

Bid Document For

**Brentwood Wetland
Arboretum Project**

In

Brentwood, Missouri



2348 South Brentwood Blvd. – Brentwood, Missouri 63144 (314) 962-4800

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INVITATION FOR BIDS

The City of Brentwood is accepting sealed bids for the Brentwood Wetland Arboretum Project. Bids will be received by the Deputy City Clerk, 2348 South Brentwood Blvd, Brentwood, MO 63144, until 11:00 a.m. on April 2, 2024. The bids will then be publicly opened and read aloud at Brentwood City Hall at 11:15 a.m. Bids received after said time will be returned unopened. Bidders shall submit two copies of bid proposal.

The Scope of Work consists of the installation of a landscape design and planting plan to enhance, restore and improve the health of the Brentwood Wetland Arboretum located at 3120 S. Brentwood Blvd., Brentwood, MO 63144. The City reserves the right to reduce the scope of work due to budgetary restraints.

This project is partially funded by the Missouri Department of Conservation, Open Space STL, Great Rivers Greenway, and Forest ReLeaf of Missouri in addition to the Missouri Botanical Garden's Deer Creek Watershed Alliance, via financial support from US EPA Region 7 through the Missouri Department of Natural Resources (subgrant number G22-NPS-09), under Section 319 of the Clean Water Act.

Bid packages are on file and available at the Deputy City Clerk's Office, 2348 South Brentwood Blvd, Brentwood MO 63144 and on the city's website at www.brentwoodmo.org.

A pre-bid meeting will be held on March 19, 2024 at 10:00 am at the Brentwood Wetland Arboretum located at 3120 S. Brentwood Blvd. Brentwood, MO 63144. **Attendance is strongly recommended.**

Not less than the prevailing hourly rate of wages shall be paid to all workmen performing under this contract in this area according to the rates determined by the Department of Labor and Industrial Relations of the State of Missouri.

The City reserves the right to accept or reject any bid and waive any irregularities in the best interest of the City. Any inquiries concerning the proposal should be directed to Eric Gruenenfelder, Director of Parks & Recreation at egrueenfelder@brentwoodmo.org.

INFORMATION FOR BIDDERS

ARTICLE 1

DEFINITIONS

1.1 Bidding Documents include the Invitation to Bid, Information for Bidders, the Bid Form and the proposed Contract Documents including any Addenda issued prior to receipt of bids. The Contract Documents proposed for the Work consists of the City-Contractor Agreement, State Wage Determination, Non-Collusion Affidavit, Performance Payment Bond, the Drawings, the Specifications, the Construction Schedule, all Addenda, and all Modifications.

1.2 All definitions set forth in the General Conditions of City-Contractor Agreement or in other Contract Documents are applicable to the Bidding Documents.

1.3 Addenda are written or graphic instruments issued prior to the execution of the City-Contractor Agreement which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.4 A bid is a complete and properly signed proposal to do the Work or a designated portion thereof for the sums stipulated therein, submitted in accordance with the Bidding Documents.

1.5 The base bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in alternate bids.

1.6 An alternate bid is an amount stated in the Bid to be considered in place of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

1.7 A unit price is an amount stated in the bid as a price per unit of measurement for materials or services as described in the Bidding Documents or in the proposed Contract Documents.

1.8 A bidder is a person or entity who submits a bid.

1.9 A sub-bidder is a person or entity who submits a bid to a bidder for materials or labor for a portion of the Work.

ARTICLE 2

BIDDER'S REPRESENTATIONS

2.1 Each bidder by making his bid represents and warrants that:

2.1.1 He has read and understands the Bidding Documents and his Bid is made in accordance therewith.

2.1.2 He has visited the site, has familiarized himself with the local conditions under which the Work is to be performed and has correlated his observations with the requirements of the proposed Contract Documents.

2.1.3 His bid is based upon the materials, products, systems and equipment required by the Bidding Documents.

ARTICLE 3

BIDDING DOCUMENTS

3.1 COPIES

3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Invitation to Bid in the number and for the deposit sum, if any, stated therein.

3.1.2 Each bidder shall use a complete set of Bidding Documents in preparing his bid.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 Bidders shall promptly notify the City of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

3.2.2 Bidders may request clarification or interpretation of the Bidding Documents by making a written request which shall reach the City at least seven (7) days prior to the date for receipt of bids.

3.2.3 Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

3.2.4 If the City determines that clarification of the terms and conditions of the Bidding Documents is necessary, an Addendum will be made available to all Bidders setting forth such clarification.

3.3 SUBSTITUTIONS

3.3.1 The materials, products, systems and equipment described in the Bidding Documents establish a minimum standard of required function, dimension, appearance and quality which must be met by any proposed substitution.

3.3.2 No substitution of the materials, products, systems and equipment described in the Bidding Documents will be considered prior to receipt of Bids unless written request for approval has been received by the City at least seven (7) days prior to the date for receipt of bids. Each such request shall include the name of the material, product, system or equipment for which substitution will be made and a complete description of the proposed substitute including drawings, costs, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, products, systems or equipment or other Work that incorporation of the substitute would require shall be included in each such request. The City, in its sole discretion, may approve or disapprove the proposed substitute.

3.3.3 If the City approves any proposed substitution prior to receipt of bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

3.3.4 No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

3.4 ADDENDA

3.4.1 Addenda will be mailed or delivered to all who are known by the City to have received a complete set of Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 No addenda will be issued later than four (4) days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of bids.

3.4.4 Prior to submitting his bid, each bidder shall ascertain that he has received all Addenda issued, and he shall acknowledge receipt of all such Addenda in his bid.

ARTICLE 4

BIDDING PROCEDURE

4.1 FORM AND STYLE OF BIDS

4.1.1 Attached to the Contract Documents is a separate, complete set of Bid Forms to be signed and submitted as the Contractor's formal bid.

4.1.2 All blanks on the Bid Form shall be filled in by typewriter or manually in ink.

4.1.3 Where so indicated by the make-up of the Bid Form, dollar amount shall be expressed in both words and figures and in case of discrepancy between the two, the amount written in words shall govern.

4.1.4 Any interlineations, alteration or erasure must be initialed by the signer of the Bid.

4.1.5 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of his bid security, state his refusal to accept award of less than the combination of bids he so stipulates. The bidder shall make no additional stipulations on the bid form nor qualify his bid in any other manner.

4.1.6 Each copy of the bid shall include the legal name of the bidder and a statement that the bidder is a sole proprietor, a partnership, a corporation, or some other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the bidder to a contract. A bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the bidder.

4.2 SUBMISSION OF BIDS

4.2.1 Bidders must complete and submit with their bids the "Non-Collusion Affidavit" included with the Bid Form and a 5% Bid Bond. Bidders shall also complete and submit the following:

1. a designation of the Work, item by item, including the related dollar amount and total dollar amount, to be performed by the bidder with his own forces;
2. the proprietary names and suppliers of principal items or systems of materials and equipment proposed for the Work.
3. Subcontractor Approval Form for each and every proposed Subcontractor, or other persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work;
4. Statement of Qualifications Form list of at least three (3) similar projects currently under contract and three (3) projects completed by the Contractor or listed Subcontractor with the last two (2) years;
5. Subcontractor/Vendor Questionnaire Form

4.2.2 All copies of the bid, and any other documents required to be submitted with the bid shall be enclosed in a sealed envelope. The envelope shall be addressed to Deputy City Clerk, 2348 South Brentwood Blvd., Brentwood, MO 63144 and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the bid is submitted. If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

4.2.3 Bids shall be deposited at the designated location prior to the time and date for receipt of bids indicated in the invitation to bid or any extension thereof made by an Addendum. Bids received after the time and date for receipt of bids will be returned unopened.

4.2.4 The bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids. The date and time of receipt of a bid as noted by the City of Brentwood shall be final, conclusive and binding on bidders for all purposes.

4.3 MODIFICATION OR WITHDRAWAL OF BID

4.3.1 A bid may not be modified, withdrawn or cancelled by the bidder within sixty (60) days following the time and date designated for the receipt of bids, and each bidder so agrees in submitting his bid.

4.3.2 Prior to the time and date designated for receipt of bids, any bid submitted may be modified or withdrawn by notice to the party receiving bids at the place designated for receipt of bids. Such notice shall be in writing over the signature of the bidder or by telegram. If by telegram, written confirmation over the signature of the bidder shall be mailed and postmarked on or before the date and time set for receipt of bids, and it shall be so worded as not to reveal the amount of the original bid.

4.3.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these instructions to bidders.

ARTICLE 5

CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

5.1.1 Unless stated otherwise in the Invitation to Bid, the properly identified bids received on time will be opened publicly and will be read aloud.

5.2 REJECTION OF BIDS

5.2.1 The City shall have the right to reject any or all bids, to reject a bid not accompanied by a Bid bond if required or by other data required by the Bidding Documents, to reject a bid which is in any way incomplete or irregular and to rebid the Work at a later date if all bids are rejected.

5.3 ACCEPTANCE OF BID (AWARD)

5.3.1 The City may make any investigation of a bidder as it deems necessary to determine the ability of a bidder to perform the Work. Bidders shall furnish information regarding their qualifications upon the reasonable request of the City. The City reserves the right to reject any bid if the evidence submitted by, or other investigation of, the bidder fails to satisfy the City that the bidder has the proper qualifications to perform the Work in accordance with the Contract.

5.3.2 It is the intent of the City to award the Contract to the lowest responsible bidder provided the bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. However, the City reserves the right to accept the bid which, in the City's judgment, is in the best interest of and most advantageous to the City. The City shall have the right to waive any informality or irregularity in any bid or bids received and to accept the bid or bids which, in its judgment, is in the City's own best interests.

5.3.3 The City shall have the right to accept Alternates in any order or combination, and to determine the low bidder on the basis of the sum of the base bid and the alternates accepted.

ARTICLE 6

POST BID INFORMATION

6.1 SUBMITTALS

6.1.1 The bidder will be required to establish to the satisfaction of the City the reliability and responsibility of the persons or entities proposed to furnish and perform the Work.

6.1.2 Prior to the award of the contract, the City will notify the bidder in writing if the City, after due investigation, objects to any such person or entity proposed by the bidder pursuant to Subparagraph 4.3.1 above. If the City objects to any such proposed person or entity, the bidder may, at his option, (1) withdraw his bid, or (2) submit an acceptable substitute person or entity with no adjustment in his bid price.

6.1.3 Persons and entities proposed by the bidder and to whom the City has made no objection under the provisions of Subparagraph 6.1.2 must be used on the Work for which they were proposed and shall not be changed except with the prior written consent of the City.

ARTICLE 7

AWARD OF CONTRACT

7.1 Following receipt to the satisfaction of the City of all information required under Paragraph 6.1 above and approval by the applicable governing body, the City shall mail to the successful bidder the Notice of Award of the Contract.

7.2 Within five (5) working days from the date of receipt of the Notice of Award, the successful bidder shall execute and deliver to the City the Contract Documents, and shall furnish the Bonds required by Paragraph 8.1 below and the Certificates of Insurance required by subparagraph 10.1.3 of the General conditions. In the event the successful bidder fails to execute and deliver the contract Documents, the Bonds and the Certificates of Insurance as aforesaid, the City may, at its option, consider the bidder in default and award the Contract of another bidder, in which case the Bid Bond of the defaulting bidder shall be forfeited to the City.

ARTICLE 8

PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

8.1 BOND REQUIREMENTS

8.1.1 The Contractor shall furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of this Contract. The surety shall be a company licensed to do business in the State of Missouri and shall be acceptable to the Owner. The Performance Bond and the Labor and Material Payment Bond may be in one or in separate instruments. The cost of procuring and maintain a performance bond shall be the sole responsibility of Contractor.

8.2 TIME OF DELIVERY AND FORM OF BONDS

8.2.1 The bidder shall deliver the required bonds to the City not later than the date of execution of the City-Contractor Agreement, or if the Work is to be commenced prior thereto in response to a letter of intent, the bidder shall, prior to commencement of the Work, submit evidence satisfactory to the City that such bonds will be furnished.

8.2.2 The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN CITY AND CONTRACTOR

9.1 FORM TO BE USED

9.1.1 Unless otherwise required in the Bidding Documents, the City-Contractor Agreement for the Work shall be in the form attached hereto.

ARTICLE 10

BID FORM PROPOSAL

BID TIME _____

BID DATE _____

TO: THE CITY OF BRENTWOOD

The bidder declares that he has had an opportunity to examine the site of the work and he has examined the contract documents therefore, and that he has prepared his proposal upon the basis thereof, _____, having carefully examined the site and having read and understood all the Contract Documents, adding Addenda _____ through _____, for the

Brentwood Wetland Arboretum Project

and being familiar with the local conditions affecting the work, hereby proposes to furnish all labor, materials, equipment and services required for the performance and completion of said project in accordance with the said Contract Documents or the following itemized bid.

(Signature)

(Print Name)

(Company Name)

(Address)

(Telephone Number)

(Seal - If bid by Corporation)

ITEMIZED BID FORM

BASE BID

ITEM	DESCRIPTION	EXTENDED PRICE
1	Brentwood Wetland Arboretum Project – Phase I	
2	Brentwood Wetland Arboretum Project – Phase II	
3	Contractor Provided Stewardship Maintenance	
4	Total Bid	

ALTERNATE BID

ITEM	DESCRIPTION	EXTENDED PRICE
1	Deduct for City to provide wood chips for trail	

A dollar value unit cost must be filled in for each item indicated above. Any bid form that does not include a separate dollar value for each item will be deemed non-responsive and will not be considered. Any proposal that lists “not required”, “\$0”, or “no bid” in lieu of a dollar value will be deemed non-responsive and will not be considered.

(Signature)

(Print Name)

(Print Title)

SUBCONTRACTOR APPROVAL FORM

This report must accompany and be part of the sealed bid proposal.

1. Name of Bidder: _____

2. Address Bidder: _____

City State Zip Phone

3. The above-named bidder intends to subcontract for materials, services, supplies, specialty contractors, etc., in the following fashion:

Table with 3 columns: Names and Addresses of Subcontractor Which the Contractor Anticipates Utilizing, Nature of Participation, \$ Value of Subcontractor. Includes four rows of blank lines for data entry.

A. Total of Above _____
B. Total Bid Amount _____

Subcontractor Utilization as a % of Total Bid Amount: (A/B x 100) _____

The General Contractor shall perform 51% of the contract with his own company.

Name-Authorized Officer of Bidder

Signature-Office Bidder

Date

The City of Brentwood, Missouri reserves the right, before any award of the Contract is made, to require of any bidder to whom it may make an award of the Contract, a non-collusion affidavit in the form designated below:

NON-COLLUSION AFFIDAVIT

STATE OF _____,

COUNTY OF _____,

_____, being first duly sworn, deposes and says that he is _____*(sole owner, partner, president, secretary, etc.) of _____, the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder had not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that any one shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the bid price of said bidder or of any other bidder, or to fix any overhead, profit or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder had not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

SIGNED:

(Title)

Subscribed and sworn to before me this ____ day of _____, 2024.
Seal of Notary

Notary Public

Statement of Qualifications
 (To be submitted by the Bidder with Bid)

All questions must be answered and the data given must be clear and comprehensive. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

1. Company Name _____

Phone Number and Fax _____

2. Permanent Main Office Address _____

3. When Organized _____

4. If a corporation, where incorporated _____

5. Number of years in business _____

If not under present firm name, list previous firm names and types of organizations.

6. Contracts on hand (complete the following schedule)

Project & Address	Owner	Owner's Representative	Contract Amount	% Complete

7. General character of work performed by your company _____

8. Have you ever failed to complete any work awarded to you? If so, why? _____

9. Have you ever defaulted on a contract? If so, why? _____

continued on next page.

10. The following are the more important projects completed in the last five (5) years. Attach additional sheets if necessary.

Site	Owner	Representative	Address	Date Completed

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the City in verification of the recitals comprising this Statement of Bidder's Qualifications.

Date at _____ this _____ day of _____, 2024.

Name of Bidder

By: _____

Title: _____

CITY OF BRENTWOOD, MISSOURI
VENDOR/CONTRACTOR QUESTIONNAIRE
(please type or print neatly)

The City of Brentwood collects demographic data on contractors and vendors in order to quantitatively measure its marketing efforts to identify and attract bids from minority and women-owned business enterprises.

The information you provide is used for statistical purposes only. It will not be used as a basis for the award of contracts or purchase orders.

- 1) Contractor/vendor name _____
- 2) Contract name or bid number _____
- 3) Choose the category below which best describes your business:

Abbreviations* mbe	minority-owned business enterprise
wbe	woman-owned business enterprise

- mbe
- wbe
- both of the above
- none of the above

- 4) If a mbe or wbe please indicate below those listing services with whom you are certified.

<u>Certifying Organization</u>	<u>Certification Number</u>
<input type="radio"/> St. Louis Minority Business Council	_____
<input type="radio"/> State of Missouri	_____
<input type="radio"/> Bi-State Development Agency	_____
<input type="radio"/> City of St. Louis	_____
<input type="radio"/> St. Louis Women's Yellow Pages	_____
<input type="radio"/> Other(s) _____	_____
_____	_____

- 5. _____
Signature Date

*The business is at least 51 percent beneficially owned, operated and controlled by ethnic-minorities or women who are U.S. citizens. Beneficial ownership and control shall be indicated by at least the following, where applicable to the particular form of business organization: ownership of at least 51 percent of each class of stock; unrestricted voting rights; right to receive profits and all other benefits attached to ownership.

INSTRUCTIONS FOR EXECUTING CONTRACT

The Contractor, in executing the Contract, shall follow the following requirements:

The Contractor and the Owner shall sign the Contract Documents in not less than triplicate.

If the Contractor is a corporation, the following certificate shall be executed:

I, _____ certify that I am the _____ secretary of the corporation named as Contractor herein above, that _____ who signed the foregoing Contract on behalf of the Contractor was then of said corporation; that said Contract was duly signed for and in behalf of said corporation by Authority of its governing body, and is within the scope of its corporate powers.

If the Contract is signed by the secretary of the corporation, the above certificate shall be executed by some other officer of the corporation under the corporate seal. In lieu of the foregoing certificate there may be attached to the contract copies of as much of the records of the corporation as will show the official character and authority of the officers signing, duly certified by the secretary or assistant secretary under the corporate seal to be true copies.

If the Contractor is a partnership, each partner shall sign the Contract. If the Contract is not signed by each partner, there shall be attached to the Contract a duly authenticated power of attorney evidencing the signer's (signers') authority to sign such a Contract for and in behalf of the partnership.

If the Contractor is an individual, the trade name (if the Contractor is operating under a trade name) shall be indicated in the Contract and the Contract shall be signed by such individual. If signed by one other than the Contractor there shall be attached to the Contract a duly authenticated power of attorney evidencing the signer's authority to execute such contract for and in behalf of the Contractor.

The full name and business address of the Contractor shall be inserted and the Contract shall be signed with his official signature. The name of the signing party or parties shall be typewritten or printed under all signatures to the Contract.

The Contract shall be deemed as having been awarded when formal notice of award shall have been duly served upon the intended awardee (i.e., the Bidder with whom the Owner contemplates entering into a Contract) by some officer or agent of the Owner duly authorized to give such notice.

CITY-CONTRACTOR AGREEMENT

This Agreement is made and entered into the ___ day of _____, 2024, by and between the City of Brentwood, Missouri (hereinafter the "City") and _____, a Corporation with offices at _____, (hereafter the "Contractor"). _____ The project shall be identified as the Brentwood Wetland Arboretum Project.

WITNESSETH:

The Contractor and the City for the consideration set forth herein agree as follows:

ARTICLE I**The Contract Documents**

The Contract Documents consist of the General Conditions of City-Contractor Agreement, Non-Collusion Affidavit, Performance and Payment Bond, Specifications, Drawings, the Construction Schedule, all Addenda and all Modifications issued after execution of this Contract, which together with this Agreement form the Contract, and are all as fully made a part of the Contract as if attached to this Agreement or repeated herein. All definitions set forth in the General Conditions of City-Contractor Agreement are applicable to this Agreement. This Contract cannot be modified except by duly authorized and executed written amendment.

ARTICLE II**Scope of Work**

The Contractor, acting as an independent contractor, shall do everything required by the Contract Documents. Contractor represents and warrants that contractor has special skills

which qualify contractor to perform the Work in accordance with the Contract and that contractor is free to perform all such Work and is not a party to any other agreement, written or oral, the performance of which would prevent or interfere with the performance, in whole or in part, of the Work.

ARTICLE III

Time of Completion

All time limits stated in the Contract Documents are of the essence. The Work to be performed under this Contract shall be completed in accordance with the time limits set forth in the construction schedule as stated in Article V – Performance of the work.

ARTICLE IV

The Contract Sum and Payments

Based upon Applications for Payment and an Invoice duly delivered by the Contractor to the City by the twentieth day of the month for work performed, in accordance with the Contract, the City shall pay the Contractor for the performance of the Work, the sum of _____ Dollars (\$_____) as follows:

(a) On or about the tenth day of each following month, ninety-five percent (95%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated into the Work, and ninety-five percent (95%) of the portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site to be incorporated into the Work, through the period ending up to the twentieth of the preceding month, less the aggregate of all previous progress payments;

(b) Within thirty (30) days of substantial completion of the Work, a sum sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum; and

(c) Final payment within thirty (30) days after the Work is certified by the City as fully completed and accepted by the City including any required documentation.

(d) The foregoing schedule shall not apply if contrary to federal funding requirements or unless funds from a state grant are not timely received.

(e) Estimates of work performed and materials delivered shall be finally determined by the City.

(f) The foregoing retainage amounts are agreed to be required to ensure performance of the Contract.

(g) Payment shall be deemed made when mailed or personally delivered, whichever is earlier.

ARTICLE V

Performance of the Work

(a) Within fourteen (14) calendar days after being awarded the Contract, the Contractor shall prepare and submit for the City's approval (1) a **Construction Schedule** for the Work in a bar chart format which Construction Schedule shall indicate the dates for starting and completing the work.

(b) Completion of the Work in accordance with the time limits set forth in the Construction Schedule is an essential condition of this Contract. If the Contractor fails to complete the Work in accordance with the Construction Schedule, unless the delay is excusable

under the provisions of Article VI hereof, the Contractor shall pay the City as liquidated damages and not as a penalty, the sum of **\$ 500.00** for each calendar day the Contractor fails to comply with the Construction Schedule. The total amount so payable to the City as liquidated damages may be deducted from any sums due or to become due to Contractor from City.

(c) After Commencement of the Work, and until final completion of the Work, the Contractor shall report to the City as such intervals as the City may reasonably direct, the actual progress of the work compared to the Construction Schedule. If the Contractor falls behind the Construction Schedule for any reason, he shall promptly take, and cause his Subcontractors to take, such action as is necessary to remedy the delay, and shall submit promptly to the City for approval a supplementary schedule or progress chart demonstrating the manner in which the delay will be remedied; provided, however, that if the delay is excusable under Article VI hereof, the Contractor will not be required to take, or cause his Subcontractors to take, any action which would increase the overall cost of the Work (whether through overtime premium pay or otherwise), unless the City shall have agreed in writing to reimburse the Contractor for such increase in cost. Any increase in cost incurred in remedying a delay which is not excusable under Article VI hereof shall be borne by the Contractor.

ARTICLE VI

Delays Beyond Contractor's Control

(a) If the Contractor fails to complete the Work in accordance with the Construction Schedule solely as a result of the act or neglect of the City, or by strikes, lockouts, fire or other similar causes beyond the Contractor's control, the Contractor shall not be required to pay liquidated damages to the City pursuant to paragraph (b) of Article V hereof, provided the Contractor uses his best efforts to remedy the delay in the manner specified in paragraph (c) of

Article V hereof. If, as a result of any such cause beyond the Contractor's control, the delay in completion of the Work in accordance with the Construction Schedule is so great that it cannot be remedied in the aforesaid manner, or if the backlog of Work is so great that it cannot be remedied without incurring additional cost which the City does not authorize, then the time of completion and the Construction Schedule shall be extended pursuant to a Change Order for the minimum period of delay occasioned by such cause. The period of delay and extension shall be determined by the City.

(b) Notwithstanding the foregoing paragraph (a), no extension of time or other relief shall be granted for any delay the cause of which occurs more than seven (7) days before claim therefore is made in writing by the Contractor to the City, and no extension of time shall be granted if the Contractor could have avoided the need for such extension by the exercise of reasonable care and foresight. In the case of a continuing cause of delay, only one claim is necessary.

(c) Weather shall constitute a cause for granting an extension of time.

(d) In the event a delay is caused by the City, the Contractor's sole remedy shall consist of his rights under this Article VI.

ARTICLE VII

Changes in the Work

(a) The City may make changes within the general scope of the Contract by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such changes in the Work shall be executed under the General Conditions of the Contract. No extra work or change shall be made except pursuant to a Change Order from the City in accordance with the General Conditions. Any claim for an increase in the Contract Sum resulting from any

such change in the Work shall be made by the Contractor in accordance with the General Conditions.

(b) If the requested change would result in a delay in the Construction Schedule, the provisions of paragraph (c) of Article V and of Article VI hereof shall apply. If the requested change would result in a decrease in the time required to perform the Work, the completion date and the Construction Schedule shall be adjusted by agreement between the parties to reflect such decrease.

(c) Any adjustment in the Contract Sum for duly authorized extra work or change in the Work shall be determined based on the unit prices previously specified; to the extent such unit prices are applicable. To the extent such unit prices are not applicable, the adjustment in the Contract Sum shall, at the option of the City, be determined by an acceptable lump sum properly itemized and supported by sufficient substantiating data to permit evaluation, or by an acceptable cost plus percentage or fixed fee.

ARTICLE VIII

Termination

(a) If the Contractor is adjudged insolvent or bankrupt, or if the Contractor makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of the Contractor's insolvency, or if the Contractor fails, except in cases for which extension of time is provided, to make progress in accordance with the Construction Schedule, or if the Contractor fails to make prompt payment to Subcontractors for material or labor, or persistently disregards laws, ordinances or the instructions of the City, or otherwise breaches any provision of the Contract, the City may, without prejudice to any other right or remedy, by giving written notice to the Contractor, terminate the Contract, take possession of the Work and of all materials and equipment thereon and finish the Work by whatever method the City may deem expedient. In

such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Sum shall exceed the expenses of finishing the Work, including additional architectural, managerial and administrative expenses, such excess shall be paid to the Contractor. If such expenses shall exceed the unpaid balance of the Contract Sum, the Contractor shall pay the difference to the City promptly upon demand.

In the event of termination pursuant to this paragraph, the Contractor, upon the request of the City, shall promptly

(i) assign to the City in the manner and to the extent directed by the City all right, title and interest of the Contractor under any subcontracts, purchase orders and construction equipment leases to which the Contractor is a party and which relate to the Work or to construction equipment required therefore, and

(ii) make available to the City to the extent directed by the City all construction equipment owned by the Contractor and employed in connection with the Work.

(b) Performance of the Work hereunder may be terminated by the City by giving three (3) days prior written notice to the Contractor. In the event of termination, under this paragraph (b) the Contract Sum shall be reduced by the percentage of work not completed on the date of termination.

ARTICLE IX

Contractor's Insurance

Contractor's insurance shall be endorsed to cover the contractual liability of the Contractor under the General Conditions referring to Property Insurance.

ARTICLE X**Indemnities**

(a) **Liability:** Contractor indemnifies, defends, and holds the City harmless for all third party claims or suits for libel, slander, property damage, and bodily injury, including death, because of the Contractor's negligence, general liability or product liability that arise out of the Project or anyone directly or indirectly employed by the Contractor or anyone for whose acts the City may be liable, regardless of whether caused in whole or in part by the City's negligence. These obligations include all judgments or awards recovered from the claims or suits, including court costs and attorney fees.

(b) **Professional Liability:** Contractor indemnifies and holds the City harmless for all third-party claims or suits for damages, including consequential or economic damages, to the extent caused by the negligent acts, errors or omissions of the Contractor, its subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable in performing professional services under this Agreement. These obligations include all judgments or awards recovered from the claims or suits, including court costs and attorney fees.

(c) **Other Indemnities:** Contractor indemnifies, defends, and holds the City harmless for all third-party claims or suits for fines, penalties, liquidated damages or any other damages of whatsoever nature to the extent caused by the negligence or wrongdoing of the Contractor, its subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. These obligations include all judgments or awards recovered from the claims or suits, including courts costs and attorney fees.

(d) Contractor agrees that its indemnity obligations set forth in this Article will not be affected in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the City, the Contractor, or any of the subcontractors under workers' compensation acts, employer's liability insurance, or other employee benefit acts.

ARTICLE XI

Insurance

(a) Except to the extent set forth in Section (b) of this Article, the Contractor will purchase and maintain the cost of workers' compensation insurance for all employees as well as the following insurance to cover its operations under this Agreement without limiting the liability of the Contractor under this Agreement. This insurance will be provided by insurance companies acceptable to the City and licensed to do business in each jurisdiction where the Work is performed.

1. Employer's Liability Insurance in full compliance with the laws of the State of Missouri together with Employer's Liability Coverage with minimum limits of liability in the amount of \$1,000,000.00 for each accident and each disease.

2. Commercial Automobile Liability Insurance under Form CA 00 01, covering all owned hired, and non-owned vehicles, with minimum combined single limits of liability of \$1,000,000 for each accident.

3. Commercial General Liability Insurance, and, if necessary, excess liability insurance on a "true following-form" basis, all of which is written on an occurrence basis, with the following minimum limits of liability:

General Aggregate	\$2,000,000.00
Products/completed operations aggregate	\$2,000,000.00
Personal and advertising injury	\$1,000,000.00
Each occurrence	\$1,000,000.00
Fire damage legal liability	\$1,000,000.00
Medical expenses	\$ 10,000.00

4. Excess Liability Insurance with minimum limits of liability of \$1,000,000.00 each claim, \$2,000,000.00 aggregate.

5. Owner's and Contractor's Protective Liability Policy, including Death \$2,000,000.00 each occurrence; Property Damage \$2,000,000.00 each occurrence, \$2,000,000.00 aggregate.

(b) The Commercial General Liability and the Commercial Automobile Liability Insurance coverages and their respective limits set forth in Section (a) of this Article are being explicitly required and obtained to insure the indemnity obligations set forth in Section (a) of Article X to meet the requirements of 434.100.2(8) R.S.Mo. The parties further acknowledge that the cost of these insurance coverages is included in the Contract Price and that the limits and coverages afforded by them is the Contractor's total aggregate liability under the indemnity obligations set forth in Section (a) of Article X.

(c) Contractor's Commercial Automobile Liability, Commercial General Liability, and Professional Liability policies – and any excess policies necessary to meet the required limits –

will include contractual liability coverage. The City will be named as an additional insured on the Contractor's Commercial General Liability policy by using ISO Additional Insured Endorsement (Form B), CG 20 10 11 85. The Commercial General Liability, Commercial Automobile Liability and required excess policies will include a severability or cross-liability clause and such insurance will be endorsed to make such insurance primary with respect to any applicable insurance maintained by the City. The Contractor's Workers' Compensation and Employer's Liability policy will include the Owner as an alternate employer by using ISO Alternate Employer WC 00 03 01A.

(d) Contractor waives any rights of subrogation under its Professional Liability Insurance policy for the City's benefit and is doing so before commencing any of the Work.

(e) Contractor will furnish an insurance certificate to City evidencing that it has met the insurance requirements of this Article, including attaching the requisite additional insured, primary and alternate employer endorsements. These documents must be provided before beginning the Work and upon each renewal of the coverage during the performance of the Work. The certificate will provide that thirty-day written notice will be given to City before any policy is canceled. Contractor will give written notice to City as soon as it receives written notice of cancellation from any of its insurance carriers. The certificate of insurance must clearly designate the name of the Project.

ARTICLE XII

The Work

The Scope of Work consists of the installation of a landscape design and planting plan to enhance, restore and improve the health of the Brentwood Wetland Arboretum located at 3120

S. Brentwood Blvd., Brentwood, MO 63144.

ARTICLE XIII

Notices

Any notice hereunder shall be personally delivered or mailed, postage prepaid, by certified mail, return receipt requested addressed to:

City of Brentwood Parks and Recreation Department

2505 S. Brentwood Blvd.

Brentwood, Missouri 63144

Attention: Eric Gruenenfelder

or to Contractor at:

Attention: _____

*In making out this form the proper name and title should be used. For example, if the Contractor is a corporation and this form is to be executed by its president, the words President should be used under Title. Attestation should be done by the Secretary of the Corporation.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement:

CITY OF BRENTWOOD

By: _____
David A. Dimmitt, Mayor

(SEAL)

Attest:

Bola Akande, City Administrator

DATE: _____

By: _____
Contractor

Title

(SEAL)

Attest:

DATE: _____

FORM OF CONTRACT PERFORMANCE - PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal of _____, State of _____ and _____ a corporation organized and existing under and by virtue of the laws of the State of _____, and regularly authorized to do business in the State of Missouri, as Surety, are held and firmly bound unto the City of Brentwood, Missouri, hereinafter called the "City," in the penal sum of _____ Dollars (\$ _____) lawful money of the United States, well and truly to be paid unto the said City for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has by written agreement dated _____, entered into a Contract with the City for the construction of the Work designated as _____ located at _____ in the State of Missouri, in accordance with the Contract, which Contract is by this reference made a part hereof, and is hereinafter referred to as the "Contract."

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the Principal shall faithfully perform the Contract on its part, and satisfy all claims and demands incurred by the Principal in the performance of the Contract, and shall fully indemnify and save harmless the City from all cost and damage which the City may suffer by reason of the failure of the Principal to do so, and shall fully reimburse and repay to the City all costs, damages, and expenses which the City may incur in making good any default by the Principal including, but not limited to, any default based upon the failure of the Principal to fulfill its obligation to furnish maintenance, repairs or replacements for any period of time after the Work is completed as provided for in the Contract, and shall for use in the prosecution of the Work required by the Contract whether by Subcontract or otherwise, and shall pay all valid claims and demands whatsoever, and shall defend, indemnify and hold harmless the City and its agents against loss or expense from bodily injury, including death, or damage or destruction of property, including loss of use resulting there from, arising out of or resulting from the performance of the work, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The City may sue on this Bond, and any person furnishing material or performing labor, either as an individual or as a Subcontractor shall have the right to sue on this Bond in the name of the City for his use and benefit, all in accordance with the provisions of MO. Rev. Stat SS 522.300, and any amendments thereto.

Whenever Principal shall be in default under the Contract, the Surety shall promptly remedy the default, or shall promptly, (1) complete the Contract in accordance with its terms and conditions, or (2) obtain bids for completing the Contract in accordance with its terms and conditions, and upon determination by the City of the lowest responsible bidder, arrange for a Contract between the City and such bidder, and made available as the Work progresses sufficient funds to pay the costs of completion, not exceeding the amount of this Bond.

It is hereby stipulated and agreed that any suit based upon any default of the Principal in fulfilling his obligation to furnish maintenance, repairs or replacements for any period of time after the Work is completed as provided for in the Contract, may be brought at any time up to

one year after the expiration of the time specified in the Contract during which the Contractor has agreed to furnish such maintenance or make such repairs or replacements.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications.

Signed and sealed this ____ day of _____, 2024,

In the presence of : _____ (SEAL)

_____ By: _____

_____ (SEAL)

_____ By: _____

GENERAL CONDITIONS OF CITY-CONTRACTOR AGREEMENT

ARTICLE 1

CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 The Contract Documents. The Contract Documents consists of the City-Contractor Agreement, General Conditions of the City-Contractor Agreement, Non-Collusion Affidavit, the Performance and Payment Bond, the Drawings, the Technical Specifications, the Construction Schedule, all Addenda and all Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, or (2) a Change Order.

1.1.2 The Contract. The Contract documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations or agreements, both written and oral, including the bidding documents. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1.

1.1.3 The Work. The term Work includes all labor necessary to complete the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

1.1.5 Notice to Proceed. The written notice from the City notifying the Contractor of the date on or before which Contractor is to begin prosecution of the work.

1.1.6 Standard Specifications: The St. Louis County Standard Specifications for Highway Construction (Jan. 1, 1997 edition).

1.1.7 Substantial Completion: The state in the progress of the Work when the Work or a designated portion thereof is sufficiently complete in accordance with the Contract Documents so the City can reasonably occupy or utilize the Work for its intended use.

1.2 EXECUTION, CORRELATION, INTENT AND INTERPRETATIONS

1.2.1 The Contract Documents shall be signed in not less than triplicate by the City and Contractor.

1.2.2 The Contractor represents that Contractor has visited the site, become familiar with the local conditions under which the Work is to be performed, and correlated any observations with the requirements of the Contract Documents.

1.2.3 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment and other items as provided in Subparagraph 3.3 necessary for

execution and completion of the Work. Words which have well-known technical or trade meanings are used herein in accordance with such recognized meanings.

1.3 COPIES FURNISHED AND OWNERSHIP

1.3.1 Unless otherwise provided in the Contract Documents, the Contractor will be furnished a maximum of three (3) copies, free of charge, of the Drawings and Specifications for the execution of the work.

1.3.2 All Drawings, Specifications and copies thereof furnished by the City are and shall at all times remain property of the City. Such documents shall not be used on any other project.

ARTICLE 2

CITY

2.1 DEFINITION

2.1.1 The term City means the City or its authorized representative.

2.2 CITY'S RIGHT TO STOP THE WORK

2.2.1 If the Contractor fails to correct defective Work or fails to supply materials or equipment in accordance with the Contract Documents, the City may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

2.3 CITY'S RIGHT TO CARRY OUT THE WORK

2.3.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, or fails to perform any provision of the Contract, the City may, after three (3) days' written notice to the Contractor and without prejudice to any other remedy City may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the City promptly upon request.

ARTICLE 3

CONTRACTOR

3.1 DEFINITION

3.1.1 The Contractor is the person or organization identified as such in the City-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or Contractor's authorized representative. The Contractor shall not subcontract except in accordance with the terms of this Agreement.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

3.2.1 The Contractor shall supervise and direct the Work, using his best skill and attention. Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work.

3.3 LABOR, MATERIALS AND EQUIPMENT

3.3.1 Unless otherwise specifically noted, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

3.3.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him. If the City reasonably objects to any person employed by the Contractor, the employee shall be immediately dismissed from the Work.

3.3.3 The Contractor shall execute and complete the Work in such a manner that avoids jurisdictional and other disputes among labor unions.

3.3.4 The Contractor shall comply with, and is bound by, the provisions of Missouri statutes pertaining to the payment of wages on public works projects contained in sections 290.210 through 290.340 (RSMo 2000), and any amendments thereto, including, but not limited to the following:

- 1) In accordance with section 290.250, the Contractor shall not pay less than the prevailing hourly rate of wages specified by the Missouri Department of Labor and Industrial Relations Division of Labor Standards to all workers performing Work under the Agreement.
- 2) In accordance with section 290.250, the Contractor shall forfeit as a penalty to the City ten dollars (\$10.00) for each worker employed for each calendar day, or portion thereof, such worker is paid less than the said stipulated rates for any Work done under the Agreement, by him or by any Subcontractor under him and shall include provisions in all bonds guaranteeing the faithful performance of said prevailing hourly wage clause.
- 3) In accordance with section 290.265, the Contractor shall post a clearly legible statement of all prevailing hourly wage rates to be paid to all workers employed to complete the Work in a prominent and easily accessible place at the site of the Work and such notice shall remain posted during the full time that any workers shall be employed on the Work.
- 4) Certified payrolls shall also be submitted prior to final payment for all Work completed by the Contractor or Subcontractors.
- 5) In accordance with section 290.290, before final payment is made an affidavit must be filed by the Contractor stating that he has fully complied with the prevailing wage law. No payment shall be made unless and until this affidavit is filed therewith in proper form and order.

3.4 WARRANTY

3.4.1 The Contractor warrants to the City that all materials and equipment furnished under the Contract and incorporated in the Work will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards shall be considered defective. If required by the City, the Contractor shall furnish satisfactory evidence as to the kind and quality of all materials and equipment.

3.5 PERMITS, FEES AND NOTICES

3.5.1 The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the Work.

3.5.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the Work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the City in writing and any necessary changes shall be adjusted by appropriate Modification. If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the City, the Contractor shall assume full responsibility thereof and shall bear all costs attributable thereto.

3.6 SUPERINTENDENT

3.6.1 This person shall be a non-working superintendent who will be responsible for the satisfactory progression of the work and to ensure that all work is being completed in accordance with the plans and specifications. This person is also to relay any conflicts or discrepancies that arise in the plans to the City's representative for resolution or interpretation. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor.

3.7 RESPONSIBILITY FOR THOSE PERFORMING THE WORK

3.7.1 The Contractor shall be responsible to the City for the acts and omissions of all his employees and all Subcontractors, their agents and employees and all other persons performing any of the Work under a Contract with the Contractor.

3.8 DRAWINGS AND SPECIFICATIONS AT THE SITE

3.8.1 The Contractor shall maintain at the site for the City one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good order and marked to record all changes made during construction. The Drawings, marked to record all changes made during construction, shall be delivered to the City upon completion of the Work. The Contractor shall also maintain on the project site a survey level, legs, and rod at all times, which are deemed adequate by the project engineer.

3.9 CLEANING UP AND STORAGE

3.9.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. The Contractor shall not "stockpile" any material on the jobsite and all excavated material shall be hauled off the site at the time of excavation.

However, stockpiling of materials delivered and used on the same day will be allowed if all materials are in place or removed at the end of the day.

3.9.2 In conjunction with Sec. 106.5 of the Standard Specifications, the Contractor is responsible for securing his own project storage site which shall not be located on City Right-of-Way without prior written consent of the Director of Public Works. After completion of the Work the Contractor shall remove all remaining waste materials and rubbish from and about the Project as well as all tools, construction equipment, machinery and surplus materials, and shall clean all surfaces and leave the Work "broom clean" or its equivalent, except as otherwise specified.

3.9.3 The Contractor shall make satisfactory arrangements to store material and equipment after delivery and during construction off of the City right-of-way. The City will assume no responsibility for these arrangements.

3.10 CASH ALLOWANCES

3.10.1 The Contractor acknowledges and agrees that the Contract Sum includes all cash allowances specified in the Contract Documents.

ARTICLE 4

SUBCONTRACTORS

4.1 DEFINITION

4.1.1 A Subcontractor is a person or organization who has a direct contract with the Contractor to perform any of the Work.

4.1.2 Nothing contained in the Contract Documents shall create any contractual relation between the City and any Subcontractor or Sub-subcontractor.

4.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

4.2.1 Unless otherwise specified in the Contract Documents or in the Instructions to Bidders, the Contractor shall submit a completed and signed Subcontractor Approval form, along with other required Bid documents to the City. Contractor shall complete and submit a Supplemental Subcontractor Approval form to the City in the event of any substitution or addition of a Subcontractor by the Contractor. No work shall be performed by a Subcontractor until such Subcontractor has been approved by the City.

4.2.2 Prior to the award of the Contract, the City will notify the Bidder in writing if the City, after due investigation, objects to any such person or entity proposed by the Bidder pursuant to Subparagraph 4.2.1 above. If the City objects to any such proposed person or entity, the Bidder may, at his option, (1) withdraw his Bid, or (2) submit an acceptable substitute person or entity with no adjustment in his bid price.

4.2.3 The City reserves the right to reject a Subcontractor, if in the City's sole discretion, delays may result in the performance of Work as a result of Subcontractor's other obligation. The Contractor shall be held responsible, in addition to the submission of the "Subcontractor Approval Form," to apprise the City of any additional work which a Subcontractor accrues throughout the duration of the project. This shall include work for the City under a different Contract, or any other person or entity. If such said additional work shall detrimentally impact the progression of the Work under this Contract, the City retains the right to require the Contractor to submit a substitute Subcontractor for this work at no additional cost to the City.

4.2.4 The Contractor shall not contract with any Subcontractor or any person or organization (including those who are to furnish materials or equipment fabricated to a special design), for proposed proportions of the Work designated in the Contract Documents or in the Instruction to Bidders or, if none is so designated, with any Subcontractor proposed for the principal portions of the Work, who has been rejected by the City.

4.2.5 If the City requires a change of any proposed Subcontractor or person or organization during the execution of the Work approved under the present Contract, the Contract Sum shall be increased or decreased by the difference in cost resulting from such change and an appropriate Change Order shall be issued.

4.2.6 The Contractor shall not make any substitution for any proposed Subcontractor or person or organization that has not been accepted by the City prior to the Contract Award, unless the substitution is accepted by the City in writing prior to such substitution.

4.3 SUBCONTRACTUAL RELATIONS

4.3.1 All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and Subcontractor (and where appropriate between Subcontractors and Sub-subcontractors) which shall contain provisions that:

- 1) require the Work to be performed in accordance with the requirements of the Contract Documents;
- 2) require submission to the Contractor of applications for payment under each Subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article 8 hereof;
- 3) require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to Subcontracted portions of the Work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the City;
- 4) waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance described in Article 10 except such rights as they may have to the proceeds of such insurance held by the City as trustee;
- 5) obligate each Subcontractor specifically to consent to the provisions of this Paragraph 4.3; and

6) require the Subcontractor (and the Sub-subcontractor's to indemnify and hold harmless the City against all claims, damages, losses, expenses and attorneys' fees arising out of or resulting from the performance of the Work by Subcontractor, and its agents and employees, unless such claims, damages or losses are caused solely by the negligent act of the City.

4.4 PAYMENTS TO SUBCONTRACTORS

4.4.1 The Contractor shall pay each Subcontractor upon receipt of payment from the City, an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's Work, less the percentage retained from payments to the Contractor. The Contractor shall also require each Subcontractor to make similar payments to his Subcontractors.

4.4.2 If the City withholds payment to the Contractor for any cause that is the fault of the Contractor and not the fault of a particular Subcontractor, the Contractor shall pay that Subcontractor on demand for its Work to the extent completed.

4.4.3 The City shall not have any obligation to pay or to see to the payment of any sum to any Subcontractor or Sub-subcontractor.

ARTICLE 5

SEPARATE CONTRACTS

5.1 CITY'S RIGHT TO AWARD SEPARATE CONTRACTS

5.1.1 The City reserves the right to award other contracts on other terms and conditions in connection with other portions of the Project.

5.1.2 During construction, it may become necessary to increase the amount of excavation or to utilize a soil stabilization process if unsuitable subgrade conditions are found. The Contractor shall immediately contact the project engineer if this condition occurs. The project engineer and the Contractor shall agree upon the existence of unsuitable subgrade, the depth in which to remove the unsuitable soil, and the extent of the problem area prior to any additional work. No payment will be made for any area that undergoes additional excavation that is not indicated in the above scope of work and has not been approved by the project engineer prior to the excavation. All additional excavation that becomes necessary shall be paid at the unit bid price for "Excavation." The City reserves the right to contract with a separate contractor for the use of a soil stabilization process. No direct payment will be made for delays incurred due to this process and the Contractor's only compensation will be the allotment of additional days for the delay. The number of days shall be from the time the Contractor initially notifies the City of an unsuitable subgrade condition and until two days after the completion of the soil stabilization process.

5.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

5.2.1 The Contractor shall afford other contractors reasonable opportunity for the delivery and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate the Work with theirs.

5.2.2 If any part of the Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect and promptly report to the City any apparent discrepancies or defects in such work that render it unsuitable for proper execution of the Work. Failure of the Contractor so to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive the Work, except as to defects which may develop in the other contractor's work after the execution of the Contractor's Work that could not have been discovered by the Contractor upon reasonable inspection.

5.2.3 If the Contractor causes damage to the work or property of any other contractor on the Project, and such separate contractor sues the City or initiates an arbitration proceeding on account of any damage alleged to have been so sustained, the City shall notify the Contractor who shall defend such proceedings at Contractor's own expense, and if any judgment or award against the City arises therefrom the Contractor shall pay or satisfy it and shall reimburse the City for all attorneys' fees and court or arbitration costs which the City has incurred.

5.3 CITY'S RIGHT TO CLEAN UP

5.3.1 If a dispute arises between the separate contractors as to their responsibility for cleaning up as required by Paragraph 3.9, the City may clean up and charge the cost thereof to the several contractors.

ARTICLE 6

GENERAL PROVISIONS

6.1 GOVERNING LAW

6.1.1 The Contract shall be governed by the laws of the State of Missouri.

6.2 SUCCESSORS AND ASSIGNS

6.2.1 This Contract shall be binding upon the successors, assigns and legal representatives of each party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract without the prior written consent of the other, nor shall the Contractor assign any sums due or to become due to him hereunder, without the prior written consent of the City.

6.3 RIGHTS AND REMEDIES

6.3.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

6.4 ROYALTIES AND PATENTS

6.4.1 The Contractor shall pay all royalties and license fees payable on all designs, processes or products used in connection with the Work or incorporated therein, unless otherwise agreed upon by the City. The Contractor shall defend all suits or claims for infringement of any patent rights and shall indemnify and hold the City harmless from and against any loss on account thereof.

6.5 PERFORMANCE AND PAYMENT BOND

6.5.1 The Contractor shall furnish the performance and payment bond required in the Instructions to Bidders.

ARTICLE 7

TIME

7.1 DEFINITIONS

7.1.1 The Contract Time is the period of time allotted in the City-Contractor Agreement for completion of the Work. Said work shall include all punchlist items deemed necessary by the City. The date of completion of the Contract shall be the date when all work including City punchlist items have been approved in writing by the City.

7.1.2 The date of commencement of the Work is the date established in the written Notice to Proceed from the City to the Contractor.

7.1.3. The term "day" as used in the Contract Documents shall mean calendar day.

7.2 PROGRESS AND COMPLETION

7.2.1 All time limits stated in the Contract Documents are of the essence.

7.2.2 The Contractor shall begin the Work on the date of commencement provided in the City-Contractor Agreement. The Contractor shall carry the Work forward expeditiously with adequate forces and shall complete it within the Contract Time and in accordance with the Construction Schedule.

ARTICLE 8

PAYMENTS AND COMPLETION

8.1 CONTRACT SUM

8.1.1 The Contract Sum is stated in the City-Contractor Agreement and is the total amount payable by the City to the Contractor for the performance of the Work.

8.2 APPLICATION FOR PAYMENT

8.2.1 By 12:00 P.M. on or before the twentieth day of the month, upon Substantial Completion of various stages of the Work, and upon final completion of the Work, the Contractor shall submit to the City an itemized Application for Payment pursuant to the City-Contractor Agreement on such forms and supported by such data substantiating the Contractor's right to payment as the City may require.

8.2.2 If payments are to be made on account of materials or equipment to be incorporated into the Work and delivered and suitably stored at the site, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other documents satisfactory to the City to establish the City's title to such materials or equipment or to otherwise protect the City's interest.

8.2.3 The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application for Payment, whether incorporated into the Work or not, will pass to the City upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances (hereinafter referred to as "liens").

8.3. PAYMENT

8.3.1 If the Contractor has made Application for Payment as above, the City will, in accordance with the City-Contractor Agreement, make payment to the Contractor for such amount as it determines to be properly due pursuant to the Contractor's Application for Payment, or state in writing the City's reasons for withholding all or any portion of such payment.

8.3.2 No progress payment, nor any partial or entire use or occupancy of the Work by the City, shall constitute an acceptance of any Work not completed in accordance with the Contract Documents.

8.4 COMPLETION AND FINAL PAYMENT

8.4.1 Upon receipt of written notice from the Contractor that the Work is fully completed and ready for final inspection and acceptance, and upon receipt of a final application for Payment, the City will promptly make such inspection and, when the City finds the Work acceptable under the Contract Documents and the Contract fully performed, the City will make final payment to the Contractor in accordance with the City-Contractor Agreement.

8.4.2 The final payment shall not become due until the Contractor submits to the City (1) an Affidavit that all payrolls, bills for materials and equipment, and other indebtedness incurred in connection with the execution and completion of the Work for which the City or its property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of the surety, if any, to final payment, (3) if required by the City, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the City and (4) Prevailing Wage Affidavit as required by subsection 3.3.4. If any Subcontractor refuses to furnish a release or waiver required by the City, the Contractor may furnish a bond satisfactory to the City indemnifying the City against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the City all moneys that the City may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

8.4.3 The acceptance of final payment shall constitute a satisfaction of all claims by the Contractor, except those previously made in writing and still unsettled.

ARTICLE 9

PROTECTION OF PERSONS AND PROPERTY

9.1 SAFETY PRECAUTIONS AND PROGRAMS

9.1.1 The Contractor shall initiate, maintain and supervise safety precautions and programs in connection with the performance of the Work.

9.2 SAFETY OF PERSONS AND PROPERTY

9.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

- 1) all employees on the Work and all other persons who may be affected thereby;
- 2) all the Work, all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
- 3) other property at the site or adjacent thereto, including trees (following the ISA standard for tree protection), shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

9.2.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction over the safety of persons or property to protect them from damage, injury or loss. The Contractor shall erect and maintain all reasonable safeguards for safety and protection, including a six foot solid wood or chain link construction fence as determined by the City, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying City and users of adjacent utilities. The Contractor shall provide signs, barrels, or any other safety devices that the City deems necessary for public safety. No additional payment will be made and this work shall be considered incidental to the Contract. The City will place safety devices as it deems necessary if the Contractor fails to provide the required items within 24 hours of notification. In the event the City needs to do this, the Contract Sum shall be reduced by the cost of these devices.

9.2.3 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

9.2.4 All damage or loss to any property caused in whole or in part by the Contractor, any Subcontractor, or any Sub-subcontractor, or anyone directly or indirectly employed by anyone for whose acts they may be liable, shall be remedied by the Contractor. The City shall document any complaint by any person regarding damage or loss to property caused by Contractor by requesting such complainant to complete a Damage Claim form. A copy of the Damage Claim form shall be submitted by the City to the Contractor and the Contractor shall

correct the problem, repair such damage or otherwise compensate the complainant or file a claim for such damage with Contractor's insurance company within ten (10) days of the receipt

of the Damage Claim form from the city. If the City shall have a legitimate basis for believing that such claim is valid, the City shall have the option to withhold payment of funds until (i) such damages are repaired; or (ii) the City has been provided with evidence that the Contractor has made restitution to the complainant.

9.2.5 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the City.

ARTICLE 10

PROPERTY INSURANCE

10.1 PROPERTY INSURANCE

10.1.1 Unless otherwise provided, the Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the City, the Contractor, Subcontractors and Sub-subcontractors in the Work and shall insure against the perils of Fire, Extended Coverage, Vandalism and Malicious Mischief.

10.1.2 The Contractor shall purchase and maintain such steam, boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interests of the City, the Contractor, Subcontractors and Sub-subcontractors in the Work.

10.1.3 Certificates of Insurance acceptable to the City shall be filed with the City prior to commencement of the work. Certificates of Insurance must state on the certificate: "The City of Brentwood is an additional insured." These Certificates shall contain a provision that coverages afforded under the policies will not be cancelled until at least fifteen days' prior written notice has been given to the City.

10.1.4 Any loss insured by property insurance maintained by the City shall be adjusted with the City and made payable to the City as trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgagee clause.

10.1.5 The City and Contractor waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance provided under this Article, except such rights as they may have to the proceeds of such insurance held by the City as trustee. The Contractor shall require similar waivers by Sub-contractors and Sub-subcontractors in accordance with Subparagraph 4.3.1.

ARTICLE 11

CHANGES IN THE WORK

11.1 CHANGE ORDERS

11.1.1 The City, without invalidating the Contract, may order Changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and the Construction Schedule being adjusted in accordance with the City-Contractor Agreement. All such changes in the Work shall be authorized by Change Order, and shall be executed under the applicable conditions of the Contract Documents.

11.1.2 A Change Order is a written order to the Contractor signed by the City, issued after the execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Construction Schedule. The Contract Sum and the Contract Time may be changed only by Change Order.

11.1.3 The cost or credit to the City resulting from a Change in the Work shall be determined in accordance with the City-Contractor Agreement.

11.2 CLAIMS FOR ADDITIONAL COST

11.2.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the City written notice thereof within twenty (20) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work. No such claim shall be valid unless so made. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

11.3 MINOR CHANGES IN THE WORK

11.3.1 The City shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or the Construction Schedule and not inconsistent with the intent of the Contract Documents. Such changes may be effected by written Field Order or by other written order. Such changes shall be binding on the City and the Contractor.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 If any Work should be covered contrary to the request of the City, it must, if required by the City, be uncovered for his observation and replaced, at the Contractor's expense.

12.1.2 If any Work has been covered which the City has not specifically requested to observe prior to being covered, the City may request to see such Work and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Contract Documents, the Cost of uncovering and replacement shall, by appropriate Change Order, be charged to the City. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs.

12.2 CORRECTION OF WORK

12.2.1 The Contractor shall promptly correct all Work rejected by the City as defective or as failing to conform to the Contract Documents, whether observed before or after substantial completion of the Work, and whether or not fabricated, installed or completed. The Contractor shall bear all cost of correcting such rejected Work.

12.2.2 If, within one year after the Date of Substantial Completion of the Work or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the City.

12.2.3 All defective or non-conforming Work shall be removed from the site if necessary, and the Work shall be corrected to comply with the Contract Documents without additional cost to the City.

12.2.4 The Contractor shall bear the cost of making good all work of separate contractors destroyed or damaged by such removal or correction.

12.2.5 If the Contractor fails to correct such defective or non-conforming Work, the City may correct it in accordance with Paragraph 2.3.

12.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

12.3.1 If the City prefers to accept defective or non-conforming Work, City may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum or, if the amount is determined after final payment, it shall be paid by the Contractor.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 SCHEDULING OF WORK AND INTERFERENCE WITH TRAFFIC

13.1.1 The Contractor's Work must be scheduled and accomplished in stages such that local traffic is maintained during construction. It shall be the Contractor's responsibility to provide a traffic way that is usable in all weather conditions. The Contractor shall construct and maintain in a safe condition temporary pavements and connections for local traffic.

13.1.2 Temporary guardrail, or other suitable temporary barriers shall be provided to protect traffic from the Work. At all times until final acceptance of the Work, the Contractor shall provide and maintain such signs, lights, watchmen and barriers, in addition to the temporary guardrail, as may be necessary to properly protect the Work and provide for safe and convenient public travel.

13.1.3 No additional payment shall be made for temporary guardrail, barriers, signs, lights, or other work as may be necessary to maintain traffic and to protect the work and the public and

all labor, equipment and material necessary to accomplish this task shall be considered incidental

13.2 ACCESS

13.2.1 Areas of intersections and roadways within the construction limits shall be constructed in phases so that at no time will access be denied.

13.2.2 Access to private driveways will be limited by the nature of the Work. The Contractor shall schedule his work such that at no time during the life of this Contract will any driveway be denied access for any reason other than the curing of concrete. All concrete, including curbs, sidewalks and driveway pavements, shall be formed and poured within a two calendar day period for each and every driveway. Excavation for this work shall be accomplished a maximum of one calendar day prior to forming, however, access shall be provided immediately after excavation. At the end of the curing period, access shall be immediately supplied using asphalt or compacted aggregate. The first lift of all asphalt drives shall be completed and paved within fourteen (14) calendar days of their excavation.

13.2.3 All temporary materials used for access will be the responsibility of the Contractor and shall be included in the unit bid price for each related item. No separate payment will be made for the placement, maintenance or removal of said access.

13.2.4 If access is not supplied as set out above, the City will supply said access with its own forces, without notification to the Contractor, and will deduct such costs from the sums due the Contractor, notwithstanding any other provisions given this Contract. Wherever excavation affects pedestrian access to houses or public buildings, plank or other suitable bridges shall be placed at convenient intervals.

13.2.5 In the event any part of the Work to be performed hereunder shall require the Contractor or his Subcontractors to enter, cross or work upon or beneath the right-of-way or other property of a railroad, the Contractor shall comply with the related requirements for such Work as are set out in the Contract Documents.

13.3 CONSTRUCTION STAKING AND LAYOUT

13.3.1 The Contractor shall be responsible for providing labor, equipment and materials necessary for construction staking and layout as required, to the grades, elevations and alignment as determined by the City of Brentwood. No separate payment will be made for construction staking and layout. No payment shall be made for restaking except as expressly authorized due to changes made by the City during construction.

13.4 OVERTIME

13.4.1 In order to provide sufficient control of work, the Contractor shall be required to inform the City of scheduled overtime work, including work on Saturdays, Sundays and City holidays at least forty-eight (48) hours in advance of any such work. If the Contractor fails to appear on a scheduled overtime period, the City shall deduct the cost for the City's assigned personnel from the Contract Sum for the time period scheduled.

13.5 CITY HOLIDAYS

13.5.1 There are ten (10) city holidays. They are:

New Year's Day	Labor Day
Martin Luther King, Jr. Day	Veteran's Day
President's Day	Thanksgiving Day
Memorial Day	Day after Thanksgiving
Independence Day	Christmas Day

13.6 [Intentionally Left Blank]

13.7 INTERFERENCE WITH EXISTING WATER SERVICES AND MAINS

13.7.1 The Contractor shall minimize the outage of water service to residents. The cutting off of water service shall be only with the consent of the City. The Contractor shall notify the City and have their approval prior to commencing work on each water main or connection item.

13.7.2 The Contractor shall conduct his work in such a manner as not to endanger existing water mains, services or appurtenances. Mains and services shall be adequately supported where they cross or are adjacent to the excavation. The Contractor shall bear the cost of all repairs to water mains or appurtenances damaged because of contractor's own carelessness or neglect.

13.8 INTERRUPTION OF WATER SERVICE

13.8.1 When it becomes necessary to shut down any existing water main, a representative of the City shall be notified to be present during this operation. The total time for the main to be shut down should be held to a minimum and in no case shall any customer be without water service for more than eight (8) hours. The Contractor shall notify each water customer whose water service will be interrupted at least one hour prior to shutdown. The Contractor shall assume full responsibility for shutting down the main and notifying the customers.

13.9 PRECONSTRUCTION CONFERENCE

13.9.1 A preconstruction conference may be held prior to the issuance of a Notice to Proceed with the Work. This meeting will be attended by the Contractor, and the City. The meeting date will be established after the taking of bids and at a time convenient to all parties.

13.10 SEQUENCE OF WORK

13.10.1 A schedule of the Contractor's work shall be submitted to the City for approval with a listing of the order in which the Contract items will be constructed and the approximate dates for starting and finishing each Contract item.

13.10.2 The City shall have the right to specify the order of construction as deemed necessary.

13.11 CONSTRUCTION LIMITS

13.11.1 The construction limits consist of the public street rights-of-way and acquired easement areas. The Contractor shall limit operations accordingly. The Contractor shall acquire the property owners' permission for any activity outside the public right-of-way or easement areas.

13.12 ALTERED QUANTITIES

13.12.1 In accordance with Section 109.3 of the Standard Specifications, the City reserves the right to make changes in plan details which may vary the accepted quantities from those shown on the Itemized Bid.

13.12.2 The Contractor shall accept, as payment in full, payment at the original Contract unit prices bid for the accepted quantities of work done. No allowance will be made for any increased expense or loss of expected profit suffered by the Contractor resulting directly from such altered quantities or indirectly from expenses derived by handling small quantities of materials or performing operations within restricted areas. No allowance shall be made for any increased expense or loss of expected profit suffered because of the anticipated use of specific equipment that was not used.

13.13 MEASUREMENT OF WEIGHED QUANTITIES

13.13.1 The Contractor's attention is directed to the fact that the City requires that all weight certificates be signed by a bonded Weighmaster. The Contractor must furnish the City's inspector on the job site with original weight certificates signed by a bonded Weighmaster for all materials supplied by the Contractor that are incorporated into his improvement, which payment therefore is based on weight.

13.14 ADDITIONS TO CONTRACT

13.14.1 Unit prices in this Agreement may be used to negotiate a Change Order for additional work involving similar projects.

13.15 PURCHASE OF MATERIALS AND EQUIPMENT

13.15.1 Sales to contractors who purchase construction materials and supplies to fulfill contracts for the City are not subject to sales tax. The City may monitor all supplies purchased, used, and consumed in fulfilling the project.

13.15.2 Contractors will be give a project exemption certificate.

13.15.3 Contractors must provide a copy of the City's exemption letter and the project exemption certificate to suppliers when purchasing materials and supplies to be consumed in the project.

13.15.4 Contractors are not exempt from sales tax on the purchase of machinery, equipment or tools used in fulfilling these contracts.

13.15.5 Suppliers shall render to the contractor invoices bearing the name of the City and the project identification number. These invoices must be retained by the purchasing contractor for a period of five (5) years.

13.15.6 Contractors must file a sales tax return for all excess re-saleable materials and supplies that are not returned to the supplier. This return must be filed and paid not later than the due date of the contractor's sales tax return following the month in which the contractor determines that the materials were not used in the project.

13.15.7 An exempt organization that fails to revise the project exemption certificate expiration date as necessary to complete any work required by the contract will be liable for any sales tax due as determined by an audit of the contractor.

13.16 TESTING

13.16.1 Materials Testing and Inspection Service: City may employ and pay for a qualified independent materials and geotechnical testing laboratory to perform testing and inspection service during construction operations. Contractor to coordinate all work.

13.16.2 The Contractor shall bear all costs of any inspections, tests, or approvals required under any laws, ordinances, rules, regulations or orders of any public authority having jurisdiction.

13.16.3 The City will provide any special inspection and testing services to verify the Work is performed in accordance with the Contract. The City will provide the Contractor with a listing of tests to be performed and approximate location or frequency. The Contractor will be required to notify the City forty-eight (48) hours prior to the time the Contractor will be ready for specific tests required by the City. If such special inspection or testing reveals failure of the Work to comply (1) with the requirements of the Contract Documents, or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, the Contractor shall bear the cost of the City's inspection and re-testing and such cost shall be deducted then or thereafter due Contractor. In all other cases, the City shall bear such costs.

13.17 SEWER SPECIFICATIONS

13.17.1 The Metropolitan St. Louis Sewer District Specifications (MSD Specifications), shall govern the Project, unless otherwise superseded by the Technical Specifications and Job Special Provisions.

13.18 CONTROL OF MATERIAL

13.18.1 All tickets will be collected to verify the quantity of each item in their original form only. Photocopies or facsimiles will not be accepted. All tickets shall be submitted on the day of delivery, either to the City personnel or the Parks and Recreation office or they will not be accepted for payment.

13.18.2 Contractors and subcontractors will be required to produce letters of certification or certified test reports from material producers and suppliers in order to determine compliance with specifications for designated materials prior to the incorporation thereof into the work.

13.18.3 The City will determine which materials are to be tested. The form and content of these test reports shall be in accordance with recognized standards and practices for this work or as otherwise determined by the City.

13.18.4 No direct payment will be made for this work.

13.19 MEASUREMENT OF QUANTITIES

13.19.1 Unless otherwise directed within the Technical Specifications, the quantities for which payment will be made will be those shown in the Agreement for the various items, provided the Project is constructed essentially to the lines and grades shown on the plans. Contract quantities will be used for final payment except when:

- a) Errors are formed in the original computations in excess of 15% of the contract quantities.
- b) An original cross section is found to have an average deviation from the true elevation in excess of one foot.
- c) An authorized change in grade, slope or typical section is made.
- d) Unauthorized deviations decrease the quantities on the plans.

When the above conditions are encountered, the correction or revisions will be computed and added to or deducted from the contract quantity.

13.19.2 When the plans have been altered or when disagreement exists between the Contractor and the City as to the accuracy of the plan quantities of any balance, or the entire project, either party shall have the right to request a re-computation of contract quantities within any area, by hand calculation of the average-end-area method for cubic yard quantities, and standard measurement methods for other quantities, by written notice to the other party. The written notice shall contain evidence that an error exists in the original groundline elevation or in the original computations which will affect the final payment quantity in excess of 15%. When such final measurement is required, it will be made from the latest available ground surface and the design section.

13.19.3 These specifications require that the Contractor must furnish the representative of the City, on the job site, with original weight certificates on a daily basis signed by a bonded weighmaster for all materials supplied by the Contractor that are incorporated into this work, which payment therefore is based on weight.

13.20 WORKMANSHIP

13.20.1 The Contractor shall at all times employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by these specifications. All workmen shall have sufficient skill and experience to perform properly the work assigned to them.

13.20.2 The labor provided by the Contractor shall be directed to be of a workmanlike character with respect to the methods of construction and quality of completed work; and, shall not encumber the premises or adjacent property or streets with materials and/or equipment.

13.20.3 "Removal" shall be defined as removal and disposal off the site unless otherwise specified or directed by the engineer.

ARTICLE 14

EQUAL OPPORTUNITY AND NON-DISCRIMINATION

14.1 EQUAL OPPORTUNITY

14.1.1 The contractor, with regard to the work performed by it after award and prior to completion of the Work, will not discriminate on the basis of race, age, color, religion, sex, national origin or disability in the selection and retention of subcontractors. The contractor will comply with Title VII of the Civil Rights Act of 1964, as the same has been or may be amended from time to time. In all solicitation either by competitive bidding or negotiations made by the contractor for work to be performed under a subcontract, including procurement of materials or equipment, each potential subcontractor or supplier shall be notified of the contractor's obligations under this contract and the regulations relative to nondiscrimination on the ground of race, color, age, religion, sex, national origin or disability.

14.1.2 The contractor will take action to ensure that applicants are employed and that employees are treated during employment without regard to their race, age, color, religion, sex, national origin or disability. Such action shall include, but not be limited to the employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The contractor agrees to post notices pertaining to the foregoing in conspicuous places available to employees and applicants for employment.

14.1.3 The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, age, religion, sex, national origin or disability.

14.1.4 The contractor will comply with all provisions of federal, state and local codes, ordinances and regulations governing the regulation of Equal Employment Opportunity and Non-Discrimination.

14.2 NON-DISCRIMINATION

14.2.1 During performance of the obligations set forth in this Agreement, Contractor agrees that it shall not discriminate against any employee or applicant for employment in the terms or conditions of employment including but not limited to: recruitment, selection, training, upgrading, promotion, demotion, transfer, layoff, or termination due to said person's race, religion, creed, color, sex, age, national origin, handicap, or disability.

14.3 GENERAL

14.3.1 In the event that any or all of the provision(s) of the foregoing paragraphs conflict with federal, state or other local laws, ordinances or regulations, then the requirements of such federal, state or local laws, ordinances, or regulations shall prevail. Compliance with the foregoing provisions shall not relieve the contractor from adherence to any and all additional requirements regarding equal employment or non-discrimination set forth in such federal, state or other local laws, ordinances or regulations.

ARTICLE 15**CONFLICTS OF INTEREST**

15.1.1 The parties agree to abide by all applicable federal, state and local laws, ordinances and regulations relating to conflicts of interest.

ARTICLE 16**ALIEN REGISTRATION, COMPLIANCE AND ENFORCEMENT****16.1 DEFINITIONS**

16.1.1 "Business entity", any person or group of persons performing or engaging in any activity, enterprise, profession, or occupation for gain, benefit, advantage, or livelihood. The term "business entity" shall include but not be limited to self-employed individuals, partnerships, corporations, contractors, and subcontractors. The term "business entity" shall include any business entity that possesses a business permit, license, or tax certificate issued by the state, any business entity that is exempt by law from obtaining such a business permit, and any business entity that is operating unlawfully without such a business permit. The term "business entity" shall not include a self-employed individual with no employees or entities utilizing the services of direct sellers as defined in subdivision (17) of subsection 12 of section 288.034, RSMo;

16.1.2 "Contractor", a person, employer, or business entity that enters into an agreement to perform any service or work or to provide a certain product in exchange for valuable consideration. This definition shall include but not be limited to a general contractor, subcontractor, independent contractor, contract employee, project manager, or a recruiting or staffing entity;

16.1.3 "Employee", any person performing work or service of any kind or character for hire within the state of Missouri;

16.1.4 "Employer", any person or entity employing any person for hire within the state of Missouri, including a public employer. Where there are two or more putative employers, any person or entity taking a business tax deduction for the employee in question shall be considered an employer of that person for purposes of this section;

16.1.5 "Employment", the act of employing or state of being employed, engaged, or hired to perform work or service of any kind or character within the state of Missouri;

16.1.6 "Federal work authorization program", any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or an equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, under the Immigration Reform and Control Act of 1986 (IRCA), P.L.99-603;

- 16.1.7 "Knowingly", a person acts knowingly or with knowledge,
- (a) With respect to the person's conduct or to attendant circumstances when the person is aware of the nature of the person's conduct or that those circumstances exist; or
 - (b) With respect to a result of the person's conduct when the person is aware that the person's conduct is practically certain to cause that result;

16.1.8 "Municipality", the City of Brentwood, Missouri.

16.1.9 "Public employer", every department, agency, or instrumentality of the state of Missouri or any political subdivision of the state of Missouri;

16.1.10 "Unauthorized alien", an alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. 1324a(h)(3);

16.1.11 "Work", any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected or due, including but not limited to all activities conducted by business entities.

16.2 ILLEGAL ACTS

16.2.1 No business entity or employer may knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the municipality.

16.2.2. Accordingly, if the amount to be paid pursuant to this contract or grant exceeds five thousand dollars by the municipality the contracting or grant recipient business entity shall, as a condition of the award of contract or grant, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such business entity shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. No such business entity or employer shall violate subsection 16.2.1 of this section.

16.2.3 The affidavit shall be approved as to form by the municipal attorney.

16.2.4 An employer may enroll and participate in a federal work authorization program and shall verify the employment eligibility of every employee in the employer's hire whose employment commences after the employer enrolls in a federal work authorization program. The employer shall retain a copy of the dated verification report received from the federal government. Any business entity that participates in such program shall have an affirmative defense that such business entity has not violated subsection 16.2.1 of this section.

16.2.5 A general contractor or subcontractor of any tier shall not be liable under subsection 16.2.1 of this section when such general contractor or subcontractor contracts with its direct subcontractor who violates subsection 16.2.1 of this section, if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 16.2.1 of this section and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor's employees are lawfully present in the United States.

16.2.6 The determination of whether a worker is an unauthorized alien shall be made by the federal government. A determination of such status of an individual by the federal government shall create a rebuttable presumption as to that individual's status in any judicial proceedings brought under this section.

ARTICLE 17

SAFETY PROGRAMS, COMPLIANCE AND PENALTIES

17.1 DEFINITIONS

17.1.1 "Construction", construction, reconstruction, demolition, painting and decorating, or major repair;

17.1.2 "Department", the Missouri department of labor and industrial relations;

17.1.3 "Person", any natural person, joint venture, partnership, corporation, or other business or legal entity;

17.1.4 "Municipality", the City of Brentwood, Missouri;

17.1.5 "Public works", all fixed works constructed for public use or benefit or paid for wholly or in part out of public funds.

17.2 OSHA

17.2.1 Contractor shall provide a ten (10) hour Occupational Safety and Health Administration (OSHA) construction safety program for all employees who will be on-site at the Project. The construction safety program shall include a course in construction safety and health that is approved by OSHA or a similar program approved by the Missouri Department of Labor and Industrial Relations which is at least as stringent as an approved OSHA program as required by Section 292.675, RSMo.

17.2.2 Contractor shall require its on-site employees to complete a construction safety program within sixty (60) days after the date work on the Project commences.

17.2.3 Contractor acknowledges and agrees that any of Contractor's employees found on the Project site without documentation of the successful completion of a construction safety program shall be required to produce such documentation within twenty (20) days, or will be subject to removal from the Project.

17.2.4 Contractor shall require all of its Subcontractors to comply with the requirements of this Section and Section 292.675, RSMo.

17.2.5 Pursuant to Section 292.675, RSMo, Contractor shall forfeit to City as a penalty two thousand five hundred dollars (\$2,500.00), plus one hundred dollars (\$100.00) for each on-site employee employed by Contractor or its Subcontractor, for each calendar day, or portion thereof, such on-site employee is employed without the construction safety training required in Sec 17.2.1.

17.2.6 The penalty described in Section in 17.2.5 shall not begin to accrue until the time periods described in 17.2.2 and 17.2.3 above has elapsed.

17.2.7 Violations of 17.2.1 above and imposition of the penalty described in this section shall be investigated and determined by the Missouri Department of Labor and Industrial Relations.

17.2.8 In the event that the Missouri Department of Labor and Industrial Relations has determined that a violation of Section 292.675, RSMo, has occurred and that a penalty as described in 17.2.5 shall be assessed, the City shall withhold and retain all sums and amounts due and owing when making payments to Contractor under this Contract.

17.3 DOCUMENTATION

17.3.1 Any employee found on a worksite subject to this section without documentation of the successful completion of the course required under subsection 17.2.1 of this Article shall be afforded twenty days to produce such documentation before being subject to removal from the project.

17.4 PENALTIES

17.4.1 The contractor to whom the contract is awarded and any subcontractor under such contractor shall require all on-site employees to complete the ten-hour training program required under subsection 2 of this section. The contractor shall forfeit as a penalty to the municipality, two thousand five hundred dollars plus one hundred dollars for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training. The penalty shall not begin to accrue until the time period in subsections 2 and 3 of this section have elapsed. The municipality shall withhold and retain therefrom, all sums and amounts due and owing as a result of any violation of this section when making payments to the contractor under the contract. The contractor may withhold from any subcontractor, sufficient sums to cover any penalties the public body has withheld from the contractor resulting from the subcontractor's failure to comply with the terms of this section. If the payment has been made to the subcontractor without withholding, the contractor may recover the amount of the penalty resulting from the fault of the subcontractor.

17.5 INVESTIGATION

17.5.1 In determining whether a violation of this section has occurred, and whether the penalty under subsection 4 of this section shall be imposed, the department shall investigate any claim of violation. Upon completing such investigation, the department shall notify the municipality and any party found to be in violation of this section of its findings and whether a penalty shall be assessed. Determinations under this section may be appealed in the Circuit Court of St. Louis County.

17.6 ENFORCEMENT

17.6.1 If the contractor or subcontractor fails to pay the penalty within forty-five days following notification by the department, the department shall pursue an enforcement action to enforce the monetary penalty provisions of subsection 4 of this section against the contractor or subcontractor found to be in violation of this section. If the court orders payment of the penalties as prescribed under subsection 4 of this section, the department shall be entitled to recover its actual cost of enforcement in addition to such penalty amount.

ARTICLE 18**PERIODS OF EXCESSIVE UNEMPLOYMENT**

Whenever there is a period of excessive unemployment in Missouri, every person who is charged with the duty, either by law or contract, of constructing or building any public works project or improvement for the municipal corporation shall employ only Missouri laborers and laborers from nonrestrictive states on such project or improvement. Only such labor shall be used during such period, except that other laborers may be used when Missouri laborers or laborers from nonrestrictive states are not available, or are incapable of performing the particular type of work involved, if so certified by the contractor and approved by the contracting officer. This Section shall apply to all labor on public works projects or improvements, whether skilled, semiskilled or unskilled, and whether manual or nonmanual except work done directly by any public utility company and not let to contract. As used in this Section, the following terms mean: (1) "Laborers from nonrestrictive states", persons who are residents of a state which has not enacted state laws restricting Missouri laborers from working on public works projects in that state, as determined by the labor and industrial relations commission; (2) "Missouri laborer", any person who has resided in Missouri for at least thirty days and intends to become or remain a Missouri resident; (3) "A period of excessive unemployment", any month immediately following two consecutive calendar months during which the level of unemployment in the state has exceeded five percent as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures; (4) "Public works", projects defined as public works pursuant to section 290.210 RSMo

SECTION 329200 – WETLAND SEEDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Site Preparation for Seeding
 - 2. Seeding of native grass and forb mixtures.
 - 3. Erosion-control material(s).

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Planting Soil: Existing, on-site soil undisturbed and/or from existing on-site sources stockpiled for reuse.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 INFORMATIONAL SUBMITTALS

- A. Certification of Native Seed: From seed vendor for each native seed mix, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- B. Product Certificates: For fertilizers, from manufacturer.
- C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.5 QUALITY ASSURANCE

- A. Native Seeding Qualifications Data: A qualified installer whose work has resulted in successful establishment of native seeding / meadow areas of similar size and scope to this project.
 - 1. Experience: Five years' experience in successful native seed installation.
 - 2. Seeding Method: Native Seeding Installer to provide a detailed statement describing how the seed bed will be prepared, what equipment will be used for bed preparation and seed sowing, and the timing of seeding operations. Seeding method is subject to approval by the Landscape Architect.
 - 3. Planting Schedule: Contractor to notify Landscape Architect the anticipated seeding timeline for each type of planting.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 - 3. Accompany each delivery of bulk materials with appropriate certificates.

1.7 FIELD CONDITIONS

- A. Native Seeding Restrictions: Native Seeding to be performed according to the Native Seeding Schedule, unless approved otherwise by the Landscape Architect.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 NATIVE GRASSES AND FORB MIXTURES

- A. Seeds shall be fresh, clean, dry new-crop seed provided in original sealed packages bearing the seed vendor's guaranteed analysis for purity, germination, hard seed, and maximum weed seed content. Labels shall be in compliance with the requirements of the Missouri Seed Law.
- B. The seeds shall be grown and processed in the United States and shall comply with the requirements of the Missouri Seed Law.

- C. Seed mixtures shall be proportioned by weight in PLS (Pure Live Seed)
- D. All leguminous seeds shall be inoculated or treated with the proper quantity of cultures approved for the particular legume to be sown. Leguminous seed will include alsike clover, Korean lespedeza, red clover, white clover, hairy vetch, partridge pea, and slender bush clover.
- E. The inoculant for treating leguminous seed shall be a nitrogen-fixing bacteria culture. The inoculant containers shall be plainly marked with the expiration date for use. The manufacturer's recommendations for inoculating seed shall be followed.
- F. Seed Carrier. If seed is broadcast it must be mixed with an equal amount at minimum of inert material such as, sharp clean sand, sawdust, perlite, vermiculite, or ground corn cobs.
- G. Native Wildflower and Grass Seed Schedules: Fresh, clean, and dry new seed, of mixed species as follows:

**NATIVE SEED TYPE 1 – For areas surrounding Cattail Wetland and within MSD Pipeline
Pre-Mix (Medium Diversity)**

Wet soil Grass Mix: Mix sown at a rate of 3 lbs. per acre PLS.

- 0.25 lbs. Panicum virgatum (Switchgrass)
- 0.25 lbs. Spartina pectinata (Cord grass)
- 0.5 lbs. Andropogon gerardii (Big bluestem)
- 1 lb. Chasmanthium latifolium (River oats)
- 1 lb. Elymus virginicus (Virginia wild rye)

Wet soil Forb pre-mix (or equal): Mix sown at a rate of 5 lbs. per acre PLS.

Typical wet soil pre-mixes may include the following forb species: Slender false foxglove, Eastern bluestar, Swamp Milkweed, Bur Marigold, White Doll's Daisy, American Bellflower, White Turtlehead, Rose Turtlehead, Mist Flower, Tall Coreopsis, Ill. Bundleflower, Rattlesnake Master, Common Boneset, Hollow Joe Pye Weed, Closed Gentian, Oxeye Sunflower, Rose Mallow, Great St. John's Wort, Southern Blue Flag, Prairie Blazing Star, Cardinal Flower, Blue Lobelia, Seedbox, Sharpwing Monkeyflower, Wild Bergamot, Common evening primrose, Foxglove Beardtongue, Jumpseed, Slender Mountain Mint, Gray-headed Coneflower, Sweet Coneflower, Maryland Senna, Cup Plant, New England Aster, Ohio Spiderwort, Blue Vervain, White Vervain, Yellow Ironweed

Contractor to submit pre-mix seed product data for SWT Design review and approval.

2.2 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.3 EROSION-CONTROL MATERIALS

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.
 - 1. Use Curlex No. 1 (or equal): bio-degradable curled wood shavings mat with open mesh that allows large seedlings to emerge. Link to specifications:
<https://americanexcelsior.com/wp-content/uploads/2015/02/Curlex-Blankets-PD.pdf>

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
- C. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
- D. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.
- F. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

3.2 SITE PREPARATION

- A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
- B. Protect grade stakes set by others until directed to remove them.
- C. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties, waterways, and walkways.

3.3 PREPARATION FOR EROSION-CONTROL MATERIALS

- A. Prepare area as specified in "Native Seed Bed Preparation" Article.

- B. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.
- C. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.4 REED CANARY/JOHNSON GRASS AREA SITE PREP

- A. The area surrounding the central cattail wetland contains a heavy infestation of Reed Canary Grass, Johnson Grass and other invasive species. The site preparation and seeding recommendations indicated in section 3.5 herein are required in this area.

Note: Cattail area shall NOT be treated.

3.5 NATIVE GRASSES AND FORB MIXTURES SEEDING

- A. Scheduling:
 - 1. Site Preparation and Native Seeding operations should adhere to the following establishment schedule. Deviations from this schedule must be approved in writing by the Landscape Architect prior to implementation.

Site Preparation and Seeding Schedule	
April-Aug	Reed canary grass and all other invasive plants are treated repeatedly with glyphosate (only formulations that are approved for use near water) beginning in April. Apply three times for complete control, first application in late April, second in June and the third application in August if plants still occur. If vegetation is too tall for spraying, mow vegetation to 10-12 inches to facilitate spraying. Other invasive species that occur in this area and treated with glyphosate include field bindweed, Japanese hops, poison hemlock, curly dock, beefsteak plant, tall fescue and barnyard grass.
June-Sept	Treat existing weeds repeatedly. Primary invasive plants in the open grassland area surrounding the cattail wetland include reed canary grass and Johnsongrass. Johnsongrass , a warm-season grass, requires Out-rider for control beginning in June, when it begins to actively grow. Apply up to three times for complete control, first application in early June, second in late July and the third application in September if plants still occur.
April-Sept <i>Cover Crops</i>	One week after third and final weed spraying treatment, sow a cover crop mix of annual rye (rate of 5 lbs. per acre) and seed oats (rate of 20 lbs. per acre). Dead vegetation may need to be mowed before sowing cover crop to attain good seed to soil connection.

<p>Nov-Jan Seeding</p>	<p>Acquire and sow native grass and forb mix followed immediately by installation of erosion blanket where slopes exceed 10 degrees.</p>
<p>Apr-June Testing <i>Maintenance Mowing</i></p>	<p>Seed germinates April through August, depending on spring rains. SWT to survey seedlings in late April and again in Late June to determine germination success.</p> <p>In April, begin maintenance mowing and/or string-trimming entire area to a height of 6-8 inches every 2-3 weeks April thru October. Vegetation shall not exceed 12 inches at any time.</p> <p>Spot spray herbicide and/or hand pull invasive species that appear. Annual weeds will be maintained by regular maintenance mowing if their concentrations are determined to be too dense by SWT Design.</p>
<p>July-Sept</p>	<p>Continue maintenance mowing and/or string-trimming every 2-3 weeks.</p> <p>Spot spray and/or hand pull invasive species only as needed. Annual/biennial weeds will be maintained by regular mowing.</p>
<p>Nov-Jan</p>	<p>A year after initial seeding, over-seed areas where seedling survey shows low germination rate. Low germination is defined as 4-5 seedlings per square yard on average.</p>

B. Native Seed Bed Preparation:

1. Removal of Existing Vegetation: Should undesirable existing vegetation be present on the site at the time of installation, the contractor shall prepare the site for planting by use of chemicals, when used as recommended by the manufacturer, and/or mechanical means acceptable to the owner. Care shall be exercised to avoid any misuse of chemicals that would create detrimental residual conditions. Care must also be used not to disturb the seedbed or cause damage to previously established seeding areas or landscape areas.

C. Sowing Seeds:

1. Seeding operations may commence once seed bed preparations are completed and are deemed satisfactory by the Landscape Architect.
2. Cover crop and native seed mixes shall be installed during the time periods specified in 3.5 A Scheduling.
3. Do not use wet seed or seed that is moldy or otherwise damaged.
4. November- January, sow wet soil grass and pre-mix seed on treated areas according to seeding schedule. Seeding occurs on weed-free bare ground, or over an existing cover crop. Cover crop may need to be mowed to 8 inches before seeding can occur. On flat or gently sloped open ground, sow with no-till prairie drill (Truax, Great Plains, or equal) set at or below ¼ inch in depth.

5. In areas where no-till drill can't reach (tree areas and slopes), sow seed directly on the ground by hand with seed that has been bulked-up with sawdust (or similar) at a minimum rate of 10 parts bulk to 1 part seed. During winter freezing and thawing, hand-sown seed works shallowly into the soil to the proper depth. A risk of flooding does exist and may affect hand-sown areas. If this occurs, overseeding of these areas with grasses only in spring is required.
6. DO NOT sow seed through a hydro-seeder or similar. DO NOT till, disc or disturb soil in any way prior to seeding, however areas may be mowed prior to seeding.
7. Immediately following seed installation, install the erosion control as required per manufacturer requirements and as noted on the plans.
8. Protect seeded areas with slopes exceeding 1:6 with erosion-control blankets installed and stapled according to manufacturer's written instructions.

D. Spring Germination and Testing:

1. Seed begins to germinate in April and may continue through August. Seedlings may be difficult to see, because of their small size and annual weed competition. SWT Design shall sample 4 random locations (1 sq. yard each) per acre, using visual seedling identification. Success is determined by presence of a minimum average of 3 species (at least one grass/rush/sedge seedling and one forb seedling) and 4 overall seedlings per sample area. Sample areas are about one square yard.
2. Overseed in areas where germination rates are low (defined as 4-5 seedlings per square yard on average). Overseed mix will be provided by the Contractor in the event that overseeding is required.
3. Sample images below:



Swamp milkweed, left, wild bergamot, center, prairie blazing star, right.

3.6 SATISFACTORY NATIVE GRASSES AND FORB MIXTURE INSTALLATION

- A. Native seeding installations shall meet the following criteria as determined by Landscape Architect:
 - 1. Satisfactory Native Grasses And Forb Mixture Installation: At the end of the Maintenance Period described in section “Contractor Provided Native Seeding Stewardship” SWT Design shall sample 4 random locations (1 sq. yard each) per acre, using visual seedling identification. Criteria for satisfactory native seeding installations shall be as follows:
 - a. Presence of a minimum average of 3 species (at least one grass/rush/sedge seedling and one forb seedling) in each sample area.
 - b. Minimum of 4 overall seedlings established per sample area.
 - c. Free from weeds, disease, and detrimental insect infestation.
 - 2. Use specified materials to reestablish native seeding that does not comply with requirements, and continue maintenance until native seeding area is satisfactory.

3.7 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.8 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- D. Remove nondegradable erosion-control measures after grass establishment period.

3.9 MAINTENANCE SERVICE

- A. Native Grasses and Forb Mixture Maintenance Service: Maintenance shall be provided as indicated in section “Contractor Provided Native Seeding Stewardship”.

END OF SECTION 329200

SECTION 329200.10 - CONTRACTOR PROVIDED STEWARDSHIP MAINTENANCE

PART 1 - GENERAL

1.1 DURATION OF CONTRACT

- A. The following landscape maintenance specification shall be agreed upon for a one (1) year period beginning on the date of Substantial Completion of each phase of work. Contract may be renewed upon request and written approval from the Owner.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and related Technical Specifications apply to this section.
- B. See "Landscape Maintenance Task and Frequency Schedule Matrix" at the end of this document.
- C. Refer to the following sections for more information:
 - 1. SECTION 329200 – WETLAND SEEDING

1.3 DEFINITIONS

- A. Fertilizer: Any material of natural or synthetic origin (other than liming materials) that is applied to soils or to plant tissues to supply one or more plant nutrients essential to the growth of plants.
- B. Mulch: A layer of material applied to the surface of soil in an attempt to conserve soil moisture, improve fertility and health of the soil, reduce weed growth, regulate soil temperature, and enhance the visual appeal of an area. Is usually, but not exclusively, organic in nature. Become naturally incorporated into the soil by the activity of worms and other soil microbes.
- C. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- D. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- E. Planting Area: Areas to be planted.
- F. Plant, Plants, Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

- G. **Prairie, Native Prairie:** An ecosystem of flat, fertile lands composed of grasses, and forbs as the dominant vegetation type. Plants develop extensive, deep root systems that stabilize the soil and provide water to the plant from water reserves deep in the surface.
- H. **Root Flare:** Also called “trunk flare.” The area at the base of the plant’s stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and stem or trunk.
- I. **Tree stabilization Materials:** Utilization of materials in an effort to keep trees upright and prevent wind tipping.

1.4 SCOPE OF WORK

- A. The scope of maintenance work will include the following components:
 - 1. All general conditions required by Owner.
 - 2. Establishment and maintenance of Prairie/ Native Seeding.
- B. The contractor shall not engage or use the services of subcontractors in performing the contract, unless noted and approved by the Owner’s representative(s).
- C. The contractor shall be responsible for all supervision required to satisfactorily perform the requirements of the contract.
- D. The contractor shall provide all equipment, labor and other materials necessary to perform the services indicated.
- E. Payment for work completed shall be conditional upon the approval of the Owner or Owner’s representative(s). The contractor shall submit an invoice itemizing services provided to Owner on a monthly basis. The sum of the monthly invoices shall be based upon an even distribution of the total contract amount. Contractor will receive payment within forty-five (45) days after approval of invoice by the Owner or Owner’s representative.
- F. The agreement for the work to be performed may be terminated by the Owner or Owner’s representative(s) should they determine the contractor has not satisfactorily completed the work assigned. Notice of contract termination must be made in writing. A minimum of ten (10) days notification is necessary to terminate contract.
- G. The contractor shall be held responsible for any damage, breakage and/or loss of Owner’s signage, buildings, irrigation, or vegetation (i.e. trees), or any loss incurred to adjacent property, buildings, or vegetation through the negligence of the contractor or his/her employees while working on site.
- H. The Owner assumes no liability for personal injury or property damage resulting from the performance of the contracted services.
- I. To prevent disputes and litigation, it is mutually agreed that the Owner, in all cases, determines all questions that may arise relevant to the performance of the work and the adequacy of the personnel, equipment, vehicles and material covered under this agreement.

- J. It is understood that the contractor is an independent contractor and neither he/she nor his/her employees represent themselves as either employees or agents of the Owner. Any person employed by the contractor who, in the opinion of the Owner, does not perform satisfactorily, is intemperate, or rude to patrons or employees of the Owner, shall at the written request of the Owner be removed from further employ in any portion of the contract.
- K. The contractor shall provide supervision of all work crews at all times while performing work under this contract. Personal supervision is not required provided that equipment or other means are provided that enable the work crew to communicate with the contractor/supervisor at all times.
- L. Contractor will attend a mandatory pre-bid conference and site inspection. Adjustments to contract price shall NOT be made due to differences between the Owner's and contractor's site interpretations.
- M. Any and all accidents (both personal injury and private property damage) are to be reported to the Owner or Owner's representative(s) as soon as possible.
- N. Maintenance contractor is to obtain a list of special events from the Owner or Owner's representative to avoid any conflicts with maintenance operations and shall adjust schedule as necessary.
- O. City requirements indicated in the general conditions of the contract shall supersede the requirements herein where conflict occurs.

1.5 QUALITY ASSURANCE

- A. Contractor shall specialize in native landscape maintenance/stewardship with a minimum of five (5) years' experience in native grass, wildflower, and ornamental landscape establishment and maintenance. Contractor must have on staff the following individual(s): a horticulturist, botanist, ecologist or like-trained individual able to demonstrate knowledge of best horticultural practices and best maintenance practices; a state certified chemical/pesticide applicator; a state certified arborist.
 - 1. Individual performing chemical applications must provide a copy of the license to the jobsite superintendent prior to application. License must be in possession of the applicator at all times while applying pesticide on the jobsite.
- B. Application of pesticides shall be performed by a licensed applicator. Contractor must provide services based on State and municipal requirements. The contractor shall not apply chemicals that would pose a risk to the public, wildlife, or vegetation.

PART 2 – PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 GENERAL SERVICES

- A. Contractor shall submit a work ticket to the Owner or Owner's representative(s) each week of work listing specific areas to be watered, weeded, or otherwise maintained and the work that will be accomplished. The work ticket shall be picked up or available to Owner at the end of each week. Contractor shall sign the ticket attesting that the work was completed.
- B. Contractor shall be responsible for appearance and conduct of his/her employees at all times. Contractor's employees shall wear uniform shirts while performing grounds maintenance duties for Owner. Pants may not be cut-offs, hats worn forward.
- C. All work being performed under this contract shall be done in accordance with Federal and State labor laws and will adhere to O.S.H.A. regulations.
- D. The contractor shall provide appropriate traffic control devices when working within any street right-of-way. Contractor employees shall wear orange safety vests or other high visibility reflective wear at all times. Reasonable care shall be taken when working in the vicinity of people, vehicles, buildings and property.

3.2 ESTABLISHMENT AND MAINTENANCE OF PRAIRIE/ NATIVE SEEDING

- A. Year one. Vigorous annual and biennial weeds can shade out seedlings during the first summer if their concentrations are too dense. Wildflowers and grasses grow more slowly above ground than annual and biennial weeds (though wildflower and grass seedlings grow deeper roots than annual weeds). Control weeds by keeping weedy areas mowed and/or string-trimmed to a height of 6-8 inches throughout the first growing season (every 2-3 weeks starting mid-April and ending late October). Most wetland seedlings are less than 6 inches tall in their first growing season and are not damaged by 6-8 inch mowing or string trimming. **Do not allow weeds to get over 12 inches high at any time**, because tall weeds will shade out small wetland seedlings and long clippings can smother small seedlings. Weed concentrations and required mowing will be determined by the landscape architect in April.
- B. Keeping weeds cut back the first year, prevents production of more weed seeds that could become a problem in the future. Keeping weeds mowed on a regular basis in year one is an important step for a successful prairie seeding, when weed concentrations are determined to be too dense.
- C. Maintain and establish native seeding by watering, weeding, mowing, trimming, replanting, and performing other operations as required to establish a healthy, viable meadow. Roll, regrade, and replant bare or eroded areas and remulch as needed. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and meadow damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
 - 3. Apply treatments as required to keep meadow and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

- D. Watering: Provide temporary irrigation and meadow-watering equipment as needed to convey water from available sources and to maintain appropriate soil moisture levels for native seed growth.
1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system, as needed, to avoid walking over muddy or newly planted areas.
 2. Provide water to native seeding areas with fine spray at a minimum rate of 1/2 inch per week for eight weeks after planting unless rainfall precipitation is adequate.
- E. Mowing: Mow seeded areas using a rotary mower or string trimmer as needed to prevent weeds from setting seed.
1. Control weeds by keeping weedy areas mowed or string-trimmed to a height of 6-8 inches throughout the first growing season (every 2-3 weeks). Most wetland seedlings are less than 6 inches tall in their first growing season and are not damaged by 6-8 inch mowing or string trimming. Do not allow weeds to get over 12 inches high at any time, because tall weeds will shade out small wetland seedlings and long clippings can smother small seedlings. Weed concentrations and required mowing will be determined by the landscape architect in April.
 2. Best mowing equipment: Front-mounted mowers on skid steer, brush-hog or woods mower on conventional tractor. String trimmers work well in tight areas, around trees, pathways or on steep slopes.
- F. Long-term Maintenance: If burning is not an option, mow and/or string trim seeded areas once they are established (normally beginning third year, occasionally in year two). Mow in February or March, every year or two, at a height of 12-14 inches tall to promote nesting for native solitary bee species. Keep stems standing through winter (mowing in February/March) to provide food and cover for resident birds in winter.

3.4 METHOD OF MEASUREMENT

- A. Contractor provided project maintenance will not be measured for payment, but will be considered a Lump Sum.

3.5 BASIS OF PAYMENT

- A. Payment will be made at the contract Lump Sum bid for Contractor Provided Project Maintenance. This price shall include all incidental material, labor, equipment, and time for sufficiently completing the maintenance tasks as outlined in this specification.

SECTION 329300 - PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Plants.
- 2. Tree stabilization.

- B. Related Requirements:

- 1. Section 329200 "Wetland Seeding"

1.3 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- D. Finish Grade: Elevation of finished surface of planting soil.
- E. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- F. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- G. Planting Area: Areas to be planted.

- H. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" for drawing designations for planting soils.
- I. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- J. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- K. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- L. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- M. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- N. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in undisturbed areas of urban environments, the surface soil may be subsoil.
- O. Tagging/Tagged/Tag: The Landscape Architect's selection of plant material at the nursery. Tag will be placed on north-facing branches.

1.4 COORDINATION

- A. Coordination with Native Seeding Areas: Plant trees, shrubs, and other plants after finish grades are established and before planting native areas unless otherwise indicated.
 - 1. When planting trees, shrubs, and other plants after planting seeding areas, protect seeding areas, and promptly repair damage caused by planting operations.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
 - 2. Pesticides and herbicides: Include product label and manufacturer's application instructions specific to the Project.
 - 3. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.
 - a. Color Photograph with multi-colored scale rod or adult.

- b. Full Latin and common name of plant.
- c. Size of plant.
- d. Name of Growing Nursery.
- e. City, State of nursery.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer. Provide 3 references of projects similar in size, scope, and expected craftsmanship as those shown in the Contract Documents. Include photographs demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
 - 1. Manufacturer's certified analysis of standard products.
 - 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.
- D. Sample Warranty: For special warranty.
- E. Contractor shall maintain an up-to-date plant species and source list indicating the botanical name, common name, size, quantity, form, root ball, limb weight, and nursery source.
 - 1. Plant list shall clearly include deviations from the specified plant list and any proposed substitutions.
 - 2. Contractor shall confirm nursery source prior to scheduling tagging trip.
 - 3. As the project progresses and plants are located and sealed, revise and re-submit the plant list submittal.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before expiration of required maintenance periods.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.
 - 1. Experience: 10 years' experience in landscape installation
 - 2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 3. Pesticide Applicator: State licensed, commercial.

- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
 - 1. Selection of plants purchased under allowances is made by Architect, who tags plants at their place of growth before they are prepared for transplanting.
- C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
 - 1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
 - 2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- D. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
 - 1. Notify Architect of sources of planting materials seven days in advance of delivery to site.
- E. Tree Planting Mockup: A mockup of tree planting shall occur at the Project Site prior to tree installation work.
 - 1. Mockup shall be in place and shall become part of the work.
 - 2. The mockup will be reviewed at each stage of construction (dig hole to staking). Contractor shall not cover installed work until approved by Landscape Architect.
 - 3. Coordinate with Landscape Architect to select location and extent of mockup. Four mockups shall be performed:
 - a. Balled and burlapped tree on slope.
 - b. Balled and burlapped tree on level area.
 - c. Container grown tree on slope.
 - d. Container grown tree on level area.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.
- B. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 3. Accompany each delivery of bulk materials with appropriate certificates.
- C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- D. Handle planting stock by root ball.
- E. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F until planting.
- F. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- G. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
- H. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two hours. Reject plants with dry roots.
 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 3. Do not remove container-grown stock from containers before time of planting.
 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.
- 1.10 FIELD CONDITIONS
- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
1. Trees and shrubs: October 1st to April 30th

- C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
 - b. Structural failures including plantings falling or blowing over.
 - c. Faulty performance of tree stabilization.
 - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 2. Warranty Periods: From date of Substantial Completion.
 - a. Trees: 12 months.
 - 3. Include the following remedial actions as a minimum:
 - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
 - b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
 - c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
 - d. Provide extended warranty for period equal to original warranty period, for replaced plant material.
 - e. Contractor shall return all adjacent elements and systems modified during the removal and replacement of plants to the condition in which they were found, including shrubs, perennials, ornamental grasses, planting soil, and mulch.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch in diameter; or with stem girdling roots are unacceptable.
 2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
- C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- D. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.
- E. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.
- F. The Landscape Architect will review plant material at the nursery source and/or at the Landscape Architect's discretion, through photographs provided by the Contractor prior to selection. Plants that do not have the Landscape Architect's approval shall be removed from the site.
1. Tagging: At least three (3) weeks prior to expected planting date, request in writing, the Landscape Architect's inspection of plant material at the nursery. The Landscape Architect will make his/her own travel arrangements in the nursery. Seals placed on the selected plants at the nursery shall remain on the plants until final acceptance of the Work.
 2. The Landscape Architect's basis of plant selection will include:
 - a. Conformance with specified genus, species, variety, size, form, root ball, and quality.
 - b. Visual characteristics and health of plants.
 - c. The growing nursery's adherence of cultural practices of maintenance procedures that are at or above the industry standard.
 3. On-site inspections by the Landscape Architect shall be permitted upon arrival or at any time prior to planting. The Landscape Architect may inspect plant material for size and condition of the root ball, root systems, insects, injury, defoliation, wind burn, and/or latent defects. Contractor shall remove unsatisfactory or defective plant material and replace without additional cost to the Owner.
 4. The Landscape Architect may reject a specific nursery source and associated plants if he/she determines before, during or after receipt of plants any of the following:
 - a. Nursery stock does not meet health standards set forth, including disease and infestation.
 - b. Nursery stock does not meet requirements of the Landscape Architect's basis of selection.
 - c. The nursery cannot supply the specified plants or acceptable substitute.

- G. Substitutions: In the event the Contractor is not able to obtain plant material specified, the Contractor shall provide a list of possible substitute plants of equal size, quality and value of the plant originally specified for Landscape Architect's consideration and selection.
- H. Plants that are field grown shall be freshly dug. Plants that have been pre-dug the previous season will not be accepted.
- I. Plants larger than specified may be used if approved by Landscape Architect and if root ball is proportionately larger and without change in contract price.
- J. Plant Character: Plants shall be typical of their species and/or variety and shall have a normal habit of growth and be legibly tagged with proper name. Form and size shall comply with ANSI Z60.1, current edition.
- K. Root Balls: If root flare is buried 2-inches or greater, provide a larger diameter or greater depth root ball to compensate for buried root flare. The soil over-burden shall be removed prior to planting, reducing the size of the root ball.
- L. Girdling Roots: Inspect root crown for girdling roots. Inspection for girdled roots shall be done at the nursery to the extent possible. If girdled roots 1/2-inch or greater are discovered during planting operations prior to acceptance, the tree shall be rejected.
- M. Container Stock: Shall have a well-developed root system. Plants loose in the container are not acceptable. The root zone shall be free of circling or kinked roots. Large matted roots at the sides or bottom of the container are acceptable. Staked plants must be self-supporting when unfastened. Container grown plants may be substituted for balled and burlapped plants if approved by the Landscape Architect.

2.2 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - 1. Type: Wood Chips.
 - 2. Size Range: 3 inches maximum, 1/2 inch minimum.
 - 3. Color: Natural.

2.3 PESTICIDES

- A. General: Pesticide registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.4 TREE-STABILIZATION MATERIALS

A. Trunk-Stabilization Materials:

1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal by length indicated, pointed at one end.
2. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch in diameter.
3. Guy Cables: Five-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.
4. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.
1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
 3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 4. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Beginning work prior to repairs being completed means that the Contractor accepts substrates, previous work, and other conditions. The Contractor shall not place plants or planting soil until all work in adjacent areas is completed and accepted by Landscape Architect.
1. If Contractor encounters incomplete or unsatisfactory conditions that will be detrimental to plant health or satisfactory completion of the Work, he shall notify General Contractor immediately.
- D. Deliver materials and plants only after preparations for planting have been completed, including, but not limited to: planting soil placement, irrigation, rough grading, utilities, de-compaction of soils, remediation of soils.
1. Sufficiently protect plants during transport. Adequately support the trunks of trees on the end of the trailer. Trees delivered to the site without sufficient protection and support are subject to rejection.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. If planting is delayed more than 4 hours after delivery, trees shall be properly heeled in, protected, and maintained.

3.3 PLANTING AREA ESTABLISHMENT

- A. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
 - 1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
 - 2. Excavate approximately three times as wide as ball diameter for balled and burlapped and container-grown stock.
 - 3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
 - 4. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
 - 5. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
 - 6. Maintain supervision of excavations during working hours.
 - 7. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
 - 8. If drain tile is indicated on Drawings or required under planting areas, excavate to top of porous backfill over tile.
- B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil unless otherwise indicated.
- C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - 1. Hardpan Layer: Drill 6-inch- diameter holes, 24 inches apart, into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.

- D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE PLANTING

- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly with sharp pruners; do not break.
- C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
 - 1. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - 2. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 3. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - a. Quantity: Three for each caliper inch of plant.
 - 4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
 - 1. Carefully remove root ball from container without damaging root ball or plant.
 - 2. If container stock is root bound, Contractor shall scarify the root ball with 2-inch sharp blade. Rest plant on its side and scarify an "X" on the bottom of the root mass. Make vertical cuts the full height of the root ball every 3 inches on center of the full circumference of the root ball.
 - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- E. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.6 TREE PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- B. Do not apply pruning paint to wounds.

3.7 TREE STABILIZATION

- A. Trunk Stabilization by Upright Staking and Tying: Install trunk stabilization as follows unless otherwise indicated:
 - 1. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inch caliper only as required to prevent wind tip out. Use a minimum of two stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend one-third of trunk height above grade. Set vertical stakes and space to avoid penetrating root balls or root masses.
 - 2. Upright Staking and Tying: Stake trees with two stakes for trees up to 12 feet high and 2-1/2 inches or less in caliper; three stakes for trees less than 14 feet high and up to 4 inches in caliper. Space stakes equally around trees.
 - 3. Support trees with bands of flexible ties at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.
 - 4. Support trees with two strands of tie wire, connected to the brass grommets of tree-tie webbing at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.

3.8 PLANTING AREA MULCHING

- A. Mulch backfilled surfaces of planting areas and other areas indicated.
 - 1. Trees: Apply organic mulch ring of 2-inch average thickness, with 36-inch radius around trunks or stems. Do not place mulch within 3 inches of trunks or stems.

3.9 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.10 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Pre-Emergent Herbicides (Selective and Nonselective): Apply to tree, shrub, and ground-cover areas according to manufacturer's written recommendations. Do not apply to seeded areas.
- C. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.11 REPAIR AND REPLACEMENT

- A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Architect.
 - 1. Submit details of proposed pruning and repairs.
 - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
 - 3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Architect.
- B. Remove and replace trees that are more than 25 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
 - 1. Provide new trees of same size as those being replaced for each tree of 6 inches or smaller in caliper size.
 - 2. Provide two new tree(s) of 4-inch caliper size for each tree being replaced that measures more than 6 inches in caliper size.
 - 3. Species of Replacement Trees: Species selected by Architect.

3.12 CLEANING AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Tracking or driving over newly planted areas is strictly prohibited. In the event it cannot be avoided, Contractor shall install a protective barrier as approved by Landscape Architect.
- C. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
- D. Restore areas disturbed by planting activities, erosion, settling, or otherwise disturbed after fine grading.

- E. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- F. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.
- G. At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

3.13 MAINTENANCE SERVICE

- A. Maintenance Service for Trees: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:
 - 1. Maintenance Period: 12 months from date of Substantial Completion.

END OF SECTION 329300

BRENTWOOD WETLAND ARBORETUM

ISSUE FOR BID DOCUMENTS

CITY OF BRENTWOOD
2505 S. BRENTWOOD BOULEVARD
BRENTWOOD, MISSOURI 63144
314-963-8681

DEER CREEK WATERSHED ALLIANCE
MISSOURI BOTANICAL GARDEN - SUSTAINABILITY DIVISION
4651 SHAW BOULEVARD
ST. LOUIS, MO 63110
314-246-9670



7722 Big Bend Blvd.
St. Louis, MO 63119
t. 314.644.5700

PREPARED FOR -
BID NUMBER -
MSD # -
ISSUE DATE - 02/9/2024
REVISED AND REISSUED -

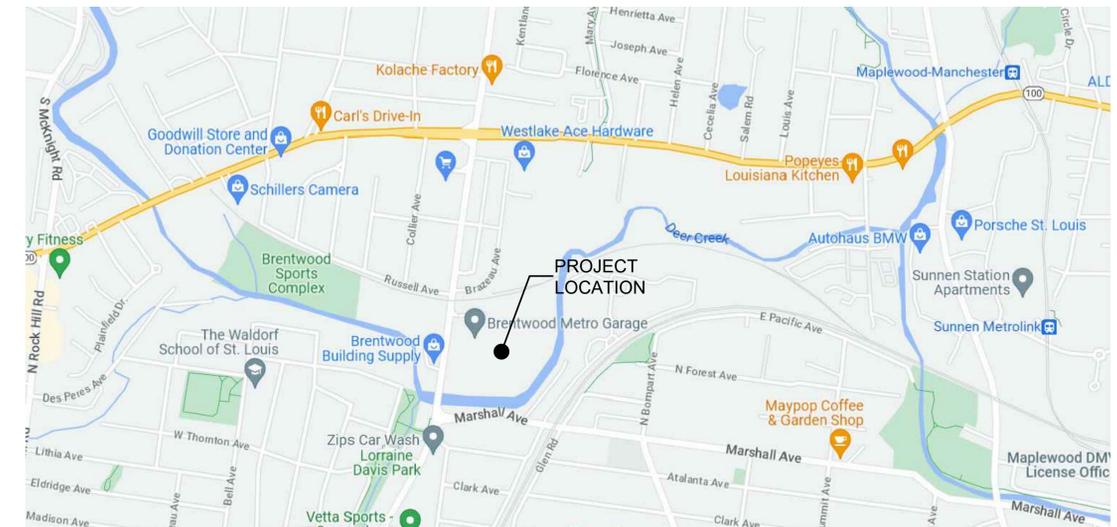
DRAWING INDEX:

COVER SHEET

- L-001 NOTES AND LEGENDS
- LD-100 DEMOLITION AND TREE PROTECTION PLAN
- L-100 OVERALL SITE PLAN
- L-140 TREE PLANTING PLAN
- L-160 SEED/ SOD PLANTING PLAN
- L-520 DETAILS



EXISTING SITE PHOTO



VICINITY MAP:
N.T.S.



Issues		
No.	Description	Date
01	50% Design	10/23/23
02	95% Design	11/28/23
03	Final Design Review	12/20/23
04	Issue for Bid	02/09/24

Revisions		
No.	Description	Date

SWT No.	21631.01
MSD No.	XXMSD-XXXX
Drawn	MB
Reviewed	TS

Sheet Title
OVERALL SITE PLAN

Number

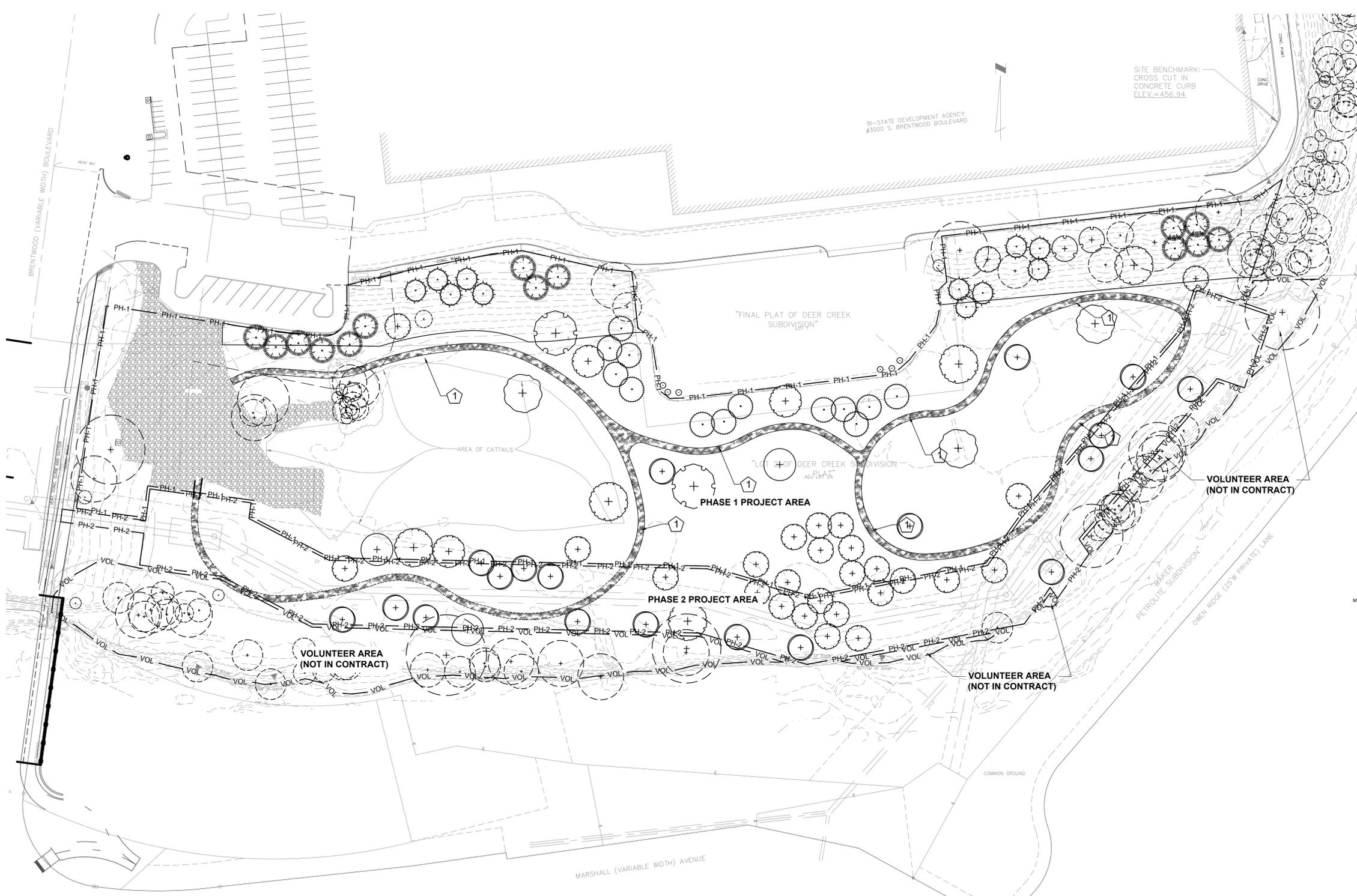
KEYED NOTES LEGEND

CONTRACTOR WILL BE PROVIDED WITH CAD FILE FOR USE IN STAKING THE WOOD CHIP TRAIL ALIGNMENT. ALIGNMENT STAKING TO BE REVIEWED BY LANDSCAPE ARCHITECT AND OWNER FOR FINAL REVIEW AND APPROVAL.

- 1 WOOD CHIPS**
5' WIDE PATH TO BE CREATED UTILIZING WOOD CHIP MULCH INSTALLED TO A MINIMUM DEPTH OF 4". CONTRACTOR TO PREPARE AREAS FOR WOOD CHIP INSTALLATION. SUPPLY AND INSTALL WOOD CHIPS.

LEGEND

- EXISTING TREE TO REMAIN, PROTECT FROM DAMAGE. NO MATERIAL STORAGE OR DRIVING OF HEAVY EQUIPMENT OVER TREES TO REMAIN
- EXISTING GRAVEL TO REMAIN
- PH-1 PHASE 1 PROJECT AREA
- PH-2 PHASE 2 PROJECT AREA
- VOL VOLUNTEER AREA
- MULCH PATHWAY
CONTRACTOR TO COORDINATE INSTALLATION TIMING OF WOOD CHIPS WITH PROJECT PHASING



A OVERALL SITE PLAN
SCALE: 1"=40'

Graphic Scale: 1" = 40'
0' 20' 40' 80' 120'



NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY IN EVENTS OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE DRAWINGS OR SPECIFICATIONS. THE CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS IN REFERENCE TO CONTRACT DOCUMENTS SHALL BE IMMEDIATELY DIRECTED TO THE LANDSCAPE ARCHITECT.

NOT FOR CONSTRUCTION

ISSUE FOR BID DOCUMENTS

PLANT SCHEDULE PHASE 1

CODE	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
TREES						
AS	2	Acer saccharum	Sugar Maple	As Shown	3"Cal	Per Details, B&B
BN	2	Betula nigra	River Birch Multi-Trunk	As Shown	8'-10' Ht.	Per Details, B&B, Multi-stem, 3-5 Trunks
CC	2	Cercis canadensis	Eastern Redbud	As Shown	6'-8' Ht.	Per Details, B&B, Multi-stem, 3-5 Trunks
GK	1	Gymnocladus dioica	Kentucky Coffeetree	As Shown	2"Cal	Per Details, B&B
JC	14	Juniperus virginiana 'Canaerti'	Canaerti Eastern Redcedar	As Shown	6'-8' Ht.	Per Details, B&B
JN	2	Juglans nigra	Black Walnut	As Shown	2"Cal	Per Details, B&B
LS	1	Liquidambar styraciflua	Sweet Gum	As Shown	2"Cal	Per Details, B&B
LT	9	Liriodendron tulipifera	Tulip Poplar	As Shown	2"Cal	Per Details, B&B
NS	3	Nyssa sylvatica	Tupelo	As Shown	2"Cal	Per Details, B&B
PE	11	Pinus echinata	Short Leaf Pine	As Shown	6' Ht.	Per Details, B&B
PH	1	Populus deltoides	Eastern Cottonwood	As Shown	3"Cal	Per Details, B&B
PO	2	Platanus occidentalis	American Sycamore	As Shown	2"Cal	Per Details, B&B
QB	3	Quercus bicolor	Swamp White Oak	As Shown	3"Cal	Per Details, B&B
QM	2	Quercus macrocarpa	Burr Oak	As Shown	2"Cal	Per Details, B&B
QS	3	Quercus shumardii	Shumard Oak	As Shown	3"Cal	Per Details, B&B
TA	1	Tilia americana	American Linden	As Shown	3"Cal	Per Details, B&B
TD	13	Taxodium distichum	Bald Cypress	As Shown	8'-10' Ht.	Per Details, B&B

PLANT SCHEDULE PHASE 2

CODE	QTY	BOTANICAL NAME	COMMON NAME	SPACING	SIZE	COMMENTS
TREES						
AO	3	Aesculus glabra	Ohio Buckeye	As Shown	2"Cal	Per Details, B&B
DV	2	Diospyros virginiana	Common Persimmon	As Shown	1"Cal	Per Details, B&B
GK	3	Gymnocladus dioica	Kentucky Coffeetree	As Shown	2"Cal	Per Details, B&B
LS	1	Liquidambar styraciflua	Sweet Gum	As Shown	2"Cal	Per Details, B&B
LT	8	Liriodendron tulipifera	Tulip Poplar	As Shown	2"Cal	Per Details, B&B
PH	7	Populus deltoides	Eastern Cottonwood	As Shown	3"Cal	Per Details, B&B
PO	1	Platanus occidentalis	American Sycamore	As Shown	2"Cal	Per Details, B&B
SB	2	Salix nigra	Black Willow	As Shown	6' Ht.	Per Details, Container

Prepared For:



Deer Creek Watershed Alliance
a project of MISSOURI BOTANICAL GARDEN

City of Brentwood
2505 S. Brentwood Boulevard
Brentwood, MO 63144
Deer Creek Watershed Alliance
Missouri Botanical Garden -
Sustainability Division
4651 Shaw Blvd.
St. Louis, MO 63110

Project:
**Brentwood Wetland
Arboretum**

Landscape Architect:



Consultant:
Cacalia Design and Wiling
82 Yorkshire Lane Court
St. Louis, MO 63144
314.337.0059

Ted Spaid - Landscape Architect
MO # LA - 162

SWT Design, Inc.
Missouri State Certificate of
Authority #2006002904

Issues

No.	Description	Date
01	50% Design	10/23/23
02	95% Design	11/28/23
03	Final Design Review	12/20/23
04	Issue for Bid	02/09/24

Revisions

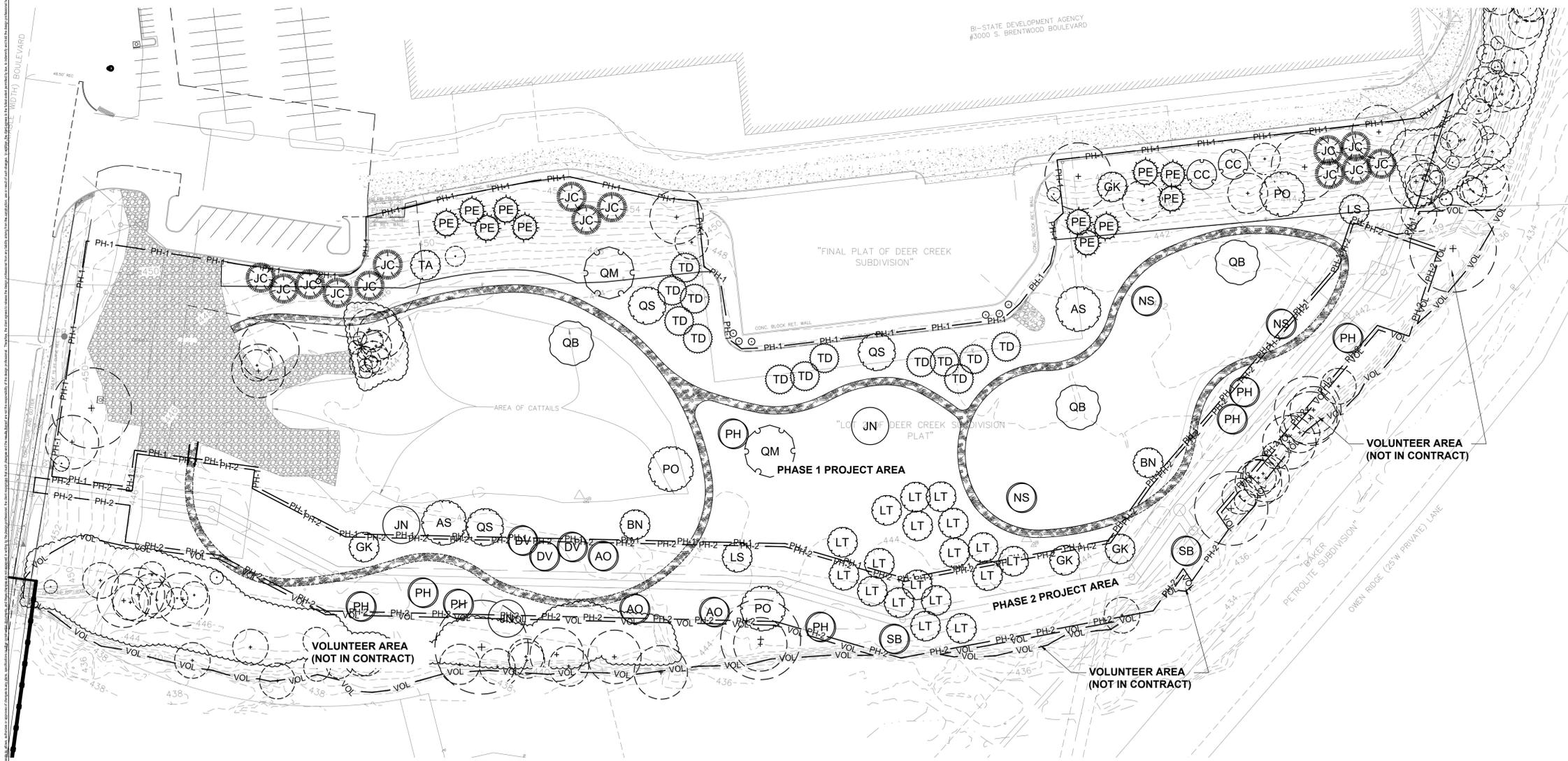
No.	Description	Date
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SWT No.	21631.01
MSD No.	XXMSD-XXXXX
Drawn	MB
Reviewed	TS

Sheet Title
TREE PLANTING PLAN

Number
L-140

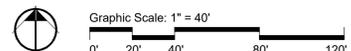
ISSUE FOR BID DOCUMENTS



LEGEND

- EXISTING TREE TO REMAIN, PROTECT FROM DAMAGE
- EXISTING GRAVEL TO REMAIN
- PH-1 PHASE 1 PROJECT AREA
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- MULCH PATHWAY CONTRACTOR TO COORDINATE INSTALLATION TIMING OF WOOD CHIPS WITH PROJECT PHASING

A TREE PLANTING PLAN
SCALE: 1"=40'



NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY IN EVENTS OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS IN THE DRAWINGS OR SPECIFICATIONS. THE CONTRACTOR IS NOT AUTHORIZED TO SCALE THE DRAWINGS. ALL QUESTIONS IN REFERENCE TO CONTRACT DOCUMENTS SHALL BE IMMEDIATELY DIRECTED TO THE LANDSCAPE ARCHITECT.

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



MICHAEL L. PARSON, Governor

Annual Wage Order No. 30

Section 100
ST. LOUIS COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by _____

Todd Smith, Director
Division of Labor Standards

Filed With Secretary of State: _____ **March 10, 2023**

Last Date Objections May Be Filed: **April 10, 2023**

Prepared by Missouri Department of Labor and Industrial Relations

Building Construction Rates for
ST. LOUIS County

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	\$66.97
Boilermaker	\$41.15*
Bricklayer	\$62.54
Carpenter	\$61.56
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	\$58.25
Plasterer	
Communications Technician	\$62.85
Electrician (Inside Wireman)	\$73.29
Electrician Outside Lineman	\$58.76
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	\$96.60
Glazier	\$65.67
Ironworker	\$67.11
Laborer	\$52.47
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	\$50.74
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	\$67.06
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	\$51.81
Plumber	\$75.30
Pipe Fitter	
Roofer	\$56.75
Sheet Metal Worker	\$72.05
Sprinkler Fitter	\$78.94
Truck Driver	\$41.15*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in RSMO Section 290.210.

Heavy Construction Rates for
ST. LOUIS County

Section 100

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	\$62.80
Millwright	
Pile Driver	
Electrician (Outside Lineman)	\$58.76
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	\$53.14
General Laborer	
Skilled Laborer	
Operating Engineer	\$67.79
Group I	
Group II	
Group III	
Group IV	
Truck Driver	\$46.49
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

OVERTIME and HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, "**overtime work**" shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.