

## **ROANE COUNTY PURCHASING DEPARTMENT INVITATION TO BID**

Roane County is inviting sealed bids for the service(s) listed below, subject to the terms and conditions of the Invitation to Bid, the accompanying specifications, and the Roane County Purchasing Manual.

At the appointed time bids will be publicly opened in the office of the Roane County Purchasing Agent at the above address. Bids arriving in the Purchasing Department past the appointed date and time will be considered late and will not be opened.

**Deliver Bids To:**

ROANE COUNTY PURCHASING DEPARTMENT  
200 EAST RACE STREET, SUITE #3  
KINGSTON, TENNESSEE 37763

**Bid Number: 2015-17/171  
PARK SITE STABILIZATION & RESTORATION**

**Open Date & Time: September 16, 2014 at 2:00 p.m. (Eastern Time Zone)**

The Bid Envelope must show the Bid Number, Name & Opening Date.

### **PURCHASING CONTACT INFORMATION**

**Lynn Farnham, CPPB  
Purchasing Agent  
Phone: 865-376-4317  
Fax: 865-376-4318  
Email: lfarnham@roanegov.org**

### **GENERAL TERMS & CONDITIONS**

Attached are instructions and conditions for submitting a bid for Roane County Government. The objective of this bid is to select suppliers in such a manner as to provide for open and free competition and comparability.

## **BID PREPARATION & SUBMISSION**

1. Bidders are expected to examine specifications, terms and conditions, general or special conditions, schedules and all instructions for the purpose of this bid. Failure to do so will be at the bidder's risk.
2. All bids shall be in accordance with the instructions to bidders and specifications included in this ITB. Specifications are intended to be open and non-restrictive.
3. All pricing submitted in the bid document must be completed in ink or typewritten. The bottom line total must also be printed in ink or typewritten on the proposal form. No erasures shall be permitted. Errors may be crossed out and corrections printed in ink or typewritten and must be initialed in ink by the person signing the bid.
4. All bids must meet or exceed the enclosed specifications.
5. It shall be the sole responsibility of the bidder to make certain that all bids in proper form are submitted to the Purchasing Department as described below.
6. All original forms must be signed by a person with authority to bind the bid. The bid must be sealed in an envelope that is labeled according to the directions stated below.
7. On the outside of the envelope/package mark the bid as follows:
  - Vendor Name & Address
  - Bid Number
  - Bid Date & Time
8. The bid must then be in a sealed envelope/package mailed or delivered to the following address:

Roane County Purchasing Department  
200 East Race Street, Suite #3  
Kingston, Tennessee 37763

**Please note that Roane County does not receive a guaranteed delivery time for express mail and/or packages. Please mail accordingly.**

12. Sealed written bids will be received at the time and place specified on the Invitation to Bid. Postmark on the Bid by this date will not suffice. Bid must be received on or before the date and time stated. Faxed bid documents will not be accepted.

## **LATE RECEIPT OF THE BID**

1. The bid and modifications or withdrawals thereof received after the time set for opening will not be considered, unless they are received before the award is made and it is determined by Roane County that failure to arrive on time was due solely to a delay in delivery for which the bidder has no responsibility. Roane County does not receive a guaranteed delivery time for express mail and/or packages. Please mail accordingly.
2. Bids must be in the Purchasing Department prior to 2:00 p.m. on the appointed date. Time will be determined by the clock in the Roane County Purchasing Department and once Purchasing Agent/or their designee determines the time is 2:00 p.m., no other bids will be accepted.

## **RESTRICTIVE OR AMBIGUOUS SPECIFICATIONS**

1. It is the responsibility of the bidder to review the entire Invitation to Bid document and to notify the Purchasing Agent if the Invitation to Bid is formulated in a manner that would unnecessarily restrict competition or if it is ambiguous in what is being requested.
2. Pursuant to TCA §12-4-126, questions regarding the specifications or bid procedures must be received by the Purchasing Agent and/or designer no less than ninety-six (96) hours before the bid opening date. No addenda will be issued within less than forty-eight (48) hours of the bid opening day, excluding weekends and legal holidays designated in §15-1-101 unless the bid opening is extended for a reasonable time as determined by the purchasing agent, which shall not be less than forty-eight (48) hours excluding weekends and legal holidays designated in §15-1-101, to allow for any necessary changes to the Invitation to Bid documents and to allow responders to resubmit their responses accordingly.
3. Any questions concerning this Invitation to Bid are to be faxed to the Purchasing Department. Questions will be answered via addenda. Information obtained from any office other than the Purchasing Office is not to be considered binding.

## **BID OPENING & AWARD**

1. Only the bottom line figure will be read at the bid opening. Bids will also be examined for compliance with specification and conditions outlined in the bid document.
2. Consideration will be given to all bids properly submitted. Bids will receive appropriate confidentiality before awarding. Upon award, bid documents and tabulations will be available for review. Errors discovered after public opening may not be corrected, and the bidder may be bound to honor bid as submitted. After investigation of the nature of the mistake, the Purchasing Agent may allow the bid to be withdrawn.
3. The contract will be awarded in writing to the most responsive bidder whose bid conforms best to the Invitation to Bid will be most advantageous to Roane County. It is the intent of Roane County to involve and utilize the best product/services at the best prices and provide small and minority firms, women's business enterprises and labor surplus area firms with increased opportunity to do business with the county. However, currently there are no set asides for small or minority firms.
4. Roane County reserves the right to accept or reject any or all bids and to waive informalities and minor irregularities in the bids received.
5. Roane County reserves the right to award the bid in its entirety or to divide the award in any way that will be more advantageous to the county.
6. Bid results will be posted on the County's website along with the bid tabulation.

## **PROTEST PROCEDURE**

1. If a prospective vendor does not agree with the bid award, they have the right to protest. Disputes arising from the award of this bid must be submitted in writing to the Roane County Purchasing Department no later than seven (7) days from date of bid award. The steps for dispute resolution may include:
  - A meeting with the Purchasing Agent, the requisitioning department's manager and representatives from the disputing party to discuss and resolve the complaint.
  - Information from the aforementioned meeting will be forwarded to the County Attorney for review.
  - A written decision letter stating the reasons for the decision will be prepared by the Purchasing Agent and submitted in writing to the protestor and all parties involved.
  - Purchases will not be allowed under this procurement until a final decision is rendered.
  - In the event that purchases must be made before a final decision is rendered, the emergency purchase procedures will be used.

## **APPROPRIATION**

1. In the event no funds are appropriated by Roane County for the goods or services in any fiscal year or insufficient funds exist to purchase the goods or services, then the contract shall expire upon the expenditure of previously appropriated funds or the end of the current fiscal year, whichever occurs first, with no further obligations owed to or by either party.

## **INSURANCE**

1. The contractor will maintain, at their expense adequate insurance coverage to protect them from claims arising under the Worker's Compensation Act, from claims for damages resulting from bodily injuries and damage to their property, for Bodily Injury and Property Damage Liability in the amount of no less than \$1,000,000, for Products and Completed Operations Liability of no less than \$1,000,000 and from claims for damage to any Roane County property. Additional insurance requirements may be listed any Special Terms & Conditions or in the Bid Specifications. This insurance company shall have a Best's rating of A or better. Any deviations from the above requirements must be disclosed in the bid submission.
2. The successful bidder shall furnish a Certificate of Insurance issued by their insurance company showing that Roane County as an additional insured. Carrier will assume full common liability of all shipments.

## **COMPLIANCE WITH ALL LAWS**

1. Contractor is assumed to be familiar with and agrees to observe and comply with all federal, state, and local laws, statutes, ordinances, and regulations in any manner affecting the provision of goods and/or services, and all instructions and prohibitive orders issued regarding this work and shall obtain all necessary permits.

## **GOVERNING LAW**

1. This contract shall be governed by the laws of the State of Tennessee, and all obligations of the parties are performable in Roane County, Tennessee. The Courts in Roane County shall have exclusive and concurrent jurisdiction of any disputes which arise hereunder.

## **BUSINESS LICENSES**

1. Bidders located in Tennessee are required to have a current business license issued by the State of Tennessee at the time the bids are submitted. Vendors located outside Tennessee are required to obtain a business license issued by the State of Tennessee.
2. A Roane County Business License is required if a contractor is doing more than \$50,000 in business in the county.
3. A Business Tax & License Affidavit is required to be submitted with the bid.

## **INDEMNIFICATION/HOLD HARMLESS**

1. Contractor shall indemnify, defend, save and hold harmless all departments of Roane County Government and/or the Roane County Board of Education, its officers, agents and employees from all suits, claims, actions or damages of any nature brought because of, arising out of, or due to breach of the agreement by Contractor, its subcontractors, supplier, agents or employees or due to any negligent act or occurrence or any omission or commission of the contractor, its subcontractors, suppliers, agents or employees until the contract terminates.

## **VENDOR PERFORMANCE**

1. If the contractor fails in full or part to perform or comply with any provision of this Contract or the terms or conditions of any documents referenced and made a part hereof, Roane County may terminate this contract, in whole or in part, and may consider such failure or noncompliance a Breach of Contract. Contractors with poor performance will be notified at the time of such performance and be given opportunity to correct the problems. Documentation will be kept on file. Any contractor with continued poor performance will be removed from the potential vendor list for one year.
2. Roane County expressly retains all its rights and remedies provided by law in case of such breach, and no action by Roane County shall constitute a waiver of any such rights or remedies. In the event of termination for default, Roane County reserves the right to purchase its requirements elsewhere, with or without competitive bid.
3. Failure to deliver within the time specified or within a reasonable amount of time, or failure to make replacements of a rejected item immediately will constitute authority to purchase on the open market so as to replace the item(s) rejected and/or not received. On all such purchases, the Vendor agrees to promptly reimburse the county for excess costs incurred by such a purchase.

## **BREACH OF CONTRACT**

1. A party shall be deemed to have breached the contract if any of the following occurs:
  - Failure to provide the services that conform to contract requirements.
  - Failure to maintain/submit any report required hereunder.
  - Failure to perform in full or in part any of the other conditions of the contract.

## **CONTRACT TERMINATION FOR CAUSE**

1. If the contractor fails to properly perform its obligations under this contract in a timely or proper manner, or if the contractor violates any terms of this contract, the county shall have the right to terminate the contract and withhold payments in excess of fair compensation for completed services.
2. In the event the contract is terminated for due cause by the county, the county shall have the option of awarding the contact to the next lowest bidder or bidding again.

## **CONTRACT TERMINATION FOR CONVENIENCE**

1. The county may, by written notice to the contractor, terminate this contract without cause for any reason. Said termination shall not be deemed a Breach of Contract by the county. The county must give notice of termination to the vendor at least thirty (30) days prior to the effective date of termination. The contractor shall be entitled to receive compensation for satisfactory, authorized service completed as of the termination date, but in no event shall the county be liable to the contractor for compensation for any service which has not been rendered. Upon such termination, the vendor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

## **BOOKS AND RECORDS**

1. The contractor shall maintain all books, documents, accounting records and other evidence pertaining to the goods and services provided under this contract and make such materials available at its offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under this agreement for inspection by county or by any other governmental entity or agency participating in the funding of this agreement, or any authorized agents thereof; copies of said records to be furnished if requested.

## **INVOICES AND PAYMENTS**

1. Payment will be made within 30 days after receipt of invoice and/or delivery of items included in this Invitation to Bid, whichever is later.
2. Roane County Government is not subject to taxation. A tax exemption certificate will be provided upon request.

## **NONDISCRIMINATION AND NON-CONFLICT STATEMENT**

1. Contractor agrees that no person on the grounds of handicap, age, race, color, religion, sex or national origin, shall be excluded from participation in, or be denied benefits of, or be otherwise subjected to discrimination in the performance of this agreement, or in the employment practices of vendor. Contractor shall upon request show proof of such nondiscrimination, and shall post in conspicuous places available to all employees and applicants notices of non-discrimination. Contractor covenants that it complies with the Fair Wage and Hour Laws, the National Labor Relations Act, and other federal and state employment laws as applicable. Contractor covenants that it does not engage in any illegal employment practices.
2. Contractor covenants that it has no public or private interest, and shall not acquire directly or indirectly any interest; that would conflict in any manner with the provision of its goods or performance of its services. The contractor warrants that no part of the total contract amount provided herein shall be paid directly or indirectly to any officer or employee of Roane County as wages, compensation, or gifts in exchange for acting as officer, agent, employee, subcontractor or consultant to contractor in connection with any goods provided or work contemplated or performed relative to the agreement.
3. No employee or member of the Roane County's governing bodies shall participate in the selection or award of a contract if a conflict of interest, real or apparent, would be involved.
4. Officers, employees or officials of the Roane County Government shall neither solicit nor accept gratuities, favors or anything of more than nominal monetary value from vendors or parties to subcontracts.

**Bid Number: 2015-17/171 – PARK SITE STABILIZATION & RESTORATION  
VENDOR INFORMATION SHEET**

(Please fill out completely)

By completing and signing this form you certify that you are an authorized representative of the company for which you are submitting a bid/proposal and that you have the authority to legally bind your company. Further, by completing and signing this form you certify that you agree to all the terms and conditions of this bid/proposal.

1. Vendor Name \_\_\_\_\_

2. Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

3. Contact Person (Please Print) \_\_\_\_\_

4. Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

5. Vendor's e-mail address \_\_\_\_\_

6. Authorizing Signature \_\_\_\_\_

7. Title of Person Signing Bid \_\_\_\_\_

8. If addenda were issued, please acknowledge the receipt of: (please write "yes" if you received one)  
Addendum 1 \_\_\_\_\_ Addendum 2 \_\_\_\_\_ Addendum 3 \_\_\_\_\_ Addendum 4 \_\_\_\_\_

9. If applicable, please indicate below if discounts will be allowed for prompt payment or if there is not discount offered:  
\_\_\_\_\_ % Net 10 Days; \_\_\_\_\_ % Net 20 Days; \_\_\_\_\_ % Net 30 Days; \_\_\_\_\_ No Discount

**COOPERATIVE PURCHASING** - Vendors are to indicate if it is permissible for other governmental agencies in the State of Tennessee to purchase these items or services at the same price. Freight charges may be adjusted to reflect differences in delivery costs to other locations. Please indicate the approval of Cooperative Purchasing.

\_\_\_\_\_ Yes \_\_\_\_\_ No

**SCHOOL CONTRACTS ONLY**

**CRIMINAL HISTORY RECORDS CHECK** – Do you agree to comply with Public Chapter 587 of 2007 which requires all contractors to facilitate a criminal history check, including fingerprinting, conducted by the Tennessee Bureau of Investigation and the Federal Bureau of Investigation for each employee or subcontractor personnel before permitting the employee or subcontractor personnel to have contact with students or enter school grounds?

\_\_\_\_\_ Yes \_\_\_\_\_ No



**Bid Number: 2015-17/171 – PARK SITE STABILIZATION & RESTORATION  
NON –COLLUSION, INDEPENDENT PRICE DETERMINATION,  
NON-DISCRIMINATION, NON-DEBARMENT & LOBBYING AFFIDAVIT**

I do hereby certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, or equipment, and is in all respects fair and without collusion or fraud.

I understand that collusive pricing is a violation of State and Federal law and can result in fines, prison sentences, and civil damage awards and that no collusion with another firm was used in preparation of this bid.

I also certify that this firm does not discriminate against any employee or applicant for employment on the grounds of race, color, national origin or sex; and does not and will not maintain or provide for his employees any segregated facilities at any of its establishments, and further, that the firm does not and will not permit their employees to perform their services at any location under this contract where segregated facilities are maintained.

By submission of this bid, the bidder certifies that neither it or its principals is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal or State department or agency.

I further certify that during the Invitation to Bid solicitation and/or during the performance of this contract that neither it nor its principals will participate in lobbying activities in conjunction with this project.

I agree to abide by all terms and conditions of this Invitation to Bid and certify that I am authorized to sign this affidavit for the vendor.

Please indicate which of the following apply to your company. This information is requested for information purposes only. Roane County currently has no policy that allows for set asides or preferences for woman owned or minority owned businesses.

African American Owned  
 Caucasian Owned  
 Native American Owned  
 Other Owned

Asian Owned  
 Hispanic Owned  
 Woman Owned

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**DRUG-FREE WORKPLACE AFFIDAVIT**

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

The undersigned, principal officer of \_\_\_\_\_, an employer of five (5) or more employees contracting with Roane County Government to provide construction services, hereby states under oath as follows:

1. The undersigned is a principal officer of \_\_\_\_\_ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A. § 50-9-113.

Further affiant saith not.

\_\_\_\_\_  
Principal Officer

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STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Before me personally appeared \_\_\_\_\_, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_.

**Bid Number: 2015-17/171 – PARK SITE STABILIZATION & RESTORATION**

**STATEMENT OF COMPLIANCE CERTIFICATE  
ILLEGAL IMMIGRANTS**

EACH CONTRACTOR BIDDING SHALL FILL IN AND SIGN THE FOLLOWING

This is to certify that \_\_\_\_\_ have fully complied with all the requirements of Chapter No. 878 (House Bill No. 111 and Senate Bill No. 411) which serves to amend Tennessee Code Annotated Title 12, Chapter 4, Part I, attached herein for reference.

- All Bidders for construction services on this project shall be required to submit an affidavit (by executing this compliance document) as part of their bid that attests that such Bidder shall comply with requirements of Chapter no. 878.

Signed: \_\_\_\_\_

State of \_\_\_\_\_ )  
 ) ss  
County of \_\_\_\_\_ )

Personally appeared before me, \_\_\_\_\_ the undersigned Notary Public, \_\_\_\_\_, the within named bargain or, with whom I am personally acquainted, and known to me to be the President / Owner / Partner (as applicable) of the \_\_\_\_\_, Corporation, Partnership, Sole Proprietorship (as applicable) and acknowledged to me that he executed the foregoing document for the purposes recited therein.

Witness my hand, at office, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_

\_\_\_\_\_  
Statement of Compliance – Illegal Immigrants

**Bid Number: 2015-17/171 – PARK SITE STABILIZATION & RESTORATION**

**BUSINESS TAX & LICENSE AFFIDAVIT**

The undersigned, (“Affiant”), states that he/she has legal authority to swear this on behalf of \_\_\_\_\_ (“Contractor”); that Contractor is not in any manner in violation of *Tennessee Code Annotated, §5-14-108(l)* which provides that “no purchase shall be made or purchase order or contract of purchase issued for tangible personal property or services by county officials or employees, acting in their official capacity, from any firm or individual whose business tax or license is delinquent”.

Affiant affirms and warrants that Contractor’s licenses are currently valid and all business taxes have been paid and are current as of the date of this affidavit. Contractor is licensed and pays business taxes in \_\_\_\_\_ County, Tennessee.

**AFFIANT**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

**INVITATION TO BID  
SPECIFICATIONS**

Roane County is inviting bids Park Site Stabilization & Restoration as per the enclosed specifications and drawings.

Any costs associated with the preparation or delivery of the bid is at the Vendor's cost with no cost to Roane County.

**REQUIRED DOCUMENTS**

Bidders must use the envelope cover sheet included herein.

The following documents must be returned in the bid envelope:

- Vendor Information Sheet
- Non-Collusion, Independent Price Determination, Non-Discrimination, Non-Debarment & Lobbying Affidavit
- Drug-Free Workplace Affidavit
- Statement of Compliance Certificate of Illegal Immigrants
- Business Tax & License Affidavit
- Certificate of Insurance issued by the Contractor's Insurance Company.

**CONTRACT**

A sample contract is included in this packet. The Terms & Conditions and the Specifications of this Invitation to Bid are also part of the contract.

**BASE BID**

Lump Sum Price for Phase I Construction as Designed

\$ \_\_\_\_\_

**ALTERNATE BID**

Lump Sum Price for Phase 2 Construction as Designed

\$ \_\_\_\_\_

**BONDING REQUIREMENTS**

If bid amount exceeds \$25,000, the contractor must be licensed contractors as required by the Contractors Licensing Act of 1976, as currently amended.

If the bid amount exceeds \$25,000 a performance and payment bond will be required in the full project amount.

# BID ENVELOPE COVER SHEET

**Project:** PARK SITE STABILIZATION & RESTORATION

ROANE COUNTY PARK  
3515 ROANE STATE HIGHWAY  
HARRIMAN, TENNESSEE 37748

**Bid Date & Time:** Tuesday, September 16, 2014  
2:00 p.m. (Eastern Time Zone)

**Bids must be delivered prior to the aforementioned date to:**

Roane County Purchasing  
200 East Race Street  
Suite #3  
Kingston, Tennessee 37763

Bidder Name & Address: _____	
_____	
_____	
TN License Number: _____	Limit: _____
Expiration Date: _____	Classification: _____



**ROANE COUNTY GOVERNMENT  
CONSTRUCTION CONTRACT  
INDEPENDENT CONTRACTOR**

This AGREEMENT is made between Roane County Government, a political subdivision of the State of Tennessee, herein "ENTITY" and \_\_\_\_\_ herein "CONTRACTOR".

**THE PARTIES AGREE AS FOLLOWS:**

1. CONTRACT: The ENTITY hereby employs the CONTRACTOR as an independent contractor to complete and perform the following project and work:
  
2. TIME OF PERFORMANCE AND TERMINATION: The PARTIES agree that:
  - a. The CONTRACTOR shall commence work on the project by:
  
  - b. The CONTRACTOR shall have the project complete by:
  
3. COMPENSATION: The ENTITY agrees to pay CONTRACTOR as compensation:  
The sum of \$ \_\_\_\_\_ payable upon completion of the project and acceptance by the ENTITY.
  
4. INDEPENDENT CONTRACTOR: The PARTIES agree that the CONTRACTOR is an independent contractor of the ENTITY and in no way an employee or agent of the ENTITY and is not entitled to workers compensation or any benefit of employment of the ENTITY. The ENTITY shall have no control over the performance of this agreement by the CONTRACTOR or its employees, except to specify the time and place of performance, and the results to be achieved. The ENTITY shall have no responsibility for security or protection of the CONTRACTOR'S supplies or equipment. The CONTRACTOR agrees to pay and be responsible for all taxes due from the compensation received under this contract.
  
5. WARRANTY: The CONTRACTOR warrants that all materials and goods supplied under this agreement shall be of good merchantable quality and that all services will be performed in a good workmanlike manner. The CONTRACTOR acknowledges that it will be liable for any breach of this warranty.
  
6. INDEMNIFICATION: The CONTRACTOR agrees to indemnify, defend and hold harmless the ENTITY, and its officers, agents and employees, from and against any and all claims, losses, actions or judgments for damages or injury to persons or property arising out of or in connection with the acts and/or any performances or activities of the CONTRACTOR, the CONTRACTOR'S agents, employees or representatives under this agreement.

7. **INSURANCE:** The CONTRACTOR agrees to obtain and keep in force during its acts under this agreement a comprehensive general liability insurance policy, which shall name and protect the CONTRACTOR, all CONTRACTOR'S employees, the ENTITY, and its officers, agents and employees, from and against all claims, losses, actions and judgments for damages or injury to persons or property arising out of or in connection with the CONTRACTOR'S acts. The CONTRACTOR shall provide proof of liability coverage as set forth above to the ENTITY prior to commencing its performance as herein provided, and require insurer to notify the ENTITY ten (10) days prior to cancellation of said policy.
  
8. **WORKER'S COMPENSATION:** The CONTRACTOR shall maintain in full force and effect worker's compensation insurance for the CONTRACTOR, any agents, employees and staff that the CONTRACTOR may employ as is required by law, and provide proof to the ENTITY of such coverage or that such worker's compensation is not required under the circumstances.
  
9. **COMPLIANCE WITH LAWS:** The CONTRACTOR agrees to comply with all federal, state and local laws, rules and regulations. Any claim, breach or dispute arising under this contract shall be heard in the courts of Roane County, Tennessee.
  
10. **ENTIRE AGREEMENT:** This document and the Invitation to Bid or Request for Proposal documents comprise the entire agreement and can only be modified or amended in writing by the PARTIES.
  
11. **PERFORMANCE & PAYMENT BONDS:** The CONTRACTOR is required to provide a performance and payment bond in the amount of the project cost prior to beginning work.

ENTITY:

Roane County Government

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Witness \_\_\_\_\_

CONTRACTOR:

\_\_\_\_\_  
 COMPANY NAME

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Witness \_\_\_\_\_



**Roane County Park  
Site Restoration and Stabilization  
Roane County, Tennessee**

**Project Description**

The work involved in this project generally consists of the preparation of the residual subgrade soils, the furnishing and placement of topsoil, seeding, fertilizing, mulching and installation of jute matting in order to establish a vegetative cover over the area shown in the project exhibit. All work shall be performed in accordance with the project specification.

**PART 1: GENERAL**

**1.01 SCOPE OF WORK**

The work of this Section consists of preparation of the residual subgrade and furnishing and placing topsoil for areas to be seeded, fertilized, and mulched.

**1.02 SUBMITTALS**

Submit four (4) copies of soil analysis certificates covering grain size and additive recommendations from the State University Agricultural Extension Service or other certified testing laboratory.

**1.03 DELIVERY**

Do not deliver topsoil in frozen or muddy condition.

**PART 2: PRODUCTS**

**2.01 MATERIALS**

Natural, friable, loamy soil, typical of local topsoil that produces heavy vegetative growth; free from subsoil, weeds, sods, stiff clay, stones larger than one inch (1"), toxic substances, litter, or other foreign material harmful to plant growth; having a pH between 6.0 and 7.0.

**GRADING ANALYSIS**

<b>Sieve</b>	<b>Minimum Percent Passing</b>
2-inch	100
# 4	90
# 10	80

Topsoil shall contain sand, silt, and clay as required by AASHTO M146.

	Minimum Percent	Maximum Percent
Sand	20	75
Silt	10	60
Clay	5	30

### **PART 3: EXECUTION**

#### **3.01 PREPARATION**

Do not perform tilling operations when ground is frozen or excessively wet.

#### **3.02 INSTALLATION**

- A. Use equipment and methods to prevent damage to existing structures, utilities, lawns, and plantings.
- B. Prior to placing topsoil, shape the subgrade to graded lines and cross-sections to provide for two inches (3") of compacted topsoil. Clear the subgrade of materials larger than two inches (2"). Excavate to depth of twelve inches (12") all areas that have become saturated with oil, gasoline, or bituminous products; backfill with approved material.
- C. After alignment of subgrade, loosen, and till to a depth of four inches (4") by disking, harrowing, rototilling, or other approved methods.
- D. After approval, place and spread topsoil to secure required depth after compaction; rake and remove materials larger than two inches (2"). Compact with approved roller equipment. Finish smoothing even and true to lines and grades indicated.

### **PART 4: MEASUREMENT AND PAYMENT**

#### **4.01 MEASUREMENT**

Measurement will be per 1000 square foot area or fraction there of prepared and covered with topsoil 3" deep.

#### **4.02 PAYMENT**

Quantities so measured will be paid for at the Contract unit price.

**END OF SECTION**

**PART 1: GENERAL****1.01 SCOPE OF WORK**

- A. This Section covers the furnishing of all labor, equipment, and materials necessary for the establishment of vegetation of all areas of the site disturbed by construction operations and all earth surfaces of embankments, including rough and fine grading, topsoil if required, fertilizer, lime, seeding, and mulching.
- B. The Contractor shall adapt his operations to variations in weather or soil conditions as necessary for the successful establishment and growth of the grasses or legumes.

**PART 2: PRODUCTS****2.01 MATERIALS****A. FERTILIZER**

- 1. The quality of fertilizer and all operations in connection with the furnishing of this material shall comply with regulations adopted by the Tennessee Department of Agriculture.
- 2. Fertilizer shall be 10-10-10 grade. Upon written approval of the Engineer, a different grade of fertilizer may be used, provided the rate of application is adjusted to provide the same amounts of plant food.
- 3. During handling and storing, the fertilizer shall be cared for in such a manner that it will be protected against hardening, caking, or loss of plant food values. Any hardened or caked fertilizer shall be pulverized to its original condition before being used.

**B. LIME**

- 1. The quality of lime and all operations in connection with the furnishing of this material shall comply with the requirements of the Tennessee Department of Agriculture.
- 2. During the handling and storing, the lime shall be cared for in such a manner that it will be protected against hardening and caking.

Any hardened or caked lime shall be pulverized to its original condition before being used.

3. Lime shall be agriculture-grade ground dolomitic limestone. It shall contain not less than eighty-five percent (85%) of the calcium and magnesium carbonates and shall be of such fineness that at least ninety percent (90%) will pass a #10 sieve and at least fifty percent (50%) will pass a #100 sieve.

#### C. SEED

1. The quality of seed and all operations in connection with the furnishing of this material shall comply with the regulations adopted by the Tennessee Department of Agriculture.
2. Seed shall have been approved by the Tennessee Department of Agriculture or any agency approved by the Engineer before being sown, and no seed will be accepted with a date of test more than nine (9) months prior to the date of sowing. Such testing however, will not relieve the Contractor from responsibility for furnishing and sowing seed that meets these Specifications at the time of sowing.
3. When a low percentage of germination causes the quality of the seed to fall below the minimum pure live seed specified, the Contractor may elect, subject to the approval of the Engineer, to increase the rate of seeding sufficiently to obtain the minimum pure live seed contents specified, provided that such an increase in seeding does not cause the quantity of noxious weed seed per square yard to exceed the quantity that would be allowable at the regular rate of seed.
4. Seed shall be entirely free from bulblets or seed of Johnson grass, nutgrass, sandbur, wild onion, wild garlic, and Bermuda grass. The Specifications for restricted noxious weed seed refers to the number per pound, singly or collectively, of blessed thistle, wild radish, Canada thistle, corncockle, field bindweed, quackgrass, dodders, dock, horsenettle, bracted plantain, buckhorn, or wild mustard; but in no case shall the number of blessed thistle or wild radish exceed twenty-seven (27) seeds of each per pound. No tolerance on weed seed will be allowed.
5. During handling and storing, the seed shall be cared for in such a manner that it will be protected from damage by heat, moisture, rodents, or other causes.

D. MULCH

Straw mulch shall be threshed straw of oats, rye, or wheat free from matured seed of obnoxious weeds or other species that would grow and be detrimental to the specified grass.

E. TACKIFIER

1. Emulsified asphalt or organic tackifier such as Reclamare R2400 shall be sprayed uniformly on mulch as it is ejected from blower or immediately thereafter.
2. Tackifier shall be applied evenly over area, creating uniform appearance.
3. Rates of application will vary with conditions.
4. Asphalt shall not be used in freezing weather.

**PART 3: EXECUTION**

**3.01 PREPARATION**

A. PROTECTION OF EXISTING TREES AND VEGETATION

1. Protect existing trees and other vegetation indicated to remain in place against unnecessary cutting, breaking, or skinning of roots; skinning and bruising of bark; smothering of trees by stockpiling construction materials or excavated materials within drip line; excess foot or vehicular traffic; or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to be left standing.
2. Provide protection for roots over one and a half inch (1-1/2") diameter cut during construction operations. Coat cut faces with an emulsified asphalt, or other acceptable coating, formulated for use on damaged plant tissues. Temporarily cover exposed roots with wet burlap to prevent roots from drying out and cover with earth as soon as possible.
3. The Contractor shall not remove or damage trees and shrubs that are outside the clearing limits established by the Owner or those within the clearing limits designated to remain.

4. Repair trees scheduled to remain and damaged by construction operations in a manner acceptable to the Engineer. Repair damaged trees promptly to prevent progressive deterioration caused by damage.
5. Replace trees scheduled to remain and damaged beyond repair by construction operations, as determined by the Engineer, with trees of similar size and species. Repair and replacement of trees scheduled to remain and damaged by construction operations or lack of adequate protection during construction operations shall be at the Contractor's expense.

#### B. GRADING

1. Rough grading shall be done as soon as all excavation required in the area has been backfilled. The necessary earthwork shall be accomplished to bring the existing ground to the desired finish elevations as shown on the Contract Drawings or otherwise directed.
2. Fine grading shall consist of shaping the final contours for drainage and removing all large rock, clumps of earth, roots, and waste construction materials. It shall also include thorough loosening of the soil to a depth of six inches (6") by plowing, disking, harrowing, or other approved methods until the area is acceptable as suitable for subsequent landscaping operations. The work of landscaping shall be performed on a section by section basis immediately upon completion of earthwork.
3. Upon failure or neglect on the part of the Contractor to coordinate his grading with seeding and mulching operations and diligently pursue the control of erosion and siltation, the Engineer may suspend the Contractor's grading operations until such time as the work is coordinated in a manner acceptable to the Engineer.

#### C. SEEDBED PREPARATION

1. The Contractor shall cut and satisfactorily dispose of weeds or other unacceptable growth on the areas to be seeded. Uneven and rough areas outside of the graded section, such as crop rows, farm contours, ditches and ditch spoil banks, fence line and hedgerow soil accumulations, and other minor irregularities that cannot be obliterated by normal seedbed preparation operations, shall be shaped and smoothed as directed by the Engineer to provide for more effective seeding and for ease of subsequent mowing operations.

2. The residual soil shall be scarified or otherwise loosened to a depth of not less than four inches (4") except as otherwise provided below or otherwise directed by the Engineer. Clods shall be broken and the top three inches (3") of soil shall be worked into an acceptable seedbed by the addition of topsoil.
3. On 2:1 slopes, a seedbed preparation will be required that is the same depth as that required on flatter areas, although the degree of smoothness may be reduced from that required on the flatter areas if so permitted by the Engineer.
4. On cut slopes that are steeper than 2:1, both the depth of preparation and the degree of smoothness of the seedbed may be reduced as permitted by the Engineer, but in all cases the slope surface shall be scarified, grooved, trenched, or punctured so as to provide pockets, ridges, or trenches in which the seeding materials can lodge.
5. On cut slopes that are either 2:1 or steeper, the Engineer may permit the preparation of a partial or complete seedbed during the grading of the slope. If at the time of seeding and mulching operations such preparation is still in a condition acceptable to the Engineer, additional seedbed preparation may be reduced or eliminated.
6. The preparation of seedbeds shall not be done when the soil is frozen, extremely wet, or when the Engineer determines that it is in an otherwise unfavorable working condition.

#### D. APPLICATION RATES

Seed shall be applied by means of a hydro-seeder or other approved method. The rates of application of seed, fertilizer, and limestone shall be as stated below.

##### 1. Lime and Fertilizer

Lime and Fertilizer application rates shall be based on soil test recommendations. Soils with a pH of 6 or higher do not need to be limed. In the absence of a soil test, the following rates of application of limestone and fertilizer shall be:

- a. 1-1.5 tons/acre of ground agricultural limestone on coarse textured soils and 2-3 tons/acre of ground agricultural limestone on fine textured soils; and



- b. 700-1,000 pounds 10-10-10 (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O) fertilizer per acre, and the remaining quantity applied when vegetation is three inches (3") in height or forty-five (45) days after seeding, whichever comes first.

2. Mulch

Mulch shall be applied at the following rates per acre:

- a. 3,000-4,000 pounds straw mulch,
- b. 1,500-2,000 pounds wood cellulose fiber;
- c. 35-40 cubic yards of shredded or hammermilled hardwood bark; or
- d. 1,200-1,400 pounds of fiberglass roving.

3. Seed

The kinds of seed and the rates of application shall be as prescribed in the Tennessee Erosion and Sediment Control Handbook 4<sup>th</sup> Ed. August 2012 based on Region and site conditions

Temporary Seeding Recommendations for Late Winter Early Spring

<b>Species</b>	<b>Rate (lb/acre)</b>
Rye	120
<b>Seeding Dates</b>	
East TN	Above 2500 feet: Feb 15-May 15 Below 2500 feet: Feb 1-May 1
Middle TN	Jan 1-May 1
West TN	Dec 1-Apr 15
<b>Soil Amendments</b>	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
<b>Mulch</b>	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mulch anchoring toll. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
<b>Maintenance</b>	
Re-fertilize if growth is not fully adequate. Reseed, re-fertilized and mulch immediately following erosion or other damage.	

## Temporary Seeding Recommendations for Summer

<b>Species</b>	<b>Rate (lb/acre)</b>
Oats	60
Brown top millet	30

**Seeding Dates**

East TN	May 15-Aug 15
Middle TN	May 1-Aug 15
West TN	Apr 15-Aug 15

**Soil Amendments**  
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch**  
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mulch anchoring toll. A disk with blades set nearly straight can be used as a mulch anchoring tool.

**Maintenance**  
Re-fertilize if growth is not fully adequate. Reseed, re-fertilized and mulch immediately following erosion or other damage.

## Temporary Seeding Recommendations for Fall

<b>Species</b>	<b>Rate (lb/acre)</b>
Oats	30
Winter Wheat	30

**Seeding Dates**

East TN	Aug 15-Dec 15
Middle TN	Aug 15-Dec 30
West TN	Aug 15-Dec 30

**Soil Amendments**  
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch**  
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mulch anchoring toll. A disk with blades set nearly straight can be used as a mulch anchoring tool.

**Maintenance**  
Re-fertilize if growth is not fully adequate. Reseed, re-fertilized and mulch immediately following erosion or other damage. If necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre crimson clover in late February or early March

PREFERRED SEED MIXES USING NATIVES OR NATURALIZED PLANTS AND PLANTING DATES

Zone		Best	Marginal	Preferred Rate/Mix (lb/ac PLS)	
Region II	Low maintenance; Slopes and poor, shallow soils			15 Browntop millet* (nurse crop)	
				5 Little Bluestem	
				2 switch grass	
		Aug 25-Sept 15	Sept 15 - Oct 25	2 tall dropseed	
		Feb15 - May 30	Mar 21 - May 30	5 sideoats gramma	
				2 black-eyed susan	
				2 partridge pea	
				1 greyheaded coneflower	
		Low maintenance; Moderate slopes; soils > 6 in. Depth			15 Browntop millet* (nurse crop)
				5 purpletop	
				5 Little Bluestem	
		Aug 25-Sept 15	Sept 15 - Oct 25	5 Virginia wild rye	
		Feb15 - May 30	Mar 21 - May 30	2 black-eyed susan	
				2 partridge pea	
				1 greyheaded coneflower	
	High maintenance			15 Browntop millet* (nurse crop)	
				2 partridge pea	
				45 Red fescue*	
		Aug 30 - Oct 15	Feb 15 - Apr 15	45 hard fescue*	
				25 chewing fescue*	
Region III	>2500 ft elevation steep slopes		Aug 15-Aug 30	15 Browntop millet* (nurse crop)	
		Mar 20-Apr 30	Mar 1-Mar20	5 purpletop	
				Apr 20-Jun15	10 little bluestem
	<2500 ft elevation; steep slopes				10 Indian grass
		Aug 15-Sept 1	Sept 1-Sept 15	2 black-eyed susan	
		Mar 1-Apr1	Apr 1- Jun 10	0.5 monarda (bergamot)	
				4 Maryland senna	
	>2500 ft elevation; shallow soils		Aug 15-Aug 30	15 Browntop millet* (nurse crop)	
		Mar 20-Apr 20	Mar 5-Mar 20	4 purpletop	
			Apr 20-Jun15	10 little bluestem	
	<2500 ft elevation; shallow soils			10 broomsedge	
		Aug 15-Sept 1	Sept 1-Sept 15	2 partridge pea	
		Mar 1-Apr1	Apr 1- Jun 10	2 black-eyed susan	
				0.5 monarda (bergamot)	
	>2500 ft elevation; moderate slopes		Aug 15-Aug 30	15 Browntop millet* (nurse crop)	
Mar 20-Apr 20		Mar 5-Mar 20	4 purpletop		
		Apr 20-Jun15	10 little bluestem		
<2500 ft elevation; steep slopes			10 Indian grass		
	Aug 15-Sept 1	Sept 1-Sept 15	2 black-eyed susan		
	Mar 1-Apr1	Apr 1- Jun 10	0.5 monarda (bergamot)		
			4 Maryland senna		
>2500 ft elevation; high maintenance		Aug 15-Aug 30	15 Browntop millet* (nurse crop)		
	Mar 20-Apr 20	Mar 5-Mar 20	45 Red fescue*		
		Apr 20-Jun15	45 hard fescue*		
<2500 ft elevation; high maintenance			25 chewing fescue*		
	Aug 15-Sept 1	Sept 1-Sept 15			
	Mar 1-Apr1	Apr 1- Jun 10			

Note: above table is referenced from the TN Erosion and Sediment Control Handbook 4th Ed.

**ALLOWABLE SEED MIXES AND PLANTING DATES**

<b>Zone</b>		<b>Best</b>	<b>Marginal</b>	<b>Preferred Rate/Mix (lb/ac PLS)</b>
Region II	Low maintenance; Slopes and poor, shallow soils	Feb 1-Mar 20	Mar 20-Apr 30	80 Pensacola bahiagrass
		Sept 1-Sept 30	Sept 30- Oct 31	30 Bermudagrass (hulled) 20 Korean lespedeza** 15 Kobe lespedeza**
	Low maintenance; Moderate slopes; soils > 6 in. Depth	Apr 1-July 15		50 Pensacola bahiagrass 15 Bermudagrass (hulled) 30 Korean lespedeza** 15 foxtail millet**
	High maintenance	Apr 1-July 15		40 Bermudagrass (hulled)
Region III	>2500 ft elevation steep slopes		Jul 15-Aug 15	
		July 25-Aug 15	Aug 15-Aug30	100 KY 31 fescue**
		Mar20-Apr20	Mar 1-Mar 20	20 Kobe lespedeza**
	<2500 ft elevation; steep slopes		Apr 20-May 15	10 Korean lespedeza**
			Jul 25-Aug 15	5 Redtop
		Aug 15-Sept 1	Sept 1-Sept 15	
	>2500 ft elevation; shallow soils		Apr 1-May 10	
		July 25-Aug 15	Jul 15-Aug 15	
		Mar20-Apr20	Aug 15-Aug30	40 KY 31 Fescue**
	<2500 ft elevation; shallow soils		Mar 1-Mar 20	10 Korean lespedeza**
		Aug 15-Sept 1	Apr 20-May 15	10 Redtop
		Mar 1-Apr 1	Jul 25-Aug 15	10 Crown vetch**
>2500 ft elevation; moderate slopes		Sept 1-Sept 15		
	July 25-Aug 15	Apr 1-May 10		
	Mar20-Apr20	Jul 15-Aug 15		
<2500 ft elevation; steep slopes		Aug 15-Aug30	60 KY 31 Fescue**	
	Aug 15-Sept 1	Mar 1-Mar 20	15 Korean lespedeza**	
	Mar 1-Apr 1	Apr 20-May 15	15 Kobe lespedeza**	
>2500 ft elevation; high maintenance		Jul 25-Aug 15		
	July 25-Aug 15	Aug 15-Aug30		
	Mar20-Apr20	Mar 1-Mar 20		
<2500 ft elevation; high maintenance		Apr 20-May 15	200 KY 31 Fescue	
	Aug 15-Sept 1	Jul 25-Aug 15		
	Mar 1-Apr 1	Sept 1-Sept 15		

Note: above table is referenced from the TN Erosion and Sediment Control Handbook 4th Ed.

## E. APPLICATION

1. Equipment to be used for the application, covering, or compaction of limestone, fertilizer, and seed shall have been approved by the Engineer before being used on the project. Approval may be revoked at any time if equipment is not maintained in satisfactory working condition, or if the equipment operation damages the seed.
2. Limestone, fertilizer, and seed shall be applied within twenty-four (24) hours after completion of seedbed preparation, unless otherwise permitted by the Engineer, but no limestone or fertilizer shall be distributed, and no seed shall be sown when the Engineer determines that weather and soil conditions are unfavorable for such operations.
3. Limestone may be applied as a part of the seedbed preparation, provided it is immediately worked into the soil. If not so applied, limestone and fertilizer shall be distributed uniformly over the prepared seedbed at the specific rate of application and then harrowed, raked, or otherwise thoroughly worked or mixed into the seedbed.
4. Seed shall be distributed uniformly over the seedbed at the required rate of application, and immediately harrowed, dragged, raked, or otherwise worked so as to cover the seed with a layer of soil. The depth of covering shall be as directed by the Engineer. If two kinds of seed are to be used that require different depths of covering, they shall be sown separately.
5. When a combination seed and fertilizer drill is used, fertilizer may be drilled in with the seed after limestone has been applied and worked into the soil. If two kinds of seed are being used that require different depths of covering, the seed requiring the lighter covering may be sown broadcast or with a special attachment to the drill or drilled lightly following the initial drilling operation.
6. When a hydraulic seeder is used for application of seed and fertilizer, the seed shall not remain in water containing fertilizer for more than thirty (30) minutes prior to application, unless otherwise permitted by the Engineer.
7. Immediately after seed has been properly covered the seedbed shall be compacted in the manner and degree approved by the Engineer.

8. When adverse seeding conditions are encountered due to steepness of slope, height of slope, or soil conditions, the Engineer may direct or permit that modifications be made in the above requirements that pertain to incorporating limestone into the seedbed; covering limestone, seed, and fertilizer; and compaction of the seedbed.
9. Such modifications may include, but are not limited to, the following:
  - a. The incorporation of limestone into the seedbed may be omitted on:
    - i. Cut slopes steeper than 2:1;
    - ii. 2:1 cut slopes when a seedbed has been prepared during the excavation of the cut and is still in an acceptable condition; or
    - iii. Areas of slopes where the surface of the area is too rocky to permit the incorporation of the limestone.
  - b. The rates of application of limestone, fertilizer, and seed on slopes 2:1 or steeper or on rocky surfaces may be reduced or eliminated.
  - c. Compaction after seeding may be reduced or eliminated on slopes 2:1 or steeper, on rocky surfaces, or on other areas where soil conditions would make compaction undesirable.

#### F. MULCHING

1. All seeded areas shall be mulched unless otherwise indicated in the special provisions or directed by the Engineer.
2. Mulch shall be spread uniformly at a rate of two (2) tons per acre in a continuous blanket over the areas specified.
3. Before mulch is applied on cut or fill slopes that are 3:1 or flatter, and ditch slopes, the Contractor shall remove and dispose of all exposed stones in excess of three inches (3") in diameter and all roots or other debris that will prevent proper contact of the mulch with the soil.
4. Mulch shall be applied within twenty-four (24) hours after the completion of the seeding, unless otherwise permitted by the Engineer. Care shall be exercised to prevent displacement of soil

or seed or other damage to the seeded area during the mulching operations.

5. Mulch shall be uniformly spread by hand or by approved mechanical spreaders or blowers that will provide an acceptable application. An acceptable application will allow some sunlight to penetrate and air to circulate but also partially shade the ground, reduce erosion, and conserve soil moisture.
6. Mulch shall be held in place by applying a sufficient amount of asphalt or other approved binding material to ensure that the mulch is properly held in place. The rate and method of application of binding material shall meet the approval of the Engineer. Where the binding material is not applied directly with the mulch it shall be applied immediately following the mulch operation.
7. The Contractor shall take sufficient precautions to prevent mulch from entering drainage structures through displacement by wind, water, or other causes and shall promptly remove any blockage to drainage facilities that may occur.

#### G. MAINTENANCE

1. The Contractor shall keep all seeded areas in good condition, reseeding and mowing if and when necessary as directed by the Engineer, until a good lawn is established over the entire area seeded. Contractor shall maintain these areas in an approved condition until final acceptance of the Contract.
2. Grassed areas will be accepted when a ninety-five percent (95%) cover by permanent grasses is obtained and weeds are not dominant. On slopes, the Contractor shall provide against washouts by an approved method. Any washouts that occur shall be regraded and reseeded until a good sod is established.
3. Areas of damage or failure due to any cause shall be corrected by being repaired or by being completely redone as may be directed by the Engineer. Areas of damage or failure resulting either from negligence on the part of the Contractor in performing subsequent construction operations or from not taking adequate precautions to control erosion and siltation as required throughout the various Sections of the Specifications, shall be repaired by the Contractor as directed by the Engineer at no cost to the Owner.

**END OF SECTION**

**PART 1: GENERAL****1.01 SCOPE OF WORK**

This Section covers the furnishing of all labor, equipment, and materials necessary for the stabilization of channels or slopes by use of jute thatching. The jute thatching is used in the place of mulch or sod in locations shown on Drawings and in other areas where ordinary seeding methods are ineffective.

**PART 2: PRODUCTS****2.01 MATERIALS**

- A. Lime, fertilizer, and seed shall be applied as required by Section 02931, Seeding, Fertilizing, and Mulching.
- B. Seeding shall be split with half the seed applied before placing the thatching and the remaining half after the thatching is laid.

**PART 3: EXECUTION****3.01 INSTALLATION**

- A. All rocks, clods, and sticks shall be removed from channel or slope and surface shall be smooth in order to provide contact between the soil surface and the thatching.
- B. Thatching shall be laid starting at the top of the channel and unrolled downgrade. When laying in channels, one edge of the strip shall coincide with the channel center. A second strip shall be laid parallel to the first, allowing a two-inch (2") overlap.
- C. The top end shall be buried in a trench a minimum of four inches (4") deep, backfilled and tamped. Reinforce with a row of staples, spaced ten inches (10") apart, driven through the jute about four inches (4") downhill from the trench. The center overlap shall be stapled three to four feet (3-4') apart. Staple the outer edges similarly after the center has been stapled.



- D. When one (1) roll of thatching ends and another roll begins, the end of the top strip shall overlap the trench where the upper end of the lower strip is buried a minimum of four inches (4") and shall be stapled securely.
- E. Erosion stops shall be formed by burying the ends of both the upper and lower strips in the slit trench and stapling securely with a double row of staples. Spacing of stops shall be one hundred feet (100'-0") maximum.
- F. Thatching shall be rolled at right angle after laying, stapling, and seeding are complete. Perfect contact between the thatching and the soil is vital.
- G. Staples shall be hairpin-shaped wire staples, 8 gauge, eight to ten inches (8-10") in length. Wooden pegs shall not be used.

### **3.02 QUALITY CONTROL**

Contractor shall inspect completed installation to ensure thatching is in contact with soil at all locations and that staples are secure.

## **PART 4: MEASUREMENT AND PAYMENT**

### **4.01 MEASUREMENT**

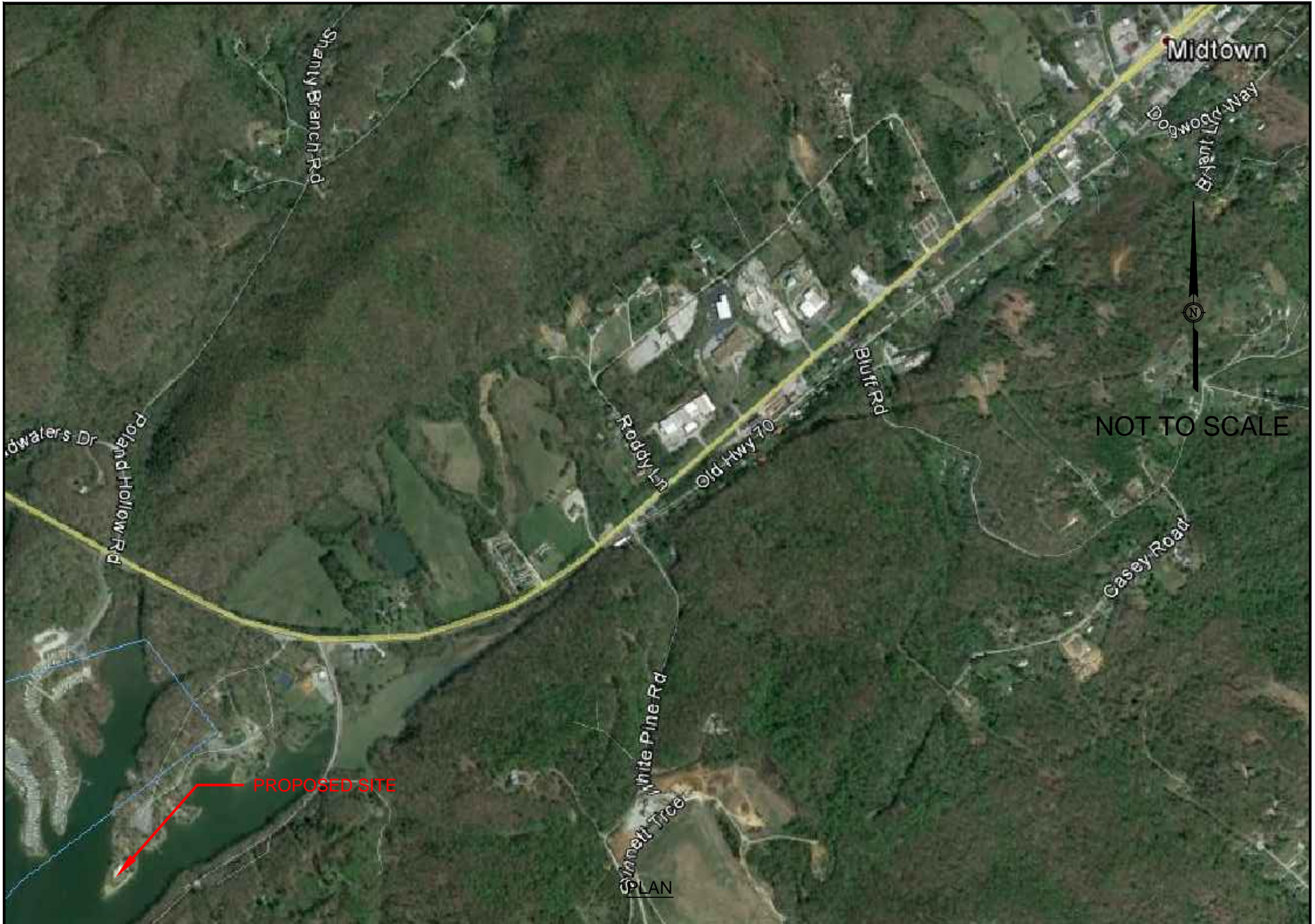
Measurement will be number of square yards of surface area completed and accepted.

### **4.02 PAYMENT**

Quantities so measured will be paid for at the Contract unit price.

**END OF SECTION**

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**ROANE COUNTY PARK**  
 3515 ROANE STATE HIGHWAY  
 HARRIMAN, TENNESSEE, 37748  
 ROANE COUNTY, TENNESSEE

JOB NO.: 14.066513  
 DATE: 04/08/2014  
 DESIGNED BY: QEC  
 CADD BY: EEG  
 DESIGN REVIEW: \_\_\_\_\_  
 CONST. REVIEW: \_\_\_\_\_  
 Exhibit1.dwg

SITE LOCATION MAP

SHEET  
**FIG-1**

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