

**CONTRACT DOCUMENTS
FOR
"CITYWIDE STRIPING PROJCT 2018"
FOR
THE CITY OF COTTONWOOD HEIGHTS, UTAH**

PROJECT NO. CHC.301.18

JULY, 2018

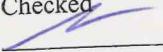
GILSON ENGINEERING, INC.

CONSULTING ENGINEERS AND SURVEYORS

Prepared


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SECTION 00100
INVITATION TO BID

CITY OF COTTONWOOD HEIGHTS
2277 E. Bengal Blvd.
Cottonwood Heights, Utah 84121

Sealed BIDS for construction of the "CITYWIDE STRIPING PROJECT 2018 -- PROJECT # CHC.301.18" will be received by the City of Cottonwood Heights at the City Offices, 2277 E. Bengal Blvd., Cottonwood Heights, Utah, until 2:00 PM, August 14, 2018; and then at said office publicly opened and read aloud.

The work includes furnishing all labor, tools, materials, equipment, transportation and services required for striping roadways at various streets within the City limits as directed by the public works director. Work includes traffic control; striping layout; furnishing and applying traffic paint for striping, bike lanes, crosswalks, messages, and symbols; and all appurtenant work; all in accordance with Drawings and Specifications prepared by the Project Engineer, Gilson Engineering.

CONTRACT DOCUMENTS may be examined at the City Offices, 2277 E. Bengal Blvd., Cottonwood Heights; and at the office of Gilson Engineering, 12401 South 450 East, Bldg. C-2, Draper, Utah. Contract Documents will be available after July 30th @ 2:00 PM.

Copies of CONTRACT DOCUMENTS may be obtained from the office of Gilson Engineering for non-refundable payment of \$40.00 for each set, made payable to Gilson Engineering.

Bid must be accompanied by a Bid Bond, Certified Check or Cashier's Check in the amount of 5% of the maximum bid price, drawn payable to the order of the City of Cottonwood Heights.

All Bids submitted shall be in conformance with the Instructions to Bidders which are included in the Contract Documents; and shall be guaranteed by the Bidder for a period of ninety (90) days from the date of Bid opening.

The City of Cottonwood Heights hereby reserves the right to reject any or all bids presented, to waive any informality in a bid, and to make award or refuse to make award in the interest of the City.

Date: July 25, 2018

By: Michael J. Peterson.
Mayor

SECTION 00200

INSTRUCTIONS TO BIDDERS

1. DEFINITION OF TERMS.

- a. Bidder. One who submits a BID for the WORK directly to the OWNER; distinct from a sub-bidder who submits a bid to a Bidder.
- b. Successful Bidder. The lowest, qualified, responsible and responsive BIDDER to whom the OWNER, on the basis of the Owner's evaluation as hereinafter provided, makes an award.
- c. Bidding Documents. Documents include the INVITATION TO BID, INSTRUCTIONS TO BIDDERS, the BID Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- d. Owner. The OWNER is the City of Cottonwood Heights, located at 2277 E. Bengal Blvd., Cottonwood Heights, Utah 84121.
- e. Engineer. The ENGINEER is Gilson Engineering, located at 12401 South 450 East, Building C-2, Draper, Utah 84020.

2. BIDDING DOCUMENTS. Complete sets of BIDDING DOCUMENTS may be obtained as provided in the INVITATION TO BID. These BIDDING DOCUMENTS must be used in preparing BIDS; the OWNER does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of BIDDING DOCUMENTS.

3. EXAMINATION OF CONTRACT DOCUMENTS AND SITE OF WORK. Before submitting a BID, each BIDDER shall:

- a. carefully examine the specifications, drawings, and other Contract Documents;
- b. visit the site of the Work to become familiar with local conditions that may affect costs, progress, performance, or furnishing of the Work;
- c. consider federal, state and local laws, rules and regulations that may affect costs, progress, performance, or furnishing of the Work;
- d. study and carefully correlate Bidder's observations with the Contract Documents; and
- e. give written notice of all conflicts, errors, or discrepancies in the Contract Documents.

The failure or omission of the BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

If any BIDDER, contemplating submitting a BID for the WORK, is in doubt as to the meaning of any part of the proposed Contract Documents, or finds any discrepancies therein, such BIDDER may submit to the ENGINEER a written request for interpretation thereof no later than five (5) day prior to the date set for opening of BIDS. The BIDDER submitting such request shall be responsible for its prompt and timely delivery to the ENGINEER. Any interpretation or correction of proposed Contract Documents will be made only by Addendum; and will be mailed or delivered to each prospective Bidder of record. The OWNER will not be responsible for any other explanations or interpretations of the proposed Contract Documents.

Any reports, estimates or test results provided to BIDDERS by the OWNER or the ENGINEER are not part of the Contract Documents; and the BIDDER shall make his own interpretations, estimates, inspections, or opinions concerning matters contained therein or pertaining to the completeness thereof for the purposes of bidding on the WORK. BIDDERS shall visit the site of the WORK; and shall conduct such inspections, explorations and tests as each BIDDER deems necessary for submission of a BID. Such examinations, investigations, explorations and tests shall be performed at the BIDDER's own expense. BIDDERS shall fill all holes, cleanup and restore the site to its former condition upon completion of any such explorations or tests. BIDDERS must satisfy themselves of the accuracy of the estimated quantities shown in the BID SCHEDULE. Inspection trips for prospective BIDDERS may be arranged by contacting the ENGINEER, phone # 801-571-9414. Submission of a BID will constitute an express representation by the BIDDER that the BIDDER has complied with every requirement of this paragraph. After the BID has been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of work to be done. Without exception, the BID is premised upon performing and furnishing the WORK required by the Contract Documents and any methods or procedures required therein.

4. BID SECURITY. Each BID must be accompanied by BID Security made payable to the OWNER in an amount of five (5) percent of the BIDDER's maximum BID price; and in the form of either a BID BOND issued by a surety acceptable to the Owner, a certified check or a cashier's check. BID Security of the Successful BIDDER will be retained until such BIDDER has executed the AGREEMENT and has furnished the required Contract Security and evidence of Insurance; whereupon the BID Security will be returned. If the Successful BIDDER fails to execute and deliver the AGREEMENT, BONDS, and evidence of Insurance within five (5) days after NOTICE OF AWARD, The OWNER may annul the NOTICE OF AWARD and the BID Security of that BIDDER will be forfeited. The BID Security of all other Bidders whom the OWNER believes to have a reasonable chance of receiving the award may be retained by the OWNER until three (3) days after the effective date of the AGREEMENT. BID Security submitted with BIDS, which are not competitive, will be returned within ten (10) days after the date of the BID opening.

5. CONTRACT TIME AND LIQUIDATED DAMAGES. The AGREEMENT will include the requirement that the WORK be completed within SIXTY (60) calendar days. The AGREEMENT will include a stipulation that liquidated damages will be assessed in the amount of \$ 600.00 per calendar day for each calendar day after the agreed completion date that the WORK is not fully certified by the ENGINEER as being substantially complete as defined in the Contract Documents.

6. FORM OF BID. All BIDS shall be made on the BID Forms included with the Bidding Documents. All blank on the BID Form must be completed in ink or typewritten. No additions, deletions, or alterations shall be made to the BID Form. Any unauthorized conditions, limitations, qualifications or provisions attached to the BID may render the BID unresponsive and may cause its rejection. No telegraphic Bid or telegraphic modification of a Bid will be considered.

BIDS by corporations must be executed in the corporate name by the president or vice-president or other authorized corporate officer, accompanied by evidence of authority to sign, and the corporate seal should be affixed thereto. BIDS by partnerships shall be executed in the partnership's name and signed by a partner having authority on behalf of the partnership. All BIDS submitted must be signed by the BIDDER or the BIDDER's authorized representative. All names should be typed or printed below the signature. The BID shall contain an acknowledgment of receipt of all ADDENDA (the numbers of which must be filled in on the Bid Form). The address and telephone number of the BIDDER must be shown for communications regarding the BID.

7. SUBMISSION OF BIDS. BIDS shall be submitted at the time and place indicated in the INVITATION TO BID. BIDS shall be enclosed in a sealed envelope addressed to the City of Cottonwood Heights; and marked on the outside with "CITYWIDE STRIPING PROJECT 2018 --- PROJECT NO. CHC.301.18"; and the name, address, and license number of the BIDDER. BID must be accompanied by the Bid Security and other required documents. Only the original signed copy of the BID shall be submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at 2277 Bengal Blvd, Cottonwood Heights, Utah 84121. Any Bids received after the scheduled closing time for receipt of BIDS will not be accepted or considered and will be returned to the BIDDER unopened.

8. MODIFICATION AND WITHDRAWAL OF BIDS. BIDS may be modified or withdrawn by the BIDDER by means of a written request, signed by the BIDDER or his duly authorized representative. Such written request must be delivered to the place stipulated in the INVITATION TO BID for receipt of BIDS prior to the opening of BIDS or authorized postponement thereof.

If, within twenty-four (24) hours after BIDS are opened, any BIDDER files a duly signed, written notice with the OWNER and promptly thereafter demonstrates to the reasonable satisfaction of the OWNER that there was a material and substantial mistake in the preparation on its BID, that BIDDER may withdraw its BID and the BID Security will be returned. Thereafter, that BIDDER will be disqualified from further bidding on the WORK to be provided under the Contract Documents.

Except as provided above, no BIDDER may withdraw a BID within sixty (60) days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

9. OPENING OF BIDS. BIDS will be opened as indicated in the INVITATION TO BID and, unless obviously non-responsive, read aloud publicly. All BIDS will remain subject to acceptance for sixty (60) days after the day of the BID Opening; but the OWNER may, in its sole discretion, release any BID and return the BID Security prior to that date.

10. DETERMINATION OF BID AMOUNT. Determination of the total amount of the BID shall be based on the correct extension and addition of BID SCHEDULE items. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of any figures and the correct sum thereof will be resolved in favor of the correct sum.

11. AWARD OF CONTRACT. The OWNER reserves the right to reject any and all BIDS, to waive any and all informalities not involving price, time, or changes in the WORK, and to negotiate contract terms with the Successful BIDDER; and the right to disregard all nonconforming, non-responsive, unbalanced, or conditional BIDS. The OWNER further reserves the right to reject the BID of any BIDDER if the OWNER believes it would not be in the best interest of the Project to make an award to that BIDDER, whether because that BID is non-responsive or the BIDDER is unqualified or of doubtful financial ability or fails to meet any other pertinent standards or criteria established by the OWNER.

To demonstrate qualifications to perform the work, each BIDDER must be prepared to submit, within five (5) days of the OWNER's request, written evidence, such as financial statements, previous work experience, present commitments, and other such information and data as may be required. BIDDERS must hold an appropriate, valid Contractor's license and be properly qualified to do business in the Cottonwood Heights area.

The OWNER may consider the qualifications and experience of sub-contractors, suppliers and other organizations or persons proposed for portions of the WORK. The apparent low BIDDER shall supply the names and addresses of suppliers, subcontractors and other persons for portions of the work when requested to do so by the OWNER. The OWNER may also consider the operating costs, maintenance requirements, performance data, and guarantees of major items of the materials and equipment proposed for incorporation into the WORK when such data is required to be submitted prior to the NOTICE OF AWARD.

The OWNER may conduct such investigations as the OWNER deems necessary or desirable to assist in the evaluation of any BID to establish the responsibility, qualifications and financial ability of BIDDER, proposed subcontractors, suppliers, and other persons and organizations to perform and furnish the WORK in accordance with the Contract Documents to the OWNER's satisfaction within the prescribed time.

If the Contract is to be awarded, it will be awarded to the lowest, responsible BIDDER whose evaluation by the OWNER indicates to the OWNER that the award will be in the best interest of the City.

If the Contract is to be awarded, the OWNER will give the Successful BIDDER a NOTICE OF AWARD within sixty (60) days after the date of the BID opening, unless a longer waiting period before award is expressly provided in the INVITATION TO BID.

12. EXECUTION OF AGREEMENT. The form of AGREEMENT, which the Successful BIDDER will be required to execute, is included in the Contract Documents. The BIDDER to whom the AWARD OF CONTRACT is made shall, within TEN (10) calendar days after the NOTICE OF AWARD from the OWNER, execute the AGREEMENT on the form provided, secure and furnish to the OWNER all insurance and all bonds required by the Contract Documents and the signed AGREEMENT. All bonds and certificates of insurance shall be submitted to and approved by the OWNER before the Successful BIDDER may proceed with the WORK. Failure or refusal to enter into and deliver the AGREEMENT as herein provided or to comply with any of the requirements connected thereto shall be just cause for annulment of the award and the forfeiture of the BID security. If the Successful BIDDER refuses or fails to execute the AGREEMENT, the OWNER may award the Contract to the next lowest, responsible BIDDER.

13. CONTRACT SECURITY. When the Successful BIDDER delivers the executed AGREEMENT to the OWNER, it must be accompanied by the required Labor and Materials PAYMENT BOND and a PERFORMANCE BOND, each in the amount of ONE HUNDRED (100) PERCENT of the Contract Price and each on the forms provided in the Contract Documents or accepted form. These BONDS shall be issued by a surety acceptable to the Owner and the cost of such BONDS shall be included in the BID. Attorneys-in-fact who sign BID BONDS or PAYMENT BONDS and PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their Power-of-Attorney.

14. INSURANCE. When the Successful BIDDER delivers the executed AGREEMENT to the OWNER, it must be accompanied by the required insurance as evidenced by certificates of insurance issued by a reputable insurance company acceptable to the Owner.

15. EXECUTION BY OWNER. Within TEN (10) calendar days of receipt of the signed AGREEMENT from the Successful BIDDER, together with the required Contract Security and insurance in a form acceptable to the OWNER, the OWNER shall cause its duly authorized representative to execute the AGREEMENT and the OWNER shall deliver one fully signed AGREEMENT to the Successful BIDDER. Each counterpart of the AGREEMENT shall be executed by the OWNER and the Successful BIDDER.

16. NOTICE TO PROCEED. A NOTICE TO PROCEED shall be issued within TEN (10) days of the execution of the AGREEMENT by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the TEN (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the AGREEMENT without further liability on the part of either party.

17. CLAIMS BY BIDDER. By submitting a BID, each BIDDER agrees to waive any claim it has or may have against the OWNER, the Engineer, and their respective employees, arising out of or in connection with the administration, evaluation or recommendations of any BID.

SECTION 00260

CONTRACTOR'S QUALIFICATION AND EXPERIENCE AFFIDAVIT

The BIDDER shall furnish all of the following information. Failure to comply with this requirement will render the BID non-responsive and will cause its rejection. The City has the right to reject any application. Additional sheets shall be attached as required.

Award of Contract will be based upon review and evaluation of this Affidavit.

A. Contractor's name and address:

B. Contractor's Telephone Number: _____

C. Contractor's License: Primary Classification _____

State License No. _____

Supplemental Classification held, if any: _____

D. Number of years as a contractor in Construction Work of this type: _____

E. Names and titles of Principal Officers of Contractor's Firm:

_____ Name	_____ Title
---------------	----------------

_____ Name	_____ Title
---------------	----------------

_____ Name	_____ Title
---------------	----------------

_____ Name	_____ Title
---------------	----------------

F. Name of person who inspected site of proposed work for your firm:

Name: _____ Date of Inspection: _____

G. Name, address, and telephone number of surety company and agent who will provide the required bonds on this Contract:

H. List of current jobs now under construction:

<u>Client</u>	<u>Telephone No.</u>	<u>Dollar Amount.</u>	<u>Type of Job</u>

I. List two projects of this size and complexity completed within the last five years:

<u>Client</u>	<u>Telephone No.</u>	<u>Dollar Amount</u>	<u>Type of Job</u>

J. List previous work completed for Cottonwood Heights:

- 1. Percentage of contract that was change-order based: _____
- 2. Was the work performed to the satisfaction of the City? _____
- 3. Was the contract executed to the satisfaction of the City? _____
- 4. Was the contractor responsive in meeting City needs and schedule requirements? _____

K. Have you ever failed to complete any work awarded to your firm? If so, when, where and why?

L. List your major equipment available for this Contract:

_____	_____
_____	_____
_____	_____
_____	_____

M. List projects that you have failed to complete on the original schedule over the past two years:

<u>Client</u>	<u>Telephone No.</u>	<u>Dollar Amount.</u>	<u>Type of Job</u>

N. List projects that you have failed to complete on the adjusted schedule over the past two years:

<u>Client</u>	<u>Telephone No.</u>	<u>Dollar Amount</u>	<u>Type of Job</u>

O. Submit a copy of OSHA 200 for the past two years.

P. Submit a copy of citation history from OSHA for past two years.

Q. Have you had any problems with OSHA in the last two years? If so, identify the problems and specify how the problems were resolved.

R. Are you in compliance with all applicable laws and governmental regulations? _____

S. Will you complete the project on time, as specified? _____

LIST OF SUBCONTRACTORS

The BIDDER shall list below the names and business address of each subcontractor who will perform Work under this Contract in excess of five percent (0.05) of the total bid price; and shall also list the portion of the Work which will be done by such subcontractor. After the opening of proposals, no changes or substitutions will be allowed without the written approval of the Engineer. Note: Attach additional sheets if required.

<u>WORK TO BE PERFORMED</u>	<u>SUBCONTRACTOR'S NAME AND ADDRESS</u>
1. _____ _____	_____ _____
2. _____ _____	_____ _____
3. _____ _____	_____ _____
4. _____ _____	_____ _____
5. _____ _____	_____ _____
6. _____ _____	_____ _____

Respectively Submitted:

Signature

Address

Title

Date

Contractor License No.

Taxpayer Identification No.

SECTION 00410

BID

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as _____.*

To the CITY OF COTTONWOOD HEIGHTS, (hereinafter called "OWNER").

In compliance with the INVITATION TO BID, the BIDDER hereby proposes to perform all WORK for construction of the "CITYWIDE STRIPING PROJECT 2018 --- PROJECT # CHC.300.18", in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated herein.

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

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within SIXTY (60) consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of \$ 600.00 for each consecutive calendar day thereafter as provided in Section 15 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM: _____

* Insert "a corporation", "a partnership" or "an individual" as applicable.

SECTION 00420

BID SCHEDULE

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

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

"CITYWIDE STRIPING PROJECT 2018 --- PROJECT # CHC.301.18"; for the City of Cottonwood Heights, Utah

No.	Item	Quantity	Unit	Unit Price	Total Amount
<hr/>					
1.	Mobilization	1	LS	\$ _____ Lump Sum	\$ _____
2.	Traffic Control, Complete	1	LS	\$ _____ Lump Sum	\$ _____
3.	Furnish and apply traffic paint for 4" wide solid or dashed, white or yellow traffic striping, complete; including layout, applying all paint for striping, and all appurtenant work	330,000	I.f.	\$ _____ per I.f.	\$ _____
4.	Furnish and apply traffic paint for 8" wide solid white traffic striping, complete; including layout, applying all paint for striping, and all appurtenant work	7,000	I.f.	\$ _____ per I.f.	\$ _____
5.	Furnish and apply traffic paint for 12" wide solid white traffic striping, complete; including layout, applying all paint for striping, and all appurtenant work	800	I.f.	\$ _____ per I.f.	\$ _____
6.	Furnish and apply traffic paint for 18" wide solid white traffic striping, complete; including layout, applying all paint for striping, and all appurtenant work	1,900	I.f.	\$ _____ per I.f.	\$ _____
7.	Furnish and apply traffic paint for 24" wide solid white traffic striping for crosswalks, complete; including layout, applying all paint for striping, and all appurtenant work	2,900	I.f.	\$ _____ per I.f.	\$ _____
8.	Furnish and apply traffic paint for symbol markings, complete; including layout, applying all paint for symbols, and all appurtenant work	440	ea.	\$ _____ per ea.	\$ _____
9.	Furnish and apply traffic paint for letter for roadway messages, complete; including layout, applying all paint for messages, and all appurtenant work	500	ea.	\$ _____ per ea.	\$ _____

No.	Item	Quantity	Unit	Unit Price	Total Amount
10.	Furnish and apply traffic paint for Type II bike lane symbols, complete; including layout, applying all paint for symbols, and all appurtenant work	200	ea.	\$ _____ per ea.	\$ _____
11.	Furnish and apply traffic paint for Type III bike lane symbols, complete; including layout, applying all paint for symbols, and all appurtenant work	200	ea.	\$ _____ per ea.	\$ _____
12.	Furnish and apply traffic paint for 4" wide solid white traffic striping, placed at a 45° angle, for buffered bike lanes; including layout, applying all paint for striping, and all appurtenant work	4,800	l.f.	\$ _____ per l.f.	\$ _____
13.	Furnish and apply traffic paint for 8" wide solid yellow traffic striping, placed at a 45° angle, for cross hatch markings; including layout, applying all paint for striping, and all appurtenant work	2,800	l.f.	\$ _____ per l.f.	\$ _____

TOTAL OF BID

\$ _____

Respectively Submitted:

Signature

Address

Title

Date

Contractor License No.

Taxpayer Identification No.
(Or Social Security No.)

(Seal - if Bid is by a corporation)

Attest _____

Bond Number: _____

SECTION 00450

BID BOND PROPOSAL FORM

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as
Principal, and _____ as Surety, are held and firmly
bound unto _____, State of Utah, hereinafter called the Obligee, in the penal sum of
_____ dollars, lawful money of the United States, for the payment of which sum, we bind
ourselves, our heirs, executors, administrators, and successors, jointly and severally, by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that:

Whereas the Principal has submitted the accompanying bid, dated _____, 20____, for
the construction of that certain Project identified and described as: "CITYWIDE STRIPING PROJECT 2018 ---
PROJECT # CHC.300.18"; and,

Whereas the penal sum set forth above is five percent (5%) of the amount of the bid submitted to the
awarding agency;

NOW, THEREFORE, if the principal shall now withdraw said bid within the period specified in said bid
after the opening of the same, or if no period be specified, within sixty (60) days after said opening, and shall within
the period specified therefore, or if no period be specified, with ten (10) days after the prescribed forms are
presented to him for signature, enter into a written contract with the AWARDING AGENCY in accordance with
Principal's bid, as accepted, and give bond with good and sufficient surety or sureties, as maybe required, for the
faithful performance and proper fulfillment of such contract, or in the event of the withdrawal of said bid within the
period specified, or the Principal's failure to enter into such contract and give such bond within the time specified, or
if the principal shall pay the AWARDING AGENCY the difference between the amount specified in said bid and
the amount for which the AWARDING AGENCY may procure the required work and/or supplies if the latter
amount be in excess of the former, then the Principal's and Surety's obligation hereunder shall be void and of no
effect; otherwise said obligation to remain in full force and effect.

IN WITNESS THEREOF, the above-bounded parties execute this instrument under their respective seals

this _____ day of _____, 20_____.

Principal Signature

Witness (if an individual)

Witness (if an individual)

CERTIFICATE AS TO CORPORATE PRINCIPAL

STATE OF UTAH)
 : ss.
COUNTY OF _____)

I certify that I am the _____ of the corporation named as
Principal in the within bond; that _____ is the
_____ of said corporation and signed the said bond on behalf of
the Principal, and that said bond was duly signed, sealed and attested for and in behalf of said corporation by
authority of its governing body.

Corporate Seal

Signature of Secretary

Subscribed and sworn to before me, a notary public authorized to administer oaths, this _____ day of
_____, 20_____.

Notary Public

Residing at:
Commission expires:

Surety Company Name

Address

Surety Telephone Number

Signature of Surety

Title

CERTIFICATE AS TO SURETY

STATE OF UTAH)
 : ss.
COUNTY OF _____)

I certify that I am the _____ of the corporation named as
Surety in the within bond; that _____ is the
_____ of said corporation and signed the said bond on behalf of
the Surety, and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority
of its governing body.

Corporate Seal

Signature of Secretary

Subscribed and sworn to before me, a notary public authorized to administer oaths, this _____ day of
_____, 20_____.

Notary Public

Residing at:
Commission expires:

End of Bid Bond Proposal Form

SECTION 00500

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2018, by and between the CITY OF COTTONWOOD HEIGHTS, hereinafter called "OWNER" and _____ doing business as _____, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete construction of the "CITYWIDE STRIPING PROJECT 2018 --- PROJECT # CHC.300.18".

2. The CONTRACTOR will furnish all of materials, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECTS described herein.

3. The CONTRACTOR will commence the WORK required by the CONTRACT DOCUMENTS within ten (10) calendar days after the date of the NOTICE TO PROCEED; unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR will commence the WORK required by the CONTRACT DOCUMENTS within ten (10) calendar days after the date of the NOTICE TO PROCEED; and will complete the same within SIXTY (60) calendar days after the date of the NOTICE TO PROCEED; unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

5. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum as shown in the BID schedule.

6. The term "CONTRACT DOCUMENTS" means and includes the following:

- (A) SECTION 00100 - INVITATION TO BID
- (B) SECTION 00200 - INSTRUCTIONS TO BIDDERS
- (C) SECTION 00250 - ADDITIONAL INSTRUCTIONS TO BIDDERS
- (D) SECTION 00260 - CONTRACTOR'S QUALIFICATION AND EXPERIENCE AFFIDAVIT
- (E) SECTION 00410 - BID
- (F) SECTION 00420 - BID SCHEDULE
- (G) SECTION 00450 - BID BOND

- (H) SECTION 00500 - AGREEMENT
- (I) SECTION 00510 - PAYMENT BOND (100 PERCENT)
- (J) SECTION 00520 - PERFORMANCE BOND (100 PERCENT)
- (K) SECTION 00530 - NOTICE OF AWARD
- (L) SECTION 00540 - NOTICE TO PROCEED
- (M) SECTION 00560 - CHANGE ORDER
- (N) SECTION 00570 - NOTICE OF SUBSTANTIAL COMPLETION
- (O) SECTION 00580 - NOTICE OF COMPLETION
- (P) GENERAL CONDITIONS
- (Q) SUPPLEMENTAL GENERAL CONDITIONS
- (R) SPECIFICATIONS prepared and issued by GILSON ENGINEERING, INC.
Consulting Engineers, dated JUNE, 2018.
- (S) DRAWINGS prepared by Gilson Engineering, Consulting Engineers
(See enumeration in Supplemental General Conditions)
- (T) ADDENDA:
 - No. ____ , dated _____ , 2018.
 - No. ____ , dated _____ , 2018.

7. The OWNER will pay to the CONTRACTOR, in the manner and at such times as set forth in the General Conditions, such amounts as required by the CONTRACT DOCUMENTS.

8. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in five (5) copies, each of which shall be deemed an original on the date first above written.

OWNER:

BY _____

NAME _____
(Please Type)

TITLE _____

(SEAL)

ATTEST:

NAME _____
(Please Type)

TITLE _____

CONTRACTOR:

BY _____

NAME _____
(Please Type)

ADDRESS _____

(SEAL)

ATTEST:

NAME _____
(Please Type)

TITLE _____

PAYMENT BOND

CONTRACTOR (Name and Address):

SURETY (Name and Principle Place of Business):

OWNER (Name of Address):

CONSTRUCTION CONTRACT

Date: _____

Amount: _____

Description (Name and Location): _____

BOND:

Date (Not earlier than Construction Contract Date): _____

Amount: _____

Modification to this Bond: ___ None ___ See Page 2

CONTRACTOR AS PRINCIPAL

SURETY

Company: _____ (Corporate Seal)

Company: _____ (Corporate Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

(Any additional signatures appear on Page 2)

(FOR INFORMATION ONLY -- Name, Address and Telephone)
AGENT or BROKER: _____

OWNER'S REPRESENTATIVE (Architect, Engineer or other party): _____

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the Owner, this obligation shall be null and void if the Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment of labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with the Contractor:
 - 4.2.1 Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the material were furnished or supplied or for whom the labor was done or performed; and
 - 4.2.2 Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
 - 4.2.3 Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2 Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related sub-contracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. DEFINITIONS:
 - 15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
 - 15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL (Corporate Seal)
 Company: _____

 Signature: _____
 Name and Title: _____
 Address: _____

SURETY (Corporate Seal)
 Company: _____

 Signature: _____
 Name and Title: _____
 Address: _____

IMPORTANT – Surety companies executing bonds much appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State of UTAH.

PERFORMANCE BOND

CONTRACTOR (Name and Address):

SURETY (Name and Principle Place of Business):

OWNER (Name of Address):

CONSTRUCTION CONTRACT

Date: _____

Amount: _____

Description (Name and Location): _____

BOND:

Date (Not earlier than Construction Contract Date): _____

Amount: _____

Modification to this Bond: ___ None ___ See Page 2

CONTRACTOR AS PRINCIPAL

SURETY

Company: _____ (Corporate Seal)

Company: _____ (Corporate Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

(Any additional signatures appear on Page 2)

(FOR INFORMATION ONLY -- Name, Address and Telephone)
AGENT or BROKER: _____

OWNER'S REPRESENTATIVE (Architect, Engineer or other party): _____

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1:
3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an arrangement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
 - 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and Surety have received notice as provided in Subparagraph 3.1; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1 Arrange for the Contractor with consent of the Owner, to perform and complete the Construction Contract; or
 - 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
 - 4.3 Obtain bids or negotiate proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 4.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
- 4.4.2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

- 5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety performs its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2 or 4.3 above, then the responsibility of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
 - 6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 6.2 Additional legal design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
 - 6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.
- 8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related sub-contracts, purchase orders and other obligations.
- 9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- 10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
- 11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
- 12. DEFINITIONS:
 - 12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
 - 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL (Corporate Seal)
Company: _____

SURETY (Corporate Seal)
Company: _____

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

Address: _____

Address: _____

SECTION 00530
NOTICE OF AWARD

TO:

PROJECT DESCRIPTION:

The OWNER has considered the BID submitted by you for the above described WORK in response to its INVITATION TO BID, dated _____, and INSTRUCTIONS TO BIDDERS.

You are hereby notified that your BID has been accepted for the WORK in the amount of \$_____.

You are required by the INSTRUCTIONS TO BIDDERS to execute the AGREEMENT and furnish the required CONTRACTORS PERFORMANCE BOND, PAYMENT BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said AGREEMENT and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNERS acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this ___ day of _____, 20__,

BY: _____

TITLE: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____
on this _____ day of _____, 20__.

BY: _____

TITLE: _____

SECTION 00540

NOTICE TO PROCEED

TO:

PROJECT DESCRIPTION:

You are hereby notified to commence WORK on this PROJECT in accordance with the AGREEMENT, dated _____, 20____, on or before _____, 20____; and you are to fully complete the WORK within _____ calendar days thereafter. The date of completion of all WORK is therefore _____, 20____.

Receipt of the above NOTICE TO PROCEED is hereby acknowledged on this _____ day of _____, 20____.

BY: _____

TITLE: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged on this _____ day of _____, 20____.

BY: _____

TITLE: _____

SECTION 00555

PROSECUTION AND PROGRESS

PART 1 GENERAL

1.01 RELATED SECTIONS

- B. Section 00725: Scope of Work
- C. Section 00727: Control of Work
- D. Section 01282: Payment
- E. Section 01355: Environmental Protection

1.02 CONTRACT SUBLETTING

- A. Obtain written approval of the City Engineer before subletting, selling, transferring, assigning, or disposing any portion of the contract.
- B. Sublet no more than 70 percent of the total contract bid amount.
- C. Subcontracts, whether committed to in writing or by an informal, unwritten arrangement or transfer of the contract, or any part of it or its obligations, do not relieve liability under the contract and bonds. As part of its contract with the Owner, the Contractor accepts liability for any claims for damages or liability resulting from an act or omission of any person who carried out work on its behalf, whether that working relationship is through a subcontract or carried out by an informal, unwritten agreement. The Contractor agrees to indemnify the Owner for any damages or liability, including attorney's fees and court costs, which may be incurred by such a person.
- D. Do not allow subcontracted work to begin until the request to sublet work is approved by the City Engineer.
- E. The Owner will consider an item as subcontracted in its entirety unless otherwise designated in the subcontract. In computing the percentage of subcontracted work.
 - 1. The City Engineer will use the accumulated percentages of all approved subcontracts to determine that the maximum subcontracted limitation is not exceeded.
 - 2. The City Engineer will use the total dollar amount of the items subcontracted in the contract bid proposal, divided by the original contract amount to determine the amount of work subcontracted.
 - 3. The City Engineer will determine the amount of work allowed to be subcontracted by using the dollar amount of the item agreed to between the prime Contractor and the subcontractor, excluding bonds, insurance, profit, and office transaction, etc.
- F. For all subcontracts:
 - 1. Provide for a reduction in retained money equal to the percentage retained in accordance with Section 01282.
 - 2. Include a statement describing the method of distribution of any adjustment due to price increases or decreases using applicable price adjustment specifications for fuel, asphalt, cement, common carrier rates, etc.

1.03 ANTICIPATED MONTHLY PAYMENT SCHEDULE

- A. Prepare the Anticipated Monthly Payment Schedule based on the proposed sequence of activities shown in the baseline construction schedule.

1. Use the form provided by the City Engineer.
 2. Submit the schedule before the date established for the first partial payment.
 3. Include both monthly and semi-monthly payments when expected due to volume of work on the project.
 4. Include all contract months when payments are anticipated.
 5. Include dates of contract start, suspension, completion and milestones that impact payments.
- B. Submit a revised Anticipated Monthly Payment Schedule within 30 calendar days after notification by the City Engineer. Revisions are required when:
1. Payments vary more than 10 percent from the submitted schedule and the variance is sustained for 60 calendar days.
 2. Contract start, suspension, completion and milestones dates change.
 3. Change orders are approved increasing or reducing the contract amount sufficient to vary actual payments more than 10 percent from the accepted schedule.

1.04 BASELINE CONSTRUCTION SCHEDULE

- A. Provide the City Engineer with a baseline construction schedule meeting the requirements of this section using current version of Primavera or Primavera Contractor or acceptable equal.
1. Accurately reflect the proposed approach to accomplish the work.
 2. Provide a schedule narrative as described in this article.
- B. Use the baseline construction schedule to coordinate all activities on the project, including those with other entities such as subcontractors, vendors and suppliers, utilities, local governments, special service districts, and the Owner.
- C. Employ a sufficient workforce, supply adequate materials and equipment, and progress the work with such diligence as to maintain the rate indicated in the accepted baseline construction schedule.
1. All costs to maintain the schedule are solely the Contractor's obligation; at no expense to the Owner.
- D. Schedule Submission.
1. Submit to the City Engineer a baseline construction schedule with schedule narrative within 14 calendar days of the Notice of Award. Submit one hard copy and one electronic copy in a format acceptable to the City Engineer.
 2. The City Engineer shall review the schedule and return it, accepted or with comments, within seven calendar days from the date of receipt.
 - a. Address any comments and revise the schedule as necessary to the satisfaction of the Engineer.
 3. Complete the final baseline schedule and obtain the City Engineer's acceptance within 30 calendar days from the Notice of Award.
 - a. No progress payments are made before the Engineer accepts the baseline construction schedule.
 4. The Contractor is solely responsible for planning and executing the work. The City Engineer's acceptance of the baseline schedule does not:
 - a. Imply approval of any particular construction methods or relieve the Contractor's responsibility to provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the contract,
 - b. Attest to the validity of assumptions, activities, relationships, sequences, resource allocations, or any other aspect of the baseline construction schedule.

5. Failure to include any element of work required by the contract in the accepted baseline construction schedule does not relieve the Contractor's responsibility to perform such work.
6. The baseline construction schedule does not modify the contract documents.

E. Schedule Requirements. Address the following with as much detail required:

1. Define a complete and logical plan that can realistically be accomplished for executing the work defined in the contract.
2. Include sufficient activities for adequate project planning for subcontractor, third party, vendor, and supplier activities.
3. Clearly show the critical path using the longest path definition and other critical elements of work.
 - a. Define the critical path of the schedule based on resource limitations if the schedule is resource loaded and leveled.
4. The City Engineer shall define the additional Owner costs required to support an accelerated schedule for early completion such as increased staff for inspection, testing, overtime, etc.
 - a. Pay for these added costs unless waived by the City Engineer on the basis of other benefits accrued to the Owner.
5. Clearly define significant interaction points with the Owner and other entities such as subcontractors, vendors and suppliers, utilities, local governments, and special service districts.
6. Designate the "Data Date" as the day before the Notice to Proceed.
7. Include a unique identification number for each schedule activity.
8. Clearly and uniquely define each activity description. Do not use descriptions referring to a percent complete of a multi-element task such as "construction 50 percent of deck".
9. Define the duration of each activity.
 - a. Limit the maximum duration of any activity to 15 days unless otherwise accepted by the Engineer.
10. Clearly identify the relationships tying activities together.
11. Do not have any open-ended activities except for one start and one finish activity.
12. Do not have any constrained activities unless the City Engineer accepts such constraints.
13. Do not sequester project total float through manipulating the calendars, extending activities durations, or any other such methodology.
14. Use resource loading if resource limitations can affect the prosecution of the work.
 - a. No request or claim for contract time extension based on resource shortages will be considered unless the baseline and subsequent schedule updates are resource loaded.
15. Include milestones to define significant contractual events such as Notice to Proceed, substantial completion, and coordination points with outside entities such as utilities, special service districts, etc.
16. Include a well-defined activity coding structure that allows project activities to be sorted by type of work, location of work, work breakdown structure (WBS), or as mutually agreed to by the Contractor and the City Engineer.
17. Clearly define calendars.

F. Schedule Narrative Requirements.

1. Provide a schedule narrative that describes:

- a. The construction philosophy supporting the approach to the work outlined in the baseline schedule. Address the reasons for the sequencing of work and describe any limited resources, potential conflicts, and other salient items that may affect the schedule and how they may be resolved.
 - b. The justification for activities with durations exceeding 15 working days.
 - c. The justification for constraints used.
 - d. The justification for unusual calendars used.
 - e. The approach used to apply relationships between activities for example, all ties are based on physical relationships between work activities - rebar must be placed before concrete is placed or relationships are used to show limited resources - bridge two follows bridge one because the Contractor only has one bridge crew etc.
 - f. The project critical path and challenges that may arise associated with the critical path.
 - g. How the coordination with other entities will be handled.
- G. Project Float. Total project float is defined as the cumulative length of time activities can be delayed before they affect the finish date of the project or a contractual milestone.
- 1. Float is a shared commodity between the Contractor and the Owner and not for the exclusive use or financial benefit of either party.
 - a. Either party has the full use of the project float until it is depleted.

1.05 CONSTRUCTION SCHEDULE UPDATES

- A. Update the construction schedule each month during the life of the contract until the closing date for the scheduled progress payment following project final acceptance.
 - 1. The City Engineer will not approve progress payment until an acceptable schedule update has been received.
 - 2. Show actual progress for each activity:
 - a. Actual start and finish dates for completed activities
 - b. Actual start dates, percent complete, and remaining duration for activities in progress
 - c. Projected sequences of activities for future work
 - d. Revised relationships and durations for unfinished activities, if warranted
 - e. A well-defined critical path
 - f. Change the data date to one day after the closing date for the monthly progress payment
- B. Submit one hard copy and one electronic copy of the schedule update to the City Engineer for review and acceptance.
- C. Along with the updated schedule, submit a narrative describing:
 - 1. Work performed during the estimate period.
 - 2. Problems or delays that have been experienced to date, the party responsible for problems or delays, and the Contractor's plan to resolve the problems or bring the delayed activities back on schedule.
 - 3. Differences between the work performed and the work planned for the period, including explanations for the deviations.
 - 4. The current critical path of the project, explaining any changes since the last update and the impacts of these changes.
 - 5. Reasons for and impacts resulting from all of the following that apply:
 - a. Added or deleted activities
 - b. Changes in activity durations
 - c. Changes in relationships between activities
 - d. Addition or deletion of constraints
 - e. Changes to project calendars
 - 6. The work to be accomplished during the next period. Provide reasons for deviations from the previous schedule update.

7. Potential problems that may be encountered during the next period and the proposed solutions. Identify all potential problems the Owner may be party to and explain what action the Owner needs to take and the date by which time the action needs to be taken to avoid the problem.
- D. Participate in a progress meeting at the request of the City Engineer, to review and discuss the updated schedule information including any activity delays, remedies, schedule revisions, coordination requirements, change orders, potential delays, and other relevant issues.
1. Make available the project manager, scheduler, and appropriate field personnel to participate in the progress meeting.
 2. Make and record an action item list that describes who is responsible for resolving existing or pending issues and the date by which the issue needs to be resolved to avoid contract delays.
 3. Submit a revised schedule update if necessary.

1.06 LIMITATION OF OPERATIONS

- A. Minimize interference with traffic during performance of the work.
- B. Do not perform any work without written approval except for repairing or servicing equipment, protecting work, maintaining or curing concrete, and maintaining traffic on Sundays or holidays.
- C. Night work:
1. Provide five calendar day's notice before starting night work.
 2. Provide adequate lighting for performing satisfactory inspection and construction operations.
 3. Control noise and vibration in accordance with Section 01355.

1.07 CHARACTER OF WORKERS

- A. Provide sufficient resources to complete all work in accordance with the contract and employ workers with the skills and experience necessary to perform the work.
- B. Remove from the project any employee who performs the work in an improper or unskilled manner or who is intemperate or disorderly. Return these employees to the project only with the City Engineer's written permission.
- C. The City Engineer may suspend work for the Contractor's failure to remove any employee or furnish suitable and sufficient personnel to perform the work.

1.08 METHODS AND EQUIPMENT

- A. Use equipment of the size and mechanical condition to perform and produce the specified work.
- B. Do not damage the roadway, adjacent property, or other highways.
- C. Use methods or equipment other than specified in the contract only with the City Engineer's written permission.
1. Describe in writing the proposed methods, equipment, and reasons for the change.
 2. Produce work that meets project requirements.
 3. Discontinue alternate methods or equipment if the City Engineer determines that the work does not meet contract requirements.
 4. Remove and replace or repair deficient work to meet specified quality at no cost to the Owner.

5. The Owner does not change the basis of payment or contract time for a change in methods or equipment.

1.09 CONTRACT TIME

- A. Contract time begins as specified in the General Conditions of these Contract Documents.
- B. The contract documents define the time allowed to complete the contract. Contract time is measured in calendar days as specified in the Instructions to Bidders. The completion date is when the contract specifies the work is required to be substantially complete.
 1. The Owner will exclude days elapsing between the effective dates of any orders of the City Engineer to suspend and resume work that are not the fault of the Contractor when the contract defines the time allowed to complete the contract in calendar days.
- C. The City Engineer will furnish a Monthly Status of Contract Time showing the number of days expended to date and the number of days remaining for substantial completion.
 1. This statement is considered correct unless a written protest documenting the differences is submitted to the City Engineer within seven calendar days of receipt.
 2. File a written protest with the City Engineer within seven calendar days of receiving Monthly Status of Contract Time charges on working day contracts when not in agreement with the time assessed.
 - a. Document asserted discrepancies in the time assessed.
 - b. Failure to file a protest is acceptance of the time assessments.
- D. Refer to the General Conditions for definitions of substantial completion, physical completion, and contract completion.

1.10 DETERMINING COMPENSATION AND CONTRACT TIME EXTENSION FOR EXCUSABLE DELAYS

- A. Request a contract time extension for excusable delays in accordance with this article. Refer to the General Conditions.
 1. Time may be granted for non-compensable delays that impact the project schedule's critical path. Additional compensation will not be granted.
 2. Time and monetary compensation may be granted for compensable delays that impact the project schedule's critical path and the Contractor's costs.
- B. Provide a written request to the City Engineer within seven calendar days of the occurrence of an excusable delay detailing the reasons for a time extension and additional compensation, if applicable. The City Engineer responds to the written request as described for differing site conditions, changes, and requests or claims for additional compensation as specified in Section 00725.
 1. Take all reasonable steps to minimize the impact of the delay once a delay-causing event is identified. Failure to do so may result in the rejection of all or part of the delay claim.
 2. Costs incurred before notification of delay are not allowed.
 3. Provide the City Engineer with a schedule impact analysis showing the impact of the delay-causing event on the project schedule.
 4. Maintain daily records of all labor and material costs, station locations, and equipment expenses for all operations affected.
 - a. Obtain City Engineer's concurrence with these records on a daily basis.
 5. Prepare and submit weekly written reports to the City Engineer that contain:
 - a. Number of delay days.
 - b. Summary of all delayed operations or those that will be delayed and the cause for delay.
 - c. Itemize all extra costs incurred:

- 1) Document how the extra costs relate to the delay and how they are calculated and measured.
 - 2) Identify all affected project employees for whom costs are being compiled.
 - 3) Summarize equipment time charges and identify equipment by manufacturer's number.
 - 4) Provide certification of all costs.
6. Meet with the City Engineer weekly to compare the previous week's daily records with those maintained by the Owner.
- a. Resolve any disagreement over weekly delay costs with the City Engineer.
 - b. Provide written notice within 10 calendar days documenting the disagreement between the Owner and Contractor calculations of weekly delay costs.
 - c. Failure to provide written notification is interpreted as acceptance that Owner records are accurate.
- C. Contract adjustment is made as written modification to the contract through change order, when warranted, unless the Contractor does not notify the City Engineer in accordance with this article.
1. Time will be added to the contract based on the overall extension of the critical path of the project schedule attributed to the delay-causing event.
- D. Delay compensation for excusable delays is made in accordance with Section 01282.
- E. The Contractor may pursue a claim for additional compensation or contract adjustment as specified in Section 00727 if the City Engineer decides a contract adjustment identified by the Contractor is unnecessary and the Contractor does not agree with the City Engineer's decision.

1.11 FAILURE TO COMPLETE ON TIME

- A. Achieve substantial completion within the specified contract time. The Owner shall deduct the sum specified in the Agreement from any money due for each calendar day that any work remains necessary for substantial completion after the specified contract time including any approved extensions.
- B. Achieve physical completion no later than 30 calendar days after substantial completion. The Owner shall deduct the sum specified in the Agreement per day from any money due for each calendar day beyond 30 calendar days following substantial completion for any work necessary for physical completion.
- C. Achieve contract completion no later than 30 calendar days after notification of physical completion or final acceptance. The Owner shall deduct the sum specified in the Agreement per day from any money due for each calendar day beyond 30 calendar days following notification of final acceptance that any Contractor obligation under the contract remains unfulfilled
- D. Continuing and completing the work after the contract time expires does not waive the Owner's rights under the contract.

1.12 CONTRACT TERMINATION FOR DEFAULT

- A. The Owner may declare the Contractor to be in default and terminate the contract if the Contractor:
 1. Does not begin the work under the contract within the time specified.
 2. Does not perform the work with sufficient resources to assure the prompt completion of the work.
 3. Does not meet contract work requirements or neglects or refuses to remove and replace rejected materials or unacceptable work.
 4. Stops work.
 5. Does not resume stopped work within the time specified upon notification from the Owner.
 6. Becomes insolvent or is bankrupt or commits related acts.
 7. Is non-responsive to final third-party judgments.

8. Makes an assignment for the benefit of creditors without the Owner's approval.
 9. Does not comply with contract requirements including minimum wage payments or EEO contract requirements.
 10. Is a party to fraud.
- B. The City Engineer may declare the Contractor in default by written notice to the Contractor and the Surety advising them of the actions required for remedy.
 - C. Comply with the written notice within 10 calendar days of receipt or the Owner has full power and authority to terminate the contract.
 - D. The Owner may appropriate or use any or all materials at the project site and enter into another contract for completion of the work according to the terms and provisions thereof or use such methods as determined by the Owner to complete the contract.
 - E. All costs and charges incurred by the Owner, including the cost of completing the work under the contract, are deducted from money owed or that may be owed the Contractor. The Contractor and Surety are liable and must pay the Owner for the difference if the expense exceeds the sum that would have been payable under the contract.
 - F. The rights and obligations of the parties will be the same as if the termination had been issued for public convenience if it is determined after termination of the Contractor's right to proceed, that the Contractor was not in default or that the delay was excusable.

1.13 CONTRACT TERMINATION FOR PUBLIC CONVENIENCE

- A. The Owner may by written order terminate the contract or any portion thereof after determining that for reasons beyond the Contractor's or the Owner's control, the Contractor is prevented from proceeding with or completing the work and that termination is in the public interest.
 1. Specifics on the termination and the effective date will be detailed in a Notice of Termination.
- B. Reasons for termination may include, but are not limited to:
 1. Executive Orders of the President or State Governor.
 2. National emergency that creates a serious shortage of materials.
 3. Orders from duly constituted authorities relating to energy conservation.
 4. Restraining Orders or Injunctions obtained by third-party citizen action resulting from national or local environmental protection laws or where the issuance of such order or injunction is primarily caused by acts or omissions of persons or agencies other than the Contractor.
 5. Court restraining orders based on acts or omissions of persons or agencies other than the Contractor.
 6. Conditions determined to be in the best interest of the Owner.
- C. Upon receipt of Notice of Termination, immediately:
 1. Stop work as specified.
 2. Place no further subcontracts or order materials, services, or facilities except as approved to complete any remaining portion of the contract.
 3. Terminate all subcontracts to the extent they relate to terminated work.
 4. Settle all outstanding liabilities and termination settlement proposals.

5. Transfer title and deliver to the Owner:
 - a. Unfabricated or partially fabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated,
 - b. Completed or partially completed plans, drawings, information, and other property required to be furnished to the Owner if the contract had been completed.
 6. Complete work not terminated.
 7. Coordinate a time and date with the City Engineer to inventory materials obtained but not yet used for the project.
 8. Take all necessary or directed actions to protect contract-related property that is in the possession of the Contractor and in which the Owner has or may have an interest.
- D. The Owner will pay for all completed items of work as of that date at the contract bid price when the Owner orders termination of a contract effective on a certain date.
1. The Owner will pay for partially completed work either at agreed prices or by force account methods.
 2. The Owner will pay for items that are eliminated in their entirety in accordance with Section 01282.
- E. Materials obtained by the Contractor that have not been incorporated into the project may be:
1. Purchased from Contractor at the option of the Owner at actual cost delivered to a prescribed location.
 2. Disposed of as mutually agreed.
- F. Contractor may submit a claim for additional costs not covered in the contract after receipt of Notice of Termination from the Owner.
1. Submit within 60 calendar days of the effective termination date.
 2. Include cost items such as:
 - a. Reasonable idle equipment time
 - b. Mobilization efforts
 - c. Bidding and project investigative costs
 - d. Overhead expenses attributable to the project terminated
 - e. Reasonable profit on work completed
 - f. Subcontractor costs not otherwise paid for
 - g. Actual idle labor cost if work is stopped before termination date
 - h. Guaranteed payments for private land usage as part of original contract
 - i. Any other direct cost the Contractor has incurred
 3. The negotiated settlement figure reached with the Contractor does not include loss of anticipated profits.
- G. Make cost records available to the Owner for determining the validity and amount of each item claimed and for providing a basis for negotiating an equitable settlement.
- H. Termination of a contract or portion thereof does not relieve the Contractor of contractual responsibilities for the work completed or relieve the Surety of its obligation for and concerning any just claim arising out of the work performed.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 00560

DATE

CHANGE ORDER NO.

PROJECT:

CONTRACTOR:

You are hereby requested to comply with the following changes from the contract plans and specifications.

Item No. (1)	DESCRIPTION OF CHANGES: quantities, units, prices, schedule, etc. (2)	Decrease (3)	Increase (4)
	Total of Decreases:		
	Total of Increases:		
	Net contract change		

The sum of \$ _____ is added to the total contract price. The total adjusted contract price to date is \$ _____

This document shall become an amendment to the contract and all provisions of the contract will apply hereby.

Accepted by Contractor:

Date:

Contractor

Recommended by Inspector:

Date:

Inspector

Recommended by Engineer:

Date:

GILSON ENGINEERING, INC.

Approved by Owner:

Date:

City/Client

**SECTION 00570
CERTIFICATE OF SUBSTANTIAL COMPLETION**

PROJECT:

DATE OF ISSUANCE:

OWNER:

ENGINEER: Gilson Engineering, Inc.
12401 South 450 East C2
Draper, Utah 84020

Contract N°:

CONTRACTOR:

CONTRACT FOR:

CONTRACT DATE:

This Certificate of Substantial Completion applies to all Work under the Contract Documents or the following parts thereof:

PER SPECIFICATIONS

To: _____
Owner

And To _____
Contractor

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR AND ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on:

DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract documents. The items in the tentative list shall be completed or corrected by the CONTRACTOR within 30 days of the above date of Substantial Completion.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as follows:

RESPONSIBILITIES

OWNER: SECURITY, OPERATION, MAINTENANCE, HEAT, UTILITIES, AND INSURANCE

CONTRACTOR: INSURANCE, WARRANTY, AND SAFETY

The following work must be completed:

This certificate does not constitute an acceptance of Work not in accordance with the contract documents nor is it a release of Contractor's obligation to complete the work in accordance with the contract documents.

Executed by the ENGINEER on _____

Gilson Engineering, Inc.
ENGINEER

By _____

CONTRACTOR accepts this certificate of Substantial Completion on _____, 20__.

CONTRACTOR

By _____

OWNER accepts this certificate of Substantial Completion on _____, 20__.

OWNER

By _____

**SECTION 00580
NOTICE OF COMPLETION
DATE:**

PROJECT:

TO:

CONTRACTOR:

You are hereby notified, in accordance with the Contract Documents including all changes and amendments, and no outstanding claims exist, that the WORK on this project is complete.

OWNER

By _____

Date _____

Receipt of the above NOTICE OF COMPLETION if hereby acknowledged on

this _____ day of _____, 20____.

CONTRACTOR

By _____

Date _____

SECTION 00700
GENERAL CONDITIONS
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SECTION 00700

GENERAL CONDITIONS

ARTICLE 1 — DEFINITIONS AND TERMINOLOGY

A. DEFINITIONS. Wherever used in these GENERAL CONDITIONS or in the other CONTRACT DOCUMENTS, the terms listed below will have the meanings indicated, which are applicable to both the singular and plural thereof:

- 1.1. ADDENDA -- Written or graphic instruments issued prior to the opening of BIDS which clarify, correct or change the BIDDING requirements or the CONTRACT DOCUMENTS, including SPECIFICATIONS and DRAWINGS.
- 1.2. AGREEMENT -- The written agreement between the OWNER and CONTRACTOR covering the WORK to be performed; other CONTRACT DOCUMENTS are attached to the AGREEMENT and made a part thereof as provided therein.
- 1.3. APPLICATION FOR PAYMENT -- Form accepted by the ENGINEER which is to be used by the CONTRACTOR in requesting progress or final payments; and which is to be accompanied by such supporting documentation as is required by the CONTRACT DOCUMENTS.
- 1.4. ASBESTOS -- Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
- 1.5. BID -- Offer or proposal of BIDDER submitted on the prescribed form setting forth prices for the WORK to be performed.
- 1.6. BIDDER -- Any person, firm or corporation submitting a BID for the WORK.
- 1.7. BIDDING DOCUMENTS -- The Invitation to Bid, Instructions to Bidders, Additional Invitation to Bidders, the BID form, and the proposed CONTRACT DOCUMENTS (including all ADDENDA issued prior to receipt of BIDS).
- 1.8. BIDDING REQUIREMENTS -- Invitation to Bid, Instructions to Bidders, Additional Instructions to Bidders and the BID form.
- 1.9. BONDS -- Bid, Performance and Payment Bonds and other instruments of security; furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.
- 1.10. CHANGE ORDER -- A document recommended by the ENGINEER, which is signed by the CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the WORK, or an adjustment in the CONTRACT PRICE or CONTRACT TIME, issued on or after the Effective Date of the AGREEMENT.
- 1.11. CONTRACT DOCUMENTS -- The AGREEMENT, ADDENDA (which pertain to the CONTRACT DOCUMENTS), CONTRACTOR's BID (including documentation accompanying the BID and any post-Bid documentation submitted prior to the NOTICE OF AWARD) when attached as an exhibit to the AGREEMENT, the BONDS, the NOTICE TO PROCEED, these GENERAL CONDITIONS, the SUPPLEMENTAL GENERAL CONDITIONS, the SPECIFICATIONS and the DRAWINGS, the same are more specifically identified in the AGREEMENT, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders and ENGINEER's written interpretations and clarifications issued pursuant to paragraphs 3.5, 3.6.1, and 3.6.3 on or after the Effective Date of the AGREEMENT.
 - 1.11.1. Shop Drawing submittals approved pursuant to paragraphs 6.26 and 6.27 and the reports and drawings referred to in paragraph 4.2.1 are not CONTRACT DOCUMENTS.
- 1.12. CONTRACT PRICE -- The moneys payable by the OWNER to the CONTRACTOR for completion of the WORK in accordance with the CONTRACT DOCUMENTS as stated in the AGREEMENT (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).
- 1.13. CONTRACT TIMES -- The number of days (computed as provided in paragraph 17.2) or the dates stated in the AGREEMENT: (i) to achieve Substantial Completion, and (ii) to complete the WORK so that it is ready for final payment as evidenced by the ENGINEER's written recommendation of final payment in accordance with paragraph 14.13.
- 1.14. CONTRACTOR -- The person, firm or corporation with whom the OWNER has entered into the Agreement.
- 1.15. DEFECTIVE -- An adjective which when modifying the word WORK refers to the WORK that is unsatisfactory, faulty or deficient, in that it does not conform to the CONTRACT DOCUMENTS; or does not meet the requirements of any inspection, reference standard, test or approval referred to in the CONTRACT DOCUMENTS; or has been damaged prior to the ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by the OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10)

1.16. DRAWINGS -- Drawings which show scope, extent and character of the WORK to be furnished and performed by the CONTRACTOR; and which have been prepared or approved by the ENGINEER and referred to in the CONTRACT DOCUMENTS.

1.16.1. Shop drawings are not Drawings as so defined.

1.17. EFFECTIVE DATE OF THE AGREEMENT -- Date indicated in the AGREEMENT on which it becomes effective, but if no such date is indicated it means the date on which the AGREEMENT is signed and delivered by the last of the two parties to sign and deliver.

1.18. ENGINEER -- The person, firm or corporation named as such in the AGREEMENT.

1.19. ENGINEER'S CONSULTANT -- A person, firm or corporation having a contract with the ENGINEER to furnish services as the ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

1.20. FIELD ORDER -- A written order issued by the ENGINEER which orders minor changes in the WORK in accordance with paragraph 9.5, but which does not involve a change in CONTRACT PRICE or CONTRACT TIME.

1.21. GENERAL REQUIREMENTS -- Section 00600 of the Specifications.

1.22. HAZARDOUS WASTE -- The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

1.23. INSPECTOR -- The authorized representative of the OWNER or ENGINEER who is assigned to observe the work on the PROJECT.

1.24. LAWS AND REGULATIONS; LAWS OR REGULATIONS -- Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

1.25. LIENS -- Liens, charges, security interests or encumbrances upon real property or personal property.

1.26. MILESTONES -- A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

1.27. NOTICE OF AWARD -- The written notice by the OWNER to the apparent successful BIDDER stating that upon compliance by the apparent successful BIDDER with the conditions precedent enumerated therein, within the time specified, the OWNER will sign and deliver the AGREEMENT.

1.28. NOTICE TO PROCEED -- A written notice given by the OWNER to the CONTRACTOR (with a copy to the ENGINEER) fixing the date on which the CONTRACT TIME will commence to run and on which the CONTRACTOR shall start to perform the CONTRACTOR's obligations under the CONTRACT DOCUMENTS.

1.29. NOTICE OF SUBSTANTIAL COMPLETION -- A written notice from the OWNER to the CONTRACTOR that the WORK on the PROJECT is substantially complete.

1.30. NOTICE OF COMPLETION -- A written notice from the OWNER to the CONTRACTOR that the WORK on the PROJECT is complete.

1.31. OWNER -- The public body or authority, corporation, association, firm or person with whom the CONTRACTOR has entered into the AGREEMENT and for whom the WORK is to be provided.

1.32. PARTIAL UTILIZATION -- Use by the OWNER of a substantially completed part of the WORK for the purpose for which it is intended (or a related purpose) prior to SUBSTANTIAL COMPLETION of all the WORK.

1.33. PCBs -- Polychlorinated biphenyls.

1.34. PETROLEUM -- Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

1.35. PROJECT -- The total construction of which the WORK to be provided under the CONTRACT DOCUMENTS may be the whole, or a part as indicated elsewhere in the CONTRACT DOCUMENTS.

1.36. RADIOACTIVE MATERIAL -- Source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

1.37. RESIDENT PROJECT REPRESENTATIVE -- The authorized representative of the OWNER or ENGINEER who may be assigned to the site or any part thereof.

- 1.38. **SAMPLES** -- Physical examples of materials, equipment, or workmanship that are representative of some portion of the WORK and which establish the standards by which such portion of the WORK will be judged.
- 1.39. **SHOP DRAWINGS** -- All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate how specific portions of the WORK shall be fabricated or installed.
- 1.40. **SPECIFICATIONS** -- Those portions of the CONTRACT DOCUMENTS consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the WORK and certain administrative details applicable thereto.
- 1.41. **SUBCONTRACTOR** -- An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- 1.42. **SUBSTANTIAL COMPLETION** -- The WORK (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, as evidenced by the ENGINEER's definitive certificate of SUBSTANTIAL COMPLETION, it is sufficiently complete, in accordance with the CONTRACT DOCUMENTS, so that the WORK (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the WORK is complete and ready for final payment as evidenced by the ENGINEER's written recommendation of final payment in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to all or part of the WORK refer to SUBSTANTIAL COMPLETION thereof.
- 1.43. **SUPPLEMENTAL GENERAL CONDITIONS** -- The part of the CONTRACT DOCUMENTS which amends or supplements these GENERAL CONDITIONS.
- 1.44. **SUPPLIER** -- A manufacturer, fabricator, supplier, distributor, material man or vendor having a direct contract with the CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the WORK by the CONTRACTOR or any Subcontractor.
- 1.45. **UNDERGROUND FACILITIES** -- All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.
- 1.46. **UNIT PRICE WORK** -- WORK to be paid for on the basis of unit prices.
- 1.47. **WORK** - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the CONTRACT DOCUMENTS. The WORK includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the CONTRACT DOCUMENTS.
- 1.48. **WORK CHANGE DIRECTIVE** -- A written directive to the CONTRACTOR, issued on or after the Effective Date of the AGREEMENT and signed by the OWNER and recommended by the ENGINEER, ordering an addition, deletion or revision in the WORK, or responding to differing or unforeseen physical conditions under which the WORK is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.23. A WORK CHANGE DIRECTIVE may not change the CONTRACT PRICE or the CONTRACT TIME, but is evidence that the parties expect that the change directed or documented by a WORK CHANGE DIRECTIVE will be incorporated in a subsequently issued CHANGE ORDER following negotiations by the parties as to its effect, if any, on the CONTRACT PRICE or CONTRACT TIME, as provided in paragraph 10.2.
- 1.49. **WRITTEN AMENDMENT** -- A written amendment of the CONTRACT DOCUMENTS, signed by the OWNER and CONTRACTOR on or after the Effective Date of the AGREEMENT and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the CONTRACT DOCUMENTS.
- 1.50. **WRITTEN NOTICE** -- A written notice to any party of the AGREEMENT relative to any part of this AGREEMENT, in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

B. TERMINOLOGY.

1.51. **INTENT OF CERTAIN TERMS OR ADJECTIVES** -- The Contract Documents include the terms "as allowed", "as approved", "as ordered", "as directed", or terms of like effect or import to authorize an exercise of professional judgment by the ENGINEER. In addition, the adjectives "reasonable", "suitable", "acceptable", "proper", "satisfactory", or adjectives of like effect or import are used to describe an action or determination of the ENGINEER as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to the ENGINEER any duty or authority to supervise or

direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.13 or any other provisions of the Contract Documents.

1.52. DAY -- The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

1.53. DEFECTIVE -- The word "defective", when modifying the word "Work", refers to Work that is unsatisfactory, faulty, or deficient in that it:

1.53.1. does not conform to the Contract Documents; or

1.53.2. does not meet the requirements of any applicable inspection, reference standard, test, or approved referred to in the Contract Documents; or

1.53.3. has been damaged prior to the ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by the OWNER at Substantial Completion in accordance with Paragraphs 14.9 and 14.10).

1.54. FURNISH, INSTALL, PERFORM, PROVIDE.

1.54.1. The word "furnish", when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation, and in usable or operable condition.

1.54.2. The word "install", when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

1.54.3. The words "perform" or "provide", when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

1.54.4. When "furnish", "install", "perform", or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of the CONTRACTOR, "provide" is implied.

1.55. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 --- PRELIMINARY MATTERS.

A. DELIVERY OF BONDS AND EVIDENCE OF INSURANCE:

2.01.1. When the CONTRACTOR delivers executed counterparts of the AGREEMENT to the OWNER, the CONTRACTOR shall also deliver to the OWNER such BONDS as CONTRACTOR may be required to furnish in accordance with paragraph 5.1.

2.01.2. Before any Work at the Site is started, the CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplemental General Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which the CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

B. COPIES OF DOCUMENTS:

2.02. The OWNER shall furnish to the CONTRACTOR two copies of the CONTRACT DOCUMENTS (unless otherwise specified in the SUPPLEMENTAL GENERAL CONDITIONS) as are necessary for the execution of the WORK. Additional copies will be furnished, upon request, at the cost of reproduction.

C. COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED:

2.03. The CONTRACT TIME will commence to run on the day indicated in the NOTICE TO PROCEED. A NOTICE TO PROCEED may be given at any time within thirty days after the Effective Date of the AGREEMENT. In no event will the CONTRACT TIME commence to run later than the sixty days after the day of the BID opening or the thirtieth day after the Effective Date of the AGREEMENT, whichever date is earlier.

D. STARTING THE PROJECT:

2.04. The CONTRACTOR shall start to perform the WORK on the date when the CONTRACT TIME commences to run, but no WORK shall be done at the site prior to the date on which the CONTRACT TIME commences to run.

E. TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

2.05.1. The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

2.05.2. The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

2.05.3. If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the contractor will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

2.05.4. The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

- a. To any preference, priority or allocation order duly issued by the OWNER.
- b. To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God or of the public enemy, acts of the OWNER, acts of other CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and
- c. To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 2.8.1 and 2.8.2 of this article.

F. BEFORE STARTING CONSTRUCTION:

2.06.1. Before undertaking each part of the WORK, the CONTRACTOR shall carefully study and compare the CONTRACT DOCUMENTS and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the ENGINEER any conflict, error, ambiguity or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the ENGINEER before proceeding with any WORK affected thereby; however, the CONTRACTOR shall not be liable to the OWNER or ENGINEER for failure to report any conflict, error, ambiguity or discrepancy in the CONTRACT DOCUMENTS, unless the CONTRACTOR knew or reasonably should have known thereof.

2.06.2. Within ten days after the Effective Date of the AGREEMENT (unless otherwise specified in the General Requirements), the CONTRACTOR shall submit to the ENGINEER for review:

- a. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the WORK, including any Milestones specified in the CONTRACT DOCUMENTS;
- b. a preliminary schedule of SHOP DRAWING and Sample submittals which will list each required submittal and the times for submitting, reviewing and processing such submittal;
- c. a preliminary schedule of values for all of the WORK which will include quantities and prices of items aggregating the CONTRACT PRICE and will subdivide the WORK into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of the WORK.

G. PRECONSTRUCTION CONFERENCE:

2.07. Within twenty days after the Effective Date of the AGREEMENT, but before the CONTRACTOR starts the WORK at the site, a conference attended by the CONTRACTOR, ENGINEER, OWNER and others as appropriate will be held to establish a working understanding among the parties as to the WORK; and to discuss the schedules referred to in paragraph 2.6, procedures for handling SHOP DRAWINGS and other submittals, and for processing APPLICATIONS FOR PAYMENT, and maintaining required records. The preconstruction conference shall be as described in Section 01300, ADMINISTRATIVE REQUIREMENTS.

H. FINALIZING SCHEDULES:

2.08. Unless otherwise provided in the CONTRACT DOCUMENTS, at least ten days before submission of the first APPLICATION FOR PAYMENT a conference attended by the CONTRACTOR, ENGINEER and others as appropriate will be held to review for acceptability to the ENGINEER as provided below the schedules submitted in accordance with paragraph 2.6 and

Section 01300. The CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and re-submit the schedules. No progress payment shall be made to the CONTRACTOR until the schedules are submitted to and acceptable to the ENGINEER, as provided below. The progress schedule will be acceptable to the ENGINEER as providing an orderly progression of the WORK to completion within any specified Milestones and the CONTRACT TIME, but such acceptance will neither impose on the ENGINEER responsibility for the sequencing, scheduling or progress of the WORK nor interfere with or relieve the CONTRACTOR from the CONTRACTOR's full responsibility therefore. The CONTRACTOR's schedule of SHOP DRAWING and Sample submissions will be acceptable to the ENGINEER as providing a workable arrangement for reviewing and processing the required submissions. The CONTRACTOR's schedule of values will be acceptable to the ENGINEER as to form and substance.

I. PROGRESS MEETINGS:

2.09. Progress meeting shall be scheduled by the CONTRACTOR as described in Section 01300.

ARTICLE 3 --- CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE.

A. INTENT:

3.01.1. The CONTRACT DOCUMENTS comprise the entire agreement between the OWNER and the CONTRACTOR concerning the WORK. The CONTRACT DOCUMENTS are complementary; what is called for by one is as binding as if called for by all. The CONTRACT DOCUMENTS will be construed in accordance with the law of the place of the Project.

3.01.2. It is the intent of the CONTRACT DOCUMENTS (including technical specifications and project drawings) to describe a functionally complete PROJECT (or part thereof) to be constructed in accordance with the CONTRACT DOCUMENTS. Any WORK, materials or equipment that may reasonably be inferred from the CONTRACT DOCUMENTS or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for, at no additional cost to the OWNER. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe the WORK, materials or equipment, such words or phrases shall be interpreted in accordance with that meaning.

3.01.3. Clarifications and interpretations of the CONTRACT DOCUMENTS shall be issued by the ENGINEER as provided in Article 9.

B. REFERENCE STANDARDS

3.02. Standards, Specifications, Codes, Laws, and Regulations.

3.02.1. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the LAWS or REGULATIONS of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or LAWS or REGULATIONS in effect at the time of the opening of BIDS (or, on the Effective Date of the AGREEMENT if there were no BIDS); except as may be otherwise specifically stated in the CONTRACT DOCUMENTS.

3.02.2. No provision of any such standard, specification, manual, code or any instruction of a Supplier shall be effective to change the duties and responsibilities of the OWNER, CONTRACTOR or ENGINEER, or any of their subcontractors, consultants, agents or employees from those set forth in the CONTRACT DOCUMENTS. No such provision or instruction shall be effective to assign to the OWNER, ENGINEER, or any of their related consultants, agents or employees, any duty or authority to supervise or direct the performance of the WORK, or any duty or authority to undertake responsibility inconsistent with the provisions of the CONTRACT DOCUMENTS.

C. REPORTING AND RESOLVING DISCREPANCIES

3.03.1 Reporting Discrepancies.

a. Contractor's Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, the CONTRACTOR shall carefully study and compare the CONTRACT DOCUMENTS and check and verify pertinent figures therein and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the ENGINEER any conflict, error, ambiguity, or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the ENGINEER before proceeding with any WORK affected thereby.

b. Contractor's Review of Contract Documents During Performance of Work: If, during the performance of the WORK, the CONTRACTOR discovers a conflict, error, ambiguity or discrepancy within the CONTRACT DOCUMENTS or between the CONTRACT DOCUMENTS and any provision of any such Law or Regulation applicable to the performance of the WORK or of any standard, specification, manual or code or of any instruction of any Supplier, the CONTRACTOR shall promptly report it to the ENGINEER in writing. The CONTRACTOR shall not proceed with the WORK affected thereby (except in an emergency as

required by Article 6) until an amendment or supplement to the CONTRACT DOCUMENTS has been issued by one of the methods indicated in Article 3.

c. The CONTRACTOR shall not be liable to the OWNER or ENGINEER for failure to report any conflict, error, ambiguity or discrepancy in the CONTRACT DOCUMENTS unless the CONTRACTOR knew or reasonably should have known thereof.

3.03.2. Resolving Discrepancies.

a. Except as otherwise specifically stated in the CONTRACT DOCUMENTS or as may be provided by amendment or supplement thereto issued by one of the methods indicated in Article 3, the provisions of the CONTRACT DOCUMENTS shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the provisions of the CONTRACT DOCUMENTS, and:

(1) the provisions of any such standard, specification, manual, code or instruction (whether or not specifically incorporated by reference in the CONTRACT DOCUMENTS); or

(2) the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the CONTRACT DOCUMENTS would result in violation of such Law or Regulation).

D. AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS:

3.04.1. The CONTRACT DOCUMENTS may be amended to provide for additions, deletions and revisions in the WORK or to modify the terms and conditions thereof by either a Change Order or a Written Change Directive.

3.04.2. The requirements of the CONTRACT DOCUMENTS may be supplemented, and minor variations and deviations in the WORK may be authorized, in one or more of the following ways:

a. a Field Order (subject to the provisions of to Article 9);

b. ENGINEER's acceptance of a SHOP DRAWING or sample (subject of the provisions of Article 6); or

c. ENGINEER's written interpretation or clarification (pursuant to paragraph 9.4); or

d. additional instructions and detail drawings, as necessary to carry out the WORK in accordance with the requirements of the CONTRACT DOCUMENTS. The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instruction.

E. REUSE OF DOCUMENTS:

3.05.1. The CONTRACTOR, and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the WORK under a direct or indirect contract with the CONTRACTOR, shall not:

a. have or acquire any title to or ownership rights in any of the DRAWINGS, SPECIFICATIONS or other documents (or copies of any thereof) prepared by or bearing the seal of the ENGINEER or the ENGINEER's consultants, including electronic media editions; or

b. reuse any of such DRAWINGS, SPECIFICATIONS, or other documents or copies on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by the ENGINEER.

3.05.2. The prohibition of this Paragraph B will survive final payment, or termination of the CONTRACT. Nothing herein shall preclude the CONTRACTOR from retaining copies of the CONTRACT DOCUMENTS for record purposes.

F. ELECTRONIC DATA

3.06.1. Copies of data furnished by the OWNER or ENGINEER to the CONTRACTOR or CONTRACTOR to OWNER or ENGINEER that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format or text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

3.06.2. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

3.06.3. When transferring documents in electronic media format, the transferring party makes not representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 --- AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

A. AVAILABILITY OF LANDS:

4.01.1. The OWNER shall furnish the lands upon which the WORK is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR, as indicated in the CONTRACT DOCUMENTS. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise provided in the CONTRACT DOCUMENTS.

a. The OWNER shall provide the CONTRACTOR with information which delineates and describes the lands owned, and easements and rights-of-way acquired on the lands upon which the WORK is to be performed.

b. The OWNER shall notify the CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which the CONTRACTOR will have to comply in performing the WORK.

c. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise provided in the CONTRACT DOCUMENTS.

d. If the CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustments in the CONTRACT PRICE or CONTRACT TIME or both, as a result of any delay in the OWNER's furnishing these lands, rights-of-way, easements, or parts thereof, the CONTRACTOR may make a claim therefore as provided in Article 11 and 12.

4.01.2. Upon reasonable written request, the OWNER shall furnish the CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and the OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

4.01.3. The CONTRACTOR shall provide, at his own expense and without liability to the OWNER, for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

B. SUBSURFACE AND PHYSICAL CONDITIONS:

4.02.1. Reports and Drawings. Reference is made to the Supplemental General Conditions for identification of:

a. Those reports of explorations and tests of subsurface conditions at or contiguous to the site that have been utilized by the ENGINEER in preparing the CONTRACT DOCUMENTS; and

b. Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) that have been utilized by the ENGINEER in preparing the CONTRACT DOCUMENTS.

4.02.2. Limited Reliance by CONTRACTOR on Technical Data Authorized: The CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not CONTRACT DOCUMENTS. Such "technical data" is identified in the Supplemental General Conditions. Except for such reliance on such "technical data", the CONTRACTOR may not rely upon or make any claim against the OWNER, ENGINEER or any of the ENGINEER's consultants with respect to:

a. the completeness of such reports and drawings for the CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by the CONTRACTOR and safety precautions and programs incident thereto; or

b. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

c. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such data, interpretations, opinions, or information.

C. DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS

4.03.1. Notice of Differing Subsurface or Physical Conditions: If the CONTRACTOR believes that any subsurface or physical condition at or contiguous to the site that is uncovered or revealed either:

a. is of such a nature as to establish that any "technical data" on which the CONTRACTOR is entitled to rely as provided in paragraphs 4.02 is materially inaccurate; or

b. is of such a nature as to require a change in the CONTRACT DOCUMENTS; or

c. differs materially from that shown or indicated in the CONTRACT DOCUMENTS; or

d. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the CONTRACT DOCUMENTS; then

e. the CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions affected thereby or performing any WORK in connection therewith (except in an emergency as permitted by Article 6), notify the OWNER and ENGINEER in writing about such conditions. The CONTRACTOR shall not further disturb such conditions or perform any WORK in connection therewith (except as aforesaid) until receipt of written order to do so.

4.03.2. ENGINEER's Review. After receipt of written notice as required above, the ENGINEER will promptly review the pertinent conditions, determine the necessity of the OWNER's obtaining additional explorations or tests with respect thereto and advise the OWNER in writing (with a copy to the CONTRACTOR) of the ENGINEER's findings and conclusions.

4.03.3. Possible Contract Document Change. If the ENGINEER concludes that a change in the CONTRACT DOCUMENTS is required as a result of a condition that meets one or more of the categories in paragraphs 4.03, a WORK CHANGE DIRECTIVE or a CHANGE ORDER will be issued as provided in Article 10 to reflect and document the consequences of such change.

4.03.4. Possible Price and Time Adjustments.

a. An equitable adjustment in the CONTRACT PRICE or CONTRACT TIME, or both, will be allowed to the extent that the existence of such uncovered or revealed condition causes an increase or decrease in the CONTRACTOR's cost of, or time required for performance of, the WORK; subject, however, to the following:

- (1) such condition must meet any one or more of the categories described in paragraphs 4.03.1; and
- (2) a change in the CONTRACT DOCUMENTS pursuant to paragraph 4.03.3 will not be an automatic authorization of nor a condition precedent to entitlement to any such adjustment; and
- (3) with respect to Work that is paid for on a Unit Price Basis, any adjustment in the CONTRACT PRICE will be subject to the provisions of Articles 9 and 11.

b. The CONTRACTOR shall not be entitled to any adjustment in the CONTRACT PRICE or TIME if:

- (1) the CONTRACTOR knew of the existence of such conditions at the time the CONTRACTOR made a final commitment to the OWNER in respect of CONTRACT PRICE and CONTRACT TIME by the submission of a bid or becoming bound under a negotiated contract; or
- (2) the existence of such conditions could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the BIDDING Requirements or the CONTRACT DOCUMENTS to be conducted by or for the CONTRACTOR prior to the CONTRACTOR's making such final commitment; or
- (3) the CONTRACTOR failed to give the written notice within the time and as required by this paragraph.

c. If the OWNER and CONTRACTOR are unable to agree on entitlement to or as to the amount or extent, of any, of any adjustment in the CONTRACT PRICE or CONTRACT TIME, or both, a claim may be made therefore as provided in Articles 11 and 12. However, the OWNER, ENGINEER, and any of ENGINEER's consultants shall not be liable to the CONTRACTOR for any claims, costs, losses or damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by the CONTRACTOR on or in connection with any other project or anticipated project.

D. UNDERGROUND FACILITIES

4.04.1. Shown or Indicated. The information and data shown or indicated in the CONTRACT DOCUMENTS with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the OWNER or ENGINEER by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplemental General Conditions:

a. the OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

b. The cost of all of the following will be included in the CONTRACT PRICE and the CONTRACTOR shall have full responsibility for:

- (1) reviewing and checking all such information and data,
- (2) locating all Underground Facilities shown or indicated in the CONTRACT DOCUMENTS,
- (3) coordination of the WORK with the owners of such Underground Facilities during construction, and
- (4) the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the

WORK.

4.04.2. Not Shown or Indicated:

a. If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the CONTRACT DOCUMENTS, the CONTRACTOR shall promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any WORK in connection therewith (except in an emergency as permitted by Article 6), identify the owner of such Underground Facility and give written notice thereof to that owner and to the OWNER and ENGINEER. The ENGINEER will promptly review the Underground Facility to determine the extent, if any, to which a change is required in the CONTRACT DOCUMENTS to reflect and document the consequences of the existence of the Underground Facility. During such time, the CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

b. If the ENGINEER concludes that a change in the CONTRACT DOCUMENTS is required, a Work Change Directive or a Change Order will be issued as provided in Article 10 to reflect and document such consequences. An equitable adjustment shall be made in the CONTRACT PRICE or CONTRACT TIME, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated with reasonable accuracy in the CONTRACT DOCUMENTS and the CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If the OWNER and CONTRACTOR are unable to agree on entitlement to or the amount or extent, if any, of any such adjustment in CONTRACT PRICE or CONTRACT TIME, the OWNER or CONTRACTOR may make a claim therefore as provided in Articles 11 and 12. However, the OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to the CONTRACTOR for any claims, costs, losses, or damages incurred or sustained by the CONTRACTOR on or in connection with any other project or anticipated project.

E. REFERENCE POINTS.

4.05. The OWNER shall provide engineering surveys to establish reference points for construction which in the ENGINEER's judgment are necessary to enable the CONTRACTOR to proceed with the WORK. The CONTRACTOR shall be responsible for laying out the WORK (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of the OWNER. The CONTRACTOR shall report to the ENGINEER whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points and property monuments by professionally qualified personnel.

F. HAZARDOUS ENVIRONMENTAL CONDITION AT SITE

4.06.1. Reports and Drawings: Reference is made to the Supplemental General Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the CONTRACT DOCUMENTS.

4.06.2. Limited Reliance by CONTRACTOR on Technical Data Authorized: The CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not CONTRACT DOCUMENTS. Such "technical data" is identified in the Supplemental General Conditions. Except for such reliance on such "technical data", the CONTRACTOR may not rely upon or make any claim against the OWNER, ENGINEER or any of the ENGINEER's consultants with respect to:

a. the completeness of such reports and drawings for the CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by the CONTRACTOR and safety precautions and programs incident thereto; or

b. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

c. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such data, interpretations, opinions, or information.

4.06.3. The CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Work Site which was not shown or indicated in the Drawings and Specification or identified in the CONTRACT DOCUMENTS to be within the scope of the Work. The CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by the CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom the CONTRACTOR is responsible.

4.06.4. If the CONTRACTOR encounters a Hazardous Environmental Condition or if the CONTRACTOR or anyone for whom the CONTRACTOR is responsible creates a Hazardous Environmental Condition, the CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by Article 6; and (iii) notify the OWNER and ENGINEER (and promptly thereafter confirm such notice in writing).

a. The OWNER shall promptly consult with the ENGINEER concerning the necessity for the OWNER to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any.

4.06.5. The CONTRACTOR shall not be required to resume work in connection with such hazardous condition or in any such affected area until after the OWNER has obtained any required permits related thereto and deliver to the CONTRACTOR special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely.

a. If the OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in the CONTRACT PRICE or CONTRACT TIMES as a result of such Work stoppage or such special conditions under which Work is agreed by the CONTRACTOR to be resumed, either party may make a claim therefore as provided in Articles 11 and 12.

4.06.6. If after receipt of such special written notice the CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then the OWNER may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work.

a. If the OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in the CONTRACT PRICE or CONTRACT TIMES as a result of deleting such portion of the Work, then either party may make a claim therefore as provided in Articles 11 and 12.

b. The OWNER may have such deleted portion of the Work performed by the OWNER's own forces or others in accordance with Article 7.

4.06.7. To the fullest extent permitted by Laws and Regulations, the OWNER shall indemnify and hold harmless the CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents, other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the CONTRACT DOCUMENTS to be included within the scope of the Work, and (ii) was not created by the CONTRACTOR or by anyone for whom the CONTRACTOR is responsible. Nothing in this Paragraph shall obligate the OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

4.06.8. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify and hold harmless the OWNER and ENGINEER, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by the CONTRACTOR or by anyone for whom the CONTRACTOR is responsible. . Nothing in this Paragraph shall obligate the CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

4.06.9. The provisions of Paragraphs B, C and D do not apply to a Hazardous Environmental uncovered or revealed at the Work Site.

ARTICLE 5 — BONDS AND INSURANCE.

A. PERFORMANCE, PAYMENT AND OTHER BONDS:

5.01.1. The CONTRACTOR shall furnish PERFORMANCE and PAYMENT BONDS, each in an amount at least equal to the CONTRACT PRICE as security for the faithful performance and payment of all CONTRACTOR's obligations under the CONTRACT DOCUMENTS. These BONDS shall remain in effect at least until one year after the date when final payment becomes due, except as otherwise provided by LAW or REGULATION or by the CONTRACT DOCUMENTS. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplemental General Conditions.

5.01.2. All BONDS shall be in the forms prescribed by the CONTRACT DOCUMENTS, except as provided by LAWS or REGULATIONS, and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All BONDS signed by an agent must be accompanied by a certified copy of such agent's authority to act.

5.01.3. If the surety on any BOND furnished by the CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.2, the CONTRACTOR shall promptly notify the OWNER and ENGINEER and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraph 5.01.2 and Paragraph B, and shall be acceptable to the OWNER.

B. LICENSED SURETIES AND INSURERS

5.02. All BONDS and insurance required by the CONTRACT DOCUMENTS to be purchased and maintained by the OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue the BONDS or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplemental General Conditions.

C. CERTIFICATES OF INSURANCE

5.03.1. The CONTRACTOR shall deliver to the OWNER, with copies to each additional insured identified in the Supplemental General Conditions, certificates of insurance (and other evidence of insurance requested by the OWNER or any other additional insured) which the CONTRACTOR is required to purchase and maintain in accordance with Article 5.

5.03.2. The OWNER shall deliver to the CONTRACTOR, with copies to each additional insured identified in the Supplemental Conditions, certificates of insurance (and other evidence of insurance requested by the CONTRACTOR or any other additional insured) which the OWNER is required to purchase and maintain in accordance with Article 5.

D. CONTRACTOR'S LIABILITY INSURANCE:

5.04.1. The CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the WORK being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from the CONTRACTOR's performance and furnishing of the WORK and CONTRACTOR's other obligations under the CONTRACT DOCUMENTS, whether it is to be performed or furnished by the CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform or furnish any of the WORK, or by anyone for whose acts any of them may be liable:

- a. Claims under workers' compensation, disability benefits and other similar employee benefit acts;
- b. Claims for damages because of bodily injury, occupational sickness or disease, or death of the CONTRACTOR's employees;
- c. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the CONTRACTOR's employees;
- d. Claims for damages insured by customary personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR; or (ii) by any other person for any other reason;
- e. Claims for damages, other than to the WORK itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from; and
- f. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

5.04.2. The policies of insurance so required by paragraph 5.04 to be purchased and maintained shall:

- a. with respect to insurance required by paragraphs 5.04, include as additional insured (subject to any customary exclusion in respect of professional liability) the OWNER, ENGINEER, and any other persons or entities identified in the Supplemental General Conditions, all of whom shall be listed as additional insured, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insured, and the insurance afforded to these additional insured shall provide primary coverage for all claims covered thereby;
- b. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplemental General Conditions or required by Laws and Regulations, whichever is greater;
- c. include completed operations insurance;
- d. include contractual liability insurance covering the CONTRACTOR's indemnity obligations under applicable portions of Article 6;
- e. contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least 30 days prior written notice has been given to the OWNER and CONTRACTOR and to each other additional insured identified in the Supplemental General Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to Article 5 will so provide);

f. remain in effect in effect at least until final payment and at all times thereafter when the CONTRACTOR may be correcting, removing or replacing defective WORK in accordance with Article 13; and

g. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

(1) the CONTRACTOR shall furnish the OWNER and each other additional insured identified in the Supplemental General Conditions to whom a certificate of insurance has been issued evidence, satisfactory to the OWNER and any such additional insured, of continuation of such insurance at final payment and one year thereafter.

E. OWNER'S LIABILITY INSURANCE:

5.05. In addition to the insurance required to be provided by the CONTRACTOR under paragraph 5.04, the OWNER, at the OWNER's option, may purchase and maintain at the OWNER's expense the OWNER's own liability insurance as will protect the OWNER against claims which may arise from operations under the CONTRACT DOCUMENTS.

F. PROPERTY INSURANCE:

5.06.1. Unless otherwise provided in the Supplemental General Conditions, the OWNER shall purchase and maintain property insurance upon the WORK at the site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplemental General Conditions or required by LAWS and REGULATIONS). This insurance shall:

a. include the interests of the OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER's consultants and any other persons or entities identified in the Supplemental General Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

b. be written on a Builder's Risk "all risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, false work and Work in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than caused by flood), and such other perils as may be specifically required by the Supplementary General Conditions;

c. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

d. cover materials and equipment stored at the site or at another location that was agreed to in writing by the OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by the ENGINEER;

e. allow for partial utilization of the Work by the OWNER;

f. include testing and startup; and

g. be maintained in effect until final payment is made unless otherwise agreed to in writing by the OWNER, CONTRACTOR and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

5.06.2. The OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplemental General Conditions or LAWS and REGULATIONS which will include the interests of the OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER's consultants and any other persons or entities identified in the Supplemental Conditions, each of whom is deemed to have an insurable interest and shall be listed as insured or additional insured.

5.06.3. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained by the OWNER in accordance with applicable portions of Article 5 will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least thirty days' prior written notice has been given to the OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with applicable portions of Article 5.

5.06.4. The OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of the CONTRACTOR, Subcontractors or others in the WORK to the extent of any deductible amounts that are provided in the Supplementary Conditions. The risk of loss within such identified deductible amount, will be borne by the CONTRACTOR, Subcontractors or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.06.5. If the CONTRACTOR requests in writing that other special insurance be included in the property insurance policies, provided under applicable portions of Article 5, the OWNER shall, if possible, include such insurance, and the cost thereof will be charged to the CONTRACTOR by appropriate CHANGE ORDER. Prior to commencement of the WORK at the site, the OWNER shall in writing advise the CONTRACTOR whether or not such other insurance has been procured by the OWNER.

G. WAIVER OF RIGHTS

5.07.1. The OWNER and CONTRACTOR intend that all policies purchased in accordance with applicable portions of Article 5 will protect the OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and all other persons or entities identified in the Supplemental Conditions to be listed as insured or additional insured in such policies and will provide primary coverage for all losses and damages caused by the perils covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insured or additional insured there under. The OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, employees and agents for all losses and damages caused by, arising out of or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants and all other persons or entities identified in the Supplemental Conditions to be listed as insured or additional insured under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by the OWNER as trustee or otherwise payable under any policy so issued.

5.07.2. The OWNER waives all rights against the CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, employees and agents of any of them, for:

- a. loss due to business interruption, loss of use or other consequential loss extending beyond direct physical loss or

damage to the OWNER's property of the Work caused by , arising out of or resulting from fire or other peril, whether or not insured by the OWNER; and

- b. loss or damage to the completed Project or part thereof caused by, arising out of or resulting from fire or other insured peril covered by any property insurance maintained on the completed Project or part thereof by the OWNER during partial utilization pursuant to paragraph 14.10, after substantial completion pursuant to paragraph 14.8 or after final payment pursuant to paragraph 14.13.

5.07.3. Any insurance policy maintained by the OWNER covering any loss, damage or consequential loss referred to in applicable portions of Article 5 shall contain provisions to the effect that in the event of payment of any such loss, damage or consequential loss the insurers will have no rights of recovery against any of the CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, employees and agents of any of them.

H. RECEIPT AND APPLICATION OF PROCEEDS:

5.08.1. Any insured loss under the policies of insurance required by paragraphs 5.7 and 5.8 will be adjusted with the OWNER and made payable to the OWNER as fiduciary for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.13. The OWNER shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged WORK shall be repaired or replaced, the moneys so received applied on account thereof and the WORK and the cost thereof covered by an appropriate CHANGE ORDER.

5.08.2. The OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to the OWNER's exercise of this power. If such objection be made, the OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, the OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, the OWNER as fiduciary shall give bond for the proper performance of such duties.

I. ACCEPTANCE OF BONDS AND INSURANCE; OPTION TO REPLACE:

5.09. If either party (the OWNER or CONTRACTOR) has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the CONTRACT DOCUMENTS, the objecting party shall so notify the other party in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.7. the OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the CONTRACT DOCUMENTS, such party shall notify the other party in writing of such failure to purchase prior to the start of Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

J. PARTIAL UTILIZATION, ACKNOWLEDGMENT OF PROPERTY INSURANCE:

5.10. If the OWNER finds it necessary to occupy or use a portion or portions of the WORK prior to SUBSTANTIAL COMPLETION of all the WORK, such use or occupancy may be accomplished in accordance with paragraph 14.10; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 --- CONTRACTOR'S RESPONSIBILITIES.

A. SUPERVISION AND SUPERINTENDENCE:

6.01.1. The CONTRACTOR shall supervise, inspect and direct the WORK competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the WORK in accordance with the CONTRACT DOCUMENTS. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specifications of a specific means, method, technique, sequence or procedure of construction which is shown or indicated in and expressly required by the CONTRACT DOCUMENTS.

6.01.2. The CONTRACTOR shall be responsible to see that the completed WORK complies accurately with the CONTRACT DOCUMENTS.

6.01.3. At all times during its progress of the Work, the CONTRACTOR shall assign a competent resident superintendent, who shall not be replaced without written notice to the OWNER and ENGINEER, except under extra-ordinary circumstances. The superintendent will be the CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to or received from the superintendent shall be binding on the CONTRACTOR.

B. LABOR; WORKING HOURS

6.02.1. The CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the CONTRACT DOCUMENTS. The CONTRACTOR shall at all times maintain good discipline and order at the Work site.

6.02.2. Except as otherwise required for the safety or protection of persons or the Work or property at the Work site or adjacent thereto, and except as otherwise stated in the CONTRACT DOCUMENTS, all Work at the site shall be performed during regular working hours. The CONTRACTOR will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without the OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to the ENGINEER.

C. SERVICES, MATERIALS, AND EQUIPMENT

6.03.1. Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the performance, testing, start-up and completion of the WORK.

6.03.2. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the CONTRACT DOCUMENTS. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of the OWNER. If required by the ENGINEER, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind and quality of materials and equipment.

6.03.3. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned and conditioned in accordance with instructions of applicable Supplier, except as otherwise provided in the CONTRACT DOCUMENTS.

D. PROGRESS SCHEDULE:

6.04.1. The CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.9 as it may be adjusted from time to time as provided below:

a. The CONTRACTOR shall submit to the ENGINEER for acceptance (to the extent indicated in paragraph 2.9) proposed adjustments in the Progress Schedule that will not change the Contract Times (or Milestones). Such adjustments will conform generally to the Progress Schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

b. Proposed adjustments in the Progress Schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Adjustments In Contract Times may only be made by a Change Order in accordance with Article 12.

E. SUBSTITUTES OR "OR-EQUAL" ITEMS:

6.05.1. Whenever an item of material or equipment is specified or described in the CONTRACT DOCUMENTS by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be accepted by the ENGINEER under the following circumstances described below:

a. "Or-Equal" Items: If in the ENGINEER's sole discretion an item of material or equipment proposed by the CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by the ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in the ENGINEER'S sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item named if:

(1) in the exercise of reasonable judgment the ENGINEER determines that:

(a) it is at least equal in materials of construction, quality, durability, appearance, strength and design characteristics;

(b) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed project as a functioning whole;

(c) it has a proven record of performance and availability of responsive service; and

(2) the CONTRACTOR certifies that, if approved and incorporated into the Work:

(a) there will be no increase in cost to the OWNER or increase in Contract Times; and

(b) it will conform substantially to the detailed requirements of the item named in the CONTRACT DOCUMENTS.

b. Substitute Items:

(1) If in the ENGINEER's sole discretion an item of material or equipment proposed by the CONTRACTOR does not qualify as an "or-equal" item under paragraph "a" above, it will be considered a proposed substitute item.

(2) The CONTRACTOR shall submit sufficient information as provided below to allow the ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. Requests for review of proposed substitute items of material or equipment will not be accepted by the ENGINEER from anyone other than the CONTRACTOR.

(3) The requirements for review by the ENGINEER will be as set forth in the applicable portions of the General Requirements and as the ENGINEER may decide is appropriate under the circumstances.

(4) If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the ENGINEER for review of a proposed substitute item of material or equipment that the CONTRACTOR seeks to furnish or use. The application:

(a) shall certify that the proposed substitute item will:

(i) perform adequately the functions and achieve the results called for by the general design;

(ii) be similar in substance to that specified; and

(iii) be suited to the same use as that specified.

(b) will state:

(i) the extent, if any, to which the use of the proposed substitute item will prejudice the CONTRACTOR'S achievement of Substantial Completion on time;

(ii) whether or not acceptance of the substitute for use in the WORK will require a change in any of the CONTRACT DOCUMENTS (or in the provisions of any other direct contract with the OWNER for work on the Project) to adapt the design to the proposed substitute item;

(iii) whether or not incorporation or use of the substitute item in connection with the WORK is subject to payment of any license fee or royalty.

(c) will identify:

(i) all variations of the proposed substitute from that specified; and

(ii) available engineering, sales, maintenance, repair and replacement service.

(d) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the ENGINEER in evaluating the proposed substitute.

(5) The ENGINEER may require the CONTRACTOR to furnish additional data about the proposed substitute item.

6.05.2. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence or procedure of construction is expressly required by the CONTRACT DOCUMENTS, the CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to the ENGINEER. The CONTRACTOR shall submit sufficient information to allow the ENGINEER, in the ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the CONTRACT DOCUMENTS. The requirements for review by the ENGINEER will be similar to those provided in paragraph 6.05.1.b.

6.05.3. Engineer's Evaluation: The ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to applicable portions of Article 6. The ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until the ENGINEER's review is complete, which will be evidenced by either a CHANGE ORDER for a substitute or an approved SHOP DRAWING for an "or equal". The ENGINEER will advise the CONTRACTOR in writing of any negative determination.

6.05.4. Special Guarantee: The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

6.05.5. Engineer's Cost Reimbursement: The ENGINEER will record the ENGINEER's costs in evaluating a substitute proposed or submitted by the CONTRACTOR pursuant to applicable portions of Article 6. Whether or not the ENGINEER accepts a substitute item so proposed or submitted by the CONTRACTOR, the CONTRACTOR shall reimburse the OWNER for the charges of the ENGINEER for making changes in the CONTRACT DOCUMENTS (or in the provisions of any other direct contract with the OWNER) resulting from the acceptance of each proposed substitute item.

F. CONCERNING SUBCONTRACTORS, SUPPLIERS AND OTHERS:

6.06.1. The CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to the OWNER and ENGINEER as indicated in Article 6), whether initially or as a replacement, against whom the OWNER or ENGINEER may have reasonable objection. The CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the WORK against whom the CONTRACTOR has reasonable objection.

6.06.2. If the Supplemental General Conditions require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to the OWNER in advance for acceptance by the OWNER and ENGINEER by a specified date prior to the Effective Date of the AGREEMENT, and if the CONTRACTOR has submitted a list thereof in accordance with the Supplemental General Conditions, the OWNER or ENGINEER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the CONTRACT DOCUMENTS) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation. The CONTRACTOR shall submit an acceptable substitute for the rejected Subcontractor, Supplier, or other individual or entity, and the CONTRACT PRICE will be adjusted by the difference in the cost occasioned by such substitution and an appropriate CHANGE ORDER will be issued. No acceptance by the OWNER or ENGINEER of any such Subcontractor, Supplier or other person or organization shall constitute a waiver or any right of the OWNER or ENGINEER to reject defective WORK.

6.06.3. The CONTRACTOR shall be fully responsible to the OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the WORK just as the CONTRACTOR is responsible for the CONTRACTOR's own acts and omissions. Nothing in the CONTRACT DOCUMENTS:

- a. shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between the OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization; nor
- b. shall create any obligation on the part of the OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by LAWS and REGULATIONS.

6.06.4. The CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with the CONTRACTOR.

6.06.5. The CONTRACTOR shall require all Subcontractors, Suppliers and such other persons and organizations performing and furnishing any of the Work to communicate with the ENGINEER through the CONTRACTOR.

6.06.6. The divisions and sections of the Specifications and the identifications of any DRAWING shall not control the CONTRACTOR in dividing the WORK among Subcontractors or Suppliers or delineating the WORK to be performed by any specific trade.

6.06.7. All WORK performed for the CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between the CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the CONTRACT DOCUMENTS for the benefit of the OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in applicable portions of Article 5, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against the OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants and all other additional insured for all losses and damages caused by, arising out of or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, the CONTRACTOR will obtain the same.

G. PATENT FEES AND ROYALTIES:

6.07.1. The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the WORK or the incorporation in the WORK of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the CONTRACT DOCUMENTS for use in the performance of the WORK and if to the actual knowledge of the OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the OWNER in the CONTRACT DOCUMENTS.

6.07.2. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify and hold harmless the OWNER, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the WORK or resulting from the incorporation in the WORK of any invention, design, process, product or device not specified in the CONTRACT DOCUMENTS.

H. PERMITS:

6.08. Unless otherwise provided in the Supplemental General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses. The OWNER shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the WORK, which are applicable at the time of opening of BIDS, or, if there are no BIDS, on the Effective Date of the AGREEMENT. The OWNER shall pay all charges of utility owners for connections for providing permanent service to the WORK.

I. LAWS AND REGULATIONS:

6.09.1 The CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither the OWNER nor ENGINEER shall be responsible for monitoring the CONTRACTOR's compliance with any Laws or Regulations.

6.09.2 If the CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, the CONTRACTOR shall bear all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be the CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve the CONTRACTOR of CONTRACTOR's obligations under Article 3.

6.09.3. Changes in Laws or Regulations not known at the time of the opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in the Contract Price or Contract Times. If the OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provide in Article 10.

J. TAXES:

6.10. The CONTRACTOR will pay all sales, consumer, use and other similar taxes required to be paid by the CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the WORK.

K. USE OF WORK SITE AND OTHER AREAS:

6.11.1. Limitations on the Use of the Work Site and Other Areas:

a. The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Work site and other areas identified in and permitted by the Contract Documents and as permitted by Laws and Regulations, and shall not unreasonably encumber the Work site and other areas with construction equipment or other materials or equipment. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas, resulting from the performance of the Work.

b. Should any claim be made by any such owner or occupant because of the performance of the Work, the CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

c. The CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless the OWNER, ENGINEER, ENGINEER's Consultant and anyone directly or indirectly employed by any of them from and against all

claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against the OWNER, ENGINEER or any other party indemnified hereunder to the extent caused by or based upon the CONTRACTOR's performance of the Work.

6.11.2. Removal of Debris During Performance of the Work.

a. During the progress of the Work, the CONTRACTOR shall keep the Work site and other areas free from accumulations of waste materials, rubbish and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

b. Cleaning: Prior to Substantial Completion of the Work, the CONTRACTOR shall clean the Work site and other areas and make it ready for utilization by the OWNER. At the completion of the Work, the CONTRACTOR shall remove from the Work site and other areas all waste materials, rubbish and debris as well as all tools, appliances, construction equipment, and machinery, and surplus materials; and shall restore to original condition all property not designated for alteration by the Contract Documents.

6.11.3. The CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

L. RECORD DOCUMENTS:

6.12. The CONTRACTOR shall maintain in a safe place at the Work site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders and written interpretations and clarifications (issued pursuant to Article 9) in good order and annotated to show all changes made during construction. These record documents, together with all approved samples and a counterpart of all approved Shop Drawings, will be available to the ENGINEER for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to the ENGINEER for the OWNER.

M. SAFETY AND PROTECTION:

6.13.1. The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with 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:

- a. all persons on the Work site or who may be affected by the Work;
- b. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- c. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

6.13.2. The CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property, or to protect ion of persons or property from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and of underground facilities and utility owners where prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.

6.13.3. All damage, injury or loss to any property referred to in this paragraph M caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR (except damage or loss attributable to the fault of the Drawings or Specifications or the acts or omissions of the OWNER or ENGINEER or ENGINEER's Consultant or anyone employed by any of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR or any Subcontractor, Supplier or other person or organization directly or indirectly employed by any of them).

6.13.4. The CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and the ENGINEER has issued a notice to the OWNER and CONTRACTOR in accordance with Article 14 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

N. SAFETY REPRESENTATIVE:

6.14. The CONTRACTOR shall designate a qualified and experienced safety representative at the Work site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

O. HAZARD COMMUNICATION PROGRAMS:

6.15. The CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Work site in accordance with Laws and Regulations.

P. EMERGENCIES:

6.16. In emergencies affecting the safety or protection of persons or the Work or property at the Work site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, is obliged to act to prevent threatened damage, injury or loss. The CONTRACTOR shall give the ENGINEER prompt written notice if the CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If the ENGINEER determines that a change in the Contract Documents is required because of the action taken by the CONTRACTOR in response to an emergency, a Work Change Directive or Change Order will be issued to document the consequences of such action.

Q. SHOP DRAWINGS AND SAMPLES:

6.17.1 The CONTRACTOR shall submit Shop Drawings and samples to the ENGINEER for review and acceptance in accordance with the accepted schedule of Shop Drawings and Sample submittals (as required in Article 2). Each submittal will be identified as the ENGINEER may require.

a. Shop Drawings.

(1) Submit number of copies specified in the General Requirements.

(2) Data shown on Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show the ENGINEER the services, materials and equipment the CONTRACTOR proposes to provide and to enable the ENGINEER to review the information for the limited purposes required by Article 6.

b. Samples. The CONTRACTOR shall also submit Samples to the ENGINEER for review and acceptance in accordance with the accepted schedule of Shop Drawings and Sample submittals.

(1) Submit number of Samples as specified in the Specifications.

(2) Clearly identified each sample as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and other data as the ENGINEER may require to enable the ENGINEER to review the submittal for the limited purposes required by Article 6.

6.17.2. Where a Shop Drawing or Sample is required by the CONTRACT DOCUMENTS or the Schedule or Submittals, any related Work performed prior to the ENGINEER's review and acceptance of the pertinent submittal will be at the sole expense and responsibility of the CONTRACTOR.

6.17.3. Submittal Procedures:

a. Before submitting each Shop Drawing or Sample, the CONTRACTOR shall have determined and verified:

(1) all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto;

(2) the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work;

(3) all information relative to the CONTRACTOR's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto; and

(4) shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

b. Each submittal will bear a stamp or specific written indication that the CONTRACTOR has satisfied the CONTRACTOR's obligations under the Contract Documents with respect to the CONTRACTOR's review and approval of that submittal.

c. With each submission, the CONTRACTOR shall give the ENGINEER specific written notice of such variations, if any, that the Shop Drawings or Samples submitted may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing and Sample submitted to the ENGINEER for review and acceptance of each such variation.

6.17.4. ENGINEER'S REVIEW.

a. The ENGINEER will provide timely review of Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals accepted by the ENGINEER. The ENGINEER's review and acceptance will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

b. The ENGINEER's review and acceptance will not extend to means, methods, techniques, sequences or procedures of constructions (except where a particular means, method, technique, sequence or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and acceptance of a separate item as such will not indicate acceptance of the assembly in which the item functions. The CONTRACTOR shall make corrections required by the ENGINEER, and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and acceptance. The CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by the ENGINEER on previous submittals.

c. The ENGINEER's review and acceptance of Shop Drawings or Samples shall not relieve the CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless the CONTRACTOR has complied with the requirements of applicable portions of Article 6 and in writing called the ENGINEER's attention to each such variation at the time of submission; and the ENGINEER has given written acceptance of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawings or Sample acceptance; nor will any acceptance by the ENGINEER relieve the CONTRACTOR from responsibility for complying with the requirements of applicable portions of Article 6.

d. Where a Shop Drawing or Sample is required by the Contract Documents, any related Work performed prior to the ENGINEER'S review and acceptance of the pertinent submittal will be at the sole expense and responsibility of the CONTRACTOR.

6.17.5. Resubmittal Procedures.

a. The CONTRACTOR shall make corrections required by the ENGINEER and shall return the required number of corrected copies of the Shop Drawings and submit, as required, new Samples for review and acceptance. The CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by the ENGINEER on previous submittals.

R. CONTINUING THE WORK:

6.18. The CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Article 15 or as the CONTRACTOR and OWNER may otherwise agree in writing.

S. CONTRACTOR'S GENERAL WARRANTY AND GUARANTEE:

6.19.1. The CONTRACTOR warrants and guarantees to the OWNER, ENGINEER and ENGINEER'S Consultants that all Work will be in accordance with the Contract Documents and will not be defective. The ENGINEER and its related entities shall be entitled to rely on representation of the CONTRACTOR's warranty and guarantee.

6.19.2. The CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

- a. abuse, modification or improper maintenance or operation by persons other than the CONTRACTOR, Subcontractors, Suppliers, or other individual or entity for whom the CONTRACTOR is responsible; or
- b. normal wear and tear under normal usage.

6.19.3. The CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of the Work that is not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

- a. observations by the ENGINEER;
- b. recommendation by the ENGINEER or payment by the OWNER of any progress or final payment;
- c. issuance of a certificate of Substantial Completion by the ENGINEER or any payment related thereto by the OWNER;
- d. use or occupancy of the Work or any part thereof by the OWNER;
- e. any review and acceptance of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by the ENGINEER;
- f. any inspection, test of approval by others; or

g. any correction of defective Work by the OWNER.

T. INDEMNIFICATION:

6.20.1. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify and hold harmless the OWNER, ENGINEER, and ENGINEER's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and all court and arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss or damage is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting there from, but only to the extent caused by any negligent act or omission of the CONTRACTOR, any subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

6.20.2. In any and all claims against the OWNER or ENGINEER or any of their respective consultants, agents, officers, directors or employees by any employee (or the survivor or personal representative of such employee) of the CONTRACTOR, any subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under applicable portions of Article paragraph 6 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any such subcontractor, Supplier or other person or organization under the workers' compensation acts, disability benefit acts or other employee benefit acts.

6.20.3. The indemnification obligations of the CONTRACTOR under applicable portions of Article 6 shall not extend to the liability of the ENGINEER and ENGINEER's consultants, officers, directors, employees, agents, consultants and subcontractors arising out of:

- a. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
- b. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

U. DELEGATION OF PROFESSIONAL DESIGN SERVICES

6.21.1. The CONTRACTOR will not be required to provide professional design services unless such services are specifically required by the CONTRACT DOCUMENTS for a portion of the Work or unless such services are required to carry out the CONTRACTOR's responsibilities for construction means, methods, techniques, sequences and procedures. The CONTRACTOR shall not be required to provide professional services in violation of applicable law.

6.21.2.. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the CONTRACTOR by the CONTRACT DOCUMENTS, the OWNER and ENGINEER will specify all performance and design criteria that such services must satisfy. The CONTRACTOR shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the ENGINEER.

6.21.3. The OWNER and ENGINEER shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided the OWNER and ENGINEER have specified to the CONTRACTOR all performance and design criteria that such services must satisfy.

6.21.4. Pursuant to this Paragraph 6.21, the ENGINEER's review and acceptance of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the CONTRACT DOCUMENTS. The ENGINEER's review and acceptance of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.

6.21.5. The CONTRACTOR shall not be responsible for the adequacy of the performance or design criteria required by the CONTRACT DOCUMENTS.

ARTICLE 7 --- OTHER WORK

A. RELATED WORK AT SITE:

7.01.1 The OWNER may perform other work related to the Project at the Site by the OWNER's own forces, or via other direct contracts therefore which shall contain General Conditions similar to these, or have other work performed by utility owners. If the fact that such other work is to be performed was not noted in the Contract Documents, then:

a. written notice thereof will be given to the CONTRACTOR prior to starting any such other work; and

b. if the OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefore as provided in Articles 10.

7.01.2. The CONTRACTOR shall afford each other contractor who is a party to such a direct contract, each utility owner and the OWNER, if the OWNER is performing other work with the OWNER's employees, proper and safe access to the Work site, and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contractor Documents, the CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the ENGINEER and the others whose work will be affected. The duties and responsibilities of the CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of the CONTRACTOR in said direct contracts between the OWNER and such utility owners and other contractors.

7.01.3. If the proper execution or results of any part of the CONTRACTOR's Work depends upon work performed by others under this Article 7, the CONTRACTOR shall inspect such other work and promptly report to the ENGINEER in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of the CONTRACTOR's Work. The CONTRACTOR's failure so to report will constitute an acceptance of such other work as fit and proper for integration with the CONTRACTOR's Work, except for latent or non-apparent defects and deficiencies in such other work.

B. COORDINATION:

7.02.1. If the OWNER intends to contract with others for the performance of other work on the Project at the site, the following will be set forth in the Supplemental General Conditions:

a. the individual or entity who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified;

b. the specific matters to be covered by such authority and responsibility will be itemized; and

c. the extent of such authority and responsibilities will be provided.

7.02.2. Unless otherwise provided in the Supplemental General Conditions, the OWNER shall have sole authority and responsibility in respect of such coordination.

C. LEGAL RELATIONSHIPS.

7.03.1. Paragraphs 7.A and 7.B are not applicable for utilities not under the control of the OWNER.

7.03.2. Each other direct contract of the OWNER under Paragraph 7.A shall provide that the other contractor is liable to the OWNER and the CONTRACTOR for the reasonable direct delay and disruption cost incurred by the CONTRACTOR as a result of the other contractor's actions or inactions.

7.03.3. The CONTRACTOR shall be liable to the OWNER and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of the CONTRACTOR's action or inaction.

ARTICLE 8 — OWNER'S RESPONSIBILITIES.

A. COMMUNICATIONS TO CONTRACTOR

8.01. Except as otherwise provided in these General Conditions, the OWNER shall issue all communications to the CONTRACTOR through the ENGINEER.

B. REPLACEMENT OF ENGINEER

8.02. In case of termination of the employment of the ENGINEER, the OWNER shall appoint an engineer to whom the CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

C. FURNISH DATA

8.03. The OWNER shall promptly furnish the data required of the OWNER under the Contract Documents.

D. PAY WHEN DUE

8.04. The OWNER shall make payments to the CONTRACTOR when they are due as provided in Article 14.

E. LANDS AND EASEMENTS; REPORTS AND TESTS

8.05. The OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in applicable portions of Article 4. Article 4 refers to the OWNER's identifying and making available to the CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Work site that have been utilized by the ENGINEER in preparing the Contract Documents.

F. INSURANCE

8.06. The OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

G. CHANGE ORDERS

8.07. The OWNER is obligated to execute Change Orders as indicated in Article 10.

H. INSPECTIONS, TESTS, AND APPROVALS

8.08. The OWNER's responsibility in respect of certain inspections, tests and approvals is set forth in Article 13.

I. LIMITATIONS ON OWNER'S RESPONSIBILITIES

8.09. The OWNER shall not supervise, direct or have control or authority over, nor be responsible for, the CONTRACTOR's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The OWNER will not be responsible for the CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

J. UNDISCLOSED HAZARDOUS ENVIRONMENTAL CONDITION

8.10. The OWNER's responsibility in respect of undisclosed Hazardous Environmental Condition is set forth in Article 4.

K. EVIDENCE OF FINANCIAL ARRANGEMENTS

8.11. If and to the extent the OWNER has agreed to furnish the CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy the OWNER's obligations under the Contract Documents, the OWNER's responsibility in respect thereof will be as set forth in the Supplemental General Conditions.

ARTICLE 9 — ENGINEER'S STATUS DURING CONSTRUCTION.

A. OWNER'S REPRESENTATIVE:

9.01. The ENGINEER will be the OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of the ENGINEER, as the OWNER's representative during construction, are set forth in the Contract Documents and will not be changed without written consent of the OWNER and the ENGINEER.

B. VISITS TO SITE:

9.02.1. The ENGINEER will make visits to the Work site at intervals appropriate to the various stages of construction as the ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of the CONTRACTOR's executed Work. Based on information obtained during such visits and observations, the ENGINEER, for the benefit of the OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. The ENGINEER will not be required to make exhaustive or continuous inspections on the Work site to check the quality or quantity of the Work. The ENGINEER's efforts will be directed toward providing for the OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and on-site observations, the ENGINEER will keep the OWNER informed of the progress of the Work and will endeavor to guard the OWNER against defective Work.

9.02.2. The ENGINEER's visits and on-site observations are subject to all the limitations on the ENGINEER's authority and responsibility set forth in paragraph 9.B.09. Particularly, but without limitation, during or as a result of the ENGINEER's on-site visits or observations of the CONTRACTOR's Work, the ENGINEER will not supervise, direct, control or have authority over or be responsible for the CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work.

C. PROJECT REPRESENTATION:

9.03. If the OWNER and ENGINEER agree, the ENGINEER will furnish a Resident Project Representative to assist the ENGINEER in providing more continuous observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplemental General Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.B.09. If the OWNER designates another representative or agent to represent the OWNER at the Work site who is not the ENGINEER's Consultant, agent or employee, the responsibilities and limitations thereon of such other individual or entity will be as provided in the Supplemental General Conditions.

D. AUTHORIZED VARIATIONS IN WORK:

9.04. The ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on the OWNER and also on the CONTRACTOR who shall perform the Work involved promptly. If the OWNER or the CONTRACTOR believes that a Field Order justifies an adjustment in the Contract Price or Contract Time, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of such adjustment, the OWNER or CONTRACTOR may make a Claim therefore as provided in Article 10.

E. REJECTING DEFECTIVE WORK:

9.05. The ENGINEER will have authority to disapprove or reject Work which the ENGINEER believes to be defective, or that the ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The ENGINEER will also have authority to require special inspection or testing of the Work as provided in Article 13, whether or not the Work is fabricated, installed or completed.

F. SHOP DRAWINGS, CHANGE ORDERS AND PAYMENTS:

9.06.1. In connection with the ENGINEER's authority, and limitations thereof, as to Shop Drawings and Samples, see Article 6.

9.06.2. In connection with the ENGINEER's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see applicable paragraphs of Article 6.

9.06.3.. In connection with the ENGINEER's authority as to Change Orders, see Articles 10, 11 and 12.

9.06.4. In connection with the ENGINEER's authority as to Applications for Payment, see Article 14.

G. DETERMINATIONS FOR UNIT PRICE WORK:

9.07. The ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR. The ENGINEER will review with the CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). The ENGINEER's written decisions thereon will be final and binding (except as modified by the ENGINEER to reflect changed factual conditions or more accurate data) upon the OWNER and CONTRACTOR, subject to the provisions of Article 10.

H. DECISIONS ON REQUIREMENTS OF CONTRACT DOCUMENTS AND ACCEPTABILITY OF WORK:

9.08.1. The ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work there under. All matters in question and other matters between the OWNER and CONTRACTOR arising prior to the date of final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the CONTRACT DOCUMENTS pertaining to the performance of the Work, will be referred initially to the ENGINEER in writing within 30 days of the event giving rise to the question.

9.08.2. The ENGINEER will, with reasonable promptness, render a written decision on the issue referred. If the OWNER or CONTRACTOR believe that any such decision entitles them to an adjustment in the Contract Price or Contract Time, or both, a Claim may be made under the applicable portion of Article 10. The date of the ENGINEER's decision shall be the date of the event giving rise to the issues referenced for the purposes of Article 10.

9.08.3 The ENGINEER's written decision on the issue referred will be final and binding upon the OWNER and CONTRACTOR, subject to the provisions of Article 10.

9.08.4. When functioning as interpreter and judge under this paragraphs 9.08, the ENGINEER will not show partiality to the OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

I. LIMITATIONS ON ENGINEER'S AUTHORITY AND RESPONSIBILITIES:

9.09.1. Neither the ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by the ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility of the ENGINEER shall create, impose or give rise to any duty owed by the ENGINEER to the CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

9.09.2. The ENGINEER will not supervise, direct, control or have authority over or be responsible for the CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The ENGINEER will not be responsible for the CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

9.09.3. The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing or furnishing any of the Work.

9.09.4. The ENGINEER's review of the final Application for Payment any accompanying documentation and all maintenance and operation instructions, schedules , guarantees, bonds and certificates of inspection, tests and approvals and other documentation required to be delivered by Article 14 will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests and approvals that the results certified indicate compliance with, the Contract Documents.

9.09.5. The limitations upon authority and responsibility set forth in this paragraph 9.09 shall also apply to the ENGINEER's Consultants, Resident Project Representative, and assistants, if any.

ARTICLE 10 --- CHANGES IN THE WORK; CLAIMS

A. AUTHORIZED CHANGES IN THE WORK

10.01.1. Without invalidating the Contract and without notice to any surety, the OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, the CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.01.2. If the OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of Work Change Directive, a claim may be made therefore as provided in this Article 10.

B. UNAUTHORIZED CHANGES IN THE WORK

10.02. The CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in Article 3, except in the case of an emergency as provided in Article 6 or in the case of uncovering Work as provided in Article 13.

C. EXECUTION OF CHANGE ORDERS

10.03.1. The OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by the ENGINEER covering:

a. changes in the Work, which are: (i) ordered by the OWNER pursuant to paragraph 10.A; (ii) required because of acceptance of defective Work under Article 13 or the OWNER's correcting defective Work under Article 13; or (iii) agreed to by the parties;

b. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

c. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by the ENGINEER pursuant to applicable portion of Paragraph 10.E; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, the CONTRACTOR shall carry on the Work and adhere to the Progress Schedule as provided in Article 6.

D. NOTIFICATION TO SURETY

10.04. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be the CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

E. CLAIMS

10.05.1. ENGINEER's Decision Required: All Claims, except those waived pursuant to Article 14, shall be referred to the ENGINEER for decision. A decision by the ENGINEER shall be required as a condition precedent to any exercise by OWNER or CONTRACTOR of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

10.05.2. Notice: Written notice stating the general nature of each Claim, shall be delivered by the claimant to the ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless the ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Article 12. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Article 12. Each Claim shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to the ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless the ENGINEER allows additional time).

10.05.3. ENGINEER'S Action: The ENGINEER will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

- a. deny the Claim in whole or in part,
- b. approve the Claim, or

c. notify the parties that the ENGINEER is unable to resolve the Claim if, in the ENGINEER's sole discretion, it would be inappropriate for the ENGINEER to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

10.05.3. In the event that ENGINEER does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

10.05.4. The ENGINEER's written actions or denial pursuant to this Paragraph 10.05 will be final and binding upon the OWNER and CONTRACTOR, unless the OWNER or CONTRACTOR invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

10.05.5 No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 --- COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

A. COST OF THE WORK

11.01.1 Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.2, necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to the CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by the OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.2.

a. Payroll costs for employees in the direct employ of the CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by the OWNER and CONTRACTOR. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Work Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by the OWNER.

b. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to the CONTRACTOR unless the OWNER deposits funds with the CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to the OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

c. Payments made by the CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by the OWNER, the CONTRACTOR shall obtain competitive bids from subcontractors acceptable to the OWNER and CONTRACTOR and shall deliver such bids to the OWNER, who will then determine, with the advice of the ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Article 11.

d. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

e. Supplemental costs including the following:

(1) The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

(2) Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Work Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of the CONTRACTOR.

(3) Rentals of all construction equipment and machinery, and the parts thereof whether rented from the CONTRACTOR or others in accordance with rental agreements approved by the OWNER with the advice of the ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

(4) Sales, consumer, use, and other similar taxes related to the Work, and for which the CONTRACTOR is liable, imposed by Laws and Regulations.

(5) Deposits lost for causes other than negligence of the CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

(6) Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by the CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with applicable portions of Article 5), provided such losses and damages have resulted from causes other than the negligence of the CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of the OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

(7) The cost of utilities, fuel, and sanitary facilities at the Work Site.

(8) Minor expenses such as telegrams, long distance telephone calls, telephone service at the Work Site, expresses, and similar petty cash items in connection with the Work.

(9) The costs of premiums for all bonds and insurance the CONTRACTOR is required by the CONTRACT DOCUMENTS to purchase and maintain.

11.01.2. Costs Excluded: The term Cost of the Work shall not include any of the following items:

a. Payroll costs and other compensation of the CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by the CONTRACTOR, whether at the Work Site or in the CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to or specifically covered by applicable portions of Article 11, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

b. Expenses of the CONTRACTOR's principal and branch offices other than the CONTRACTOR's office at the Work Site.

c. Any part of the CONTRACTOR's capital expenses, including interest on the CONTRACTOR's capital employed for the Work and charges against the CONTRACTOR for delinquent payments.

d. Costs due to the negligence of the CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

e. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in applicable portions of Article 11.

11.01.3. CONTRACTOR's Fee: When all the Work is performed on the basis of cost-plus, the CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the CONTRACTOR's fee shall be determined as set forth in applicable portions of Article 12.

11.01.4. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.1 and 11.01.2, the CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to the ENGINEER an itemized cost breakdown together with supporting data.

B. ALLOWANCES

11.02.1. It is understood that the CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to the OWNER and ENGINEER.

11.02.2. Cash Allowances

a. The CONTRACTOR agrees that:

(1) the cash allowances include the cost to the CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Work Site, and all applicable taxes; and

(2) the CONTRACTOR's costs for unloading and handling on the Work Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no

demand for additional payment on account of any of the foregoing will be valid.

11.02.3. Contingency Allowance

a. The CONTRACTOR agrees that a contingency allowance, if any, is for the sole use of the OWNER to cover unanticipated costs.

11.02.4. Prior to final payment, an appropriate Change Order will be issued as recommended by the ENGINEER to reflect actual amounts due the CONTRACTOR on account of the Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

C. UNIT PRICE WORK

11.03.1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

11.03.2. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR will be made by the ENGINEER subject to the provisions of Article 9.

11.03.3. Each unit price will be deemed to include an amount considered by the CONTRACTOR to be adequate to cover the CONTRACTOR's overhead and profit for each separately identified item.

11.03.4. The OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with applicable portions of Article 10 if:

- a. the quantity of any item of Unit Price Work performed by the CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
- b. there is no corresponding adjustment with respect any other item of Work; and
- c. the CONTRACTOR believes that the CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or the OWNER believes that the OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 --- CHANGE OF CONTRACT PRICE

A. CHANGE OF CONTRACT PRICE:

12.01.1. The Contract Price may only be changed by a Change Order. Any claim for an adjustment in the Contract Price shall be based on a written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of Article 10.

12.01.2. The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:

- a. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of applicable portions of Article 11); or
- b. Where the Work involved is not covered by unit prices contained in the Contract Documents, by mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.3).
- c. Where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under this paragraph 12.01.2, on the basis of the Cost of the Work (determined as provided in applicable portion of Article 11) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraphs 12.01.3).

12.01.3. CONTRACTOR's Fee: The CONTRACTOR's fee for overhead and profit shall be determined as follows:

- a. a mutually acceptable fixed fee; or
- b. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - (1) for costs incurred under Paragraphs 11.01.1.a and 11.01.1.b, the CONTRACTOR's fee shall be 15 percent;
 - (2) for costs incurred under Paragraph 11.01.1.c, the CONTRACTOR's fee shall be five percent;

(3) where one or more tiers of subcontractors are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.3.b.(1) is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee a 15 percent of the costs incurred by such Subcontractor under Paragraph 11.01.1.a and 11.01.1.b and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

(4) no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.1.d, 11.01.1.e and 11.01.2;

(5) the amount of credit to be allowed by the CONTRACTOR to the OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in the CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

(6) when both additions and credits are involved in any one change, the adjustment in the CONTRACTOR's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.3.b.(1) through 12.01.3.b.(5), inclusive.

B. CHANGE OF CONTRACT TIMES

12.02.1. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of Paragraph 10.E.

12.02.2. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

C. DELAYS

12.03.1. Where the CONTRACTOR is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of the CONTRACTOR, the Contract Times will be extended in an amount equal to the time lost due to such delay if a claim is made therefore as provided in paragraph 12.02.1. Delays beyond the control of the CONTRACTOR shall include, but not be limited to, acts or neglect by the OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions or acts of God.

12.03.2. If the OWNER, ENGINEER, or other contractors or utility owners performing other work for the OWNER as contemplated by Article 7, or anyone for whom the OWNER is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then the CONTRACTOR shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both, the CONTRACTOR's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to the CONTRACTOR's ability to complete the Work within the Contract Times.

12.03.3. If the CONTRACTOR is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of the OWNER, or other causes not the fault of and beyond control of the OWNER and CONTRACTOR, then the CONTRACTOR shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to the CONTRACTOR's ability to complete the Work within the Contract Times. Such an adjustment shall be the CONTRACTOR's sole and exclusive remedy for the delays described in this paragraph 12.03.3.

12.03.4. The OWNER, ENGINEER and the related entities of each of them shall not be liable to the CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by the CONTRACTOR on or in connection with any other project or anticipated project.

12.03.5. The CONTRACTOR shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of the CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of the CONTRACTOR.

ARTICLE 13 --- TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

A. NOTICE OF DEFECTS:

13.01. Prompt notice of all defective Work of which the OWNER or ENGINEER have actual knowledge will be given to the CONTRACTOR. All defective Work may be rejected, corrected or accepted as provided in this Article 13.

B. ACCESS TO WORK:

13.02. The OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of the OWNER, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the Work site and the Work at reasonable times for their observation, inspecting and testing. The CONTRACTOR shall provide them proper and safe conditions for such access and advise them of the CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

C. TESTS AND INSPECTIONS:

13.03.1. The CONTRACTOR shall give the ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.03.2. The OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests or approvals required by the Contract Documents except:

- a. for inspections, tests or approvals covered by paragraph 13.03.3 and 13.03.4 below;
- b. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.2 shall be paid as provided in said paragraph 13.04.3; and
- c. as otherwise specifically provided in the Contract Documents.

13.03.3. If Laws and Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, the CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith, and furnish the ENGINEER the required certificates of inspection, or approval.

13.03.4. The CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connections with any inspections, tests or approval required in connection with the OWNER's or ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to the CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to the OWNER and ENGINEER.

13.03.5. If any Work (or the work of others) that is to be inspected, tested or approved is covered by the CONTRACTOR without written concurrence of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for observation.

13.03.6. Uncovering Work as provided in paragraph 13.03.5 shall be at the CONTRACTOR's expense, unless the CONTRACTOR has given the ENGINEER timely notice of the CONTRACTOR's intention to cover the same and the ENGINEER has not acted with reasonable promptness in response to such notice.

D. UNCOVERING WORK:

13.04.1. If any Work is covered contrary to the written request of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for the ENGINEER's observation and replaced at the CONTRACTOR's expense.

13.04.2. If the ENGINEER considers it necessary or advisable that covered Work be observed by the ENGINEER or inspected or tested by others, the CONTRACTOR, at the ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment.

13.04.3. If it is found that uncovered Work is defective, the CONTRACTOR shall pay all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professional and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction, (including but not limited to all costs of repair or replacement of work of others); and the OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, the OWNER may make a claim therefore as provided in Article 10.

13.04.4. If, the uncovered Work is not found to be defective, the CONTRACTOR shall be allowed an increase in the Contact Price or an extension of Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefore as provided in Article 10.

E. OWNER MAY STOP THE WORK:

13.05. If the Work is defective, or the CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the OWNER may order the CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the Work shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

F. CORRECTION OR REMOVAL OF DEFECTIVE WORK:

13.06.1. Promptly after receipt of notice, the CONTRACTOR shall correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the ENGINEER, remove it from the Project and replace it with Work that is not defective. The CONTRACTOR shall pay all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.06.2. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, the CONTRACTOR shall take no action that would void or otherwise impair the OWNER's special warranty and guarantee, if any, on said Work.

G. CORRECTION PERIOD:

13.07.1. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for the CONTRACTOR's use by the OWNER or permitted by Laws and Regulations as contemplated in applicable portions of Article 6 is found to be defective, the CONTRACTOR shall promptly, without cost to the OWNER and in accordance with the OWNER's written instructions:

- a. repair such defective land or areas; or
- b. correct such defective Work; or
- c. if the defective Work has been rejected by the OWNER, remove it from the Project and replace it with Work that is not defective; and
- d. satisfactorily correct or remove and replace any damage to other Work, to the work of others or other land or areas resulting there from.

13.07.2. If the CONTRACTOR does not promptly comply with the terms of the OWNER's written instructions, or in an emergency where delay would cause serious risk of loss or damage, the OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professional and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by the CONTRACTOR.

13.07.3. In special circumstances, where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

13.07.4. Where defective Work (and damage to other Work resulting there from) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

13.07.5. The CONTRACTOR's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

H. ACCEPTANCE OF DEFECTIVE WORK:

13.08. If, instead of requiring correction or removal and replacement of defective Work, the OWNER (and, prior to the ENGINEER's recommendation of final payment, the ENGINEER) prefers to accept it, the OWNER may do so. The CONTRACTOR shall pay all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to the OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by the ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by the CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to the ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, the OWNER may make a claim therefore as provided in Article 10. If the acceptance occurs after such a recommendation, an appropriate amount will be paid by the CONTRACTOR to the OWNER.

I. OWNER MAY CORRECT DEFECTIVE WORK:

13.09.1. If the CONTRACTOR fails, within a reasonable time after written notice from the ENGINEER to correct defective Work or to remove and replace rejected Work as required by the ENGINEER in accordance with paragraph 13.06.1, or if the CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if the CONTRACTOR fails to comply with any other provision of the Contract Documents, the OWNER may, after seven days written notice to the CONTRACTOR, correct and remedy any such deficiency.

13.09.2. In exercising the rights and remedies under this Paragraph 13.09, the OWNER shall proceed expeditiously. In connection with such corrective and remedial action, the OWNER may exclude the CONTRACTOR from all or part of the Work site and suspend the CONTRACTOR's services related thereto, take possession of the CONTRACTOR's tools, appliances, construction equipment and machinery at the Work site, and incorporate in the Work all materials and equipment stored at the Work site or for which the OWNER has paid the CONTRACTOR but which are stored elsewhere. The CONTRACTOR shall allow the OWNER, the OWNER's representatives, agents and employees, OWNER's other contractors and the ENGINEER and ENGINEER's Consultants access to the Work site to enable the OWNER to exercise the rights and remedies under this Paragraph.

13.09.3 All claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by the OWNER in exercising such rights and remedies under this Paragraph 13.09 will be charged against the CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, the OWNER may make a claim therefore as provided in Article 10. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by corrections, removal or replacement of the CONTRACTOR's defective Work.

13.09.4. The CONTRACT shall not be allowed an extension of the Contract Times because of any delay in performance of the Work attributable to the exercise by the OWNER of the OWNER's rights and remedies under this Paragraph 13.09.

ARTICLE 14 --- PAYMENTS TO CONTRACTOR AND COMPLETION

A. SCHEDULE OF VALUES:

14.01. The Schedule of values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

B. PROGRESS PAYMENT:

14.02.1. Applications for Payments.

a. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), the CONTRACTOR shall submit to the ENGINEER for review an Application for Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Work site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that the CONTRACTOR has received the materials and equipment, free and clear of all Liens, charges, security interest, and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the OWNER's interest therein, all of which will be satisfactory to the OWNER.

(1) Unless otherwise prescribed by law, the Value of Materials stored at the Site shall be 80% of the value of such materials.

b. Beginning with the second Application for Payment, each Application shall include an affidavit of the CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge the CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

c. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

14.02.2. Review of Applications.

a. The ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to the OWNER, or return the Application to the CONTRACTOR indicating in writing the ENGINEER's reason for refusing to recommend payment. In the latter case, the CONTRACTOR may make the

necessary corrections and resubmit the Application.

b. The ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by the ENGINEER to the OWNER, based on the ENGINEER's observations on the Work site of the executed Work as an experienced and qualified design professional and on the ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of the ENGINEER's knowledge, information and belief:

(1) that the Work has progressed to the point indicated;

(2) the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under applicable portions of Article 9, and to any other qualifications stated in the recommendation); and

(3) the conditions precedent to the CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is the ENGINEER's responsibility to observe the Work.

c. By recommending any such payment the ENGINEER will not thereby be deemed to have represented that:

(1) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to the ENGINEER in the Contract Documents; or

(2) that there may not be other matters or issues between the parties that might entitle the CONTRACTOR to be paid additionally by the OWNER or entitle the OWNER to withhold payment to the CONTRACTOR.

d. Neither the ENGINEER's review of the CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on the ENGINEER:

(1) to supervise, direct, or control the Work; or

(2) for the means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto; or

(3) for the CONTRACTOR's failure to comply with Laws and Regulations applicable to the CONTRACTOR's performance of the Work; or

(4) to make any examination to ascertain how or for what purposes the CONTRACTOR has used the moneys paid on account of the Contract Price; or.

(5) to determine that title to any of the Work, materials, or equipment has passed to the OWNER free and clear of any Liens.

e. The ENGINEER may refuse to recommend the whole or any part of any payment if, in the ENGINEER's opinion, it would be incorrect to make such representations to the OWNER stated in Paragraph 14.02.2.b. The ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment previously made, to such extent as may be necessary in the ENGINEER's opinion to protect the OWNER from loss because:

(1) the Work is defective, or completed Work has been damaged requiring correction or replacement;

(2) the Contract Price has been reduced by Change Orders;

(3) the OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09;

(4) the ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.02.1.

14.02.3. Payment Becomes Due.

a. Ten days after presentation of the Application for Payment to the OWNER with the ENGINEER's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.4) become due, and when due will be paid by the OWNER to the CONTRACTOR.

14.03.4. Reduction in Payment.

a. The OWNER may refuse to make payment of the full amount recommended by the ENGINEER because:

(1) claims have been made against the OWNER on account of the CONTRACTOR's performance or furnishing of the Work;

(2) Liens have been filed in connection with the Work, except where the CONTRACTOR has delivered a specific bond satisfactory to the OWNER to secure the satisfaction and discharge of such Liens;

(3) there are other items entitling the OWNER to a set-off against the amount recommended; or

(4) the OWNER has actual knowledge of the occurrence of any of the events enumerated in appropriate portions of paragraphs 14.02.2, or paragraph 15.02.1.

b. If the OWNER refuses to make payment of the full amount recommended by the ENGINEER, the OWNER will give the CONTRACTOR immediate written notice (with a copy to the ENGINEER) stating the reasons for such action and promptly pay the CONTRACTOR any amount remaining after deduction of the amount so withheld. The OWNER shall promptly pay the CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by the OWNER and CONTRACTOR, when the CONTRACTOR corrects to the OWNER's satisfaction the reasons for such action.

c. If it is subsequently determined that the OWNER's refusal was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.3.a.

C. CONTRACTOR'S WARRANTY OF TITLE

14.03. The CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to the OWNER no later than the time of payment free and clear of all Liens.

D. SUBSTANTIAL COMPLETION:

14.04.1. When the CONTRACTOR considers the entire Work ready for its intended use, the CONTRACTOR shall notify the OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by the CONTRACTOR as incomplete) and request that the ENGINEER issue a certificate of Substantial Completion.

14.04.2. Promptly after the CONTRACTOR's notification, the OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If the ENGINEER does not consider the Work substantially complete, the ENGINEER will notify the CONTRACTOR in writing giving the reason therefore.

14.04.3. If the ENGINEER considers the Work substantially complete, the ENGINEER will deliver to the OWNER a tentative certificate of Substantial Completion which shall fix the date of the Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. The OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to the ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, the ENGINEER concludes that the Work is not substantially complete, the ENGINEER will within 14 days after submission of the tentative certificate to the OWNER notify the CONTRACTOR in writing, stating the reasons therefore. If, after consideration of the OWNER's objections, the ENGINEER considers the Work substantially complete, the ENGINEER will within said 14 days execute and deliver to the OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as the ENGINEER believes justified after consideration of any objections from the OWNER.

14.04.4. At the time of delivery of the tentative certificate of Substantial Completion, the ENGINEER will deliver to the OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between the OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance and warranties and guarantees. Unless the OWNER and CONTRACTOR agree otherwise in writing and so inform the ENGINEER prior to the ENGINEER's issuing the definitive certificate of Substantial Completion, the ENGINEER's aforesaid recommendation will be binding on the OWNER and CONTRACTOR until final payment.

14.04.5. The OWNER shall have the right to exclude the CONTRACTOR from the Work site after the date of Substantial Completion, subject to allowing the CONTRACTOR reasonable access to complete or correct items on the tentative list.

E. PARTIAL UTILIZATION:

14.05.1. Prior to Substantial Completion of all the Work, the OWNER may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which the OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by the OWNER for its intended purpose without significant interference with the CONTRACTOR's performance of the remainder of the Work, subject to the following conditions:

a. The OWNER at any time may request the CONTRACTOR in writing to permit the OWNER to use any such part of the Work which the OWNER believes to be ready for its intended use and substantially complete. If and when the CONTRACTOR agrees that such part of the Work is substantially complete, the CONTRACTOR will certify to the OWNER and ENGINEER that such part of the Work is substantially complete and request the ENGINEER to issue a certificate of Substantial Completion for that part of the Work.

b. The CONTRACTOR at any time may notify the OWNER and ENGINEER in writing that the CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request the ENGINEER to issue a certificate of Substantial Completion for that part of the Work.

c. Within a reasonable time after either such request, the OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If the ENGINEER does not consider that part of the Work to be substantially complete, the ENGINEER will notify the OWNER and CONTRACTOR in writing giving the reasons therefore. If the ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

d. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

F. FINAL INSPECTION:

14.07. Upon written notice from the CONTRACTOR that the entire Work or an agreed portion thereof is complete, the ENGINEER will promptly make a final inspection with the OWNER and CONTRACTOR and will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. The CONTRACTOR shall immediately take such measure as are necessary to complete such Work or remedy such deficiencies.

G. FINAL PAYMENT:

14.07.1. Application for Payment.

a. After the CONTRACTOR has, in the opinion of the ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12) and other documents, the CONTRACTOR may make application for final payment following the procedure for progress payments.

b. The final Application for Payment shall be accompanied (except as previously delivered) by:

- (1) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.2.g;
- (2) consent of the surety, if any, to final payment;
- (3) a list of all claims against the OWNER that the CONTRACTOR believes are unsettled; and
- (4) complete and legally effective releases or waivers (satisfactory to the OWNER) of all Lien rights arising out of or Lien filed in connection with the Work.

c. In lieu of such releases or waivers of Liens specified in Paragraph 14.07.1.b and as approved by the OWNER, the CONTRACTOR may furnish receipts or releases in full and an affidavit of the CONTRACTOR that: (i) the releases and receipts include all labor, services, materials and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which the OWNER or OWNER's property might in any way be responsible, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, the CONTRACTOR may furnish a Bond or other collateral satisfactory to the OWNER to indemnify the OWNER against any Lien.

14.07.2. Engineer's Review of Application and Acceptance.

a. If, on the basis of the ENGINEER's observation of the Work during construction and final inspection, and the ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, the ENGINEER is satisfied that the Work has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing the ENGINEER's recommendation of payment and present the Application to the OWNER for payment. At the same time the ENGINEER will also give written notice to the OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, the ENGINEER will return the Application to the CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case the CONTRACTOR shall make the necessary corrections and resubmit the Application.

14.07.3. Payment Becomes Due.

a. Thirty days after presentation to the OWNER of the Application for Payment and accompanying documentation, the amount recommended by the ENGINEER, less any sum the OWNER is entitled to set off against the ENGINEER's recommendation, including but not limited to liquidated damages, will become due, and will be paid by the OWNER to the CONTRACTOR.

H. FINAL COMPLETION DELAYED

14.08. If, though no fault of the CONTRACTOR, final completion of the Work is significantly delayed, and if the ENGINEER so confirms, the OWNER shall, upon receipt of the CONTRACTOR's final Application for Payment (for Work fully completed and accepted) and recommendation of the ENGINEER, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by the OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the CONTRACTOR to the ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

I. WAIVER OF CLAIMS:

14.09.1. The making and acceptance of final payment will constitute:

a. A waiver of all claims by the OWNER against the CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the term of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

b. A waiver of all claims by the CONTRACTOR against the OWNER other than those previously made in accordance with the requirements herein and expressly acknowledged by the OWNER in writing and still unsettled.

ARTICLE 15 --- SUSPENSION OF WORK AND TERMINATION

A. OWNER MAY SUSPEND WORK:

15.01. At any time and without cause, the OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to the CONTRACTOR and ENGINEER which will fix the date on which the Work will be resumed. The CONTRACTOR shall resume the Work on the date so fixed. The CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if the CONTRACTOR makes a claim therefore as provided in Paragraph 10.05.

B. OWNER MAY TERMINATE FOR CAUSE:

15.02.1. the occurrence of any one or more of the following events will justify termination for cause:

a. The CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

b. The CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

c. The CONTRACTOR's disregard of the authority of the ENGINEER; or

d. The CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

15.02.2. If one or more of the events identified in Paragraph 15.02.1 occur, the OWNER may, after giving the CONTRACTOR (and surety) seven days written notice of its intent to terminate the services of the CONTRACTOR:

a. exclude the CONTRACTOR from the Work site, and take possession of the Work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the Work site, and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion),

b. incorporate in the Work all materials and equipment stored at the Work site or for which the OWNER has paid the CONTRACTOR but which are stored elsewhere, and

c. complete the Work as the OWNER may deem expedient.

15.02.3. If the OWNER proceeds as provided in Paragraph 15.02.2, the CONTRACTOR shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by the OWNER arising out of or resulting from completing the Work, such excess will be paid to the CONTRACTOR. If such claims, costs, losses and damages exceed such unpaid balance, the CONTRACTOR shall pay the difference to the OWNER. Such claims, costs, losses and damages incurred by the OWNER will be reviewed by the ENGINEER as to their reasonableness and when so approved by the ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph the OWNER shall not be required to obtain the lowest price for the Work performed.

15.02.4. Notwithstanding Paragraphs 15.02.2 and 15.02.3, the CONTRACTOR's services will not be terminated if the CONTRACTOR begins, within seven days of receipt of notice of intent to terminate, to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

15.02.5. Where the CONTRACTOR's services have been so terminated by the OWNER, the termination will not affect any rights or remedies of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of the moneys due the CONTRACTOR by the OWNER will not release the CONTRACTOR from liability.

15.02.6. If and to the extent that the CONTRACTOR has provided a performance bond under the provisions of Paragraph 5.01.1, the termination procedures of that bond shall supersede the provisions of Paragraph 15.02.2 and 15.02.3.

C. OWNER MAY TERMINATE FOR CONVENIENCE

15.03.1. Upon seven days written notice to the CONTRACTOR and ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy of the OWNER, terminate the Contract. In such case, the CONTRACTOR shall be paid for (without duplication of any items):

- a. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
- b. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
- c. all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and
- d. reasonable expenses directly attributable to termination.

D. CONTRACTOR MAY STOP WORK OR TERMINATE

15.04.1. If, through no act or fault of the CONTRACTOR, (i) the Work is suspended for more than 90 consecutive days by the OWNER or under an order of court or other public authority, or (ii) the ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or (iii) the OWNER fails for 30 days to pay the CONTRACTOR any sum finally determined to be due, then the CONTRACTOR may, upon seven days written notice to the OWNER and ENGINEER, and provided the OWNER and ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from the OWNER payment on the same terms as provided in Paragraph 15.03.

15.04.2. In lieu of terminating the Contract and without prejudice to any other right or remedy, if the ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or the OWNER has failed for 30 days to pay the CONTRACTOR any sum finally determined to be due, the CONTRACTOR may, seven days after written notice to the OWNER and ENGINEER, stop the Work until payment is made of all such amounts due the CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude the CONTRACTOR from making claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to the CONTRACTOR's stopping Work as permitted by this paragraph.

ARTICLE 16 --- DISPUTE RESOLUTION

A. METHODS AND PROCEDURES

16.01.1. Either the OWNER or CONTRACTOR may request mediation of any claim submitted to the ENGINEER for a decision under applicable portions of Article 10 before such decision becomes final and binding. The mediation will be governed

by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.5.

16.01.2. The OWNER and CONTRACTOR shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

16.01.3. If the Claim is not resolved by mediation, the ENGINEER's action under Paragraph 10.05.3 or a denial pursuant to Paragraph 10.05.3.c or 10.05.4 shall become final and binding 30 days after termination of the mediation, unless, within that time period, the OWNER or CONTRACTOR:

1. elects in writing to invoke any dispute resolution process provided for in the Supplemental General Conditions; or
2. agrees with the other party to submit the Claim to another dispute resolution process; or
3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 --- MISCELLANEOUS

A. GIVING NOTICE:

17.01.1. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or,
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

B. COMPUTATION OF TIME:

17.02. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

C. CUMULATIVE REMEDIES

17.03. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

D. SURVIVAL OF OBLIGATIONS

17.04. All representatives, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of the CONTRACTOR.

E. CONTROLLING LAW

17.05. This Contract is to be governed by the law of the state in which the Project is located.

F. HEADINGS

17.06. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

END OF GENERAL CONDITIONS

SUPPLEMENTAL GENERAL CONDITIONS

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1. NUMERATION OF DRAWINGS.

- a. The Project Drawings are enumerated in Section 01100 -- PROJECT DESCRIPTION.

2. INSURANCE. The requirements of applicable portions of Article 5 of the General Conditions for insurance to be purchased and maintained by the Contractor, and any renewals thereof, are modified and supplemented as follows:

- a. All liability insurance policies for the project shall include an endorsement naming the OWNER and the ENGINEER as additional insured.

- b. RE: GC5.04.1 - The CONTRACTOR General Liability Insurance shall be comprehensive form and shall include the following coverages:

- (1) Premises/operations, collapse hazard, underground hazard, products / completed operations hazard, contractual insurance applicable to CONTRACTOR's obligations under SGC 6.20 - INDEMNIFICATION, broad form property damage, independent contractors, and personal injury.

- (2) If the CONTRACTOR plans to use blasting agents during prosecution of the work, coverage for explosion hazard shall be provided before blasting operations are commenced.

- (3) Auto Liability Insurance shall be comprehensive form and shall cover owned, hired and non-owned vehicles.

- c. The limits of liability required for the respective coverages shall be not less than the following amounts or greater where required by law:

- (1) Comprehensive General Liability:

- (a) Bodily Injury:
\$1,000,000 Each Occurrence
\$2,000,000 Annual Aggregate, Products and Completed Operations

- (b) Property Damage:
\$ 500,000 Each Occurrence
\$1,000,000 Annual Aggregate

- (c) Personal Injury, with employment exclusion deleted:
\$1,000,000 Annual Aggregate

- (2) Comprehensive Automobile Liability:

- (a) Bodily Injury:
\$ 500,000 Each Person
\$1,000,000 Each Accident

- (b) Property Damage:
\$ 500,000 Each Occurrence

- (3) Worker's Compensation:

- (a) State: Statutory

- (b) Employer's Liability \$500,000

- d. Neither Fire and Extended Coverage nor Builder's Risk insurance are required for this project.

e. All insurance provided shall remain in effect until final payment and at all times thereafter when the CONTRACTOR may be correcting, removing or replacing defective work. In addition, the CONTRACTOR shall maintain such products/completed operations hazard insurance for at least two years after final payment and furnish the OWNER with evidence of continuation of such insurance at final payment and one year thereafter.

3. COORDINATION OF DRAWINGS AND SPECIFICATIONS.

a. Work Indicated Singly. Any part of the work which is not mentioned in the specifications, but is shown on the drawings, or any part not shown on the drawings but described in the specifications shall be furnished and installed by the CONTRACTOR as if fully described in the specifications and shown on the drawings.

b. Incidental Work. All minor details of work and materials which are not shown on the drawings, as well as such items which are not specifically mentioned in the specifications, but are obviously necessary for the proper completion of the work, shall be considered as incidental, and as being a part of and included with the work for which prices are given in the proposal, and no extra compensation shall be allowed the CONTRACTOR for the performance thereof.

c. Any part of the work which is not mentioned in these specifications, but is shown on the drawings, or any part not shown on the drawings but described in the specifications, shall be furnished and installed by the CONTRACTOR as if fully described in the specifications and shown on the drawings.

4. COMPETENT MEN AND EQUIPMENT TO BE EMPLOYED.

a. The CONTRACTOR shall employ suitable and competent mechanics for every kind of work. If any person employed by the CONTRACTOR is incompetent, disorderly or disobedient to the ENGINEER or his inspectors, or rude or abusive to any of the general public he shall be removed from the work and not again be employed upon the work without the consent of the ENGINEER.

b. The CONTRACTOR shall provide needed and approved equipment in good repair, to do any and all work specified and required as well as sufficient qualified workmen, as required and he shall prosecute the work diligently at all times and shall maintain his work in a clean and safe condition during the entire performance of this contract.

c. The CONTRACTOR shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract any and all supplemental plans and drawings, and in accordance with the directions of the ENGINEER or Inspector as given from time to time during the progress of this work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required.

d. The CONTRACTOR shall observe, comply with and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the ENGINEER and the OWNER.

5. CODES AND STANDARDS.

a. All materials and workmanship shall comply with all applicable codes, specifications, local ordinances, industry standards and utility company regulations.

(1) In case of difference between building codes, specifications, state laws, local ordinances, industry standards and utility company regulations and the contract documents, the most stringent shall govern. The CONTRACTOR shall promptly notify the ENGINEER or Inspector in writing of any such differences. If extra compensation is claimed because of such differences, it shall be negotiated and resolved before the work is done.

(2) When applicable regulations, codes and standards have been revised or superseded, the revision, edition or expression in effect at date of advertisement for bids shall govern the work.

b. Non-Compliance. Should the CONTRACTOR perform any work that does not comply with the requirements of applicable building codes, state laws, local ordinances, industry standards, and utility company regulations, he shall bear all costs arising in correcting the deficiencies.

c. Applicable Codes and Standards. Applicable codes and standards shall include all state laws, local ordinances, utility company regulations, and the applicable requirements of national and state-accepted codes and standards; including, but not limited to the following:

(1) Building Codes:

- IBC - International Building Code
- UBC - Uniform Building Code
- UPC - Utah Plumbing Code
- UOSHA - Utah Occupational Safety & Health Rules & Regulations - General Standard

(2) Industry Standards, Codes and Specifications

- AASHTO - American Association of State Highway and Transportation Officials
- ACI - American Concrete Institute
- AGA - American Gas Association
- AISC - American Institute of Steel Construction
- AISI - American Iron and Steel Institute
- AMCA - Air Moving & Conditioning Association
- ANSI - American National Standards Institute
- APWA - Manuals of Standard Specifications and Drawings
- ASHRAE - American Society of Heating, Refrigeration & Air Conditioning Engineers
- ASME - American Society of Mechanical Engineers
- ASTM - American Society of Testing and Materials
- AWWA - American Water Works Association
- AWS - American Welding Society
- CRSI - Concrete Reinforcing Steel Institute
- NBS - National Bureau of Standards
- NEC - National Electrical Code
- NEMA - National Electrical Manufacturers Association
- NEPA - National Fire Protection Association
- PCA - Portland Cement Association
- SMACNA - Sheet Metal & Air Conditioning Contractors National Association
- UL - Underwriters Laboratories, Inc.

6. INSPECTION AND TESTS.

a. All work and materials, and the manufacture and preparation of such materials from the beginning of the construction until the final completion and acceptance of the herein proposed work shall be subject to the inspection and rejection of the ENGINEER or his representative at such times as may suit his convenience, and no material shall be used until proper tests and approvals have been given. As soon as the materials have been inspected and tested, the CONTRACTOR shall immediately remove all rejected materials from the work, and to such a point distant therefrom as the ENGINEER or Inspector may require. The CONTRACTOR shall furnish, at his own expense, such labor as may be required to enable a thorough inspection and culling of all materials, as proposed to be used, in sufficient amounts as required to make proper tests.

b. The CONTRACTOR shall make application for an inspector at least twenty-four (24) hours before his services are required.

c. All inferior or imperfect work or materials that may be discovered before the completion and acceptance of the herein proposed work shall be corrected immediately upon the order of the ENGINEER, notwithstanding that it may have been overlooked by the ENGINEER or his representative.

d. It is hereby expressly agreed that inspections by the ENGINEER or Inspector shall not relieve the CONTRACTOR of his liability to furnish materials and workmanship in accordance with the specifications.

e. The ENGINEER and Inspectors shall at all times be free to perform their duties, and any intimidation of any inspector on the part of the CONTRACTOR or his employees shall be sufficient reason, if the ENGINEER desires, to cause the CONTRACTOR to remove the employees.

f. No materials shall be used before being inspected and approved by the ENGINEER or Inspector, but the failure or neglect on the part of said ENGINEER or Inspector to condemn or reject inferior materials or work shall not be construed to imply an acceptance of the same should their inferiority become evident at any time prior to the final acceptance of the work.

g. The ENGINEER, by reserving the right to inspect the doing of any work shall not have control of the CONTRACTOR's workers, methods of doing the work, or safety of the work or workers, but such inspection shall be limited to the control necessary to ensure that the final results will fully comply with the contract documents. Inspection by the ENGINEER or the OWNER shall in no way excuse the CONTRACTOR from fully complying with the Contract Documents.

h. Tests shall be required to determine suitability of materials, equipment and workmanship.

(1) The CONTRACTOR shall provide certificates showing that items of equipment and materials have been sampled, inspected and tested when the product is completed off the site.

(2) Except as otherwise provided by the Technical Specifications, the OWNER shall provide for sampling and testing of materials and workmanship performed on the Work site.

(3) As examples of the division of responsibility, the following table may be used as a guide:

<u>CONTRACTOR</u>		<u>OWNER</u>
Concrete aggregates	Concrete water	Pipe alignment
Concrete cement	Concrete slump	Paint thickness
Concrete strength	Reinforcing steel	Soil gradation (local material)
Pipe strength	Pipe leakage	
Machinery	Paint content	
Electrical materials	Soil density	
Soil gradation (imported or off site borrow)		

(4) These examples shall serve as a guide to the division of responsibilities for sampling and testing, and shall govern unless specific responsibilities are given elsewhere in these specifications.

7. SUBMITTAL OF SHOP DRAWINGS AND RELATED DATA.

a. Prior to fabrication and in ample time to permit satisfactory progress of the work, the CONTRACTOR shall submit shop drawings and related data covering equipment and fabricated materials to the ENGINEER for review. Submittals shall be in such detail as the ENGINEER may require for informing himself as to design, installation and operation of the items covered. Two copies shall be submitted for preliminary review, and six copies for final review.

b. Submittals not bearing CONTRACTOR's certification that he has reviewed, checked and approved the drawings and that they are in conformance with the requirements of the Contract Documents will not be reviewed by the ENGINEER.

c. Corrections or comments made on shop drawings during the ENGINEER's review shall not relieve the CONTRACTOR from compliance with requirements of the Contract Documents. The ENGINEER will check and review only for general conformance with the design concept of the project and general compliance with information given in the Contract Documents. The CONTRACTOR shall be responsible for: conforming and correlating all quantities and dimensions; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the safe and satisfactory performance of his work.

d. The CONTRACTOR shall require all suppliers of materials and equipment to include with their submittal a written statement that the materials and equipment being furnished are suitable and proper for the intended installation, that the supplier has investigated the intended use, and that the items will satisfactorily perform and operate in the installation.

e. Drawings of minor manufactured items may not be required by the ENGINEER; however, the CONTRACTOR shall furnish to the ENGINEER tabulated lists of such items, showing manufacturer's catalog data, together with samples or general data, as may be required to permit determination as to their acceptability for incorporation in the work.

f. The CONTRACTOR, at his own expense, shall make such changes in the fabrication and equipment drawings as may be found necessary by the ENGINEER to make the same conform to the Contract Documents. Prior to review and acceptance of such drawings by the ENGINEER, any work which the CONTRACTOR may do on that portion of the work is at his own risk; the OWNER will not be responsible for any expense incurred by the CONTRACTOR for changes to make work conform to the drawings as finally accepted.

g. The CONTRACTOR shall furnish complete operation, maintenance and lubrication instructions in triplicate covering all equipment, materials and supplies used in the work. Installation of equipment shall not begin until these instructions have been supplied to the ENGINEER.

8. SELECTION OF MATERIAL.

a. Materials or equipment noted on the drawings and in specifications by the trade or manufacturer's name are so designated primarily to establish standards of quality, finish, appearance, ruggedness of construction, and performance. It is not the intent to limit the choice of materials and equipment to the specific product designated.

b. The CONTRACTOR will be allowed to submit requests to substitute equal items of equipment and material for those items which the OWNER has not expressed a designated type and manufacturer in the award of the contract.

c. Such requests shall be made in writing, and shall be accompanied by complete data on which the ENGINEER may make determination on the merits of the proposed substitution. The written request shall state how the product proposed for substitution compares with or differs from the designated product in composition, size, arrangement, performance, etc., and shall show conclusively that the proposed substitute is equal in all respects to that which is shown on the drawings or specified. If, in the opinion of the ENGINEER, the proposed product is equal to or better than the designated product, it may be approved for use, subject, however, to all applicable provisions of the specifications. Such opinion and approval must be in writing.

d. When the BIDDER is required to submit alternate bids on items of equipment as manufactured by three different manufacturers, he shall submit bids on equipment manufactured by at least two of the manufacturers listed and may submit a bid on equipment made by a third manufacturer selected by the CONTRACTOR. The final selection of equipment for the work will be based on quality, conformity to the specifications, efficiency, past experience, maintenance and cost. The OWNER, on recommendation of the ENGINEER, will select the item and manufacturer and award the Contract based on this selection.

(1) Where alternate bids are required for equipment or materials manufactured from different materials or by different processes, the BIDDER shall submit bids on a minimum of three of the alternates except where less than three alternates are requested.

(2) Selection will be based on the bid price of the alternate as well as an analysis of total contract cost, quality, efficiency, maintenance and other features of the work which may be affected by the selection of that alternate.

(3) The BIDDER shall submit bids on all alternates so that the ENGINEER can make a complete analysis of the bid.

e. All requirements of the specifications must be adhered to and all modifications shall be made in the article specified by trade name, type, or model of manufacturer's equipment to make it conform to the specific requirements of the specifications.

f. Materials of a general description shall be the best of their several kinds, free from defects and adapted to the use for which provided.

g. The physical characteristics of all materials not particularly specified shall conform to the latest standards published by the American Society for Testing and Materials, or other recognized standards where applicable.

h. On all questions concerning acceptability of materials, classification of materials, execution of the work, and the determination of costs, the decision of the ENGINEER shall be final and binding upon all parties.

9. SURVEYS.

a. General. The ENGINEER at the OWNER's expense will establish lines and grades required for proper execution of the work. The minimum quantity of stakes or markers that will be set by the ENGINEER shall be as given herein as applicable to a given project.

(1) The ENGINEER's survey crews will not be available at all times for the work. The CONTRACTOR shall notify the ENGINEER at least 48 hours ahead of the time surveys will be required. The CONTRACTOR shall keep the ENGINEER advised on a current basis of construction survey requirements so that survey work may be coordinated with the CONTRACTOR's sequence of operations.

(2) It is the intent of the OWNER and the ENGINEER to check alignment and grades of the various parts of the project from time to time.

(3) The CONTRACTOR shall, without additional costs give such assistance and provide such ladders, lights or other equipment as may be required in establishing and checking lines and grades.

b. Location and Quantity of Stakes to be Provided By The ENGINEER. The ENGINEER shall furnish alignment and grade data in the form of offset stakes or markers, located a convenient distance from the centerline of the pipe, street, sidewalk, curb and gutter, etc., and referenced to the centerline of the work.

(1) Sanitary and Storm Sewer Lines. Line and grade stakes shall be provided at sewer manholes, clean outs and boxes for laser instrument setting and at a distance of 50-feet therefrom, to check the setting. Where laser instruments are not used and stakes are required at more frequent intervals than described above, the Contractor shall be responsible for establishing the additional control stakes required. See subparagraph "Contractor's Responsibility."

(2) Waterlines. Alignment markers shall be provided at valves, fittings, meters, hydrants, specials, and at not to exceed 100 feet for straight runs of pipe. Grade marks for waterlines shall be established where the ENGINEER considers grade to be critical.

(3) Structures. A maximum of eight (8) line and grade stakes shall be provided for each rectangular or square structure.

(4) Slope Staking. Slope stakes shall be provided at 50-foot intervals and at all changes in alignment.

(5) Roadway centerline and grade stakes and curb and gutter alignment and grade stakes shall be provided at 50-foot intervals and at directional changes.

(6) Area finish grade stakes shall be provided at 100-foot grids.

c. CONTRACTOR's Responsibility.

(1) The CONTRACTOR shall transfer line and grade from the stakes or marks referred to above, to the work and shall be responsible for the accuracy of the measurements from the stakes or marks to the work.

(2) Where laser instruments are not used to maintain alignment and grade, the CONTRACTOR shall establish additional alignment and grade stakes sufficient to provide control stakes at no greater than 50-foot intervals. These additional stakes shall be established from the control stakes provided by the ENGINEER. When the ENGINEER is requested to provide this additional staking for the CONTRACTOR, the ENGINEER shall be reimbursed and the extra cost shall be paid by the CONTRACTOR.

(a) Also, where string line is used to maintain grade instead of laser equipment, the CONTRACTOR shall at all times have a minimum of 150 feet of string line stretched ahead of the work and 100 feet behind.

(3) The CONTRACTOR shall be responsible for the accuracy of all stakes for alignment and grade established by the CONTRACTOR. However, the ENGINEER shall have the discretionary right to check the CONTRACTOR's stakes, alignment and grades at any time.

(a) Survey stakes, marks, grades, etc., set by the CONTRACTOR shall be established far enough ahead of their use so that the ENGINEER may have 24 hours during normal working time, to check the work prior to use by the CONTRACTOR. The CONTRACTOR shall notify the ENGINEER when the work is ready to check. Over-time cost and other cost incurred by the ENGINEER to accelerate this schedule for the CONTRACTOR's convenience shall be charged against the CONTRACTOR.

(4) The CONTRACTOR shall be responsible for the protection of all control stakes established by the ENGINEER. The ENGINEER shall be reimbursed for re-establishing stakes or bench marks that have been disturbed or destroyed and the extra cost shall be paid by the CONTRACTOR.

(5) The CONTRACTOR shall not disturb any survey monuments found in the line of the work unless written authority to do so is given by the ENGINEER. Cost incurred by ENGINEER in replacing monuments that have been disturbed by the CONTRACTOR without written approval shall be paid by the CONTRACTOR.

10. PROPERTY LIABLE TO DAMAGE.

a. The CONTRACTOR shall be liable for all damage, caused by his own negligence to water, gas, steam or other pipes, ducts, cables, flumes, poles, or conduits, or other property owned by any person, corporation or the OWNER. The CONTRACTOR shall repair or replace, as directed by and to the satisfaction of the OWNER and the ENGINEER, all water, sewer, irrigation, drainage or other pipes, flumes, conduits, hydrants, poles, or other property of the OWNER or others which may be injured or damaged by reason of the negligence or carelessness of the CONTRACTOR or any of his agents, servants, employees or subcontractors. If the CONTRACTOR shall fail or neglect to make such repairs or replacements within ten days after being notified by the ENGINEER to do so, then the OWNER may make repairs or replacement of property so injured or damaged; and the cost of so doing may be deducted from any sum due or to become due the CONTRACTOR under this contract. If the repairs are determined by the ENGINEER to be of an emergency nature, the CONTRACTOR shall not be allowed ten days to complete repairs or replacements but rather shall immediately make the necessary repair or replacement.

b. The CONTRACTOR shall take all possible care to avoid grass or forest fires. He shall assume responsibility for damage caused by any fire caused by his construction operations.

c. When excavating in the vicinity of buried utilities, the CONTRACTOR shall take special precautions, including but not necessarily limited to using metal detectors and hand excavation, to minimize damage to such utilities.

11. MOVING PROPERTY OF PUBLIC UTILITY. In case the ENGINEER, acting on application by the CONTRACTOR, determines that it is necessary to move the property of any public utility or franchise, the public utility or franchise will be notified by the ENGINEER to move the property within a specified reasonable time, and the CONTRACTOR shall not interfere with the property until after the expiration of the time specified, and then only as approved by the ENGINEER.

12. DAMAGE TO UTILITIES. The CONTRACTOR shall immediately notify the utility company, department or person involved and he shall satisfactorily repair or replace any utility which is damaged or broken due to the execution of the work under this contract or he shall arrange for the utility to perform the work. If the CONTRACTOR fails or neglects to make, or arrange with the utility company to make such repairs or replacements immediately, then the OWNER may make the necessary repairs and the cost of so doing will be deducted from any sum due or to become due the CONTRACTOR under this contract.

13. CLAIM FOR DAMAGE. The CONTRACTOR shall not be entitled to any claim for damage on account of hindrance or delay from any cause whatever, but if occasioned by an act or omission on the part of the OWNER, such hindrance or delay may entitle the CONTRACTOR to an extension of time in which to complete the work, which shall be determined by the OWNER, provided, that the CONTRACTOR shall give notice in writing of the cause of such delay. No extra time will be given for time elapsing before such notice is given.

14. PROPERTY REMOVED UNDER THE CONTRACT TO REMAIN THE PROPERTY OF ITS OWNER. All castings, grates, special fittings, hydrants, valves, valve boxes, pipe, poles, wire, building material, or other items removed during progress of the work, which in the ENGINEER's opinion have value to its OWNER shall remain the property of its OWNER at such point on or near the site of the work as the ENGINEER may direct.

15. SAFETY STANDARDS AND ACCIDENT PREVENTION.

a. With respect to all work performed under this contract the Contractor shall:

(1) Comply with the safety standards provisions of applicable laws, building and construction codes, the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America and State Safety Regulations, the General Safety Orders Covering Utah Industries as published by Industrial Commission of Utah, the OSHA standards as they apply, safety standards as required by the Department of Transportation and City or County Highway Department.

(2) The Contractor shall exercise every precaution at all times for the protection of persons (including employees) and property which shall include, as needed, the use of shoring, bracing, barricades, guards, night watchmen, red lighting and the elimination of hazardous conditions.

(3) The Contractor shall maintain at his office or other well-known place at the job site, all articles necessary for giving first aid to the injured; and shall have an employee who has completed the American Red Cross Standard First Aid Course or its equivalent, and standing arrangements for the immediate removal to a hospital for a doctor's care of persons (including employees) who may be injured on the job site. On job sites on which less than 10 employees are working, a standard first aid kit equipped to serve 10 to 25 people, may be substituted for the above requirements. However, in no case, shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or doctor's care.

16. OBSTRUCTION AND GUARDS.

a. The CONTRACTOR shall erect and maintain good and sufficient guards, barricades, light and signals at all unsafe places at or near the work, and shall in all cases maintain a safe passageway.

b. In the event the work under this contract may become hazardous to traffic or pedestrians, then the CONTRACTOR shall furnish, without added cost to the OWNER, such flagmen as required to direct and control traffic during such emergencies and until such hazards have been corrected.

17. CLEANING UP AND JOB SHUT-DOWN.

a. Immediately upon the completion of each section of the work as determined by the ENGINEER or the Inspector, the CONTRACTOR shall, at his own expense, clean up and remove all refuse materials of every kind resulting from the work; and upon failure to do so within twenty-four (24) hours after having been notified by the ENGINEER or Inspector, the work may be done by the OWNER and the cost thereof deducted from the amount of his final payment. The ENGINEER or Inspector will not make the final review of the project until all work required by the Contract has been completed and final clean up performed.

b. If, for any reason the work is closed down temporarily, the CONTRACTOR shall clean up all finished work and shall provide protection as provided in Paragraph "Protection of Work During Shut-Down;" and all other work under construction shall be cleaned up, material on hand shall be properly stored and made safe from damage or loss. The CONTRACTOR shall be responsible to see that the job is kept and maintained in a satisfactory condition during the entire time the work is closed down, roadways shall be made passable for local and emergency traffic at all times; and the CONTRACTOR shall be responsible for all materials, tools, and equipment entrusted to his care from damage, or theft, and for its safety during the time the work is closed down, as well as throughout the entire performance of the project work. Failure of the CONTRACTOR to comply with the above provisions during temporary shutdown of the work will be just cause for the OWNER to do the required work, and the cost deducted from the final amount due the CONTRACTOR.

18. PREFERENCE TO LOCALLY PRODUCED MATERIALS. The CONTRACTOR agrees that preference shall be given to locally produced materials and that foreign made items or items made using foreign materials shall not be used unless no source for items made in the U.S.A. exists.

19. PROTECTION OF WORK DURING SHUT-DOWN. The CONTRACTOR shall be responsible at all times during the construction period, or during the time the work is closed down for any reason, for the safety of all persons, materials, tools, equipment, etc. from theft, damage or injury to any of them or for damage done to the work that may be caused by his neglect or the neglect of his agents or employees, or by not keeping proper watch. The responsibility for the above, as well as providing competent watchmen at the job site, remains with the CONTRACTOR until such time as the work is completed, accepted by and turned over to the OWNER for operation.

20. EQUIPMENT AND MATERIALS. All materials and equipment for installation shall be new and shall bear the manufacturer's name, trade name and the UL label, ASME stamp or other symbols of approval in every case where a standard has been established for the particular material. The equipment and material to be furnished under each Section of the specification shall be essentially the standard product of a manufacturer regularly engaged in the production of the required type of equipment or material, and shall be the manufacturer's latest approved design.

a. Equipment and Materials of the Same General Type. Equipment and materials of the same general type shall be of the same make throughout the work to provide uniform appearance, operation and maintenance.

b. Protection. Equipment shall be tightly covered and protected against dirt, water and chemical or mechanical injury or theft. At the completion of the work, fixtures, equipment and materials shall be cleaned and polished thoroughly and turned over to the OWNER in a condition satisfactory to the ENGINEER or Inspector. Damage or defects developing before acceptance of the work shall be made good at the CONTRACTOR's expense.

c. Dimensions. It shall be the responsibility of the CONTRACTOR to insure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall furnish and install such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the drawings and specifications.

21. SANITATION.

a. The CONTRACTOR shall be fully responsible for the conduct of his workmen and the workmen of all subcontractors on the project. He will see that proper sanitary facilities are available and that all workmen are notified of the location of said facilities. Any workman committing any nuisance outside proper facilities will be cause for suspension of the whole work until the situation has been corrected to the complete satisfaction of the ENGINEER.

b. On projects where facilities are not readily available the CONTRACTOR shall provide and erect a chemical or marine type toilet at a point to be approved by the ENGINEER, for the use of CONTRACTOR's employees and other personnel on the construction. No use shall be made of dug hole privies. Following the period of necessity for such toilet, it shall be removed completely.

(1) Chemical toilet shall be of the approved type. The CONTRACTOR shall furnish all materials for said toilet and erect same at his sole cost and expense, and he shall maintain and remove the same upon completion of the need for its use wherever it is located.

22. COORDINATION OF WORK.

a. The CONTRACTOR shall review the drawings and specifications and shall report any discrepancies to the ENGINEER and obtain from him written instructions for changes necessary to avoid interference. Before installation, the CONTRACTOR shall make proper provision to avoid interferences in a manner approved by the ENGINEER. All changes required in the work of the CONTRACTOR caused by his neglect to do so shall be made by him at his own expense.

b. If, through acts of neglect on the part of the CONTRACTOR, any other Contractor or any Subcontractor shall suffer loss or damage on the work, the CONTRACTOR agrees to settle with such other Contractor or Subcontractor by agreement or arbitration if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the OWNER on account of any damage alleged to have been sustained, the OWNER shall notify the CONTRACTOR, who shall indemnify and hold harmless the OWNER against any such claim.

23. QUANTITIES OF ESTIMATE. Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonable necessary or desirable by the OWNER to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

24. COMPLIANCE WITH LAWS AND REGULATIONS. The CONTRACTOR shall comply, and require his subcontractors to comply, with the current provisions of Utah Code Ann. Sec. 34-30-1 et seq.; specifically but not limited to provisions of Utah law relating to hiring practices, payment for overtime, and preparation and preservation of payroll records.

a. Failure by the CONTRACTOR to comply with these requirements will be considered as a breach of this Contract, in addition to other penalties provided by Utah law. If the provisions of Utah Code Ann. Sec. 34-30-1 are not complied with, this Contract shall be void.

25. PARTIAL PAYMENTS AND ESCROW ACCOUNTS.

a. Partial Payments. Payment of monthly partial payment estimates submitted by the CONTRACTOR as described in the GENERAL CONDITIONS must, in most instances, be approved by the OWNER at a regularly scheduled monthly meeting. The CONTRACTOR will be advised during the preconstruction conference as to the scheduled dates of such meetings. Each partial payment estimate prepared by the CONTRACTOR shall be submitted to the ENGINEER at least ten (10) days prior to the scheduled date of the OWNER's monthly meeting.

b. Retainage Escrow. The provisions of Article 14 of the GENERAL CONDITIONS with respect to retainage on partial payments are hereby modified for public projects. In order to comply with the Utah State law enacted in 1983 requiring escrow accounts for retainage, the CONTRACTOR shall establish an escrow account in a manner acceptable to the Owner for the purpose of holding the CONTRACTOR's retainage. The OWNER will issue two checks for each partial payment; one check to the CONTRACTOR for work completed less retainage, and the second check for retainage to the Escrow Account.

(1) The OWNER will make arrangements with the successful Bidder with respect to either the establishment of the Escrow Account or waiver of the requirement by the CONTRACTOR, prior to giving "Notice to Proceed."

(2) The OWNER reserves the right to alter this procedure in any manner in accordance with the Utah State legislation governing escrow accounts.

c. Final Payment. As a condition for completion and final acceptance of the work by the ENGINEER and the OWNER, the CONTRACTOR and his surety shall certify that the final payment request submitted by the CONTRACTOR is correct and will constitute payment in full when paid, that the CONTRACTOR waives the right to make any additional claims, and that work has been performed in accordance with the contract documents.

26. PAYMENTS BY CONTRACTOR. The CONTRACTOR shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered; (b) for all materials, tools, and other expendable equipment to the extent of ninety percent (90%) of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools and equipment are delivered at the site of the project, and the balance of the cost thereof, not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used; and (c) to each of his Subcontractors, not later than the 5th day following each payment to the CONTRACTOR, the respective amounts allowed the CONTRACTOR on account of the work performed by his Subcontractors to the extent of each Subcontractor's interest therein.

27. "AS-CONSTRUCTED" DRAWINGS.

a. Before final acceptance, the CONTRACTOR shall provide the ENGINEER with a set of full size prints which have been marked to show the location of concealed portions of the project including: manholes, valves, tees, crosses, elbows, meters and laterals on water pipelines; electric wire cable conduit location shall be properly plotted to scale and noted by station, offset and elevation.

b. These "As-Constructed" prints shall also show all elevations of buried or concealed features from the ENGINEER's datum as shown on the "Construction" drawings.

c. The CONTRACTOR shall maintain these drawings on an up-to-date basis. The ENGINEER may call for "As-Constructed" drawings when a phase of the project is complete.

28. PRECONSTRUCTION CONFERENCE. Within ten (10) days after notification of contract award, the successful bidder together with his known principal Subcontractors, will be required to attend a preconstruction conference at a time and place designated by the OWNER. Subcontractors shall include, but not be limited to, major items of work, such as heating, electrical, plumbing and so forth. The purpose of the preconstruction conference is to discuss, among other considerations, the responsibilities of the successful bidder and his Subcontractors.

29. GUARANTEE.

a. The CONTRACTOR shall warrant and guarantee that the improvements provided and every part hereof will remain in good condition for a period of one year after the date of completion and conditional acceptance by the OWNER. The guarantee period for road surfaces and street improvements such as curb and gutter and sidewalk shall be three years. The date of conditional acceptance shall be the date of approval, by the Owner, of the final estimate for the work as prepared by the ENGINEER. The CONTRACTOR agrees to make all repairs and/or replacements, for all defects in workmanship, materials and equipment during the guarantee period, ordinary wear and tear and acts of God excepted, without additional charge or cost to the OWNER.

(1) The CONTRACTOR shall maintain all equipment until the date of conditional acceptance, at which time the OWNER will assume normal maintenance. It shall be the CONTRACTOR's responsibility to instruct the OWNER in all correct maintenance procedures for all items requiring maintenance.

(2) The CONTRACTOR also agrees that the performance and payment bond hereto attached shall remain in force until the conditions of this guarantee are fulfilled.

b. The determination of the necessity for repairs above mentioned rests entirely with the OWNER, whose decision shall be final and obligatory upon the CONTRACTOR. If the termination of the said period of one or three years shall fall within the months of November, December, January, February or March, said months shall not be included in the computation of the said period of one or three years, but said period shall be held and understood to terminate on the 15th day of April next thereafter, unless otherwise permitted by the OWNER. It is hereby expressly understood and agreed that the OWNER shall not finally accept the work before the date specified above, and then only in the case that all necessary repairs have been made according to standard methods approved by the ENGINEER.

30. PROGRESS DVD'S AND DIGITAL PHOTOGRAPHS.

a. Provide DVD Disc's and Digital photographs from a digital camera with at least 7.1 Mega Pixels of construction throughout progress of Work, produced by an experienced photographer, and acceptable to City Inspector and City Engineer.

b. Take photographs when and as directed by the City Inspector or City Engineer and as follows:

c. Views:

(1) Video tape and photographs shall show total project, from beginning to end, prior to start of work and after work has been completed; with additional footage or photographs to portray special items of interest and unusual conditions.

(2) Consult with City Inspector or City Engineer for instructions on views required to adequately show original conditions. No work shall be started until original conditions are adequately documented.

(3) Provide factual presentation.

(4) Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.

d. DVD's: Provide two copies.

(1) DVD's shall include narration to identify date, locations, and indicating special items of interest.

e. Photographs: Submitted on CD. Two Copies.

(1) Photographs' shall be burned on to a CD and shall be placed in chronological order.

(2) Identify each photograph with label description of Project, contract number, phase, orientation of view, date and time of view and name of individual who took photograph.

f. Deliver DVD's at the end of the project, or when directed by the Inspector or Engineer, with transmittal letter specified in this section.

g. Deliver CD's with each Application for Payment with transmittal letter specified in this Section.

h. Deliver CD's with photographs from total project to Owner upon completion of project with project record documents. Catalog and label photographs in chronological sequence, provide table of contents.

31. EASEMENTS. Where portions of the work are located on public or private property, easements and certain access permits will be obtained by the Owner. Easements will provide for the use of property for construction purposes to the extent indicated on or described in the easements. Copies of the easements and permits that have been acquired by the Owner are available at the office of the Engineer; and will be issued to the successful Bidder. It shall be the Contractor's responsibility to determine the adequacy of the easement obtained in every case and to abide by all requirements and provisions of the easement. The Contractor shall confine his construction operations to within the easement limits or public rights-of-way; or shall make special arrangements with the property owners or appropriate public agency for the additional area required.

It is anticipated that the required easements and access permits will be obtained before construction is started. However, should the procurement of any easement or permit be delayed, the Contractor shall schedule and perform the work around these areas until such a time as the easement or permit has been secured.

32. PERMITS AND FEES. The Contractor shall obtain all applicable building and inspection permits required by the City of Cottonwood Heights for work within the City; fees for these permits will be waived by the City.

33. SPECIAL REQUIREMENTS - DIVERSION OF EXISTING FLOWS. The Contractor shall furnish, connect, operate and maintain all pumps, hoses, temporary piping, temporary connections and other appurtenances required to bypass existing water flows around the individual areas of work during the prosecution of the project work, where and as required. The Contractor shall maintain the bypass systems at all times so that water flows from upstream from the project work areas, are uninterrupted; and to avoid any flooding of adjacent areas and across the state road. After the project work is completed and accepted by the Engineer, the Contractor shall remove all of the bypass systems.

Determination of the sizes of pumps, piping, hoses and related equipment; and the selection of connection points and methods of operating the bypass facilities shall rest solely with the Contractor; subject only to review and acceptance by the Engineer.

Bypassed water flows shall be discharged only into the existing channels, downstream from the project work areas. No discharge of water onto streets, land surfaces, or private ditches will be permitted.

The Contractor shall be responsible for any damage caused as a result of plugging or bypassing water flows.

34. MOBILIZATION. Mobilization shall include all preparatory work and operations required to perform the project work. Mobilization shall include the following:

- a. Obtaining all required insurance, bonds and work permits.
- b. Movement of personnel, equipment, supplies and incidental items to and from project site.
- c. Establishment of all offices, buildings and other facilities necessary for work on the project; and removal of all items after work is completed.
- d. Furnishing, erecting and maintaining all necessary construction signs and barricades; and removing all items after work is completed.
- e. All other work and operation which must be performed, or costs incurred, not otherwise paid for prior to beginning work on the various items on this project site.

35. TRAFFIC CONTROL. Traffic control shall include the following:

- a. Furnishing, erecting and maintaining all necessary traffic control signs and barricades; and removing all items after work is completed.
- b. Providing all necessary flagging.

SECTION 00725
SCOPE OF WORK

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Section 00555: Prosecution and Progress
- B. Section 00727: Control of Work
- C. Section 01282: Payment
- D. Section 01355: Environmental Protection
- E. Section 01554: Traffic Control
- F. Section 01741: Final Cleanup

1.02 REFERENCES

- A. UDOT and Utah AGC Partnering Field Guide

1.03 CONTRACT INTENT

- A. The contract states the roles and obligations of the Owner and Contractor regarding the construction, execution, and completion of work.
 - 1. Furnish all resources and incidentals required to complete the specified work.

1.04 PARTNERING

- A. The Owner encourages partnership between the Owner, the Contractor, and the subcontractors. This partnership uses the strengths of each organization to identify and achieve mutual goals.
- B. Implement partnering in accordance with the UDOT and Utah AGC Partnering Field Guide. Refer to <http://www.udot.utah.gov/go/standardsreferences>.
 - 1. Decide with the City Engineer whether to use an independent third party firm to implement facilitated partnering or to share in facilitation.
 - a. Contact the City Engineer within 30 days of Notice of Award and before the preconstruction conference to implement a third party facilitated partnering initiative.
 - 2. The Contractor and the City Engineer shall select a facilitator for the meeting and develop attendees list, agenda, duration, and location of a partnering workshop.
- C. Share any costs equally with the Owner to accomplish partnering.
- D. Follow-up workshops may be held as agreed by the Contractor and the City Engineer.

1.05 DIFFERING SITE CONDITIONS, CHANGES, AND REQUESTS OR CLAIMS FOR ADDITIONAL COMPENSATION

- A. Immediately notify the City Engineer verbally of alleged changes to the contract due to differing site conditions, extra work, altered work beyond the scope of the contract, actions taken by the Owner that change the contract terms and conditions, or upon discovering any other unforeseen condition or event that may result in a request or claim for additional compensation or time.
 - 1. Refer to Section 00555 for determining compensation and contract time extension for excusable delays.

2. Leave the site undisturbed and suspend work unless directed otherwise when differing site conditions on the project are encountered.
 3. Obtain written authorization from the City Engineer to perform affected work and incur contract item expense after discovering the change, condition, or event.
- B. Notification Requirements:
1. Provide the following information in writing within seven calendar days of when the change, condition, or event resulting in the request or claim for additional compensation is discovered.
 - a. Date, nature, and circumstances causing the change, condition, or event.
 - b. Name, title, and activity of each Owner representative aware of the change, condition, or event.
 - c. Identify documents and the substance of discussions about the change, condition, or event.
 - d. Basis for a claim that the work is not required by the contract.
 - e. Particular elements of contract performance for which compensation is being requested including:
 - 1) Pay items that have been or may be affected by the change, condition, or event.
 - 2) Labor or materials that will be added, deleted, or wasted by the change, condition, or event, and equipment that will be idled or added.
 - 3) Existing or anticipated delays and disruptions in contract performance, procedure, or order.
 - 4) Estimate of the time within which the Owner must respond to the notice to reduce project cost, delay, or disruption.
 2. Failure to provide written notification within seven calendar days of when the change, condition, or event is noticed will limit any contract adjustment, when warranted, to those costs or impacts incurred after written notification is received by the City Engineer.
 3. Failure to provide required notice under this article constitutes a waiver for any claim resulting from the alleged change, condition, or event.
- C. Notify the City Engineer and continue the work unaffected by the alleged differing site conditions, change, condition, or event, to the extent possible under the contract.
1. The City Engineer will provide a written response within seven calendar days of receiving the notice to do one of the following:
 - a. Confirm the change, condition, or event and, when necessary, direct how the work will proceed.
 - b. Deny the change, condition, or event, and direct how the work will proceed.
 - c. Advise that there is not enough information to decide whether to confirm or deny the change, condition, or event and indicate what additional information is necessary for further review and the date by when it must be received. The City Engineer responds to additional information within seven calendar days of receipt.
 - 1) Any contract adjustments will exclude increased costs or time extensions resulting from the Contractor's failure to provide the requested information.
- D. Contract adjustment is made as written modification to the contract through change order when warranted, unless the Contractor does not notify the City Engineer in accordance with this article.
1. Loss of anticipated profits are excluded.
- E. No contract adjustment that benefits the Contractor is allowed unless the Contractor has provided written notice in accordance with this article.
- F. The Contractor may pursue a claim for additional compensation or contract adjustment if the City Engineer decides a contract adjustment identified by the Contractor is unnecessary and the Contractor does not agree with the Engineer's decision. Refer to Section 00727.

1.06 VARIATION IN QUANTITIES AND SIGNIFICANT CHANGE IN CHARACTER OF WORK

- A. The City Engineer reserves the right at any time during the work to revise the contract and make written changes in quantities and alterations in the work that are necessary to satisfactorily complete the project.

1. Such changes in quantities and alterations do not invalidate the contract or release the surety and the Contractor agrees to complete the work as altered.
 2. Do not proceed with the revised work without the City Engineer's written authorization.
 3. Proceed immediately with the revised work upon receiving written approval.
- B. Meet notification requirements under this section, article 1.05, when requesting compensation or adjustment to the contract under this article.
1. No contract adjustment that benefits the Contractor is allowed unless the Contractor has provided written notice in accordance with this section.
- C. Payment will be made at contract prices when the total quantity of any item of work varies from the bid quantity by 25 percent or less.
- D. Payment will be made at the contract prices when the total quantity of any item of work varies from the bid quantity by more than 25 percent and the alterations or changes in quantities do not represent a significant change in character of work to be performed under the contract.
- E. The term "significant change in character of work" applies only to the following circumstances:
1. The character of the altered work differs materially in kind or nature from that involved or included in the original contract.
 2. The total quantity of a major contract item varies from the original contract quantity by more than 25 percent.
 - a. An adjustment in price may be made to the contract at the request of either party.
 - b. Any price adjustment for an increase in quantity applies only to that portion in excess of 125 percent of the original contract quantity.
 - 1) Fixed costs in the original contract price are deemed recovered by payment made for 125 percent of the contract quantity and excluded from any adjustment to that portion in excess of 125 percent of the original contract quantity.
 - c. Any adjustment for a decrease in quantity below 75 percent of the contract quantity is limited to the actual quantity of work performed.
 - 1) Fixed costs in the original contract may be considered when establishing the adjustment.
 - 2) Payment for the work will in no case exceed the payment that would have been made for the performance of 75 percent of the original item quantity at the contract price.
- F. The Owner will adjust the contract, excluding loss of anticipated profits, if the alterations or changes in quantities result in a significant change in character of work under the contract.
1. Alterations or changes can be significant changes to the character of work or by their effect cause other work to become significantly different in character.
 2. Agree upon the basis for contract adjustment before beginning work.
 - a. The City Engineer may order the work to proceed under the force account provisions of Section 01282 if a basis for adjustment cannot be agreed upon.
 3. Contract time is adjusted in accordance with Section 00555 for directed changes that require additional time to complete.
 4. Adjustments may be either for or against the Contractor in such an amount the City Engineer may determine to be fair and equitable.
- G. The Contractor may pursue a claim for additional compensation or contract adjustment if the City Engineer decides a contract adjustment identified by the Contractor is unnecessary and the Contractor does not agree with the City Engineer's decision. Refer to Section 00727.

1.07 WORK SUSPENSIONS ORDERED BY THE CITY ENGINEER

- A. The City Engineer may give written notice to suspend all or any portion of the work for any reason at any time during the contract.
 - 1. Submit a written request to the City Engineer for a contract adjustment for suspensions or delays considered unreasonable or atypical to the construction industry. Refer to Section 00555.
 - a. Submit the request within seven calendar days of the notice to resume work.
 - b. Contract adjustment is made only for requests submitted within the established time frame.
 - 2. The Owner will not allow adjustments to the Contract to the extent that performance would have been suspended or delayed by any other cause or for which an adjustment is provided for or excluded under any other contract term or condition.
 - 3. Contract adjustment is made in accordance with Sections 00555 and 01282 if both parties agree that the suspension:
 - a. Increased the cost or time required for the performance of the contract.
 - b. Resulted from conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier.
 - c. Was not caused by weather.
- B. The Contractor may pursue a claim for additional compensation or contract adjustment if the City Engineer decides a contract adjustment due to the suspension of work is unnecessary and the Contractor does not agree with the City Engineer's decision. Refer to Section 00727.

1.08 MAINTAINING TRAFFIC

- A. Keep roads open to traffic during the work and work suspensions or provide and maintain detour roads as specified or directed.
 - 1. Provide traffic control. Refer to Section 01554.
 - 2. Maintain all necessary accesses to parking lots, garages, businesses, residences, farms, etc.
 - 3. Exclude snow removal.
- B. The Owner will not additionally compensate for maintenance except for specific work directed by the City Engineer to benefit the traveling public.
- C. Suspensions ordered by the City Engineer:
 - 1. Prepare the project for traffic flow during anticipated work suspensions.
 - 2. Maintain all required traffic control devices.
 - 3. The Owner will maintain temporary roadways and portions of the project during work suspensions.
 - 4. Resume maintenance for the entire project once work restarts.
 - 5. Repair or replace all work or materials lost or damaged during the suspension.
 - 6. Remove work or materials used for temporary maintenance and complete the project as though the work had been continuous and without interference.
 - 7. The Owner will pay for maintenance required for events beyond the Contractor's control during work suspensions at contract prices or as extra work.
- D. Other Suspensions of Work:
 - 1. Maintain the roadway at no additional cost to the Owner to accommodate traffic during suspensions resulting from:

- a. Seasonal or climatic conditions.
 - b. Failure to correct conditions unsafe for the workers or the general public.
 - c. Failure to perform work ordered by the City Engineer.
 - d. Other reasons caused by the Contractor.
- E. Failure to maintain traffic is cause for the Owner to take action to meet the requirements of this specification.
- 1. The Owner will deduct its costs incurred in such actions from money due the Contractor.

1.09 USE OF ON-SITE MATERIALS

- A. Obtain approval before using excavated materials found on the work site that are suitable for completing other bid items of work. The Owner will pay for the quantity of excavated materials at the contract unit price for roadway excavation and under the pay item for which the material is used.
 - 1. The Owner will not charge for the materials used.
 - 2. Obtain written approval before excavating material outside grading limits.
- B. Replace excavated material used for completing other bid items of work with acceptable material at no additional cost to the Owner.
- C. Unless otherwise specified in the contract, salvageable material is the property of the Contractor.

1.10 FINAL CLEANUP

- A. Clean all rubbish, excess materials, temporary structures, and equipment from the highway, project, borrow and local material source sites, and all areas occupied in connection with the work before final inspection and acceptance.
 - 1. Refer to Section 01741 for requirements.

1.11 RESTORATION OF SURFACES OPENED BY PERMIT

- A. Allow individuals, firms, or corporations with authorized permits to enter the project to construct or reconstruct any utility service.
- B. Repair damage caused by the permit holder when directed by the City Engineer. The Owner pays for repair work as extra work or as provided in the contract.

1.12 CONTRACTOR'S RESPONSIBILITY FOR WORK

- A. Maintain and protect the work included in the contract against injury or damage from all causes whether or not related to performing the work until project final acceptance.
- B. Rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the work under the control of the Contractor at no additional cost to the Owner before receiving final acceptance.
- C. Rebuild, repair, restore, and make good all losses, injuries, or damage to any portion of the work not under the control of the Contractor, under agreed unit prices or as extra work under Section 01282.
 - 1. Items not under the Contractor's control include, but are not limited to, acts of God, acts of public enemies, acts of governmental authorities, fires, floods, unusually severe weather, damage caused by third party errant vehicles, and vandalism.
- D. When work is suspended for any cause:
 - 1. Protect the project from damage.
 - 2. Provide for normal drainage.

3. Erect any necessary temporary structures, signs, or other facilities.
4. Maintain all newly established plantings, seeding, and sodding and protect new tree growth and other designated vegetative growth in an acceptable condition.

1.13 ENVIRONMENTAL PROTECTION

- A. Refer to Section 01355.

1.14 CONTRACTOR PROPOSALS FOR VALUE ENGINEERING

- A. The Contractor and the Owner equally share the savings resulting from a Value Engineering Change Proposal (VECP) offered by the Contractor and approved by the Owner.
- B. The Owner will consider VECPs that may potentially result in savings and preserve essential functions and characteristics of the facility, including, but not limited to service life, economy of operation, ease of maintenance, desired capacity, and safety.
- C. Base contract bid prices on specified work rather than on VECPs subject to Owner approval. Complete the contract as bid if a VECP is rejected.
- D. Submitting Proposals:
 1. Submit the following materials and information with each proposal:
 - a. A statement that the submission is a VECP.
 - b. A description of the existing work and the proposed changes for performing the work. Discuss the comparative advantages and disadvantages of each.
 - c. A complete set of plans and specifications showing proposed revisions to the original contract.
 - d. A detailed cost estimate for performing the work under the existing contract and under the VECP.
 - e. A time frame within which the Owner must make a decision.
 - f. A statement of the probable effect the VECP will have on the contract completion time.
 - g. A description of any previous use or tests of the proposal, conditions, result, dates, project numbers, and the Owner's action on the VECP if previously submitted.
 2. The Owner will determine and notify the Contractor within five working days when there is insufficient review time for a response.
 3. The Owner may consider a non-compensable delay adjustment to the contract based on the additional review time necessary and its effect on the Contractor's schedule.
 4. The Contractor has no claim against the Owner for compensable or non-compensable delay if the Owner fails to respond within the time indicated in this article when additional information requested from the Contractor is necessary to complete the review.
- E. Requirements:
 1. VECPs apply only to the current contract and become property of the Owner regardless of their approval.
 2. The Owner will only consider VECPs that meet the following conditions:
 - a. Impose no restrictions on use or disclosure.
 - b. The Owner may duplicate or disclose any data necessary to use the VECP.
 - c. The Owner may apply a proposal for general use on other contracts it administers without obligation to the Contractor.
 - d. This provision does not deny rights provided by law with respect to patented materials or processes.
 3. Use only proven features that have been employed under similar conditions or projects acceptable to the Owner.

- F. The Owner will decide whether or not to consider a VECP. The Owner may reject a VECP that requires excessive review, evaluation or investigation, or that is inconsistent with project design policies or criteria. The Owner will reject VECPs that:
1. Provide equivalent options to those already in the contract.
 2. Contain revisions the Owner is already considering or has approved for the contract.
 3. Do not generate sufficient savings.
 4. Do not provide additional information as requested by the Owner, including requests for field investigation results and surveys, design computations, and field change sheet for proposed design changes.
 5. Relate to pavement section thickness or type.
- G. The Contractor has no claim to additional costs or delays including development costs, loss of anticipated profits, or increased material or labor costs if the VECP is rejected.
- H. The City Engineer will reject unsatisfactory work resulting from an approved VECP.
1. Remove rejected work and reconstruct under the original contract provisions without reimbursement for the work performed under the VECP or for its removal.
 2. Reimbursement for approved modifications to the VECP to adjust to field or other conditions is limited to the total amount payable for the work under the contract bid prices.
 3. Rejection or limitation of reimbursement is not basis for any claim against the Owner.
- I. The Owner will not consider savings generated by contingency items when it is reduced as part of a VECP unless it can be tied to a reduction in contract time.
- J. The Owner will pay by change order for VECPs approved in whole or in part.
1. The contract incorporates changes in quantities of unit bid items or new agreed price items, as appropriate.
 2. The Owner will pay for the revised work directly and pay the Contractor 50 percent of the savings between cost of the revised work and the original bid price.
 3. The Owner will not reimburse costs to develop, design, and implement the VECP.
 4. Only the Contractor may submit VECPs and be reimbursed for savings. The Contractor may submit VECPs for an approved subcontractor.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 00727
CONTROL OF WORK

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Section 00555: Prosecution and Progress
- B. Section 00725: Scope of Work
- C. Section 01282: Payment
- D. Section 01721: Survey

1.02 REFERENCES

- A. Utah Code Title 63, Chapter 56 – Utah Procurement Code
- B. Utah Regulations for Legal & Permitted Vehicles

1.03 CITY ENGINEER AUTHORITY AND DUTIES

- A. The City Engineer will decide all questions regarding the quantity, quality and acceptability of materials furnished and work performed, work progress, contract interpretation, project final acceptance, and acceptable contract completion.
- B. The City Engineer has the authority to suspend the work, wholly or in part, by written order without liability to the Owner if the Contractor does not:
 - 1. Correct conditions unsafe for the project personnel or the public, or
 - 2. Perform work properly or comply with contract provisions, or
 - 3. Comply with the City Engineer's orders
- C. The City Engineer can suspend work wholly or partially for:
 - 1. Periods of unsuitable weather, or
 - 2. Conditions unsuitable for the prosecution of the work, or
 - 3. Any other condition or reason determined to be in the Owner's interest

1.04 PLANS AND WORKING DRAWINGS

- A. Keep at least one complete set of plans, specifications, and standard drawings on the project site at all times.
- B. Furnish to the Owner structure plans with working drawings that detail required work not included in the contract plans.
- C. Include the cost of furnishing all working drawings in the related contract bid items.

1.05 PLANS AND SPECIFICATIONS CONFORMANCE

- A. Perform work and furnish materials to meet contract requirements.

- B. The City Engineer will decide the extent to which the work will be accepted and remain in place when a contract item does not meet contract requirements but is adequate to serve the design purpose. The City Engineer will document the basis of acceptance and adjusts the contract unit price.
- C. The Owner will use the specified pay adjustment factors for payment when the contract provides for acceptance of a contract item not complying fully with the minimum requirements.
- D. Remove, replace, or correct work at no cost to the Owner when a contract item does not meet specified requirements and results in work inadequate to serve the design purpose.

1.06 COORDINATE PLANS, STANDARD SPECIFICATIONS, AND SPECIAL PROVISIONS

A. All supplementary documents are essential parts of the contract and a requirement occurring in one is binding as though occurring in all. Supplementary documents are complementary and provide and describe the complete contract.

B. The governing ranking in case of a discrepancy is:

Dimensions	Information
1. Plan	1. Project Specifications
2. Calculated	2. Project Plans
3. Scaled	3. UDOT Specifications
	4. Measurement and Payment
	5. City Standard Specifications
	6. City Standard Drawings

C. Do not take advantage of any apparent error or omission in the contract.

D. Notify the City Engineer promptly of any omissions or errors in the contract so that necessary corrections and interpretations can be made.

1.07 CONTRACTOR COOPERATION

A. Facilitate progress of the work and cooperate with Owner inspectors and other contractors.

B. Employ a competent superintendent experienced with the work being performed and capable of reading and understanding the contract documents.

- 1. The superintendent must have completed the UDOT's Partnering Training or be registered for and attend the next available training session.

C. The superintendent must be:

- 1. Present at the project site at all times that work is being performed.
- 2. Authorized to act as an agent for the Contractor and execute instructions and directions from the City Engineer or authorized representatives.

D. Supply all necessary resources to complete the contract regardless of the amount of work sublet.

1.08 UTILITIES COOPERATION

A. Relocate or adjust utilities when specified.

- 1. Use work procedures that consider the potential of inaccurate or inexact utility locations provided by utility owners, especially for underground installations.
- 2. Cooperate with the utility owners to remove and rearrange underground or overhead utilities to avoid service interruption or duplicate work by the utility owner.

B. Cooperate with the utility owners to adjust utility fixtures and appurtenances shown in the contract plans.

- C. Use work procedures that protect utilities or appurtenances that remain in place during construction.
- D. The Owner will notify utility companies, pipeline owners, or other utility agencies affected by the work to verify that all utility adjustments, within or adjacent to the construction limits, are made as soon as possible.
- E. Notify the appropriate utility authorities of any service interruption resulting from breakage within the construction limits.
 - 1. Cooperate with authorities until service is restored.
 - 2. Work around fire hydrants only after obtaining approval by the local fire authority and then only after making provisions for continued service.
- F. Repair damages to utilities that result from carelessness or omission. Restore damaged facilities to the preexisting condition at no additional cost to the Owner.
- G. Adjust or relocate utility facilities or appurtenances found but not noted in contract documents when directed by the City Engineer.

1.09 COOPERATION BETWEEN CONTRACTORS

- A. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by the contract.
- B. Cooperate with other contractors working within the project limits. Conduct work without interrupting or inhibiting the progress or completion of work by other contractors.
- C. Each Contractor involved accepts all liability, financial or otherwise, in connection with the contract.
- D. Each Contractor protects and holds the Owner harmless from any damages or claims caused by inconvenience, delay, or loss from the presence and work of other contractors working within the same project limits.
- E. Coordinate and sequence the work with other contractors. Arrange, place, and dispose of materials without interfering with the operations of other contractors on the same project.

1.10 OWNER-PROVIDED CONTROL POINTS AND ELEVATION BENCH MARKS

- A. The Owner will provide control points and elevation benchmarks.
- B. The Contractor shall replace disturbed control points and elevation benchmarks at no expense to the Owner.

1.11 CONSTRUCTION SURVEY

- A. Perform the Construction Surveying necessary to properly control the entire work. Refer to Section 01721.

1.12 CITY INSPECTOR DUTIES

- A. The Owner's inspectors are authorized to inspect all work and materials furnished.
 - 1. Inspection may extend to the preparation, fabrication, or manufacture of the materials to be used.
 - 2. Inspectors are not authorized to alter or waive the contract provisions, issue instructions contrary to the contract, or act as foreman for the Contractor.
 - 3. City Inspectors may reject work or materials until any issue in question can be referred to and decided by the City Engineer.

1.13 WORK INSPECTION

- A. Provide information, assistance, and safe access to the City Engineer for all parts of the work to obtain a complete and detailed inspection.
- B. Remove and replace work performed or materials used without inspection by an authorized Owner representative at Contractor expense, if ordered by the City Engineer.
 - 1. Remove and uncover portions of finished work as directed.
 - 2. Once inspected, restore work to contract requirements.
 - a. The Owner will pay for the additional cost to uncover, remove, and replace or make good the parts removed as extra work, if the uncovered work is found acceptable.
 - b. The Owner will not pay for additional costs to uncover, remove, and replace the covering, or make good the parts removed, if the work is found unacceptable.
- C. Initial failure by the City Engineer to reject defective work or materials either from lack of discovery or any other reason does not prevent the later rejection when such defect is discovered or obligate the Owner to the accept the final work or materials.
 - 1. The Owner is not responsible for losses suffered due to necessary removals or repairs of such defects.
- D. The representative of a government agency, utility, or other companies that will pay a portion of the contract cost may inspect that portion of the work. The right to inspect does not make that entity a party to the contract and does not interfere with the rights of parties to the contract.

1.14 UNACCEPTABLE AND UNAUTHORIZED WORK REMOVAL

- A. Remove and replace any unacceptable work before final acceptance.
 - 1. Work is considered unacceptable if it does not meet the contract requirements unless accepted under this section, article 1.5.
- B. Work performed contrary to the City Engineer's instructions, work beyond plan limits, or extra work performed without the City Engineer's permission is excluded from pay consideration and may be ordered removed, restored, or replaced at the Contractor's expense.

1.15 LOAD RESTRICTIONS

- A. Observe legal load restrictions when hauling equipment or materials on public roads beyond project limits.
 - 1. A special permit does not relieve the Contractor of liability for damage.
 - 2. Refer to the Utah Regulations for Legal & Permitted Vehicles.
- B. Do not apply weight restrictions to equipment or materials hauled over subgrade.
- C. Do not exceed legal gross weight limits on any public roads, structures, or on any component of the pavement structure excluding granular borrow.
- D. Suspend construction operations when load restriction violations are observed until the City Engineer approves acceptable corrective measures.
- E. The City Engineer will contact the appropriate law enforcement agency if overweight load violations are suspected when public roads are used to haul any type of excavation, borrow, backfill, base, or surfacing material.
- F. For materials imported to the job site such as asphalt, cement, concrete, steel, etc.:
 - 1. Provide the City Engineer with invoices showing the gross load weights.

2. The Owner will withhold payment for material used in the project if invoices are not provided.
3. The City Engineer will notify the appropriate enforcement agency if it is suspected that legal gross load limits are exceeded.

1.16 MAINTAIN THE WORK DURING CONSTRUCTION

- A. Maintain all work included in the contract during construction until final acceptance.
 1. Maintain traffic detour routes and project travel ways in accordance with the Traffic Control Plan.
- B. The City Engineer will immediately notify the Contractor of failure to meet these provisions.
 1. The Owner will maintain the project if unsatisfactory maintenance is not remedied within 24 hours after receiving notice.
 2. The Owner will deduct the entire cost to maintain the work from the money due or to become due the Contractor.
- C. Include in the bid unit prices the cost of maintaining work during construction until final acceptance.

1.17 OPEN PROJECT SECTIONS TO TRAFFIC

- A. The City Engineer may order certain sections of work opened to traffic before completion or acceptance of the work.
- B. Opening a section of work does not constitute acceptance of the work or a waiver of any contract provisions.
- C. Maintain any section of roadway opened to traffic by order of the City Engineer.
 1. Contractor is paid in accordance with Section 01282 when the ordered opening to traffic is not the result of Contractor fault or inactivity.
 2. The Owner will prepare a change order when the opening is not provided for in the contract. The Owner will not compensate the Contractor if the order to open is the result of Contractor fault or inactivity.
- D. The City Engineer will give written notice establishing a time period for completing features of the work for which the Contractor is late.
 1. The City Engineer may order all or a portion of the project opened to traffic if the Contractor does not complete or make a reasonable effort to complete the late work.
 2. Assume liability and responsibility for maintaining the work and conduct the remaining construction operation with minimum interference to traffic without additional compensation.

1.18 FURNISH RIGHT-OF-WAY

- A. The Owner will secure all necessary right-of-way before construction, except as provided in the contract.

1.19 PROJECT ACCEPTANCE

- A. Partial Acceptance
 1. The Contractor may request acceptance of a unit when:
 - a. A unit or portion of the project is substantially complete.
 - b. The unit or portion is considered or determined necessary for the convenience of traffic such as a structure, interchange, roadway section, intersection, substation, or portion of highway lighting or traffic signal systems.

2. The City Engineer may make written acceptance of a unit as complete if the unit has been completed according to the contract and relieve the Contractor of further responsibility for that unit.
3. Partial acceptance neither voids nor alters any contract terms.

B. Substantial Completion

1. Request inspection and verification by the City Engineer when the project is substantially complete.
 - a. The City Engineer will perform an inspection and identify any necessary corrective work and work necessary for physical completion.
 - b. The City Engineer will notify the Contractor in writing and stop contract time when the project is found to be substantially complete.
 - c. Immediately comply with and execute instructions given by the City Engineer if the inspection discloses any unsatisfactory work.
 - d. Execute all work necessary for physical completion within 30 calendar days of the substantial completion date in accordance with Section 00555.

C. Final Acceptance

1. Request inspection and verification by the City Engineer when the project is physically complete.
 - a. The City Engineer will perform the final inspection and identify any necessary corrective work.
 - b. Immediately comply with and execute instructions given by the City Engineer if the inspection discloses any unsatisfactory work.
 - c. The City Engineer will notify the Contractor in writing of the date of final acceptance when the project is determined to be physically complete and identify any documents required to complete the contract.
 - d. Furnish all documentation identified by the City Engineer to complete the contract within 30 days of notification of final acceptance in accordance with Section 00555.
 - e. The City Engineer will notify the Contractor in writing of the date of contract completion.

1.20 ADDITIONAL COMPENSATION OR CONTRACT ADJUSTMENT CLAIMS

- A. Notify the City Engineer in writing of any intent to file a claim for additional compensation for work or material before beginning or continuing the affected work.
 1. Follow the notification requirements for differing site conditions, changes, and requests or claims for additional compensation under Section 00725.
 2. The City Engineer will respond as described for differing site conditions changes, and requests or claims for additional compensation under Section 00725.
- B. Work closely with the City Engineer during notification, review, and evaluation to resolve the contract question and avoid further claims.
- C. The Contractor waives any claim for additional compensation if the City Engineer is not notified or is not afforded proper facilities for strict accounting of actual costs.
 1. Notifying the City Engineer and accounting of costs does not substantiate the claim's validity.
 2. The contract will be adjusted only if the claim is found to have merit.
- D. Submit claim with enough detail to enable the City Engineer to understand the basis for entitlement and the resulting costs. Include the following information with each claim submitted:
 1. A detailed statement providing all necessary dates, locations, and items of work affected by the claim.
 2. The date on which actions or conditions resulting in the claim occurred or became evident.
 3. Name, title, and activity of each Owner employee knowledgeable about facts that are the basis of the claim.

4. Name, title, and activity of each Contractor employee knowledgeable about facts that are the basis of the claim.
5. The specific contract provisions that support the claim and a statement of why they support it.
6. Identification of pertinent documents and the substance of any relevant verbal communications relating to the claim.
7. A statement whether the additional compensation or extension of time is based on contract provisions or an asserted breach of contract.
8. For time extension or compensation for delay requests, include:
 - a. The specific days for which a time extension is requested.
 - b. The specific reasons a time extension should be granted.
 - c. Documents and reports specified for determining compensation and contract time extension for excusable delays under Section 00555.
9. Exact amount and specifics of additional compensation sought and a breakdown of the cost into the following categories:
 - a. Direct labor
 - b. Direct materials
 - c. Direct equipment
 - 1) Do not exceed actual cost on rates claimed for each piece of equipment.
 - 2) The rates for the equipment in use cannot exceed the force account rates in the absence of actual equipment cost. Refer to Section 01282.
 - d. Field indirect costs
 - e. Home office overhead
 - f. Subcontractor's claims
 - 1) Provide the same level of detail as specified in contract documents for any subcontractor's claims.
10. Certification: Submit a statement to the City Engineer containing the following language:

Under the penalty of law for perjury or falsification, the undersigned,

Name	Title	Company

hereby certifies that the claim for extra compensation and time, if any, made herein for work on this contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the contract between the parties.

Dated _____ /s/ _____
 Subscribed and sworn before me this _____ day of _____
 Notary Public
 My Commission Expires _____

- E. Failure to either submit information and details as described in this section for any claim or failure to submit any claim before the date of final acceptance constitutes a waiver of the claim.

1.21 CLAIMS RECORD KEEPING

- A. Maintain complete records of all costs and additional time incurred for any alleged claim.
- B. Permit the City Engineer access to those records and any other records as required to determine the facts or contentions involved in the claim.
- C. Retain all records for a period of not less than three years after final acceptance.

1.22 CLAIMS AUDITING

- A. All claims filed against the Owner are subject to audit at any time following filing the claim.
- B. The Owner or an auditor under contract with the Owner may conduct the audit. The audit may begin at any time during the life of the contract, or 20 calendar days after notice is provided to the Contractor, the subcontractors, or the Contractor's agents if more than 60 calendar days after the final acceptance date of the contract have elapsed.
- C. Provide adequate facilities acceptable to the City Engineer for the audit during normal business hours. Cooperate with the auditors.
- D. Failure of the Contractor, subcontractors, or agents to maintain and retain sufficient records to allow the auditors to verify all or a portion of the claim or to permit the auditor access to the books and records of the Contractor, subcontractors, or agents constitutes a waiver of the claim and bars any recovery.
- E. As a minimum, make the following documents available to auditors:
 - 1. Daily time sheets and supervisor's daily reports
 - 2. Union agreements, if any
 - 3. Insurance, welfare, and benefits records
 - 4. Payroll registers
 - 5. Earnings records
 - 6. Payroll tax forms
 - 7. Material invoices, purchase orders, requisitions, and all material and supply acquisition contracts
 - 8. Material cost distribution work sheet
 - 9. Equipment records including list of company equipment, rates, etc.
 - 10. Vendor rental agreements and subcontractor invoices
 - 11. Subcontractor payment certificates
 - 12. Canceled checks (payroll and vendors)
 - 13. Job cost report
 - 14. Job payroll ledger
 - 15. General ledger, general journal if used, and all subsidiary ledgers and journals together with all supporting documentation pertaining to entries made in these ledgers and journals
 - 16. Cash disbursements journal
 - 17. Depreciation records on all company equipment used in performance of the work
 - 18. All other documents used to develop costs for the Contractor's internal purposes to establish the actual cost of owning and operating equipment used in performance of the work
 - 19. All documents related to preparing the Contractor's bid, including final documents on which the bid was based - Exclude documents placed in escrow

20. All documents that relate to each and every claim together with all documents that support the amount of damages as to each claim
 21. Worksheets used to prepare the claim establishing the cost components for items of the claim including, but not limited to, labor, benefits and insurance, materials, equipment, subcontractors, all documents that establish the time periods, individuals involved, and the hours and rates for the individuals
- F. Full compliance with the provisions of this article is a contractual condition precedent to the right to seek judicial relief.

1.23 CLAIMS HIGHER LEVEL REVIEW

- A. Provide written notification to the City Engineer within 10 calendar days of the City Engineer's denial of a claim requesting a higher-level review, when not accepting the City Engineer's denial action.
- B. Failure to submit a request within this 10-day time frame is considered acceptance of the City Engineer's denial action.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 00820

LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Section 00555: Prosecution and Progress
- B. Section 01355: Environmental Protection
- C. Section 01554: Traffic Control

1.02 REFERENCES

- A. Code of Federal Regulations (CFR)
- B. Manual of Uniform Traffic Control Devices (MUTCD)
- C. OSHA Safety and Health Regulations for Construction
- D. UDOT Construction Safety and Health Manual
- E. UDOT Owner Controlled Insurance Program (OCIP)

1.03 OBSERVING LAWS, RULES, AND REGULATIONS

- A. Observe and comply with all of the following that affect the conduct of work on the project, have jurisdiction or authority over the work, or that affect individuals engaged or employed on the project:
 - 1. Federal and State Laws
 - 2. Local laws, ordinances, and health officials
 - 3. Regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority
 - 4. UDOT Construction Safety and Health Manual
- B. Protect and indemnify the Owner, City Engineer and their representatives against claim or liability arising out of or resulting from violations of any of the above listed items, whether violated by employees, agents, or contractors of the following:
 - 1. The Contractor
 - 2. Subcontractor at any tier
 - 3. Suppliers of materials or services
 - 4. Any others engaged by the Contractor
- C. Do not require employees of the Contractor or subcontractor to work in surroundings, or under conditions that are unsanitary, hazardous, or dangerous to health or safety.
 - 1. Immediately correct any conditions that do not comply with the foregoing provisions.
 - a. The City Engineer issues a stop work order when either site conditions or work practices present an imminent danger that may result in serious injury, death, or extensive property damage until those conditions or practices are corrected.
 - b. A stop work order does not provide relief from completing the project within the specified contract completion time.

- D. Allow access to all areas of work on the project and admit any inspector of the OSHA or other legally responsible agency involved in safety and health administration without delay and without presentation of an inspection warrant to all areas of the work and project site upon presentation of proper credentials.
- E. Comply with Federal, State and local laws, rules, and regulations that enumerate unlawful employment practices including discrimination because of race, religion, color, sex, age, disability, or national origin, and that define actions required for Affirmative Action and Minority/Disadvantaged Business programs.
- F. Immediately notify the City Engineer in writing upon discovering any discrepancy or inconsistency between the contract and any law, ordinance, regulation, or order, except as noted in this Section, article 1.07.

1.04 USING EXPLOSIVES

- A. The use of explosives will not be allowed.

1.05 PERMITS, LICENSES, AND TAXES

- A. Acquire all permits and licenses; pay applicable charges, fees, and taxes; and give all notices necessary to perform the work.
- B. The costs of all City permits, licenses and appropriate items will be waived by the City.
- C. Include the costs of other items in the appropriate unit prices bid for the contract items.

1.06 PATENTED DEVICES, MATERIALS, AND PROCESSES

- A. Provide proof of legal agreement with the patentee or owner, if necessary, for use of a design, device, material, or process covered by letters, patents, or copyrights
- B. Indemnify and hold harmless the Owner and any affected third party or political subdivision from claims of infringement of patents, copyrights, or trademarks.
- C. Indemnify the Owner for costs, expenses, and damages, which it may be obligated to pay as a result of an infringement during the conduct of the work or after the project is completed.

1.07 PUBLIC CONVENIENCE AND SAFETY

- A. Perform work with minimal obstruction to traffic.
- B. Follow the safety provisions of all applicable laws, rules, codes, and regulations to ensure the safety and convenience of the public and property.
- C. Provide, erect, and maintain all traffic control devices such as barriers, barricades, and warning signs in accordance with MUTCD and Section 01554 requirements to protect the work and the public safety.
 - 1. Use barriers and barricades to delineate highway sections closed to traffic.
 - 2. Illuminate obstructions during darkness and provide warning signs to control and direct traffic.
- D. Erect warning signs for work that may interfere with traffic or where new work crosses or coincides with an existing road.
 - 1. Place and maintain warning signs according to the project traffic control plan.
 - 2. Obtain approval before dismantling or removing traffic control devices.
- E. For Pedestrians:
 - 1. Place and maintain warning signs under project traffic control plan.
 - 2. Provide pedestrian access in areas where construction interferes with existing pedestrian access.

1.08 PROTECTING AND RESTORING PROPERTY AND LANDSCAPE

- A. Preserve public and private property during the work.
- B. The City Engineer will verify reference to the location of monuments and property line markers before they are moved, disturbed, or damaged.
 - 1. Obtain written approval from the City Engineer before moving or disturbing any monuments or markers.
- C. Accept liability for any damage to public or private property resulting from defective work, materials, or non-execution of the contract.
 - 1. Maintain liability until the project is accepted.
- D. Restore damaged property to a condition similar or equal to that existing before the damage at no additional cost to the Owner.
- E. Temporarily discontinue work if remains of prehistoric dwelling sites or artifacts of historical or archeological significance are encountered. Refer to Section 01355.

1.09 THIRD-PARTY BENEFICIARY CLAUSE

- A. This contract does not authorize anyone who is not a party to this contract the right to maintain an action for damages under its provisions or to any of the rights of a third-party beneficiary. However, this contract does not prohibit the parties from agreeing to provide third-party beneficiary rights to another party so long as those rights are set forth in a separate agreement and signed by all the parties to this contract and the intended third-party beneficiary.

1.10 OWNER EMPLOYEES PERSONAL LIABILITY

- A. The Owner's authorized representatives, including the City Engineer, act solely as agents and representatives of the Owner when carrying out the provisions of or exercising the power or authority granted to them under the contract.
- B. They are not liable either personally or as employees of the Owner for actions in their ordinary course of employment.

1.11 NO WAIVER OF LEGAL RIGHTS UPON COMPLETION

- A. Upon completion of the contract, the Owner will make final inspection and notify the Contractor of acceptance.
 - 1. Final acceptance does not prevent the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work.
 - 2. The Owner is not prevented from recovering from the Contractor or Surety or both, overpayment sustained for failure of the Contractor to fulfill the obligations under the contract.
 - 3. A waiver from the Owner for any breach of any part of the contract is not held as a waiver of any other or subsequent breach.
- B. Even after completion, assume liability to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards to the Owner's rights under any warranty or guaranty without prejudice to the terms of the contract.

1.12 RESPONSIBILITY FOR DAMAGE CLAIMS

- A. Protect, indemnify, and hold the Owner, and their officers, agents, and employees harmless from and against all claims, demands, damages, and causes of action of every kind or character on account of bodily injuries, death, or damage to property arising out of, resulting from, or in any way connected with the performance of the contract to the extent allowed by law.

- B. Defend the Owner against all third party or other lawsuits arising out of or resulting from the contract Work. The Owner may require that the Contractor represent its interests or may choose to have separate counsel. If the Owner has its own counsel, the Owner pays for its own attorneys' fees, costs, and expenses. Upon determination by the court of the proportionate liability for the claim, total defense costs will be apportioned accordingly. For example, if the court finds the Owner to be 60 percent liable for the claim and the Contractor 40 percent liable, then the Owner pays 60 percent of the total defense costs while the Contractor pays 40 percent.
- C. Contractor and the Owner agree to provide each other with a copy of the summons and complaint within two business days of receipt if served with a lawsuit or Notice of Claim. Do not file a responsive pleading on behalf of the Owner until receiving written notice that the Owner chooses to have Contractor handle the defense. The Owner will provide the Contractor such written notice in a timely manner allowing the Contractor adequate time to respond to the summons.
- D. All parties agree to cooperate to the fullest extent possible, subject to privileges and ethical rules if the parties have separate counsel.
- E. Provide insurance as defined in the General Conditions from reliable insurance companies authorized to do business in Utah, rated "A" or better and with a financial size category of Class VII or larger by A.M. Best Company, at the time of contract execution.
- F. Comply with the following insurance claims notification and processing procedures:
 - 1. Notify the City Engineer of all claims within seven days of notification.
 - 2. Provide written notification for all pending claims to City Engineer before final acceptance of the project.

1.13 HAULING BY TRUCK

- A. Comply with all Federal and State regulations regarding hauling.
- B. Hauling to the project site or away from the project site does not require a subcontract to be approved by the City Engineer.

1.14 AIR QUALITY PROTECTION

- A. Refer to Section 01355.
- B. Contact the Utah Division of Air Quality (DAQ) and obtain the appropriate Air Quality Permit for the project. Permit application forms can be obtained from DAQ's web site. Refer to:
<http://www.udot.utah.gov/go/standardsreferences>.

Utah Division of Air Quality
150 North 1950 West
PO Box 144820
Salt Lake City, UT 84114-4810
Phone: (801) 536-4000
Fax: (801) 536-4099

- C. The Contractor is not allowed to proceed with work affecting air quality without an Air Quality Approval Order or Notice of Intent to Approve letter or a Temporary Approval Order for the project, process, or equipment to be used.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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DIVISION 01

GENERAL REQUIREMENTS

SECTION 01100

PROJECT DESCRIPTION

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: CITYWIDE ROADWAY STRIPING PROJECT FOR VARIOUS STREETS LOCATED WITHIN THE CITY LIMITS 2018, in the City of Cottonwood Heights, Salt Lake County, Utah.
- B. Project Scope: The Project consists of the items of Work listed in SECTION 02100 - MEASUREMENT AND PAYMENT, of these Contract Documents.
- C. Owner's Name: City of Cottonwood Heights, Utah.
 - 1. City Engineer: Bradley S. Gilson, P.E.
- D. Design Engineer's Name: Gilson Engineering, Inc., Consultant Engineers and Surveyors.
- D. The Project shall be constructed according to these project specifications and drawings; and according to the Standard Technical Specifications and Drawings for the City of Cottonwood Heights, Latest Edition.
 - 1. Work on this project shall be done as specified in these project specifications and as indicated on the project drawings.
 - 2. All work not covered by these specifications and drawings shall be done as specified in the APWA Standard Specifications and as indicated on the APWA Standard Drawings.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00500 - Agreement.

1.03 PROJECT DRAWINGS

- A. The drawings listed in the CONTRACT DOCUMENTS form a part of this contract as set forth in the Agreement.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01200

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Price and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 RELATED SECTIONS

- A. Section 00500 - Agreement: Contract Price, retainages, payment period, monetary values of unit prices.
- B. Section 00700 - General Conditions and Document 00800 - Supplemental General Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Section 00800 - Supplemental General Conditions: Percentage allowances for Contractor's overhead and profit.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in Section 19 of the General Conditions.
- B. Present required information in typewritten form.
- C. Form: Contract Form including continuation sheets when required.
- D. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.

- E. Execute certification by signature of authorized officer.
- F. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.
- G. Submit three copies of each Application for Payment.
- H. Include the following with the application:
 - 1. Transmittal letter as specified for Submittals in Section 01300.
 - 2. Construction progress schedule, revised and current as specified in Section 01300.
 - 3. Project record documents as specified in Section 01780, for review by the Owner which will be returned to the Contractor.
- I. When the City Engineer or City Inspector requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.04 MODIFICATION PROCEDURES

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in the Contractor's employ or Subcontractors of changes to the Work.
- B. The City Engineer or City Inspector will advise of minor changes in the Work, not involving an adjustment to Contract Price or Contract Time as authorized by the Conditions of the Contract, by issuing supplemental instructions in writing.
- C. Construction Change Directive: The City Engineer may issue a document, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. The document will describe changes in the Work, and will designate method of determining any change in Contract Price or Contract Time.
 - 2. Promptly execute the change in Work.
- D. Proposal Request: The City Engineer may issue a document which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. The Contractor shall prepare and submit a fixed price quotation within seven days.
- E. The Contractor may propose a change by submitting a request for change to the City Engineer, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01600.
- F. Computation of Change in Contract Amount:
 - 1. For change requested by the City Engineer for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by the Contractor, the amount will be based on the Contractor's request for a Change Order as approved by the City Engineer.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.

4. For change ordered by the City Engineer without a quotation from the Contractor, the amount will be determined by the City Engineer based on the Contractor's substantiation of costs as specified for Time and Material work.
- G. Substantiation of Costs: Provide full information required for evaluation.
1. On request, provide following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- H. Execution of Change Orders: The City Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract on Contract Change Order Form.
- I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- K. Promptly enter changes in Project Record Documents.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 1. All closeout procedures specified in Section 01700.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01270

UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Measurement and payment criteria applicable to Work performed under a unit price or lump sum price payment method.
- B. Defect assessment and non-payment for rejected work.

1.02 COSTS INCLUDED

- A. Unit Prices or Lump Sum Prices included on the Bid Form shall include full compensation for all required labor, Products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.03 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.
- B. Quantities indicated in the Bid Form will be the maximum amount of these items to be used, without prior approval, in writing, by the Engineer. Over-runs of these items will not be paid for if prior approval was not received by the Contractor; and will be at the Contractor own expense, with no additional cost to the Owner.

1.04 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by the City Inspector or City Engineer.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.
- D. Measurement Devices:
 - 1. Weigh Scales: Inspected, tested and certified by the applicable state Weights and Measures department within the past year.
 - 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
 - 3. Metering Devices: Inspected, tested and certified by the applicable State department within the past year.
- E. Measurement by Weight:
 - 1. Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
 - 2. Soil material will be measured by scale weight. Weights will be converted to volume measurements by use of soil density.
- F. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

- G. Measurement by Area: Measured by square dimension using mean length and width or radius.
- H. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- I. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.
- J. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify the City Inspector or City Engineer prior to starting work.
- K. Contractor's Engineer Responsibilities: Sign surveyor's field notes or keep duplicate field notes, calculate and certify quantities for payment purposes.

1.05 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work which is incorporated in or made necessary by the Work and accepted by the City Inspector or City Engineer, multiplied by the unit sum/price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.

1.06 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the City Inspector or City Engineer it is not practical to remove and replace the Work, the City Inspector or City Engineer, will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the City Engineer.
 - 2. The defective Work will be partially repaired to the instructions of the City Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the City Engineer.
- C. If, in the opinion of the Owner, it is not practical to remove and replace the Work, the Owner will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
 - 2. The defective Work will be partially repaired to the instructions of the Owner, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
- D. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- E. The authority of the City Engineer to assess the defect and identify payment adjustment is final.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01282

PAYMENT

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Section 01200: Price and Payment Procedures.

1.02 REFERENCES

- A. Rental Rate Blue Book for Construction Equipment
- B. Wall Street Journal

1.03 SCOPE OF PAYMENT

- A. The Owner shall fully compensate the Contractor as provided in the contract for:
 - 1. Furnishing all materials, labor, equipment, tools, transportation, and incidentals required for acceptable completion of the work.
- B. Lump sum or unit price:
 - 1. Consider payment as full compensation for all resources and incidentals necessary to complete the work.
- C. The Owner will not pay the Contractor for:
 - 1. Work that is in excess of that contained in the contract.
 - 2. Removal and replacement of defective work.
 - 3. Loss of anticipated profits.
- D. Partial payment or releasing of retainage does not relieve the Contractor of the obligation to correct all defective work or materials.

1.04 ELIMINATED ITEMS

- A. Accept the City Engineer's authority to eliminate contract items found to be unnecessary to complete the work.
- B. Request reimbursement for all costs incurred before notification of elimination.

1.05 VARIATION IN QUANTITIES AND SIGNIFICANT CHANGES IN CHARACTER OF WORK

- A. The Owner will pay the original contract unit prices for the accepted quantities of work or provide adjustment when the accepted quantities of work vary from the estimated quantities in the contract.
 - 1. The Owner will not allow compensation for any increased expenses, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense and subsequent loss of expected reimbursement or from any other cause.

1.06 DIFFERING SITE CONDITIONS, CHANGES, AND EXTRA WORK

- A. The Owner will pay for differing site conditions, changes, and extra work at either unit price or lump sum as stipulated in the order authorizing the work.

- B. The City Engineer uses contract unit prices if they are representative of the work to be performed.
 - 1. Unit price work will be reimbursed at the rates established in the contract.
 - a. These rates include compensation for the actual work and associated field indirect costs, home office overheads, profit, and all other costs incidental to the work unless otherwise defined in the contract.
- C. Negotiated lump sum or unit pricing for changes to the contract work will be based on the Contractor's estimate to do the work as validated by the City Engineer's review or independent cost estimate.
 - 1. Support the price with a detailed cost estimate. Include the following in the estimate:
 - a. Labor and equipment hours based on agreed upon productivity rates.
 - b. Use the actual cost of wages, benefits, burdens, and other labor related expenses for the labor rates applied to the estimated man-hours.
 - 1) Include certified accounting records verifying these costs or make them available upon request of the City Engineer.
 - c. Materials will be reimbursed at actual cost as determined by supplier invoices or estimates.
 - 1) Materials produced on site, such as granular borrow or UTBC will be reimbursed according to the labor and equipment rates used to produce such materials.
 - d. Use the actual cost of the equipment to the Contractor for equipment rates applied to the estimated equipment hours.
 - 1) Include certified accounting records verifying these costs or make them available upon request of the City Engineer.
 - 2. A markup of 15 percent will be paid on all expenses identified above. This markup compensates the Contractor for home office overheads, profit, and incidental costs.
 - 3. No other expenses will be compensated unless approved by the City Engineer.

1.07 PROGRESS PAYMENTS

- A. The Owner will make progress payments at least once each month as the work is progressing.
- B. More frequent payments may be made during any period when the Owner determines that the value of work performed during the period is sufficient to warrant a payment.
- C. Payments are based on estimates prepared by the City Engineer of the value of the work performed and materials in place under the contract and for payment for material on hand in accordance with this section.
- D. The Owner will not make any progress payment when the total value of the work done since the last estimate is less than \$1,000.
- E. The Owner will deduct and retains five percent from the total value of work until after the entire contract has been completed in an acceptable manner with the following exceptions:
 - a. Retention for subcontracted work is paid upon satisfactory completion and acceptance by the Owner. Refer to Section 01284.
 - b. The City Engineer may prepare a semi-final estimate with the consent of the Surety from which the Owner retains 1.5 percent of the original contract amount when no less than 95 percent of the work has been completed. The Owner certifies the remainder for payment, less all previous payments.
- F. The Contractor may enter into an addendum agreement providing for payment of retained money into an escrow account, or the Owner does so automatically.
 - 1. This money is applied to the purchase of approved securities that are to be held by an escrow agent until satisfactory completion of the construction contract.
 - 2. The value of the securities placed in escrow has a minimum value equal to or greater than the amount that would otherwise be retained.
 - 3. The addendum agreement must be executed concurrently with the execution of the construction contract. Agreement forms will be available in the office of the City Engineer.

- G. The Owner will pay the Contractor within 14 calendar days after certification and approval of billings and estimates.
 - 1. The Contractor and City Engineer agree to a Saturday partial estimate closing date. Succeeding partial estimates close on the same Saturday for each succeeding month.
 - 2. The Contractor approves partial estimate before submission.

1.08 FINAL PAYMENT

- A. The City Engineer prepares the final estimate of work performed when the project has been accepted.
 - 1. The Owner will process the estimate for final payment if the Contractor approves the final estimate and does not object to the quantities within 30 calendar days of receiving the final estimate.
 - 2. The Owner will pay the entire sum due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract after approval of the final estimate by the Contractor.
- B. File a full, complete, and itemized written statement with the Owner justifying the adjustment within 30 calendar days after the final estimate is submitted for approval if additional payment is due from the Owner.
 - 1. Contractor waives all disputes not itemized.
 - 2. Submission of disputes by the Contractor will not be reason for withholding full payment of the total value of work shown on the City Engineer's final estimate.
 - 3. The Owner will evaluate the dispute.
 - a. The final estimate is revised accordingly under the terms of the contract if it is determined that additional payment is due.
 - b. The estimate as submitted is final if it is determined that no additional payment is due.
- C. All prior partial estimates and payments are subject to correction in the final estimate and payment.
- D. The Owner will complete and deliver the final estimate to the Contractor within 90 days of contract completion.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01300

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preconstruction meeting.
- B. Progress meetings.
- C. Construction progress schedule.
- D. Progress videotapes and photographs.
- E. Coordination drawings.
- F. Submittals for review, information, and project closeout.
- G. Number of copies of submittals.
- H. Submittal procedures.

1.02 RELATED SECTIONS

- A. Document 00700 - General Conditions: Dates for applications for payment.
- B. Document 00700 - General Conditions: Duties of the Construction Manager.
- C. Section 01700 - Execution Requirements: Additional coordination requirements.
- D. Section 01780 - Closeout Submittals: Project record documents.

1.03 PROJECT COORDINATION

- A. Project Coordinator: City Inspector.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for project access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to the City Engineer through the Project Coordinator:
 - 1. Requests for interpretation.
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.

4. Test and inspection reports.
5. Design data.
6. Manufacturer's instructions and field reports.
7. Applications for payment and change order requests.
8. Progress schedules.
9. Coordination drawings.
10. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. The Owner will schedule a meeting after Notice of Award.
- B. Attendance Required:
 1. Owner.
 2. City Inspector.
 3. City Safety Coordinator.
 4. City Engineer.
 5. Contractor.
 6. Representative from Utility Companies.
- C. Prior to Meeting:
 1. Execution of Owner -Contractor Agreement.
 2. Submission of executed bonds and insurance certificates.
- D. Agenda:
 1. Distribution of Contract Documents.
 2. Submission of list of Subcontractors, and progress schedule.
 3. Designation of personnel representing the parties in Contract, Contractor, Owner, and City Engineer.
 4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 5. Review safety standards and procedures.
 6. Scheduling.
 7. Scheduling activities of a testing company and Geotechnical Engineer, if required.

- E. Record minutes and distribute copies within two days after meeting to participants, with one copy to Contractor, City Engineer, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, City Inspector, City Safety Coordinator, City Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to Work.
- E. Record minutes and distribute copies within two days after meeting to participants, with one copy to Contractor, City Engineer, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01325

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.04 PROGRESS DVD'S AND DIGITAL PHOTOGRAPHS (NOT USED)

3.05 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Review drawings prior to submission to the City Engineer.

3.06 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to the City Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01780 - CLOSEOUT SUBMITTALS.

3.07 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for the City Engineer's knowledge as contract administrator or for the Owner. No action will be taken.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

- A. When the following are specified in individual sections, submit them at project closeout:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- B. Submit for the Owner's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS

- A. Documents for Review:
 - 1. Small size sheets, not larger than 8-1/2 x 11 inches: Submit the number of copies which the Contractor requires, plus two copies which will be retained by the City Engineer.
 - 2. Larger sheets, not larger than 36 x 48 inches: Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by City Engineer.
- B. Documents for Information: Submit two copies.
- C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- D. Samples: Submit the number specified in individual specification sections; one of which will be retained by the City Engineer.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.10 SUBMITTAL PROCEDURES

- A. Transmit each submittal with transmittal letter.
- B. Sequentially number the transmittal letters. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply the Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to the City Engineer at business address.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 7 days excluding delivery time to and from the Contractor.
- H. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- I. Provide space for Contractor and City Engineer review stamps.
- J. When revised for re-submission, identify all changes made since previous submission.
- K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

END OF SECTION

SECTION 01325

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 REFERENCES

- A. AGC (CPM) - The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry; Associated General Contractors of America; latest edition.
- B. M-H (CPM) - CPM in Construction Management - Project Management with CPM, O'Brien, McGraw-Hill Book Company; latest edition.

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days, as directed by the City Inspector or City Engineer.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment, as directed by the City Inspector or City Engineer.
- F. Submit the number of opaque reproductions the Contractor requires, plus one copy which will be retained by the City Engineer.
- G. Submit under transmittal letter form specified in Section 01300.

1.04 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.05 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches or width required.
- C. Sheet Size: Multiples of 8-1/2 x 11 inches.
- D. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01100.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Include conferences and meetings in schedule.
- G. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- H. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, Products identified under Allowances, and dates reviewed submittals will be required from the City Engineer. Indicate decision dates for selection of finishes.
- I. Indicate delivery dates for owner-furnished products.
- J. Coordinate content with schedule of values specified in Section 01200.
- K. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with the City Inspector or City Engineer at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.

- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.
- G. Provide narrative report, as directed by the City Inspector or City Engineer, to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect including the effects of changes on schedules of separate contractors.

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, the City Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION

SECTION 01400
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. References and standards.
- B. Quality assurance submittals.
- C. Control of installation.
- D. Tolerances.
- E. Testing and inspection services.
- F. Manufacturers' field services.

1.02 RELATED SECTIONS

- A. Section 00300 - Information Available to Bidders: Soil investigation data.
- B. Section 00700 - General Conditions: Inspections and approvals required by public authorities.
- C. Section 01300 - Administrative Requirements: Submittal procedures.
- D. Section 01600 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCES

- A. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- B. ASTM D 290 - Standard Practice for Bituminous Mixing Plant Inspection.
- C. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- D. ASTM E 329 - Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
- E. ASTM E 543 - Standard Practice for Agencies Performing Nondestructive Testing.
- F. ASTM E 548 - Standard Guide for General Criteria used for Evaluating Laboratory Competence.
- G. Use the latest edition of the above reference standards as of the date of the project.

1.04 SUBMITTALS

- A. Testing Agency Qualifications:
 - 1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

- B. Test Reports: After each test/inspection, promptly submit two copies of report to the City Inspector or City Engineer and to the Contractor; within maximum of 24 hours.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Conformance with Contract Documents.
 - k. When requested by the City Inspector or City Engineer, provide interpretation of results.
 - 2. Test reports are submitted for the City Inspector or City Engineer's knowledge as contract administrator or for the Owner, for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor to the City Inspector or City Engineer, in quantities specified for Product Data.
 - 1. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 - 2. Certificates may be recent or previous test results on material or Product, but must be acceptable to the City Inspector or City Engineer.
- D. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- E. Manufacturer's Field Reports: Submit reports for the City Inspector or City Engineer's benefit as contract administrator or for the Owner.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- F. Erection Drawings: Submit drawings for the City Inspector or City Engineer's benefit as contract administrator or for the Owner.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
 - 2. Data indicating inappropriate or unacceptable Work may be subject to action by the City Inspector, City Engineer or the Owner.

1.05 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.

- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from the City Engineer before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the City Inspector or City Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 TESTING AND INSPECTION AGENCIES

- A. Owner will employ and pay for services of an independent testing agency to perform specified testing. See Supplemental General Conditions for specified testing.
- B. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing. See Supplemental General Conditions for specified testing.
- C. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- D. Contractor and Owner Employed Agency:
 - 1. Testing agency: Comply with requirements of ASTM E 329, ASTM E 548, ASTM C 1093, ASTM E 543, ASTM C 1021, ASTM C 1077, ASTM C 1093, and ASTM C 1021.
 - 2. Inspection agency: Comply with requirements of ASTM D290.
 - 3. Laboratory: Authorized to operate in State in which Project is located.
 - 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 - 5. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from the City Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from the City Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

3.03 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with the City Engineer and Contractor in performance of services.
 - 2. Perform specified sampling and testing of Products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify the City Inspector or City Engineer and the Contractor of observed irregularities or non conformance of Work or Products.
 - 5. Perform additional tests and inspections required by the City Inspector or City Engineer.
 - 6. Attend preconstruction meetings and progress meetings, when requested.
 - 7. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify the City Inspector or City Engineer and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by the Contractor beyond specified requirements.

6. Arrange with the Owner's agency and pay for additional samples, tests, and inspections required by the Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by the City Inspector or City Engineer. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Sum/Price.

3.04 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If, in the opinion of the City Inspector or City Engineer, it is not practical to remove and replace the Work, the City Inspector or City Engineer will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Vehicular access and parking.

1.02 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required chemical or marine type toilets of acceptable type. Provide at time of project mobilization.
- B. Use of existing facilities is permitted, where acceptable to the owners of the facilities.
- C. Maintain daily in clean and sanitary condition.
- D. At end of construction, remove portable toilets completely.

1.03 BARRIERS

- A. Provide sufficient barriers at all unsafe places at or near construction areas and to protect existing facilities and adjacent properties from damage from construction operations; in all cases maintain safe passageways through construction areas.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, and structures from damage.

1.04 FENCING

- A. Where required, provide temporary fences at construction areas to contain domestic animals.
- B. After project work is completed, the temporary fences shall be totally removed.

1.05 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and the Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Maintain at least one lane of traffic for local residences, or as directed by the City Inspector.
- D. Provide and maintain access to adjacent businesses as directed.
- E. Provide means of removing mud from vehicle wheels before entering streets.
- F. Provide temporary parking areas to accommodate construction personnel.

1.06 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to the original conditions. Restore permanent facilities used during construction to specified conditions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01560

SAFETY STANDARDS AND ACCIDENT PREVENTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Safety Standards.
- B. Accident Prevention.

1.02 DEFINITIONS

- A. OSHA - Occupational Safety and Health Administration.
- B. UOSHA - Utah Occupational Safety and Health Administration.

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Provide copy of OSHA 200 for past two years.
- C. Provide copy of citation history from OSHA for past two years.
- D. Provide copy of safety and health program.

1.04 SAFETY STANDARDS AND ACCIDENT PREVENTION

- A. Health and safety, as well as environmental concerns, are given top priority by the Owner.
- B. With respect to all work performed for this Contract, the Contractor shall:
 - 1. Provide a safe and healthful work place in accordance with all federal, state and local regulations.
 - 2. Conform to all rules and regulation of OSHA.
 - 3. Immediately notify the OWNER of ANY accident or job related illness that occurs on the job site.
 - 4. Notify UOSHA of any serious accident within 12 hours of such occurrence, as required by the Utah Administrative Code R574-102 13.1.1.
 - 5. Notify the OWNER of any sub-contractor retained to work on this project; and assure that they are informed of the Safety and Health Standards required by this Contract.
 - 6. Provide the OWNER with a traffic plan for the work zone and buffer zone. Plan must be approved by U.D.O.T. where necessary.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.

1.02 RELATED SECTIONS

- A. Document 00200 - Instructions to Bidders: Product options and substitution procedures prior to bid date.
- B. Section 01400 - Quality Requirements: Product quality monitoring.

1.03 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
 - 1. Submit within 15 days after date of Agreement.
 - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project.
- D. Provide written statement that materials and equipment being furnished are suitable and proper for the intended installations; that suppliers have investigated intended uses; and that items will satisfactorily perform and operate in the installations.

PART 2 PRODUCTS

2.01 PRODUCTS

- A. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- B. Provide interchangeable components of the same manufacture for components being replaced.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. Engineer will consider requests for substitutions only within 15 days after date of Agreement.
- C. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- D. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- E. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities.
- F. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- G. Substitution Submittal Procedure:
 - 1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 3. The Engineer will notify Contractor in writing of decision to accept or reject request.

3.02 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

3.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.

- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Store loose granular materials on relatively solid, flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01700
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Surveying for laying out the work.
- C. Cleaning and protection.
- D. Closeout procedures, except payment procedures.

1.02 RELATED SECTIONS

- A. Section 01300 - Administrative Requirements: Submittals procedures.
- B. Section 01400 - Quality Requirements: Testing and inspection procedures.
- C. Section 01500 - Temporary Facilities and Controls:
- D. Section 01780 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.

1.03 PROJECT CONDITIONS

- A. Grade work areas to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- E. Erosion and Sediment Control: Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
 - 1. Minimize amount of bare soil exposed at one time.
 - 2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 - 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
 - 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- F. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.04 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Coordinate completion and clean-up of work of separate sections.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01600.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Beginning new work means acceptance of existing conditions.
- B. Examine and verify specific conditions described in individual specification sections.
- C. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Cut, move, or remove items as necessary for access to construction area. Replace and restore at completion where necessary.
- B. Remove unsuitable material, such as brush, weeds, wood, metals, concrete and rocks. Load and haul removed materials and dispose of in an acceptable manner.

3.03 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify City Inspector or Engineer of any discrepancies discovered.
- C. Contractor shall locate and protect survey control and reference points.
- D. Control datum for survey is that established by Owner provided survey.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Promptly report to City Inspector or Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

- G. Owner's surveyors will replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.
- H. Utilize recognized engineering survey practices.
- I. Establish elevations, lines, grades and elevations. Locate and lay out by instrumentation and similar appropriate means.
- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install Products as specified in individual sections.

3.05 PROGRESS CLEANING

- A. Maintain construction areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipes and other closed spaces, prior to enclosing the space.
- C. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.

3.06 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic from landscaped areas.

3.07 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the site.

3.08 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 - 1. Provide copies to Engineer and Owner.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.
- C. Notify City Inspector or Engineer when work is considered ready for Substantial Completion.
- D. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Engineer's review.
- E. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.

- F. Accompany Project Coordinator on preliminary final inspection.
- G. Notify Inspector or Engineer when work is considered finally complete.
- H. Complete items of work determined by Inspector or Engineer's final inspection.

END OF SECTION

SECTION 01780
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Warranties and bonds.

1.02 RELATED SECTIONS

- A. Conditions of the Contract: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01300 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01700 - Execution Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.
- F. Section 01785 - Project Evaluation.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Engineer with claim for final Application for Payment.
- B. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty period.
- C. Project Evaluation: Submit form to Engineer with claim for final Application for Payment.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.

3. Addenda.
 4. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
 - C. Store record documents separate from documents used for construction.
 - D. Record information concurrent with construction progress.
 - E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Changes made by Addenda and modifications.
 - F. Record Drawings: Legibly mark each item to record actual construction including:
 1. Measured depths of foundations in relation to finish main floor datum.
 2. Measured depths of manholes in relation to rim elevation.
 3. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 4. Field changes of dimension and detail.
 5. Details not on original Contract drawings.

3.02 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

3.03 PROJECT EVALUATION FORM

- A. See Section 01785 - PROJECT EVALUATION.
- B. Complete all items on the Project Evaluation Form and submit with final Application for Payment.
- C. Owner and Engineer shall also each complete the Project Evaluation form; which will be included with the Project file for use in future evaluation of the Contractor.

END OF SECTION

SECTION 01785

PROJECT EVALUATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Evaluation Document.

1.02 RELATED SECTIONS

- A. Section 01780 - Closeout Submittals.

1.03 SUBMITTALS

- A. Project Evaluation: Document must be submitted to Engineer with claim for final Application for Payment.

1.04 PROJECT EVALUATION

- A. Project to be evaluated by the Owner, Engineer and Contractor.
- B. Project evaluation by Owner and Engineer will be used to rate the Contractor's performance; which will be used to determine Contractor's qualification for future projects with the Owner.
- C. Evaluation shall be done on a five point system; with 5 being excellent, 1 being poor and N/A for items which do not apply.
- D. The following areas are to be evaluated.
- E. Contract: How well was the Contract followed.
 - 1. Time: _____.
 - 2. Materials: _____.
 - 3. Pricing: _____.
 - 4. Bid: _____.
 - 5. Change Orders: _____.
 - 6. Warranties: _____.
- F. Quality of Work.
 - 1. Workmanship: _____.
 - 2. Materials: _____.
 - 3. Equipment Used: _____.
- G. Quality of Materials.
 - 1. Storage on Site: _____.
 - 2. Care to Prevent Damage: _____.

H. Red-Line Drawings.

1. Provided: _____.
2. Quantity: _____.
3. On Time: _____.

I. Working Relationships.

1. Owner's Engineer: _____.
2. Owner's Employees: _____.
3. General Public: _____.
4. Property Owners: _____.

J. Contractor's Performance on Previous Projects with Owner.

1. Owner: _____.
2. Engineer: _____.

K. COMMENTS: _____

END OF SECTION

DIVISION 02

PROJECT CONSTRUCTION

SECTION 02100

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Measurement and payment for Roadway Striping Project for various streets located within the City limits:
 - 1. Mobilization and traffic control.
 - 2. Traffic Paint for Striping, Crosswalks, Messages, and Symbols.

1.02 RELATED SECTIONS

- A. Section 01270 - Unit Prices: criteria applicable to Work performed under a unit price or lump sum price payment method.

1.03 MEASUREMENT AND PAYMENT

- A. Measurement shall be made at the units or lump sums, as described below.
- B. Payment shall be made at the unit price or lump sum price bid in the bid schedule for the items described below; which shall be payment in full for all costs of furnishing labor, tools, equipment, materials, testing, etc., to complete the items of work as specified and as indicated on the drawings.
- C. Mobilization (Bid Item No. 1):
 - 1. Basis for Measurement: Lump Sum.
 - 2. Basis for Payment: Includes all preparatory work and operations, such as movement of personnel, supplies and incidental items to the project site; establishment of offices and other facilities necessary for work on the project; furnishing, erecting and maintaining construction signs and barricades, and all other work and operations which must be performed or cost incurred prior to beginning work on the project.
 - a. Payment shall also include all costs for de-mobilization after the project is completed.
- D. Traffic Control (Bid Item No. 2):
 - 1. Basis for Measurement: Lump Sum.
 - 2. Basis for Payment: Includes furnishing, erecting and maintaining traffic control signs and barricades, all necessary flaggers, and all appurtenant work required for traffic control.
- E. Furnish and Apply Traffic Paint for Pavement Striping (Bid Items No. 3 thru 7 & No. 12 thru 13):
 - 1. Basis for Measurement: By the linear foot of paint actually applied.
 - 2. Basis for Payment: Includes all required layout; furnishing and applying traffic paint for striping for roadways, of the width, color and type, as indicated and as directed by the City Inspector; and all appurtenant work to complete paint layout and application.
- F. Furnish and Apply Traffic Paint for Symbol Markings (Bid Item No. 8):
 - 1. Basis for Measurement: By the unit of symbols actually painted.
 - 2. Basis for Payment: Includes all required layout; furnishing and applying traffic paint for symbol

markings, of the size, type and color, as indicated and as directed by the City Inspector; and all appurtenant work to complete paint layout and application.

L. Furnish and Apply Traffic Paint for Letters for Roadway Messages (Bid Item No. 9):

1. Basis for Measurement: By the unit of message letters actually painted.
2. Basis for Payment: Includes all required layout; furnishing and applying traffic paint for letters for roadway messages, of the size, type and color, as indicated and as directed by the City Inspector; and all appurtenant work to complete paint layout and application.

M. Furnish and Apply Traffic Paint for Bike Lane Symbols (Bid Items No. 10 and 11):

1. Basis for Measurement: By the unit of symbols actually painted.
2. Basis for Payment: Includes all required layout; furnishing and applying traffic paint for bike lane symbols, of the size, type and color, as indicated and as directed by the City Inspector; and all appurtenant work to complete paint layout and application.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 02765

PAVEMENT MARKING PAINT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Furnish Acrylic Water Based pavement marking paint. Refer to this Section, article 2.02, for resin requirement.
- B. Apply to existing roadway pavement as edge lines, center lines, broken lines, guidelines, contrast lines, symbols, and other related markings.
- C. Remove existing pavement markings.

1.02 REFERENCES

- A. AASHTO M 247: Standard Specification for Glass Beads Used in Traffic Paints
- B. ASTM D 562: Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer
- C. ASTM D 2205: Standard Guide for Selection of Tests for Traffic Paints
- D. ASTM D 2743: Standard Practices for Uniformity of Traffic Paint Vehicle Solids by Spectroscopy and Gas Chromatography
- E. ASTM D 2805: Standard Test Method for Hiding Power of Paints by Reflectometry
- F. ASTM D 3723: Standard Test Method for Pigment Content of Water-Emulsion Paints by Low-Temperature Ashing
- G. ASTM D 3960: Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
- H. ASTM D 4451: Standard Test Method for Pigment Content of Paints by Low-Temperature Ashing
- I. ASTM D 5381: Standard Guide for X-Ray Fluorescence (XRF) Spectroscopy of Pigments and Extenders
- J. ASTM E 1347: Standard Test Method for Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry
- K. Federal Standards
- L. Manual on Uniform Traffic Control Devices (MUTCD)
- M. UDOT Materials Manual of Instruction, Part 8
- N. UDOT Minimum Sampling and Testing Requirements
- O. Use the latest edition of the above reference standards as of the date of the project.

1.03 DEFINITIONS

- A. Longitudinal Markings: Pavement markings that are generally placed parallel and adjacent to the flow of traffic, such as lane lines, center lines, edge lines, channelizing lines, and other related lines.

- B. Transverse Markings: Pavement markings that are generally placed perpendicular and across the flow of traffic, such as shoulder markings; word, symbol and arrow markings; stop lines; crosswalk lines; parking space markings; and other related lines.

1.04 SUBMITTALS

- A. Documentation of the manufacturer and production batch identification for the paint used.

1.05 ACCEPTANCE

- A. Provide fixtures such as ball valves, gate valves, or others on paint truck for the purposes of obtaining field samples.
- C. Agitate the paint to allow for thorough mixing. Follow paint manufacturer’s recommendation for agitation and mixing times.
- D. Stop all agitation before sample is drawn.
- E. Calibrate all meters on the paint truck annually and certify for application rate verification.
 - 1. Use the following calibration tolerances for meters:
 - a. Paint: ± 0.1 gal
 - b. Beads: ± 0.5 lb/gal
 - 2. Keep a clean, legible copy of calibration report with the paint truck.
 - 3. Provide a copy of certification at the City Engineer’s request.
- F. The City Engineer will:
 - 1. Visually inspect lines, legends, symbols, and messages to verify compliance with the required dimensions.
 - 2. Inspect at a minimum at the end of each production day.
 - 3. Verify quantities applied by either of the following methods:
 - a. Measuring both paint and bead tanks prior to and after application.
 - b. Witnessing the meter readings prior to and after application.
 - 1) A printout of meter readings, in lieu of witnessing, may be accepted at the City Engineer’s discretion.
 - 4. Sample in accordance with the UDOT Materials Manual of Instruction, Part 8-932 and the UDOT Minimum Sampling and Testing Requirements.
- G. Repaint any line or legend failing to meet bead adherence and dimensional requirements.
- H. Price Reductions. When more than one of the requirements of the pavement markings is deficient, the result with the highest price reduction governs.
 - 1. Price reductions for pavement markings installed below the specified wet mil thickness are outlined in Table 1.

Table 1

Price Reduction for Wet Mil Thickness	
	Pay Factor
At the specified mil thickness	1.00
1-10 percent below the Specified wet mil thickness	0.75
11-15 percent below the Specified wet mil thickness	0.50
More than 15 percent below the Specified wet mil thickness	0.00 *

* Repaint pavement markings at no cost to the Owner.

2. Price reductions for pavement markings installed below the specified total solids, pigment, and non-volatile vehicle content (shown in table 4) are outlined in Table 2.

Table 2

Price Reduction for Total Solids, Pigment and Non-Volatile Vehicle	
	Pay Factor
At or above the specified percentage	1.00
Up to 0.5 percent below the specified percentage	0.85
0.5 to 1.0 percent below the specified percentage	0.70
More than 1.0 percent below the specified percentage	0.00 *

* Repaint pavement markings at no cost to the Owner.

3. Price reductions for pavement markings that fail to meet the remaining requirements of Table 4 are outlined in Table 3.

Table 3

Price Reductions	
	Pay Factor
At the specified requirements	1.00
Up to 1 percent deficient	0.90
1 to 2 percent deficient	0.80
2 to 3 percent deficient	0.70
3 to 4 percent deficient	0.60
4 to 5 percent deficient	0.50
More than 5 percent below specified quantitative requirements	0.00 *

* Repaint pavement markings at no cost to the Owner.

PART 2 PRODUCTS

2.01 PAINT

- A. Meet the requirements for Acrylic Water Based Paint as listed in Table 4:

Table 4

Paint Requirements				
Property	White	Yellow	Black	Test
Pigment: Percent by weight	63.0	63.0	63.0	ASTM D 3723
Total Solids: Percent by weight, minimum	79.0	79.0	79.0	ASTM D 2205
Nonvolatile vehicle: Percent by weight vehicle, minimum*	43.0	43.0	43.0	ASTM D 2205
Viscosity, KU @ 77 degrees F	80 – 95	80 - 95	80 - 95	ASTM D 562
Density, lb/gal	14.1 ± 0.3	14.1 ± 0.3	14.1 ± 0.3	ASTM D 2205
Volatile Organic Content (VOC): lb/gal, maximum	1.25	1.25	1.25	ASTM D 3960
Titanium Dioxide Content, lb/gal	1.0 min	0.2 max	N/A	ASTM D 5381
Color Definition	37875	33538	N/A	Federal Standard 595B
Directional Reflectance Minimum	90.0	50.0	N/A	ASTM E 1347
Dry Opacity: Minimum (5 mils wet)	0.95	0.95	N/A	ASTM D 2805

* Binder: 100 percent acrylic cross-linking polymer, by weight, as determined by infrared analysis and other chemical analysis available to UDOT. Refer to ASTM D 2205.

B. No-Pick-Up Time

1. Paint may not smear or track three minutes after application to the roadway using standard application equipment, at the mil thickness required, and with an ambient shaded temperature of at least 50 degrees F.

C. Additional requirements:

1. Free of lead, chromium, or other related heavy metals. Refer to ASTM D 5381.
2. Refer to ASTM D 2743, ASTM D 4451 and ASTM D 5381: Tests used to verify paint samples meet ASTM requirements.

2.02 GLASS SPHERES (BEADS) USED IN PAVEMENT MARKING PAINT

A. Specific Properties: Meet AASHTO M 247 with the following exceptions.

1. Gradation:

Passing No. 14 sieve	95 - 100 percent
Passing No. 16 sieve	80 - 95 percent
Passing No. 18 sieve	10 - 40 percent
Passing No. 20 sieve	0 - 5 percent
Passing No. 25 sieve	0 - 2 percent

2. Beads: Silane adhesion coating.

3. Roundness - The glass beads will have a minimum of 80 percent true spheres.

B. Beads used in Temporary Pavement Markings meet the above or AASHTO M 247 Type II uniform gradation.

PART 3 EXECUTION

3.01 GENERAL

A. The general striping plan and markings, for each street to be striped, will match the existing striping plan and markings, as indicated and as directed by the City Inspector.

1. The striping and markings shall include 4-inch wide white solid and dashed lines, and 4-inch wide yellow solid and dashed lines, for traffic lanes and bike lanes; 8-inch white solid lines for stop bars and crosswalks; paint for City standard 3-D crosswalks; all markings and symbols matching existing as per types and sizes, as directed; and all appurtenant work to complete the striping and markings for each street.
2. Before striping layout, the Contractor shall examine each street with the City Inspector to determine how the layout shall be done on each street to maintain the existing number of traffic lanes, bike lanes, and related items.

3.02 PREPARATION

A. Line Control.

1. Establish control points at 100 foot intervals on tangent and at 50 foot intervals on curves.
2. Maintain the line within 2 inches of the established control points and mark the roadway between control points as needed.
 - a. Remove paint that is not placed within tolerance of the established control points and replace at no expense to the Owner. Refer to this Section, article 3.4.
 - b. Maintain the line dimension within 10 percent of the width and length dimensions defined in Standard Drawings.

- B. Remove dirt, loose aggregate and other foreign material and follow manufacturer's recommendations for surface preparation.

3.03 APPLICATION

- A. Apply Pavement marking paint at the following wet mil thickness requirements.
 - 1. 20 – 25 wet mils for all longitudinal markings.
 - a. Example Calculation: (Verify wet mil thickness)
Wet Mils = $(0.133681 \text{ ft}^3/\text{gal}) * 12000 \text{ mil}/\text{ft} / (X \text{ ft}/\text{gal})(Z \text{ ft})$
Where
X = application rate. (Meter readings or dipping tanks).
Z = line width measured in feet.
12000 = conversion from feet to mil; 0.133681 = conversion from gallons to cubic feet.
 - b. For information only: Approximate application rate for required mil thickness requirements.
 - 1) 4 inch Solid Line: From 190 to 240 ft/gal
 - 2) 4 inch Broken Line: From 760 to 960 ft/gal
 - 3) 8 inch Solid Line: From 95 to 120 ft/gal
 - 2. 23 – 40 wet mils for all painted legends as determined by a wet mil gauge.
- B. Refer to Table 1 for pavement markings that are less than required wet mils in thickness.
- C. No additional payment for pavement markings placed in excess of required wet mils in thickness or exceeding dimensional requirements outlined in this Section, article 3.1 paragraph A.
- D. Glass Sphere (Beads): Apply a minimum of 8 lb/gal of paint, the full length and width of line and pavement markings.
 - 1. Do not apply glass beads to contrast lines (black paint).
- E. Begin striping operations no later than 24 hours after ordered by the City Engineer.
- F. At time of application apply lines and pavement markings only when the air and pavement temperature are:
 - 1. 50 degrees F and rising for Acrylic Water Based Paint.
- G. Comply with U.D.O.T. TC Series Standard Drawings.

3.04 CONTRACTOR QUALITY CONTROL

- A. Application Rate: Verify that the paint and beads are being applied within specified tolerances prior to striping.
- B. Curing: Protect the markings until dry or cured. In the event that the uncured marking is damaged the marking will be reapplied and track marks left on the pavement will be removed at no additional cost to the Owner.

3.05 REMOVE PAVEMENT MARKINGS

- A. Use one of these removal methods:
 - 1. High pressure water spray,
 - 2. Sand blasting,
 - 3. Shot blasting,
 - 4. Grinding. Grinding is not allowed on the final surfacing unless the City Engineer grants prior written approval.

- B. Do not eliminate or obscure existing striping, in lieu of removal, by covering with black paint or any other covering.
 - 1. The City Engineer may grant prior written approval for use of black paint or other obscuring material for work durations shorter than “long term stationary” as defined in the Temporary Traffic Control section of the MUTCD.
- C. Use equipment specifically designed for removal of pavement marking material.

END OF SECTION

SECTION 02768

PAVEMENT MARKING MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Methods and materials for installing retroreflective pavement marking materials; including Pavement Marking Tape, Solvent-Free and Lead-Free Epoxy, Methyl-Methacrylate, and Thermoplastic legends.

1.02 MEASUREMENT AND PAYMENT

- A. Section 021000 - Measurement and Payment.

1.03 SUBMITTALS

- A. Manufacturer Warranty:
 - 1. Provide a full warranty covering 100 percent of the pavement marking materials.
 - a. Manufacturer is responsible for quality control of the materials, proper placement by the Contractor or subcontractor, and all other factors that affect the service life of the materials.
 - b. Remove or replace 100 percent of the markings for all failed sections at no cost to the Owner in the event of a performance failure.
 - c. Failed sections are defined in this Section, Part 2 for each pavement marking material.
- B. Warranty Bond:
 - 1. The manufacturer provides a warranty bond for the total bid price of the material. The total bid price will be calculated by using the quantity of pavement marking material listed in the engineers estimate and the Contractor's unit bid price for said material.
 - 2. Warranty period covers the specified service life of the materials, and begins after all pavement markings are installed and accepted.
 - 3. Submit proof of bond to the City Engineer before placing the material.
- C. Traffic Control: Refer to SUPPLEMENTAL GENERAL CONDITIONS.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with manufacturer's recommendations.
- B. Provide Material Safety Data Sheets (MSDS) upon delivery of material.

1.07 MANUFACTURER SERVICE REQUIREMENT

- A. Provide technical support to the Contractor during the placement of the marking materials, including information about handling, storage, placement, and other training that may preserve the quality of the installed markings.

1.08 SERVICE LIFE TESTING

- A. The manufacturer shall provide certification of service life testing.
- B. Performance measures: Retro-reflectivity, color contrast and stability, and durability under all traffic volumes and wear conditions, unless stated otherwise.
- C. Retro-reflectivity is measured using a Federal approved instrument (30 m geometry).

- D. Take readings on clean surface areas free of debris when performing Service Life Testing.

PART 2 PRODUCTS

2.01 PAVEMENT MARKING TAPE

- A. Preformed adhesive tape with a raised profile for longitudinal lines on all pavement surfaces.
- B. Preformed adhesive tape with a flat or raised profile for legends and symbols on all pavement surfaces.
- C. Minimum service life for the following applications under all traffic volumes and wear conditions:
 - 1. Longitudinal lines: 48 months.
 - 2. Legends and symbols: 18 months.
- D. Performance Measures for Retro-reflectivity, Color Contrast/stability, and Durability.
 - 1. Minimum Retro-reflectivity:
 - a. White longitudinal lines: 125 millicandelas.
 - b. Yellow longitudinal lines: 125 millicandelas.
 - c. Legends and symbols: 125 millicandelas.
 - 2. Minimum Color Contrast and Stability: For white markings, provide a minimum yellowness index of 30 when measured with a portable colorimeter (XYZ C/2).
 - 3. Minimum Durability Level: 90 percent of the longitudinal line on any 1,000 foot segment or 90 percent of the legend and symbol must be present.
 - 4. Failure to meet any of the specified performance measures on at least 90 percent of the longitudinal line in any 1,000 foot segment or 90 percent of a legend or symbol is considered a complete failure of that marking. Replace under the warranty terms.
- E. Manufacturer. Preformed pavement markings shall 3M Starmark High Performance Wet Reflective Tape, Series 380WR-ES, or acceptable equal.

2.02 SOLVENT-FREE EPOXY

- A. Use 100 percent lead free, two-component (resin and hardener) epoxy system for longitudinal lines, legends, and symbols for all pavement surfaces.
- B. Minimum service life for the following applications under all traffic volumes and wear conditions:
 - 1. Type 1 - Fast dry
 - a. Longitudinal: Center, skip, and edge lines: 24 months.
 - b. Legends and symbols: 12 months.
 - 2. Type 2 - Slow dry
 - a. Longitudinal: Center, skip, and edge lines: 48 months.
 - b. Legends and symbols: 24 months.
- C. Performance Measures for Retro-reflectivity, Color Contrast/stability, and Durability.
 - 1. Minimum Retro-reflectivity:
 - a. White longitudinal lines: 125 millicandelas.
 - b. Yellow longitudinal lines: 125 millicandelas.
 - c. Legends and symbols: 125 millicandelas.
 - 2. Minimum color stability: Yellowness Index of White Paint on concrete or asphalt surfaces: 30 or less.

3. Minimum Durability Level: 90 percent of the longitudinal line on any 1,000 foot segment or 90 percent of the legend and symbol must be present.
 4. Failure to meet any of the specified performance measures on at least 90 percent of the longitudinal line, in any 1,000 foot segment, or 90 percent of a legend or symbol is considered a complete failure of that marking. Replace under the warranty terms.
- D. Retain a one pint sample from each lot or batch used.
1. 24 months for Type 1.
 2. 48 months for Type 2.
- E. Repaint pavement markings that are below 16 wet mils in thickness.
1. No payment for materials placed in excess of 20 wet mils in thickness.
- F. Use beads according to manufacturer's recommendations.

2.03 METHYL METHACRYLATE

- A. Use a two-component pavement marking system compliant with Federal VOC regulations used for longitudinal lines, legends and symbols and for use on all pavement surfaces.
- B. Profiled, non-profiled, inlaid, inverted profile with bump, inverted profile without bump, and spray.
- C. Minimum surface life for the following applications under all traffic volumes and wear conditions:
1. Longitudinal lines: 48 months.
 2. Legends and symbols: 18 months.
- D. Performance Measures for Retro-reflectivity and Durability.
1. Minimum retro-reflectivity:

a. White Longitudinal markings:	125 millicandelas.
b. Yellow Longitudinal markings:	125 millicandelas.
c. Legends and Symbols:	125 millicandelas.
 2. Minimum Durability level: 90 percent of the longitudinal line on any 1,000 foot segment or 90 percent of the legend and symbol must be present.
 3. Failure to meet any of the specified performance measures on at least 90 percent of the longitudinal line in any 1,000 foot segment or 90 percent of the legend or symbol is considered a complete marking failure. Replace under the warranty terms.
- E. Remove and replace pavement marking that is below 80 wet mils in thickness.
1. No payment for materials placed in excess of 100 wet mils in thickness.
- F. Use beads according to manufacturer's recommendations.

2.04 THERMOPLASTIC

- A. Used for legends and symbols only on all pavement surfaces.
- B. Heat-fused preformed and Hot Melt pavement marking materials.

- C. Minimum Service Life for Legends and Symbols under all traffic volumes and wear conditions:
 - 1. Legends and Symbols: 24 months.
- D. Performance Measures for Retro-reflectivity and Durability.
 - 1. Minimum Level of Retro-reflectivity: 125 millicandelas.
 - 2. Minimum Durability: 90 percent of the each legend or symbol must be present.
 - 3. Failure to meet any of the specified performance measures on at least 90 percent of the legend or symbol is considered a complete failure of that legend or symbol. Replace under the warranty terms.
- E. Hot-melt Thermoplastic:
 - 1. Remove and replace legends and symbols that are below 80 wet mils in thickness.
 - 2. No payment for materials placed in excess of 100 wet mils in thickness.

PART 3 EXECUTION

3.01 PREPARATION

- A. Conduct surface preparations according to manufacturer's recommendations.

3.02 APPLICATION

- A. Apply Pavement Marking Materials according to manufacturer's specifications.
- B. Marking configurations shall be as indicated on the drawings and in accordance with the "Manual on Uniform Traffic Control Devices".

END OF SECTION