

TECHNICAL SPECIFICATIONS

**Former Alcan Aluminum Corporation  
Site #8-28-005  
Pittsford, New York**

*Alcan Aluminum Corporation  
Cleveland, Ohio*



A handwritten signature in cursive script, reading "Terrance P. Madden".

Terrance P. Madden, P.E.  
Vice President

April 1999



5000 Brittonfield Parkway  
East Syracuse, New York 13057

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INFORMATION FOR BIDDERS - SECTION 1

CONDITIONS OF WORK

I-1.01. RECEIPT AND OPENING OF BIDS

Alcan Aluminum Corporation (herein called the Owner) invites Bids on the forms attached hereto.

Bids must be addressed to:

Mr. Marc J. Dent  
O'Brien & Gere Engineers, Inc.  
5000 Brittonfield Parkway  
East Syracuse, New York 13057

The owner may consider informal any Bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities in or reject any or all bids. No bidder may withdraw a bid within twenty-one days after the actual date of the opening thereof.

I-1.02. LOCATION AND DESCRIPTION OF PROJECT

This project site is located at the former Alcan Aluminum Corporation, Site #8-28-005 facility at 860 Linden Avenue, Town of Pittsford, Monroe County, New York. The work of this Contract includes approximately 6,000 cubic yards of earthwork/grading and installation of an asphalt cover over existing impoundment materials. The cover is comprised of 6 inches of stone subbase and 3 inches asphalt binder and surface wearing course. An underground cistern shall also be removed, crushed and placed within the limits of the cover.

I-1.03. COMMENCEMENT OF WORK

Upon execution and delivery of the Contract and the delivery of the required performance and labor and material bonds and insurance certificates and policies by the Contractor to the Owner and the approval thereof by the Owner, the Contractor will be provided with notification of award and to proceed with the Work of the Contract. The Work of the Contract shall be commenced within ten days following receipt of the notice to proceed.

The Contractor shall notify the Owner's Representative in writing, of his intention to enter upon the site of the Work at least five days in advance of such entrance.

I-1.04. BORINGS AND OTHER SUBSURFACE INVESTIGATION

It shall be the Contractor's obligation to satisfy himself as to the nature, character, quality and quantity of subsurface conditions likely to be encountered. Any reliance upon the subsurface information made available by the Owner or the Owner's Representative shall be at the Contractor's risk. The Contractor agrees that he shall neither have nor assert against the Owner or Owner's Representative any claim for damages for extra work or otherwise or for relief from any obligation of this Contract based upon the failure by the Owner or Owner's Representative to obtain or to

furnish additional subsurface information or to furnish all subsurface information in the Owner's or Owner's Representative possession or based upon any inadequacy or inaccuracy of the information furnished; provided, however that the Contractor may be entitled to an adjustment in the contract price under the circumstances and to the extent provided in Sections GP-4.02 and GP-4.03.

Certain subsurface information may be shown on separate sheets or otherwise made available by the Owner or Owner's Representative to Bidders, Contractors, and other interested parties. Previous reports and subsurface information may be reviewed in the document repository at the East Rochester Public Library, 111 West Elm Street East Rochester, NY. Neither such information nor the documents on which it may be shown shall be considered a part of the Contract Documents or Contract Drawings, it being understood that such information is made available only as a convenience, without express or implied representation, assurance, or guarantee that the information is adequate, complete, or correct, or that it represents a true picture of the subsurface conditions to be encountered, or that all pertinent subsurface information in the possession of the Owner or Owner's Representative has been furnished.

It shall be the obligation of the Contractor to inquire of the Owner and Owner's Representative whether pertinent subsurface information has been obtained by the Owner with respect to the work.

#### I-1.05. TAXES

The cost of all sales and other taxes under the Contract shall be included in the Bid prices for the several items of the Contract and no separate payment will be made therefor.



## INFORMATION FOR BIDDERS - SECTION 2

### BID INFORMATION

#### I-2.01. QUALIFICATIONS OF BIDDERS

The Owner may make such investigation as he deems necessary to determine the qualifications of the Bidder to perform the Work and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract, and to complete the Work contemplated therein. Conditional bids will not be accepted.

#### I-2.02. BIDDER'S RESPONSIBILITY

At the time of the opening of Bids, each Bidder will be presumed to have inspected the Site of the proposed Work and adjacent areas and to have read and to be thoroughly familiar with the Contract Documents. The failure or omission of any Bidder to obtain or examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to his Bid.

#### I-2.03. ADDENDA

No interpretation of the meaning of the Contract Drawings, Specifications or other portion of the Contract Documents will be made orally. Every request for such interpretation must be addressed to O'Brien & Gere Engineers, Inc., P.O. Box 4873, 5000 Brittonfield Parkway, Syracuse, New York 13221, Attn: Mr. Marc J. Dent, (telephone no. 315-437-6100; facsimile telephone no. 315-463-7554) and to be given consideration must be received at the above address at least four days prior to the date scheduled for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be sent by certified or registered mail with return receipt requested, telegraph, or by facsimile transmission to all holders of Contract Documents at the respective addresses furnished for such purposes not later than two days prior to the day fixed for the opening of Bids. Failure of any Bidder to receive any such addenda shall not relieve said Bidder from any obligation under his Bid as submitted. All addenda so issued shall become part of the Contract Documents.

Prospective Bidders are cautioned concerning the use of a Post Office Box address as telegraphic addenda cannot be sent to Post Office Boxes.

#### I-2.04. BID INSTRUCTIONS

All blank spaces in the Bid Forms, applicable to the Contract for which a Bid is being submitted, must be appropriately filled in with ink and with both words and figures, except as provided below, and the Bid must be properly executed.

**DO NOT REMOVE THE BID FORMS FROM THIS BOOK. ONE SET OF THE CONTRACT DOCUMENTS, EXCEPT SEPARATELY BOUND CONTRACT DRAWINGS, MUST BE SUBMITTED WITH THE BID. CONTRACT DOCUMENTS ARE DEFINED IN THE AGREEMENT. THE SECOND SET OF CONTRACT DOCUMENTS PROVIDED, WILL BE RETAINED BY EACH BIDDER UNTIL AWARD OF CONTRACT, AT WHICH TIME ALL**

REMAINING CONTRACT DOCUMENTS WILL BE RETURNED TO O'BRIEN & GERE ENGINEERS, INC.

If the Bid is made by a corporation, the official corporation name shall be given, and the Bid shall be signed by an authorized officer of the corporation, and the corporate seal affixed. If the Bid is made by a partnership, the official name as it appears on the Assumed Name Certificate shall be given and the Bid shall be signed by a partner. If the Bid is made by a sole proprietorship, the Bid shall be signed by the individual owner.

All attachments, certifications or acknowledgments attached to the Bid shall be executed in the same manner as the Bid.

#### I-2.05. DISCREPANCY IN BIDS

In the event there is a discrepancy in any Bid between the unit prices and the extended totals, the unit prices shall govern. In the event there is a discrepancy in any Bid between the unit or lump sum prices written in figures and the unit or lump sum prices written in words, the unit or lump sum prices written in words shall govern. Bids which do not contain a price for every numbered item contained in the applicable Bid Form may be accepted.

#### I-2.06. CONTRACT DRAWINGS FURNISHED TO BIDDERS

Two sets of Contract Documents are furnished to each prospective Bidder free of charge.

Where Contract Drawings have been reduced from the full size tracings, the Drawings furnished to prospective Bidders will be reduced Drawings. The Bidders are cautioned against scaling distances from such Drawings, except through the use of graphic scales shown thereon.

INFORMATION FOR BIDDERS - SECTION 3

AWARD OF CONTRACT

I-3.01. AWARD OF CONTRACT

The award of the Contract will be made to the most responsive, responsible Bidder, who, in the opinion of the Owner, is qualified to perform the Work required and is responsible and reliable.

The award shall be made by the person or body authorized to make such awards. Formation of legally binding obligations between the Owner and Bidder (Award) shall occur upon the mailing of written notice of the Award to the successful Bidder.

It is the intention of the Owner that the Work will be awarded within 21 calendar days after the opening of Bids to the responsible Bidder or combination of responsible Bidders whose Bids conform to the requirements of the Bidding Contract Documents. Bids may not be withdrawn, altered or revoked during this 21 day period. Even after the expiration of such 21 day period, the Owner may accept a Bid and Award the Work to any Bidder whose Bid has not been unequivocally withdrawn or revoked prior to the mailing of written notice of the Award to the successful Bidder. For purposes of the preceding sentence, withdrawal or revocation of a Bid shall not occur until the Owner receives an unequivocal statement to that effect.

The right is reserved to reject any Bid or all Bids and to waive any informality in any Bid received.

I-3.02. ESTIMATED QUANTITIES

The Bidder, by submitting his Bid, agrees that he is satisfied with and will at no time dispute the estimated quantities stated in the Bid as a proper means of comparing the Bids.

BID  
FOR THE CONSTRUCTION OF

FORMER ALCAN ALUMINUM CORPORATION  
SITE #8-28-005  
PITTSFORD, NEW YORK

TO ALCAN ALUMINUM CORPORATION.:

The undersigned hereby declares that he has carefully examined all Bidding and Contract Documents and that he has personally inspected the actual location of the Work, together with the local sources of supply, has satisfied himself as to all the quantities and conditions, and understands that in signing this Bid he waives all right to plead any misunderstanding regarding the same.

Pursuant to and in compliance with the Documents relating thereto, the Bidder hereby offers to furnish all plant, labor, materials, supplies, equipment and other facilities and things necessary or proper for, or incidental to the construction and completion of this Contract, as required by and in strict compliance with the applicable provisions of all Contract Documents, for the following unit and/or lump sum prices.

The undersigned further agrees to accept the unit prices, if any, set forth, as full payment for or the amount of credit to the Owner for, any deletions, additions, modifications or changes to the portion or portions of Work covered by said unit prices.

The undersigned agrees to complete the Work within forty-five (45 ) calendar days after receipt of notice to proceed. In the event the undersigned fails to complete the work within said 45 calendar days, or within the time to which such completion shall have been extended in accordance with the Contract Documents, he agrees to pay to the Owner liquidated damages to cover engineering inspection, administration and review costs, as well as Owner staff and other required efforts and costs related to delay.

BID

B-2a  
784/23404

FORMER ALCAN ALUMINUM CORPORATION

SITE # 8-28-005  
PITTSFORD, NEW YORK

PI NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT OR LUMP SUM PRICE		TOTAL AMOUNT
			WORDS	FIGURES	
1.1	<u>SECTION NO. 1 - UNIT PRICE ITEMS</u>  Stone Subbase - Type 2 Item No. 304.03	2,650 cyd	_____	\$ _____	\$ _____
			Dollars		
			Cents		
1.2	Bituminous Asphalt Cement 2-Inch Binder - Type 3 - Item No. 403.13 1 -Inch Top - Type 7 - Item No. 403.18	15,000 cyd	_____	\$ _____	\$ _____
			Dollars		
			Cents		
2.1	<u>SECTION NO. 2 - LUMP SUM ITEMS</u>  Clearing & Grubbing	LS	_____	\$ _____	\$ _____
			Dollars		
			Cents		

**BID**

B-2b \_\_\_\_\_  
784/23404

FORMER ALCAN ALUMINUM CORPORATION

SITE # 8-28-005  
PITTSFORD, NEW YORK

PI NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT OR LUMP SUM PRICE		TOTAL AMOUNT
			WORDS	FIGURES	
2.2	Earthwork	LS	_____	\$ _____	\$ _____
			Dollars		
			Cents		
2.3	Mobilization/Demobilization	LS	_____	\$ _____	\$ _____
			Dollars		
			Cents		

TOTALS	GRAND TOTAL BID \$ _____ (Price in Figures)
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BID

The undersigned will, within ten (10) days after Award, execute and deliver the Contract or Contracts in the form of the Agreement attached hereto.

The undersigned hereby designates as his office to which such notice of Award may be mailed, telegraphed or delivered:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This Bid may be withdrawn at any time prior to the scheduled time for the opening of bids or any authorized postponement thereof.

The undersigned acknowledges the receipt of the following addenda, but he agrees that he is bound by all addenda whether or not listed herein.

Addendum No.	Date of Addendum
_____	_____
_____	_____
_____	_____

\_\_\_\_\_ Dated \_\_\_\_\_ legal name of person, partnership, or corporation

By \_\_\_\_\_ Name and Title of Signatory

(Corporate seal, if any)

(If no seal write  
"No Seal" across

Address \_\_\_\_\_ this  
\_\_\_\_\_  
\_\_\_\_\_

RESOLUTION ACCOMPANYING BID

(Corporate Bidders Only)

To: \_\_\_\_\_  
(Name of Owner)

I HEREBY CERTIFY that the following is a true and correct copy of resolutions duly adopted at a meeting of the Board of Directors of \_\_\_\_\_ a corporation incorporated under the laws of the State of \_\_\_\_\_ duly called and held on the \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_, a quorum then being present; that the said resolutions have been entered upon the regular minute book of the corporation and are in accordance with the certificate of incorporation and the by-laws and are now in full force and effect:

RESOLVED THAT \_\_\_\_\_ be and hereby is authorized to sign and submit the bid proposal of this corporation for the following project:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

and to include in such bid proposal the certificate as to non-collusion required by law as the act and deed of such corporation, and for all inaccuracies or misstatements in such certificate this corporation shall be liable under the penalty of perjury; and to enter into the contract if awarded to this corporation;

RESOLVED that the following officer(s) of this corporation is/are authorized on behalf of this corporation to sign the bid proposal and the contract:

\_\_\_\_\_  
(Authorized Officer(s))

I FURTHER CERTIFY that the names of the persons holding titles referred to in the foregoing resolutions are as follows:

NAME	TITLE
_____	_____
_____	_____
_____	_____

Secretary: \_\_\_\_\_

Dated: \_\_\_\_\_

(Corporate Seal)  
(If no seal write "No Seal"  
across this place and sign)

(This Form Must Be Completed  
and Submitted with the Bid)



AGREEMENT

THIS CONTRACT, in six copies, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,  
by and between \_\_\_\_\_  
hereinafter designated as the OWNER, and \_\_\_\_\_ of County of \_\_\_\_\_, State  
of \_\_\_\_\_, hereinafter designated as the CONTRACTOR.

WITNESSETH: That the parties hereto, each in consideration of the Agreements on the part  
of the other herein contained, have mutually agreed and hereby mutually agree, the Owner for itself  
and its successors and the Contractor for itself, himself, or themselves and its successors, his or their  
executors, administrators and assigns as follows:

Article 1. Under this Agreement and Contract the Contractor shall construct Contract(s) No.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Article 2. In consideration of the payments to be made as hereinafter provided, and of the  
performance of the Owner of all of the matters and things to be performed by the Owner and herein  
provided; the Contractor agrees, at his own sole cost and expense, to perform all the labor and  
services and to furnish all the labor and materials, plant and equipment necessary to complete, and  
to complete in good, substantial, workmanlike and approved manner, the Work described under  
Article 1 hereof, within the time hereinafter specified and in accordance with the terms, conditions  
and provisions of this Contract and with the instructions, orders and directions of the Engineer made  
in accordance with this Contract.

Article 3. The Owner agrees to pay and the Contractor agrees to accept as full compensation  
for all Work done, and materials, equipment and supplies furnished, and for materials, equipment and  
supplies sold, and also for all costs and expenses incurred, and loss or damages sustained by reason  
of the action of the elements, or growing out of the nature of the Work, or from any unforeseen  
obstruction or difficulty encountered in the prosecution of the Work, and for all risks of every  
description connected with the Work, and for all expenses incurred by or in consequence of, the  
suspension or discontinuance of the Work as herein specified, and for faithfully completing the Work  
and the whole thereof as herein provided, and for maintaining the Work in good condition until the  
final payment is made, the prices stipulated in the Bid hereto attached.

Article 4. The following documents shall constitute integral parts of this Agreement, the whole to be collectively known and referred to as the Contract Documents or the Contract, and in the case of discrepancies among any parts of the Contract Documents, preference shall be given in the following order:

- a. Addenda (later dates taking precedence over earlier dates)
- b. Special Provisions
- c. General Provisions
- d. Advertisement
- e. Information for Bidders
- f. Bid
- g. Payment Items
- h. Technical Specification (Materials and Performance) Sections
- i. Contract Drawings (detailed drawings taking precedence over general drawings)

The Table of Contents, Headings and Titles contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

Article 5. If the Contractor shall fail to comply with any of the terms, conditions, provisions or stipulations of this Contract, according to the true intent and meaning thereof, then the Owner may make use of any or all remedies provided in his behalf in the Contract and shall have the right and power to proceed in accordance with the provisions thereof.

Article 6. The following addenda have been made and included in this Contract before it was signed by the parties hereto:

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Article 7. This agreement shall be construed and enforced in accordance with the laws of the State of New York.

Article 8. The Contractor agrees:

- (a) He hereby voluntarily and irrevocably submits himself to the jurisdiction and venue of any court of competent jurisdiction over the subject matter of this Contract located within the State of New York in which any litigation is brought based on or arising out of this Contract.
- (b) Any litigation brought by the Contractor based on or arising out of this Contract shall be brought only in the Supreme Court of the State of New York within the county in which the Owner is located.
- (c) Any legal process or notice connected with any litigation may be served on the Contractor by United States registered mail, postage prepaid, addressed to the Contractor at his address stated in this Contract or at the address stated in this Contract for the furnishing of notices to the Contractor or at the Contractor's last known

address, and that service in such manner shall constitute good and valid service of process upon the Contractor.

- (d) The Contractor hereby waives any defense which might be available to it in any such litigation based on or alleging lack of jurisdiction or venue, or, if process is served in the manner provided in subparagraph (c) immediately above, invalid service of process, and that he will duly enter his appearance in any such action.
- (e) This Contract may be presented in court as conclusive evidence of the foregoing agreement.

IN WITNESS WHEREOF, the parties to this Agreement have hereunto set their hands and seals and have executed this Agreement, in six copies the day and year first above written.

OWNER

(Seal)

By:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONTRACTOR

(Seal)

By:

\_\_\_\_\_  
\_\_\_\_\_

AGREEMENT

(ACKNOWLEDGMENT OF OFFICER OF OWNER)

STATE OF

COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_, before me personally came \_\_\_\_\_ to me personally known and known to me to be the same person who executed the foregoing Contract as such official, and that said \_\_\_\_\_ duly acknowledged to me that he executed the same pursuant to the power and authority vested in him by the \_\_\_\_\_ and that said signature is so affixed pursuant to authority vested in him.

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

(ACKNOWLEDGMENT OF CONTRACTOR, IF A CORPORATION)

STATE OF

COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_, before me personally came and appeared \_\_\_\_\_ to me known, who, being by me duly sworn, did depose and say that he resides at \_\_\_\_\_; and that he is the \_\_\_\_\_ of \_\_\_\_\_ the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation, that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

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

AGREEMENT

(ACKNOWLEDGMENT OF CONTRACTOR, IF A PARTNERSHIP)

STATE OF

COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me known and known to me to be one of the members of the firm of \_\_\_\_\_ described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Seal)

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

(ACKNOWLEDGMENT OF CONTRACTOR, IF AN INDIVIDUAL)

STATE OF

COUNTY OF

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally came and appeared \_\_\_\_\_ to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same.

(Seal)

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

AGREEMENT

(CERTIFICATE OF OWNER'S ATTORNEY)

The undersigned as the duly authorized attorney for the Owner, does hereby certify that:

I have examined the Contract, the surety bond(s) and the policies or other evidence of insurance coverage, and the manner of execution thereof. In my opinion said surety bonds and insurance coverage are in compliance with the Contract and are adequate in form, substance and amount to protect the various interests of the Owner in connection with Contract. I am of the further opinion that the Contract, the said surety bond(s) and policies or other evidence of insurance coverage have been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that each of the aforementioned agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

\_\_\_\_\_  
Owner's Attorney

Dated: \_\_\_\_\_

AGREEMENT

(Attach Insurance Certificates Here)

## GENERAL PROVISIONS - SECTION 1

## DEFINITIONS

## GP-1.01. DEFINITIONS

Whenever the words herein defined or pronouns used in their stead, occur in this Contract, they shall have the meaning given below:

ADDENDUM or ADDENDA shall mean the additional contract provisions issued in writing by the Owner prior to the receipt of bids.

BID shall mean the offer or proposal submitted, signed and sealed, in the form prescribed in the Contract Documents setting forth the prices for the Work to be performed.

BONDS shall mean any or all of the following: performance, payment, labor and material bonds and other instruments of security furnished by the Contractor and his surety or sureties in accordance with the Contract Documents.

CHANGE ORDER shall mean the formal document executed by the Owner incorporating any Modifications into the Contract.

CLARIFICATION shall mean a written notice issued by the Engineer to the Contractor for the purpose of clarifying or interpreting the Contract Documents, or to authorize minor change or alteration in the Work which will not result in a change in the Contractor's cost or completion time.

CONTRACT or CONTRACT DOCUMENTS shall mean any or all of the following: the Advertisement, Information for Bidders, Bid, Agreement, General Provisions, Special Provisions, Technical Specification, Materials and Performance Sections, Payment Items, Contract Drawings, and all interpretations or Addenda thereto issued by the Owner or by the Engineer with the approval of the Owner.

Anything shown on the Contract Drawings and not mentioned in the Specifications or mentioned in the Specifications and not shown on the Drawings, shall have the same effect as if shown or mentioned, respectively, in both.

CONTRACT DRAWINGS shall mean those plans and drawings which show the scope and character of the Work and are specifically referred to as such in these Documents or in any Addendum or Addenda.

CONTRACTOR shall mean the Party of the Second Part to this Contract or the person, persons, partnership or corporations entering into this Contract for the performance of the Work required by it, and the legal representatives of said party or the agents appointed for said party in the performance of the Work.

ELEVATION or any abbreviation of the word shall mean the distance in feet above or below the datum established for the Project.

ENGINEER shall mean the Consulting Engineer or Engineers engaged by the Owner for the project and shall include any properly authorized assistants acting for the Consulting Engineer within the scope of the particular duties assigned to them.

INVERT shall mean the inside bottom of a pipe or the surface upon which sewage or water flows along the plan centerline of the completed Work.

MODIFICATION shall mean a written order to the Contractor, signed by the Engineer and the Owner on which is stated the addition, deletion or revision in the Work, together with any adjustment in Contract price or Contract time. One or more Modifications may be incorporated into a Change Order for making payments to the Contractor.

OWNER shall mean the Party of the First Part to this Contract or any person duly authorized to act for said First Party.

PROCEED ORDER shall mean a written order issued by the Owner to the Contractor to proceed with certain Work pending the resolution of disputes.

PROJECT shall mean the entire improvement to which the Contract relates.

SITE shall mean the area included within the property lines shown on the Contract Drawings, and other such areas adjacent thereto as may be designated by the Owner in writing.



SPECIFICATIONS shall mean any or all of the following: the Special Provisions, Technical Specifications, Materials and Performance Sections, Payment Items and any Addenda pertaining thereto.

SUBCONTRACTOR shall mean any person, firm or corporation other than employees of the Contractor, who or which contracts with the Contractor to furnish, or actually furnishes labor, or labor and materials, or labor and equipment, or labor, materials and equipment at the Site.

SUBGRADE shall mean the bottom line or surface to which excavations are necessarily made for purpose of building the Work in accordance with the Contract Drawings, not including the additional depth of excavation required for any special foundation that may be ordered.

SURETY or SURETIES shall mean the Bondsmen or party or parties who have made secure the fulfillment of the Contract by a Bond and whose signatures are attached to said Bond.

WORK shall mean everything expressly or impliedly required to be furnished and done by the Contractor under the Contract, including extra work.

WRITTEN NOTICE. The term "notice" as used herein shall mean and include all written notices, demands, instructions, claims, approvals and disapprovals required to obtain compliance with contract requirements. Written Notice shall be deemed to have been duly served if: 1) delivered in person to the individual or to a member of the firm or to an officer of the corporation at the location specified in the Contract Documents, or 2) if delivered at the last business address known to him who gives the notice, or 3) if sent by registered mail, ordinary mail, facsimile followed by ordinary mail, certified mail, postage paid, return receipt requested, by nationally recognized overnight carrier (against receipt) or telegraph to the last business address known to the person who gives the notice.

## GENERAL PROVISIONS - SECTION 2

## PERFORMANCE OF WORK

## GP-2.01. PERMITS, LAWS AND REGULATIONS

Where the Owner is required to obtain permits for the Project, the permits have been or will be obtained and are noted in the Special Provisions. The Contractor shall take out all other necessary permits from the County, State, municipal or other public authorities; shall give all notices required by the law or municipal ordinances and shall pay all fees and charges incidental to the due and lawful execution of the Work done under this Contract.

The Contractor shall keep itself fully informed for the duration of the Contract of all laws, ordinances, regulations, and applicable codes affecting those engaged or employed in the Work, or the materials used in the Work, or affecting the conduct of the Work, and of all orders, decrees and instructions of bodies or tribunals having jurisdiction or authority over the same. If any discrepancy or inconsistency should be discovered in the Contract Documents in relation to any such law, ordinance, regulation, codes, order, decree, or instruction, the Contractor shall forthwith report the same in writing to the Engineer.

The Contractor shall at all times observe and comply with and shall cause all its agents and employees to observe and comply with all such existing and future laws, ordinances, regulations, codes, orders, decrees and instructions.

Any provisions of these General Provisions which is shown with the agreement of the Owner to contradict or conflict with the mandates of the applicable law in the jurisdiction where the Project is located, shall be interpreted and enforced to comply 1) with, the requirements of the applicable law and 2) to the maximum practicable extent, with the original extent of these General Provisions.

## GP-2.02. CARE AND PROTECTION OF THE WORK

From the commencement until the acceptance of the Work, the Contractor shall be solely responsible for the care of the Work covered by the Contract and for the materials, supplies and equipment delivered at the Site intended to be used in the Work; and all injury or damage to the same from whatever cause, shall be made good at his expense. The Contractor shall provide suitable means of protection for and shall protect all materials intended to be used in the Work, all Work in progress, and all completed Work. The Contractor shall take all necessary precautions to prevent injury or damage to the Work by flood, fire, freezing or from inclemencies of the weather.

The Contractor shall neither load nor permit any part of a structure to be loaded with weights that will endanger the structure, and shall not subject any part of the Work to stresses or pressures that will endanger it.

## GP-2.03. CLEANING STRUCTURES AND SITE

As the Work progresses, the Contractor shall remove all unused materials, tools, equipment and machinery, waste materials, rubbish, refuse and other debris from the Site and see to it that the Site is at all times maintained in a neat and orderly condition.

At the completion of the Work, the Contractor shall promptly remove all construction tools, equipment and machinery, surplus materials, waste materials, rubbish, refuse and other debris from the Site and leave the Site in a neat and orderly condition. The Contractor shall also see to it that all pipelines, buildings, and other structures are left in a bright, polished, and new-appearing condition.

Whenever the Contractor neglects his responsibilities as set forth above, or neglects the repairing of streets, roadways, passageways or areas, or the repairing of fences or damages, the Engineer will give notice to that effect to the Contractor. If the Contractor does not take reasonable steps upon receipt of such notice to correct the neglected situation, the Owner may do so, and the expense thereby incurred shall be deducted from any monies due or that may become due to the Contractor.

If a dispute arises between the separate Contractors as to their responsibilities for cleaning up, etc., as required above, the Owner may do such work as it deems appropriate and charge the cost thereof to the several Contractors as it shall determine to be just. The Owner's determination shall be binding and final.

## GP-2.04. SANITARY REGULATIONS

Sanitary conveniences in sufficient numbers and convenient locations for the use of all persons employed on the Work, properly screened from public observation, shall be provided, maintained, and removed by the Contractor or by the General Contractor. The contents of the same shall be removed and disposed of in accordance with applicable laws codes and regulations. The Contractor shall rigorously prohibit the committance of nuisances within, on, or about the Work.

The Contractor and each Subcontractor shall supply sufficient drinking water to all of his employees.

The Contractor shall also obey and enforce such other sanitary regulations and orders and shall take such precautions against infectious diseases as may be deemed necessary by the responsible authority.

GP-2.05. FIELD CONTROL OF THE WORK

All work shall be constructed in accordance with the lines, grades and elevations shown on the Contract Drawings or as given by the Engineer in the field. The Contractor shall be fully and solely responsible for maintaining alignment and grade.

Control lines and elevations will be established by the Engineer as outlined in the Special Provisions. The Contractor shall, without additional compensation, provide all stakes, grade boards, cleats, nails, and such other materials and give such assistance to the Engineer as may be required to establish control lines and elevations. The Contractor shall inform the Engineer in writing a reasonable time in advance of the times and places at which he intends to do work in order that control lines and elevations may be established with the minimum of inconvenience to the Engineer or delay to the Contractor.

The Contractor shall protect and safeguard all points, stakes, grade marks, monuments, and bench marks at the Site of the Work, and shall re-establish, at its expense, any marks which are removed or destroyed due to construction operations. The Contractor shall bear the entire expense of rectifying Work improperly installed due to not maintaining or protecting marks, or to removing, without the Engineer's written approval, any such established points, stakes, or marks.

GP-2.06. LAND AVAILABLE TO CONTRACTOR

The Owner will furnish not later than the date when needed by the Contractor, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of the Contractor. Land and easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the Owner.

The Contractor shall provide at its expense all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

The Contractor shall confine its operations to such portions of the property of the Owner, as may be designated by the Owner from time to time for such use and to the rights-of-way or easements acquired for the Work. Private property adjacent to the Work shall not be entered upon or used by the Contractor for any purpose whatsoever without the written consent of the owner thereof.

All Work in connection with the Contract within or bordering on private or public property shall be conducted in such manner as will cause the minimum inconvenience and disturbance to it. No excavated materials or supplies of any kind shall be stored on private or public premises without the Owner's written consent and in accordance with all applicable regulations, and all walks and driveways shall be kept open to uninterrupted passage.

The Contractor shall at its expense whenever so required by the Owner, erect and maintain fences along the roadways and around the grounds occupied by the Contractor, which fences shall be sufficient for the protection of the adjoining property and all persons lawfully using the same.

GP-2.07. TRAVEL NOT TO BE OBSTRUCTED

The Contractor shall not allow travel upon any street, park, roadway, or alley to be hindered or inconvenienced needlessly, nor shall the same be wholly obstructed without the written permission of the owner thereof. Upon receipt of such permission the Contractor shall cause plain and properly worded signs announcing such fact to be placed, with proper lighted barricades, at the nearest cross streets, upon each side of such obstructed portion, where travel can pass around the same in the shortest and easiest way.

The driveways to and from all fire department buildings and those required by all manufacturing plants, industrial establishments, and other business concerns for the proper continuance of their commerce shall be kept open and maintained in passable condition at all times unless modified by agreement between the Contractor and the property owner. The Contractor shall give reasonable notice to the owners of all private ways before interfering with them.

The Contractor shall give reasonable written notice to concerned police, bus, fire, ambulance, and school bus departments before initiating any activity which will restrict public travel or access to private property.

GP-2.08. MAINTAINING FLOW OF SEWERS, WATER LINES AND DRAINS

The Contractor shall, at its expense, provide for and maintain the flow of all sewers, drains, house inlet connections, and water courses which may be met with during the progress of the Work. The Contractor shall not allow the contents of any sewer,

drain, or house inlet connection to flow into trenches, sewers, or other structures to be constructed under the Contract, and shall at its expense, immediately remove from the vicinity of the Work and cart away to a proper disposal site all offensive matter.

The Contractor shall, at its expense, provide for and maintain the flow in all water mains or laterals which may be met with during the progress of the Work. When water mains or laterals are to be disturbed to the extent that the water will be shut off, the superintendent of the water utility and all parties being served by the lines involved shall be notified 72 hours in advance concerning time and duration of the shut-off period. In cases involving fire hydrants, the fire department shall be so notified.

In the case of an accidental maining of a water line, gas main or electrical conduit, the repairs of such break shall have priority over all other operations. The parties whose services are affected by the break shall be notified at once and all assistance given to supply emergency water, gas, or electricity where necessary by temporary lines, tank truck, or other means. The Contractor shall have the obligation at its expense to assure that all water, gas and sewer connections serving private or public property shall be promptly and correctly restored.

#### GP-2.09. COLLATERAL WORK

During the progress of the Work the Owner reserves the right to award other contracts relating to the Project or for work on sites adjoining or adjacent to that on which the Work covered by this Contract is to be performed. The Contractor shall afford the other contractors who are parties to such contracts reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work and shall properly connect and coordinate its Work with theirs.

The Contractor shall keep itself informed of the progress and the detail work of other contractors and shall notify the Engineer immediately in writing of lack of progress or defective workmanship on the part of other contractors where such delay or such defective workmanship will interfere with its own operations. Failure of a Contractor to keep informed of the Work progressing on the Site or failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance of the status of the Work as being satisfactory for proper coordination with its own Work and shall constitute a waiver of any and all claims against the Owner or Engineer relating thereto in any way.

The Contractor shall do all cutting, fitting, and patching for its Work that may be required to make its several parts come together properly and fit it to receive or be received by the work of others. The Contractor shall not endanger any Work of others by cutting, excavating, or otherwise altering their work, except with the written consent of the other contractor and the Engineer.

If the performance of additional Work is undertaken by other contractors, and if the Contractor believes that the performance of such additional Work will cause additional expense or will require an extension of time, a claim therefor may be made as provided for herein.

The Contractor agrees that it has and will make no claim for damages against the Owner by reason of any act or omission to act by any other contractor or in connection with the Engineer's or Owner's acts or omissions to act in connection with such other contractor, but the Contractor shall have a right to claim such damages from the other contractors, under a provision similar to the following provision which has been or will be inserted in the Contract with such other contractors.

Should any other contractor, having or who shall hereafter have a contract with the Owner relating to the Project or in connection with the Work on sites adjoining or adjacent to that on which the Work covered by this Contract is to be performed, sustain any damage through any act or omission of the Contractor, the Contractor agrees to reimburse such other contractor for all such damages and it further agrees to defend, indemnify, and save harmless the Owner from all claims for such damages by whomever made or presented.

#### GP-2.10. FURNISHING AND USE OF CONTRACT DOCUMENTS

Unless otherwise stated in the Special Provisions, the Contractor will be furnished, free of charge, three copies of the Contract Documents, including three sets of reduced and three sets of full-size Contract Drawings where drawings have been reduced. Additional sets will be furnished to the Contractor, but only to the limit of availability. Any other copies of the Contract Documents which the Contractor may desire can be obtained by the Contractor from the Engineer at the cost of duplication thereof.

The Contractor shall keep at the Site of the Work at least two copies of the Contract Documents and shall at all times provide the Engineer, and other representatives of the Owner, access thereto. One copy shall be available for ready reference and the other shall be used for record purposes.

#### GP-2.11. RECORD DRAWINGS

The copy of the Contract Drawings provided to the Contractor for record purposes in accordance with Section GP-2.10 above, shall be annotated by the Contractor to record all changes made during the construction process. Said copy shall be available to the Engineer and shall be delivered to the Contractor by the Contractor upon completion of the Project.

GP-2.12. SLEEVES, INSERTS, CHASES AND OPENINGS

Where there is more than one Contractor on a Project, the General Contractor shall install in new floors, roofs, walls, and other structures constructed by it all sleeves, inserts, chases, and openings to fit its own Work and that of other contractors. The sleeves and inserts shall be provided by the installers of the pipes, ducts, conduits, and related equipment but shall be placed by the General Contractor as directed by the installers of the pipes, ducts, conduits and related equipment. It is the responsibility of the General Contractor to give other contractors reasonable notice as to when items provided by the other contractors will be placed in the Work.

Patching and finishing around the pipes, ducts, conduits, and related equipment after installation shall be by the same Contractor or Contractors installing the pipes, ducts, conduits, and related equipment.

Where sleeves, inserts, chases, or openings are required in existing floors, roofs, walls, and other structures, they shall be installed by the same Contractor or Contractors installing the pipes, ducts, conduits, and related equipment.

GP-2.13. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though such provisions were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

GP-2.14. INVALID PROVISIONS

If any term or provision of the Contract Documents or the application thereof to any person, firm or corporation, or circumstance shall, to any extent, be invalid or unenforceable, the remainder of the Contract Documents, or the application of such terms or provisions to persons, firms or corporations, or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term or provision of the Contract Documents shall be valid and be enforced to the fullest extent permitted by law.

GP-2.15. APPLICABLE STANDARDS

Reference to codes, manuals or standard specifications of any technical society, organization or association or to the code of any governmental authority, whether such reference be specified or implied, shall mean the latest code, manual or standard specification in effect at the time of opening of the Bids, except as may be otherwise specifically provided in the Contract Documents.

However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ENGINEER, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any of ENGINEER's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of the Contract Documents.

## GENERAL PROVISIONS - SECTION 3

## TIME PROVISIONS

## GP-3.01. COMMENCEMENT AND COMPLETION OF WORK: TIME OF ESSENCE

The Contractor shall commence the Work within ten days following the date of notice to proceed and fully complete the Work within the time specified in the Bid. The Contractor shall notify the Engineer, in writing, of its intention to enter upon the Site of the Work at least five days in advance of such entry.

Time is of the essence of this Contract.

## GP-3.02. RATE OF PROGRESS

The rate of progress of the Work shall be as nearly uniform as practicable and shall be such that all Work under the Contract will be completed within the time specified, or before such later date to which the time of completion may have been extended by the Owner.

The Contractor shall within ten days following the execution of this Contract prepare and submit to the Engineer for approval, two copies of a practical and feasible Work schedule showing the order and date on which the several salient features (including equipment) will be started and completed.

The Work schedule shall be in the form of a critical path or bar graph.

Where there is more than one Contract on the Project, the General Contractor shall, within ten days following the execution of its Contract with the Owner, submit two copies of its own proposed Work schedule to the Engineer for review. After review, sufficient additional copies of the schedule shall be submitted to the Engineer for transmittal of two copies to each of the other Contractors, who shall then prepare and submit their own Work scheduled for review. The General Contractor shall then incorporate these schedules into its schedule.

The Contractor on each Contract shall adhere to the approved Work schedule for its Contract. In the event a Contractor does not adhere to its Work schedule and causes other Contractors to be damaged, the Contractor causing the delay shall defend, indemnify, and save harmless the Owner and Engineer from all actions and charges of the other Contractors against the Owner or Engineer caused by said delay including all costs, disbursements and attorney's fees.

The Contractor shall update and resubmit its own schedule every month, unless the Engineer requests less frequent updates.

## GP-3.03. EXTENSION OF TIME

If the Contractor is obstructed or delayed in the prosecution or completion of the Work by the neglect, delay or default of the Owner, Engineer or of any other contractors for adjoining or contiguous work, or by any damage that may happen thereto, by the unusual action of the elements, or by the abandonment of the Work by the employees in a general strike, or by any delay on the part of the Owner or Engineer doing work or furnishing material, the Contractor shall have no claim for damages against the Owner or Engineer for any such cause or delay, but may in such case be entitled to an extension of time specified herein for the completion of the Work, provided, however, that claim for such extension of time be made by the Contractor in writing within thirty calendar days from the time when such alleged cause for delay shall occur. Any extension granted shall constitute the sole and only redress to the Contractor for any claims of any nature whatsoever caused or in any way related to such delay.

An application for an extension of time must set forth in detail the source and the nature of each alleged cause of delay in the completion of the Work, the date upon which each such cause of delay began and ended, and delay attributable to each of such causes. The Contractor shall, however, be entitled to an extension of time for such causes only for the number of calendar days of delay which the Owner may determine to be due solely to such causes, and then only if the Contractor shall have strictly complied with all of the requirements of this Section.

The Contractor shall not be entitled to receive a separate extension of time for each one of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the Work as determined by the Owner irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault or omission of the Contractor or of his subcontractors or materialmen, and would of itself (irrespective of the concurrent causes) have delayed the Work, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

## GENERAL PROVISIONS - SECTION 4

## SURFACE AND SUBSURFACE CONDITIONS

## GP-4.01. PROTECTION, EXISTING STRUCTURES

It shall be the sole responsibility of the Contractor and at its expense to protect adjacent and other property or premises from damage of any kind during the progress of the Work and shall erect and maintain guards around its Work in such a way as to afford protection to the public. The Contractor shall be held responsible for improper, illegal, or negligent conduct of itself, and its subcontractors, employees and agents in and about said Work or in the execution of the Work covered by this Contract.

It shall be the sole responsibility of the Contractor, and at its expense to sustain in their places and permanently protect from direct or indirect injury any and all pipelines, subways, pavements, sidewalks, curbs, railways, buildings, trees, poles, wells, and other property in the vicinity of his Work, whether over- or underground, or which appear within the trench or excavations, and it shall assume all costs and expenses for direct or indirect damage which may be occasioned by injury to any of them.

The Contractor's liability shall also include the damage or injury sustained by any structure whatsoever due to settlement of trenches or excavations or to settlement or lateral movement of the sides of such trenches or excavations, whether such movement occurs during or after excavation or backfilling of such trenches or excavations. The responsibility to so support and protect all such structures from damage or injury shall continue, without limitation, throughout the Contract period and during the period of guarantee.

The Contractor shall at all times have available onsite suitable and sufficient material and shall use the same as may be necessary or required for sustaining and supporting any and all such structures which are uncovered, undermined, weakened, endangered, threatened, or otherwise materially affected.

In case injury occurs to any portion of a pipeline or structure, or to the material surrounding or supporting the same, through blasting or similar operations, the Contractor shall immediately notify the Engineer, and, at its expense, shall remove such injured Work and shall rebuild the pipeline or structure and shall replace the material surrounding and supporting the same, or shall furnish such material and perform such work of repairs or replacements as the Engineer may order. In the case of utilities, the Contractor shall immediately notify the utility company, and provide all assistance for the repair of the utility by the utility company unless authorized to undertake such repairs directly by the utility company. Any damage whatsoever shall be promptly, completely, and satisfactorily repaired by the Contractor at its expense to the satisfaction of the Owner, or owner of the utility.

## GP-4.02. EXISTING SUBSURFACE STRUCTURES

## (a) General

Certain existing subsurface structures likely to be encountered during the performance of the Work embraced in this Contract or located in close proximity to the Work hereunder as to require special precautions and methods for their protection, such as sewers, drains, water mains, and conduits, together with appurtenances, are shown on the Contract Drawings. The sizes, locations, and depths shown are approximate.

It is the obligation of the Contractor to verify the accuracy and completeness of the information shown, and the Contractor agrees that it shall neither have nor assert against the Owner or Engineer any claim for damages or relief from any obligation of this Contract by reason of the inaccuracy, inadequacy, incompleteness, or other deficiency of the information given or the failure to furnish additional or further information in the possession of the Owner or Engineer, except as set forth in subsection (b) and (c) below.

Contractor is hereby given notice that subsurface structures and facilities may be located on the site which are either not identified or are mislocated on the Contract Documents.

Where any existing subsurface structure such as a sewer, drain, gas pipe, water pipe, conduit, or other structure is found which is not anticipated by the Contract Documents or which is found to be materially different in size, location, or depth from that anticipated by the Contract Documents, the Contractor shall immediately notify the Engineer, and also the superintendent of the utility, before disturbing the structure.

Contractor shall use due care to avoid damage to subsurface facilities not identified or mis-located on Contract Documents.

If ordered by the Engineer, such structure shall be uncovered and supported by the Contractor, at its cost and expense, as constituting a part of the Contract, and the Contractor shall not become entitled to claim any damages for or on account of the presence of such structure or the uncovering and supporting of same.

(b) Existing subsurface structures which require changes in the Work of the Contract.

The Engineer will determine whether changes should be made in the Contract Documents for construction of the Work of the Contract to avoid the subsurface structure, whether the Work of the Contract can proceed without changes in the Contract Documents, or whether the structure should be removed, realigned, or changed.

Any increase in cost of the Work resulting from any changes in the Contract Documents necessitated by the unanticipated presence or difference in size, location, or depth of the subsurface structure will be adjusted in the manner provided herein for changes in Contract amount.

(c) Existing subsurface structures which require changes in the existing structure.

Where the size, location, or depth of the existing subsurface structure has been anticipated and the Contract Documents require removal, realignment, or change, all Work under this Contract shall be done in accordance with the Contract Documents in mutual cooperation with the utility or other parties concerned.

Where the presence of the subsurface structure or its size, location, or depth is not anticipated by the Contract Documents, any work by the Contractor required to remove, realign, or change the structure shall be done under the provisions for changes in the Work for the removal, realignment, or change and shall be done as mutually agreed by the Contractor, Engineer, and utility or other parties concerned.

(d) Interruption of Service

Where it is necessary to interrupt water, gas, or other public utility service to remove, realign, or change a subsurface structure, the Work shall proceed with expedience and shall be continuous after interruption of service until completion of the removal, realignment, or change and return of the utility service to its normal state.

GP-4.03. SUBSURFACE CONDITIONS OTHER THAN STRUCTURES FOUND DIFFERENT

Reference is made to the Information for Bidders Section of these Contract Documents and the obligations of the Contractor to perform all necessary subsurface investigations prior to bidding. Furthermore, the Contractor shall not be entitled to rely upon the subsurface investigation performed by the Owner or the Engineer. In the event that the Contractor encounters subsurface physical conditions other than structures at the site which conditions differ significantly and substantially from those shown on or described or indicated in the Contract Documents and which could not have been reasonably foreseen or anticipated from the information made available by the Owner or the Engineer or from an appropriate investigation, inspection and examination by the Contractor (including subsurface investigation) or from a full and complete study and evaluation by the Contractor of all information available to the Contractor, it shall give immediate notice to the Engineer of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions. If conditions do differ significantly and substantially from those which should have been reasonably foreseen or anticipated by the Contractor as above provided, a change in the Contract will be determined.

Any increase or decrease of cost resulting from any such change in the Contract necessitated by reason of such latent subsurface conditions shall be adjusted in the manner provided herein for changes in Contract amount.

GP-4.04. PROTECTION OF UTILITIES

All utilities whose facilities may be affected by the Work of the Contract shall be notified by the Contractor at least 72 hours in advance of the start of any operations which might affect such facilities.

The removal, replacement, support, or other handling of private and public utilities coming within the lines of the Work shall be accomplished by the Contractor at its expense in accordance with arrangements satisfactory to the owner or operator of the utility involved. The Contractor, at its expense, shall remove, replace, or support all utilities as required.

The Contractor shall not permit nor cause any hindrance to or interference with any individual, municipal department, public service corporation, or other company or companies in protecting its or their mains, pipes, poles, posts, or other structures, nor in shifting, removing, or replacing the same. The Contractor shall allow said individual, department, company, or companies to take all such measures as they may deem prudent to protect their structures.

GP-4.05. REPLACEMENT OF PROPERTY

The Contractor shall replace all pavement, driveways, fences, shrubs, lawns, trees, and any other public or private property damaged as a result of the Work under this Contract. All such replacement shall be done in accordance with the applicable specifications and no separate or extra payment will be made unless specifically provided for in the Payment Items. In all cases said replacement shall be at least equal to the original conditions.



## GENERAL PROVISIONS - SECTION 5

## OWNER'S STATUS

## GP-5.01. OWNER'S RIGHT TO SUSPEND WORK

If, in the opinion of the Owner the Work is defective, or the Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payments for labor, materials or equipment, or if other good cause exists, the Owner may order the Contractor to suspend the Work or any portion thereof until the cause for such order has been eliminated. This right of the Owner to suspend the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other party. The Contractor shall have no claim or damages against the Owner for any delay due to such suspension of Work, provided, however, that in case of the suspension of Work due to circumstances beyond the control of the Contractor, the time within which the Contractor is required to complete the Work, shall be extended by as many calendar days as the Work was suspended. Such extended time of completion shall be the Contractor's only compensation for the suspension of Work as above provided.

## GP-5.02. CONTRACTOR'S DEFAULT

In addition to those instances provided in other sections of this Contract, the Owner shall have the right to declare the Contractor in default of the whole or any part of the Work if:

- (a) The Contractor files a voluntary petition in bankruptcy or shall be adjudicated a bankrupt or insolvent, or shall file any petition or answer seeking any reorganization, arrangement, liquidation, dissolution, or similar relief for itself under any statute, law, or regulation, or shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of the Contractor, or of all or any substantial part of his properties or assets, or shall make any general assignment for the benefit of creditors, or shall admit in writing to inability to pay its debts generally as they become due; or if
- (b) A petition is filed against the Contractor seeking any reorganization, arrangement, liquidation, dissolution, or similar relief under any statute, law, or regulation, and shall remain undischarged or unstayed for an aggregate of thirty days (whether or not consecutive); or if
- (c) Any trustee, receiver, or liquidator of the Contractor or of all or any substantial part of its properties or assets is appointed without the consent or acquiescence of the Contractor and such appointment shall remain unvacated or unstayed for an aggregate of thirty days (whether or not consecutive); or if
- (d) A receiver or receivers are appointed to take charge of the Contractor's property or affairs; or if
- (e) The Contractor fails to commence work when notified to do so by the Owner; or if
- (f) The Contractor abandons the Work as evidenced by removing workman, materials or equipment from the site; or if
- (g) The Contractor refuses to proceed with the Work when and as directed by the Owner; or if
- (h) The Contractor without just cause reduces its working force to a number which, if maintained, would be insufficient, in the opinion of the Owner to complete the Work in accordance with the approved time progress schedule, and fails or refuses to sufficiently increase such working force when ordered to do so by the Owner; or if
- (i) The Contractor sublets, assigns, transfers, conveys, or otherwise disposes of the Contract other than as permitted by the contract; or if
- (j) The Owner is of the opinion that the Contractor is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the Work, or the award of necessary subcontracts; or if
- (k) The Owner is of the opinion that the Work cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended, provided however, that the impossibility of timely completion is, in the Owner's opinion, attributable to conditions within the Contractor's control; or if
- (l) The Work is not completed within the time herein provided therefor or within the time to which the Contractor may be entitled to have such completion extended; or if

- (m) The Owner is of the opinion that the Contractor is or has been willfully or in bad faith violating any of the provisions of this Contract; or if
- (n) The Owner is of the opinion that the Contractor is not or has not been executing the Contract in good faith and in accordance with its terms.

The Owners exercise of this right shall not give rise to any claim or cause of action for damages of any nature whatsoever.

Before the Owner shall exercise its right to declare the Contractor in default by reason of the conditions set forth in the above items a, e, f, g, h, j, k, l, m and n, it shall give the Contractor and/or surety three working day's notice of its intention to declare the Contractor in default and unless, within such three day period, the Contractor shall make arrangements satisfactory to the Owner to correct or eliminate the conditions set forth in the Owner's aforesaid notice, the Contractor may be declared in default at the expiration of such three-day period or at the expiration of such longer period of time as the Owner may determine.

The right to declare the Contractor in default for any of the grounds specified or referred to shall be deemed exercised by the Owner sending the Contractor and surety a written notice at the address provided herein setting forth the ground or grounds upon which such default is to be declared. Upon receipt of notice that it is to be declared in default, the Contractor shall do only those acts reasonably related correcting the default or concluding its operations and demobilizing the site; leaving untouched all plant, materials, equipment, tools and supplies then on Site except as the Owner may otherwise direct.

The Owner, after declaring the Contractor in default, may then have the Work completed by such means and in such manner, by contract, with or without public letting, or otherwise, as it may deem advisable, utilizing for such purpose such of the Contractor's plant, materials, equipment, tools, and supplies remaining on the Site, and also such subcontractors as it may deem advisable, or it may call upon the Contractor's surety at its expense to do so.

In the event that the Owner declares the Contractor in default of the Work or any part of the Work, the Contractor, in addition to any other liability to the Owner hereunder or otherwise provided for or allowed by law, shall be liable to the Owner, firstly, for any costs, including legal fees and expenses, the Owner incurs for additional advisory and engineering services necessary, in its opinion, because of the default and, secondly, for the total amount of liquidated damages from the date when the Work should have been completed by the Contractor in accordance with the terms hereof to the date of actual completion of the Work, any of which shall be considered as expenses incurred by the Owner in completing the Work and the amount may be charged against and deducted out of such monies as would have been payable to the Contractor or its surety if the Work had been completed without default.

If the Owner completes the Work, the Engineer shall issue a certificate stating the expenses incurred in such completion, including the cost of reletting. Such certificate shall be final, binding, and conclusive upon the Contractor, its surety, and any person claimed under or through the Contractor as to the amount of such expenses, except as may be modified by the Owner to reflect damages incurred.

The expense of such completion, as certified by the Engineer, shall be charged against and deducted out of such monies as would have been payable to the Contractor if it had completed the Work; the balance of such monies, if any, subject to the other provisions of the Contract, shall be paid to the Contractor without interest after such completion. Should the expense of such completion, as certified by the Engineer, exceed the total sum which would have been payable under the Contract if the same had been completed by the Contractor, such excess shall be paid by the Contractor to the Owner upon demand.

In the event the Owner shall determine to complete the Work without calling upon the Contractor's surety to do so, the Contractor shall not be entitled, from and after the effective date of the declaration of the default, to receive any further payment under the Contract until the said Work shall be wholly completed and accepted by the Owner.

In case the Owner shall declare the Contractor in default as to a part of the Work only, the Contractor shall discontinue such part, shall continue performing the remainder of the Work in strict conformity with the terms of the Contract, and shall not hinder or interfere with any other contractors or persons whom the Owner may engage to complete the Work as to which the Contractor was declared in default.

The provisions relating to declaring the Contractor in default as to the entire Work shall be equally applicable to a declaration of partial default, except that the Owner shall be entitled to utilize for completion of the part of the Work as to which the Contractor was declared in default such plant, materials, equipment, tools, and supplies as the Owner may direct.

In completing the whole or any part of the Work, the Engineer and the Owner shall have the power to depart from or change or vary the terms and provisions of the Contract, provided, however, that such departure, change or variation be made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the Engineer's certificate of expense to any action to recover the amount by which such certificate exceeds the amount which would have been payable to the Contractor hereunder but for his default.

GP-5.03. OWNER'S RIGHT TO TERMINATE CONTRACT

Upon thirty days' written notice to the Contractor and the Engineer, the Owner may without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such event, the Contractor shall be paid for Work executed and expense sustained plus a reasonable profit.

GP-5.04. NO WAIVER OF RIGHTS

Neither the inspection by the Engineer, Owner, or any of its employees, nor any order of the Owner for payment of money, nor any order, measurement or certificate by the Engineer, nor payment for, nor acceptance of the whole or any part of the Work by the Engineer or Owner, nor any extension of time, nor any possession taken by the Owner or employees shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the Owner or of any right to damage herein provided, no waiver of any breach of this Contract shall be held to be a waiver of any other subsequent breach. All remedies provided in this Contract to the Owner shall be construed as cumulative, i.e., in addition to each and every other remedy herein provided, and the Owner shall have any and all equitable and legal remedies which it would in any case have.

## GENERAL PROVISIONS - SECTION 6

## INSPECTION OF WORK

## GP-6.01. OWNER'S REPRESENTATIVE

The Engineer will be the Owner's representative during the construction period. A representative of the Engineer will make visits to the Site to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in substantial compliance with the Contract Documents. The Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of his on-site observations the Engineer will keep the Owner informed of the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work of Contractors. The Engineer may disapprove Work as failing to conform to the Contract Documents. Whenever the Engineer considers it necessary or advisable for the proper carrying out of the intent of the Contract Documents, the Engineer shall have authority to require the Contractor to make special examination or testing of the Work (whether or not fabricated, installed or completed).

No matter how extensive or intensive the Engineer's inspection, the Engineer will not have any duty or obligation with reference to and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in substantial compliance with the Contract Documents. The Engineer's duties, services, and work shall in no way supersede or dilute the Contractor's obligation to perform the Work in conformance with all contract requirements. The Engineer is empowered when directed by the Owner to act on its behalf with respect to the proper execution of the Work and to give instructions when necessary to require such corrective measures as may be necessary in the Engineer's professional opinion to endeavor to protect the Owner's interest.

The Engineer is empowered to determine the amount, quality, acceptability, and fitness of all parts of the Work, to interpret the Contract Documents, to waive provisions of the Specifications to meet unforeseen conditions or circumstances revealed or arising during the course of the Work, and to decide all other questions in connection with the Work, but this authority shall not give rise to any duty or responsibility of the Engineer to the Contractor, the subcontractor, or any of their agents or employees to do so.

## GP-6.02. ACCESS TO WORK

The Owner, its Engineers, Inspectors, Agents, other employees, and any other parties who may enter into contracts with the Owner for doing work within the territory covered by this Contract shall, for all purposes which may be required by their contracts, and representatives of State and Federal regulatory agencies shall for any purpose have access to the Work and the premises used by the Contractor, and the Contractor shall provide safe and proper facilities therefor. The Contractor shall, whenever so requested, provide to the Engineer access to the proper invoices, bills of lading, etc., and shall provide scales and assistance for measuring and testing any of the materials.

## GP-6.03. COVERING OF WORK

No backfilling or covering of underground Work or covering of Work in structures shall be done without authorization by the Engineer. Any Work covered without such authorization shall be uncovered to such extent as directed or removed and replaced by the Contractor at its expense. If covering of the Work is ordered stopped, no more Work shall be done until such order is withdrawn.

## GENERAL PROVISIONS - SECTION 7

## CONTRACTOR'S STATUS

## GP-7.01. REPRESENTATIONS OF THE CONTRACTOR

The Contractor represents and warrants:

- (a) That it is financially solvent, that its financial condition is in all material respects the same as represented and certified at the time of bidding, and that it is experienced in and competent to perform the type of Work or to furnish the plant, materials, supplies or equipment, to be so performed or furnished by it; and
- (b) That it is familiar with all Federal, State, County and Municipal laws, ordinances, and regulations which may in any way affect the Work or those employed therein including, but not limited to, any special acts relating to the Work or to the project of which it is a part; and
- (c) That such temporary and permanent Work required by the Contract Documents as is to be done by it can be satisfactorily performed and constructed and used for the purpose for which it is intended and that such construction will not injure any person or damage any property; and
- (d) That it has carefully examined the Contract Documents and the Site of the Work and that, from its investigations, it has satisfied itself as to the nature and location of the Work, the character, quality and quantity of surface and subsurface materials and structures likely to be encountered, the character of equipment and other facilities needed for the performance of the Work, the general and local conditions, and all other materials which may in any way affect the Work or its performance.
- (e) The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with each and every phase of the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to all employees on the Work and any other persons who may be affected thereby.

## GP-7.02. CONTRACTOR'S ADDRESS: NOTICES

Both the address given in the Bid upon which the Contract is founded and the Contractor's office at or near the Site of the Work are hereby designated as places to either of which notices, letters or other communications to the Contractor may be delivered. Notices to the Contractor may be given: 1) by personal delivery to any partner or officer of the Contractor, or, to the Contractor if a sole proprietor, or to any authorized representative of the Contractor, or, 2) by depositing in a postpaid wrapper directed to either of the places above designated in any post office box regularly maintained by the U.S. Postal Department, or, 3) by registered mail, certified mail, postage paid, return receipt requested, or, 4) by facsimile followed by regular mail, or, 5) by nationally recognized overnight courier (against receipt), or, 6) by telegraph. The date of service shall be the date of such delivery or mailing. The first named address may be changed at any time by an instrument in writing executed by the Contractor and delivered to the Owner.

Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other written communication upon the Contractor or his authorized representative personally.

## GP-7.03. SUPERVISION AND SUPERINTENDENCE

The Contractor shall continuously supervise and direct the Work efficiently and with its best skill and attention. The Contractor shall have sole responsibility for the means, methods, techniques, sequences, and procedures of construction. The Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

The Contractor acknowledges and agrees that it is fully responsible for the safety, supervision and control of the Work and of Contractor's employees, subcontractors and suppliers and that the Owner and its agents have no obligation with respect to supervision of Contractor's employees, subcontractors or suppliers and the manner in which the work is performed.

The Contractor shall at all times have a competent superintendent agreeable to the Owner on the Site of the Work who shall have full authority to act for the Contractor and who shall see that the Work under the Contract is executed in accordance with the Contract Documents. The superintendent shall be an authorized representative of the Contractor for the purposes of Section GP-7.02.

The Contractor shall be responsible for the acts of its agents, superintendents, and employees during the life of the Contract.

GP-7.04. CONTRACTOR'S EMPLOYEES

The Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction and related activities as required by the Contract Documents. It shall, at all times, maintain good discipline and order at the Site.

GP-7.05. CONTRACTOR'S RESPONSIBILITY AND LIABILITY FOR INJURIES TO PERSONS OR DAMAGE TO PROPERTY

The Contractor shall be solely responsible and liable for the safety and protection of property, including but not limited to, the premises, its appurtenances and equipment and for the safety and protection of all persons entering on, in or about the Site including, but not limited to, the employees of the Owner, Engineer, Contractor, or subcontractors. The Contractor shall be solely responsible for all physical injuries, including death, to any such persons and for all damage to any such property occurring on account of the Work under this Contract, whether or not due to the negligence, fault, or default of the Contractor, its officers, employees, or agents, or of a subcontractor, its officers, employees, or agents.

To the fullest extent permitted by the law of the State in which the work is performed the liability of the Contractor under this Contract shall be absolute and shall not be dependent upon any question of negligence on his part or on the part of its officers, agents, servants, or employees. Neither the approval by the Engineer of the methods of doing the Work, nor the failure of the Engineer to call attention to improper or inadequate methods or to require a change in methods, nor the neglect of the Engineer to direct the Contractor to take any particular precautions or to refrain from doing any particular thing shall excuse the Contractor from its obligations hereunder in case of any such injury to person or damage to property.

The provisions of this paragraph are intended for the sole benefit and protection of the Owner and Engineer and shall not create any cause of action in favor of any person, corporation or entity, other than the Owner and Engineer.

GP-7.06. CONTRACTOR'S DUTY OF INDEMNIFICATION

The Contractor shall fully protect, defend, indemnify, and save harmless the Owner and the Engineer, their officers and agents, against all liability, judgments, costs, damages and expenses, including reasonable attorneys' fees, upon any claims for injuries to, or death of, any persons or damage to any property occurring on account of the Work hereunder, whether such damages or injuries to be attributable to the negligence of the Contractor, its officers, employees, agents, the Owner, Engineer, or others, provided, however, that to the extent precluded by statute, this clause shall not be deemed to provide indemnity against the sole negligence of the Owner.

The Contractor shall fully protect, defend, indemnify, and save harmless the Owner and the Engineer against all liability judgments, costs, damages, and expenses, including reasonable attorneys' fees, upon all claims relating to labor and material furnished in connection with the Work hereunder or on account of the failure, omission, or neglect of the Contractor or its Subcontractors, their officers, employees, or agents to do or perform any of the covenants, acts, matters, or other duties required by this Contract.

The provisions of this Section GP-7.06 shall not be deemed to provide indemnity of the Engineer for the liability of the Engineer, its agents or employees, to the extent that the liability of the Engineer, its agents or employees arises out of (a) or (b) below.

- (a) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications, or
- (b) the negligent giving or failure to give, directions or instructions required by contract or statute of the Engineer, its agents or employees as part of the Work, where such giving or failure to give directions or instructions, is the primary and principal cause of the bodily injury or property damage.

GP-7.07. CLAIMS

If the Contractor claims: 1) that any Work it has been ordered to do is extra work, or 2) that it has performed or is going to perform extra work, or 3) that any action or omission of the Owner or the Engineer is contrary to the terms and provisions of the Contract, it shall:

- (a) Promptly comply with such order;
- (b) File with the Owner and the Engineer within fourteen working days after being ordered to perform the Work claimed by it to be extra work or within fourteen working days after commencing performance of the extra work, whichever date shall be the earlier, or within fourteen working days after the said action or omission on the part of the Owner or the Engineer occurred, a written notice of the basis of its claim and a request for a determination thereof;

- (c) File with the Owner and the Engineer, within thirty calendar days after said alleged extra work was required to be performed or said alleged extra work was commenced, whichever date shall be earlier, or said alleged action or omission by the Owner or the Engineer occurred, a verified detailed statement, with documentary evidence, for the items and basis of its claim;
- (d) Produce for the Owner's examination, upon notice from the Owner, all of the Contractor's and its subcontractors' (of any tier) books of account, bills, invoices, payrolls, subcontracts, time books, progress records, daily reports, bank deposit books, bank statements, checkbooks, and canceled checks showing all of its actions and transactions in connection with, or relating to, or arising by reason of, its claim, and submit itself, persons in its employment, and persons in its subcontractor's employment for examination under oath by any person designated by the Owner to investigate any claims made against the Owner under the Contract, such examination to be made at the offices of the Owner or the Owner's agent;
- (e) Proceed, prior to and subsequent to the determination of the Owner with respect to any such disputed matter, with the performance of the Contract diligently and in accordance with all instructions of the Owner and the Engineer.

The Contractor's failure to comply with any or all of the foregoing provisions of this Section shall be deemed to be: 1) a conclusive and binding determination on its part that said order, work, action, or omission does not involve extra work and is not contrary to the terms and provisions of the Contract; and 2) a waiver by the Contractor of all claims for additional compensation or damages as a result of said order, work, action or omission.

No person shall have power to waive or modify any of the foregoing provisions. In any action against the Owner to recover any sum in excess of the sum certified by the Owner to be due under or by reason of the Contract, the Contractor must allege in its complaint and prove at the trial compliance with each and all the provisions of this Section.

Nothing in this Section shall in any way affect the Owner's right to obtain an examination before trial or a discovery and inspection in any action that might be instituted by, or against, the Owner or the Contractor.

#### GP-7.08. NO CLAIMS AGAINST INDIVIDUALS

No claim whatsoever shall be made by the Contractor against any trustee, beneficiary, officer, agent, or employee of the Owner for, or on account of, anything done or omitted to be done in connection with the Contract.

This Section shall also apply with equal force and effect to the directors, officers and employees of the Engineer provided, however, that this Section shall not apply to partners or other persons who by law would be liable for the acts of the legal entity, whether the Owner or Engineer, it being the intent of this Section that claims against the legal entity itself shall not be precluded.

#### GP-7.09. SAFETY AND PROTECTION

In addition to the published safety rules and practices of the Owner, if any, applicable to activities at the work site the Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of public bodies having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss, including, without limitation, the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596), as amended, and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54) and the Labor Laws of the State within which the project is located and the codes, rules and regulations promulgated therewith. The Contractor shall erect and maintain as required by the conditions and the progress of the Work, all necessary safeguards for safety and protection and shall comply with all applicable recommendations of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc.

In compliance with the foregoing the Contractor shall have on site while any work is being performed an appropriately trained, responsible member of its organization whose duty shall be compliance with the above referenced laws, ordinances, rules, regulations and orders and the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in advance in writing by the Contractor to the Owner.

The Contractor shall be responsible for developing, adopting and enforcing a project specific health and safety plan. The Contractor may not use any health and safety plan provided by Owner or Engineer as a substitute for conducting a full independent analysis of the materials, substances, equipment and conditions to be encountered during the project or as part of Contractor's work. The Contractor shall be responsible for determining and applying the most current applicable codes, rules, regulations and generally accepted standard of practice for each element of Contractor's health and safety plan. The Contractor shall not be permitted to rely on any project health and safety plan provided by Owner or Engineer.

## GENERAL PROVISIONS - SECTION 9

## CHANGES

## GP-9.01. OWNER'S CHANGES IN THE WORK

(a) The Owner at any time without notice to any Surety may make changes in the Work of the Contract by making alterations therein, by making additions thereto, or by omitting Work therefrom, and no such action shall invalidate the Contract, relieve or release the Contractor from any guarantee under the Contract, affect the terms or validity of any bond, relieve or release any Surety, or constitute grounds for any claim by the Contractor for damages or loss of anticipated profits. All Work required by such alterations, additions, or omissions shall be executed under the terms of the Contract notwithstanding the extent thereof. Said changes alterations, additions or omissions shall not constitute a cardinal change in the Contract.

(b) Other than in an emergency endangering life or property or pursuant to a Field Order, the Contractor shall not make any change in the Work nor furnish any labor, equipment, materials, supplies, or other services in connection with any change except pursuant to, and after, receipt of a written authorization from the Owner in the form of a Change Order, Modification, or Proceed Order. The Contractor shall not be entitled to any increase in the Contract price or extension of the Contract time, and no claim therefor shall be valid, unless such written authorization has been so issued to the Contractor.

(c) The Engineer may authorize minor changes in the Work which do not alter the character, quantity, or cost of the Work as a whole. These changes may be accomplished by a Field Order. The Contractor shall carry out such Field Orders promptly and without any adjustment of the Contract price or Contract time.

(d) For any changes funded by the United States Environmental Protection Agency/New York State Department of Environmental Conservation, resulting in price adjustment in excess of \$100,000, the Contractor shall submit an EPA Form 5700-41 along with such supporting data as may be required.

## GP-9.02. ADJUSTMENTS IN PRICE

Any increase or decrease in the Contract price resulting from changes in the Work ordered by the Owner shall be determined as provided in this Section:

- (a) By such applicable unit prices, if any, as set forth in the Contract; or
- (b) If no such unit prices are so set forth, then by unit prices or by a lump sum mutually agreed upon by the Owner and the Contractor; such unit prices or lump sum being arrived at by estimates of reasonable value prepared in general conformance with the outline set forth in (c) below.
- (c) If no such unit prices are so set forth and if the parties cannot agree upon unit prices or a lump sum, then determination shall be made as the sum of the following amounts for all Work necessary for the changes:
  - (1) Cost of materials delivered to the job Site for incorporation into the Contract Work.
  - (2) Wages paid to workmen and foremen and wage supplements paid to labor organizations in accordance with current labor agreements.
  - (3) Premiums or taxes paid by the Contractor for workmen's compensation insurance, unemployment insurance, FICA tax and other payroll taxes as required by law.
  - (4) Sales and use taxes paid as required by law.
  - (5) Allowances for necessary use of construction equipment (exclusive of hand tools and minor equipment), as approved by the Engineer.
  - (6) An amount for overhead.
  - (7) An amount for profit.

Construction equipment rental rates shall be in accordance with those published in that issue of the Associated Equipment Distributors (AED) Rental Guide, current at the time the work is done. In the event that rental rates for equipment used in the performance of extra work are not listed in the AED Rental Guide, rental rates will be approved for payment which are consistent with those prevailing in the construction industry in the area of the Work. Monthly, weekly, or daily rates shall apply, prorated to the actual time the equipment is in use; the classification of monthly, weekly, or daily rate to be used shall be determined by the



length of time the piece of equipment under consideration was in use on the total project under Contract plus either the time used in the performance of the extra work or the time used in the performance of the extra work plus additional subsequent time used on the total project under contract. Gasoline, oil and grease required for operation and maintenance will be paid for at the actual cost. When, in the opinion of the Contractor as approved by the Engineer, suitable equipment is not available on the Site, the moving of said equipment to and from the Site will be paid for at actual cost.

The Contractor shall submit evidence satisfactory to the Engineer to substantiate each and every item included in an estimate prepared pursuant to GP-9.02 (b) or a determination pursuant to GP-9.02 (c).

The amounts allowed for overhead and profit for a change resulting in an increase in Contract price may be less than, but shall not exceed, the applicable percentages as follows:

- (a) For work done directly by the Contractor, the sum of overhead amount plus profit amount shall not exceed 20% of the cost.
- (b) For work done by subcontractors of any tier, the sum of total overhead amounts of the subcontractors and Contractor, plus total profit amounts for the subcontractors and Contractor, shall not exceed 25% of the cost. Subcontractors shall be limited to 15% and Contractors shall be limited to 10% for combined overhead and profit.

Overhead is defined as all expense not included in the amounts outlined in GP-9.02 (c) (1) through GP-9.02 (c) (5), including administration, superintendence, insurance not outlined in GP-9.02 (c) (1) through GP-9.02 (c) (5), material used in temporary structures, additional premiums placed upon the labor and performance bonds of the Contractor and small hand tools.

Where Work necessitated by the change involves overtime, no payroll taxes, overhead or profit will be allowed on the premium portion of overtime pay.

GP-9.03. PROCEED ORDER

If the Owner and the Contractor cannot agree upon an equitable adjustment of the Contract price prior to performance of the change in the Work, a Proceed Order will be issued authorizing the change, and Contractor shall proceed with the work thereof by the most economical methods. Upon completion of the change in the work and a determination of the adjustment in the Contract price, a Change Order will be issued.

GENERAL PROVISIONS - SECTION 10  
CORRECTION AND GUARANTEE OF WORK

GP-10.01. CORRECTION OF WORK PRIOR TO ACCEPTANCE

If the Work, or any portion thereof, is damaged in any way or if defects not readily detected by inspection develop before acceptance of the Work, the Contractor shall forthwith remove and replace, without additional compensation, such damaged or defective work. This requirement to remove and replace is notwithstanding that the Work may have previously passed the prescribed inspections and tests.

If the Contractor shall fail to replace any defective or damaged work within thirty days following written notice from the Engineer, or such other period of time designated by written notice from the Engineer, the Owner may cause such Work, material or equipment to be replaced; the expense thereof shall be charged to the Contractor and the amount deducted from any monies due or to become due the Contractor.

Any materials brought upon the Site which shall be rejected by the Engineer as not in conformity with the Contract Documents shall be removed immediately by the Contractor from the Site of the Work and replaced with materials complying with the Contract Documents.

Failure or omission on the part of the Engineer or any of its assistants or agents to reject defective or inferior work, material, or equipment, shall not release the Contractor from the obligations of tearing out, removing, and properly replacing the defective or inferior Work, materials, or equipment at its cost and expense at any time, upon the discovery of said defective or inferior work, material or equipment, prior to the acceptance of the Work under this Contract, notwithstanding that such Work, material, or equipment may have been estimated for payment or that partial payments have been made on the same.

GP-10.02. CORRECTION OF WORK AFTER ACCEPTANCE

Any Work requiring rebuilding or replacement, as set forth in the subsection entitled Guarantee, will be brought to the attention of the Contractor by written notice. The Contractor shall, within five days of such written notice, advise the Owner of his schedule for the timely rebuilding or replacement of such Work. Thereafter, such rebuilding or replacement shall be accomplished in accordance with said schedule.

GP-10.03. ACCEPTANCE OF UNCORRECTED WORK

If, instead of requiring correction or removal and replacement of Work which deviates from the Contract, the Owner prefers to accept it, he may do so. In such case, a Change Order shall be issued with appropriate reduction in the Contract price as set forth in General Provisions Section entitled Deductions for Uncorrected Work.

GP-10.04. GUARANTEE

The Contractor guarantees the Work under the Contract against any and all defects in workmanship and materials for a period of one year following the date of Substantial Completion of the Work or the date of Beneficial Occupancy of completed Work where Beneficial Occupancy may have occurred.

Pursuant to this guarantee, the Contractor agrees to make good, without delay and at its expense, any and all failures of any parts due to faulty materials, construction, or installation, or to the failure of any equipment to perform successfully within the limits prescribed by the Specifications; in addition, the Contractor shall make good any damage or injury to any other part of the Work caused by such failure of parts or equipment.

Where the total value of all replacement or rebuilding required during the guarantee period is equal to or less than \$5,000 or such other value as may be stated in the Special Provisions, the guarantee period shall terminate at one year following the date of Substantial Completion or Beneficial Occupancy. Where the total value of said replacement exceeds \$5,000 or such other value as may be stated in the Special Provisions, the guarantee period for the total replacement or rebuilding shall be extended to a date one year following the date of completion of the rebuilding or replacing of the last item which failed.

The guarantee period for minor items contained on the Estimate of Work Remaining shall terminate at a date one year following the date of Substantial Completion, provided that completion or correction by the Contractor occurs within 6 months of the date of Substantial Completion. However, in the event of failure of a minor item or items following completion or correction of said minor items, the value of subsequent replacement or rebuilding of such item or items shall be included in the total value of all replacement or rebuilding for determining an extension of the guarantee period as set forth in the previous paragraph.

The Contractor shall furnish such labor and equipment as the Engineer may require to facilitate any one-year inspections of the Project.

The guarantee under this provision shall not impair or limit the other rights and remedies available to the Owner by contract, statute or common law.

## GENERAL PROVISIONS - SECTION 11

## PAYMENTS AND COMPLETION

## GP-11.01. ESTIMATED QUANTITIES

The Contractor agrees: 1) that it will make no claim of any nature against the Owner or Engineer because of a difference between the quantities for unit price items of Work actually furnished and the estimated quantities stated in the Bid even though the estimated quantities prove grossly different from the quantities actually used, and 2) that the quantity of any unit price item of Work may be increased or decreased as may be deemed necessary without alteration or modification of the Contract.

In the event that the quantities of various items actually used are either higher or lower than the quantities stated in the Bid, the Contractor agrees as follows:

- (a) where the change in quantities for any item in the original bid does not exceed 15% of the original bid quantity, the applicable unit prices bid shall be the sole basis for computing payment.
- (b) where the change in quantities for any item in the original bid exceeds 15% of the original bid quantity, the Owner may review the unit price for said item to determine if a new unit price should be negotiated.

## GP-11.02. PRICES

The prices herein agreed to for the performance of the Work shown and as specified shall include not only the doing of the Work but also the furnishing of all labor, tools, and materials therefor, whether the same are required directly or indirectly, unless otherwise specified.

Where Work is to be measured for payment by units of length, area, volume, or weight (as stated in the Bid), only the net amount of Work actually done, as it shall appear in the finished Work and as measured only within the payment limits described in the Contract Documents or as is ordered, shall be paid for, local customs to the contrary notwithstanding.

Where a lump sum price is bid for an item in the Bid, the lump sum price shall be for the Work complete as described in the item and shall include the cost of all specified or implied equipment, materials, and labor incidental to the Work, complete and ready for service and in accordance with the Contract Documents.

## GP-11.03. BREAKDOWN OF LUMP SUM ITEMS

At least ten days prior to the submission of its first application for a progress payment, the Contractor shall present to the Engineer for its review a detailed schedule showing the breakdown of all lump sum bid prices in the Contract. Such schedule shall contain the amount estimated for each part of the Work and an estimate of quantities for each part of the Work. Work to be performed by subcontractors shall be separately identified. Upon request of the Engineer, said schedule shall be apportioned by the Contractor for labor and for materials. Such schedule shall be revised by the Contractor until the same shall be satisfactory to the Engineer and shall not be changed after the Engineer has approved the same without the express written consent of the Engineer. The approved schedule will be used in the preparation of the current estimate but will not be considered as fixing the basis for additions to or deductions from the Contract.

## GP-11.04. CURRENT ESTIMATES

The Owner will establish dates during the respective months of the Project on which the Owner will accept applications for payment.

At least ten days before each date set for consideration for payment, the Contractor shall submit to the Engineer for review an application for payment, filled out and signed by the Contractor and covering the Work completed as of the date of the application, in satisfactory form and supported by such data as the Owner and Engineer may reasonably require.

The Engineer will, within ten days after receipt of each application for payment, either indicate in writing its recommendation of payment and present the application to the Owner or return the application to the Contractor, indicating in writing his reasons for not recommending payment. In the latter case, the Contractor shall make the necessary corrections and resubmit the application.

The Engineer's recommendation of any payment request shall constitute its advice to the Owner: that to the best of its knowledge, information, and belief, based on the Engineer's on-site observations of the Work in progress and on its reliance upon application for payment and supporting data, the Work has progressed to the point indicated; that the quality of the Work appears

to be in substantial compliance with the Contract Documents (subject to any subsequent tests and qualifications stated in his final review); and that the Contractor is entitled to the payment of the amount recommended. However, by recommending any such payment, the Engineer shall not thereby be deemed to have represented that it made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, that it has reviewed the means, methods, techniques and sequences, or that it has made any examination to ascertain how or for what purpose the Contractor has used the monies paid or to be paid to the Contractor on account of the Contract price.

Where Work has been included in the current estimate recommended by the Engineer for payment, and where such Work is later found to be defective, and where such defective Work has not been corrected, the Engineer will recommend to the Owner that the value of such uncorrected Work be deducted from the amount due or to become due the Contractor.

The Engineer may decline to act upon requests for monthly payment if lists of vendors and subcontractors, shop drawings, samples, work schedules, instruction manuals, and breakdowns of lump sum bid items necessary for orderly prosecution of the Work, are not submitted as required.

#### GP-11.05. TITLE TO MATERIALS, EQUIPMENT AND SUPPLIES

The Contractor warrants and guarantees that it will have good title to all materials, equipment, and supplies delivered to the Site for use in the Work.

Title to all materials, equipment and supplies to be sold by the Contractor to the Owner pursuant to this Contract or to be installed or incorporated into the Project shall immediately vest in the Owner upon delivery of such materials, equipment and supplies to the Site and prior to their installation or incorporation into the Project. Such materials, equipment, and supplies shall then become the sole property of the Owner subject to the right of the Owner to reject the same as hereinafter provided. The Contractor shall mark or otherwise identify all such materials, equipment, and supplies as the property of the Owner. The Contractor, at the request of the Owner, shall furnish to the Owner such confirmatory bills of sale and other instruments as may be required by it, properly executed, acknowledged, and delivered, confirming to the Owner title to such materials, equipment, and supplies free of encumbrances. In the event that, after title has passed to the Owner, any of such materials, equipment, and supplies are rejected as being defective or otherwise unsatisfactory, title to all such materials, equipment, and supplies shall upon such rejection re-vest in the Contractor, and the Contractor shall then replace the rejected material, equipment, and supplies with acceptable material, equipment, and supplies at no additional cost to the Owner.

Nothing in this Section is intended, or shall be construed, as relieving the Contractor from its obligations under this Contract, and the Contractor shall have the sole continuing responsibility to install the materials, equipment, and supplies purchased or furnished in accordance with the provisions of this Contract, to protect the same, to maintain them in proper condition, and to forthwith repair, replace, and make good any damage thereto or loss thereof, without cost to the Owner until such time as the Work covered by the Contract is accepted by the Owner in accordance with Section GP-11.13.

The Contractor warrants and guarantees that no materials, equipment, or supplies delivered to the Site for use in the Work will have been acquired by the Contractor (or any other person performing work at the Site or furnishing materials, equipment or supplies for the project) subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller (or otherwise imposed on the Contractor by any person).

#### GP-11.06. PAYMENTS FOR MATERIALS DELIVERED TO SITE

In making estimates of the value of the Work done and materials incorporated in the Work, the Contractor may, subject to the approval of the Owner or as required by law, include in the current estimates the delivered cost, as modified below, of equipment and non-perishable materials which have been tested for adequacy and which have been delivered to the Site and adequately protected from fire, theft, vandalism, the effect of the elements, and any damage whatsoever, or similarly placed in approved storage facilities adjacent thereto. Such materials and equipment shall at all times be available for inspection by the Engineer and the Owner.

No progress payment shall, however, be made for said material and equipment until each of the following conditions has been fulfilled:

- (a) The Contractor shall have furnished to the Engineer invoices establishing the value of the said materials and equipment with the full amount the Contractor agrees to pay the vendor. Such invoices shall be furnished at least ten days in advance of the date of preparation of monthly estimates as established by the Engineer.
- (b) The Engineer shall have inspected said material and equipment and recommended payment therefor.

- (c) The Contractor shall have furnished to the Owner the fire insurance policies, as provided in this Contract and with the broad form extended coverage endorsement, for said material and equipment in an amount equal to 100% of the value thereof and which policies shall be maintained, at the sole cost and expense of the Contractor, until said material and equipment has been incorporated into the Project.

Contractor shall submit with each application for payment, satisfactory evidence that all suppliers, materialmen and subcontractors have been paid all amounts previously invoiced with respect to their services and agreeing to defend and hold Owner harmless from any liens and encumbrances placed against the Project on account of Contractor's failure to promptly pay its suppliers, materialmen and subcontractors. Satisfactory evidence shall be: a canceled check in the correct amount and including identification of the invoice or invoices paid; a letter or telegram, from the vendor and signed by his properly authorized employee, stating the amounts and invoices that have been paid; or a receipted invoice.

Should the above evidence of payment not be furnished, the Engineer will recommend the deduction of any funds included in previous estimates for such materials and equipment for which said evidence has not been furnished from the current estimate or subsequent current estimates.

Any payment made for materials and equipment delivered will not relieve the Contractor of any responsibility for furnishing all the necessary equipment and materials required for prosecution of the Work in the same manner as if such payments had not been made.

#### GP-11.07. OWNER'S PAYMENT OF MONTHLY ESTIMATES

The Owner will, within thirty days of presentation to it of an approved application for payment (current estimate), pay the Contractor the approved amount of such estimate, which unless otherwise set forth in the special provisions, shall be less retainage of five (5) percent.

In lieu of all or part of the cash retainage, the Owner may accept securities negotiable without recourse, conditions or restrictions, a release of retainage bond, or an irrevocable letter of credit provided by the Contractor. The Owner may accept only securities, bonds or instruments acceptable under the laws of the State where the Owner is resident and/or the work is performed in lieu of any or all of the cash retainage.

Acceptance by the Contractor of the monthly payment shall constitute its warranty that it will pay each of its subcontractors and vendors all monies due them as required by applicable State and Federal Laws and Regulations.

#### GP-11.08. OWNER'S RIGHT TO WITHHOLD PAYMENTS

The Owner may withhold from the Contractor so much of any approved payments due it as may in the judgment of the Owner be necessary to assure the payment of any claims, liens or judgments against the Contractor, resulting from performance or non performance of the Work of the Contract, which have not been suitably discharged. The Owner shall have the right as agent for the Contractor to apply any such amounts so withheld in such manner as the Owner may deem proper to satisfy such claims, liens or judgments. Such application of such money shall be deemed payments for the account of the Contractor.

The Owner may also withhold from the Contractor so much an amount of any payments due it as may in the judgment of the Owner be necessary:

- (a) to protect the Owner from loss due to previous payment for Work subsequently found to deviate from the Contract requirements and which has not been corrected by the Contractor, and
- (b) to protect the Owner from loss due to previous payment for materials and/or equipment delivered to the Site for which evidence of payment to vendors has not been furnished by the Contractor.

#### GP-11.09. DEDUCTIONS FOR UNCORRECTED WORK

If the Owner deems it expedient to accept uncorrected Work, the Contract price shall be decreased by an amount, determined by the Owner, which is equal to the difference in value of the Work as performed by the Contractor and the value of the Work had it been satisfactorily performed in accordance with the Contract, or which is equal to the cost of performing the corrective Work, whichever shall be the higher amount.

#### GP-11.10. SUBSTANTIAL COMPLETION

The Work of the Contract shall be deemed Substantially Complete when either of the following occurs:

- (a) When the Work of the Contract is at least 99% complete as evidenced by a list of minor items to be completed with estimated value equal to or less than 1% of the value of the Contract payments as shown in current estimates of Work completed.
- (b) When the Owner and Contractor reach mutual written agreement that the Work is Substantially Complete.

The Contract will be considered as a single unit for determination of Substantial Completion except as follows:

- (a) Where a division of major parts of the Contract is set forth in the Special Provisions for purposes of separate determinations of Substantial Completion for each part.
- (b) Where the Owner and Contractor reach mutual written agreement that a major part of the Contract can be separately determined to be Substantially Complete.
- (c) Where part of the Work of the Contract has been previously accepted into Beneficial Occupancy.

The date of Substantial Completion shall be evidenced by a Certificate of Substantial Completion signed by the Contractor, Engineer, and Owner.

#### GP-11.11. FINAL INSPECTION AND CERTIFICATE OF SUBSTANTIAL COMPLETION

The Owner, Engineer, and Contractor will make an inspection as soon as possible after written notification by the Contractor to the Owner that the Work is 99% complete, or after the Owner and Contractor mutually agree that the Work appears Substantially Complete. Following said Final Inspection the Engineer will advise the Contractor of remaining items to be completed or corrected to arrive at completion of the Work inspected.

When the remaining items of Work to be completed or corrected are of sufficiently reduced value that Substantial Completion is indicated, the Engineer will prepare a detailed estimate (hereinafter referred to as Estimate of Work Remaining) of the value of said items showing each item's separate value as well as the total value of all items. The Contractor shall endorse said Estimate as evidence of agreement.

Substantial Completion will be evidenced by a Certificate of Substantial Completion signed by the Contractor, Engineer, and Owner. The date of Substantial Completion shall be that date specified in the Certificate of Substantial Completion. The Estimate of Work Remaining will be attached to the Certificate of Substantial Completion.

#### GP-11.12. PAYMENT AT SUBSTANTIAL COMPLETION

The Application for Payment at Substantial Completion shall be in a form satisfactory to the Owner and shall be accompanied by the following documents:

- (a) Certificate of Substantial Completion with Estimate of Work Remaining attached.
- (b) A schedule endorsed by the Contractor showing time of completion of all remaining Work.
- (c) An affidavit of the Contractor: 1) that the claims of all subcontractors, materialmen, laborers, and all other persons and parties furnishing labor and materials with respect to the Contract have been paid in full except as noted; 2) that the Contractor will pay in full the exceptions stated from the proceeds of this payment; and 3) that the Contractor acknowledges that the Owner has made this payment in reliance upon this affidavit.
- (d) Releases or receipts evidencing payment of all liens which may have been filed as a result of the performance of the Work of the Contract.
- (e) A written statement from Surety that the Labor and Material Bond and the Performance Bond, each in the amount of 100% of the value of the Contract, are in force and will remain in force for a period of one year following the date of Substantial Completion or such later date as may be established by an extension of the guarantee period.

Payment at Substantial Completion will be an amount equal to the value of all of the Work of the Contract which has been declared Substantially Complete including the estimated value of the minor items to be completed or corrected less an amount equal to twice the total Estimate of Work Remaining, less an amount withheld to satisfy any outstanding claims, liens, or judgments, less any charges for delay, and less all prior payments to or for the account of the Contractor. All prior estimates and payments including those related to Change Orders, shall be subject to correction by the payment at Substantial Completion.

## GP-11.13. ACCEPTANCE OF WORK

Acceptance by the Owner of the Work of the Contract will occur on the dates as follows:

- (a) The date of Substantial Completion specified in the Certificate of Substantial Completion for all Work not included in (b) or (c) below.
- (b) The date of Beneficial Occupancy for all Work taken into Beneficial Occupancy.
- (c) The date of payment of the requisition of the Contractor at the time of 100% completion or correction for all Work included in the Estimate of Work Remaining.

## GP-11.14. CONTRACTUAL RELEASE TO OWNER

The submission by the Contractor of an Application for Payment at Substantial Completion shall be, and shall operate as, a release to the Owner of all further claims and liability to the Contractor for all things done or furnished in connection with the Contract, and for every act and neglect of the Owner and others relating or arising out of the Contract excepting the Contractor's requests for payment for completion or correction of Work items included in the Estimate of Work Remaining, the Application for Payment at Substantial Completion, and interest on said Payment if payment is improperly delayed. However, no Application for Payment, or payment of same, shall operate to release the Contractor from any obligations under the Contract or the Surety bonds.

## GP-11.15. PAYMENT FOR MINOR ITEMS WHEN COMPLETED OR CORRECTED

The minor items of Work contained in the Estimate of Work Remaining shall be completed or corrected by the Contractor in a timely manner in accordance with the schedule submitted with the application for Payment at Substantial Completion. Upon such completion or correction, and upon Application for Payment in a form satisfactory to the Owner, the Owner will pay an amount equal to the value, and only that value, of the item or items of Work completed or corrected. The remaining amount held as determined when making Payment at Substantial Completion will be retained by the Owner until the Contractor has completed all items of Work contained in the Estimate of Work Remaining and has submitted evidence that all claims, liens, and judgments have been satisfied. No payment will be made which is less than one thousand dollars, except upon 100% completion or correction of all items included in the Estimate of Work Remaining.

## GP-11.16. FINAL PAYMENT (Affidavit)

The Contractor's application for payment upon 100% completion [correction of all items included in the Estimate of Work Remaining] shall be accompanied by an affidavit of the Contractor as follows:

- (a) That in accordance with the provisions of the applicable law of the State, in which the work is performed and other applicable State and Federal laws and regulations, all claims, liens, and judgments with respect to the Contract have been paid in full;
- (b) that the Contractor has no further claims with regard to the Contract against the Owner or its agents; and
- (c) that the Contractor acknowledges that the Owner has made this Final Payment in reliance upon this affidavit.

## GP-11.17. OWNER'S RIGHT TO COMPLETE THE CONTRACT

During the time period extending from the date of Substantial Completion to a date six months thereafter or to mutually acceptable later date, the Contractor shall complete or correct all items contained in the Estimate of Work Remaining in accordance with the schedule established at Substantial Completion as such Estimate of Work Remaining and Schedule may be modified or supplemented prior to the end of the warranty period. Where Work items are not completed or corrected in accordance with the established schedule, and following reasonable notice by the Owner to the Contractor, the Owner may complete or correct said Work items. The cost for such completion or correction may be paid by the Owner, without review by the Contractor, and the Contractor shall reimburse the Owner for all costs so incurred.

It is hereby mutually agreed that six months following the date of Substantial Completion or the mutually acceptable later date, and at any time thereafter, the Owner (having given prior notice as set forth in the preceding paragraph) may, without additional notice to the Contractor, complete and correct any items contained in the Estimate of Work Remaining which are remaining to be completed or corrected. The cost for such completion and correction may be paid by the Owner, without review by the Contractor, and the Contractor shall reimburse the Owner for all costs so incurred. In the event that the Owner commences legal proceedings to recover all costs not reimbursed, there shall be included as an item of damage all reasonable attorneys' fees.



Each piece of equipment shall be provided with a substantial nameplate, which is securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, and principal rating data.

Where the Materials and Performance, Technical Specification Sections require spare parts to be furnished by the Contractor, said spare parts for each item of equipment shall be kept separate and tagged to identify the specific item of equipment to which they belong, shall be packaged so as to preclude damage from handling and storage, and shall be bagged or packaged together where items are small in dimension.

#### GP-13.05. EQUIPMENT INSTALLATION

The Contractor shall have on hand sufficient proper equipment and machinery of ample capacity to facilitate the Work.

The General Contractor shall furnish, install, and protect all necessary concrete pads, which shall include guides, track rails, bearing plates, anchor and attachment bolts, and all other appurtenances needed for the installation of the devices included in the equipment specified. The location, size and templates for the concrete pads shall be furnished by the Contractor supplying the equipment along with all guides, track rails, bearing plates, anchor and attachment bolts and other appurtenances required.

Anchor bolts shall be made of ample size and strength for the purpose intended. Unless otherwise specified, anchor bolts in submerged locations shall be bronze or stainless steel; all other anchor bolts shall be cadmium plated. Substantial templates and working drawings for installation shall be furnished.

All equipment shall be correctly aligned, leveled and adjusted for satisfactory operation and shall be installed so that proper and necessary connections can be made readily between the various units.

The Contractor shall furnish all oils and greases for initial operation of each item of equipment and shall furnish the lubricant chart as indicated in Paragraph GP-13.08. Insofar as possible, all lubricants shall be obtained from one manufacturer approved by the Owner. Each item of equipment shall be tagged to show the date lubricated, the name and type of lubricant used and the recommended frequency of lubrication.

All mechanical and electrical equipment shall be checked for correctness of installation by a qualified representative of the manufacturer, and the manufacturer shall certify in writing to the Engineer that the equipment was installed according to his specifications. Where multiple manufacturers have supplied components for a piece of equipment, the manufacturer that assembled the components shall supply the certification.

#### GP-13.06. OPERATING INSTRUCTIONS AND MANUALS

The Contractor shall furnish the services of qualified manufacturers' representatives to instruct designated employees of the Owner in the operation and care of all equipment. The Contractor shall also furnish and deliver to the Engineer three complete sets of instructions, bulletins, diagrams, and other data and information required for the proper operation and maintenance of the equipment, including spare parts lists and ordering of spare parts. These operating manuals shall be furnished to the Engineer at such time as the equipment is delivered and shall include references to models and serial numbers of equipment furnished, assembly drawings, lubrication instructions, and service recommendations. Such data shall be bound in booklet form for easy reference and shall be accompanied by a transmittal sheet listing an inventory of items included.

#### GP-13.07. STORAGE AND MAINTENANCE OF EQUIPMENT

Equipment containing moving parts or bearings which is subject to damage by exposure or improper storage shall be protected as set forth herein:

The Contractor shall require that the manufacturers of all equipment to be incorporated into the Work of this Contract supply detailed instructions concerning storage and maintenance required to maintain the equipment in good condition until it is placed in operation. These instructions shall be acceptable to the Engineer and shall be strictly enforced. Such acceptance shall not relieve the Contractor of its obligation to properly store and maintain the equipment.

Equipment which is intended for outdoor installation may be stored outside subject to and in accordance with the manufacturer's instructions. Equipment intended for indoor installation shall be stored in heated and ventilated warehouses or in heated and ventilated enclosures on the Site of the Work.

Equipment which is installed more than seven days prior to being placed in operation shall be protected in strict accordance with the manufacturers' recommendations and in a manner acceptable to the Engineer. Such protection, where dictated, shall consist of complete air-tight encapsulation with desiccants.

Equipment improperly stored or improperly protected after installation shall, at the Owner's option, be replaced by the Contractor at no cost to the Owner.

GP-13.08. LUBRICATION CHART AND LUBRICATION

The Contractor shall furnish the Owner a lubrication chart(s) for all equipment furnished or installed by the Contractor. The chart(s) shall include the following for each item of equipment:

- name of the item;
- location of the item;
- each point of lubrication on the item;
- for each point of lubrication, the identification of the lubricant recommended and the recommended frequency of lubrication.

The information on the chart(s) shall be developed from manufacturers' printed data or from manufacturers' specific recommendations.

The identification of the lubricant by manufacturer's name and product identification number (such as Mobil X421) shall be furnished. Unless otherwise stated the name of the manufacturer to be used will be furnished to the Owner by the Contractor.

Following the initial operation of the equipment the Contractor shall relubricate, changing and adding lubricants, at the intervals or frequency as recommended by the manufacturer until acceptance.

## GENERAL PROVISIONS - SECTION 14

## SHOP DRAWINGS AND SAMPLES

## GP-14.01. LISTING OF ITEMS

Following execution of the Contract by the Contractor, the Engineer will submit to the Contractor a list of equipment, materials, and other items for which shop drawings, layouts, samples, or shop drawings and samples which will be required. This listing shall not be construed to be all-inclusive and may be added to, or deleted from, as may be required in the opinion of the Engineer.

## GP-14.02. ACCEPTANCE OF MANUFACTURERS OR VENDORS

The Contractor, with such promptness and in such sequence as to cause no delay in the Work, shall submit to the Engineer the name of the manufacturer or vendor for each item on the list or addition to the list submitted. No awards shall be made by the Contractor, and no work under any item shall proceed, until acceptance of the manufacturer or vendor has been given by the Engineer. Such acceptance will be only on the basis of the manufacturer's or vendor's experience and reputation and will not imply that the shop drawings or samples for the item will be acceptable. Review of shop drawings for an item will depend upon full compliance with the Contract Documents as demonstrated by material submitted.

## GP-14.03. ELECTRICAL INTERCONNECTIONS

Where the Project includes electrical equipment and electrical control systems and where the Work of the Project involves more than one Contractor, it shall be the responsibility of the Electrical Contractor to coordinate and complete power, control, and electrical signal interconnections for all equipment included in the Project.

## GP-14.04. SHOP DRAWING SUBMITTAL REQUIREMENTS

Shop drawings and data shall be submitted to the Engineer for each item on the latest revised list determined from Section GP-14.01 above. Submittals shall be made sufficiently in advance of the time when items included therein are to be incorporated into the Work to permit proper review, necessary revisions, and resubmittals without causing a delay in the performance of the Work.

Shop drawings shall present complete and accurate information relative to all working dimensions, equipment weights, assembly, and section views, and all necessary details pertaining to coordinating the Work of the Contract, lists of materials and finishes, parts lists and the description thereof, lists of spare parts and tools where such parts or tools are required, and any other items of information that are required to demonstrate detailed compliance with the Contract Documents. Drawings for electrical equipment shall include elementary and interconnection diagrams.

Each shop drawing submitted shall be presumed to have been reviewed by the Contractor before being submitted to the Engineer. The Contractor's submittal of a shop drawing shall constitute its representation that the Contractor has determined and verified all quantities, dimensions, field construction criteria, materials catalog numbers, and similar data and that it has reviewed or coordinated each shop drawing with the requirements of the Work and the Contract Documents.

Unless otherwise permitted in specific cases, all data shall be transmitted to the Engineer by the Prime Contractor.

Each shop drawing submitted shall indicate the following:

- (a) Project name and contract number
- (b) Manufacturer of the equipment
- (c) Notation as to whether original submittal or resubmittal
- (d) Date received by Contractor from manufacturer or vendor
- (e) Date submitted to Engineer

Each shop drawing submittal shall be accompanied by a transmittal letter indicating the item or items submitted, with particular reference to latest revised list of equipment, materials, and other items described in GP-14.01 above and the appropriate section of the Contract Documents to which the items apply. The transmittal letter shall also indicate whether the submittal constitutes a complete set of drawings for the item, a partial set of drawings for which additional submittals are to be expected by the Engineer, or a partial set of drawings to complete a previous submittal. In any case, the Contractor shall indicate by the transmittal letters when the submittals for an item are intended to be complete.

Unless otherwise stated in the Special Provisions, the Contractor shall submit at least five copies of drawings, catalog data, and similar items for review. This number includes one for return to the Contractor noted as "Reviewed" or request for amendment. If the Contractor desires more than one copy returned to it, it shall submit with the initial and any subsequent transmittals the additional number desired up to a maximum of three copies.

If the Engineer requires additional copies, it will so inform the Contractor upon return of the material noted as "Reviewed". Additional copies of "Reviewed" shop drawings will be requested in the cases where the subject matter shown thereon requires coordination of two or more prime Contracts. Copies of such drawings, when received, will be retransmitted by the Engineer.

A current file of "Reviewed" shop drawings will be maintained by the Engineer and, where so stated in the Special Provisions, said current file of "Reviewed" shop drawings will be at the job site. Any Contractor may have access to said "Reviewed" shop drawing file during normal office hours. It shall be the responsibility of each prime Contractor to avail itself of information in said "Reviewed" shop drawing file and to be aware of coordination requirements involving its work in the event it does not receive appropriate shop drawings from the Engineer.

#### GP-14.05. ENGINEER'S REVIEW OF SHOP DRAWINGS

The Engineer's review of shop drawings is for general compliance with the Contract Documents only and is not a complete check of the method of assembly, erection, or construction. Such review shall in no way be construed as permitting any departure whatsoever from the Contract Documents, except where the Contractor has previously requested and received written approval of the Engineer for such departure.

Review of shop drawings by the Engineer will be limited to completed submittals except where review of a partial submittal is specifically requested by the Contractor and where such review of a partial submittal is necessary for timely completion of the Work of the Contract. Where shop drawings of related items are necessary for review of a particular submittal, the Engineer will so inform the Contractor, who will promptly submit such shop drawing of said related items.

Drawings and similar data will be reviewed and stamped by the Engineer as follows:

- (a) "Reviewed," if no change or rejection is made. All but four copies of the submitted data will be returned.
- (b) "Reviewed and Noted," if minor changes or additions are made but resubmittal is not considered necessary. All but four copies of the submitted data will be returned and all copies will bear the corrective marks.
- (c) "Resubmit," if the changes requested are extensive or if retransmittal of the submittal to another Contractor is required. In this case, the Contractor shall resubmit the items after correction, and the same number of copies shall be included in the resubmittal as in the first submittal. One copy of the first submittal will be retained by the Engineer and two copies will be returned to the Contractor.
- (d) "Rejected," if it is considered that the data submitted cannot, with reasonable revision, meet the requirements of the Contract Drawings and Specifications.

#### GP-14.06. RESUBMITTALS

Any changes, other than those indicated as requested, made in drawings or other data shall be specifically brought to the attention of the Engineer upon resubmittal. Changes or additions shall not be made in, or to, "Reviewed" data without specific notice to the Engineer.

If, after reasonable correction and resubmittal of the shop drawings for an item of equipment, acceptance is not given, the Contractor shall submit the name of another manufacturer or vendor to supply the item required in accordance with GP-14.02. Should progress of the Work be delayed by the changing of the manufacturer or vendor, such a cause will not be considered an extenuating circumstance beyond the control of the Contractor, and charges for delay if otherwise applicable, will be levied.

#### GP-14.07. SAMPLES

Samples shall be submitted to the Engineer as required on the latest revised list determined from Section GP-14.01. The samples shall be properly identified by tags and shall be submitted sufficiently in advance of the time when they are to be incorporated into the Work, so that rejections thereof will not cause delay. A letter of transmittal from the Contractor requesting review shall accompany such samples.

The procedures set forth in Section GP-14.05 and GP-14.06 above for shop drawings shall be used for processing samples.

## GENERAL PROVISIONS - SECTION 15A

## TEMPORARY SERVICES (SINGLE CONTRACT)

## GP-15A.01. TEMPORARY HEAT

It is the obligation and responsibility of the Contractor to provide and maintain temporary heat by means of portable electric, oil or gas-fired units. The Contractor shall provide and pay for all fuel and electricity used in the temporary facilities and shall provide proper smoke pipes or other means to prevent smoke or smudge from marking up walls, ceilings, or other parts of equipment.

Should the temporary heating facilities require electric service, the Contractor shall provide the necessary wiring and power.

After their installation and testing of the permanent heating system facilities, they may be used for temporary heating purposes with concurrence of the Owner. Any temporary wiring or piping required and all power consumed shall be the obligation and responsibility of the Contractor.

If the Contractor elects to utilize the permanent heating facilities included in the Project for temporary heat, it shall be the responsibility of the Contractor to guarantee the heating system for a period of one year following final acceptance of the Contract or Beneficial Occupancy of the Contract, whichever comes first, the Contract. It shall be the responsibility of the Contractor to replace all filters before the final acceptance of the Contract.

It shall be the responsibility of the Contractor to the Owner to repair any damage to heating and ventilating equipment suffered as the result of use by the General Contractor.

After the buildings are enclosed excepting windows, doors and similar apertures, temporary enclosures for all apertures shall be provided and temperatures in the entire building shall be continuously maintained at not less than 40 degrees Fahrenheit unless specific permission is granted in writing by the Engineer. The Contractor shall install on each floor, near the center of the building, a suitable, securely fastened, and properly protected thermometer.

The Owner will supply all heat after final acceptance of the Contract or upon Beneficial Occupancy of a structure by the Owner.

## GP-15A.02. TEMPORARY ELECTRIC LIGHT AND POWER

It is the obligation and responsibility of the Contractor to provide and maintain temporary facilities for furnishing light and power necessary for operations under the Contract, and to make all necessary arrangements therefor, including all required connections, ordering the meter, and paying all fees and inspection charges.

The General Contractor shall make the temporary light and power facilities available to any and all subcontractors, for their use in connection with their Contracts, and may charge each subcontractor for such service an amount not to exceed a fraction of the cost of the services, as billed by the utility, proportional to the value of the Project. Removal of temporary facilities shall be by the Contractor. The installation and meters shall remain until need for same has ceased or until completion of the Contract.

## GP-15A.03. POWER, FUEL AND WATER FOR TESTING

The permanent electrical service, or any part thereof, shall not be connected until the tests on wiring and grounding systems have been successfully completed and test data reviewed by the Engineer.

Where tests on equipment require electric power for testing, such power shall be supplied through the permanent electrical service and through the permanent electrical distribution and control equipment. All power for testing will be provided by the Owner. The use by the Owner of the permanent electrical service, electrical distribution system, and/or control equipment for the purpose of testing shall not constitute acceptance of the Work.

Where tests are specified on fuel-burning equipment, or where tests are specified on other equipment, and require simultaneous operation of the fuel burning equipment, all fuel for such tests will be provided by the Owner.

Unless otherwise specified, water of acceptable quality for testing shall be furnished by the Contractor.

GP-15A.04. TEMPORARY WATER FACILITIES

Where the public water supply is available and under control of the Owner, water will be furnished to Contractor. Such water supply shall be subject at all times to the control and supervision of the superintendent or manager of the water utility, and at a cost determined by the schedule of charges on a file at the office of the utility. Prior to making use of any municipal water, permission in writing to use the water for any particular purpose shall be obtained from the superintendent or manager. The cost, if any, of connection to the water supply shall be paid by the Contractor.

Where the public water supply is owned or controlled by a private company, corporation or individual or municipality other than the Owner, the Contractor shall make such arrangements at its cost for service with the owners thereof as he requires.

The General Contractor shall make the temporary water service available to all subcontractors, for their reasonable use in connection with their Contracts. Removal of temporary facilities shall be the responsibility of the Contractor. The installation and meters shall remain until need for same by has ceased or until completion of the Contract. Each Contractor shall provide its own services after completion of the Contract.

## SPECIAL PROVISIONS

### 1. LINES, GRADES AND ELEVATIONS

- A. Control lines and elevations will be set up by the Contractor. A suitable number of bench marks shall be established adjacent to the work by the Contractor.
- B. The Contractor shall establish bench marks and develop and make all detailed surveys needed for construction.
- C. The Contractor shall set and maintain all necessary intermediate points, lines, grades, and elevations, offset stakes, and other such items at his own expense.
- D. The Contractor shall furnish copies, to the Owner in advance of construction, of grade letters and cut sheets prepared by the Contractor. The accuracy of the Contractor's survey and other required data is the sole responsibility of the Contractor, and the furnishing of data to the Owner does not constitute a transferral of responsibility for checking.

### 2. WORK SCHEDULE

- A. The work schedule shall be in the form of a bar graph prepared by the Contractor and submitted to the Owner.

### 3. PRE-CONSTRUCTION MEETING

- A. Prior to the start of construction a general information meeting shall be held with the Owner, Contractor and the NYSDEC. The meeting shall cover the general features of the project and the various requirements in the Contract.

### 4. PROGRESS AND COORDINATION MEETINGS

- A. Progress and coordination meetings will be held as directed by the Owner, with the Contractor's supervisory representatives, with decision-making authority, in attendance.

### 5. EMERGENCY CALLS

- A. The Contractor shall provide the Owner with the phone numbers of at least three (3) responsible persons, to be used during non-working hours and weekends, who shall be in a position to dispatch men and equipment to the project in the event of an emergency.

### 6. CLEARING AND DISPOSAL

- A. Clearing and disposal of refuse, debris and spoil from the work site by removal shall be done in accordance with local regulations. Impoundment material encountered shall be disposed of on-site and under the asphalt cover as directed by the Owner's Representative.

7. UTILITIES

- A. Special precautions shall be observed not to interfere with or cause damage to any existing utilities. The Contractor shall notify the proper utility companies at least seventy-two (72) hours before construction is started adjacent to such utilities. Proof of such notification shall be filed with the Owner's Representative. Failure to provide such proof shall be cause for an automatic cessation of the work. The utilities shall be protected in the manner prescribed by the utility company, or the Owner's Representative.

8. SPECIAL CONSTRUCTION REQUIREMENTS

- A. The Contractor shall visit the site before beginning work to become fully familiar with existing conditions. Any special construction requirements in excess of those specified in the attached specifications or on the Construction Drawings shall be the responsibility of the Contractor and no additional payment will be made to him because of lack of knowledge of such conditions. It should be understood that the party or parties inspecting the site must assume all risks and liabilities.

9. RECORD DRAWINGS

- A. The Contractor shall provide a complete set of mylar reproducible record drawings and AutoCad electronic files with the as-built information noted 30 days following the completion of the contract, to the Owner. The Record Drawings shall be representative of all changes made during the construction process.

10. EXISTING BUSINESS

- A. The Contractor shall take all precautionary measures to adequately protect all persons from accidents or injury and property from damage or loss, protect and continuously maintain safe pedestrian and vehicular traffic on public, private and Owner's property. All protective structures and materials shall be in accordance with applicable provisions of Federal, State and Municipal Safety Laws and Building codes.

11. ENVIRONMENTAL PROTECTION/EROSION CONTROL

- A. In order to prevent and to provide the abatement and control of any sediment transport and storm water discharge arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, they shall comply with all applicable federal, state, and local laws/regulations.
- B. Erosion as a result of surface drainage from cuts and fills within the construction limits, whether or not completed, and from staging, stockpile, borrow and waste disposal areas, shall be held in suitable sedimentation basins/traps or shall be graded to control erosion. Temporary erosion and sediment control measures including but not limited to berms, dikes, drains, soil stabilization matting, diversion channels, baled hay or straw, silt fences, and sedimentation basins, shall be provided and maintained as required to meet the New York guidelines for sediment and erosion control.



12. DUST CONTROL

- A. Attached is a copy of the NYSDEC TAGM 4031- "Fugitive Dust Suppression and Particulate Monitoring at Inactive Hazardous Waste Sites". The Contractor shall meet the requirements of the TAGM, as appropriate.

13. NEW YORK STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS

- A. Except as modified herein, Sections 200 through 700 of the latest edition of the Standard Specifications, Construction and Materials issued by the New York State Department of Transportation (NYSDOT), Office of Engineering, including all revisions and addenda issued by NYSDOT prior to the date the notice to bidders is advertised, hereinafter referred to as the NYSDOT Standard Specifications, shall govern the work to be done where referred to on the plans and in the specifications. If a conflict exists between the NYSDOT Standard Specifications and these Contract Documents, the Contract Documents shall govern.
- B. Any reference to NYSDOT Standard Specifications is limited in scope to technical engineering and construction work, materials, details, procedures, etc. All references to the State or the NYSDOT or administrative officers or employees thereof are null and void with respect to legal or contractual responsibilities.
- C. For clarification, where the State of New York or the NYSDOT or administrative officers or employees thereof are named in the Standard Specifications, such references shall be taken to mean either the Engineer or Owner as defined by the Contract, each with separate and distinct responsibilities described or reasonably implied by the Contract.
- D. The Contractor is advised that the method of measurement and basis of payment for individual NYSDOT item numbers does not necessarily reflect the Owner's method of measurements and/or basis of payment.

14. MATERIALS INSPECTION

- A. The Owner and the Owner's Representative have the right to review and approve materials for the construction of the facilities before and after delivery to the project site and prior to construction. The referenced parties have the right to inspect the work in progress, on-site at any time.

15. COORDINATION WITH OTHER CONTRACTORS

- A. There may be other Contractors on-site during the construction of this contract. It shall be the Contractor's responsibility to coordinate with all other Contractors to ensure the completion of this Contract within the time limits specified by the Owner. The Owner is not responsible for any delays in this contract due to the actions of the other Contractors working on the project site.

16. PERMITS

- A. The Contractor is required to obtain at this own expense all necessary permits, licenses and approvals required by the law or any municipal ordinance.

17. WORKING LIMITS

- A. The Contractor must stay within the limits of the property, unless directed otherwise by the Owner.

18. WORK WITHIN HIGHWAY LIMITS

- A. Vehicular and pedestrian traffic shall be maintained at all times during construction.

19. HEALTH AND SAFETY

- A. The Contractor shall comply with all pertinent safety and health regulations including but not limited to the Department of Labor safety and health regulations for construction promulgated under the Occupational Safety and Health Act of 1970 ( PL-596) and under Section 107 of the Contract Work Hours and Safety Standard Act (PL91-54), 20CFR 1910 and 29CFR 1926. The Contractor shall be fully responsible for seeing that all pertinent safety and health regulations are adhered to.
- B. The Contractor must submit a health and safety plan. The plan will be subject to NYSDEC review and approval prior to the commencement of construction. It is the responsibility of the Contractor to verify that this plan meets or exceeds all the standards required to protect individuals that may be working on-site.

20. PROJECT LABOR

- A. Labor for the project may consist of non-union personnel who have 40-hour OSHA HAZWOPER-trained individuals.

21. NON-DISCLOSURE

- A. The Contractor shall agree that any and all information, written or otherwise, obtained as a result of this contract shall not be disclosed to any persons or parties, without the prior written consent of the Owner.


\* \* \* \* \*

New York State Department of Environmental Conservation

MEMORANDUM

TO: Regional Hazardous Waste Remediation Engrs., Bur. Directors & Section Chiefs  
FROM: Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation  
SUBJECT: DIVISION TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM--FUGITIVE DUST  
DATE: SUPPRESSION AND PARTICULATE MONITORING PROGRAM AT INACTIVE HAZARDOUS WASTE SITES

OCT 27 1989



1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2. Background

Fugitive dust is particulate matter--a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets or solids, over a wide range of sizes--which becomes airborne and contributes to air quality as a nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter ( $PM_{10}$ ); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects,  $PM_{10}$  is considered conservative for the primary standard--that requisite to protect public health with an adequate margin of safety. The primary standards are  $150 \mu g/m^3$  over a 24-hour averaging time and  $50 \mu g/m^3$  over an annual averaging time. Both of these standards are to be averaged arithmetically.

There exists real-time monitoring equipment available to measure  $PM_{10}$  and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

### 3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

- (1) Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
- (2) Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Such activities shall also include the excavation, grading, or placement of clean fill, and control measures therefore should be considered.
- (3) Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns ( $PM_{10}$ ) with the following minimum performance standards:

Object to be measured: Dusts, Mists, Aerosols

Size range: <0.1 to 10  $\mu$ m

Sensitivity: 0.001  $mg/m^3$

Range: 0.001 to 10  $mg/m^3$

Overall Accuracy: +10% as compared to gravimetric analysis of stearic acid or reference dust

Operating Conditions:

Temperature: 0 to 40°C

Humidity: 10 to 99% Relative Humidity

Power: Battery operated with a minimum capacity of eight hours continuous operation

Automatic alarms are suggested.

Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by MDA Scientific, Inc. or similar is appropriate.

- (4) In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity operating the equipment to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

- (5) The action level will be established at  $150 \text{ ug/m}^3$  over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of  $150 \text{ ug/m}^3$ , the upwind background level must be measured immediately using the same portable monitor. If the working site particulate measurement is greater than  $100 \text{ ug/m}^3$  above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of  $150 \text{ ug/m}^3$  be exceeded, the Division of Air Resources must be notified in writing within five working days; the notification shall include a description of the control measures implemented to prevent further exceedences.
- (6) It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure  $\text{PM}_{10}$  at or above the action level. Since this situation has the potential to migrate contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.
- (7) The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
1. Applying water on haul roads.
  2. Wetting equipment and excavation faces.
  3. Spraying water on buckets during excavation and dumping.
  4. Hauling materials in properly tarped or watertight containers.
  5. Restricting vehicle speeds to 10 mph.
  6. Covering excavated areas and material after excavation activity ceases.
  7. Reducing the excavation size and/or number of excavations.

Experience has shown that utilizing the above-mentioned dust suppression techniques, within reason as not to create excess water which would result in unacceptable wet conditions, the chance of exceeding the  $150 \text{ ug/m}^3$  action level at hazardous waste site remediations is remote. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

- (8) If the dust suppression techniques being utilized at the site do not lower particulates to an acceptable level (that is, below 150 ug/m<sup>3</sup> and no visible dust), work must be suspended until appropriate corrective measures are approved to remedy the situation. Also, the evaluation of weather conditions will be necessary for proper fugitive dust control--when extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

cc: E. Sullivan  
D. Markell  
A. DeBarbieri  
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R. Tramontano  
E. McCandless  
A. Fossa  
J. Kelleher  
J. Colquhoun  
M. Keenan  
D. Ritter  
Regional Directors  
Regional Engineers  
RSHWE  
Reg. Citizen Participation Specs.

SECTION 02080

DECONTAMINATION OF EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Labor, materials, and equipment necessary for the decontamination of all heavy equipment, driving equipment, and miscellaneous equipment.
- B. All vehicles and equipment which may come in contact with former impoundment material (impacted material) during the construction activities shall be properly decontaminated before leaving the site.

1.2 DECONTAMINATION PAD

- A. The Contractor shall provide an equipment decontamination pad ("Decon pad"). The decon pad shall be large enough such that the largest expected vehicle will fit completely within the pad with no less than 5 feet of clearance on either side and at least 8 feet of clearance at each end.
- B. The decon pad shall be designed and constructed such that it collects and contains all wash waters, sludges, mud and sediment generated during the equipment decontamination activities, and that it will prevent these materials from migrating into the surrounding soil. A collection sump of adequate size and design to collect all fluids shall be provided as an integral part of the decon pad.

1.3 DECONTAMINATION

- A. All construction equipment shall be decontaminated prior to its leaving the site. This shall include but not be limited to truck tires, tracks and undercarriage, interior, and any portions of the equipment that could possibly contain impacted material. The Contractor shall take the responsibility of verifying that no impacted material will leave the site. No adjustments shall be made to the Contract for the decontamination of any equipment.
- B. Supply all decontamination equipment, facilities, and supplies.
- C. Equipment shall be cleaned and decontaminated prior to use onsite, and prior to leaving the site.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide all equipment necessary for equipment decontamination, such as soaps, a mobile hot-water high-pressure washer, buckets and brushes, etc.
- B. Contractor shall also be responsible for providing an adequate supply of water suitable for use in equipment decontamination.

- C. Decon wastewater, sludges, mud and sediment generated during the decon activities shall be placed within the limits of the asphalt cover.

PART 3 EXECUTION

3.1 GENERAL

- A. Prior to mobilization, the Contractor shall review the equipment decontamination procedures with the Engineer.

3.2 EQUIPMENT DECONTAMINATION

- A. Decontamination of heavy equipment shall include the following:
  - 1. Scrape and remove as much of the earthen materials from the equipment as possible, before moving it from the impacted material area where it was in use.
  - 2. Wrap in plastic sheeting all potentially impacted components and move the piece of equipment to the decon pad.
  - 3. Hose down equipment with a potable high-pressure washer, making sure that all of the decon wastewater generated remains within the decon pad and is collected in the decon pad collection sump.
- B. At a minimum, all heavy equipment tires or support vehicles shall be cleaned with the pressure washer prior to traveling on any public roads.

\* \* \* \* \*



## SECTION 02221

### EARTHWORK

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. This Section includes excavation and backfilling including the loosening, removing, refilling, transporting, storage and disposal of all materials classified as "earth" necessary to be removed or relocated on site for the construction and completion of all work under the Contract, and as shown on the Contract Drawings, specified or directed.

##### 1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards, and specifications, except where more stringent requirements have been specified herein:
1. American Society for Testing and Materials (ASTM)
    - a. A328 Specification for Steel Sheet Piling
    - b. D698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>) (600 kN-m/m<sup>3</sup>)
    - c. D1556 Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
    - d. D1760 Specification for Pressure Treatment of Timber Products
    - e. D2922 Test Methods for Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

##### 1.3 DEFINITIONS

- A. Excavation (or Trenching)
1. Grubbing, stripping, removing, storing and rehandling of all materials of every name and nature necessary to be removed for all purposes incidental to the construction and completion of all the work under construction.
  2. All diking, ditching, fluming, cofferdamming, pumping, bailing, draining, well pointing, or otherwise disposing of water.
  3. The removing and disposing of all surplus materials from the excavations.
  4. The maintenance, accommodation and protection of travel and the temporary paving of highways, roads and driveways.

5. The supporting and protecting of all tracks, rails, buildings, curbs, sidewalks, pavements, overhead wires, poles, trees, vines, shrubbery, pipes, sewers, conduits or other structures or property in the vicinity of the work, whether over- or underground or which appear within or adjacent to the excavations, and the restoration of the same in case of settlement or other injury.

6. All temporary bridging and fencing and the removing of same.

B. Earth

1. All materials such as sand, gravel, clay, loam, ashes, cinders, pavements, muck, roots or pieces of timber, soft or disintegrated rock, not requiring blasting, barring, or wedging from their original beds, and specifically excluding all ledge or bedrock and individual boulders or masonry larger than one-half cubic yard in volume.

C. Backfill

1. The refilling of excavation and trenches to the line of filling indicated on the Contract Drawings or as directed using materials suitable for refilling of excavations and trenches; and the compacting of all materials used in filling or refilling by rolling, ramming, watering, puddling, etc., as may be required.

D. Spoil

1. Surplus excavated materials not required or not suitable for backfills or embankments.

E. Embankments

1. Fills constructed above the original surface of the ground or such other elevation as specified or directed.

F. Excavation Below Subgrade

1. Excavation below the limiting subgrades of structures or pipelines.

2. Where materials encountered at the limiting subgrades are not suitable for proper support of structures, pipelines or embankments, the Contractor shall excavate to such new lines and grades as required.

1.4 SUBMITTALS

A. Those submittals identified in the Special Provisions.

1.5 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS

A. American Society for Testing and Materials (ASTM)

## PART 2 PRODUCTS

### 2.1 Not Used

## PART 3 EXECUTION

### 3.1 UNAUTHORIZED EXCAVATION

- A. Whenever excavations are carried beyond or below the lines and grades shown on the Contract Drawings, or as given or directed by the Owner's Representative, all such excavated space shall be refilled with special granular materials, concrete or other materials as the Owner's Representative may direct. All refilling of unauthorized excavations shall be at the Contractor's expense.
- B. All material which slides, falls or caves into the established limits of excavations due to any cause whatsoever, shall be removed and disposed of at the Contractor's expense and no extra compensation will be paid the Contractor for any materials ordered for refilling the void areas left by the slide, fall or cave-in.

### 3.2 REMOVAL OF WATER

#### A. General

- 1. The Contractor shall control grading such that the ground is pitched to prevent water from running to excavated areas or damaging other structures.
- 2. The Contractor shall at all times provide and maintain proper and satisfactory means and devices including, but not limited to, pumps, sumps, trenches, wells, or well points, for the removal of all water entering the excavations, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the prosecution of the work or the proper placing of pipes, structures, or other work.
- 3. Water pumped or drained from excavations, or any sewers, drains or water courses encountered in the work, shall be disposed of in a suitable manner without injury to adjacent property, the work under construction, or to pavements, roads, drives, and water courses. No water shall be discharged to sanitary sewers unless directed by Owner's Representative and approved by local regulator agency. Sanitary sewage shall be pumped to sanitary sewers.
- 4. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the Contractor.

#### B. Work Included

- 1. The construction and removal of cofferdams, sheeting and bracing, and the furnishing of materials and labor necessary therefor.
- 2. The excavation and maintenance of ditches.

3. The furnishing and operation of pumps and appliances needed to maintain thorough drainage of the work in a satisfactory manner.

### 3.3 STORAGE OF MATERIALS

#### A. Sod

1. Any sod cut during excavation shall be removed and stored during construction so as to preserve the grass growth. Sod damaged while in storage shall be replaced in like kind at the sole expense of the Contractor.

#### B. Topsoil

1. Topsoil suitable for final grading shall be removed and stored separately from other excavated material.

#### C. Excavated Materials

1. All excavated materials shall be stored in locations so as not to endanger the work, and so that easy access may be had at all times to all parts of the excavation. Stored materials shall be kept neatly piled and trimmed, so as to cause as little inconvenience as possible to public travel or to adjoining property holders.
2. Special precautions must be taken to permit access at all times to fire hydrants, fire alarm boxes, police and fire department driveways, and other points where access may involve the safety and welfare of the general public.

### 3.4 DISPOSAL OF MATERIALS

#### A. Spoil Material

1. All spoil materials shall be disposed of as required by the local, state or federal regulations pertaining to the area.
2. The surface of all spoil areas shall be graded and dressed and no unsightly mounds or heaps shall be left on completion of the work.

### 3.5 BACKFILLING

#### A. General

1. All excavations shall be backfilled to the original surface of the ground or to such other grades as may be shown on the Contract Drawings, specified or directed.
2. Backfilling shall be done with suitable excavated materials which can be satisfactorily compacted during refilling of the excavation. In the event the excavated materials are not suitable, NYSDOT Item 203.07 - Select Granular Fill as specified or ordered by the Owner's Representative shall be used for backfilling.

3. Any settlement occurring in the backfilled excavations shall be refilled and compacted.

B. Unsuitable Materials

1. The Contractor is responsible for removing all material that is unsuitable for backfilling from the work area, as determined by the Owner's Representative.
2. Stones, pieces of rock or pieces of pavement greater than 1 cubic foot in volume or greater than 1.5 feet in any single dimension shall not be used in any portion of the backfill/embankment.
3. All stones, pieces of rock or pavement shall be distributed through the backfill and alternated with earth backfill in such a manner that all interstices between them shall be filled with earth.
4. Frozen earth shall not be used for backfilling.

C. Compaction and Density Control

1. The compaction shall be as specified for the type of earthwork, i.e., structural, trenching or embankment.
  - a. The compaction specified shall be the percent of maximum dry density.
  - b. The compaction equipment shall be suitable for the material encountered.
2. Where required, to assure adequate compaction, in-place density test shall at the expense of the Contractor be made by an approved testing laboratory.
  - a. The moisture-density relationship of the backfill material shall be determined by ASTM D698, Method D.
    - 1) Compaction curves for the full range of materials used shall be developed.
  - b. In-place density shall be determined by the methods of ASTM D1556 or ASTM D2922 and shall be expressed as a percentage of maximum dry density.
3. Where required, to obtain the optimum moisture content, the Contractor shall add, at his expense, sufficient water during compaction to assure the specified maximum density of the backfill. If, due to rain or other causes, the material exceeds the optimum moisture content, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.
4. The Contractor shall be responsible for all damage or injury done to pipes, structures, property or persons due to improper placing or compacting of backfill.

3.6 OTHER REQUIREMENTS

A. Drainage

1. All material deposited in roadway ditches or other water courses shall be removed immediately after backfilling is completed and the section, grades and contours of such ditches or water courses restored to their original condition, in order that surface drainage will be obstructed no longer than necessary.

B. Hauling Material on Streets

1. When it is necessary to haul material over the streets or pavements, the Contractor shall provide suitable tight vehicles so as to prevent deposits on the streets or pavements. In all cases where any materials are dropped from the vehicles, the Contractor shall clean up the same as often as required to keep the crosswalks, streets and pavements clean and free from dirt, mud, stone and other hauled material.

C. Dust Control

1. It shall be the sole responsibility of the Contractor to control the dust created by any and all of his operations to such a degree that it will not endanger the safety and welfare of the general public.
2. Calcium chloride and petroleum products shall not to be used for dust control.
3. The Contractor shall have a water truck or other acceptable means of controlling dust available at all times.

D. Test Pits

1. For the purpose of obtaining detail locations of underground obstructions or limits of impoundment materials to be covered, the Contractor shall make excavations in advance of the work.

\* \* \* \* \*

SECTION 02223

EMBANKMENT

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes construction of earth embankments constructed to established lines and grades at the locations shown on the Contract Drawings and as directed by the Owner's Representative.

1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards and specifications, except where more stringent requirements have been specified herein:

1. American Society for Testing and Materials (ASTM)
  - a. D698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>) (600 kN-m/m<sup>3</sup>)
  - b. D1556 Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
  - c. D2922 Test Methods for Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

1.3 SUBMITTALS

- A. In addition to those submittals identified in the Special Provisions, the following items shall be submitted:
1. Proposed testing laboratory
  2. Source of off-site materials, if required
  3. Compaction curves for all materials to be used
  4. Results of all testing.

1.4 TESTING

- A. All testing, including field and laboratory services, shall be at the Contractor's expense without additional compensation, except where separate payment is specified.

PART 2 PRODUCTS

2.1 GENERAL

- A. Embankment material shall be free from frost, stumps, trees, roots, sods, muck, marl, vegetable matter or other unsuitable material and shall be suitable for compaction as

described in the following provisions. Where embankments are to be placed underwater only acceptable granular materials shall be used.

- B. Embankment materials shall be obtained from acceptable soils on the site, or approved off-site sources.

### PART 3 EXECUTION

#### 3.1 PREPARATION OF SUBGRADE

- A. The entire surface to be covered with embankment shall be grubbed and stripped of all trees, grass, vegetation, topsoil, rubbish, or other unsuitable materials before any embankment material is placed.
  - 1. Topsoil shall be stockpiled or placed as designated by the Owner's Representative.
  - 2. Other grubbed and stripped materials shall be removed as spoil.
- B. Stripped or excavated surfaces on which embankments are to be placed shall be compacted to the required density of the embankment prior to any fill being placed.

#### 3.2 PLACEMENT AND COMPACTION

- A. Materials shall be placed in lifts not greater than 8 inches of thickness unless greater thicknesses are allowed by the Owner's Representative upon demonstration by the Contractor that the materials and compaction efforts are adequate to obtain the required density.
- B. Material shall be placed in a uniform lift and thoroughly compacted by compaction equipment suitable for the material encountered to obtain the required density prior to the placement of succeeding lift.
  - 1. Each lift shall be tested for proper compaction before successive lifts are applied.
- C. Stones shall not exceed 6 inches in greatest dimension and shall be well distributed throughout the soil mass. Stone shall be defined as rock material either in its natural or broken state.
- D. Stones not well mixed with soil material shall not be used in earth embankments unless the stone material is sufficiently deteriorated or friable so as to be compactible to achieve minimum voids and required density.
- E. If the required density is not obtained, compaction of the embankment shall continue until specified densities are obtained, before any additional embankment is placed. Improperly compacted embankment shall be removed.
- F. Where required, the Contractor shall, at his expense, add sufficient water during the compaction effort to assure proper density. If, due to rain or other causes, the material exceeds the optimum moisture content for satisfactory compaction, it shall be allowed to



dry, assisted by discing or harrowing, if necessary, before compaction or filling effort is resumed.

- G. The Contractor shall be required to seal the working surface at the close of each day's operation and when practical prior to rainfall. Sealing shall be accomplished by rolling the surface with a smooth wheel steel roller.
- H. Compaction or consolidation achieved by traveling trucks, machines and other equipment will not be accepted unless such procedures are approved by the Owner's Representative and proper compaction density is achieved.
- I. Hand tamping shall be required around buried utility lines or other subsurface features that could be damaged by mechanical compaction equipment.
- J. Embankments shall be constructed to such elevations as to make allowance for any settlement that may occur. Prior to the construction of any structure, roadway or other ground feature and before final acceptance of the contract, the Contractor shall regrade the embankments to conform to the established lines and grades.

### 3.3 DENSITY CONTROL

- A. Embankments shall be compacted to 95% of maximum dry density as determined by the density tests designated in ASTM D 698.
  - 1. Compaction curves for the full range of soil materials to be used in the embankment shall be developed by an approved independent testing laboratory.
- B. Field control samples shall be taken and tested by the testing laboratory as required to assure that adequate compaction of the embankment material is being achieved.
- C. A minimum of one (1) in-place density test shall be made for every 10,000 square feet of compacted area per lift.
  - 1. In-place density of soils shall be determined by the methods described in ASTM D1556 or ASTM D2922 and expressed as a percentage of the maximum dry density.
- D. Additional testing may be required by the Owner's Representative.
- E. All testing shall be performed at the Contractor's expense at no additional cost to the Owner.

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SECTION 02229  
ROCK REMOVAL

PART 1 GENERAL

1.1 SUMMARY

- A. In the event rock is encountered this Section includes removal to the widths and depths shown on the Contract Drawings or as directed by the Owner's Representative, including the loosening, removing, transporting, storing and disposal of all materials requiring blasting, barring, or wedging for removal from their original beds, and backfill of rock excavations with acceptable materials.

1.2 SUBMITTALS

- A. In addition to those submittals identified in the Special Provisions, the following items shall be submitted:
  - 1. Before any blasting operations begin the Contractor shall obtain all permits and licenses required.

1.3 DEFINITIONS

- A. Rock
  - 1. All pieces of ledge or bedrock, boulders or masonry larger than one-half cubic yard in volume.
  - 2. Any material requiring blasting, barring, or wedging for removal from its original bed.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 BLASTING

- A. General
  - 1. Handling of explosives and blasting shall be done only by experienced persons.
  - 2. Handling and blasting shall be in accordance with all Federal, State and local laws, rules and regulations relating to the possession, handling, storage and transportation and use of explosives.
  - 3. All blasts in open cut shall be properly covered and protected with approved blasting mats.

4. Charges shall be of such size that the excavation will not be unduly large and shall be so arranged and timed that adjacent rock, upon or against which pipelines or structures are to be built, will not be shattered.
5. Blasting will not be permitted within 25 feet of pipelines or structures.
6. All existing pipes or structures exposed during excavation shall be adequately protected from damage before proceeding with the blasting.

B. Repair of Damages Due to Blasting

1. Any injury or damage to the work or to existing pipes or structures shall be repaired or rebuilt by the Contractor at his expense.
2. Whenever blasting may damage adjacent rock, pipes or structures, blasting shall be discontinued and the rock removed by drilling, barring, wedging or other methods.

C. Explosives

1. At no time shall an excessive amount of explosives be kept at the site of the work. Such explosives shall be stored, handled and used in conformity with all applicable laws and regulations.
2. Accurate daily records shall be kept showing the amounts of explosives on hand, both at the site and at any storage magazine, the quantities received and issued, and the purpose for which issued.
3. The Contractor shall be responsible for any damage or injury to any persons, property or structures as a result of his handling, storage or use of explosives.

D. Rock Clearance in Trenches

1. Ledge rock, boulders and large stones shall be removed from the sides and bottom of the trench to provide clearance for the specified embedment of each pipe section, joint or appurtenance; but in no instance shall the clearance be less than 6 inches. Additional clearance at the pipe bell or joint shall be provided to allow for the proper make-up of the joint.
2. At the transition from an earth bottom to a rock bottom the minimum bottom clearance shall be 12 inches for a distance of not less than 5 feet.

E. Rock Clearance at Structures

1. Concrete for structures shall be placed directly on the rock and the excavation shall be only to the elevations and grades shown on the Contract Drawings.

3.2 EXCAVATION AND BACKFILL

- A. Rock removal and backfilling shall be performed in accordance with the applicable provisions of the Section entitled "Earthwork".

- B. The rock excavated which cannot be incorporated into the backfill material, as specified, shall be disposed of as spoil and shall be replaced with the quantity of acceptable material required for backfilling.

\* \* \* \* \*

SECTION 02503

RESTORATION OF SURFACES

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes restoration and maintenance of all types of surfaces, sidewalks, curbs, gutters, culverts and other features disturbed, damaged or destroyed during the performance of the work under or as a result of the operations of the Contract.
- B. The quality of materials and the performance of work used in the restoration shall produce a surface or feature equal to the condition of each before the work began.

1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
  - 1. American Society for Testing and Materials (ASTM)
    - a. D698 - Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>) (600 kN-m/m<sup>3</sup>)
    - b. D1557 - Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>) (2700 kN-m/m<sup>3</sup>)

1.3 SUBMITTALS

- A. In addition to those submittals identified in the Special Provisions, the following items shall be submitted:
  - 1. A schedule of restoration operations. After an accepted schedule has been agreed upon it shall be adhered to unless otherwise revised with the approval of the Owner's Representative.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 GENERAL

- A. In general, permanent restoration of paved surfaces will not be permitted until one months' time has elapsed after excavations have been completely backfilled as specified. A greater length of time, but not more than nine months may be allowed to elapse before

permanent restoration of street surfaces is undertaken, if additional time is required for shrinkage and settlement of the backfill.

- B. The replacement of surfaces at any time, as scheduled or as directed, shall not relieve the Contractor of responsibility to repair damages by settlement or other failures.

### 3.2 TEMPORARY PAVEMENT

- A. Immediately upon completion of refilling of the trench or excavation, the Contractor shall place a temporary pavement over all disturbed areas of streets, driveways, sidewalks, and other traveled places where the original surface has been disturbed as a result of his operations.
- B. Unless otherwise specified or directed the temporary pavement shall consist of compacted run-of-crusher limestone to such a depth as required to withstand the traffic to which it will be subjected.
- C. Where concrete pavements are removed, the temporary pavement shall be surfaced with cold patch. The surface of the temporary pavement shall conform to the slope and grade of the area being restored.
- D. For dust prevention, the Contractor shall treat all surfaces, not covered with cold patch, as frequently as may be required.
- E. The temporary pavement shall be maintained by the Contractor in a safe and satisfactory condition until such time as the permanent paving is completed. The Contractor shall immediately remove and restore all unsatisfactory pavement disturbed by his operations.

### 3.3 PERMANENT PAVEMENT REPLACEMENT

- A. The permanent and final repaving of all streets, driveways and similar surfaces where pavement has been removed, disturbed, settled or damaged by or as a result of performance of the Contract shall be repaired and replaced by the Contractor, by a new and similar pavement.
  - 1. The top surface shall conform with the grade of existing adjacent pavement and the entire replacement shall meet the current specifications of the local community for the particular types of pavement.
  - 2. Where the local community has no specification for the type of pavement, the work shall be done in conformity with the New York State Department of Transportation Standard which conforms the closest to the type of surfacing being replaced, as determined by the Owner's Representative.

### 3.4 PREPARATION FOR PERMANENT PAVEMENT

- A. When scheduled and within the time specified, the temporary pavement shall be removed and a base prepared, at the depth required by the local community or regulatory agency, to receive the permanent pavement.

1. The base shall be brought to the required grade and cross-section and thoroughly compacted before placing the permanent pavement.
  2. Any base material which has become unstable for any reason shall be removed and replaced with compacted base materials.
- B. Prior to placing the permanent pavement all service boxes, manhole frames and covers and similar structures within the area shall be adjusted to the established grade and cross-section.
- C. The edges of existing asphalt pavement shall be cut a minimum of 1 foot beyond the excavation or disturbed base whichever is greater.
1. All cuts shall be parallel or perpendicular to the centerline of the street.

### 3.5 ASPHALT PAVEMENT

- A. The permanent asphalt pavement replacement for streets, driveways and parking area surfaces shall be replaced with bituminous materials of the same depth and kind as the existing unless otherwise specified.
- B. Prior to placing of any bituminous pavement a sealer shall be applied to the edges of the existing pavement and other features.
- C. The furnishing, handling and compaction of all bituminous materials shall be in accordance with the New York State Department of Transportation Standards.

### 3.6 CONCRETE PAVEMENT AND PAVEMENT BASE

- A. Concrete pavements and concrete bases for asphalt, brick or other pavement surfaces shall be replaced with 4,000 psi concrete, air-entrained.
- B. Paving slabs or concrete bases shall be constructed to extend 1 foot beyond each side of the trench and be supported on undisturbed soil. Where such extension of the pavement will leave less than 2 feet of original pavement slab or base, the repair of the pavement slab or base shall be extended to replace the slab to the original edge of the pavement or base unless otherwise indicated on the Contract Drawings.
- C. Where the edge of the pavement slab or concrete base slab falls within the excavation, the excavation shall be backfilled with NYSDOT Item 203.07 - Select Granular Fill compacted to 95% maximum dry density as determined by ASTM D 1557 up to the base of the concrete.
- D. The new concrete shall be of the same thickness as the slab being replaced and shall contain new reinforcement equal to the old pavement.
1. New concrete shall be placed and cured in accordance with the applicable provisions of the New York State Department of Transportation Standards or regulatory agency.

3.7 STONE OR GRAVEL PAVEMENT

- A. All pavement and other areas surfaced with stone or gravel shall be replaced with material to match the existing surface unless otherwise specified.
  - 1. The depth of the stone or gravel shall be at least equal to the existing.
  - 2. After compaction the surface shall conform to the slope and grade of the area being replaced.

3.8 CONCRETE WALKS, CURBS AND GUTTER REPLACEMENT

- A. Concrete walks, curbs and gutters removed or damaged in connection with or as a result of the construction operations shall be replaced with new construction.
  - 1. The minimum replacement will be a flag or block of sidewalk and 5 feet of curb or gutter.
- B. Walks shall be constructed of 4,000 psi concrete, air-entrained with NYSDOT #1 stone aggregate on a 4-inch base of compacted gravel or stone.
  - 1. The walk shall be not less than 4 inches in thickness or the thickness of the replaced walk where greater than 4 inches, shall have construction joints spaced not more than 25 feet apart, shall have expansion joints spaced not more than 50 feet apart and shall be sloped at right angles to the longitudinal centerline approximately  $\frac{1}{8}$  inch per foot of width.
- C.  $\frac{1}{2}$ -inch expansion joint material shall be placed around all objects within the sidewalk area as well as objects to which the new concrete will abut, such as valve boxes, manhole frames, curbs, buildings and others.
- D. Walks shall be hand-floated and broom-finished, edged and grooved at construction joints and at intermediate intervals matching those intervals of the walk being replaced.
  - 1. The intermediate grooves shall be scored a minimum of  $\frac{1}{4}$  of the depth of the walk.
  - 2. The lengths of blocks formed by the grooving tool, and distances between construction and expansion joints shall be uniform throughout the length of the walk in any one location.
- E. The minimum length of curb or gutter to be left in place or replaced shall be 5 feet. Where a full section is not being replaced, the existing curb or gutter shall be saw cut to provide a true edge.
  - 1. The restored curb or gutter shall be the same shape, thickness and finish as being replaced and shall be built of the same concrete and have construction and expansion joints as stated above for sidewalks.
- F. All concrete shall be placed and cured as specified in the Section entitled "Site Work Miscellaneous Concrete".



3.9 LAWNS AND IMPROVED AREAS

- A. The area to receive topsoil shall be graded to a depth of not less than 4 inches or as specified, below the proposed finished surface.
  - 1. If the depth of existing topsoil prior to construction was greater than 4 inches, topsoil shall be replaced to that depth.
- B. When required to obtain germination, the seeded areas shall be watered in such a manner as to prevent washing out of the seed.
- C. Any washout or damage which occurs shall be regraded and reseeded until a good sod is established.
- D. The Contractor shall maintain the newly seeded areas, including regrading, reseeding, watering and mowing, in good condition.

3.10 OTHER TYPES OF RESTORATION

- A. Trees, shrubs and landscape items damaged or destroyed as a result of the construction operations shall be replaced in like species and size.
  - 1. All planting and care thereof shall meet the standards of the American Association of Nurserymen.
- B. Water courses shall be reshaped to the original grade and cross-section and all debris removed. Where required to prevent erosion, the bottom and sides of the water course shall be protected.
- C. Culverts destroyed or removed as a result of the construction operations shall be replaced in like size and material and shall be replaced at the original location and grade. When there is minor damage to a culvert and with the consent of the Owner's Representative, a repair may be undertaken, if satisfactory results can be obtained.
- D. Should brick pavements be encountered in the work, the restoration shall be as directed by the Owner's Representative.

3.11 MAINTENANCE

- A. The finished products of restoration shall be maintained in an acceptable condition for and during a period of one year following the date of Substantial Completion or other such date as set forth elsewhere in the Contract Documents.

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SECTION 02511

BITUMINOUS CONCRETE PAVEMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes construction of two course bituminous concrete pavement on a prepared base laid to the required grade, thickness and cross-section as shown on the Contract Drawings or as specified in this Section.
- B. The quality of materials and performance of the work shall be in accordance with the Standards of the New York State Department of Transportation (NYSDOT) unless otherwise specified in this Section.

1.2 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards and specifications, except where more stringent requirements have been specified herein:
  - 1. NYSDOT

PART 2 PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

- A. Soil Stabilization Fabric
  - 1. Mirafi 500X (if required or as ordered by Engineer)
  - 2. Or equal
- B. Bituminous Concrete Products
  - 1. The binder course shall be NYSDOT Type 3, Item 403.13
  - 2. The top course shall be NYSDOT Type 7, Item 403.18

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install finished pavement to the grades and cross-sections as shown on the Contract Drawings.
- B. Subgrade
  - 1. The subgrade shall be shaped to line and grade and compacted with self-propelled rollers.

2. All depressions which develop under rolling shall be filled with acceptable material and the area re-rolled.
3. Soft areas shall be removed and filled with acceptable materials and the area re-rolled.
4. Should the subgrade become rutted or displaced prior to the placing of the subbase it shall be reworked to bring to line and grade.

C. Soil Stabilization Fabric, if required

1. The soil stabilization fabric shall be placed on the subgrade prior to the depositing of the subbase.
  - a. The soil stabilization fabric shall be the full width of the subgrade and shall extend up the sides the depth of the subbase.
  - b. The fabric shall be overlapped a minimum of 4 feet at all joints.
  - c. The fabric shall be installed in accordance with the manufacturer's recommendations.

D. Subbase

1. Standard Duty Pavement
  - a. The subbase shall consist of 6 inches of NYSDOT Item 304.03. Each layer shall be compacted by rolling with self-propelled rollers.
2. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement ahead of the roller.
3. After completion of the subbase rolling there shall be no hauling over the subbase other than the delivery of material for the top course.

E. Bituminous Material

1. Standard Duty Pavement
  - a. The bituminous binder course shall be 2 inches compacted depth.
  - b. The bituminous top course shall be 1-inch compacted depth.

3.2 FIELD TESTING

- A The surface tolerance shall not exceed ¼ inch in 10 feet.
- B. There shall be no depressions which will retain standing water.

C. Variations exceeding  $\frac{1}{4}$  inch or depressions shall be satisfactorily corrected.

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SECTION 02981  
TOPSOIL AND SEEDING

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes topsoil, fertilizer, seed, mulch anchorage, and associated work.

1.2 SUBMITTALS

- A. In addition to those submittals identified in the Special Provisions, the following items shall be submitted:
1. The location of source and data for off-site topsoil.
  2. Analysis of the seed.
  3. Should hydroseeder be used, the Contractor shall submit all data including material and application rates.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Topsoil shall be unfrozen friable clayey loam free from clay lumps, stones, roots, sticks, stumps, brush or foreign objects.
- B. Fertilizer shall be a standard quality commercial carrier of available plant food elements. A complete prepared and packaged material containing a minimum of 10 percent nitrogen, 10 percent phosphoric acid and 10 percent potash.
1. Each bag of fertilizer shall bear the manufacturer's guaranteed statement of analysis.
- C. Seed mixtures shall be of commercial stock of the current season's crop and shall be delivered in unopened containers bearing the guaranteed analysis of the mix.
1. All seed shall meet the New York State standards of germination and purity.

D. Seed Mixtures:

<u>Species</u>	<u>Lawn Areas*</u>	<u>Unmaintained* Areas</u>
Kentucky Bluegrass	50	20
Creeping Red Fescue	30	20
Manhattan or Pennfine Ryegrass	20	60

\* % by weight

- E. Mulch shall be stalks of oats, wheat, rye or other approved crops which are free from noxious weeds.

PART 3 EXECUTION

3.1 INSTALLATION

- A. The area to receive topsoil shall be graded to a depth of not less than 4 inches or as specified, below the proposed finished surface. If the depth of topsoil existing prior to construction was greater than 4 inches, the topsoil shall be replaced not less than the greater depth.
1. All debris and inorganic material shall be removed and the surface loosened for a depth of 2 inches prior to the placing of the topsoil.
  2. The topsoil shall not be placed until the subgrade is in suitable condition and shall be free of excessive moisture and frost.
- B. Satisfactory topsoil removed from the excavations shall be placed on the prepared subgrade to the depth required.
1. In the event the topsoil removed during excavation is unsatisfactory or inadequate to obtain the required finish grades, the Contractor shall furnish the required quantity of satisfactory topsoil from approved sources off site.
  2. All topsoil shall be free from stones, roots, sticks and other foreign substances and shall not be placed in a frozen or muddy condition.
  3. The finished surface shall conform to the lines and grades of the area before disturbed or as shown on the Contract Drawings. Any irregularities shall be corrected before the placement of fertilizer and seed.
- C. The fertilizer shall be applied uniformly at the rate of 20 pounds per 1000 square feet.
1. Following the application of the fertilizer and prior to application of the seed, the topsoil shall be scarified to a depth of at least 2 inches with a disc or other suitable method traveling across the slope if possible.

- D. When the topsoil surface has been fine graded, the seed mixture shall be uniformly applied upon the prepared surface with a mechanical spreader at a rate of not less than 5 pounds per 1000 square feet.
  - 1. The seed shall be raked lightly into the surface and rolled with a light hand lawn roller.
  - 2. Seeding and mulching shall not be done during windy weather.
- E. The mulch shall be hand or machine spread to form a continuous blanket over the seed bed, approximately 2 inches uniform thickness at loose measurement. Excessive amounts or bunching of mulch will not be permitted.
  - 1. Mulch shall be anchored by an acceptable method.
  - 2. Unless otherwise specified, mulch shall be left in place and allowed to disintegrate.
  - 3. Any anchorage or mulch that has not disintegrated at time of first mowing, shall be removed. Anchors may be removed or driven flush with ground surface.
- F. Seeded areas shall be watered as often as required to obtain germination and to obtain and maintain a satisfactory sod growth. Watering shall be in such a manner as to prevent washing out of seed.
- G. Hydroseeding may be accepted as an alternative method of applying fertilizer, seed and mulch. The Contractor shall submit all data regarding materials and application rates to the Owner's Representative for review.

### 3.2 MAINTENANCE

- A. All lawn areas shall be mowed by the Contractor before the new grass reaches a height of 4 inches.
  - 1. The Contractor shall maintain the newly seeded areas in good condition until acceptance, including regular mowing to a height of 2 inches.

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FORMER ALCAN ALUMINUM CORPORATION

SITE #8-25-005

PAYMENT ITEMS

SECTION 1 - UNIT PRICE ITEMS

PI-1.01 Description

Under this section, the Contractor shall furnish all labor, equipment and materials, construct and fully complete the work of unit price items, in the quantities, and to the lines, grades and elevations shown or specified, encountered in the work, or ordered by the Engineer.

The principal items of work scheduled herein are included under this section. The work of this section also includes all accessories, appurtenances and other work required to complete this Contract, except those related to the work of these items but specifically included under other payment item sections of this Contract or under other contracts.

PI-1.02 Payment

Payment for the work of unit price items will be made at the Contractor's unit prices stated in the Bid and appropriate to each item included under this section.

PI-1.03 No Payment

No payment will be made under this section for work performed by the Contractor to replace defective work, or for work which is not shown or ordered, or which is outside the limits shown or ordered.



FORMER ALCAN ALUMINUM CORPORATION

SITE #8-25-005

PAYMENT ITEMS

SECTION 1 - UNIT PRICE ITEMS

Item 1.1 - Stone Subbase - Type 2

PI-1.1 -01. Description

Under this Item, the Contractor shall furnish all labor, materials, and equipment required to install the stone subbase course as shown by the Engineer.

PI-1.1-02. Work Included

Work under this Item shall generally be comprised of, but not limited to, the following:

- Provide survey (by a NYS licensed surveyor) to verify subgrade preparation to design elevation
- Fine grading and compaction of subgrade for stone subbase course, as required
- Furnish minimum of 6" of subbase material.
- Install and compact subbase course to the grades and thicknesses shown
- Provide testing as required

PI-1.1 -03. Basis of Payment

The quantity of stone subbase for which payment will be made will be the actual number of cubic yards furnished and installed as ordered by the Engineer.

No payment will be made under this section for work performed by the Contractor to replace defective work, or for work which is not shown or ordered, or which is outside the limits shown or ordered.

FORMER ALCAN ALUMINUM CORPORATION

SITE #8-25-005

PAYMENT ITEMS

SECTION 1 - UNIT PRICE ITEMS

Item 1.2 - Bituminous Asphalt Cement

2 inch Binder Course

1 inch Top Course

PI-1.2-01. Description

Under this Item, the Contractor shall furnish all labor, materials, and equipment required to install the pavement courses of hot, plant mixed asphalt concrete on a prepared stone subbase in accordance with these specifications as ordered by the Engineer.

PI-1.2-02. Work Included

Work under this Item shall generally be comprised of, but not limited to, the following:

- Provide mix designs for review and approval
- Furnish and install the materials and composition for the respective courses as shown or specified.
- Provide testing as required
- Provide cleaning necessary or as ordered by the Engineer
- Provide tack or prime coat as necessary or as ordered by the Engineer.
- Make necessary joints and provide and install joint sealant.

PI-1.2-03. Basis of Payment

The quantity of respective asphalt pavement course for which payment will be made will be the actual number of cubic yards of asphalt mix installed or as ordered by the Engineer.

No payment will be made under this section for work performed by the Contractor to replace defective work, or for work which is not shown or ordered, or which is outside the limits shown or ordered.

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SECTION 2 - LUMP SUM ITEMS

PI-2.01. Description

Under this section, the Contractor shall furnish all materials and construct the structures and appurtenant facilities; shall furnish, install, test, place into satisfactory operation and maintain until final acceptance the equipment, piping and systems pertinent thereto; and shall fully complete the work of lump sum items, as shown, specified, scheduled and directed.

The principal items of work scheduled herein are included under this section. The work of this section also includes all accessories, appurtenances and other work required to complete this Contract, except those related to the work of these items but specifically included under other payment item sections of this Contract or under other contracts.

The schedules of the work which may be included have been shown solely for the convenience of the Owner, Engineer and Contractor, and do not necessarily include all of the items of work which are shown and specified and which are required under this Contract.

PI-2.02. Payment

Payment for the work of lump sum items will be made at the Contractor's lump sum prices stated in the Bid and appropriate to each item included under this section.

PI-2.03. No Payment

No payment will be made under this section for work performed by the Contractor to replace defective work, or for work which is not shown or ordered, or which is outside the limits shown or ordered.

FORMER ALCAN ALUMINUM CORPORATION

SITE #8-25-005

SECTION 2 - LUMP SUM ITEMS

Item 2.1 - Clearing and Grubbing

PI-2.1-01. Description

Under this Item, the Contractor shall furnish all labor, materials and equipment necessary to complete the work of this item per the Contract Documents.

PI-2.1-02. Work Included

- Clearing from the site of the work, by removal or destruction as may be required of the following, (but not limited to):
  - Trees
  - Brush
  - Logs
  - Stumps
  - Refuse and rubbish
- Disposal of the above items shall be at a site chosen by the Contractor and at the Contractor's expense. There may be an opportunity to dispose of on-site. The Contractor shall present his plan to the Engineer.
- Excavation and storage of existing topsoil for later use on this Project.
- Site access and haul roads where not shown, but determined necessary by the Contractor to complete the work of this contract and later removed.

PI-2.1-03. Basis of Payment

Payment for the works of this item will be made at the Lump Sum Price stated in the Bid.

FORMER ALCAN ALUMINUM CORPORATION

SITE #8-25-005

SECTION 2 - LUMP SUM ITEMS

Item 2.2 - Earthwork

PI-2.2-01. Description

Under this Item, the Contractor shall furnish all labor, materials, and equipment required to construct, test, place into satisfactory condition, and maintain with final acceptance, the grading to complete the project as shown, specified, scheduled or directed.

PI-2.2-02. Work Included

Work under this Item shall generally be comprised of, but not limited to, the following:

- Provide survey (by a NYS licensed surveyor) to verify existing ground elevations and construction layout.
- Furnish and install any additional embankment material necessary to bring existing ground to subgrade elevation in conjunction with the pavement section. It is anticipated all embankment material required shall come from on-site.
- Compaction as required.
- Grading (to drain) of adjacent drainage swales. (Existing swales are at approximate grade, however, will require reshaping and definition).
- Removal and placement of existing cistern (crushing as required) immediately adjacent soils, sediment and water to within the limits of asphalt cover.
- Plugging pipes that enter the cistern.

PI-2.2-03. Basis of Payment

Payment for work of this item will be made at the Lump Sum Price stated in the Bid.

FORMER ALCAN ALUMINUM CORPORATION

SITE #8-25-005

SECTION 2 - LUMP SUM ITEMS

Item 2.3 - Mobilization/Demobilization

PI-2.3-01 Work Included

Work under this Item shall generally be comprised of set up of the necessary general plant, including shops, storage areas, field office trailer, equipment decontamination area, and such sanitary and other facilities including the removal of same as are required by local or state law or regulation. The cost of required insurance and bonds and any initiation of the Contract work is also included in this Item.

Work shall also include the installation, maintenance and removal of Erosion and Sediment Control measures.

PI-2.3-02 Basis of Payment

The amount bid shall be made payable to the Contractor whenever he shall have completed 5% of the Contract work. 5% of the work shall be considered completed when the total of payments earned, as reflected by estimates of work done, not including the amount bid for this item, nor payments for materials delivered to the site exceeds 5% of the total amount of the bid for this Contract.