

***Bid Package
For
Duncan Park Lake Tree Removal & Spill
Way Maintenance Project***

CITY OF SPARTANBURG

JOB NO. SW 1803

November 1, 2018

Proposal No.1819-11-27-01

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City of Spartanburg
Procurement and Property Division
Post Office Drawer 1749, SC 29304-1749
Phone (864) 596-2049 - Fax (864) 596-2365

Legal Notice

Request for Proposal for **Duncan Park Lake Tree Removal and Spill Way Maintenance Project.**

November 1, 2018

NOTICE IS HEREBY GIVEN –that The City of Spartanburg will receive sealed bids from Contractors to provide services for the Duncan Park Lake Tree Removal and Spill Way Maintenance located on Parkview Drive between South Park Drive and West Park Drive.

Bids are invited upon the several items and quantities of work as follows:

Contractor will be responsible for the lowering of the lake level to allow for the removal of trees and stumps. Contractor will also be responsible for various maintenance items associated with the existing spill way. Contractor will remove and replace existing guardrail to SCDOT specifications. Contractor is responsible for all traffic control, utility locates and sediment/erosion control during construction. Contractor will also be responsible for stockpiling and removal of any debris. Contractor will be responsible for any applicable permits.

Proposal No. 1819-11-27-01

City of Spartanburg, hereby, notifies all proposers that it will affirmatively ensure that all disadvantaged and women's business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of gender, race, color, or national origin in consideration for an award. Each proposer shall attest that they engaged in good faith efforts in an endeavor to achieve the City's M/WBE goal of 15%.

The City of Spartanburg reserves the right to reject any or all proposals or to waive any informality in the qualifications process. Proposals may be held by the City of Spartanburg for a period not to exceed sixty (60) days from the date of the opening of Proposals for the purpose of reviewing the Proposals and investigating the qualifications of prospective parties, prior to awarding of the Contract. The vendor that is awarded the proposal will be required to obtain a City of Spartanburg Business License and all applicable permits and fees. Contractor will be responsible to prove existing experience with similar projects and have verifiable references of at least 3 other similar projects.

Each bid must be accompanied by a Bid Bond payable to the Owner for five (5) percent of the total amount of the Bid.

A Mandatory Pre-bid will take place on November 20, 2018 at 10:00 a.m. at site.

Drawings and Specifications may be purchased from Imaging Technologies Construction Documents, including Drawings and Technical Specifications are on file and can be purchased at ARC , located a 7092 Howard Street #K, Spartanburg, SC (864) 585-8388

Complete proposal package will be available at www.cityofspartanburg.org by following the links for Invitations for bids.

The Bidder to whom the contract is awarded will be required to furnish a corporate surety bond in a sum equal to one hundred percent (100%) of the amount of the proposals or bids.

Sealed Proposals shall be submitted to Carl Wright, Procurement and Property Manager, on or before Tuesday November 20, 2018 no later than 3 PM, City Hall, 145 W. Broad Street, at which time they will be publicly opened and read aloud in the Training Room, same location.

Proposals can be hand delivered or mailed to the following address:

City of Spartanburg
P.O. Box 5107
145 W. Broad Street
Spartanburg, SC. 29304

Attn: Procurement and Property Division

For further information and complete Proposal Package, please contact the Procurement and Property office at (864) 596-2049. Complete proposal package also available at www.cityofspartanburg.org by following the links for Invitations for bids. The following Proposal Number Must be placed on the outer envelope in order for the bid to be Stamped in as accepted on time: **Proposal No: 1819-11-27-01**

PROPOSAL FOR
Duncan Park Lake Tree Removal and Spill Way Maintenance Project.

CITY OF SPARTANBURG

Job No. 1803

BID

FROM:

BIDDER _____ **Date** _____

Address _____ **Telephone** _____

Bidder's License No. _____

Contractor's License No. _____

TO: CITY OF SPARTANBURG (OWNER)

**145 West Broad Street
Post Office Drawer 5107
Spartanburg, S. C. 29304**

The undersigned, as bidder, hereby declares that the only person, or persons, interested in this bid as principal(s) is, or are, named herein, and that no other person has any interest in the bid or the contract to be entered into; that this bid is made without connection with any person, company or parties making a bid; and that it is in all respects fair and in good faith without collusion or fraud.

The bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the contract documents relative thereto; and that he has satisfied himself as to the work to be performed.

The bidder further proposes and agrees, if this bid is accepted, to contract with the Owner in the attached form of agreement, to furnish all material, equipment, tools, apparatus means of transportation, and labor necessary to complete the project in full and complete accordance with the contract documents, to the full and entire satisfaction of the Owner, at the prices and amounts listed below.

The bidder further agrees to commence work on the date stipulated in the notice to proceed and to fully complete the project within the number of consecutive calendar days thereafter as listed below. The bidder also agrees to pay as liquidated damages, the sum as listed below for each consecutive calendar day thereafter the project remains incomplete.

Completion Time 45 days
Liquidated Damages: \$300.00 per day

The undersigned Bidder agrees that if this Proposal shall be accepted, the undersigned will, within ten (10) days after notifications of such acceptance, enter into the contract for their performance of all work proposed under this improvement within the number of calendar days as stated herein, and, as a guaranty of the faithful performance thereof, to furnish at the time of executing the contract a performance bond in an amount not less than one hundred percent (100%) of the total amount bid, and with sureties subject to the approval of the Owner. Upon failure to execute the contract and bond as aforesaid, it is agreed that the undersigned shall forfeit check ac-companying this proposal to the Owner as liquidated damages caused by such failure.

The work consists of the approximate quantities shown herein which will be used as a basis for comparison of bids and not for final estimate. The Owner does not, by expression or by implication, agree that the actual amount of work will correspond with the estimated quantities.

In case of error in extension, the unit price shall govern rather than the amount. For lump sum items, the individual amounts shall govern the total of the bid in case of discrepancy.

The Owner may delete from the contract any or all of the alternates listed in the bid form.

The prices and amounts listed below include all labor, materials, tools, equipment, transportation, removal, overhead, profit, insurance, taxes, etc., to cover the finished work in place

Bidder acknowledges receipt of the following Addenda:

Addenda Received: No. _____
Date _____

The undersigned further agrees that in case of failure on his part to execute the said contract and bonds within 10 consecutive calendar days after written notice has been given of the award of the contract, the check and/or bid bond accompanying this bid and the monies payable thereon will be paid into the funds of the Owner as liquidated damages for such failure; otherwise, said check or bid bond will be returned to the undersigned.

The bidder further purposes and agrees hereby to commence the work with adequate forces and equipment within 10 days after being notified by the Owner or Engineer to proceed, and to complete the work within the specified time.

ATTACHED HERETO is a certified check on the _____
_____ Bank of _____ and/or bid bond
with the _____ Company for the sum of _____
Dollars (_____), made payable to the Owner as a bid guarantee.

The attached completed and executed Debarred Firms certification is hereby made a part of this bid.

Address:

_____ Firm _____
_____ By _____ (L.S.)
Title _____

(SEAL is bid is by a corporation)

INFORMATION FOR BIDDERS

Bids will be received and opened as specified in the advertisement.

1. Bids

- a) Each Bid must be submitted in a sealed envelope, as advertised. Each sealed envelope containing a BID must be plainly marked on the outside as **BID for Duncan Park Lake Tree Removal and Spill Way Maintenance Project , Job No. 1803**, and the envelope should bear on the outside the Bid Number, name of BIDDER, his address, all license information, etc., typed thereon and sealed. If forwarded by mail, the sealed envelope contained in the BID must be enclosed in another envelope addressed to the OWNER as advertised.
- b) The Owner may consider informal any bid not prepared and submitted in accordance with the provisions herein and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered.
- c) All bids shall be on the printed form contained herein or on copies thereof, and shall be for all labor, material and equipment required to complete the work embraced in the contract in accordance with the plans and specifications. Bid Documents shall include the Bid, the Bid Quantity, the Non-Collusion Affidavit and the Statement of Bidder's Qualification. Bids shall be typewritten or completed in ink. All blank spaces for bid prices must be filled in, in figures, or in both words and figures if so indicated in the bid form. In addition, any other information requested in the bid form must be completed.
- d) Each BIDDER is required to state in his proposal his name and place of residence and the names of all persons interested with him; in case of a corporation the names of other than the president and secretary need not be given. Reference shall be furnished to establish the skill and business standing of the BIDDER.
- e) If the Contract is awarded, it will be awarded by the Local Public Agency to a responsible Bidder on the basis of the lowest Bid and the selected Alternative Bid items, if any. The Contract will require the completion of the work according to the Contract Documents.
- f) If called for in the bid, each bidder shall submit a price for all alternates listed therein. Failure to do so will result in the bid being considered incomplete and may result in rejection of the bid.

- g) On the first sheet of the bid form, the bidder shall write his name and address, his bidder's license number; and contractor's license number, if required. In South Carolina, where a mechanical contract amounts to \$10,000 or more, the name and license number of the sub-contractor, where his bid is used, shall also be shown.
- h) Following the BID opening, the OWNER shall determine the Items, Alternates, and Additions to be performed. Total BIDS will be calculated by adding the amounts BID by each BIDDER for such ITEMS, Alternates, and Additions, less the Deductions, so selected by the Owner in determining the low responsive, responsible BID. The OWNER reserves the right to reject any and all BIDS.
- i) The successful BIDDER will be further required to furnish the OWNER with a complete breakdown of the lump sum BID items to the satisfaction of the ENGINEER, before signing the contract documents.
- j) The Owner reserves the right to hold bids for a period of sixty (60) days after date of opening and to award the contract at any time during that period.
- k) Five (5) sets of plans and specifications will be furnished the successful Contractor at no cost and any additional sets requested will be furnished at cost.

2. INTERPRETATIONS OR ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Local Public Agency. Any inquiry received seven or more days prior to the date fixed for opening of Bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents, and when issued, will be on file in the office of the Local Public Agency and the office of the Engineer at least five days before Bids are opened. In addition, all Addenda will be mailed to each person holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Addenda issued. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

Each bidder shall acknowledge receipt of all addenda in the spaces provided in the bid form. It shall be each bidder's responsibility to assure himself that all addenda have been received. No claim for failure to receive addenda will be considered.

3. INSPECTION OF SITE

Each Bidder should visit the site of the proposed work and fully acquaint himself with the existing conditions there relating to construction and labor, and should fully inform himself as to the facilities involved, the difficulties and restrictions attending the performance of the Contract. The Bidder should thoroughly examine and familiarize himself with the Drawings, Technical Specifications, and all other Contract Documents. The Contractor by the execution of the Contract shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument or to visit the site and acquaint himself with the conditions there existing and the Local Public Agency will be justified in rejecting any claim based on facts regarding which he should have been on notice as a result thereof.

4. ALTERNATIVE BIDS

No alternative bids will be considered unless alternative bids are specifically requested by the technical specifications.

5. BID GUARANTY

Each Bid must be accompanied by a BID BOND payable to the OWNER for five percent of the total amount of the Bid. As soon as the BID prices have been compared, the OWNER will return the bonds of all except the three lowest responsible BIDDERS. When the Agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment bond and performance bond have been executed and approved, after which it will be returned. A Certified check may be used in lieu of a BID BOND.

A performance bond and payment bond, each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract in the form attached hereto.

Attorneys-in-fact who sign BID BONDS or payment bonds and performance bonds must file with each bond a certified and effective dated copy of their power of attorney.

6. COLLUSIVE AGREEMENTS

- a) Each Bidder submitting a Bid to the Local Public Agency for any portion of the work contemplated by the documents on which Bidding is based shall and attach thereto, an affidavit substantially in the form herein provided, to the effect that he has not entered into a collusive agreement with any other person, firm, or corporation with regard to any Bid submitted.
- b) Before executing any subcontract the successful Bidder shall submit the name of any proposed subcontractor for prior approval and an affidavit substantially in the form provided in Section SUBCONTRACTS under GENERAL CONDITIONS PART I hereof.

7. STATEMENT OF BIDDER'S QUALIFICATIONS

Each Bidder shall upon request of the Local Public Agency submit on the form furnished for that purpose (a copy of which is included in the Contract Documents), a statement of the Bidder's qualifications, his experience record in constructing the type of improvements embraced in the contract, his organization and equipment available for the work contemplated, and when specifically requested by the Local Public Agency, a detailed financial statement. The Local Public Agency shall have the right to take such steps as it deems necessary to determine the availability of the Bidder to perform his obligations under the Contract and the Bidder shall furnish the Local Public Agency all such information and data for this purpose as it may request. The right is reserved to reject any Bid where an investigation of the available evidence or information does not satisfy the Local Public Agency that the Bidder is qualified to carry out properly the terms of the Contract.

8. UNIT PRICES

The unit price for each of the several items in the proposal of each Bidder shall include its prorata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price Bid represents the total Bid. Any Bid not conforming to this requirement may be rejected as informal. The special attention of all Bidders is called to this provision, for should questions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed, provided the net monetary value of all such additive and subtractive changes in quantities of such items of work (i.e., difference in cost) shall not increase or decrease the original contract price by more than twenty-five (25%) percent, except for work not covered in the Drawings and Technical Specifications as provided for in Section CHANGES IN THE WORK under GENERAL CONDITIONS Part I hereof.

The quantities listed in the proposal form are to be considered as approximate and are to be used only for the comparison of the BIDS and as basis for computing amounts of security or penal sums of bonds to be furnished. The unit prices to be tendered by the BIDDERS are to be tendered expressly for the scheduled quantities as they may be increased or decreased. Payments, except for lump sum contracts, and except for lump sum items in unit price contracts, will be made to the CONTRACTOR for the actual quantities only of work performed or materials furnished in accordance with the plans and specifications, and it is understood that the scheduled quantities of work to be done and materials to be furnished may each be increased or diminished without in any way invalidating the unit BID prices.

9. CORRECTIONS

Bids which are incomplete, unbalanced, conditional or obscure, or which contain additions not called for, erasures, alterations or irregularities of any kind, or which do not comply with the contract documents may be rejected at the option of the Owner.

Erasures or other changes in the Bids must be explained or noted over the signature of the Bidder.

10. TIME FOR RECEIVING BIDS

- a) Bids received prior to the advertised hour of opening will be securely kept, sealed. The officer whose duty it is to open them will decide when the specified time has arrived, and no Bid received thereafter will be considered: except that when a Bid arrives by mail after the time fixed for opening, but before the reading of all other Bids is completed, and it is shown to the satisfaction of the Local Public Agency that the non-arrival on time was due solely to delay in the mail for which the Bidder was not responsible, such Bid will be received and considered.

11. OPENING OF BIDS

At the time and place fixed for the opening of Bids, the Local Public Agency will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

12. WITHDRAWAL OF BIDS

Bids may be withdrawn on written or telegraphic request dispatched by the Bidder in time for delivery in the normal course of business to the time fixed for opening; provided, that written confirmation of any telegraphic withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for Bid opening. The Bid guaranty of any Bidder withdrawing his Bid in accordance with the foregoing conditions will be returned promptly.

13. AWARD OF CONTRACT: REJECT OF BIDS

- a) The Contract will be awarded to the responsible Bidder submitting the lowest Bid complying with the conditions of the Invitation for Bids. The Bidder to whom the award is made will be notified at the earliest possible date. The Local Public Agency, however, reserves the right to reject any and all Bids and to waive any informality in Bids received whenever such rejection or waiver is in its interest.
- b) The Local Public Agency reserves the right to consider as unqualified to do the work of general construction any Bidder who does not habitually perform with his own forces the major portions of the work involved in construction of the Improvements embraced in this Contract.

14. EXECUTION OF AGREEMENT: PERFORMANCE BOND, PAYMENT BOND, BUSINESS LICENSE

- a) Subsequent to the award and within ten (10) days after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the Local Public Agency an Agreement in the form included in the Contract Documents such number of copies as the Local Public Agency may require.
- b) Having satisfied all conditions of award as set forth elsewhere in these documents, the successful Bidder shall, within the period specified in paragraph "a" above, furnish a surety bond in a penal sum not less than the amount of the Contract as awarded, as security for the faithful performance of the Contract, and for the payment of all persons, firms, or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services, employed or used by him in performing the work. Such bond shall be in the same form as that included in the Contract Documents and shall bear the same date as, or a date subsequent to that of the Agreement. The current power of attorney for the person who signs for any surety company shall be attached to such bond. This bond shall be obtained from companies holding certificates of authority as acceptable sureties (31 CFR 223).
- c) The failure of the successful Bidder to execute such Agreement and to supply the required bond or bonds within ten days after the prescribed forms are presented for signature, or within such extended period as the Local Public Agency may grant, based upon reasons determined sufficient by the Local Public Agency, shall constitute a default, and the Local Public Agency may either award the Contract to the next lowest responsible Bidder or re-advertise for Bids, and may charge against the Bidder the difference between the amount of the Bid and the amount for which a Contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the Bid Bond. If a more favorable Bid is received by re-advertising the defaulting Bidder shall have no claim against the Public Agency for a refund.
- d) The NOTICE OF AWARD shall be accompanied by the necessary Agreement and bond forms.

15. NOTICE TO PROCEED

The NOTICE TO PROCEED shall be issued within 10 days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the 10 day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

16. WAGES AND SALARIES

- a) Attention of Bidders is particularly called to the requirements concerning the payment of not less than the prevailing wage and salary rates specified in the Contract Documents and the conditions of employment with respect to certain categories and classifications of employees. See GENERAL CONDITIONS PART II.
- b) The rates of pay set forth under GENERAL CONDITIONS, PART II, are the minimums to be paid during the life of the Contract. It is therefore, the responsibility of Bidders to inform themselves as to local labor conditions, such as the length of work day and work week, overtime compensation, health and welfare contributions, labor supply and prospective changes or adjustments of rates.

17. EQUAL EMPLOYMENT OPPORTUNITY

- a) Attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin. (See Section EQUAL EMPLOYMENT OPPORTUNITY under GENERAL CONDITIONS PART I hereof).
- b) Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

The offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

The goals for minority and female participation are applicable to the entire Contractor's Construction work (whether or not it is Federal or federally assisted) performed in the covered areas.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a). And its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulation in 41 CFR, Part 60-4. Compliance with the goals will be measured against the total work hours performed.

1. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
2. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county, and city, if any).

GENERAL GUARANTY

3. Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the Improvements embraced in this Contract by the Local Public Agency or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties of responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting there from which shall appear within a period of 12 months from the date of final acceptance of the work. The Local Public Agency will be given notice of defective materials and work with reasonable promptness.

18. LOCAL PUBLIC AGENCY

Wherever the term "Local Public Agency" is referenced in the contract documents, it shall mean the Owner which is the City of Spartanburg, S. C.

19. TAXES

Attention is called to the following provisions of the South Carolina Tax laws:

South Carolina law requires that a withholding tax of two percent (2%) be withheld from payments made to non-resident contractors performing a business of temporary nature in South Carolina, and provided the contract exceeds \$10,000. The withholding of two percent (2%) may be waived provided the nonresident taxpayer posts with the South Carolina Tax Commission a non-resident withholding tax bond. This provision insures the South Carolina Tax Commission that the non-resident contractor will comply with applicable provisions of the Income Tax Act of 1926, as amended. The prime contractor or employer of the non-resident contractor is held responsible for the tax due to be withheld and must withhold the tax unless he is notified by the South Carolina Tax Commission that a non-resident withholding bond has been posted covering the contract in question.

- a) In addition to the above, the non-resident contractor is required to act as withholding agent for the State of South Carolina and withhold tax from wages paid to his employees working in South Carolina. It is the responsibility of the non-resident contractor to apply for an employer account number and file the quarterly withholding reports on or before the appropriate due dates.

20. ENGINEER

Wherever the "Engineer" is referenced in the contract documents, it shall mean the City Storm Water Manager, P. O. Drawer 1749, Spartanburg, S. C. 29304, telephone (864) 596-2089.

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

State of South Carolina)

ss.

County of Spartanburg)

_____, being first duly sworn,
deposes and says that:

- 1) He is _____ OF _____, the Bidder that has submitted the attached Bid:
- 2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid:
- 3) Such Bid is genuine and is not a collusive or sham Bid:
- 4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Spartanburg, S.C. or any person interested in the proposed Contract; and
- 5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(signed) _____
Title

Subscribed and sworn to before me this

_____ day of _____, 20____

Title

⁵Forms of Bid Bonds prepared to meet the requirements of local or State laws or the needs of the Local Public should be substituted for this form where necessary.
-1-

Attest:

By: _____ Affix
Corporate
Seal

Countersigned

by _____

⁶Attorney-in-Fact, State of _____

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that
I am the _____,
Secretary of the Corporation named as Principal in the within bond: that
_____ who signed the said bond on behalf
of the Principal was then _____ of said corporation: that I know
his signature, and his signature thereto is genuine: and that said bond was duly
signed, sealed, and attested to, for and in behalf of said corporation by
authority of this governing body.

_____ (Corporate Seal)

Title: _____

⁶Power-of-attorney for person signing for surety company must be attached to bond.

STATEMENT OF BIDDER'S QUALIFICATIONS

(To be submitted by the Bidder only upon the specific request of the Local Public Agency.)

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

1. Name of Bidder.
2. Permanent main office address.
3. When organized.
4. If a corporation, where incorporated.
5. How many years have you been engaged in the contracting business under your present firm or trade name?
6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
7. General character or work performed by your Company.
8. Have you ever failed to complete any work awarded to you?
9. Have you ever defaulted on a contract?
10. List the more important projects recently completed by your Company, stating the approximate cost for each, and the month and year completed.
11. List your major equipment available for this contract.
12. Experience in construction work similar in importance to this project.
13. Background and experience of the principal members of your organization, including the officers.
14. Credit Available: \$ _____.
15. Give Bank Reference: _____.
16. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the City of Spartanburg?
17. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the City of Spartanburg in verification of the recitals comprising this Statement of Bidder's Qualifications.

CERTIFICATION OF NONSEGREGATED FACILITIES

The Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control where segregated facilities are maintained. The bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this Bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants, and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Bidder agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certification in his files.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

By: _____

Title: _____

Date _____, 20__

Official Address (including Zip Code).

EXHIBIT D

**EXHIBIT A
SCOPE OF WORK
(BY OWNER)**

Contractor will be responsible for the lowering of the lake level to allow for the removal of trees and stumps. Contractor will also be responsible for various maintenance items associated with the existing spill way. Contractor will remove and replace existing guardrail to SCDOT specifications. Contractor is responsible for all traffic control, utility locates and sediment/erosion control during construction. Contractor will also be responsible for stockpiling and removal of any debris. Contractor will be responsible for any applicable permits.

WORK TO BE COMPLETED IN 45 DAYS.

**EXHIBIT A-1
SPECIFICATIONS**



Hulsey McCormick & Wallace
ENGINEERING • ENVIRONMENT • SCIENCE



TECHNICAL SPECIFICATIONS
FOR TREE REMOVAL
DUNCAN PARK LAKE DAM
CITY OF SPARTANBURG
HMW PROJECT NO. SPA 003-1020-15
AUGUST 2018



Development

Environment

Water

Mapping

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TECHNICAL SPECIFICATIONS
FOR THE
CITY OF SPARTANBURG
TREE REMOVAL – DUNCAN PARK LAKE DAM

Prepared for the
City of Spartanburg, South Carolina
HMW Project No. SPA 003-1020-15



August 2018



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DIVISION 1
GENERAL REQUIREMENTS

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PART 1 - GENERAL

1.1 LOCATION OF WORK

All of the work of this Contract shall be installed at locations shown on the drawings.

1.2 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these specifications and as shown on the drawings.
- B. The Contractor shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, clean-up, replacements and restoration required as a result of damages caused during this construction.
- C. All materials, equipment, skills, tools and labor which are reasonable and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these specifications or drawing shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the contract documents or not.
- D. The Contractor shall comply with all municipal, county, state, federal, and other codes which are applicable to the proposed construction work.

1.3 GENERAL DESCRIPTION OF WORK TO BE PERFORMED

- A. Furnish all labor, materials, equipment and incidentals required and provide Tree Removal from the Duncan Park Lake Dam, as shown on the drawings and specified herein.
- B. The work includes, but is not necessarily limited to, the following:
Removal of existing trees and vegetation, restoration of ground surfaces and slopes, grassing and stabilization as shown on the plans.

1.4 WORK SEQUENCE

- A. All work to be done under this contract shall be done with minimum inconvenience to the existing roadway traffic flow.
- B. Coordinate the construction schedule and operations with the Owner's representative.

1.5 CONSTRUCTION AREAS

- A. Contractor shall limit his use of the construction areas for work and for storage, to allow for:
 - 1. Owner use.
- B. Coordinate use of work site.
- C. Move and store felled timber and brush, under Contractor's control which interfere with operations of the Owner or separate Contractor.

- D. Obtain and pay for the use of additional storage or work areas needed for operations.

1.6 PLANS AND SPECIFICATIONS

- A. The technical specifications consist of three parts: General, Products, and Execution. The General Section contains General Requirements which govern the work. Products and Execution modify and supplement the General Requirements. The Products and Execution parts shall always govern whenever there appears to be a conflict.

- B. Intent

All work called for in the specifications applicable to this contract, but not shown on the plans in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the plans or in the specifications, but involved in carrying out their intent or in the complete and proper execution of the work, is required and shall be performed by the Contractor as though were specifically delineated or described.

The apparent silence of the specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these specifications shall be made upon that basis. The inclusion of the General Requirements (or work specified elsewhere) in the general part of the specifications is only for the convenience of the Contractor, and shall not be interpreted as a complete list of related specification sections.

1.7 OWNER OCCUPANCY

Owner will have full access to and use of all existing facilities. Cooperate with Owner's representative in all construction operations to minimize conflict and to facilitate Owner usage.

1.8 PARTIAL OWNER OCCUPANCY

The Contractor shall schedule his operations for completion of portions of the work, as designated, for the Owner's occupancy prior to substantial completion of the entire work.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

PART 1 - GENERAL

1.1 PARTIAL OCCUPANCY BY OWNER

Whenever, in the opinion of the Engineer, any section or portion of the work or any structure is in suitable condition, it may be put into use upon the written order of the Engineer and such usage will not be held in any way as an acceptance of said Work or structure, or any part thereof, or as a waiver of any of the provisions of the specifications and the contract. Pending final completion and acceptance of the Work, all necessary repairs and replacement, due to defective materials or workmanship or operations of the Contractor, for any section of the work so put into use shall be performed by the Contractor at Contractor's own expense.

END OF SECTION

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PART 1 - GENERAL

1.1 SCOPE

- A. The bid form lists each item of the project for which payment will be made. No payment will be made for any items other than those listed in the bid form.
- B. Required items of work and incidentals necessary for the satisfactory completion of the Work which are not specifically listed in the bid, and which are not specified in this section to be measured or to be included in one of the items listed in the bid, shall be considered as incidental to the work. All costs thereof, including Contractor's overhead costs and profit, shall be considered as included in the lump sum or unit prices bid for the various bid items. The Contractor shall prepare the bid accordingly.
- C. Work includes furnishing all labor, equipment, tools and materials, which are not furnished by the Owner and performing all operations required to complete the work satisfactorily, in place, as specified and as indicated on the drawings.

1.2 DESCRIPTIONS

- A. Measurement of an item of work will be by the unit indicated in the bid.
- B. Payment will include all necessary and incidental related work not specified to be included in any other item or work listed in the bid.
- C. Payment will be made by extending unit prices multiplied by quantities provided and then summing the extended prices to reflect actual work. Such price and payment shall constitute full compensation to the Contractor for furnishing all permits, labor, equipment, tools and materials not furnished by the Owner and for performing all operations required to provide to the owner the entire project, complete in place, as specified and as indicated on the drawings.
- D. No separate payment will be made for any item of work, materials, parts, equipment, supplies or related items required to perform and complete the work. The costs for all such items required shall be included in the price bid for item of which it is a part. The Bid Form is provided for the Contractor's convenience and to assign values to the work to be performed. No separate payment shall be made for incidental work required in the contract documents. The total bid amount shall be all inclusive of the work to be performed, in place, complete, and accepted. No separate payment shall be made for any work not specifically listed on the Bid Form, but required to perform the work in the bid documents. This work will be considered incidental to the performance of the contract.

1.3 CASH ALLOWANCES

- A. General
 - 1. The Contractor shall include in the bid total all allowances stated in the contract documents. These allowances shall cover the net cost of the services provided by a firm selected by the Owner and approved by the Engineer in writing. The Contractor's handling costs, labor, overhead, profit and other expenses

contemplated for the original allowance shall be included in the items to which they pertain and not in allowances.

2. No payment will be made for nonproductive time on the part of testing personnel due to the Contractor's failure to properly coordinate testing activities with the work schedule or the Contractor's problems with maintaining equipment in good working condition. The Contractor shall make all necessary excavations and shall supply any samples of materials necessary for conducting compaction and density tests.
 3. No payment shall be provided for services which fail to verify required results.
 4. The soils testing cash allowance, if any, shall apply only to those tests required in Section and 02221 to verify construction quality. Cash allowances shall not be used for exploration or other uses.
- B. Should the net cost be more or less than the specified amount of the allowance, the contract will be adjusted accordingly by change order. The amount of change order will not recognize any changes in handling costs at the site, labor, overhead, profit and other expenses caused by the adjustment to the allowance.
- C. Documentation
1. Submit copies of the invoices with each periodic payment request from the firm providing the services.
 2. Submit results of services provided which verify required results.
- D. Schedule of Cash Allowances
- None included.

1.4 EROSION AND SEDIMENTATION CONTROL

- A. General
1. The Contractor shall comply with all appropriate provisions of the NPDES Stormwater General Permit for Construction Activities, and the approved Storm Water Pollution Prevention Plan.
 2. No separate payment shall be made for temporary and/or permanent erosion and sedimentation controls, except as noted below. All other temporary and/or permanent erosion and sedimentation control costs, including the cost of obtaining land disturbance permits or other requirements of SCDHEC, shall be included in the lump sum price.
 3. No payment will be made for any portion of the project for which temporary erosion and sedimentation controls are not properly maintained.

4. Quantities for payment shall be based upon actual quantity constructed and authorized by the Engineer.
- B. Construction Exits: All costs for construction exits, including installation, maintenance, repair, and removal, shall be included in the unit price bid for construction exits.
- C. Silt Fence: All costs for silt fences, including installation, maintenance, repair, replacement, and removal, shall be included in the unit price bid for silt fence.
- D. Wave Erosion Protection
 1. The bidder shall furnish all labor, supervision, supplies, tools, equipment and other means necessary or proper for performing and completing the work.
 2. The unit bid price for wave erosion protection shall include all rip rap, geotextile fabric and crushed stone as shown in the drawings.

1.5 TREE REMOVAL

- A. The bidder shall furnish all labor, supervision, supplies, tools, equipment and other means necessary or proper for performing and completing the work. The bidder shall be responsible for the cleaning up of the job site and shall repair or restore all structures and property that may be damaged or disturbed during performance of the work to the satisfaction of the Owner and Engineer.
- B. No separate or additional payment will be made for any special or unique method, means, techniques or equipment necessary for the Contractor's compliance with these Specifications, regulatory requirements, permits, laws or regulations which govern this project.
- C. Trees to be removed shall be measured per inch of diameter. The diameter shall be measured at a point four feet (4') six inches (6") above the highest ground level at the tree (DBH) and will be determined by dividing the measured circumference at that point by 3.1416.

1.6 STUMP REMOVAL

- A. The bidder shall furnish all labor, supervision, supplies, tools, equipment and other means necessary or proper for performing and completing the work. The bidder shall be responsible for the cleaning up of the job site and shall repair or restore all structures and property that may be damaged or disturbed during performance of the work to the satisfaction of the Owner and Engineer.
- B. No separate or additional payment will be made for any special or unique method, means, techniques or equipment necessary for the Contractor's compliance with these Specifications, regulatory requirements, permits, laws or regulations which govern this project.

- C. Stumps shall be identified and priced according to two size categories: 1) 18 inches and under and 2) 19 inches and over. Diameters are based on the original diameter of the tree measured at DBH.

END OF SECTION

PART 1 - GENERAL

1.1 SCOPE

A. Permits and Responsibilities

The Contractor shall, at no additional cost to the Owner, be responsible for obtaining all necessary licenses and permits, including building permits and land disturbance permits, and for complying with any applicable federal, state, county and municipal laws, ordinances, codes and regulations, in connection with the performance of the work.

B. The Contractor shall take proper safety and health precautions to protect the work, the workers, the public and the property of others.

C. Prior to commencing any work, the Contractor shall submit a job-specific Health and Safety Plan to the Owner for their records.

D. Contractor shall provide inspection of sediment and erosion control measures required by the NPDES General Permit for Stormwater Discharges, SCR10000, and as described in the Stormwater Pollution Prevention Plan for the project. The Contractor shall be listed as a co-permittee in the Notice of Intent for coverage under the permit and shall sign the required certification for co-permittees.

E. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the work.

F. The Contractor shall post a copy of the construction permit in a conspicuous location on site.

END OF SECTION

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PART 1 - GENERAL

1.1 DESCRIPTION

- A. Whenever reference is made to conforming to the standards of any technical society, organization, body, code or standard, it shall be construed to mean the latest standard, code, or specification adopted and published at the time of advertisement for bids. This shall include the furnishing of materials, testing of materials, fabrication and installation practices. In those cases where the Contractor's quality standards establish more stringent quality requirements, the more stringent requirement shall prevail. Such standards are made a part hereof to the extent which is indicated or intended.
- B. The inclusion of an organization under one category does not preclude that organization's standards from applying to another category.
- C. In addition, all work shall comply with the applicable requirements of local codes, utilities and other authorities having jurisdiction.
- D. All material and equipment for which a UL Standard, an AGA or NSF approval, or an ASME requirement is established, shall be so approved and labeled or stamped. The label or stamp shall be conspicuous and not covered, painted, or otherwise obscured from visual inspection.
- E. The standards which apply to this project are not necessarily restricted to those organizations which are listed in Article 1.02.

1.2 STANDARD ORGANIZATIONS

A. Piping and Valves

ACPA	American Concrete Pipe Association
ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AWWA	American Water Works Association
CISPI	Cast Iron Soil Pipe Institute
DIPRA	Ductile Iron Pipe Research Association
FCI	Fluid Controls Institute
MSS	Manufacturers Standardization Society
NCPI	National Clay Pipe Institute
NSF	National Sanitation Foundation
PPI	Plastic Pipe Institute
	Uni-Bell PVC Pipe Association

B. Materials

AASHTO	American Association of State Highway and Transportation Officials
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials

- C. Painting and Surface Preparation
 - NACE National Association of Corrosion Engineers
 - SSPC Steel Structures Painting Council

- D. Aluminum
 - AA Aluminum Association
 - AAMA American Architectural Manufacturers Association

- E. Steel and Concrete
 - ACI American Concrete Institute
 - AISC American Institute of Steel Construction, Inc.
 - AISI American Iron and Steel Institute
 - CRSI Concrete Reinforcing Steel Institute
 - NRMA National Ready-Mix Association
 - PCA Portland Cement Association
 - PCI Prestressed Concrete Institute

- F. Welding
 - ASME American Society of Mechanical Engineers
 - AWS American Welding Society

- G. Government and Technical Organizations
 - AIA American Institute of Architecture
 - APHA American Public Health Association
 - APWA American Public Works Association
 - ASA American Standards Association
 - ASAE American Society of Agricultural Engineers
 - ASCE American Society of Civil Engineers
 - ASQC American Society of Quality Control
 - ASSE American Society of Sanitary Engineers
 - CFR Code of Federal Regulations
 - CSI Construction Specifications Institute
 - EDA Economic Development Administration
 - EPA Environmental Protection Agency
 - FCC Federal Communications Commission
 - FmHA Farmers Home Administration
 - FS Federal Specifications
 - IAI International Association of Identification
 - ISEA Industrial Safety Equipment Association
 - ISO International Organization for Standardization
 - ITE Institute of Traffic Engineers
 - NBFU National Board of Fire Underwriters
 - (NFPA) National Fluid Power Association
 - NBS National Bureau of Standards
 - NISO National Information Standards Organization
 - OSHA Occupational Safety and Health Administration
 - SI Salt Institute

SPI	The Society of the Plastics Industry, Inc.
USDC	United States Department of Commerce
WEF	Water Environment Federation

H. Roadways

AREA	American Railway Engineering Association
DOT	Department of Transportation
SSRBC	Standard Specifications for Construction of Transportation Systems, Georgia Department of Transportation

I. Plumbing

AGA	American Gas Association
NSF	National Sanitation Foundation
PDI	Plumbing Drainage Institute
SPC	SBCC Standard Plumbing Code

1.3 SYMBOLS

Symbols and material legends shall be as scheduled on the drawings.

END OF SECTION

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PART 1 - GENERAL

1.1 SCOPE

- A. Work under this section includes all scheduling and administration of pre-construction and progress meetings as herein specified and necessary for the proper and complete performance of this work.
- B. Scheduling and Administration by Engineer/Owner:
 - 1. Prepare agenda.
 - 2. Make physical arrangements for the meetings.
 - 3. Preside at meetings.
 - 4. Record minutes and include significant proceedings and decisions.
 - 5. Distribute copies of the minutes to participants.

1.2 PRE-CONSTRUCTION CONFERENCE

- A. The Engineer shall schedule the pre-construction conference prior to the issuance of the Notice to Proceed.
- B. Representatives of the following parties are to be in attendance at the meeting:
 - 1. Owner
 - 2. Engineer
 - 3. Contractor and superintendent
 - 4. Major subcontractors
 - 5. Representatives of governmental or regulatory agencies when appropriate
- C. The agenda for the pre-construction conference shall consist of the following as a minimum:
 - 1. Distribute and discuss a list of major subcontractors and a tentative construction schedule.
 - 2. Critical work sequencing.
 - 3. Designation of responsible personnel and emergency telephone numbers.
 - 4. Processing of field decisions and change orders.
 - 5. Adequacy of distribution of contract documents.

6. Schedule and submittal of shop drawings, product data and samples.
7. Pay request format, submittal cutoff date, pay date and retainage.
8. Procedures for maintaining record documents.
9. Use of premises, including office and storage areas and owner's requirements.
10. Major equipment deliveries and priorities.
11. Safety and first aid procedures.
12. Security procedures.
13. Housekeeping procedures.
14. Work hours.

1.3 PROJECT COORDINATION MEETINGS

- A. Schedule regular monthly meetings as directed by the Engineer.
- B. Hold called meetings as the progress of the work dictates.
- C. The meetings shall be held at the location indicated by the Engineer.
- D. Representatives of the following parties are to be in attendance at the meetings:
 1. Engineer
 2. Contractor and superintendent
 3. Major subcontractors as pertinent to the agenda
 4. Owner's representative as appropriate
 5. Representatives of governmental or other regulatory agencies as appropriate
- E. The minimum agenda for progress meetings shall consist of the following.
 1. Review and approve minutes of previous meetings.
 2. Review work progress since last meeting.
 3. Note field observations, problems and decisions.
 4. Identify problems which impede planned progress.
 5. Review off-site fabrication problems.

Section 01200
PROJECT MEETINGS

6. Review Contractor's corrective measures and procedures to regain planned schedule.
7. Review Contractor's revision to the construction schedule.
8. Review submittal schedule; expedite as required to maintain schedule.
9. Maintenance of quality and work standards.
10. Review changes proposed by Owner for their effect on the construction schedule and completion date.
11. Complete other current business.

END OF SECTION

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PART 1 - GENERAL

1.1 SCOPE

- A. This section includes testing which the Owner may require to determine if materials provided for the project meet the requirements of these specifications.
- B. This work also includes all testing required by the Owner to verify work performed by the Contractor is in accordance with the requirements of these specifications, i.e., soil compaction, etc.
- C. The testing laboratory or laboratories will be selected by the Owner and will work for the Owner.

1.2 PAYMENT FOR TESTING SERVICES

- A. The cost of testing services required by the contract shall be paid for by the Owner.
- B. The cost of additional testing services not specifically required in the specifications, but requested by the Owner or Engineer, shall be paid for by the Owner.
- C. The cost of retesting any item that fails to meet the requirements of these specifications shall be paid for by the Contractor. Retesting shall be performed by the testing laboratory working for the Owner.

1.3 LABORATORY DUTIES

- A. Cooperate with the Owner, Engineer and Contractor.
- B. Provide qualified personnel promptly on notice.
- C. Perform specified inspections, sampling and testing of materials.
 - 1. Comply with specified standards, ASTM, other recognized authorities, and as specified.
 - 2. Ascertain compliance with requirements of the contract documents.
- D. Promptly notify the Engineer and Contractor of irregularity or deficiency of work which are observed during performance of services.
- E. Promptly submit three copies (two copies to the Engineer and one copy to the Contractor) of report of inspections and tests in addition to those additional copies required by the Contractor with the following information included:
 - 1. Date issued
 - 2. Project title and number
 - 3. Testing Laboratory name and address

4. Name and signature of inspector
 5. Date of inspection or sampling
 6. Record of temperature and weather
 7. Date of test
 8. Identification of product and Specification section
 9. Location of Project
 10. Type of inspection or test
 11. Results of test
 12. Observation regarding compliance with the contract documents
- F. Perform additional services as required.
- G. The laboratory is not authorized to release, revoke, alter or enlarge on requirements of the contract documents, or approve or accept any portion of the work.

1.4 CONTRACTOR RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to work.
- B. Furnish required labor and facilities to:
1. Obtain and handle samples at the site;
 2. Facilitate inspections and tests.
- C. Notify the laboratory sufficiently in advance of operation to allow for the assignment of personnel and schedules of tests.
- D. Laboratory Tests: Where such inspection and testing are to be conducted by an independent laboratory agency, the sample(s) shall be selected by such laboratory or agency, or the Engineer, and shipped to the laboratory by the Contractor at Contractor's expense.
- E. Copies of all correspondence between the Contractor and testing agencies shall be provided to the Engineer.

1.5 QUALITY ASSURANCE

Testing shall be in accordance with all pertinent codes and regulations and with procedures and requirements of the American Society for Testing and Materials (ASTM).

1.6 PRODUCT HANDLING

Promptly process and distribute all required copies of test reports and related instructions to insure all necessary retesting or replacement of materials with the least possible delay in the progress of the work.

1.7 CODE COMPLIANCE TESTING

Inspections and tests required by codes or ordinances or by a plan approval authority, and made by a legally constituted authority, shall be the responsibility of, and shall be paid for by the Contractor, unless otherwise provided in the contract documents.

1.8 CONTRACTOR'S CONVENIENCE TESTING

Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor and at the Contractor's expense.

1.9 TESTING SCHEDULE**A. Establishing Schedule**

1. The Contractor shall, by advance discussion with the testing laboratory, determine the time required for the laboratory to perform its tests and to issue each of its findings, and make all arrangements for the testing laboratory to be on site to provide the required testing.
2. Provide all required time within the construction schedule.

B. When changes of construction schedule are necessary during construction, coordinate all such changes of schedule with the testing laboratory as required.

C. When the testing laboratory is ready to test according to the determined schedule, but is prevented from testing or taking specimens due to incompleteness of the work, all extra costs for testing attributable to the delay will be back-charged to the Contractor and shall not be borne by the Owner.

1.10 SAMPLING SPECIMENS

Unless otherwise indicated in the contract documents, all specimens and samples for tests will be sampled by the testing laboratory or the Engineer.

1.11 TRANSPORTING SAMPLES

The Contractor shall be responsible for transporting all samples, except those taken by testing laboratory personnel, to the testing laboratory.

END OF SECTION

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PART 1 - GENERAL

1.1 SCOPE

- A. Temporary facilities required for this work include, but are not necessarily limited to:
 - 1. Temporary utilities such as water and electricity
 - 2. First aid facilities
 - 3. Sanitary facilities
 - 4. Potable water
 - 5. Temporary enclosures and construction facilities

1.2 GENERAL

- A. First aid facilities, sanitary facilities and potable water shall be available on the project site on the first day that any activities are conducted on site. The other facilities shall be provided as the schedule of the project warrants.
- B. Maintenance: Use all means necessary to maintain temporary facilities in proper and safe condition throughout progress of the work. In the event of loss or damage, immediately make all repairs and replacements necessary, at no additional cost to the Owner.
- C. Removal: Remove all such temporary facilities and controls as rapidly as progress of the work will permit.
- D. Contractor shall maintain access to Owner's facilities during the course of construction. Any temporary closing of Owner access shall be coordinated with the Owner's schedule.

1.3 TEMPORARY UTILITIES

- A. General
 - 1. Provide and pay all costs for all water, electricity and other utilities required for the performance of the work.
 - 2. Pay all costs for temporary utilities until project completion.
 - 3. Costs for temporary utilities shall include all power, water, and the like, necessary for testing equipment as required by the contract documents.
- B. Temporary Water: Provide all necessary temporary piping, and upon completion of the work, remove all such temporary piping. Provide and remove water meters.
- C. Temporary Electricity
 - 1. Provide all necessary wiring for the Contractor's use.

2. Furnish, locate and install area distribution boxes such that the individual trades may use their own construction type extension cords to obtain adequate power, and artificial lighting at all points where required by inspectors and for safety.

1.4 FIRST AID FACILITIES

The contractor shall provide a suitable first aid station, equipped with all facilities and medical supplies necessary to administer emergency first aid treatment. The Contractor shall have standing arrangements for the removal and hospital treatment of any injured person. All first aid facilities and emergency ambulance service shall be made available by the Contractor to the Owner and the Engineer's personnel.

1.5 SANITARY FACILITIES

Prior to starting the work, the Contractor shall furnish, for use of Contractor's personnel on the job, all necessary toilet facilities which shall be secluded from public observation. These facilities shall be either chemical toilets or shall be connected to the Owner's sanitary sewer system. All facilities, regardless of type, shall be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the area in which the work is performed. Adequacy of these facilities will be subject to the Engineer's review and maintenance of same must be satisfactory to the Engineer at all times.

1.6 POTABLE WATER

The Contractor shall be responsible for furnishing a supply of potable drinking water for employees, subcontractors, inspectors, engineers, the Owner, and others who are associated with the work.

1.7 ENCLOSURES AND CONSTRUCTION FACILITIES

Furnish, install and maintain for the duration of construction, all required scaffolds, tarpaulins, canopies, steps, bridges, platforms and other temporary construction necessary for proper completion of the Work in compliance with all pertinent safety and other regulations.

1.8 PARKING FACILITIES

Parking facilities for the Contractor's and Contractor's subcontractors' personnel shall be the Contractor's responsibility. The storage and work facilities provided by the Owner will not be used for parking by the Contractor's or subcontractor's personnel.

END OF SECTION

PART 1 - GENERAL

1.1 BARRICADES, LIGHTS AND SIGNALS

- A. The Contractor shall furnish and erect such barricades, fences, lights and danger signals and shall provide such other precautionary measures for the protection of persons or property and of the work as necessary. Barricades shall be painted in a color that will be visible at night. From sunset to sunrise, the Contractor shall furnish and maintain at least one light at each barricade and sufficient numbers of barricades shall be erected to keep vehicles from being driven on or into any work under construction.

- B. The Contractor will be held responsible for all damage to the work due to failure of barricades, signs and lights. Whenever evidence is found of such damage, the Contractor shall immediately remove the damaged portion and replace it at Contractor's cost and expense. The Contractor's responsibility for the maintenance of barricades, signs and lights shall not cease until the project has been accepted by the Owner.

END OF SECTION

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PART 1 - GENERAL

1.1 SCOPE

Limit blowing dust caused by construction operations by applying water or employing other appropriate means or methods to maintain dust control, subject to the approval of the Owner. At a minimum, this may require the use of a water wagon twice a day to suppress dusty conditions.

1.2 PROTECTION OF ADJACENT PROPERTY

- A. The bidders shall visit the site and note the buildings, landscaping, roads, parking areas, environmentally sensitive areas and other facilities near the work site that may be damaged by their operations. The Contractor shall make adequate provision to fully protect the surrounding area and will be held fully responsible for all damages resulting from Contractor's operations.

- B. Protect all existing facilities (indoors or out) from damage by dust, fumes, spray or spills (indoors or out). Protect motors, bearings, electrical gear, instrumentation and building or other surfaces from dirt, dust, welding fumes, paint spray, spills or droppings causing wear, corrosion, malfunction, failure or defacement by enclosure, sprinkling or other dust palliatives, masking and covering, exhausting or containment.

END OF SECTION

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PART 1 - GENERAL

1.1 SCOPE

This section covers the general cleaning which the Contractor shall be required to perform both during construction and before final acceptance of the project unless otherwise shown on the drawings or specified elsewhere in these specifications.

1.2 QUALITY ASSURANCE

- A. Daily, and more often if necessary, conduct inspections verifying that requirements of cleanliness are being met.
- B. In addition to the standards described in this section, comply with all pertinent requirements of governmental agencies having jurisdiction.

1.3 HAZARD CONTROL

- A. The Contractor shall store volatile wastes in covered metal containers and remove from premises daily.
- B. The Contractor shall prevent accumulation of wastes which create hazardous conditions.
- C. Burning or burying rubbish and waste materials on the site shall not be allowed.
- D. Disposal of volatile wastes into sanitary storm sewers shall not be allowed.

1.4 DISPOSAL OF SURPLUS MATERIALS

- A. Unless otherwise shown on the drawings, specified or directed, the Contractor shall legally dispose, off the site, all surplus excavated materials and materials and equipment from demolition and shall provide Contractor's own suitable, off-site spoil area, or utilize a site designated by the Owner.
- B. The Owner shall have the opportunity to inspect any removed equipment or materials prior to disposal by the Contractor. If said equipment and/or materials are determined to be salvageable by the Owner, the Contractor shall transport said equipment and material to a building or area designated by the Owner.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Engineer.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

A. General

1. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic and providing the required protection of materials.
2. Do not allow the accumulation of scrap, debris, waste material and other items not required for construction of this work.
3. At least each week, and more often as necessary, completely remove all scrap, debris and waste material from the job site.
4. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the environment.

B. Site

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris and waste material. Remove all such items to the place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site; restack or otherwise service all arrangements to meet the requirements of paragraph 3.1 above.
3. At all times maintain the site in a neat and orderly condition which meets the approval of the Engineer.

3.2 FINAL CLEANING

- A. Definitions: Except as otherwise specifically provided, "clean" for the purpose of this Section shall be interpreted as meaning the level of cleanliness generally provided by commercial building maintenance subcontractors using commercial quality building maintenance equipment and materials.
- B. General: Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris and waste. Conduct final cleaning as described in 3.1 above.
- C. Site: Unless otherwise specifically directed by the Engineer, hose down all paved areas on the site and all public sidewalks directly adjacent to the site; rake clean other surfaces of the grounds. Completely remove all resultant debris.
- D. Restoration of Landscape Damage: Any landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense. The Engineer will decide what method of restoration shall be used.

- E. The Contractor shall protect all trees outside of the limits of construction. The Contractor shall be responsible for the replacement of damaged trees outside the limits of construction.
- F. Post-Construction Clean-up or Obliteration: The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction, as directed by the Engineer.
- G. Timing: Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean project.

3.3 CLEANING DURING OWNER'S OCCUPANCY

Should the Owner occupy the work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning of the occupied spaces shall be as determined by the Engineer in accordance with the supplementary conditions of the contract documents.

END OF SECTION

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PART 1 - GENERAL**1.1 PROJECT MAINTENANCE AND WARRANTY**

- A. Maintain and keep in good repair the work covered by these drawings and specifications until acceptance by the Owner.
- B. The Contractor shall warrant for a period of one year from the date of Owner's written acceptance of certain segments of the work and/or Owner's written final acceptance of the project, as defined in the contract documents, that the completed work is free from all defects due to faulty products or workmanship. The Contractor shall promptly make such corrections as may be necessary by reason of such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the Cost thereby incurred. The performance bond shall remain in full force and effect throughout the warranty period.
- C. The Contractor shall not be obligated to make replacements which become necessary because of ordinary wear and tear, or as a result of improper operation or maintenance, or as a result of improper work or damage by another Contractor or the Owner, or to perform any work which is normally performed by a maintenance crew during operation.
- D. In the event of multiple failures of major consequence prior to the expiration of the one year warranty described above, the affected unit shall be disassembled, inspected and modified or replaced as necessary to prevent further occurrences. All related components which may have been damaged or rendered non-serviceable as a consequence of the failure shall be replaced. A new 12-month warranty against defective or deficient design, workmanship, and materials shall commence on the day that the item is reassembled and placed back into operation. As used herein, multiple failure shall be interpreted to mean two or more successive failures of the same kind in the same item or failures of the same kind in two or more items. Major failures may include, but are not limited to, cracked or broken housing, piping, or vessels, excessive deflections, bent or broken shafts, broken or chipped gear teeth, premature bearing failure, excessive wear or excessive leakage around seals. Failures which are directly and clearly traceable to operator abuse, such as operations in conflict with published maintenance instructions, shall be exempted from the scope of the one year warranty. Should multiple failures occur in a given item, all products of the same size and type shall be disassembled, inspected, modified or replaced as necessary and re-warranted for one year.
- E. The Contractor shall, at Contractor's own expense, furnish all labor, materials, tools and equipment required and shall make such repairs and remoyals and shall perform such work or reconstruction as may be made necessary by any structural or functional defect or failure resulting from neglect, faulty workmanship or faulty materials, in any part of the work performed by the Contractor. Such repair shall also include refilling of trenches, excavations or embankments which show settlement or erosion after backfilling or placement.

- F. Except as noted on the drawings or as specified, all structures such as embankments and fences shall be returned to their original condition prior to the completion of the contract. Any and all damage to any facility not designated for removal, resulting from the Contractor's operations, shall be promptly repaired by the Contractor at no cost to the Owner.
- G. The Contractor shall be responsible for all road and entrance reconstruction and repairs and maintenance of same for a period of one year from the date of final acceptance. In the event the repairs and maintenance are not made immediately and it becomes necessary for the Owner of the road to make such repairs, the Contractor shall reimburse the Owner of the road for the cost of such repairs.
- H. The Contractor shall protect existing trees and other vegetation to remain in place against unnecessary cutting, breaking, skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line and excess foot or vehicular traffic, or parking of vehicles within drip line. The Contractor shall be responsible for the replacement of such damaged trees and vegetation.
- I. In the event the Contractor fails to proceed to remedy the defects upon notification within 15 days of the date of such notice, the Owner reserves the right to cause the required materials to be procured and the Work to be done, as described in the drawings and specifications, and to hold the Contractor and the sureties on Contractor's bond liable for the cost and expense thereof.
- J. Notice to Contractor for repairs and reconstruction will be made in the form of a registered letter addressed to the Contractor at Contractor's home office.
- K. Neither the foregoing paragraphs nor any provision in the contract documents, nor any special guarantee time limit implies any limitation of the Contractor's liability within the law of the place of construction.

END OF SECTION

DIVISION 2
SITE CONSTRUCTION

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PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included: Remove trees, underbrush, undesirable growth, stumps, roots, etc., from the area to the limits shown on the drawings, as specified herein, and as needed to meet the requirements of the construction shown in the contract documents.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and sections in Division 1 of these specifications.
 - 2. Section 02370: Erosion and Sediment Control.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity and numbers to accomplish the work in a timely manner.
- C. Comply with requirements of governmental agencies having jurisdiction.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 AREA INCLUDED

- A. Tree removal zones as indicated on drawings.

3.2 PROTECTION

- A. The Contractor shall protect all areas outside the designated tree removal zones. These areas shall not be used for site access, vehicle parking, or stockpiling of soil or construction materials.
- B. The Contractor shall protect trees outside the tree removal zone whose drip line extends into the construction zone. The Contractor shall not park vehicles or stockpile soil or construction materials within the drip line of these trees.

TREE REMOVAL FROM DAMS

- C. The Contractor shall protect all structural components of the dam including embankments, spillways, outlet structures, valves and valve stems. The embankment areas of the dam shall not be used for vehicle parking or stockpiling of soil or construction materials.

3.3 PROCEDURES

- A. Site Walkthrough: Prior to beginning clearing and grubbing, the Contractor, Engineer, and Owner shall walk through the site to identify potential conflicts and other project requirements. The Contractor shall not proceed with clearing and grubbing until any identified conflicts have been addressed in writing.
- B. Removal of Trees: All trees to be removed shall be felled in such a manner as to avoid injury to remaining trees and to other features not proposed for removal. Trees shall be cut up and the trunks, limbs, and other debris shall be removed from the site. Immediately after removal of a tree has been completed, the area beneath the tree shall be raked and all debris shall be removed from the site. All streets, driveways, and sidewalks shall be swept clean. See Plans for specified procedure in each tree removal zone.
- A. Stumps and Roots: Stumps and roots shall be either left in place or removed per the specifications as shown on the Plans. In the zones where stumps are to be removed the area of operation then shall be cleared of resulting debris and matted roots, weeds and other extraneous matter and such shall be hauled away from the site. See Plans for specified procedure in each tree removal zone.
- B. Erosion Control: Construct and maintain erosion control as shown on the drawings and in accordance with Section 02370, Erosion and Sediment Control, and the local county's requirements.

3.4 MEASUREMENT AND PAYMENT

- A. Comply with the pertinent provisions of Section 01025.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Construct all permanent work in areas free from water. Design, construct and maintain all dikes, levees, cofferdams and diversion and drainage channels as necessary to maintain the areas free from water and to protect the areas to be occupied by permanent work from water damage. Remove temporary works after they have served their purpose.
- B. The Contractor shall be responsible for the stability of all temporary and permanent slopes, grades, foundations, materials and structure during the course of the Contract. Repair and replace all slopes, grades, foundations, materials and structures damaged by water, both surface and subsurface, to the lines, grades and conditions existing prior to the damage, at no additional cost to the Owner.
- C. No additional compensation shall be paid to the contractor for dewatering activities.

PART 2 - PRODUCTS

2.1 PRODUCTS SUPPLIED BY CONTRACTOR

- A. Furnish pumps or other approved methods of the type normally used in dewatering operations.

PART 3 - EXECUTION

3.1 CARE OF WATER

- A. Furnish, install, maintain and operate necessary pumping and other equipment for dewatering the various parts of the work and for maintaining the foundation and other parts free from water as required for constructing each part of the work.
- B. Install all drainage ditches, sumps and pumps to control excessive seepage on excavated slopes, to drain isolated zones with perched water tables and to drain impervious surfaces at final excavation elevation.
- C. Dewater by means which will preserve final lines and grades, and not disturb or displace adjacent soil.
- D. All pumping and drainage shall be done with no damage to property or structures and without interference with the rights of the public or owners of private property.
- E. Do not overload or obstruct existing drainage facilities.
- F. After they have served their purpose, remove all temporary protective work at a satisfactory time and in a satisfactory manner.

3.2 DEWATERING

Section 02240
DEWATERING

- A. By the use of well points, pumps, tile drains or other approved methods, the Contractor shall prevent the accumulation of water in excavated areas. Should water accumulate, it shall be promptly removed.
- B. Excavations shall be continuously dewatered to maintain a ground water level no higher than three to four feet below the lowest point in the excavation. Dewatering shall be accomplished well enough in advance of excavation to ensure that groundwater is already lowered prior to completing the final excavation to finish sub-grade.
- C. All destabilized sub-grade conditions caused by inadequate or untimely dewatering operations shall be undercut and backfilled with suitable backfill material at no additional cost to the Owner.
- D. Where the presence of fine grained subsurface materials and a high groundwater table may cause the upward flow of water into the excavation with a resulting quick or unstable condition, the Contractor shall install and operate a well point system to prevent the upward flow of water during construction. Water pumped or drained from excavations, or any sewers, drains or water courses encountered in the work, shall be disposed of in a suitable manner without injury to adjacent property, the work under construction, or to pavements, roads, drives, and water courses. No water shall be discharged to sanitary sewers.

END OF SECTION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included: Cut, fill, excavate, backfill, compact and grade the site as necessary to bring the roads, drives, building sites, paved areas and open areas to the lines and grades shown on the drawings.
1. The work includes, but is not necessarily limited to:
 - a. Excavations and formations of embankments.
 - b. Dressing of graded areas, shoulders, and ditches.
 2. Classification: Material determined by the engineer to be rock as defined herein will be classified as "Rock Excavation".
 - a. Excavation of rock will be paid for at the unit price indicated on the bid form.
 - b. Quantities for rock excavation shall be as determined by the Engineer from field measurements.
 - c. Do not perform any rock excavation without prior approval of the engineer.
- B. Related Work:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.
 2. Section 02235 – Tree Removal from Dams.
 3. Section 02370 - Erosion and Sediment Control.
- C. Definitions:
1. Open areas: Open areas shall be those areas that do not include building sites, paved areas, street right-of-way, and parking areas.
 2. Maximum Density: Maximum weight in pounds per cubic foot of a specific material.
 3. Optimum moisture: Percentage of water in a specific material at maximum density.
 4. Rock Excavation: Excavation of any hard natural substance which requires the use of explosives and/or special impact tools such as jack hammers, sledges, chisels or similar devices specifically designed for use in cutting or breaking rock, but exclusive of trench excavating machinery. To be considered as rock excavation, the material shall be continuous; individual boulders or rocks in soil will not be considered rock excavation. Any material occupying an original volume of more than 1 cubic yard

which cannot be excavated with a single-tooth ripper drawn by a crawler tractor having a minimum draw bar pull rating not less than 56,000 pounds usable pull (Caterpillar D-8K), or the excavator listed in Section 02316 is considered Rock.

5. **Unsuitable Material:** Unsuitable material is defined as earth material unsatisfactory for its intended use and as classified by the soils technician. In addition to organic matter (greater than 5% organic content based on loss on ignition), sod, roots and rubbish, highly plastic clay soils of the CH and MH descriptions, and organic soils of the OL and OH descriptions, as defined in the Unified Soil Classification System shall be considered as unsuitable material.
 6. **Suitable Material:** Where the term suitable material is used in specification sections pertaining to earthwork, it means earth or materials designated as being suitable for their intended use by soils technicians or the engineer. Suitable material shall be designated as meeting the requirements of the Unified Soil Classification System types SW, GW, GC, SP, SC, SM, ML, CL or as designated in these specifications.
 7. **Select material:** Select material is defined as granular material to be used where indicated on the drawings or where specified herein consisting of soils conforming to the Unified Soil Classification types SW, SM, GW or GM or as otherwise approved by the engineer as select fill. Select material shall contain no stones or rubble larger than 1" in diameter.
 8. **Crushed stone (gravel):** Crushed stone shall be No. 57 aggregate or equal conforming to ASTM C-33.
 9. **Excavation:** Excavation is defined as unclassified excavation of every description regardless of materials encountered.
- D. The contractor must determine for himself the volume of material required by the site.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. Comply with requirements of governmental agencies having jurisdiction.
- C. A testing laboratory retained by the owner will make such tests as are deemed advisable. The contractor shall schedule his work so as to permit a reasonable time for testing before placing succeeding lifts of fill material and shall keep the laboratory informed of his progress. The cost of the initial tests shall be paid for by the owner. Subsequent tests required as a result of improper compaction shall be paid for by the contractor.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Soil material used as fill, backfill, subgrade for structures or pavements, embankments, or site

grading shall consist of suitable material as found available on site until such supply of on-site material is depleted.

1. Provide suitable material free from organic matter and deleterious substances, containing no rocks or lumps over 6" in greatest dimension, and with not more than 15% of the rocks or lumps larger than 2" in their greatest dimension.
 2. Do not permit rocks having a dimension greater than 1" in the upper 6" of fill or embankment.
- B. Should the quantity of suitable on-site material be insufficient to complete the work, suitable borrow material as approved by the Engineer shall be provided by the contractor at no additional expense to the owner.
- C. Select materials may be provided from on-site if acceptable material as approved by the engineer is available on site. Otherwise approved select material shall be provided by the contractor from an off-site source.

2.2 TOPSOIL

- A. Use topsoil consisting of material removed from the top 3" to 6" of existing on-site soils.
- B. Use topsoil containing no stones, roots, or large clods of soil.
- C. Stockpile topsoil separate from other excavated material.

2.3 SPECIAL SOIL MATERIALS

- A. Provide basin liner soils consisting of fine grained soils selected from excavated area or approved borrow sites, stockpiled and then placed and compacted in areas to receive liner.
- B. Sufficient material for the liner, as selected by the engineer, shall be stockpiled, kept separate from other excavated materials and piled free of undesirable materials.

2.4 WEED KILLER

- A. Provide a dry, free-flowing, dust free chemical compound, soluble in water, capable of inhibiting growth of vegetation and approved for use on this work by governmental agencies having jurisdiction.

2.5 EQUIPMENT

- A. Use equipment adequate in size, capacity and numbers to accomplish the work in a timely manner without undue waste or damage of material.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this section will be performed.

Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Complete any tree removal work as may be required prior to grading operations.
- B. Dispose of all clearing, grubbing and demolition debris and other deleterious material off the project site.
- C. Topsoil: Strip topsoil to a depth of 3" to 6" without contamination from the subsoil and stockpile topsoil separate from other excavated materials.
 - 1. Transport and deposit topsoil in storage piles convenient to areas that are to receive topsoil or in other locations as indicated or approved by the engineer.
 - 2. Deposit topsoil in areas that are already graded and will not be disturbed by on-going construction.
 - 3. Dispose of unsuitable or unusable stripped material off-site or as otherwise directed by the engineer.
- D. Sampling and Preliminary Testing:
 - 1. Prior to beginning the grading operations, the contractor shall submit to the engineer his proposed sequence of excavation operations.
 - 2. Based upon the sequence of excavation, samples of the fill materials will be obtained as excavation proceeds and tested for grain size permeability and moisture density relationship using the Standard Proctor Method (ASTM D698, Method A).
 - 3. Allow sufficient time for completion of laboratory tests before any fill operations begin, using the soils being tested.

3.3 FINISH ELEVATIONS AND LINES

- A. Degree of finish shall be that ordinarily obtainable from blade grader, supplemented with hand raking and finishing.
- B. Finish surfaces to within 0.10' above or below the established grade or approved cross section.

3.4 GENERAL PROCEDURES

- A. Existing Utilities:
 - 1. Unless shown to be removed, locate and protect active utility lines shown on the drawings or otherwise made known to the contractor prior to excavating. If damaged, repair or replace at no additional cost to the owner.
 - 2. If active utility lines are encountered and are not shown on the drawings or otherwise

made known to the contractor, promptly notify the engineer and take necessary steps to assure that service is not interrupted.

3. If service is interrupted as a result of work under this section, immediately restore service by repairing the damaged utility at no additional cost to the owner.
 4. If existing utilities are found to interfere with the permanent facilities being constructed under this section, immediately notify the engineer and secure his instructions.
 5. Do not proceed with permanent relocation of utilities until written instructions are received from the engineer.
- B. Protection of Persons and Property:
1. Barricade open holes and depressions occurring as part of this work, and post warning lights on property adjacent to or with public access.
 2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout and other hazards created by operations under this section.
- C. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.
- D. Maintain access to adjacent areas at all times.
- E. Excavate and backfill in a manner and sequence that will provide proper drainage at all times

3.5 EXCAVATING (CUTS)

- A. Perform excavating of every type of material encountered within the limits of the work to the lines, grades and elevations indicated and specified herein.
- B. Suitable excavated materials:
1. Use all suitable materials removed from the excavation as far as practicable in the formation of the embankments, subgrades, shoulders, building sites, and other places as directed.
 2. Unless otherwise indicated on the drawings or approved by the engineer, surplus suitable material shall be removed from the site and disposed of by the contractor.
- C. Unsuitable Excavated Material: Remove from the site and dispose of all unsuitable material unless otherwise approved by the engineer.
- D. Rock Excavation:

1. Notify the engineer upon encountering rock or similar material which cannot be removed or excavated by conventional earth moving or ripping equipment.
 2. Do not use explosives without written permission from the engineer.
 3. When explosives are permitted, use only experienced persons who are licensed or otherwise authorized to use explosives. Store, handle, and use explosives in strict accordance with all regulatory bodies and the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America, Inc.
 4. The contractor shall be solely responsible for any damage resulting from the use of explosives.
 5. The contractor is responsible for securing all permits required in performing this work.
- E. Unauthorized Excavation:
1. Excavation of material to depths below the grades indicated, unless so directed by the engineer will be deemed unauthorized excavation.
 2. Unauthorized over-excavation shall be backfilled and compacted without any additional expense to the owner.
- F. Authorized Over-Excavation:
1. In the event that it is necessary to remove unsuitable material to a depth greater than that shown on the drawings or otherwise specified, the contractor, upon receiving direction from the engineer, shall remove, replace and compact such material as directed by the engineer at the unit prices indicated in the bid form.

3.6 FILLING AND BACKFILLING

- A. Use fills formed of suitable material placed in layers of not more than 8" in depth measured loose and rolled and/or vibrated with suitable equipment until compacted.
- B. Do not place rock that will not pass through a 6" diameter ring within the top 12" of the surface of the completed fill or rock that will not pass through a 3" diameter ring within the top 6" of the completed fill.
- C. Do not use broken concrete or asphaltic pavement in fills.
- D. Selection of Borrow Material:
 1. Material in excess of that available on the site shall be suitable material furnished by the contractor from private sources selected by the contractor. The material shall be approved by the engineer before use. All expenses involved in securing, developing, transporting and placing the material shall be borne by the contractor.

E. Placing and Compacting:

1. Place backfill and fill materials in layers not more than 8" in loose depth.
2. Before compacting, moisten or aerate each layer as necessary to provide the optimum moisture content.
3. Compact each layer to required percentage of maximum density for the area.
4. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
5. Place backfill and fill materials evenly adjacent to structures, to required elevations.
6. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structures to approximately the same elevation in each lift.

F. Moisture Control:

1. Do not use soil material that is either too dry or too wet to achieve proper compaction.
2. Where subgrade or layer of soil material is too dry to achieve proper compaction, uniformly apply water to surface of soil material such that free water does not appear on the surface during or subsequent to compacting operations.
3. Remove and replace, or scarify and air dry, soil material that is too wet to permit compacting to the specified density.
4. Soil material that has been removed because it is too wet to permit compacting may be stockpiled or spread and allowed to dry. Assist drying by dicing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value as determined by moisture-density relation tests approved by the engineer.

G. Compaction Requirements:

1. Compact soils to not less than the following percentages of maximum dry density as determined in accordance with ASTM D698, Method A (Standard Proctor).
2. Fill beneath structures and beneath an area extending 10' beyond the limits of the foundation:
 - a. Top 12" of subgrade 100%
 - b. All other fill material 98%
3. Fill beneath roadway:
 - a. Top 12" of subgrade 100%

- b. All other fill material 95%
- 4. Embankments:
 - a. Top 12" of subgrade 98%
 - b. All other fill material 95%
- 5. Fill beneath walkways:
 - a. Top 12" of subgrade 95%
 - b. All other fill material 90%
- 6. Lawn and unpaved open areas:
 - a. All other fill material 90%

3.7 PLACING SPECIAL MATERIALS

A. Placing Impervious Liner Materials:

- 1. Place selected fine grain soils on bottom and side slopes of the basin to the indicated depth.
- 2. Inspect and proofroll the stripped and grubbed subgrade prior to placement of any liner material, as specified hereinafter.
- 3. Spread liner material in 8" maximum, loose lift thickness to provide a 6" compacted lift thickness.
- 4. Adjust soil moisture content to 1 to 3 percentage points "wet" of the optimum moisture contents.
- 5. Compact at 98% of maximum density.
- 6. Maintain liner material sufficiently moist to prevent drying and cracking, until such time as the basin is filled.

3.8 FINISH GRADING

A. General:

- 1. Uniformly grade the areas within limits of grading under this section, including adjacent transition areas.
- 2. Smooth the finished surfaces within specified tolerance.
- 3. Grade with uniform levels or slopes between points where elevations are shown on the drawings, or between such points and existing grades.

4. Where a change of slope is indicated on the drawings, construct a rolled transition section having a minimum radius of approximately 8'0", unless adjacent construction will not permit such a transition, or if such a transition defeats positive control of drainage.
- B. Grading Adjacent to Structures: Grade areas adjacent to buildings to achieve drainage away from the structures and to prevent ponding.
- C. Ditches and Gutters and Swales:
 1. Cut accurately to the cross sections, grades and elevations shown.
 2. Maintain excavations free from detrimental quantities of leaves, sticks, trash and other debris until completion of the work.
 3. Dispose of excavated materials as specified herein; do not in any case deposit materials within 3'0" of the edge of a ditch.

3.9 FIELD QUALITY CONTROL

- A. Secure the engineer's inspection and approval of subgrades and fill layers before subsequent construction is permitted thereon.
- B. Field density determinations will be made, at no cost to the contractor, to insure that the specified densities are being obtained. Field density tests will be performed as determined by the engineer, considering the following:
 1. At areas to receive paving, at least one field density test for every 5,000 sq.ft. of subgrade area, but not less than three tests.
 2. In each compacted fill layer, one field density test for every 5,000 sq.ft. of overlaying paved area, but not less than three tests.
 3. In fill beneath structures, one field density test for every 2,500 sq.ft. in each layer.
 4. Other tests as deemed necessary by the engineer.
- C. If, in the engineer's opinion based on reports of the testing laboratory, subgrade or fills which have been placed are below specified density, provide additional compacting and testing until specified requirements are met.
 1. Additional testing will be provided by the owner's selected testing laboratory and all costs for the additional testing will be borne by the contractor.
- D. Proofrolling:
 1. The contractor shall proofroll subgrade of areas to receive paving, structures on fill or impervious lining material.
 - a. Make not less than 3 passes of a 25 to 50 ton rubber tired roller over the full

area.

- b. Unstable, soft or otherwise unsuitable materials revealed by the proofrolling shall be removed and replaced with satisfactory materials, compacted as specified herein.

3.10 PLACING TOPSOIL

- A. Upon completion of site grading and other related site work, topsoil shall be uniformly spread over the graded or improved areas. Topsoil shall be evenly distributed to conform to final grade elevations shown on the plans.
- B. Place, level and lightly compact topsoil to a depth of not less than 3".
- C. Maintain topsoil free of roots, rocks, debris, clods of soil and any other objectionable material which might hinder subsequent grassing or mowing operations.
- D. Any surplus materials shall be disposed of in approved areas on the site.

3.11 MAINTENANCE

- A. Protection of Newly Graded Areas:
 - 1. Protect newly graded areas from traffic and erosion, and keep free from trash and weeds.
 - 2. Repair and re-establish grades in settled, eroded and rutted areas to the specified tolerances.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

3.12 MEASUREMENT AND PAYMENT

- A. Comply with the pertinent provisions of Section 01025.

END OF SECTION

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included: Provide protection of the environment during the construction of this project to reduce soil erosion and siltation to the lowest reasonably achievable level. Provide protection of wetlands, lakes, stream buffers, bed and bank areas outside of work limits.

1.2 GENERAL

- A. Exercise every reasonable precaution, throughout the life of the project, to prevent the eroding of soil and the silting of rivers, streams, lakes, reservoirs, other water impoundments, ground or roadway surfaces, or other property. Erosion control practices to be used for this project are shown on the drawings and are to conform to South Carolina Department of Health and Environmental Control regulations.
- B. Contractor shall comply with the requirements of the current NPDES General Permit for Stormwater Associated with Construction Activities, and the Stormwater Pollution Prevention Plan for the project.

PART 2 - PRODUCTS

2.1 CRUSHED STONE

- A. Provide 2" – 3" diameter crushed stone for project entrance and exit.
- B. Provide 9" – 12" depth crushed stone for temporary sediment barriers around inlets.

2.2 GRASSING

- A. Comply with Section 02930: Grassing.

2.3 SILT FENCE

- A. Posts:
 - 1. Only steel posts shall be used. Steel posts shall be self-fastener angle steel type, 5' in length.
- B. Provide not less than No. 9 wire staples, 1.5" long for fastening wire mesh.
- C. Woven wire shall conform to the requirements of ASTM A116, Class I zinc coating for wire. Each woven square shall measure 5.33" X 12". The top and bottom wires shall be 10 gauge. All other wires shall be 12 gauge.
- D. Wire mesh is not required with synthetic, extra strength filter fabric providing a puncture strength of 50 psi in accordance with ASTM D4833.
- E. Filter fabric shall be burlap or synthetic.

EROSION AND SEDIMENT CONTROL

- F. If silt fencing is used more than 5 days, synthetic type shall be used.
- G. Burlap shall be 7.5 ounces weight and a minimum 32" wide.
- H. Filter fabric shall be Mirafi 100X as manufactured by Celanese Fibers Co., or Bidim C34 as manufactured by DuPont or equivalent.

2.4 EROSION CONTROL BLANKET

- A. Use erosion control blanket S150, from North American Green or approved equal.

PART 3 – EXECUTION

3.1 GENERAL

- A. Construct and maintain all erosion control measures until the substantial completion of the project.

3.2 CONSTRUCTION ENTRANCE

- A. Construct a gravel area or pad at points where vehicles enter and leave a construction site.
- B. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade and place gravel to the grade and dimensions shown on the plans.
- C. Construct drainage channels to carry water to a sediment trap or other suitable outlet.
- D. Use geotextile fabrics to improve stability of the foundation in locations subject to seepage or high water table.
- E. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site by periodic top dressing with two inches of stone.
- F. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary.
- G. Immediately remove objectionable materials spilled, washed, or tracked onto public roadways.

3.3 TEMPORARY GRASSING

- A. Provide a temporary cover for erosion control on disturbed areas that will remain unstabilized for a period of more than 14 days in accordance with Section 02930.
- B. This practice applies to cleared areas, diversions, dams, temporary sediment basins, temporary road banks, and topsoil stockpiles where vegetation is needed for less than 1 year.
- C. Provide grassing on slope 5% or greater within 14 days of disturbance.
 - 1. Comply with Section 02930: Grassing.

3.4 SILT FENCE

- A. Provide silt fence barrier where shown on the plans and on utility construction parallel to the disturbed trench where perpendicular sheet flow runoff occurs on disturbed areas with slopes greater than 4%.
- B. Place at the extreme limits of the area to be disturbed as shown.
- C. Construct temporary sediment barriers of filter fabric, buried at the bottom, stretched and supported by posts and install below small disturbed areas as indicated on the drawings to retain sediment by reducing the flow velocity to allow sediment deposition.
- D. Provide spacing between posts 5'0" on center, minimum.
- E. Fasten wire mesh to steel posts with wire staples.
- F. Remove sediment deposits prior to reaching one-third height of the fence.
- G. Monitor site frequently and place additional silt fencing should evidence indicate that erosion is about to occur at locations other than those shown on plan.

3.5 EROSION CONTROL BLANKET

- A. Provide on areas as shown on the plans or on all embankments with slopes equal to or steeper than 2:1.

3.7 MAINTENANCE

- A. Place all erosion control devices or measures prior to any land disturbing activity within the drainage area they are located.
- B. Periodically check erosion control devices and clean or otherwise remove silt build-up as necessary to maintain them in proper working order.

3.8 REMOVAL

- A. Remove temporary structures after protected areas have been stabilized.

3.9 INSPECTION

- A. Contractor shall provide inspection of erosion and sediment control measures shown on the drawings and described in this section and the Stormwater Pollution Prevention Plan for the project. Inspections shall be performed by a qualified person as described in the current NPDES General Permit for Stormwater Associated with Construction Activities, and in accordance with the schedule in the Stormwater Pollution Prevention Plan.

3.10 MEASUREMENT AND PAYMENT

- A. Comply with the pertinent provisions of Section 01025.

END OF SECTION

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PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. This section includes furnishing all labor, materials, and equipment for the installation of all drainage lines, including headwalls, inlets, catch basins, and other special appurtenances and structures as required for this project, shown on the drawings and specified herein.
- B. The layout of underground lines and invert elevations at governing points are shown on the drawings.
- C. All pipe in place shall have been approved before backfilling.
- D. All grades shown as pipe elevations are to the bottom of inside of pipe, unless otherwise noted. Pipe lines shall be kept cleaned out as the laying progresses.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete shall be 3000 psi mix using Portland Cement ASTM C150 Type 1, sand ASTM C33 and coarse aggregate ASTM C33.
- B. Reinforcing bars shall conform to ASTM A615 new billet steel, intermediate grade.
- C. Water shall be clean, free from oils, acids, alkalies, or organic or deleterious substances.
- D. Corrugated Aluminum Alloy Culvert Pipe (CM) shall conform to AASHTO M-196.
- E. Gray Iron Castings - frames, solid covers and grates for drainage structures shall be gray iron conforming to ASTM A-48, size as indicated, free from blow holes, porosity, hard spots, shrinkage distortion or other defects, well cleaned and coated with asphalt paint which shall result in smooth coating, tough and tenacious when cold, not tacky and not brittle, bearing surface between frame and cover or grate shall be machined to prevent rocking and rattling.
- F. Steps - steps for manholes and drainage structures shall be manufacturers standard.
- G. Drainage Structures - provide precast reinforced concrete catch basins as indicated.
- H. All materials shall conform to South Carolina Department of Transportation Standards.

PART 3 - EXECUTION

3.1 PIPE TRENCH EXCAVATION

- A. Excavation shall be classified as 'common excavation' or 'rock excavation' as defined in Section 02316. Base bids shall be based on 'common excavation' in trenches.

Section 02720
STORM DRAINAGE

- B. The trench shall be excavated by an approved method, to a depth to permit installation of the pipe along the lines and grades shown on the drawings. The width of the trench shall be sufficient to allow thorough compacting of the backfill under and around the pipe. Where rock is encountered, the rock shall be removed to a depth below grade of at least 6 inches (6"), and the trench shall be refilled to grade with earth, sand, gravel, or other suitable material, firmly compacted to provide proper bedding for the pipe.
- C. If directed by the Engineer, soft, mucky, or otherwise unstable or unsuitable material in the trench bottom shall be removed and replaced with crushed stone, or stabilized with crushed stone.
- D. The Contractor shall notify the Engineer immediately if 'rock excavation' is encountered. Rock removal or backfill shall not proceed until directed by the Engineer. Section 02316 shall apply to 'rock excavation' in trenches.
- E. The sides of all trenches and excavation shall be adequately braced and sheeted to protect personnel, structures and property from slides, cave-ins, or settlement and to maintain the work clear of all obstructions. Bracing, shoring and sheeting shall comply with all applicable safety regulations governing the work. Full responsibility for the design, type and strength of shoring, sheeting and bracing shall rest with the Contractor.

3.2 PUMPING

- A. The Contractor shall do all pumping necessary for de-watering trenches and to provide proper work conditions for installation of pipe and appurtenances. Pipe shall be installed on dry, stable trench bottoms.

3.3 BACKFILLING

- A. Immediately after the pipes have been laid and approved, the trench shall be backfilled around the barrel of the pipe with fine materials, free from large stones, deposited in level layers no more than 6 inches (6") in depth, each layer to be thoroughly tamped and compacted before the next layer is deposited. Care should be exercised to avoid any wedging action or eccentric action upon or against any pipe or structure and to avoid any disturbance or damage to the work.
- B. Trench backfilling material as specified above shall be compacted in 6 inch (6") layers for the full depth of the trench and consolidated in such a manner to provide an unyielding foundation for vehicular traffic. Unless otherwise shown on the plans or required by governing authorities, the compaction density shall be equal to the density of the original adjacent material. However, under paving, the minimum compaction density shall be 95% of maximum density according to ASTM D-698, except that the upper 18 inches (18") shall be compacted to 100% of maximum density.
- C. No rock or boulders shall be used in the backfill for at least one foot (1') above the top of the pipe and in the upper 18 inches (18"). No stone larger than 6 inches (6") in its greatest dimension shall be used in the backfilling.

3.4 DRAINAGE LINE CONSTRUCTION

- A. Installation of Pipe - Under no circumstances shall pipe be laid in water, on rock, or when trench conditions or weather is unsuitable for such work. Each pipe shall be carefully examined before being laid, and any defective or damaged pipe shall be removed from the site. Proper facilities shall be provided for lowering sections of pipe into trenches. The pipe shall be laid true to line and grade, beginning at the lowest point with the spigot and pointing in the direction of flow, with uniform bearing upon the pipe bed for the full length of its barrel. Raising the pipe off the subgrade (bridging) to obtain the proper elevation will not be allowed. Each section shall be securely attached to the adjoining sections by the method contemplated by the type of joints used.
- B. In laying concrete pipe all joints shall be made water tight using a flexible Butyl Resin Sealant according to the manufacturer's specifications and AASHTO M 198.
- C. Any pipe which is not in true alignment or which shows undue settlement after laying, or is damaged, shall be taken up and re-laid without extra compensation.
- D. Drainage Structures - Drainage structures shall be constructed as shown on the drawings.

3.5 CLEAN UP

- A. The Contractor shall remove all excess material from excavations to points designated by the Engineer, and clean the site of the work of all debris collected during the construction.

END OF SECTION

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SECTION 02920
CHEMICAL PRESSURE GROUTING (CRACK REPAIR)

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included: Furnish all materials, labor, tools, and equipment for the repair cracks as designated by the owner.

1.2 QUALITY ASSURANCE

- A. The manufacturer of the specified-product shall be ISO 9001:2000 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.
- B. Contractors shall be qualified in the field of concrete repair and protection with a successful track record of 3 years or more.
- C. Contractor shall install materials in accordance with all safety and weather conditions required by manufacturer.

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver the specified product in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers.
- B. Store and condition the specified product as recommended by the manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- C. Hydrophilic Polyurethane Chemical Grout shall be SikaFix HH Hydrophilic as manufactured for Sika Corporation, Lyndhurst, New Jersey or approved equal.

2.2 MATERIALS

- A. Hydrophilic Polyurethane Chemical Grout: The grouting compound shall be a non-toxic, non-flammable, high flash point (225 F) hydrophilic polymer of the type which is applied in a crack or open joint by use of a packer. When the grout is mixed with water the material will expand up to 4 times its original volume and cure to a pale yellow closed cell polyurethane foam.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Clean the crack surface to locate extent of the crack.
- B. Contractor shall seal the surface of the crack with a surface sealing material.

CHEMICAL PRESSURE GROUTING (CRACK REPAIR)

- C. The surface sealing can be done before or after drilling the injection holes.
- D. Contractor shall drill 5/8" diameter holes along the side of the crack at 45 angles. The hole shall be drilled to intersect the crack midway through the substrate.
- E. Install the injection packers in holes.
- F. Prior to product application moisture must be present. If concrete being injected contains insufficient moisture to activate the gout, inject the crack with a small amount of water prior to the application of the chemical gout.

3.2 MIXING

- A. The material can be agitated vigorously shaking the 5 gallon pail or by mixing thoroughly for about 2 minutes maximum with low speed (400-600 rpm), drill and paddle, bung mixer. Do not allow water to enter this mix and avoid "whipping" air into the material.

3.3 PACKER PLACEMENT

- A. The use of injection packers is usually required for the application of the polyurethane chemical grout.
- B. Set packers as required by the manufacturer.
- C. Drill 5/8" diameter holes along the side of the crack at a 45° degree angle. Drill the hole to intersect the crack midway through the substrate.
- D. Spacing of the injection ports depends on crack width, but normal spacing varies from 6" to 36".
- E. It is necessary to flush the drilled holes with water to remove drill dust from the holes and cracks, and insure that the crack is wet enough to react with the grout when introduced to the crack.
- F. On structures open on both sides, provide packers on opposite sides at staggered elevations. Install the injection packers in the holes.
- G. If the crack or joint to be injected is 1/2" or greater at surface, pack an open cell polyurethane foam saturated with the mixed polyurethane chemical gout into the crack/joint.
- H. Spray the saturated foam with a small amount of water to activate the grout and create a surface seal.
- I. Injection pressure will vary from 200 psi to 2500 psi depending on the width of the crack, thickness of the concrete and condition of the concrete.

3.4 PRESSURE INJECTOR

- A. Inject the prepared cracks with a minimum of 250 psi in order to achieve maximum filling and penetration without the inclusion of air pockets or voids in the polyurethane chemical grout.
- B. Begin the pressure injection at the lowest packer and continue until there is the appearance of the polyurethane chemical grout at an adjacent packer, thus indicating travel. When travel is indicated, a decision to discontinue or continue the pressure injection from that packer should be made by the contractor, based on his experience, with the approval of the engineer. Continue the procedure until all pressure-injectable cracks have been filled. Pump polyurethane chemical grout for 45 seconds and then pause to allow the material to flow into all the cracks and crevices. Watch for material flow and water movement to appear on the surface. When movement stops, begin injection into the next packer. When sealing vertical cracks, begin injecting at the bottom of the crack and work vertically. If site temperature is extremely low, heat bands or heated water baths may be used on the pails, before and during use to maintain the products temperature. Re-inject to assure that all voids are properly sealed off.
- C. If penetration of any cracks is impossible, consult the engineer before discontinuing the injection procedure. If modification of the proposed procedure is required to fill the cracks, submit said modification in writing to the Engineer for acceptance prior to proceeding.
- D. Adhere to all limitations and cautions for the polyurethane chemical grout as stated in the manufacturer's current printed literature.

3.5 CLEANUP

- A. Flush pump and hoses with SikaFix Pump Flush.
- B. A sharp sided tool such as putty knife or trowel shall be used to remove excess material from walls, and floors. Wait for material to cure before removing them. Sanding may be required.
- C. The uncured polyurethane chemical grout can be cleaned from tools with an approved solvent. The cured polyurethane chemical grout can only be removed mechanically.
- D. Contractor shall leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent concrete areas.

END OF SECTION

SECTION 02920
CHEMICAL PRESSURE GROUTING (CRACK REPAIR)

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PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included: Provide grassing of the areas specified herein, or as indicated, for a complete and proper installation.
 - 1. Sanitary Sewer Easements, including highway and street shoulders: All areas disturbed by the construction operation.
- B. Related Work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and sections in Division 1 of these specifications.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. Seed: Conform to all State laws and to all requirements and regulations of the South Carolina Department of Agriculture.
 - 1. Deliver to site each variety of seed individually packaged and tagged to show name, net weight, origin and lot number.
- C. Fertilizer: Conform to State fertilizer law.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.

1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.
- B. At time of delivery, furnish the Engineer invoices of all materials received in order that application rates may be determined.
- C. Immediately remove from the site materials that do not comply with the specified requirements, and promptly replace with materials meeting the specified requirements.

PART 2 - PRODUCTS

2.1 FERTILIZER

- A. Provide a mixed fertilizer with a designation such as 10-10-10, where the first number represents the minimum percent of nitrogen required, the second number represents the minimum percent of available phosphoric acid required, and the third number represents

the minimum percent of water soluble potash required in the fertilizer. For centipede grass, use only 15-0-15 or 16-4-8 fertilizer. Fertilizer shall be delivered to the site in bags labeled with the manufacturer's guaranteed analysis.

2.2 GRASS SEED

- A. Provide grass seed which is:
 - 1. Free from noxious weed seeds, and recleaned.
 - 2. Grade A recent crop seed.
 - 3. Treated with appropriate fungicide at time of mixing.
 - 4. Delivered to the site in sealed containers with dealer's guaranteed analysis.

2.3 LIME

- A. Provide agricultural grade, standard ground limestone conforming to current "Rules, Regulations and Standards of the Fertilizer Board of Control" issued at Clemson University.
- B. Bag tags or delivery slip for bulk loads shall indicate brand or trade name, calcium carbonate equivalent, and other pertinent data to identify the lime.

2.4 WOOD CELLULOSE FIBER

- A. Provide wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer.
- B. Material to be heat processed so as to contain no germination or growth inhibiting factors.
- C. It shall be dyed (non-toxic) an appropriate color to facilitate metering.

2.5 STRAW MULCH

- A. Provide straw or hay material.
 - 1. Straw to be stalks of wheat, rye, barley or oats.
 - 2. Hay to be timothy, peavine, alfalfa, or coastal Bermuda.
- B. Material to be reasonably dry and reasonably free from mature seed bearing stalks, roots or bulblets or Johnson Grass, Nutgrass, Wild Onion, Sandburg, Wild Garlic, Wild Mustard, Crotonaria, Pigweed, Witchweed, and Cocklebur and other noxious weeds.

2.6 EXCELSIOR FIBER MULCH

- A. To consist of 4" to 6", average length, wood fibers cut from sound, green timber.
- B. Make cut in such a manner as to provide maximum strength of fiber, but at a slight angle to natural grain of the wood.

2.7 EROSION CONTROL BLANKET

- A. Provide on areas as shown on the plans.
- B. Provide Erosion Control Blanket S150, from North American Green, or approved equal.

PART 3 - EXECUTION

3.1 GENERAL

- A. Seed these areas immediately upon completion of grading or construction and clean-up operations.
 - 1. Slopes greater than four horizontal to one vertical.
 - 2. Utility rights-of-way adjacent to stream banks.

3.2 SEEDING SCHEDULES

- A. Unless otherwise provided, select the type of seeding from the tables shown below for the upper state and the lower state regions as applicable to the project. The total seed rate in pounds per acre is the sum total shown for all the varieties of seed opposite the schedule number in the seeding schedules included herein. The upper state region consists of all counties west of the counties of Aiken, Lexington, Richland, Kershaw, and Chesterfield. The lower state region consists of the above-cited counties and all counties east.

B. Adhere to the following seeding schedules:

Seeding Schedule for Permanent Vegetation Upper State				
Schedule No.	Common Name of Seed	Pounds/acre Rural ¹	Pounds/acre Urban ¹	Planting Dates
1	Common Bermuda (hulled) ³	23	23	March 15 to August 14
	Sericea Lespedeza (scarified) ²	50	50	
	Kentucky 31 Fescue	50	60	
	Weeping Lovegrass ²	10	10	
2	Kentucky 31 Fescue	50	80	August 15 to March 14
	Sericea Lespedeza (unhulled, unscarified) ²	80	80	
	Common Bermuda (unhulled) ³	30	30	
	Weeping Lovegrass ²	10	10	
	Reseeding Crimson Clover ⁴	20	0	
	Annual Rye Grass ⁵	5	15	
	Rye Grain	20	0	

Notes:

¹ Includes rural areas adjacent to well-developed lawns.

² Not required on shoulders, medians, etc. and on slopes under 5 feet in height.

³ Do not use Giant Bermuda seed including NK-37.

⁴ Provide an inoculant for treating reseeding crimson clover seed of a pure culture of nitrogen-fixing bacteria selected for a maximum vitality and ability to transform nitrogen from the air into soluble nitrates and deposit them into the soil. Ensure that inoculants consist of purebred cultures and are not more than one year old. Do not plant clover in medians or in rural areas adjacent to well-developed lawns.

⁵ The use of Italian Rye Grass is prohibited on all projects.

Seeding Schedule for Permanent Vegetation Lower State				
Schedule No.	Common Name of Seed	Pounds/acre Rural ¹	Pounds/acre Urban ¹	Planting Dates
3 ⁵	Common Bermuda (hulled) ³	30	30	March 1 to August 14
	Weeping Lovegrass ²	10	10	
	Sericea Lespedeza (scarified) ²	50	50	
	Weeping Lovegrass ²	10	10	
4 ⁵	Common Bermuda (unhulled) ³	40	40	August 15 to February 28
	Weeping Lovegrass ²	10	10	
	Sericea Lespedeza (unhulled, unscarified) ²	80	80	
	Reseeding Crimson Clover ⁴	20	0	
	Annual Rye Grass ⁵	5	15	
	Rye Grain	20	0	
5 ⁶	Centipede	10	10	March 1 to April 15

Notes:

¹ Includes rural areas adjacent to well-developed lawns.

² Not required on shoulders, medians, etc. and on slopes under 5 feet in height.

³ Do not use Giant Bermuda seed including NK-37.

⁴ Provide an inoculant for treating reseeded crimson clover seed of a pure culture of nitrogen-fixing bacteria selected for a maximum vitality and ability to transform nitrogen from the air into soluble nitrates and deposit them into the soil. Ensure that inoculants consist of purebred cultures and are not more than one year old. Do not plant clover in medians or in rural areas adjacent to well-developed lawns.

⁵ Pensacola Bahia is allowed only as shown in Seeding Schedules 3 and 4 at the rate of 50 pounds per acre only when seeding pit areas that are governed by the South Carolina Mining Act. Otherwise, do not include Bahia seed in the mix.

⁶ Apply one-half of lime rates and one-half of maintenance fertilizer rates. Fertilize centipede at the application rate of 20 pounds per acre of 16-4-8 or 15-0-15 fertilizers in May and repeat in August.

⁷ The use of Italian Rye Grass is prohibited.

- C. The Contractor may include quantities of rye grain and millet in Schedule Nos. 1 and 3 to establish quick ground cover for erosion control purposes.

Seeding Schedule for Temporary Vegetation Upper and Lower State			
Schedule No.	Common Name of Seed	Pounds/acre	Planting Dates
1	Brown Top Millet	50	April 1 to August 15
2	Rye Grain	55	August 16 to March 31
	Annual Rye Grass ¹	15	
¹ The use of Italian Rye Grass is prohibited.			

3.3 GROUND PREPARATION

- A. Bring all areas to proper line, grade and cross section indicated on the plans.
- B. Repair erosion damage prior to commencing seeding operations.
- C. Loosen seedbed to minimum depth of 3".
- D. Remove all roots, clods, stones larger than 1" in any dimension, and other debris.
- E. Provide and prepare topsoil in accordance with Section 02310.
- F. Conduct soil test to determine pH factor.
 - 1. If pH is not in the range of 6.0 to 6.5, adjust.

3.4 APPLICATION OF FERTILIZER

- A. Spread uniformly over areas to be seeded at:
 - 1. Rate of 1000 lbs. per acre.
 - 2. Fertilize centipede at the application rate of 20 pounds per acre of 16-4-8 or 15-0-15.
 - 3. Use approved mechanical spreaders.
- B. Mix with soil to depth of approximately 3".

3.5 SOWING METHODS

A. General:

1. Perform seeding during the periods and at the rates specified in the seeding schedules.
2. Do not conduct seeding work when ground is frozen or excessively wet.
3. Produce satisfactory stand of grass regardless of period of the year the work is performed.

B. Seeding, slopes less than four horizontal to one vertical:

1. Shall conform to Methods EA, WF or WCF as specified hereinafter.
2. Method EA (Emulsified Asphalt):
 - a. Sow seed not more than 24 hours after application of fertilizer.
 - b. Use mechanical seed drills on accessible areas, rotary hand seeders, power sprayers, etc. may be used on steep slopes or areas not accessible to seed drills.
 - c. Cover seed and lightly compact with cultipacker if seed drill does not.
 - d. Within 24 hours following compaction of seeded areas, uniformly apply 0.2 gallons per square yard of emulsified asphalt over the seeded area.
3. Method WF
 - a. Sow seed as specified for Method EA.
 - b. Within 24 hours following covering of seeds, uniformly apply excelsior fiber at the rate of 100 lbs. per 1000 sq.ft.
 - c. Apply material hydraulically.
 - d. Seeded areas to be lightly rolled to form a tight mat of the excelsior fibers.
4. Method WCF
 - a. Apply seed, fertilizer and wood fiber mulch using hydraulic equipment.
 - b. Equipment to have built-in agitation system with capacity to agitate, suspend and homogenously mix a slurry of the specified amount of fiber, fertilizer, seed and water.
 - c. Minimum capacity of slurry tank: 1000 gallons.
 - d. Apply fiber mulch at rate of 35 lbs. per 1000 sq.ft.

- e. Regulate slurry mixture so that amounts and rates of application will result in uniform application of all materials at not less than the specified amounts.
 - f. Apply slurry in a sweeping motion, in an arched stream, so as to fall like rain, allowing the wood fibers to build upon each other.
 - g. Use color of wood pulp as guide, spraying the prepared seedbed until a uniform visible coat is obtained.
- C.
- 1. Seeding (slopes greater than four horizontal to one vertical)
 - 2. Sow seed as specified for Method EA, unmulched.
 - 3. Cover seeded area with erosion control blanket.

3.6 SECOND APPLICATION OF FERTILIZER

- A. When plants are established and showing satisfactory growth, apply nitrogen at the rate of 1.0 lb. per 1000 sq.ft.
- B. Apply in dry form unless otherwise directed by the Engineer.
- C. Do not apply to stands of temporary grasses.

3.7 MAINTENANCE

- A. Maintain all seeded areas in satisfactory condition until final acceptance of the work.
- B. Areas not showing satisfactory evidence of germination within six weeks of the seeding date shall be immediately reseeded, fertilized and/or mulched.
- C. Repair any eroded areas.
- D. Mow as necessary to maintain healthy growth rate until final acceptance of the work.

3.8 ACCEPTANCE

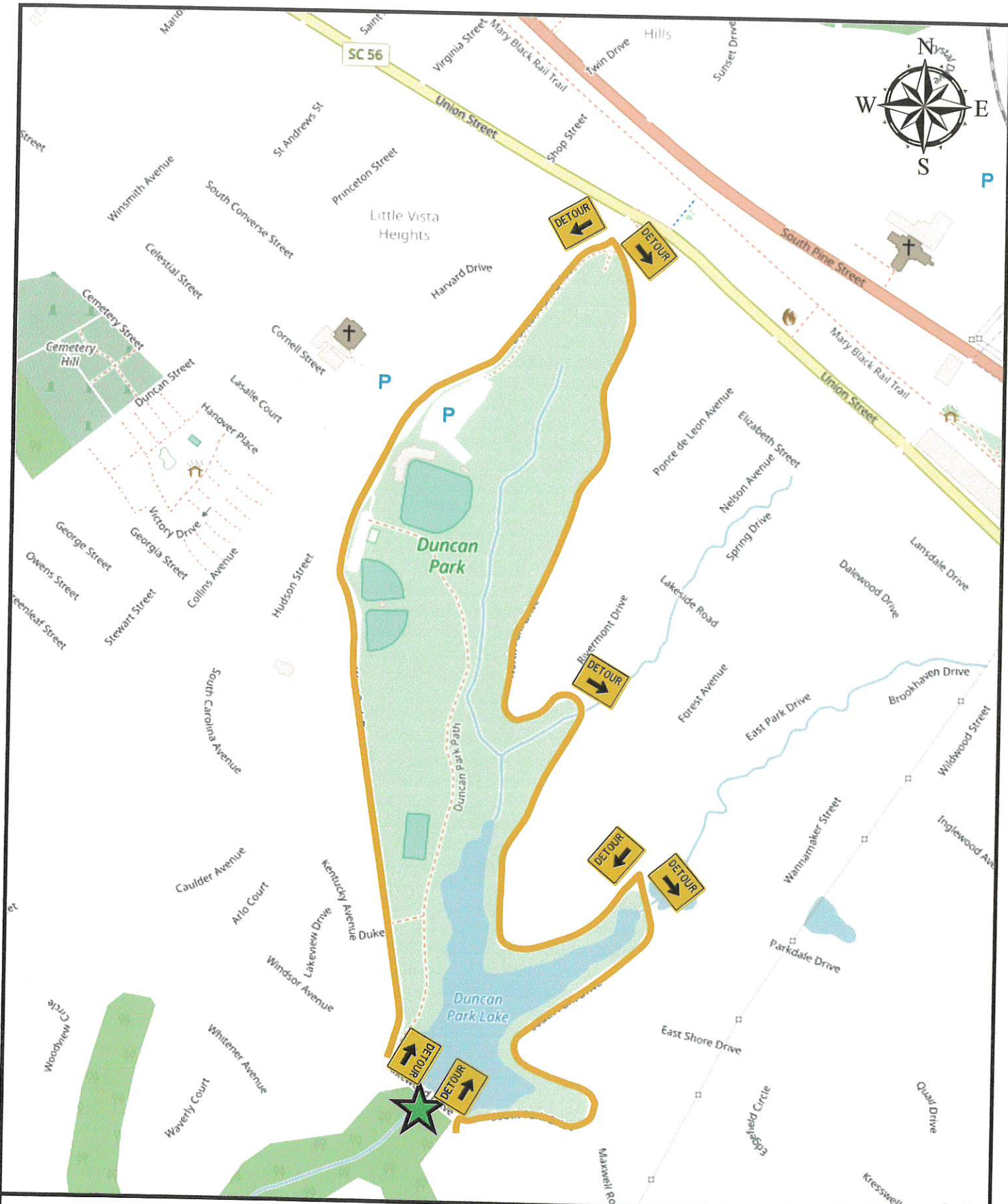
- A. Permanently seeded areas will be accepted when the grass attains a height of 2".
- B. No acceptance will be made of temporary seeded areas. Rework and seed per Permanent Seeding Schedule.

3.9 MEASUREMENT AND PAYMENT

- A. Comply with the pertinent provisions of Section 01025.

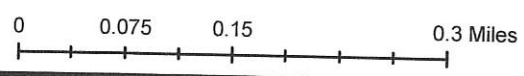
END OF SECTION

EXHIBIT A-2 DRAWINGS



 **Hulsey McCormick & Wallace**
ENGINEERING • ENVIRONMENT • SCIENCE

**Detour Plan - Parkview Drive
Dam Improvements
City of Spartanburg
South Carolina**



TREE REMOVAL PLAN

DUNCAN LAKE PARK DAM

FOR THE

CITY OF SPARTANBURG

SOUTH CAROLINA

OCTOBER 2018

TOPOGRAPHIC SURVEY:

Gooch & Associates, P.A. - Surveyors
 DATED: March 02, 2016

EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

OWNER:

- City of Spartanburg, South Carolina
- Mayor: Junie White
- Council Member: Sterling Anderson
- Council Member: Alan Jenkins
- Council Member: Ruth Littlejohn
- Council Member: Max Hyde
- Council Member: Jerome Rice
- Council Member: Erica Brown
- City Manager: Chris Story

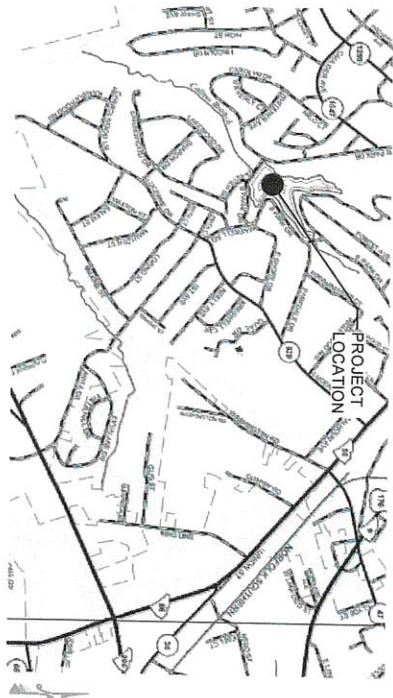
145 W. Broad Street
 Spartanburg, South Carolina 29306
 PHONE: (864) 596-2026

24-HOUR CONTACT:

Jay Squires
 Streets and Stormwater Manager
 PHONE: (864) 596-2089

ENGINEER:

Hulsey McCormick & Wallace, Inc.
 Hal Morris, P.E.
 106 Clair Drive
 Piedmont, S.C. 29673
 Phone: (864) 269-0890
 Fax: (864) 269-9030



VICINITY MAP
N.T.S.



PROJECT DESCRIPTION:
 THIS PROJECT IS LOCATED SOUTHEAST OF THE CITY OF SPARTANBURG, SOUTH CAROLINA ON PARKVIEW DRIVE BETWEEN WEST PARK DRIVE AND SOUTH PARK DRIVE. THE PROJECT GENERALLY CONSISTS OF REMOVAL OF EXISTING TREES ON THE DUNCAN LAKE DAM AND RESTORATION OF EMBANKMENTS AND OTHER RELATED WORK REQUIRED FOR A COMPLETE DAM RESTORATION.

INDEX TO DRAWINGS	
TS	TITLE SHEET
C1.0	REMEDATION PLAN
C2.0	REMEDATION AND EROSION CONTROL DETAILS



SCALE SOURCE

NO.	DATE	DESCRIPTION
1	10/15/18	DESIGN
2	10/15/18	PERMITS
3	10/15/18	CONSTRUCTION
4	10/15/18	FINAL



Hulsey McCormick & Wallace
 ENGINEERING • ENVIRONMENT • SCIENCE
 106 Clair Drive
 Piedmont, SC 29673-7771
 Phone: (864) 269-0890
 email@hmcwengineers.com

TITLE SHEET

TREE REMOVAL DUNCAN LAKE PARK DAM

CITY OF SPARTANBURG
 SPARTANBURG, SOUTH CAROLINA

PROJECT NO: 18-003
 DESIGNED: HMM
 DRAWN: WMT
 APPROVED: HMC
 DATE: 10/15/18

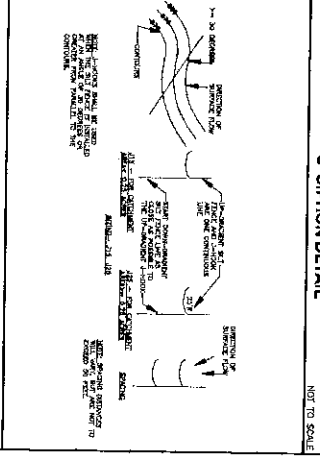
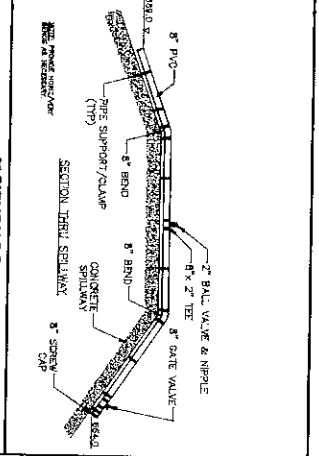
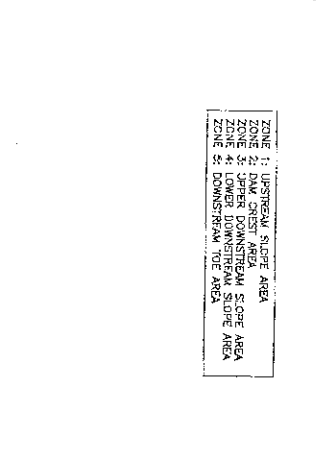
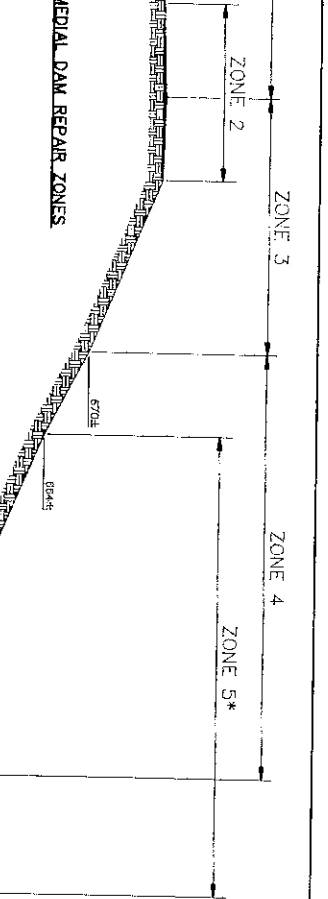
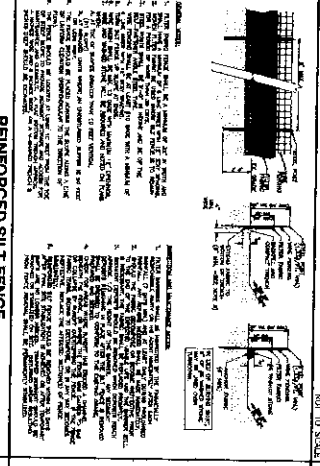
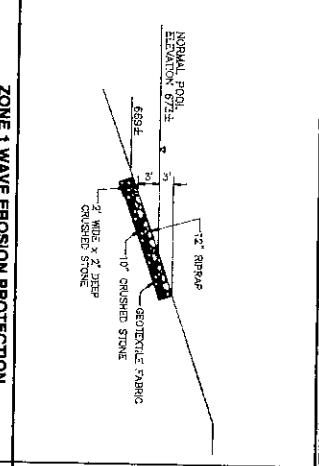
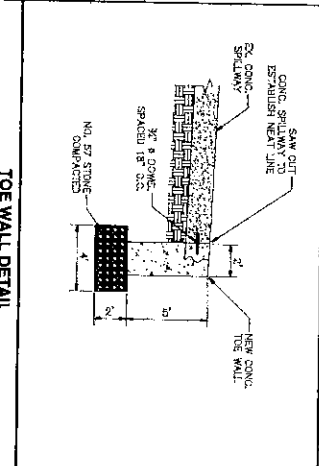
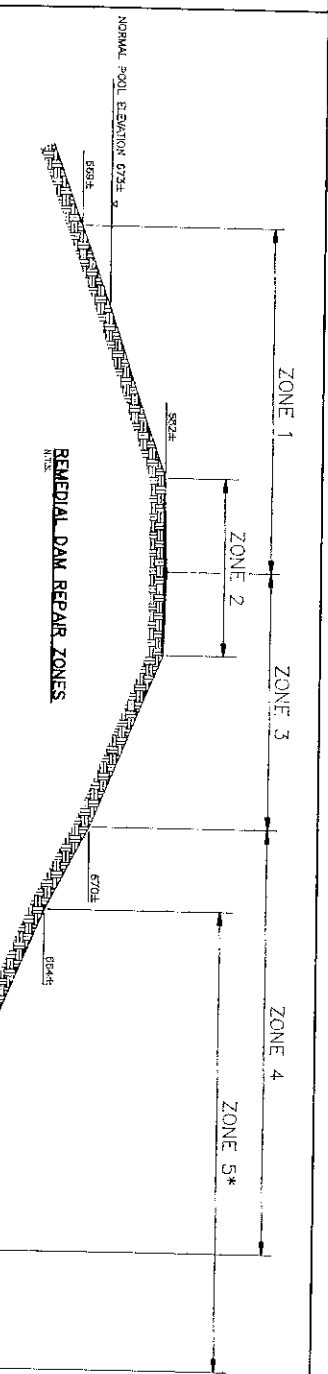
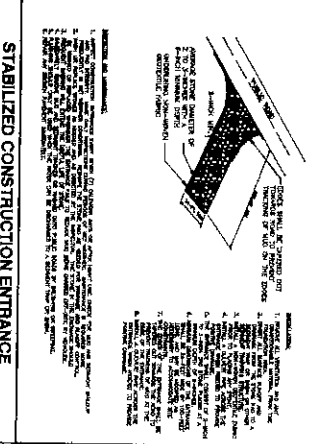
TS

1. THE DESIGNER HAS REVIEWED THE RECORD DRAWINGS AND FOUND THEM TO BE IN ACCORDANCE WITH THE DESIGN REQUIREMENTS AND THE DESIGN STANDARDS. THE DESIGNER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE PROJECT AND THEREFORE CANNOT GUARANTEE THE ACCURACY OF THE RECORD DRAWINGS. THE DESIGNER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE PROJECT AND THEREFORE CANNOT GUARANTEE THE ACCURACY OF THE RECORD DRAWINGS. THE DESIGNER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE PROJECT AND THEREFORE CANNOT GUARANTEE THE ACCURACY OF THE RECORD DRAWINGS.

NO.	REVISION	DATE	BY	CHKD.
1	ISSUED FOR PERMIT	08/14/13	JM	SM
2	ISSUED FOR PERMIT	08/14/13	JM	SM
3	ISSUED FOR PERMIT	08/14/13	JM	SM
4	ISSUED FOR PERMIT	08/14/13	JM	SM
5	ISSUED FOR PERMIT	08/14/13	JM	SM
6	ISSUED FOR PERMIT	08/14/13	JM	SM
7	ISSUED FOR PERMIT	08/14/13	JM	SM
8	ISSUED FOR PERMIT	08/14/13	JM	SM
9	ISSUED FOR PERMIT	08/14/13	JM	SM
10	ISSUED FOR PERMIT	08/14/13	JM	SM

BRASSING NOTES

1. THE BRASSING SHALL BE CHANGED BY THE CONTRACTOR TO MATCH THE BRASSING OF THE EXISTING DAM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE BRASSING FROM THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE BRASSING FROM THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE BRASSING FROM THE ARCHITECT.



ZONE	DESCRIPTION
ZONE 1	UPSTREAM SLOPE AREA
ZONE 2	DAM CREST AREA
ZONE 3	LOWER DOWNSTREAM SLOPE AREA
ZONE 4	DOWNSTREAM TOE AREA
ZONE 5	DOWNSTREAM TOE AREA

REMEDICATION & EROSION CONTROL DETAILS

TREE REMOVAL
DUNCAN LAKE PARK DAM
 CITY OF SPARTANBURG
 SPARTANBURG, SOUTH CAROLINA

Hulsey McCormick & Wallace
 ENGINEERS + ENVIRONMENTAL + SCIENCE
 105 Clair Drive
 Piedmont, SC 29673-7711
 Phone: (854) 265-6398
 www.hulseywallace.com

C2.0

DATE: 08/14/13
 DRAWN: JM
 CHECKED: SM
 APPROVED: SM

EXHIBIT A-3

Procurement & Property Division



Request for Proposal

Construction Services for Duncan Park Lake Tree Removal and Spill Way Maintenance Project.

Proposal No. 1819-11-27-01

(Show this number on envelope and all correspondence)

_____ submits herewith our proposal in response to the bid request
(Company Name)

number shown above in compliance with the description(s) and specifications (s) for the following:
Bidder will supply materials and labor for the following fixed price:

In compliance with the proposal invitation and subject to all conditions thereof, the undersigned agrees:

- A. This proposals is stated, is open for acceptance for a period of 60 calendar days from day of pending.
- B. To furnish any and all material and labor at the prices set forth the items unless otherwise specified, within contract and/or notice proceed.

Total Price _____

Company Name:	
Street Address:	
City, State, Zip:	
Telephone #:	
Fax #:	
Federal ID or SS #:	

SIGNATURE OF PROPOSALER'S REPRESENTATIVE

Name & Title: _____

Date: _____

EXHIBIT B INSURANCE REQUIREMENTS

CONTRACTOR INSURANCE REQUIREMENTS

Contractor shall provide, pay for and maintain in full force and effect, all insurance outlined herein with limits of liability not less than the limits of liability shown covering Contractor's activities, those of any subcontractors or anyone directly or employed by any of them, or by anyone for whose acts any of them might be liable.

Insurer Qualifications

All insurance should be provided through insurance companies authorized to do business in South Carolina with an A M Best's Rating of no less than A and shall be approved by and acceptable to Owner.

Certificates of Insurance

Prior to execution of Contract and commencing Work, Contractor's insurer shall provide to Owner a Certificate of Insurance issued by an authorized representative of its insurer certifying that the insurance as required in this Exhibit is in full force and effect. Certificates should be sent via fax or mail to the following:

Risk Coordinator
City of Spartanburg
P. O. Box 1749
Spartanburg, SC 29304
Fax:# 864-596-2365
Email: cwright@cityofspartanburg.org

The original of the Certificate is to be sent as well. The Certificate shall include a statement that the policies will not be canceled or non-renewed without 30 days advance written notice to Owner.

Primary Insurance

All insurance coverage required of the Contractor shall be primary over any in-surance or self insurance carried by City of Spartanburg.

Duration of Coverage

All required insurance coverage shall be maintained without interruption during the entire term of the Contract plus an additional 3 years for Products and Completed Operations Coverage following final acceptance of the Work by Owner.

Subcontractor’s Insurance

The Contractor shall require any Subcontractor to purchase and maintain insurance of same types and limits required herein.

Waiver of Subrogation

The Contractor shall require all policies of insurance as required herein to be en-dorsed to provide that the insurance company shall waive all of its right of recovery or subrogation against Owner. The Contractor shall require similar waivers from any Sub-contractors.

Additional Insured

The Contractor’s insurance policies as required herein with the exception of Workers Compensation shall be endorsed to name Owner as an additional insured.

Insurance Coverage and Limits

Workers’ Compensation: The Contractor shall provide and maintain Workers Compensation insurance in each jurisdiction in which the Work is located.

Limits:

Coverage A – State Statutory Benefits	
Coverage B - Employers Liability	\$1,000,000

Specific Coverage:

- United States Longshoremen and Harbor Workers Act
- Coverage endorsement must be provided if any work is to be performed on or around navigable water.

Automobile Liability: Contractor shall provide and maintain Business Auto

Liability insurance covering bodily injury and/or property damage liability arising out of the use of any auto (including owned, hired, and non-owned autos).

Limits:

Combined Single Limit Each Accident:	\$1,000,000
--------------------------------------	-------------

Commercial General Liability: Contractor shall provide and maintain in full force and effect Commercial General Liability Insurance covering all operations by or on behalf of Contractor on an occurrence basis against claims for bodily injury, personal in-jury, and/or property damage (including loss of use).

Limits:

Each Occurrence	\$1,000,000
General Aggregate	\$2,000,000
Products/Completed Operations	\$2,000,000

Specific Coverage:

Occurrence Form
Blanket Contractual Liability
Underground Explosion and Collapse

Umbrella/Excess Liability: Contractor shall provide and maintain Umbrella/Ex-cess Liability Insurance on an occurrence basis with coverage as broad a underlying policies.

Limits:

Each occurrence:	\$2,000,000
Annual Aggregate:	\$2,000,000

Specific Coverage:

Blanket Contractual Liability
Follow Form Primary

Builder's Risk Insurance: If Owner provides Builder's Risk Insurance, Contractor is responsible for its pro-rata share of the \$ _____ dollar deductible.

Other Insurance: Any other insurance as specified by Owner in the Contract Documents.

Changes: Exceptions to specified insurance requirements shall be submitted at time of any bid.

EXHIBIT C

South Carolina's Immigration Reform Act

Contractor agrees to verify the hiring eligibility of its employees as required under South Carolina's Eligible Immigration Reform Act, S.C. Code Ann., § 41-8-10, et seq. by either registering and participating in the Federal Work Authorization Program (E-Verify) pursuant to the Statute or employ only workers who at the time of their employment possess a valid South Carolina Driver's License or Identification Card or are eligible to obtain same or possess a valid Driver's License or Identification Card from another state deemed by the Director of the Department of Motor Vehicles to have requirements at least as strict as those in South Carolina. Contractor certifies that it will comply with the Statute in its entirety and agrees to provide the Owner with documentation to establish applicability of the Statute to the Contractor and compliance by same.

Furthermore, The City of Spartanburg will have the right to request and receive legal status verification within five working days of any person working under Contract with Contractor or Sub Contractor. Failure to comply can result in the immediate cancellation of the contract.

_____ Contractor

_____ Subcontractor

certifies that it is compliant with the South Carolina Eligible Immigration Reform Act by either registering and participating in the Federal Work Authorization Program (E-Verify) pursuant to the Statute or employing only workers who at the time of their employment possess a valid South Carolina Driver's License or Identification Card or are eligible to obtain same or possess a valid Driver's License or Identification Card from another state which has been deemed by the Director of the Department of Motor Vehicles to have requirements at least as strict as South Carolina. By the signature below, the Contractor (Subcontractor, etc.) agrees to provide the City with documentation to establish the applicability of the Statute to the Contractor and by the signature below, certifies that it is compliant with the Statute with all regards. This certification and the requirements of this Statute require that the Contractor verify the hiring eligibility of its employees before and during the Project.

Name of Contractor (Subcontractor, etc.)

By _____

Its _____

Date _____