

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF MINES AND MINERAL INDUSTRIES  
HARRISBURG, PENNSYLVANIA

"The Land and Water Conservation and Reclamation Act"  
PROJECT NO. SL 142-1

Mine Drainage Treatment Plant

Pigeon Creek, Carroll Township,  
Washington County, Pennsylvania

SPECIFICATIONS

Introduction

Acid mine water from abandoned mine in the vicinity of Dunkirk Village in Carroll Township, Washington County, Pennsylvania, pollutes Pigeon Creek.

The mine water while low in acid content has a considerable amount of iron, thus is amenable to simple aeration and settling.

The project is one to which the Commonwealth of Pennsylvania may contribute to or bear the cost under the authority conveyed by the General Assembly of Pennsylvania, Session of 1967, Act No 443 known as "The Land and Water Conservation and Reclamation Act", specifically Section 16, (1) (11), "The Department of Mines and Mineral Industries shall have the power and authority to construct and operate a plant or plants for the control and treatment of water pollution resulting from mine drainage".

1. Definitions

Work- The term "Work" described herein includes providing all materials, equipment and performing all labor required for the construction and break-in operation of a "Mine Drainage Treatment Plant" located across the highway from the Dunkirk Mine Portal.

DEPARTMENT REPRESENTATIVE - "Department Representative" as used herein is the person or persons duly authorized by the Secretary of Mines and Mineral Industries to represent the Department during this project for the purpose of seeing that the work is done in compliance with the Specifications and Contract,

and to accomplish the purpose of the project.

CONTRACTOR - "Contractor" as used herein shall mean the person, partnership, company or corporation who shall be adjudged the successful bidder and who shall have satisfied all bond and insurance requirements and shall have been awarded a fully executed contract with authorization to proceed with the work.

SUB-CONTRACTORS - "Sub-contractors" as used herein shall mean any and all persons, partnerships, companies or corporations duly listed by the Contractor in his bid presentation as able and willing to perform certain portions of the work. Such sub-contractors shall be bound by all of the provisions of the Contract and unless such listed Sub-contractors are approved by the Secretary of Mines and Mineral Industries, the bid may be disallowed.

2. The Work

The following is a description of the work concerned in this project by parts identified and as delineated in the attached drawings.

Whenever and wherever a term descriptive of a part of the work is employed herein, that term shall mean incorporate by reference, and reference is therefore directed to the section of the Specifications dealing with that portion of the work.

A. EXCAVATION

The Contractor shall provide all labor and equipment necessary to excavate and prepare the site for the installation of all concrete and masonry work as shown in the Project Drawings- Exhibit "A", including fences, not shown in detail. Contractors obligation shall include any necessary diversion facilities.

All excavation shall be to neat lines, avoiding damage or disruption of adjoining facilities and injury to the public.

Existing monuments, utilities and/ or bench marks shall be protected.

Excavation is unclassified. No claims for extra compensation or extension of time due to sub-surface conditions will be honored.

Excavation shall be kept free from water until all masonry work and backfilling is completed.

Backfilling shall be in eight inch (8") layers, mechanically tamped, no puddling will be allowed.

Excess material remaining after backfilling shall be placed and graded at the direction of the Department Representative. Upon completion of the project, all litter and debris shall be cleaned up, leaving the work area in an orderly and workmanlike condition.

B. MASONRY

Concrete slab, footings, and walls.

This phase of the work involves the furnishing of all labor, material, supplies and equipment necessary for the construction of footings, slabs, and concrete walls, as shown on attached drawings.

The following provisions wherever applicable shall apply for the installation of all concrete work included in the Specifications and any costs pertaining thereto shall be included in the unit price for concrete in place and accepted.

The structural drawings indicate the general extent and major details of the structural concrete work. Contractor shall be responsible for supplying proper reinforcement for all foundations, walls, slabs, etc., as required by the intent of the drawings. Where not specifically detailed, such reinforcement shall be as indicated for similar typical sections. Contractor shall furnish extra steel at construction joints in walls, around openings, etc. and other such locations as may be required in accordance with the standard practice for detailing reinforced concrete structures published by the American Concrete Institute.

Included under this part of the contract is furnishing and installing all appurtenances required for installation of the mechanical work as shown or noted on all drawings. The Contractor shall examine the drawings and Specifications for such separate work items in order to determine the exact requirements

and shall construct such items in accordance with detailed drawings of equipment furnished by the manufacturer of the equipment involved.

SHOP DRAWINGS AND DIMENSIONS - The Contractor shall provide shop drawings for reinforcing steel. All details shall be in accordance with the standard practice as recommended by the American Concrete Institute. Shop drawings shall be submitted to the Department for approval. This approval, however, is not to relieve the Contractor of responsibility for error, in detail or dimension, as the checking of the Department is only a precautionary measure and it is not intended that this checking shall go into every detail of the work.

Contractor shall be responsible for all dimensions of the concrete work and shall check structural drawings in relation to all other drawings and shall verify all dimensions and relations with other work. Contractor shall be responsible for proper arrangement and fit of the work and if discrepancies are noted between the various drawings and work, the Contractor shall notify the Department immediately in writing and shall not proceed until so directed.

No shop drawings will be accepted for correction by the Department unless checked by the Contractor and stamped with his approval of details and dimensions.

CEMENT - Portland Cement shall be Type I or III, conforming to current "Standard Specifications for Portland Cement" (ASTM Spec. C-150). Cement shall be properly housed and protected from dampness and shall show no signs of deterioration when delivered to the mixer.

CONCRETE AGGREGATES Concrete aggregates shall conform to the "Standard Specifications for Concrete Aggregates" (ASTM Spec. C-33), except that aggregate which have been found by test and actual service to produce concrete of the required strength, durability, watertightness, fire resistance, and wearing qualities may be used where authorized by the Department. Lightweight concrete aggregates shall conform to the "Standard Specifications for Lightweight Aggregates for Concrete" (ASTM Spec. C-130). The maximum size of the aggregate

shall be not larger than one-fifth of the narrowest dimension between forms of the member for which the concrete is to be used, nor larger than three-fourths of the minimum clear spacing between reinforcing bars. Fine aggregate shall consist of natural sand having clean hard, durable, uncoated grains free from deleterious substances and conforming to ASTM Spec. C-33. Course aggregate shall consist of crushed stone or gravel having clean, hard, durable, uncoated particles free from deleterious matter.

WATER Water used in mixing concrete shall be clean and free from harmful amounts of acid, alkalies, salts, or organic materials.

METAL REINFORCEMENT Reinforcing bars shall conform to the requirements of the "Standard Specifications for Billet-Steel Bars for Concrete Reinforcement" (ASTM Spec. A15). Welded wire fabric for concrete reinforcement shall conform to the requirements of the "Standard Specifications for Welded Steel Wire Fabric for Concrete Reinforcement" (ASTM Spec. A185). Slabs on grade shall be reinforced with welded wire mesh, unless otherwise noted, lapped six inches (6") and tied at all joints except where heavier reinforcement is shown.

All other reinforcement shall be intermediate grade steel. Reinforcement at the time of placing concrete shall be free from rust, oil, loose scale, or other coatings which would destroy or reduce the bond.

ACCESSORIES Contractor for reinforcing steel shall submit placing shop drawings for approval. They shall include all accessories, such as chairs, ties, spacing bars, etc. Provide wire mesh and beam clips required for flanges of all beams and columns which are shown encased in concrete. Extent of accessories shall conform to standard practice as described in the Concrete Reinforcing Steel Institute's Manual of Standard Practice. (3rd edition)

FORMS Forms shall conform to shape, lines, and dimensions of the members as shown on the plans. They shall be properly braced or tied together to maintain correct position and shape. Forms shall be made sufficiently tight to prevent leakage of mortar. Exposed surfaces shall be formed with five-eighths

inch ( $5/8$ " ) or three-fourth inch ( $3/4$ " ) Plyform or with steel panels. The edges of all plyboards shall be straightened to insure close-fitting, tight joints. Corners of exposed beams, slabs, walls, etc. shall have three-fourth ( $3/4$ " ) chamfer unless otherwise noted.

Form ties shall have a minimum working strength when fully assembled of at least 3,000 pounds. Ties shall be adjustable in length to permit tightening forms and shall leave no metal closer than one and one-half inches ( $1\frac{1}{2}$ " ) of the surface. Ties shall not be fitted with any lugs, cones, washers, or other device to act as a spreader within the form, or for any other purpose, that will leave a hole larger than seven-eighth inch ( $7/8$ " ) in diameter or a depression back of the exposed surface of the concrete. Wire ties will not be permitted. Ties that are to be pulled from the wall shall be coated with cup grease or other approved material to facilitate removal.

WETTING AND OILING FORMS All contact surfaces of forms shall be treated with an approved form oil manufactured for the purpose. Forms shall be oiled before any reinforcing has been placed, and reinforcing steel shall be prevented from coming in contact with oiled forms. Excess oil on forms shall be removed prior to placing steel. Wood forms shall be thoroughly soaked with water preceding the placing of concrete and shall be surface wet at the time of placing. Concrete shall not be placed in any form until the form is thoroughly cleaned of all debris and foreign material.

PROPORTIONS AND MIXING The required twenty-eight (28) day strength of concrete shall be minimum  $2500 \text{ psi}$ , same as used for designing purposes.

All measurements of fine aggregate, coarse aggregate and bulk cement shall be by weight. Water shall either be weighted or accurately measured by volume. One (1) gallon of water weights 8.34 pounds. Portland cement in standard unopened cloth or paper sacks manufacturer packed, may be considered as weighing 94 pounds.

inch (5/8") or three-fourth inch (3/4") Plyform or with steel panels. The edges of all plyboards shall be straightened to insure close-fitting, tight joints. Corners of exposed beams, slabs, walls, etc. shall have three-fourth (3/4") chamfer unless otherwise noted.

Form ties shall have a minimum working strength when fully assembled of at least 3,000 pounds. Ties shall be adjustable in length to permit tightening forms and shall leave no metal closer than one and one-half inches (1 1/2") of the surface. Ties shall not be fitted with any lugs, cones, washers, or other device to act as a spreader within the form, or for any other purpose, that will leave a hole larger than seven-eighth inch (7/8") in diameter or a depression back of the exposed surface of the concrete. Wire ties will not be permitted. Ties that are to be pulled from the wall shall be coated with cup grease or other approved material to facilitate removal.

WETTING AND OILING FORMS All contact surfaces of forms shall be treated with an approved form oil manufactured for the purpose. Forms shall be oiled before any reinforcing has been placed, and reinforcing steel shall be prevented from coming in contact with oiled forms. Excess oil on forms shall be removed prior to placing steel. Wood forms shall be thoroughly soaked with water preceding the placing of concrete and shall be surface wet at the time of placing. Concrete shall not be placed in any form until the form is thoroughly cleaned of all debris and foreign material.

PROPORTIONS AND MIXING The required twenty-eight (28) day strength of concrete shall be minimum 3000 psi, same as used for designing purposes.

All measurements of fine aggregate, coarse aggregate and bulk cement shall be by weight. Water shall either be weighted or accurately measured by volume. One (1) gallon of water weights 8.34 pounds. Portland cement in standard unopened cloth or paper sacks manufacturer packed, may be considered as weighing 94 pounds.

The proportioning of materials for concrete shall be based on the requirements for a plastic, workable mix of maximum density. Proportions and water-cement ratio established for the mixes using the maximum slump allowed, shall be such that the twenty-eight (28) day strength when tested in 6" x 12" cylinders made, cured, and tested in accordance with current ASTM standards, shall be fifteen percent (15%) higher than the assumed design strength indicated on the drawings.

The minimum cement factor shall be as required by absolute volume calculations and in no case shall be less than six (6) sacks of cement per cubic yard. The consistency as measured by the slump test shall not exceed four inches (4").

All concrete mixed at the site shall be mixed in a batch mixer until there is a uniform distribution of the materials, but in no case less than one (1) minute. All mixed concrete shall be discharged completely from the mixer before recharging with unmixed materials. The water content shall not be increased beyond the amount required by the design mix unless cement at required water-cement ratio of design mix is added.

READY-MIXED CONCRETE All concrete shall be certified central mixed concrete, measured, mixed and delivered in accordance with the Standard Specifications for Ready Mixed Concrete, ASTM Designation C-94. It shall be designed to insure the strengths called for; measurements shall be by weight, accurate to within one percent (1%).

The driver of each transit mix truck shall supply the Contractor's Superintendent at the building with a certificate stating the time he left the plant and the mix of the concrete he is delivering. The certificate shall also state the amount of water and cement in the concrete.

Failure to comply with these requirements shall be sufficient grounds for rejecting the concrete.

Certificates mentioned above must be written and signed by an



authorized official of the transit mix company.

Time that unloading of each load of transit mix concrete is completed shall be inserted on certificate by the Contractor's Superintendent. Contractor's Superintendent shall retain all certificates at the job for the inspections by the Department's Representative.

TEST SPECIMENS To determine whether the compressive strength of the concrete is in accordance with the structural design, test specimens will be taken by the Inspector. One (1) set of three (3) specimens will be made for every twenty-five (25) cubic yards of concrete placed. All specimens will be taken from the concrete, as poured and prepared in accordance with the current specifications of the American Society for Testing Materials, and tested by a recognized commercial testing agency. Samples shall be made under the supervision of the Department.

PLACING CONCRETE Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or the loss of materials. Equipment for handling concrete shall be of such size and design as to insure a practically continuous flow of concrete at the point of placing. Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing. No concrete that has partially hardened or been contaminated by foreign material shall be deposited, nor shall retempered concrete be used.

JOINTS Expansion and construction joints shall be placed at locations indicated on the plans, and at the following points: Construction joints in slabs on grade shall be keyed and shall be placed where indicated or at intervals not exceeding twenty feet (20') in either direction unless otherwise shown or noted. "Servicised Products" control joints shall be placed where shown and noted and at the end of each pour in floor. Those control joints shall be tongue and groove type of dimension recommended by the

manufacturer for this purpose.

Construction joints in beams and supported floors, when not shown on the plans, shall be made and located as to least impair the strength of the structure. Where a joint is to be made, the surface of the concrete shall be thoroughly cleaned and all laitance removed. Joints shall be thoroughly wetted, but not saturated, and slushed with a coat of neat cement grout immediately before the placing of new concrete. Beams, girders, haunches, etc. shall be considered as part of the floor system and shall be placed integrally with it.

RUBBING Concrete walls, beams, etc., shall have a smooth finish free of defects and shall not be rubbed except to remove fins. Grout or plaster coat will not be allowed. Surfaces which show honeycombing, excessive depressions, or projections will not be acceptable and if such surfaces cannot be repaired to the satisfaction of the Department, the entire section of work affected shall be removed and replaced. Construction joints in exposed surfaces of walls and construction joints in floor slabs shall be ground down to a smooth, level surface if required due to any misalignment of forms or because of curling due to drying out. The Department will not accept any work, particularly in regard to floors, unless all joints are absolutely smooth.

CURING AND PROTECTION The Contractor shall have all equipment required for adequate protection and curing of concrete on hand and ready to install before concrete placement begins. No concrete shall be placed until such equipment is ready to the satisfaction of the Department. All concrete shall be protected from the elements and from defacement due to construction, operations and shall be maintained in a moist condition for a period of not less than five (5) days after placement. Water for curing shall be clean and free from elements that might stain the work. During the curing period, all exposed concrete shall be kept continuously wet with mechanical sprinklers, or shall be protected from moisture loss by means of an approved curing compound.

COLD WEATHER REQUIREMENTS Adequate equipment shall be provided for heating the concrete materials and protecting the concrete during freezing or near-freezing

weather. No frozen materials or materials containing ice shall be used.

All concrete materials and all reinforcements, forms, fillers, and ground with which the concrete is to come in contact shall be free from frost.

Whenever the temperature of the surrounding air is below forty degrees (40o) F., or is expected to go below forty degrees (40o) F., all concrete placed in the forms shall have a temperature of between seventy degrees (70o) F. and eighty degrees (80o) F. Salt or other chemicals shall not be used to prevent freezing. Adequate means shall be provided for maintaining a temperature of not less than seventy degrees (70o) F. for three (3) days or fifty degrees (50o) F. for five (5) days.

If high-early-strength concrete is used, the temperature shall be maintained at not less than seventy degrees (70o) F. for two (2) days or fifty degrees (50o) F. for three (3) days or for such time as is necessary to insure proper curing of the concrete. The housing, covering, or other protection used in connection with curing shall remain in place and intact at least twenty-four (24) hours after the artificial heating is discontinued. Cold weather concreting shall not proceed until approval of facilities for heating is obtained from the Department.

REINFORCEMENT - FABRICATION AND ERECTION All reinforcement shall be fabricated and erected in accordance with the Joint Code adopted as standard by the Concrete Reinforcing Steel Institute. All splices and laps shall be sufficient to transfer the stress between bars by bond and shall be made in accordance with ACI Code 318-56. Reinforcement in all walls shall be carried through construction joints and around all corners. Metal reinforcement shall be protected by the thickness of concrete indicated in the plans. Where not otherwise shown the thickness of concrete over the reinforcement shall be as follows: Where concrete is deposited against ground without the use of forms, not less than three inches (3"). Where concrete is exposed to the weather, but placed in forms, not less than two inches (2") for bars more than five-eighth inch ( $5/8$ "

in diameter and one and one-half inches ( $1\frac{1}{2}$ ) for bars five-eighths inch ( $5/8$ " or less in diameter. In slabs and walls not exposed to the ground or to the weather, not less than three-fourth inch ( $3/4$ "). In beams, girders and columns not exposed to the ground or to the weather, not less than one and one-half inches ( $1\frac{1}{2}$ "). In all cases the thickness of concrete over the reinforcement shall be at least equal to one and one-half times the diameter of the bars.

SPACERS All reinforcing steel shall be accurately located in the forms, and firmly held in place before and during the placing of concrete. This shall be done by means of wire supports and adequate to prevent displacement during the course of construction and to keep the steel at the proper distance from the forms. Bar supports shall be sufficient in number and weight to support the reinforcing steel properly. Slab bolsters or slab spacer bars shall have a maximum end spacing of 1' - 0" and a maximum intermediate spacing of 5' - 0" for both lower and upper layers of bars.

SLABS ON GRADE All concrete slabs on grade shall be placed upon six inch (6") crushed stone or gravel. Slabs shall be graded to drain as indicated. All slabs shall be reinforced with 6 x 6 x 8/8 wire mesh, except where specified otherwise.

SLABS ON FORMS All supported slabs shall be placed upon smooth, tight forms of the type specified or shown. All reinforcement, conduit, sleeves, inserts, and other imbedded fixtures shall be in proper position and adequately secured before placing of concrete is started. Concrete for slabs on forms shall be of the driest consistency possible to work with a sawing motion of the strike-off board. Unless otherwise specified, all slabs shall be poured with monolithic finish. Adjustable pipe screeds shall be used for leveling.

FILL AND BACKFILL All fill and backfill shall be placed in maximum eight inch (8") layers and compacted to maximum compaction. All fill and backfill shall be free of stone, wood, or other foreign material and of granular type. Before any backfilling is done all free standing walls or structures shall be thoroughly braced to prevent overturning or displacement.

C. Fence

The Contractor shall furnish and erect a cyclone type chain link (or equal) fence enclosure.

The fenced enclosure shall be as shown on attached drawing with two ten foot (10') gates. Chain link fence shall be installed on three inch (3") O.D. corner posts, erected in concrete piers which must extend into the ground not less than 3' 0" below the top of piers.

The fabric portion of the fence shall be 6 feet 0 inches high of #9 gauge woven wire in a two inch (2") chain link diamond mesh and shall be hot dipped galvanized after weaving or aluminum coated. The top and bottom selvages shall have twisted and barbed finish by cutting wire on a bias to create a sharp point. All posts, gates, extension arms, supporting bars and clips shall be hot dipped galvanized of suitable material for the purpose intended. Bottom selvages shall not be more than six inches (6") from finished floor line.

The gates shall be provided with a latch suitable for locking with padlock suitable for outdoor service. Two (2) padlocks shall be furnished to have protection against lock picking, to be master keyed and four (4) master keys shall also be furnished for each installation.

See drawing attached for detail of fence.

3. Estimates and Drawings

Any estimates and drawings shown in this Specification are merely for the guidance of the bidders. The attention of prospective bidders is called to the fact that this is a lump sum bid for complete construction, and break-in operation.

Attention is called to the individual portions of the "Specification" detailing types and quality of materials and equipment required, and to requirements for "Shop Drawings".

The lump sum bid shall comprise the complete and total payment, with no allowances for extra effort on the part of the "Contractor", regardless of the source of said extra effort. (See attached bid proposal for bidding instructions).

4. Equipment Required

The "Contractor" or his duly authorized "Sub-contractors" shall provide all necessary equipment to perform the work required in the various categories listed and any other necessary work occasioned by the local physical or climate condition

5. Bidding

The bidder shall certify that he or a duly authorized representative has visited the project site, accompanied by a representative of the Department of Mines and Mineral Industries, and after doing same he or they have estimated to his or their own satisfaction the quantities, equipment, material and labor required to properly complete the work in connection with this project. It is understood that the Bid Proposal and Contract are based upon the bidder's and contractor's own inspection and calculation.

The bidder shall submit a lump sum price as stated in "Estimates and Drawings and in the "Bid Proposal".

Each bid proposal shall be accompanied by a proposal guarantee payable to the Department of Mines and Mineral Industries, to insure the execution of the contract by the bidder. Such proposal guarantee shall be the depositor's check, certified to by the bank of deposit. The amount of proposal guarantee will be ten percent (10%) of the total amount of the bid proposal. In all projects where the total amount of the bid proposal shall exceed one hundred thousand dollars (\$100,000.00) a "BID BOND" in an amount equal to ten percent (10%) of the total amount of the bid proposal will be accepted in lieu of a cashier's check or certified check in an amount equal to ten percent (10%) of the total amount of the bid proposal.

Proposal guarantees shall be returned within three (3) days after bids are opened excepting those which the Secretary elects to hold until the award is made and the successful bidder qualifies. Thereafter proposal guarantees other than that of the qualified low bidder shall be returned at once. The proposal guarantee of the bidder to whom the award is made shall be held until the contract is signed by both parties thereto and approved by the Attorney General.

A contract or performance bond and a labor and material bond, acceptable to the Department of Mines and Mineral Industries, each in the amount of fifty percent (50%) of the total contract price, together with property and public liability insurance, contractual liability, workmen's compensation insurance and occupational disease insurance will be required of any successful bidder. The insurance shall be in the amounts listed below:

PUBLIC LIABILITY INSURANCE

One Hundred Thousand Dollars	(\$100,000.00)
and	
Two Hundred Thousand Dollars	(\$200,000.00)

PROPERTY DAMAGE LIABILITY INSURANCE

One Hundred Thousand Dollars	(\$100,000.00)
and	
Two Hundred Thousand Dollars	(\$200,000.00)

CONTRACTUAL LIABILITY INSURANCE

One Hundred Thousand Dollars	(\$100,000.00)
and	
Two Hundred Thousand Dollars	(\$200,000.00)

WORKMEN'S COMPENSATION AND OCCUPATIONAL DISEASE INSURANCE

As provided under the Pennsylvania Workmen's Compensation Law.

It is understood that the Commonwealth reserves the right to reject any and all bid proposals. The competency and financial responsibility of bidders will receive consideration before the award of any contract.

The bidder to whom the award is made must execute the Contract and return it together with the properly executed bonds and insurance policies to the office of the Secretary of Mines and Mineral Industries, Harrisburg, Pennsylvania, within six (6) days after having been notified to do so by the Secretary. If the contractor to whom the Contract is awarded fails, refuses or neglects to return the Contract, bonds and insurance policies as herein provided, the amount of the proposal guaranty shall be forfeited and retained by the Commonwealth for such neglect, refusal or failure.

No proposal shall be considered binding upon the Commonwealth until the

execution of the Contract and its approval as to form and legality by the Attorney General of the Commonwealth or his representative.

The entire job shall be completed to the satisfaction of the representative of the Department of Mines and Mineral Industries.

If the low bidder fails to execute the contract documents within the time specified, the amount of the proposal guaranty may be forfeited to the Commonwealth, not as a penalty, but as liquidated damages.

6. Method of Payment

The "Contractor" shall be paid upon submission of bi-monthly estimates based on an engineering evaluation of the percentage of the total project completed, as verified by the "Department Representative", less ten percent (10%) withheld from each estimate pending final completion.

When the entire project is completed to the satisfaction of the Department of Mines and Mineral Industries, upon receipt of affidavit of the contractor that all labor, material and other bills have been paid, the contractor shall be paid the retained percentage and released from his performance and payment bonds. In addition the contractor shall certify on a form furnished by the Department in triplicate, that he has conformed to all provisions of Act No. 442 of the 1961 Session of the Pennsylvania Legislature, known as the Pennsylvania Prevailing Wage Act, and all regulations promulgated thereunder.

SUBLETTING OR ASSIGNING OF CONTRACTS

The contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or contracts or any portion thereof, or of his right, title or interest therein, without written consent of the Secretary of Mines and Mineral Industries, except that sub-contractors listed in the bid presentation as described, and approved by the Secretary, may be used without further negotiation.

7. General

The term "similar" used in the Specifications is merely a guideline; it is



not intended as anything more; the result to be achieved is the true criterion.

Suitable roads for transporting equipment to the site of operations are available; any additional roads for movement of equipment within the general operating area will be the responsibility of the contractor and will not be paid for. The necessary maintenance of these roads leading to the area shall be his responsibility. Private roads existing before the start of the project shall be restored to their original condition by the contractor at no cost to the Department of Mines and Mineral Industries. Before the work will be considered as having been completed, the contractor shall clean and remove from the job site all surplus and discarded materials and shall leave the project in a presentable condition throughout the entire length of the project. Upon completion of the work and final acceptance by the Commonwealth, the bidder will be released from his contract or performance bond.

The contractor will be required to construct and erect a sign on the project site as described on the sketch attached to these Specifications. The Contractor shall arrange to have "No Trespass" signs legally posted, at his own expense, at conspicuous locations and roadways adjoining the project for the protection of everyone concerned.

The contractor will be required to furnish and maintain a suitable field office for the Department Representative. Office to contain desk, chairs, and sanitary facilities and lighting. If the work continues into cold weather, the office shall be adequately heated.

The Contractor will be required to furnish at his own expense first aid supplies and safety equipment for the protection of all workmen. The safety equipment shall include, to the satisfaction of the Department Representative, sufficient hard hats, goggles, and protective shoes. The first aid supplies shall include stretchers for transportation of disabled workmen.

Excavation and construction operations shall be carried on for at least five (5) days per week, one (1) shift of eight (8) hours per day, as directed by the

Department Representative, except on days which are National Holidays or on days when, in the opinion of the Department Representative, weather conditions are such that work cannot or should not be prosecuted.

8. Crews and Supervision

The Contractor shall provide skilled operators for all equipment furnished, together with such other personnel as may be required to carry on the work in an efficient and expeditious manner, and to service and maintain the equipment in efficient operating condition. At all times during the progress of the work the contractor shall have on the job a superintendent or foreman, who shall represent the contractor in dealing with the Department Representative.

9. Releases

Releases from property owners to allow for the operation of the project will be made available by the Department of Mines and Mineral Industries.

10. Drawings and Work Location

Attached hereto is a set of maps and plans setting forth the location and general design of the work required under the project.

In case of any difference between the maps and specifications, or where the maps or specifications are not clear or definite, the subject shall be referred to the Department for decision and their decision shall be binding, and without such decision, adjustment shall not be made by the contractor save at the contractor's own risk.

The Contractor shall carefully inspect and consider the place where the work is to be performed, and shall carefully study and compare all maps, specifications, and other information pertaining to the work given to the Contractor by the Department. The Contractor shall assure himself of the quality of materials and character and quality of the workmanship required, and shall in writing immediately report to the Department for rectification any error, inconsistency, or omission therein which the Contractor shall discover, or could have discovered by the exercise of reasonable diligence.

Specifications with maps must accompany Bid Proposal. Failure to include the "Specifications and Maps" shall be construed as an admission that the "Bidder" has not carefully studied the requirements of the project and shall cause mandatory rejection of the "Bid".

11. Engineering

The Department will arrange to have survey stakes placed to provide reference for location and elevation for the control of the engineering details on the project. The contractor must carefully maintain those stakes and in case of their destruction, unless by Act of God, the contractor must replace said stakes at the contractor's expense. The contractor shall set all other necessary stakes required for the control of the work and provide all other engineering services as may be necessary for the construction required in the work, all at the contractor's expense.

12. Minimum Wage Rates

(a) The contractor shall pay no less than the wage rates as determined in the decision of the Secretary of Labor and Industry, and the contractor shall comply with the conditions of the Pennsylvania Prevailing Wage Act approved August 15, 1961 (Act No. 442) and the regulations issued pursuant thereto, to assure the full and proper payment of said rates.

The minimum rates which shall be paid for work on this contract shall be as shown on attached sheets.

(b) Any workman performing services under this contract shall be paid no less than such general prevailing minimum wage rates.

(c) The provisions of these specifications shall apply to all work performed under the contract, of which these specifications are a part, by the contractor as well as by any sub-contractor.

(d) The contractor shall insert in each of his sub-contracts all of the provisions contained in these specifications as applicable to wage scales.

(e) No workman may be employed for work to be performed under the contract of which these specifications are a part except in accordance with classifications set forth in the decision of the Secretary of Labor and Industry as noted in sub-paragraph (a) above. In the event that additional or different classifications are found to be necessary, then the procedures set forth in Section 7 of the Regulations referred to above shall be followed and a petition for review shall be requested. The contractor, if it be deemed necessary, shall notify the Secretary of Mines and Mineral Industries who shall request in writing a determination by the Secretary of Labor and Industry to list additional classifications and wage rates. A copy of this request shall be given to all interested parties and shall also be posted at an appropriate place at the site of the project. The Secretary of Labor and Industry shall make a determination and shall notify all interested parties of his determination, which shall be effective as of the date on which it is made.

(f) All workmen employed or working on the project described in these specifications shall be paid unconditionally regardless of whether any contractual relationship exists or the nature of any contractual relationship which may be alleged to exist between any contractor, sub-contractor, and workman, "not less than once a week" without deduction or rebate on any account either directly or indirectly, except authorized deductions, the full amounts due at the time of payment computed at the rates applicable to the time worked in the appropriate classification. Nothing in the contract, of which these specifications are a

part, the Act, or the Regulation as referred to in sub-paragraph (a) above, shall prohibit the payment of more than the general prevailing minimum wage rates as set forth in sub-paragraph (a) above.

(g) The contractor and each sub-contractor shall post for the entire period of work under the contract of which these specifications are a part, the wage determination decision by the Secretary of Labor and Industry as set forth in sub-paragraph (a) above, including the effective dates of any changes thereto, in a prominent and easily accessible place or places at the site of the work, and at such place or places used by them to pay workmen their wages. The posted notice of wage rates must contain the following information:

- (1) Project Number
- (2) The Department of Mines and Mineral Industries as the Commonwealth contracting party.
- (3) The crafts and classifications of workmen as listed in sub-paragraph (a) above
- (4) The general prevailing minimum wage rates listed in sub-paragraph (a) above
- (5) The following statement: Workmen are advised that if they have been paid less than the general prevailing minimum wage rate for their job classification as noted above in paragraphs 3 and 4, or that the contractor and/or sub-contractor are not complying with the provisions of the Pennsylvania Prevailing Wage Act approved August 15, 1961 (Act No. 112) and the Regulations pursuant thereto in any manner whatsoever they may file a protest in writing with the Secretary of Labor and Industry within three (3) months of the date of the occurrence objecting to the payment to any contractor to the extent of the amount or amounts due or to become due to them as wages for work performed under the contract of

which these specifications are a part of this project. Any workman paid less than the rates specified in paragraphs 3 and 4, above shall have a civil right of action for the difference between the wage paid and the wages so listed above in paragraphs 3 and 4, which right of action must be exercised within six (6) months from the occurrence of the event which created such right.

(h) The contractor and any sub-contractor on this project shall keep an accurate record showing the name, craft and/or classification, number of hours worked per day, and the actual hourly rate of wages paid including any employees' benefits to each workman employed by him in connection with this project, and such record must include any deductions made from wages of each workman. These records must be preserved for two (2) years from the date of payment and shall be open at all reasonable hours to the inspection of the Secretary of Mines and Mineral Industries and the Secretary of Labor and Industry or their duly authorized representatives.

(i) Apprentices shall be limited to such numbers as shall be in accordance with a bona fide apprenticeship program registered with and approved by the Pennsylvania Apprenticeship and Training Council and only apprentices whose training and employment are in full compliance with the provisions of the Apprenticeship and Training Act approved July 14, 1961, (Act No. 304) and the rules and regulations issued pursuant thereto, shall be employed on this project.

(j) Wages shall be paid without any deductions except those authorized by law. Employers not parties to a contract requiring contributions for employees' benefits which the Secretary of Labor and Industry has determined to be included in the general prevailing minimum wage rate shall pay the monetary equivalent thereof directly to the workman.

(k) Payment of compensation to workmen for work performed on this project on a lump sum basis or a piece-work system or a price certain for the completion

of a certain amount of work, or the production of a certain result shall be deemed a violation of the Act and of the Regulations thereof referred to in subparagraph (a) above, regardless of the average hourly earnings resulting therefrom.

(1) Each contractor and each sub-contractor on this project shall file a statement each week and a final statement at the conclusion of the work under the contract of which these specifications are a part with the Department of Mines and Mineral Industries, under oath, certifying that all workmen have been paid wages in strict conformity with the provisions of the contract as prescribed in these provisions, or if any wages remain unpaid shall set forth the amount of wages due and owing to each workman respectively.

(m) The provisions of the Act and Regulations referred to in subparagraph (a) above are hereby incorporated by reference in these specifications and the contract of which these specifications are a part and are deemed to be a part of said contract as fully as though the Act and the Regulations have been set out completely in said contract.