

*Carmen Johnson*  
Fac/Perm/Co ID # 44-01  
Date ~~3/26/89~~  
Doc ID#  
4/4/12 (CP)

CONTRACT DOCUMENTS

FOR

DEVELOPMENT OF AREA A  
LANDFILL NO. 6

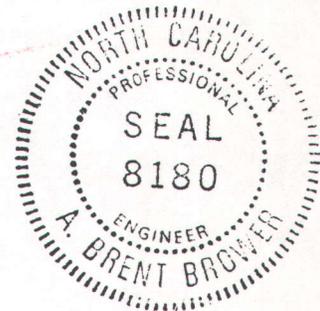
FOR

CHAMPION INTERNATIONAL CORPORATION

CANTON MILL



DECEMBER 1989



SIRRINE ENVIRONMENTAL CONSULTANTS  
GREENVILLE, SOUTH CAROLINA

*A. Brent Brower*  
12/8/89

CHAMPION INTERNATIONAL  
CANTON MILL  
OWNER

NOTICE TO CONTRACTORS

Sealed bids for: Preparation of Area A  
Landfill No. 6  
Near The Champion International Mill in  
Canton, North Carolina

will be received by Mr. \_\_\_\_\_, Purchasing Agent, Champion International, Canton Mill, Canton, North Carolina 28716 (Owner), until \_\_\_\_\_.

Bids will be considered only if submitted for all of the work included in the project. The work is defined in the Bid Documents, Specifications and Drawings, hereinafter called bid documents.

BIDDING

All bidders shall be licensed for the work when and as required by the laws of the State of North Carolina.

The Contractor shall be responsible for obtaining any Haywood County construction permits.

Any proposed deviations of the terms and conditions of the bid documents will be subject to negotiation and should be a part of the bid response.

Site inspection can be made on \_\_\_\_\_. Champion International (Owner) and Sitrine Environmental Consultants (Engineer) will have representatives available during the site inspection.

Questions concerning technical aspects of this project may be directed to:

Mr. Ted V. Clark  
Sitrine Environmental Consultants  
P.O. Box 24000  
Greenville, SC 29616

(803) 234-3027

The Owner may reject any or all bids or subcontracted portions of a bid. The Owner reserves the right to select any or all subcontractors.

BID FORM  
DEVELOPMENT OF AREA A  
LANDFILL NO. 6

CHAMPION INTERNATIONAL CORPORATION  
CANTON, NORTH CAROLINA

Proposal of \_\_\_\_\_ (hereinafter called "BIDDER"),  
organized and existing under the Laws of the State of \_\_\_\_\_ doing business  
as \_\_\_\_\_\*. To Champion International Corporation (hereinafter  
called "OWNER").

In compliance with your Request for BIDS, BIDDER hereby proposes to perform all  
WORK for the construction of Development of Area A, Landfill No. 6 in strict accordance  
with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated  
below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID each  
party thereto certifies as to his own organization, that this BID has been arrived at  
independently, without consultation, communication, or agreement as to any matter relating  
to this BID with any other BIDDER or with any competitor.

BIDDER acknowledges receipt of the following ADDENDUM:

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

BID SCHEDULE

NOTE: BIDS shall include sales tax and all other applicable taxes and fees.

NO.	ITEM	UNIT	UNIT PRICE	QUANTITY*	TOTAL PRICE
1.	Clearing	Acre	_____		_____
2.	Grubbing	Acre	_____		_____
3.	Stripping	C.Y.	_____		_____
4.	Unsuitable Materials Excavation	C.Y.	_____		_____
5.	Excavation and Backfill	C.Y.	_____		_____
6.	Uncontaminated Storm Drainage System:				
	A. 12-inch HPDE Pipe Including Fittings	L.F.	_____		_____
	B. Non-Shrink Grout	C.Y.	_____		_____
	C. 36" Perforated CM Riser	L.F.	_____		_____
	D. Perforated Riser Filter Stone	Ton	_____		_____
	E. Stormwater Junction Box	L.S.	_____		_____

NO.	ITEM	UNIT	UNIT PRICE	QUANTITY*	TOTAL PRICE
7.	Internal Filter Drainage System				
	A. Coarse Filter (ASTM #57)	Ton	_____	_____	_____
	B. Fine Filter (ASTM C-33)	Ton	_____	_____	_____
	C. 4 Ounce Geotextile Fabric	SF	_____	_____	_____
	D. 12-inch Perforated HDPE Pipe Including Fittings	LF	_____	_____	_____
8.	Rock Removal	CY	_____	_____	_____
9.	Roadway Surfacing				
	A. Crusher Run Stone (N.C. ABC)	Ton	_____	_____	_____
	B. Concrete Surfacing	CY	_____	_____	_____
10.	Erosion/Sediment Control (Silt Fence)	LF	_____	_____	_____
11.	Seeding	Acre	_____	_____	_____

TOTAL OF BID ..... \$ \_\_\_\_\_  
(Written Dollar Bid)

Respectfully submitted:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

Job Completion Date \_\_\_\_\_.

(Contractor to insert date on or before which he will have job completed. This date will be a part of the bid and will be considered in bid selection. It is Champion International's wishes to have the earthwork completed by \_\_\_\_\_. See Specification Section 01000 for Time for Completion and Liquidated Damages.)

\* Estimated Quantities are for Contractor's Bid Estimate Preparation and May Not Represent Actual Quantities of Work to be Performed.

LIST OF SUBCONTRACTORS

This list is part of the bid and must be completed in order to have a responsive bid.

<u>List of Type of Work</u>	<u>List of Subcontractors</u> <u>Name and Address</u>
1. _____	Name _____ Address _____
2. _____	Name _____ Address _____
3. _____	Name _____ Address _____
4. _____	Name _____ Address _____

**CHAMPION INTERNATIONAL CORPORATION**  
**STANDARD CONSTRUCTION TERMS AND CONDITIONS**

The following terms and conditions are a part of our Purchase Order \_\_\_\_\_.

and become effective and binding upon the parties hereto upon the acceptance of the

purchase order by \_\_\_\_\_

\_\_\_\_\_

hereinafter referred to as the "Contractor". Champion International Corporation is

hereinafter referred to as the "Owner".

1. **PERFORMING THE WORK** - Performing the work, hereinafter referred to as the "Work", shall include the furnishing of and paying for all labor, supervision, machinery, materials, tools, equipment, transportation, services, supplies and facilities, unless otherwise specified, necessary for and incidental to the completion of work in accordance with specifications and plans or drawings and as set forth in our Purchase Order. Time of performance by the Contractor is of the essence.
2. **CONTRACTOR STATUS AND DUTY** -
  - a) The Contractor is, and shall act in all respects as, an independent contractor and shall, subject to the limitations expressed herein, have exclusive control over the manner and method of performing the Work.
  - b) The Contractor represents that it is qualified and able to carry out and complete the Work, and agrees to perform the Work with due diligence and in a good and workmanlike manner.
  - c) The Contractor shall designate a competent superintendent or foreman for the Work who shall be fully authorized to act for it in all respects under this contract, and the person so designated shall not be changed for the duration of the Work except with written approval from the Owner.
  - d) Contractor and its employees and subcontractors and their employees shall comply with the rules and regulations of the Owner regarding their personal conduct on the premises of the Owner.
  - e) Contractor shall comply with all public laws, ordinances, regulations and requirements respecting the Work, obtain and pay for all required licenses and permits, and comply with regulations of any insurance company which issues a policy on any part of the Work or site. Contractor shall acquaint itself with limits of the property, including easements, if any, of Owner and shall not trespass on property of others.
3. **INSPECTION OF SITE AND DRAWINGS** - The Contractor shall be held to have examined the drawings and specifications and the work site in order to acquaint itself with the details of the work and with local conditions. It is understood the Contractor accepts conditions at the site on the date of this Contract and no allowances will be made after contract award for any claims for additional work which could have been determined by proper and careful examination of the drawing and specifications and of the work site.
4. **INSPECTION AND COORDINATION OF WORK** - It is understood and agreed by the Contractor that the Work will be subject to the coordination, scheduling and inspection by Owner's designated representative. Owner's representative shall at all times have complete access for the inspection of the Work and materials, machinery and equipment purchased by the Contractor for the Work. Notwithstanding each inspection, the Contractor shall be held responsible for the acceptability of the finished work.

5. **MATERIAL SUBSTITUTION** - Substitutions for the specified materials will not be allowed except on written approval of Owner based on a written proposal by the Contractor furnishing satisfactory evidence, including samples, where applicable, as to the kind and quality of the substitute material. The decision of Owner or its representatives as to the equality and acceptability of substitute articles or products will be final.
6. **QUALITY** - Unless otherwise provided in writing, all materials, machinery and equipment shall be new and of the most suitable for the intended purpose. Workmanship and materials shall be of the best quality.
7. **GUARANTEE** - The Contractor shall guarantee all workmanship and materials for a period of one year, or as otherwise specified in writing, from the date of written final acceptance of the Work by Owner. It is further agreed that such acceptance of the Work by Owner does not relieve the Contractor from the responsibility to correct faulty workmanship and/or to replace faulty materials at the Contractor's expense during the guarantee period.
8. **SUBCONTRACTING AND ASSIGNMENT** - This contract may not be assigned or encumbered, nor may the Contractor subcontract the Work, in whole or in part, without the prior written consent in each instance of the Owner. The Contractor shall bind each subcontractor to comply with all the terms and conditions of this contract, including the specifications and drawings. In the event the whole or any part of the work under this contract is subcontracted, Contractor shall remain liable for the performance of all of the Work as provided herein and shall not by approval of subcontracting the work, in whole or in part, be relieved in any way whatsoever of any liability or responsibility under this contract. Owner reserves the right to approve all Subcontractors who may be retained by the Contractor.
9. **TITLE TO MATERIALS AND EQUIPMENT** - The Owner shall have title to all work completed or in course of construction or installation, and shall also have title to all equipment, materials and supplies delivered to the premises, which are to become an integral part of the structure or systems, as well as such materials, etc., as may be considered for progress payments.
10. **INDEMNITY** - Contractor will indemnify and hold Owner, its officers, agents and employees, harmless against any and all suits, actions, damages, loss, liability, costs, penalties, expenses (including attorneys' fees) and compensation arising out of injuries (including death) and damages sustained by, or alleged to have been sustained by, any person or persons or any property, real or personal, which is, or is alleged to be occasioned in whole or in part by the acts or omissions of Contractor or any of Contractor's subcontractors, materialmen or anyone directly or indirectly employed by the Contractor or any of them while engaged in the performance of the Work.
11. **TERMINATION** - Should conditions arise which, in the Owner's opinion, make it advisable or necessary to discontinue work under the contract, the Owner may terminate this contract in whole or in part by giving two days written notice to the Contractor specifying the date and the extent to which the contract is terminated. In the event of such termination, the Contractor, not being in default, shall be paid in full for the work performed to date of cancellation, a pro rata portion of his profit and for the cost of the materials, machinery and equipment specifically purchased for the project work, but not installed.
12. **DEFAULT** - If the contractor becomes bankrupt or insolvent, commits an act of bankruptcy, takes advantage of bankruptcy, reorganization, composition or arrangement statute or defaults under the provisions of this contract, the owner may, in addition and without prejudice to any other rights or remedies provided by law, terminate the contract upon two days written notice to the Contractor, or his assignee or successor take possession of the premises and all materials, machinery and equipment thereon and finish the Work by whatever method Owner may deem expedient. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner.
13. **WAIVER OF DEFAULT** - Owner shall not be considered to have waived any of the terms and conditions of this contract unless evidenced by Owner's written waiver, and Owner's waiver of any one of the Contractor's defaults hereunder shall not be construed as a waiver of any subsequent default. Delay by the Owner in the enforcement of any remedy in the event of Contractor's default shall not be construed as a waiver of such default.

14. **PROTECTION OF WORK** - The Contractor, his employees, subcontractors, agents, etc. shall at all times until final acceptance protect the work from damage and during the course of the work protect all the Owner's products and equipment from dust, dirt, moisture and physical damage.
15. **SAFETY** - The Contractor shall comply with Champion's Safety Manual and all applicable provisions of Federal, State, and local safety laws, rules and regulations and shall take all necessary precautions for the safety of employees on the Work and to prevent accidents or injury to them or other persons on, about, or adjacent to the premises where the Work is being performed. It shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of workmen and the public and shall post danger signs warning against hazards including but not limited to protruding nails, hoists, well holes, hatchways, scaffolding, window openings, stairways and falling materials.
16. **CHANGES** - Owner without notice to sureties may increase, decrease or alter work to be done and materials to be furnished under the contract; provided, however, that the Contractor shall not be entitled to any additional payment for such additional work or materials, unless agreed to in writing by Owner, prior to the performance of such additional work or the furnishing of such additional materials, as the case may be. Contractor shall make no claim for additional work or materials or for additional time to perform such work or procure such materials unless so agreed to.
17. **PAYMENT OF BILLS** - Contractor shall promptly pay and discharge all liabilities to subcontractors and for labor and material employed in the performance of the Work hereunder, and agrees to furnish to Owner appropriate affidavits and documents, under the applicable Mechanics Lien Laws, evidencing the payment to or the waivers of subcontractors, laborers and materialmen.
18. **LIENS** - Contractor hereby waives all vendor's and mechanic's lien rights which may be provided by the law of the place of the work and will immediately take appropriate action to secure the removal of any lien or encumbrance upon the property or premises of Owner which is, or is alleged to be, caused by any act or omission of Contractor, any of Contractor's subcontractors or materialmen, or anyone directly or indirectly employed by them or any of them and will defend against any such lien or encumbrance, and will indemnify and hold Owner harmless from any losses, costs and expenses, including attorneys' fees resulting from the filing or assertion of any such lien or encumbrance.
19. **ROYALTIES AND PATENTS** - Contractor will indemnify and hold Owner harmless against any and all demands and claims on account of infringements or alleged infringements of patented or allegedly patented articles or inventions used on or for the Work or specified or called for in any construction drawings and will, at its own cost and expense, defend any and all suits which may be brought against Contractor or Owner on account of such infringements or alleged infringements and pay any and all expenses (including attorneys' fees), costs and damages resulting therefrom. Contractor shall not, however, assume any liability for patent infringements with respect to any article or invention which is specifically required to be used by the Owner's instruction, unless Contractor has knowledge of the infringing nature of such use.
20. **INSURANCE** - The Contractor shall provide and maintain in force throughout the term of the contract, insurance of the types and with minimum limits of not less than indicated below:

	STATUTORY
A) Workers' Compensation & Employers Liability	\$500,000
B) Comprehensive General Liability	
1) Bodily Injury	\$300,000 Each Occurrence \$300,000 Annual Aggregate
2) Property Damage	\$100,000 Each Occurrence \$100,000 Annual Aggregate

3) Contractor shall provide the Certificate of Insurance that indicates the Comprehensive General Liability provides coverage for:

- a) Premises/Operations Liability
- b) Owners & Contractors Protective Liability
- c) Products/Completed Operations Liability
- d) Blanket Contractual Liability
- e) Explosion, Collapse & Underground Property Damage Liability (at the discretion of the Owner)

C) Comprehensive Automobile Liability

- |  |  |
|--|--|
| 1) Bodily Injury   | <b>STATUTORY</b><br>\$100,000 Each Person<br>\$300,000 Each Occurrence |
| 2) Property Damage   | \$100,000 Each Occurrence  |
| 3) Contractor shall provide the Certificate of Insurance that indicates the Comprehensive Automobile Liability provides coverage for all owned, non-owned and hired automobiles. |  |

D) Architects or Engineers Professional Liability

(Applicable only when this contract requires engineering work.)

- |                                 |           |
|---------------------------------|-----------|
| 1) Limit of Liability Per Claim | \$300,000 |
| 2) Aggregate Amount Payable     | \$300,000 |

All of the above described insurance to be maintained by the Contractor shall be obtained from an insurance carrier or carriers satisfactory to the owner.

Certificates of such insurance shall be filed with the Owner prior to commencing any part of the work.

Such Certificates shall provide that the insurance is not subject to change or cancellation until 20 days after written notice of such proposed action has been given to the Owner.

21. **TAXES** - All sales, use, consumer and similar taxes, duties and tariffs imposed by Federal, state or local laws and all assessments or charges for social security, medical, retirement, or unemployment benefits imposed by applicable law shall be paid by the Contractor. Such taxes, assessments and charges constitute a part of the cost of the Work for which the Contractor is compensated.
22. **BONDS** - If required by the Owner, the Contractor shall furnish such financial data as is required to secure a performance and payment bond under Owner's bonding agreement in form and amount and with such surety or sureties as shall be approved by the Owner. Such bond shall be for the full amount of the contract at all times.
23. **COOPERATION** - The Contractor shall prosecute the Work in such manner as to permit maintenance of plant traffic and manufacturing operations as near normal as possible. Also, the Contractor shall assist in keeping walks, roadways, and railroad sidings clear and unobstructed and shall cooperate with, and shall not in any way interfere with the operations of, other contractors and the Owner.
24. **SITE CLEANLINESS** - During the performing of the Work, the Contractor shall not unnecessarily encumber the premises with materials and equipment and shall maintain the work area in a clean and orderly condition. Upon completion of the Work, Contractor shall remove all scaffolds, construction tools and equipment, excess and unused construction materials, as well as rubbish, and leave the premises in a clean and satisfactory condition.
25. **BENEFIT** - The terms and provisions of the contract shall inure to the benefit of and be binding upon the Owner and Contractor, their respective heirs, executors, administrators, successors and assigns including without limitation those arising from merger, consolidation, sales of assets or otherwise.

**26. PAYMENTS WITHHELD - The Owner may withhold payment to such extent as may be necessary to protect the Owner from loss on account of:**

- (a) Defective or damaged work not remedied by the Contractor.**
- (b) Claims filed or reasonable evidence indicating the probable filing of claims.**
- (c) Failure of the Contractor to make payments properly to subcontractors or materialmen for labor, materials or equipment.**
- (d) Damage to another contractor, the Owner, one of its officers, agents or employees, or the public.**
- (e) Unsatisfactory prosecution of the Work by the Contractor.**
- (f) Reasonable doubt that the Work can be completed within the contract time.**
- (g) Reasonable doubt that the Work can be completed for the unpaid balance of the contract sum.**

When the above grounds are removed, payment will be made for amounts withheld because of them.

**27. GENERAL - The provisions on the face of the purchase order to which the terms and conditions are attached and the provisions of the drawing and specifications shall prevail over any conflicting provisions hereof and the provisions hereof shall prevail over any conflicting provisions on the reverse side of the purchase order.**

**28. VERBAL AGREEMENTS - No verbal agreement nor any conversation with any officer, agent or employee of the Owner, either before or after the execution of this Contract, shall affect or modify any of the terms of this Contract and related contract documents or the obligations created thereby.**

**29. Safety & Housekeeping - per the attached page.**

**30. Lockout Procedure - per the attached page.**

## SAFETY & HOUSEKEEPING RULES

WHILE AT CHAMPION WE KNOW THAT YOU WILL WANT TO OBSERVE ALL OUR SAFETY AND HOUSEKEEPING RULES. THESE RULES ARE INTENDED TO EMPHASIZE AND SERVE AS A REMINDER OF SOME OF OUR MORE IMPORTANT REQUIREMENTS TO INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:

1. Smoking is prohibited except in certain designated areas.
2. The use of or possession of, or under the influence of intoxicating liquors and illegal drugs on Company premises is absolutely prohibited.
3. Visitors are not permitted in the plant without express authority of Management.
4. Contractors must obtain permit and fire watchers before doing any welding, cutting or use of open flame.
5. Should it be necessary for Contract personnel to enter a vessel or confined area, the Canton Mill Vessel Entry Procedure will be followed. This procedure can be obtained from the Mill Contractor Coordinator.
6. No machines or vehicles are to be started until the operator is certain that no one is in a position to be injured by such act.
7. No production equipment is to be started or stopped without the express approval of production department supervision.
8. Contractors must follow Lock-Out Procedure. (See attached.)
9. Excavations, floor openings and the like must be effectively barricaded as required by OSHA specifications.
10. Be sure all scaffolds and working platforms are constructed according to OSHA specifications.
11. No metal portable ladders are acceptable for your safety. Ladders needing repair will be tagged unsafe and will be taken out of service until proper repairs have been made.
12. When material is being raised, lowered or dropped from above, the area beneath must be effectively barricaded or someone stationed below to warn passers-by away from the area.
13. Your job is not complete until all unused or scrap materials have been removed and the entire area policed.
14. Contract personnel must wear appropriate personal protective equipment such as head protection, eye protection, hearing protection, respiratory protection, as required by OSHA specifications.
15. Contract personnel must enter and leave the plant area through designated gates at all times. Any and all personnel changes must be brought to the attention of the gate guard immediately so that pass authorization may be kept current.
16. Only vehicles necessary to the performance of the job will be permitted within the plant area. Under no circumstances will vehicles be allowed to block alleys, roadways, and railroad tracks.
17. Drinking water must come from drinking fountains only. If drinking water barrells are used they must be filled from city water lines only.

QUESTIONS REGARDING ANY OF THESE REQUIREMENTS SHOULD BE REFERRED TO THE SAFETY SECTION OFFICE

## LOCKOUT PROCEDURE

All contractors performing work on company premises will follow a lockout procedure that is as effective as the Canton Mill Lockout Procedure. All locks and lockout devices, such as chains and adaptors used by contractors will be furnished by the contractor. Under no circumstances will a contractor "borrow" a lock assigned to a Canton Mill employee.

In the event that a lock has to be removed in an emergency condition, such as an employee of a contractor leaving the Mill with his lock on a piece of equipment that is essential to safety or Mill operation, the contractor's superintendent and the project coordinator will make the decision to remove the lock. If the contractor's superintendent or the project coordinator can not be reached, the Canton Mill Emergency Lock Removal Procedure (Page 6, Sec. I of the Lockout Manual) will be followed with the exception that the lock will be cut off because no key will be available to company personnel. The company will not be held responsible for cost of a contractor's lock when required to follow this procedure.

In certain situations not covered by established procedures, common sense and good safety practices should be used. The entire purpose of the Lockout program is to provide a safer working environment for both Champion and contractors' employees.

TABLE OF CONTENTS

GENERAL CONDITIONS

<u>Article No.</u>	<u>Title</u>	<u>Page</u>
1	Preliminary Matters	01000- 1
2	Existing Utilities	01000- 3
3	Time for Completion and Liquidated Damages	01000- 3
4	Subsurface Data	01000- 4
5	Contractor's Responsibilities	01000- 4
6	Owner's Responsibilities	01000- 7
7	Engineer's Status	01000- 7
8	Changes in the Work	01000- 8
9	Tests and Inspections	01000- 9
10	Acceptance and Payment	01000-10

01000 - GENERAL CONDITIONS

## ARTICLE 1 - PRELIMINARY MATTERS

## 1.01 DEFINITIONS

The words and terms used in the Contract and Specifications will have the meanings given below:

- A. Owner: Champion International Corporation, Canton Mill or its authorized representatives.
- B. Engineer: Serrine Environmental Consultants acting directly through a registered professional engineer or through any assistant having the particular duties entrusted to him.
- C. Inspector: Serrine Environmental Consultants, acting directly through its technician(s), approved by the Owner, to inspect the Contractor's work and materials and to perform certain quality control tests.
- D. Contractor: The person, persons, partnership, company or corporation entering into the Contract for the performance of the required work. No part of this work may be subcontracted without the written permission of the Owner. The Contractor shall be an independent contractor.
- E. Contract: All of the covenants, terms and stipulations contained in the Bid Documents, Proposal, Specifications, Drawings, Bond and Agreement.
- F. Specifications: All of the terms and stipulations contained (1) in the provisions described in the Contract Documents (2) in the addenda and revisions which may be made in them, and (3) in all written agreements, made or to be made, pertaining to the method and manner of performing the work or to the quality and quantity of the material to be furnished.
- G. Drawings: All of the drawings attached to the Contract, and those supplementary or additional drawings which the Engineer may issue to clarify or further detail the contract drawings or work.

H. Proposal: The Contractor's offer to do the specified work at certain stipulated prices or costs.

#### 1.02 LOCATION OF WORK

The work as specified is for preparation of Area A (and associated roads) at the Champion International Landfill No. 6, located south of Interstate Highway I-40 and off Secondary Road S.R. 1550 (Thickety Road) and on the north side of the Pigeon River in Haywood County, North Carolina approximately 2 miles northwest of Canton, North Carolina.

#### 1.03 SCOPE OF WORK

The work to be performed by the Contractor shall consist of furnishing all labor, materials, equipment, tools, supplies, transportation and all other goods and services required for the preparation of Area A and other development as indicated on the Contract Drawings at the Champion International Landfill No. 6 for the Champion International Canton Mill.

The Contract work includes the following principal features:

- Clearing, Grubbing, and Stripping
- Unsuitable Materials Excavation
- Compacted Earth Fill Dike Construction
- Rock Removal
- Uncontaminated Storm Drainage System Construction
- Internal Filter Drainage System Construction
- Surfacing Roadways
- Grassing

These principal work features are a general outline and do not in any way limit the responsibility of the Contractor to perform all work required by the specifications.

#### 1.04 COMMENCEMENT OF CONTRACT TIME, NOTICE TO PROCEED

The Contract Time will commence to run on the day after the Notice to Proceed is given.

#### 1.05 STARTING THE PROJECT

A. The CONTRACTOR shall start to perform the Work within 14 days of the Contract Time commencing to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

- B. Construction Schedule: Within ten (10) days after the execution of the Agreement, the CONTRACTOR shall deliver to the OWNER a construction progress schedule in a form satisfactory to the OWNER, showing the proposed dates of commencement of each of the various subdivisions of Work.

## ARTICLE 2 - EXISTING UTILITIES

- 2.01 Special precautions shall be taken by the CONTRACTOR to avoid damage to existing overhead and underground utilities owned and operated by the OWNER or by public or private utility companies.
- 2.02 When existing utilities or appurtenant structures, either underground or above ground are encountered, they shall not be displaced or molested unless necessary, and in such case shall be replaced in as good or better condition than found as quickly as possible. Permanent or temporary relocation and replacement of all utilities and appurtenant structures to accommodate the construction work shall be at the CONTRACTOR'S expense.
- 2.03 The Contractor shall make all arrangements and payments necessary for the securing and use of any utilities required for execution of the Contract provisions such as water, fuels, electric power, telephones, and other similar or related items.

## ARTICLE 3 - TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- 3.01 If all of the work or any portion thereof is not completed by the date inserted by the Contractor on the Bid Form, or any extension thereof, damage will be sustained by the Owner and it will be difficult to determine the actual damage which the Owner will sustain by reason of such delay. Therefore the Contractor shall pay to the Owner, as liquidated damages, the amount specified herein for each day's delay in completing the work or any portion thereof beyond the time specified on the Bid Form by the Contractor, or any extension thereof. The Owner may deduct any amount of such liquidated damages from any money due or that may become due the Contractor under the Contract. If the Engineer is responsible for any portion of a delay in completing the work or any portion thereof beyond the time specified therefor, extension of time and adjustments in compensation will be made, and the Contractor shall pay liquidated damages to the Owner for the remaining portion of the delay in accordance with the foregoing provisions.
- 3.02 Pursuant to the provisions herein, the Contractor shall complete the work by the date specified by him on the Bid Form.

- 3.03 Liquidated damages for failure to complete the portion of the work as described above within the time specified shall be \$500.00 per calendar day. (The Contractor is reminded that the date he specifies forms a part of his bid and will have a value to be determined by the Owner during bid selection.)
- 3.04 The Owner will not be responsible for any damages, hindrances, or delays arising from rain, any sort of adverse weather or from similar contingencies. The Contractor shall bear the expense caused by such circumstances and shall be fully prepared to plan and perform work required with prudent regard for delays and difficulties which may be normally encountered.
- 3.05 Other delays and hindrances for which he is not responsible may entitle the Contractor to a contract-time extension, the length of which will be determined by the Engineer. Requests for time extension arising from such circumstances shall be made in writing and submitted to the Engineer within 14 days of requirements for such extensions. Such requests shall outline the cause and character of the delays or hindrances involved.

#### ARTICLE 4 - SUBSURFACE DATA

- 4.01 The Engineer has performed a subsurface investigation program for the project. A copy of the Report of Subsurface Investigation is available for review and a copy will be kept at the project during construction and will be available for inspection by the Contractor. The subsurface data, in any form and wherever shown, are not intended as a representation by the Owner or warranty by the Engineer, but are furnished for information only. It is expressly understood that the Owner will not be responsible for the accuracy of the subsurface data, nor for any deduction, interpretation, or conclusion drawn therefrom by the Contractor. The Test Boring Records represent the Soils Engineer's interpretation of the filed logs based on examination of the field samples. The lines designating the interfaces between various strata represent approximate boundaries and the transition between strata may be gradual. The Soils Engineer does not guarantee that materials other than those disclosed by the borings will not be encountered or that the proportions and character of the various materials between the borings will not vary from those indicated on the Test Boring Records.

#### ARTICLE 5 - CONTRACTOR'S RESPONSIBILITIES

##### 5.01 SUPERVISION AND SUPERINTENDENCE

- A. The CONTRACTOR shall supervise and direct the Work efficiently and with his best skills and attention. He will be solely responsible for the means, methods, techniques, sequencing and procedures of construction for his forces as well as those of his Subcontractors. The CONTRACTOR will be

responsible to see that the finished Work complies accurately with the Contract Documents.

- B. The CONTRACTOR will keep on the Work, at all times during its progress, a competent Resident Project Superintendent, who shall be named at the start of the Work and who shall not be replaced without written notice to the OWNER and the ENGINEER except under extraordinary circumstances. The superintendent will be the CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. Whenever the Contractor or his superintendent is not present on any part of the work where it may be desired to give directions, the Contractor shall designate a responsible supervisory employee to receive and execute such orders as the Engineer or his representative may give.
- C. Without limiting the scope of this Agreement, the CONTRACTOR shall repair, restore, or replace damaged articles and areas disturbed by construction to their original or better condition.
- D. The binding of each Subcontractor to the terms of the Contract Documents by the CONTRACTOR in no way causes an implied contract between the OWNER and the Subcontractor or the ENGINEER and the Subcontractor or the ENGINEER and the CONTRACTOR.
- E. All workmen engaged on special or skilled work shall have had sufficient experience in such work to properly and satisfactorily perform it and operate the equipment involved.
- F. The Contractor shall maintain current progress records which show the percentage of work scheduled for completion at any time and the actual percentage of work completed. The Contractor shall immediately submit 4 copies of the progress reports to the Engineer at the end of each month or at such intervals as directed by the Engineer.

## 5.02 SAFETY AND PROTECTION

- A. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He shall be responsible for the safety of the following and shall provide the necessary protection to prevent damage, injury or loss to the following:
  - 1. All employees and Subcontractors on the Work and other persons who may be affected thereby.

2. All the Work and all materials or equipment to be incorporated therein, whether in storage on or off site, and
  3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designed for removal, relocation or replacement in the course of construction.
- B. The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection, and in addition he will comply with all applicable recommendations of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc. He shall notify owners of adjacent utilities when prosecution of the Work may affect them. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or anyone whose acts any of them may be liable, will be remedied by the CONTRACTOR; except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of the OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.
- C. The CONTRACTOR shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the CONTRACTOR's superintendent unless otherwise designated in writing by the CONTRACTOR to the OWNER.
- D. The CONTRACTOR shall continuously maintain adequate protection of all his work from damage, and shall protect the OWNER's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except such as may be directly due to errors in the Contract Documents or caused solely by agents or employees of the OWNER. He shall adequately protect adjacent and downstream property as provided by law and the Contract Documents.
- E. The CONTRACTOR shall assume all risks of loss, injury or damage of any kind to any vehicle, equipment, materials, apparatus or machinery which he will provide in doing the Work.

- F. The CONTRACTOR shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no nuisance or trespass on the any public or private property in any operation arising from or connected with the improvements embraced in this Contract.

#### 5.03 EMERGENCIES

In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or the OWNER, is obligated to act, at his discretion, to prevent threatened damage, injury or loss. The CONTRACTOR shall give the ENGINEER prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved. If the CONTRACTOR believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he shall immediately make a claim to the OWNER in writing, setting out the amount of and justification for the claim.

#### 5.04 PROJECT COORDINATION MEETINGS

The CONTRACTOR will participate in Project Coordination Meetings to be held on the site monthly, or more often if conditions warrant, to establish the current state of completion and revise the schedule as necessary. The Project Coordination Meeting will be conducted by the ENGINEER.

### ARTICLE 6 - OWNER'S RESPONSIBILITIES

- 6.01 The OWNER will furnish the data required of him under the Contract Documents promptly and shall make payments to the CONTRACTOR after they are due as provided in Article 10.
- 6.02 The Owner will furnish land and boundary surveys. The Contractor will furnish or indicate location and limit marks necessary for construction of the project. All such marks and stakes shall be carefully preserved by the Contractor, and he shall be responsible for the proper building of the work to those lines and grades.

### ARTICLE 7 - ENGINEER'S STATUS DURING CONSTRUCTION

- 7.01 The ENGINEER is Serrine Environmental Consultants. Their address is P.O. Box 24000, Greenville, South Carolina 29616. Their telephone number is (803) 234-3000.

7.02 The ENGINEER shall be the OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of the ENGINEER as the OWNER'S representative during construction are set forth in the following paragraphs.

#### 7.03 VISITS TO SITE

The ENGINEER will make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. His efforts will be directed toward providing assurance for the OWNER that the completed Project will conform to the requirements of the Contract Documents. On the basis of his on-site observations as an experienced and qualified design professional, he will keep the OWNER informed of the progress of the Work and will endeavor to guard the OWNER against defects and deficiencies in the Work.

#### 7.04 CLARIFICATIONS AND INTERPRETATIONS

The ENGINEER will issue with reasonable promptness such written clarification or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If the CONTRACTOR believes that a written clarification and interpretation entitles him to an increase in the Contract Price, he may make a claim therefor as provided in Article 8.

#### 7.05 RESIDENT/INSPECTOR

The Inspector will monitor the quality of earthwork operations for work performed within the scope of these specifications with a program of inspection, sampling, and testing to verify conformance with provisions of the specifications and determine other engineering characteristics for the Owner's design requirements. This program will include monitoring for density, moisture content, shear strength, particle gradation, Atterberg Limits and other material properties as may be required by the Soils Engineer.

### ARTICLE 8 - CHANGES IN THE WORK

8.01 Without invalidating the Agreement, the OWNER may at any time order additions, deletions, or revisions in the Work; these will be authorized by written Change Orders. Upon receipt of an approved written Change Order, the CONTRACTOR will proceed with work involved. All such work will be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made.

- 8.02 The ENGINEER may authorize minor changes or alterations in the Work not involving extra cost, not lengthening the Contract Time and not inconsistent with the overall intent of the Contract Documents. If the CONTRACTOR believes that any minor changes or alterations authorized by the ENGINEER entitles him to an increase in the Contract Price, he may make a claim in writing, stating the amount of and justification for the claim.
- 8.03 Additional work performed by the CONTRACTOR without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency as provided in Paragraph 5.03.

#### ARTICLE 9 - TESTS AND INSPECTIONS: CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

##### 9.01 ACCESS TO WORK

The ENGINEER and the ENGINEER'S representatives, other representatives of the OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspection and testing. The CONTRACTOR shall provide proper and safe conditions for such access.

##### 9.02 TESTS AND INSPECTIONS

- A. The CONTRACTOR shall give the ENGINEER timely notice of readiness of Work for all required inspections, tests or approvals.
- B. If any law, ordinance, rule, regulation, code or order of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, the CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish the ENGINEER the required certificates of inspection, testing or approval. The cost of all other inspections, tests and approvals required by the Contract Documents shall be paid by the OWNER (unless otherwise specified); provided, however, the necessity and authority for such inspections, tests and approvals shall be determined and approved by the ENGINEER and OWNER.
- C. All inspections, tests, or approvals other than those required by law, ordinance, rule, regulation, code or order of any public body having jurisdiction shall be performed by organizations acceptable to the OWNER, the CONTRACTOR, and the ENGINEER.

- D. Any work that the CONTRACTOR covered before being tested or inspected by the ENGINEER may be requested to be uncovered for observation and testing.

#### 9.03 OWNER MAY STOP THE WORK

If the Work is defective, or the CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment, or if the CONTRACTOR fails to make prompt payments to Subcontractors or for labor, materials or equipment, the OWNER may order the CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the Work shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR or any other party.

#### 9.04 CORRECTION OR REMOVAL OF DEFECTIVE WORK

- A. If required by the ENGINEER, the CONTRACTOR shall promptly, without cost to the OWNER and as specified by the ENGINEER, either correct any defective work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the ENGINEER, remove it from the site and replace it with nondefective Work.

### ARTICLE 10 - ACCEPTANCE AND PAYMENT

- 10.01 The Engineer will perform all necessary surveys and computations for measurement of quantities of materials to be used as a basis for payment. The Contractor or his designee may be present when final cross-sections are taken and computations are performed. The Contractor may inspect previously taken cross-sections by appointment. Field books will be retained by the Engineer.
- 10.02 Field surveys will utilize methods normally employed to obtain horizontal and vertical measurements. Volumes of materials will be determined using average-end-area methods if applicable.
- 10.03 Monthly payments to the Contractor will be based on estimates as agreed upon by the Contractor and Engineer. Weight scales used by the Contractor as a basis of payment for truck weight tickets shall be calibrated to the satisfaction of the Engineer. The Engineer shall be allowed to check the calibration of such scales at any time and may refuse payment for weight tickets which have serious errors. Weight tickets will be presented to the Owner's representative at time of delivery.
- 10.04 The Owner may retain a portion of the amount otherwise due the Contractor. The amount retained by the Owner shall be limited to the following:
- (1) Withholding of not more than ten percent (10%) of the payment claimed by the Contractor on his Application for Payment.

(2) If the work is fifty percent (50%) complete (not including the value of stored material), the Contractor may request in writing to the Owner and the Engineer that retainage be reduced on all future Applications for Payment. The Engineer will have fifteen (15) calendar days to review the Contractor's request and to either approve or reject the request in writing. The criteria on which the Engineer will base his decision are as follows:

- a. The job must be progressing on time and in accordance with the Contractor's schedule.
- b. The dollar value of work completed must be greater than fifty percent (50%) of the total contract amount. This dollar value of work completed will not include stored material.
- c. There must be no other specific reason to maintain ten percent (10%) retainage.

10.05 If the Contractor claims additional cost because of any additional or changed contract work, and requests extra compensation therefor, he shall give the Engineer advance written notice of such costs, submitting a complete and detailed estimate thereof. Before starting such extra work, he shall secure a written order from the Owner covering such additions or changes. All claims not so established will be void. All extra-work cost estimates submitted for extra compensation shall be made on the basis of the unit prices named in the contract price schedule or, if not included in the unit cash bid, as mutually agreed upon.

10.06 The Contractor shall keep the work and grounds free from rubbish and waste material during the progress of the work. Immediately upon completion of the project, and before final payment is made, the Contractor shall remove all rubbish, temporary structures, equipment, and excess materials and shall leave the work and premises in a neat and orderly condition acceptable to the Engineer.

## SECTION 02100

### CLEARING AND GRUBBING

#### 1. DEFINITIONS

1.1 Clearing: Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including down timber, snags, brush, and rubbish occurring in the areas to be cleared.

1.2 Grubbing: Grubbing shall consist of the removal and disposal of stumps, roots, matted roots, and other protruding obstructions from the designated grubbing areas.

#### 2. SCOPE OF WORK

- a. All areas designated for excavation or filling on the applicable Drawings, and a strip 15 feet wide adjacent to the toe of dike and roadway fill.
- b. The entire area of Area A at Landfill No. 6.
- c. All borrow areas and spoil areas required during the course of the work.

Areas not included in the above, which are not otherwise required for the prosecution of the work, shall be maintained in their undisturbed state.

#### 3. MEASUREMENT

3.1 Clearing and Grubbing: Clearing and grubbing will be measured in horizontal acres of clearing and grubbing actually performed.

#### 4. PAYMENT

4.1 Clearing and Grubbing: Payment will be made at the contract unit price for clearing and grubbing, and this price shall constitute full compensation for all labor, equipment, tools, and incidentals necessary to complete the work specified herein.

#### 5. CLEARING

5.1 Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface. Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as circumstances require. Clearing shall also include the removal and disposal of structures that obstruct, encroach upon, or otherwise obstruct the work.

5. GRUBBING

5.1 Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to the full depth of the obstruction below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as construction areas under this contract. Depressions made by grubbing in areas not to be excavated shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.

6. DISPOSAL OF MATERIALS

6.1 That portion of salable timber and pulpwood, if any after the Owner's timber removal operations, shall be cut and stockpiled as directed by the Engineer and will remain the property of the Owner. Other trees and underbrush shall be cleared, in so far as possible, by bulldozers or other equipment. In other areas clearing may be accomplished by hand cutting.

Vegetation materials shall be buried in areas designated by the Engineer. Such material shall be covered with not less than two feet of earth compacted by equipment used for placing the cover.

## SECTION 02110

### STRIPPING

#### 1.0 DEFINITIONS

1.1 Stripping: Stripping shall consist of the removal and disposal of topsoil and other soils containing fibrous, organic, or other perishable matter that will decompose over time from areas to be filled.

#### 2.0 SCOPE OF WORK

2.1 Areas requiring stripping include:

- a. All areas designated for excavation, earth fill foundation areas and a strip 10 feet wide contiguous to all sides of the earth fill foundation areas.
- b. The entire area of Area A at Landfill No. 6.
- c. All borrow areas required during the course of the work.
- d. Any other areas designated by the Engineer.

#### 3.0 MEASUREMENT

3.1 Measurement of stripping will be the volume between the original ground surface and the final stripped surface as determined by two surveys. Computation of quantities between surveys will be made as described in Section 01000. At the option of the Engineer, the volume of stripping may be based on an average of stripping mutually agreed to in writing by the Engineer and Contractor for each particular area.

#### 4.0 PAYMENT

4.1 Payment will be made at the contract unit price for stripping and this price shall constitute full compensation for all labor, equipment, tools, and incidentals for excavation, hauling, and placement of the materials in designated disposal areas on the site.

#### 5.0 STRIPPING

5.1 In areas to be stripped, all materials shall be removed to a depth necessary to eliminate topsoil and other soils containing more than 5 percent by weight fibrous organic matter, rubbish, vegetable matter, roots, small stones and all other perishable or objectionable matter. The minimum stripping depth shall be 6 inches. Stripped material shall be placed in disposal areas for spoil materials as designated by the Engineer.

## SECTION 02120

### UNSUITABLE MATERIALS EXCAVATION

#### 1.0 DEFINITIONS

1.1 **Unsuitable Materials Excavation:** This item includes the excavation and disposal of soft or compressible alluvial soils, old spoil materials, or any other materials judged by the Engineer to be unsuitable for foundations.

#### 2.0 SCOPE OF WORK

2.1 This item includes the excavation and disposal of unsuitable materials that may be encountered within the construction area.

2.2 This item also includes any necessary dewatering for areas where unsuitable materials are removed to permit placement and compaction of fill materials.

2.3 Areas that will likely require undercutting include natural creeks and drainage swales that are to receive fill materials.

#### 3.0 MEASUREMENT

3.1 Measurement of unsuitable materials excavation will be the volume between the original ground surface and the final excavated surface as determined by two surveys. Computation of quantities between surveys will be made as described in Section 01000.

3.2 In the case of small volume areas of excavation, it may be desired to calculate the volume of excavation by some other means. The Contractor and Engineer will agree on the method to be employed.

#### 4.0 PAYMENT

4.1 Payment will be made at the contract unit price for unsuitable materials excavation and this price shall constitute full compensation for all labor, equipment, tools, and incidentals for excavation, hauling, and placement of the materials in designated disposal areas on the site.

4.2 The contract unit price shall also include any dewatering necessary to place compacted earth fill in the excavated areas.

## 5.0 UNSUITABLE MATERIALS EXCAVATION

5.1 The Engineer and Contractor shall agree upon the quantity of excavation required prior to initiation of excavation.

5.2 The Contractor shall excavate, haul, and dispose of unsuitable materials to the depths and limits as determined by the Engineer. The unsuitable materials shall be disposed in areas designated by the Engineer. The materials requiring excavation will be soft or compressible alluvial soils unsuitable for earthen structures.

5.3 The Contractor shall dewater the area of undercutting to a depth of at least 2 feet below the bottom of the excavation and shall maintain the dewatered condition until compacted earth fill is placed to at least 3 feet above the original water level or to original ground level, whichever is higher.

## SECTION 02201

### EXCAVATION, FILLING, AND BACKFILLING

#### 1.0 DEFINITIONS

1.1 **Excavation:** Excavation consists of the removal of materials encountered to subgrade elevations indicated and subsequent fill of materials removed.

1.2 **Satisfactory Soils Materials:** Materials consisting of in-place soils, fill, and backfill material, are defined as those complying with ASTM D 2487 soil classification groups GW, GP, GM, SW, SM, SP, SC, ML, CL free of organics, rocks greater than 6" in diameter, and other deleterious material.

1.3 **Unsatisfactory Soil Materials:** Materials classified in ASTM D 2487 soil classification groups GC, MH, CH, OL, OH, and PT.

1.4 **Degree of Compaction:** Degree of compaction required is expressed as a percentage of the maximum density obtained by the Laboratory Tests (ASTM D 698) for the material in question.

#### 2.0 SCOPE OF WORK

2.1 Work included as part of the excavation and backfill includes:

- a. Excavation of material from the entire area of Area A at Landfill No. 6 to achieve the final grades as indicated on the Drawings.
- b. Excavation of material from a borrow area designated by the Engineer if the area of excavation at Area A is insufficient in quantity for fill material requirements.
- c. Preparation of the foundation for the earth fill areas including any drainage or dewatering that may be required to control surface water or groundwater in the dike and roadway fill areas.
- d. Construction of the compacted fill including placement, spreading, and compaction of the fill to the lines and grade indicated on the Drawings.
- e. Disposal of any excess excavated materials to a disposal area designated by the Engineer. Disposal areas shall be compacted and maintained in sufficient drainage condition to minimize erosion prior to seeding operations.
- f. Any other work necessary to the proper construction and completion of the earth fill.

### 3.0 MEASUREMENT

3.1 The quantity of compacted earth fill will be determined by measurement of the volume between the final surface of the fill foundation as determined by surveys made after the completion of stripping (and excavation of any unsatisfactory material) and the final surface of the compacted earth fill determined by surveys made after the completion of slope dressing. In addition, estimates will be made of small volumes of fill if any minor excavations, depressions or cavities that were filled in and the volume was not measured by survey.

### 4.0 PAYMENT

4.1 Payments will be made at the contract price per cubic yard for Compacted Earth Fill. This price is to cover everything required to perform, to completion and final acceptance, the work outlined in the Scope of Work in accordance with these Specifications.

### 5.0 FINAL CONTOURS

5.1 Excavation shall be to the best extent possible to the lines and grades shown on the Drawings. It is likely that rock may be encountered in several of the excavated areas. Should rock removal be selected to obtain the lines and grades shown on the Drawings, this excavation will be covered in Specification Section 02202, Rock Removal.

5.2 The earth fill shall be constructed to the elevations, lines, grades, and cross sections indicated on the Contract Drawings or revisions thereto. Increased heights and widths may be required to compensate for later shrinkage and settlement.

5.3 The Owner or Engineer reserves the right to vary the foundation widths and the fill slopes, and to make other changes in the sections of the compacted fill. Changes in lines and grades which result in changed material quantities will not be cause for revision of unit prices.

### 6.0 FILL MATERIAL

6.1 Materials for the earth fill shall be obtained from areas of excavation to reach final grades as shown on the Drawings. If the area of excavation is insufficient in quantity, the Engineer will designate an alternative borrow area.

6.2 Fill material shall be satisfactory soil materials as classified in ASTM D 2487.

6.3 Unsatisfactory soil materials as classified in ASTM D 2487 shall not be permitted in the fill. Unsatisfactory materials shall be placed in a spoil area designated by the Engineer.

6.4 Frozen material can not be used as backfill or fill. Fill shall not be placed upon a frozen surface.

## 7.0 FILL PREPARATION

7.1 Drainage of the dike foundation area shall be provided by the Contractor. The contractor shall install such ditches, trenches, pits or sumps as may be required to control both surface water and high ground water. Ground water shall be maintained at least 2 feet below the stripped foundation surface or undercut surface until the compacted earth fill dike is constructed to a height of at least 3 feet above the original water level, to original ground level, or until such time as determined by the Engineer.

7.2 After establishing drainage and after stripping of foundation and removal of weak or unsuitable materials has been completed, and before start of material placement, clean soil shall be used to fill all test pits, stump holes, minor excavations and depressions or cavities inside the earth fill limits. These fillings shall be placed in layers over areas of practical size, and shall be moistened or dried to obtain the moisture requirements of the fill. In small areas where roller equipment cannot be employed, material shall be compacted by hand tampers. Layer thickness, moisture content and compaction requirements are detailed below.

7.3 After the filling of depressions and prior to the placement of compacted fill, the earth fill foundation shall be proofrolled to detect any soft surface zones. Proofrolling shall be done with a 50-ton rubber-tired roller or a fully loaded 20 yarn pan. A total of four passes of the roller or pan shall be made over each spot of the foundation, two in mutually perpendicular directions. Areas that continue to deflect more than two inches after two or three repeated passes of the roller or pan shall be excavated and replaced with fill. Proofrolling shall not be undertaken on areas of the foundation saturated due to the presence of the water table or other critical areas if, in the opinion of the Engineer, such proofrolling, will cause deterioration of the foundation. In lieu of such proofrolling, visual inspection of the foundation, supplemented by dynamic cone penetrometer tests, standard penetration tests, auger borings, or such other means as the Soils Engineer may employ will be used to ascertain the presence of an acceptable foundation.

7.4 After acceptance of the foundation, the entire surface shall be thoroughly loosened to a depth of three to six inches by scarifying, plowing, disc harrowing or other approved method. After scarifying, the loosened area shall be covered by a layer of fill material having proper moisture content and being placed to a depth of not more than six inches loose measurement. The scarified and deposited soils shall then be thoroughly mixed with a disc harrow or other approved equipment. The area so treated shall then be compacted to the density specified for Compaction of Fill Material.

7.5 No separate payment will be made for any of the above processes, as the entire costs thereof shall be included in the contract unit price for Compacted Earth Fill.

## 8.0 BERM FILLS

8.1 Placement of a bonding layer shall, except for its thickness, be in accord with the provisions of this section. Materials shall, as far as practicable, be spread during dumping.

Further spreading shall be accomplished by bulldozers or graders or other approved means. Layers shall be approximately horizontal with the thickness of each not greater than 9 inches, loose measure. Harrowing of the layer may be required to break up and blend the fill materials, or to obtain uniform moisture conditions.

8.2 The distribution and gradation of materials shall be such that there will be no lumps, pockets or layers of material differing substantially in texture and gradation from surrounding materials. Small stones and gravel shall not be allowed to accumulate at any point. Rock fragments larger than 6 inches in size will not be allowed to be placed in the compacted fill.

8.3 As soon as feasible after starting construction of the fill, the central portion thereof shall be built and maintained slightly higher than the sides so that the top of the fill will drain freely toward the side slopes. The fill surfaces shall be maintained in a free draining condition throughout construction.

8.4 Equipment shall not travel continuously over the same routes. All traveling shall be along the length of the fill insofar as possible, except for turning movements. Ruts shall be continuously broken up to facilitate proper bonding. When the fill has been otherwise completed, the Contractor shall dress the slope surfaces to the required limits of fill as directed by the Engineer. Any slopes which are not grassed immediately upon completion shall be "tracked" by movement of a cleated dozer up and down the slope to impede surface runoff during rainfall.

8.5 Rock encountered within the landfill area and, at the direction of the Engineer, is left in-place, shall be covered by at least a 2 feet thick layer of compacted soil fill as directed by the Engineer.

## 9.0 MOISTURE CONTROL

9.1 Compaction shall be done at moisture contents within the limits of 1 percent below to 4 percent above laboratory optimum. Regardless of source, materials that are too wet to permit proper compaction shall not be spread on the fill until the moisture content is satisfactorily reduced. When material is too dry, each layer of the fill shall be sprinkled prior to its compaction. This water shall be blended into the material, by harrowing or otherwise, until a uniform distribution of moisture has been obtained. The amount of water so applied shall be sufficient to dampen the material to the required moisture content, and its application shall be so controlled that no free water will appear on the surface during compaction or afterwards. Should too much water be added to any part of the embankment so that material is too wet to obtain the desired density, the compaction and all work on that section of the embankment shall be delayed until the moisture content of the material is reduced to within the specified limits. Water jets shall not be directed at the embankment with enough force to cause separation of materials. If it is found impractical to add sufficient moisture to materials on the fill, the materials shall be prewetted at the source of excavation. The Contractor shall have an adequate supply of water available at all times.

## 10.0 FILL COMPACTION

10.1 When the moisture content and other conditions in any layer are satisfactory, that layer shall be compacted as required to attain a density not less than the 95 percent of Standard Proctor maximum density as determined by Laboratory Tests (ASTM D 698) for the soil type in question. The entire fill area shall be covered by the number of passes necessary to produce a uniform compaction. When there is sufficient area, separate dumping, spreading, sprinkling and compacting operations may be carried on at the same time at different places on the fill.

10.2 The fill shall be compacted to create low permeability. Tamping type rollers, either sheepsfoot, or other approved type, shall be used. Weights of these rollers and arrangement of tamping feet shall be such that rollers will not completely "walk out" of a fill layer. Rollers shall leave a roughened surface for placement of the succeeding fill layer. Rubber tired equipment may be used for towing rollers on the fill provided excessive rutting does not occur. If such rutting occurs the Engineer may require that the Contractor substitute crawler type equipment for towing rollers.

10.3 The fill shall be compacted to the full extent of the design slopes. It may be necessary to overbuild the slopes in order to obtain the required degree of compaction and then cut the slopes back to design grade.

## SECTION 02202

### ROCK REMOVAL

#### 1.0 DEFINITIONS

1.1 Definition of Rock: Any material occupying an original volume of at least one cubic yard which cannot be excavated with a single-tooth ripper drawn by a crawler tractor having a minimum draw bar pull rated at not less than 56,000 pounds (Caterpillar D 8K, D9 or equivalent) or by a Caterpillar 977 front-end loader or equivalent. Excavation of material with larger equipment will be paid as Earth excavations unless Contractor demonstrates inability to excavate with above specified equipment.

#### 2.0 SCOPE OF WORK

2.1 The concept of the design is to maintain the landfill bottom to the best extent possible above the rock. However, it should be anticipated that several rock outcroppings may be encountered that will significantly reduce the cell volume. In this case, the Owner or Engineer may request the rock to be removed. Rock shall be removed to the lines and grades as approved by the Engineer.

2.2 No rock shall be removed prior to authorization by the Owner or Engineer.

#### 3.0 MEASUREMENT

3.1 Measurement of rock excavation will be the volume between the original rock surface and the final rock surface as determined by two surveys. Computation of quantities between surveys will be made as described in Section 01000.

3.2 In the case of small volume areas of rock excavation it may be desirable to calculate the volume of rock excavation by some other means. The Contractor and Engineer will agree on the method to be employed.

#### 4.0 PAYMENT

4.1 Payment will be made for measured quantity of rock excavated, at the unit price bid per cubic yard. The unit price for rock excavation shall include the cost of rock excavation, the cost of handling sufficient and suitable fill material, and all costs incidental thereto.

#### 5.0 BLASTING

5.1 Blasting operations shall be conducted in accordance with all existing ordinances and regulations. All structures shall be protected from the effects of the blast. The blasting shall be done by experienced workmen. Dispose of excavated rock in accordance with applicable local, state and federal regulations.

Any damage done shall be promptly repaired by the Contractor at his expense.

## SECTION 02480

### SEDIMENT CONTROL

#### 1.0 DEFINITION

1.1 Sediment Control includes furnishing an effective control system to prevent uncontrolled discharge of sediment into the natural waterways.

#### 2.0 SCOPE OF WORK

2.1 This item includes furnishing and installing a sediment control system as shown on Drawing No. 6 or as directed by the Engineer or as required by Haywood County or the State.

#### 3.0 MEASUREMENT

3.1 Measurement of sediment control will be in actual linear feet of fencing installed.

#### 4.0 PAYMENT

4.1 Sediment control fencing will be paid for at the contract price per linear foot. This price shall include furnishing, constructing, and maintaining the fences until a healthy stand of seed has established in the disturbed areas.

#### 5.0 SEDIMENT CONTROL

5.1 Erosion/Sediment Control fencing shall be constructed as shown on Drawing No. 6 or as may be required to prevent uncontrolled discharge from the site at any time during project construction. The Contractor shall be responsible for complying with all State and County regulations concerning erosion and sediment control. The Contractor shall maintain the fencing in a functioning condition for the duration of the project, and locations shall be modified as needed to prevent uncontrolled discharge from the site.

## SECTION 02485

### GRASSING

#### 1.0 DEFINITIONS

1.1 Seeding shall consist of the following: soil preparation, liming and fertilizing, seeding, mulching, seed maintenance, and all other related operations required to establish a permanent stand of perennial grass adequate to protect earth slopes and other graded surfaces against erosion.

#### 2.0 SCOPE OF WORK

2.1 All cut and fill slopes and areas disturbed by construction operations shall be seeded with the exception of interior landfill cell slopes and bottoms. The seeded areas include but are not limited to ditches, road slopes, borrow and stockpile areas.

#### 3.0 MEASUREMENT

3.1 Measurement of the grassed areas will be by standard horizontal surveying techniques.

#### 4.0 PAYMENT

4.1 Payment will be made at the contract price per acre for Grassing. This price shall include all labor, equipment and materials required to establish a permanent grass cover on all graded surfaces and maintain this grass cover until acceptance by the Engineer. This price shall also include any maintenance and protection required to control erosion on embankment fill surfaces prior to beginning permanent grassing operations.

#### 5.0 SOIL PREPARATION

5.1 Soil preparation for cut slopes shall be limited to scarifying the slopes two to four inches deep perpendicular to the slope to provide a place for lodging of the seed and impedance of storm runoff. Fill slopes shall be "tracked" by movement of a cleated dozer up and down the slopes. Slopes flatter than three percent shall be prepared by scarifying or discing to a depth of two to four inches and shall be raked to true lines, free from all bumps, ridges or depressions for later moving and maintenance.

#### 6.0 LIMITING AND FERTILIZING

6.1 Fertilizer for seeding areas shall be Grade 10-10-10 complete fertilizer of uniform composition, free flowing and suitable for application with approved equipment, delivered to the site in bags or other containers, each fully labeled, conforming to local fertilizer laws, and bearing the name and warranty of the producer.

6.2 Lime shall be agricultural grade, ground limestone. Ground limestone shall contain not less than 80 percent of calcium carbonate equivalent and shall be of such a fineness that 90 percent will pass through a No. 10 sieve and not less than 50 percent through a No. 50 sieve.

6.3 In areas to be seeded, fertilizer and lime shall be distributed uniformly at a rate of 1,000 pounds per acre for fertilizer and 2,000 pounds per acre for lime, and shall be incorporated into the soil to a depth of at least 2 inches by discing and harrowing. The incorporation of the fertilizer and lime may be part of the tillage operation specified above. Distribution by means of an approved seed drill or hydroseeder equipped to sow seed and distribute lime and fertilizer at the same time will be acceptable.

## 7.0 SEEDING

7.1 Seed shall be a mixture as described below or an equal approved by the Engineer and shall meet the requirements of the Seed Laws of the State of North Carolina and the U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act in effect on the bids are received. Seed shall be delivered in standard containers. Seed which has become wet, moldy, or damaged in transit or storage will not be acceptable.

Summer Season:	March 15 to August 15
Ky 31 Fescue:	70 pounds/acre
Annual Rye Grass:	50 pounds/acre
Common Bermuda Grass:	40 pounds/acre (hulled)
Total:	160 pounds/acre
Winter Season:	August 15 to March 15
Annual Rye Grass:	20 pounds/acre
Ky 31 Fescue:	70 pounds/acre
Common Bermuda Grass:	70 pounds/acre (unhulled)
Total:	160 pounds/acre

7.2 Seed shall be sown within 24 hours following the application of fertilizer and lime and preparation of the seed bed as specified above. Seed shall be uniformly sown at the rates specified below by use of approved mechanical seed drills, rotary hand seeders, power sprayers, or other satisfactory equipment. Immediately after the fertilizing, liming and seeding have been completed, the entire area shall be compacted by means of a cultipacker, roller, or approved equipment weighing approximately 90 pounds per linear foot of roller. If the soil is of such type that a smooth or corrugated roller cannot be operated satisfactorily, a pneumatic roller (not wobble-wheel) will be required. The pneumatic roller shall have tires of sufficient size so that completed coverage of the soil surface is obtained. When a cultipacker or similar equipment is used, the final rolling shall be at right angles to the existing slopes to prevent water erosion.

## 8.0 MULCHING

8.1 Mulch shall be straw mulch material, hay mulch material, or wood products mulch material. Straw shall be stalks of wheat, rye, oats, or other approved grain. Hay shall consist of timothy, peavine, alfalfa, or other grasses from approved sources. Wood products mulch shall consist of bark chips and wood fibers 4 to 6 inches in length manufactured particularly for use with hydroseeding equipment. These materials shall be reasonably dry prior to use. Emulsified asphalt shall be homogeneous. It shall show no separation after thorough mixing within 30 days after delivery, provided separation has not been caused by freezing.

8.2 Emulsified asphalt shall conform to the following requirements or approved equal:

<u>Grade</u>	<u>Minimum</u>	<u>Maximum</u>
Viscosity, Saybolt Furol at 77 degrees F (25 degrees C.) sec	20	300
Settlement test: 5 days percent	-	3
Sieve test: percent (test shall be run at 140 degrees F.)	-	10
Demulsibility: 50cc, 0.10 N/CaC12, percent	-	5
Oven residue, 50 G., 3 hours at 163 degrees C., percent*	57	-
Tests on residue from oven loss: *		
Penetration at 77 degrees F. (25 degrees C.,) 100 G., 5 sec.	100	200
Ductility at 77 degrees F. (25 degrees C.,) cm	40	-
Specific gravity at 77 degrees F. (25 degrees C.)	1.00	-
Soluble in CS2, percent	97	-
Ash, percent	-	2.0

\* If the oven residue fails to meet the requirements as specified, or contains lumps or granules, then the residue shall be obtained by the standard distillation test.

8.3 Within 24 hours following covering of the seed, mulch and emulsified asphalt shall be uniformly applied to the planted areas. Mulch shall be applied at the rate of 2 tons per are and emulsified asphalt at 145-290 gallons per acre. The mulch and emulsified asphalt shall be applied with power driver spreader or blower equipment with the asphalt being injected as the mulch leaves the spreader. The mulch shall allow sunlight to penetrate and air to circulate but also partially shade the ground and conserve soil moisture. The exact amount of emulsified asphalt shall be determined in the field and shall be the amount necessary to bond together the mulch particles without giving a heavy coating of the asphalt material and shall prevent wind erosion.

On slopes of 3 horizontal to 1 vertical or steeper the seeded area shall be covered with Ero-Mat fiber protective mat by Armco, or approved equal instead of the mulch and asphalt as specified above. Fiber mat shall be installed in accordance with the manufacturer's recommendations and securely pinned to the ground to prevent displacement by wind.

## 9.0 MAINTENANCE

9.1 The Contractor shall be responsible for obtaining a satisfactory stand of grass as determined by the Owner. The period of establishment shall extend for a period of one month after completion of planting.

9.2 Areas that require refertilization, reliming, reseeding and resodding will be designated by the Engineers. When any portion of the surface becomes gullied or otherwise damaged following seeding, or seedling have been winter-killed or otherwise destroyed, the affected portion shall be repaired to re-establish the condition and grade of the soil prior to seeding and shall then be reseeded as specified above.

9.3 Watering will be required if the planting is done when the ground is excessively dry. Water shall be applied immediately after final compaction. Watering shall be at the rate of 15,000 gallons per acre. The Contractor shall provide satisfactory means for an even distribution of water at the specified rate, and in a manner that will prevent erosion due to application of excessive quantities. The watering equipment shall be of a type to prevent damage to the finished surface.

9.4 When any portion of the surface becomes gullied, rilled or otherwise damaged after planting and before acceptance, the affected portion shall be repaired to re-establish the condition and grade of the soil prior to injury and re-planted at the Contractor's expense.

## SECTION 02500

### ROADWAY SURFACING

#### 1.0 DEFINITIONS

1.1 Roadway surfacing includes furnishing, hauling, spreading, compacting, and construction of site roadways as designated on the Drawings. Included in this item is the preparation of the soil surface on which the roadway surfacing is to be placed.

#### 2.0 SCOPE OF WORK

2.1 This item includes construction of the crusher run stone for site roadways, except for areas where portland cement concrete pavement is specified.

#### 3.0 MEASUREMENT

3.1 Surfacing - Crusher Run Stone will be measured based upon truck weigh tickets.

3.2 Surfacing - Portland Cement Concrete Pavement will be calculated based upon horizontal measurements of the roadway surface at the roadway depth specified on the Drawings.

#### 4.0 PAYMENT

4.1 Surfacing - Crusher Run Stone will be paid for at the contract price per ton. This price shall include furnishing, hauling, spreading and compacting of the crusher run material.

4.2 Surfacing - Portland Cement Concrete Pavement will be paid for at the contract price per cubic yard. This price shall include furnishing, spreading, and finishing of the concrete surface.

#### 5.0 SUBGRADE PREPARATION

5.1 Preparation of the soil surface shall be by: a) compacting the upper 2 feet of any fill material to at least 98 percent of the maximum dry density as determined by Laboratory Tests (ASTM D 698).

#### 6.0 CRUSHER RUN STONE

6.1 Crusher run stone for roadways shall meet the criteria of North Carolina Standard Size No. ABC (Aggregate Base Course). The Contractor shall spread and shape the material to the lines and grades as shown on the Drawings. The material should be watered, as needed, and compacted to provide a firm and durable base. Acceptance of the compacted surfacing will be made on the basis of visual inspection and approval by the Engineer.

7.0 PORTLAND CEMENT CONCRETE

7.1 Concrete and materials used therein shall conform to the requirements of North Carolina State Department of Transportation.

