

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ABANDONED MINE LANDS
AND RECLAMATION

COUNTY
OF
BROOKE

NAME OF PROJECT
EBENEZER RUN HIGHWALL #9

NOTICE

ALL PAPERS BOUND WITH OR ATTACHED TO
THE BID FORM ARE A NECESSARY PART
THEREOF AND MUST NOT BE DETACHED

PROJECT SPECIFICATION BOOK

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ARTICLE I - DEFINITIONS

ARTICLE I - DEFINITIONS

- 1.0 **"Bidder" refers to the person, firm, or company offering to furnish the work called for by the specifications herein.**
- 2.0 **"Chief" shall mean the Chief of the West Virginia Department of Environmental Protection's, Office of Abandoned Mine Lands & Reclamation.**
- 3.0 **"Construction Administrator" refers to the head of the Construction Group of the Office of Abandoned Mine Lands & Reclamation of the West Virginia Department of Environmental Protection.**
- 4.0 **"Construction Supervisor" refers to the regional supervisor of the West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands & Reclamation Construction Inspectors.**
- 5.0 **"Contract" refers to a purchase order placed by the West Virginia Department of Administration on behalf of the Department of Environmental Protection and accepted by the Contractor together with these specifications and all other documents incorporated therein by reference.**
- 6.0 **"Contract Documents" consist of all of the articles, sections, and attachments to the contract, including Information for Bidders, General Conditions, General Requirements, Special Conditions, drawings, specifications, all addenda issued prior to execution of the contract, and change orders and other written modifications issued after execution of the contract and executed by both parties to the contract.**
- 7.0 **"Contractor" refers to the person, firm or company contracting with the West Virginia Department of Environmental Protection to furnish the work called for in the contract.**
- 8.0 **"Director" refers to the Director of the West Virginia Department of Environmental Protection.**
- 9.0 **"DEP" means the West Virginia Department of Environmental Protection.**
- 10.0 **"Engineer" shall mean the representative of the Office of Abandoned Mine Lands & Reclamation's Engineering Section or the Architect/Engineering consulting firm, whichever designed the project.**
- 11.0 **"Inspector" shall refer to DEP's Inspector, who monitors all construction operations at the project site.**
- 12.0 **"Project" shall mean the Abandoned Mine Lands Project described and referred to by the specifications herein.**
- 13.0 **"Sub-contractor" refers to the person, firm or company contracting directly with the Contractor and not with DEP to furnish the Contractor with any portion of the work called for by the contract.**

ARTICLE I - DEFINITIONS

14.0 "Work" shall be understood to mean and include any and all of the labor, supervision, services, materials, machinery, equipment, tools, supplies and facilities called for by and required to complete the contract.

ARTICLE III - GENERAL CONDITIONS

ARTICLE III - GENERAL CONDITIONS

Sections Included:

- 1.0 Enumeration of Contract Documents**
- 2.0 Correlation of Documents**
- 3.0 Examination of Premises**
- 4.0 Materials & Workmanship**
- 5.0 Guarantee & Maintenance**
- 6.0 Supervision & Construction Procedures**
- 7.0 Permits, Laws, Regulations, & Rights of Entry**
- 8.0 Safety Requirements**
- 9.0 Protection of Persons & Property**
- 10.0 Insurance & Worker's Compensation**
- 11.0 Labor Laws, Ordinances, Wages & Other Conditions**
- 12.0 Subcontractors**
- 13.0 Time**
- 14.0 Payments & Completion**
- 15.0 Surety Bonds**
- 16.0 Changes in the Work**
- 17.0 Uncovering & Correction of Work**
- 18.0 Assignment of Contract**

ARTICLE III - GENERAL CONDITIONS

1.0 ENUMERATION OF CONTRACT DOCUMENTS

1.1 Drawings

Construction drawings (44 sheets) for the reclamation of the project as prepared by for the West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation, 601 57th Street, SE, Charleston, West Virginia 25304-2345, Telephone (304) 926-0485.

1.2 Specifications

See Index

1.3 Addenda

| | |
|-----------|------------|
| No. _____ | Date _____ |
| No. _____ | Date _____ |
| No. _____ | Date _____ |
| No. _____ | Date _____ |

2.0 CORRELATION OF DOCUMENTS

- 2.1** The intent of the contract documents is to include all labor, materials, equipment, operations and transportation necessary for the proper execution and completion of the work. The contract documents are complementary and what is required by one is required by all.
- 2.2** The Contractor shall carefully study and compare the contract documents and shall at once report to DEP any error, inconsistency or omission it may discover. Contractor shall not proceed with the work affected by such error, inconsistency, or omission until resolved to the satisfaction of itself and DEP.
- 2.3** The drawings and specifications are correlative and shall be accepted and used as a whole and not separately. Should any item be omitted from the drawings and be included in the specifications, and be required to complete the work under the contract, it shall be executed as if shown on both and contained in both; except that it is not intended that items or work not applicable or required be provided unless it is consistent therewith and reasonably inferable therefrom as being necessary to produce the intended results.
- 2.4** In case of disagreement or conflict between drawings and specifications, or inconsistencies, errors, or if omissions be discovered in the drawings and specifications, or if in any part the meaning of either or both shall be considered obscure or uncertain, the Director or his/her authorized

ARTICLE III - GENERAL CONDITIONS

representative shall be immediately notified thereof. No work so affected by such circumstances shall proceed until the Director or his/her authorized representative renders a decision and/or interpretation thereon. Large scale drawing details shall take precedence over drawings of lesser scale. Words and abbreviations which have well known technical or trade meanings are used in the contract documents in accordance with such recognized meanings.

3.0 EXAMINATION OF PREMISES

- 3.1** Before submitting proposals for the work, each bidder will be held to have examined the premises and satisfied itself as to the existing conditions under which it will be obliged to operate, or that will in any manner affect the work under the contract. Bidders shall have become familiar with the drawings and specifications and have compared them with existent conditions.
- 3.2** By executing the contract, Contractor represents that it has visited the site, familiarized itself with the local conditions under which the work is to be performed, and correlated its observations with the contract documents. No allowance will subsequently be made by reason of neglect or error on the part of the Contractor for failing to inform itself of the requirements and conditions contained herein.

4.0 MATERIALS & WORKMANSHIP

- 4.1** All installed materials and equipment shall be new, and all materials, equipment, and workmanship shall be of kind and type specified, and in all cases, be of good quality. Contractor shall, if required, furnish satisfactory evidence as to kind and quality of its materials, equipment and workmanship.
- 4.2** The Contractor shall provide and pay for all labor, materials, equipment operations, tools, construction equipment, and machinery, transportation, water, heat, utilities, and other facilities and services necessary for the proper execution and completion of the work. The Contractor at all times shall supply sufficient skilled and other labor necessary to adequately fulfill the requirements of the drawings and specifications, and provide for expeditious and practicable execution of the work to its completion.
- 4.3** The installation or application of all devices and materials shall be in accordance with the manufacturer's installation application data, shop drawings and instructions, unless otherwise provided herein.

5.0 GUARANTEE & MAINTENANCE

- 5.1** The materials and workmanship affected by the Contractor are subject to the guarantee established by custom of the respective trades. In the absence

ARTICLE III - GENERAL CONDITIONS

of a trade guarantee custom or a special guarantee provision, the work, both as to the materials and workmanship, shall upon acceptance of final payment by the Contractor be considered guaranteed by the Contractor for one (1) year from the date of the acceptance of the work. Neither the final acceptance nor the final payment shall relieve the Contractor of responsibility for negligence or faulty materials, and for defects appearing within the guarantee period shall be remedied at the expense of the Contractor upon written notice.

- 5.2 During the one-year guarantee period, the Contractor will maintain the project to the conditions existing at the date of the acceptance of the work. Any failures due to the negligence or workmanship of the Contractor in any of the work which develop during the guarantee period shall be corrected by the Contractor at its expense.
- 5.3 The one-year guarantee period shall not be construed as being an extension of the performance time allotted for work under the contract.
- 5.4 Guarantees concerning revegetation may be further defined in the technical specifications contained herein.

6.0 SUPERVISION & CONSTRUCTION PROCEDURES

- 6.1 The Contractor shall supervise and direct the work, using its best skill and attention. It shall be responsible for all construction means, methods, techniques, and procedures, coordinating all portions of the work, and for cooperating with appropriate DEP personnel and with other contractors in every way possible.
- 6.2 The Contractor shall be responsible to DEP for the acts and omissions of its employees, its subcontractors and their agents or employees, and other persons performing any of the work under a contract with the Contractor.
- 6.3 The Contractor will be supplied with five (5) copies of the plans and specifications. It shall have available on the work site at all times one (1) copy of said plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

7.0 PERMITS, LAWS, REGULATIONS, & RIGHTS OF ENTRY

- 7.1 As indicated in Section 13 of the Special Provisions, the WVDEP-AML has obtained a Construction Storm Water General Permit for this project from WVDEP Division of Water and Waste Management (WVDEP DWWM). The registration for this reclamation project will be modified to include the Contractor as Co-Applicant #1, with the WVDEP-AML being Co-Applicant #2. As such, the Contractor shall assume responsibility for compliance with the terms and conditions of the permit including modifications and any future correspondence such as registration renewal invoices, inspection reports, and notices of violation shall be forwarded to the Contractor. Upon award of the contract, the Contractor shall complete a Co-Applicant #1 signature page and submit the completed form to WVDEP-AML prior to scheduling a Pre-Construction Conference.

Upon receipt of the completed form, WVDEP-AML will request the WVDEP DWWM to modify the existing NPDES registration for this project to make the Contractor the Co-Applicant #1 to the permit.

ARTICLE III - GENERAL CONDITIONS

The WVDEP DWWM will notify the Contractor and WVDEP-AML when the successful transfer of registration under WV/NPDES Storm Water Construction General Permit (No.WV0115924) is completed. A Notice to Proceed will not be issued until the successful transfer of registration has been completed. Once the transfer has been completed, the WVDEP will continue to be responsible for any modification fees and annual renewal fees incurred up until the date of the final inspection of the project that occurs after completion of construction activities at the site. The Contractor shall be responsible for any and all costs associated with violations and fines assessed against the project that are a result of the Contractor's negligence, carelessness, or failure to install permanent controls as part of the work as scheduled.

The Contractor shall apply for a Notice of Termination (NOT) from WVDEP DWWM via the Construction Storm Water website <http://www.dep.wv.gov/Programs/stormwater/csw/Documents/Construction> upon completion of construction activities at the site. The NOT shall be issued by WVDEP DWWM upon completion of the project. The Contractor will continue to be bound by the terms and conditions of the permit until the NOT has been approved by WVDEP DWWM. Once the project is complete, the Contractor will still bear responsibility for the NPDES registration until a NOT is received from the WVDEP DWWM.

- 7.2 The Contractor shall comply with all laws, ordinances, rules, orders and regulations relating to the performance of the work, the protection of adjacent property, the maintaining of passageways, guard fences, or other protective facilities.
- 7.3 All applicable Federal and State laws and regulations, municipal ordinances, and the rules and regulations of all public authorities having jurisdiction over construction of the project shall apply to the contract throughout, and are incorporated herein by reference.
- 7.4 DEP shall be responsible for obtaining all construction rights of entry for the project unless otherwise provided for in the Construction Specifications.
- 7.5 The Contractor agrees to indemnify and hold harmless the DEP from all liability and/or damages resulting from the Contractor's use of property for which the Contractor was to obtain rights of entry for borrow, disposal, access or other purposes. Said indemnification shall include, but is not limited to, liability and damages resulting from the Contractor's failure to obtain any or not all the right of entry; failure to utilize appropriate language in the right of entry agreements; or failure to obtain the permission and signatures of all persons or entities holding a legal interest in the subject property(ies) covered by the rights of entry.
- 7.6 All right of entry agreements the Contractor obtains for borrow, disposal, access or other purposes for this project shall include a provision requiring the property owner to indemnify and hold harmless the DEP for the Contractor's actions and any injury or damages whatsoever resulting from the Contractor's use of the property.


ARTICLE III - GENERAL CONDITIONS

8.0 SAFETY REQUIREMENTS

- 8.1 Particular attention is directed to the "West Virginia Safety Code for Building Construction" as published by the West Virginia Department of Labor. Observance of and compliance with said laws, regulations and codes shall be solely with and without qualification the responsibility of the Contractor.
- 8.2 The Contractor, subcontractors, other contractors and all employees and workers shall comply with the provisions of the Occupational Safety and Health Act of 1970, Public Law 91-596. The Contractor shall be held liable to DEP for any health and safety infractions, on the Contractor's part, which cause DEP to receive a citation and/or fine from any local, State or Federal agency. Actual costs involved will be paid by the Contractor to the satisfaction of DEP.

9.0 PROTECTION OF PERSONS & PROPERTY

- 9.1 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.
- 9.2 Safety of Persons and Property: The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection, preventing damage, injury, or loss to:
- (a) All employees on the work, and all other persons who may be affected thereby;
 - (b) All the work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor, or any of its subcontractors or their employees or subcontractors; and
 - (c) Other property on the site or adjacent thereto, including, but not limited to, paving, roadways, structures, utilities and permanent property boundaries, monuments or markers not designated for removal, or relocation, or replacement in the course of construction. Any damage to these items shall be repaired or replaced at the expense of the Contractor and to the satisfaction of DEP.

| | | |
|---|---------------------------------------|---|
|  | Co-Applicant #1: | New NPDES Storm Water Construction Project Name: |
| | Co-Applicant #1 Signature Page | |

BY COMPLETING AND SUBMITTING THIS APPLICATION, I HAVE REVIEWED AND UNDERSTAND AND AGREE TO THE TERMS AND CONDITIONS OF THE GENERAL PERMIT ISSUED ON DECEMBER 5, 2012. I UNDERSTAND THAT PROVISIONS OF THE PERMIT ARE ENFORCEABLE BY LAW. VIOLATION OF ANY TERM AND CONDITION OF THE GENERAL PERMIT AND/OR OTHER APPLICABLE LAW OR REGULATIONS CAN LEAD TO ENFORCEMENT ACTION.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THIS FORM AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRING OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

 (CO-APPLICANT #1 SIGNATURE)

Print Name: _____
 Print Title: _____
 Date: _____

PRIOR TO FILING THIS APPLICATION, YOU MAY WISH TO OBTAIN A COPY OF THE LEGISLATIVE RULES OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, TITLE 47, SERIES 26, WATER POLLUTION CONTROL PERMIT FEE SCHEDULE IN ORDER TO DETERMINE THE APPROPRIATE PERMIT APPLICATION FEE REQUIRED TO ACCOMPANY YOUR SUBMISSION OF THIS APPLICATION. YOU CAN OBTAIN A COPY OF THE REGULATION FROM THE SECRETARY OF STATE'S OFFICE, STATE CAPITOL BUILDING, CHARLESTON, WV 25305. HOWEVER, YOU MAY WISH TO USE THE TABLE FOUND IN ITEM V. OF THE ATTACHED INSTRUCTIONS.

ALL SPILLS OR ACCIDENTAL DISCHARGES ARE REQUIRED TO BE REPORTED IMMEDIATELY TO THE EMERGENCY RESPONSE SPILL ALERT SYSTEM TOLL FREE TELEPHONE NUMBER 1-800-642-3074. CALLS FROM OUT OF STATE SHOULD BE MADE TO 304-348-8899.

ARTICLE III - GENERAL CONDITIONS

- 9.3 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, and lawful orders of any public authority, bearing on the safety of persons or property, or their protection from damage, injury, or loss.
- 9.4 The Contractor shall erect and maintain, as required by existing conditions and progress of the work, all reasonable and adequate safeguards for safety and protection. It shall post danger signs and provide other warnings as required against hazards and dangers to persons and property.
- 9.5 In case of an emergency which threatens injury, loss of life and/or damage to property, the Contractor will be permitted to act, without prior instruction from the Construction Administrator, in a diligent manner. It shall notify the Construction Supervisor immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Construction Supervisor for verification and approval by the Construction Administrator.

Where the Contractor has not taken action, but has notified the Construction Administrator of an emergency threatening injury to persons or damage to the work or any adjoining property, it shall act as instructed or authorized by the Construction Administrator.

The amount of reimbursement claimed by the Contractor for work arising out of any emergency situation shall be determined by the Director or his/her authorized representative.

- 9.6 The Contractor shall be responsible for the verification of existing utilities that may be affected by its work in the project area. It shall be held responsible for any damage to and for maintenance and protection of existing utilities and structures during the performance of the work.

10.0 INSURANCE & WORKER'S COMPENSATION

10.1 Contractor's and Subcontractor's Public Liability, Vehicle Liability and Property Damage Insurance.

The Contractor shall maintain insurance as follows:

- (a) Contractor's Public Liability Insurance and Comprehensive Vehicle Liability Insurance shall be in an amount not less than \$2,000,000.00 for bodily injury and property damage for each occurrence and not less than \$2,000,000.00 aggregate.

The required insurance must be written by a company or companies licensed to do business in West Virginia at the time the policy is issued and the policy must be countersigned by a licensed resident agent.

- (b) Contractor shall either (1) require each of the subcontractors to procure and to maintain, during the life of its subcontract, subcontractor's Public Liability and Property Damage Insurance of the type and in the same amounts as specified in paragraph (a) above, or (2) insure the activities of its subcontractors in its own policy.

ARTICLE III - GENERAL CONDITIONS

Contractor agrees to indemnify and hold harmless DEP from all liability for personal injury, including death resulting therefrom, and against all liability for property damage sustained by any person or persons, including persons employed by Contractor or subcontractors, which is caused in whole or in part by an act or omission, negligent or otherwise, of the Contractor, its agents, servants, or employees, and to assume the defense of any action brought by such persons to recover damages, and to pay all costs and expenses, including attorney's fees, incurred by DEP as result thereof.

Each party to the contract shall promptly notify the other of the assertion of any claim against which such party is held harmless pursuant to this Section, shall give such other party the opportunity to defend any such claim, and shall not settle any such claim without approval of the indemnifying party.

10.2 Proof of Carriage of Insurance.

The Contractor shall provide DEP, before work commences, with certificates issued by the insurance company or companies issuing the insurance policies required by this Section. The certificates shall show the type, amount, class of operations covered, effective dates, and dates of expiration of such policies. Such certificates shall provide that written notice shall be given to DEP prior to expiration, cancellation, or modification of any such policy, and shall contain substantially the following representation: "The insurance covered by this certificate will not be canceled, or materially modified or altered, except after ten (10) days written notice has been verified as received by the West Virginia Department of Environmental Protection".

10.3 Worker's Compensation Insurance.

All employees of the Contractor, and of subcontractors engaged in the work of this contract, shall be covered by West Virginia Worker's Compensation Insurance. Certificates shall be provided to DEP by the Contractor and subcontractors showing compliance with the Worker's Compensation Laws of West Virginia.

RTICLE III - GENERAL CONDITIONS

11.0 LABOR LAWS, ORDINANCES, WAGES, AND OTHER CONDITIONS

11.1 The Contractor shall obey and abide by all laws of the State of West Virginia, particularly with respect to the carrying out of public improvements.

The Contractor shall not pay less than the established prevailing minimum wage rate for each particular class of employment in the county in which the work is being performed.

ARTICLE III - GENERAL CONDITIONS

11.2 During the performance of this contract, the Contractor agrees as follows:

- (a) **The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notice, to be provided by the contracting officer, setting forth the provisions of this nondiscrimination clause.**
- (b) **Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color or national origin.**
- (c) **Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, a notice, to be provided by the agency contracting officer, advising the labor union or worker's representative of the Contractor's commitments under Section 202 of Presidential Executive Order #11246 of September 24, 1965 (hereinafter "Executive Order #11246"), as amended by Presidential Executive Order #11375 and supplemented by U.S. Department of Labor regulations 41 CFR Part 60 and shall post copies of the notice in conspicuous places available to employees and applicants for employment.**
- (d) **Contractor will comply with all provisions of Executive Order #11246, and with all of the applicable rules, regulations, and relevant orders of the U.S. Secretary of Labor (hereinafter "Secretary of Labor").**
- (e) **Contractor will furnish all information and reports required by Executive Order #11246, and by the applicable rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders. These provisions shall also apply to DEP or employees of the Federal Government or their designated representatives for the purpose of making audits, examinations, excerpts, or transcriptions.**
- (f) **In the event of the Contractor's noncompliance with these nondiscrimination clauses, this contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order #11246, and such other sanctions may be imposed and remedies invoked as provided in Executive Order #11246, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.**

ARTICLE III - GENERAL CONDITIONS

- (g) **The Contractor will include the provisions of these paragraphs (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order #11246, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontractor or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the Contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request DEP to enter into such litigation to protect the interests of DEP.**
- (h) **Copeland "Anti-Kickback" Act. Contractor or Subcontractor shall comply with the Copeland "Anti-Kickback" Act (18 USC 874) as supplemented in U.S. Department of Labor regulations (29 CFR Part 3). Said Act provides that each Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public works, to give up any part of the compensation to which it is otherwise entitled. The Contractor shall report all suspected or reported violations to DEP.**
- (i) **Clean Air & Water Acts. Should the amount of this contract exceed one-hundred thousand dollars (\$100,000.00), compliance will be required with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 USC 1857[h]), Section 508 of the Clean Water Act (33 USC 1368), Presidential Executive Order #11738, and Federal Environmental Protection Agency regulations (40 CFR Part 15), which prohibit the use under non-exempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities. Contractor shall report violations to DEP and to the U.S. EPA Assistant Administrator for Enforcement (EN-329).**
- (j) **Energy Policy & Conservation Act. The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act, Public Law 94-163.**
- (k) **Access to Records. DEP, the U.S. Department of Interior's Office of Surface Mining Reclamation & Enforcement, and the U.S. Comptroller General or their duly authorized representatives shall have access to any books, papers, and records of the Contractor which are directly pertinent to that specific contract, for the purpose of making audits, examinations, excerpts, and transcriptions.**
- (l) **Maintenance of Records. The Contractor shall maintain all required records for three (3) years after DEP processes final payments and all other pending matters are closed.**
- (m) **Termination of Contract by DEP. This contract may be cancelled in whole or in part in writing by the Director of Purchasing, without prejudice to any other right or remedy it may have, provided that the contractor is given not less than thirty (30) calendar days written notice, (delivered by certified mail, return receipt requested) of intent to terminate.**

ARTICLE III - GENERAL CONDITIONS

- (n) **Legal Remedies.** Unless otherwise provided by law or elsewhere in this contract, all claims, counter-claims, disputes and other matters in question between DEP and the Contractor arising out of, or relating to, this contract or the breach of it will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State of West Virginia.

11.3 **Wages.**

Attention is called to the prevailing rates of wages to be paid for labor on public improvements in Taylor County, West Virginia, as determined by the West Virginia Department of Labor. A copy of wage rates shall be posted in a conspicuous location on the job site. Copies of the wage rates are included herein, however, it is the responsibility of the Contractor to pay the wage rate in effect when the project was bid. The Contractor is to maintain and have available for inspection by DEP, upon request, certified copies of its payrolls.

The contractor/subcontractors shall pay the higher of the U.S. Department of Labor Davis-Bacon Act or the WV Prevailing wage rate as established for various county, pursuant to West Virginia Code 21-5A, Et, Seq. and 42CSR7 Rules & Regulations for the WV Prevailing Wage Act. For prevailing wage rates, please refer to <http://www.sos.wv.gov>

12.0 **SUBCONTRACTORS**

- 12.1 Unless otherwise required by the contract documents, the Contractor, as soon as practicable after award of the contract, shall furnish DEP in writing the names of subcontractors (including those who are to furnish materials or equipment fabricated to special design) proposed for performing portions of the work.
- 12.2 DEP reserves the right to disapprove any proposed subcontractor whose record of performance does not establish its experience, competence, and financial ability to perform the work for which it is proposed. Nothing contained in the contract documents shall create any contractual relation between any subcontractor and DEP.

13.0 **TIME**

- 13.1 The date of commencement of work is the date established in a written "Notice to Proceed" issued by DEP to the Contractor. The date of completion shall be the date that DEP finds the work acceptable under the contract documents and the contract fully performed.

ARTICLE III - GENERAL CONDITIONS

13.2 Delays & Extensions of Time.

- (a) It is agreed that if the Contractor should be unavoidably delayed in fulfilling its obligations under this contract by acts of Providence or general strikes, or by Court injunctions, or by stopping of the work by DEP because of any Contractor toward final completion of the work hereunder, DEP may require the Contractor to prepare an itemized estimate of the amount of work performed, and material and equipment stored under the contract since the date of the last preceding estimate and Application for Payment. DEP may request that the Contractor submit such estimate along with supporting documentation in the form of certified payrolls, material invoices, weight slips, and Applications for Payment. Contractor is to maintain and have available such records for inspection by DEP upon request.
- (b) Upon approval by DEP of the Application and Certificate for Payment, DEP shall, as soon thereafter as practicable, process for the Contractor as a progress payment a sum equal to the contract value of the work performed since the last preceding estimate and Application for Payment in accordance with Paragraphs 14.4 and 14.5 of this Section, less the aggregate of previous payments.
- (c) No Certificate for a progress payment, nor any progress payment, shall constitute acceptance or be deemed or construed as acceptance of any part of the work not in accordance with the contract documents.
- (d) The Contractor warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment, whether incorporated in the project or not, will pass to DEP upon the receipt of such payment by the Contractor, free and clear of all liens.

13.3 Progress Schedule.

The Contractor, immediately after being awarded the contract, shall prepare and submit, for DEP's information, an estimated progress schedule for the work. Such progress schedule shall be related to the entire project to the extent required by the contract documents, and shall provide for expeditious and practicable execution dates of the various stages of construction and may be revised as required by conditions of work, subject to DEP's approval.

14.0 PAYMENTS & COMPLETION

14.1 Contract Sum.

The contract sum as stated in the Contractor's executed Contract Acceptance Form, including any authorized adjustment(s) thereto, is the total amount payable by DEP to the Contractor for the performance of the work under the contract documents.

ARTICLE III - GENERAL CONDITIONS

14.2 Schedule of Values.

Before submitting its first Application for Payment, the Contractor shall submit to DEP a schedule of values allocated to the various portions of the work, prepared in such form and supported by such data to substantiate its accuracy, as DEP may require. This schedule shall be used only as a basis for the Contractor's Applications for Payment.

14.3 Progress Estimates, Applications for Payment.

- (a) On the fifteenth (15th) and thirtieth (30th) day of each month during which progress has been made on the work under the contract by the Contractor toward final completion of the work hereunder, DEP may require the Contractor to prepare an itemized estimate of the amount of work performed since the date of the last preceding estimate and Application for Payment. DEP may request that the Contractor submit such estimate along with supporting documentation in the form of certified payrolls (not to include social security numbers), material invoices, weight slips, and Applications for Payment. Contractor is to maintain and have available such records for inspection by DEP upon request.
- (b) Upon approval by DEP of the Application and Certificate for Payment, DEP shall, as soon thereafter as practicable, process for the Contractor as a progress payment a sum equal to the contract value of the work performed since the last preceding estimate and Application for Payment, in accordance with Paragraphs 14.4 and 14.5 of this Section, less the aggregate of previous payments.
- (c) No Certificate for a progress payment, nor any progress payment, shall constitute acceptance or be deemed or construed as acceptance of any part of the work not in accordance with the contract documents.
- (d) The Contractor warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment, whether incorporated in the project or not, will pass to DEP upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances, and that no work, materials, or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the work at the site or furnishing materials and equipment for the project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the Contractor or otherwise imposed by the Contractor or such other person.

ARTICLE III - GENERAL CONDITIONS

14.4 Payments Withheld.

The Director may decline to approve an estimate or Application for Payment, to the extent necessary to protect DEP from loss because of:

- (i) Unsatisfactory, unrepresentative, and unverified amounts and items included in progress estimates of Paragraph 14.3(a) above.
- (ii) Unfulfilled provisions of Paragraphs 14.3(d) above.
- (iii) Defective work not remedied.
- (iv) Unsatisfactory performance of the work by the Contractor.
- (v) Failure of the Contractor to make payments properly to subcontractors, or for labor, materials, or equipment.
- (vi) Reasonable doubt that the remaining work can be completed for the unpaid balance of the contract sum.
- (vii) Reasonable indication that the work will not be completed within the contract time for completion.
- (viii) Third party claims filed, or reasonable evidence indicating probable filing of such claims.
- (ix) Damage to another contractor.

When the above grounds under 14.4 (i)-(ix) are removed, payment shall be approved for the amounts that were withheld because of them.

14.5 Final Completion & Final Payment.

- (a) Upon notice from the Contractor that the work is ready for final inspection, the Construction Supervisor will promptly make such inspection. If the Construction Supervisor upon his/her inspection finds the work acceptable under the contract documents and the contract fully performed, the Contractor shall submit a Final Estimate Application and Certificate for Payment to DEP for processing. Also, final quantity calculations shall be submitted to DEP at the final inspection conference by the Contractor.
- (b) Final payment to the Contractor will be processed by DEP upon fulfillment of the provisions of the contract documents and the conditions thereof.

ARTICLE III - GENERAL CONDITIONS

- (c) **The processing of final payment and the processing of payment of retained percentage shall constitute a waiver of all claims by DEP except those arising from:**
 - (i) **Unsettled liens.**
 - (ii) **Faulty or defective work appearing after final completion.**
 - (iii) **Failure of the work to comply with requirements of the contract documents.**
 - (iv) **Terms of any special warranties required by the contract documents.**
- (d) **The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment. No payment, however, final or otherwise, shall operate to release the Contractor or its sureties from any obligation under the contract documents, or the Performance Bond, and the Labor and Material Payment Bond. (See 15.1 below.)**

14.6 Application for Payment Forms.

Bound herewith on the following pages are sample Application and Certificate for Payment forms which the Contractor shall use in the submittal of progress estimate Applications for Payment to DEP.

APPLICATION AND CERTIFICATE FOR PAYMENT

Project Name: _____

Application No: _____

Contractor: _____

Application Date: _____

Address: _____

Performance Period From: _____ To: _____

ATTN (AML&R Inspector): _____

CHANGE ORDER SUMMARY

| Change Order Number | Approved (date) | Deductions | |
|---------------------|-----------------|---------------|-----|
| | | Additions \$+ | \$- |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Application is made for payment, as shown below, in connection with contract No. _____
 Sheet is attached. The present status of the account for this contract is as follows:

ORIGINAL CONTRACT SUM \$ _____

Net Change by Change Orders \$ _____

CONTRACT SUM TO DATE \$ _____

TOTAL COMPLETED & STORED TO DATE \$ _____
 (Column "G" on Continuation Sheet)

LESS PREVIOUS CERTIFICATES FOR PAYMENT \$ _____

CURRENT PAYMENT DUE \$ _____

Items listed hereon conform to specification, were received & are approved for payment.

| Date: _____ | | Signed: _____, Inspector | | | | |
|-------------|----|--------------------------|-----|------------------|--------|----------|
| | | PO#: _____ | | | | |
| | | P#: _____ | | Office/App _____ | | |
| | | FEIN/SS#: _____ | | Date _____ | | |
| | | FIMS Vendor # _____ | | | | |
| FUND | FY | ORG | ACT | OBJ CODE | GRANT# | PROJECT# |
| 8708 | 20 | | 130 | 830 | | |

Total Completed & Stored to Date
 % COMPLETE:-----

Contract Sum to Date

Contractor: _____
 Original Signature (Blue Ink)

DEPARTMENT OF ENVIRONMENTAL PROTECTION / OFFICE ABANDONED MINE LANDS & RECLAMATION

CONTINUATION SHEET OF APPLICATION AND CERTIFICATE FOR PAYMENT

Project Name: _____ Application No: _____

| BID SCHEDULE PER CONTRACT | | | | UNITS THIS APPLICATION | TOTAL COM |
|---------------------------|------------------|------------|---------------------|------------------------|-----------|
| ITEM # A | DESCRIPTION B | UNITS C | UNIT BID PRICE D | UNITS E | UNIT F |
| | | | | | |

SUBTOTAL OR TOTAL

ARTICLE III - GENERAL CONDITIONS

15.0 SURETY BONDS

15.1 The Contractor shall provide and deliver to DEP's Buyer at the Purchasing Division of the Department of Administration at the time of execution of the contract, and prior to the performance of the work, satisfactory surety bonds in an amount of not less than one hundred percent (100%) of the contract sum which shall include a Performance Bond and Labor and Material Payment

Bond, with sureties acceptable to DEP's Buyer, for the faithful fulfillment of the contract within the time specified. Said bonds shall also save and hold harmless DEP from all liens and claims arising out of the work. The Contractor shall pay for the bonds.

15.2 In the event that the surety on any contract or payment bond given by the Contractor becomes insolvent, or is placed in the hands of a receiver, or has its right to do business in this State revoked as provided by law, the Director may at his/her election, withhold payment or any estimate until the Contractor shall give a good and sufficient bond in lieu of the bond so executed by such surety.

15.3 Power of Attorney.

Attorneys-in-Fact who execute surety bonds issued pursuant to this Section must provide with each such bond a certified and properly executed Power of Attorney.

15.4 Bond Release.

All performance bonds shall be in effect throughout the one-year guarantee period set out in Section 5.0 above. Bonds will be released upon completion of the guarantee period and acceptance of the project by DEP.

16.0 CHANGES IN THE WORK

16.1 Change Orders.

(a) DEP, without invalidating the contract, may order or the Contractor may request changes in the work within the general scope of the contract consisting of additions, deletions, or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by change order, and shall be executed under the applicable conditions of the contract documents.

(b) A change order is a written order to the Contractor, properly executed as to form, issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or contract time. The contract sum or contract time may be changed only by a change order. A change order issued to the Contractor indicates its agreement therewith, including the adjustment in the contract sum or contract time set forth therein.

ARTICLE III - GENERAL CONDITIONS

- (c) **The cost or credit to DEP resulting from a change in the work shall be determined in one or both of the following ways:**
 - (i) **By mutual acceptance of a lump sum properly itemized.**
 - (ii) **By unit prices stated in the contract documents or subsequently agreed upon.**
- (d) **If none of the methods set forth in 16.1(c) above is agreed upon, or the work to be performed is agreed by DEP and Contractor to be of such nature that it cannot be estimated in advance with sufficient exactness for mutual agreement, then DEP may direct the Contractor to perform the work by change order in accordance with the following provisions, and the Contractor shall promptly proceed with the work:**
 - (i) **The work shall then be performed for an amount equal to the actual and necessary net cost to the Contractor for material and labor cost necessarily used therein, including all taxes and delivery costs for materials, all required extra costs on labor, plus cost for superintendents, power, use of tools, equipment, plant, plus the Contractor's normal charge under the contract for overhead and profit. The Contractor shall keep and present to DEP for inclusion in the change order complete itemized accounting for all materials, complete identified time and payment records for all employees, and workmen actually performing the work covered by the change order, the cost accounting of work performed by subcontractors for work covered by the change order. DEP reserves the right to require verifications of all costs covered under the change order.**
 - (ii) **The amount of credit to be allowed by the Contractor to DEP for any deletion or change which results in a net decrease in the contract sum will be the actual net cost. When both additions and credits covering related work or substitutions are involved in one change, the allowance for overhead and profit shall be figured only on the basis of the increase, if any, with respect to that change.**

16.2 The Director is the only individual who can execute a change order committing DEP to the expenditure of public funds. No person other than the Director or his/her authorized representative can make any changes to the terms, conditions, contract clauses, or other stipulations of this contract.

The Contractor shall not accept any instructions issued by any person other than the Director or his/her authorized representative regarding changes in the work under the contract which affect the contract sum and/or contract time. No information, other than that which may be contained in an authorized modification to this contract, duly issued by the Director or his/her authorized representative, which may be received from any person employed by DEP or otherwise, shall be considered grounds for deviation from any stipulation of the contract.

ARTICLE III - GENERAL CONDITIONS

16.3 Minor Changes in the Work.

Notwithstanding the requirements of Section 16.2 above, the Director or his/her authorized representative shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents. Such changes may be affected by field order or by other written order. Such changes shall be binding on DEP and the Contractor. The Contractor shall carry out such written orders promptly.

16.4 Omissions.

DEP may omit any item or items in the contract, provided that the notice of intent to omit such item or items is given to the Contractor before any material has been purchased or labor involved has been performed, and such omission shall not constitute grounds of any claim for damages or loss of anticipated profits. DEP may omit any item or items shown the estimate, at any time, by agreeing to compensate the Contractor for the reasonable expense already incurred and to take over at actual cost any unused material purchased in good faith for use for the item or items omitted.

17.0 UNCOVERING & CORRECTION OF WORK

17.1 Uncovering of Work.

- (a) If any work should be covered contrary to the request of DEP, it must, if required by DEP, be uncovered for its observation and be replaced at the Contractor's expense.
- (b) If any other work has been covered which DEP has not specifically requested to observe prior to being covered, DEP may request to see such work and it shall be uncovered by the Contractor. If such work is found to be in accordance with the contract documents, the cost of uncovering and replacement shall, by appropriate change order, be charged to DEP. If such work is found not to be in accordance with the contract documents, the Contractor shall pay such costs unless it is found that such condition was caused by a separate contractor employed by DEP and in that event DEP shall be responsible for the payment of such costs.

17.2 Correction of Work.

The Contractor shall promptly correct all work rejected by DEP as defective or as failing to conform to the contract documents whether observed before or after final completion and whether or not fabricated, installed or completed. The Contractor shall bear all cost of correcting such rejected work. All such defective or

ARTICLE III - GENERAL CONDITIONS

non-conforming work shall be removed from the site if necessary, and the work shall be corrected to comply with the contract documents at no cost to DEP. If the Contractor fails to correct such defective or non-conforming work, DEP may correct it in accordance with Section 17.3 below or Section 11.2(m) of these General Conditions.

17.3 Acceptance of Non-Conforming Work.

If DEP prefers to accept non-conforming work, it may do so instead of requiring its removal and correction, in which case a change order will be issued to reflect an appropriate reduction in the contract sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

18.0 ASSIGNMENT OF CONTRACT

Contractor shall not assign or transfer this contract or sublet it as a whole without having first obtained the written consent of DEP to do so; and it is likewise agreed that the Contractor shall not assign legally or equitably any of the moneys payable to it under the contract, or its claim thereto, without having first obtained the written consent of DEP to do so.

ARTICLE IV - GENERAL REQUIREMENTS

ARTICLE IV - GENERAL REQUIREMENTS

Sections Included:

- 1.0 Summary of the Work**
- 2.0 Quality Standards, Approvals**
- 3.0 Superintendents, Coordination**
- 4.0 Project Meetings**
- 5.0 Authority & Duties of Inspectors**
- 6.0 Shop Drawings, Product Data, Samples**
- 7.0 Measurements, Manufacturer's Directions**
- 8.0 Lines, Levels, Grades, Layout**
- 9.0 Documents, Shop Drawings, Etc., at Site**
- 10.0 Storage of Materials**
- 11.0 Protection of Work, Damages**
- 12.0 Temporary Facilities**
- 13.0 Construction Sign**
- 14.0 Cleaning and Final Clean-Up**
- 15.0 Testing**
- 16.0 Project Completion - Certificates**

ARTICLE IV - GENERAL REQUIREMENTS

1.0 SUMMARY OF THE WORK

This Article briefly outlines and describes the work to be performed and is not intended to limit the faithful execution of the contract documents.

1.1 Work Included.

The scope of the work for this project, without attempting to restrict or limit the contractor's responsibility, consists of furnishing all plant, labor, materials, and equipment to construct abandoned mine drainage control structures described in the drawings and these specifications. The work shall include, but not be limited to, the following:

The three sites of the project encompass an old mine site that exhibits collapsed/draining portals with AMD seepage, standing water, vertical openings, old sediment ponds, subsidence features, strip mine highwalls mine spoil, and refuse. Remediation for the sites shall be governed by the contract documents. Other work shall include sediment and erosion control measures, maintenance and repair of existing roads and construction of temporary access roads.

ARTICLE IV - GENERAL REQUIREMENTS

2.0 QUALITY STANDARDS, APPROVALS

- 2.1 Notwithstanding reference in the specifications or on the drawings to any article, item, product, material, equipment, or system by name, brand, make, or manufacturer, such reference shall be intended and interpreted as establishing a standard of quality, and shall not be taken, regarded, or construed as limiting competition.
- 2.2 Any article, item, product, material, equipment, or system which will perform adequately and satisfactorily the duties imposed by the general design will be considered equally acceptable to that specified or referenced, providing the article, item, product, material, equipment, or system so proposed is equal in quality, substance, design, manufacture, function and performance as that specified or referenced, and adjudged and determined to be so in the opinion of the Construction Supervisor and is approved by him/her. The approval of the Construction Administrator is required before purchase and installation.

2.3 Approvals.

Where the term "of approved manufacture" appears in the specifications, or an "approved" or "approved as equal" article or item is referred to, it shall mean that the article, item, workmanship, or material must meet the approval of the Construction Supervisor.

3.0 SUPERINTENDENTS, COORDINATION

3.1 Superintendents.

The Contractor shall employ and keep a competent superintendent and assistants who shall be capable of effective communication as required on the job at all times and who shall give efficient supervision to the work, using his/her best skill and attention, and shall have knowledge and control of all trades. The superintendent shall be acceptable to the Construction Supervisor and shall not be changed without the Construction Supervisor's knowledge and consent. The Contractor also shall see that each respective sub-contractor provides a competent foreman for each trade.

3.2 Coordination.

The Contractor and each sub-contractor shall coordinate the work and operations and shall cooperate with and assist each other on the job for the successful execution of the work within trade jurisdictional rulings. Each shall study all drawings and specifications and shall perform all work which properly comes under jurisdiction of the trade he/she represents.

4.0 PROJECT MEETINGS AND CONFERENCES

- 4.1 The following meetings shall be scheduled and held prior to commencement of the project and during execution of the work. DEP will schedule such

ARTICLE IV - GENERAL REQUIREMENTS

meetings and advise all parties concerned by written notice of the date, time, and location of such meetings.

- (a) **Pre-Bid Conference.** Conference with Engineer, bidders and appropriate DEP personnel as necessary, and others directly concerned for explanation of bidding and contract documents, project site familiarization as required, and for answering questions pertinent to the project. **Attendance by bidders is mandatory in order to be eligible to bid on the project.**

A date and time will be set for the on-site mandatory Prebid Conference. All interested parties are required to attend this meeting. Failure to attend the mandatory pre-bid shall result in disqualification of the bid. No one person may represent more than one bidder.

An attendance sheet will be made available for all potential bidders to complete. This will serve as the official document verifying attendance at the mandatory pre-bid. Failure to provide your company and representative name on the attendance sheet will result in disqualification of the bid. The State will not accept any other documentation to verify attendance. The bidder is responsible for ensuring they have completed the information required on the attendance sheet. The Purchasing Division and the state agency will not assume any responsibility for a bidder's failure to complete the pre-bid attendance sheet. In addition, we request that all potential bidders include their e-mail address and fax number.

All potential bidders are requested to arrive prior to the starting time for the pre-bid. Bidders who arrive late, but prior to the dismissal of the technical portion of the pre-bid will be permitted to sign in. Bidders who arrive after conclusion of the technical portion of the pre-bid, but during any subsequent part of the pre-bid will not be permitted to sign the attendance sheet.

- (b) **Pre-Construction Conference.** Conference with Engineer, appropriate DEP personnel, Contractor, Sub-Contractors, and others directly concerned, after award of the contract and prior to commencement of construction, for discussion of the project, contract documents, scheduling, and for resolving questions concerning project execution and administration as required.

- (c) **Project Meetings.** Meetings shall be held at periodic intervals throughout the construction contract period for discussion of matters pertinent to the execution and administration of the project. The Construction Administrator, Engineer, Construction Supervisor, Inspector, Contractor and/or its Superintendent, Subcontractors, Project Foremen, as required, and others directly concerned, as necessary, shall attend the meetings.

5.0 AUTHORITY & DUTIES OF INSPECTORS

- 5.1 **The Inspector, as the Director's authorized representative, is authorized to make minor field changes to the plans and specifications that do not involve an increase or decrease in the contract sum or an increase or decrease in the contract time. The Inspector shall be authorized to inspect all work done, all material furnished, payroll records of personnel, material invoices and relevant data and records of the work, and the preparation, fabrication, or manufacture of the materials to be used. The Inspector is not authorized to revoke, alter, or waive any requirements of the plans and specifications that result in an increase or decrease in the amount of compensation due the Contractor or an increase or decrease in the contract time. The Inspector is authorized to call to the attention of the Contractor any failure of the work or materials to conform to the plans and specifications. The Inspector shall have the authority to reject materials or suspend the work until any questions at issue can be referred to and decided by the Construction Administrator.**

- 5.2 **The Inspector shall in no case act as foreman or perform other duties for the Contractor, nor interfere with the management of the work by the Contractor. Any advice which the Inspector may give the Contractor shall in no way be construed as binding the Construction Administrator in any way, or releasing the Contractor from fulfilling all of the terms of the contract.**

ARTICLE IV - GENERAL REQUIREMENTS

5.3 If the Contractor refuses to suspend operations on verbal order, the Inspector shall issue a written order giving the reason for ordering the work to stop. After placing the order in the hands of the person in charge, the Inspector shall immediately leave the job, and the Contractor shall cease all operations.

6.0 SHOP DRAWINGS, PRODUCT DATA, SAMPLES

6.1 Definitions.

- (a) "Shop drawings" are drawings, diagrams, schedules, and other data, prepared for the project by the Contractor, Sub-contractor, manufacturer, or supplier, to illustrate and/or install some portion of the work.
- (b) "Product data" are illustrative data, brochures, schedules, catalog cuts, charts, informative material and specifications to illustrate materials, articles, items, or products for use in some portion of the work.
- (c) "Samples" are physical examples which show and illustrate materials, finishes, equipment or workmanship of products proposed for use in some portion of the work.

6.2 Submittals.

- (a) The Contractor shall review, approve, and submit to the Construction Administrator with reasonable promptness, and in such sequence to cause no delay in the work, all shop drawings, product data, and samples required by the contract documents.
- (b) No shop drawings, product data, or samples shall be submitted to the Construction Administrator except by the Contractor, who shall, before submission, verify all materials, check all details, measurements, verify all field measurements and field construction conditions, and other job coordination requirements. Upon review, check, and approval by the Contractor, the Contractor shall place its stamp of approval thereon before submitting to the Construction Administrator.
- (c) The Contractor shall not be relieved of responsibility for any deviation from the requirements of the contract documents by the Construction Administrator's approval of shop drawings, product data, or samples, nor shall it be relieved of responsibility for errors or omissions therein.
- (d) Shop drawings, product data, and samples shall be submitted in sufficient number for all approvals, with a minimum of two (2) copies or samples being retained by the Construction Administrator, and a number of copies and samples being retained by the Contractor as required for the execution of its work.

ARTICLE IV - GENERAL REQUIREMENTS

- (e) No portion of the work requiring submission of a shop drawing, product data, or sample shall be commenced until the submittal has been approved by the Construction Administrator. All such portions of the work shall be in accordance with approved submittals.
- (f) Shop drawings, product data, and samples shall be submitted for work, systems, articles, items, and equipment as specified. Other additional shop drawings, product data, and samples as may be requested for the work by the Construction Administrator shall be submitted to him/her for approval.

7.0 MEASUREMENTS, MANUFACTURER'S DIRECTIONS

7.1 Measurements.

Before ordering any material, product, article, or doing any work, the Contractor shall take all necessary measurements at the project and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between actual dimensions and the dimensions indicated on the drawings. The Construction Administrator shall be notified of any differences found and work shall not proceed thereon until the Construction Administrator has rendered a decision.

7.2 Manufacturers' Directions.

All manufactured articles, items, products, material, and equipment shall be applied, installed, connected, erected, used, cleaned, conditioned and put into operation or use as directed by the manufacturer's printed instructions, unless specified otherwise herein. The Contractor shall be responsible for obtaining all such instructions.

7.3 Measurement of Quantities.

The Contractor shall be responsible for providing all necessary volumetric and weight measurement equipment necessary to measure quantities accurately for payment of contract unit items, and said equipment shall be subject to the Construction Administrator's approval. Volume and weight measurements shall be submitted to the Construction Administrator for approval.

8.0 LINES, LEVELS, GRADES, LAYOUT

8.1 Lines, Levels, Grades.

- (a) Control points have been established in the field and are shown on the plans whereby the Contractor can properly control the work contracted for under these specifications. Such stakes and markings which the Engineer may have set for either his/her own guidance shall be scrupulously preserved by the Contractor, or its employees. If any

ARTICLE IV - GENERAL REQUIREMENTS

action by the Contractor should result in the destruction of such stakes or markings, an amount equal to the cost of replacing same may be deducted from subsequent estimates due the Contractor at the discretion of the Construction Supervisor. The Contractor shall satisfy itself as to the accuracy of all measurements before constructing any permanent structure and shall not take advantage of any errors which may have been made in laying out the work. Should any discrepancies become evident between the plans and the Contractor's field survey, the Contractor shall immediately notify the Inspector. If these discrepancies will create a change in any item in the Contractor's accepted final bid, the DEP reserves the right to re-design or negotiate. Should the Contractor fail to make notification of these discrepancies, DEP will not be held liable for any changes in the original quantities.

- (b) The Contractor shall make all field measurements necessary for its work and shall be responsible for the accuracy of all dimensions, lines, levels, and grades. If a survey is required, it shall be performed at the expense of the Contractor. All survey work shall be performed by a West Virginia Registered Civil Professional Engineer or Licensed Land Surveyor who shall certify as to the accuracy of the survey to DEP.

9.0 DOCUMENTS, SHOP DRAWINGS, ETC., AT THE SITE

- 9.1 The Contractor shall maintain at the project site for DEP one (1) record copy of all drawings, specifications, addenda, change orders, and other modifications, in good order, marked currently to record all changes made during construction, and all approved shop drawings, product data, and samples, properly filed and referenced. All such documents and samples shall be delivered to the Construction Supervisor upon completion of the work.
- 9.2 The Contractor shall furnish the Inspector in writing two (2) sets of daily reports showing all personnel (by classification), equipment, and tools engaged in the work, for use in accounting records.
- 9.3 The Contractor shall be responsible for submitting a daily activity summary which shall be used to report progress of the various construction activities performed at the subject site. The summary report shall be submitted to the Inspector on a weekly basis on the prescribed forms. Processing invoices may be delayed if summary reports are not submitted.

10.0 STORAGE OF MATERIALS

- 10.1 The Contractor, under and with the approval, supervision, and direction of DEP, shall assume full charge of the area or areas of the project premises allocated for the storage of materials and equipment as required, allocating the necessary site space to any sub-contractor(s) for storage sheds and space for the storage of materials and equipment. Such arrangement of storage facilities

ARTICLE IV - GENERAL REQUIREMENTS

shall be orderly, convenient, shall not obstruct movement on the site, the work of others, or construction operations. All storage sheds, enclosures, and facilities shall fully protect the stored materials. The Contractor shall arrange with appropriate landowner(s) for any storage areas located outside of the project limits and such storage areas shall also be subject to DEP's approval.

- 10.2 All materials subject to damage by moisture, water, or weather shall be fully protected. All flammable, toxic, and explosive materials shall be safely stored in conformity with applicable safety requirements of State and Federal regulations and safety standards of the National Fire Protection Association.

11.0 PROTECTION OF WORK; DAMAGES

11.1 Protection and Replacement of Work.

- (a) The Contractor shall protect its work from damage of any kind until completion of construction. Each contractor or sub-contractor shall adequately protect all preceding work from damage caused by it or its work. Should any part of the construction be subject to freezing or exposure to the elements, the same shall be fully protected to prevent damage.
- (b) The Contractor and each sub-contractor shall provide protection against weather, frost, freezing, storms, and heat, to maintain all work, materials, installations, and equipment safe from injury and damage. The Contractor shall provide temporary covering and closures in the construction as required to protect it from damage by weather, until permanent construction provides such protection.
- (c) Damaged or defective work must be replaced; all other work injured or damaged in the replacing of such work or in any way incidental thereto must be brought back to its original condition or replaced by the Contractor performing the work, without additional cost to DEP.

11.2 Damages to Existing Work.

All masonry damage, glass breakage, and other damage caused to existing buildings and appurtenances by the Contractor or by other contractors in the performance of work shall be properly replaced or repaired at the option of DEP, without additional cost to DEP.

12.0 TEMPORARY FACILITIES

12.1 Job Utilities.

- (a) General. All concerned with providing temporary utilities for use on the project are advised to determine locations of sources of supply and the conditions under which services can be brought to points of use on the site.

ARTICLE IV - GENERAL REQUIREMENTS

- (b) **Drinking Water.** The Contractor shall arrange for drinking water and containers to be provided on the site.
- (c) **Utility Connections.** The Contractor is to furnish power, gas, compressed air and any other utilities required for its own use during construction. The Contractor shall remove all temporary wiring, switches, lights, piping and connections to service facilities used during construction. Such connections shall not be made without approval of the Inspector.
- (d) **Temporary Supports.** The Contractor shall provide such temporary supports as may be required during construction, including those necessary to ensure the stability of the proposed excavation.
- (e) **Equipment.** The Contractor shall furnish all special apparatuses, welding machines, air compressors, hoisting equipment, tools, implements, cartage, scaffolding, ladders, planks, acetylene gas, oxygen gas, expendable materials, temporary light and heat, construction materials, shims and all other materials that may be required for the proper execution of the work.
- (f) **Temporary Buildings.** The Contractor will furnish, place, and equip, at its own expense, and as it deems necessary, any portable construction building(s) such as a trailer, storage sheds or chemical sanitary facilities. These portable facilities must be within the designated project limits; otherwise, the Contractor is solely responsible for making necessary arrangements with the proper landowner when the buildings are set up outside of the project limits. The type and number of buildings are subject to the approval of the Inspector. All written instructions, orders, and other communication delivered to the temporary construction office set up on the site shall be considered as having been delivered to the Contractor itself. The Contractor shall provide and pay for its own fire protection, watchman, temporary utility hookups, etc. The Contractor will promptly remove from the project any office facilities, equipment or materials when so instructed by the Inspector.
- (g) **Sanitation Facilities.** The Contractor shall provide and pay for adequate temporary toilet facilities for personnel during the project construction period. Toilets shall be of types approved by DEP and the State Division of Health, and situated only in approved locations. The Contractor shall be responsible for operation and sanitary maintenance of the temporary toilets and shall have them removed upon completion of construction.

ARTICLE IV - GENERAL REQUIREMENTS

13.0 CONSTRUCTION SIGN

13.1 Work Required.

The work to be performed under this Section consists of providing all labor, material and equipment necessary to install a project sign as indicated on the detail included herein and as specified herein.

13.2 Materials.

- (a) Paint. Paint for the project sign shall be one (1) coat Exterior-Grade Wood Primer-Sealer, and two (2) coats Exterior Grade Low-Sheen Enamel by Glidden or another approved manufacturer.
- (b) Wood. Sign face shall be 3/4" Marine Exterior plywood, and posts and cross-brace shall be No. 2 Grade Pine or Fir, kiln dried and treated.
- (c) Hardware:
 - (1) All hardware shall be manufactured from good, commercial-quality material and meet all applicable ASTM standards.
 - (2) Spikes and nails shall be common wire-type and shall meet AISI steel specifications 1010 or 1020.
 - (3) All hardware shall be hot-dip galvanized in accordance with ASTM A-153.

13.3 Execution.

- (a) Project Sign. The sign board shall be cut to the dimensions shown on the detail herein. The sign shall be painted with one (1) coat of primer and two (2) coats of white enamel. All exterior cut edges shall be smooth sanded prior to painting. All edges shall be double primed. The letters, border and strips shall be painted as shown on the detail drawing. Posts and cross-brace shall be painted with two (2) finished coats of brown enamel.

The Contractor shall bolt the sign to posts and provide required cross-bracing. The posts and sign shall be erected and posts set in gravel base, as shown on the drawings. One (1) sign is required and is to be located at the discretion of the Inspector.

- (b) Payment. Payment for the work which shall include installation of the project sign shall be part of the lump-sum bid for "Mobilization".

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Office of Abandoned Mine Lands & Reclamation

Project Cost: \$XXX,XXX.00
Funding: US Department of the Interior – OSM with fees paid by the Coal Industry

Project Name:
DEP#

Contractor: Joe Smith Contracting

Project Start Date: 01/01/01

77 1/4"

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Office of Abandoned Mine Lands & Reclamation

27 3/4"

Project Cost: \$XXX,XXX.00
Funding: US Department of the Interior – OSM with fees paid by the Coal Industry

Project Name:
DEP#

18"

Contractor: Joe Smith Contracting

Project Start Date: 01/01/01

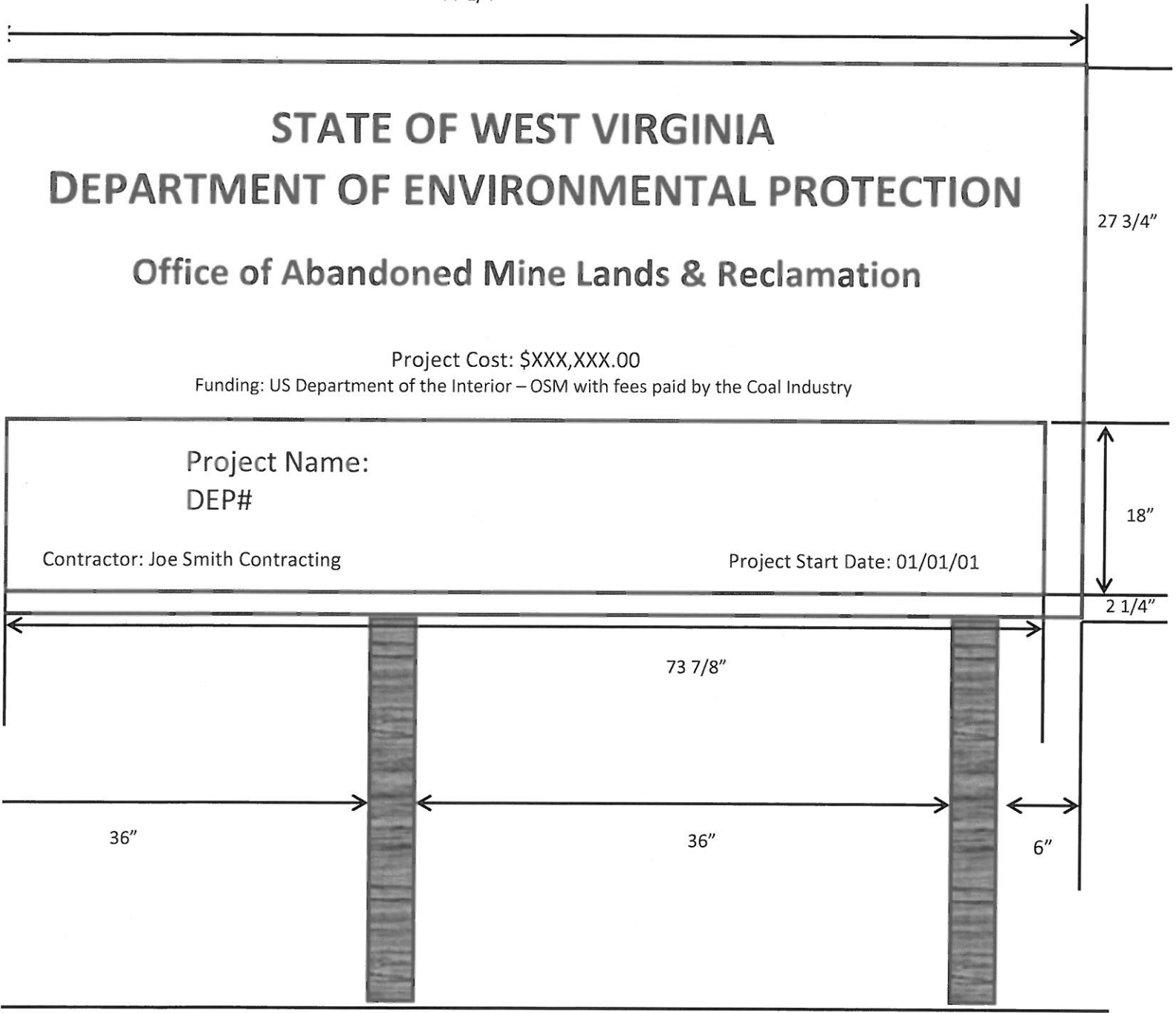
2 1/4"

73 7/8"

36"

36"

6"



96"

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Office of Abandoned Mine Lands & Reclamation

Project Cost: \$XXX,XXX.00

Funding: US Department of the Interior – OSM with fees paid by the Coal Industry

Project Name:

DEP#

Contractor: Joe Smith Contracting

Project Start Date: 01/01/01

81 3/8"

STATE OF WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Office of Abandoned Mine Lands & Reclamation

Project Cost: \$XXX,XXX.00

Funding: US Department of the Interior – OSM with fees paid by the Coal Industry

Project Name:

DEP#

Contractor: Joe Smith Contracting

Project Start Date: 01/01/01

6"

2 ¼"

1 ½"

2 ¼"

3 ¾"

2 ¼"

1 ½"

2"

3 ¾"

1 ½"

4 7/8"

2 ¼"

1 ½"

2 ¼"

4 7/8"

1 ½"

3 ¾"

be 3/4" by 4'X 8' marine plywood.

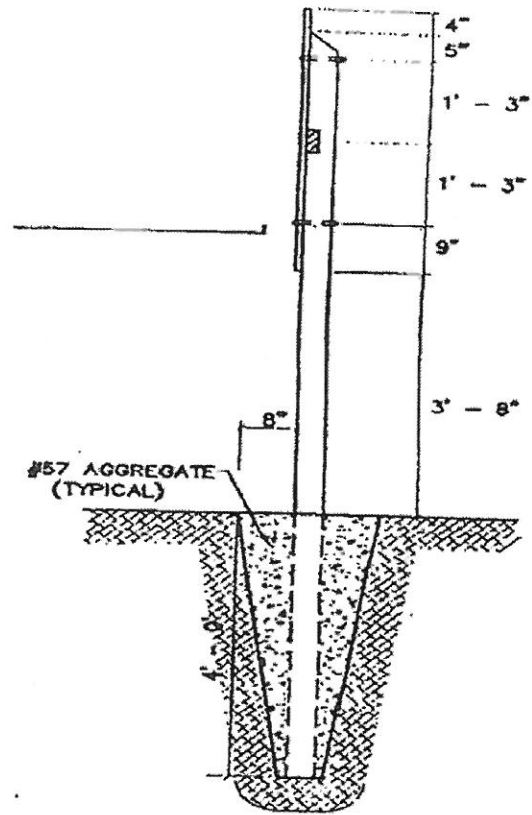
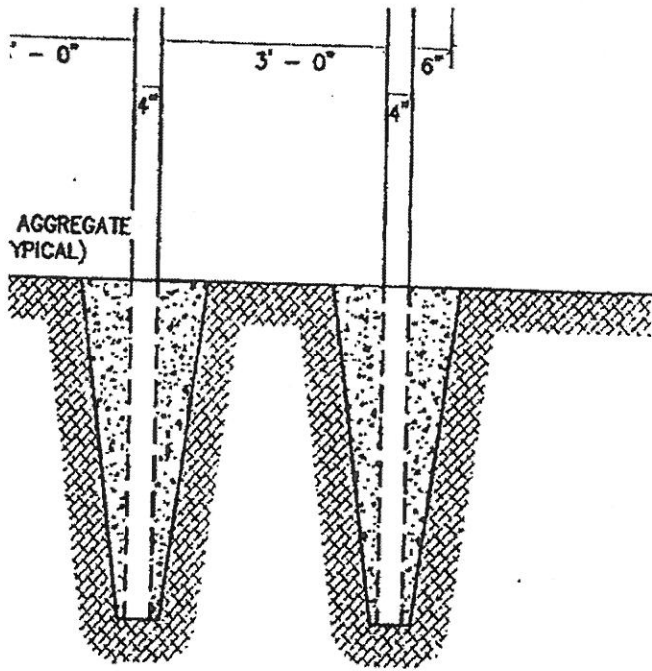
or is to be white and letter colors are to be dark green and sized as shown on the detail.

cross brace let into posts.

posts using 3/8"X 5" galvanized carriage bolt.

posts treated 4"X 4"X 12' and panted brown.

mined by WVDEP.



ARTICLE IV - GENERAL REQUIREMENTS

14.0 CLEANING & FINAL CLEAN-UP

14.1 Housekeeping - Periodic Cleaning.

The Contractor shall at all times keep the construction site free of accumulations of waste materials and rubbish caused by its operations. Periodically during the progress of the work, and also when directed to do so by DEP, the Contractor shall remove, or cause to be removed by sub-contractors responsible, accumulated waste materials, rubbish, and debris, and leave the construction area in good order.

14.2 Final Clean-Up.

The Contractor at all times shall dispose of all debris and waste resulting from work at the Contractor's dump site. The Contractor shall not put or spill any materials into any drainage system which would pollute area streams or waterways. The Contractor shall be liable for any stream pollution caused directly or indirectly by its own employees or those of its sub-contractors.

14.3 DEP's Right to Clean-Up.

Should disputes arise between Contractor and separate contractors, or sub-contractors as to responsibilities for cleaning-up, and refusals to do so result therefrom, DEP may perform the clean-up and charge the cost thereof to the Contractor, the contractors, or sub-contractors responsible therefor, as DEP shall determine fair and just.

15.0 TESTING.

15.1 When Testing Required.

Testing shall be performed as required by the specifications or ordered by the Construction Administrator in writing. The Construction Administrator will determine the need, location, extent, and time of any testing herein specified, or in addition to that which is herein specified.

15.2 Payment for Testing.

The Contractor shall select an independent testing laboratory or utilize a laboratory run by the Contractor, to perform all testing for compaction, concrete, and soils as specified herein. All laboratory reports must be signed by a registered professional engineer. The Contractor shall be responsible for testing payments as an incidental to the various items of the bid schedule. If the Contractor allows work to proceed beyond a testing point resulting in the disassembly of structures or the uncovering of work for testing, payment for such will be the responsibility of the Contractor at no extra cost to DEP.

ARTICLE IV - GENERAL REQUIREMENTS

16.0 PROJECT COMPLETION - CERTIFICATES

- 16.1 All certificates of testing, quality, compliance, and performance, as required, requested, and/or specified, shall be delivered to DEP upon delivery or completion of the work covered by the certificates.
- 16.2 All certificates of approval, compliance, and completion as required by codes, inspection and regulatory agencies, and local, State and Federal governmental authorities, shall be delivered to DEP upon completion of the work and inspections covered by such certificates.
- 16.3 The contractor shall submit to the WVDEP as built drawings certified by a Registered Professional Engineer identifying all changes occurring on the project. The drawings shall be of professional quality. Unsuitable drawings will be returned for revisions. These drawings shall be approved by WVDEP prior to scheduling a Final Inspection.

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ABANDONED MILE LANDS & RECLAMATION**

Report for Week Ending: _____ Project Name: _____
By: _____ Location: _____
Title: _____ Contractor: _____

Daily Activity Summary

| | |
|------------------|--|
| Sunday | |
| Monday | |
| Tuesday | |
| Wednesday | |
| Thursday | |
| Friday | |
| Saturday | |

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ABANDONED MILE LANDS & RECLAMATION**

Weekly Quantity Summary

Report By: _____

For Week Ending: _____

| Pay Item | Units | Quantity Performed |
|----------|-------|--------------------|
| | | |
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Attach any sheets applicable to this weeks work and check appropriate box.

- Change Orders
- Test Results
- Other (explain)

- Field Changes
- Explanation of work stoppages not due to weather

ARTICLE V - SPECIAL CONDITIONS

ARTICLE V - SPECIAL CONDITIONS

Sections Included:

- 1.0 Use of Minority, Women's, & Small Business Enterprises**
- 2.0 Erosion & Sediment Control**
- 3.0 Debarment and Suspension Requirements**
- 4.0 Certification Regarding Lobbying**

ARTICLE V - SPECIAL CONDITIONS

1.0 USE OF MINORITY, WOMEN'S, & SMALL BUSINESS ENTERPRISES

- 1.1 **Should the Contractor intend to sublet a portion of the work on this project, it shall seek out and consider minority, women's, and small business enterprises as potential sub-contractors. The Contractor shall contact minority, women's, and small businesses to solicit their interest, capability, and prices, and shall retain proper documentation to substantiate such contacts.**
- 1.2 **The Contractor will sign and provide the enclosed Minority, Women's and Small Business Affirmative Action Certification to DEP along with the name(s) of any subcontractor(s) it submits for approval.**

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CONSTRUCTION CONTRACTOR'S
MINORITY, WOMEN'S AND SMALL BUSINESS
AFFIRMATIVE ACTION CERTIFICATION**

We, _____, the undersigned, Construction Contractor on the Abandoned Mine Lands & Reclamation construction contract herein, intending to sub-contract a part of our contract work under Requisition No. _____, hereby certify as follows:

- 1) We will include qualified small, minority and women's businesses on solicitation lists;
- 2) We will assure that small, minority and women's businesses are solicited whenever they are potential sources;
- 3) We will, when economically feasible, divide total requirements into smaller tasks or quantities so as to permit maximum small, minority and women's business participation.
- 4) Where our requirements permit, we will establish delivery schedules which will encourage participation by small, minority and women's businesses.
- 5) We will utilize the services and assistance of the Small Business Administration, the Office of Minority Business Enterprise of the Department of Commerce and the Community Services Administration as required.

We understand that we may obtain the information required under the foregoing provisions from the Governor's Office of Community & Industrial Development's Small Business Development Center, 1115 Virginia Street, East, Charleston, West Virginia 25301, Phone 304/348-2960.

- 6) We will submit this certification to the Construction Supervisor when we submit proposed subcontractors for approval.
- 7) We agree that all documentation relative to affirmative action taken by us to seek out and consider the use of minority, women's and small business enterprises as subcontractors shall be made available for inspection by representatives of the West Virginia Department of Environmental Protection and the U.S. Office of Surface Mining Reclamation and Enforcement;
- 8) This certification is an integral part of our proposal for the construction contract.

Signed this _____ day of _____, 20__ .

Signature of Authorized Representative

Title

ARTICLE V - SPECIAL CONDITIONS

2.0 EROSION & SEDIMENT CONTROL

The manual entitled "West Virginia Department of Natural Resources Technical Handbook of Standards and Specifications for Erosion and Sediment Control", 1981, is incorporated herein by reference as a guide for erosion and sediment control, except that where any provision of said manual is in conflict with any special erosion and sediment control provision set out and contained in this specification book and/or in the plans for this project, the specification book and/or plans shall prevail and be followed.

**ASSURANCE REQUIREMENT REGARDING EQUAL EMPLOYMENT OPPORTUNITY
FOR VENDORS, SUPPLIERS AND CONTRACTORS ENGAGED IN
COMMERCIAL TRANSACTIONS WITH
THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

We, _____, the undersigned, desiring to avail ourselves of the benefits of engaging in commercial transactions with the West Virginia Department of Environmental Protection, hereby agree that:

- 1) All employment and personnel practices under this contract, Requisition No. _____, will be conducted without regard to race, sex, religion or national origin;
- 2) We will include in all recruitment advertisements the following wording:
"An Equal Opportunity Employer"; and
- 3) We will provide the Director of the Abandoned Mine Lands and Reclamation Division or his/her authorized representative, upon request, documentation that will enable him/her to judge the extent of our compliance with the requirements of Governor's Executive Order No. 4-65, of December 15, 1965.

Signed this ____ day of _____, 20__.

Signature of Authorized Representative

Title

ARTICLE V - SPECIAL CONDITIONS

3.0 GOVERNMENT-WIDE DEBARMENT & SUSPENSION REQUIREMENTS

U. S. Department of the Interior

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion

Lower Tier Covered Transactions

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction", "participant", "person", "primary covered transaction", "principal", "proposal", and "voluntarily excluded", as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal, that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Non procurement List (Tel.#).
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

U. S. Department of the Interior
Certification Regarding
Debarment, Suspension, Ineligibility and
Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 43 CFR Part 12, Section 12.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211). For assistance in obtaining a copy of the regulations, contact the U.S. Department of the Interior, Acquisition and Assistance Division, Office of Acquisition and Property Management, 18th and C Streets, N.W., Washington D.C. 20240.

(1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Name and Title of Authorized Representative

Signature **Date**

ARTICLE V - SPECIAL CONDITIONS
Instructions for Certification Regarding Lobbying

- 1. This certification and a disclosure form should be filed by each person as required, with each submission that initiates agency consideration of such person for: (1) award of a Federal contract, grant, or cooperative agreement exceeding \$100,000 or (2) an award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000.**
- 2. This certification and a disclosure form should be filed by each person as required, upon receipt by such person of (1) a Federal contract, grant, or cooperative agreement exceeding \$100,000, or (2) a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000, unless such person previously filed a certification, and a disclosure form, if required, at the time agency consideration was initiated.**
- 3. Any person who requests or receives from a person referred to in paragraphs (1) and (2) above: (1) a subcontract exceeding \$100,000 at any tier under a Federal contract; (2) a subgrant, contract, or subcontract exceeding \$100,000 at any tier under a Federal grant; (3) a contract or subcontract exceeding \$100,000 at any tier under a Federal loan exceeding \$150,000; or (4) a contract or subcontract exceeding \$100,000 at any tier under a Federal cooperative agreement, shall file a certification, and a disclosure form, as required, to the next tier above.**
- 4. All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraphs(1) or (2) above. That person shall forward all disclosure forms to the appropriate Bureau/Office within the Department of the Interior.**
- 5. Any certification or disclosure form filed under paragraph (4) above shall be treated as a material representation of fact upon which all receiving tiers shall rely. All liability arising from an erroneous representation shall be borne solely by the tier filing that representation and shall not be shared by any tier to which the erroneous representation is forwarded. Submitting an erroneous certification or disclosure constitutes a failure to file the required certification or disclosure, respectively. If a person fails to file a required certification or disclosure, the United States may pursue all available remedies, including those authorized by Section 1352, title 31, U.S. Code.**

**U. S. Department of the Interior
CERTIFICATION REGARDING LOBBYING**

This certification is required by Section 1352, title 31, U. S. Code, entitled "Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions."

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.**
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. To obtain a Standard Form LLL, contact DEP or the U.S. Office of Surface Mining, 603 Morris Street, Charleston, WV 25301, phone number 347-7158.**
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.**

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature _____ Date _____

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

0348-0046

(See reverse for public burden disclosure.)

| | | |
|--|---|--|
| 1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance | 2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award | 3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____ |
| 4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known: Congressional District, if known: 4c | 5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known: | |
| 6. Federal Department/Agency: | 7. Federal Program Name/Description: CFDA Number, if applicable: _____ | |
| 8. Federal Action Number, if known: | 9. Award Amount, if known: \$ _____ | |
| 10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI): | b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): | |
| 11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. | Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____ | |
| Federal Use Only: | | Authorized for Local Reproduction Standard Form LLL (Rev. 7-97) |

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

WAGE AND HOUR INFORMATION

PREVAILING WAGE RATES
can be obtained by contacting:

WV Division of Labor
Capitol Complex
Bldg. 6, Room 749B
Charleston, WV 25305

Phone: (304) 558-7890

Website: www.sos.wv.gov

CONSTRUCTION SPECIFICATIONS

July 2014

DEP16130

**SPECIAL PROVISIONS
AND
TECHNICAL SPECIFICATIONS**

for the

**EBENEZER RUN HIGHWALL #9
PROJECT**

Brooke County, West Virginia

Prepared for



**State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation**

Prepared by



Baker

Michael Baker Jr., Inc.
Beaver., Pennsylvania

ENGINEER'S ESTIMATE
Ebenezer Run Highwall #9 (DEP 16130)
 July-14

| ITEM NO. | ITEM | QTY | UNIT | UNIT PRICE | ITEM PRICE |
|----------|---|--------|-------------|------------|------------|
| 1.0 | MOBILIZATION AND DEMOBILIZATION (NOT TO EXCEED 10% OF TOTAL AMOUNT BID) | 1 | L.S. | \$42,979 | \$42,979 |
| 2.0 | CONSTRUCTION LAYOUT STAKES (NOT TO EXCEED 5% OF TOTAL AMOUNT BID) | 1 | L.S. | \$21,490 | \$21,490 |
| 3.0 | QUALITY CONTROL (NOT TO EXCEED 3% OF TOTAL AMOUNT BID) | 1 | L.S. | \$12,894 | \$12,894 |
| 4.1 | SITE PREPARATION (NOT TO EXCEED 10% OF TOTAL AMOUNT BID) | 1 | L.S. | \$42,979 | \$42,979 |
| 4.2 | TEMPORARY ACCESS ROAD | 240 | L.F. | \$21.00 | \$5,040 |
| 5.1 | SILT FENCE | 160 | L.F. | \$4.25 | \$680 |
| 5.2 | SUPER SILT FENCE | 230 | L.F. | \$10.00 | \$2,300 |
| 5.3 | STABILIZED CONSTRUCTION ENTRANCE | 1 | EA. | \$3,000.00 | \$3,000 |
| 5.4 | STRAW WATTLES | 11,178 | L.F. | \$2.75 | \$30,740 |
| 5.5 | SEDIMENT TUBE TRAPS | 7 | EA. | \$2,500.00 | \$17,500 |
| 5.6 | SEDIMENT TRAP | 3 | EA. | \$9,000.00 | \$27,000 |
| 5.7 | SEDIMENT BAFFLE | 270 | L.F. | \$25.00 | \$6,750 |
| 6.0 | REVEGETATION | 12.1 | Acre | \$2,500 | \$30,250 |
| 7.1 | 2 FT. BOTTOM TRAPEZOIDAL CHANNEL (2H:1V) | 2,758 | L.F. | \$9.00 | \$24,822 |
| 7.2 | 3 FT. BOTTOM TRAPEZOIDAL CHANNEL (3H:1V) | 710 | L.F. | \$11.00 | \$7,810 |
| 7.3 | OUTLET PROTECTION | 3 | EA. | \$1,500.00 | \$4,500 |
| 7.4 | LOW WATER CROSSING | 3 | EA. | \$3,000.00 | \$9,000 |
| 8.0 | UNCLASSIFIED EXCAVATION | 74,400 | C.Y. | \$3.50 | \$260,400 |
| | | | SUB TOTAL | | \$550,133 |
| | | | 10% CONT. | | \$55,013 |
| | | | GRAND TOTAL | | \$605,146 |

Ebenezer Run Highwall # 1 Project

DEP 16130

Contractor's Bid Sheet

Company Name: _____

Address: _____

The DEP reserves the right to request additional information and supporting documentation regarding unit prices when the unit price appears to be unreasonable.

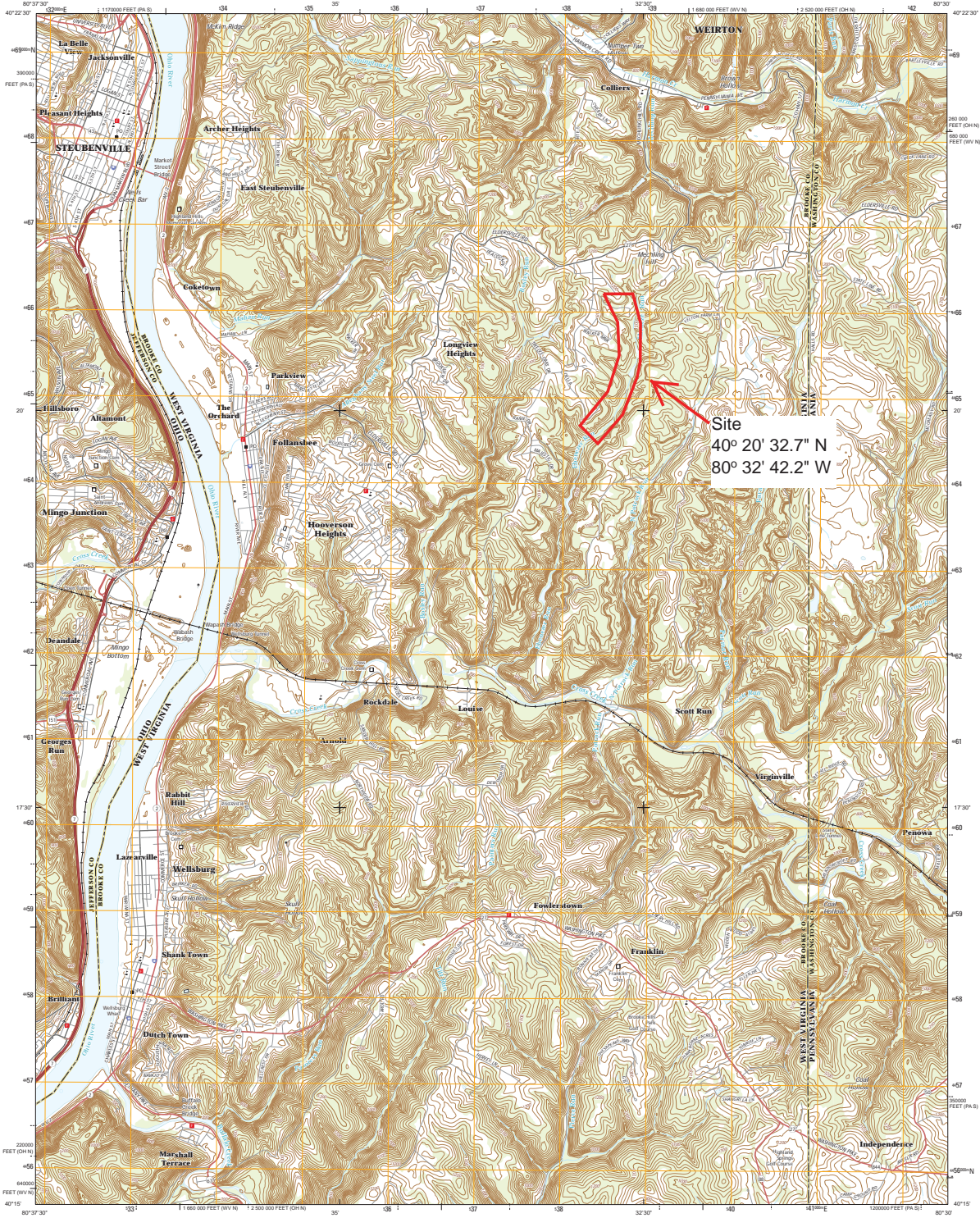
| ITEM NO. | QUANTITY | DESCRIPTION | UNIT PRICE | AMOUNT |
|--------------|-------------|---|------------|--------|
| 1.0 | 1 L.S. | MOBILIZATION AND DEMOBILIZATION (NOT TO EXCEED 10% OF TOTAL AMOUNT BID) | | \$ |
| 2.0 | 1 L.S. | CONSTRUCTION LAYOUT STAKES (NOT TO EXCEED 5% OF TOTAL AMOUNT BID) | | \$ |
| 3.0 | 1 L.S. | QUALITY CONTROL (NOT TO EXCEED 3% OF TOTAL AMOUNT BID) | | \$ |
| 4.1 | 1 L.S. | SITE PREPARATION (NOT TO EXCEED 10% OF TOTAL AMOUNT BID) | | \$ |
| 4.2 | 240 L.F. | TEMPORARY ACCESS ROAD | | \$ |
| 5.1 | 160 L.F. | SILT FENCE | | \$ |
| 5.2 | 230 L.F. | SUPER SILT FENCE | | \$ |
| 5.3 | 1 EA. | STABILIZED CONSTRUCTION ENTRANCE | | \$ |
| 5.4 | 11,178 L.F. | STRAW WATTLES | | \$ |
| 5.5 | 7 EA. | SEDIMENT TUBE TRAPS | | \$ |
| 5.6 | 3 EA. | SEDIMENT TRAP | | \$ |
| 5.7 | 270 L.F. | SEDIMENT BAFFLE | | \$ |
| 6.0 | 12.1 Acre | REVEGETATION | | \$ |
| 7.1 | 2,758 L.F. | 2 FT. BOTTOM TRAPEZOIDAL CHANNEL (2H:1V) | | \$ |
| 7.2 | 710 L.F. | 3 FT. BOTTOM TRAPEZOIDAL CHANNEL (3H:1V) | | \$ |
| 7.3 | 3 EA. | OUTLET PROTECTION | | \$ |
| 7.4 | 3 EA. | LOW WATER CROSSING | | \$ |
| 8.0 | 74,400 C.Y. | UNCLASSIFIED EXCAVATION (CUT MATERIAL UNADJUSTED) | | \$ |
| TOTAL | | | | \$ |



U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY



STEBENVILLE EAST QUADRANGLE
OHIO-WEST VIRGINIA-PENNSYLVANIA
7.5-MINUTE SERIES

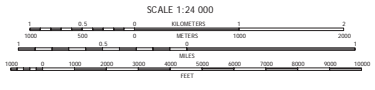
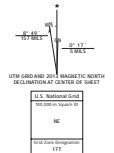


Site
40° 20' 32.7" N
80° 32' 42.2" W

Produced by the United States Geological Survey
North American Edition of 1983 (BASED)
World Geodetic System of 1984 (WGS84) Projection and
1:250,000 scale, General Transverse Mercator, Zone 17T
10 000-foot scale, West Virginia Coordinate System of 1983
(North-south), Pennsylvania Coordinate System of 1983 (North
zone), Ohio Coordinate System of 1983 (North zone)

This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. (State permission before)

Imagery: NADP, July 2011
Roads: © 2006-2013 TomTom
Names: GNS, 2013
Hydrography: National Hydrography Dataset, 2011
Boundaries: National Gazetteer Dataset, 2010
Roads: Census, BGC, USGS, 1917, 2012
Public Land Survey System: BLM, 2013



| | | |
|---------------|----------|-----------|
| Franklin | Bellevue | Bergholtz |
| Franklinville | East | Avoca |
| Franklinville | Bellevue | Bellevue |
| Franklinville | Bellevue | Bellevue |



STEBENVILLE EAST, OH-WV-PA
2013

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I. SPECIAL PROVISIONS

1. LOCATION / SITE DESCRIPTION

The Ebenezer Run Highwall #9 Project consists of a highwall site near the town of Follansbee in Brooke County, West Virginia on the Steubenville East Ohio-WV-PA USGS quadrangle. The site is located along St. Johns Road. The site can be accessed off of either Ginger Lane (for the northern end) or Pleasant Valley Lane (for the southern end). The project site drains to Ebenezer Run, a tributary to Cross Creek of the Ohio River. Ebenezer Run is not on the EPA list of impaired waters and is not a Tier 3 Water as defined by the WVDEP as of this date.

These areas are in the vicinity of an abandoned surface and underground mines Pre-1977. Records indicate this it as the Locust Grove (No. 1) underground mine operated by the West Virginia – Pittsburg Coal Company. Production records show mine operations until 1944. Surface mining most likely operated during this same time frame.

The strip mining activity in these areas produced dangerous highwalls and large piles of refuse and spoil throughout the site. The site consists of approximately 3,000 linear feet of highwall ranging in height from 30 to 40 feet. The highwall is associated with the Pittsburgh coal seam, which was surface and deep mined throughout the project areas, as evidenced by the mine bench and large spoil piles. No open mine portals have been located on the project. Pre law mining activities have created a high point on the coal bench where coal overburden (spoil) was stacked. From this area storm runoff generally flows towards low areas at the base of the highwall or over the outer edge of the spoil onto existing grades. Acid Mine Discharge (AMD) runoff from the project area quickly reaches Ebenezer Run. In order to remedy the dangers presented by the highwall and AMD, the refuse and spoil will be used to stabilize and produce safe slopes from the highwall by pushing and compacting material against the wall. This will create a disturbed area of soil susceptible to erosion and sediment release. To mitigate these problems, temporary best management practices will be employed near the top of the highwalls, along disturbed slopes, at locations of concentrated flow discharges, and below disturbed areas where appropriate to contain sediment on the site. Permanent water channels will be put in place to convey surface water through the reclamation area along paths consistent with existing surface drainage patterns.

Directions to the site:

From Wheeling travel North along SR-2 to SR-27 in Follansbee. Turn right and proceed along SR-27 for approximately 4.4 miles to St. Johns Church Road CR-14 on right. To access the northern end of the site, follow CR-14 for approximately ¼ mile and turn left onto Ginger Lane (small green sign identifies road). Follow driveway 500 feet to start of highwall in a field on right. To access the southern end of Site 1, continue south on CR-14 for an additional 0.4 miles and turn left onto Pleasant Valley Lane (small green sign identifies road). Follow to end of driveway.

2. **REFERENCE SPECIFICATIONS / DEFINITIONS**

All references to “Owner” in these Specifications shall mean West Virginia Department of Environmental Protection (WVDEP), Office of Abandoned Mine Lands.

All reference to “Engineer” in these Specifications shall mean the Owner's Engineer or authorized representative or the WVDEP.

All reference to “ASTM” shall mean the American Society of Testing and Material Specifications, Latest Edition unless otherwise noted.

All reference to “AASHTO Specifications” shall mean the Standard Specifications for Transportation Materials and Methods of Sampling and Testing by the American Association of State Highway and Transportation Officials, latest edition, and all subsequent addenda thereto.

All reference to “WVDOH Standard Specifications” shall mean State of West Virginia Department of Transportation, Division of Highways Standard Specifications for Roads and Bridges, adopted 2000, and all-subsequent addenda thereto.

All references to the “Contractor” shall be understood to mean the successful bidder and or firm or corporation undertaking the execution of the work under the terms of these Specifications.

All reference to “OSHA” shall be understood to mean The Occupational Safety and Health Administration and the standards set in the Occupational Safety and Health Act of 1970.

All reference to “refuse” and/or “mine spoil” shall be understood to mean all coal refuse, shale, sandstone and other rock fragments that were generated and disposed of as such within the project area during mining and processing of coal.

All reference to “AMD” shall be understood to mean all acid or alkaline mine drainage discharges from the project site.

All reference to “OSMRE” shall be understood to mean Office of Surface Mining Reclamation and Enforcement.

3. **SCOPE OF WORK**

The work covered by the Special Provisions and Technical Specifications consists of furnishing all labor, plant, power, equipment and supplies, and performing all operations necessary for the completion of the project. The Contractor shall perform all operations necessary for:

The Contractor also shall be responsible for surveying, including establishing

construction baseline, measuring and developing all completed quantities on the job, and for ordering, purchase and delivery of any and all materials required for construction or required for development of support areas. The Contractor shall perform all other operations as incidental to the program as specified herein.

4. BIDDERS TO EXAMINE LOCATION

Prospective bidders are required to examine the locations of the proposed work and to determine, each in their own way, the difficulties which may be encountered in the prosecution of the same. The submission of a bid shall be prima facie evidence that such examination and determinations have been made by the Bidder. No claims for additional compensation will be considered by the Owner based on obstruction or conditions at the location of the work, which may add to the difficulties or costs of construction, even though such obstructions or conditions are not shown on the contract plans or indicated in the other construction documents. Prospective bidders are advised that should they deem it necessary to obtain any subsurface samples of test borings etc., at the site, they should obtain their own permission from the landowners.

5. SCHEDULE OF WORK

Before commencing work on this project, the Contractor shall prepare and submit a schedule of construction activities for approval by the Owner.

The Contractor shall provide adequate supervision, labor, tools, equipment, and materials to prosecute the work energetically and complete the work within the time specified.

It is the intention not to delay the work for the checking of lines or grades, but if necessary, working operations shall be suspended for such reasonable time as the Engineer may require for the purpose. No special compensation shall be paid for the cost to the Contractor for any of the work or delay occasioned by checking lines and grades, by making other necessary measurements, or by inspection.

The Contractor's work hours for this project shall be from 7:00 a.m. to 7:00 p.m. Monday through Saturday. Work on Sunday and major holidays, as defined by the Engineer, will not be allowed on this project.

6. MEASUREMENT OF QUANTITIES

The Contractor shall be responsible for providing all necessary volumetric, dimension, and weight measurement equipment necessary to prosecute the work as shown on the Construction Drawings and to accurately determine quantities for payment of Contract Bid Items as approved by the Engineer. Such measurements and equipment shall be subject to the approval of the Engineer for use in this project.

7. BORROW (DISPOSAL) AREAS

All borrow (disposal) areas must be approved by WVDEP. Should the Contractor decide to obtain and utilize any borrow areas outside of construction limits, or move material

from one property owner to another unless designated, the Contractor shall be responsible to obtain from the property owner(s) of the borrow areas, all necessary rights of entry, including rights of entry for WVDEP and OSMRE for inspection purposes. The said rights of entry agreement must state that the property owner(s) agree to indemnify and hold harmless the WVDEP from all liability and/or damages resulting from the contractor's use of property for which the contractor was to obtain rights of entry for borrow, disposal, access or other purposes. Said indemnification shall include, but is not limited to, liability and damages resulting from the contractor's failure to obtain any or not all the rights of entry; failure to obtain the proper rights of entry; failure to utilize appropriate language in the rights of entry agreements; or failure to obtain permission and signature of all persons or entities holding a legal interest in the subject property(ies) covered by the rights of entry.

The Contractor also shall submit a borrow area reclamation plan for prior approval by WVDEP. The Contractor shall observe the following NEPA compliance schedule relative to selecting and utilizing any off site borrow areas and or any waste disposal areas.

- a. No borrow (disposal) site operations will affect a site listed in, eligible or proposed to be listed in the National Register of Historic Places.
- b. No borrow (disposal) operations will be located within one-quarter mile of any Federally listed established or prospective component of the National Wild and Scenic River System under 16 USC 1274 and 1276.
- c. Borrow (disposal) site operations will not cause a significant encroachment within the base floodplain (CE.O. 11988: Floodplain Management).
- d. Borrow (disposal) site operations will not be located in or affect a critical habitat of a Federally listed endangered or threatened species under 16 USC 1531, et. seq.
- e. No borrow (disposal) operations will occur in wetland areas which are designated by appropriate agencies.
- f. Borrow (disposal) site operations will be consistent with any approved plans governing ambient air quality.
- g. Adherence to these mitigation measures does not relieve the Contractor of the obligation or responsibility to obtain any other Federal, State, or local approvals required to use borrow (disposal) areas and conduct such activities.
- h. Documentation: Copies of borrow (disposal) site approvals and concurrences will be submitted to the WVDEP prior to the commencement of reclamation activities.
- i. Site Monitoring: Borrow (disposal) activities will be monitored by the State to ensure compliance with contractual requirements, applicable Federal, State, and local laws, and any permit conditions.

8. DISPOSAL OF UNSUITABLE MATERIAL

All waste areas shall be obtained in accordance with Special Provisions Section VII. of these specifications. All unsuitable materials (wood, trash, debris, and garbage) as determined by the Engineer, shall be wasted by the Contractor, at his/her expense, outside the limits of work conforming to the requirements of the applicable sub-sections of Section 4.0 of these Specifications. Wood may be burned in conformity with the applicable sub-sections of Sections 4.0 of these Specifications.

The Contractor shall observe the NEPA compliance schedule relative to selecting and utilizing any off-site disposal areas in accordance with Special Provisions Section VII of these Specifications.

9. INTERPRETATION OF APPROXIMATE ESTIMATE OF QUANTITIES

The estimate of quantities of work to be done and/or materials to be furnished under the Special Provisions and Technical Specifications, as shown on the Contract Bid Schedule, is approximate and is given only as a basis of calculation upon which the award of the Contract is to be made. WVDEP reserves the right to increase or decrease any or all of the quantities of work or to omit any of them, as it may deem necessary.

10. SAFETY

All regulations of the Occupational Safety and Health Act of 1970 (OSHA) are in effect for this Contract. WVDEP shall not be liable for any citations received by the Contractor as a result of failure to comply with applicable OSHA standards. Compensation is to be included in the various items of the Contract for the expense involved in complying with these standards. In addition, the Contractor shall comply with Section 107.7 of the WVDOH Standard Specifications regarding public convenience and safety.

11. REGULATIONS

All appropriate Township, County, State, and Federal Regulations shall apply to this Contract. It shall be the Contractor's sole responsibility to be aware of these regulations and to comply with them. WVDEP shall not be liable for any citations received by the Contractor. The Contractor shall keep the existing roads open and safe to public vehicular traffic at all times and shall provide appropriate barriers and warning devices as directed by the Engineer.

12. LAWS TO BE OBSERVED

The Contractor shall at all times, observe, comply with, and post as required all Federal, State, and local laws, ordinances, and regulations in any manner affecting the conduct of the work or applying to employees on the project as well as all orders or decrees which have been or may be promulgated or enacted by any legal bodies or tribunals having authority or jurisdiction over the work, materials, employees, or Contract. The Contractor shall protect and indemnify WVDEP and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation,

order, or decree whether by the Contractor or by the Contractor's employees.

13. PERMITS, LICENSES AND FEES

The WVDEP shall provide the NPDES Stormwater permit from the Division of Water and Waste Management, a WVDOH Encroachment permit if required, the Water Quality Certification from the Division of Water and Waste Management and an ACOE Regional permit if required. The Contractor, after the award of the Contract, shall become Co-Applicant to the NPDES permit as per the Article III, Section 7 of these specifications. The Contractor shall procure all other permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work. Permits required for this project may include but are not limited to: a Stream Activity permit from the WV Division of Natural Resources and burning permits from the WV Division of Forestry and WVDEP, Division of Air Quality. A copy of the permits as procured shall be furnished to the Owner prior to initiation of the work under this Contract.

West Virginia Construction Stormwater General Permit to be provided.

14. ELECTRICITY, WATER SUPPLY AND SANITARY FACILITIES

There are no available supplies at the site of electricity and water and, additionally, there are no sanitary facilities. Arrangements for electric service, water supply and sanitary facilities shall be made by the Contractor, and all costs for such arrangements shall be borne by the Contractor at no additional cost to the Department.

15. UTILITIES AND OTHER OBSTRUCTIONS

The Contractor shall be solely responsible to correctly locate all existing active underground and overhead utilities at the project sites and take precautions to avoid damage to them. Any existing utility lines damaged by the Contractor shall be replaced by the Contractor or repaired at no cost to the Owner. The Contractor shall notify the utility companies likely to be affected well in advance and before beginning any work within the project sites. In the event of damage to the existing utilities or other facilities, the Contractor shall notify the affected utility Owner(s) and the Engineer immediately and make, or have made, all necessary repairs and bear the expense thereof and resulting damaged caused thereby. It shall be the responsibility of the Contractor to arrange for relocating the utility lines, where required and as directed by the Engineer, in accordance with the guidelines set forth by the utility company, prior to beginning construction. The Contractor will be reimbursed for actual charges invoiced by the Utility Company, except for utilities that are subject to regulation by the Public Service Commission, in which case, payment will be made directly to the affected utility by the WVDEP. The utility companies (and WVMIS) must be contacted by the Contractor at least one week prior to commencement of construction activities for the purpose of field locating and marking utility owned facilities within the project area.

The name, address, and phone number of the WVMIS Utility location service and of the utility companies are as follows:

WVMIS
1-800-245-4848

For utilities that are subject to regulation by the Public Service Commission, language should be provided here indicating that payment will be made directly to the affected utility by the WVDEP, as opposed to reimbursement to the contractor for actual charges invoiced by the utility company.

16. SITE CLEANUP

Before the project shall be considered as having been satisfactorily completed, the Contractor shall clean and remove, from the project site, all surplus and discarded materials, and equipment and shall further remove all debris and objectionable materials of any kind from areas used or disturbed by the construction operations within or within sight of the project area. The Contractor shall be responsible for the removal of the project sign prior to the final inspection of the project, and upon approval from the WVDEP.

17. ROCK BLASTING

All blasting operations shall be conducted in strict accordance with applicable State and Federal laws relating to rock blasting and the storage and use of explosives. The contractor shall maintain and keep in full force and effect blasting insurance to protect and indemnify the Owner and/or his agents or representative from claims for damages and shall defend all suits at law. The Contractor shall submit to the Owner a request for permission to blast rock, a reclamation plan for the area to be disturbed, and proof of blasting insurance coverage prior to initiating blasting operations. Failure to obtain approval for blasting prior to initiating the work will result in no payment for items utilizing this rock.

18. TEMPORARY ACCESS ROADS

The Contractor shall construct and maintain temporary access roads for convenient access to the various parts of the work, and for other necessary purposes incidental to the performance of this Contract. The location of access roads shall be approved by the Engineer prior to construction. No separate payment for construction and maintenance of such roads will be made. The Contractor shall erect such temporary fences or guards as may be necessary to keep unauthorized persons away from the work. Grading and surfacing of temporary access roads, excavations, fills and embankments for purposes of construction, or for convenience, beyond the limits of ordered excavations and all temporary fences and guards, shall be provided by the Contractor and shall be maintained in good condition. The Contractor shall be required to maintain all roads used by the hauling equipment in a dust-controlled condition. Upon completion, the Contractor shall

return the disturbed areas to the approximate original condition as approved by the Engineer.

The contractor shall be required to obtain a right of entry agreement from any property owner(s) prior to the utilization or construction of any access outside of the construction limits shown on the plans. Such agreement shall require the property owner(s) to indemnify and hold WVDEP harmless from any and all injuries or damages, whatsoever, resulting from the Contractor's use of the property.

19. TRAFFIC CONTROL

The Contractor shall maintain and protect traffic, protect the work in progress, protect adjacent property from excess dust resulting from the construction and maintain traffic through, around, or adjacent to the construction area. All materials used for traffic control shall be in accordance with the current WVDOH manual: "Traffic Control for Streets and Highway Construction and Maintenance Operations." A copy of the operational plan accepted by the WVDOH shall be submitted to the WVDEP for approval prior to its implementation. All traffic control required during the work shall be considered incidental to the project.

20. SITE CONDITIONS AND ENVIRONMENTAL PROTECTION

Conditions at the site shall be examined by the Contractor, and the Contractor shall assume responsibility as to the contours and the character of the earth, rock, water and other items that may be encountered during the excavation and filling operations.

The Contractor shall be responsible for controlling and handling water encountered during construction, including dewatering of mine pools for mine seal installations, by providing equipment and labor to insure safe and proper construction. The Contractor shall submit a plan to the WVDEP at the pre-construction meeting for approval. The WVDEP's approval of this plan does not relieve the Contractor of his responsibility for controlling water.

The Contractor shall be responsible for the operation and maintenance of any required diversion or pumping facilities for removing ground water from work areas during the progress of the work under this Contract.

The Contractor shall be responsible for furnishing all materials, equipment, labor and incidentals necessary for the installation of silt barriers and check dams as designated in the drawings. Sediment control shall be placed on regraded areas concurrent with construction and prior to revegetation.

The Contractor shall be responsible for implementing the measures called for in the NPDES Stormwater permit provided by the WVDEP for erosion and sediment control. Sediment control measures shall be in-place and operational prior to any disturbance occurring in the project area. The WVDEP's approval of this plan does not relieve the Contractor of his responsibility to be in compliance with any laws and/or permits.

The Contractor shall take any necessary steps to prevent erosion or silting problems from occurring and to minimize pollution or sedimentation of the stream. If any such problems develop, the Contractor shall be responsible to take immediate corrective action.

The Contractor shall be responsible for the repair or replacement of streets or driveways (blacktop, gravel & concrete), trees, shrubs, fences, and any other physical features that are disturbed by construction which were not included in the proposed scope of work for the project to original condition or better at his own expense.

The Contractor shall be responsible for the replacement of any existing boundary or corner markers disturbed by construction activities.

21. CONTROL AND REVIEW OF WORK BY THE ENGINEER

All services rendered by the Engineer consist of professional opinions and recommendations made in accordance with generally accepted engineering practice. Under no circumstances is it the intent of the Engineer to directly control the physical activities of the Contractor or the Contractor's workmen's accomplishment of work on this project.

The presence of the Department's Field Representative and/or Engineer at the site is to provide the Department a continuing source of professional advice, opinions and recommendations based upon the Field Representative's and/or Engineer's observations of the Contractor's work and does not include any superintending, supervision or direction of the actual work of the Contractor or the Contractor's workmen.

Any construction review of the Contractor's performance conducted by the Engineer is not intended to include review of the adequacy of the Contractor's safety measures in, or near, the construction site.

22. CITATION OF OTHER SPECIFICATIONS

Whenever the Specifications for this Contract refer to the specifications of any society, institute, association or government organization, then such specifications cited shall become a part of this Contract as if written in full. Commonly used abbreviations have the following meanings:

ASTM - American Society for Testing Materials

ASA - American Standards Association

AWWA - American Water Works Association

AASHTO - American Association of State Highway and Transportation Officials

ACI - American Concrete Institute

WVDOT - West Virginia Department of Transportation

WVDOH - West Virginia Division of Highways

Where reference is made to a specification, it shall be the latest revision at the time called for bids, except as noted on the Plans or elsewhere herein.

23. **NPDES STORMWATER PERMIT GUIDELINES**

VEGETATIVE PRACTICES

Except as noted below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven days after the construction activity in that portion of the site has permanently ceased.

- Where the initiation of stabilization measures by the fourth day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as conditions allow.
- Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (e.g., the total time period that construction activity is temporarily halted is less than 21 days) then stabilization measures do not have to be initiated on that portion of the site by the seventh day after construction activities have temporarily ceased.

Areas where the seed has failed to germinate adequately (uniform perennial vegetative cover with a density of 70%) within 30 days after seeding and mulching must be reseeded immediately, or as soon as weather conditions allow.

Diversions must be stabilized prior to becoming functional.

MAINTENANCE & INSPECTION

At a minimum, all erosion and sediment controls on the site will be inspected at least once every seven calendar days and within 24 hours after any storm event of greater than 0.5 inches of rain per 24-hour period.

All controls should be cleaned out when sediment reaches one half the sediment capacity of that control.

Inspection and maintenance records must be kept onsite.

EROSION & SEDIMENT CONTROL CONSTRUCTION SEQUENCE

1. Install stabilized construction entrance as shown on site plans.
2. Install perimeter sediment control devices as shown on site plans.
3. Clear and grub site.
4. Provide sediment control for any topsoil stockpiles.
5. Commence rough grading of site. Continue to maintain and inspect all erosion and sediment controls.
6. Install additional erosion and sediment controls as shown on site plans.

7. Fine grade site.
8. Permanently seed and mulch all disturbed areas within 7 days of reaching final grade.
9. Upon completion of project including adequate stabilization, remove all remaining erosion and sediment controls.

II. TECHNICAL SPECIFICATIONS

1.0 MOBILIZATION AND DEMOBILIZATION

1.1 DESCRIPTION

Upon receipt of a notice-to-proceed, the Contractor shall initiate and complete measures necessary to commence the work. Mobilization shall also consist of delivering to the site and assembling in working order all necessary equipment, materials, and supplies to be furnished by the Contractor to complete the work. Demobilization shall consist of removal from the site of all the Contractor's equipment and materials after completion of the work and cleanup of the site. Work shall be done to the satisfaction of the Engineer.

This work shall consist of the performance of construction preparatory operations, including the movement of personnel and equipment to the project sites and for the establishment of the Contractor's office(s), buildings and other facilities including the construction of all temporary access roads as necessary to begin work on a substantial phase of the contract. The location of Contractor's office to be established shall be approved by WVDEP. It also shall include all demobilization activities involving the removal from the sites of all plant, equipment, supplies and personnel after completion of the work including cleanup of all rubbish and waste materials generated during the construction of this project; and restoration of any damage to existing site improvements resulting from the Contractor's activities at the site; and installation of the project sign.

1.2 METHOD OF MEASUREMENT

The method of measurement will be per lump sum. The project sign shall be considered incidental to this item.

1.3 BASIS OF PAYMENT

The bid for "Mobilization and Demobilization" shall be a lump sum and cannot be more than 10% of the TOTAL AMOUNT BID for the project. Partial payments for this pay item will be as follows:

- (a) One-half of the amount bid will be released to the Contractor with the first estimate payable, not less than 15 days after the start of work at the project site.
- (b) The final one-half of the amount bid shall be released with the estimate payable after the work is accepted by the WVDEP and when all "As-Built" drawings are submitted and approved by WVDEP.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided for by the Contract. No deduction will be made nor will any increase be made, in the lump sum mobilization and demobilization item amount regardless of decreases or

increases in the final total contract amount or for any other cause.

1.4 PAY ITEM

Item 1.0 “Mobilization and Demobilization” per lump sum. Cannot be more than 10% of the TOTAL AMOUNT BID for the project.

2.0 CONSTRUCTION LAYOUT STAKES

2.1 DESCRIPTION

This item consists of furnishing, placing, and maintaining construction layout stakes necessary for the proper performance of the work under this contract. It shall further consist of determining the exact units of measure for payment. It also consists of checking and making any field adjustment to the plan alignment, grades and elevations as considered necessary by the Engineer. Additionally, this item shall also include the preparation in AutoCAD compatible format. "As-Built" Plans shall consist of hard copies and two CD-ROM copies provided in PDF format prior to the Final Inspection Meeting.

2.2 MATERIALS

Conventional survey stakes, hubs, batter boards, flagging, templates, straightedges and other devices necessary for laying out all parts of the work.

2.3 CONSTRUCTION METHODS

2.3.1 The Contractor shall be responsible for the proper layout of the work. The Owner will provide the Contractor with survey information regarding the baselines and the existing surface features shown on the Construction Drawings. The Contractor shall make all calculations involved and shall furnish and place all layout stakes.

2.3.2 The Contractor shall provide field forces and shall set all additional stakes as needed, such as offset stakes, reference point stakes, slope stakes, grade stakes, stakes for drainage, or other structures, supplementary bench marks, and any other horizontal or vertical controls necessary to secure a correct layout of the work including the re-establishment of the survey and construction baselines (as necessary), as shown on the Construction Drawings. The Contractor shall also perform any necessary cross-section surveying of the existing ground surface at the intervals shown within the Construction Drawings for areas of proposed grading, provide an overlay of the surveyed cross-sections on the cross-sections shown on the Construction Drawings, and submit the same to the Engineer for comparison prior to initiating earthwork. Acceptable plans (with same baseline shown on the plans) and cross-sections shall (with proposed grade lines) be sent hard copy, on disk in AutoCAD 2013 format or later and PDF format and be overlain on those cross-sections contained in the Construction Drawings. The original grade line and proposed final grade line shall be included on all sections. Incomplete cross-sections will be returned to the Contractor for necessary additions. Cross-sections, which do not encompass all areas of both earthwork excavation (including borrow excavation) and fill placement shall be considered incomplete without exception. The Contractor shall also include the locations of baselines used showing cross section locations on a copy of the reclamation plan when submitting cross sections.

2.3.3 The Contractor shall be responsible for assuring the layout staking work is in conformance to the lines, grades, elevations, dimensions, and locations shown on the Construction Drawings or as required by the Engineer. The Contractor shall furnish a copy of his/her survey records for checking by the Engineer and for the Owner's permanent file. These records shall be furnished as they are completed during the progress of the work.

Any inspection or checking of the Contractor's layout by the Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work.

2.3.4 The Contractor shall exercise care in the preservation of stakes and benchmarks, including existing property line markers, and shall have them reset at his/her expense when any are damaged, lost, displaced or removed. The Contractor shall use competent personnel and suitable equipment for the layout work required and shall provide that it be done under the supervision of, or directed by, a Registered Professional Civil Engineer or Licensed Land Surveyor registered in the State of West Virginia.

2.3.5 The Contractor shall prepare "As-Built" drawings, which include the vertical and horizontal locations of all mine seals, conveyance pipes, culverts, subsurface drains, and drainage channels. Mine seal and subsurface drain "As-Built" drawings shall include vertical and horizontal location of the bottom of drains, pipe inverts, and top of buried subsurface drains. All of these "As-Built" drawings shall be provided prior to Final Inspection Meeting and final "Mobilization and Demobilization" payment.

2.4 METHOD OF MEASUREMENT

Measurement for furnishing, setting, maintaining, and resetting the stakes when necessary, and for furnishing all engineering personnel, equipment, materials, and all incidentals thereto, shall be by the lump sum bid for "Construction Layout Stakes".

2.5 BASIS OF PAYMENT

Payment for furnishing, setting, maintaining, and resetting the stakes when necessary, and for furnishing all engineering personnel, equipment, materials, and all incidentals thereto, shall be by the lump sum bid for "Construction Layout Stakes". The lump sum payment also shall include the cost for providing the Engineer pre-and post-construction ground line cross-sections for all disturbed or regraded areas including borrow areas and "As-Built" drawings as described herein. The final one-half of the amount bid for "Mobilization and Demobilization" will be held until submittal and approval of the as-built drawings. The "as-built drawings" shall consist of hard copies and two copies on CD-ROM in PDF format. Said total lump sum bid cannot be more

than 5% of the TOTAL AMOUNT BID for the project. No deduction will be made, nor will any increase be made, in the lump sum “Construction Layout Stakes” item amount regardless of decreases or increases in the final total contract amount or for any other cause.

2.6 PAY ITEM

Item 2.0, “Construction Layout Stakes”, per lump sum. Cannot be more than 5% of the TOTAL AMOUNT BID for the project.

3.0 QUALITY CONTROL

3.1 DESCRIPTION

This work shall consist of testing for verification that the materials supplied and the work performed are in accordance with these specifications.

3.2 MATERIALS

3.2.1 The Contractor shall submit a minimum of two (2) copies of shop drawings, catalog cuts and material certifications (as applicable) to the Engineer of all off-site materials to be incorporated into the work. Written approval from the Engineer will be required prior to incorporation of these items into the work.

3.2.2 The Contractor shall submit at least two (2) copies of the results of all tests conducted on in-situ material, concrete, flowable fill, and grout to be used in this project. As a minimum, these tests will include moisture content & density tests of the soil in accordance with the provisions of ASTM D698 (Standard Proctor), field density tests following compaction, soil tests to determine the lime and nutrient requirements of the areas to be revegetated, compressive strength test for grout in accordance with ASTM C109, for concrete in accordance with ASTM C31 & C39, and for flowable fill in accordance with ASTM D4832.

3.3 CONSTRUCTION METHODS

3.3.1 The Contractor shall furnish the services of his own testing laboratory or select an independent testing laboratory, as long as the laboratory is under the direct supervision of a Registered Professional Civil Engineer. The laboratory must be approved by the Owner.

3.3.2 Testing for compaction, soil nutrient and lime requirements for soil; compressive strength and slump tests for concrete and grout; shall be performed as required by these specifications and/or ordered by the Engineer in writing. The Engineer will determine the locations and time of any testing herein specified and the need and extent of any testing in addition to that which is herein specified.

3.3.3 The contractor shall be responsible for performing laboratory tests of the coal refuse, mine spoil, and any natural soil to identify the compaction requirements for their use as fill and cover material, respectively. In addition, field density tests shall be performed in accordance with the Construction Specifications. All test results shall be submitted to the Engineer for approval of compaction criteria prior

to compacting the fill and after fill compaction to verify that the required compaction is obtained.

3.3.4 Only new and first class materials, which conform to the requirements of these Specifications, shall be used unless specified otherwise. When requested by the Owner, the Contractor shall furnish a written statement of the origin, composition, and manufacturer of any or all materials (manufactured or produced) that are to be used in the work. The sources of supply of each material used shall be approved by the Engineer before delivery is started. If, at any time, sources previously approved fail to produce materials acceptable to the Owner, the Contractor shall furnish materials from other approved sources. The State Department of Transportation has a website listing of all approved sources and products at www.transportation.wv.gov/highways/pages/listings.aspx

3.4 METHOD OF MEASUREMENT

The method of measurement for determining the quantity of quality control work done as described above will be on a lump sum basis.

3.5 BASIS OF PAYMENT

The quantity of quality control work done will be paid at the contract lump sum price bid for this item. Said lump sum bid cannot be more than 3% of the TOTAL AMOUNT BID for the project. No deduction will be made nor will any increase be made in the lump sum "Quality Control" item amount regardless of decreases or increases in the final total contract amount or for any other cause.

3.6 PAY ITEM

Item 3.0, "Quality Control", per lump sum. Cannot be more than 3% of the TOTAL AMOUNT BID for the project.

4.0 SITE PREPARATION

4.1 DESCRIPTION

Work in this Section shall be performed as shown on the Construction Drawings and as specified herein. The work shall include, but not necessarily be limited to, the following:

4.1.1 Clearing & Grubbing

Work performed under this section shall include the removal and disposal of all trees, stumps, shrubs and any other vegetation, wood, debris (including metal structures and pipes), garbage of any nature from those areas within the limits of project construction and/or shown on the plans and/or any other areas as approved by WVDEP. Clearing and grubbing at the borrow area shall be performed only as needed and is approved by the Engineer.

This work shall also include the preservation from injury to all vegetation, utilities or other objects to remain.

4.1.2 Site Access

Site access includes all access roads other than constructed access roads required by the contractor to access the site and perform the work. Site access shall be as required to provide access to the various project areas during construction, maintain access during construction, and return all access roads to a condition equal to or better than original at project completion. This includes the existing gravel drive located immediately before the proposed stabilized construction entrance, and all mine bench access roads as required during construction. Note that private property owners shall be required to have continuous access to their property and facilities. The contractor will be required to improve and maintain the existing gravel road located immediately before the proposed stabilized construction entrance. Contractor shall also maintain access along the strip bench as required to perform the work specified and shall maintain such site access in conformance with the stormwater permit and construction plans. Stone may be provided for mine bench access as needed, but is not specifically required. All site access shall be maintained as all-weather access roads for the duration of the project. Existing access road upgrades as required for site access shall consist of minor grading and capping the roadway surface with crushed stone as directed by the owner and as needed to address roadway irregularities, wet areas, depressions, and other deficiencies. All existing access roads shall be left in a condition equal to or better than existed at the time of mobilization, and shall be repaired and

maintained during construction to the satisfaction of the owner. Mine bench access roads shall be revegetated at final reclamation. Stone for site access road, upgrading, repair, and maintenance shall be crusher run limestone. Initial site access road and additional maintenance resurfacing and/or stabilization stone required during construction will not be measured and shall be incidental to the cost of the work described herein for any road upgrading required for construction access or maintenance as deemed necessary by the owner to facilitate site travel. All travel and upgrading operations performed on existing access roads shall be confined to the width of the existing road unless greater width is deemed necessary by the contractor, but not more than 15 feet in width. Final grading, revegetation, stabilization by re-surfacing with stone, and providing final drainage control for existing access roads shall be performed as directed and approved by the owner after final reclamation has been completed.

The contractor shall maintain and protect traffic, protect the work in progress, protect adjacent property from damage and excess dust resulting from construction and maintain traffic through, around, or adjacent to the construction areas. The contractor's vehicles will travel paved, gravel, and unimproved dirt roads in proximity to resident's homes, driveways, and other structures. Resident's access shall be maintained at all times during construction, and existing private and state roads shall be maintained in accordance with the requirements of the owner and applicable permit requirements at all times.

The cost for all Site Access road activities shall be included with the cost bid for "Site Preparation" including all improvements, grading, and crusher run required to establish site access. Stone resurfacing required for maintaining the access roads after initial establishment and during project construction, as deemed necessary by WVDEP, will also be incidental to the cost of the Site Preparation work described herein. Final grading, stabilization, and providing final drainage control (if any) for existing access roads shall be performed after reclamation operations for the project have been completed.

Contractor temporary work access roads, if any, constructed to gain access to, travel between, or otherwise required for equipment or vehicular site access shall be kept to a minimum and only constructed where necessary upon approval from the WVDEP, where applicable. If the Contractor constructs such travel routes, they shall be reclaimed and revegetated according to Section 6.0 upon completion of the construction activities, as deemed necessary by the WVDEP, with associated costs being incidental.

4.1.3 Temporary Access Road

Temporary access roads are new aggregate access roads consisting of grading and forming a roadway surface with crushed stone as shown on the construction drawings and directed by the owner. The cost for initial Temporary Access Road construction including all improvements, grading, and crusher run shall be based on the linear footage access road provided to establish site access per the construction drawings. Stone resurfacing required for maintaining the access roads after initial establishment and throughout project construction as deemed necessary by WVDEP will be incidental to the cost of the work described herein.

4.1.4 Demolition

This work shall consist of complete demolition, removal, and disposal of any minor structures and equipment, ruins, foundations, trash, and removal of the trash, trailers, and construction debris located at the dump area as specifically designated on the Plans and directed by the Engineer for removal. Demolished concrete, cinder block, and foundation ruins can be disposed of on-site.

4.2 MATERIALS

4.2.1 Paint for tree wound shall be antiseptic and waterproof, black in color and with an asphaltic base. It shall contain no coal-tar creosote, oils, kerosene, turpentine or other harmful materials to the living tissue of trees.

4.2.2 Stone for maintenance of temporary or existing access road shall be “crusher run” consisting of hard, durable, crushed stone gradation having a maximum particle size of not more than 1 ½ inches or as approved by the Owner.

4.3 CONSTRUCTION METHODS

4.3.1 All timber eight (8) inches in diameter and larger at stump height shall be saw cut prior to grubbing operations. Timber shall be topped with the branches removed and stacked and stockpiled in an appropriate manner in an accessible location approved by the WVDEP on the property from which it was cut. Timber to be stockpiled shall not be pushed down by equipment prior to being cut nor can it be indiscriminately shoved into a stockpile.

4.3.2 All organic material shall be burned completely to ash or otherwise removed from the site and disposed of in a manner approved by the WVDEP. Burning of the

combustible material will not be permitted on or near refuse, mine portals or within close proximity to coal seams or utilities. The Contractor shall obtain all permits and licenses required prior to burning the material. A plan showing the location of material to be burned and all fire control measures to be implemented, including copies of permits and licenses, shall be submitted to the WVDEP's representative at the site for approval.

- 4.3.3** All other materials generated from required clearing and grubbing operations shall be removed and disposed of by the Contractor. All garbage, construction debris, mining debris, etc., shall be disposed of in approved waste areas or landfills. It shall be the responsibility of the Contractor to obtain, at no expense to the WVDEP, all necessary waste and borrow areas or landfills for the disposal of waste materials in accordance with any applicable local, state, and/or federal regulations including compliance with NEPA requirements (See Section VII for NEPA Compliance Schedule). All waste and borrow areas must be approved by the WVDEP and, the Contractor must provide a reclamation plan for approval. In addition, for all waste and borrow areas (if needed) outside the construction limits, the Contractor must obtain from the property owner a right-of-entry agreement in which the property owner indemnifies and holds the WVDEP and OSMRE harmless from any injury or damages whatsoever resulting from the use of the property.
- 4.3.4** Trash, garbage, railroad ties, roofing shingles, tires, plastic, metal and other unsuitable material resulting from demolition or uncovered on site shall be disposed of by the Contractor at his/her own responsibility and expense outside the work limits in an approved landfill, as approved by the Engineer, unless otherwise directed.
- 4.3.5** Demolished concrete, foundation ruins, bricks, stone and cinder blocks uncovered during reclamation activities to be incorporated into the fill shall be of size less than 2 feet in any dimension and shall be buried at least one foot below finished grade. Hollow core cinder blocks shall be crushed prior to incorporation into the fill.
- 4.3.6** If structures are demolished and removed, the removal operation shall extend to 1 foot below finished grade. The area shall then be graded as necessary to blend into adjacent finished grades. Re-grading shall be such that all areas are free draining and surface runoff will not pool or impound as directed by the Engineer.
- 4.3.7** The areas to be cleared and grubbed are generally described as, but not limited to,

those specific areas of excavation, backfill, soil borrow or drainage structure installation including areas of underdrain, channels, mine seals, and conveyance pipes.

- 4.3.8** Clearing and grubbing shall be completed prior to initiation of earthwork operations only to the extent necessary to complete the work. The Contractor shall confine his operations strictly to required areas. If he clears and grubs beyond the required areas, whether knowingly or accidentally, he shall, at his expense, replant and otherwise restore all areas outside the limit lines to a condition equal to that existing prior to start of work.
- 4.3.9** All stumps, roots, buried logs and brush shall be removed. Grass, however, may be incorporated into the re-soiling material. Taproots and other projections over 1-½ inches in diameter shall be grubbed out to a depth of at least ten (10) inches below the planned subgrade or slope elevation. All holes remaining after the grubbing operation shall have the sides broken down to flatten out the slopes, and shall be filled with suitable materials, moistened and properly compacted.
- 4.3.10** Cleared and grubbed areas shall be worked such that positive drainage is provided to prevent ponding of water except for the purpose of sediment control sumps as approved by the WVDEP.
- 4.3.11** It shall be the sole responsibility of the Contractor to correctly locate and avoid all underground, on-ground, and overhead utilities, facilities and other structures and constructions, and for that purpose, shall employ all necessary precautions and methods to insure avoidance of and damage to such constructions. In the event damage does occur, the Contractor shall notify the affected Owner and the WVDEP immediately and make or have made all necessary repairs and bear the expense thereof and resulting damage caused thereby. See “Special Provisions”, Section XV “Utilities and Other Obstructions”, of these specifications for more information on utilities.
- 4.3.12** Existing ruins and foundation structures shall be removed to the existing ground level, which operation shall include removal of concrete slabs or any other type of floors and/or walls resting upon the ground. Coal and/or refuse spillage, concrete, cinder blocks, and foundation ruins shall be excavated and/or removed and incorporated into the refuse pile fill material.
- 4.3.13** Bricks and stone blocks shall be disposed as per Section 4.3.5 of these specifications.

- 4.3.14** Should offsite disposal or borrow be necessary, the Contractor shall observe the NEPA Compliance Schedule as per Section VII of the Special Provisions.
- 4.3.15** Stone to be placed for “Temporary Access Road” shall conform to the requirements for Class 1 Aggregate as described in Table 704.6.2A and Section 704.6 of the WVDOH Standard Specifications for Roads and Bridges, Adopted 2000. After final reclamation work has been completed, all utilized access roads will be reclaimed to original or better than original conditions. If the road area was originally vegetated, then it must be reclaimed and revegetated according to Section 6.0 upon completion of the construction activities.
- 4.3.16** Existing site access roads shall provide safe, all-weather access to the sites. The existing roads shall be maintained during construction and left in a better than or equal to condition. Crusher Run stone shall be provided for maintenance of temporary and/or existing access roads. The Contractor is responsible for locating and avoiding all underground and overhead utilities, culverts, and constructions during access road grading and maintenance.
- 4.3.17** Any existing fence lines encountered during construction activities shall be removed, repaired or replaced to an “as good as” or “better than” condition and as approved by the WVDEP. In situations where fencing is used to control or contain cattle and livestock, the Contractor shall also be responsible for any temporary fencing required to assure the safety and containment of livestock.

4.4 METHOD OF MEASUREMENT

- 4.4.1** There shall be no measurement of the “Site Preparation” item as it is a lump sum.
- 4.4.2** “Temporary Access Road” shall be measured per linear foot as measured along the centerline of completed Temporary Access Roads as shown on the contract drawings. Minor excavation and grading required for the Temporary Access Road shall not be measured. Additional crusher run stone, or other items required for maintenance during construction and final reclamation shall not be measured but shall be considered incidental to the “Temporary Access Road”.
- 4.4.3** There shall be no measurement of “Site Access” as shown on the contract drawings and shall include crusher run initially provided for upgrading existing access roads to a condition suitable for contractor site access. Additional stone as required to maintain access throughout construction, and returning upgraded access roads to condition equal to or better than original condition will not be

measured but is considered incidental to the “Site access road”. Maintenance of the drive located immediately before the stabilized construction entrance (a stone roadway) during construction, and final restoration to ‘equal to or better than’ preconstruction conditions shall not be measured but shall be included with “Site access road”.

4.5 BASIS OF PAYMENT

4.5.1 Site Preparation: This item shall be paid at the bid lump sum price. The amount shall not exceed 10% of the TOTAL AMOUNT BID for each bid. Payment shall be full compensation for doing all the work herein prescribed in a workmanlike and acceptable manner including; Site access including maintenance of temporary, permanent, and/or existing site access roads; clearing and grubbing; demolition of structures; disposal of scattered debris and structure remnants; disposal of the construction debris, trailers and other trash at the dump site; and furnishing of all labor, materials, crusher run, tools, equipment, supplies, and incidentals necessary to complete the work.

No deduction will be made, nor will any increase be made, in the lump sum “Site Preparation” amount regardless of decreases or increases in the final total contract amount or for any other cause.

4.5.2 Temporary Access Road: This item shall be paid at the price bid per linear foot based on centerline length of completed Temporary Access Roads. Payment shall be full compensation for doing all the work herein including the furnishing of all labor, materials, 4” thick minimum aggregate layer, tools, equipment, supplies, and incidental items necessary to complete the work. Said installation of Temporary Access Roads along new routes shall include minor grading and leveling of existing and proposed roadbeds to the lines and grades indicated on the drawings and to remove irregularities or wet materials prior to aggregate placement in conformance with the Temporary Access Road template requirements, maintaining access roads during construction, and returning all roads to original or better existing conditions at construction completion. After initial construction of Temporary Access Roads, additional crusher run or aggregate for ongoing maintenance of access roads during construction, and final restoration of Temporary Access Roads to original conditions shall not be measured but shall be considered incidental to Temporary Access Roads. If the road area was originally vegetated, then it must be reclaimed and revegetated according to Section 6.0 upon completion of the construction activities.

4.5.3 Site access road: This item shall be considered incidental to the price bid per lump sum for site preparation. “Site access road” as required for initial upgrading of existing roads to condition suitable for contractor’s use as primary site access and as designated on the plans for ‘Site access’. Payment shall be full compensation for doing all the work herein including the furnishing of all labor, materials, crusher run or approved aggregate, tools, equipment, supplies, and incidental necessary to complete the work. Said work shall include improvement to designated existing gravel roads as required to provide access during construction, maintaining access roads during construction, and returning all roads to ‘equal to or better than’ preconstruction conditions at construction completion. This shall also include minor restoration of existing drainage channels or pipes, if any, along or below access roads if damaged by the contractor, all of which shall not be measured but shall be considered incidental to Site access road.

4.6 PAY ITEMS

Item 4.1, “Site Preparation”, per lump sum. Cannot be more than 10% of the “Total Amount Bid” for the project.

Item 4.2, “Temporary Access Road”, per Linear Foot.

5.0 SEDIMENT CONTROL

5.1 DESCRIPTION

This item shall consist of furnishing all materials, equipment, labor and incidentals necessary for the installation of sediment and erosion control best management practice devices including, outlet structures, silt fence, super silt fence, sediment tubes, straw wattles, check dams, sediment baffles, and any other sediment control structures as designated in the Drawings and/or as approved by the WVDEP. Sediment control shall generally be placed near the toe of regraded out-slope areas concurrent with construction and prior to revegetation. Additional quantities may be added at the discretion of the WVDEP. Also included shall be check dams below temporary mine water treatment systems (if any) and stabilized construction entrances to the construction sites.

The CONTRACTOR shall submit an erosion and sediment control plan to the WVDEP at the pre-construction meeting for approval. This plan shall include measures to be utilized for temporary and permanent erosion and sediment control, and shall closely follow the requirements of the construction plans, in conformance with the previously obtained WVDEP storm water permit (NPDES). This plan shall also include the measures as outlined herein. The WVDEP's approval of this plan does not relieve the CONTRACTOR of his responsibility to be in compliance with any and all permits. All costs associated with meeting the Federal and/or State Regulations shall be the sole responsibility of the Contractor.

5.2 MATERIALS

- 5.2.1** Silt fencing for sediment control materials and installation shall meet all applicable requirements of Section 715.11.5 and 642.6 of the WVDOH Standard Specifications. The use of silt fence shall generally be as shown on the plans and limited to the toe of selected slopes.
- 5.2.2** Super Silt fencing materials and installation for sediment control shall meet all applicable requirements of Section 715.11.5 and 642.6 of the WVDOH Standard Specifications. The use of silt fence shall be as shown on the plans.
- 5.2.3** Straw wattles for protection of disturbed areas shall be 12" Straw Wattles by ACF Environmental or equal.
- 5.2.4** Stakes for Silt Fence and wattles: The stakes shall consist of 2" X 2" stakes, 60 inches in length made from suitable hardwoods. Other methods of anchoring may be used if specifically approved by the WVDEP.
- 5.2.5** Sediment Tubes for sediment tube traps in areas of concentrated flow shall be woven polypropylene geotextile exterior with washed shredded rubber and wood fiber internal fill with diameter and length as appropriate for the intended use and in conformance with the manufacturers recommended placement, accessories, and

spacing. Sediment tubes shall be 'Erosion Eels' by ACF Environmental or equal. Sediment tube stakes shall be metal T-posts or approved equal as specified by the manufacturer.

- 5.2.6** Crusher Run used for Stabilized Construction Entrances shall be a well graded mixture with maximum stone size no larger than 4", or AASHTO No. 1 aggregate.
- 5.2.7** Separation fabric for Stabilized Construction Entrances and sediment trap stone outlet shall be class 2 woven geotextile per AASHTO M288.
- 5.2.8** Geotextile Filter Bags shall be provided in accordance with WVDOH Specifications, Section 715.11.10, Dewatering Device.
- 5.2.9** Coarse Aggregate for the sediment trap stone outlet shall be washed gravel ½" to 1 ½" in diameter.
- 5.2.10** Rip Rap for the sediment trap stone outlet shall be well graded stone 2" to 8" in diameter.
- 5.2.11** Baffles for the sediment trap will be constructed with ¾"x4'x8' marine grade plywood sheets and 4"x4" pressure treated posts.

5.3 CONSTRUCTION METHODS

5.3.1 Installation

- 5.3.1.1** Silt Fence shall be installed as detailed on the construction drawings. All work involving installation of silt fence, or any other applicable measure contained herein for erosion, sediment, and water pollution control must be completed prior to any other construction. Super Silt fence may be installed in areas of concentrated flow, if approved by WVDEP. Standard Silt fence may NOT be installed in areas of concentrated flow.
- 5.3.1.2** Straw Wattles shall be installed in accordance with the manufacturer's requirements. Straw wattles must be installed perpendicular to flow and staked along contours with minimum embedment of 4" to encourage accumulation of sediment along the wattle and prevent passage of water below the wattle.
- 5.3.1.3** Sediment Tubes (ACF Environmental Erosion Eels or equal) shall be installed in accordance with the manufacturer's requirements and as shown on construction drawings. Sediment tubes across areas of concentrated flow, anticipated along the collection channel and also permissible for use along mine bench drainage swales, shall be installed as shown on the drawings at the required spacing. Sediment tubes above

highwall areas are intended to intercept runoff, reduce flow velocity, and release the runoff as sheet flow. Sediment tubes above highwall areas shall be installed as shown on the drawings, generally perpendicular to flow and staked along contours. Sections that do not follow contours are anticipated due to the irregular highwall, such sections are to be minimized and shall divert limited amounts of runoff to sections of tubes installed along contours of equal or greater length to insure concentration of excessive runoff from moderately sloped tube sections does not occur. No embedment is required for Sediment tubes except as indicated for gulley installation, however the surface is to be prepared to provide a suitable contact surface as required by the manufacturer.

5.3.1.4 Sediment trap shall be installed as detailed in the construction drawings.

5.3.1.5 Sediment baffles shall be installed as detailed in the construction drawings

5.3.2 Maintenance

5.3.2.1 During the course of the project, all best management practice structures shall be maintained in sound condition and accumulations of silt which may threaten their effectiveness shall be removed.

5.3.2.2 Silt Fence, super silt fence, straw wattles, and sediment tubes shall be inspected after each rainfall and sediment shall be removed as directed by the Owner, and shall always be maintained in good working order.

5.3.2.3 Silt removed from the sediment control BMP's shall be taken to an approved disposal area, or incorporated into the fill if approved by the WVDEP.

5.3.2.4 Geotextile Filter Bags shall be inspected frequently during operation. Once sediment within the wet storage area is $\frac{1}{2}$ the excavated depth the sediment shall be removed.

5.3.2.5 Sediment traps and sediment tube traps inspected every 7 days and/or after 0.5 inch of rain to ensure structure has not been damaged. Sediment shall be removed and properly disposed of, once it reduces the wet-storage volume by 50%.

5.3.3 All temporary sediment control BMP's, unless otherwise directed by the WVDEP, will be removed following completion of reclamation of the site and establishment of vegetation.

5.4 METHOD OF MEASUREMENT

- 5.4.1** The method of measurement for clearing and grubbing in these items is to be included under Section 4.0, "SITE PREPARATION," as contained elsewhere in these Specifications.
- 5.4.2** The method of measurement for liming, fertilizing, seeding and mulching in these items, whether temporary or permanent is to be included under Section 6.0, "REVEGETATION," as contained elsewhere in these Specifications.
- 5.4.3** The method of measurement for Silt Fence installation and maintenance in conformance with the specifications and accepted by the WVDEP shall be on a per lineal foot basis to include the fencing, stakes, all necessary materials, supplies, labor and equipment for installation and maintenance including sediment removal and disposal.
- 5.4.4** The method of measurement for Super Silt Fence installation and maintenance in conformance with the specifications and accepted by the WVDEP shall be on a per lineal foot basis to include the fencing, stakes, all necessary materials, supplies, labor and equipment for installation and maintenance including sediment removal and disposal.
- 5.4.5** The method of measurement for Stabilized Construction Entrances shall be per each installed complete as shown on the construction plans including stone, separation fabric, minor grading, and other drainage measures if required such as temporary culvert pipe.
- 5.4.6** Any additional minor sediment control, i.e. stone check dams, level spreaders, sumps, etc., installed by the Contractor to meet any applicable State or Federal Law or Regulation shall be the Contractor's sole responsibility and shall not be measured. All costs pursuant thereto shall be borne fully by the Contractor and considered incidental to the items covered herein.
- 5.4.7** The method of measurement for straw wattle installation and maintenance in conformance with the specifications and accepted by the WVDEP shall be on a per lineal foot basis to include the straw wattles, stakes, all necessary materials, supplies, labor and equipment for installation and maintenance including sediment removal and disposal.
- 5.4.8** The method of measurement for sediment tube trap installation, maintenance, and removal in conformance with the specifications and accepted by the WVDEP shall be on a per each basis to include the sediment tube (Erosion Eels by ACF Environmental or equal), stakes, T stakes, and all necessary materials, supplies, labor and equipment for complete installation and maintenance including sediment removal and disposal.

5.4.9 The method of measurement for sediment trap installation, maintenance, and removal in conformance with the specifications and accepted by WVDEP shall be on a per each basis to include the excavation, embankment and any other associated grading, filter fabric, aggregate, vegetation, reclamation, and all necessary materials, supplies, labor and equipment for complete installation, maintenance and removal including sediment removal and disposal.

5.4.10 The method of measurement for sediment baffle installation, maintenance, and removal shall be on a per lineal foot basis to include marine grade plywood, pressure treated posts, all necessary materials, supplies, labor and equipment for installation and maintenance including sediment removal and disposal.

5.5 BASIS OF PAYMENT

The quantity of work completed will be paid at the contract unit price bid for the following items, which price and payment shall be full compensation for all materials, labor, equipment and incidentals necessary to perform the work. Additionally, payments shall constitute full compensation for any required maintenance, sediment removal and disposal.

5.5.1 The method of payment for “Silt Fence” shall be on a per lineal foot basis to include the fencing, stakes, all necessary materials, supplies, labor and equipment for installation and removal of the silt fencing including maintenance and periodic removal and disposal of accumulated sediment.

5.5.2 The method of payment for “Super Silt Fence” shall be on a per lineal foot basis to include the chain link fencing, stakes, all necessary materials, supplies, labor and equipment for installation and removal of the super silt fencing including maintenance and periodic removal and disposal of accumulated sediment.

5.5.3 The method of payment for “Stabilized Construction Entrances” shall be per each installed complete as shown on the construction plans including stone, separation fabric, minor grading, and other drainage measures if required such as temporary culvert pipe.

5.5.4 The method of payment for “Straw Wattles” shall be on a per lineal foot basis to include the wattles, stakes, all necessary materials, supplies, labor and equipment for installation of the straw wattles including maintenance and periodic removal and disposal of accumulated sediment. Removal of biodegradable straw wattles is not required.

5.5.5 The method of payment for “Sediment Tube Trap” shall be on a per each basis to include the sediment tubes, stakes, T stakes, all necessary materials, supplies, labor and equipment for installation and removal of the sediment tubes including maintenance and periodic removal and disposal of accumulated sediment.

5.5.6 The method of payment for “Sediment Trap” shall be on a per each basis to include excavation, embankment and any other associated grading, filter fabric, aggregate, vegetation, reclamation, and all necessary materials, supplies, labor and equipment for complete installation, maintenance and removal including sediment removal and disposal.

5.5.7 The method of payment for “Sediment Baffle” shall be on a per lineal foot basis to include marine grade plywood, pressure treated posts, all necessary materials, supplies, labor and equipment for installation and removal of sediment baffle including maintenance and periodic removal and disposal of accumulated sediment.

5.6 **PAY ITEM**

Item 5.1, “Silt Fence”, per linear foot.

Item 5.2, “Super Silt Fence”, per linear foot.

Item 5.3, “Stabilized Construction Entrance”, per each.

Item 5.4, “Straw Wattles”, per linear foot.

Item 5.5, “Sediment Tube Trap”, per each.

Item 5.6, “Sediment Trap”, per each.

Item 5.7, “Sediment Baffle”, per linear foot.

6.0 REVEGETATION

6.1 DESCRIPTION

This work shall cover all operations incidental to the establishment of vegetation within the limits of construction as shown on the Drawings and in any other areas as directed and approved by the WVDEP. This work also includes the furnishing and the application of fertilizer, agricultural limestone and mulch and the furnishing and sowing of seed, all in accordance with these Specifications and as designated herein.

No areas outside the limits of construction shall be disturbed without prior approval from the WVDEP in order to ensure that Right-of-Entry has been obtained. Contractor shall minimize disturbances to areas outside limits of grading.

Any areas outside the limits of construction, disturbed by the Contractor, shall be revegetated by the Contractor at no expense to the WVDEP.

6.2 MATERIALS

6.2.1 Fertilizer

The commercial fertilizer to be used shall consist of 10-20-20 grade of uniform composition and furnished in standard containers. These containers, in accordance with applicable state and federal laws, must be clearly marked with the following information:

- a. Weight
- b. Name of Plant Nutrients
- c. Guaranteed Nutrients Percentages

Fertilizer shall be applied at a minimum rate of 1,000 lbs/acre in the areas of herbaceous revegetation. Fertilizer shall be applied immediately to all areas reaching final grade by one of the two following methods:

- a. Apply and incorporate fertilizer during seedbed preparation.
- b. Apply fertilizer in hydro seeding mixture following seedbed preparation.

Other fertilizer materials and rates may be used only if the Engineer finds that the substitutions are appropriate based on soil testing performed by State certified laboratories.

6.2.2 Lime

The lime to be used will be an agricultural grade pulverized limestone containing a minimum of 10% MgCO₃ and not less than 75% total carbonates. Fineness will be such that no less than 75% will pass through a #100 sieve and 100% will pass through a #10 sieve.

The application rate shall be formulated from soil test results, but in the absence of testing, a rate of three (3) tons per acre shall serve as the preferred minimum. Application directly to exposed areas of refuse is required prior to the placement of soil cover material over the refuse. Lime shall be applied immediately to all areas requiring seeding reaching final grade by one of the two methods listed in Section 6.2.1, "Fertilizer", in the areas of herbaceous revegetation.

6.2.3 Seed Mixtures

The variety of grass and legume seed furnished for the project shall bear a tag, in accordance with applicable state and federal laws, with the following information listed:

1. Lot Number
2. Seed Producer's Name
3. Percent Purity
4. Percent Germination
5. Date of Germination Testing
6. Weed Seed Content (should be <0.25% by weight)

All leguminous seed shall be inoculated with the specified strain of rhizobia which shall be a pure culture of bacteria selected for maximum vitality. No rhizobia shall be used which has passed the expiration date on each package. The inoculant shall be applied at five times the recommended rate except when used in a hydroseeding mixture when the rate will be ten times the recommended rate.

6.2.3.1 Temporary Seed Mixture

All stockpiles or other disturbed areas which will require further disturbance in which the additional disturbance will be delayed for a period of three (3) weeks or longer shall be vegetated according to the following guidelines.

| TEMPORARY SEED MIXTURE | | | | |
|---|---------------------|---------------------|--------------------|-----------------------|
| | Spring 3/15-5/15 | Summer 5/15-8/15 | Fall 8/15-10/15 | Winter 10/15-11/15 |
| Variety of Seed | -----lbs./acre----- | | | |
| Annual Ryegrass (Lolium multiflorum) | 40 | | 40 | |
| German Millet (Setaria italica) | | 40 | | |
| Cereal Rye (Secale cereale) | | | | 170 |
| *Do not use Japanese Millet | | | | |

All areas to be temporarily seeded which are to be redisturbed shall be fertilized with 500 lbs/acre of 10-20-20. All areas reaching final grade to be temporarily seeded shall be fertilized according to Section 6.2.1. Lime shall be applied according to Section 6.2.2 and mulched according to Section 6.2.4

6.2.3.2 Lawn Seed Mixture – Not Used

6.2.3.3 Permanent Seed Mixture

Permanent vegetation shall be established on all areas reaching final grade or other areas not likely to be destroyed by further construction activities. Any areas which reach final grade outside the permanent seeding season dates for permanent vegetation (between May 15 - August 15 or October 15 – March 15) shall be seeded with the appropriate temporary seed mixture according to Section 6.2.3.1. These areas shall then be reseeded with a permanent seed mixture during the next defined seeding period according to this section. The actual date of permanent seeding will require the Engineer's approval. The contractor shall have the option of utilizing permanent seed mix instead of temporary seed mix when seeding outside of the designated seeding season dates for permanent vegetation for seeding operations conducted on areas that have reached final grade (areas that will not require further disturbance) provided that these areas shall be reseeded with permanent seed mix at no additional cost to the WVDEP should adequate vegetation (as determined by the WVDEP) fail to be established from the initial seeding.

| PERMANENT SEED MIXTURE | | |
|--|---------------------|--------------------|
| | SPRING 3/15-5/15 | FALL 8/15-10/15 |
| Variety of Seed* | -----lbs./acre----- | |
| Orchardgrass (<i>Dactylis glomerata</i>) | 30 | 85 |
| Birdsfoot Trefoil 1. (<i>Lotus corniculatus</i>) | 15 | 85 |
| Red Clover (<i>Trifolium pretense</i>) | 10 | 85 |
| Annual Ryegrass 2. (<i>Lolium multiflorum</i>) | 25 | 85 |
| Spring Oats | 35 | 0 |
| Or | | |
| Winter Wheat | 0 | 90 |
| <p>1. Herbaceous legumes must be treated with the appropriate bacterium before seeding. <i>On areas that are steeply sloping (steeper than 1.7:1), slide prone, swales, or drainage conveyance structures substitute Crownvetch (<i>Coronilla varia</i>) at 20 lbs./acre for Birdsfoot Trefoil.</i></p> <p>2. Use Annual Ryegrass only in mixtures seeded after August 15 and before May 15.</p> <p>* Use only certified “blue tag” seed. Seed-rate suggested is for pure live seed (PLS) in lbs/acre.</p> | | |

6.2.4 Mulch Material

Mulching procedures shall take place immediately following seeding. Mulch shall consist of baled straw mulch or wood cellulose fiber. Straw mulch shall be applied at a rate of 2 tons/acre. The straw mulch shall be anchored with 100 gals/acre asphalt emulsion or 750 lbs/acre wood cellulose fiber. Wood cellulose fiber mulch may only be used on slopes steeper than 2H:1V or areas that are difficult to access at a rate of 1,500 lbs/acre, and only with the approval of the WVDEP.

6.2.4.1 Straw

Straw mulch shall include baled wheat or oats straw, or baled grass hay. Alfalfa, clover, and salt grass hay are not acceptable. Straw mulch shall be dry and reasonably free of weed, seeds, sticks, or other foreign material.

6.2.4.2 Wood Cellulose Fiber

Wood Cellulose Fiber shall be processed in such a manner that it will contain no growth or germination inhibiting factors and shall be dyed green. It shall be manufactured in such a manner that (1) after addition and agitation in slurry tanks with fertilizers, lime seeds, and water, the fibers in the material will become uniformly suspended to form a homogeneous slurry and (2) the material, when hydraulically sprayed on the ground, will form a blotter-like ground cover impregnated uniformly with seed, will allow rainfall to percolate to the underlying soil. Wood cellulose shall only be used on areas that have been approved by WVDEP.

The wood cellulose fiber shall be supplied in packages having a gross weight not to exceed 100 pounds. Weight specifications of this material from suppliers, and for all applications, shall refer only to air dry weight of the fiber material. Air dry weight is based on the normal weight standard of the Technical Association of the Pulp and Paper Industry for Wood Cellulose and is considered equivalent to 10 percent moisture. Each package of the cellulose fiber shall be marked by the manufacturer to show the air dry weight content.

6.2.5 Water

Water shall be reasonably free of injurious and other toxic substances harmful to plant life. The source of water is subject to the approval of the WVDEP.

6.3 CONSTRUCTION METHODS

6.3.1 All revegetation activities shall be conducted immediately following completion of final grading so as to utilize the fine soil material as a seedbed before this material is lost via subsequent rainfall.

6.3.2 On sites where appropriate equipment can operate the seedbed shall be prepared by breaking up surface crusts and loosening the soil material to a minimum of three (3) inches. Disking, harrowing, cultipacking or other acceptable tillage operations may be used to prepare the seedbed. On sites where appropriate equipment cannot operate, the seedbed shall be prepared by “tracking in” with a dozer or scarifying by other approved methods. Tracking will be limited in areas proposed for planting woody species to only that amount needed for stability. Compaction will be minimized in order to promote tree growth. Rocks larger than six (6) inches in diameter, trash, weeds and other debris that will interfere with seeding or maintenance shall be removed or disposed of as approved by the WVDEP. Seedbed preparation shall be suspended when soil moisture conditions are not suitable for the preparation of a satisfactory seedbed as determined by WVDEP.

- 6.3.3** Seedbed preparation and seeding shall take place progressively as various regraded areas are brought to final grade.
- 6.3.4** All seeding operations shall be performed immediately following seedbed preparation in such a manner that the seed is applied in the specified quantities uniformly on the designated areas.
- 6.3.5** Seed Application shall consist of approved hydroseeding methods where feasible. Any seed left in hydroseeder overnight shall be reinoculated before that seed shall be applied. Other methods of seed application may be utilized for site-specific reasons when approved by the WVDEP.
- 6.3.6** Any area failing to establish a vegetative stand due to weather or adverse soil conditions shall be reseeded, relimed, refertilized and remulched as approved by the WVDEP.
- 6.3.7** The Contractor shall maintain all seeded areas until final acceptance of the project. All areas shall be protected from any further equipment traffic and any damaged areas shall be repaired and reseeded. Maintaining seeded areas shall consist of watering, refilling, refertilizing, reliming, reseeding, and remulching erosion gullies and all bare areas.
- 6.3.8** A second and third seeding will be applied as needed, or as approved by the WVDEP.

6.3.8.1 **Second Step Seeding**

The second step seeding will take place during the first defined seeding period following the initial seeding. No payment shall be made for second step seeding, this work is part of the contract if completed before the final inspection or shall be considered warranty if completed after the final inspection. The following shall be used as a guide for second step application.

6.3.8.1.1 For areas with less than a 50 percent stand or subject to severe erosion, apply the complete amount of seed, fertilizer, lime much as specified.

6.3.8.1.2 For areas with over 50 percent stand apply one half the original fertilizer, lime and seed. If erosion is a problem, apply one half of the original mulch specified in Section 6.2.4.

6.3.8.2 Third Step Seeding

The third step seeding shall consist of spot applications on areas not showing a satisfactory stand. The seeding shall take place at the next defined seeding period following the second step application. The quantity of material to be used shall be determined on the same basis as the second step application in Section 6.3.8.1.

6.3.9 All seeded and planted areas will be visually inspected prior to the recognized spring and fall planting seasons. The inspection will include the following:

6.3.9.1 In the event that rills and gullies form in the areas that have been regraded and which disrupt the approved post-construction land use, interfere with the re-establishment of vegetation cover, or cause or contribute to impacts to receiving waters, the rills or gullies will be filled, regraded, stabilized and seeded or replanted in accordance with the specified plan.

6.3.9.2 Prior to the recognized spring and fall planting seasons, all areas shall be inspected which were seeded, and/or planted during previous planting season. Areas found to be deficient in vegetation will be re-treated (graded, seeded, planted, mulched, limed, etc., as needed) to achieve the required level of vegetation success and erosion control.

6.3.10 The contractor may utilize permanent seed mix instead of temporary seed mix when seeding outside of the designated seeding season dates for permanent vegetation for seeding operations conducted on areas that have reached final grade (areas that will not require further disturbance) provided that these areas shall be reseeded with permanent seed mix at no additional cost to the WVDEP should adequate vegetation (as determined by the WVDEP) fail to be established from the initial seeding.

6.4 METHOD OF MEASUREMENT

6.4.1 The method of measurement for revegetation shall be per acre.

6.5 BASIS OF PAYMENT

6.5.1 Payment will be made at the Contract unit price bid for these items, which price and payment shall be full compensation for doing all the work herein described in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies and incidentals as necessary to complete the work. Payment for revegetation includes all seeding (i.e. – temporary, first and second seeding) and planting operations. No additional payment will be made for second or third seeding.

6.5.2 Temporary seeding will be incidental to the seeding item and no separate measurement or payment will be made for temporary seeding. There will be no

separate payment for maintaining seeded and planted areas. No payment will be made for seeding after the final inspection. All work performed after the final inspection will be done under warranty.

6.6 PAY ITEMS

Item 6.0 “Revegetation”, per acre.

7.0 DRAINAGE STRUCTURES

7.1 DESCRIPTION

This work shall consist of furnishing all labor, equipment and materials necessary to construct the drainage structures shown on the Construction Drawings. Drainage structures shown include fiber and turf reinforcement mat lined channels, low water crossings, and rock outlet aprons.

7.2 MATERIALS

7.2.1 The Contractor should be aware that no provisions have been made to obtain rock on site. All rock riprap used throughout the project site shall consist of locally available, commercially purchased, calcareous stone (except as noted otherwise) meeting the following requirements. The rock riprap required for the various drainage structures, channels, and outlet aprons shall be of the size and gradations shown on the drawings and have a calcium carbonate equivalency of 70% or greater. The rock riprap shall have a maximum weighted loss of thirty percent when subjected to five (5) cycles of the Sodium Sulfate Soundness Test – ASTM C88 (ASTM C88-99a Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate), as modified by the American Association of State Highway and Transportation Officials (AASHTO) T-104. The use of on-site rock materials for riprap may be permitted with prior approval from the WVDEP in special circumstances. In order to be considered for use as riprap, the rock shall be subjected to laboratory testing and is required to be certified by the testing laboratory as non-acid producing. A certification on calcium carbonate equivalency and sodium sulfate soundness test shall be submitted to the WVDEP prior to delivery. Rip rap gradations shall be as shown on the drawings.

7.2.2 Turf/Earth Reinforcement Mats shall be Tensar's North American Green P500 TERM, or approved equal, and shall meet Type 5A, B, and C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18.

7.3 CONSTRUCTION METHODS

7.3.1 Areas for proposed drainage ditches and channels, and culverts shall be cleared and grubbed in accordance with Section 4.0 of these Specifications. Riprap shall be placed in accordance with Section 218.3.2 of the **WVDOH Standard Specifications for Roads and Bridges**, Adopted 2000.

7.3.1.1 The riprap stone furnished on the project shall be certified by the supplier as meeting or exceeding the requirements for size, gradation, durability, and calcium carbonate equivalency as established by these specifications.

7.3.2 Trench excavation exceeding five (5) feet in depth shall be supported with suitable shoring or sides of the excavation shall be cut to stable slopes as recommended in the OSHA Publication “Excavating and Trenching Operations”, OSHA 2226 and approved by the Engineer to prevent caving, slipping or cracking of the sides to protect workmen from any injury. Any shoring installed shall be removed following backfilling the trench.

7.3.4 Drainage channels

7.3.4.1 Drainage channels constructed in predominantly coal refuse or granular fill shall be excavated one foot below planned grade and soil material shall be placed and compacted to 95% of Standard Proctor Maximum Dry Density to a thickness of one foot over the refuse prior to placement of channel lining.

7.3.4.2 The subgrade for Turf/Earth Reinforced Matting channels shall be excavated to final grade prior to placement of the matting. Existing channels to be improved with riprap shall be cleared of all rock debris, coal refuse, trash, wood shrubs, and debris prior to commencement of channel construction in that area.

7.3.4.3 Impervious soil bedding placed below the rip rap in areas where proposed channels are constructed over fill shall consist of clay with grain size distribution having 50 percent or more passing the No. 200 mesh sieve. The clay shall not contain any soil particle greater than 2 inches in maximum dimension. If the clay is obtained off-site, the borrow area shall be in accordance with Section VII of the Special Provisions of these Specifications.

7.3.4.4 Stone for riprap may be placed by equipment. The riprap shall be placed to its full course thickness in one operation. Stone for the riprap shall be delivered and placed in a manner that will insure that the riprap is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Hand placing will be required where so directed by the Engineer to prevent damage to any permanent works.

- 7.3.4.5** The final location and extent of riprap may be adjusted by the Engineer in the field as conditions require.
- 7.3.4.6** Channels to receive Turf/earth reinforcement mats shall have them installed as detailed in the construction drawings and in accordance with the manufacturer's recommendations. Where there is a difference between the drawings and the manufacturer's recommendations, the more stringent of the two shall apply.
- 7.3.4.7** All areas adjacent to or above the channel banks that are disturbed during construction of the channels shall be revegetated.
- 7.3.4.8** Drainage channels and ditches shall be constructed to the lines, grades, and cross-sections shown on the Construction Drawings. Slopes shall be rounded and trimmed. Flow lines shall be trimmed of irregularities in the grade that might cause surface water pockets. The final location of the channels may be adjusted by the Engineer in the field to minimize the disturbed area or as field conditions require. Sections of ditches and channels that are cut into the rock shall not require riprap lining.
- 7.3.4.9** Maximum cut slopes for the drainage channels and ditches shall not exceed 2H:1V unless otherwise approved by the Engineer, or as shown on the Construction Drawings. Suitable excess material from diversion ditch excavation may be used as final soil cover material for regraded refuse areas upon approval of the Engineer.
- 7.3.4.10** Compacted earth fill necessary to construct drainage channels shall be placed in eight (8) inch loose lifts and compacted. The soil shall be tested in accordance with the provisions of ASTM D698 (Standard Proctor). The acceptable compaction shall be 90% of Standard Proctor maximum dry density at a moisture content of not less than 2% below nor greater than 3% above optimum at the time compactive effort is applied. Fill shall not be placed on slopes steeper than 3H:1V, unless the slope is benched as shown on the Construction Drawings. Fill foundation areas shall be stripped of sod and topsoil, and the top eight inches scarified and compacted prior to placement of the fill. Fill benches shall be constructed to allow placement of fill in horizontal layers. Fill bench construction or fill foundation preparation will be considered incidental to the construction of drainage channels or ditches. For grass lined ditches, if

any, after the ditch area has been properly shaped and compacted the area shall be limed, fertilized, seeded and mulched in accordance with Section 6.0 of these Specifications.

7.3.5 Outlet Protection shall be constructed as shown on the Construction Drawings.

7.3.6 The Low Water Crossing shall be constructed as shown on the Construction Drawings.

7.4 METHOD OF MEASUREMENT

7.4.1 The method of measurement for clearing and grubbing in these items is to be included under Section 4.0, "SITE PREPARATION," as contained elsewhere in these Specifications.

7.4.2 The method of measurement for liming, fertilizing, seeding and mulching in these items is to be included under Section 6.0, "REVEGETATION," as contained elsewhere in these Specifications.

7.4.3 The method of measurement for the "Trapezoidal Channels" will be on a linear foot basis for the channel as measured along the flow line of the channels. The unit measurement and price shall include the cost of all excavation and backfilling for channel template and Turf/Earth Reinforcement Matting; furnishing and installing the matting, 6" thick impermeable soil layer (for channels over pervious fill or refuse material), matting anchors, and all other incidental items necessary to construct the channel in conformance with these Specifications and Construction Drawings.

7.4.4 The method of measurement for "Outlet Protection" will be on a per each basis including all excavation, soil preparations, rip rap, filter fabric, and all other incidental items necessary to construct the outlet protection in conformance with these Specifications and Construction Drawings.

7.4.5 The method of measurement for "Low Water Crossing" will be on a per each basis including all excavation, soil preparation, rip rap, aggregate, and all other incidental items necessary to construct the crossing in conformance with these Specifications and Construction Drawings.

7.5 BASIS OF PAYMENT

- 7.5.1** Payment will be made per linear foot for Turf/Earth Reinforcement Mats “Trapezoidal Channels” at the Contract unit price bid, which price and payment shall be full compensation for doing all the work herein described in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies and incidentals as necessary to complete the work including all items as described in the method of measurement section.
- 7.5.2** Payment will be made per each for “Outlet Protection” at the Contract unit bid price for this item, which price and payment shall be full compensation for doing all work herein described in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies and incidentals as necessary to complete the work including all items as described in the method of measurement section.
- 7.5.3** Payment will be made per each for “Low Water Crossing” at the Contract unit bid price for this item, which price and payment shall be full compensation for doing all the work herein described in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies and incidentals as necessary to complete the work including all items as described in the method of measurement section.

7.6 PAY ITEMS

- Item 7.1, “2 Ft. Bottom Trapezoidal Channel (2H: 1V)”, per linear foot.
Item 7.2, “3 Ft. Bottom Trapezoidal Channel (3H: 1V)”, per linear foot.
Item 7.3, “Outlet Protection”, per each.
Item 7.4, “Low Water Crossing”, per each.

8.0 UNCLASSIFIED EXCAVATION

8.1 DESCRIPTION

This work shall consist of excavating, transporting, stockpiling, placing and compacting mine spoil, soil, rock, coal refuse or other materials encountered in the grading of the project areas and any other indicated incidental work.

Construction of site access roads, separation and storing of soil material suitable for final cover and other earthwork necessary for the proper execution of the design shall be incidental to this item. Payment will not be made for any excavation beyond planned template (cross-sections) or limits of disturbance unless the Owner in writing gives prior authorization. Borrow soil shall be obtained from within the limits of disturbance or as close to those limits as possible as shown on the Construction Drawings. Excavated material cannot be moved from one property owner to another without prior authorization from the WVDEP. Cleaning and grubbing of any borrow areas shall be limited to the extent necessary to obtain the required borrow soil. If off-site borrow areas should be necessary to provide for borrow soil shortages, then the Contractor is responsible for locating the borrow areas and obtaining right-of-entry agreements in which the property owner indemnifies and holds WVDEP/OSMRE harmless from any injury or damage whatsoever resulting from the Contractor's use of the property. All prospective Contractor and Bidders must obtain their own permission from the landowner for any subsurface test borings or pits. For borrow areas outside the limits of construction, the Contractor shall be held responsible for compliance with all NEPA requirements and shall provide proof of such compliance to the WVDEP. The Contractor shall also be responsible for the preparation of any reclamation plans required. WVDEP and the landowner must approve the reclamation plans. Grading shall be conducted in a manner such that a 12-inch thick layer of soil material is uniformly spread over any areas of exposed refuse resulting from the grading operation, or any exposed refuse within the construction limits not being graded shall be covered with a one foot thick layer of suitable soil material as depicted on the plans. Grading shall be to the lines and grades shown on the plans. The final grade line includes the one foot thick layer of soil cover.

8.2 MATERIALS

8.2.1 Materials to be excavated and regraded under this item will consist of coal refuse including, mine spoil, soil and rock which are in place.

8.2.2 Material for soil cover shall consist of all excess excavated soil obtained from the construction of the channels, underdrains, and soil from areas within or adjacent to proposed grading activities, provided the material is free from coal or unburned coal refuse, rocks larger than four (4) inches and contains no trash, garbage,

rubble or other substances that will interfere with re-seeding equipment or hinder the establishment of vegetative cover. The Contractor shall obtain only soil cover material as needed to provide adequate material for the 12-inch soil cover for regraded and disturbed areas. Use and development of offsite borrow area(s), if any, shall comply with Special Provisions Section VII of these Specifications for off-site borrow source.

The Contractor shall submit a borrow site reclamation plan to the WVDEP prior to any excavation taking place. The contractor shall be responsible for pre and post excavation cross-sections for all soil borrow areas for approval by the WVDEP

8.3 BORROW AREAS

8.3.1 Borrow material shall be obtained from within the limits of disturbance or as close to those limits as possible as shown on the Construction Drawings. Excavated material cannot be moved from one property owner to another without prior authorization from the WVDEP.

8.3.2 Cleaning and grubbing of any borrow areas shall be limited to the extent necessary to obtain the required borrow soil.

8.3.3 If off-site borrow areas should be necessary to provide for borrow soil shortages, then the Contractor is responsible for locating the borrow areas and obtaining right-of-entry agreements in which the property owner indemnifies and holds WVDEP/OSMRE harmless from any injury or damage whatsoever resulting from the Contractor's use of the property. All prospective Contractor and Bidders must obtain their own permission from the landowner for any subsurface test borings or pits. For borrow areas outside the limits of construction, the Contractor shall be held responsible for compliance with all NEPA requirements and shall provide proof of such compliance to the WVDEP. The Contractor shall also be responsible for the preparation of any reclamation plans required. WVDEP and the landowner must approve the reclamation plans.

8.3.4 Borrow areas and related disturbance shall be graded, fertilized, lined, seeded, and mulched in accordance with Section 6.0 of these Specifications.

8.4 SOIL COVER

8.4.1 Grading shall be conducted in a manner such that a 12-inch thick layer of soil material is uniformly spread over any areas of exposed refuse resulting from the grading operation, or any exposed refuse within the construction limits not being graded shall be covered with a one foot thick layer of suitable soil material as depicted on the plans. Grading shall be to the lines and grades shown on the plans.

The final grade line includes the one foot thick layer of soil cover.

- 8.4.2** Soil cover material as needed shall primarily be obtained on-site. When adequate borrow soil cover is not available on-site, then soil cover material shall be obtained off-site by the Contractor.
- 8.4.3** Prior to placement of the soil cover material, the surface of the regraded areas shall be finish graded to remove all surface irregularities, erosion gullies, or surface sloughs. Finish grading shall be performed immediately prior to placement of the soil cover to allow compaction of the soil cover with material loosened by the grading operation and to prevent additional erosion. Finish grading shall be in close conformity to the lines and limits shown on the Construction Drawings or as otherwise approved by the Engineer. Cover material shall neither be frozen nor shall it be placed on frozen ground or under moisture conditions that prevent grading equipment from producing a uniform surface. Finish grading equipment or techniques that produce a sealed, slick surface will not be permitted.
- 8.4.4** Cover material shall be placed and spread over the top of the graded area, embankment and embankment slopes, and graded to form a surface free of depressions, gullies, or other irregularities. The final thickness of the cover material shall be a minimum of twelve inches measured perpendicular to the surface, unless otherwise approved by the Engineer. Thickness of the cover material will be checked at random locations, as directed by the Engineer, by test pit excavation. The Contractor is responsible for digging the test pits and correcting any deficiencies in the thickness of the cover material.
- 8.4.5** After placement, the cover material shall be compacted to ensure proper bonding of the cover material to the regraded area. Compaction equipment shall be capable of operating on the slopes of the finished graded area and shall produce a uniform surface free of ruts and loose soil. Compaction equipment and methods shall be approved by the Engineer and shall be suspended when moisture conditions prohibit proper compaction of the cover material. To ensure uniform compaction of the cover material, a minimum of three passes shall be required. A pass shall be defined as the passing of the approved equipment over the entire surface with an overlap of one-third the width of the compaction surface between successive trips of the equipment. No minimum density shall be required.
- 8.4.6** As the cover material is placed and compacted, it shall be protected from erosion by liming, fertilizing, seeding, and mulching as described in Section 6.0 of these Specifications. The Contractor shall be responsible for repairing erosion and for tracking slopes if necessary until the Owner (WVDEP) accepts the project. All other operations will be halted if more than one acre of soil-covered area is left unseeded.

8.5 CONSTRUCTION METHODS

8.5.1 Excavation

Material excavation shall consist of the required removal of materials from the areas shown and the sloping and finishing of the areas to the required lines and grades as shown on the drawings. The slopes may be varied only by permission of the WVDEP. Any excavation beyond planned grades will not be paid for unless prior authorization is obtained from the Engineer. Slopes shall be trimmed neatly to present a uniform surface, free from hollows and protrusions and loose or overhanging rocks. The tops of all slopes shall be rounded to form a smooth, uniform transition to the existing ground. Areas cut to grade in refuse are to be undercut one foot below the final grades shown on the reclamation plan with final grades achieved with soil cover material.

The reclamation approach described in these construction specifications is intended to provide a lasting, stable configuration. The Contractor is required to exercise care to avoid conditions which may result in unstable conditions during the construction process. The Contractor shall be responsible for protecting residences from damage.

The Contractor must utilize material removal techniques, which are generally considered to be conducive to retaining slope stability. Additionally, disturbed slopes shall be brought to the design template as soon as practical and shall be protected in accordance with Section 6.0, "Revegetation".

Excavation shall not begin until clearing and grubbing operations have progressed sufficiently beyond the area to be excavated so the clearing and grubbing operations do not interfere with excavation operations. The Contractor shall obtain the approval of the Engineer prior to beginning excavation in any one area. The Engineer may require a halt of excavation activities if clearing and grubbing activities are inadequate or if sufficient areas are not available for placement of the excavated material.

The Contractor shall select equipment of such type, size, and quantity to perform the work efficiently and within the requirements set forth in these Specifications. If it is determined that these Specifications are not being met due to inappropriate equipment, the Contractor shall make changes to his equipment so as to bring the work into compliance with the Specifications.

Prior to any excavation and regrading work at the site the Contractor shall install and implement all temporary water pollution control measures (silt barrier, straw wattles, etc.) as approved by the Engineer. All ponded and wet areas adjacent to

the work areas are to be completely drained and cleared of all muck, debris and wet soil prior to initiating any excavation and regrading work at these locations.

The Engineer may increase the depth, extent, and limit of excavation if soft and or wet materials are encountered at the bottom of the excavation.

During excavation the contractor shall make every effort to separate material suitable for use as final soil cover. Final soil cover material may be placed on completed sections of embankment or stockpiled for later use.

Cut slopes steeper than 2H:1V will not be permitted unless the cut is in firm un-weathered rock or is suitable as determined by the Engineer, except a cut slope of 1:1.5 for selected diversion channels shall be permitted in order to limit the disturbed area, provided the 1:1.5 slope length is less than 15 feet in height.

8.5.2 Material Placement

Depositing and compacting fill in layers shall be started at the lowest point in the fill below grade, at the bottom of ravines and at the toe of the slope on side hills fills. Prior to fill placement, existing foundation for the embankment will be proof-rolled and all unsuitable material, as determined by the WVDEP, will be removed.

Excavated material shall be placed in embankments in successive layers not to exceed one (1) foot in thickness before compaction. The layers shall be constructed approximately horizontal. Each layer, before starting the next, shall be leveled and smoothed by means of power driven graders, dozers, or other suitable equipment with adequate weight, capacity, and power to do the work. Layers shall be extended across the entire fill at the level of deposition unless otherwise authorized by the WVDEP. Each layer, before starting the next, shall be compacted.

Fill materials to be used in any area of an embankment shall be free from trash, debris, frozen soil, organic material or other foreign material. The top two feet of the final graded embankment shall not contain any material greater than one (1) foot in any dimension.

Embankment fill and embankment subgrade materials shall be compacted to at least 90% of Standard Proctor (ASTM D-698) maximum dry density at a moisture content of not less than 2% below or greater than 3% above optimum. Testing shall be at a frequency approved by the WVDEP. One test per day during fill placement shall serve as a minimum.

Embankment fill material which does not contain sufficient moisture to be compacted to the requirements specified herein shall receive applications of

water necessary for compaction. Water shall be applied with suitable sprinkling devices and shall be thoroughly incorporated into the material which is to be compacted. Embankment fill material which contains excess moisture shall be dried prior to compaction. Sufficient discing equipment shall be continuously available at the site and shall be used to add water or remove excess moisture from fill materials.

At the close of each day's work, or when work is to be stopped for a period of time, the entire surface of the compacted fill shall be sealed by a method approved by the WVDEP. If, after a prolonged rainfall, the top surface of the embankments is too wet and plastic to work properly, the top material shall be removed to expose firm material. Ruts in the surface of any layer shall be suitably filled or eliminated by grading before compaction. The disturbed areas will be revegetated according to Section 6.0, "Revegetation".

The Contractor shall select compaction equipment that will produce the desired density. Compaction equipment that produces a sealed, slick surface will not be permitted. All compaction equipment must be approved by the Engineer prior to use. If a sealed, slick surface develops during compaction of the fill due to causes other than the type of compaction equipment utilized, the surface shall be scarified to a depth of 4 inches prior to placement of the next lift.

Testing frequency for in place field density using ASTM Method D1556 (Sand Cone) or ASTM Method D2922 and D3017 (Nuclear Density) shall be as follows: every other lift of fill placed, with a minimum of one lot test per each day fill is placed or as directed by the Engineer.

During grading and embankment construction, fill material shall not be placed on frozen ground; frozen soil shall not be used as fill material.

Fill shall be placed within the limits and lines shown on the Construction Drawings, including areas of over excavation, if any. Fill slopes shall be as shown on the Construction Drawings. Fill slope steeper than 2H:1V will not be permitted.

8.6 METHOD OF MEASUREMENT

8.6.1 Method of measurement of furnishing, installing, and implementing temporary water pollution control measures in this item is to be in accordance with and included under Section 5.0, "SEDIMENT CONTROL" as contained elsewhere in these Specifications.

8.6.2 Clearing and grubbing in this item will be measured in accordance with and included under Section 4.0, "SITE PREPARATION", as contained elsewhere in

these Specifications.

- 8.6.3** The method of measurement for earthwork and grading work including borrow area excavation, sediment basin excavation, and any undercutting of embankment foundation will be in cubic yards of "UNCLASSIFIED EXCAVATION". Furnishing and installing the necessary equipment and performing all the work of draining and clearing the ponded areas of all muck, debris and wet soil; excavation and drying (if necessary), transporting, placing and compacting the onsite soil to construct the embankment will be considered as a necessary part of manipulation to establish the final regraded surface, the cost of which is included in the price bid per cubic yard for "Unclassified Excavation". The Contractor shall reestablish the cross sections shown on the Construction Drawings and develop cross sections showing the existing ground surface and the final bottom of the excavation including all authorized over excavation and fill benching. The excavation volume shall be determined by the average end area method or the Contractor has the option of performing a topographic survey of the finished ground to produce a surface that can be compared to the original (existing) ground surface using a computer-aided drafting program. It is recommended that the comparison of the finished and original ground surfaces be calculated using the grid volume method with an out/fill factor of 1.0 feet. Field survey and volume calculations shall be certified by a Professional Land Survey or Professional Engineer. The Contractor shall measure only the cut quantity of material excavated from its original state. No allowance will be made for shrink or swell of the material in the pay item. The cost of all work associated with separating, and placing soil cover material shall also be included in the unit price bid for "Unclassified Excavation". Payment will not be made for any excavation beyond planned template (cross-sections) unless the Owner in writing gives prior authorization. Construction of access roads including aggregate materials, and other earthwork necessary for the proper execution of the design shall be incidental to this item.

Should off-site borrow soil area be needed, it would be the responsibility of the Contractor and will be paid at the unit rate of "Unclassified Excavation." Borrow soil volume will be determined in the same way as the "Unclassified Excavation".

- 8.6.4** No separate measurement shall be made of the number of compaction tests performed by the Contractor. The cost of testing shall however be included under Section 3.0 "QUALITY CONTROL", as contained elsewhere in these Specifications.
- 8.6.5** The method of measurement for liming, fertilizing, seeding and mulching in this

item is to be included under Section 6.0, "REVEGETATION", as contained elsewhere in these Specifications.

8.7 BASIS OF PAYMENT

8.7.1 Payment will be made per Cubic Yard for Unclassified Excavation at unit price bid, which price and payment shall be full compensation for doing all the work herein described in a workmanlike and acceptable manner; including the furnishing of all labor, materials, tools, equipment, supplies and incidentals as necessary to complete the work including all items as described in the method of measurement section. The cost of all work associated with dewatering and drying wet material, separating, placing soil cover material, and final removal and reclamation of sediment control basins and channels shall also be included in the unit price bid for "Unclassified Excavation". Payment will not be made for any excavation beyond planned template (cross-sections) unless the Owner in writing gives prior authorization. Excavation for channels, underdrains, conveyance pipes, access roads, and mine seals shall not be included with the per Cubic Yard payment for Unclassified Excavation, but is included with the unit bid cost for the applicable items as described elsewhere in these specifications.

8.8 PAY ITEM

Item 8.0, "Unclassified Excavation", per Cubic Yard

11.0 UTILITIES

11.1 DESCRIPTION

This work, if necessary, shall consist of all measures to relocate, maintain and protect all utilities within the limits of work specified herein and on the construction drawings. No specific utility relocations are anticipated in connection with execution of the reclamation project.

The contractor shall notify the utility in writing at least fifteen (15) days, but preferably thirty (30) days prior to the time of work within the area will be done. The Contractor shall be solely responsible for locating all utilities within the limits of work. All damage made to existing utilities by the Contractor shall be the sole responsibility of the Contractor. In the event damage does occur, the Contractor shall notify the affected utility and the WVDEP immediately and make or have made all necessary repairs and bear the expenses thereof and resulting damage caused thereby. The Contractor shall obtain right-of-entry and/or any necessary permits for repairs or relocation.

Utility Contacts: Miss Utility of West Virginia, 1-800-245-4848 or 811

11.2 MATERIALS

All materials used for utility related disturbance shall be in accordance with these specifications or as indicated by the affected utility.

11.3 CONSTRUCTION METHODS

All work shall be in accordance with these specifications or in accordance with those methods as indicated by the affected utility.

11.4 METHOD OF MEASUREMENT

No measurement shall be made for protection of utilities. The Contractor will not bid on utility work but will be reimbursed the actual approved invoice cost. The Contractor shall submit an estimate for utility relocation to the WVDEP for approval. Only utilities affected by the proposed reclamation will be reimbursed.

11.5 BASIS OF PAYMENT

Payment for Utility relocations shall be based on actual approved invoice cost for such work. For utilities that are subject to regulation by the Public Service, payment for expenses for utility relocation (if any) shall be made directly to the affected utility by the WVDEP. Payment for protection of utilities shall not be made, but shall be considered incidental to the work included in these specifications.

12.0 BORING LOGS AND WATER QUALITY ANALYSIS

PROJECT: Ebenezer Highwall SHEET: 1 OF 1
 LATITUDE: 40.34633 LONGITUDE: -080.55254 GEO. DATUM: _____ START: 9/16/13 END: 9/16/13
 NORTH: _____ EAST: _____ COORD. DATUM: _____ LOGGER: MJS
 STATION: _____ OFFSET: _____ BASELINE: _____ DRILLER: WAYNE EWING
 EQUIPMENT: CME 45 RUBBER TRACKED RIG DRILL CO.: TBS, INC.

METHOD DETAILS: 6.5" OD HSA; 1 3/8" ID SPT; 140 LBS / AUTO HAMMER, 30" DROP

WATER DEPTH 1: _____ TIME: _____ DATE: _____ DESCRIPTION: _____ INCLINATION: 0 DEG
 WATER DEPTH 2: _____ TIME: _____ DATE: _____ DESCRIPTION: _____ ELEV. DATUM: _____
 WATER DEPTH 3: _____ TIME: _____ DATE: _____ DESCRIPTION: _____ GROUND ELEV.: 1146

| SAMPLE DEPTH (FT.) | SAMPLE TYPE -NUMBER | RECOVERY % | SPT BLOWS/ 0.5 FT. or (ROD) | TEST RESULTS | STRATA | DEPTH | DESCRIPTION | REMARKS |
|--------------------|---------------------|------------|-----------------------------|--------------|--------|-------|---|-----------------------------|
| 0 | | | | | | 0 | TOPSOIL; brown; moist; soft; -PL to +PL; homogenous; contains grass and roots | 0.3' Weathered Rock (Shale) |
| 1.5 | S-1 | 40% | 7 8 6 | | | 1.03 | 0.3' - EL 1145.7 | |
| 3.0 | A-N | | | | | 2.07 | SILTY SAND WITH GRAVEL (SM); brown; dry to moist; NP; homogeneous; gravel is coarse to fine; sand is coarse to fine | |
| 4.5 | S-2 | | 7 14 13 | | | 3.1 | | |
| 6.0 | A-N | | | | | 4.13 | | |
| 7.5 | S-3 | | 12 9 8 | | | 5.17 | | |
| 8.5 | A-N | | | | | 6.2 | | |
| 10.0 | S-4 | | 5 7 8 | | | 7.23 | | |
| | | | | | | 8.27 | | |
| | | | | | | 9.3 | | |
| | | | | | | 10.0 | 10.0' - EL 1136.0 | |
| | | | | | | 10.39 | END OF BORING @ 10.0' | |
| | | | | | | 11.37 | | |
| | | | | | | 12.4 | | |
| | | | | | | 13.43 | | |
| | | | | | | 14.47 | | |
| | | | | | | 15.5 | | |
| | | | | | | 16.53 | | |
| | | | | | | 17.57 | | |
| | | | | | | 18.6 | | |
| | | | | | | 19.63 | | |

PROJECT: **Ebenezer Highwall**

SHEET: 1 OF 1

LATITUDE: **40.34232** LONGITUDE: **-080.54470**

GEO. DATUM:

START: **9/16/13** END: **9/16/13**

NORTH: EAST:

COORD. DATUM:

LOGGER: **MJS**

STATION: OFFSET:

BASELINE:

DRILLER: **WAYNE EWING**

EQUIPMENT: **CME 45 RUBBER TRACKED RIG**

DRILL CO.: **TBS, INC.**

METHOD DETAILS: **6.5" OD HSA; 1 3/8" ID SPT; 140 LBS / AUTO HAMMER, 30" DROP**

WATER DEPTH 1: TIME: DATE: DESCRIPTION: INCLINATION: **0 DEG**

WATER DEPTH 2: TIME: DATE: DESCRIPTION: ELEV. DATUM:

WATER DEPTH 3: TIME: DATE: DESCRIPTION: GROUND ELEV.: **1129**

| SAMPLE DEPTH (FT.) | SAMPLE TYPE -NUMBER | RECOVERY % | SPT BLOWS/ 0.5 FT. or (RQD) | TEST RESULTS | STRATA | DEPTH | DESCRIPTION | REMARKS |
|--------------------|---------------------|------------|-----------------------------|--------------|--------|--------|---|---------|
| 0 | | | | | | 0 | TOPSOIL; brown; moist; soft; -PL to +PL; homogenous; contains grass and roots | |
| 1.5 | S-1 | 47% | 11 11 | | | 0.3' | 0.3' - EL 1128.7 | |
| 3.0 | A-N | | | | | 2.07' | SANDY SILT WITH GRAVEL (ml); brown; dry to moist; stiff to very stiff; -PL; homogeneous; sand is fine to coarse; gravel is fine to coarse; gravel is subangular sandstone | |
| 4.5 | S-2 | 73% | 5 8 5 | | | 3.1' | | |
| 6.0 | A-N | | | | | 4.13' | | |
| 7.5 | S-3 | 93% | 3 3 4 | | | 5.17' | 6.5' - EL 1122.5 | |
| 8.5 | A-N | | | | | 6.2' | CLAYEY SAND WITH GRAVEL (sc); brown to gray; dry to moist; loose; NP; sand is fine to coarse; gravel is fine to coarse; gravel is subangular sandstone | |
| 10.0 | S-4 | 73% | 4 6 4 | | | 7.23' | | |
| | | | | | | 8.27' | | |
| | | | | | | 9.3' | | |
| | | | | | | 10.0' | 10.0' - EL 1119.0 | |
| | | | | | | 10.39' | END OF BORING @ 10.0' | |
| | | | | | | 11.37' | | |
| | | | | | | 12.4' | | |
| | | | | | | 13.43' | | |
| | | | | | | 14.47' | | |
| | | | | | | 15.5' | | |
| | | | | | | 16.53' | | |
| | | | | | | 17.57' | | |
| | | | | | | 18.6' | | |
| | | | | | | 19.63' | | |

PROJECT: **Ebenezer Highwall**

SHEET: 1 OF 1

LATITUDE: **40.34212** LONGITUDE: **-080.54453** GEO. DATUM: _____

START: **9/16/13** END: **9/16/13**

NORTH: _____ EAST: _____ COORD. DATUM: _____

LOGGER: **MJS**

STATION: _____ OFFSET: _____ BASELINE: _____

DRILLER: **WAYNE EWING**

EQUIPMENT: **CME 45 RUBBER TRACKED RIG**

DRILL CO.: **TBS, INC.**

METHOD DETAILS: **6.5" OD HSA; 1 3/8" ID SPT; 140 LBS / AUTO HAMMER, 30" DROP**

WATER DEPTH 1: _____ TIME: _____ DATE: _____ DESCRIPTION: _____ INCLINATION: **0 DEG**

WATER DEPTH 2: _____ TIME: _____ DATE: _____ DESCRIPTION: _____ ELEV. DATUM: _____

WATER DEPTH 3: _____ TIME: _____ DATE: _____ DESCRIPTION: _____ GROUND ELEV.: **1138**

| SAMPLE DEPTH (FT.) | SAMPLE TYPE -NUMBER | RECOVERY % | SPT BLOWS/ 0.5 FT. or (ROD) | TEST RESULTS | STRATA | DEPTH | DESCRIPTION | REMARKS |
|--------------------|---------------------|------------|-----------------------------|--------------|--------|-------|--|--------------------------------|
| 0 | | | | | | 0 | TOPSOIL; brown; moist; soft; -PL to +PL; homogenous; contains grass and roots | |
| 1.5 | S-1 | 60% | 3 7 9 | | | 1.03 | 0.2' - EL 1137.8 | |
| 3.0 | A-N | | | | | 2.07 | SILTY SAND WITH GRAVEL (SM); brown to gray; dry to moist; loose to medium dense; homogeneous, sand is fine to coarse; gravel is fine to coarse; gravel is subangular sandstone | |
| 4.5 | S-2 | 67% | 2 4 2 | | | 3.1 | | |
| 6.0 | A-N | | | | | 4.13 | 4.0' - EL 1134.0 | |
| 7.5 | S-3 | 80% | 5 3 5 | | | 5.17 | SANDY CLAY WITH GRAVEL (CL); dry to moist; medium stiff; -PL to +PL; homogeneous; sand is fine to coarse; gravel is fine to coarse; gravel is subrounded shale | |
| 9.0 | A-N | | | | | 6.2 | | |
| 10.5 | S-4 | 87% | 4 3 2 | | | 7.23 | | |
| 12.0 | A-N | | | | | 8.27 | | |
| 13.5 | S-5 | 100% | 7 1 3 | | | 9.3 | | |
| 15.0 | A-N | | | | | 10.35 | | |
| 16.5 | S-6 | 100% | 3 2 4 | | | 11.37 | | |
| 18.5 | A-N | | | | | 12.4 | | |
| 20.0 | S-7 | 100% | 4 4 3 | | | 13.43 | | |
| | | | | | | 14.47 | | |
| | | | | | | 15.5 | | |
| | | | | | | 16.53 | | |
| | | | | | | 17.57 | | |
| | | | | | | 18.6 | | |
| | | | | | | 19.63 | | |
| | | | | | | 20.0 | 20.0' - EL 1118.0 | |
| | | | | | | | END OF BORING @ 20.0' | |
| | | | | | | | | 13.0' ROCK ENCOUNTERED (SHALE) |

PROJECT: **Ebenezer Highwall**

SHEET: 1 OF 1

LATITUDE: **40.34158** LONGITUDE: **-80.54479** GEO. DATUM: _____

START: **9/16/13** END: **9/16/13**

NORTH: _____ EAST: _____ COORD. DATUM: _____

LOGGER: **MJS**

STATION: _____ OFFSET: _____ BASELINE: _____

DRILLER: **WAYNE EWING**

EQUIPMENT: **CME 45 RUBBER TRACKED RIG**

DRILL CO.: **TBS, INC.**

METHOD DETAILS: **6.5" OD HSA; 1 3/8" ID SPT; 140 LBS / AUTO HAMMER, 30" DROP**

| | | | | |
|----------------------|-------------|-------------|--------------------|---------------------------|
| WATER DEPTH 1: _____ | TIME: _____ | DATE: _____ | DESCRIPTION: _____ | INCLINATION: 0 DEG |
| WATER DEPTH 2: _____ | TIME: _____ | DATE: _____ | DESCRIPTION: _____ | ELEV. DATUM: _____ |
| WATER DEPTH 3: _____ | TIME: _____ | DATE: _____ | DESCRIPTION: _____ | GROUND ELEV.: 1130 |

| SAMPLE DEPTH (FT.) | SAMPLE TYPE -NUMBER | RECOVERY % | SPT BLOWS/ 0.5 FT. or (ROD) | TEST RESULTS | STRATA | DEPTH | DESCRIPTION | REMARKS |
|--------------------|---------------------|------------|-----------------------------|--------------|--------|-------|--|--|
| 0 | | | | | | 0 | TOPSOIL; brown; moist; soft; -PL to +PL; homogenous; contains grass and roots | |
| 1.5 | S-1 | 73% | 2 4 13 | | | 1.03 | 0.2' - EL 1129.8 SILTY SAND WITH GRAVEL (SM); brown to gray; dry to moist; medium dense; NP; homogeneous; sand is fine to coarse; gravel is fine to coarse; gravel is subangular shale | |
| 3.0 | A-N | | | | | 2.07 | | |
| 4.5 | S-2 | 80% | 7 7 5 | | | 3.1 | 3.0' - EL 1127.0 CLAYEY SAND WITH GRAVEL (SC); brown to gray; dry to moist; medium dense to very dense; NP; homogeneous; sand is fine to coarse; gravel is fine to coarse; gravel is subangular sandstone | |
| 6.0 | A-N | | | | | 4.13 | | |
| 6.4 | S-3 | 100% | 50/0.4 | | | 5.17 | | 6.0' ROCK ENCOUNTERED (SHALE) |
| 9.0 | A-N | | | | | 6.2 | | |
| 10.5 | S-4 | 67% | 9 5 5 | | | 7.23 | | |
| 12.0 | A-N | | | | | 8.27 | | |
| 13.5 | S-5 | 93% | 20 13 26 | | | 9.3 | | |
| 15.0 | A-N | | | | | 10.35 | 10.0' - EL 1120.0 WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM); brown to gray; dry to moist; medium dense to dense; NP; homogeneous; sand is fine to coarse; gravel is fine to coarse; gravel is angular shale | |
| 16.5 | S-6 | 0% | 5 5 6 | | | 11.37 | | |
| 18.5 | A-N | | | | | 12.4 | | 13.0' - 13.3' THIN LAYER OF GRAY CLAY WITH COAL REFUSE |
| 20.0 | S-7 | 93% | 7 7 5 | | | 13.43 | | |
| | | | | | | 14.47 | | |
| | | | | | | 15.5 | | |
| | | | | | | 16.53 | | |
| | | | | | | 17.57 | | |
| | | | | | | 18.6 | | |
| | | | | | | 19.63 | | |
| | | | | | | 20.0 | 20.0' - EL 1110.0 END OF BORING @ 20.0' | |

H&H WATER CONTROLS, INC.

565 Route 88 South
Carmichaels, PA 15320

Telephone: (724) 966-2278 Fax: (724) 966-7924
PA Lab # 30-00287

Ship To Michael Baker Jr William Neider
4301 Dutch Ridge Road
Beaver, PA 15010

| | |
|-------------------|---------------|
| Report No. | 302341 |
|-------------------|---------------|

Report Date: 10/10/2013
H&H Sample No: 13-3279.1-2
P.O. Number:
Collection Date: 09/16/2013
Collection Time: 13:55
Collected By: MJS
Received Date: 09/17/2013
Analyzed Date: 09/27/2013
Sample Id: WQ-1-1 Ebenezer
High Wall Stream

LABORATORY ANALYSIS REPORT

| Method No. | Parameter | QL* | MDL* | Results | Units | Date / Time / By |
|---------------|------------------------|-----|------|---------|----------------------|------------------|
| SM18 4500H+B | PH/Lab | | | ** 7.1 | S.U. | 0917131625dl |
| SM18 2320B | Alkalinity | | 2 | 31 | mg CaCO ₃ | 0920130905dh |
| SM18 2310B-4a | Acidity (Hot) | | 2 | -26 | mg CaCO ₃ | 0920131425dh |
| SM18 2540C | Total Dissolved Solids | | 10.0 | 647.0 | mg/L | 0920131745dh |
| SM18 3111BFe | Iron | 0.1 | .03 | 1.4 | mg/L | 0927130910cs |
| SM18 3111D | Aluminum | .1 | .03 | 0.5 | mg/L | 0927131440cs |

*QL = Quantitation Limit

*MDL = Method Detection Level

**pH received and analyzed outside hold time.



Debra A. Harris
Laboratory Director
H&H WATER CONTROLS, INC.

H&H WATER CONTROLS, INC.

565 Route 88 South
Carmichaels, PA 15320

Telephone: (724) 966-2278 Fax: (724) 966-7924
PA Lab # 30-00287

| | |
|-------------------|---------------|
| Report No. | 302342 |
|-------------------|---------------|

Report Date: 10/10/2013
H&H Sample No: 13-3279.3-4
P.O. Number:
Collection Date: 09/16/2013
Collection Time: 10:30
Collected By: MJS
Received Date: 09/17/2013
Analyzed Date: 09/27/2013
Sample Id: WQ-2-1 Ebenezer
High Wall-Pond

Ship To Michael Baker Jr William Neider
4301 Dutch Ridge Road
Beaver, PA 15010

LABORATORY ANALYSIS REPORT

| Method No. | Parameter | QL* | MDL* | Results | Units | Date / Time / By |
|---------------|------------------------|-----|------|---------|----------------------|------------------|
| SM18 4500H+B | PH/Lab | | | ** 5.8 | S.U. | 0917131625dl |
| SM18 2320B | Alkalinity | | 2 | <20 | mg CaCO ₃ | 0920130905dh |
| SM18 2310B-4a | Acidity (Hot) | | 2 | <-2 | mg CaCO ₃ | 0920131425dh |
| SM18 2540C | Total Dissolved Solids | | 10.0 | 737.0 | mg/L | 0920131745dh |
| SM18 3111BFe | Iron | 0.1 | .03 | 0.2 | mg/L | 0927130910cs |
| SM18 3111D | Aluminum | .1 | .03 | 0.2 | mg/L | 0927131440cs |

*QL = Quantitation Limit

*MDL = Method Detection Level

**pH received and analyzed outside hold time.



Debra A. Harris
Laboratory Director
H&H WATER CONTROLS, INC.