IRCA). The Contractor may not knowingly obtain the labor or services of an unauthorized alien. The Contractor, not the Village, must verify eligibility for employment as required by IRCA.

12. At any time, the Village may terminate this Contract for convenience, upon written notice to the Contractor. The Contractor shall cease work immediately upon receipt of such notice. The Contractor shall be compensated for services performed and accepted by the Village up to the date of termination.

13. No waiver or deferral by either party of any term or condition of this Contract shall be deemed or construed to be a waiver or deferral of any other term or condition or subsequent wavier or deferral of the same term or condition.

14. This Contract may only be amended by written instrument approved and executed by the parties.

15. This Contract and the rights and obligations contained herein may not be assigned by the Contractor without the prior written approval of Village.

16. The parties hereby state that they have read and understand the terms of this Contract and hereby agree to the conditions contained herein.

17. This Contract has been made under and shall be governed by the laws of the State of Illinois. The parties agree that performance and all matters related thereto shall be in Cook County, Illinois.

18. Contractor, its employees, associates or subcontractors shall perform all the work hereunder. Contractor agrees that all of its associates, employees, or subcontractors who work on this Project shall be fully qualified and competent to do the work described hereunder. Contractor shall undertake the work and complete it in a timely manner.

19. If any provision of this Contract shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court of competent jurisdiction finds that any provision of this Contract is invalid or unenforceable, but that by limiting such provision it may become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

20. This Contract represents the entire and integrated agreement between the Village and Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral.

21. This Contract will be effective when signed by the last party whose signing makes the Contract fully executed.

22. The Contractor agrees to comply with the Illinois Prevailing Wage Act, if the work to be performed under this Contract is covered by said Act.

IF THIS IS PREVAILING WAGE WORK:

This contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* ("the Act"). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the current "prevailing rate of wages" (hourly cash wages plus amount for fringe benefits) in the county where the work is performed. The Department publishes the prevailing wage rates on its website at http://labor.illinois.gov/. The Department revises the prevailing wage rates and the contractor/subcontractor has an obligation to check the Department's web site for revisions to prevailing wage rates. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website. All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, *including but not limited to*, all wage requirements and notice and record keeping duties.

23. The Contractor agrees to comply with the Illinois Substance Abuse Prevention on Public Works Projects Act.

CERTIFICATIONS BY CONTRACTOR

Eligibility to Contract

The undersigned hereby certifies that the Contractor is not barred from bidding on or entering into this contractor as a result of a violation of either the bid-rigging or bid-rotating provisions of Article 33E of the Criminal Code of 1961, as amended.

Name of Contractor (please print)

Submitted by (signature)

Title

Certificate of Compliance with Illinois Human Rights Act

The undersigned hereby certifies that the Contractor is in compliance with Title 7 of the 1964 Civil Rights Act as amended and the Illinois Human Rights Act as amended.

Name of Contractor (please print)

Submitted by (signature)

Title

Certificate of Compliance with Illinois Drug-Free Workplace Act

The undersigned, **having 25 or more employees**, does hereby certify pursuant to section 3 of the Illinois Drug Free Workplace Act (30 ILCS 580/3) that it shall provide a drug-free workplace for all employees engaged in the performance of the work under the contract by complying with the requirements of the Illinois Drug-Free Workplace Act and, further certifies, that it is not ineligible for award of this contract by reason of debarment for a violation of the Illinois Drug-Free Workplace Act.

Name of Contractor (please print)

Submitted by (signature)

Title

Certificate Regarding Sexual Harassment Policy

The undersigned does hereby certify pursuant to section 2-105 of the Illinois Human Rights Act (775 ILCS 5/2-105) that it has a written sexual harassment policy that includes, at a minimum, the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under State law; (iii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Department of Human Rights and Human Rights Commission; (vi) direction on how to contact the Department of Human Rights and Human Rights Commission; and (vii) protection against retaliation.

Name of Contractor (please print)

Submitted by (signature)

Title

Certificate of Compliance with Substance Abuse Prevention on Public Works Projects Act

The undersigned hereby certifies that:

A. There is in place a written program which meets or exceeds the program requirements of the Substance Abuse Prevention on Public Works Projects Act (P.A. 95-0635), and has provided a written copy thereof to the Village of Tinley Park.

B. There is in place a collective bargaining agreement which deals with the subject matter of the Substance Abuse Prevention on Public Works Projects Act (P.A. 95-0635)

(Cross out either A or B depending upon which certification is correct)

Name of Contractor (please print)

Submitted by (signature)

Title

[NAME OF CONTRACTOR]

BY: _____ 4/22/19
Date

Printed Name: _____

Title: President

VILLAGE OF TINLEY PARK

BY: _____ 4-16-19
Mayor Date
(required if Contract is $10,000 or more)

ATTEST:

_____ 4-10-19
Village Clerk Date
(required if Contract is $10,000 or more)

VILLAGE OF TINLEY PARK

BY: _____ 4-15-19
Village Manager Date

Exhibit A

SCOPE OF SERVICES

ADDENDUM NO. 1

Fairfield Glen Restoration
2019-RFP-006
Tinley Park, Illinois 60477

February 20, 2019

This addendum forms part of the Contract Documents for the above named project and contains the following:

1) Questions and Answers
    a. Question 1: Are there project cost estimates available?
        i. Answer 1: The Village does not have detailed cost estimates to share at this time.

    b. Question 2: Is prevailing wage required?
        i. Answer 2: According to the information found on the IL Department of Labor Website here:
        https://www2.illinois.gov/idol/faqs/pages/landscaping.aspx#qst1
        Our interpretation is that this project falls under the category of landscape improvements. Any new landscape construction work done as part of a new project would not be included in this contract.

    c. Question 3: The plans show work beyond the south property line. Is this required?
        i. Answer 3: The area beyond the south property line is parkway within the LaPorte Rd ROW, which is still under the jurisdiction of the Village of Tinley Park. This work is required.

    d. Question 4: Can you please identify the approved access points to the site?
        i. Answer 4: The LaPorte Rd side of the project site west of Wildflower Dr provides the easiest access due to that section of roadway being a dead end. When necessary, access from Fairfield Ln or Glenshire St id also an option.

    e. Question 5: Are burn piles acceptable?
        i. Answer 5: Yes, but they should be kept towards the interior of the site as much s possible.

    f. Question 6: Is there an anticipated schedule when the work needs to be completed?
        i. Answer 6: There is no set schedule, but we would anticipate that the plant installations be completed by the end of the 2019 growing season.

    g. Question 7: Is a proposal guaranty required? If so, what percentage?
        i. Answer 7: Yes, the conditions are as follows:
        BID SECURITY
        A certified check or bid bond on a solvent bank, payable without condition to the Village of Tinley Park in an amount not less than ten percent (10%) of the base bid shall be submitted with each proposal, as a guarantee that, if the proposal is accepted, a contract will be entered into and the performance of the contract is properly secured.

        The Bid Security of the successful Respondent shall be returned to them immediately after the execution of the Agreement and upon delivery to the Owner of all requested bonds or certificates.

The Bid Security of all unsuccessful Respondents shall be returned to them, after the Bid opening, as soon as is practicable.

In submitting a Proposal, the Respondent understands and agrees that if their Proposal is accepted, and if Respondent fails to enter into an Agreement with the Owner, Respondent shall forfeit their Bid Security paid to the Owner, not as a penalty, but as liquidated damages due to such failure.

h. Question 8: How are the encroachment issues from neighboring residents to be handled?
    i. Answer 8: There are a variety of different conditions, so these will need to be addressed on a case by case basis. The Village has asked residents to remove their own materials that they would like to keep, and we do not anticipate removing all of the items as part of the work in this project. In some cases we may just work around the existing conditions.

i. Question 9: Are the seed and plug vendors listed in the RFP the only vendors we can use or are they just suggestions
    i. Answer 9: Those are just the pre-approved vendors. Proposed alternatives will be reviewed for approval by the Village.

j. Question 10: There is an area just off of Laporte Rd that is listed as open water on the plans and no treatment is indicated on this area. When visiting the site, it looked like this area was full of cattail. Are we to bid this project to leave the area as cattail or should we bid it to remove the cattail?
    i. Answer 10: That area is intended to be left as cattails.

k. Question 11: Who is responsible for monitoring and reporting?
    i. Answer 11: The Village and/or their assigned representatives will handle monitoring and reporting.

2) Clarifications
    a. Clarification 1: There is conflicting information about the size of the interpretive signage. The correct size is 14" x 17".

3) Changes to RFP Documents
    a. Change 1: Page 32 31 38 - 3 has been updated to reflect Clarification 1, and has been included as part of this addendum.

END OF ADDENDUM 1

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Genesis Graphics, Inc.1823 7th Av. N. Escanaba, Michigan 49829 ph. 800-659-7734 fax. 906-786-0614 Locally Represented by Joan Ball, Genesis Graphics, Inc. 1823 7th Avenue North Escanaba, MI 49829 tel. 1-800-659-7734

B. Acceptable others
   1. KVO Industries, Inc. | 1825 Empire Industrial Ct. Suite A | Santa Rosa CA 95403 P 707 573 6868 | F 707 573 6888
   2. The Plastic Lumber Company, Inc.; 540 South Main Street, Building 7; Akron, Ohio 44311-1023. Telephone: 330-762-8989. Fax: 330-762-1613. Email: sales@plasticlumber.com. Websites: www.plasticlumber.com and www.simplesigns.com.

2.2 MATERIALS

A. High Pressure Laminate (dHPL)
   1. Graphic imaging surface paper impregnated with melamine resins and combined with kraft paper core sheets impregnated with phenolic resins. These sheets are then bonded under high pressure and temperature. Finished sheets are then cut and edge finished.
   2. Maximum sheet size is 5X12 ft. with maximum image size of 58X142 in.
      a. Thicknesses: 1/2 in.
      b. Sign Size: 14" x 17" x ½" with threaded inserts for mounting.
      c. Corners: Radius of ½"

B. Heavy Gauged Aluminum Post
   1. 3" x 3" x 60" aluminum post with 6" x 6" plate. 6" x 6" plate shall be mounted at 45 deg angle to post.
   2. Powdercoated black.

C. Fasteners
   1. Bolts shall be black, tamper resistant.

2.3 Concrete footing

A. Provide 3000 PSI air entrained ready-mixed concrete conforming to ASTM C-94-, maximum 3" slump.

2.4 FABRICATION

A. Custom Architectural Signs: Fabricate to design provided by AOR.
   1. Digital files shall be supplied from AOR that indicate: Size, Sign Message, Letter Height and color.

Village of Tinley Park, Illinois
REQUEST FOR PROPOSALS
Fairfield Glen Restoration
2019-RFP-006

The Village of Tinley Park ("the Village"), invites Proposals from a capable Contractor to coordinate and provide ecological restoration services at Fairfield Glen. The Contractor shall perform the following services beginning in Spring 2019.

- Vegetation management, site preparation and native planting installations
- Regular landscape maintenance and stewardship services for the naturalized area
- Install hardscape improvements and landscape planting beds

Firms with demonstrated experience in this area, and with an interest in making their services available to the Village, are invited to respond to this RFP.

GENERAL REQUIREMENTS:

Proposers are to submit four (4) packets. Submit **one (1) original plus three (3)** complete copies of the proposals.

SUBMISSION LOCATION:

The Village Of Tinley Park- Clerk's Office
16250 South Oak Park Avenue
Tinley Park, IL 60477

SUBMISSION DATE:

Tuesday, February 26, 2019 by 12:00 p.m.
Responses received after the time specified will not be opened.

PRE-SUBMITTAL MEETING:

Thursday, February 14, 2019 at 11:00 a.m.
Recommended meeting at Public Works Facility:
7980 W. 183rd St
Tinley Park, IL 60477

CONTACT QUESTIONS:

Submit questions via email to: Mitch Murdock at mitchell.murdock@site-design.com . Questions are required no less than one (1) week prior to the RFP opening date. **Absolutely no informal communication shall occur regarding this RFP, including requests for information or speculation between Proposers or any of their individual members and any Village elected official or employee. All questions will be answered with a copy of the question and answer to each proposer that the Village is aware of and may be answered by addendum.**

CONTENTS:

The following sections, including this cover sheet, shall be considered integral parts of this solicitation:

- Notice of RFP
- General Terms and Conditions
- Project Overview
- Submission Requirements
- Requirements and Expectations
- Projected Timeline
- Natural Areas Establishment Provisions
- Landscape Specifications

- Bid Tab
- Site Plans

GENERAL TERMS AND CONDITIONS

1. **Negotiations:**
The Village of Tinley Park reserves the right to negotiate specifications, terms and conditions, which may be necessary or appropriate to the accomplishment of the purpose of this RFP. Nothing in this RFP is intended as a contract or as any kind of promise or commitment to enter into an agreement.

2. **Confidentiality:**
RFPs and responses thereto are subject to the Illinois Freedom of Information Act ("FOIA").

3. **Reserved Rights:**
The Village of Tinley Park reserves the right, at any time and for any reason, to cancel this RFP or any portion thereof, to reject any or all RFPs. The Village reserves the right to waive any immaterial defect in any RFP. The Village may seek clarification from a proposer at any time, after the submission date, and failure to respond promptly is cause for rejection.

4. **Incurred Costs:**
The Village of Tinley Park will not be liable for any costs incurred by respondents in replying to this RFP.

5. **Award:**
Award, if any, will be based on the highest ranked responsive, responsible bidder. Award, if any, will be based on the evaluation criteria set forth herein.

6. **Discussion of RFP:**
The Village of Tinley Park may conduct discussions with any proposer who submits a response to this RFP. During the course of such discussions, the Village shall not disclose any information derived from one proposer to any other proposer.

7. **Time and Effort:**
Time is of the essence. The broker shall be able to devote sufficient resources to the Village of Tinley Park.

8. **Responsibility and Default:**
The proposer shall be required to assume responsibility for all items listed in this RFP. The successful proposer shall be considered the sole point of contact for purposes of any service agreement entered into by the Village.

9. **Interpretations or Correction of Request for Proposals:**
Proposer shall promptly notify the Village of Tinley Park of any ambiguity, inconsistency or error that they may discover upon examination of the RFP. Interpretation, correction and changes to the RFP will be made by written addendum. Interpretation, corrections or changes made in any other manner will not be binding.

10. **Addenda:**

Addenda are written instruments issued by the Village prior to the date of receipt of qualifications, which modify or interpret the RFP by addition, deletions, clarifications, or corrections. Each proposer shall ascertain prior to submitting a qualifications packet that all addenda issued have been received, and by submission of a qualification packet, such act shall be taken to mean that such proposer has received and understands fully the contents of the addenda.

11. **Taxes:**
The Village of Tinley Park is exempt from paying Federal and Illinois State taxes.

12. **Non-Discrimination:**
Proposer shall comply with the Illinois Human Rights Act, 778ILCS 5/1-101 et seq. as amended and any rules and regulations promulgated in accordance therewith, including, but not limited to, the Equal Employment Opportunity Clause, Illinois Administrative Code, Title 44, Part 780 (Appendix A), which is incorporated herein by reference.

13. **Insurance:** ***Please submit certificate with your proposal***
The proposer must obtain insurance issued by a company or companies qualified to do business in the State of Illinois and provide the Village with evidence of credible insurance. Insurance in the following types and amounts is necessary:

A. **Worker's Compensation and Employer's Liability** with limits not less than:
   a. (1) Worker's Compensation: Statutory;
   b. (2) Employer's Liability;
   c. $1,000,000 injury-per occurrence
   d. Such insurance shall evidence that coverage applies in the State of Illinois.

B. **Comprehensive Motor Vehicle Liability** with limits for vehicles owned, non-owned or rented not less than:
   a. Bodily Injury/Property Damage: Combined Single Limit: $1,000,000 per accident

C. **Comprehensive General Liability** with coverage written on an "occurrence" as is and with limits no less than:
   a. Each Occurrence: $ 1,000,000
   b. General Aggregate: $2,000,000
   c. Products and completed operations: General Aggregate: $2,000,000

D. Coverage's shall include:
   a. Premises/Operations
   b. Independent Vendors
   c. Personal Injury (with Employment Exclusion deleted)
   d. Broad Form Property Damage Endorsement
   e. Blanket Contractual Liability (must expressly cover the indemnity provisions of this Contract)

E. **Umbrella Policy.** The required coverage's may be in any combination of primary, excess, and umbrella policies. Any excess or umbrella policy must provide excess coverage over underlying insurance on a following-form basis such that when any loss covered by the primary policy exceeds the limits under the primary policy, the excess or umbrella policy becomes effective to cover such loss. This policy should apply to the Commercial General Liability and Motor Vehicle Coverage. Minimum amount $5,000,000 in combination. An exception for a lower limit may be granted at the discretion of the Village of Tinley Park. Such an exception could be based upon

other criteria such as a review of their safety record, information provided by references, and/or any established prior job performance on behalf of the Village.

Village of Tinley Park shall be named as an Additional Insured on the Comprehensive General Liability, Comprehensive Motor Vehicle Liability and Umbrella/Excess Policies. An endorsement naming the Village an additional insured must be submitted With the Certificate of Insurance. All insurance policies are to be placed with insurers authorized to conduct business in the state with a current A.M. Best rating of no less than A: VII, unless otherwise acceptable to the Village.

F. **Other Insurance Provisions -**
The insurance policies are to contain, or be endorsed to contain, the following provisions:

a. The Entity, its officers, officials, employees, and volunteers are to be covered as additional insureds on the general liability, auto and umbrella/excess policies. An endorsement naming the Village an additional insured must be submitted with the Certificate of Insurance

b. For any claims related to this project, the insurance coverage shall be primary insurance coverage at least as broad as ISO CG 20 01 04 13 as respects the Entity, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the Entity, its officers, officials, employees, or volunteers shall be excess of the Vendor's insurance and shall not contribute with it. Vendor shall procure and maintain for the duration of the contract, and for 2 years thereafter, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Vendor, his agents, representatives, employees.

c. Each insurance policy required by this clause shall provide that coverage shall not be canceled, except with notice to the Entity.

d. Insurance is to be placed with insurers authorized to conduct business in the state with a current A.M. Best rating of no less than A: VII, unless otherwise acceptable to the Entity.

e. Waiver of Subrogation: Vendor hereby agrees to waive rights of subrogation which any insurer of Vendor may acquire from Vendor by virtue of the payment of any loss. Vendor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the Entity for all work performed by the Vendor, its employees, agents.

14. **Change in Status:**
The proposer shall notify the Village of Tinley Park immediately of any changes in its status resulting from any of the following: (a) proposer is acquired by another party; (b) proposer becomes insolvent; (c) proposer, voluntarily or by operation of law, becomes subject to the provisions of any chapter of the Bankruptcy Act; (d) vendor ceases to conduct its operations in normal course of business. The Village of Tinley Park shall have the option to terminate any professional working relationship with the vendor immediately on written notice based on any such change in status.

15. **Precedence:**
Where there appears to be variances or conflicts, the following order of precedence shall prevail: The Village of Tinley Park Request for Proposals; and the Proposers Response to RFP.

16. **Submittal and Evaluation Factors:**

The contract will be awarded to the Contractor determined by the Village of Tinley Park to be in the best interest of the Village, who meets or exceeds the criteria and provisions sought by the Village. The Village reserves the right to reject any or all responses or to waive any details in the responses received whenever such rejection or waiver is in the best interests of the Village. The Village also reserves the right to reject the RFP of a Contractor who has previously failed to satisfactorily perform a contract. The Village of Tinley Park reserves the right to award the contract to a Contractor who is not the lowest cost; however, cost is an important factor in the selection of a Contractor.

In determining the most qualified responder, the following criteria will be considered by the Village:

A. Experience and qualifications;
B. Ability to complete required work in a timely manner;
C. Fee amount and terms;
D. Projects with other Municipalities and/or projects of comparable scale

PROJECT OVERVIEW

1. **Introduction and Purpose**

The Village of Tinley Park (The Village) in its role of maintaining certain stormwater management properties in the public realm, seeks a proposal from a capable Contractor to coordinate and provide ecological restoration services at Fairfield Glen. Fairfield Glen is an approximately 9.5-acre stormwater management site that includes portions of upland, wetland and open water areas. Fairfield Glen is located at the northwest corner of 88th Ave and Laporte Rd. This RFP calls for the management and control of existing vegetation including, which includes removal of both herbaceous and woody material. In addition to installing native seeding and plant material, this RFP also includes options for several formal landscape beds, a small seating area/ plaza and interpretive signage as neighborhood amenities.

2. **Scope of Services and Specifications**

It is the responsibility of the successful Responder to meet the requirements of the scope of services and specifications as detailed in the Natural Areas Establishment Provisions and the Landscape Specifications.

SUBMISSION REQUIREMENTS

1. Qualification Data- Responder shall provide information as requested in the Natural Areas Specifications, sections 1.03 and 1.08.

2. Pricing- Must be included in the cost proposal, as listed on the detailed bid tab.

3. References - Responder shall provide information as requested in the Natural Areas Specifications, section 1.03.

4. Insurance Certificate- See insurance requirements above.

REQUIREMENTS AND EXPECTATIONS

The following are general requirements and expectations of the selected Contractor:

1. The Contractor shall perform all work in accordance with Federal, State, and Local laws, regulations, codes and ordinances;
2. The Contractor must be able to receive requests via e-mail;
3. The Contractor is expected to have all necessary supplies, equipment, personnel, and skills to complete the project in a timely manner;
4. Hours of work are 7:00 AM through 7:00 PM, Monday through Friday, and between 9:00 AM and 5:00 PM on Saturday, unless authorized at the sole discretion of The Village;
5. The surrounding area shall have a neat, professional looking appearance upon completion of the job, and
6. All contractor employees shall wear suitable uniforms during the time they are on Village property or public ROW areas.

PROJECTED TIMELINE

Every effort will be made to adhere to the following schedule:

RFP Released:	February 5, 2019
Proposals Due	February 26, 2019 at 12:00 PM
RFP Review	February/March 2019
Committee Review	March 2019
Board Approval	March 2019

FAIRFIELD GLEN RESTORATION
TINLEY PARK, IL

NATURAL AREAS ESTABLISHMENT PROVISIONS

PART 1 GENERAL

1.01 DESCRIPTION AND INTENT OF WORK

A. The Natural Areas Contractor shall perform all work to the complete satisfaction of the Owner and in accordance with all municipal, county, state and other laws, ordinances applicable to such work.

B. The Natural Areas Contractor's personnel shall at all times present a neat and professional appearance and all work shall be done and all complaints handled by the Contractor with due regard to the Owner's public relations.

C. Natural Areas Brush & Tree Clearing priorities are to approach eradication of invasive woody species and thin existing stands of native woody species. The intent is to allow sunlight to penetrate the ground and eliminate threats from invasive species or aggressive native species, while protecting existing trees to remain from damage, prior to hand-off to the Owner.

D. Native Herbaceous Planting priorities are to prepare planting areas for good seed-to-soil contact, install an even coverage of high-quality native seed/plants and protect planting areas from erosion. The intent is to develop a dense stand of native seedlings with minimal weed content.

E. Natural Areas Stewardship's priority is to approach eradication of invasive herbaceous species, establish and encourage the healthy growth of native species, and increase overall site biodiversity. This document describes the standards for Acceptance, Monitoring*, Reporting*, Performance, and Remediation for a successful stewardship program. The intent is to develop a dense stand of desirable native species with minimal weed content and no threat from invasive species or aggressive native species prior to hand-off to the Owner.
**Monitoring and Reporting will be provided by others*

F. Prescribed Fire priorities are to achieve specific ecological and/or aesthetic outcomes through the safe application of fire under a comprehensive prescription. The intent is to clear standing dormant herbaceous biomass and/or leaf litter to allow significant sunlight to penetrate the soil surface and allow easy application of herbicide to emerging plant material without causing damage to structures, property, cultural resources, desirable woody vegetation, desirable deadwood, desirable fire-negative herbaceous species or other desirable features.

1.02 WORK INCLUDED

A. Natural Areas Brush & Tree Clearing shall include all labor, material, equipment, and transport necessary for, and incidental to, site preparation (includes the disposal of brush, vegetation, downed logs, stumps, sod, limited rubbish, surface debris, or other material occurring within the natural area which will interfere with the work, or which is unsuitable to remain), cutting, herbiciding, removing, and disposing of target tree and shrub species. This work shall also include follow-up cutting, herbiciding, removing, and disposing of all target species re-sprouts.

B. Native Herbaceous Planting work shall include all labor, material, equipment, and transport necessary for, and incidental to, site preparation (includes minor grading), identification of invasive/weedy species, eradication of invasive/weedy species, planting, seeding, and erosion control as related to the installation of native plant species.

C. Natural Areas Stewardship work shall include all labor, material, equipment, and transport necessary for, and incidental to, short-term/establishment stewardship of the natural areas including, but not limited to the control of invasive woody and herbaceous flora through

cultural methods, physical removal, biological control, or the application of appropriate herbicides.

D. Prescribed Fire shall include all labor, material, equipment, and transport necessary for, and incidental to, permit acquisition, coordination with local jurisdictions, notifications, site preparation (may include the disposal of brush, vegetation, downed logs, stumps, sod, limited rubbish, surface debris, or other material occurring within the natural area which will interfere with the work), creation of required burn breaks, ignition, containment, smoke monitoring & management, and mop-up activities. Mop-up activities include, but are not limited to, suppression of all smoldering material, ensuring burn crew members are on-call and remain within 2-hours of the burn site for 24 hours after burn completion, etc.

1.03 CONTRACTOR QUALIFICATIONS

A. All work shall be performed by a Natural Areas Contractor with at least seven (7) years of documented experience in selective brush and tree clearing, planting of native species, and natural areas management for the purposes of ecological restoration, and shall be able to demonstrate their knowledge in the field. Natural Areas Contractor shall submit a statement of qualifications with their bid containing the following information:

- Name, address, and telephone number of firm.
- Brief business history of the firm, including year founded.
- List of equipment anticipated to be utilized for this project, specify whether the equipment is owned by the Natural Areas Contractor or not (See Appendix E).
- List of personnel anticipated to be assigned to this project. Specify total number years of experience, number years with submitting firm and which tasks they are expected to perform under this contract (See Appendix E).
- Descriptions and references to five (5) successful natural areas projects similar in scope and size to the Owner's project. At a minimum references shall include the client's name, address, and telephone number.
- A minimum of three (3) of the projects referenced shall meet the following:
  - Have been completed within the past five (5) years
  - Include before and after photos.
  - Be located less than one hundred and fifty (150) miles from the project site(s). These sites will be field inspected for quality of work prior to contractor selection.
  - Be naturalized stormwater basins with a minimum natural area size of three (3) acres, not including open water.
  - The work shall have been performed for a local government municipality.
  - Tasks performed shall include site preparation, native seed/plant installation, management (including herbicide application) and prescription burning.
- References to fifteen (15) successfully completed burns within natural areas similar in scope and size to the Owner's project. At a minimum references shall include the client's name, address and telephone number. If applicable, prescribed fire references can be the same as project references.

B. Only tasks self-performed shall meet the above criteria, subcontracted tasks must be identified within the qualification submittal.

C. Project Manager: The Natural Areas Contractor shall designate an employee to be the Project Manager (PM). This person shall be the sole representative of the Natural Areas Contractor

and shall be the contact person for the Owner/Owner's Representative. The PM must speak fluent English and at a minimum must have a bachelor's degree in natural resources, ecology, biology, or a related field, three (3) years of documented experience with Midwestern ecosystems/habitat types and one (1) year of field experience in ecosystem restoration. PM must also demonstrate the following:

- Experience with public speaking in general and the ability to verbally communicate complicated processes or techniques and technical data or information in a simplified, clear and concise manner
- Experience working with municipal government staff, elected officials and community residents.
- Working knowledge and understanding of basic ecology and restoration principles.
- The skills to competently identify invasive and native species.
- Working knowledge of the latest most effective and selective methods/materials/herbicides for providing quality ecological restoration.
- Understanding of effective timing for successful target species herbicide application methods.
- Hold a current and valid State of Illinois Pesticide Applicator or Operator License
- Successful completion of NWCG s130/s190 wildland fire training.

D. On-Site Crew Foreman (Supervisor): The Natural Areas Contractor shall provide at least one foreman who will be present at all times during execution of the work. The foreman must speak fluent English and shall possess a minimum two (2) year degree or five (5) years of documented experience in natural resources, biology, or a related field. They shall have a minimum of three (3) years of documented field experience in ecological restoration. Foreman must also demonstrate the following:

- Experience working on municipal government projects and an ability to communicate technical information clearly to the Contractor's crew, the Owner/Owner's Representative and community residents.
- Experience working on naturalized stormwater basin projects.
- Working knowledge and understanding of basic ecology and restoration principles.
- The skills to competently identify invasive and native species, including grasses, forbs, shrubs and trees during the dormant and growing seasons.
- Working knowledge of the latest most effective and selective methods/materials/herbicides for providing quality ecological restoration.
- Understanding of effective timing for successful target species herbicide application methods.
- Hold a current and valid State of Illinois Pesticide Applicator License.
- Successful completion of NWCG s130/s190 wildland fire training.
- Successful completion of OSHA 30 hour safety training
- Be current in CPR/First Aid

E. Crew Members: Contractor's field staff shall demonstrate the following:

- Employed full-time directly by the submitting firm. Subcontractors, interns and seasonal employees are not acceptable crew members.
- Working knowledge and understanding of basic ecology and restoration principles.
- Working knowledge of the type and operation of equipment being used.
- The skills to competently identify most common invasive species.
- Hold a current and valid State of Illinois Pesticide Applicator or Operator License.

- Successful completion of OSHA 10 hour safety training
- At least one (1) crew member, other than the Supervisor, shall be current in CPR/First Aid

F. Burn Boss: The burn boss shall have met the requirements of Illinois Law and Regulations (17 Illinois Admin. Code 1565.70) and shall be recognized as a Certified Prescribed Burn Manager in compliance with the Illinois Prescribed Burning Act (525 ILCS 37); the certificate number and date of issue shall be provided on submitted resume. The burn boss must also demonstrate the following:

- Employed full-time directly by the submitting firm. Subcontractors, interns and seasonal employees are not acceptable.
- Working knowledge and understanding of basic ecology and restoration principles.
- A minimum of five (5) years conducting prescribed fire in the Midwest, in the fuel types present, and in projects of similar scope and size.
- Documented experience writing burn plans and shall have led the execution of a minimum fifteen (15) prescribed fires.
- Successful completion of the following National Wildfire Coordinating Group (NWCG) Wildland Fire Training Courses:
  - Intermediate Wildland fire Behavior (s290)
  - Basic Incident Command Systems (i100)
  - Fire Fighter Training (s130)
  - Wildland Fire Behavior (s190)
- Successful completion of OSHA 30 hour safety training
- Be current in CPR/First Aid

G. Burn Crew: All burn crew members must also demonstrate the following:

- Employed full-time directly by the submitting firm. Subcontractors, interns and seasonal employees are not acceptable.
- Working knowledge and understanding of basic ecology and restoration principles.
- A minimum of one (1) year documented experience conducting prescribed fire.
- Documented experience working the line of a minimum three (3) prescribed fires.
- Successful completion of the following National Wildfire Coordinating Group (NWCG) Wildland Fire Training Courses:
  - Fire Fighter Training (s130)
  - Wildland Fire Behavior (s190)
  - or a Prescribed Fire Training Program approved by the IL Prescribed Fire Council
- Successful completion of OSHA 10 hour safety training
- At least one (1) crew member, other than the Burn Boss, shall be current in CPR/First Aid

1.04 COMMUNICATION

A. The Natural Areas Contractor shall make the PM, foreman, and burn boss (or any other staff assigned the project) available for phone calls or meetings as requested by the Owner/Owner's Representative.

B. The Natural Areas Contractor shall respond to questions or fulfill requests by the Owner/Owner's representative within twenty-four (24) hours unless an extension is granted in writing by the Owner/Owner's Representative. Contractors not responding within this timeframe will be considered unresponsive and corrective action may be taken, up to and including enacting the performance bond.

1.05 PERMITS AND FEES

A. Natural Areas Contractor shall obtain any necessary permits for the required work and pay any fees required for permits.

1.06 SAFETY

A. Minimum crew size for any work on this project shall be two (2) crew members. Crew members shall have the ability to communicate with one another at all times (cell phones, two-way radios, etc.) and shall have the ability to communicate with emergency personnel.

B. The Owner/Owner's Representative shall be notified at least twenty-four (24) hours before the start of any work.

C. It shall be the responsibility of the Contractor to adhere to all safety regulations and guidelines of local jurisdictions, all applicable OSHA safety regulations and guidelines, as well as Federal Construction Safety and Health Standards while carrying out activities related to this project.

D. In the event of pesticide spillage, fuel or other chemical spillage, any personal injury or death related to the project, or damage of any kind, the Owner/Owner's Representative shall be notified immediately.

E. Any trails and/or roads within two-hundred (200) feet of the daily work area shall be posted with Caution-Work Area, Tree Work Ahead, or Construction Area signs to warn the public. Signs or pin flags shall be posted along trails, roads or other public access points upon application of herbicides. Signs on public roadways shall conform to all applicable DOT and local jurisdictional signage specifications.

F. Appropriate caution shall be taken when work is performed near trails, utilities, and roads. This shall include the posting of look-out observers if there is the possibility of debris or brush from project activities landing in trail or road areas.

G. Traffic: Conduct construction operations to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without written permission from the Owner/Owner's Representative and other authorities having jurisdiction.

H. The Contractor shall ensure that the following safety equipment is available at the project site at all times for personnel involved in this project:

1. First Aid Kit
2. Portable emergency eye wash station
3. Chemical spill kit

1.07 ACCESS AND STAGING

A. The Owner/Owner's Representative shall designate all access and staging points on the Plan(s) and/or in the field prior to work beginning. Whenever possible, access points shall be off paths and roadways to minimize potential damage to desirable vegetation.

B. Any damage incurred during the project (e.g. pitting, rutting, compaction, erosion, etc.) shall be repaired immediately by the Natural Areas Contractor at no additional cost to the Owner. Areas shall be repaired to a finished state as determined by the Owner/Owner's Representative and may include, but is not limited to, re-grading, re-seeding/re-planting with appropriate species, and appropriate erosion control.

C. When not in use, the Contractor's vehicles, equipment, materials and supplies shall be removed from the Owner's property and/or stored at staging points as identified on the Plan(s) and/or as directed in the field by the Owner/Owner's Representative. Designated staging points shall be located to limit the movement of equipment on site and for safety of the equipment. Prior to work beginning, designated staging points shall be agreed upon in

writing by the Contractor. Any damage or theft of vehicles, equipment, materials and/or supplies during movement and storage shall be the responsibility of the Contractor.

D. All equipment and personnel clothing shall be thoroughly washed prior to entering the work site. Prior to entering the work site equipment, personnel and materials shall be free of mud, dirt, stone, vegetation, seeds or seed parts, roots, and all other debris having the ability of transferring weeds or invasive species to the project site. Contractor's equipment and personnel shall be subject to inspection for the risk of such weed transfer by the Owner/Owner's Representative each day prior to commencing work.

E. Fuels and herbicides shall be handled in OSHA/NIOSH approved containers only. Refueling of equipment performed on site shall be performed over a catch basin on a tarpaulin. Additionally, a chemical absorbent for spilled fuels and other chemicals must be kept at the project site by the Contractor throughout the duration of this project. Any spills shall immediately be reported to the Owner/Owner's Representative.

1.08 SUBMITTALS

A. With Bid:

1. Qualification Data: Submit statement of qualifications for the selected Natural Areas Contractor including name, address, phone number(s), business history, and a list of similar projects completed by selected Contractor with descriptions, references and photos that demonstrate capabilities and experience. Include a resume for the selected Natural Areas Contractor's Project Manager, Foreman, Burn Boss and Project Ecologist.

B. After Award, Prior to Installation of seed/plants:

1. Seed Supply Matrix: No later than sixty (60) days prior to the specified seeding timeframe, submit a completed seed supply matrix (Appendix E) for each seed mix to be installed and copies of the original seed test certificate for each seed lot referenced in the matrix. Upon receiving review comments by the Owner/Owner's Representative the Natural Areas Contractor shall have ten (10) business days to make revisions and re-submit a final Seed Supply Matrix addressing all items that do not meet specification and/or the approval of the Owner/Owner's Representative. Each seed supply matrix must be approved in writing by the Owner/Owner's Representative prior to seed inspection.
    a. Seed testing certificates shall include the species being tested, unique lot number, date of testing, seed origin, % purity, % germination + % dormant (or %TZ test), % weed seed, and name of weeds.
2. Plant Suppliers: Submit copies of the quotations from your native plant suppliers with name, address and phone number(s) that list: species by scientific name, quantities quoted and native origin.
3. Inoculant Suppliers: Submit copies of the quotations from your inoculant suppliers with name, address and phone number(s) that list: species by scientific name, quantities quoted, test date, and test results.
4. Erosion Control Blanket: Submit product information for proposed erosion control blanket applications, including proposed anchoring products & methods as specified herein.
5. Clearing, Installation & Stewardship Schedule: Submit a proposed planting schedule to the Owner/Owner's Representative showing dates for clearing operations, each type of planting and proposed stewardship activities. Include proposed personnel, methods and equipment to be utilized for each task.

6. Irrigation Plan: Submit a proposed watering or irrigation plan that outlines methods for maintaining plant/seed bed moisture as specified herein.
7. Access & Staging Points: Contractor shall agree in writing to designated access and staging points prior to beginning work.

C. Certifications:
1. Herbicide – Submit copies of current certificates for the State of Illinois pesticide applicators and operators working on this project.
2. Prescribed Fire – Submit copies of the burn boss's Prescribed Burn Manager Certification through the State of Illinois and training certifications required for all burn crew members.

1.09 BACKGROUND INFORMATION

A. Review underground utility location maps and plans; Notify J.U.L.I.E.; demonstrate an awareness of utility locations; and certify acceptance of liability for the protection of utilities during course of work. Natural Areas Contractor shall be responsible for repairing any damage to utilities or property at no additional cost to the Owner.

B. Review existing landscape and natural areas present at the project site. Natural Areas Contractor shall be responsible for repairing any damage to existing landscape features and/or existing natural areas that are not slated for removal/alteration as part of this project at no additional cost to the Owner, including but not limited to mitigation fees and/or fines for unauthorized wetland/floodplain impacts.

C. It is the responsibility of the Natural Areas Contractor to locate, identify, and eradicate any species that may endanger the successful establishment and long-term health of the specified native plant communities within the project area/site. See Appendix-A for a list of common Exotic/Invasive Species.

D. Because Natural Areas are dynamic systems that constantly change and adapt to current conditions, the stewardship plan must be flexible. This document shall be considered a starting point, a foundation on which the Natural Areas Contractor must build upon using practical experience and knowledge to achieve the specified intent.

PART 2 PRODUCTS

2.01 GENERAL

A. See Appendix-B for approved Native Seed & Native Plant lists. In the event of any discrepancy between quantities listed in Appendix-B and the Plan Drawing showing the plants, the Plan Drawing shall govern.

B. All materials, products or equipment described and specified herein are subject to inspection and approval by Owner/Owner's Representative.

C. Native trees, shrubs, vines, plugs and seed may be inspected by the Owner/Owner's Representative at source of supply or the Owner/Owner's Representative may require the Natural Areas Contractor to submit color photographs which illustrate the specified plant material at the source of supply.

D. Materials, products and equipment shall be inspected by the Owner/Owner's Representative at time of delivery to the project site. This inspection does not waive the right to reject any material or product after it has been installed.

E. The specified species and quantities in this document may be modified by the Owner/Owner's Representative as a result of site conditions and/or availability.

2.02 TOPSOIL

A. ASTM D 5268, pH range of 6 to 7, minimum 5 percent organic material content, fertile, friable, free of stones ½ inch or larger in any dimension, roots, plants, sod, clods, clay lumps,

pockets of coarse sand, construction debris, paint & concrete products, petroleum products and other extraneous materials harmful to plant growth; free of noxious weeds, invasive plants and their seed; free of nematodes, grubs, or other pests, pest eggs, or other undesirable organisms and disease-causing plant pathogens; friable and with sufficient structure to give good tilth and aerations. Continuous, air-filled pore space content on a volume/volume basis shall be at least 15 percent when moisture is present at field capacity.

B. Whenever possible, topsoil for Natural Area operations shall be re-used from material stockpiled on site. Utilize soil-testing to verify suitability of on-site soil to produce topsoil meeting requirements and amend accordingly. If necessary, supplement and/or replace existing on-site soils with imported topsoil when quantities are insufficient. Imported topsoil shall be obtained from a local site where topsoil occurs at least 4 inches deep and mimics as closely as possible the project site's native soils; do not obtain topsoil form bogs or marshes.

2.03 FERTILIZERS AND SOIL AMENDMENTS

A. The application of fertilizers and/or soil amendments shall be as specified in the Plan(s) or based upon approved soil testing results.

B. Uniform in composition, dry, and free-flowing. Fertilizer which becomes caked or otherwise damaged making it not suitable for use will not be accepted.

C. Inorganic Fertilizers and Soil Amendments – Based on recommendations of the soil analysis, the following amendments may or may not be required. If required, the following shall apply:

1. Aluminum Sulfate: Commercial grade, unadulterated.
2. Gypsum: Agricultural grade, minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 (0.30-mm) sieve.
3. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
4. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
5. Class: T, with a minimum of 99 percent passing through No. 8 (2.36-mm) sieve and a minimum of 75 percent passing through No. 60 (0.25-mm) sieve.
6. Provide lime in form of ground dolomitic limestone.
7. Monoammonium Phosphate (MAP) 11-52-0
8. Perlite: Horticultural perlite, soil amendment grade.
9. Sand: Clean, washed, FA2 (Course Sand) or as specified in the Plan(s) and free of toxic materials.
10. Sulphate of Potash (SOP) 0-0-50
11. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, and with a minimum of 99 percent passing through No. 6 (3.35-mm) sieve and a maximum of 10 percent passing through No. 40 (0.425-mm) sieve.

D. Organic Fertilizers and Soil Amendments – Based on recommendations of the soil analysis, the following amendments may or may not be required. If required, the following shall apply:

1. Compost: Compost shall be well decomposed, stable, weed free organic matter produced at a facility operating in compliance with, and permitted and regulated in the State of Illinois and meeting the requirements of the Illinois EPA standards for "general use compost" (analogous to part 503 regulations for Class A compost). The product will contain no substances toxic to plants and shall be reasonably free (< 1% by dry weight) of manmade foreign matter. The compost or soil amendment will possess no objectionable odors and shall not resemble the raw material from which it was derived. The product shall be certified through the U.S. Composting Council's

(USCC) Seal of Testing Assurance (STA) program. Proof of registration and good standing within the program will be provided by the manufacturer of the product.

2. Composted Leaf Mulch: See "MULCH" section of this specification
3. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed and material harmful to plant growth.
4. Milogranite: Milogranite 6-2-0 Classic (4Fe) Slow-Release Organic Nitrogen fertilizer rich in Iron. Nutrients derived from biosolids.
5. Mycorrhizal Inoculants:
   a. Granular form of endomycorrhizal inoculum that are prepared for direct soil application.
   b. Granular form of ectomycorrhizal inoculum that are prepared for direct soil application.
   c. Rhizobial Inoculants: Solid, peat-based inoculants (granular or powder form) that are prepared for seed or direct soil application. Each legume species requires a specific species and strain of rhizobia inoculum.
6. Peat: Domestic peat composed of not less than 90% of decomposed organic matter by weight on oven-dried basis. Peat shall be delivered in a workable condition, with uniform texture and free from lumps.

E. With adequate documentation of efficacy and appropriateness, alternate fertilizers and/or soil amendments may be utilized only with written approval by the Owner/Owner's Representative.

2.04 SOURCES OF SUPPLY FOR NATIVE SEED & PLANT MATERIAL

A. Native seed and herbaceous plants shall be purchased from sources specializing in native species. When available and economical, seed and herbaceous plant stock shall be obtained from sources within the same EPA Level III Ecoregion as the project site. If the specified species are not available from the same Ecoregion or are not economical to obtain, seed and herbaceous plants shall be obtained from an adjacent Ecoregion, preferably to the south, west, or east, but no further than 350 miles from the project site. Proposed nursery(s) shall be approved by the Owner/Owner's Representative prior to bidding. See Appendix-C for a list of pre-approved nurseries.

1. Sources of supply for native seed and herbaceous plants shall be a company with a minimum of five (5) years documented experience specializing in the lawful harvest, processing and shipping/storage of native species.
   a. Seed supplier's facility shall have the capacity to maintain optimal conditions for seed viability and freshness, including but not limited to the ability to control temperature and humidity in each work area, from receiving through seed cleaning, processing, stock shelves and long-term storage.
   b. Seed not grown by the vendor must be clearly indicated and accompanied by the name and address of the company which grew the seed.

B. Proposed nursery(s) shall be approved by the Owner/Owner's Representative prior to commencing work.

2.05 NATIVE SEED

A. Nomenclature: The names of plants required under this Contract conform to those given in the "Standardized Plant Names", 1942 Edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.

B. Standards:

1. All seeds shall comply with the Federal Seed Act.
2. All seeds shall be of straight species, no horticultural varieties shall be acceptable.
3. Natural Areas Contractor shall provide a fresh clean crop of the specified seed species. All native seed supplied shall be from seed lots tested by a qualified seed testing laboratory, certificates for each lot of each species tested must be supplied to the Owner/Owner's Representative directly from the testing laboratory. Seed test results shall be dated no more than 12 months prior to the anticipated seed installation date.
4. All seeds shall be clean, of the highest quality and shall be processed appropriately for use in mechanized equipment. Native seed testing, packaging, and quality standards for this project shall be incidental to the contract and shall include:
   a. All native seed shall be provided on a pure live seed (PLS) basis. Actual seed amounts used on the project will vary with the actual percent of PLS in the seed lot. Seed supplied to the site shall contain documentation of PLS testing and, if required, adjustment of the seed weights to provide 100% PLS standards. If rounding is required during PLS adjustment calculations, the adjustment shall always be rounded up. PLS adjustment must be based on seed test results dated no more than 12 months prior to the anticipated seed installation date. Minimum PLS percentage for any species shall be 70%.
   b. Seed containing noxious weeds will not be accepted. Seed containing weed seed in excess of 0.5% will not be accepted.
   c. "Bearded" forb species seed (Aster, Solidago, Liatris, etc.) shall be provided as defluffed/debearded seed. Legumes (Dalea, Lespedeza, Desmodium, etc.) shall be provided as de-hulled seed.
   d. All species requiring scarification shall be appropriately processed prior to seed inspection.
   e. When required, seed shall be appropriately stratified prior to installation. If the project has been designed for a Dormant seed installation using a "Stratification Seed Mix" and the Natural Areas Contractor misses the optimal installation timeframe, they shall artificially stratify any seed species identified as requiring stratification prior to installation at no additional cost to the Owner.
   f. All seed shall be shipped in single species containers directly from the supplier and shall be inspected by the Owner/Owner's Representative prior to installation. Inspection requests shall be made in writing to the Owner/Owner's Representative a minimum of ten (10) business days prior to the proposed installation date. Once seed has been inspected and approved in writing by the Owner/Owner's Representative, individually packaged species shall be mixed at the time of planting by the Natural Areas Contractor. At no time shall seed species be mixed by the supplier unless approved in writing by the Owner/Owner's Representative.
   g. All seed shall be furnished in sealed containers. Seed that has become wet (unless as a result of stratification), moldy, or otherwise damaged in transit or storage will not be acceptable.
   h. Seed packaging shall be transparent (i.e. clear, re-sealable plastic bags) so that the seed is clearly visible for easy inspection of quality. In the event that

the quantity of seed ordered will not fit in two (2) large clear re-sealable plastic bags the use of woven polypropylene bags will be permitted, however these bags will be cut open by the Natural Areas Contractor at the time of seed inspection. It will be the Natural Area Contractor's responsibility to re-seal the opened bags or transfer the seed to another re-sealable container (such as a plastic bin with lid) after inspection.

i. Each package containing seed shall be legibly tagged as to supplier name & address, project name, seed mix name, species scientific name, species common name, lot number, specified quantity (adjusted for acreage), and PLS adjusted quantity (adjusted for acreage). Seed stock shall be true to species as specified and information provided on seed packaging shall correspond to the approved Seed Supply Matrix.

j. All Native Seed mixes will be accompanied by a cover crop consisting of Avena sativa (Seed Oats) at a rate of twenty (20) pounds per acre with Spring planting or ReGreen™ (Wheat x Wheatgrass hybrid) cover crop at a rate of twenty (20) pounds per acre for Fall plantings. The cover crop shall be the only non-native species planted! The Owner/Owner's Representative may approve the deletion of the cover crop as a result of site conditions at a cost savings to the Owner.

k. All Native Seed mixes specified above normal water level will be accompanied by a granular form of endomycorrhizal inoculum at a minimum rate of forty (40) pounds per acre and rhizobia inoculum for the appropriate plant species at rates recommended by the native plant nursery. Natural Areas Contractor shall provide proof that the Mycorrhizal inoculum utilized contains a majority of live spores.

2.06 NATIVE HERBACEOUS PLANTS

A. Nomenclature: The names of plants required under this Contract conform to those given in the "Standardized Plant Names", 1942 Edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.

B. Standards:

1. All herbaceous plant materials, methods, etc. are to conform to the Standards of the American Association for Nursery Stock (ANSI Z60.1-2004). In the event there is a discrepancy between these standards and this Document, the most restrictive requirement shall govern.
2. All herbaceous plants shall be of straight species, no horticultural varieties shall be acceptable unless otherwise specified.
3. All herbaceous plants will be provided in single-form factor plug trays that are configured to grow plugs at least 2" in diameter by 4-1/2" deep (minimum 11.9 in^3), unless otherwise noted in this document.
4. Herbaceous plant containers shall be legibly tagged as to name and size of container and shall be true to species as specified in this document.
5. All herbaceous plants shall be alive, healthy, hydrated, and in a vigorous growing condition at the time of delivery.
6. All herbaceous plants will be inoculated with a broad-spectrum mycorrhizal fungi mix. All leguminous species must be inoculated with the proper strain of rhizobia inoculum as well.

7. For ephemeral or other specific types of native species, Bare Root stock may be utilized upon written approval by the Owner/Owner's Representative.
8. For emergent & aquatic native species, Bare Root stock may be utilized upon written approval by the Owner/Owner's Representative.
9. To avoid frost damage and shock, plants utilized prior to May 31st shall be overwintered stock and shall not have been force grown under heated greenhouse conditions.

C. Natural Areas Contractor shall provide written documentation to the Owner/Owner's Representative as to the source of supply, quantities, and species by scientific & common name of the herbaceous plants ordered prior to installation (e.g. supplier's invoice).

2.07 EROSION CONTROL

A. Standard Erosion Control Blanket shall be:

1. Single Net Straw with natural fiber netting, such as:
   a. S-75BN
      North American Green
      Evansville, IN 47725
      PH: 800-772-2040
      www.nagreen.com
      -or approved substitution
2. Double Net Straw with natural fiber netting, such as:
   a. S-150BN
      North American Green
      Evansville, IN 47725
      PH: 800-772-2040
      www.nagreen.com
      -or approved substitution
3. Double Net Straw/Coconut with natural fiber netting, such as:
   a. SC-150BN
      North American Green
      Evansville, IN 47725
      PH: 800-772-2040
      www.nagreen.com
      -or approved substitution

B. Heavier blanket may be required as part of the SWPPP, see SWPPP and engineering plans for additional blanket requirements.

2.08 HERBICIDE

A. General requirements:
B. All herbicide product labels must be strictly followed and shall supersede any of the information contained in this document.
C. All herbicide use shall be in strict compliance with manufacturers label specifications, application rates, procedures, warning labels, and all applicable codes, standards, and best management practices.
D. The Natural Areas Contractor shall have on site at all times the appropriate Materials Safety Data Sheets (MSDS) and labels for all substances utilized in the fulfillment of this project.
E. Herbicide(s) shall contain 0.25% v/v surfactant. If selected herbicide does not contain surfactant, the Natural Areas Contractor shall add appropriate surfactant(s) at the specified rate of the manufacturer and in accordance with all applicable regulations.

F. Herbicide(s) shall be mixed with water, oils, fuels, anti-foaming agents, and/or tackifiers in order to achieve the appropriate potency and/or to increase water resistance and persistence at the specified rate of the manufacturer and in accordance with all applicable regulations.

G. All herbicide(s) shall contain colored dye, such as "The Turfmark", "Signal", or "Spimax" mixed at a ratio of one-ounce to one-gallon applied to herbaceous plant material or "Bas-oil" mixed at a ratio of four-ounces to five-gallons applied to woody plant material, to aid in identification of areas or objects that have received herbicide treatment.

1. Dyes shall be eliminated from herbicides used directly adjacent to walkways or other high-visibility or sensitive structures that could potentially become stained by the dye.

H. Natural Areas Contractor shall conduct herbicide applications so that over-application/overspray and volatization is minimized or eliminated. Herbicide shall be applied to treat only those species targeted. Damage caused by mistreatment or over-application/overspray shall be quantified and calculated by the Owner/Owner's Representative and repaired by the Natural Areas Contractor at no cost to the Owner or adjacent Land Owners.

I. No herbicide(s) shall be mixed or loaded on the project site unless approved in writing by the Owner/Owner's Representative.

J. A supply of chemical absorbent shall be maintained at the project site. Any chemical spills shall be cleaned up and reported to the Owner/Owner's Representative immediately.

K. Herbicide(s) shall not be applied within two (2) hours of anticipated precipitation or if heavy rains have resulted in an extremely wet soil or stump surface. Applications shall be postponed until the next expected dry two (2) hour period.

L. Natural Areas Contractor shall not apply herbicide during periods of excessive wind.

M. Only personnel who are a State of Illinois certified pesticide applicator or certified pesticide operator working under a certified pesticide applicator and is trained in plant identification shall perform the application of herbicides. All certifications must be current. The Contractor shall submit a copy of herbicide licenses for all applicators and operators to the Owner/Owner's Representative prior to beginning work on the project.

N. Approved non-selective herbicides (Active Ingredient):

1. Razor Pro or Equivalent (Glyphosate 41.0%)
2. Aquaneat or Equivalent (Glyphosate 53.8%, Aquatic Labeled)

O. Approved selective herbicides (Active Ingredient):

1. Weeder 64 or Equivalent (2, 4-DAmine 46.8%)
2. Agri Star or Equivalent (Clethodim 26.4%)
3. Tahoe 3A or Equivalent (Triclopyr Amine 44.4%)
4. Tahoe 4E or Equivalent (Triclopyr Ester 61.6%)

P. With adequate documentation of efficacy and appropriateness, alternate herbicides may be utilized only with written approval by the Owner/Owner's Representative. Under no circumstances are persistent herbicides such as Atrazine to be used.

2.09 WATER

A. Water shall be free of substances harmful to the growth of vegetation.

PART 3 BRUSH AND TREE CLEARING

3.01 PREPARATION

A. Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain in place against unnecessary cutting, breaking, skinning of roots, skinning

or bruising of bark, smothering of trees by stockpiling construction materials within drip lines, excess foot or vehicular traffic, or parking of vehicles under tree drip lines. Provide temporary guards to protect trees and vegetation to be left standing, as indicated on the Plans.

B. Locate, identify and protect utilities, survey benchmarks and control points, and existing structures from damage or displacement. Utilities to be abandoned or removed shall be disconnected and plugged or capped in accordance with the requirements of the utility company, involved agency, or the Owner/Owner's Representative. The Natural Areas Contractor shall immediately repair damage to utilities, survey benchmarks, control points, and existing structures at no cost to the Owner.

3.02 TREE PROTECTION

A. Existing trees to remain (particularly "specimen" trees) within the construction area(s) shall be prepared for the stresses of clearing/construction operations by the Natural Areas Contractor prior to commencement of construction operations to ensure survival. Treatments/Methods of preparation are subject to approval by the Owner/Owner's Representative (e.g. deep root fertilization, trimming, or pruning).

B. Prior to work beginning, erect and maintain temporary fencing around tree protection zones as determined by the Natural Areas Contractor. Remove fence when construction is complete.

1. Do not store construction materials, debris, or excavated material within fenced area.
2. Do not permit vehicles, equipment, or foot traffic within fenced area.
3. Maintain fenced area free of weeds and trash.
4. Do not excavate within tree protection zones, unless otherwise indicated and/or approved in writing by the Owner/Owner's Representative.
5. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

C. Repair, replace, or monetarily compensate for trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by the Owner/Owner's Representative.

1. If repairs are needed, the Owner/Owner's Representative shall employ an independent ISA Certified Arborist, licensed in the jurisdiction where the Project is located, to submit details of proposed repairs to the Contractor, and to repair damage to existing trees and shrubs at the Contractor's cost.

3.03 EXECUTION

A. The Contractor shall exercise due care in their construction operations to prevent marring or scarring of species that are to remain and their associated root systems.

B. If the Contractor finds any targeted specimen to be questionable as to whether it should remain or be removed, they shall contact the Owner/Owner's Representative immediately. The Owner/Owner's Representative shall visit the site and make the appropriate recommendation to the Contractor in writing.

C. If the Contractor removes non-target species and/or target species that were marked to remain, the Owner/Owner's Representative shall hire a qualified individual or agency, at the Contractor's cost, to evaluate the monetary value of the downed species using standard practices of the trade. At the Owner's discretion, the Contractor shall compensate the Owner

according to the evaluator's findings or shall replace the removed species at a ratio of two (2) inches DBH for each one (1) inch of DBH cut. All replacement plantings shall be of species as specified by the Owner/Owner's Representative and shall be guaranteed by the Contractor for one (1) year from the date of replacement.

D. Methods of tree and brush removal shall be approved in writing by the Owner/Owner's Representative prior to work beginning. Standard tree and brush removal methodologies are defined as follows:

1. Mechanical Removal: Any cutting/removal of brush that includes any rubber-tired or track vehicle, tractor or similar implement mounted with mowing/cutting equipment. Examples of mechanical removal equipment include deck mowers, seppi, bush hog, forestry mowers or other similar equipment. Without exception, any mechanical removal of brush shall occur only under conditions of frozen soils so that absolutely no rutting/pitting or other damage to the existing soils occurs. Without exception, mechanical removal of brush shall not occur in wetlands under any circumstances.
2. Hand Cutting: Any cutting of material that includes access to the clearing area on foot only. Chain saws, brush clearing saws, handsaws and loppers may be used. Upon written approval by the Owner/Owner's Representative, small walk behind mower-type brush cutters may be utilized provided that their use does not result in rutting or pitting of the soil while in operation.
3. Basal Bark: Involves herbicide application directly to the trunk of the target species that are one inch or less at the base. Herbicides shall be applied with a backpack or handheld sprayer using low presser and an adjustable solid cone, flat fan nozzle, or wick/sponge-type applicator. Apply herbicide directly to the tree trunk, around the entire circumference, at 6" above the soil until thoroughly wet near the ground plane, but not to the point of runoff. Basal bark application to excessively small stems (under 1 cm diameter at the base) shall be treated with a wick or sponge-type applicator. Apply during dormancy, except when snow or water prevents spraying to the ground plane.
4. Frill: Approximately twelve (12) inches above the ground surface, cut the outer bark, approximately ½" into trunk penetrating the cambium layer, and fill cut with an appropriate herbicide solution so that the plant absorbs the active ingredient.
5. Girdle: Approximately six (6) inches above the ground surface, cut the outer bark thru the cambium slightly into the trunk, making a circle all the way around the trunk. Make a second cut six (6) inches up the trunk and completely remove the bark between the two cuts.

E. Use only hand cutting methods for grubbing inside drip lines of non-targeted species and/or targeted species indicated to remain.

3.04 SCOPE OF TARGET SPECIES REMOVAL

A. The Natural Areas Contractor shall be responsible for positively identifying all woody species before they are removed.

B. Target species to remain are shown on plans and/or have been field marked at the base of trunk in green spray paint and/or tagged with green ribbon.

C. Target species that are six (6) inches DBH (Diameter at Breast Height) or larger and require complete removal shall be shown on the Plan(s) and have been field marked at breast height in red spray paint and/or tagged with red ribbon. The remaining unmarked target species six (6) inches DBH or larger shall be girdled or frilled:

1. Frilling and Girdling is not permitted within seventy-five (75) feet of any fence, utility, utility line, road, trail, railroad line, parking lot, or other physical structure. In these instances, target species must be cut at the base and disposed of in accordance with this document.

D. Target species that are less than six (6) inches DBH shall be cut at a height of no more than two (2) inches above the soil surface. Stems that are in submerged or seasonally flooded areas shall be cut at a height of four (4) inches above the water or ice surface. All stems shall be cut horizontally flat.

E. All cut target species shall be treated with an herbicide mixture. After cutting down the target species apply herbicide, such as Garlon 4E in a 20-30% (or as stated on the product label) solution in basal oil, to the stump. Lonicera spp. shall be treated with RoundUp in a 50% solution, to the stump. Treat the cut area around the edge with herbicide so the cambium layer will take up the active ingredient. Herbicide shall be applied immediately after cutting.

F. All herbicide applications shall be accomplished by utilizing wick or sponge-type applicators only. No herbicide applications shall be made with broadcast spray equipment unless approved in writing by the Owner/Owner's Representative.

G. The Natural Areas Contractor shall demonstrate selective removal practices where target species are effectively eliminated and non-target species are left unharmed at all times. This includes areas where target and non-target species are intermingled.

H. Removal goals for target species are as follows:

1. Non-Native Species:

a.	All Non-Native Species	100% Stem Reduction

2. Native Species:

a.	Boxelder (Acer negundo)	100% Stem Reduction
b.	Sugar Maple (Acer saccharum)	50% Stem Reduction
c.	Common Hackberry (Celtis occidentalis)	50% Stem Reduction
d.	Grey Dogwood (Cornus racemosa)	75% Stem Reduction
e.	Ash species (Fraxinus spp.)	100% Stem Reduction
f.	Eastern Cottonwood (Populus deltoides)	25% Stem Reduction
g.	Black Cherry (Prunus serotina)	75% Stem Reduction
h.	Sandbar Willow (Salix interior)	100% Stem Reduction
i.	Black Willow (Salix nigra)	50% Stem Reduction
j.	Elm Species (Ulmus spp.)	50% Stem Reduction
k.	Other	As Determined On Site

3. Target species stem reduction percentages shall be accomplished and assessed across the entire site. It is not allowable for the Natural Areas Contractor to remove 100% of a target species across 50% of the site in order to achieve a 50% Stem Reduction goal.

3.05 TREATMENT OF TARGET SPECIES RE-SPROUTS

A. The Natural Areas Contractor shall conduct follow-up herbicide treatments to all re-sprouts, re-growth, or other remaining live plants of the target species and/or all non-native woody species during the growing season immediately following clearing operations.

B. Follow-up herbicide treatments during the growing season may be applied with foliar application using an appropriate herbicide, such as Garlon 3A. Damage to surrounding vegetation due to re-sprout treatments shall be repaired by the Natural Areas Contractor at no additional cost to the Owner.

C. Follow-up herbicide treatments during the dormant season may be applied with cut-stem and/or basal bark application using an appropriate herbicide, such as Garlon 4E. Damage to surrounding vegetation due to re-sprout treatments shall be repaired by the Natural Areas Contractor at no additional cost to the Owner.

D. The Natural Areas Contractor shall initiate follow-up herbicide treatments when re-sprouts have reached a height of three to six (3-6) inches (approximately May 1st). The Contractor shall continue follow-up herbicide treatments until performance criteria have been achieved.

3.06 DISPOSAL

A. All cuttings longer than two (2) feet in length and/or larger than one (1) inch in diameter shall be removed from the project site. Smaller cuttings and cutting debris that has been shredded or chipped by the use of hand-held mechanical equipment may be left on site to decompose or be consumed by prescribed fire (if applicable). Cuttings and cutting debris shall not be allowed to accumulate to a depth that will smother existing desirable native species, prevent existing desirable native species from emerging or prevent good seed-to-soil contact in newly seeded areas (approximately one-half inch maximum depth).

B. The collection and stockpiling of cuttings, logs, stumps, root material, sod, rubbish, surface debris, or other materials shall not result in pitting, rutting or any other soil disturbances. Mechanized collection, transport, and stockpiling shall be permitted only under these conditions.

C. Stockpiling areas shall be as shown on plans or shall be chosen by the Contractor using the following criteria:
   1. Damage to high quality natural or cultural features shall not be allowed
   2. Ease of access
   3. Aesthetics (placement of piles shall not disrupt views from trails and roads)

D. Stockpiling shall not be allowed in wetland areas

E. Whenever possible, stockpiling shall occur in degraded areas

F. Written approval of proposed stockpiling areas by the Owner/Owner's Representative

G. Dispose of non-desirable cuttings, logs, stumps, root material, sod, rubbish, surface debris, or other material off of Owner's property in accordance with local jurisdiction. Contractor shall provide documentation to the Owner/Owner's Representative of disposal methods upon request.

H. Disposal of cuttings and other materials shall be completed simultaneously with the initial selective target species removal and herbicide treatment(s).

I. Alternate methods of disposal or use, such as cut & drop, cut & chip, burn piling, habitat enhancement, etc, may be utilized as specified in the Plan(s) or upon written approval from the Owner/Owner's Representative.

PART 4 NATIVE HERBACEOUS PLANTING

4.01 INSTALLATION TIMEFRAME

A. NON-STRATIFICATION SEED MIXES:
   1. Non-Stratification seed mixes are those consisting of 60% or more species by seed count that do not require cold moist stratification periods of 30 days or more.
   2. Optimal Installation Timeframe
      a. Spring: March 1st – June 15th
      b. Dormant: September 15th – October 31st
   3. Alternative Installation Timeframe

4. November 1st – February 28th: Cover crops will not germinate during this seeding time and may be eliminated upon written authorization by the Owner/Owner's Representative at a cost saving to the Owner.
5. June 15th – September 15th: Installation of native seed shall be suspended unless irrigation can be provided or unseasonably cool and wet conditions persist. Any annual forbs specified in the seed mixes may germinate during this time, however they may not have sufficient time to flower and set seed before fall senescence, essentially removing them from the plant community. If this seeding time is chosen, annual forbs shall be removed from the seed matrix and planted at a subsequent, more appropriate time as determined by the Owner/Owner's Representative.

B. STRATIFICATION SEED MIXES:
1. Stratification seed mixes are those consisting of 60% or more species by seed count that require cold moist stratification periods of 30 days or more.
2. Optimal Installation Timeframe
   a. Dormant: November 1st – December 31st
3. Alternative Installation Timeframe
   a. March 1st – June 30th: Installation of native seed shall be suspended unless the Natural Areas Contractor can provide artificially stratified seed and consistent irrigation for 6-8 weeks as described herein.
   b. Owner/Owner's Representative must be notified when the seed has entered refrigeration for artificial stratification and reserves the right to inspect said seed at any time throughout the stratification period.

C. GRASS MONOCULTURE SEED MIXES:
1. Grass Monoculture seed mixes are typically comprised of warm season grass species requiring 60-70° soil temperatures to germinate.
2. Optimal Installation Timeframe
   a. June 1st – July 15th: Seeding during this period is required for germination and appropriate establishment, consistent irrigation shall be provided as described herein.
3. Alternative Installation Timeframe
   a. NO ALTERNATE SEEDING TIMES WILL BE ACCEPTABLE FOR NATIVE GRASS MONOCULTURES (Buffalo Grass Lawn, Transitional Buffer Seed Mix, Seed/Plug Hybrid Seed Mix, etc.). If seeding cannot be completed during the optimal seeding times, seeding areas shall be temporarily seeded until the next optimal seeding time at which time the Natural Areas Contractor shall prepare and seed the Native Grass

D. HERBACEOUS PLANTS
1. Optimal Installation Timeframe
   a. April 1st – May 31st (Overwintered stock only, see PRODUCTS)
2. Alternative Installation Timeframe
   a. June 1st –September 30th: Planting of herbaceous plants during this period can only be conducted if consistent irrigation is provided.
   b. October 1st – March 31st: Planting of herbaceous plants during this period can only be conducted if the shrink-swell potential of the soil is low.

E. Alternate seeding and herbaceous plant installation times must be approved in writing at the discretion of the Owner/Owner's Representative prior to planting.

F. The approval of an alternate seeding and/or herbaceous plant installation time shall not relieve the Natural Areas Contractor from their performance obligations as outlined in the performance section of this document. All performance criteria shall be enforced.

4.02 DELIVERY, HANDLING, AND TEMPORARY STORAGE

A. Seed containers are to be stored off the ground and indoors.

B. Seed packaging is to be protected from moisture and extreme heat. Seed shall be stored in a temperature controlled environment.

C. On-site storage of seed and/or live plants shall be at the Natural Areas Contractor's own risk. Any damage incurred to plant or seed stock while stored on-site shall not relieve the Natural Areas Contractor from his/her responsibility for furnishing and installing all plant materials in strict accordance with this document.

D. Live plants shall be protected from grazing animals (e.g. geese).

E. Live plants may require regular watering and supplemental nutrition while in temporary storage. Consult the native plant nursery for recommendations. Natural Areas Contractor is to ensure that live plants are in a healthy, vigorous state upon installation.

F. Protect live plants from frost.

4.03 LAYOUT

A. All seeding and planting zones/locations shall be laid out and marked on the project site according to the plan by the Natural Areas Contractor. No seeds or plants shall be installed until the seeding and planting zones/locations has been approved in writing by the Owner/Owner's Representative.

B. Wherever site conditions require it, the Owner/Owner's Representative reserves the right to adjust the limits of seeding/planting areas without adjusting total seed quantities at no additional cost to the Owner.

4.04 GRADED SITE PREPARATION

A. The Natural Areas Contractor shall coordinate with the Grading Contractor to ensure proper handling within planting areas. A preconstruction meeting and at least one (1) meeting during construction shall be held in order to coordinate equipment movement within planting areas to avoid/reduce soil compaction and to review underground utility location maps and plans. This meeting shall be coordinated by the Construction Project Manager. The following tasks may be performed by the Grading Contractor with proper coordination; however it is the responsibility of the Natural Areas Contractor to ensure that the native planting areas are prepared according to this document.

B. After the completion of subgrade preparation the Natural Areas Contractor shall rip or disc soil to a depth of four (4) inches within areas designated for native seed mixes. When conditions are such that, by reason of drought, frost, excessive moisture, or other factors satisfactory results are not likely to be obtained, the work will be suspended and shall resume only when conditions are appropriate. Undulation or irregularities in the surface that would interfere with the Natural Areas Contractor's operations or maintenance shall be leveled before the next operation.

C. Spread topsoil to a minimum depth of 6" meeting thickness, grades and elevations shown on engineering plans after light rolling and natural settlement. When conditions are such that, by reason of drought, frost, excessive moisture, or other factors satisfactory results are not likely to be obtained, the work will be suspended and shall resume only when conditions are appropriate. Add specified soil amendments and mix thoroughly into upper four (4) inches of topsoil. Delay mixing fertilizer with topsoil if planting will not proceed within 72 hours of spreading. If required, mix lime with dry soil before mixing fertilizer.

D. Spread approximately ½ the thickness of topsoil over loosened subgrade. Work into top of loosened subgrade to create a transition layer. Spread remainder of planning soil.

E. Prior to beginning seeding/planting operations the Natural Areas Contractor shall:

1. Confirm topsoil placement by the Grading Contractor within all planting zones.
2. Request copies of soil test results for review. If soil test results are not available, Natural Areas Contractor shall conduct soil testing as per the products section of this document. If soils do not meet specification it shall be amended or replaced by the Natural Areas Contractor prior to beginning seeding/planting operations.
3. Confirm that the Grading Contractor has removed all foreign matter and/or soil clods larger than two (2) inches in any dimension within the areas to be seeded. Natural Areas Contractor shall be responsible for removing all foreign matter prior to beginning seeding/planting operations.
4. Check compaction of topsoil (0-6" depth) and normal subsoil depth (6-12" depth) utilizing a penetrometer with ¾" tip:
   a. Topsoil shall be loose, friable and measure less than 200 psi.
   b. Subsoils shall be firm and measure less than 300 psi.
   c. Natural Areas Contractor shall test for compaction in random locations throughout the planting area, at a minimum the number of testing locations shall be 0.1% of the planting area unless otherwise agreed to by the Owner/Owner's Representative (i.e. 5,000 square feet of planting areas would require a minimum of 5 testing locations).
   d. Record compaction test locations utilizing a GPS unit and document the results of each test location. Submit compaction test data and compaction remediation plan to Owner/Owner's Representative for approval prior to planting.

F. Natural Areas Contractor shall utilize equipment having low unit pressure ground contact within planting areas. They shall take precautions to ensure that equipment and vehicles do not damage the grading, utilities, structures, or existing trees and shrubs during planting operations. Any damage shall be repaired by the Natural Areas Contractor at no additional cost to the Owner.

G. Non-native perennial species may require control with a low toxicity (2% mixture), non-persistent glyphosate based herbicide. Apply herbicides as needed after grading operations.

H. Allow 10-14 days after spraying herbicides prior to cultivating for seed bed preparation. Check for weed growth. Reapply herbicide when the weeds are 2-3 inches tall. Wait 10 days and rake smooth, do not compact.

4.05 VEGETATED/NON-GRADED SITE PREPARATION

A. Planting areas that contain solid stands of existing non-native/weedy herbaceous vegetation and are not to be disturbed by grading operations, or have been graded and now have established non-native/weedy herbaceous vegetation, shall be treated with applications of a Glyphosate herbicide resulting in a complete kill of all existing vegetation. Broadcast or "Boom" spraying of herbicide is acceptable under these conditions; precautions shall be taken to eliminate damage from overspray.

B. Planting areas that contain existing desirable native herbaceous vegetation and are not to be disturbed by grading operations shall be treated with applications of an appropriate selective herbicide, resulting in a 99% kill (brown-out) of non-native/weedy herbaceous vegetation and the survival of existing desirable native herbaceous vegetation. Limited spot applications

of herbicide shall be utilized if conservative native plant species within the planting are to be preserved.

C. Planting areas that are heavily vegetated with persistent species such as Quackgrass (Elymus repens), Fescues (Festuca spp.), Reed Canary Grass (Phalaris arundinacea) or Canada Thistle (Cirsium arvense) often require two or more herbicide applications at 2-3 week intervals to kill resprouts and seedlings from the existing seed bank.

D. Herbicide applications in or adjacent to shorelines or open water shall utilize an herbicide approved for aquatic use.

E. Mowing, Raking and/or Prescribed Fire may be required to eliminate standing biomass prior to seeding, including leaf litter in Savanna or Woodland project areas. Conduct mowing, raking and/or Prescribed Fire as shown on the Plan(s) or as deemed necessary to achieve good seed-to-soil contact and to meet the performance criteria.

F. Native Areas Contractor shall scarify the soil in order to prepare the site for good seed-to-soil contact. Scarification shall result in disruption of a minimum seventy five percent (75%) of the soil surface no greater than one-half inch (½") deep. Scarification methods must be approved in writing by the Owner/Owner's Representative prior to implementation.

G. Native Areas Contractor shall not disc or roto-till the soils within vegetated planting areas prior to planting, unless the area(s) have been heavily trafficked/compacted or as otherwise directed by the Owner/Owner's Representative. Whenever vegetated planting areas are disturbed, they shall be prepared for planting as per the "GRADED SITE PREPARATION" section of this specification.

H. Natural Areas Contractor shall utilize equipment having low unit pressure ground contact within planting areas. They shall take precautions to ensure that equipment and vehicles do not damage the grading, utilities, structures, or existing trees and shrubs during planting operations. Any damage shall be repaired by the Natural Areas Contractor at no additional cost to the Owner.

4.06 INSTALLATION

A. Following seedbed preparation, an application of soil amendments shall be completed within the following areas at the following application rates:

ALL SEEDING AREAS		
Product Description	Application Rate	Application Times
Gypsum	50#/1,000 s.f.	Prior to Seed Installation
Hi-Cal Lime	30#/1,000 s.f.	Prior to Seed Installation
SOP (0-0-50)	5#/1,000 s.f.	Prior to seed installation
MAP (11-52-0)	4#/1,000 s.f.	Prior to seed installation
Milorganite	15#/1,000 s.f.	Prior to seed installation

B. Seed shall be drop-seeded by a rangeland type dropseeder designed to plant native grass and forb seed (such as the Trillion or Belco seeder). Unless otherwise approved in writing by the Owner/Owner's Representative, seed shall be installed in two (2) separate runs where each application of seed shall overlap the previous application by one half (1/2) the weight to insure double coverage of seeded areas (example: seed in a north to south direction @ ten pounds per acre, then overlap by seeding in an east to west direction @ ten pounds per acre, resulting in a total coverage of twenty pounds per acre [twenty pounds per acre is an example only, see Appendix-B for actual project seeding rates].) Each planting run shall overlap by a minimum of six (6) inches. Some seed species require exposure to sunlight for

germination, these species shall be planted separately, after dropseeding, utilizing the broadcasting method.

C. If site conditions prohibit the use of mechanized seeding equipment, broadcasting of seed is acceptable on exposed soil only. If seed is broadcast, it shall be mixed with an equal amount of inert filter (such as sand, vermiculite, rice hulls, etc.) to enable an even distribution of seed. A mechanical broadcast seeder may also be utilized, such as Cyclone or Truax Seed Slinger. Seed shall be broadcast in three (3) separate applications:
   1. Broadcast half (1/2) of the specified native grass seed first. Drag the seeding area utilizing a rake or similar equipment, work native grass seed into the soil achieving a final planting depth between 0.25" (1/4") – 0.5" (1/2").
   2. Broadcast remaining native grass seed, cover crop and one-third (1/3) of the remaining seed mixture (sedges/rushes/forbs), reserving 100% of any species indicated as "surface sown" in Appendix-B. Lightly drag the seeding area utilizing a rake or similar equipment, working the native seed into the soil achieving a final planting depth between 0.0625" (1/16") – 0.25" (1/4").
   3. Broadcast remaining seed directly atop prepared seedbed. Do not drag or rake.
   4. Where site conditions allow it, roll broadcast seeded areas immediately after installation to ensure good seed-to-soil contact.

D. Do not sow seed in areas where standing water is present, during adverse weather or when wind speeds exceed ten (10) miles per hour unless approved in writing by Owner/Owner's Representative.

E. Hydroseeding of Native Seed is not acceptable. Hydromulch may be utilized as an erosion control method upon written approval by the Owner/Owner's Representative.

F. The Natural Areas Contractor shall rake, roll or drag broadcast seeded areas perpendicular to the slope within 24 hours after seeding, or as soon as site conditions permit. The use of compaction wheels on the seed drill or cultipacker on the dropseeder is acceptable.

G. Erosion control measures shall be implemented immediately upon seeding completion. The Owner/Owner's Representative may reduce erosion control requirements based on site conditions and/or planting.
   1. All seeded areas on newly graded sites shall include the installation of a temporary erosion control blanket, unless otherwise stated on the Plan(s). Install erosion control blanket as per the manufacturer's recommendation or as shown on Plan(s), at a minimum the Natural Areas Contractor shall:
      a. Apply blanket materials without stretching, allowing the blanket to lie smoothly but loosely on the soil surface.
      b. Minimize walking directly on the seed or topsoil bed either before or after the blanket is applied.
      c. Bury all upslope blanket ends a minimum of four (4) inches deep, staple at twelve (12) inch intervals and firmly tamp trench backfill after closing.
      d. Restore all disturbed edges immediately following blanket installation utilizing the same seed mixes installed with the blanket, ensure seed becomes incorporated.
   2. All shorelines from a minimum of three (3) feet above normal water level (NWL) to a minimum of one (1) foot below NWL shall at a minimum include the installation of S-150 temporary erosion control blanket, heavier blankets may be required depending upon the application.

3. All planting areas in direct contact with concentrated water flow (drainage ways, swale bottoms, streams, etc.) shall at a minimum include the installation of SC-150 temporary erosion control blanket, heavier blankets may be required depending upon the application.
4. In addition to the installation of SC-150 temporary erosion control blanket, shorelines adjacent to consistently flowing water (streams, creeks, etc.) shall also be protected with coconut fiber erosion control logs as specified on Plan(s).
5. Alternate blanket types may be required as part of the SWPPP, see SWPPP and engineering plans for additional blanket requirements. For any conflicts between this document and an existing SWPPP, the more restrictive document shall prevail.

H. Herbaceous plant and bare root planting densities will vary according to project budget and project goals.

I. Shorelines shall include planting within the "safety shelf" a minimum of three (3) live native plugs per linear foot of shoreline and shall be distributed from Normal Water Level (NWL) to two feet (2') out from NWL.

J. Herbaceous plants and bare root plants shall be installed in full or half flats, creating drifts or groupings of the same species rather than planting all species intermixed randomly across the site. Plant spacing within each grouping shall be eighteen inches (18").

K. Herbaceous plants and bare root plants shall be installed in holes drilled with an auger with the same diameter and depth as the herbaceous plant's or bare root/tuber root massing (within +.75"/-.25"). In wetland & shoreline plantings where soil is soft and moist enough, a dibble bar or trowel may be used to create planting holes. Avoid severely damaging erosion control mat during plug planting operations.

L. Insert herbaceous plants or bare root plants into hole so that the final position of the root crown following planting, soil settlement, and initial watering is slightly below the soil surface (1/8 – 1/4 inch). All crowns shall be covered with soil.

M. Ensure that herbaceous plants and bare root plants are not loose after planting.

N. Each herbaceous plant or bare root plant shall be flooded with approximately 200 ml of water after insertion into the ground, watering shall result in a saturated soil condition.

O. Herbivory protection fencing shall be erected around all herbaceous plants that have been installed in areas where there is a potential for depredation. Install native herbaceous plants and herbivory protection fencing in 100' – 200' lengths, leaving 4-6' wide openings between ends to allow access to the water for people and wildlife during the establishment period.

1. Install steel T-posts @ twelve (12) feet on-center (maximum). Drive posts into the ground so that the exclosure will extend at least two (2) feet in height above the tops of installed herbaceous plants.
2. Attach black UV stabilized poultry netting securely to the steel T-posts with plastic zip-ties.
3. Attach nylon rope to the top of steel T-posts in a zigzag pattern to prevent aerial landings by waterfowl.
4. Natural Areas Contractor shall disassemble and remove all waterfowl exclosures from the project site after two (2) complete growing seasons. The Owner/Owner's Representative may request removal of the exclosure prior to the two (2) year term ending.
5. Natural Areas Contractor shall maintain the exclosure in a functional and aesthetic condition. The Natural Areas Contractor shall make all required, reasonable repairs and/or replacements in a timely manner.

P. **ALTERNATE** - Waterfowl exclosures shall be erected around all herbaceous plant "pods". Install herbaceous plants and goose exclosure fencing in 10' x 10' pods, installed 30' on center.

1. Install steel T-posts @ ten (10) feet on-center (maximum). Drive posts into the ground so that the exclosure will extend at least two (2) feet in height above the tops of installed herbaceous plants.
2. Attach black UV stabilized poultry netting securely to the steel T-posts with plastic zip-ties.
3. Attach nylon rope to the top of steel T-posts in a zigzag pattern to prevent aerial landings by waterfowl.
4. Natural Areas Contractor shall disassemble and remove all waterfowl exclosures from the project site after two (2) complete growing seasons. The Owner/Owner's Representative may request removal of the exclosure prior to the two (2) year term ending.
5. Natural Areas Contractor shall maintain the exclosure in a functional and aesthetic condition. The Natural Areas Contractor shall make all required, reasonable repairs and/or replacements in a timely manner.

Q. The Natural Areas Contractor shall be responsible for protecting shoreline & wetland plantings from predation and foot traffic. All reasonable efforts to prevent damage shall be made by the Natural Areas Contractor as incidental to natural areas management. This may include, but is not limited to the erection of temporary signage and barriers to limit foot traffic, professional trapping of nuisance wildlife, deploying wildlife deterrents, etc. Predation of plant material shall not relieve the Natural Areas Contractor from meeting the performance criteria, unless approved in writing by the Owner/Owner's Representative.

4.07 WATERING

A. Natural Areas Contractor shall supply the Owner/Owner's Representative with a unit price to supply and apply water to all seeded and planted areas. Natural Areas Contractor shall also supply an estimate of coverage per unit to meet these specifications (i.e. 1 acre/hour).

B. All seed types shall need ample moisture continuously to germinate and to develop into healthy seedlings. Normal rainfall shall be adequate moisture for germination and growth, however if drought conditions exist (typically less than .25" of water after two (2) weeks, or as indicated by the Drought Mitigation Center [drought.unl.edu/dm]) the Natural Areas Contractor may be directed by the Owner/Owner's Representative to maintain consistent moisture during periods of drought at the hourly rates supplied, gradually reducing waterings, depending on the climate and rainfall. Watering operations shall be conducted overnight or in the morning hours ending no later than 10:00 a.m., and each area of shall receive water until there is a saturated soil condition. If planting operations are conducted in the fall, watering applications may need to be extended or delayed until spring. The Owner/Owner's Representative may opt to conduct watering at a cost savings to the Owner.

C. Herbaceous plants shall need ample moisture continuously to develop into vigorous mature plants. The Natural Areas Contractor shall be responsible for maintaining consistent moisture for a minimum of 8 weeks after planting and then gradually reduce watering, depending on the climate and rainfall. Watering operations shall be conducted overnight or in the morning hours ending no later than 10:00 a.m., and each area shall receive water until there is a saturated soil condition. If planting operations are conducted in the fall, watering applications may need to be extended or delayed until spring. After the initial 6-8 week period, normal rainfall shall be adequate moisture for continued healthy growth. However if

drought conditions exist (typically less than .25" of water after two (2) weeks, or as indicated by the Drought Mitigation Center [drought.unl.edu/dm]) the Natural Areas Contractor shall be responsible for maintaining consistent moisture for the remainder of the growing season or until drought conditions subside. The Owner/Owner's Representative may opt to conduct watering at a cost savings to the Owner.

D. It is the Natural Areas Contractor's responsibility to monitor seeding and/or planting areas for signs of damage due to drought or dry soil conditions. If the Natural Areas Contractor believes a drought or dry soil condition exists that may impact the establishment of planted materials they must notify the Owner/Owner's Representative in writing immediately. Upon notification, the Owner/Owner's Representative shall work with the Natural Areas Contractor to evaluate the situation and, if necessary, devise and implement a watering plan. If the Natural Areas Contractor notifies the Owner/Owner's Representative after damage has occurred the Natural Areas Contractor shall re-plant the damaged area at no additional cost to the Owner.

4.08 CLEAN-UP

A. During natural areas work, the Natural Areas Contractor shall store materials and equipment where directed by the Owner/Owner's Representative. Pavements shall be kept clean and work areas shall be kept in an orderly condition.

B. The Natural Areas Contractor shall protect natural areas work and materials from damage due to landscape operations or operations by other trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed by the Owner/Owner's Representative.

C. Remove all debris from the site resulting from planting operations in accordance with site construction rules (e.g. LEED requirements) and/or local jurisdiction.

4.09 INTERIM STEWARDSHIP

A. The Natural Areas Contractor shall conduct stewardship tasks as described herein until Substantial Completion, including mowing, herbicide applications and watering as necessary. Interim stewardship shall be a requirement of the contract regardless of the award of Alternate Bid #1.

PART 5 STEWARDSHIP

5.01 GENERAL

A. Begin Natural areas management immediately upon Substantial Completion and continue for three (3) full growing seasons until Final Acceptance by the Owner/Owner's Representative. Management of installations that receive Substantial Completion prior to July 15th will be considered management of one full growing season. Installations receiving Substantial Completion after July 15th will require three (3) full growing seasons of management starting the year following installation.

B. The Natural Areas Contractor shall keep a log of all restoration activities performed during contract period, installation through stewardship, and shall submit it to the Owner/Owner's Representative on a monthly basis.

C. Chemicals used will have the lowest environmental impact for the task at hand. Organic or cultural practices will be used whenever practical.

5.02 NATURAL AREAS MOWING

A. All mowing shall be conducted in accordance with all applicable codes and by personnel with appropriate training in safety and in the use of the machinery being utilized.

B. REGULAR MOWING

1. Regular mowing shall be conducted with a conventional rotary mower, sickle type mower, or a flail type mower, however in order to reduce thatch, at no time shall more than six (6) inches (height) of vegetation be cut in a pass.
2. If mowing results in excessive thatch being produced after mowing, the Contractor shall rake, collect and dispose of excessive cut vegetation off-site at no additional cost to the Owner.
3. If mowing results in "knock-down" rather than severed vegetation, the Contractor shall re-mow all areas at no additional cost to the Owner, ensuring that vegetation is severed.
4. On slopes that are too steep to mow, around structures (trees, fencing, buildings, etc.), and in areas that are too wet to mow, mowing shall be conducted with the use of a hand-held gas powered brush cutter or walk-behind brush cutter (such as Brush Hog, etc.) only.
5. Damage caused to landscape material or other structures shall be repaired/replaced by the Natural Areas Contractor at no additional cost to the Owner.

C. SPOT MOWING

1. Spot mowing shall be conducted with the use of a hand-held gas powered brush cutter and/or walk-behind brush cutters (such as Brush Hog, etc.) targeting areas containing a mix of weed species and mature/flowering desirable native species. Spot mowing shall be utilized to eliminate the reproduction of non-native and non-desirable native species by not allowing the dispersal of seed from those targeted species.
2. Species targeted for spot mowing shall include removal of plant reproductive parts (e.g. flower stalks, un-developed seed heads, etc.). Spot mowing of perennial species shall be conducted in concert with, or shall be followed up with herbicide applications.
3. Spot-mown vegetative materials shall be left on-site in a manner that will not allow regeneration or seed set of the mown species.
4. Damage caused to landscape material or other structures shall be repaired/replaced by the Natural Areas Contractor at no additional cost to the Owner.

D. MOWING TIMING

1. Mowing is a key aspect in achieving positive results. Mowing must be conducted by the Natural Areas Contractor on a consistent basis and must respond to seasonal weather. Vegetation shall be high-mown as follows:
   a. First Growing Season: Kept under twelve (12) inches. A minimum of five (5) mowings will be required.
   b. Second Growing Season: Areas with high annual/biennial weed content shall be kept under twenty-four (24) inches. Areas with scattered annual/biennial weed content and high desirable native content shall be spot mown, ensuring that non-native/weedy species are not allowed to develop viable seed.
   c. Third Growing Season & Beyond: Spot mow and observe, if non-native/weedy species are dominant mowing shall continue as needed at the Second Year rate.
2. Mowing shall commence during late May/early June and subsequently two-four weeks apart or any time a large number of weed species begin to flower. Mowing shall be conducted prior to weed species developing viable seed.

3. It is the Native Landscape Contractor's responsibility to monitor the site in order to determine when mowing is required. However, if the Owner/Owner's Representative determines at any time that the project site requires mowing they will notify the Contractor in writing. No later than three (3) business days following notification, the Native Landscape Contractor shall conduct the requested mowing. If Contractor fails to mow the area in the allotted time, the Owner/Owner's Representative may conduct the mowing as necessary and apply any associated fees as a deduct to the contract.

5.03 HERBICIDE APPLICATION

A. SPOT HERBICIDE APPLICATIONS

1. Small scattered populations or individual specimens of undesirable species shall be controlled with spot herbicide applications. Large scale colonization shall not be allowed. The following methods are appropriate:
   a. Backpack Spray Treatments – Natural Areas Contractor shall utilize a 3-5 gallon backpack style sprayer, such as Solo, SP3, Field King or acceptable substitution.
   b. Hand Wicking – In areas of high quality native vegetation where desirable species are directly adjacent to targeted plants, or where the growth habit of the target plant makes it impossible to avoid off-target damage, the appropriate herbicide shall be selectively hand wiped onto the target plant utilizing a sponge-wicking applicator or a saturated cloth glove.
2. Spot herbicide application areas will require supplemental seed and/or plants. Site preparation and planting after herbicide applications shall be as per the Native Herbaceous Planting section of this document.

5.04 BROADCAST HERBICIDE APPLICATIONS

A. On larger sites where a broad-scale application is needed because large colonies of the target species have become established, broadcast applications by large tank-equipped spray-gun, all-terrain vehicle (ATV) or tractor may be utilized to treat undesirable species. The following methods are appropriate:
   1. Broad-Spectrum Herbicide Broadcast Application – This method utilizes a large tank-equipped spray-gun and/or an ATV or tractor equipped with a boom-sprayer to apply large amounts of glyphosate, which will result in complete kill of all vegetation.
   2. Selective Herbicide Broadcast Application – This method utilizes a large tank-equipped spray-gun and/or an ATV or tractor equipped with a boom-sprayer to apply large amounts of a selective herbicide, such as Clethodim, resulting in a complete kill of only those targeted species.

B. A "large colony of target species" shall be defined as a target plant population whose aerial coverage is such that a broad-spectrum chemical can be broadcast without inflicting any damage to adjacent native vegetation.

C. Broadcast herbicide application areas will require supplemental seed and/or plants. Site preparation and planting after herbicide applications shall be as per the Native Herbaceous Planting section of this document.

5.05 HERBICIDE APPLICATION TIMING

A. Herbicide applications must be conducted by the Natural Areas Contractor on a consistent basis and must respond to seasonal weather and to the life-cycle of each target species. Non-native vegetation shall be herbicided as follows:
   1. A minimum of seven (7) herbicide applications will be required.

B. As stated above, herbicide application timing must be flexible and respond to seasonal weather and to the life-cycle of each target species, however at a minimum the following schedule shall be followed for the first three (3) years:

Target Species	Approved Herbicide	Initial Herbicide Application	Follow-up Herbicide Application (if necessary)**
Wild Parsnip (Pastinaca sativa)	2, 4-D Anamine*	March 1st – May 31st	August 1st – October 31st
Reed Canary Grass (Phalaris arundinacea)	Sethoxydim*, Aquatic Glyphosate	April 1st – May 31st	October 1st – Dormancy/Frost
Teasel Species (Dipsacus spp.)	Triclopyr 3a*, Glyphosate	April 1st – May 31st	October 1st – Dormancy/Frost
Sweet Clover Species (Melilotus spp.)	2, 4-D*, Clopyralid	April 1st – May 31st	Use Clopyralid an needed throughout growing season
Cattail Species (Typha spp.)	Aquatic Imazapyr	July 1st – August 1st	August 1st – September 1st
Purple Loosestrife (Lythrum salicaria)	Tricolopyr 3a*, Aquatic Glyphosate	May 15th – July 15th	July 15th – August 15th
Non-native Thistle Species (Carduus, Cirsium, & Onopordum spp.)	Clopyralid	May 15th – July 15th	July 15th – August 15th
Bird's Foot Trefoil (Lotus corniculatus)	Triclopyr 3a	May 15th – July 15th	July 15th – August 15th
Crown Vetch (Coronilla varia)	Triclopyr 3a	May 15th – July 15th	July 15th – August 15th
Common Reed (Phragmites australis)	Aquatic Imazapyr	August 1st – September 1st	September 1st – September 30th
Honeysuckle Species (Lonicera spp.)	Triclopyr 3a (Foliar Application)	May 15th – July 15th	July 15th – August 15th
	Glyphosate (Cut-Stump/Basal Bark Application)	November 15th – March 15th (During Dormancy)	Follow-up should be Foliar
Other Woody Species (includes Rhamnus spp.)	Triclopyr 3a (Foliar Application)	May 15th – July 15th	July 15th – August 15th
	Triclopyr 4e (Cut-Stump/Basal Bark Application)	November 15th – March 15th (During Dormancy)	Follow-up should be Foliar

*Herbicide preferred when selectivity is needed and hydrology is appropriate.

**Do not allow species to produce and/or disperse viable seed in between treatment times.

5.06 HAND WEEDING

A. In the event that herbicide applications cannot, or should not, be performed due to social, cultural, environmental, or other verified reasons, target weed species shall be removed by hand.

B. Species targeted for complete hand weeding shall include removal of all plant parts from the soil, including the above ground growth and all roots or rhizomes present in the ground.

C. Species targeted for partial hand weeding shall include removal of plant reproductive parts (e.g. seed heads). Partial hand weeding shall be conducted in concert with, or shall be followed up with herbicide applications.

D. Removed vegetative materials shall be discarded off-site or left on-site in a manner that will not allow regeneration or seed set of the removed species. Transportation of removed vegetative materials shall meet Department of Agriculture standards/requirements. Hand weeding shall never result in excessive soil disturbance. Due to the public nature of this site the Owner/Owner's Representative reserves the right to direct the Contractor to collect and discard all hand-pulled vegetation.

5.07 TREATMENT OF WOODY SPECIES

A. The Natural Areas Contractor shall conduct woody species herbicide treatments to all re-sprouts, re-growth, or other remaining live plants of all non-native or aggressive native woody species throughout stewardship operations until performance criteria have been achieved. (See Appendix-A).

B. Woody species treatment methods during the growing season may be a foliar application using an appropriate herbicide, such as Garlon 3A. Damage to surrounding vegetation due to re-sprout treatments shall be repaired by the Natural Areas Contractor.

C. Woody species herbicide treatments during the dormant season may be applied with cut-stem and/or basal bark application using an appropriate herbicide, such as Garlon 4E. Damage to surrounding vegetation due to re-sprout treatments shall be repaired by the Natural Areas Contractor.

1. Hand Cutting/Cut-Stump Treatment: Chain saws, brush clearing saws, handsaws and loppers may be used. Upon written approval by the Owner/Owner's Representative, small walk behind mower-type brush cutters may be utilized provided that their use does not result in rutting or pitting of the soil while in operation.

a. Cut woody target species shall be treated with an herbicide mixture. After cutting down the target species apply herbicide, such as Garlon 4E in a 20-30% (or as stated on the product label) solution in basal oil, to the stump. Lonicera spp. shall be treated with RoundUp in a 25-50% solution, to the stump. Treat the cut area around the edge with herbicide so the cambium layer will take up the active ingredient. Herbicide shall be applied immediately after cutting.

2. Basal Bark: Involves herbicide application directly to the trunk of the woody target species that are one inch or less at the base. Apply herbicide directly to the tree trunk, around the entire circumference, at 6" above the soil until thoroughly wet near the ground plane, but not to the point of runoff. Apply during dormancy, except when snow or water prevents spraying to the ground plane. Optimal results are achieved when applications are made to young stems which have not developed the thicker bark characteristic of slower growing older trees.

D. Wherever possible herbicide applications shall be accomplished by utilizing wick or sponge-type applicators.

E. Disposal of cuttings and other materials shall be completed simultaneously with the initial woody species herbicide treatment(s).

F. All cuttings longer than two (2) feet in length and/or larger than one (1) inch in diameter shall be removed from the project site. Smaller cuttings and cutting debris that has been shredded or chipped by the use of hand-held mechanical equipment may be left on site to decompose or be consumed by prescribed fire (if applicable). Cuttings and cutting debris shall not be allowed to accumulate to a depth that will smother existing desirable native species, prevent existing desirable native species from emerging or prevent good seed-to-soil contact in newly seeded areas (approximately one-half inch (1/2") maximum depth).

5.08 OVERSEEDING AND RE-PLANTING

A. Overseeding or re-planting in areas of herbicide application and/or in under-performing areas will be necessary for compliance with the performance section of this document at no additional cost to the Owner.

B. See Native Herbaceous Planting section. Site preparation and planting after herbicide applications shall be as per the Native Herbaceous Planting section of this document.

5.09 STEWARDSHIP SCHEDULE

A. The recommended stewardship schedule is summarized in the table below. The table indicates what activities are likely to be necessary in a given month; the table is not meant to require that the activity must be conducted. Actual stewardship scheduling will be site driven.

B. As stated above, a stewardship plan must be flexible, however at a minimum the following schedule* shall be followed for the first three (3) years**:

Month	Visits by Crew	Herbicide	Brush Clearing	Mow	Collect & Disperse	Burn Prep	Burn**
April	0-1	X	X			X	X
May	1-2	X	X	X	X	X	X
June	1-2	X		X	X		
July	1-2	X		X			
August	1-2	X		X			
September	0-1	X		X			
October	1-2	X	X	X	X	X	
November	0-1	X	X		X	X	X
December - March	0-1	X	X		X	X	X

*This schedule should be considered a guideline and may be varied from to react to current site Conditions.

**In newly planted natural areas, the execution of a prescribed fire may not be possible until the second or third growing season.

PART 6 PRESCRIBED FIRE

6.01 PRIORITIES

A. To restore fire to its natural role and to reduce hazardous fuels through the application of prescribed fire. The Owner/Owner's Representative and Natural Areas Contractor shall strategically focus activities by placing priority on:

B. Areas where actions will mitigate threats to the safety of employees and the public (SAFETY FIRST!).

C. Areas where actions will protect, enhance, restore and/or maintain plant and animal communities that are critical for endangered, threatened, or sensitive plant and animal species.

D. Areas where actions will suppress invasive species and recycle valuable nutrients into the native soil matrix.

E. Areas that will reduce the risks of wildfire. This includes the reintroduction of fire into fire-dependent ecosystems to maintain and enhance those ecosystems and the modification of vegetation to achieve specific land management objectives.

6.02 GUIDING PRINCIPALS

A. The following guiding principles are fundamental to the success of the Owner/Owner's Representative's Prescribed Fire and Fuels Management Program.

B. Fire crew and public safety is the first priority in every prescribed fire and fuels management activity.

C. Only qualified and experienced personnel using safe working standards and guidelines will participate in the implementation of prescribed fire and fuels management projects.

D. Whenever possible, the role of prescribed fire as an essential ecological process and natural change agent will be incorporated into the land use planning process and the fire management program.

E. Develop an education plan and an education strategy with internal and external audiences to increase awareness of, and the need for, prescribed fire and other fuels management.

F. Encourage research, monitoring and program development to advance the understanding of fire science.

6.03 PERSONNEL/TRAINING

A. It is required that the National Wildfire Coordinating Group (NWCG) standards be followed for this prescribed fire.

B. It is required to have highly trained and experienced employees working on a prescribed fire. The Natural Areas Contractor must meet the requirements under the "Contractor Qualifications" section of this document; documentation of fully trained and experienced personnel shall be submitted to the Owner/Owner's Representative at the time of bidding.

C. Refresher courses for NWCG levels are required annually. To maintain certification individuals need to have completed the s130/s190 courses (once), pass at least a moderate level pack test (carry forty-five pounds [45 lbs.] three [3] miles in forty-five [45] minutes), and attend a yearly one-day refresher course; documentation that certification maintenance training for all proposed burn crew members has been completed shall be submitted to the Owner/Owner's Representative at the time of bidding. Refresher courses for other NWCG positions vary.

6.04 EQUIPMENT

A. The Natural Areas Contractor shall have in their possession at the time of bidding the following equipment:

1. Two Type 6 Engines
2. Two Type 7, 6 Wheel Drive ATV Engines
3. One 500 Gallon Water Tender
4. One Fire Pump capable of delivering sufficient water pressure at 1000 feet to suppress an escaped fire
5. 1000 feet of collapsible 1" fire hose with nozzles
6. Two-way radios for all personnel involved in the fire, whether on the line or not

7. All necessary personal protective equipment for all personnel to meet NWCG guidelines

6.05 INSURANCE

A. "A" insurance rating with coverage for at least $5,000,000.00 (five million) dollars of general liability insurance and excess general liability for "Prescribed Fire Operations" with a minimum $2,000,000.00 (two million) per occurrence limit.

B. The Natural Areas Contractor shall provide the Owner/Owner's Representative with a certificate of insurance and name them as additional insured.

C. The Natural Areas Contractor shall list prescribed fire on the certificate as the activity covered.

6.06 PERSONAL PROTECTIVE EQUIPMENT (PPE)

A. It is required that all fire personnel wear/carry the following:

1. Nomex clothing (shirt and pants)
2. Nomex face and neck protection
3. 8" high top leather boots with 1" logging heels
4. Leather gloves
5. Fire rated hardhat
6. Faceshield
7. Safety glasses
8. Cigarette lighter or matches
9. Compass
10. Pre-tested, fully charged two-way radio with radio harness
11. Canteen (2 each) filled with water
12. Food, such as granola bars or other snacks
13. Burn unit map
14. All underclothing of natural fiber – The danger of wearing polyester or other synthetic materials should be emphasized with anyone attending a burn.

B. For prescribed fires where the Safety Zone cannot be reached in 15 seconds, all personnel shall carry a fire shelter (for protection from flames and superheated gasses in the event of entrapment) and fussees (as a means to light a separate fire in order to burn out a safety zone ahead of the threatening fire front). A fussee shall not be considered an alternative to a fire shelter.

C. In addition to the equipment listed above, a fully stocked first aid kit shall be readily available to all burn crew members.

D. In addition to the equipment listed above, Burn Bosses shall carry a fully charged, fully operational cellular phone.

E. In addition to the equipment listed above, Crew Bosses (or their qualified designee on the crew) shall carry a fully functional weather kit.

6.07 ROADSIDE VISIBILITY MATERIALS

A. Roadside visibility materials are essential if the fire is near a roadway. Natural Areas Contractor shall provide and install temporary warning signage along all roadways bordering the burn unit. Warning signage shall be visible by road traffic and shall display the Natural Areas Contractor's contact information. All signage on public roadways shall conform to all applicable local and Illinois DOT signage specifications.

B. All fire personnel participating in a prescribed fire within close proximity of a roadway shall wear appropriate reflective work vests.

6.08 FIRELINE TOOLS

A. Every fire crew member shall have one hand tool in their possession at all times while on or near the fire line. The tools needed for a safe prescribed fire will vary with each fire and should be specified in the burn plan. Recommended tools:
   1. Drip Torch
   2. Flappers
   3. Pulaski
   4. McLeod
   5. Leaf Rakes
   6. Fire Rakes
   7. Backpack pumps

6.09 BURN PLAN

A. The Natural Areas Contractor shall complete and submit a burn plan for approval by the Owner/Owner's Representative and local officials prior to burning. It is required that burn plans are written/reviewed and approved by the burn boss.

B. The burn plan shall be prepared in accordance with the Illinois Prescribed Burning Act (525 ILCS 37).

6.10 EXECUTION

A. The prescribed fire shall be executed in accordance with the burn plan.

B. The prescribed fire shall achieve the goals as stated in the burn plan.

C. The Natural Areas Contractor shall mop up all burning material to 100% black after the main fire has passed. There shall be no burning materials when the Natural Areas Contractor leaves the site.

D. The Natural Areas Contractor shall be available to return to the site within 2 hours following mop up operations to extinguish burning materials. The person selected to return to the site must have access to all crew members in the event that they must be re-deployed to the project site.

PART 7 NATURAL AREAS MONITORING AND REPORTING (BY OTHERS)

7.01 MONITORING

A. Biannual monitoring shall occur in the time periods of May/June & September/October and shall be conducted until final acceptance. Monitoring activities shall be conducted annually thereafter under separate Contract. Owner/Owner's Representative reserves the right to review and select monitoring contractors based upon the best interest of the project and the Owner.

B. Baseline Data
   1. Baseline data for established sites or remnant areas will include a meander survey prior to restoration or stewardship activities.
   2. For newly planted areas without existing baseline data a meander survey shall be conducted during the first growing season as described herein. The resulting data collected shall be considered as baseline.

C. Meander Survey
   1. The initial post-planting meander survey shall begin at the end of the first full growing season after planting. For instance, if the planting is installed in April, monitoring shall begin in September or October of that same year. If the planting is installed in October, monitoring shall begin in September or October of the following year.

2. Meander each plant community so that at least twenty percent (20%) of the planted area is included in the survey. The Owner/Owner's Representative may require separate meander surveys for each planting area at no additional cost to the Owner.
3. Record every species that is observed, including native, non-native, woody, herbaceous, etc.
4. Make qualitative observations such as species composition and distribution, herbivory, presence of weedy species, erosion problems, etc.

D. Live Plant Material Assessment
1. Herbaceous perennial plant material shall be inspected to ensure that it will meet the performance criteria.
   a. At least twenty-five percent (25%) of each planted area of live perennials shall be evaluated to estimate the percent survival of the installed plants.

E. Data Entry
1. Data collected from the Meander Survey shall be entered into the Floristic Quality Assessment (FQA) computer program (Masters 1996) or equivalent and shall utilize the most current and relevant database available.

F. Photographic Documentation
1. Representative photographs of the stewardship area(s) shall be collected to document site conditions and progress. Photographs shall be collected using the following methods:
   a. General
      1) Photos shall be taken in the same manner during each visit. Photos shall be in digital format at the highest megapixel setting (minimum 7 megapixel) setting that the camera will allow. The photos shall be taken at eye level at the widest angle a standard point-and-shoot camera will allow.
      2) Photos shall be legible. Whenever possible, photos shall be taken so that the photographer is not facing directly into the sun.
   b. Permanent Photo Points
      1) Photo points shall be physically field marked in a permanent manner on the ground, either through the use of T-Posts or Rebar. Each photo point shall be recorded using a GPS device. Photo points shall be sufficiently marked so they can be easily found in the field with or without the use of a GPS device.
      2) A minimum of three photo points shall be set up per acre, per planting zone, or as directed by the Owner/Owner's Representative.
      3) Photos shall be taken with the photographer's back against the post in each of the four cardinal directions: North, South, East, and West.

7.02 REPORTING

A. Annual Monitoring Reports shall be submitted to the Owner and Owner's Representative in duplicate by February 15th, or by the date required by the permitting agency.

B. At a minimum, Annual Monitoring Reports shall include the following information:
1. Introduction
2. Site history leading up to the current project.
3. Site description, including a street address (if applicable), County, Section, Township, and Range.
4. A site location map.

5. Permit numbers & Department/County of issue (if applicable).
6. Methods
7. Summarize the methods used for monitoring, include the survey dates.
8. Results
9. Floristic Quality Assessment Data for the Baseline Survey.
10. Floristic Quality Assessment Data for the Meander Survey:
    a. Native Mean Coefficient of Conservatism Value (C).
    b. Native Floristic Quality Index (FQI).
    c. Native Wetness Coefficient (W).
    d. A comparison table that lists previous years' data with current year's data.
11. Live Plant Material:
    a. Report on the condition of any native herbaceous live plant material installation areas. Document survivability.
12. Discussion
    a. Discuss in detail the work performed as part of on-going stewardship during the previous calendar year.
    b. Compare the current year's data with data from the previous year(s).
    c. Compare current year's results against the performance criteria.
    d. Describe any deficiencies in the current year's stewardship activities that are hindering the sites ability to meet the performance criteria and propose detailed corrective actions.
    e. Discuss in detail the stewardship activities that will occur in the upcoming year.
13. Appendices
    a. Species lists for installation and/or enhancement seeding/planting.
    b. Site Photographs.
    c. Floristic Quality Assessment data tables.
    d. Original planting plan and species lists
    e. Site plan that graphically delineates deficiencies and locates any recommended remediation items.

PART 8 NATURAL AREAS PERFORMANCE

8.01 MINIMUM PERFORMANCE CRITERIA – NATIVE HERBACEOUS PLANTING

A. General:
   1. Final determinations of species dominance, richness, coverage and/or distribution are subject to verification by Owner/Owner's Representative.
   2. Final determinations of plant vigor are subject to verification by Owner/Owner's Representative.

B. Throughout stewardship activities:
   1. Zero (0) aggressive native species, non-native species, nor invasive species shall be allowed to become established on the site and/or be allowed to colonize.
   2. With the exception of planted cover crops, none of the top five (5) dominant species within any planting area shall be aggressive native, non-native or invasive species (See Appendix A). Dominance shall be determined by ocular assessment using meander methodology.

C. Within three (3) months of seed installation or by June 1st of the following year if seed installation is completed in the fall:

1. Total vegetative aerial cover in all areas seeded with cover crop shall be greater to or equal than seventy-five percent (75%) as measured using meander methodology.

D. By the end of the first (1st) growing season, in addition to fulfilling the above:
   1. Native Seed Planting Areas:
      a. Total vegetative aerial cover in all Native Seed areas shall be greater to or equal to ninety percent (90%) as measured using meander methodology.
      b. Twenty-five percent (25%) of the Native Seed species installed within each plant community shall be alive and apparent. This standard does not apply to emergent communities.
   2. Native Herbaceous Planting Areas:
      a. No less than ninety percent (90%) of any native herbaceous plant material installed shall be alive and in vigorous condition, this standard shall apply to each planting area where native herbaceous plants are installed. If less than ninety percent (90%) of any native herbaceous plant material installed survive the first full growing season, the plants shall be replaced so that the ninety percent (90%) criteria is achieved within each applicable planting area.

E. By the end of the second (2nd) growing season, in addition to fulfilling the above:
   1. Native Seed Planting Areas:
      a. Fifty percent (50%) of the Native Seed species installed within each plant community shall be alive and apparent. This standard does not apply to emergent or streamside communities.
      b. Native vegetative aerial cover within Native Seed planting areas shall be at least forty percent (40%) as measured using meander methodology.
   2. Native Herbaceous Planting Areas:
      a. Eighty percent (80%) of the native herbaceous plant species installed within each plant community shall be alive and apparent.
      b. Native vegetative aerial cover within native herbaceous planting areas shall be at least twenty-five percent (25%) as measured using meander methodology.

F. By the end of the third (3rd) growing season, in addition to fulfilling the above:
   1. General:
      a. Based on the results of the meander survey, the Native Mean C-Value and the Native FQI shall increase each successive year after planting.
      b. There shall be no area(s) greater than 0.25 m^2 that is devoid of vegetation. This standard does not apply to emergent, deep emergent, floating aquatic or streamside communities.
      c. There shall be no rills, gullies or other evidence of significant or on-going erosion or areas of high erosion potential present throughout the project area.
   2. Native vegetative aerial cover within Native Seed planting areas shall be at least eighty-five percent (85%) as measured using meander methodology.
   3. Native vegetative aerial cover within shoreline plant communities shall be at least sixty percent (60%) as measured using meander methodology.
   4. To ensure species richness at the local level, any given square meter (1.0 m^2) within Native Seed planting areas shall contain a minimum of three (3) different acceptable species and shall include at least one (1) species seeded as specified.

5. The following standards shall be achieved for each plant community:
   a. Transitional Buffer – N/A
   b. Shade – N/A
   c. Low Profile Prairie
      1) Total FQI – 21.0
      2) Total Mean C Value – 2.6
      3) Native FQI – 28.0
      4) Native Mean C Value – 3.5
   d. Dry Bottom Detention
      1) Total FQI – 20.0
      2) Total Mean C Value – 2.1
      3) Native FQI – 25.0
      4) Native Mean C Value – 3.3
   e. Wet Prairie
      1) Total FQI – 18.0
      2) Total Mean C Value – 2.2
      3) Native FQI – 23.0
      4) Native Mean C Value – 3.5
   f. Shoreline
      1) Total FQI – 19.0
      2) Total Mean C Value – 2.2
      3) Native FQI – 25.0
      4) Native Mean C Value – 3.7

8.02 REMEDIATION – If native planting areas fail to meet the terms of the performance criteria described above, the Natural Areas Contractor shall develop and submit to the Owner/Owner's Representative, a remedial action plan that takes into consideration the site goals and specific deficiencies causing the remedial action. The Natural Areas Contractor will implement the approved remedial action plan at no additional cost to the Owner and submit a report that describes the remedial action taken. If remedial seeding or planting is required, the Natural Areas Contractor will not be required to perform additional remedial seeding or planting in the same area for a minimum of one growing season. After one full growing season following the remedial planting, the performance criteria must be met or additional remedial action must be taken at no additional cost to the Owner. Final acceptance shall not be granted until all planting areas meet performance criteria and/or meet the stated intent of the project to the satisfaction of the Owner/Owner's Representative.

8.03 ACCEPTANCE – NATIVE HERBACEOUS PLANTING

A. Five (5) days prior to the anticipated date of inspection, submit written notice requesting inspection to Owner/Owner's Representative.

B. Substantial Acceptance:
   1. Field inspections will be conducted by the Owner/Owner's Representative 7-14 days after receiving written request for Substantial Completion inspection from the Contractor.
   2. The work shall be considered substantially complete after all landscape features, seed, plugs, goose exclosure and erosion control structures have been installed (excludes tree, shrub and vine planting); completion of Substantial Completion Punch-list items; and cover crop germination has begun to the satisfaction of the Owner/Owner's Representative.

C. Final Acceptance:

NATURAL AREAS ESTABLISHMENT PROVISIONS

1. Field inspections will be conducted by the Owner/Owner's Representative at the end of the first full growing season or 7-14 days after receiving written request for Final Acceptance inspection from the Contractor, but no later than October 1st.
2. The work shall be considered 100% complete after goose exclosure fencing has been removed and the third (3rd) growing season performance criteria have been satisfied.
3. Final Acceptance criteria shall only apply to this contract if Alternate #1 (Natural Areas Stewardship) is awarded to the Natural Areas Contractor. If Alternate #1 is not awarded, Substantial Acceptance shall constitute Final Acceptance.

END OF NATURAL AREAS ESTABLISHMENT PROVISIONS

INVASIVE SPECIES LIST

APPENDIX - A

It is the responsibility of the Natural Areas Contractor to locate, identify, and eradicate any species that may endanger the successful establishment and long-term health of the specified native plant communities within the project area/site. Following is a list of common invasive, weedy and aggressive native species typically encountered during ecological restoration efforts that can inhibit the successful establishment of desirable native species. This list is not representative of the site and should not be considered an inventory. The listed species shall at no time be allowed to dominate any portion of the project site.

Aggressive Weed/Invasive Species List:

Acer negundo	BOXELDER[3]
Acer platanoides	NORWAY MAPLE
Achillea spp.	YARROW[3]
Aegopodium podagraria	GOUTWEED
Agrostis gigantea	REDTOP
Agrostis stolonifera	CREEPING BENTGRASS[3]
Ailanthus altissima	TREE OF HEAVEN
Alliaria petiolata	GARLIC MUSTARD
Alnus glutinosa	EUROPEAN BLACK ALDER
Ambrosia artemisiifolia	COMMON RAGWEED[1,3]
Ambrosia trifida	GIANT RAGWEED[1,3]
Anthriscus sylvestris	WILD CHERVIL
Arctium minus	COMMON BURDOCK
Berberis thunbergii	JAPANESE BARBERRY
Brassica nigra	BLACK MUSTARD[2]
Bromus inermis	SMOOTH BROME
Bromus tectorum	DOWNY BROME
Butomus umbellatus	FLOWERING RUSH
Cannabis sativa	MARIJUANA[1]
Carduus nutans	MUSK THISTLE[1]
Celastrus orbiculatus	ASIAN BITTERSWEET[1]
Centaurea maculosa	SPOTTED KNAPWEED
Chenopodium album	LAMB'S QUARTERS[2]
Cirsium arvense	CANADA THISTLE[1]
Cirsium vulgare	BULL THISTLE
Conium maculatum	POISON HEMLOCK[1]
Cornus racemosa	GRAY DOGWOOD[3]
Cynanchum louiseae	BLACK SWALLOW-WORT
Cynanchum rossicum	PALE SWALLOW-WORT
Cyperus esculentus	YELLOW NUTSEDGE[3]
Dactylis glomerata	ORCHARDGRASS
Daucus carota	QUEEN ANNE'S LACE[2]
Dioscorea oppositifolia	CHINESE YAM
Dipsacus spp.	TEASEL[1]
Echinochloa crus-galli	BARNYARD GRASS
Egeria densa	BRAZILIAN WATERWEED
Eichhornia crassipes	WATER HYACINTH
Elaeagnus angustifolia	RUSSIAN OLIVE[1]
Elaeagnus pungens	THORNY OLIVE[1]
Elaeagnus umbellata	AUTUMN OLIVE[1]

Elymus repens	QUACKGRASS
Erigeron canadensis	MARE'S TAIL[3]
Erigeron annuus	ANNUAL FLEABANE[3]
Erigeron strigosus	DAISY FLEABANE[3]
Euonymus alatus	BURNING BUSH
Euonymus fortunei	WINTERCREEPER
Euphorbia esula	LEAFY SPURGE
Fallopia japonica	JAPANESE KNOTWEED[1]
Fallopia sachalinensis	GIANT KNOTWEED[1]
Fallopia × bohemica	BOHEMIAN KNOTWEED[1]
Frangula alnus	GLOSSY BUCKTHORN
Hedera helix	ENGLISH IVY
Hemerocallis fulva	ORANGE DAYLILY
Heracleum mantegazzianum	GIANT HOGWEED[1]
Hesperis matronalis	DAMES ROCKET
Humulus japonicus	JAPANESE HOPS
Hydrilla verticillata	HYDRILLA
Hydrocharis morsus-ranae	EUROPEAN FROGBIT
Hypericum perforatum	COMMON ST. JOHN'S WORT
Ipomoea purpurea	MORNING GLORY[2]
Iris pseudacorus	YELLOW IRIS
Lespedeza cuneata	SERICEA LESPEDEZA
Ligustrum spp. (non-native)	PRIVET (non-native)
Lolium multiflorum	ANNUAL RYE/ITALIAN RYEGRASS
Lonicera spp.	HONEYSUCKLE (non-native)[1]
Lotus corniculatus	BIRDS FOOT TREFOIL
Lysimachia nummularia	MONEYWORT
Lythrum salicaria	PURPLE LOOSESTRIFE
Marsilea quadrifolia	EUROPEAN WATERCLOVER
Medicago lupulina	BLACK MEDIC
Medicago sativa	ALFALFA
Melilotus albus	WHITE SWEET CLOVER
Melilotus officinalis	YELLOW SWEET CLOVER
Microstegium vimineum	JAPANESE STILTGRASS
Morus alba	WHITE MULBERRY
Myosotis sylvatica	GARDEN FORGET-ME-NOT
Myriophyllum aquaticum	PARROT FEATHER
Myriophyllum spicatum	EURASIAN WATERMILFOIL
Myosotis scorpioides	WATER FORGET-ME-NOT
Najas minor	BRITTLE WATERNYMPH
Nepeta cataria	CATNIP
Nymphoides peltata	YELLOW FLOATING HEART
Oenothera biennis	EVENING PRIMROSE[3]
Onopordum acanthium	SCOTCH THISTLE
Pastinaca sativa	WILD PARSNIP
Phalaris arundinacea	REED CANARY GRASS
Phragmites australis (non-native)	COMMON REED (non-native)

Pistia stratiotes	WATER LETTUCE
Poa pratensis	KENTUCKY BLUEGRASS
Populus alba	WHITE POPLAR
Populus deltoides	COTTONWOOD[3]
Potamogeton crispus	CURLY-LEAF PONDWEED
Pueraria montana var. lobata	KUDZU[1]
Ranunculus ficaria	LESSER CELANDINE[1]
Rhamnus cathartica	COMMON BUCKTHORN
Robinia pseudoacacia	BLACK LOCUST
Rorippa nasturtium	WATERCRESS
Rumex acetosella	SHEEP SORREL
Rumex crispus	CURLY DOCK
Rosa multiflora	MULTIFLORA ROSE
Rubus spp.	RASPBERRY/BLACKBERRY[3]
Salix interior	SANDBAR WILLOW[3]
Saponaria officinalis	BOUNCING BET
Schedonorus arundinaceus	TALL FESCUE
Securigaria varia	CROWN VETCH
Setaria spp.	FOXTAIL/MILLET[2]
Silene latifolia var. alba	BLADDER CAMPION
Solidago altissima	TALL GOLDENROD[3]
Solidago canadensis	CANADA GOLDENROD[3]
Solidago sempervirens	SEASIDE GOLDENROD
Sonchus arvensis	PERENNIAL SOWTHISTLE[1]
Sorghum almum	COLUMBUS GRASS[1]
Sorghum halepense	JOHNSONGRASS[1]
Symphyotrichum lateriflorum	SIDE FLOWERING ASTER[3]
Symphyotrichum pilosum	HAIRY ASTER[3]
Tamarix spp.	SALT CEDAR[1]
Tanacetum vulgare	COMMON TANSY
Taraxacum officinalis	COMMON DANDELION[2]
Thlaspi arvense	FIELD PENNYCRESS[2]
Torilis japonica	JAPANESE HEDGE PARSLEY
Toxicodendron radicans	POISON IVY[3]
Trifolium pratense	RED CLOVER[2]
Trifolium repens	WHITE CLOVER[2]
Typha angustifolia	NARROWLEAF CATTAIL[3]
Typha latifolia	COMMON CATTAIL[3]
Ulmus pumila	SIBERIAN ELM
Verbascum blattaria	MOTH MULLEIN[2]
Verbascum thapsus	COMMON MULLEIN[2]
Vinca minor	PERIWINKLE
Xanthium strumarium	ROUGH COCKLEBUR

[1]Species classified as a Noxious Weed in the State of Illinois as of the date of this document
[2]Species considered common weeds requiring control, not specifically considered invasive

[3]Species considered native (or questionably native) in the State of Illinois, but often has an aggressive growth behavior that may require control on a case-by-case basis

END OF EXHIBIT A

APPROVED NATIVE SPECIES LISTS

APPENDIX - B

Transitional Buffer Seed Mix (Dry-Mesic Soils)

MIX STATISTICS	
Number of Native Species in Mix	2
Native FQI	2.8
Native Mean C Value	4.0
Native Mean W Value	5.0
Lbs/Acre of Native Seed	65.0
Seeds per Square Foot	138.8
Acres to be Planted	0.37

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX		GERMINATION	TOP SOW
						by Weight	by Seed Count		
BOUCUR	*Bouteloua curtipendula*	Side-oats Grama	6,000	960.00	60.00	92.31%	95.24%	N/A	
BOUDAB	*Bouteloua dactyloides 'BOWIE'*	Bowie Buffalo Grass	3,600	80.00	5.00	7.69%	4.76%	N/A	
			Grass/Sedge Subtotals		65.000	100.00%	100.00%		
			Mix TOTALS		65.000	100.00%	100.00%		

Low Profile Prairie Seed Mix (Dry-Mesic Soils)

MIX STATISTICS	
Number of Native Species in Mix	38
Native FQI	35.0
Native Mean C Value	5.7
Native Mean W Value	2.5
Lbs/Acre of Native Seed	24.4
Seeds per Square Foot	162.5
Acres to be Planted	1.15

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
BOUCUR	*Bouteloua curtipendula*	Side-oats Grama	6,000	128.00	8.00	32.80%	10.85%	N/A	
CXBICK	*Carex bicknellii*	Copper-shouldered Oval Sedge	17,000	6.00	0.38	1.54%	1.44%	CM-60	
CXBREV	*Carex brevior*	Plains Oval Sedge	29,000	4.00	0.25	1.02%	1.64%	CM-60	
CXMOLE	*Carex molesta*	Field Oval Sedge	25,000	2.00	0.13	0.51%	0.71%	CM-60	
ELYCAN	*Elymus canadensis*	Canada Wild Rye	5,200	32.00	2.00	8.20%	2.35%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	3,200,000	0.50	0.03	0.13%	22.60%	CM-60	
PANVIR	*Panicum virgatum*	Switch Grass	14,000	8.00	0.50	2.05%	1.58%	N/A	
SCHSCO	*Schizachyrium scoparium*	Little Bluestem	15,000	48.00	3.00	12.30%	10.17%	N/A	
			Grass/Sedge Subtotals		14.281	58.55%	51.34%		

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ALLCER	*Allium cernuum*	Nodding Onion	7,600	3.00	0.19	0.77%	0.32%	CM-60	
AMOCAN	*Amorpha canescens*	Lead Plant	16,000	2.00	0.13	0.51%	0.45%	CM-10, H, I, J	
ASCTUB	*Asclepias tuberosa*	Butterfly Weed	4,300	16.00	1.00	4.10%	0.97%	CM-30	
BAPALB	*Baptisia alba*	White Wild Indigo	1,700	2.50	0.16	0.64%	0.06%	CM-10, H, I	
CHAFAS	*Chamaecrista fasciculata*	Partridge Pea	2,700	16.00	1.00	4.10%	0.61%	CM-10, H, I	
CORLAN	*Coreopsis lanceolata*	Sand Coreopsis	20,000	6.00	0.38	1.54%	1.70%	CM-30	
CORPAL	*Coreopsis palmata*	Prairie Coreopsis	10,000	4.00	0.25	1.02%	0.57%	CM-60, M	
DALPUR	*Dalea purpurea*	Purple Prairie Clover	18,000	12.00	0.75	3.07%	3.05%	J, I	
ECHPAL	*Echinacea pallida*	Pale Purple Coneflower	5,200	16.00	1.00	4.10%	1.18%	CM-90 or M	
ERYYUC	*Eryngium yuccifolium*	Rattlesnake Master	7,500	4.00	0.25	1.02%	0.42%	CM-60	
EUPCOR	*Euphorbia corollata*	Flowering Spurge	8,000	4.00	0.25	1.02%	0.45%	CM-30	
HELHEL	*Heliopsis helianthoides*	Early Sunflower	6,300	6.00	0.38	1.54%	0.53%	CM-30	
LESCAP	*Lespedeza capitata*	Round-headed Bush Clover	8,000	4.00	0.25	1.02%	0.45%	CM-10, H, I, J	
LIAASP	*Liatris aspera*	Button Blazing Star	16,000	3.00	0.19	0.77%	0.68%	CM-60	
LIAPYC	*Liatris pycnostachya*	Prairie Blazing Star	11,000	4.00	0.25	1.02%	0.62%	CM-60	
MONFIS	*Monarda fistulosa*	Wild Bergamot	70,000	2.00	0.13	0.51%	1.98%	N/A	
PARINT	*Parthenium integrifolium*	Wild Quinine	7,000	8.00	0.50	2.05%	0.79%	CM-60	
PENDIG	*Penstemon digitalis*	Foxglove Beardtongue	130,000	2.00	0.13	0.51%	3.67%	CM-30, G	
PYCTEN	*Pycnanthemum tenuifolium*	Slender Mountain Mint	378,000	0.25	0.02	0.06%	1.33%	N/A	
RATPIN	*Ratibida pinnata*	Yellow Coneflower	30,000	4.00	0.25	1.02%	1.70%	CM-30	
RUDFUL	*Rudbeckia fulgida*	Orange Coneflower	31,000	4.00	0.25	1.02%	1.75%	CM-60	
RUDHIR	*Rudbeckia hirta*	Black-eyed Susan	92,000	8.00	0.50	2.05%	10.40%	CM-30	
SOLJUN	*Solidago juncea*	Early Goldenrod	290,000	1.50	0.09	0.38%	6.14%	CM-60	
SOLRIG	*Solidago rigida*	Stiff Goldenrod	41,000	1.00	0.06	0.26%	0.58%	CM-60	
SYMERI	*Symphyotrichum ericoides*	Heath Aster	200,000	1.00	0.06	0.26%	2.83%	N/A	
SYMLAE	*Symphyotrichum laeve*	Smooth Blue Aster	55,000	1.00	0.06	0.26%	0.78%	N/A	
SYMNOV	*Symphyotrichum novae-angliae*	New England Aster	66,000	0.50	0.03	0.13%	0.47%	CM-60	
TRAOHI	*Tradescantia ohiensis*	Ohio Spiderwort	8,000	8.00	0.50	2.05%	0.90%	CM-120 or M, G	
VERSTR	*Verbena stricta*	Hoary Vervain	28,000	2.00	0.13	0.51%	0.79%	CM-60	
ZIZAUR	*Zizia aurea*	Golden Alexanders	11,000	16.00	1.00	4.10%	2.49%	CM-60 or M, G	
			Wildflower Subtotals		10.109	41.45%	48.66%		
			Mix TOTALS		24.391	100.00%	100.00%		

Dry-Bottom Detention Basin Seed Mix (Mesic-Wet Soils at the Bottom of Basins or Swales)

MIX STATISTICS	
Number of Native Species in Mix	44
Native FQI	31.2
Native Mean C Value	4.7
Native Mean W Value	-1.1
Lbs/Acre of Native Seed	29.6
Seeds per Square Foot	327.3
Acres to be Planted	0.38

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ANDGER	*Andropogon gerardii*	Big Bluestem	10,000	64.00	4.00	13.50%	4.49%	N/A	
CXBEBB	*Carex bebbii*	Bebb's Oval Sedge	34,000	2.00	0.13	0.42%	0.48%	CM-60	
CXBREV	*Carex brevior*	Plains Oval Sedge	29,000	4.00	0.25	0.84%	0.81%	CM-60	
CXCRIS	*Carex cristatella*	Crested Oval Sedge	58,000	1.00	0.06	0.21%	0.41%	CM-60	
CXHYST	*Carex hystericina*	Porcupine Sedge	30,000	2.00	0.13	0.42%	0.42%	CM-60	
CXMOLE	*Carex molesta*	Field Oval Sedge	25,000	3.00	0.19	0.63%	0.53%	CM-60	
CXSCOP	*Carex scoparia*	Lance-fruited Oval Sedge	84,000	1.00	0.06	0.21%	0.59%	CM-60	
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	100,000	8.00	0.50	1.69%	5.61%	CM-60	
ELEPAL	*Eleocharis palustris*	Great Spike Rush	51,000	6.00	0.38	1.27%	2.15%	CM-60	
ELYCAN	*Elymus canadensis*	Canada Wild Rye	5,200	32.00	2.00	6.75%	1.17%	N/A	
ELYVIR	*Elymus virginicus*	Virginia Wild Rye	4,200	48.00	3.00	10.13%	1.41%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	3,200,000	1.00	0.06	0.21%	22.44%	CM-60	
PANVIR	*Panicum virgatum*	Switch Grass	14,000	80.00	5.00	16.88%	7.86%	N/A	
SCHSCO	*Schizachyrium scoparium*	Little Bluestem	15,000	64.00	4.00	13.50%	6.73%	N/A	
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	460,000	1.00	0.06	0.21%	3.23%	CM-60 or M	
SCICYP	*Scirpus cyperinus*	Wool Grass	1,700,000	0.50	0.03	0.11%	5.96%	CM-60 or M	
SORNUT	*Sorghastrum nutans*	Indian Grass	12,000	16.00	1.00	3.38%	1.35%	N/A	
		Grass/Sedge Subtotals			20.844	70.36%	65.63%		

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ALLCER	*Allium cernuum*	Nodding Onion	7,600	4.00	0.25	0.84%	0.21%	CM-60	
ASCINC	*Asclepias incarnata*	Swamp Milkweed	4,800	24.00	1.50	5.06%	0.81%	CM-30	
CHAFAS	*Chamaecrista fasciculata*	Partridge Pea	2,700	16.00	1.00	3.38%	0.30%	CM-10, H, I	
CORTRI	*Coreopsis tripteris*	Tall Coreopsis	14,000	6.00	0.38	1.27%	0.59%	CM-60	
DESCAA	*Desmodium canadense*	Showy Tick Trefoil	5,500	4.00	0.25	0.84%	0.15%	I, I	
ECHPUR	*Echinacea purpurea*	Purple Coneflower	6,600	8.00	0.50	1.69%	0.37%	N/A	
ERYYUC	*Eryngium yuccifolium*	Rattlesnake Master	7,500	12.00	0.75	2.53%	0.63%	CM-60	
EUPPER	*Eupatorium perfoliatum*	Boneset	160,000	0.50	0.03	0.11%	0.56%	CM-30	
EUTGRA	*Euthamia graminifolia*	Grass-leaved Goldenrod	350,000	1.00	0.06	0.21%	2.45%	CM-60	
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	95,000	2.00	0.13	0.42%	1.33%	CM-30	
HELAUT	*Helenium autumnale*	Sneezeweed	130,000	3.00	0.19	0.63%	2.74%	N/A	
LIASPI	*Liatris spicata*	Marsh Blazing Star	11,000	2.00	0.13	0.42%	0.15%	CM-60	
MONFIS	*Monarda fistulosa*	Wild Bergamot	70,000	4.00	0.25	0.84%	1.96%	N/A	
PENDIG	*Penstemon digitalis*	Foxglove Beardtongue	130,000	4.00	0.25	0.84%	3.65%	CM-30, G	
PHYVIR	*Physostegia virginiana*	Obedient Plant	11,000	2.00	0.13	0.42%	0.15%	CM-60	
PYCVIR	*Pycnanthemum virginianum*	Virginia Mountain Mint	220,000	2.00	0.13	0.42%	3.09%	N/A	
RUDHIR	*Rudbeckia hirta*	Black-eyed Susan	92,000	8.00	0.50	1.69%	5.16%	CM-30	
RUDSUB	*Rudbeckia subtomentosa*	Sweet Black-eyed Susan	43,000	1.00	0.06	0.21%	0.30%	CM-30	
RUDTRI	*Rudbeckia triloba*	Brown-eyed Susan	34,000	3.00	0.19	0.63%	0.72%	CM-30	
SILPER	*Silphium perfoliatum*	Cup Plant	1,400	0.30	0.03	0.11%	0.00%	CM-60	
SOLRID	*Solidago riddellii*	Riddell's Goldenrod	93,000	2.00	0.13	0.42%	1.30%	CM-60	
SOLRIG	*Solidago rigida*	Stiff Goldenrod	41,000	1.50	0.09	0.32%	0.43%	CM-60	
SYMNOV	*Symphyotrichum novae-angliae*	New England Aster	66,000	6.00	0.38	1.27%	2.78%	CM-60	
THADAS	*Thalictrum dasycarpum*	Purple Meadow Rue	11,000	4.00	0.25	0.84%	0.31%	CM-60, G	
VERHAS	*Verbena hastata*	Blue Vervain	93,000	4.00	0.25	0.84%	2.61%	CM-30	
VERFAS	*Vernonia fasciculata*	Common Ironweed	24,000	4.00	0.25	0.84%	0.67%	CM-60	
ZIZAUR	*Zizia aurea*	Golden Alexanders	11,000	12.00	0.75	2.53%	0.93%	CM-60 or M, G	
		Wildflower Subtotals			8.781	29.64%	34.37%		
		Mix TOTALS			29.625	100.00%	100.00%		

Wet Prairie Seed Mix (Wet Soils)

MIX STATISTICS	
Number of Native Species in Mix	36
Native FQI	29.2
Native Mean C Value	4.9
Native Mean W Value	-3.4
Lbs/Acre of Native Seed	12.2
Seeds per Square Foot	369.9
Acres to be Planted	1.67

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX		GERMINATION	TOP SOW
						by Weight	by Seed Count		
CALCAN	*Calamagrostis canadensis*	Blue Joint Grass	280,000	1.50	0.09	0.77%	2.61%	N/A	
CXCRIS	*Carex cristatella*	Crested Oval Sedge	58,000	1.50	0.09	0.77%	0.54%	CM-60	
CXHYST	*Carex hystericina*	Porcupine Sedge	30,000	2.00	0.13	1.02%	0.37%	CM-60	
CXSTIP	*Carex stipata*	Common Fox Sedge	34,000	3.00	0.19	1.53%	0.63%	CM-60	
CXSTRI	*Carex stricta*	Common Tussock Sedge	53,000	1.00	0.06	0.51%	0.33%	CM-60	
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	100,000	8.00	0.50	4.09%	4.97%	CM-60	
ELEPAL	*Eleocharis palustris*	Great Spike Rush	51,000	2.00	0.13	1.02%	0.63%	CM-60	
ELYVIR	*Elymus virginicus*	Virginia Wild Rye	4,200	36.00	2.25	18.39%	0.94%	N/A	
GLYSTR	*Glyceria striata*	Fowl Manna Grass	90,000	2.00	0.13	1.02%	1.12%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	3,200,000	1.00	0.06	0.51%	19.86%	CM-60	
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	460,000	2.00	0.13	1.02%	5.71%	CM-60 or M	
SCICYP	*Scirpus cyperinus*	Wool Grass	1,700,000	3.00	0.19	1.53%	31.65%	CM-60 or M	
SPAPEC	*Spartina pectinata*	Cord Grass	6,600	36.00	2.25	18.39%	1.47%	N/A	
			Grass/Sedge Subtotals		6.188	50.57%	70.84%		

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX		GERMINATION	TOP SOW
						by Weight	by Seed Count		
ASCINC	*Asclepias incarnata*	Swamp Milkweed	4,800	16.00	1.00	8.17%	0.48%	CM-30	
BIDCER	*Bidens cernua*	Nodding Bur Marigold	21,000	2.00	0.13	1.02%	0.26%	CM-60	
BOLAST	*Boltonia asteroides*	False Aster	160,000	0.50	0.03	0.26%	0.50%	CM-60	
CORTRI	*Coreopsis tripteris*	Tall Coreopsis	14,000	8.00	0.50	4.09%	0.70%	CM-60	
DOEUMB	*Doellingeria umbellata*	Flat-topped Aster	67,000	0.75	0.05	0.38%	0.31%	CM-60	
ERYYUC	*Eryngium yuccifolium*	Rattlesnake Master	7,500	4.00	0.25	2.04%	0.19%	CM-60	
EUPPER	*Eupatorium perfoliatum*	Boneset	160,000	1.00	0.06	0.51%	0.99%	CM-30	
EUTGRA	*Euthamia graminifolia*	Grass-leaved Goldenrod	350,000	3.00	0.19	1.53%	6.52%	CM-60	
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	95,000	3.00	0.19	1.53%	1.77%	CM-30	
HELAUT	*Helenium autumnale*	Sneezeweed	130,000	2.00	0.13	1.02%	1.61%	N/A	
IRIVIS	*Iris virginica var. shrevei*	Southern Blue Flag	1,000	24.00	1.50	12.26%	0.15%	CM-120 or M	
LIASPI	*Liatris spicata*	Marsh Blazing Star	11,000	2.00	0.13	1.02%	0.14%	CM-60	
LYCAME	*Lycopus americanus*	Water Horehound	130,000	1.50	0.09	0.77%	1.21%	N/A	
MONFIS	*Monarda fistulosa*	Wild Bergamot	70,000	3.00	0.19	1.53%	1.30%	N/A	
PENDIG	*Penstemon digitalis*	Foxglove Beardtongue	130,000	4.00	0.25	2.04%	3.23%	CM-30, G	
PYCVIR	*Pycnanthemum virginianum*	Virginia Mountain Mint	220,000	3.00	0.19	1.53%	4.10%	N/A	
RUDFUL	*Rudbeckia fulgida*	Orange Coneflower	31,000	2.00	0.13	1.02%	0.38%	CM-60	
SILPER	*Silphium perfoliatum*	Cup Plant	1,400	1.00	0.06	0.51%	0.01%	CM-60	
SOLRID	*Solidago riddellii*	Riddell's Goldenrod	93,000	2.00	0.13	1.02%	1.15%	CM-60	
SYMNOV	*Symphyotrichum novae-angliae*	New England Aster	66,000	4.00	0.25	2.04%	1.64%	CM-60	
THADAS	*Thalictrum dasycarpum*	Purple Meadow Rue	11,000	3.00	0.19	1.53%	0.20%	CM-60, G	
VERHAS	*Verbena hastata*	Blue Vervain	93,000	3.00	0.19	1.53%	1.73%	CM-30	
VERFAS	*Vernonia fasciculata*	Common Ironweed	24,000	4.00	0.25	2.04%	0.60%	CM-60	
			Wildflower Subtotals		6.047	49.43%	29.16%		
			Mix TOTALS		12.234	100.00%	100.00%		

Shade Seed Mix (Mesic Soils)

MIX STATISTICS	
Number of Native Species in Mix	19
Native FQI	23.4
Native Mean C Value	5.4
Native Mean W Value	0.9
Lbs/Acre of Native Seed	8.9
Seeds per Square Foot	160.9
Acres to be Planted	0.0

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
BROPUB	*Bromus pubescens*	Hairy Wood Chess	7,600	8.00	0.50	5.61%	0.87%	CM-30	
CXDAVI	*Carex davisii*	Awned Graceful Sedge	9,000	3.00	0.19	2.11%	0.39%	CM-60	
CXGRAL	*Carex gracillima*	Purple-sheathed Graceful Sedge	102,000	2.00	0.13	1.40%	2.91%	CM-60	
CXSPRE	*Carex sprengelii*	Long-beaked Sedge	10,000	2.00	0.13	1.40%	0.29%	CM-60	
CXTENE	*Carex tenera*	Narrow-leaved Oval Sedge	20,000	2.00	0.13	1.40%	0.57%	CM-60	
CINARU	*Cinna arundinacea*	Stout Wood Reed	81,000	8.00	0.50	5.61%	9.25%	CM-60	
ELYHYS	*Elymus hystrix*	Bottlebrush Grass	7,600	24.00	1.50	16.84%	2.60%	N/A	
ELYVIR	*Elymus virginicus*	Virginia Wild Rye	4,200	48.00	3.00	33.68%	2.88%	N/A	
FESSUB	*Festuca subverticillata*	Nodding Fescue	20,000	5.00	0.31	3.51%	1.43%	CM-60	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	3,200,000	1.00	0.06	0.70%	45.65%	CM-60	
JUNTEN	*Juncus tenuis*	Path Rush	1,000,000	1.00	0.06	0.70%	14.27%	CM-60	
			Grass/Sedge Subtotals		6.500	72.98%	81.09%		

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
AGANEP	*Agastache nepetoides*	Yellow Giant Hyssop	90,000	2.00	0.13	1.40%	2.57%	CM-60	
AGASCR	*Agastache scrophulariaefolia*	Purple Giant Hyssop	93,000	8.00	0.50	5.61%	10.61%	CM-60	
ALLCER	*Allium cernuum*	Nodding Onion	7,600	4.00	0.25	2.81%	0.43%	CM-60	
ANECYL	*Anemone cylindrica*	Thimbleweed	26,000	1.00	0.06	0.70%	0.37%	CM-60	
AQUCAN	*Aquilegia canadensis*	Wild Columbine	38,000	6.00	0.38	4.21%	3.25%	CM-60	
CAMAME	*Campanulastrum americanum*	American Bellflower	170,000	5.00	0.31	3.51%	12.13%	CM-30	
HELSTR	*Helianthus strumosus*	Pale-leaved Sunflower	4,200	6.00	0.38	4.21%	0.36%	CM-30	
RUDTRI	*Rudbeckia triloba*	Brown-eyed Susan	34,000	4.00	0.25	2.81%	1.94%	CM-30	
SCRMAR	*Scrophularia marilandica*	Late Figwort	170,000	1.00	0.06	0.70%	2.43%	CM-60?	
SOLULM	*Solidago ulmifolia*	Elm-leaved Goldenrod	130,000	3.00	0.19	2.11%	5.56%	CM-60	
SYMDRU	*Symphyotrichum drummondii*	Drummond's Aster	80,000	3.00	0.19	2.11%	3.42%	N/A	
SYMSHO	*Symphyotrichum shortii*	Short's Aster	60,000	2.50	0.16	1.75%	2.14%	CM-30	
THADAS	*Thalictrum dasycarpum*	Purple Meadow Rue	11,000	8.00	0.50	5.61%	1.26%	CM-60, G	
THADIO	*Thalictrum dioicum*	Early Meadow Rue	7,300	1.00	0.06	0.70%	0.10%	CM-60	
VERALT	*Verbesina alternifolia*	Wingstem	9,000	16.00	1.00	11.23%	2.05%	CM-30	
			Wildflowers Subtotals		2.406	27.02%	18.91%		
			Mix TOTALS		8.906	100.00%	100.00%		

Shoreline Seed Mix (Saturated Soils)

MIX STATISTICS	
Number of Native Species in Mix	41
Native FQI	31.4
Native Mean C Value	4.9
Native Mean W Value	-4.5
Lbs/Acre of Native Seed	11.1
Seeds per Square Foot	180.5
Acres to be Planted	0.24

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
CALCAN	*Calamagrostis canadensis*	Blue Joint Grass	280,000	1.00	0.06	0.56%	3.56%	N/A	
CXCOMO	*Carex comosa*	Bristly Sedge	30,000	3.00	0.19	1.69%	1.14%	CM-60	
CXCRIS	*Carex cristatella*	Crested Oval Sedge	58,000	1.00	0.06	0.56%	0.74%	CM-60	
CXHYST	*Carex hystericina*	Porcupine Sedge	30,000	4.00	0.25	2.26%	1.53%	CM-60	
CXSTIP	*Carex stipata*	Common Fox Sedge	34,000	4.00	0.25	2.26%	1.73%	CM-60	
CXSTRI	*Carex stricta*	Common Tussock Sedge	53,000	2.00	0.13	1.13%	1.35%	CM-60	
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	100,000	12.00	0.75	6.77%	15.26%	CM-60	
ELEPAL	*Eleocharis palustris*	Great Spike Rush	51,000	2.00	0.13	1.13%	1.30%	CM-60	
GLYSTR	*Glyceria striata*	Fowl Manna Grass	90,000	1.00	0.06	0.56%	1.14%	N/A	
JUNDUD	*Juncus dudleyi*	Dudley's Rush	3,200,000	0.125	0.01	0.07%	5.09%	CM-60	
JUNEFF	*Juncus effusus*	Common Rush	1,000,000	0.50	0.03	0.28%	6.36%	CM-60	
LEEORY	*Leersia oryzoides*	Rice Cut Grass	34,000	6.00	0.38	3.39%	2.59%	N/A	
SCHPUP	*Schoenoplectus pungens var. pungens*	Chairmaker's Rush	12,000	2.00	0.13	1.13%	0.31%	CM-60	
SCHTAB	*Schoenoplectus tabernaemontani*	Great Bulrush	31,000	2.00	0.13	1.13%	0.79%	CM-60	
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	460,000	0.50	0.03	0.28%	2.93%	CM-60 or M	
SCICYP	*Scirpus cyperinus*	Wool Grass	1,700,000	0.125	0.01	0.07%	2.70%	CM-60 or M	
SPAPEC	*Spartina pectinata*	Cord Grass	6,600	24.00	1.50	13.55%	2.01%	N/A	
			Grass/Sedge Subtotals		4.078	36.84%	50.53%		

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count	GERMINATION	TOP SOW
ACOCAL	*Acorus calamus*	Sweet Flag	6,800	12.00	0.75	6.77%	1.04%	CM-60	
ALISUB	*Alisma subcordatum*	Mud Plantain	60,000	4.00	0.25	2.26%	3.05%	CM-30	
ASCINC	*Asclepias incarnata*	Swamp Milkweed	4,800	24.00	1.50	13.55%	1.47%	CM-30	
BIDCER	*Bidens cernua*	Nodding Bur Marigold	21,000	6.00	0.38	3.39%	1.60%	CM-60	
BOLAST	*Boltonia asteroides*	False Aster	160,000	0.75	0.05	0.42%	1.53%	CM-60	
CHEGLA	*Chelone glabra*	Turtlehead	92,000	2.00	0.13	1.13%	2.34%	CM-120 or M	
EUPPER	*Eupatorium perfoliatum*	Boneset	160,000	1.00	0.06	0.56%	2.03%	CM-30	
EUTGRA	*Euthamia graminifolia*	Grass-leaved Goldenrod	350,000	0.25	0.02	0.14%	1.11%	CM-60	
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	95,000	2.00	0.13	1.13%	2.42%	CM-30	
HELAUT	*Helenium autumnale*	Sneezeweed	130,000	1.00	0.06	0.56%	1.65%	N/A	
HIBLAE	*Hibiscus laevis*	Halberd-leaved Rose Mallow	2,800	16.00	1.00	9.03%	0.57%	CM-60	
IRIVIS	*Iris virginica var. shrevei*	Southern Blue Flag	1,000	24.00	1.50	13.55%	0.31%	CM-120 or M	
LOBCAR	*Lobelia cardinalis*	Cardinal Flower	400,000	1.00	0.06	0.56%	5.09%	CM-60	
LOBSIP	*Lobelia siphilitica*	Great Blue Lobelia	500,000	1.00	0.06	0.56%	6.36%	CM-60	
MIMRIN	*Mimulus ringens*	Monkey Flower	2,300,000	0.125	0.01	0.07%	3.66%	CM-60	
PENSED	*Pentharum sedoides*	Ditch Stonecrop	1,300,000	0.250	0.02	0.14%	4.13%	CM-60	
PHYVIR	*Physostegia virginiana*	Obedient Plant	11,000	2.00	0.13	1.13%	0.28%	CM-60	
SAGLAT	*Sagittaria latifolia*	Common Arrowhead	61,000	2.00	0.13	1.13%	1.55%	CM-60	
SCULAT	*Scutellaria lateriflora*	Mad-dog Skullcap	65,000	2.00	0.13	1.13%	1.65%	CM-60	
SILPER	*Silphium perfoliatum*	Cup Plant	1,400	0.50	0.03	0.28%	0.01%	CM-60	
SOLRID	*Solidago riddellii*	Riddell's Goldenrod	93,000	2.00	0.13	1.13%	2.37%	CM-60	
SYMNOV	*Symphyotrichum novae-angliae*	New England Aster	66,000	2.00	0.13	1.13%	1.68%	CM-60	
VERFAS	*Vernonia fasciculata*	Common Ironweed	24,000	4.00	0.25	2.26%	1.22%	CM-60	
VERHAS	*Verbena hastata*	Blue Vervain	93,000	2.00	0.13	1.13%	2.37%	CM-30	
			Wildflower Subtotals		6.992	63.16%	49.47%		
			Mix TOTALS		11.070	100.00%	100.00%		

Shoreline Plug Mix

MIX STATISTICS	
Number of Native Species in Mix	15
Native FQI	28.2
Native Mean C Value	5.3
Native Mean W Value	-4.9
Total # of Plants in Mix	5092.0

Grasses, Sedges, & Rushes

CODE	SCIENTIFIC NAME	COMMON NAME	SIZE	PLANTS/ FLAT	# OF FLATS	# OF PLANTS	% OF TOTAL	NOTE*
BOLFLU	*Bolboschoenus fluviatilis*	River Bulrush	plug	38	10.00	380.00	7.46%	A. Rhizomatous
CALCAN	*Calamagrostis canadensis*	Blue Joint Grass	plug	38	5.00	190.00	3.73%	A. Rhizomatous
CXCOMO	*Carex comosa*	Bristly Sedge	plug	38	2.00	76.00	1.49%	S. Rhizomatous
CXLACU	*Carex lacustris*	Common Lake Sedge	plug	38	5.00	190.00	3.73%	A. Rhizomatous
CXLUPN	*Carex lupulina*	Common Hop Sedge	plug	38	2.00	76.00	1.49%	S. Rhizomatous
CXSTRI	*Carex stricta*	Common Tussock Sedge	plug	38	12.00	456.00	8.96%	Rhizomatous
CXTRIC	*Carex trichocarpa*	Hairy-fruited Lake Sedge	plug	38	5.00	190.00	3.73%	A. Rhizomatous
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	plug	38	2.00	76.00	1.49%	Rhizomatous
JUNEFF	*Juncus effusus*	Common Rush	plug	38	2.00	76.00	1.49%	S. Rhizomatous
LEEORY	*Leersia oryzoides*	Rice Cut Grass	plug	38	5.00	190.00	3.73%	A. Rhizomatous
SCHTAB	*Schoenoplectus tabernaemontani*	Great Bulrush	plug	38	10.00	380.00	7.46%	A. Rhizomatous
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	plug	38	2.00	76.00	1.49%	Rhizomatous
SCICYP	*Scirpus cyperinus*	Wool Grass	plug	38	1.00	38.00	0.75%	S. Rhizomatous
			Grass/Sedge Subtotals		63.00	2,394.00	47.01%	

Wildflowers

CODE	SCIENTIFIC NAME	COMMON NAME	SIZE	PLANTS/ FLAT	# OF FLATS	# OF PLANTS	% OF TOTAL	NOTE*
ACOAME	*Acorus americanus*	American Sweet Flag	plug	38	2.00	76.00	1.49%	
ALISUB	*Alisma subcordatum*	Mud Plantain	plug	38	5.00	190.00	3.73%	A. Rhizomatous
ASCINC	*Asclepias incarnata*	Swamp Milkweed	plug	38	2.00	76.00	1.49%	S. Rhizomatous
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	plug	38	2.00	76.00	1.49%	A. Rhizomatous
HIBLAE	*Hibiscus laevis*	Halberd-leaved Rose Mallow	plug	38	2.00	76.00	1.49%	S. Rhizomatous
IRIVIS	*Iris virginica var. shrevei*	Southern Blue Flag	plug	38	10.00	380.00	7.46%	Rhizomatous
LOBCAR	*Lobelia cardinalis*	Cardinal Flower	plug	38	2.00	76.00	1.49%	
LYCAME	*Lycopus americanus*	Water Horehound	plug	38	2.00	76.00	1.49%	S. Rhizomatous
LYTALA	*Lythrum alatum*	Winged Loosestrife	plug	38	2.00	76.00	1.49%	Rhizomatous
MIMRIN	*Mimulus ringens*	Monkey Flower	plug	38	1.00	38.00	0.75%	Rhizomatous
PERHYD	*Persicaria hydropiperoides*	Swamp Smartweed	plug	38	3.00	114.00	2.24%	
PONCOR	*Pontederia cordata*	Pickerelweed	plug	38	15.00	570.00	11.19%	Rhizomatous
SAGLAT	*Sagittaria latifolia*	Common Arrowhead	plug	38	15.00	570.00	11.19%	Rhizomatous
SOLRID	*Solidago riddellii*	Riddell's Goldenrod	plug	38	3.00	114.00	2.24%	S. Rhizomatous
SPAEUR	*Sparganium eurycarpum*	Great Bur Reed	plug	38	5.00	190.00	3.73%	Rhizomatous
			Wildflower Subtotals		71.00	2,698.00	52.99%	
			Mix TOTALS		134.00	5,092.00	100.00%	

Pod Planting Plug Mix (0-6" Water Depth)

MIX STATISTICS	
Number of Native Species in Mix	23
Native FQI	29.0
Native Mean C Value	5.3
Native Mean W Value	-4.9
Total # of Plants in Mix	2432.0

CODE	SCIENTIFIC NAME	COMMON NAME	SIZE	PLANTS/ FLAT	# OF FLATS	# OF PLANTS	% OF TOTAL	NOTE
BOLFLU	*Bolboschoenus fluviatilis*	River Bulrush	plug	38	5.00	190.00	7.81%	A. Rhizomatous
CALCAN	*Calamagrostis canadensis*	Blue Joint Grass	plug	38	2.00	76.00	3.13%	A. Rhizomatous
CXLACU	*Carex lacustris*	Common Lake Sedge	plug	38	1.00	38.00	1.56%	A. Rhizomatous
CXTRIC	*Carex trichocarpa*	Hairy-fruited Lake Sedge	plug	38	1.00	38.00	1.56%	A. Rhizomatous
LEEORY	*Leersia oryzoides*	Rice Cut Grass	plug	38	2.00	76.00	3.13%	A. Rhizomatous
SCHTAB	*Schoenoplectus tabernaemontani*	Great Bulrush	plug	38	5.00	190.00	7.81%	A. Rhizomatous
SCHPUN	*Scirpus pungens*	Chairmaker's Rush	plug	38	1.00	38.00	1.56%	A. Rhizomatous
ACOCAL	*Acorus calamus*	Sweet Flag	plug	38	1.00	38.00	1.56%	Rhizomatous
ALISUB	*Alisma subcordatum*	Mud Plantain	plug	38	4.00	152.00	6.25%	A. Rhizomatous
ASCINC	*Asclepias incarnata*	Swamp Milkweed	plug	38	2.00	76.00	3.13%	S. Rhizomatous
CXCOMO	*Carex comosa*	Bristly Sedge	plug	38	1.00	38.00	1.56%	S. Rhizomatous
CXHYST	*Carex hystericina*	Porcupine Sedge	plug	38	1.00	38.00	1.56%	S. Rhizomatous
CXLUPN	*Carex lupulina*	Common Hop Sedge	plug	38	1.00	38.00	1.56%	Rhizomatous
CXSTRI	*Carex stricta*	Common Tussock Sedge	plug	38	1.00	38.00	1.56%	Rhizomatous
CXVULP	*Carex vulpinoidea*	Brown Fox Sedge	plug	38	1.00	38.00	1.56%	A. Rhizomatous
EUTMAC	*Eutrochium maculatum*	Spotted Joe Pye Weed	plug	38	1.00	38.00	1.56%	S. Rhizomatous
HIBLAE	*Hibiscus laevis*	Halberd-leaved Rose Mallow	plug	38	5.00	190.00	7.81%	Rhizomatous
IRIVIS	*Iris virginica var. shrevei*	Southern Blue Flag	plug	38	3.00	114.00	4.69%	S. Rhizomatous
JUNEFF	*Juncus effusus*	Common Rush	plug	38	1.00	38.00	1.56%	
LOBCAR	*Lobelia cardinalis*	Cardinal Flower	plug	38	1.00	38.00	1.56%	S. Rhizomatous
LYCAME	*Lycopus americanus*	Water Horehound	plug	38	1.00	38.00	1.56%	Rhizomatous
LYTALA	*Lythrum alatum*	Winged Loosestrife	plug	38	1.00	38.00	1.56%	Rhizomatous
MIMRIN	*Mimulus ringens*	Monkey Flower	plug	38	2.00	76.00	3.13%	
PERHYD	*Persicaria hydropiperoides*	Swamp Smartweed	plug	38	7.00	266.00	10.94%	Rhizomatous
PONCOR	*Pontederia cordata*	Pickerelweed	plug	38	7.00	266.00	10.94%	Rhizomatous
SAGLAT	*Sagittaria latifolia*	Common Arrowhead	plug	38	1.00	38.00	1.56%	Rhizomatous
SCIATR	*Scirpus atrovirens*	Dark-green Bulrush	plug	38	1.00	38.00	1.56%	S. Rhizomatous
SCICYP	*Scirpus cyperinus*	Wool Grass	plug	38	1.00	38.00	1.56%	S. Rhizomatous
SOLRID	*Solidago riddellii*	Riddell's Goldenrod	plug	38	2.00	76.00	3.13%	Rhizomatous
SPAEUR	*Sparganium eurycarpum*	Great Bur Reed	Mix TOTALS		64.00	2,432.00	73.44%	

END OF EXHIBIT B

PRE-APPROVED NATIVE PLANT NURSERIES

APPENDIX - C

Native Seed

Agrecol, Inc., Evansville, WI
Phone: (608) 223-3571

Prairie Moon Nursery, Winona, MN
Phone: (507) 452-1362

Shooting Star Native Seeds, Spring Grove, MN
Phone: (507) 498-3944

Native Plugs

Agrecol, Inc., Evansville, WI
Phone: (608) 223-3571

Midwest Natural Garden, St. Charles, IL
Phone: (847) 742-1792

Pizzo Native Plant Nursery, LLC, Leland, IL
Phone: (815) 495-2300

GLOSSARY

APPENDIX - D

NATURAL AREAS ESTABLISHMENT PROVISIONS

Acceptable Species: Vegetative species that have been seeded or planted as specified and/or volunteer native species with a C-value of 2 or greater, except for any of those species listed in Appendix-A.

Aerial coverage: The vegetation covering the ground surface above the ground surface; including all leaves, stems, flower parts, etc. Aerial coverage can be visualized by considering a bird's-eye view of the vegetation.

Density: Numbers of individuals or stems per unit area.

Dominant Species: Plant species or species groups, which by means of their number, coverage or size, have considerable influence or control upon the conditions or existence of associated species.

Erosion: The washing away or dislodging of soil by water, wind or ice.

Established: Establish is defined in botany as a species being allowed to thrive and reproduce.

Growing Season: The part of a calendar year during which rainfall and temperature allow plants to grow. In the Midwest the growing season typically occurs between the months of April thru October.

Invasive Species: An undesirable non-native species, that competes with desirable, native plants and animals for light, space, water, food and nutrients. An invasive species, left untreated, will destroy the integrity of an ecosystem and will often become the only plant or animal inhabiting a particular landscape.

Native Species: 1) an indigenous species that is normally found as part of a particular ecosystem. 2) a species that was present in a defined North American area prior to European settlement.

Ocular Assessment: The act of making a professional judgment about something based on what is physically seen by the observer's eyes.

Plant Community: A group of plants that need a particular set of environmental conditions (i.e. light, soil type, moisture) in order to thrive. Examples include dry prairie, mesic prairie, wet prairie, wetland, emergent, savanna, dry-mesic woodland, etc.

Planting Area: The physical area(s) of a project site receiving site preparation, planting and/or stewardship activities. A plant community may consist of multiple planting areas.

Quadrat: Small areas of a standard size placed along transects or selected at random to act as representative samples for assessing the local distribution of plants or animals.

Remnant: A surviving trace or vestige of vegetation that has remained undisturbed or minimally undisturbed since European settlement. Remnant habitats are often found in fragmented form dissected by human development with a highly diverse number of native plants or native indicator species.

Transect: A straight line through a natural feature or across the earth's surface, along which observations are made or measurements taken.

Vegetative Cover: See aerial coverage.

Vigorous: Well-rooted in soil and displaying healthy, strong vegetative growth.

NATURAL AREAS ESTABLISHMENT PROVISIONS

BID SUBMITTAL DOCUMENTS

APPENDIX - E

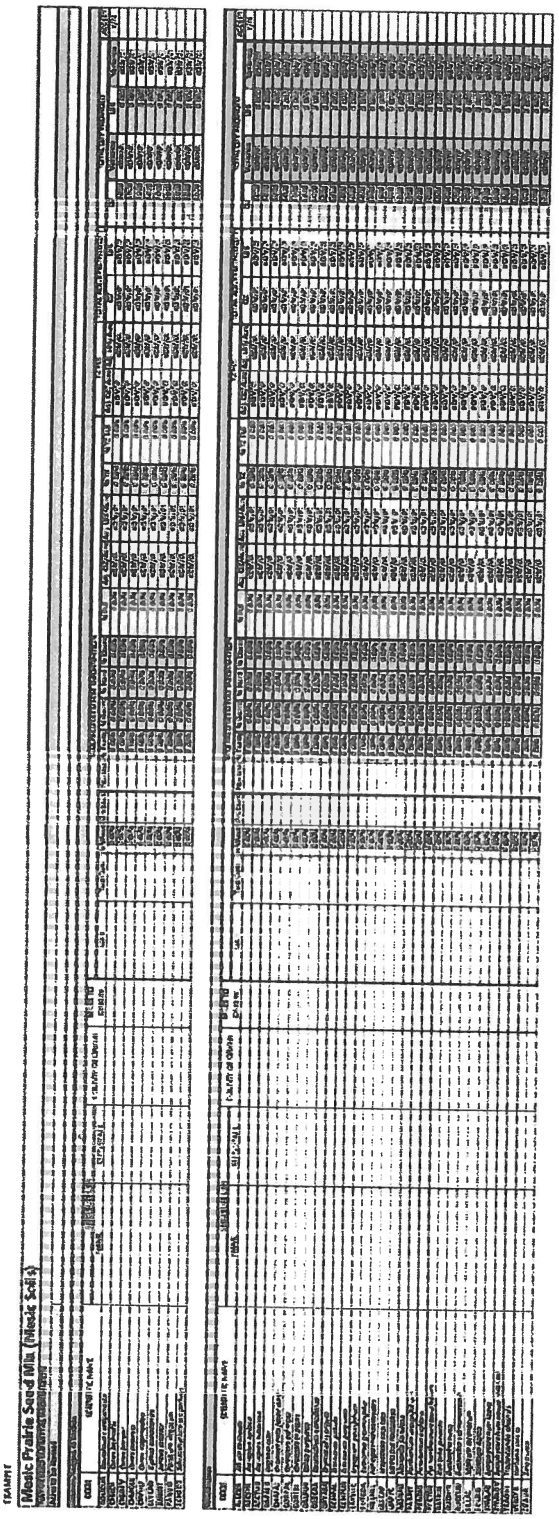
PROPOSED EQUIPMENT SCHEDULE

TYPE OF EQUIPMENT	PROPOSED TASK(S)	OWNED?	
		YES	NO
EXAMPLE – Tractor w/3-point	Mowing/Seeding	X	

NATURAL AREAS ESTABLISHMENT PROVISIONS

PROPOSED STAFF SCHEDULE

EMPLOYEE NAME	PROPOSED TASK(S)	YEARS EXPERIENCE	
		TOTAL	w/FIRM
EXAMPLE – John Smith	Foreman	10	6



FAIRFIELD GLEN RESTORATION

LANDSCAPE SPECIFICATIONS

SECTION 12 93 00
SITE FURNISHINGS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes site furnishings as indicated.

1. Backed Bench

1.2 SUBMITTALS

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

B. Samples: For each exposed finish, not less than 12-inch long tubular sections, or other samples indicating material finish and color.

C. Maintenance Data: To include in maintenance manuals. Include manufacturer's recommended methods for repairing damage to the finish. Include cleaning procedures or products that may be detrimental to surface finish.

1.3 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

B. Anchors: Furnish not less than five (5) percent of quantity installed of each type.

PART 2 - PRODUCTS

2.1 BACKED BENCH

A. Design is based upon Model: Austin, backed bench, surface mount, aluminum, end arm rest. Manufactured by Landscape Forms, 431 Lawndale Ave. Kalamazoo, MI 49048, USA, 800-430-6209, specify@landscapeforms.com, and distributed locally by Jennifer Woods, 800-430-6206 x 1336, jenniferw@landscapeforms.com.

1. Or approved equal will be considered subject to meeting the performance criteria specified herein and as indicated on the drawings.

B. Benches shall be supplied as 6' long.

C. Bench shall be surface mounting on concrete footings as shown on the drawings and per manufacturer's specifications.

D. Bench frame shall be aluminum, color: Titanium.

E. Finish: Landscape Forms' Pangard II® polyester powder coat.

F. Benches shall be supplied with ipe wood slats with matching end armrests and center armrest.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.

B. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated.

B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.

C. Install site furnishings level, plumb, true, and securely anchored at locations indicated in the Drawings.

D. Fit exposed connections accurately together to form tight, hairline joints.

E. Perform cutting, drilling, and fitting required for installation of site furnishings.

F. Set work accurately in location, alignment and elevation plumb, level, true, non-rocking and free of rack, measured from established lines and levels. Do not weld, cut, or abrade surfaces of components which have been coated or finished after fabrication, and are intended for field connection by mechanical means without further cutting or fitting.

3.3 ADJUSTMENT AND CLEANING

A. Protect finishes of all items from damage during construction by use of temporary protective coverings approved by manufacturers. Remove protective covering immediately before Preliminary Acceptance / Substantial Completion.

1. Restore finishes damaged during installation and construction period so that no evidence remains of correction work. Return items which cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units as required.

END OF SECTION

SECTION 32 15 00

STABILIZED PATHWAY MIX

PART 1 - GENERAL

1.1 WORK INCLUDES

B. Base Bid:

1. General Contractor Provide:

a. Stabilized Pathway Mix

1.2 RELATED WORK

A. Specified Elsewhere: Requirements that relate to this section are included but not limited to the sections below.

B. Division 1 section for:

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

C. Division 03 section for:

1. Section 03 30 00 "Cast-in-Place Concrete" for general applications of concrete.

D. Division 31 section for:

1. Section 31 00 00 "Earthwork" for preparation of subgrade and base course.

E. Divisions 32 section for:

1. Section 32 13 00 "Portland Cement Concrete Paving" for cast-in-place concrete pavement with other finishes.

1.3 PERFORMANCE REQUIREMENTS

A. Perform gradation of decomposed granite material or 3/8" or 1/4" minus crushed aggregate in accordance with ASTM C 136 – Method for Sieve Analysis for Fine and Course.

1.4 ACTION SUBMITTALS

A. Products Data: For each product specified. Submit a 5 lb. sample and sieve analysis for grading of decomposed granite or crushed 3/8" or 1/4" minus aggregate to be sent to Stabilizer Solutions, Inc. prior to any construction – (allow 2 week turn around). Must be approved by Landscape Architect and owner.

B. Shop Drawings: Show details of installation, including plans and sections.

1.5 PROJECT/SITE CONDITIONS

A. Field Measurements: Each bidder is required to visit the site of the Work to verify the existing conditions. No adjustments will be made to the Contract Sum for variations in the existing conditions.

1. Where surfacing is indicated to fit with other construction, verify dimensions of other construction by field measurements before proceeding with the work.

B. Environmental Limitations: Do not install decomposed granite or crushed 3/8" or 1/4" minus aggregate paving during rainy conditions or below 40 degrees Fahrenheit and falling.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Installer to provide evidence to indicate successful experience in providing decomposed granite or crushed 3/8" or 1/4" minus aggregate paving containing Stabilizer binder additive

B. Mock-ups: Install 4 ft. wide x 10 ft. long mock-up of decomposed granite or 3/8" or 1/4" minus crushed aggregate paving with Stabilizer additive at location as directed by owner's representative.

1.7 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Submit a written warranty executed by the installer agreeing to repair or replace components of stabilized surfacing that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:

1. Premature wear and tear, provided the material is maintained in accordance with manufacturer's written maintenance instructions.
2. Failure of system to meet performance requirements.

C. Warranty Period: Contractor shall provide warranty for performance of product. Contractor shall warranty installation of product for the time of one year from completion.

D. Contractor shall provide, for a period of sixty days, unconditional maintenance and repairs as required.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Stabilizer for crushed stone surfaces provided by the following manufacturers:

1. Kafka Granite. 550 East Highway 153, Mosinee, WI 54455. Phone (715) 687-2423; fax (715) 687-2395; Rep: Dan Steidl, Cell: 715-316-3956, email dan@kafkagranite.com
2. Envirobond Products Corporation. 1530 Drew Rd., Suite 17, Mississauga, ON Canada L5S 1W8. Phone 1-866-636-8476; email info@envirobond.com
3. Technisoil North America, LLC. Supplied locally by Lafarge Fox River Stone. 1300 Route 31, South Elgin, IL 60177. phone (847) 888-6133; fax (847) 742-6282.

2.2 MATERIALS

A. Decomposed Granite or 3/8" or 1/4" crushed aggregate screenings

1. Crushed Stone Sieve Analysis Percentage of Weight Passing a Square Mesh Sieve AASHTO T11-82 and T27-82.

1/4" MINUS AGGREGATE GRADATION

U.S. Sieve No.	Percent Passing by Weight
# 3/8"	100
# 4	90 – 100
# 8	75 – 80
# 16	55 – 65
# 30	40 – 50
# 50	25 – 35
# 100	15 – 20
# 200 to	10 – 15

2. Color: Cherry Creek Granite

B. Stabilized Binder

1. Non-toxic, organic binder that is a colorless and odorless concentrated powder that binds decomposed granite or crushed 3/8" or 1/4" minus aggregate.

2.3 METAL EDGING

A. Metal Edge Restraint

1. Product: Border King, 1/4" thick, 5" high with stakes 3/16" thick 15" long, finish: galvanized or approved equal
2. Submittals: Submit 3 - 12" long samples of the edging with finish coat.

3. Installation: Edge restraint must be located according to the plans. Install per Manufacturers recommendations.

2.4 EXCESS MATERIALS

A. Provide owner's authorized representative with the following excess materials for use in future decomposed granite or 3/8" or 1/4" minus crushed aggregate paving repair: 40 to 50 lb. Bags of the aggregate paving blended with proper amount of Stabilizer.

PART 3 - EXECUTION

3.1 BLENDING STABILIZER

A. Blend 12 to 16 lbs OrganicLock Stabilizer per 1-ton of decomposed granite or crushed 3/8" or ¼" minus aggregate screenings. It is critical that Stabilizer be thoroughly and uniformly mixed throughout decomposed granite or crushed ¼" or 3/8" minus aggregate screenings.

B. Using a moisture-reader, pre-hydrate the aggregate/binder mix to achieve a moisture content of 10-12% after hydration. Do not over-water.

3.2 PLACEMENT

A. After pre-blending, place the Stabilized decomposed aggregate or 3/8" or ¼" crushed aggregate screenings on prepared sub-grade. Level to desired grade and cross section.

B. Place in (2) two equal 2" lifts.

C. Depth of pathways – 4" for heavy foot traffic and light vehicles.

3.3 WATERING

A. Water heavily to achieve full depth moisture penetration of the Stabilized pathway Profile. Water activates Stabilizer. To achieve saturation of Stabilized pathway Profile, 25 to 45 gallons of water per 1-ton must be applied. During water application randomly test for depth using a probing device to the final depth.

3.4 COMPACTION

A. Upon thorough moisture penetration, compact aggregate screenings to 85% relative compaction by compaction equipment such as; a 2 to 4-ton double drum roller. Do not begin compaction for 6 hours after placement and up to 48 hours.

B. Take care in compacting decomposed granite or crushed 3/8" or ¼" minus aggregate screenings when adjacent to planting and irrigation systems. Hand tamping with 8" or 10" hand tamp recommended.

3.5 INSPECTION

A. Finished surface of pathway shall be smooth, uniform and solid. There shall be no evidence of chipping or cracking. Cured and compacted pathway shall be firm throughout profile with no

spongy areas. Loose material shall not be present on the surface. Any significant irregularities in path surface shall be repaired to the uniformity of entire installation.

3.6 MAINTENANCE

A. Remove debris, such as paper, grass clippings, leaves or other organic material by mechanically blowing or hand raking the surface as needed. Any plowing program required during winter months shall involve the use of a rubber baffle on the plow blade or wheels on the plow that lifts the blade 1/4" off the paving surface.

B. During the first year, a minor amount of loose aggregate will appear on the paving surface (1/16" to 1/4"). If this material exceeds a 1/4", redistribute the material over the entire surface. Water thoroughly to the depth of 1". This process should be repeated as needed.

C. If cracking occurs, simply sweep fines into the cracks, water thoroughly and hand tamp with an 8" – 10" hand tamp plate.

3.7 REPAIRS

A. Excavate damaged area to the depth of the Stabilized aggregate and square off sidewalls.

B. If area is dry, moisten damaged portion lightly.

C. Pre-bend the dry required amount of Stabilizer powder with the proper amount of aggregate in a concrete mixer.

D. Add water to the pre-blended aggregate and Stabilizer. Thoroughly moisten mix with 25 to 45 gallons per 1-ton of pre-blended material or to approximately 10% moisture content.

E. Apply moistened pre-blended aggregate to excavated area to finish grade.

F. Compact with an 8" to 10" hand tamp or 250 to 300 pound roller. Keep traffic off areas for 12 to 48 hours after repair has been completed.

3.8 CLEANING

A. Construction Waste Management

1. At the end of each work day, recycle or dispose of unused material, debris and containers in accordance with Division 1 Section "Construction Waste Management and Disposal".

END OF SECTION

SECTION 32 31 38

INTERPRETATIVE SIGN

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. High Pressure Laminate signs.

B. Support posts made from heavy gauge aluminum.

C. Fasteners and accessories.

1.2 RELATED SECTIONS

A. Section 33000: Cast-in-place concrete

B. Section 55000 – Metal Fabrications

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

1.3 REFERENCES

A. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics; 1997.

B. ASTM D 746 - Standard Test method for Brittleness Temperature of Plastics and Elastomers by Impact; 1998.

C. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 1997.

D. ASTM D 1505 - Standard Test Method for Density of Plastics by the Density-Gradient Technique; 1998.

E. ASTM D 1822 - Standard Test Method for Tensile-Impact Energy to Break Plastics and Electrical Insulating Materials; 1993.

F. ASTM D 2240 - Standard Test Method for Rubber Property -- Durometer Hardness; 1997.

G. ASTM D 6108 - Standard Test Method for Compressive Properties of Unreinforced and Reinforced Plastic Lumber; 1997.

H. ASTM D 6109 - Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastic Lumber; 1997.

I. ASTM D 6111 - Test Method for Bulk Density and Specific Gravity of Plastic Lumber and Shapes by Displacement; 1997.

1.4 SUBMITTALS

A. Product Data: Manufacturer's data sheets on signage and mounting materials, including installation methods.

B. Shop Drawings: Submit shop drawings for custom architectural signs, precise dimensions, and installation details.

C. Selection Samples: For each sign type specified, one catalog showing manufacturer's full range of available color combinations.

D. Certification: Manufacturer's certification that products furnished comply with specified requirements.

1.5 QUALITY ASSURANCE

A. Artwork: Architect will furnish camera-ready artwork for use in fabricating signs. Artwork will consist of clean full color images with maximum image area of 8 by 10, either in paper originals or in IBM-compatible electronic files in .eps, .tif, or .jpg format.

B. Artwork: To be developed by sign manufacturer from copy provided by Architect.

C. Mock-Up: Provide one complete sign of type required.
   1. Do not proceed with fabrication of remaining signage until workmanship, colors, and installation are approved by Architect.
   2. Approved mockup may be incorporated into the finished work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

B. Store materials protection from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer. Prevent contact with materials that may cause corrosion, discoloration, or staining. Store off the ground in a safe, dry place.

C. Handle signs in manner not to damage or mar sign surfaces.

1.7 WARRANTY

A. 10 year

1.8 SEQUENCING

A. Comply with manufacturer's ordering instructions and lead time requirements to avoid delays.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Genesis Graphics, Inc.1823 7th Av. N. Escanaba, Michigan 49829 ph. 800-659-7734 fax. 906-786-0614 Locally Represented by Joan Ball, Genesis Graphics, Inc. 1823 7th Avenue North Escanaba, MI 49829 tel. 1-800-659-7734

B. Acceptable others
1. KVO Industries, Inc. | 1825 Empire Industrial Ct. Suite A | Santa Rosa CA 95403 P 707 573 6868 | F 707 573 6888
2. The Plastic Lumber Company, Inc.; 540 South Main Street, Building 7; Akron, Ohio 44311-1023. Telephone: 330-762-8989. Fax: 330-762-1613. Email: sales@plasticlumber.com. Websites: www.plasticlumber.com and www.simplesigns.com.

2.2 MATERIALS

A. High Pressure Laminate (dHPL)
1. Graphic imaging surface paper impregnated with melamine resins and combined with kraft paper core sheets impregnated with phenolic resins. These sheets are then bonded under high pressure and temperature. Finished sheets are then cut and edge finished.
2. Maximum sheet size is 5X12 ft. with maximum image size of 58X142 in.
   a. Thicknesses: 1/2 in.
   b. Sign Size: 8" x 10" x ½" with threaded inserts for mounting.
   c. Corners: Radius of ½"

B. Heavy Gauged Aluminum Post
1. 3" x 3" x 60" aluminum post with 6" x 6" plate. 6" x 6" plate shall be mounted at 45 deg angle to post.
2. Powdercoated black.

C. Fasteners
1. Bolts shall be black, tamper resistant.

2.3 Concrete footing

A. Provide 3000 PSI air entrained ready-mixed concrete conforming to ASTM C-94-, maximum 3" slump.

2.4 FABRICATION

A. Custom Architectural Signs: Fabricate to design provided by AOR.
1. Digital files shall be supplied from AOR that indicate: Size, Sign Message, Letter Height and color.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that areas to receive signage are properly prepared.

3.2 INSTALLATION

A. Install signs at locations indicated and in accordance with manufacturer's instructions and approved shop drawings.

B. In undisturbed or compacted soil, drill or hand excavate holes using post hole digger to dimensions required.

C. Set posts in proper position, plumb and not less than 3 inches (75 mm) above bottom of excavation, and place concrete around posts, vibrating or tamping for consolidation.

D. Attach signs to support posts as recommended by manufacturer. Install signs plumb, level, at proper angle to landmarks, and at heights indicated, with surfaces free from distortion.

3.3 CLEANING AND PROTECTION

A. Clean surfaces of signs that have become soiled during installation process.

B. Protect installed signs from damage until completion of project.

C. Touch-up, repair or replace damaged signs after Substantial Completion.

END OF SECTION

SECTION 32 93 11

PLANTINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes landscaping work as shown and specified.

1.2 SUBMITTALS

A. Submit list of sources for plant material to be provided.

B. Submit photographs of proposed plant material taken in the nursery where they are grown prior to requesting inspection and tagging.

C. Submit two copies of written maintenance instructions for care of installed plants.

D. Samples:

1. Submit samples and certified analyses by recognized laboratory for humus, fertilizer. Manufacturer's analysis for standard products will be acceptable.
2. For environmental analysis, submit representative soil samples (no composite samples) to a laboratory certified by the Illinois Environmental Protection Agency and provide analysis results to the Boards Authorized Representative for approval in accordance with Division 31 Section "Acceptance of Backfill, Topsoil and CU Structural Soil."
3. Review shall not be construed as final acceptance. Architect may take samples of materials delivered to site and analyze them for compliance with specifications.

E. Percolation Test results:

1. Perform percolation tests in tree pits as required by the Chicago Landscape Ordinance. Submit 5 copies of test results to Architect.

F. Comply with State of Illinois and federal laws with respect to inspection of all plants for plant diseases and insect infestation. Submit an inspection certificate, required by law to this effect, with each shipment.

G. Preinstallation Conference: Conduct preinstallation conference at the Site in compliance with requirements of Division 01 Section "Project Management and Coordination":

1. Review maintenance procedures for surrounding streets, walks, paving and site amenities.
2. Review procedures for work on public property.
3. Review plant locations and procedures for adjustment.

1.3 QUALITY ASSURANCE

A. Ability to Deliver:

1. Investigate sources of supply and confirm they can supply plants specified on plant list in sizes, variety, and quality noted and specified before submitting bid. Failure to take this precaution will not relieve responsibility for furnishing and installing plant material in accordance with Contract requirements.
2. Substitutions may be permitted only upon submission of written proof that specified plant is not obtainable locally. Such substitution may be made upon written authorization by Architect.
3. Furnish and install plants shown on drawings in quantity and size designated.

B. Inspection:

1. Submit photos of plant material as grown in the nursery for preliminary review by Architect. Select and tag plant material before requesting inspection by Architect.
2. In addition to review of plant material photographs, Architect may inspect plant material at nursery. Such inspection shall be in addition to inspection at job site.

    a. If plants and materials required to be inspected are located outside radius of 25 miles from Project site, Architect's direct and indirect cost including normal profit shall be borne and paid by Contractor.

3. Upon delivery and before planting request inspection of plants by Architect.
4. Inspection and approval is for quality, size, and variety only, and in no way impairs right of rejection for failure to meet other requirements during progress of Work.
5. Contractor shall be present during required inspection or as may be required by Architect.

C. Qualifications of installer: Work under this Section is to be performed by a Landscape Contracting firm which has a minimum of 5 years experience successfully completing projects of a similar size and value.

D. Perform planting by personnel familiar with accepted landscape planting procedures. A qualified foreman, with a minimum of 5 years experience installing plant material is to be on-site during planting procedures.

E. Reference Standards

1. Provide analyses and tests of topsoil, fertilizer and humus in accordance with requirements of Association of Official Agricultural Chemists.
2. Provide environmental analysis of topsoil to the Boards Authorized Representative 10 days before depositing any soil on site. Soil sample analysis shall not be composite samples, and shall be collected and analyzed in accordance with Division 31 Section "Acceptance of Backfill, Topsoil and CU Structural Soil." The date of the topsoil analysis report shall be within 60 days of the importing such material to the site.
3. Plant names used in plant list are in accordance with "Standardized Plant Names," published by American Joint Committee on Horticulture Nomenclature (current edition).
4. Size grading standards of plant materials shall be in accordance with American Association of Nurseryman, Inc., (AAN) Code of Standards ANSI Z60.1.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Preparation for Delivery:

1. Balled and Burlapped (B&B) Plants:

   a. Dig and prepare for shipment in manner that will not damage roots, branches, shape, and future development of plant.
   b. Originate from soil which will hold good ball when wrapped with burlap or similar material, bound with twine or cord so as to hold balls firm and intact.
   c. Ball Sizes: Not less than standard established by AAN.
   d. Drumlace plants 2 inches in caliper and over.

2. Potted or Container Plants

   a. Provide container to hold ball shape protecting root mass during delivery and handling.

B. Delivery:

1. Plant Material: Take precautions in accordance with best trade practices to ensure arrival of plant material at job site in good condition and without injury. Cover plants to prevent drying, transit disease or injury.
2. Fertilizer: Deliver fertilizer to site in original, unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to state law.
3. Notify Architect, a minimum of 24 hours before delivery of plant material.

   a. Failure to notify Architect in advance, in order to arrange proper scheduling may result in loss of time or removal of plant or plants not installed as specified or directed.

4. Each shipment shall be accompanied by invoice showing sizes and varieties of plants included in each shipment.

   a. Provide copy of invoice to Architect upon delivery of plant material.

C. Storage:

1. Plant Material:

   a. Set plants which are not to be planted within 4 hours, on ground and heal in with peat, soil, mulch or other media.
   b. Protect roots of plant material from drying or other possible injury.
   c. Water plants as necessary until planted.
   d. Plants shall not remain unplanted for longer than 3 days.

2. Store fertilizer, humus, and spray materials in weatherproof storage areas and in such manner that their effectiveness will not be impaired.

1.5 JOB CONDITIONS

A. Planting Seasons:

1. Spring Planting: From time soil becomes workable to June 15. Fall Planting: September 1 to November 15. Plant evergreen shrub plantings no later than November 1, and evergreen tree plantings no later than October 15.
2. Summer Season: June 2 through August 31. Planting shall be considered unseasonable and shall require approval by Architect. Approval to plant under such conditions shall in no way relieve Contractor from guarantee provisions of these specifications.
3. Container Plants: Planting season designated above may be extended for container grown plants when approved by Architect.

B. Plant only when weather and soil conditions are suitable in accordance with best practices of industry.

C. Protection:

1. Protect seeded and planted areas against damage by other work.
2. Replace, repair, restake or replant sod or plantings which are damaged.
3. Protect lawn areas, and repair damage resulting from planting operations.

D. Wherever landscape work is executed in conjunction with other work, arrange schedule that will permit execution of landscape work as specified.

PART 2 - PRODUCTS

2.1 PLANT

A. General:

1. Provide nursery grown plant material. Provide plants grown within same hardiness zone as project site or have been acclimated to conditions of same hardiness zone for minimum of two growing seasons. Hardiness zones shall conform to "Zones of Plant Hardiness" as provided by U.S. Department of Agriculture.
2. Unless specifically noted otherwise, provide plants of selected specimen quality, have normal habit of growth and be sound, healthy, vigorous plants with well developed root systems, free of disease, insect pests, their eggs or larvae, and injuries.
3. Do not prune before delivery. Prune only at time of planting.
4. Trees that have damaged or crooked leader, or multiple leaders, are not acceptable unless specifically specified. Trees with abrasion of bark, sun scalds, disfiguring knots, or fresh cuts of limbs over 1-1/4 inches, which have not completely calloused, are not acceptable.
5. Plants shall be freshly dug or container-grown. No heeled-in plants or plants for cold storage will be accepted, except as otherwise specified, unless Contractor makes such request in writing and plants are inspected and approved.

B. Plant Name and Size:

1. Measure plants when branches are in their normal position. Height and spread refer to plant's main body and not from branch tip to branch tip.
2. Take caliper measurement at point on trunk 6 inches above natural ground line for trees up to 4 inches in caliper and at point 12 inches above natural ground line for trees 4 inches and over in caliper.

3. If range of size is given, no plant shall be less than minimum size and not less than 50% of plants shall be as large as upper half of range specified.
4. Measurements specified are minimum size acceptable and are measurements after pruning, where pruning is required. Plants meeting measurements specified, but not producing normal balance between height and spread, are not acceptable.
5. Shrubs shall be matched specimens from single block source.
6. Plants shall be true to species and variety and shall conform to measurement specified in Plant List except that plants larger than specified may be used if approved by Architect. Use of such plants shall not result in increase in Contract price. If larger plants are approved, increase ball of earth in proportion to size of plant.
7. Where plants larger than specified have been submitted in writing for approval and approved in writing by Architect, Contractor shall assume responsibility of guarantee for plant in size as planted.

C. Balled and Burlapped Plants (Designated B&B):

1. Dig plants with firm natural balls of earth of diameter indicated below and of sufficient depth to encompass fibrous and feeding root system necessary for full recovery of plant.
2. Plants having balls broken or cracked during delivery or at time of planting will be rejected.
3. For Evergreen trees, trunk diameter shall be used to determine minimum required ball dimensions. Minimum ball dimensions shall be those as specified for single stem trees.
4. Diameter at top of each ball shall be diameter specified above and diameter at bottom of each ball shall not be less than 70% of specified top diameter. Top and bottom sources shall be parallel.
5. Ball shall be of specified depth at points perpendicular to bottom of ball.
6. Balls greater than 30 inches diameter shall be drum-laced.
7. Architect may reject any plant specified as balled and burlapped which fails to conform, in the Architect's opinion, to balling requirements set forth herein.

D. Container or Pot Grown Plants:

1. Container grown plants shall have heavy fibrous root system, or well developed taproot, that has been developed by proper horticultural practice including transplanting and root pruning.
2. Root system shall have developed sufficiently long for new fibrous roots to develop so root mass will retain its shape and hold together when removed from container.
3. In no case should container strangle or girdle natural growth of plant.
4. Groundcovers in containers pots shall have the minimum number of runners and length of runners in accordance with American Association of Nurserymen, Inc., ANSI Z60.1.
5. Diameter of spread shall determine inside diameter of pot in which they shall be grown for at least 3 months prior to delivery.
6. Plant container sizes shall conform to American Association of Nurseryman, Inc., ANSI Z60.1.

E. Deciduous (Shade and Ornamental Trees):

1. Street tree plantings shall be free of branches equivalent to 1/2 of tree height or so that crown of tree is in proportion to trunk as tree grows.

a. Trees with ascending branches may be branched 1 foot or more below branch heights as listed.

2. Provide trees of specimen quality.

F. Evergreen Trees/Shrubs:

1. Provide evergreen trees of specimen quality.
2. Provide evergreen shrubs of specimen quality.
3. Columnar plants:

a. Provide columnar plants of specimen quality.

G. Deciduous Shrubs:

1. Provide deciduous shrubs of specimen quality.

H. Perennial, Biennials, Prairie Forbs, and Grasses:

1. Perennial, biennials, prairie forbes, and grasses specified as "container" or "pot" shall be provided as container grown plants, or shall be provided with firm natural balls of earth with diameter and depth in accordance with American Standard for Nursery Stock for size specified on Plant List.
2. Ship balled plants in open-air boxes or crates that will minimize handling of each plant prior to installation. Do not plant balled plants if ball is cracked or broken either before or during process of planting.

2.2 PLANTING MATERIALS

A. Water:

1. Existing water supply from hose bibs at the project building may be used for all planting operations. Provide hose and equipment necessary for proper watering of plant material. Provide water at no extra cost if it is not available at the project site.

B. Topsoil:

1. Topsoil shall be loamy soil from the A horizon of soil profiles of local soils. It shall be relatively free from large roots, sticks, weeds, brush, or stones larger than 25 mm (1 inch) in diameter, or other litter and waste products. At least 90 percent must pass the 2.00 mm (No. 10) sieve and the pH must be between 5.0 and 8.0.
2. Composition: 45-77 percent silt, 0-25 percent clay, 25-33 percent sand.
3. Acidity: pH 6.0 to 7.0; amend soil as indicated by tests to achieve this pH range.
4. Organic content: Three to five percent.
5. Environmental analysis requirements shall be in accordance with Division 31 Section "Acceptance of Backfill, Topsoil and CU Structural Soil."
6. Import topsoil conforming to above requirements from off-site sources as required to complete the work. Do not obtain from bogs or marshes.
7. Perform test analysis on each source of topsoil to demonstrate compliance with the above and submit reports as specified.

C. Section2.2:

1. Shredded Hardwood Bark:

a. From mixed hardwood species and free of sticks leaves, and wood chips, 60% shall range between 1 inch and 3 inches in length; remaining 40% shall not exceed 1-1/2 inches.
b. Maximum of 5% content by weight of shredded wood particles.

D. Drainage material:

1. Free draining aggregate meeting the requirements of IDOT CA7 and having a pH of 5.5 - 7. Comply with the requirements of Division 31 Section "Acceptance of Backfill, Topsoil and CU Structural Soil."

E. Aeration/drainage pipe:

1. Perforated or slotted agricultural drainage pipe capable of withstanding required backfill compaction.
2. Rigid riser pipe for vertical installation where indicated. Install slotted use compatible pipe and fittings such as tees and caps for horizontal and vertical installations.
3. Cover aeration/drainage pipe with a geotextile sock.

F. Filter fabric:

1. Nonbiodegradable, needle-punched, non-woven, water permeable, 100% continuous polypropylene or polyester fabric, 3 oz. per sq. yd. minimum, designed for drainage applications without clogging or piping.
2. Capable of withstanding backfilling and compacting operations without tearing or deforming.

PART 3 - EXECUTION

3.1 INSPECTION

A. Do not install plantings where depth of soil over underground construction, obstructions or rock is insufficient to accommodate roots or where pockets in rock or impervious soil will require drainage. Where such conditions encountered in excavation planting areas and where stone, boulders or other obstruction cannot be broke or removed by hand methods and where trees to be planted found under overhead wires, bring to the attention of the Architect. Alternate locations for planting may be designated by Architect.

B. Remove rock or other underground construction and drain planting areas only when approved by Architect. Payment of extra shall be based on in-place volume required to provide normal requirements for plantings.

C. Verify location of underground utilities with appropriate sources prior to construction. Contact JULIE at least 48 hours before commencing with construction operations. Repair damaged utilities.

D. Conflicts with utilities shall be called to the Architect's attention before proceeding with work. Alternate locations may be designated by Architect.

3.2 INSTALLATION

A. Topsoil/Finish Grading:

1. Do not place or work topsoil in frozen or muddy condition.
2. Establish final grade as shown on drawings. Grades not otherwise indicated are uniform levels or slopes between points where elevations are given or between such points and existing finished grades.
3. Where drawings show existing grades of landscaped areas not to be changed remove enough material to allow placement of 18in. of new topsoil and 6 inches of drainage material beneath shrub plantings and 24 inches of topsoil minimum beneath tree plantings, unless existing topsoil to required depth is undisturbed and of equal or better quality than specified herein. In latter case, existing topsoil may be left in place and use only enough new topsoil to bring these areas up to grade.

B. Preparation:

1. Planting Season: Conform to planting seasons defined herein.
2. Preparation of Planting Areas: Cover surrounding turf (if existing) in manner to protect turfed areas that are to be trucked or hauled over and upon which soil is to be temporarily stocked.
3. Maintain at least one stockpile of topsoil for backfilling plants during planting operations.
4. Stake or paint locations of plants and bed lines. Architect must approve locations before excavation is started. Provide 48 hours notice for approval. Contractor to be present during approval. Make adjustments in locations and outlines as required. In event that pits or areas for planting are prepared and backfilled with topsoil to grade prior to commencement of lawn operations, mark so they can be readily located when work of planting proceeds.
5. Remove weed growth prior to planting installation.

C. Excavation for Planting:

1. Comply with the requirements of Division 31 Section "Soil, Fill, Backfill, CU Structural Soil and Construction and Demolition Debris Removal."
2. Excavate circular pits with vertical side for plants. Except for ground cover or other bedding type plant material.

    a. Diameter of pits for trees shall be at least 2 feet greater than diameter of ball, or container.

3. Depth of pits for trees shall be as indicated, or as required by Ordinance, which ever is more beneficial to the growth of plants. Excavate to greater depth as suitable to accommodate ball, container or bare roots when plant is set to finish grade allowing for 6 in. of compacted, prepared soil in bottom of pit.
4. All planting areas must have adequate drainage. Install under drainage pipes in all planting areas and connect to storm sewer. Where percolation tests indicate adequate percolation of 1 inch per hour minimum, sump drainage may be used. Auger an 8-inch diameter by 6-foot deep drainage passage beneath individual tree pits. Fill passage with

drainage material and cover with filter fabric. Utilize continuous trench for rows of trees. Excavate a drainage sump of indicated dimensions adjacent to each tree. Fill sump with drainage material and cover with filter fabric.

5. Utilize continuous trench for shrub masses and hedges instead of separate round pits. Auger an 8-inch diameter by 6-foot deep drainage sump every 8 ft along length of plant pit. Fill passage with drainage material and cover with filter fabric.
6. Install aeration/drainage pipe system in tree planting trenches as indicated.

D. Testing of Plant Pits and Trenches:

1. Perform percolation tests for all plant pits.
2. Where obstructions below or above ground are encountered, alternate locations may be selected as approved by Architect.
3. Where locations cannot be changed as determined by Architect, submit cost required to remove obstructions to depth of not less than 6 in. below required pit depth. Proceed with work after approval of Architect.
4. Dispose of excavated material not suitable for backfilling offsite in legal manner.

E. Preparation of Planting Pits:

1. Loosen soil at bottom of pit to minimum depth of 4 inches by spading or other effective methods.
2. Scarify walls of plant pits.
3. Backfill pit with 6-inch layer of compacted, topsoil.
4. If drainage problems are encounter notify AOR immediately for review and direction.

F. Setting and Backfilling Plants:

1. Balled and Burlapped (B&B) Plants:

   a. Place plants being planted in pits or trenches in center of pit or trench on compacted, topsoil. Adjust compacted soil so that top of root ball bears same relationship to finish grade as it bore to its previous finish grade in nursery.
   b. Remove twine tied around tree trunk. Remove or roll down burlap or plastic wrap around ball. Remove wire and other non-decomposable materials. Untreated burlap need not be removed, but shall be loosened around tree trunk.
   c. Backfill planting pits with topsoil in 12-inch layers and tamp each layer to fill voids until planting mixture is at final grade.
   d. Remove nursery plant identification tags.

2. Container Grown Plants:

   a. Open and remove potted plants from containers.
   b. If growing medium is comprised of 75% or more of peat, perlite, sand or like material other than soil, pull visible roots away from container medium so as to leave roots partially exposed.
   c. Place plants in plant pit or trench and carefully backfill with topsoil among exposed roots. Continue backfilling and tamping in 6-inch layers until topsoil is at final grade.
   d. Remove nursery plant identification tags.

G. Saucer Formation:

1. Form shallow saucer around each isolated plant pit with topsoil.
2. Water plants immediately after planting.

H. Bed Edging:

1. Spade edge all planting beds and tree rings 2 inches deep.
2. Ragged edges and edging will not be accepted.

3.3 PRUNING

A. Prune trees and shrubs at time of or after planting as necessary. Prune and repair existing trees designated to remain.

B. Prune in accordance with standard horticultural practices to retain natural habit and shape of plant.

1. Shearing of plants will not be accepted, unless instructed by Architect.
2. Preserve leader(s) promoting symmetrical growth on multiple leader plants.

C. Prune and trim dead wood, suckers, and injured twigs and branches.

D. Use only clean, sharp tools.

E. Make cuts flush and clean avoiding injury to branch bark ridge or branch collar leaving no stubs.

F. For cuts greater than 3/4 in. in diameter and bruises or scars on bark, trace injured cambium back to living tissue and remove. Smooth and shape wounds so as not to retain water.

G. Prune flowering trees only to remove dead or damaged branches. Do not remove leader.

3.4 PROTECTION AND MAINTENANCE

A. Mulching:

1. Mulch shade trees, ornamental trees, singularly planted shrubs, hedge plantings, and massed plantings. Cover entire planting pit or trench with minimum 3-inch depth of shredded hardwood bark.
2. Mulch within five days after installation.

B. Watering:

1. Thoroughly water immediately after installation.
2. Water during period of temporary maintenance.

3.5 CLEAN UP

A. Remove soil or similar material brought onto paved areas, keeping these areas clean.

B. Upon completion of planting, remove excess soil, stones, and debris and dispose of off-site in legal manner.

3.6 MAINTENANCE

A. Maintain plant material until landscape operations have received substantial completion of the project. (This includes not only plant material but also installation completion (preliminary acceptance) of sodded areas as described in Division 32 Section "Sodding").

B. Maintenance begins immediately after each plant is installed and shall include watering, necessary cultivation, weeding, pruning, disease and insect pest control, protective spraying, resetting of plants to proper grades or upright position, restoration of damaged planting saucers, and any other procedure consistent with good horticultural practice necessary to ensure normal, vigorous, and healthy growth of work.

3.7 ACCEPTANCE

A. Planting Acceptance: At Preliminary Acceptance / Substantial Completion of the project, the Architect will inspect landscape work for acceptance.

1. Acceptance requires:

a. Plant material shall conform to drawings with respect to quantity, quality, size, species, and location, except those items accepted or revised in field by Architect.
b. Plant material shall be in healthy condition as defined under guarantee requirements below.
c. Items shall appear to be in general conformance with specifications.

3.8 GUARANTEE

A. Contractor shall guarantee for period of one year from the date of Preliminary Acceptance / Substantial Completion, replacement of plants which have died, or are in distressed/dying condition, or which have failed to flourish in such manner that their usefulness or appearance has been impaired. Replace any tree with dead main leader or crown that is 25% or more dead.

1. Exclusions:

a. Contractor shall not be liable for replacement cost of plants damaged by deicing compounds, fertilizers, pesticides or other materials not specified in Contract Documents or not applied by the landscaper, by relocating or removal by others, by acts of God, or by vandalism, and losses due to curtailment of water by local authorities.

2. Inspection of Maintenance:

a. During guarantee period, Contractor shall, from time to time, inspect watering, cultivation, and other maintenance operations carried on by Owner with respect to such work, and promptly report to Owner any methods, practices or operations considered unsatisfactory and not in accord with interests or good horticultural practices.

b. Failure of Contractor to so inspect or report shall be construed as an acceptance of Owner's maintenance operations, and Contractor shall not thereafter claim or assert that any defects which may later develop are result of such methods or practices or operations.

3.9 REPLACEMENTS

A. Plants which die or require replacement for other reasons during one-year guarantee period shall be replaced as soon as possible during following acceptable planting seasons:

1. Spring Replacement Season: All plants - when ground becomes workable to June 15.
2. Fall Replacement Season:

    a. Deciduous plants - September 1 to November 15.
    b. Evergreen plants - September 1 to November 1.

B. Topsoil that does not conform to the environmental standards as detailed in specification Division 31 Section "Acceptance of Backfill, Topsoil and CU Structural Soil" shall be excavated and replaced with topsoil that does at Contractor's expense.

C. Procedure:

1. Dispose of plants off-site in legal manner.
2. Replacements shall be of same size and species as original plant unless otherwise approved by Landscape Architect.
3. Replacements shall be supplied and installed in accordance with specifications.

    a. Additional one-year guarantee for replacement plants shall begin on date of final acceptance of plant material by Architect as documented in field report.

4. Replacement and Damages:

    a. Decisions of Architect for required replacements shall be conclusive and binding upon Contractor.
    b. Contractor shall be responsible for repairing damage to property also caused by defective workmanship and materials.

END OF SECTION

BID FORM - BASE BID PRICING

2/5/2019

SITE PREPARATION				
LINE ITEM DESCRIPTION	**Unit(s)**	**Qty**	**Unit Price**	**Total Price**
Brush Clearing and Tree Thinning - Includes cutting, herbicide application, and removal/disposal of cut material	LS	1	$	$
Boom-Spray Herbicide Application - Includes initial herbicide application and any follow-up applications required to meet performance	LS	1	$	$
Shoreline Grading - Includes re-grading of eroded shorelines with up to 24" of vertical cut and distributing excavated soil on-site	LF	430	$	$
Soil Scarification - Includes elimination of standing dead biomass when required and collection/disposal of sticks, stones, clods or other debris	LS	1	$	$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.

SOIL AMENDMENTS				
LINE ITEM DESCRIPTION	**Unit(s)**	**Qty**	**Unit Price**	**Total Price**
Fertilizer: Gypsum, applied	LBS	8,300	$	$
Fertilizer: Hi-Cal Lime, applied	LBS	5,000	$	$
Fertilizer: Monoammonium Phosphate (MAP), applied	LBS	700	$	$
Fertilizer: Sulphate of Potash (SOP), applied	LBS	850	$	$
Fertilizer: Milorganite, applied	LBS	2,500	$	$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.

Actual quantities will be based upon the results of soil tests, Contractor shall be paid for fertilizers based upon materials used at the provided unit price

PLANTING OPERATIONS				
LINE ITEM DESCRIPTION	**Unit(s)**	**Qty**	**Unit Price**	**Total Price**
Seed, Installed - Transitional Buffer Seed Mix, includes planting zone layout	AC	0.37	$	$
Seed, Installed - Low Profile Prairie Seed Mix, includes planting zone layout	AC	1.15	$	$
Seed, Installed - Dry Bottom Detention Seed Mix, includes planting zone layout	AC	0.38	$	$
Seed, Installed - Wet Prairie Seed Mix, includes planting zone layout	AC	1.67	$	$
Seed, Installed - Shoreline Seed Mix, includes planting zone layout	AC	0.24	$	$
Plugs, Common Species Installed - Includes planting zone layout and establishment watering	EACH	5,100	$	$
Herbivory Protection Fencing, Installed - Includes installation of double row per linear foot, maintenance and removal following plant establishment	LF	1,700	$	$
Erosion Control Blanket – North American Green S75BN, installed (Includes Transitional Buffer, Low Profile Prairie, and Supplemental Shade Seed Mix Areas)	SY	8,160	$	$
Erosion Control Blanket – North American Green C125BN, installed (Includes 50% of the Shoreline Seed and Plug Mix area)	SY	560	$	$
Interim Stewardship - Until Substantial Completion	LS	1	$	$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.

TOTAL BASE BID (in numbers):	$

TOTAL BASE BID (in words): _____ and _____ /100

ALTERNATE BID PRICING 2/5/2019

ALTERNATE #1 - Annual Natural Areas Stewardship

LINE ITEM DESCRIPTION	Unit(s)	Qty	Unit Price	Total Price
Natural Areas Stewardship - 1st Growing Season	AC	3.81	$	$
Natural Areas Stewardship - 2nd Growing Season	AC	3.81	$	$
Natural Areas Stewardship - 3rd Growing Season	AC	3.81	$	$
TOTAL ALTERNATE #1 (in numbers):				$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.

ALTERNATE #2 - Annual Natural Areas Stewardship

LINE ITEM DESCRIPTION	Unit(s)	Qty	Unit Price	Total Price
Professional Prescribed Fire	Each	1	$	$
TOTAL ALTERNATE #2 (in numbers):				$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item

ALTERNATE #3 - Additional Restoration Areas

LINE ITEM DESCRIPTION	Unit(s)	Qty	Unit Price	Total Price
Site preparation and restoration utilizing Base Bid unit pricing	AC	2.64	$	$
TOTAL ALTERNATE #3 (in numbers):				$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.

ALTERNATE #4 - Plug Pods

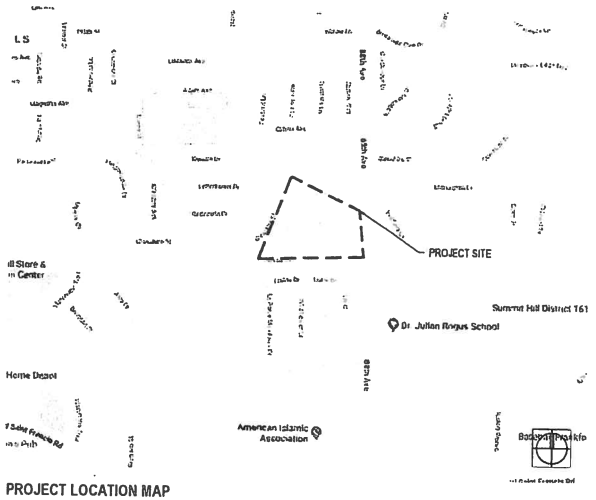
LINE ITEM DESCRIPTION	Unit(s)	Qty	Unit Price	Total Price
Plugs, Common Species Installed - Includes planting zone layout and establishment watering	EACH	2,450	$	$
Herbivory Protection Fencing, Installed - Includes installation of 20' x 20' square for each plug pod, maintenance and removal following plant establishment	LF	520	$	$
TOTAL ALTERNATE #4 (in numbers):				$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.

ALTERNATE #5 - Landscape Bed Installations and Hardscape Improvements

LINE ITEM DESCRIPTION	Unit(s)	Qty	Unit Price	Total Price
Install landscape beds along Fairfield Ln, per plans	EACH	2	$	$
Install landscape bed along Glenshire St, per plans	LS	1	$	$
Install seating area, bench and landscape bed along Glenshire St per plans	LS	1	$	$
Install parkway trees, per plans	EACH	6	$	$
Install interpretive signs, per plans	EACH	2	$	$
TOTAL ALTERNATE #5 (in numbers):				$

All prices shall include all costs for labor, mobilization, materials, equipment, fuel and/or maintenance of equipment as incidental costs to the main line item.



PROJECT LOCATION MAP

TINLEY PARK FAIRFIELD GLEN RESTORATION

LAPORTE RD & 88TH AVE.
TINLEY PARK, ILLINOIS 60487

ISSUED FOR BID
FEBRUARY 5, 2019

CLIENT
VILLAGE OF TINLEY PARK

PROJECT TEAM

site design group, ltd. — Landscape Architect

ecology — Ecologist

SHEET INDEX

ABBREVIATIONS

&	AND	HD	HEAVY DUTY	R	RADIUS
@	AT	HR	HOUR	ROW	RIGHT OF WAY
AFF	ABOVE FINISHED FLOOR	HT	HEIGHT	RET	RETAINING
AOR	ARCHITECT OF RECORD	L	LENGTH	SIM	SIMILAR
BOT	BOTTOM	LAV	LAVATORY	SS	STAINLESS STEEL
CONC	CONCRETE	LBS. #	POUNDS	STD	STANDARD
CJ	CONTROL JOINT	MH	MANHOLE	T/	TOP OF
DIA	DIAMETER	MAX	MAXIMUM	THK	THICK
EL	ELEVATION	MIN	MINIMUM	TS	TOP STEP ELEVATION
EXP	EXPANSION	MTD	MOUNTED	TYP	TYPICAL
EXIST	EXISTING	MTL	METAL	UNO	UNLESS NOTED OTHERWISE
FDN	FOUNDATION	NIC	NOT INCLUDED IN CONTRACT	VIF	VERIFY IN FIELD
FE	FINISHED ELEVATION	NO	NUMBER	W	WIDTH
FFE/FF	FINISHED FLOOR ELEVATION	NTS	NOT TO SCALE	WD	WOOD
FIN	FINISHED	OC	ON CENTER	WT	WEIGHT
FL/FLR	FLOOR	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	W/	WITH
GA	GALVANIZED			YR	YEAR
H	HEIGHT	PIP	POURED IN PLACE		

811 Know what's below. Call before you dig.

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

LaPorte Rd & 88th Ave
Tinley Park, IL 60487

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ISSUANCES

Rev. #	Description	Date Issued
00	Issued For Bid	02/05/2019

Project No 8322
Drawn JT — File 8322 cover dwg
Checked MM — Scale AS NOTED
Approved BM

Sheet Title
COVER SHEET

Drawing Number
G0-00

GENERAL NOTES:

1. COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES FOR ALL SCOPE AND OPERATIONS
2. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, THE CONTRACTOR SHALL VISIT THE PREMISES AND ACQUAINT THEMSELVES FULLY WITH THE EXISTING CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPES OF EQUIPMENT REQUIRED, ETC ANY BID SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK WITHIN THE EXISTING CONDITIONS DISRUPTION OF NORMAL ACTIVITIES IN THE WORK AREA MUST BE KEPT TO A MINIMUM
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION, DIMENSIONS, AND ELEVATIONS FOR CONFORMANCE WITH THE DRAWINGS ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE AOR AND LA
4. COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR ALL BUILDING ELEMENTS NOT SHOWN IN THESE DRAWINGS, ETC
5. THE LANDSCAPE ARCHITECTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL AND OTHER DISCIPLINES' DRAWINGS ALL DIMENSIONS, ELEVATIONS, DETAILS, BUILDING COMPONENTS, ETC, ARE TO BE CHECKED AGAINST ALL DOCUMENTS AS WELL AS THE PROJECT SPECIFICATIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE AOR AND LA IMMEDIATELY, AND RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION CONTRACTOR TO COORDINATE THE WORK OF ALL TRADES AND MAKE NECESSARY INVESTIGATIONS AND FIELD MEASUREMENTS
6. SHOP DRAWINGS PREPARED BY THE CONTRACTOR AND/OR HIS SUPPLIERS SHALL BE REVIEWED BY THE AOR AND LA ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW
7. CONTRACTOR SHOP DRAWINGS PREPARED BY SUPPLIERS AND/OR SUBCONTRACTORS SHALL BE REVIEWED BY THE CONSTRUCTION MANAGER PRIOR TO SUBMISSION TO THE AOR AND LA
8. CONTRACTOR SHOP DRAWINGS SUBMITTED PRIOR TO PERMIT RECEIPT ARE SUBJECT TO CHANGE ADDITIONAL SERVICES FOR SUBSEQUENT REVIEW BY THE AOR AND LA WILL BE PAID BY THE GC, AT NO COST TO THE OWNER
9. CONTRACTOR SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED FOR ALL STRUCTURAL PREFABRICATED ITEMS TO AOR, SOR AND LA FOR REVIEW ALL STRUCTURAL PREFABRICATED ITEMS TO BE SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONSTRUCTION
10. DETAILS AND SECTIONS DESIGNATED AS "TYPICAL" APPLY TO AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL OR DETAIL TITLE UNO
11. WATERSTOPS, VAPOR BARRIERS, ETC, SHOWN ON LANDSCAPE ARCHITECTURAL DRAWINGS ARE SCHEMATIC SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON WATER, MOISTURE AND CONDENSATION RESISTANCE DETAILING
12. MISC LOADS TO BE DESIGNED FOR UNO HEREIN OR WHEN REFERRING TO STRUCTURAL:
    a. STAIRS 100 PSF LIVE LOAD, 300 LBS CONCENTRATED LOAD AT CENTER OF STAIR TREAD
    b. HANDRAIL VERTICAL AND HORIZONTAL THRUST OF 50 LBS /FT, APPLIED AT THE TOP OF THE RAILING OR A CONCENTRATED LOAD OF 200 LBS /FT IN ANY DIRECTION, WHICHEVER PRODUCES THE GREATEST STRESS.
15. PRIOR TO THE COMMENCEMENT OF ANY INDIVIDUAL SCOPE OF WORK, CONVENE A PRE-CONSTRUCTION CONFERENCE WITH AOR, LA, CONTRACTOR AND ANY ASSOCIATED AND RELEVANT DESIGN TEAM MEMBERS, SUBCONTRACTORS AND AHJ TO REVIEW WORK SCOPE, SCHEDULE AND TO REVIEW Q&A BY DESIGN TEAM, AHJ AND CONTRACTORS CONTRACTOR TO PROVIDE MINIMUM 5 BUSINESS DAY NOTICE FOR ALL MEETINGS
16. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK SCOPE AT NO COST TO OWNER
17. FOLLOW ALL LOCAL AND STATE STANDARDS, INCLUDING APPLICABLE DOT STANDARDS FOR WORK WITHIN THE RIGHT-OF-WAY SUBMIT PLAN OF CONSTRUCTION STAGING FOR APPROVAL PRIOR TO START OF WORK
18. IF WORK REQUIRES SIDEWALK OR STREET CLOSURE, CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY WORK AND MATERIALS TO DO SO
19. INSTALL AND MAINTAIN MIN 6'HT CHAINLINK CONSTRUCTION FENCING AS INDICATED WITHIN SPECIFICATIONS TO PROTECT THE WORK FOR PUBLIC SAFETY AND TO PROVIDE SECURITY ADJUST FENCING TO ACCOMMODATE PROGRESS OF CONSTRUCTION MAINTAIN FENCING IN PLACE UNTIL SUBSTANTIAL PROJECT COMPLETION OR AS DIRECTED BY THE OWNER INSTALL GATES FOR CONSTRUCTION ACCESS AS REQUIRED.
20. MODIFY AND RESTORE SITE CONDITIONS TO GAIN ACCESS INTO THE SITE OWNER NOT RESPONSIBLE FOR RESTORATION COSTS DUE TO CONTRACTOR NEGLIGENCE DURING CONSTRUCTION IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY DOCUMENT THE EXISTING CONDITIONS OF THE SITE
21. VERIFY THE EXACT LOCATIONS OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO THE START OF LANDSCAPE OPERATIONS CONTRACTOR TO MAKE EVERY EFFORT POSSIBLE TO LOCATE ALL PRIVATE UTILITIES CONTRACTOR TO ALSO BE RESPONSIBLE FOR MAINTAINING ALL UTILITY LOCATIONS AS MARKED BY THE UTILITY COMPANIES AND OWNER'S REPRESENTATIVE THROUGHOUT THE DURATION OF LANDSCAPE CONSTRUCTION
22. BEFORE ANY EXCAVATION ON THE SITE, CALL TO LOCATE ANY EXISTING UTILITIES ON THE SITE. BECOME FAMILIAR WITH THE LOCATIONS OF ALL BURIED UTILITIES IN THE AREAS OF WORK BEFORE START OPERATIONS REPAIR OR REPLACE ANY BURIED CONDUITS, CABLES OR PIPING DAMAGED DURING THE INSTALLATION OF THE WORK, AT NO COST TO OWNER
23. REMOVE FROM THE SITE IN A LEGAL MANNER ANY AND ALL DEBRIS GENERATED DURING CONSTRUCTION OPERATIONS
24. DO NOT INTERFERE WITH THE USE OF ADJACENT PROPERTIES INCLUDING BUT NOT LIMITED TO BUILDINGS, PARKING LOTS, STREETS OR ALLEYS.
25. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, FENCING, FURNISHINGS, AND PLANTINGS, TREES, AND LAWNS FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUTS, AND OTHER HAZARDS CREATED BY SITE IMPROVEMENTS IF ANY DAMAGE OCCURS, REPAIR TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO OWNER
26. PROTECT AND/OR RESTORE EXISTING LAWN TO EXCELLENT CONDITION WITH TOPSOIL AND SOD CONTRACTOR IS RESPONSIBLE FOR REPLACING ALL LANDSCAPE MATERIAL REMOVED OR DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER
27. VERIFY SITE CONDITIONS BEFORE PROCEEDING WITH WORK AND REPORT ANY CONFLICT WITH AOR AND LA
28. QUANTITIES ARE SHOWN FOR REFERENCE ONLY ALL QUANTITIES TO BE CONFIRMED BY CONTRACTOR. FOR ALL FINISH MATERIALS AND SITE FURNISHINGS CONTRACTOR TO PROVIDE 5% OR 1 ITEM MIN FOR ALL LOOSE ITEMS TO OWNER UNO
29. IDENTIFY AND REPORT ANY SUBSOIL, SOIL AND/OR DRAINAGE ISSUES IMMEDIATELY TO THE ATTENTION OF THE AOR AND LA
30. VERIFY ALL DIMENSIONS IN FIELD AND BRING ANY DISCREPENCIES IMMEDIATELY TO THE ATTENTION OF THE AOR AND LA
31. COORDINATE WORK WITH ALL OTHER TRADES.
32. RESTORE ANY AREAS IMPACTED BY CONSTRUCTION OPERATIONS WHETHER WITHIN OR OUTSIDE OF PROJECT LIMITS
33. PERFORM ALL MAINTENANCE ACTIVITIES WITHIN THE PROJECT LIMITS THROUGH FINAL ACCEPTANCE

EXCAVATION AND BACKFILL NOTES:

1. AFTER EXCAVATING FOR ALL EARTH-SUPPORTED FOOTINGS AND FOUNDATIONS, THE EXPOSED NATURAL SOIL SHALL BE THOROUGHLY COMPACTED TO 95% OF ASTM D1557 (MODIFIED PROCTOR) MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT PRIOR TO PLACING FILL
2. NO MUD SLABS, FOOTINGS, OR SLABS SHALL BE PLACED ONTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
3. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACEMENT OF CONCRETE UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT STRUCTURE
4. THE CONCRETE FOR EACH ISOLATED FOOTING SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT
5. THE CONTRACTOR SHALL PREPARE ALL CONSTRUCTION PROCEDURES AND SEQUENCES AND SUBMIT FOR THE AOR, EOR, LA, AND GEOTECHNICAL REVIEW PRIOR TO THE START OF CONSTRUCTION.

CONCRETE AND FORMWORK NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING (INCLUDING BUT NOT LIMITED TO) AMERICAN CONCRETE INSTITUTE PUBLICATIONS
    a. ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
    b. ACI 304 - GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE
    c. ACI 311 - GUIDE FOR CONCRETE INSPECTION
    d. ACI 315 - DETAILS AND DETAILING OF CONCRETE REINFORCEMENT
    e. ACI 318 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
    f. ACI 347 - GUIDE TO FORMWORK FOR CONCRETE
2. CONCRETE SHALL BE AS FOLLOWS
    a. CONCRETE F'C PSI @ 28 DAYS
    i. FOUNDATIONS AND FOOTINGS NORMAL WEIGHT (145 PCF) F'C = 4000 PSI
    ii. GRADE BEAMS NORMAL WEIGHT (145 PCF) F'C = 4000 PSI
    iii. EXTERIOR SLAB ON GRADE NORMAL WEIGHT (145 PCF) F'C = 4000 PSI
    iv. PADS FOR MEP EQUIP NORMAL WEIGHT (145 PCF) F'C = 4000 PSI
    v. ELEVATED SLABS, BEAMS NORMAL WEIGHT (145 PCF) F'C = 8000 PSI
3. ALL EXTERIOR EXPOSED CONCRETE SHALL BE AIR- ENTRAINED TO GIVE THE CONCRETE AN AIR CONTENT OF 6 +/- 1 1/2% BY VOLUME WATER REDUCING PLASTICIZING ADMIXTURES MAY BE USED, PENDING APPROVAL OF THE AOR, SOR AND LA
4. NO CALCIUM CHLORIDE OR CHLORIDE ION PRODUCING ADD MIXTURE SHALL BE USED IN ANY CONCRETE
5. CONCRETE PROTECTION FOR REINFORCING BARS SHALL BE AS FOLLOWS
    a. FOOTINGS 3" CLEAR, SIDES AND BOTTOM
    b. WALLS 2" CLEAR, OUTSIDE FACE, 1 1/2" CLEAR, INSIDE FACE
    c. SLABS 1" CLEAR
    d. PIERS 2" CLEAR TO TIES

HARDSCAPE NOTES:

1. PRIOR TO THE COMMENCEMENT OF HARDSCAPE SCOPE OF WORK, CONVENE A PRE-CONSTRUCTION CONFERENCE WITH AOR, LA, CONTRACTOR AND ANY ASSOCIATED AND RELEVANT DESIGN TEAM MEMBERS, SUBCONTRACTORS AND AHJ TO REVIEW WORK SCOPE, SCHEDULE AND TO REVIEW Q&A BY DESIGN TEAM, AHJ AND CONTRACTORS CONTRACTOR TO PROVIDE MINIMUM 5 BUSINESS DAY NOTICE FOR ALL MEETINGS
2. CONFIRM ALL HARDSCAPE QUANTITIES AND DIMENSIONS.
3. STAKE AND PAINT OUT ALL STRUCTURE EXTENTS AND FOOTING LOCATIONS, WALL FACES/BACKS, STAIR LOCATIONS, CURB FACES/BACKS AND PAVING EDGES PER PLANS FOR AOR AND LA REVIEW AND APPROVAL PRIOR TO EXCAVATION AND INSTALLATION ADJUST ANY LAYOUT MODIFICATIONS BY AOR AND LA AT NO ADDITIONAL COST TO THE OWNER ALL SURVEY AND LAYOUT COSTS BY CONTRACTOR
4. ESTABLISH APPROVED LAYOUT LINES AND GRADES AND MAINTAIN THROUGH CONSTRUCTION FOR VERIFICATION BY AOR AND LA. ALL LINES TO BE STRAIGHT AND TRUE, ALL CURVES SHALL BE SMOOTH AND NON-FACETED WITH BOTH IN ACCORDANCE WITH THE PLANS AND APPROVED FIELD LAYOUT BY AOR AND LA
5. FOR PRECISION OF LAYOUT REQUIREMENTS SEE SPECS ALL EDGES OF HARDSCAPE ELEMENTS TO BE PAINTED AND MAINTAINED FOR AOR AND LA REVIEW AND APPROVAL PRIOR TO FORMING. ALL FORMING AND REINFORCEMENT TO BE REVIEWED AND APPROVED BY AOR AND LA PRIOR TO POURING
6. MATCH LINE AND GRADE OF PAVEMENT, LAWN AND PLANTING AREAS TO EXISTING ADJACENT AREAS
7. TRANSITION SMOOTHLY BETWEEN DIFFERENT SLOPES WITHOUT ABRUPT CHANGES IN SLOPE REFER TO GRADING PLAN
8. REFER TO SPECIFICATIONS FOR PAVEMENT REPAIR AND RESTORATION CRITERIA
9. FOR HARDSCAPE DETAILS, SEE SHEET(S) L2-01

SITE FURNISHINGS NOTES:

1. PRIOR TO THE COMMENCEMENT OF SITE FURNISHINGS SCOPE OF WORK, CONVENE A PRE-CONSTRUCTION CONFERENCE WITH AOR, LA, CONTRACTOR AND ANY ASSOCIATED AND RELEVANT DESIGN TEAM MEMBERS, SUBCONTRACTORS AND AHJ TO REVIEW WORK SCOPE, SCHEDULE AND TO REVIEW Q&A BY DESIGN TEAM, AHJ AND CONTRACTORS CONTRACTOR TO PROVIDE MINIMUM 5 BUSINESS DAY NOTICE FOR ALL MEETINGS
2. CONFIRM ALL SITE FURNISHING QUANTITIES AND DIMENSIONS
3. PROVIDE STAINLESS STEEL TAMPER PROOF FASTENERS UNO

PLANTING NOTES:

1. PRIOR TO THE COMMENCEMENT OF PLANTING SCOPE OF WORK, CONVENE A PRE-CONSTRUCTION CONFERENCE WITH AOR, LA, CONTRACTOR AND ANY ASSOCIATED AND RELEVANT DESIGN TEAM MEMBERS, SUBCONTRACTORS AND AHJ TO REVIEW WORK SCOPE, SCHEDULE AND TO REVIEW Q&A BY DESIGN TEAM, AHJ AND CONTRACTORS CONTRACTOR TO PROVIDE MINIMUM 5 BUSINESS DAY NOTICE FOR ALL MEETINGS
2. CONFIRM ALL PLANTING QUANTITIES AND DIMENSIONS QUANTITIES PROVIDED ARE FOR THE CONVENIENCE OF THE CONTRACTOR CONTRACTOR TO VERIFY IMPLIED COVERAGE ON THE PLANTING PLANS CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE LA AT THE TIME OF BID
3. ALL PLANT MATERIAL TO BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE CODES AND ORDINANCES
4. EXISTING PARKWAY AND INTERIOR TREES/FENCING TO BE PROTECTED WHILE PROJECT IS UNDER CONSTRUCTION AND WILL BE REPLACED IF DAMAGED BY CONTRACTOR
5. TAKE GREAT CARE NOT TO DAMAGE EXISTING OR NEW TREES OR OTHER PLANT MATERIAL DURING EXCAVATION, PLANTING AND OTHER CONSTRUCTION OPERATIONS SEEK AOR AND LA APPROVAL TO WORK WITHIN THE DRIP LINE OF EXISTING TREES
6. ALL PLANT MATERIAL TO BE SPECIMEN QUALITY, WELL MATCHED IN FORM, NURSERY GROWN, SOUND, HEALTHY, VIGOROUS AND FREE OF INSECTS, DISEASE AND INJURIES WITH HABIT OF GROWTH THAT IS TYPICAL FOR THE SPECIES SIZES SHALL BE EQUAL TO OR GREATER THAN THOSE NOTED ON THE PLANT LIST(S) DO NOT PROCEED WITH PLANTING INSTALLATION UNLESS LA HAS APPROVED ALL PLANT MATERIAL ALL B&B MATERIAL TO BE OBTAINED FROM NURSERIES WITH SIMILAR SOIL CONDITIONS AS THE PROJECT SITE
7. PROVIDE AOR AND LA WITH PLANT LIST AND INTENDED NURSERY SUPPLIERS FOR EACH ITEM TO LA WITHIN 30 DAYS OF AWARD OF CONTRACT ANY UNAVAILABLE PLANT MATERIAL SHOULD BE NOTED AT THAT TIME AOR AND LA RESERVES THE RIGHT TO ASSIST IN PLANT SOURCING AS NECESSARY. PROVIDE AOR AND LA WITH SUBSTITUTION LIST IN THE EVENT PROPOSED MATERIALS ARE UNAVAILABLE PRIOR TO PROCUREMENT FOR FINAL REVIEW AND APPROVAL
8. COORDINATE NURSERY SELECTION AND TAGGING WITH AOR AND LA AOR AND LA RESERVES THE RIGHT TO ACCEPT OR REJECT ANY AND ALL PLANT MATERIAL AS IT RELATES TO THE REQUIREMENTS IN THE SPECIFICATIONS AOR AND LA RESERVES THE RIGHT TO REJECT PLANT MATERIAL IF DAMAGED OR UNHEALTHY UPON ARRIVAL TO THE PROJECT SITE EVEN AFTER INITIAL APPROVAL.
9. PROVIDE IDENTIFICATION TAG FROM THE SUPPLYING NURSERY SHOWING COMMON AND BOTANICAL PLANT NAMES FOR AT LEAST ONE PLANT OF EACH UNIQUE SPECIES DELIVERED TO THE SITE
10. PRIOR TO PLANTING INSTALLATION, VERIFY PLANTING AREAS ARE GRADED AT +/-0 1 FEET TO FINISHED GRADE
11. FINISHED GRADE OF PLANTING AREAS TO MEET ADJACENT HARDSCAPES 2 INCHES BELOW ELEVATION OF HARDSCAPES UNO
12. REMOVE ALL ROCK AND DEBRIS 1 INCH AND LARGER FROM PLANTING AREAS LEGALLY DISPOSE ALL EXCESS MATERIALS RESULTING FROM THE WORK
13. WITHIN PLANTING EXCAVATIONS, REMOVE CRUSHED AGGREGATE TO AN ADEQUATE DEPTH TO ENSURE THAT NO PART OF THE PLANT MATERIAL OR FUTURE EXTENTS OF ROOT SYSTEM IS IN CONTACT OR AFFECTED BY THE LIME OR LIMESTONE WITHIN THE AGGREGATE
14. STAKE ALL TREES AND FLAG ALL SHRUB LOCATIONS FOR REVIEW AND APPROVAL BY AOR AND LA PRIOR TO PLANTING. PROVIDE LA WITH A MINIMUM OF 5 BUSINESS DAYS NOTICE PRIOR TO REVIEW
15. SET ALL TREES AND SHRUBS ON TOP OF FINISHED GRADE PER APPROVED STAKED AND FLAGGED LOCATIONS FOR FACING AND FINAL APPROVAL BY AOR AND LA PRIOR TO PLANTING
16. FOR ALL GRASSES, PERENNIALS, GROUNDCOVER AND ANNUALS, SET OUT PLANT MATERIAL ON TOP OF PROPOSED GRADE FOR AOR AND LA REVIEW PRIOR TO PLANTING IN ACCORDANCE WITH PLANTING PLANS AOR AND LA RESERVE THE RIGHT TO MODIFY THEPLANTINGS AS NEEDED
17. INSTALL ALL PLANT MATERIAL IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS
18. REMOVE ALL PLANT TYING MATERIAL AND MARKING TAPES AT THE TIME OF PLANTING LEAVE AOR AND LA NURSERY SEALS IN PLACE FOR THE DURATION OF THE SPECIFIED WARRANTY PERIOD
19. FOR B&B MATERIAL, REMOVE TOP 1/3 OF METAL CAGE AND BURLAP FROM ROOT BALL AND PROPERLY DISPOSE. DO NOT FOLD DOWN, CAGE MUST BE REMOVED IMMEDIATELY REPORT ANY DAMAGE TO ROOT BALLS OR PLANTS TO AOR AND LA
20. FOR CONTAINER MATERIAL WHERE APPLICABLE LOOSEN ROOT MASS BY HAND OR IF REQUIRED BY CUTTING (4) 1 INCH DEEP VERTICAL SLITS EVENLY SPACED AROUND ROOT BALL OF PLANT PRIOR TO PLANTING REPEAT SLITS IN X PATTERN ON BOTTOM OF ROOT MASS
21. ROOT FLARE OF PLANTS TO BE SET MIN AT FINISHED GRADE OR NO MORE THAN 3 INCHES ABOVE FINISHED GRADE
22. ROOT FLARE OF PLANTS INSTALLED IMMEDIATELY ADJACENT TO HARDSCAPE TO BE PLANTED NO MORE THAN 1 INCH ABOVE FINISHED GRADE TO ENSURE SMOOTH TRANSITION TO HARDSCAPE
23. FOR PERENNIALS AND GROUNDCOVERS, PLANT 1 INCH ABOVE SOIL PROFILE TO ACCOMADE MULCH LAYER
24. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING
25. TREE STAKING AND GUYING TO BE REVIEWED WITH AOR AND LA WHEN DEEMED NECESSARY PRIOR TO INSTALLATION
26. ALL NEWLY INSTALLED PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO THE NEW GRADE AS THEY BORE TO NURSERY GRADES UNO
27. WATER AND MAINTAIN PLANT MATERIAL WHILE BEING STORED ON SITE, IMMEDIATELY AFTER PLANTING AND UNTIL FINAL ACCEPTANCE
28. ALL PLANTINGS BED EDGES TO HAVE A SPADED EDGE UNO BOTTOM OF SPADED EDGE TO BE 2 INCHES BELOW THATCH OR ADJACENT HARDSCAPE SURFACE
29. PROVIDE 2 INCH (AFTER SETTLEMENT) OF MULCH OVER ALL PLANTING BEDS UPON COMPLETION OF PLANTING OPERATIONS MULCH TO BE A 50/50 BLEND OF ½ INCH SHREDDED HARDWOOD BARK FINES and ½ INCH PINE BARK FINES UNO
30. PRUNE AND MAINTAIN ALL PLANTINGS IN SITE TRIANGLES TO A HEIGHT BELOW 30 INCHES OR ABOVE 7 FEET AS REVIEWED AND APPROVED BY AOR AND LA
31. SOD IS TO BE CUT WITH 1 INCH OF SOIL UNO
32. DO NOT ALLOW SOD TO BE ROLLED UP FOR A PERIOD LONGER THAN 12 CONSECUTIVE HOURS
33. AOR AND LA TO APPROVE FINE GRADING OF LAWN SOIL PRIOR TO SOD INSTALLATION
34. SCARIFY LAWN SOIL 1/2 INCH PRIOR TO INSTALLATION AND APPROVED BY LA
35. ALTERNATE SOD SEAMS TO ELIMINATE CONTINUOUS SEAMS. OVERLAPPING ADJACENT SOD PANEL BY ½ FOR SMALL ROLL SOD
36. INSTALL AND MAINTAIN SOD TO ELIMINATE LUMPS IN SURFACE AND SEAMS
37. SOD TO MEET ALL ADJACENT HARDSCAPE SURFACES FLUSH WITH TOP OF THATCH LAYER
38. ROLL SOD WITH APPROPRIATELY SIZED ROLLER TO PROVIDE PROPER SOD TO SOIL INTERFACE
39. COMPLETELY WATER IN SOD DEEPLY IMMEDIATELY AFTER ROLLING
40. PROTECT SEEDED AREAS AND SLOPES AGAINST EROSION AND SEED LOSS DUE TO BIRDS AND OTHER WILDLIFE BY APPLYING SHORT TERM, BIODEGRADEABLE EROSION CONTROL BLANKETS MATS, AND/OR NETTING AFTER COMPLETION OF SEEDING OPERATIONS ADHERE TO MANUFACTURER'S REQUIREMENTS FOR REQUIRED PLACEMENT AND STAKING
41. PRUNING OPERATIONS SHOULD FOLLOW APPLICABLE ANSI STANDARDS UNO UPON COMPLETION OF WORK UNDER THIS CONTRACT, PRUNE AND REPAIR INJURIES TO ALL PLANTS LIMIT AMOUNT OF PRUNING TO MINIMUM NECESSARY TO REMOVE INJURED OR DAMAGED BRANCHES, TWIGS AND STEMS AND TO COMPENSATE FOR THE LOSS OF ROOTS AS A RESULT OF TRANSPLANTING OPERATIONS PRUNE IN SUCH A MANNER AS NOT TO CHANGE NATURAL HABIT OR SHAPE UNO ALL HEDGE PRUNING TO BE COMPLETED UNDER THE REVIEW BY AOR AND LA
42. DURING PUNCH LIST REVIEW, COORDINATE WITH AOR AND LA TO REVIEW AESTHETIC PRUNING NEEDS FOR ALL PLANTS AOR AND LA TO MARK (WITH YELLOW RIBBON) OR SELF CONDUCT AESTHETIC PRUNING WITH CONTRACTOR AS PART OF THE SUBSTANTIAL COMPLETION REVIEW
43. WARRANTY ALL PLANT MATERIAL FOR A MIN PERIOD OF 1 YEAR FROM FINAL ACCEPTANCE UNO IN THE SPECIFICATIONS REMOVE AND REPLACE PLANTS AS DETERMINED BY LA TO BE SIGNIFICANTLY UNHEALTHY OR DEAD PER THE CRITERIA SET FORTH IN THE SPECS CONDUCT REPLACEMENTS DURING THE APPROPRIATE PLANTING SEASON AS DETERMINED BY THE LOCAL CLIMATE AND INDUSTRY STANDARDS REPLACEMENTS SHOULD CONFORM TO THE CRITERIA SHOWN AND SPECIFIED SEE SPECS FOR ALL MAINTENANCE REQUIREMENTS SIZE, CHARACTER AND FORM OF ALL REPLACEMENTS TO BE SIMILAR TO THE ORIGINAL APPROVED MATERIAL AND APPROVED BY THE AOR AND LA
44. ALL PLANT MATERIAL IS SHOWN AS ANTICIPATED SIZE AT INSTALLATION PLANT GROWTH VARIES BY SPECIES AND YEARLY CLIMACTIC CONDITIONS
45. FOR PLANTING DETAILS, SEE SHEET(S) L2-01

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

LaPorte Rd & 88th Ave
Tinley Park, IL 60487

site design group, ltd.
Landscape Architect

ecology
ecology+vision, llc
Ecologist

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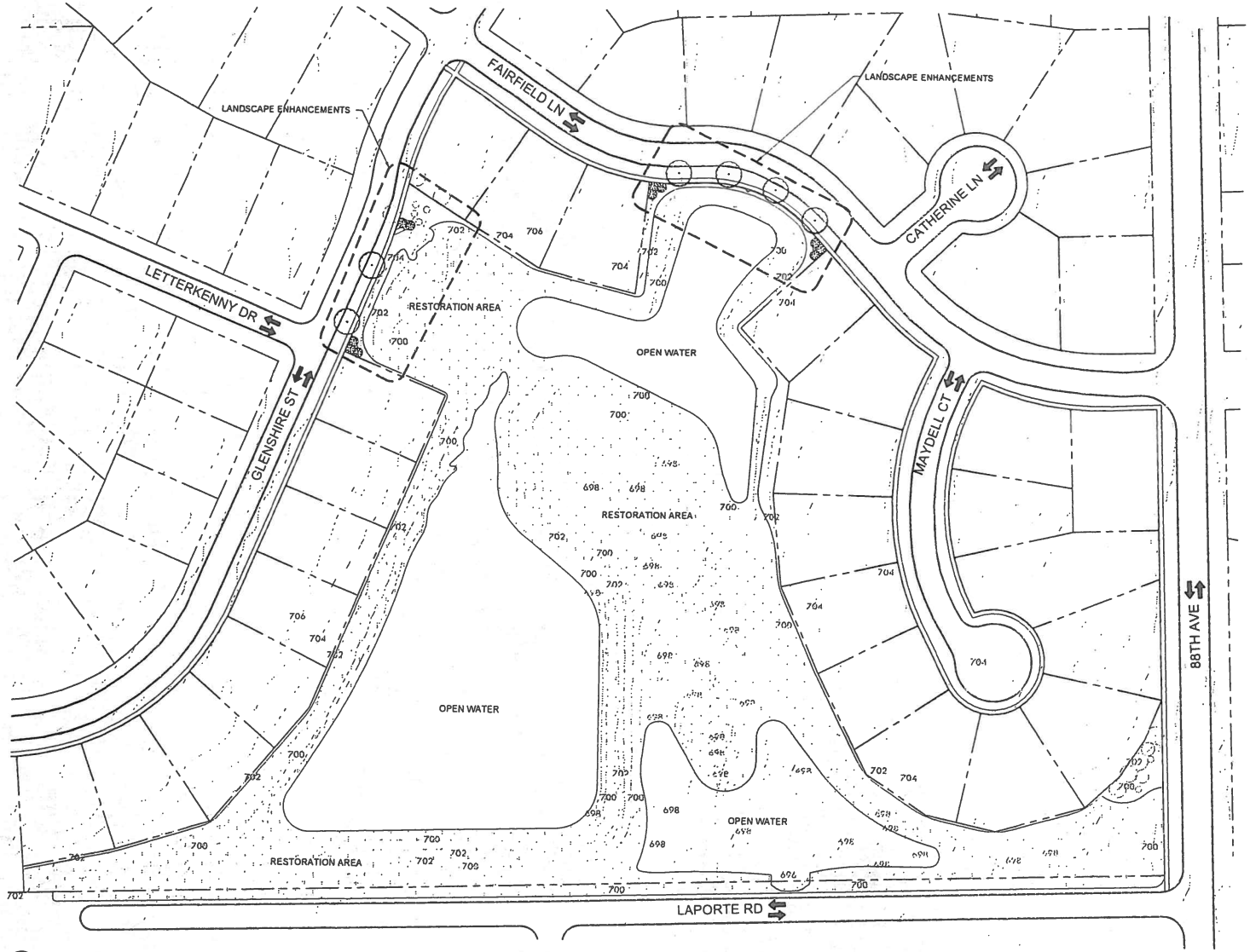

1 OVERALL SITE PLAN (FOR REFERENCE ONLY)
1" = 60'-0"

0 20 40 60 80 100 120

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

LaPorte Rd & 88th Ave
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site design group, ltd. — landscape architecture urban design — Landscape Architect

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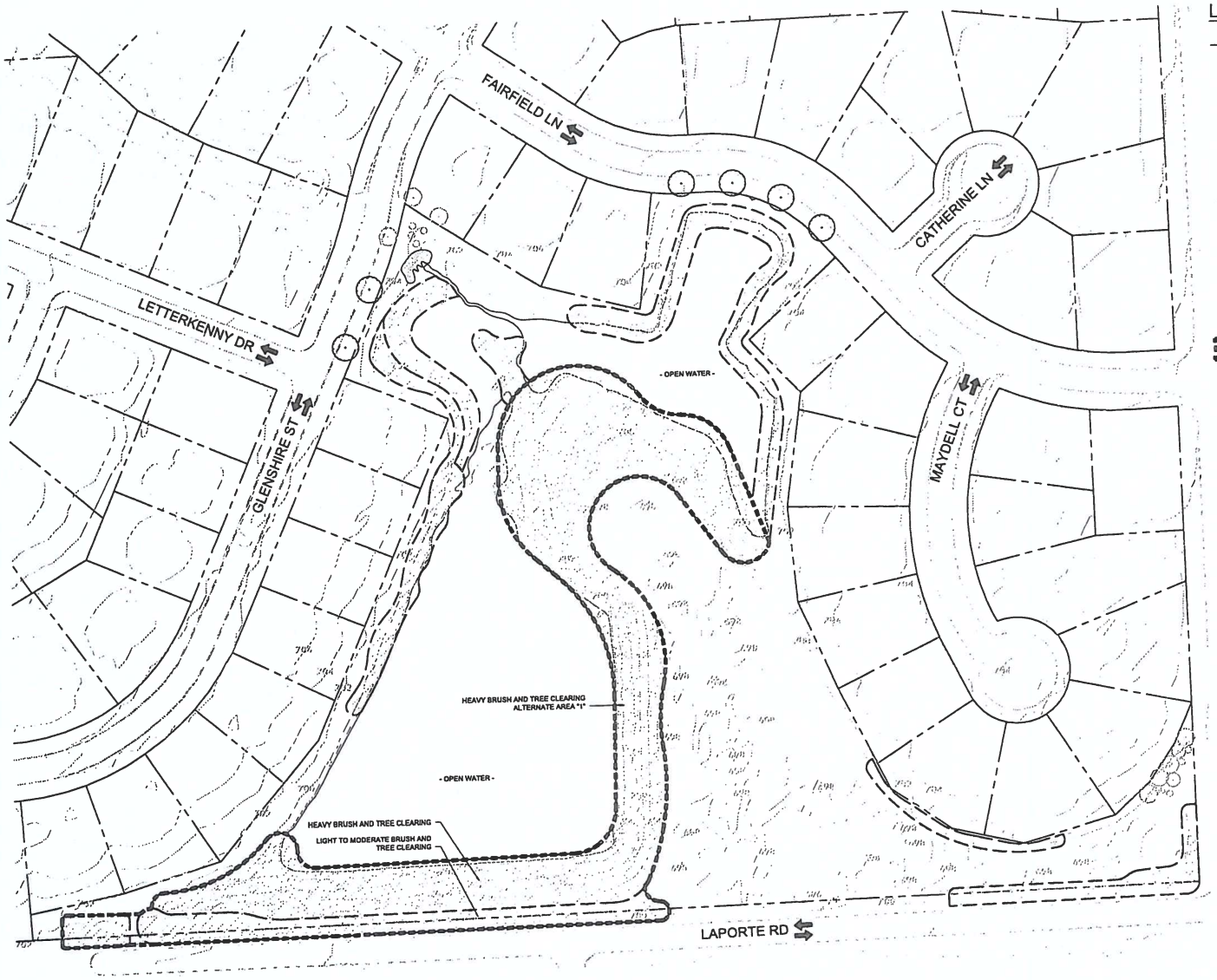
Drawing Number
G1-01



LEGEND

PROPERTY LINE

LIGHT TO MODERATE BRUSH AND TREE CLEARING

Restoration areas that contain populations of target woody species requiring removal. Target woody species shall be cut, removed, and the stump treated with herbicide as specified. Follow-up treatment of woody re-sprouts will be required. Contractor shall identify and shall NOT remove existing non-target native species including but not limited to *Prunus spp.* without written approval.

HEAVY BRUSH AND TREE CLEARING

Restoration areas that contain populations of target woody species requiring removal. Target woody species shall be cut, removed, and the stump treated with herbicide as specified. Follow-up treatment of woody re-sprouts will be required. Contractor shall identify and shall NOT remove existing non-target native species including but not limited to *Prunus spp.* without written approval.

BRUSH AND TREE CLEARING ALTERNATE AREA "1"

1 BRUSH AND TREE CLEARING PLAN
1" = 60'-0"

0 20 40 80 80 100 120'

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

LaPorte Rd & 88th Ave.
Tinley Park, IL 60487

site landscape architect/s/re urban design
site design group, ltd.
Landscape Architect

ecology
ecologyservices, llc
Ecologist

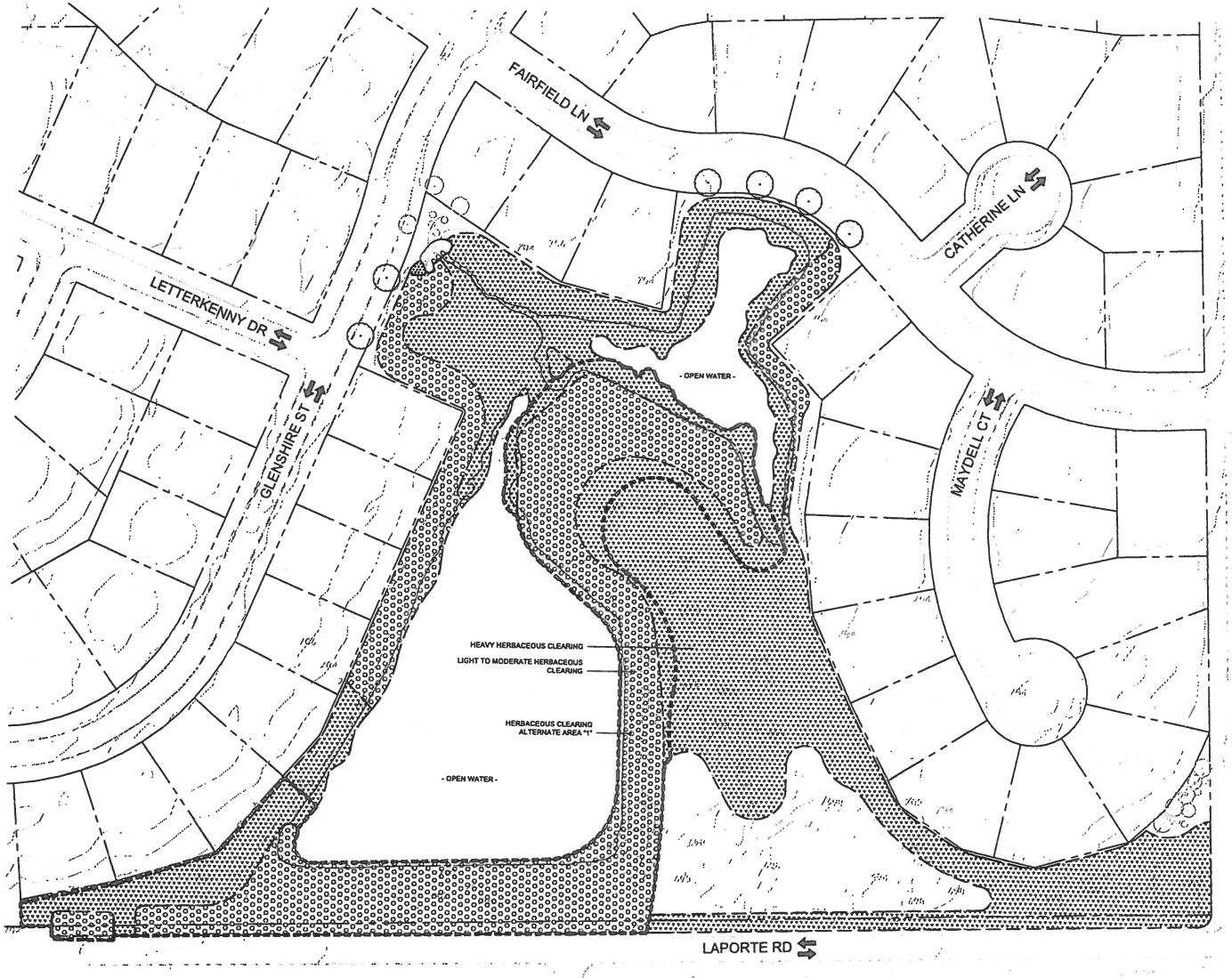
ISSUANCES

Rev. #	Description	Date Issued
00	Issued For Bid	02/05/2019

Project No : 8322
Drawn : JT
Checked : MM
Approved : BM
File : 8322_site.dwg
Scale : AS NOTED

Sheet Title:
TREATMENT PLAN
BRUSH AND TREE CLEARING

Drawing Number:
R2-00



1 HERBACEOUS CLEARING PLAN
1" = 60'-0"

0 20 40 60 80 100 120'

LEGEND

PROPERTY LINE

LIGHT TO MODERATE HERBACEOUS CLEARING
Areas with dense native vegetation and lower weed content. Without damaging the existing native vegetation, target species shall be selectively spot-sprayed or hand-wicked prior to planting. Follow-up treatment will be required for successful eradication. Upon completion of herbaceous clearing, mow existing vegetation to a height of six inches (6") prior to seeding.

HEAVY HERBACEOUS CLEARING
Areas with sparse native vegetation and high weed content. Existing vegetation shall be treated with a non-selective herbicide. Follow-up treatment will be required for successful eradication. Upon completion of herbaceous clearing, eliminate dead biomass and scarify the soil prior to seeding.

HERBACEOUS CLEARING ALTERNATE AREA "1"

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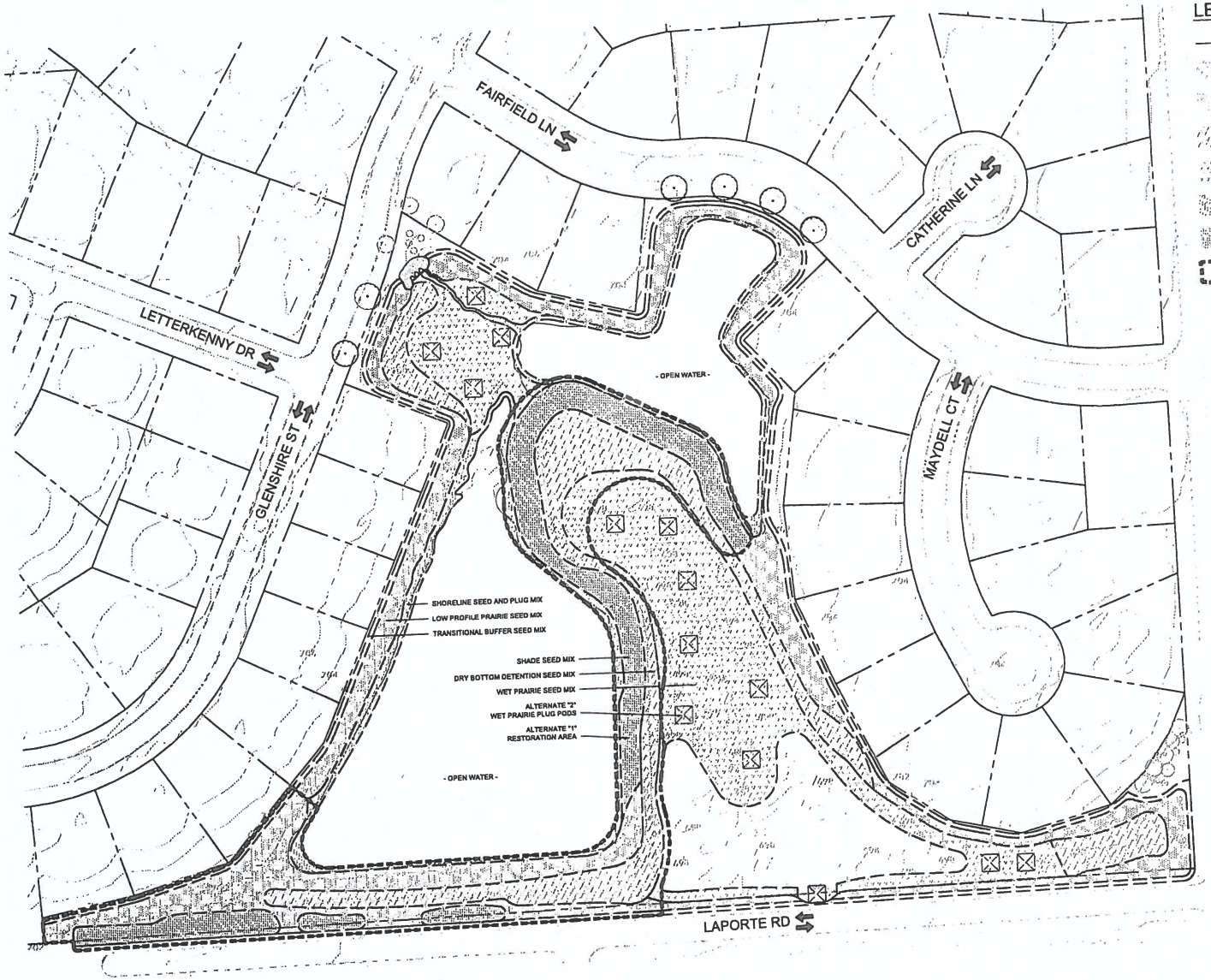
Approved : BM

Sheet Title:
TREATMENT PLAN
HERBACEOUS CLEARING

Drawing Number:
R2-01



1 RESTORATION PLAN
1" = 60'-0"

LEGEND

- PROPERTY LINE
- TRANSITIONAL BUFFER SEED MIX
- LOW PROFILE PRAIRIE SEED MIX
- DRY BOTTOM DETENTION SEED MIX
- WET PRAIRIE SEED MIX
- SHORELINE SEED AND PLUG MIX
- SHADE SEED MIX
- ALTERNATE "1" RESTORATION AREA
- ALTERNATE "2" WET PRAIRIE PLUG PODS

Village of Tinley Park ILLINOIS

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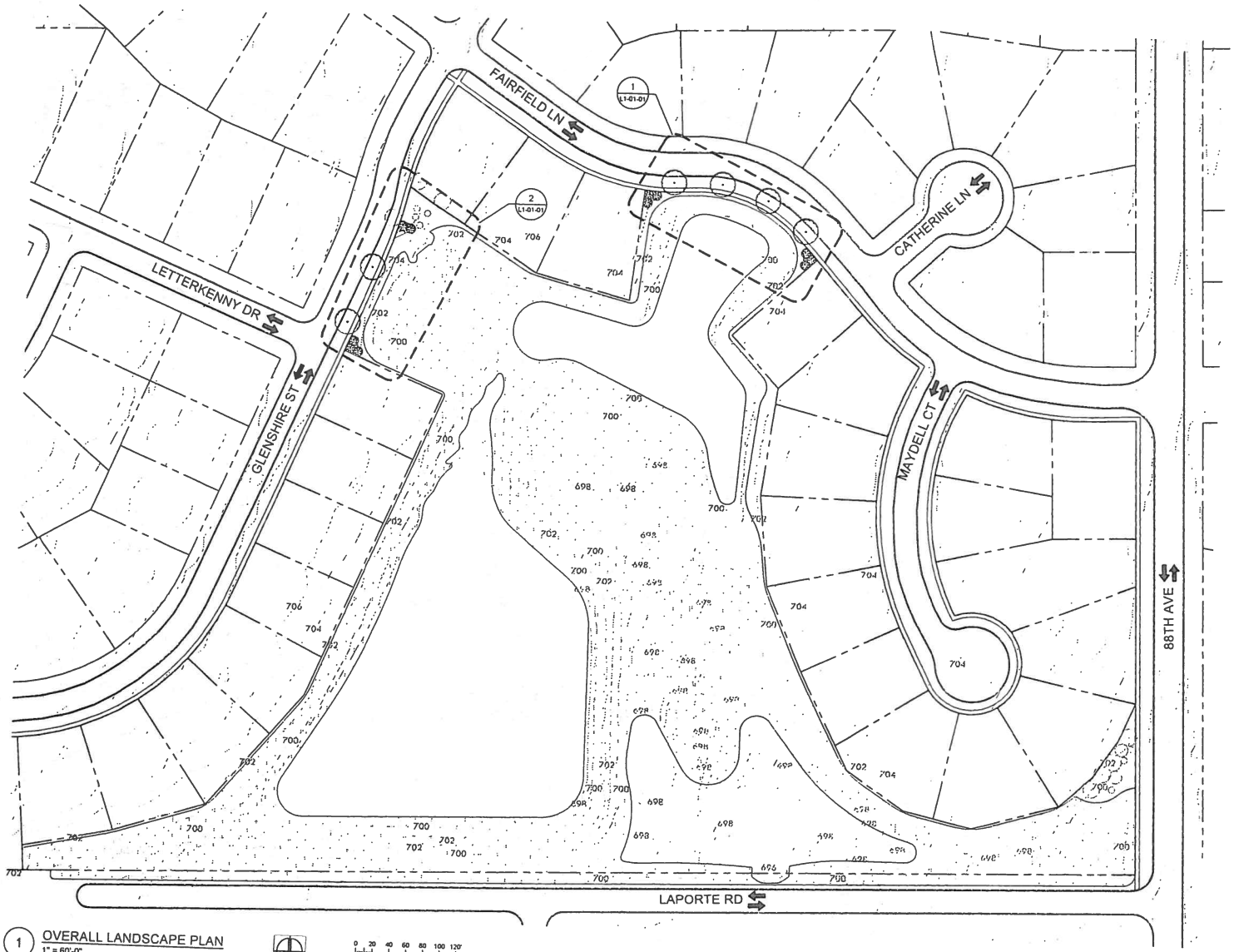
File : 8322_site.dwg
Scale : AS NOTED

Sheet Title:
RESTORATION PLAN

Drawing Number:
R3-00



1 OVERALL LANDSCAPE PLAN
1" = 60'-0"

0 20 40 60 80 100 120'

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

LaPorte Rd & 88th Ave
Tinley Park, IL 60487

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landscape architecture urban design
site design group, ltd. — Landscape Architect

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ISSUANCES

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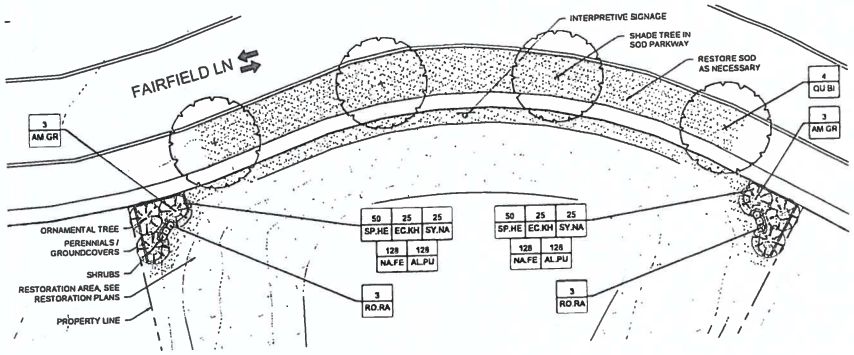
Project No 8322
Drawn JT — File 8322 land dwg
Checked MM — Scale AS NOTED
Approved BM

Sheet Title
OVERALL LANDSCAPE PLAN

Drawing Number
L1-01



1 LANDSCAPE PLAN ENLARGEMENT
1" = 20'-0"

0 10 20 30 40'

LEGEND

- PROPERTY LINE
- STABILIZED DECOMPOSED GRANITE
- PERENNIALS / GROUNDCOVERS
- SOD
- EXISTING TREE
- SHADE TREE
- ORNAMENTAL TREE
- SHRUBS
- BENCH
- INTERPRETIVE SIGN

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

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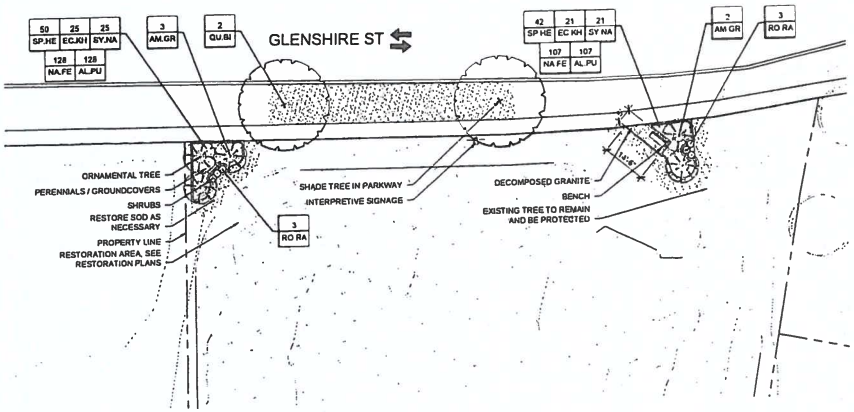

2 LANDSCAPE PLAN ENLARGEMENT
1" = 20'-0"

0 10 20 30 40'

PLANT SCHEDULE						
CODE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	REMARKS
SHADE TREES						
QU.BI	6	*Quercus bicolor*	Swamp White Oak	B&B	2.5" cal	matching heads
ORNAMENTAL TREES						
AM.GR	11	*Amelanchier x grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	B&B	8' ht	multi-stem
SHRUBS						
RO.RA	12	*Rosa 'RedWhite'*	White Knockout Rose	pot	#3	per plan
PERENNIALS						
EC.KH	96	*Echinacea 'Kim's Knee High'*	Kims Knee High Coneflower	pot	#1	18" o.c.
SP.HE	192	*Sporobolus heterolepis 'Tara'*	Tara Prairie Dropseed	pot	#1	18" o.c.
SY.NA	96	*Symphyotrichum novae-angliae 'Purple Dome'*	Purple Dome Aster	pot	#1	18" o.c.
BULBS						
AL.PU	491	*Allium 'Purple Sensation'*	Purple Sensation Allium	bulb	12 cm	8" o.c.; plant in drifts
NA.FE	491	*Narcissus '3D' Blend*	3D Blend Daffodil	bulb	13 cm	8" o.c.; plant in drifts

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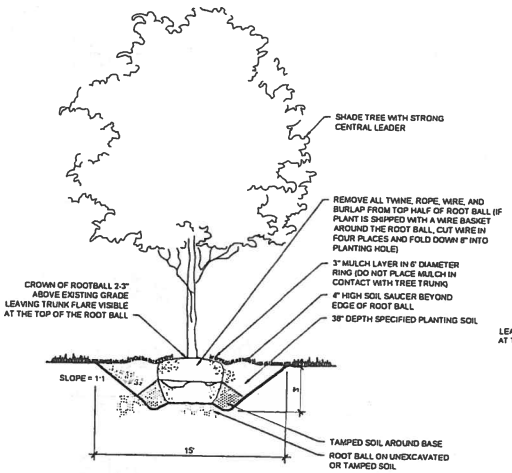
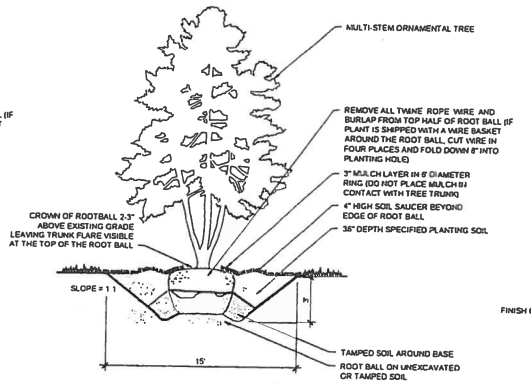
Sheet Title
LANDSCAPE PLAN ENLARGEMENTS

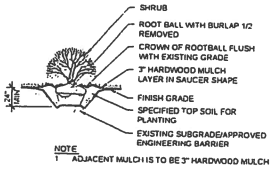
Drawing Number
L1-01-01



1 SHADE TREE PLANTING SECTION
NOT TO SCALE

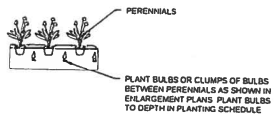


2 ORNAMENTAL TREE PLANTING SECTION
NOT TO SCALE

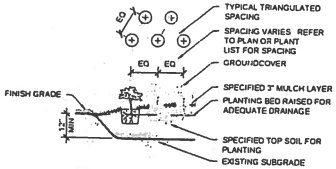


NOTE
1 ADJACENT MULCH IS TO BE 3" HARDWOOD MULCH

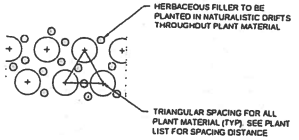
3 SHRUB PLANTING SECTION
NOT TO SCALE



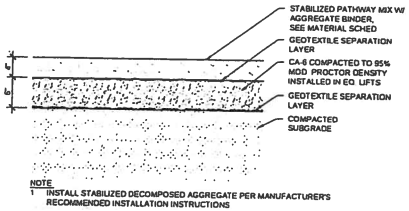
5 BULB INSTALLATION DETAIL
NOT TO SCALE



4 PERENNIAL PLANTING SECTION
NOT TO SCALE

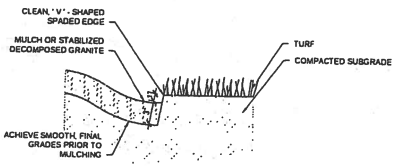


6 INTERPLANTING DETAIL
NOT TO SCALE

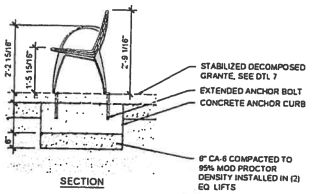


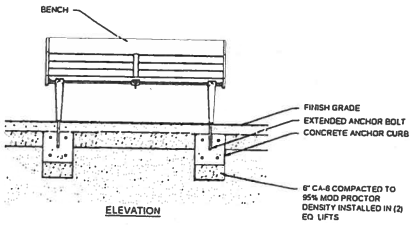
NOTE
1 INSTALL STABILIZED DECOMPOSED AGGREGATE PER MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS

7 PEDESTRIAN STABILIZED DECOMPOSED AGGREGATE
1" = 1'-0"



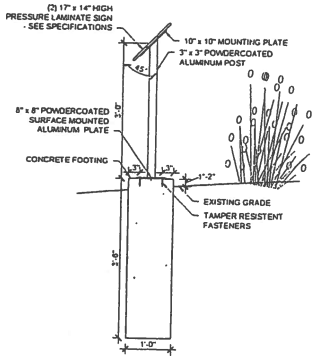
8 SPADED EDGE DETAIL
1-1/2" = 1'-0"

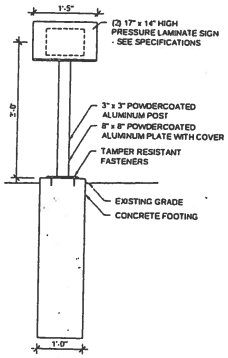




NOTE
1 CONTRACTOR IS RESPONSIBLE FOR REFERRING TO MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION DETAILS

9 6'W BENCH AT PAVERS DETAIL
1/2" = 1'-0"





10 INTERPRETIVE SIGN DETAIL
3/4" = 1'-0"

Village of Tinley Park ILLINOIS

Tinley Park Fairfield Glen Restoration

LaPorte Rd & 88th Ave
Tinley Park, IL 60487

site design group, ltd.
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ISSUANCES

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Project No 8322
Drawn JT
File 8322 dtl plnt dwg
Checked MM
Scale AS NOTED
Approved BM

Sheet Title
LANDSCAPE DETAILS

Drawing Number
L2-01

Exhibit B

INSURANCE REQUIREMENTS

(See Risk Manager for Insurance Requirements)

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 05/01/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Leigh Ann Francis
Brown & Brown of Illinois 2300 Cabot Dr. Ste 100 Lisle IL 60532	PHONE (A/C, No, Ext): (630) 245-4600 FAX (A/C, No): (630) 245-4601 E-MAIL ADDRESS: l.francis@bbofillinois.com

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	Homeland Insurance Company of New York	
INSURER B :	The Continental Insurance Company	35289
INSURER C :	Great American Alliance Insurance Company	
INSURER D :		
INSURER E :		
INSURER F :		

INSURED: Pizzo & Associates, Ltd., 10729 Pine Road, Leland IL 60531

COVERAGES **CERTIFICATE NUMBER:** 1/19-10/19 GENERAL **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR [X] POLLUTION & PROFESSIONAL [X] XCU INCLUDED GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:			7930032290002	01/01/2019	01/01/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 10,000,000 $ 50,000 $ 5,000 $ 10,000,000 $ 10,000,000 $ 10,000,000 $
B	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			6050510369	01/01/2019	10/01/2019	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
B	[X] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			CUE6050510386	01/01/2019	10/01/2019	EACH OCCURRENCE AGGREGATE $	$ 10,000,000 $ 10,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WC376330100	01/01/2019	10/01/2019	PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Fairfield Glen Restoration, 2019-RFP-006
Primary and Non-Contributory Additional Insured on General Liability, Auto and Umbrella and Waiver of Subrogation on Workers Compensation: Village of Tinley Park, Its Officers, Officials, Employees and Volunteers
Per Form OBENV GE 301 (02 11); OBENV GE 304 (02 11)

CERTIFICATE HOLDER

Village of Tinley Park
16250 S. Oak Park Avenue
Tinley Park IN 60477

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Leigh Ann Francis

Policy Number: 7930032290002

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION – FORM I

This endorsement only modifies coverage provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
CONTRACTORS ENVIRONMENTAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:
Any person or organization for which the Named Insured has agreed to provide insurance prior to loss as provided by this policy but only to the scope of insurance agreed to by the Named Insured.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

A. **SECTION II – WHO IS AN INSURED** is amended to include as an insured the person or organization shown in the SCHEDULE above, but only with respect to liability arising out of your ongoing operations performed for that insured.

B. With respect to the insurance afforded to these additional insureds, the following exclusion is added:

2. Exclusions

This insurance does not apply to **bodily injury**, **property damage** or **environmental damage** occurring after:

(a) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or

(b) That portion of **your work** out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

All other terms and conditions remain the same.

Policy Number: 793-00-32-29-0002

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement only modifies coverage provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
CONTRACTORS ENVIRONMENTAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations:
Any person or organization for which the Named Insured has agreed to provide insurance prior to loss as provided by this policy but only to the scope of insurance agreed to by the Named Insured.	Any location or completed operation, but only to the scope of insurance agreed to by the named insured.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

SECTION II – WHO IS AN INSURED is amended to include as an additional insured the person(s) or organization(s) shown in the SCHEDULE above, but only with respect to liability for **bodily injury**, **property damage** or **environmental damage** caused, in whole or in part, by **your work** at the location designated and described in the SCHEDULE above performed for that additional insured and included in the **products-completed operations hazard**.

All other terms and conditions remain the same.