CONTRACT DOCUMENTS FOR:

ITB #15-023

Painting of Key West Fire Department Exterior and Police Interior/Exterior

MAY 2015

MAYOR: CRAIG CATES

COMMISSIONERS:

TONY YANIZ

BILLY WARDLOW

JIMMY WEEKLEY

CLAYTON LOPEZ

MARK ROSSI

TERI JOHNSTON

PREPARED BY:
City Of Key West
Community Services

CITY OF KEY WEST

CONTRACT DOCUMENTS

For

Painting of Key West Fire Department Exterior and Police Interior/Exterior

****

CONSISTING OF:
BID REQUIREMENTS
CONTRACT FORMS
CONDITIONS OF THE CONTRACT
TECHNICAL SPECIFICATIONS

*****

KEY WEST, FLORIDA

MAY 2015

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PART 1

BIDDING REQUIREMENTS

INVITATION TO BID

Sealed bids for the City of Key West ITB# 15-023, addressed to the City of Key West, will be received at the Office of the City Clerk, 3126 Flagler St., Key West Florida, 33040 until 3:00 pm on JULY 1 , 2015 and then will be publicly opened and read. Any bids received after the time and date specified will not be considered. There will be a mandatory pre bid meeting at 1600 north Roosevelt Blvd. Key West, FL 33040 at 2:00 JUNE 17 2015.

Please submit one (1) original, and two (2) flash drives each with one single PDF file of the bid package. Bid package is to be enclosed in a sealed envelope, clearly marked on the outside ITB # 15023 "PAINTING OF KEY WEST FIRE DEPARTMENT EXTERIOR AND POLICE INTERIOR/ EXTEROR " addressed and delivered to the City Clerk at the address noted above.

The project contemplated consists of providing all materials, equipment and labor necessary to accomplish the following:

- Prepare, prime, and paint select interior of the police station
- Prepare, prime, and paint the exterior of the police and fire station

Drawings and Specifications may be obtained from Demand Star by Onvia. Please contact Demand Star at www.demandstar.com or call 1-800-711-1712 or www.cityofkeywest-fl.gov

The Bidder will also be required to furnish documentation showing that he is in compliance with the licensing requirements of the State and the provisions of Chapter 66 section 87 of the Code of Ordinances of the City of Key West. Compliance with these provisions is required before the Contractor can enter into the agreement contained in the Contract Documents. Specifically, Bidder shall demonstrate that he holds, as a minimum, the following licenses and certificates required by State Statute and local codes.

EACH BID MUST BE SUBMITTED ON THE PRESCRIBED FORM AND ACCOMPANIED BY BID SECURITY AS PRESCRIBED IN THE INSTRUCTIONS TO BIDDERS, PAYABLE TO THE CITY OF KEY WEST, FLORIDA, IN AN AMOUNT NOT LESS THAN FIVE (5) PERCENT OF THE AMOUNT BID.

THE BIDDER MUST BE A CERTIFIED GENERAL CONTRACTOR, CERTIFIED BUILDING CONTRACTOR, REGISTERED GENERAL CONTRACTOR, BUILDING CONTRACTOR OR A CERTIFIED PAINTING CONTRACTOR AND SUBMIT PROOF OF SUCH WITH THE BID.

The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of the provisions of Chapter 66 Section 87 of the Code of Ordinances of the City of Key West; within 10 days the following the Notice of Award and must demonstrate that he holds at a minimum, the following licenses & certificates;

A. City of Key West Business Tax License Receipt
B. A valid Certificate of Competency issued by the Chief Building Official of Key West, Florida as applicable.

All bid bonds, contract bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the Surety or Insurance Company having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said Surety or Insurance Company shall be duly licensed and qualified to do business in the State of Florida.

Before a Contract will be awarded for the work contemplated herein, the CITY OF KEY WEST will conduct such investigation as is necessary to determine the performance record and ability of the apparent low Bidder to perform the size and type of work specified under this Contract. Upon request, the Bidder shall submit such information as deemed necessary by the CITY OF KEY WEST to evaluate the Bidder's qualifications.

For information concerning the proposed work, or for appointment to visit the site of the proposed work, contact Brett Wright FMT supervisor (305) 809-3755 bwright@cityofkeywest-fl.gov

As stated above at the time of the bid submittal the Bidder must provide satisfactory documentation of State Licenses. The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of County, and City licenses as would be required within ten days of the award. The successful Bidder must also be able to satisfy the CITY OF KEY WEST ATTORNEY as to such insurance coverage and legal requirements as may be demanded by the Bid in question. The CITY OF KEY WEST may reject bids for any and/or all of the following reasons: (1) for budgetary reasons, (2) if the bidder misstates or conceals a material fact in its bid, (3) if the bid does not strictly conform to the law or is non-responsive to the bid requirements, (4) if the bid is conditional, or (5) if a change of circumstances occurs making the purpose of the bid unnecessary to the CITY OF KEY WEST. The CITY OF KEY WEST may also waive any minor formalities or irregularities in any bid, (6) if such rejection is in the best interest of the CITY OF KEY WEST The CITY OF KEY WEST may also waive any minor formalities or irregularities in any bid.

INSTRUCTIONS TO BIDDERS

1. CONTRACT DOCUMENTS

A. FORMAT

The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the sections into work performed by the various building trades, work by separate subcontractors, or work required for separate facilities in the project.

B. DOCUMENT INTERPRETATION

The separate sections contained within these Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed work.

Should there be any doubt as to the meaning or intent of said Contract Documents, the Bidder should request of MARCUS DAVILA, MADAVILA@CITYOFKEYWEST-FL.GOV, in writing (at least 10 working days prior to bid opening) an interpretation thereof. Any interpretation or change in said Contract Documents will be made only in writing in the form of Addenda to the documents which will be furnished to all registered holders of Contract Documents. Bidders shall submit with their Bids, or indicate receipt of, all Addenda. The CITY will not be responsible for any other explanation or interpretations of said Documents.

2. GENERAL DESCRIPTION OF THE PROJECT

A general description of the work to be done is contained in the Invitation to Bid. The scope is specified in applicable parts of these Contract Documents.

3. QUALIFICATION OF CONTRACTORS

The prospective Bidders must meet the statutorily prescribed requirements before award of Contract by the CITY. Bidders must hold or obtain all licenses and/or certificates as required by the State and Local Statutes in order to bid and perform the work specified herein.

4. BIDDER'S UNDERSTANDING

Each Bidder must inform himself of the conditions relating to the execution of the work, and it is assumed that he will inspect the site and make himself thoroughly familiar with all the Contract Documents. Failure to do so will not relieve the successful Bidder of his obligation to enter into a Contract and complete the contemplated work in strict accordance with the Contract Documents. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction all information concerning site and subsurface conditions.

The CITY will make available to prospective Bidders upon request and at the office of the Engineer, prior to bid opening, any information that he may have as to subsurface conditions and surface topography at the worksite.

Each Bidder shall inform himself of, and the Bidder awarded a Contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, nondiscrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees, and similar subjects.

5. TYPE OF BID

A. LUMP SUM

The BID for the work is to be submitted on a lump sum basis. Lump sum prices shall be submitted for all items of work set forth in the bid. All items required to complete the work specified but not included in the bid shall be considered incidental to those set forth in the bid.

The Bidder shall submit a Schedule of Values with the BID. It shall be broken down by trade and type of work and it shall be used as a basis for payment. Payment to the Contractor will be made on the measurement of the work actually performed by the Contractor as specified in the Contract Documents.

6. PREPARATION OF BIDS

A. GENERAL

All blank spaces in the BID form must be filled in, as required, preferably in BLACK ink. All price information shall be shown in both words and figures where required. No changes shall be made in the phraseology of the forms. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures. In case of discrepancy between unit prices and extended totals, unit prices shall prevail.

Any BID shall be deemed informal which contains omissions, erasures, alterations, or additions of any kind, or prices uncalled for, or in which any of the prices are obviously unbalanced, or which in any manner shall fail to conform to the conditions of the published Invitation to Bid.

Only one BID from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the CITY that any Bidder is interested in more than one Bid for work contemplated; all Bids in which such Bidder is interested will be rejected.

B. SIGNATURE

The Bidder shall sign his BID in the blank space provided therefore. If Bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign Contracts on behalf of the corporation. If Bidder is a partnership, the true name of the firm shall be set forth above, together with

the signature of the partner or partners authorized to sign Contracts in behalf of the partnership. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a notarized power-of-attorney must be on file with the CITY prior to opening of Bids or submitted with the Bid, otherwise the Bid will be regarded as not properly authorized.

C. SPECIAL BIDDING REQUIREMENTS

The Bidder's attention is brought to the hiring practices and licenses and permits of the City of Key West. These are defined in the addition to Article 39, ORDINANCES, PERMITS, AND LICENSES, as set forth in the Supplementary Conditions.

The Bidder shall submit with his Bid his experience record showing his experience and expertise in PAINTING and related work. Such experience record shall provide at least five current or recent projects (within the past 5 years) of similar work, within the State Florida and preferably Monroe County. For each project the following information shall be provided:

1. Description and location of work.
2. Contract amount.
3. Dates work was performed.
4. Owner.
5. Name of Owner's contact person and phone number.
6. Engineer.
7. Name of Engineer's contact person and phone number.

The bidder shall submit with his bid a list of items to be performed by his own labor and that performed by subcontractors or others.

D. ATTACHMENTS

Bidder shall complete and submit the following forms with his bid:

Anti-Kickback Affidavit
Public Entity Crimes Form
Indemnification Form
Local Vendors certification
Domestic Partnership Affidavit
Bidders Checklist
Cone of Silence Affidavit

E. PUBLIC ENTITY CRIMES FORM

Pursuant to the requirements of Chapter 287.133, Laws of Florida, pertaining to the sworn statement on Public Entity Crimes and the Convicted Vendor List, all Bidders shall submit a signed and notarized statement with their Bid on the form provided herein.

7. STATE AND LOCAL SALES AND USE TAXES

Unless the Supplementary Conditions contains a statement that the CITY is exempt from state sales tax on materials incorporated into the work due to the qualification of the work under this Contract, the Contractor, as required by the laws and statutes of the state and its political subdivisions, shall pay all state and local sales and use taxes. Prices quoted in the Bid shall include all nonexempt sales and use taxes, unless provision is made in the Bid form to separately itemize the tax.

8. SUBMISSION OF BIDS

All BIDS must be submitted not later than the time prescribed, at the place, and in the manner set forth in the Invitation to Bid. BIDS must be made on the BID forms provided herewith, **submit one (1) ORIGINAL and two (2) FLASH DRIVES each containing a single PDF file of the entire bid package.**

Each BID must be submitted in a sealed envelope, so marked as to indicate the Bidder's name and its contents (project name and bid number) without being opened, and addressed in conformance with the instructions in the Invitation to Bid.

9. MODIFICATION OR WITHDRAWAL OF BIDS

Prior to the time and date designated for receipt of BIDS, any BID submitted may be withdrawn by notice to the party receiving BIDS at the place designated for receipt of BIDS. Such notice shall be in writing over the signature of the Bidder or by telegram. If by telegram, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of BID. No BID may be withdrawn after the time scheduled for opening of BIDS, unless the time specified in paragraph AWARD OF CONTRACT of these Instructions to Bidders shall have elapsed.

10. RETURN OF BID SECURITY

Within 10 days after the award of the Contract, the CITY will return the bid securities to all Bidders who's BIDS are not to be further considered in awarding the Contract. Retained bid securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and any guarantees, which have been forfeited, will be returned to the respective Bidders whose Bids they accompanied.

11. AWARD OF CONTRACT

Within ninety (90) calendar days after the opening of Bids, the CITY will accept one of the Bids or will act in accordance with the following paragraphs. The acceptance of the Bid will be by written notice of award, mailed to the office designated in the Bid, or delivered to the Bidder's representative. In the event of failure of the lowest responsive, responsible Bidder to sign the Contract, provide additional documents, insurance certificate(s) and evidence of holding required licenses and certificates, the Owner may award the Contract to the next lowest responsive, responsible Bidder. Such award, if made, will be made within one hundred & twenty (120) days after the opening of Bids.

The CITY reserves the right to accept or reject any or all Bids, and to waive any informalities and irregularities in said Bids.

12. BASIS OF AWARD

The award will be made by the Owner on the basis of the BID from the lowest, responsive, responsible BIDDER which, in the Owner's sole and absolute judgment will best serve the interest of the Owner.

13. EXECUTION OF CONTRACT

The successful Bidder shall, within ten (10) working days after receiving Notice of Award, sign and deliver to the CITY an original Contract and two (2) copies in the form hereto attached, together with the insurance certificate examples of the bonds as required in the Contract Documents and evidence of holding required licenses and certificates. Within 10 working days after receiving the signed Contract from the successful Bidder, the City's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

14. CONTRACT BONDS (not required)

15. FAILURE TO EXECUTE CONTRACT

The Bidder who has a Contract awarded to him and who fails to promptly and properly execute the Contract shall forfeit the bid security that accompanied his bid, and the bid security shall be retained as liquidated damages by the CITY, and it is agreed that this said sum is a fair estimate of the amount of damages the CITY will sustain in case the Bidder fails to enter into a Contract . Bid security deposited in the form of cash, a certified check, or cashier's check shall be subject to the same requirement as a Bid Bond.

16. TIME OF COMPLETION

The time of completion of the work to be performed under this Contract is the essence of the Contract. Delays and extensions of time may be allowed in accordance with the provisions stated in the General Conditions.

When the Contractor receives a Notice to Proceed, he shall commence work as soon as possible and shall complete all work within the number of calendar days stipulated in this Bid.

The term of this contract will be 60 calendar days.

NOTE TO BIDDER: Use preferably BLACK ink for completing this BID form.

BID

To:	The City of Key West
Address:	3126 Flagler Street, Key West, Florida 33041
Project Title:	Painting of Key West Fire Department Exterior and Police Interior/Exterior ITB # 15-023

Bidder's contact person for additional information on this BID:

Company Name: _____

Contact Name & Telephone #: _____

Email Address: _____

BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Bid are those named herein, that this Bid is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Bid is made without any connection or collusion with any person submitting another Bid on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Bid is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Bid.

CERTIFICATES OF INSURANCE

Bidder agrees to furnish the Owner, before commencing the work under this Contract, the certificates of insurance as specified in these Documents.

All contractors and subcontractors wishing to perform work for the City of Key West, Florida, will be required to comply with the following minimum insurance requirements:

Commercial General Liability Limits:	$2,000,000 Aggregate $1,000,000 Each Occurrence $2,000,000 Products-Comp / Op Aggregate $1,000,000 Personal & Advertising Injury $300,000 Fire Damage / Legal

Coverage must include the following:

- Contractual Liability
- CG2010 (1185) or Equivalent
- No exclusion for XCU
- Products / Completed Operations
- Personal Injury
- Commercial Form
- Broad Form Property Damage
- Premises / Operations
- Independent Contractors (if any part of the work is to be subcontracted out)

Automobile Liability:	$1,000,000 Combined Single Limit (Include Hired & Non-Owned Liability)
Additional Umbrella Liability:	$2,000,000 Occurrence / Aggregate
Worker's Compensation:	Statutory
Employer's Liability:	$1,000,000 Each Accident $1,000,000 Disease-Policy Limit $1,000,000 Disease-Each Employee

The Contractor will be required to provide Builders Risk insurance for the completed value of the project.

The above reflects the minimum requirements for working with the City of Key West. Any requirements found in a particular job's contract that are of a higher standard will prevail.

The City of Key West must be named as an additional insured under all policies other than worker's compensation. Contractors or subcontractors general liability shall be written on a primary and non-contributory basis. Certificates of insurance must be accompanied by a copy of the additional insured endorsement (CG 20101185 or combination of CG20100704 and CG20370704 will be accepted).

Contractors and subcontractors must obtain an endorsement from their carrier that waives and relinquishes any right of subrogation against the City of Key West and its agents, representatives, employees, and affiliates they might possess for any policy of insurance provided under this requirement or under any state or federal worker's compensation or employer's liability act.

Contractor's policies must be endorsed to give no less than thirty (30) day notice to the City in the event of material change or cancellation.

The City of Key West must be given a certificate of insurance showing that the above requirements have been met. The certificate of insurance must remain current and must include copies of the requested endorsements (additional insured, cancellation notice, and waiver of subrogation) in order for the City to issue payments to the contractor or subcontractor.

START OF CONSTRUCTION AND CONTRACT COMPLETION TIME

The Bidder further agrees to begin work within 14 calendar days after the date of the Notice to proceed and to complete the project, in all respects within 60 calendar days after the date of the Notice to Proceed.

LIQUIDATED DAMAGES

In the event the Bidder is awarded the Contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to the Owner at the rate of $500.00 per day for all work awarded until the work has been satisfactorily completed as provided by the Contract Documents.

ADDENDA

The Bidder hereby acknowledges that he has received Addenda No's. _____, _____, ____, _____, ____, ____, _____, _____, _____, _____, _____, _____, _____, _____,
(Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Bid(s) includes all impacts resulting from said addenda.

SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

LUMP SUM ITEMS

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following lump sum amounts. The Bidder agrees that the lump sum represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

TOTAL LUMP SUM BASE BID:

1 LS ITB# 15-023, PAINTING **OF KEY WEST FIRE DEPARTMENT EXTERIOR**

$_____

_____Dollars & _____Cents

(amount written in words)

2 LS ITB# 15-023, PAINTING **OF KEY WEST POLICE DEPARTMENT EXTEROR**

$_____

_____Dollars & _____Cents

(amount written in words)

3 LS ITB# 15-023, PAINTING **OF KEY WEST POLICE DEPARTMENT INTERIOR**

$_____

_____Dollars & _____Cents

(amount written in words)

GRAND LUMP SUM TOTAL OF ITEMS 1, 2, AND 3 (without performance and payment bonds)

$_____

_____Dollars & _____Cents

(amount written in words)

GRAND LUMP SUM TOTAL OF ITEMS 1, 2, AND 3 (with performance and payment bonds)

$_____

_____Dollars & _____Cents

(amount written in words)

The Bidder shall submit a Schedule of Values with the Bid. It shall be broken down by trade and type of work and it shall be used as a basis for payment. The Bidder will be considered non-responsive if Schedule of Values is not included in Bid package.

NOTE: THE TOTAL LUMP SUM BASE BID WILL BE THE BASIS OF EVALUATING LOW BIDDER AND BASIS OF AWARD

Payment for materials & equipment authorized by the owner in a written work change order but not listed in the schedule of values, will be provided at suppliers invoice plus 10 %.

List items to be performed by CONTRACTOR's own forces and the estimated total cost of these items. (Use additional sheets if necessary.)

SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

_____

Name

_____, _____, _____, _____

Street City State Zip

Name

_____, _____, _____ ,_____

Street City State Zip

_____
Name

_____, _____, _____,_____
Street City State Zip

_____
Name

_____, _____, _____,_____
Street City State Zip

SURETY

_____ whose address is

_____, _____, _____, _____
Street City State Zip

BIDDER

The name of the Bidder submitting this Bid is

_____ doing business at

_____, _____, _____, _____
Street City State Zip

which is the address to which all communications concerned with this Bid and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Bid, or of the partnership, or of all persons interested in this Bid as principals are as follows:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

If Sole Proprietor or Partnership

IN WITNESS hereto the undersigned has set his (its) hand this _____ day of _____ 2015.

_____
Signature of Bidder

_____
Title

If Corporation

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this _____ day of _____ 2015.

(SEAL)

_____
Name of Corporation

By _____

Title _____
Attest_____

EXPERIENCE OF BIDDER

The Bidder states that he is an experienced CONTRACTOR and has completed similar projects within the last 5 years.

(List similar projects, with types, names of OWNERs, construction costs, ENGINEERs, and references with phone numbers. Use additional sheets if necessary.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

FLORIDA BID BOND

BOND NO. _____

AMOUNT: $ _____

KNOW ALL MEN BY THESE PRESENTS, that _____

_____

hereinafter called the PRINCIPAL, and _____

_____

a corporation duly organized under the laws of the State of _____

having its principal place of business at _____

_____in the State of _____,
and authorized to do business in the State of Florida, as SURETY, are held and firmly bound unto

_____

hereinafter called the OBLIGEE, in the sum of_____
DOLLARS ($_____) for the payment for which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these present.

THE CONDITION OF THIS BOND IS SUCH THAT:

WHEREAS, the PRINCIPAL is herewith submitting his or its Bid for the Painting of Key West Fire Department Exterior and Police Interior/Exterior, said Bid, by reference thereto, being hereby made a part hereof.

WHEREAS, the PRINCIPAL contemplates submitting or has submitted a bid to the OBLIGEE for the furnishing of all labor, materials (except those to be specifically furnished by the CITY),

equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Bid and the detailed Specifications, entitled:

Painting of Key West Fire Department Exterior and Police Interior/Exterior

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check, certified check, or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the CITY for the performance of said Contract, within 10 working days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the PRINCIPAL within 10 consecutive calendar days after written notice of such acceptance, enters into a written Contract with the OBLIGEE and furnishes the Performance and Payment Bonds (Not required as part of this contract), each in an amount equal to 100 percent of the base bid, satisfactory to the CITY, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the OBLIGEE and the Surety herein agrees to pay said sum immediately upon demand of the OBLIGEE in good and lawful money of the United States of America, as liquidated damages for failure thereof of said PRINCIPAL.

Signed and sealed this _____ day of _____, 2015.

PRINCIPAL

By_____

STATE OF _____)
: SS
COUNTY OF _____)

_____
SURETY

By

ANTI – KICKBACK AFFIDAVIT

STATE OF _____)
: SS
COUNTY OF _____)

I, the undersigned hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

By: _____

Sworn and subscribed before me this _____day of _____, 2015.

NOTARY PUBLIC, State of _____ at Large

My Commission Expires:

SWORN STATEMENT UNDER SECTION 287.133(3)(A)
FLORIDA STATUTES, ON **PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Bid or Bid for _____

   _____

2. This sworn statement is submitted by_____
   (Name of entity submitting sworn statement)

   whose business address is _____

   _____

   and (if applicable) its Federal Employer Identification Number (FEIN) is_____

   _____

   (If the entity has no FEIN, include the Social Security Number of the individual

   signing this sworn statement _____

3. My name is _____
   (Please print name of individual signing)

   and my relationship to the entity named above is _____

4. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any bid or contract for goods or services to be provided to any public or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication guilt, in any federal or state trial court of record relating to charges brought by indictment information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means

a. A predecessor or successor of a person convicted of a public entity crime; or

b. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1)(8), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies).

____Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

_____There has been a proceeding concerning the conviction before a hearing of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

_____The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of

Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order.)

_____The person or affiliate has not been put on the convicted vendor list. (Please describe any action taken by or pending with the Department of General Services.)

(Signature)

_____

(Date)

STATE OF_____

COUNTY OF_____

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

_____who, after first being sworn by me, affixed his/her
(Name of individual signing)

Signature in the space provided above on this_____day of _____ , 2015.

My commission expires:

_____

NOTARY PUBLIC

INDEMNIFICATION

To the fullest extent permitted by law, the CONTRACTOR expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents, and employees (herein called the "indemnitees") from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR, its Subcontractors or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONTRACTOR's insurance or $1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any.

The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR under workers' compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the CONTRACTOR or of any third party to whom CONTRACTOR may subcontract a part or all of the Work. This indemnification shall continue beyond the date of completion of the work.

CONTRACTOR: _____ SEAL:

_____
Address

_____
Signature

_____
Print Name

_____
Title

DATE: _____

LOCAL VENDOR CERTIFICATION PURSUANT TO CKW ORDINANCE 09-22 SECTION 2-798

The undersigned, as a duly authorized representative of the vendor listed herein, certifies to the best of his/her knowledge and belief, that the vendor meets the definition of a "Local Business." For purposes of this section, "local business" shall mean a business which:

a. Principle address as registered with the FL Department of State located within 30 miles of the boundaries of the city, listed with the chief licensing official as having a business tax receipt with its principle address within 30 miles of the boundaries of the city for at least one year immediately prior to the issuance of the solicitation.

b. Maintains a workforce of at least 50 percent of its employees from the city or within 30 miles of its boundaries.

c. Having paid all current license taxes and any other fees due the city at least 24 hours prior to the publication of the call for bids or request for Bids.

- Not a local vendor pursuant to Ordinance 09-22 Section 2-798
- Qualifies as a local vendor pursuant to Ordinance 09-22 Section 2-798

If you qualify, please complete the following in support of the self-certification & submit copies of your County and City business licenses. Failure to provide the information requested will result in denial of certification as a local business.

Business Name _____ Phone: _____

Current Local Address: _____ Fax:_____
(P.O Box numbers may not be used to establish status)

Length of time at this address:_____

_____ Date: _____
Signature of Authorized Representative

STATE OF_____ COUNTY OF_____
_____

The foregoing instrument was acknowledged before me this _____day of_____, 2015.

By_____, of _____
(Name of officer or agent, title of officer or agent) (Name of corporation acknowledging)

or has produced identification_____as identification
(Type of identification)

_____
Signature of Notary

_____
Print, Type or Stamp Name of Notary

_____
Title or Rank

Return Completed form with
Supporting documents to:
City of Key West Purchasing

EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

STATE OF _____)
: SS
COUNTY OF _____)

I, the undersigned hereby duly sworn, depose and say that the firm of _____ provides benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses per City of Key West Ordinance Sec. 2-799.

By: _____

Sworn and subscribed before me this

_____ Day of _____, 2015.

_____
NOTARY PUBLIC, State of _____ at Large

My Commission Expires: _____

CONE OF SILENCE AFFIDAVIT

STATE OF _____)
: SS
COUNTY OF _____)

I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of _____ have read and understand the limitations and procedures regarding communications concerning City of Key West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence (attached).

Sworn and subscribed before me this

_____ Day of _____, 2015.

_____

NOTARY PUBLIC, State of _____ at Large

My Commission Expires: _____

BIDDER'S CHECKLIST

(Note: The purpose of this checklist is to serve as a reminder of major items to be addressed in submitting a bid and is not intended to be all inclusive. It does not alleviate the Bidder from the responsibility of becoming familiar with all aspects of the Contract Documents and proper completion and submission of his bid.)

1.	All Contract Documents thoroughly read and understood.	[ ]
2.	All blank spaces in Bid filled in, using black ink.	[ ]
3.	Total and unit prices added correctly and attached Schedule of Values	[ ]
4.	Addenda acknowledged.	[ ]
5.	Subcontractors are named as indicated in the Bid.	[ ]
6.	Experience record included.	[ ]
7.	Bid signed by authorized officer.	[ ]
8.	Bid Bond completed and executed, including power-of-attorney dated the same date as Bid Bond.	[ ]
9.	Bidder familiar with federal, state, and local laws, ordinances, rules and regulations affecting performance of the work.	[ ]
10.	Bidder, if successful, able to obtain and/or demonstrate possession of required licenses and certificates within (10) ten calendar days after receiving a Notice of Award.	[ ]
11.	BID submitted intact with the volume entitled “Bidding Requirements” and “Contract Forms”, 1 original, and 2 flash drives as stated in the invitation to bid.	[ ]
12.	Bid Documents submitted in sealed envelope and addressed and labeled in conformance with the instructions in the Invitation to Bid.	[ ]

PART 2

CONTRACT FORMS

CONTRACT

This Contract, made and entered into this _____ day of _____ 2015,

by and between the CITY OF KEY WEST, hereinafter called the "Owner", and_____

_____

_____

hereinafter called the "Contractor";

WITNESSETH:

The Contractor, in consideration of the sum to be paid him by the Owner and of the covenants and agreements herein contained, hereby agrees at his own proper cost and expense to do all the work and furnish all the materials, tools, labor, and all appliances, machinery, and appurtenances for ITB # 15023 Painting of Key West Fire Department Exterior and Police Interior/Exterior, Key West, Florida to the extent of the Bid made by the Contractor, dated the _____ day of 2015, all in full compliance with the Contract Documents referred to herein.

The CONTRACT DOCUMENTS, including the signed copy of the BID, CONTRACT FORMS, PERFORMANCE & PAYMENT BONDS (Not required as part of this contract), SUMMARY OF WORK, SPECIFICATIONS, GENERAL & SUPPLEMENTARY CONDITIONS OF THE CONTRACT.

In consideration of the performance of the work as set forth in these Contract Documents, the Owner agrees to pay to the Contractor the amount bid in the Bid as adjusted in accordance with the Contract Documents, or as otherwise herein provided, and to make such payments in the manner and at the times provided in the Contract Documents.

The Contractor agrees to complete the work within sixty (60) days and to accept as full payment hereunder the amounts computed as determined by the Contract Documents and based on the said BID.

The Contractor agrees to remedy all defects appearing in the work or developing in the materials furnished and the workmanship performed under thgf is Contract during the warranty period after the date of final acceptance of the work by the Owner, and further agrees to indemnify and save the Owner harmless from any costs encountered in remedying such defects.

It is agreed that the Contract, based upon the BID, shall be fully complete within the stated number of consecutive calendar days from the date the Notice to Proceed is issued.

In the event the Contractor fails to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid at a rate of $500.00 per day. Sundays and legal holidays shall be included in determining days in default.

This contract will automatically expire upon completion of the project. Contractors warranty obligations remain in effect.

IN WITNESS WHEREOF, we, the parties hereto, each herewith subscribe the same this

_____ Day of _____, A.D., 2015.

CITY OF KEY WEST

By_____

Title_____

CONTRACTOR

By_____

Title_____

FLORIDA PERFORMANCE BOND

BOND NO._____

AMOUNT: $_____

KNOW ALL MEN BY THESE PRESENTS, that in accordance with Florida Statutes Section

255.05 _____

with offices at _____

hereinafter called the CONTRACTOR (Principal), and

_____

with offices at_____

a corporation duly organized and existing under and by virtue of the laws of the State of Florida, hereinafter called the SURETY, and authorized to transact business within the State of Florida, as SURETY, are held and firmly bound unto the **CITY OF KEY WEST,** hereinafter called the CITY (Obligee), in the sum of:

_____DOLLARS ($_____), lawful money of the United States of America, for the payment of which, well and truly be made to the CITY, the CONTRACTOR and the SURETY bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:
WHEREAS, the CONTRACTOR has executed and entered into a certain Contract hereto attached, with the CITY, dated _____, 2015, to furnish at his own cost, charges, and expense all the necessary materials, equipment, and/or labor in strict and express accordance with said Contract and the Contract Documents as defined therein, all of which is made a part of said Contract by certain terms and conditions in said Contract more particularly mentioned, which Contract, consisting of the various Contract Documents is made a part of this Bond as fully and completely as if said Contract Documents were set forth herein;

NOW THEREFORE, the conditions of this obligation are such that if the above bounden CONTRACTOR:

1. Shall in all respects comply with the terms and conditions of said Contract and his obligation there under, including the Contract Documents (which include the scope of work and conditions as prepared by the CITY, invitation to bid, instructions to bidders, the CONTRACTOR'S bid as accepted by the above CITY, the bid and contract performance and payment bonds (Not required as part of this contract), and all addenda, if any, issued prior to the opening of bids), being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying PRINCIPAL with labor, materials, or supplies, used directly or indirectly by PRINCIPAL in the prosecution of the work provided for in the contract; and

3. Pays CITY all losses, costs, expenses, damages, attorney's fees, including appellate proceedings, injury or loss of whatever kind and however arising including, without limitation, delay damages to which said CITY may be subject by reason of any wrongdoing, misconduct, want of care or skill, negligence, failure of performance, breach, failure to petition within the prescribed time, or default, including patent infringements, on the part of said CONTRACTOR, his agents or employees, in the execution or performance of said Contract; and

4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this obligation shall be void; otherwise, to remain in full force and effect for the term of said Contract.

AND, the said Surety for value received, hereby stipulates and agrees that no change involving any extension of time, or addition to the terms of the Contract Documents, or to the work to be performed, or materials to be furnished there under shall affect said obligation of said Surety on this Bond, and the said Surety does hereby waive notice of any such changes, extension of time, alterations, or additions of the terms of the Contract Documents, or to the work.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

IN WITNESS WHEREOF, the above parties bonded together have executed this instrument

this _____ day of _____, 2015, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

By: _____

(SEAL)

ATTEST

SURETY

By: _____

(SEAL)

ATTEST

FLORIDA PAYMENT BOND

BOND NO._____

AMOUNT: $_____

KNOW ALL MEN BY THESE PRESENTS, that in accordance with Florida Statutes Section

255.05,_____

with offices at_____
hereinafter called the CONTRACTOR, (Principal), and

_____

with offices at _____

a corporation duly organized and existing under and by virtue of the laws of the State of _____

_____ , hereinafter called the SURETY, and authorized to transact business within the State of Florida, as SURETY, are held and firmly bound unto CITY OF KEY WEST**,** hereinafter called the City (Obligee), in the sum of:

_____DOLLARS(_____), lawful money of the United States of America, for the payment of which, well and truly be made to the CITY, and the CONTRACTOR and the SURETY bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

WHEREAS, the CONTRACTOR has executed and entered into a certain Contract for

ITB #15-015 KEY WEST HISTORIC SEAPORT - TURTLE KRAALS WALL REPLACEMENT attached hereto, with

the CITY, dated_____

_____, 2015, to furnish at his own cost, charges, and expense the necessary materials, equipment, and/or labor in strict and express accordance with said Contract and the plans, drawings (if any), and specifications prepared by the CITY, all of which is made a part of said Contract by certain terms and conditions in said Contract more particularly mentioned, which Contract, consisting of the various Contract Documents specifically mentioned herein and relative hereto, is made a part of this Bond as fully and completely as if said Contract Documents were set forth herein.

NOW THEREFORE, the conditions of this obligation are such that if the above bounden CONTRACTOR shall in all respects comply with the terms and conditions of said Contract and his obligation thereunder, including the Contract Documents ,which include Scope of work and conditions prepared by the CITY, invitation to bid, instructions to bidders, the

CONTRACTOR'S bid as accepted by the CITY, the bid and contract and payment bonds (Not required as part of this contract), and all addenda, if any, issued prior to the opening of bids), and further that if said CONTRACTOR shall promptly make payments to all persons supplying materials, equipment, and/or labor, used directly or indirectly by said CONTRACTOR or subcontractors in the prosecution of the work for said contract is accordance with Florida Statutes, Section 255.05 or Section 713.23, then this obligation shall be void; otherwise to remain in full force and effect for the term of said contract, including and all guarantee periods as specifically mentioned in said Contract Documents.

AND, the said SURETY for value received, hereby stipulates and agrees that no change involving any extension of time, or addition to the terms of the Contract or to the work to be performed, or materials to be furnished thereunder, or in the Contract Documents and specifications accompanying the said contract shall affect said obligation of said SURETY on this Bond, and the said SURETY does hereby waive notice of any such changes, extension of time, alternations, or additions of the terms of the Contract, or to the work, to the Contract Documents, or to the specifications.

Claimant shall give written notice to the CONTRACTOR and the SURETY as required by Section 255.05 or Section 713.23, Florida Statutes. Any action instituted against the CONTRACTOR or SURETY under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2) or Section 713.23, Florida Statutes.

IN WITNESS WHEREOF, the above parties bounded together have executed this instrument

this _____ day of _____, 2015, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

CONTRACTOR

By:_____

(SEAL)

ATTEST

SURETY

By:_____

(SEAL)

ATTEST

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DEFINITIONS

Whenever in the Contract Documents the following terms are used, the intent and meaning shall be interpreted as follows:

1. AS APPROVED

The words "as approved", unless otherwise qualified, shall be understood to be followed by the words "by the ENGINEER for conformance with the Contract Document".

2. AS SHOWN, AND AS INDICATED

The words "as shown" and "as Indicated" shall be understood to be followed by the words "on the Drawings".

3. BIDDER

The person or persons, partnership, firm, or corporation submitting a Bid for the work contemplated.

4. CONTRACT DOCUMENTS

The "Contract Documents" consist of the Bidding Requirements, Contract Forms, Conditions of the Contact, Specifications, Drawings, all modifications thereof incorporated into the Documents before their execution, Change Orders, and all other requirements incorporated by specific reference thereto. These form the Contract.

5. CONTRACTOR

The person or persons, partnership, firm, or corporation who enters into the Contract awarded him by the OWNER.

6. CONTRACT COMPLETION

The "Contract Completion" is the date the OWNER accepts the entire work as being in compliance with the Contract Documents, or formally waives nonconforming work to extent of nonconformity, and issues the final payment in accordance with the requirements set forth in Article, "Final Payment" of these General Conditions.

7. DAYS

Unless otherwise specifically stated, the term "days" will be understood to mean calendar days. Business day or working day means any day other than Saturday, Sunday, or legal holiday.

8. DRAWINGS

The term "Drawings" refers to the official Drawings, Profiles, cross sections, elevations, details, and other working drawings and supplementary drawings, or reproductions thereof, signed by the ENGINEER, which shows the location, character, dimensions, and details of the work to be performed. Drawings may either be bound in the same book as the balance of the Contract Documents, or bound in separate sets, and are a part of the Contract Documents, regardless of the method of binding.

9. ENGINEER

The person or organization identified as such in the Contract Documents. The Term "ENGINEER" means ENGINEER or his authorized representative.

10. NOTICE

The term "notice" or the requirement to notify, as used in the Contract Documents or applicable state or federal statutes, shall signify a written communication delivered in person or by registered mail to the individual, or to a member of the firm, or to an officer of the corporation for whom it is intended. Certified or registered mail shall be addressed to the last business address known to him who gives the notice.

11. OR EQUAL

The term "or equal" shall be understood to indicate that the "equal" Product is equivalent to or better than the Product named in function, performance, reliability, quality, and general configuration. Determination of equality in reference to the Project design requirements will be made by the ENGINEER. Such equal Products shall not be purchased or installed by the CONTRACTOR without written authorization.

12. OWNER

The person, organization, or public body identified as such in the Contract Documents.

13. PLANS (See Drawings)

14. SPECIFICATIONS

The term "Specifications" refers to 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. Where standard specifications, such as those of ASTM, AASHTO, etc., have been referred to, the applicable portions of such standard specifications shall become a part of these Contract Documents. If referenced specifications conflict with specifications contained herein, the requirements contained herein shall prevail.

15. 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 his obligation under the Contract Documents. The Notice to Proceed will be given within 30 days following the execution of the Contract by the OWNER.

16. SUBSTANTIAL COMPLETION

"Substantial Completion" shall be that degree of completion of the Project or a defined portion of the Project, as evidenced by the ENGINEER's written notice of Substantial Completion, sufficient to Provide the OWNER, at his discretion, the full-time use of the Project or defined portion of the Project for the purposes for which it was intended. "Substantial Completion" of an operating facility shall be that degree of completion that has Provided a minimum of 7 continuous days of successful, trouble-free, operation, which period shall

begin after all performance and acceptance testing has been successfully demonstrated to the ENGINEER. All equipment contained in the work, plus all other components necessary to enable the OWNER to operate the facility in a manner that was intended, shall be complete on the substantial completion date.

17. WORK

The word "work" within these Contract Documents shall include all material, labor, tools, and all appliances, machinery, transportation, and appurtenances necessary to perform and complete the Contract, and such additional items not specifically indicated or described which can be reasonably inferred as belonging to the item described or indicated and as required by good Practice to Provide a complete and satisfactory system or structure. As used herein, "Provide" shall be understood to mean "furnish and install, complete in-place ".

CONTRACT DOCUMENTS

18. INTENT OF CONTRACT DOCUMENTS

The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The intent of the Documents is 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 as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials, or equipment, such words shall be interpreted in accordance with that meaning.

Reference to standard 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 on the first published date of the Invitation to Bid, except as may be otherwise specifically stated. However, no Provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any ENGINEER's consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibility contrary to the Provisions of Article LIMITATIONS ON ENGINEER'S RESPONSIBILITIES.

19. DISCREPANCIES AND OMISSIONS

Any discrepancies or omissions found in the Contract Documents shall be reported to the ENGINEER immediately. The ENGINEER will clarify discrepancies or omissions, in writing, within a reasonable time.

In resolving inconsistencies among two or more sections of the Contract Documents, Precedence shall be given in the following order:

A. CONTRACT
B. BID
C. SUPPLEMENTARY CONDITIONS
D. INVITATION TO BID
E. INSTRUCTIONS TO BIDDERS

F. GENERAL CONDITIONS
G. SPECIFICATIONS
H. DRAWINGS

Addenda shall take Precedence over all sections referenced therein. Figure dimensions on Drawings shall take precedence over scale dimensions. Detailed Drawings shall take precedence over general Drawings.

20. CHANGES IN THE WORK

The OWNER, without notice to the Sureties and without invalidating the Contract, may order changes in the work within the general scope of the Contract by altering, adding to, or deducting from the work, the Contract being adjusted accordingly. All such work shall be executed under the conditions of the original Contract, except as specifically adjusted at the time of ordering such change.

In giving instructions, the ENGINEER may order minor changes in the work not involving extra cost and not inconsistent with the purposes of the Project, but otherwise, except in an emergency endangering life and Property, additions or deductions from the work shall be performed only in pursuance of an approved Change Order from the OWNER, countersigned by the ENGINEER.

If the work is reduced by alterations, such action shall not constitute a claim for damages based on loss of anticipated Profits.

21. EXAMINATION AND VERIFICATION OF CONTRACT DOCUMENTS

The CONTRACTOR shall thoroughly examine and become familiar with all of the various parts of these Contract Documents and determine the nature and location of the work, the general and local conditions, and all other matters, which can in any way affect the work under this Contract. Failure to make an examination necessary for this determination shall not release the CONTRACTOR from the obligations of this Contract. No verbal agreement or conversation with any officer, agent, or employee of the OWNER or with the ENGINEER either before or after the execution of this Contract shall affect or modify any of the terms or obligations herein contained.

22. DOCUMENTS TO BE KEPT ON THE JOBSITE

The CONTRACTOR shall keep one copy of the Contract Documents on the job- site, in good order, available to the ENGINEER and to his representatives.

The CONTRACTOR shall maintain on a daily basis at the jobsite, and make available to the ENGINEER on request, one current record set of the Drawings which have been accurately marked to indicate all modifications in the completed work that differ from the design information shown on the Drawings. Upon Substantial completion of the work, the CONTRACTOR shall give the ENGINEER one complete set of these marked up record Drawings.

23. ADDITIONALCONTRACT DOCUMENTS

Copies of Contract Documents or Drawings may be obtained on request from the ENGINEER and by paying the actual cost of reproducing the Contract Documents or Drawings.

24. OWNERSHIP OF CONTRACT DOCUMENTS

All portions of the Contract Documents, and copies thereof furnished by the ENGINEER are instruments of service for this Project. They are not to be used on other work and are to be returned to the ENGINEER on request at the completion of the work. Any reuse of these materials without specific written verification or adaptation by the ENGINEER will be at the risk of the user and without liability or legal expense to the ENGINEER. Such user shall hold the ENGINEER harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adaptation shall entitle the ENGINEER to further compensation at rates to be agreed upon by the user and the ENGINEER.

THE ENGINEER

25. AUTHORITY OF THE ENGINEER

The ENGINEER will be the OWNER's representative during the construction period. His authority and responsibility will be limited to the Provisions set forth in these Contract Documents. The ENGINEER will have the Authority to reject work that does not conform to the Contract Documents. However, neither the ENGINEER's authority to act under this Provision, nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any SUBCONTRACTOR, their respective Sureties, any of their agents or employees, or any other person performing any of the work.

26. DUTIES AND RESPONSIBILITIES OF THE ENGINEER

The ENGINEER will make visits to the site at intervals appropriate to the various stages of construction to observe the Progress and quality of the work and to determine, in general, if the work is proceeding in accordance with the intent of the Contract Documents. He will not make comprehensive or continuous review or observation to check quality or quantity of the work, and he will not be responsible for construction means, methods, techniques, sequences, or Procedures, or for safety Precautions and Programs in connection with the work. Visits and observations made by the ENGINEER shall not relieve the CONTRACTOR of his obligation to conduct comprehensive inspections of the work and to furnish materials and perform acceptable work, and to provide adequate safety Precautions, in conformance with the intent of the Contract.

The ENGINEER will make recommendations to the OWNER, in writing, on all claims of the OWNER or the CONTRACTOR arising from interpretation or execution of the Contract Documents. Such recommendations will be of factual and/or technical nature, and will not include the legal interpretation of the Contract Documents. Any necessary legal interpretation of the Contract Document will be made by the OWNER. Such recommendation shall be necessary before the CONTRACTOR can receive additional money under the terms of the Contract. Changes in work ordered by the ENGINEER shall be made in compliance with Article CHANGES IN THE WORK.
One or more Project representatives may be assigned to observe the work. It is understood that such Project representatives shall have the authority to issue notice of nonconformance and make decisions within the limitations of the authority of the ENGINEER. The CONTRACTOR shall furnish all reasonable assistance required by the ENGINEER or Project representatives for Proper observation of the work. The above-mentioned Project representatives shall not relieve the CONTRACTOR of his obligations to conduct comprehensive inspections of the work and to furnish materials and perform acceptable work, and to provide adequate safety Precautions, in conformance with the intent of the Contract.

27. LIMITATIONS ON ENGINEER'S RESPONSIBILITIES

ENGINEER will not be responsible for CONTRACTOR's means, methods, techniques, sequences, or Procedures of construction, or the safety Precautions and Programs incident thereto, and ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the work in accordance with the Contract Documents.

ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any SUBCONTRACTOR, any supplier, or of any other person or organization performing or furnishing any of the work.

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "Proper", or "satisfactory", or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of ENGINEER as to the work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibility contrary to the Provisions of this Article.

28. REJECTED WORK

Any defective work or nonconforming materials or equipment that may be discovered at any time prior to expiration of the warranty period shall be removed and replaced by work which shall conform to the Provisions of the Contract Documents. Any material condemned or rejected shall be removed at once from the Project site.

Failure on the part of the ENGINEER to condemn or reject bad or inferior work or to note nonconforming materials or equipment on CONTRACTOR submittals shall not be construed to imply acceptance of such work. The OWNER shall reserve and retain all of its rights and remedies at law against the CONTRACTOR and its Surety for correction of any and all latent defects discovered after the guarantee period.

29. LINES AND GRADES

Lines and grades shall be established as provided in the supplementary conditions. All stakes, marks, and other reference information shall be carefully preserved by the CONTRACTOR, and in case of their careless or unnecessary destruction or removal by him or his employees, such stakes, marks, and other information shall be replaced at the CONTRACTOR's expense.

30. SUBMITTALS

After checking and verifying all field measurements and after complying with applicable Procedures specified in Division I, GENERAL REQUIREMENTS, CONTRACTOR shall submit to ENGINEER, in accordance with the schedule for submittals for review, shop drawings, electrical diagrams, and catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment), which shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submittal. All submittals shall be identified as ENGINEER may require. The data shown shall be complete with respect to quantities, dimensions specified, performance and design criteria, materials, and similar data to enable ENGINEER to review the information. CONTRACTOR shall also submit to ENGINEER for review, with such promptness as to cause no delay in

work, all samples required by the Contract Documents. All samples shall have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission and shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which intended.

Before submission of each submittal, CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each submittal with other submittals and with the requirements of the work and the Contract Documents.

At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of each variation that the submittal may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each shop drawing submitted to ENGINEER for review and approval of each variation.

ENGINEER will review submittals with reasonable Promptness, but ENGINEER's review will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences, or Procedures of construction (except where a specific means, method, technique, sequence, or Procedure of construction is indicated in or required by the Contract Documents) or to safety Precautions or Programs incident thereto. The review of a separate item as such will not indicate review of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER, and shall return the required number of corrected copies of shop drawings and submit as required new samples for review. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on Previous submittals.

ENGINEER's review of submittals shall not relieve CONTRACTOR from the responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of submission and ENGINEER has given written approval of each such variation by a specific written notation thereof incorporated therein or accompanying the shop drawing or sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the shop drawings or from responsibility for having complied with the Provisions herein.
Where a shop drawing or sample is required by the specifications, any related work performed prior to ENGINEER's review and approval of the pertinent submission shall be at the sole expense and responsibility of the CONTRACTOR.

31. DETAIL DRAWINGS AND INSTRUCTIONS

The ENGINEER will furnish, with reasonable Promptness, additional instructions by means of Drawings or otherwise, if, in the ENGINEER's opinion, such are required for the Proper execution of the work. All such Drawings and instructions will be consistent with the Contract Documents, true developments thereof, and reasonably inferable there from.

THE CONTRACTOR AND HIS EMPLOYEES

32. CONTRACTOR, AN INDEPENDENT AGENT

The CONTRACTOR shall independently perform all work under this Contract and shall not be considered as an agent of the OWNER or of the ENGINEER, nor shall the CONTRACTOR's SUBCONTRACTORS or employees be subagents of the OWNER or of the ENGINEER.

32. (a.) ASSIGNMENT OF CONTRACT

Assignment of any part or the whole of this Contract shall be subject to review and approval of the City Commission.

33. SUBCONTRACTING

Unless modified in the Supplementary Conditions, within 10 days after the execution of the Contract, the CONTRACTOR shall submit to the ENGINEER the names of all SUBCONTRACTORS Proposed for the work, including the names of any SUBCONTRACTORS that were submitted with the Bid. The CONTRACTOR shall not employ any SUBCONTRACTORS to which the OWNER may object to as lacking capability to properly perform work of the type and scope anticipated.

The CONTRACTOR is as fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the Contract Documents shall create any contractual relationship between any SUBCONTRACTOR and the OWNER or ENGINEER.

34. INSURANCE AND LIABILITY

A. GENERAL

The CONTRACTOR shall provide (from insurance companies acceptable to the OWNER) the insurance coverage designated hereinafter and pay all costs before commencing work under this Contract. The CONTRACTOR shall furnish the OWNER with certificates of insurance specified herein showing the type, amount class of operations covered, effective dates, and date of expiration of policies, and containing substantially the following statement:

"The insurance covered by this certificate shall not be canceled or materially altered, except after 30 days' written notice has been received by the OWNER."

In case of the breach of any Provision of this Article, the OWNER, at his option, may take out and maintain, at the expense of the CONTRACTOR, such insurance as the OWNER may deem Proper and may deduct the cost of such insurance from any monies which may be due or become due the CONTRACTOR under this Contract.

B. CONTRACTOR AND SUBCONTRACTOR INSURANCE

The CONTRACTOR shall not commence work under this Contract until he has obtained all the insurance required hereunder and such insurance has been reviewed by the OWNER, nor shall the CONTRACTOR allow any SUBCONTRACTOR to commence work on his subcontract until insurance specified below has been obtained. Review of the insurance by the OWNER shall not relieve or decrease the liability of the CONTRACTOR hereunder.

C. COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

The CONTRACTOR shall maintain during the life of this Contract the statutory amount of Workmen's Compensation Insurance, in addition, Employer's Liability Insurance in an amount as specified in the Supplementary Conditions, for each occurrence, for all of his employees to be engaged in work on the Project under this Contract. In case any such work is subcontracted, the CONTRACTOR shall require the SUBCONTRACTOR to provide similar Workmen's Compensation and Employer's Liability Insurance for all of the SUBCONTRACTOR's employees to be engaged in such work.

D. GENERAL LIABILITY INSURANCE (INCLUDING AUTOMOBILE)

The CONTRACTOR shall maintain during the life of this Contract such general liability, completed operations and Products liability, and automobile liability insurance as will Provide coverage for claims for damages for personal injury, including accidental death, as well as for claims for Property damage, which may arise directly or indirectly from performance of the work under this Contract. The general liability policy shall include contractual liability assumed by the CONTRACTOR under Article **INDEMNITY.** Coverage for Property damage shall be on a "broad form" basis with no exclusions for "X, C & U". The amount of insurance to be provided shall be as specified in the Supplementary Conditions.

In the event any work under this Contract is performed by a SUBCONTRACTOR, the CONTRACTOR shall be responsible for any liability directly or indirectly arising out of the work performed by the SUBCONTRACTOR; to the extent such liability is not covered by the SUBCONTRACTOR's insurance.

The OWNER and ENGINEER, their officers, agents, and employees shall be named as Additional Insured's on the CONTRACTOR's and any SUBCONTRACTOR's general liability and automobile liability insurance policies for any claims arising out of work performed under this Contract.

E. BUILDERS RISK ALL RISK INSURANCE

Unless otherwise modified in the Supplementary Conditions, the CONTRACTOR shall secure and maintain during the life of this Contract, Builders Risk All Risk Insurance coverage in an amount equal to the full value of the facilities under construction. Such insurance shall include coverage for earthquake, landslide, flood, collapse, loss due to the results of faulty workmanship or design, and all other normally covered risks, and shall provide for losses to be paid to the CONTRACTOR, OWNER, and ENGINEER as their interests may appear.

The OWNER and ENGINEER, their officers, agents, and employees shall be named as additional insured's on the CONTRACTOR's and any SUBCONTRACTOR's Builders Risk All Risk insurance policies for any claims arising out of work performed under this Contract.

This insurance shall include a waiver of subrogation as to the ENGINEER, the OWNER, the CONTRACTOR, and their respective officers, agents, employees and SUBCONTRACTORS.

F. NO PERSONAL LIABILITY OF PUBLIC OFFICIALS

In carrying out any of the Provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

35. INDEMNITY

To the maximum extent permitted by law, the CONTRACTOR shall indemnify and defend the OWNER and the ENGINEER, and their officers, employees, agents, and sub-consultants, from all claims and losses, including attorney's fees and litigation costs arising out of Property losses or health, safety, personal injury, or death claims by the CONTRACTOR, its SUBCONTRACTORS of any tier, and their employees, agents, or invitees regardless of the
fault, breach of Contract, or negligence of the OWNER or ENGINEER, excepting only such claims or losses that have been adjudicated to have been caused solely by the negligence of the OWNER or the ENGINEER and regardless of whether or not the CONTRACTOR is or can be named a party in a litigation.

36. EXCLUSION OF CONTRACTOR CLAIMS

In performing its obligations, the ENGINEER and its consultants may cause expense for the CONTRACTOR or its SUBCONTRACTORS and equipment or material suppliers. However, those parties and their sureties shall maintain no direct action against the ENGINEER, its officers, employees, agents, and consultants for any claim arising out of, in connection with, or resulting from the engineering services performed or required to be performed.

37. TAXES AND CHARGES

The CONTRACTOR shall withhold and pay any and all sales and use taxes and all withholding taxes, whether State or Federal, and pay all Social Security charges and also all State Unemployment Compensation charges, and pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees or sums whatsoever, which are now or may hereafter be required to be paid or withheld under any laws.

38. REQUIREMENTS OF STATE LAW FOR PUBLIC WORKS PROJECTS

When the Contract Documents concern public works of the state or any county, municipality, or political subdivision created by its laws, the applicable statutes shall apply. All parties to this Contract shall determine the contents of all applicable statutes and comply with their Provisions throughout the performance of the Contract.

39. CODES, ORDINANCES, PERMITS AND LICENSES

The CONTRACTOR shall keep himself fully informed of all local codes and ordinances, as well as state and federal laws, which in any manner affect the work herein specified. The CONTRACTOR shall at all times comply with said codes and ordinances, laws, and regulations, and Protect and indemnify the OWNER, the ENGINEER and their respective employees, and its officers and agents against any claim or liability arising from or based on the violation of any such laws, ordinances, or regulations. All permits, licenses and inspection fees necessary for Prosecution and completion of the work shall be secured and paid for by the CONTRACTOR, unless otherwise specified.

40. SUPERINTENDENCE

The CONTRACTOR shall keep at the project site, competent supervisory personnel. The CONTRACTOR shall designate, in writing, before starting work, a Project superintendent who shall be an employee of the CONTRACTOR and shall have complete authority to represent and to act for the CONTRACTOR.

ENGINEER shall be notified in writing prior to any change in superintendent assignment. The CONTRACTOR shall give efficient supervision to the work, using his best skill and attention. The CONTRACTOR shall be solely responsible for all construction means, methods, techniques, and Procedures, and for providing adequate safety Precautions and coordinating all portions of the work under the Contract. It is specifically understood and agreed that the ENGINEER, its employees and agents, shall not have control or charge of and shall not be responsible for the construction means, methods, techniques, Procedures, or for providing adequate safety Precautions in connection with the work under Contract.

41. RECEPTION OF ENGINEER'S COMMUNICATIONS

The superintendent shall receive for the CONTRACTOR all communications from the ENGINEER. Communications of major importance will be confirmed in writing upon request from the CONTRACTOR.

The ENGINEER may schedule Project meetings for the purposes of discussing and resolving matters concerning the various elements of the work. Time and place for these meetings and the names of persons required to be Present shall be as determined by the ENGINEER. CONTRACTOR shall comply with these attendance requirements and shall also require his SUBCONTRACTORS to comply.

42. SAFETY

The CONTRACTOR shall be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees) and Property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Safety Provisions shall conform to U.S. Department of Labor (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, and regulations. Where any of these are in conflict, the more stringent requirement shall be followed. The CONTRACTOR's failure to thoroughly familiarize himself with the aforementioned safety Provisions shall not relieve him from compliance with the obligations and penalties set forth therein.

The CONTRACTOR shall develop and maintain for the duration of this Contract, a safety Program that will effectively incorporate and implement all required safety Provisions. The CONTRACTOR shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety Program. The duty of the ENGINEER to conduct construction review of the work does not include review or approval of the adequacy of the CONTRACTOR's safety Program, safety supervisor, or any safety measures taken in, on, or near the construction site. The CONTRACTOR, as a part of his safety Program, shall maintain at his office or other well-known place at the jobsite, safety equipment applicable to the work as Prescribed by the aforementioned authorities, all articles necessary for giving first-aid to the injured, and shall establish the Procedure for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured on the jobsite.

If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the ENGINEER and the OWNER. In addition, the CONTRACTOR must promptly report in writing to the ENGINEER all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.

If a claim is made by anyone against the CONTRACTOR or any SUBCONTRACTOR on account of any accident, the CONTRACTOR shall promptly report the facts in writing to the ENGINEER, giving full details of the claim.

43. PROTECTION OF WORK AND PROPERTY

The CONTRACTOR shall at all times safely guard and Protect from damage the OWNER's Property, adjacent Property, and his own work from injury or loss in connection with this Contract. All facilities required for Protection by federal, state, or municipal laws and regulations and local conditions must be provided and maintained.

The CONTRACTOR shall Protect his work and materials from damage due to the nature of the work, the elements, carelessness of other CONTRACTORs, or from any cause whatever until the completion and acceptance of the work. All loss or damages arising out of the nature of the work to be done under these Contract Documents, or from any unforeseen obstruction or defects which may be encountered in the Prosecution of the work, or from the action of the elements, shall be sustained by the CONTRACTOR.

44. RESPONSIBILITY OF CONTRACTOR TO ACT IN AN EMERGENCY

In case of an emergency which threatens loss or injury of Property, and/or safety of life, the CONTRACTOR shall act, without previous instructions from the OWNER or ENGINEER, as the situation may warrant. The CONTRACTOR shall notify the ENGINEER thereof immediately thereafter. Any claim for compensation by the CONTRACTOR, together with substantiating documents in regard to expense, shall be submitted to the OWNER through the ENGINEER and the amount of compensation shall be determined by agreement.

45. MATERIALS AND APPLIANCES

Unless otherwise stipulated, the CONTRACTOR shall Provide and pay for all materials, labor, water, tools, equipment, heat, light, fuel, power, transportation, construction equipment and machinery, appliances, telephone, sanitary facilities, temporary facilities and other facilities and incidentals necessary for the execution and completion of the work.

Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of good quality. The CONTRACTOR shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

In selecting and/or approving equipment for installation in the Project, the OWNER and ENGINEER assume no responsibility for injury or claims resulting from failure of the equipment to comply with applicable federal, state, and local safety codes or requirements, or the safety requirements of a recognized agency, or failure due to faulty design concepts, or defective workmanship and materials.

46. CONTRACTORS' AND MANUFACTURERS' COMPLIANCE WITH STATE SAFETY, OSHA, AND OTHER CODE REQUIREMENTS

The completed work shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items required by the state and federal (OSHA) industrial authorities and applicable local and national codes. Further, any features of the work subject to such safety regulations shall be fabricated, furnished, and installed (including OWNER-furnished equipment) in compliance with these requirements. CONTRACTORs and manufacturers of equipment shall be held responsible for compliance with the requirements included herein. CONTRACTORs shall notify all equipment suppliers and SUBCONTRACTORS of the Provisions of this Article.

47. SUBSTITUTION OF MATERIALS

Except for OWNER-selected equipment items, and items where no substitution is clearly specified, whenever any material, article, device, Product, fixture, form, type of construction, or Process is indicated or specified by patent or Proprietary name, by name of manufacturer, or by catalog number, such specifications shall be deemed to be used for the purpose of establishing a standard of quality and facilitating the description of the material or Process desired. This Procedure is not to be construed as eliminating from competition other Products of equal or better quality by other manufacturers where fully suitable in design, and shall be deemed to be followed by the words "or equal". The CONTRACTOR may, in such cases, submit complete data to the OWNER for consideration of another material, type, or Process that shall be substantially equal in every respect to that so indicated or specified. Substitute materials shall not be used unless approved in writing. The OWNER will be the sole judge of the substituted article or material.

48. TESTS, SAMPLES, AND OBSERVATIONS

The CONTRACTOR shall furnish, without extra charge, the necessary test pieces and samples, including facilities and labor for obtaining the same, as requested by the ENGINEER. When required, the CONTRACTOR shall furnish certificates of tests of materials and equipment made at the point of manufacture by a recognized testing laboratory.

The OWNER, ENGINEER, and authorized government agents, and their representatives shall at all times be Provided safe access to the work wherever it is in Preparation or Progress, and the CONTRACTOR shall Provide facilities for such access and for observations, including maintenance of temporary and permanent access.

If the Specifications, laws, ordinances, or any public authority require any work, to be specially tested or approved, the CONTRACTOR shall give timely notice of its readiness for observations. If any work should be covered up without approval or consent of the ENGINEER, it shall, if required by the ENGINEER, be uncovered for examination at the CONTRACTOR's expense.
Reexamination of questioned work may be ordered by the ENGINEER, and, if so ordered, the work shall be uncovered by the CONTRACTOR. If such work is found to be in accordance with the Contract Documents, the OWNER will pay the cost of uncovering, exposure, observation, inspection, testing and reconstruction. If such work is found to be not in accordance with the Contract Documents, the CONTRACTOR shall correct the defective work, and the cost of reexamination and correction of the defective work shall be paid by the CONTRACTOR.

49. ROYALTIES AND PATENTS

The CONTRACTOR shall pay all royalty and licenses fees, unless otherwise specified. The CONTRACTOR shall defend all suits or claims for infringement of any patent rights and shall save the OWNER and the ENGINEER harmless from any and all loss, including reasonable attorneys' fees, on account thereof.

50. CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

If the work should be stopped under an order of any court or other public authority for a period of more than 3 months, through no act or fault of the CONTRACTOR, its SUBCONTRACTORS, or respective employees or if the ENGINEER should fail to make recommendation for payment to the OWNER or return payment request to CONTRACTOR for revision within 30 days after it is due, or if the OWNER should fail to pay the CONTRACTOR within 30 days after time specified in Article PARTIAL PAYMENTS, any sum recommended by the ENGINEER, then the CONTRACTOR may, upon 15 days' written notice to the OWNER and the ENGINEER, stop work or terminate this Contract and recover from the OWNER payment for all acceptable work performed and reasonable termination expenses, unless said default has been

remedied.

51. CORRECTION OF DEFECTIVE WORK DURING WARRANTY PERIOD

The CONTRACTOR hereby agrees to make, at his own expense, all repairs or replacements necessitated by defects in materials or workmanship, Provided under terms of this Contract, and pay for any damage to other works resulting from such defects, which become evident within 2 years after the date of final acceptance of the work or within 2 years after the date of substantial completion established by the ENGINEER for specified items of equipment, or within such longer period as may be Prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents. Un-remedied defects identified for correction during the warranty period but remaining after its expiration shall be considered as part of the obligations of the warranty. Defects in material, workmanship, or equipment which are remedied as a result of obligations of the warranty shall subject the remedied portion of the work to an extended warranty period of 2 years after the defect has been remedied.

The CONTRACTOR further assumes responsibility for a similar guarantee for all work and materials provided by SUBCONTRACTORS or manufacturers of packaged equipment components. The effective date for the start of the guarantee or warranty period for equipment qualifying as substantially complete is defined in Article SUBSTANTIAL COMPLETION, AND Article SUBSTANTIAL COMPLETION DATE, in these General Conditions.

The CONTRACTOR also agrees to hold the OWNER and the ENGINEER harmless from liability of any kind arising from damage due to said defects. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order for same from the OWNER. If the CONTRACTOR fails to make the repairs and replacements promptly, or in an emergency where delay would cause serious risk, or loss, or damage, the OWNER may have the defective work corrected or the rejected work removed and replaced, and the CONTRACTOR and his Surety shall be liable for the cost thereof.

PROGRESS OF THE WORK

52. BEGINNING OF THE WORK

Following execution of the Contract, the CONTRACTOR shall meet with the OWNER and ENGINEER relative to his arrangements for prosecuting the work.

53. SCHEDULES AND PROGRESS REPORTS

Prior to starting the construction, the CONTRACTOR shall Prepare and submit to the ENGINEER, a Progress schedule showing the dates on which each part or division of the work is expected to be started and finished, and a Preliminary schedule for submittals. The Progress schedule for submittals shall be brought up to date and submitted to the ENGINEER at the end of each month or at such other times the ENGINEER may request.

The CONTRACTOR shall forward to the ENGINEER, at the end of each month, an itemized report of the delivery status of major and critical items of purchased equipment and material, including shop drawings and the status of shop and field fabricated work. These Progress reports shall indicate the date of the purchase order, the current percentage of completion, estimated delivery, and cause of delay, if any.

If the completion of any part of the work or the delivery of materials is behind the submitted Progress schedule, the CONTRACTOR shall submit in writing a plan acceptable to the OWNER for bringing the work up to schedule.

The OWNER shall have the right to withhold Progress payments for the work if the CONTRACTOR fails to update and submit the Progress schedule and reports as specified.

54. PROSECUTION OF THE WORK

It is expressly understood and agreed that the time of beginning, rate of Progress, and time of completion of the work are the essence of this Contract. The work shall be prosecuted at such time, and in or on such part or parts of the Project as may be required, to complete the Project as contemplated in the Contract Documents and the Progress schedule.

If the CONTRACTOR desires to carry on work at night or outside the regular hours, he shall give timely notice to the ENGINEER to allow satisfactory arrangements to be made for observing the work in Progress.

55. OWNER'S RIGHT TO RETAIN IMPERFECT WORK

If any part or portion of the work completed under this Contract shall Prove defective and not in accordance with the Drawings and Specifications, and if the imperfection in the same shall not be of sufficient magnitude or importance as to make the work dangerous or unsuitable, or if the removal of such work will create conditions which are dangerous or undesirable, the OWNER shall have the right and authority to retain such work but will make such deductions in the final payment therefore as may be just and reasonable.

56. OWNER'S RIGHT TO DO WORK

Should the CONTRACTOR neglect to Prosecute the work in conformance with the Contract Documents or neglect or refuse at his own cost to remove and replace work rejected by the ENGINEER, then the OWNER may notify the Surety of the condition, and after 10 days' written notice to the CONTRACTOR and the Surety, or without notice if an emergency or danger to the work or public exists, and without Prejudice to any other right which the OWNER may have under Contract, or otherwise, take over that portion of the work which has been improperly or non-timely executed, and make good the deficiencies and deduct the cost thereof from the payments then or thereafter due the CONTRACTOR.

57. OWNER'S RIGHT TO TRANSFER EMPLOYMENT

If the CONTRACTOR should abandon the work or if he should persistently or repeatedly refuse or should fail to make prompt payment to SUBCONTRACTORS for material or labor, or to persistently disregard laws, ordinances, or to prosecute the work in conformance with the Contract Documents, or otherwise be guilty of a substantial violation of any Provision of the Contract or any laws or ordinance, then the OWNER may, without Prejudice to any other right or remedy, and after giving the CONTRACTOR and Surety 10 days' written notice, transfer the employment for said work from the CONTRACTOR to the Surety. Upon receipt of such notice, such Surety shall enter upon the Premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the work included under this contract and employ by Contract or otherwise, any qualified person or persons to finish the work and Provide the materials therefore, in accordance with the Contract Documents, without termination of the continuing full force and effect of this contract. In case of such transfer of employment to such Surety, the Surety shall be paid in its own name on estimates according to the terms hereof without any right of the CONTRACTOR to make any claim for the same or any part thereof.

If, after the furnishing of said written notice to the Surety, the CONTRACTOR and the Surety still fail to

make reasonable Progress on the performance of the work, the OWNER may terminate the employment of the CONTRACTOR and take possession of the Premises and of all materials, tools, and appliances thereon and finish the work by whatever method he may deem expedient and charge the cost thereof to the CONTRACTOR and the Surety. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the work is finished. If the expense of completing the Contract, including compensation for additional managerial and administrative services, shall exceed such unpaid balance, the CONTRACTOR and the Surety shall pay the difference to the OWNER.

58. DELAYS AND EXTENSION OF TIME

If the CONTRACTOR is delayed in the Progress of the work by any act or neglect of the OWNER or the ENGINEER, or by any separate CONTRACTOR employed by the OWNER, or by strikes, lockouts, fire, adverse weather conditions not reasonably anticipated, or acts of Nature, and if the CONTRACTOR, within 48 hours of the start of the occurrence, gives written notice to the OWNER of the cause of the potential delay and estimate of the possible time extension involved, and within 10 days after the cause of the delay has been remedied, the CONTRACTOR gives written notice to the OWNER of any actual time extension requested as a result of the aforementioned occurrence, then the Contract time may be extended by change order for such reasonable time as the ENGINEER determines. It is agreed that no claim shall be made or allowed for any damages, loss, or expense which may arise out of any delay caused by the above referenced acts or occurrences other than claims for the appropriate extension of time. No extension of time will be granted to the CONTRACTOR for delays occurring to parts of the work that have no measurable impact on the completion of the total work under this Contract. No extension of time will be considered for weather conditions reasonably anticipated for the area in which the work is being performed. Reasonably anticipated weather conditions will be based on official records of monthly Precipitation and other historical data. Adverse weather conditions, if determined to be of a severity that would impact Progress of the work, may be considered as cause for an extension of Contract completion time.

Delays in delivery of equipment or material purchased by the CONTRACTOR or his SUBCONTRACTORS, including OWNER-selected equipment shall not be considered as a just cause for delay, unless the OWNER determines that for good cause the delay is beyond the control of the CONTRACTOR. The CONTRACTOR shall be fully responsible for the timely ordering, scheduling, complete the work is the per-diem rate, as stipulated in the Bid. The said amount is hereby agreed upon as a reasonable estimate of the costs, which may be accrued by the OWNER after the expiration of the time of completion. It is expressly under- stood and agreed that this amount is not to be considered in the nature of a penalty, but as liquidated damages which have accrued against the CONTRACTOR. The OWNER shall have the right to deduct such damages from any amount due, or that may become due the CONTRACTOR, or the amount of such damages shall be due and collectible from the CONTRACTOR or Surety.

59. DIFFERING SITE CONDITIONS

The CONTRACTOR shall promptly, and before the conditions are disturbed, give a written notice to the OWNER and ENGINEER of:

A. subsurface or latent physical conditions at the site which differ materially from those indicated in this Contract.

B. Unknown physical conditions at the site of an unusual nature, which ditter materially from those

ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract

The ENGINEER will investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the CONTRACTOR's cost of, or the time required for, performing any part of the work under this Contract, whether or not changed as a result of the conditions, and equitable adjustment shall be made under this Article and the Contract modified in writing accordingly.

No request by the CONTRACTOR for an equitable adjustment to the Contract under this Article will be allowed, unless the CONTRACTOR has given the written notice required; Provided that the time prescribed above for giving written notice may be extended by the OWNER.

No request by the CONTRACTOR for an equitable adjustment to the Contract for differing site conditions will be allowed if made after final payment under this Contract.

60. LIQUIDATED DAMAGES

Should the CONTRACTOR fail to complete the work, or any part thereof, in the time agreed upon in the Contract or within such extra time as may have been allowed for delays by extensions granted as Provided in the Contract, the CONTRACTOR shall reimburse the OWNER for the additional expense and damage for each calendar day, Sundays and legal holidays included, that the Contract remains uncompleted after the Contract completion date. It is agreed that the amount of such additional expense and damage incurred by reason of failure to complete the work is the per-diem rate, as stipulated in the Bid. The said amount is hereby agreed upon as a reasonable estimate of the costs which may be accrued by the OWNER after the expiration of the time of completion. It is expressly under- stood and agreed that this amount is not to be considered in the nature of a penalty, but as liquidated damages which have accrued against the CONTRACTOR. The OWNER shall have the right to deduct such damages from any amount due, or that may become due the CONTRACTOR, or the amount of such damages shall be due and collectible from the CONTRACTOR or Surety.

61. OTHER CONTRACTS

The OWNER reserves the right to let other Contracts in connection with the work. The CONTRACTOR shall afford other CONTRACTORs reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with theirs.

If any part of the work under this Contract depends for Proper execution or results upon the work of any other CONTRACTOR, utility service company or OWNER, the CONTRACTOR shall inspect and Promptly report to the ENGINEER in writing any patent or apparent defects to deficiencies in such work that render it unsuitable for such Proper execution and results. The CONTRACTOR's failure to so report shall constitute and acceptance of the work by others as being fit and Proper for integration with work under this Contract, except for latent or non-apparent defects and deficiencies in the work.

62. USE OF PREMISES

The CONTRACTOR shall confine his equipment, the storage of materials and the operation of his workers to limits shown on the Drawings or indicated by law, ordinances, permits, or directions of the ENGINEER, and shall not unreasonably encumber the Premises with his materials. The CONTRACTOR shall provide, at his own expense, the necessary rights-of-way and access to the work, which may be required outside the limits

of the OWNER's Property and shall furnish the ENGINEER copies of permits and agreements for use of the Property outside that provided by the OWNER.

The CONTRACTOR shall not load nor permit any part of the structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the work or adjacent Property to stresses or Pressures that will endanger it.

63. SUBSTANTIAL COMPLETION DATE

The ENGINEER may issue a written notice of substantial completion for the purpose of establishing the starting date for specific equipment guarantees, and to establish the date that the OWNER will assume the responsibility for the cost of operating such equipment. Said notice shall not be considered as final acceptance of any portion of the work or relieve the CONTRACTOR from completing the remaining work within the specified time and in full compliance with the Contract Documents. See SUBSTANTIAL COMPLETION under DEFINITIONS of these General Conditions.

64. PERFORMANCE TESTING

Operating equipment and systems shall be performance tested in the Presence of the ENGINEER to demonstrate compliance with the specified requirements. Performance testing shall be conducted under the specified design operating conditions or under such simulated operating conditions as recommended or approved by the ENGINEER. Schedule such testing with the ENGINEER at least one week in advance of the planned date for testing.

65. OWNER'S USE OF PORTIONS OF THE WORK

Following issuance of the written notice of Substantial Completion, the OWNER may initiate operation of the facility. Such use shall not be considered as final acceptance of any portion of the work, nor shall such use be considered as cause for an extension of the Contract completion time, unless authorized by a Change Order issued by the OWNER.

66. CUTTING AND PATCHING

The CONTRACTOR shall do all cutting, fitting, or patching of his work that may be required to make its several parts come together Properly and fit it to receive or be received by work of other CONTRACTORs shown upon or reasonably implied by the Drawings.

67. CLEANING UP

The CONTRACTOR shall, at all times, keep Property on which work is in Progress and the adjacent Property free from accumulations of waste material or rubbish caused by employees or by the work. Upon completion of the construction, the CONTRACTOR shall remove all temporary structures, rubbish, and waste materials resulting from his operations.

PAYMENT

68. PAYMENT FOR CHANGE ORDERS

The OWNER's request for quotations on alterations to the work shall not be considered authorization to proceed with the work expediting, delivery, and installation of all equipment and materials. Within a reasonable period after the CONTRACTOR submits to the OWNER a written request for an extension of time, the ENGINEER will Present his written opinion to the OWNER as to whether an extension of time is justified, and, if so, his recommendation as to the number of days for time extension. The OWNER will make the final decision on all requests for extension of time.

Prior to the issuance of a formal Change Order, nor shall such request justify any delay in existing work. Quotations for alterations to the work shall include substantiating documentation with an itemized breakdown of CONTRACTOR and SUBCONTRACTOR costs, including labor, material, rentals, approved services, overhead, and profit. OWNER may require detailed cost data in order to substantiate the reasonableness of the proposed costs.

Any compensation paid in conjunction with the terms of a Change Order shall comprise total compensation due the CONTRACTOR for the work or alteration defined in the Change Order. By signing the Change Order, the CONTRACTOR acknowledges that the stipulated compensation includes payment for the work or alteration plus all payment for the interruption of schedules, extended overhead, delay, or any other impact claim or ripple effect, and by such signing specifically waives any reservation or claim for additional compensation in respect to the subject Change Order.

At the OWNER's option, payment or credit for any alterations covered by a Change Order shall be determined by one or a combination of the methods set forth in A, B, or C below, as applicable:

A. UNIT PRICES

Those unit Prices stipulated in the Bid shall be utilized where they are applicable. In the event the Change Order results in a change in the original quantity that is materially and significantly different from the original bid quantity, a new unit Price shall be negotiated upon demand of either party. Unit Prices for new items included in the Change Order shall be negotiated and mutually agreed upon.

B. LUMP SUM

A total lump sum for the work negotiated and mutually acceptable to the CONTRACTOR and the OWNER. Lump sum quotations for modifications to the work shall include substantiating documentation with an itemized breakdown of CONTRACTOR and SUBCONTRACTOR costs, including labor, material, rentals, approved services, overhead, and Profit, all calculated as specified under "C" below.

C. COST REIMBURSEMENT WORK

The term "cost reimbursement" shall be understood to mean that payment for the work will be made on a time and expense basis, that is, on an accounting of the CONTRACTOR's forces, materials, equipment, and other items of cost as required and used to do the work.

If the method of payment cannot be agreed upon Prior to the beginning of the work, and the OWNER directs by written Change Order that the work be done on a cost reimbursement basis, then the CONTRACTOR shall furnish labor, and furnish and install equipment and materials necessary to complete the work in a satisfactory manner and within a reasonable period of time. For the work performed, payment will be made for the documented actual cost of the following:

1. Labor including foremen for those hours they are assigned and participating in the cost reimbursement

work (actual payroll cost, including wages, fringe benefits as established by negotiated labor agreements, labor insurance, and labor taxes as established by law). No other fixed labor burdens will be considered, unless approved in writing by the OWNER.

2. Material delivered and used on the designated work, including sales tax, if paid by the CONTRACTOR or his SUBCONTRACTOR.
3. Rental or equivalent rental cost of equipment, including necessary transportation for items having a value in excess of $100. Rental or equivalent rental cost will be allowed for only those days or hours during which the equipment is in actual use. Rental and transportation allowances shall not exceed the current rental rates prevailing in the locality. The rentals allowed for equipment will, in all cases, be understood to cover all fuel, supplies, repairs, and renewals, and no further allowances will be made for those items, unless specific agreement to that effect is made.
4. Additional bond, as required and approved by the OWNER.
5. Additional insurance (other than labor insurance) as required and approved by the OWNER.

In addition to items 1 through 5 above, an added fixed fee for general overhead and Profit shall be negotiated and allowed for the CONTRACTOR (or approved SUBCONTRACTOR) actually executing the Cost Reimbursement work.

An additional fixed fee shall be negotiated and allowed the CONTRACTOR for the administrative handling of portions of the work that are executed by an approved SUBCONTRACTOR. No additional fixed fee will be allowed for the administrative handling of work executed by a SUBCONTRACTOR of a SUBCONTRACTOR, unless by written permission from the OWNER.

The added fixed fees shall be considered to be full compensation, covering the cost of general supervision, overhead, Profit, and any other general expense. The CONTRACTOR's records shall make clear distinction between the direct costs of work paid for on a cost reimbursement basis and the costs of other work. The CONTRACTOR shall furnish the ENGINEER report sheets in duplicate of each day's cost reimbursement work no later than the working day following the performance of said work. The daily report sheets shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the CONTRACTOR, SUBCONTRACTOR or other forces. The daily report sheets shall provide names or identifications and classifications of workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment and hours operated.
Material charges shall be substantiated by valid copies of vendors' invoices. Such invoices shall be submitted with the daily report sheets, or, if not available, they shall be submitted with subsequent daily report sheets. Said daily report sheets shall be signed by the CONTRACTOR or his authorized agent.

The OWNER reserves the right to furnish such materials and equipment as he deems expedient and the CONTRACTOR shall have no claim for profit or added fees on the cost of such materials and equipment. To receive partial payments and final payment for cost reimbursement work, the CONTRACTOR shall submit to the ENGINEER, detailed and complete documented verification of the CONTRACTOR's and any of his SUBCONTRACTORS' actual costs involved in the cost reimbursement work. Such costs shall be submitted within 30 days after said work has been performed.

69. PARTIAL PAYMENTS

A. GENERAL

Nothing in this Article shall be construed to affect the right, hereby reserved, to reject the whole or any part of the aforesaid work, should such work be later found not to comply with the Provisions of the Contract

Documents. All estimated quantities of work for which partial payments have been made are subject to review and correction on the final estimate. Payment by the OWNER and acceptance by the CONTRACTOR of partial payments based on periodic estimates of quantities of work performed shall not, in any way, constitute acceptance of the estimated quantities used as a basis for computing the amounts of the partial payments.

B. ESTIMATE

At least 30 days before each Progress payment falls due, as specified in the Supplementary Conditions, the CONTRACTOR shall submit to the ENGINEER a detailed estimate of the amount earned during the Preceding month for the separate portions of the work, and request payment. As used in this Article, the words "amount earned" means the value, on the date of the estimate for partial payment, of the work completed in accordance with the Contract Documents, and the value of approved materials delivered to the Project site suitable stored and Protected Prior to incorporation into the work.

ENGINEER will, within 7 days after receipt of each request for payment, either indicate in writing a recommendation of payment and present the request to OWNER, or return the request to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may, within 7 days, make the necessary corrections and resubmit the request.

ENGINEER may refuse to recommend the whole or any part of any payment if, in his opinion, it would be incorrect to make such representations to OWNER. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended to such an extent as may be necessary in 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. Written claims have been made against OWNER or Liens have been filed in connection with the work;

3. The Contract Price has been reduced because of Change Orders;

4. OWNER has been required to correct defective work or complete the work in accordance with Article OWNER'S RIGHT TO DO WORK;

5. Of CONTRACTOR's unsatisfactory Prosecution of the work in accordance with the Contract Documents; or

6. CONTRACTOR's failure to make payment to SUBCONTRACTORS or for labor, materials, or equipment.

C. DEDUCTION FROM ESTIMATE

Unless modified in the Supplementary Conditions, deductions from the estimate will be as described below:

1. The OWNER will deduct from the estimate, and retain as part security, 10 percent of the amount earned for work satisfactorily completed. A deduction and retainage of 10 percent will be made on the estimated amount earned for approved items of material delivered to and properly stored at the jobsite but not incorporated into the work. When the work is 50 percent complete, the OWNER may reduce the retainage to 5 percent of the dollar value of all work satisfactorily completed to date provided the CONTRACTOR is making satisfactory progress and there is no specific cause for a

greater retainage. The OWNER may reinstate the retainage up to 10 percent if the OWNER determines, at his discretion, that the CONTRACTOR is not making satisfactory progress or where there is other specific cause for such withholding.

D. QUALIFICATION FOR PARTIAL PAYMENT FOR MATERIALS DELIVERED

Unless modified in the Supplementary Conditions, qualification for partial payment for materials delivered but not yet incorporated into the work shall be as described below:

1. Materials, as used herein, shall be considered to be those items which are fabricated and manufactured material and equipment. No consideration shall be given to individual purchases of less than $200 for any one item.

2. To receive partial payment for materials delivered to the site, but not incorporated in the work, it shall be necessary for the CONTRACTOR to include a list of such materials on the Partial Payment Request. At his sole discretion, the ENGINEER may approve items for which partial payment is to be made. Partial payment shall be based on the CONTRACTOR's actual cost for the materials as evidenced by invoices from the supplier. Proper storage and Protection shall be provided by the CONTRACTOR, and as approved by the ENGINEER. Final payment shall be made only for materials actually incorporated in the work and, upon acceptance of the work, all materials remaining for which advance payments had been made shall revert to the CONTRACTOR, unless otherwise agreed, and partial payments made for these items shall be deducted from the final payment for the work.

3. 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 OWNER at the time of payment free and clear of all liens, claims, security interests, and encumbrances.
4. If requested by the ENGINEER, the CONTRACTOR shall provide, with subsequent pay requests, invoices receipted by the supplier showing payment in full has been made.

E. PAYMENT

After deducting the retainage and the amount of all previous partial payments made to the CONTRACTOR from the amount earned, the amount due will be made payable to the CONTRACTOR. Recommendations for payment received by the OWNER less than 9 days Prior to the scheduled day for payment will not be Processed or paid until the following month.

70. CLAIMS FOR EXTRA WORK

In any case where the CONTRACTOR deems additional time or compensation will become due him under this Contract for circumstances other than those defined in Article DELAYS AND EXTENSION OF TIME, the CONTRACTOR shall notify the ENGINEER, in writing, of his intention to make claim for such time or compensation before he begins the work on which he bases the claim, in order that such matters may be settled, if possible, or other appropriate action taken. The notice of claim shall be in duplicate, in writing, and shall state the circumstances and the reasons for the claim, but need not state the amount. If such notification is not given or if the ENGINEER is not afforded proper facilities by the CONTRACTOR for keeping strict account of actual cost, then the CONTRACTOR hereby agrees to waive the claim for such additional time or compensation. Such notice by the CONTRACTOR, and fact that the ENGINEER has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim.

No extension of time will be granted to the CONTRACTOR for delays resulting from extra work that have no measurable impact on the completion of the total work under this Contract. Claims for additional time or compensation shall be made in itemized detail and submitted, in writing, to the OWNER and ENGINEER within 10 days following completion of that portion of the work for which the CONTRACTOR bases his claim. Failure to make the claim for additional compensation in the manner and within the time specified above shall constitute waiver of that claim. In case the claim is found to be just, it shall be allowed and paid for as provided in Article PAYMENT FOR CHANGE ORDERS.

71. RELEASE OF LIENS OR CLAIMS

The CONTRACTOR shall indemnify and hold harmless the OWNER from all claims for labor and materials furnished under this Contract. Prior to the final payment, the CONTRACTOR shall furnish to the OWNER, as part of his final payment request, a certification that all of the CONTRACTOR's obligations on the project have been satisfied and that all monetary claims and indebtedness have been paid. The CONTRACTOR shall furnish complete and legal effective releases or waivers, satisfactory to the OWNER, of all liens arising out of or filed in connection with the work.

72. FINAL PAYMENT

Upon completion of all the work under this Contract, the CONTRACTOR shall notify the ENGINEER, in writing, that he has completed his part of the Contract and shall request final payment. Upon receipt of such notice the ENGINEER will inspect and, if acceptable, submit to the OWNER his recommendation as to acceptance of the completed work and as to the final estimate of the amount due the CONTRACTOR. Upon approval of this final estimate by the OWNER and compliance by the CONTRACTOR with Provisions in Article **RELEASE OF LIENS OR CLAIMS,** and other Provisions as may be applicable, the OWNER shall pay to the CONTRACTOR all monies due him under the Provisions of these Contract Documents.

73. NO WAIVER OF RIGHTS

Neither the inspection by the OWNER, through the ENGINEER or any of his employees, nor any order by the OWNER for payment of money, nor any payment for, or acceptance of, the whole or any part of the work by the OWNER or ENGINEER, nor any extension of time, nor any possession taken by the OWNER or its employees, shall operate as a waiver of any Provision of this Contract, or any power herein reserved to the OWNER, or any right to damages herein Provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach. Acceptance or final payment shall not be final and conclusive with regards to latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the OWNER's rights under the warranty.

74. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE

The acceptance by the CONTRACTOR of the final payment shall release the OWNER and the ENGINEER, as representatives of the OWNER, from all claims and all liability to the CONTRACTOR for all things done or furnished in connection with the work, and every act of the OWNER and others relating to or arising out of the work except claims Previously made in writing and still unsettled. No payment, however, final or otherwise, shall operate to release the CONTRACTOR or his Sureties from obligations under this Contract and the Performance Bond, Payment Bond, and other bonds and warranties, as herein provided.

SUPPLEMENTARY CONDITIONS

The General Conditions are hereby revised as follows:

ARTICLE 9 “ENGINEER”

The person or organization identified as such in the Contract Documents. The Term “ENGINEER” means “OWNER” or his authorized representative.

ARTICLE 34 "INSURANCE & LIABILITY”

Contractor shall maintain limits no less than those stated below:

CONTRACTOR is to secure, pay for, and file with the City of Key West, prior to commencing any work under the Contract, all certificates for workers’ compensation, public liability, and property damage liability insurance, and such other insurance coverages as may be required by specifications and addenda thereto, in at least the following minimum amounts with specification amounts to prevail if greater than minimum amounts indicated. Notwithstanding any other provision of the Contract, the CONTRACTOR shall provide the minimum limits of liability insurance coverage as follows:

Auto Liability	$1,000,000	Combined Single Limit
General Liability	$2,000,000	Aggregate (Per Project)
	$2,000,000	Products Aggregate
	$1,000,000	Any One Occurrence
	$1,000,000	Personal Injury
	$ 300,000	Fire Damage/Legal
Additional Umbrella Liability	$2,000,000	Occurrence / Aggregate

CONTRACTOR shall furnish an original Certificate of Insurance indicating, and such policy providing coverage to, City of Key West named as an additional insured on a PRIMARY and NON CONTRIBUTORY basis utilizing an ISO standard endorsement at least as broad as CG 2010 (11/85) or its equivalent, (combination of CG 20 10 07 04 and CG 20 37 07 04, providing coverage for completed operations, is acceptable) including a waiver of subrogation clause in favor of City of Key West on all policies. CONTRACTOR will maintain the General Liability and Umbrella Liability insurance coverages summarized above with coverage continuing in full force including the additional insured endorsement until at least 3 years beyond completion and delivery of the work contracted herein.

Notwithstanding any other provision of the Contract, the CONTRACTOR shall maintain complete workers’ compensation coverage for each and every employee, principal, officer, representative, or agent of the CONTRACTOR who is performing any labor, services, or material under the Contract. Further, CONTRACTOR shall additionally maintain the following minimum limits of coverage:

Bodily Injury Each Accident	$1,000,000
Bodily Injury by Disease Each Employee	$1,000,000
Bodily Injury by Disease Policy Limit	$1,000,000

If the work is being done on or near a navigable waterway, CONTRACTOR's workers compensation policy shall be endorsed to provide USL&H Act (WC 00 01 06 A) and Jones Act (WC 00 02 01 A) coverage if specified by the City of Key West. CONTRACTOR shall provide the City of Key West with a Certificate of Insurance verifying compliance with the workman's compensation coverage as set forth herein and shall provide as often as required by the City of Key West such certification which shall also show the insurance company, policy number, effective and expiration date, and the limits of workman's compensation coverage under each policy.

CONTRACTOR's insurance policies shall be endorsed to give 30 days' written notice to the City of Key West in the event of cancellation or material change, using form CG 02 24, or its equivalent.

Certificates of Insurance submitted to the City of Key West will not be accepted without copies of the endorsements being requested. This includes additional insured endorsements, cancellation/material change notice endorsements, and waivers of subrogation. Copies of USL&H Act and Jones Act endorsements will also be required if necessary. PLEASE ADVISE YOUR INSURANCE AGENT ACCORDINGLY.

CONTRACTOR will comply with any and all safety regulations required by any agency or regulatory body including but not limited to OSHA. CONTRACTOR will notify City of Key West immediately by telephone at (305) 809-3963 any accident or injury to anyone that occurs on the jobsite and is related to any of the work being performed by the CONTRACTOR.

Add the following Article:

G. SURETY AND INSURER QUALIFICATIONS

All bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the Surety or insurance company, having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said Surety or Insurance Company shall be duly licensed and qualified to do business in the State of Florida. If requested, Contractor shall Provide Proof of Florida Licensure for all insurance companies. The City of Key West shall be named as Additional Insured on the insurance certificates.

ARTICLE 35 "INDEMNITY"

Delete Article "INDEMNITY" in its entirety and substitute the following:

INDEMNITY

To the fullest extent permitted by law, the CONTRACTOR expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents, and employees (herein called the "indemnitees") from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR, its Subcontractors or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONTRACTOR's insurance or $1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any. The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR under workers' compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the CONTRACTOR or of any third party to whom CONTRACTOR may subcontract a part or all of the Work. This indemnification shall continue beyond the date of completion of the work.

ARTICLE 39 "CODES, ORDINANCES, PERMITS, AND LICENSES"

Add the following:

A. PERMIT FOR WORK WITHIN LOCAL RIGHTS-OF-WAY

The Contractor shall obtain from the City of Key West the necessary permits for work within the rights-of-way. The Contractor shall abide by all regulations and conditions, including maintenance of traffic.

B. NOISE ORDINANCE

City of Key West has a noise ordinance that allows working hours between 8:00 AM to 7:00 PM, Monday through Friday. No work should be performed during weekends or City Holidays, State Holidays and National Holidays.

C. "LICENSES"

THE BIDDER MUST BE A CERTIFIED GENERAL CONTRACTOR, CERTIFIED BUILDING CONTRACTOR, REGISTERED GENERAL CONTRACTOR, REGISTERED BUILDING CONTRACTOR OR A CERTIFIED PAINTING CONTRACTOR? AND SUBMIT PROOF OF SUCH WITH THE BID.

1. Within 10 days of Notice of Award, the successful Bidder must represent that he holds all applicable, county, and City of Key West licenses and permits required to do business as a contractor with respect to the work described in the Contract Documents.

2. Further, the successful Bidder must, within 10 days of Notice of Award, furnish documentation showing that, as a minimum, he has complied with the provisions of Chapter 18 of the Code of Ordinances of the City of Key West in order to enter into the Agreement contained in the Contract Documents.

3. Specifically, within 10 days after Notice of Award, the successful Bidder must demonstrate that he holds, as a minimum, the following licenses and certificates:

   a.) City of Key West Tax License Receipt;
   b.) A valid Certificate of Competency issued by the Chief Building Official of Key West, Florida
   c.) A valid occupational license issued by the City of Key West, Florida.

D. WORK DURING HOLIDAYS

There shall be no work during City Holidays, State Holidays and National Holidays. Any construction operations during these days shall be approved by the City of Key West.

ARTICLE 40 “SUPERENTENDENCE”

Add the following sub article:

The CONTRACTOR shall keep at the project site, competent supervisory personnel, able to read, write and speak English to effectively communicate with City staff.

ARTICLE 42 "SAFETY"

Add the following sub article:

OCCUPATIONAL SAFETY AND HEALTH

The Contractor shall observe and comply with all applicable local, state, and federal occupational safety and health regulations during the prosecution of work under this Contract. In addition, full compliance by the Contractor with the U.S. Department of Labor's Occupational Safety and Health Standards, as established in Public Law 91-596, will be required under the terms of this Contract.

ARTICLE 43 "PROTECTION OF WORK AND PROPERTY"

Add the following Article:

HISTORIC PRESERVATION

The Contractor shall comply with Florida's Archives and Historic Act (Florida Statutes, Chapter 267) and the regulations of the local historic preservation board as applicable and protect against the potential loss or destruction of significant historical or archaeological data, sites, and properties in connection with the project.

ARTICLE 57 “OWNERS RIGHT TO TRANSFER EMPLOYMENT”

Add the following Article:

TERMINATION FOR CONVENIENCE AND RIGHT OF SUSPENSION

A. Owner shall have the right to terminate this Contract without cause by written notice of Termination to the Contractor. In the event of such termination for convenience, the Contractor’s recovery against the Owner shall be limited to that portion of the Contract amount earned through the date of termination, together with any retainage withheld and reasonable termination expenses incurred. Contractor shall not be entitled to any other or further recovery against the Owner, including, but not limited to, damages or any anticipated profit on portions of the Work not performed.

B. The Owner shall have the right to suspend all or any portions of the Work upon giving the Contractor prior written notice of such suspension. If all or any portion of the Work is so suspended, the Contractor shall be entitled to reasonable costs, expenses and time extension associated with the suspension.

ARTICLE 60 "LIQUIDATED DAMAGES"

Delete Article "LIQUIDATED DAMAGES" in its entirety and substitute the following:
LIQUIDATED DAMAGES

Should the Contractor fail to complete the work or any part thereof in the time agreed upon in the Contract Documents or within such extra time as may have been allowed for delays by extensions granted as provided in the Contract, the Contractor shall reimburse the Owner for the additional expense and damage for each calendar day, Sundays and legal holidays included, that project outlined in Contract Documents remains uncompleted after the completion date. Liquidated damages shall be assessed. It is agreed that the amount of such additional expense and damage incurred by reason of failure to complete the work is the per diem rate as stipulated in the Bid. The said amount is hereby agreed upon as a reasonable estimate of the costs which may be accrued by the Owner after the expiration of the time of completion. It is expressly understood and agreed that this amount is not to be considered in the nature of a penalty but as liquidated damages, which have accrued against the Contractor. The Owner shall have the right to

deduct such damages from any amount due or that may become due the Contractor or the amount of such damages shall be due and collectible from the Contractor or Surety.

ARTICLE 68 “PAYMENT”

Sub article C. “COST REIMBURSEMENT WORK”

Delete the third & fourth paragraph in its entirety & substitute the following;

In addition to 1 through 5 above , an added fixed fee of 15 percent (%) for general overhead & profit shall be allowed for the CONTRACTOR (or approved SUBCONTRACTOR) actually executing the Cost Reimbursement work.

An additional fixed fee of 5 % will be allowed the CONTRACTOR for the administrative handling of portions of the work that are executed by an approved SUBCONTRACTOR. No additional fixed fee will be allowed for the administrative handling of work executed by the SUBCONTRACTOR of a SUBCONTRACTOR.

ARTICLE 69 "PARTIAL PAYMENTS"

Delete the first paragraph of Sub article B. "ESTIMATE" and substitute the following:

No more than once each month the Contractor shall submit to the Engineer a detailed estimate of the amount earned during the preceding month for the separate portions of the work and request payment. As used in this Article the words "amount earned" means the value, on the date of the estimate, for partial payment of the work completed in accordance with the Contract Documents and the value of approved materials delivered to the project site suitably stored and protected prior to incorporation into the work. Payment will be made by the Owner to the Contractor within 40 days receipt of the written recommendation of payment from the Engineer.

Sub Article C. “DEDUCTION FROM ESTIMATE

Delete third sentence in its entirety and substitute add the following;

1. When the work is 90 per cent complete, the OWNER may reduce the retainage to 5 percent of the dollar value of all work satisfactorily completed to date provided the CONTRACTOR is making satisfactory progress and there is no specific cause for greater retainage.

Delete Sub article E. "PAYMENT" in its entirety and substitute the following:

After deducting the retainage and the amount of all previous partial payments made to the Contractor from the amount earned the amount due will be made payable to the Contractor. Recommendations for payment received by the Owner less than 40 days prior to the scheduled day for payment will not be processed or paid until the following month.

ARTICLE 72 "FINAL PAYMENT"

Delete Article "FINAL PAYMENT" in its entirety and substitute the following:

FINAL PAYMENT

Upon completion of the work the Contractor shall notify the Engineer, in writing, that he has completed it and shall request final payment. The Contractor shall be responsible for keeping an accurate and detailed record of his actual construction. Upon completion of construction and before final acceptance and payment the Contractor shall furnish the Engineer as-built drawings of his construction. Upon receipt of a request for final payment and the as-built drawings the Engineer will inspect and, if acceptable, submit to the Owner his recommendation as to acceptance of the completed work and as to the final estimate of the amount due the Contractor. Upon approval of this final estimate by the Owner and compliance by the Contractor with provisions in Article RELEASE OF LIENS OR CLAIMS, and other provisions as may be applicable, the Owner shall pay to the Contractor all monies due him under the provisions of these Contract Documents.

ARTICLE 72 "FINAL PAYMENT"

Add the following;

A. Acceptance and Final Payment

Whenever the Contractor has completely performed the work provided for under the Contract and the Engineer has performed a final inspection and made final acceptance and subject to the terms of the Engineer will prepare a final estimate showing the value of the work as soon as the Engineer makes the necessary measurements and computations. The Engineer will correct all prior estimates and payments in the final estimate and payment. The OWNER will pay the estimate, less any sums that the OWNER may have deducted or retained under the provisions of the Contract, as soon as practicable after final acceptance of the work, provided the Contractor has met the requirements of (1) through (5) below.

1 The Contractor has agreed in writing to accept the balance due or refund the overpayment, as determined by the OWNER, as full settlement of his account under the Contract and of all claims in connection therewith, or the Contractor, accepted the balance due or refunded the overpayment, as determined by the OWNER, with the stipulation that his acceptance of such payment or the making of such refund

does not constitute any bar, admission, or estoppel, or have any effect as to those payments in dispute or the subject of a pending claim between the Contractor and the OWNER. To receive payment based on a FINAL PAYMENT CERTIIFCATE, The Contractor further agrees, by submitting a FINAL PAYMENT CERTIFICATE that any pending or future arbitration claim or suit is limited to those particulars, including the itemized amounts, defined in the original FINAL PAYMENT CERTIFICATE , and that he will commence with any such arbitration claim or suit within 15 calendar days from and after the time of final PAYMENT of the work and that his failure to file a formal claim within this period constitutes his full acceptance of the Engineer's final estimate and payment. The overpayment refund check from the Contractor, if required, will be considered a part of any Acceptance Letter executed.

2 The Contractor has properly maintained the project, as specified herein before.

3 The Contractor has furnished a sworn affidavit to the effect that the Contractor has paid all bills and no suits are pending (other than those exceptions listed, if any) in connection with work performed under the Contract and that the Contractor has not offered or made any gift or gratuity to, or made any financial transaction of any nature with, any employee of the OWNER in the performance of the Contract.

4 The surety on the contract bond consents, by completion of their portion of the affidavit and surety release subsequent to the Contractor's completion of his portion, to final payment to the Contractor and agrees that the making of such payment does not relieve the surety of any of its obligations under the bond.

5 The Contractor has furnished all required mill tests and analysis reports to the Engineer.

END OF SECTION

PART 4

SUMMARY OF WORK

SECTION 01001
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT DESCRIPTION

A. The following information though not all-inclusive, is given to assist Contractors in the evaluation of the work required to meet the project objectives.

B. A brief description of the work is stated in the Invitation to Bid. To determine the full scope of the project or of any particular part of the project, coordinate the applicable information in the several parts of these Contract Documents.

1.2 MOBILIZATION AND DEMOBILIZATION

A. Contractor shall be responsible for mobilization and demobilization of labor, materials and equipment. Payment for mobilization and demobilization will be included in the lump sum price.

B. DAILY REPORTS
   1) The CONTRACTOR shall submit 2 reports weekly of construction activities for each site, including non-work days. The report shall include:
      a) Manpower, number of men by craft
      b) Quality Control
      c) Equipment on the Project
      d) Major deliveries
      e) Activities worked with reference to the Work Order items
      f) New problems
      g) Other pertinent information
   2) A similar report shall be submitted for/by each Subcontractor.
   3) The 2 reports weekly shall be submitted to the OWNER.

1.4 SCHEDULING

A. Plan the work and carry it out with minimum interference to the operation of the existing facilities. Prior to starting the work, confer with the Engineer and Owner's representative to develop an approved work schedule, which will permit the facilities to function as normally as practical. It may be necessary to do certain parts of the work outside normal working hours in order to avoid undesirable conditions. The Contractor shall do this work at such times and at no additional cost to the Owner.

1.5 COORDINATION

A. Contractors shall cooperate in the coordination of their separate activities in a manner that will provide the least interference with the Owner's operations and other contractors and utility companies working in the area, and in the interfacing and connection of the separate elements of the overall project work.

B. If any difficulty or dispute should arise in the accomplishment of the above, the problem shall be brought immediately to the attention of the OWNER.

1.6 WORK TO BE PERFORMED BY OTHERS

A. During the construction period for this project, the Owner (either with his own forces or under a separate contract) may be performing work that may require the cooperation of the Contractors in scheduling and coordination to avoid conflicts.

B. If any difficulty or dispute should arise in the accomplishment of the above, the problem shall be brought immediately to the attention of the OWNER.

C. All Contractors working on this site are subject to this requirement for cooperation, and all shall abide by the OWNER's decision in resolving project coordination problems without additional cost to the Owner.

1.7 SITE INVESTIGATION AND REPRESENTATION

A. The Contractor acknowledges satisfaction as to the nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation, access to the site, disposal, handling and storage of materials, availability of labor, water, electric power, roads, and uncertainties of weather, or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the work, and all other matters which can any way affect the work or the cost thereof under this Contract.

B. The Contractor further acknowledges satisfaction as to character, quality, and quantity of surface and subsurface materials to be encountered from his inspection of the site and from reviewing any available records of exploratory work furnished by the Owner or included in these Documents. Failure by the Contractor to become acquainted with the physical conditions of the site and all available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the work.

C. The Contractor warrants that as a result of examination and investigation of all the aforesaid data, the contractor can perform the work in a good and workmanlike manner and to the satisfaction of the Owner.

D. The Owner assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract, and (2) the Contract expressly provides that the responsibility therefore is assumed by the Owner.

1.8 INFORMATION ON SITE CONDITIONS

A. General: Any information obtained by the Owner regarding site conditions, subsurface information, water level, existing construction of site facilities as applicable, and similar data will be available for inspection at the office of the Owner upon request. Such information is offered as supplementary information only. Owner does not assumes any responsibility for the completeness or interpretation of such supplementary information.

1.9 DIFFERING SUBSURFACE CONDITIONS

A. The Owner shall investigate such conditions promptly and following this investigation, the Contractor shall proceed with the work, unless otherwise instructed by the Owner. If the Owner finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for performing the work, the Owner will recommend to the Owner the amount of adjustment in cost and time he considers reasonable. The Owner will make the final decision on all Change Orders to the Contract regarding any adjustment in cost or time for completion.

1.10 UTILITIES

A. During excavation the Contractor shall be responsible for determining, at his cost, the locations of all known utilities in the project area.

B. Contractor shall notify utility location service (e.g. Call Sunshine 1-800-432-4770) a minimum for 48 hours prior to work order mobilization. Assigned notification number shall be maintained at the job site at all times and recorded in the daily reports.

1.11 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

A. Where the Contractor's operations could cause damage or inconvenience to telephone, television, gas, water, sewer, or irrigation systems, the operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by the Contractor.

B. Notify all utility offices, which are affected by the construction operation at least 48 hours in advance. Under no circumstances expose any utility without first obtaining permission from

the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for all existing underground utilities.

C. The Contractor shall be solely and directly responsible to the Owner and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage which may result from the construction operations under this Contract

D. Neither the Owner nor its Officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the work.

E. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no case shall interruption of any water or utility service be allowed to exist outside working hours unless prior approval is granted.

F. In the event the Contractor encounters water service lines that interfere with trenching, he may, by obtaining prior approval of the property owner, Florida Keys Aqueduct Authority (FKAA), or Fire Department as applicable, and the OWNER, cut the service dig through, and restore service with similar and equal materials at the Contractor's expense.

G. The Contractor shall replace, at his own expense, all existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract Documents or ordered by the Owner.

1.12 SAFETY REQUIREMENTS FOR TEMPORARY ELECTRIC POWER

A. Temporary electric power installation shall meet the construction Safety requirements of OSHA, State, and other governing agencies.

1.13 SANITARY FACILITIES

A. The Contractor shall provide and maintain sanitary facilities for his employees and his subcontractor's employees that will comply with the regulations of the local and State Departments of Health and as directed by the Owner.

1.14 STORAGE OF MATERIALS

A. Materials shall be so stored as to ensure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms or other clean hard surfaces and not on the ground. Stored materials shall be located so as to facilitate prompt inspection. Stored materials in the right –of –way shall be fully barricaded, with bottom height of 47” or lower and top height of 36” min., also they must be fitted and should have lights at night. Private property shall not be used for storage purposes without the written permission of the owner or lessee. Materials shall not be stored where access to any structure, plot, or road is blocked. Location of stored materials approved by the OWNER or his designee.

B. Delicate instruments and materials subject to vandalism shall be placed under lock cover and, if necessary, provided with temperature control as recommended by the manufacturer.

1.15 CONSTRUCTION SAFETY PROGRAM

A. The Contractor shall develop and maintain for the duration of this Contract, a safety program that will effectively incorporate and implement all required safety provisions. The Contractor shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety program.

B. The duty of the OWNER to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's safety supervisor, the safety program or any safety measures taken in, on, or near the construction site.

C. The Contractor shall do all work necessary to protect the general public from hazards, including, but not limited to, surface irregularities, or unramped grade changes in pedestrian sidewalk or roadway. Barricades, lights, and proper signs shall be furnished in sufficient amount to safeguard the public and the work.

D. The performance of all work and all completed construction, particularly with respect to ladders, platforms, structure openings, scaffolding, shoring, lagging, machinery guards and the like, shall be in accordance with the applicable governing safety authorities.

E. During construction, the Contractor shall construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railing, barricades or steel plates, as applicable, at all openings, obstructions, or other hazards in streets, sidewalks, floors, roofs, and walkways. All such barriers shall have adequate warning lights as necessary, or required for safety. Also all barriers shall have a lower horizontal continuous frame member at a maximum of 17” above grade.

1.16 ACCIDENT REPORTS

A. If death or serious injuries or serious damages are caused; the Contractor must promptly report by telephone or messenger to the Engineer. In addition, the Contractor must promptly report in writing to the Owner all accidents whatsoever arising out of or in connection with, the performance of the work whether on, or adjacent, to the site, giving full details and statements of witnesses.

B. If a claim is made against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Owner, giving full details of the claim.

1.17 TRAFFIC MAINTENANCE AND SAFETY

A. Comply with all rules and regulations of the state, county, and city authorities regarding closing or restricting the use of public streets or highways. No public or private road shall be closed, except by express permission of the owner. Conduct the work so as to assure the least possible obstruction to traffic and normal commercial pursuits. Protect all obstructions within traveled roadways by installing approved signs, barricades, and lights where necessary for the safety of the public. The convenience of the general public and residents adjacent to the project and the protection of persons and property are of prime importance and shall be provided for in an adequate and satisfactory manner.

B. Maintenance of Traffic shall be maintained at all construction sites until the work is either completed or any open trenches have been properly covered and all equipment is properly stored. Contractor shall maintain Maintenance of Traffic (MOT) signs in good repairs and required MOT lights should be operative at all times. The Owner shall stop work if MOT is not properly maintained; there shall not be any additional cost to the Owner for this downtime.

C. When flagmen and guards are required by regulation, permits, or when deemed necessary for safety, they shall be furnished with approved orange wearing apparel and other regulation traffic-control devices.

D. MOT plans shall be submitted with the Work Order Right-of-Way Permit application for review and approval by the COMMUNITY SERVICES.

1.18 STREET MAINTENANCE

A. CONTRACTOR shall notify all residents and proprietors adjacent to construction site of work to be performed, more specifically the notice shall state the day and time construction will begin, the name and phone number of the Contractor's representative responsible for the completion of the proposed improvements. Notice shall also include the Owner's representative for the project.

1.19 FIRE PREVENTION AND PROTECTION

A. The Contractor shall perform all work in a fire-safe manner and shall supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable federal, state, and local fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.

1.20 HURRICANE PREPAREDNESS PLAN

A. Within 30 days of the date of Notice to Proceed, the CONTRACTOR shall submit to the OWNER and City Representative a Hurricane Preparedness Plan. The plan should outline the necessary measures which the CONTRACTOR proposes to perform at no additional cost to the OWNER in case of a hurricane warning.

B. In the event of inclement weather, or whenever Owners Representative shall direct, CONTRACTOR will, and will cause Subcontractors to protect carefully the Work and materials against damage or injury from the weather. If, in the opinion of Owner's Representative, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of CONTRACTOR or any Subcontractors to so protect the Work, such Work and materials shall be removed and replaced at the expense of the CONTRACTOR.

1.21 SITE RESTORATION AND CLEANUP:

A. At all times during the work keep the premises clean and orderly and upon completion of daily work repair all damage caused by equipment and leave the project free of rubbish or excess materials of any kind.

B. Stockpile excavated materials in a manner that will cause the least damage to adjacent lawns, grassed areas, gardens, shrubbery, or fences regardless of whether these are on private property, or State, County, or City rights-of-way. Remove all excavated materials from grassed and planted areas, and leave these surfaces in a condition equivalent to their original condition.

1.22 FINISHING OF SITE, BORROW, AND STORAGE AREAS

A. Upon completion of the project, all areas used by the Contractor shall be properly cleared of all temporary structures, rubbish and waste materials and properly graded to drain and blend in with the abutting property. Areas used for the deposit of waste materials shall be finished to properly drain and blend in with the surrounding terrain.

1.23 AREA CLEANUP DURING CONSTRUCTION

A. Thoroughly clean all spilled dirt, gravel, sand, concrete, or other foreign materials caused by the construction operations from all streets and roads, grass, pathways, or concrete walkways and from adjacent areas at the conclusion of each day's operation. Wet concrete is not to be stored, dumped, or placed on the ground or other structures on any City property at any time. Truck or equipment wash down is not to be performed on City Property.

1.24 PREVENTION

A. Give all unpaved areas used in the construction area an approved dust-preventive treatment or periodically water to prevent dust during construction. Applicable environmental regulations for dust prevention shall be strictly adhered to.

1.25 SUBMITTALS

A. See Submittals section of the specifications

1.26 PAYMENT

A. The cost of the work in this section is considered incidental to the contract.

PART 2 – Not used

PART 3 – Not used

END OF SECTION

SECTION 01010

SCOPE OF WORK POLICE INTERIOR

1.0 Description The project includes the painting of the interior of the police station 1600 NORTH ROOSEVELT BLVD.

1.1 Finish all interior and exterior surfaces exposed to view, unless fully factory finished and unless otherwise indicated, including the following

1.2 In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hanger, brackets, collards, and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.

1.3 This is a turnkey project "NO CHANGE ORDERS" Contractor is to use the mandatory pre-bid meeting to identify any deficiencies and include them in the bid pricing.

1.4 This is the complete painting of the interior of police department facility with predetermined Sherwin Williams's products or equivalent approved by owner, Colors must be owner approved.

1.5 Contractor is responsible for getting as well as meeting all Permitting requirements, OHSA Regulations, Code, Rules and regulations that are required to complete this project.

1.6 Contractor must ensure that all staff and sub-contractors are dressed in company uniforms while on job site and work at the City of Key West facilities.

1.7 Contractor is responsible for moving, storing and safe guarding any furniture or items that are in the work area. Upon completion of work in each area the furniture or items will be returned to their original location.

1.8 Work in general includes surface preparation, surface repairs, caulking, sealant, patching and application of the paint coating to the substrates and systems outlined in the specifications. It is the intent of the specifications that all surfaces (except those specifically noted otherwise) be painted or finished for a thoroughly complete job in every item is herein specified or not.

1.9 All work done on sight must be coordinated and supervised by a Key West police officer.

1.10 Paint all doors front back and sides along with door jams.

1.11 Remove any fixtures and plates paint behind and reinstall the fixtures and plates.

2.0 Restore all surfaces to the original pre project condition (i.e.) clean up any over spray, drippings, splatter or debris.

2.1 Do not paint or finish the following items:

A . Items fully factory- finished unless specifically so indicated: materials and products having factory-applied primers are not considered factory finish

B. Item indicated to receive other finish

C. Item indicated to remain unfinished

D. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment

E. Floors unless specifically so indicated

F. Glass

G. Concealed pipes, ducts and conduits

2.2 KWPD Interior Painting Survey

All Interior Hallways up and downstairs (SW6378)"Crisp Linen"

All doors and door frames up and downstairs (SW6472)"Composed"

Both Stairwells – Front and Back (SW6378)"Crisp Linen"

<u>FIRST FLOOR:</u> (SW6379) "Jersey Cream"

Unless otherwise noted, all rooms will be painted Jersey Cream.

Room #129 Interview

Room #130 Report Writing

Room #131 Patrol Captain NO

Room #132 Coordinator-Patrol

Room #133 Conference room – IT

Room #134 Patrol Lieutenant

Room #135 Patrol Lieutenant

Room #136 Patrol Lieutenant

Room #137 Public Interview NO

Room #139 Evidence Locker

Room #142 Evidence Custodian

Room #105 Records

Room # 106 Records Supervisor

Room #104 Reception

Room #103 Elevator Equipment NO

Room #108 Community Affairs

Room #109 Night Sgt's

Room #110 Storage NO

Room #111 Armory NO

Room #112 Traffic

Room #113 Traffic Supervisor

Room #114 Electrical NO

Room #128B Eyewash NO

Room # 126 Briefing **--(SW6519) "Hinting Blue"**

Room #123 Day Patrol Sgt's NO

Room #118 Fitness/Gym

Room #149 Sanitation

Room #122 Simulator

<u>SECOND FLOOR:</u> (SW6379) "Jersey Cream"

Unless otherwise noted, all rooms will be painted Jersey Cream.

Room #232 Conference Room

Room #233 PIO NO

Room #234 Quartermaster NO

Room #235 Quartermaster Storage NO

Room #236 Copy Room

Room #237 Professional Standards

Room #239 Executive Asst.

Room #240 Chief

Room #245 Detectives

Room #246 Video Room (in detectives)

Room #244 Det. Sgt.

Room #243 Det. Lt.

Room # 201 Reception

Room #205 Communications

Room #206 Communications Supervisor

Room #207 Communications Lounge

Room #210 Admin Commander/Captain

Room #211 Admin Asst

Room #212 Training/Accreditation

Room #213 SS Commander NO

Room #215 Staff Lounge/Kitchen **--(SW6519) "Hinting Blue"**

Room #230 Elevator Equipment NO

Room #229 EOC **--(SW6519) "Hinting Blue"**

Room #213 Office IA

Room #222 Interview

Room #223 Interview NO

Room #221 Recruiter/Background NO

Room #227 Storage NO

Room #227B Storage NO

Room #256 Office-Payroll

Room #219 Central Records NO

Room #252 Wiring Closet NO

Room #228 Storage EOC NO

Room #226 Telephone Wiring EOC NO

Room #225 Computer Network Room EOC NO

SECTION 01010

SCOPE OF WORK
FIRE AND POLICE EXTERIORS

The project includes the painting of the exterior of the fire station and exterior and police station 1600 NORTH ROOSEVELT BLVD.

1.01 DESCRIPTION

1.11 Finish all exterior surfaces exposed to view, unless fully factory finished and unless otherwise indicated, including the following

1.12 In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hanger, brackets, collards, and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.

1.13 This is a turnkey project "NO CHANGE ORDERS" Contractor is to use the mandatory pre-bid meeting to identify any deficiencies and include them in the bid pricing.

1.14 This is the complete painting of the facility exteriors with predetermined Sherwin Williams's products or equivalent approved by owner, Colors must be owner approved.

1.15 Contractor is responsible for getting as well as meeting all Permitting requirements, OHSA Regulations, Code, Rules and regulations that are required to complete this project.

1.16 Contractor must ensure that all staff and sub-contractors are dressed in company uniforms while on job site and work at the City of Key West facilities.

1.17 Contractor is responsible for moving, storing and safe guarding any furniture or items that are in the work area. Upon completion of work in each area the furniture or items will be returned to their original location.

1.18 Work in general includes surface preparation, surface repairs, caulking, sealant, patching and application of the paint coating to the substrates and systems outlined in the specifications. It is the intent of the specifications that all surfaces (except those specifically noted otherwise) be painted or finished for a thoroughly complete job in every item is herein specified or not.

1.19 All work done on sight must be coordinated and supervised by a Key West police officer.

1.20 Paint all doors front back and sides along with door jams.

2.00 Remove any fixtures and plates paint behind and reinstall the fixtures and plates.

2.01 Restore all surfaces to the original pre project condition (i.e.) clean up any over spray, drippings, splatter or debris.

2.1 Do not paint or finish the following items

A . Items fully factory- finished unless specifically so indicated: materials and products having factory-applied primers are not considered factory finish

H. Item indicated to receive other finished

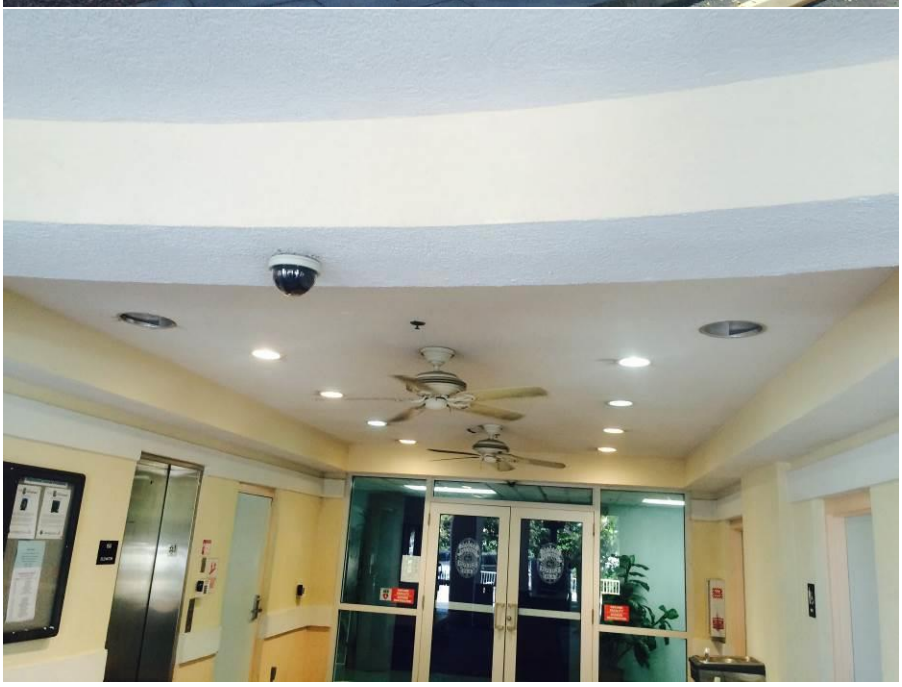
I. Item indicated to remain unfinished

J. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment

K. Floors unless specifically so indicated

L. Glass

M. Concealed pipes, ducts and conduits



FOR ASSISTANCE
PICK UP PHONE

PROPERTY

PROPER

STOP
STOP

WARDLOW

CHIEF RICHARD DICKIE WARDLOW

CENTRAL
FIRE
STATION

CENTRAL
FIRE
STATION

1600 NORTH ROOSEVELT BLVD.
THE CITY OF KEY WEST
PUBLIC SAFETY FACILITY
FIRE STATION POLICE STATION

POLICE

POLICE

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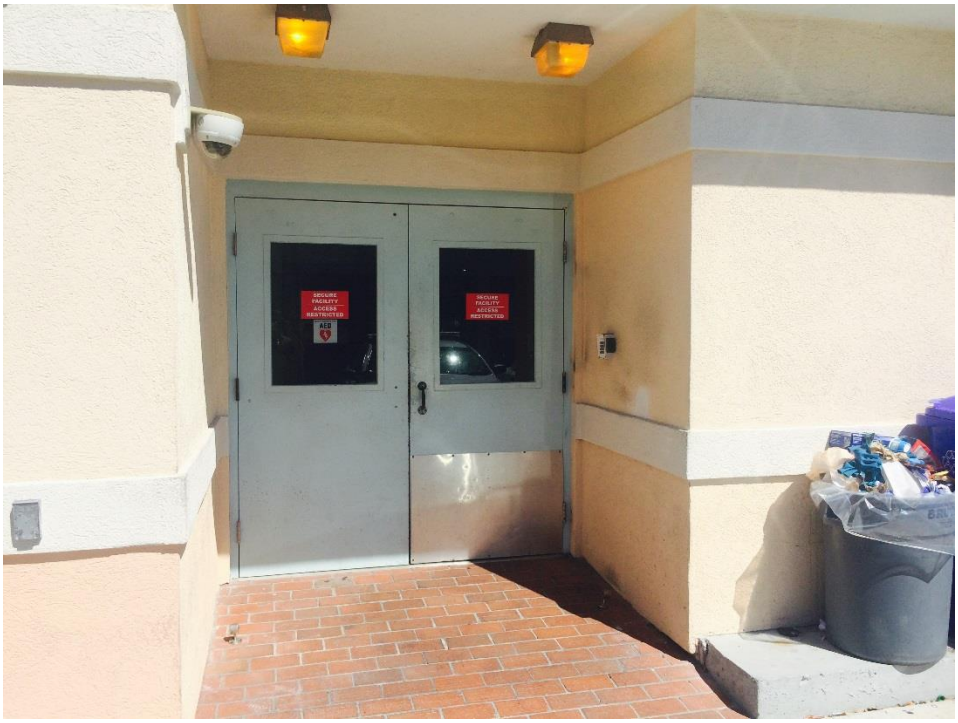
SECURE
FACILITY
ACCESS
RESTRICTED
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SECURE
FACILITY
ACCESS
RESTRICTED

SECTION 01014
PROTECTION OF THE ENVIRONMENT

PART 1 GENERAL

1.1 GENERAL

A. The Contractor shall maintain all work areas within and outside the project boundaries free from environmental pollution, which would be in violation to any federal, state, or local regulations.

B. The work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls as necessary.

C. Temporary erosion controls include, but are not limited to, grassing, mulching, watering, and reseeding on-site surfaces and spoil and borrow area surfaces and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the OWNER.

D. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the OWNER.

E. CONTRACTOR is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.

1.2 PROTECTION OF AIR QUALITY

A. The air pollution likely to occur due to construction operations shall be minimized by wetting down bare soils during windy periods, requiring the use of properly operating combustion emission control devices on construction vehicles and equipment used by contractors, and by encouraging the shutdown of motorized equipment not actually in use.

B. Trash burning will not be permitted on the construction site.

C. Contractor shall provide dust control for any asphalt / concrete removal.

1.3 CONSTRUCTION NOISE CONTROL

A. The Contractor shall conduct all his work, use appropriate construction methods and equipment, and furnish and install acoustical barriers, all as necessary so that no noise emanating from the process or any related tool or equipment will exceed legal noise levels, as set forth in the Code of Ordinances, City of Key West, Florida.

1.4 MITIGATION OF CONSTRUCTION NOISE IMPACT

A. The Contractor shall submit to the Owner his plans to mitigate the construction noise impacts and to comply with the noise criteria specified herein, including the method of construction, the equipment to be used, and acoustical treatments if necessary.

1.5 PAYMENT

A. Payment for the work associated with this Section will be incidental to the contract.

PART 2 – Not used

PART 3 – Not used

END OF SECTION

SECTION 01300
SUBMITTALS

PART 1 - GENERAL

1.1 GENERAL

A. Inquiries: Direct to OWNER regarding procedure, purpose, or extent of Submittal.

B. Submittal Submission Procedures: As provided in General Conditions, as specified herein, and as may otherwise be established during the preconstruction conference.

C. OWNER's Authorization: At any time, OWNER may authorize changes to procedures and requirements for Submittals, as necessary to accomplish specific purpose of each Submittal. Such authorization will be by Field Order or Work Change Directive.

D. Timeliness: Make submissions in accordance with requirements of individual Specification sections, as shown on the current accepted schedule of Submittals submissions, and in such sequence as to cause no delay in Work or in work of other contractors.

E. Identification of Submittals:

1. Complete, sign, and transmit with each Submittal package, one Transmittal of CONTRACTOR's Submittal Form attached at the end of this section.
2. Identify each Submittal with numbering and tracking system reviewed by OWNER:
   a. Sequentially number each Submittal.
   b. Resubmission of a Submittal will have original number with sequential alphabetic suffix.
3. Show date of submission and dates of previous submissions.
4. Show Project title and OWNER's contract identification and contract number.
5. Show names of CONTRACTOR, Subcontractor or Supplier, and manufacturer as appropriate.
6. Identify, as applicable, Contract Document section and paragraph to which Submittal applies.
7. Clearly identify revisions from previous submissions.

F. Incomplete Submittal Submissions:

1. At OWNERS's sole discretion, OWNER will either (i) return the entire Submittal for CONTRACTOR's revision/correction and resubmission, or (ii) retain portions of the Submittal and request submission/resubmission of specified items or as noted thereon.

2. Submittals which do not clearly bear CONTRACTOR's specific written indication of CONTRACTOR review and approval of Submittal or which are transmitted with an unsigned or uncertified submission form or as may otherwise be required under Contract Documents, will be returned to CONTRACTOR unreviewed for resubmission in accordance with Contract Documents.

3. Delays, re-sequencing or other impact to Work resulting from CONTRACTOR's submission of unchecked or unreviewed, Incomplete, inaccurate or erroneous, or nonconforming Submittals, which will require CONTRACTOR's resubmission of a Submittal for OWNER'S review, shall not constitute a basis of claim for Adjustment in Contract Price or Contract Times.

G. Non-specified Submissions: Submissions not required under these Contract Documents will not be reviewed and will be returned to CONTRACTOR.

H. Transmit submittals in accordance with current accepted schedule of Submittal submissions, and deliver the Owner designated by the COMMUNITY SERVICES Department of the City of Key West OWNERS REPRESENTATIVE.

I. Disposition of Submittals: As specified herein for administrative Submittals. OWNER will review, stamp, and indicate requirements for resubmission or acceptance on Submittal as follows:

1. No Exceptions Taken.

2. Reviewed as Noted:
   a. Reference the General Conditions for intent.
   b. CONTRACTOR may proceed to perform Submittal related Work.
   d. One copy for OWNER'S file.
   e. One copy returned to CONTRACTOR.

3. Revise and Resubmit (Revise/Correct or Develop Replacement and Resubmit):
   a. Revise/correct in accordance with OWNER'S comments and resubmit.
   b. One copy to OWNER'S file.
   c. One copy returned to CONTRACTOR appropriately annotated.

J. Payment for the work in this section will be incidental

PART 2 - Not used

PART 3 - Not used

END OF SECTION

SECTION 01390
RECORDINGS PRECONSTRUCTION AUDIO-VIDEO

PART 1 – GENERAL

1.1 REQUIREMENTS

A. The Contractor shall provide a color audio-video recording showing the entire preconstruction site. All videos shall be taken by a video photographer. The video photographer shall be an established enterprise that routinely provides these services. The videos shall be in DVD format or .wav files on removable USB drive, indicating the date, project name, and a brief description of the location where the video was taken. The Contractor shall submit one (1) copy of the preconstruction audio-video to the OWNER.

B. No construction shall begin prior to the review and approval of the preconstruction audio-video tape by the OWNER.

C. The total audio-video recording system and the procedures employed in its use shall be such as to produce a finished product that will fulfill the technical requirements of the project. The video portion of the recording shall produce bright sharp, and clear pictures with accurate colors and shall be free from distortion, and any other form of picture imperfection. All video recordings shall, by electronic means, display on the screen the time of day, the month, day, and year of the recording.

PART 2 – PRODUCTS (Not used)

PART 3 – EXECUTION

3.1 GENERAL

A. The following shall be included with the audio-video documentation:

1. Coverage is required within and adjacent to the right of way, easements, storage, and staging areas where the work is to be constructed.

2. Documentation of the conditions of the adjacent properties or any affected structures as a result of the impending construction.

3. Videos shall be properly identified by project name. Video shall include direction of coverage, the name of the streets or easements, engineering station numbers, date and time of coverage.

3. Provide a written video log to aid in locating any section of the construction site that may be in question.

B. There will be no separate payment for this preconstruction audio-video recording. The cost will be incidental to the contract.

END OF SECTION

SECTION 01530
BARRIERS

PART 1 – GENERAL

1.1 REQUIREMENTS

A. Furnish, install, and maintain suitable barriers as required to prevent public entry, and to protect the work, existing facilities, trees, and plants from construction operations; remove when no longer needed, or at completion of work.

1.2 RELATED REQUIREMENTS

A. Section 01010 Scope of Work.

PART 2 - PRODUCTS

2.1 MATERIALS – GENERAL

A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.02 FENCING

A. Minimum fence height shall be four feet. Open-mesh orange plastic fence shall be used to prohibit entry to the construction zone.

2.03 BARRIERS

A. Materials are Contractor's option, as appropriate to serve required purpose.

PART 3 - EXECUTION

3.01 GENERAL

A. Install facilities of a neat and reasonably uniform appearance, structurally adequate for the required purposes.

B. Maintain barriers during entire construction period.

C. Relocate barriers as required by the progress of construction.

3.02 FENCES

A. Provide and maintain fences necessary to assure security of the site during construction to keep unauthorized people and animals from the site when construction is not in progress.

B. Provide additional security measures as deemed necessary and approved by the OWNER.

3.03 TREE AND PLANT PROTECTION

A. Preserve and protect existing trees and plants at site which are designated to remain, and those adjacent to site.

B. Consult with the OWNER and the City's Urban Forestry Manager and remove agreed-on roots and branches which interfere with construction. Employ a qualified tree surgeon to remove branches and treat cuts. No trees or roots shall be removed without approval and/or a permit issued by the City Tree Commission.

C. Protect root zones of trees and plants:

1. Do not allow vehicular traffic or parking.
2. Do not store materials or products.
3. Prevent dumping of refuse or chemically injurious materials or liquids.
4. Prevent puddling or continuous running water.

D. Carefully supervise excavating, grading and filling, and other construction operations, to prevent damage.

E. Replace, or suitably trim trees and plants designated to remain which are damaged or destroyed due to construction operations.

3.04 REMOVAL

A. Completely remove barricades when construction has progressed to the point that they are no longer needed and when approved by the OWNER.

B. Repair damage caused by construction. Fill and grade areas of the site to the required evaluations, and clean up the area.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 – GENERAL

1.1 REQUIREMENTS

A. Project completion includes substantial completion, final inspection after completion, final cleaning, contractor's closeout submittals, and final adjustment of accounts.

1.2 SUBSTANTIAL COMPLETION

A. When Contractor considers work has reached substantial completion for the project, contractor shall submit to the OWNER the following:

1. Written notice that the work is substantially complete in accordance with Contract Documents.

2. A list of items yet to be completed or corrected and explanations thereof.

B. Within a reasonable time upon receipt of such notice, the OWNER will make an inspection, if necessary, to determine the status of completion.

C. Should the OWNER determine that the Project is not substantially complete?

1. The OWNER will promptly notify the Contractor in writing, giving the reasons thereof.

2. Contractor shall remedy the deficiencies in the work and send a second written notice of Substantial Completion to the OWNER.

3. Upon receipt of the second notice, the OWNER will review the work.

D. When the OWNER finds that the Project is substantially complete, owner will issue a Certificate of Substantial Completion with a tentative list of items to be completed or corrected before final inspection.

1.3 FINAL INSPECTION AFTER COMPLETION

A. When Contractor considers the Project complete with all minor deficiencies completed or corrected, he shall submit written certification that:

1. Contract Document requirements have been met.

2. Project has been inspected for compliance with Contract Documents.

3. Project has been completed in accordance with Contract Documents.

4. All minor deficiencies have been corrected or completed and the Work is ready for final inspection.

5. Project record documents are complete and submitted.

B. Within a reasonable time upon receipt of such certification, the OWNER will make an inspection to verify the status of completion.

C. Should the OWNER determine that the work is incomplete or defective?

1. The OWNER will promptly notify the Contractor in writing, listing the incomplete or defective work.

2. Contractor shall remedy the deficiencies in the work and send a second written certification to the OWNER that the work is complete.

3. Upon receipt of the second certification, the OWNER will review the Work.

D. When the OWNER determines that the work is acceptable under the Contract Documents, the Contractor shall provide all closeout submittals.

1.4 FINAL CLEANING

A. Execute final cleaning prior to final inspection.

B. Clean site; sweep paved areas, rake clean other surfaces.

C. Remove waste and surplus materials, rubbish, and construction facilities from the Project and from the site.

1.5 CONTRACTOR'S CLOSEOUT SUBMITTALS

A. Project Record Documents

1. At Contract Closeout, submit documents with transmittal letter containing date, project title, Contractor’s name and address, list of documents, and signature of Contractor.

2. Changes made by Field Order or by Change Order.

B. Evidence of payment and Release of Liens.

1.6 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to the OWNER.

B. Statement shall reflect all adjustments to the Contract Sum.
   1. The original Contract sum.
   2. Additions and deductions resulting from:
      a. Previous change orders or written amendment.
      b. Allowances
      c. Unit prices
      d. Deductions for uncorrected work.
      e. Deductions for liquidated damages
      f. Other adjustments
   3. Total contract sum as adjusted
   4. Previous payments
   5. Sum remaining due

1.7 FINAL AS-BUILT OR RECORD DRAWINGS

A. All supplied data collections, as-builts, drawings and files to be compatible with esri ArcGIS 10.2.2 Software. The OWNER's current computing environment consists of *Microsoft SQL Server - Windows 7/Server 2008 - ESRI GIS Platform*.

B. Interfaces and Integrations:

   1. The City of Key West uses a number of software applications critical to its core operation and mission. The proposed mobile asset data collection solution will need to interface or integrate with these existing platforms. - Arc Collector-ArcGIS Online - ArcMap 10.2

C. Contact Nicholas Osterhoudt, City GIS Manager, at 305-809-3721 with software related questions.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

END OF SECTION

SECTION 079005

JOINT SEALERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Elastomeric joint sealers, backings, bond breakers, fillers, and related materials.

B. Pre-formed seals and gaskets.

C. Removal and recaulking of exterior joint sealers at the following locations:
   1. Perimeter joints at fenestration elements.
   2. Joints at through-wall penetration elements.
   3. Control and expansion joints.
   4. Lap joints in sheet metal work.
   5. Joint sealant at metal-to-metal joints and metal-to-glass joints in storefronts and window assemblies (only if water infiltration testing indicates leakage).

1.02 RELATED SECTIONS

A. Section 092410 - Portland Cement Plaster Repairing: Patching and repair of defects and damage in existing cement plaster (stucco) work; patching materials.

B. Section 099000 - Painting and Coating: Surface preparation and field-application of paints and coatings on new and existing surfaces, except exterior cement plaster (stucco).

C. Section 099723 - Acrylic Waterproof Coating System: Surface preparation and field-application of high-build acrylic waterproof coating system over existing and repaired exterior cement plaster (stucco) surfaces.

1.03 REFERENCE STANDARDS

A. For requirements relating to reference standards, see Section 014219 - Reference Standards.

B. American Society for Testing and Materials (ASTM):
   1. ASTM C510 -- Standard Test Method for Staining and Color Change of Single- or Multicomponent Joint Sealants.
   2. ASTM C639 -- Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants.
   3. ASTM C661 -- Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer.

4. ASTM C719 -- Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants under Cyclic Movement (Hockman Cycle).
5. ASTM C790 -- (refer to ASTM C1193).
6. ASTM C794 -- Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.
7. ASTM C804 -- (refer to ASTM C1193).
8. ASTM C834 -- Standard Specification for Latex Sealants.
9. ASTM C919 -- Standard Practice for Use of Sealants in Acoustical Applications.
10. ASTM C920 -- Standard Specification for Elastomeric Joint Sealants.
11. ASTM C962 -- (refer to ASTM C1193).
12. ASTM C1087 -- Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.
13. ASTM C1193 -- Standard Guide for Use of Joint Sealants.
14. ASTM C1248 -- Standard Test Method for Staining of Porous Substrate by Joint Sealants.
15. ASTM C1382 -- Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints.
16. ASTM D412 -- Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
17. ASTM D1004 -- Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting.
18. ASTM D1056 -- Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.
19. ASTM D2203 -- Standard Test Method for Staining from Sealants.
20. ASTM D2240 -- Standard Test Method for Rubber Property Durometer Hardness.
21. ASTM D2628 -- Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.

C. U.S. Federal Specifications and Standards (FS):
1. FS TT-S-00227 -- Sealing Compound: Elastomeric Type, Multi-component.
2. FS TT-S-00230 -- Sealing Compound: Elastomeric Type, Single Component.
3. FS TT-S-001543 -- Sealing Compound: Silicone Rubber Base.
4. FS TT-S-001657 -- Sealing Compound: Single Component, Butyl Rubber Based, and Solvent Release Type.

1.04 SUBMITTALS

A. General:
1. For submittal procedures, refer to Section 01300

B. Manufacturers' Project Review Services Report: Prior to product selection, manufacturers' technical service staff shall review all exterior joint sealer applications for compliance with manufacturer's recommended design principles, and shall submit report indicating recommendations for changes (if any) and/or limitations of the proposed products and designs.
1. Test Reports: If requested by Architect, include the following:

a. Results of Laboratory Pre-Construction Testing.
b. Results of Field Pre-Construction Testing.
c. Manufacturer's recommendations for joint preparation, priming, and joint accessory materials based on test results.
d. Manufacturer's recommended installation procedure modifications resulting from field adhesion tests.

C. Product Data:
1. Submit complete list of joint sealers and related materials proposed for use on this project.
   a. Coordinate with Manufacturers' Project Review Services Report.
2. Submit manufacturer’s product data sheet for each product; data shall include sealant chemical characteristics, performance criteria, substrate preparation, limitations, color availability, and primer data.
3. Submit Material Safety Data Sheet for each solvent, primer and sealant material.

D. Samples:
1. Submit color charts for each sealant type for initial selection.
2. Submit standard cured color samples for each sealant type illustrating selected colors.

E. Manufacturer's Installation Instructions: Submit manufacturer's recommended joint preparation, priming and installation instructions for each joint sealant and backing material.
1. Indicate special procedures, surface preparation, perimeter conditions requiring special attention, and warranty requirements.
2. Include instructions for completing sealant intersections when different materials are joined.
3. Include instructions for removing existing sealants and preparing joints for new sealant.

1.05 QUALITY ASSURANCE

A. Provide single source responsibility for each type of joint materials.

B. Joint sealant and backing materials shall be compatible with one another, with joint substrate, and with other adjacent materials including finishes.

C. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum ten years documented experience.

D. Applicator Qualifications:
1. Company specializing in performing work of this section with minimum three years documented experience, minimum three successfully completed projects of similar scope and complexity, and approved by manufacturer.
2. Designate one individual as project foreman who shall be on site at all times during installation.

E. Field Pre-Construction Testing: Test each elastomeric sealant and joint substrate in accordance with the following, before beginning work of this section:
   1. Install field samples or mockups using joint preparation methods determined by laboratory pre-construction testing or manufacturer's installation instructions.
      a. Install field test joints in inconspicuous location as approved by Owner.
   2. Remove existing sealant and clean joint using manufacturer's recommended joint preparation methods, and install new sealant in accordance with manufacturer's installation instructions.
   3. Test Method: Manufacturer's standard field adhesion test to verify joint preparation and primer required to obtain optimum adhesion of sealants to joint substrate.
   4. When test indicates sealant adhesion failure, modify joint preparation, primer, or both and retest until joint passes sealant adhesion test.

F. Perform work in accordance with ASTM C1193 and manufacturer's installation instructions.

G. Joint Tolerance: Provide joint tolerances in accordance with product data and manufacturer's installation instructions.

1.06 WARRANTY

A. Correct defective work within a five year period after Date of Substantial Completion.

B. Include coverage for replacement of sealants, backing materials and accessories which fail to achieve water tight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Elastomeric Joint Sealants:
   1. BASF Construction Chemicals-Building Systems.
   2. Bostick, Inc.
   3. Dow Corning Corp.
   4. Momentive Performance Materials, Inc (formerly GE Silicones).
   5. Pecora Corporation.
   6. Tremco Global Sealants
   7. Or Approved Equal By Owner.

B. Pre-formed Foam Seals and Gaskets:
   1. Acme Highway Products Corp.
   2. Emseal Corp.
   3. Illbruck Sealant Systems.
   4. Sandell Manufacturing Co., Inc.
   5. Watson Bowman Associates inc.
   6. Or approved Equal By Owner

2.02 GENERAL

A. Manufacturer's Recommendations: Only products recommended for the specific application indicated shall be used.

B. Single Source Responsibility: All joint sealer materials for a specific application shall be obtained from a single manufacturer.

C. Compatibility: Joint sealers, backings, bond breakers, fillers, and other related materials shall be provided which are compatible with one another and with joint substrates under the indicated conditions of service and application, as demonstrated by manufacturer's testing and field experience.

D. Colors: Colors of exposed joint sealers shall be provided as indicated or, if not otherwise indicated, as selected by the Owner from manufacturer's standard colors.

2.03 ELASTOMERIC JOINT SEALANTS

A. General:
   1. Manufacturer's standard chemically curing elastomeric sealant shall be of base polymer indicated which complies with ASTM C920 requirements, including those for Type, Grade, Class and Uses indicated.

B. Silicone Sealants:
   1. Sealant Type S-1: One-part, non-acid-curing, low modulus, silicone sealant, meeting the following requirements:
      a. Compliance Requirements: ASTM C920, Type S, Grade NS, Class 25, Uses NT, M, G, A, and Use O (as applicable to joint substrates indicated).
      b. Durometer Hardness, Shore A (ASTM C661): 15.
      c. Tensile Strength (ASTM D412):
         (1) at 25 percent extension: 15 psi, max.
         (2) at 50 percent extension: 20 psi, max.
         (3) at 100 percent extension: 45 psi, max.
      d. Peel Strength (ASTM C794): 25 lb/in.
      e. Joint Movement Capability (ASTM C719): +100/-50 percent.
      f. Staining (ASTM C1248): None.
      g. Color(s): As selected by OWNER from manufacturer's complete range of not less than 10 colors.
      h. Product: “Dow Corning 790” by Dow Corning, or equal.
   2. Sealant Type S-2: One-part, non-acid-curing, medium modulus, silicone sealant, meeting the following requirements:
      a. Compliance Requirements: ASTM C920, Type S, Grade NS, Class 25, Uses NT, M, G, A, and Use O (as applicable to joint substrates indicated).
      b. Durometer Hardness, Shore A (ASTM C661): 35.
      c. Tensile Strength (ASTM D412):
         (1) at 25 percent extension: 45 psi, max.
         (2) at 50 percent extension: 60 psi, max.
         (3) at 100 percent extension: 75 psi, max.
      d. Peel Strength (ASTM C794): 32 lb/in.
      e. Joint Movement Capability (ASTM C719): +50/-50 percent.
      f. Staining (ASTM C1248; concrete, limestone): None.
      g. Color(s): As selected by OWNER from manufacturer's complete range of not less than 10 colors.

h. Product: “Dow Corning 795” by Dow Corning, or equal.

3. Sealant Type S-3: One-part, acid-curing, silicone sealant.
   a. Compliance Requirements: ASTM C920, Type S, Grade NS, Class 25, Uses NT, M, G, A, and Use O (as applicable to joint substrates indicated).
   b. Durometer Hardness, Shore A (ASTM C661): 25.
   c. Tensile Strength, Ultimate (ASTM D412): 325 psi.
   d. Tear Strength (ASTM D624): 25 ppi.
   e. Peel Strength (ASTM C794): 20 lb/in.
   f. Color(s): As selected by OWNER from manufacturer's complete range of not less than 8 colors.
   g. Product: “Dow Corning 999-A” by Dow Corning, or equal.
4. Sealant Type S-4:
   a. Compliance Requirements: ASTM C920, Type S, Grade NS, Class 25, Uses NT, G, A and O; non-staining, non-bleeding.
   b. Color: As selected by OWNER.
   c. Product: "Dow Corning 999" or "Dow Corning 799" by Dow Corning, or equal.
5. Sealant Type S-5: Premium, very-low-modulus, high-movement, non-sag, fast-curing, ready-to-use, solvent-free, silyl-terminated polyether polymer (STPe) sealant; compatible with non-rigid coatings (may be painted soon after installation).
   a. Compliance Requirements:
      (1) ASTM C920, Type S, Grade NS, Class 50, Use NT, M, A, G, and O.
      (2) FS TT-S-001543A, Type II, Class A, Type Non-sag.
      (3) FS TT-S-00230C, Type II, Class A.
      (4) COE CRD-C-541, Type II, Class A.
   b. Physical and Performance Requirements:
      (1) Movement Capability (ASTM C719): +/-50 percent.
      (2) Extension (ASTM C1382): 100 percent.
      (3) 100-percent Modulus (ASTM D412): 35 psi (0.24 MPa).
      (4) Tensile Strength (ASTM D412): 140 to 180 psi.
      (5) Tear Strength (ASTM D1004): 40 lb/in (7.1 kg/cm).
      (6) Ultimate Elongation at Break (ASTM D412): 800 to 1,000 percent.
      (7). Sag in Vertical Displacement (ASTM C639): No sag.
      (8) Hardness, Shore A (ASTM C661): 17.
      (9) Stain and Color Change (ASTM C510): Pass (no visible stain). (10) Bond Durability (ASTM C719): Pass (on glass, aluminum, concrete; +/-50 percent).
      (11) Adhesion, in peel (ASTM C794):
         (a) Aluminum: 35 pli (6.2 kg/cm).
         (b) Glass: 33 pli (5.8 kg/cm).
         (c) Concrete: 36 pli (6.4 kg/cm).
   c. Product: "MasterSeal NP 150" (formerly “Sonolastic 150 VLM”) by BASF, or equal.
6. Sealant Type S-6:
   a. Compliance Requirements: ASTM C920, Type S, Grade NS, Class 50, Uses NT, M, G, A and O; non-staining, non-bleeding.

b. Color: As selected by OWNER.
c. Product: "Dow Corning CC5" by Dow Corning, or equal.

7. Sealant Type S-7: Single-component, ready to use, silicone rubber sealant with integral fungicide; recommended by manufacturer for use in bathrooms, spas and similar applications where joints need protection against fungi and bacteria
   a. Compliance Requirements: ASTM C920, Type S, Grade NS, Class 25, Uses NT, G, A and O; mildew resistant.
   b. Durometer Hardness, Shore A (ASTM C661): 25.
   c. Tensile Strength, Ultimate (ASTM D412): 325 psi.
   d. Tear Strength (ASTM D624): 25 ppi.
   e. Peel Strength (ASTM C794): 20 lb/in.
   f. Color: White.
   g. Product: " Dow Corning 786 Sealant M White" by Dow Corning, or equal.
8. Sealant Type S-8: Low modulus, high performance, single component; gun grade, as appropriate; sealant.
   a. Color: As selected by Architect.
   b. Product: " Dow Corning 888" or "Dow Parking Sealant NS" by Dow Corning, or equal.
9. Sealant Type S-9: Two-part, self-leveling, non-acid curing, silicone sealant.
   a. Compliance Requirements: ASTM C920, Type M, Grade NS, Class 25, Uses T, M, and Use O (as applicable to joint substrates indicated).
   b. Durometer Hardness, Shore 00 (ASTM C661): 60.
   c. Tensile Strength, Ultimate (ASTM D412): 75 psi.
   d. Joint Movement Capability (ASTM C719): +100/-50 percent.
   e. Color: Gray, except as otherwise indicated.
   f. Product: “Dow Corning Parking Sealant FC” by Dow Corning, or equal.
10. Sealant Type S-10: Low modulus, high performance, single component; self leveling, as appropriate; sealant.
   a. Compliance Requirements:
      (1) ASTM D5893 Type SL.
   b. Durometer Hardness, Shore 00 (ASTM C661): 41 to 50.
   c. Joint Movement Capability (ASTM C719): +100/-50 percent.
   d. Color: Gray, except as otherwise indicated.
   e. Product: " Dow Corning 890" or "Dow Parking Sealant SL" by Dow Corning, or equal.

C. Urethane Sealants:
1. Sealant Type U-1:
   a. Compliance Requirements: ASTM C920, Type M, Grade NS, Class 50, Use T, M, A, O, and I (Class 2); non-staining, non-bleeding.
   b. Color: As selected by OWNER.
   c. Product: "Dymeric 240FC": by Tremco, or equal.
2. Sealant Type U-2: Two-part, non-sag, urethane sealant for Use T.
   a. Compliance Requirements: ASTM C920, Type M, Grade NS, Class 25, Uses T, M, A, and Use O (as applicable to joint substrates indicated).
   b. Product: “Dynatred” by Pecora, or equal.

3. Sealant Type U-3:
    a. Compliance Requirements: ASTM C920, Type M, Grade P, Class 25, Use T, M, and O; non-staining.
    b. Color: As selected by OWNER.
    c. Product: "THC-900/THC-901" by Tremco, or equal.
4. Sealant Type U-4:
    a. Compliance Requirements: ASTM C920, Type S, Grade P, Class 50, Use T, M, A, O, and I (Class 2); non-staining, non-bleeding.
    b. Color: As selected by OWNER.
    c. Product: "Vulkem 45 SSL" by Tremco, or equal.
5. Sealant Type U-7: One-part, high-performance, moisture-cure, polyurethane sealant.
    a. Compliance Requirements:
        (1) ASTM C920, Type S, Grade NS, Class 35, Use NT, M, A, and O.
        (2) FS TT-S-00230C, Class A, Type I.
    b. Physical and Performance Requirements:
        (1) Movement Capability (ASTM C719): +/-35 percent.
        (2) Hardness, Shore A (ASTM C661): 25.
        (3) Stain and Color Change (ASTM C510): Pass (no visible stain).
        (4) Adhesion, in peel (ASTM C794): 30.
    c. Product: "Sonolastic NP 1" by BASF, or equal.
6. Sealant Type U-8: One-part, low-modulus, silane end-capped, moisture-cure, polyurethane hybrid sealant.
    a. Compliance Requirements:
        (1) ASTM C920, Type S, Grade NS, Class 35, Use NT, M, A and O.
        (2) FS TT-S-00230C, Class A, Type II.
    b. Physical and Performance Requirements:
        (1) Movement Capability (ASTM C719): +/-35 percent.
        (2) Hardness, Shore A (ASTM C661): 25.
        (3) Stain and Color Change (ASTM C510): Pass (no visible stain).
        (4) Adhesion, in peel (ASTM C794):
            (a) Aluminum: 20-25 pli (89-112 N).
            (b) Concrete: 18-22 pli (80-98 N).
    c. Product: "Dymonic FC" by Tremco, or equal

D. Other Sealants:
1. Sealant Type A-1: ASTM C834 single-component water-based siliconized acrylic-latex caulk for use in general purpose interior applications.
    a. Product: BASF Sonolac, or equal.
2. Sealant Type L-1: Highly elastic, latex sealant for sound-rated partition and ceiling systems; compatible with gypsum board, cementitious backer board, and metal stud framing system components.
    a. Shall provide excellent adherence, permanent flexibility, and lasting seal.
    b. Shall meet or exceed ASTM C919 and ASTM C834.
    c. Acceptable Product: USG SHEETROCK® acoustical sealant; for additional requirements, refer to Section 092116 - Gypsum Board Assemblies.

2.04 PRE-FORMED SEALS AND GASKETS

A. Pre-formed Foam Sealant: Manufacturer's standard preformed, pre-compressed, impregnated open-cell foam sealant manufactured from high-density urethane foam impregnated with a nondrying, water repellant agent; factory-produced in pre-compressed sizes and in roll or stick form to fit joint widths indicated and to develop a watertight and airtight seal when compressed to the degree specified by the manufacturer. Provide products which are permanently elastic, mildew-resistant, non-migratory, non-staining, compatible with joint substrates and other joint sealers, and comply with the following requirements:
   1. Impregnating Agent: Manufacturer's standard
   2. Density: Manufacturer's standard
   3. Backing: Pressure sensitive adhesive, factory applied to one side, with protective wrapping or coated on one face with release agent serving as bond breaker for primary joint sealant.

B. Pre-formed Hollow Neoprene Gasket: Manufacturer's standard preformed polychloroprene elastomeric joint seal of the open-cell compression type complying with ASTM D2628 and with requirements indicated for size, profile and cross-section design.

2.05 BACKING AND BOND BREAKER MATERIALS

A. General:
   1. Provide sealant backings of material and type which are:
      a. Non-staining.
      b. Compatible with joint substrates, sealants, primers and other joint fillers.
      c. Approved by sealant manufacturer for applications indicated.

B. Backup strip shall be a flexible and compressible type of closed cell foam polyethylene, butyl rubber, rounded at surface to contact sealant, conforming to sealant manufacturer’s installation instructions.
   1. Backup strip must fit neatly into the joint without compacting and to such a height to allow a sealant depth of 1/2 the width of the joint.
   2. Sealant must not bond to the backup material.

C. Plastic Foam Joint-Fillers: Pre-formed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of either flexible, open cell polyurethane foam or non-gassing, closed-cell polyethylene foam, subject to sealant manufacturer's approval; and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

D. Elastomeric Tubing Joint Fillers: Neoprene, butyl, silicone or EPDM tubing complying with ASTM D1056, non-absorbent to water and gas, capable of remaining resilient at temperatures down to minus 26 degrees F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth and otherwise contribute to optimum sealant performance.

E. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by the sealant manufacturer for preventing bond between sealant and joint filler or other

materials at the back or third surface of the joint. Provide self-adhesive tape where applicable.

2.06 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive work.

B. Verify that joint backing and release tapes are compatible with sealant.

3.02 PREPARATION

A. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

B. Removal of existing joint sealants:
   1. Remove sealant at existing exterior joints, including but not limited to the following locations:
      a. Control and expansion joints in paving.
      b. Exterior wall expansion joints.
      c. Control and soft joints in masonry, and between masonry and adjacent work.
      d. Lap joints in exterior sheet metal work.
      e. Joints between exterior metal frames and adjacent work.
   2. If water infiltration testing indicates leakage at storefronts, remove existing sealant/gasket at the following locations:
      a. Metal-to-metal joints in storefronts.
      b. Metal-to-glass joints in storefronts.
   3. At locations where existing joint sealant is to be removed, do so in accordance with sealant manufacturer’s recommended procedures.

C. Surface Cleaning of Joints: All joints shall be cleaned out immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
   1. All foreign material shall be removed from joint substrates which could interfere with adhesion of joint sealer, including dust; paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer) oil; grease; waterproofing; water repellents; water, and surface dirt.
   2. Concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces shall be cleaned by brushing, grinding, blast cleaning, mechanical abrading, acid washing or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Loose particles remaining from the above cleaning operations shall be removed by vacuuming or blowing out joints with oil-free compressed air.
   3. Laitance and form release agents shall be thoroughly removed from all concrete

surfaces.

4. Metal, glass, porcelain enamel, glazed surfaces of ceramic tile and other nonporous surfaces shall be cleaned with chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.

D. Joint Priming:
   1. Clean and prime joints in accordance with manufacturer's instructions.
   2. Joint substrates shall be primed where indicated or where recommended by joint sealer manufacturer. Primer shall be applied so as to comply with joint sealer manufacturer's recommendations. Primers shall be confined to areas of joint sealer bond. Spillage or migration onto adjoining surfaces shall not be allowed.

E. Protect elements surrounding the work of this section from damage or disfigurement.
   1. Masking tape shall be used where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Tape shall be removed immediately after tooling without disturbing joint seal.

3.03 INSTALLATION

A. General:
   1. Unless otherwise indicated, comply with joint sealer manufacturers' printed installation instructions.
      a. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
   2. Perform installation in accordance with ASTM C1193.
   3. Perform acoustical sealant application work in accordance with ASTM C919.
   4. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
   5. Install bond breaker where joint backing is not used.
   6. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
   7. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
   8. Tool joints concave.

B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C962 for use of joint sealants as applicable to materials, applications and conditions indicated.

C. Solvent-Release-Curing Sealant Installation Standard: Comply with requirements of ASTM C804 for use of solvent-release-curing sealants.

D. Latex Sealant Installation Standard: Comply with requirements of ASTM C790 for use of latex sealants.

E. Acoustical Sealant Application Standard: Comply with recommendations of ASTM C919 for use of joint sealants in acoustical applications as applicable to materials, applications and conditions indicated.

F. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
   1. Install joint-fillers of the types indicated to provide support of sealants during application and at position necessary to product the required cross-sectional shapes and depths.
      a. Do not leave gaps between ends of joint-fillers.
      b. Do not stretch, twist, puncture or tear joint-fillers.
      c. Remove absorbent joint-fillers which have become wet prior to sealant application and replace with dry material.
   2. Install bond breaker tape between sealants and joint-fillers, compression seals or back of joints, where required to prevent third-side adhesion of sealant to back of joint.
   3. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint-fillers.

G. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.

H. Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by the sealant manufacturer.
   1. Concave joint configuration per Figure 6A in ASTM C962, unless otherwise indicated.

I. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, and complying with sealant manufacturer's directions for installation methods, materials and tools which produce seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in conformance with sealant manufacturer's recommendations.

J. Installation of Preformed Hollow Neoprene Gaskets: Install gaskets, with minimum number of end joints, in joint recesses with edges free of spalls and sides straight and parallel, both within tolerances specified by gasket manufacturer. Apply manufacturer's recommended adhesive to joint substrates immediately prior to installing gaskets. For straight sections provide gaskets in continuous lengths; where changes in direction occur, adhesively splice gasket together to provide watertight joints. Recess gaskets below adjoining surfaces by 1/8 inch to 1/4 inch.

3.04 PROTECTION AND CLEANING

A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so

that they are without deterioration or damage at time of substantial completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers and reseal joints with new materials to produce installations with repaired areas indistinguishable from original work.

B. Clean off excess sealants or sealant smears adjacent to joints as Work progresses, by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

3.05 SEALANT SCHEDULE

A. Exterior Joints:
   1. Control and Expansion Joints in Concrete Paving:
      a. Concrete Slab on Grade: Sealant Type U-2 or Sealant Type S-9.
      b. Elevated Concrete Deck: Sealant Type S-9.
   2. Preformed Expansion Joints in Walls: As indicated in drawings.
   3. Control, Expansion, and Movement Joints in Cement Plaster: Sealant Type S-5.
   4. Control, Expansion, and Movement Joints between Cement Plaster and Adjacent Work: Sealant Type S-5.
   5. Joints between Metal Frames and Adjacent Work (except masonry): Sealant Type S-5.
   6. Metal-to-Metal Joints (except lap joints in sheet metal work): Sealant Type S-1 or Sealant Type S-2.
   7. Lap Joints in Sheet Metal Work: Sealant Type S-1 or Sealant Type S-2.
   8. Metal-to-Glass Joints (except joints sealed with dry gasket or tape): Sealant Type S-2.
   9. Joints for Which No Other Sealant Type is Indicated: Sealant Type U-8 or Sealant Type S-5.

B. Interior Joints:
   1. Perimeter Joints between Gypsum Board Wall/Ceiling Finish and Metal Frame (e.g., window frame/trim; storefront framing): Sealant Type U-7.
   2. Joints between Metal Stud Track/Runner and Adjacent Construction, and between Outlet Boxes and Gypsum Board: Refer to Concealed Joints.
   3. Joints between Plumbing Fixtures and Tile: Sealant Type S-7.
   4. Joints between Solid Surface Fabrications (e.g., vanity backsplash) and Tile: Sealant Type S-7.
   5. Perimeter Joints between Stucco Wall/Ceiling Finish and Metal Frame (e.g., door frame; window frame; metal storefront; louver) or Steel Framing Member (e.g., steel roof beam): Sealant Type U-7.
   6. Perimeter Joints between Tile Wall Finish and Metal Frame (e.g., door frame; window frame; metal storefront):
      a. Tile to Site Finished Steel Frame (e.g., door frame): Sealant Type U-7.
      b. Tile to Shop-Finished Aluminum Frame (e.g., storefront): Sealant Type S-1 or Sealant Type S-3.
   7. Perimeter Joints between Gypsum Board Wall/Ceiling Finish and Metal Frame (e.g., door frame; window frame; metal storefront): Sealant Type U-7.
   8. Joints between Gypsum Board and Quartz Surface Fabrications, Architectural

Woodwork or Cabinetry: Sealant Type U-7.

a. For additional requirements, refer to Section 064100 - Architectural Wood Casework and Section 066100 - Quartz Surface Fabrications.

9. Tile Movement Joints:
   a. Floor Tile to Floor Tile: Sealant Type S-5.
   b. Floor Tile to Base Tile: Sealant Type S-5.
   c. Wall Tile to Wall Tile: Sealant Type S-5.
   d. For additional requirements, refer to Section 093013 - Tiling.
10. Joints for Which No Other Sealant Type is Indicated: Sealant Type P-1.

C. Concealed Joints:
   1. Concealed Metal Lap Joints (e.g., concealed lap and hook joints in sheet metal flashing and trim): Sealant Type S-1.
   2. Concealed Bedding Joints (e.g., joints under metal thresholds and saddles; joints between sheet metal flashing and other materials): Sealant Type P-1.
   3. Concealed Acoustical Joints at Interior Stud-Framed Partitions (e.g., joints between metal stud track/runner and adjacent construction; sealant joints between outlet boxes and gypsum board):
      a. Dry Areas: Sealant Type L-1.
      b. Wet Areas (e.g., restrooms): Sealant Type S-5 or Sealant Type S-7.

.END OF SECTION

SECTION 092410

PORTLAND CEMENT PLASTER REPAIRING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Portland cement plaster (stucco).
   1. Inspection and evaluation of all existing exterior cement plaster work, and documentation of damaged or defective areas.
   2. Patching and repair of damaged or defective cement plaster work, including but not limited to the following:
      a. Cracking.
      b. Delamination.
      c. Impact damage.
      d. Rusted or damaged beads.

B. Repair mortar.

C. Metal lath.

D. Beads, screeds, reveals, control joints, and other plaster accessories.

1.02 RELATED REQUIREMENTS

A. Section 079005 - Joint Sealers: Removal and replacement of joint sealers, backing and bond breakers; joint sealer for stucco crack repair.

B. Section 099000 - Paints and Coatings: Surface preparation and repainting of exterior surfaces; crack repair materials for stucco crack repair.

C. Section 099723 - Acrylic Waterproof Coating System.

1.03 REFERENCE STANDARDS

A. American Concrete Institute (ACI):
   1. ACI 524 -- Guide to Portland Cement Plastering.

B. American Society for Testing and Materials (ASTM):
   1. ASTM C91 -- Standard Specification for Masonry Cement.
   2. ASTM C150 -- Standard Specification for Portland Cement
   3. ASTM C847 -- Standard Specification for Metal Lath.
   4. ASTM C897 -- Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters.

5. ASTM C926 -- Standard Specification for Application of Portland Cement-Based Plaster.
6. ASTM C932 -- Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering.
7. ASTM C1063 -- Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster.
8. ASTM C1116 -- Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
9. ASTM C1328 -- Specification for Plastic (Stucco) Cement.
10. ASTM D1784 -- Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.
11. ASTM D4216 -- Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) and Related PVC and Chlorinated Poly(Vinyl Chloride) (CPVC) Building Products Compounds.

C. Florida Building Code, 2010 edition (FBC):
   1. FBC-B -- Florida Building Code, Building (including 2012 Supplement).

D. Portland Cement Association (PCA):
   1. PCA EB049 -- Portland Cement Plaster/Stucco Manual.

E. The Society for Protective Coatings (SSPC):
   1. SSPC-SP 2 -- Hand Tool Cleaning.
   2. SSPC-SP 3 -- Power Tool Cleaning.

1.04 SUBMITTALS

A. General:
   1. For submittal procedures, refer to Section 01300

B. Product Data: Submit manufacturer's product data for each product to be used, including but not limited to premixed cement plaster and patching stucco/cement plaster, integral bonding admixture, lath and plaster accessories.
   1. Include manufacturer’s written specifications, proportion mixes, and installation instructions for factory-prepared materials.
      a. Manufacturer’s written specifications shall include physical and performance characteristics, and instructions for storage, handling, and use.
   2. Provide documentation certifying that materials used together are mutually compatible (e.g., integral bonding admixture and premixed cement plaster).
   3. If requested, provide Material Safety Data Sheets.

1.05 QUALITY ASSURANCE

A. Installer/Applicator Qualifications: Company specializing in performing the work of this section with minimum five years of documented experience.

B. Contractor shall not change source or manufacturer of cement plaster materials during the course of the work.

C. Warranty: Contractor shall provide a written warranty against defects in material and installation for a period of not less than ten (10) years.

1.06 MOCK-UPS

A. General:
   1. Contractor shall prepare mock-up installations illustrating each type of cement plaster repair work to be performed.
      a. Special tooling and texturing necessary to match existing finish is to be included.
      b. If cleaning tests are also to take place, test panels should be prepared on the same area as mock-up.
   2. Where mock-up is deemed by Owner to be not in conformance with design intent, Contractor shall prepare additional mock-up(s) at no additional cost to Owner as necessary to achieve Owner's approval.
   3. Locate mock-ups where directed or as approved by Owner's.
      a. Mock-ups should not be undertaken on highly visible surfaces, except as authorized by Owner's.
   4. Accepted mock-up(s) shall become part of the Work, and shall serve as the quality standard for subsequent Work.

B. Mock-up No. 1 – Fine Fissure (hairline) Crack Repair: Construct mock-up of exterior fine fissure repair, 2 ft long, illustrating crack concealment and surface finish match to existing.

C. Mock-up No. 2 – Linear Static Crack Repair: Construct mock-up of exterior linear static crack repair, 2 ft long, illustrating crack concealment and surface finish match to existing.

D. Mock-up No. 3 – Large Dynamic Crack Repair: Construct mock-up of exterior wall large dynamic crack repair, 2 ft long, illustrating crack concealment and surface finish match to existing.

E. Mock-up No. 4 – Delamination Repair: Construct mock-up of exterior wall delamination repair, 2 ft long by 2 feet wide, illustrating surface finish match to existing, and edge interface between new and existing cement plaster.

F. Mock-up No. 5 – Corner Bead Repair: Construct mock-up of exterior wall corner repair, 2 ft long, illustrating corner finishing, surface finish match to existing, and edge interface between new and existing cement plaster.

G. Mock-up No. 6 – Reveal Bead Repair: Construct mock-up of exterior wall reveal repair, 2 ft long, illustrating reveal finishing, surface finish(es) match to existing, and edge interface between new and existing cement plaster.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver all products to the site in original packaging, unopened, and undamaged with

manufacturer's name and product identification visible thereon, and manufacturer's instructions and Material Safety Data Sheets.

B. Store products in a dry location and protect them from dampness following manufacturer's instructions.

C. Stockpile and handle aggregates in a manner to prevent contamination from foreign materials.

1.08 FIELD CONDITIONS

A. Do not apply cement plaster when substrate or ambient air temperature is under 50 degrees F or over 90 degrees F.

B. Hot Weather Conditions:
   1. Use damp loose sand.
   2. Use cool water for mixing.
   3. Pre-dampen masonry walls prior to application of cement plaster scratch coat.
   4. Prevent the cement plaster from drying out by covering with a plastic sheet, or moist cure at least twice daily for the first 2 to 3 days.
   5. Do not allow fresh cement plaster to be subject to hot, dry winds.

C. Protect existing adjacent materials and surfaces during the execution of the work; provide all necessary protection and follow all necessary work procedures to avoid damage to existing material assemblies not a part of the work in the Section:
   1. Minimize levels of dust during cement plaster removal and repair operations.
   2. Protect open joints and other vulnerable areas from water penetration to prevent leakage during the course of the work. Open areas shall not be left exposed overnight or when inclement weather is predicted.
   3. Temporarily remove and store surface-mounted appurtenances (e.g., light fixtures, signs, etc.) during cement plaster and sealant repair work.
   4. Protect windows during repair of cement plaster in close proximity to window openings.
   5. Protect existing roof surface from damage during the course of the cement plaster rehabilitation work. Repair all damage to roofing, flashings, etc., to the satisfaction of, and at no additional cost to, the Owner.
   6. Protect adjacent work from moisture deterioration and soiling due to cement plaster application operations. Provide temporary coverings as required to minimize spattering of cement plaster on other materials.

D. Provide visible barriers and/or warning tape around the perimeter of the work area for visitor protection and shall provide that nearby vehicles and adjacent structures and foliage are protected from damage during the course of the work.

E. Coordinate cement plaster work with the other trades involved in exterior rehabilitation work, including but not limited to cleaning, sealing, and painting.

PART 2 - PRODUCTS

2.01 GENERAL

A. Comply with applicable requirements of governing building code, including but not limited to the following:
   1. Lathing and plastering materials shall conform to the standards listed in FBC-B TABLE 2507.2 and FBC-B CHAPTER 35 and, where required for fire protection, shall also conform to the provisions of FBC-B CHAPTER 7.
   2. Cement plaster and lathing shall be done with the appropriate materials listed in FBC-B TABLE 2507.2 and FBC-B CHAPTER 35.

B. Manufacturers:
   1. Cement Plaster Materials:
      a. Titan America LLC; 11000 NW 121 Way; Medley, FL 33178; Tel. 800-226-2057.
   2. Integral Bonding Admixture:
      a. BASF Construction Chemicals LLC.
      b. Lambert Corporation.
   3. Metal Lath:
      a. Alabama Metal Industries Corporation: www.amico-online.com.
      b. Clark Steel: www.clarksteel.com.
      c. Western Metal Lath, Inc: www.wmlinc.com.
   4. Plaster Beads, Screeds, Reveals and Other Accessories:
      a. Alabama Metal Industries Corporation: www.amico-online.com.
      b. Plastic Components, Inc. (PCI): 9051 NW 97 Terrace, Miami, FL 33178; Tel. 305-885-0561.
      c. Vinyl Corp.: 8255 NE 70 Street; Miami, FL 33166; Tel. 305-477-6464.

2.02 STUCCO MATERIALS

A. Portland Cement Plaster: In accordance with ASTM C926 and applicable requirements of the governing building code.
   1. Cement:
      a. Portland Cement: ASTM C150, Type I.
      b. Masonry Cement: ASTM C81, Type S.
      c. Stucco Cement: ASTM C1328, Type S.
   2. Aggregate:
      a. Base Coats: ASTM C897, natural or manufactured sand.
      b. Finish Coat: Natural or manufactured sand graded to pass the No. 16 (1.18 mm) mesh sieve, light colored.
   3. Water: Clean, fresh, cool, potable and free of mineral or organic impurities which can affect cement plaster or metal in the system.

B. Admixtures:
   1. Integral Bonding Admixture: Acrylic-polymer emulsion or ethyl-vinyl acetate (EVA) admix designed to enhance the physical properties, adhesion to substrate, and durability of cement plaster.
      a. Do not use Integral Bonding Admixture in a plaster mix that already has air entrained.

b. Do not use Integral Bonding Admixture as a surface-applied external bonding agent or as a primer.
c. Products: One of the following:
(1) “MasterEmaco A660” (formerly "Acryl 60") manufactured by BASF.
(2) “Lambco Primer” manufactured by Lambert Products.

2. Fibers: 1/2-inch fibers meeting the requirements of ASTM C1116; alkali-resistant.

2.03 RELATED MATERIALS

A. Crack Repair Materials:
1. Patching Material Type 1 or 2, as appropriate for application; for additional information, refer to Section 099000 - Painting and Coating.
2. Patching Material Type 3: Joint Sealant Type S-5; for additional information, refer to Section 079005 - Joint Sealers.

B. Repair Mortar (Patching Material Type 4): Non-sag, lightweight, one-component, high-strength, polymer-modified, silica-fume-enhanced repair mortar with integral corrosion inhibitor for vertical and overhead applications.
1. Performance Characteristics:
a. Compressive Strength (ASTM C109): 6,750 psi (46.5 MPa) at 28 days.
b. Modulus of Elasticity (ASTM C215): 5.6×10^5 psi (3,861 MPa).
c. Splitting Tensile Strength (ASTM C496): 610 psi (4.2 MPa) at 28 days.
d. Flexural Strength (ASTM C348): 1,110 psi (7.7 MPa) at 28 days.
e. Bond Strength (ASTM C882, mortar scrubbed into substrate): 450 psi (16.9 MPa) at 28 days.
f. Water Absorption (ASTM C642): 4 percent.
g. Chloride Permeability (AASHTO T-277, according to ASTM C1202 Table 1): Very low range.
h. Length Change, wet cure (ASTM C157): +0.034 percent.
i. Length Change, dry cure (ASTM C157): -0.15 percent.
2. Product: “MasterEmaco N425” (formerly "Gel Patch") by BASF.

C. Lath: Shall conform to applicable requirements of ASTM C1063 and the governing building code, including but not limited to FBC-B CHAPTER 25.
1. Metal Lath: ASTM C847, minimum G60 galvanized; self-furring
a. Weight: To suit application, comply with deflection criteria, and as specified in FBC-B TABLE 2514.3.2 for framing spacing.
2. Strip Lath: Same as Metal Lath, except 6 inch (300 mm) wide strip.
3. Welded Wire Lath: ASTM C933; galvanized; with 2 inch (50 mm) square openings, paper or felt backing, of weight to suit application and as specified in FBC-B TABLE 2514.3.2 for framing spacing.

D. Corner Mesh: Formed sheet steel, minimum 0.018 inch (0.5 mm) thick, expanded flanges shaped to permit complete embedding in cement plaster, minimum 2 inch (50 mm) size; minimum G60 galvanized..

E. Beads, Screeds, Reveals, Control Joints, and Other Plaster Accessories:
1. General:
a. Material: PVC, open grid flanges or perforated with nailing holes.

b. Depth/ground governed by cement plaster thickness; maximum possible lengths.

2. Casing Beads: Bevelled edges.
3. Corner Beads: Radiused corners.
4. Base Screeds: Bevelled edges.
5. Control Joints: Use one of the follow, as indicated on Drawings; if not indicated, per A/E's direction.
   a. One-piece accordion profile with 2 inch (50 mm) flange at both sides; overall width 4 inches (100 mm); furnish with removable tape.
   b. Back-to-back casing beads, each with 2 inch (50 mm) flange; overall width 4 inches (100 mm).
6. Soffit Vents: Match existing.

F. Anchorage: Tie wire, nails, and other metal supports, of type and size to suit application; to rigidly secure materials in place, galvanized.

G. Fasteners: ASTM C1002 self-piercing tapping screws.

H. Tie Wire: Annealed galvanized steel.

PART 3 - EXECUTION

3.01 EXAMINATION

A. General:
   1. Prior to beginning operations, all exterior cement plaster surfaces shall be inspected to determine locations and extent of defects in cement plaster work, and to identify scope of patching and repair required.
   2. Verify that substrates to receive cement plaster conform to the requirements of ASTM C926.

B. Existing Conditions Survey and Analysis:
   1. Comprehensive evaluation of all exterior cement plaster areas shall be conducted by qualified persons experienced cement plaster analysis and repairs.
      a. All cement plaster surfaces to be visually inspected for defects/damage, including but not limited to the following:
         (1) Efflorescence: White crystalline deposits on wall surface; white streaks.
         (2) Craze Cracking: Short, fine lines on the surface of cement plaster; typically about one-eighth (1/8) inch to about one-half (1/2) inch in length.
         (3) Fine Fissures: Fine, tight fissures in the cement plaster.
         (4) Linear Cracks: Fissures / fractures in cement plaster, such as dimensional cracks, angular cracks, corner cracks, and door and window cracks; indicate whether cracking is static or dynamic in nature.
         (5) Delamination: Failure of the bond between cement plaster and substrate.
         (6) Damage: Chipped or broken cement plaster and/or plaster accessory (e.g., corner bead).
      b. Sounding: At locations where delamination of cement plaster is suspected (e.g., cracking, discoloration, unevenness in finished surface), conduct

"soundings" to identify areas of delamination.

c. Bond Strength Tests: At locations where delamination of cement plaster has been identified by soundings, conduct bond strength testing to determine the extent of defective cement plaster and to identify sound cement plaster.
   (1) Bond strength test procedure shall include a pull-out test conducted on existing cement plaster surfaces.
   (2) Test machine shall be any type that is of sufficient capacity and capable of applying the load continuously and without shock at the rate of 0.05 in. (1.27 mm) per minute, with provision for adjustment of the rate of loading.
   (3) Cement plaster areas where testing indicates that bond strength is less than the minimum acceptable values specified in ASTM C932 (i.e., 150 psi) shall be deemed to be defective.

d. The edges of each area where delamination has been identified by soundings and/or bond strength testing shall be marked for removal.

3.02 PREPARATION

A. General:
   1. Pressure clean all existing cement plaster surfaces, using minimum 3000 psi, 3 gal per minute equipment.
      a. Areas where mildew is present or suspected must be pre-treated with mildewcide prior to pressure cleaning.
   2. Prior to application of cement plaster to masonry or concrete substrate surfaces:
      a. Clean concrete and masonry substrate surfaces of foreign matter. Wash surfaces with clean water.
      b. Wet cast-in-place concrete and unit masonry bases with fine water spray to produce a uniformly damp surface and to reduce excessive suction.

B. At each area where efflorescence is identified in the Existing Stucco Inspection and Evaluation Report: Remove efflorescence from cement plaster surface.

C. At each area where cracking is identified in the Existing Stucco Inspection and Evaluation Report:
   1. Craze Cracking or Fine Fissure Cracking (hairline cracks caused by plastic or drying shrinkage): Remove loose materials and foreign matter that could impair adhesion of crack repair materials to be used for repair; coordinate with preparation requirements specified in Section 099000 - Painting and Coating.
   2. Linear Static Cracking (1/32-inch to 1/4-inch wide): Remove loose materials and foreign matter that could impair adhesion of crack repair materials to be used for repair; coordinate with preparation requirements specified in Section 099000 - Painting and Coating.
   3. Large Dynamic Cracking (1/4-inch wide or wider): Rout out the crack to form a continuous slot, 1/4 inch W x 1/4 inch D. Remove loose materials and foreign matter that could impair adhesion of crack repair materials to be used for repair.
      a. The edges of the routed slot shall be undercut where possible; if undercut is not possible, then slot shall have square edges. Edges shall be suitable for installation of bond breaker and joint sealer.

b. Coordinate joint design (including edge slope) with joint sealant requirements specified in Section 079005 - Joint Sealers, and with preparation requirements specified in Section 099000 - Painting and Coating.

D. At each area where delaminated cement plaster is identified in the Existing Stucco Inspection and Evaluation Report:
   1. Sound cement plaster to determine the extent of delaminated material.
   2. Remove unsound cement plaster material; profile base substrate by mechanical means.
      a. Where unsound cement plaster material is to be removed, sawcut an edge line over sound cement plaster at least 2 inches beyond extent of unsound cement plaster material; sawcuts shall be same depth as cement plaster thickness, and shall not extend into substrate. The angle of sawcuts shall be slightly greater than 90 degrees, to provide optimal edge for mating of new cement plaster to existing; featheredging is not allowed.
   3. Remove paint from sound cement plaster a minimum of 12 inches surrounding area to be repaired.

E. At each area where damage (e.g., rusted metal bead) is identified in the Existing Stucco Inspection and Evaluation Report:
   1. Remove sections of metal plaster bead which are rusted plus minimum 6 inches of sound (free of rust) metal at each end of rusted portion.
   2. Remove unsound cement plaster material and all cement plaster covering the legs of bead sections being removed; profile base substrate by mechanical means.
      a. Where unsound cement plaster material is to be removed, sawcut an edge line over sound cement plaster at least 2 inches beyond extent of unsound cement plaster material; sawcuts shall be same depth as cement plaster thickness, and shall not extend into substrate. The angle of sawcuts shall be slightly greater than 90 degrees, to provide optimal edge for mating of new repair mortar or cement plaster to existing; featheredging is not allowed.
   3. Remove paint from sound cement plaster a minimum of 12 inches surrounding area to be repaired.

F. At each area where cast-in-place concrete is exposed due to removal of delaminated or damaged cement plaster, the exposed concrete surface shall be prepared to receive new cement plaster by:
   1. Sandblasting, wire brushing, or chipping, or a combination thereof; and
   2. Application of a dash-bond coat of cement plaster, applied forcefully against the surface, left untroweled, undisturbed, and moist cured for at least 24 hours.

3.03 MIXING - CEMENT PLASTER

A. General:
   1. Mix only as much cement plaster as can be used prior to initial set.
      a. Size mixer to produce batches that will be applied within maximum of 1-1/2 hours after mixing.
   2. Accurately proportion materials for initial cement plaster mixture using measuring devices or known volume.

    a. Shovels of sand can be used after mixer is calibrated with known volumes of materials, including water.
3. Use damp, loose sand.
4. Mix materials dry, to uniform consistency, before adding bonding admix/water mixing liquid.
5. Add specified admixtures to batch in accordance with manufacturer's recommendations; mix slowly to avoid entrapping air.
6. Retempering of base-coat cement plaster is permitted one time only after initial mixing.
    a. Cement plaster not used within 1-1/2 hours of initial mixing shall be discarded.
7. Retempering of finish-coat cement plaster is not permitted.
8. Protect cement plaster mixture from contamination and excessive evaporation.

B. Bonding Admix/Water Mixing: Mix in accordance with integral bonding admixture manufacturer's instructions.
    1. Where increased physical and chemical resistance are required, increase the bonding admix content in the mixing liquid in accordance with manufacturer's instructions.
    2. Do not use integral bonding admixture in a plaster mix that already has air entrained.

C. Mechanical Mixing:
    1. Mix each batch separately.
        a. Double batching with single batch discharge shall not be permitted.
    2. Maintain mixer in clean condition before, during, and after cement plaster preparation.
        a. Remove partially set and hardened cement plaster from mixer drum before next batch.
        b. If mixer has been previously used in preparing gypsum plaster, thoroughly clean prior to use to prepare cement plaster.
    3. Maintain mixer in continuous operation while charging mixer.
        a. Add water to bring cement plaster to desired consistency.
        b. Continue mixing for 3 to 5 minutes after all ingredients have been added to the mixer.
    4. Mix factory-prepared cement plaster in accordance with manufacturer's recommendations.
    5. Do not over-mix, aerate, or mix at a high speed.

D. Hand Mixing:
    1. Hand mixing will be allowed only when authorized by Owner.
    2. Provide waterproof protection around mixing tub and water barrels when mixing inside the building.

E. Mix Proportions:
    1. Dash-bond Coat: 1 part of Portland cement and maximum 2 parts of sand, proportioned by volume and mixed to a consistency that will permit application as specified in ASTM C926.
    2. Base Coat(s): Plaster Mix "MS" per ASTM C926 Table 3.
        a. Add fiber and integral bonding admixtures per manufactures' recommendations.

3. Finish Coat: Plaster Mix “FMS” per ASTM C926 Table 4, or equivalent factory-prepared mixture with water as recommended by manufacturer.

3.04 STUCCO REPAIRS

A. General:
   1. Defective or damaged cement plaster and related plaster accessories shall be removed.
   2. After application of finish coating system, patched and repaired cement plaster cracks, areas, beads and edges shall not be distinguishable in the finished cement plaster work.

B. Repair of Cracks in Cement Plaster:
   1. General:
      a. Prepare surfaces and install crack repair materials in accordance with manufacturer’s application instructions.
      b. Crack shall be free from dirt, grease, or other contaminants. Blow cracks clean with compressed air, not to exceed 150 psi.
      c. If substrate appears chalky after cleaning or if other conditions warrant, apply primer in accordance with manufacturer’s application instructions.
   2. Craze Cracking and Fine Fissure (Hairline) Cracks: After surface preparation, fill crack with appropriate crack repair materials.
   3. Linear Static Cracks: Fill crack with appropriate crack repair materials.
   4. Large Dynamic Cracks: After surface preparation, install bond breaker at bottom of new routed slot and install joint sealant.
      a. The edges of the crack shall be undercut where possible. Brush cracks clean of loose debris with a soft brush.

C. Repair of Delaminated or Damaged Stucco:
   1. Cut, patch, repair, and point-up cement plaster as necessary to restore uniform cement plaster (stucco) finish, and to prepare such finish for coating application.
   2. Repair cracks and intended surfaces by moistening cement plaster and filling with new cement plaster, troweled or tamped flush with adjoining surfaces.
   3. Point-up finish surfaces around items which are built into or penetrate cement plaster surfaces.

D. Plaster Bead Repairs at Corners and Reveals:
   1. At locations where existing metal bead is rusted through or damaged, cut and remove rusted or damages bead and adjacent cement plaster. Then patch and repair the cement plaster to match adjacent corner/reveal detail, using slip-form method without a bead.
   2. At locations where existing metal bead has minor rust, solvent clean; then remove loose rust, loose mill scale, and other foreign substances using hand tools according to SSPC-SP 2 or power tools according to SSPC-SP 3. Then coat metal with rust-inhibitive primer recommended by top coat manufacturer (refer to Section 099000 - Painting and Coating), and patch and repair the cement plaster to match adjacent corner/reveal detail.

3.05 CEMENT PLASTER APPLICATION

A. General:
   1. Apply premixed cement plaster in accordance with manufacturer's instructions.
   2. Apply cement plaster in accordance with ASTM C926.
   3. Moist cure base coats.
   4. Apply second coat immediately following initial set of first coat.
   5. After curing, dampen previous coat prior to applying finish coat.
   6. Avoid excessive working of surface. Delay troweling as long as possible to avoid drawing excess fines to surface.
   7. Where cement plaster is applied to horizontal surfaces, provide slope to prevent water from accumulating or standing.
   8. Where cement plaster abuts aluminum, protect metal from contact with such cement plaster.
   9. Where dissimilar base materials abut and are to receive a continuous coat of cement plaster, the juncture shall be covered with a 6-inch wide strip lath extending 3 inches on either side of the juncture.
   10. Do not use integral bonding admixture as a surface-applied external bonding agent or as a primer.

B. Apply cement plaster with complete embedment into bases and all accessories. Fill all corner beads with each coat.

C. At each cement plaster area to be patched, apply cement plaster with interruptions occurring only at junctures of cement plaster planes, openings, or control joints.

D. At locations where cement plaster repair work is over metal base (e.g., metal lath), install cement plaster in accordance with the requirements of ASTM C926 for the application of three-coat cement plaster on metal plaster bases.
   1. Cement plaster thickness for patching and repairs shall match existing.

E. At locations where cement plaster repair work is over solid base (e.g., concrete, concrete masonry), install cement plaster in accordance with the requirements of ASTM C926 for the application of three-coat cement plaster on solid bases.
   1. Cement plaster thickness for patching and repairs shall match existing.
   2. Where total cement plaster thickness will exceed the total thickness specified in ASTM C926 Table 1 for three-coat work over unit masonry or cast-in-place concrete, self-furring metal lath shall be installed in accordance with ASTM C1063.

F. Delay application of brown coat until scratch coat has attained sufficient rigidity to resist cracking or other physical damage when the next coat is applied.
   1. Use a long rod or slicker to densify each coat.

G. Curing and Interval:
   1. First and second coats of cement plaster shall be applied and moist cured as set forth in ASTM C926 and FBC-B TABLE 2512.6.
      a. The base coat shall be damp cured for a period of not less than 24 hours as set forth in FBC-B SECTION 2516.1.6.6.
   2. Cement plaster finish coats shall be applied over base coats that have been in place for the time periods set forth in ASTM C926 and FBC-B SECTION 2516.1.6.8.

a. The third or finish coat shall be applied with sufficient material and pressure to bond and to cover the brown coat, and shall be of sufficient thickness to conceal the brown coat; additional coats shall be applied as necessary to meet the finished thickness specified or to flush with adjacent cement plaster surfaces.

3. Cement plaster shall be kept damp for a period of not less than 48 hours after application of the finish coat.

H. Finish Texture:

1. Finish texture of new cement plaster used for patching and repairs shall match finish of existing cement plaster on adjacent surfaces, to provide a uniform and consistent overall appearance; for reference, use the following finishes in the locations indicated:

a. Vertical Surfaces (e.g., walls; columns): Smooth or textured finish (as indicated on drawings and verified in the field), to match existing finish on adjacent cement plaster.

b. Horizontal Surfaces (e.g., ceilings; soffits): Smooth finish, to match existing finish on adjacent cement plaster.

2. Patched and repaired cement plaster work shall not be distinguishable in the finished cement plaster work.

I. Tolerance: Complete cement plaster work such that the deviation from true plane (exclusive of texture) is no greater than 1/4 in. (6 mm) as measured from line of a 10-ft (3.5-m) straightedge placed at any location on surface.

3.06 ADJUSTING, CLEANING AND PROTECTION

A. Adjusting:

1. Point-up cement plaster around trim and other locations where cement plaster abuts dissimilar materials.
2. Remove defective and damaged cement plaster by cutting it out.
3. Replace removed cement plaster using specified cement plaster brought to desired texture consistent with surrounding area.

B. Provide temporary covering to minimize spattering of cement plaster on adjacent work.

C. Remove cement plaster materials from door frames, windows, and other surfaces which are not to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged.

D. Remove protective tape from control joint accessories after application of cement plaster finish coat.

END OF SECTION

SECTION 99000
PAINTING AND COATING

PART 1 GENERAL
1.01 Finish all interior's and exteriors serfaces exposed to view as described in section 01010 scope of work
1.02 RELATED REQUIREMENTS

A. Section 079005 - Joint Sealers: Removal and replacement of joint sealers, backing and bond breakers; joint sealer for stucco crack repair.

B. Section 092410 - Portland Cement Plaster Repairing: Patching and repair of damaged or defective cement plaster work.

C. Section 099723 - Acrylic Waterproof Coating System: High-build acrylic waterproof coating system over exterior cement plaster (stucco).

1.03 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM):
   1. ASTM D235 -- Standard Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent).
   2. ASTM D522 -- Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
   3. ASTM D562 -- Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer.
   4. ASTM D1308 -- Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
   5. ASTM D1475 -- Standard Test Method For Density of Liquid Coatings, Inks, and Related Products.
   6. ASTM D3273 -- Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
   7. ASTM D3359 -- Standard Test Methods for Measuring Adhesion by Tape Test.
   8. ASTM D3960 -- Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
   9, ASTM D4214 -- Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films
   10. ASTM D5201 -- Standard Practice for Calculating Formulation Physical Constants of Paints and Coatings.
   11. ASTM D6904 -- Standard Practice for Resistance to Wind-Driven Rain for Exterior Coatings Applied on Masonry.

B. Florida Building Code (FBC):
   1. FBC-B -- Florida Building Code, Building (including 2012 Supplement).

C. Master Painters Institute, Master Painters and Decorators Association (MPI):
   1. MPI (APL) -- Master Painters Institute Approved Products List.

2. MPI (APSM) -- Master Painters Institute Architectural Painting Specification Manual.

D. The Society for Protective Coatings (SSPC).
1. SSPC (PM1) -- Good Painting Practice: SSPC Painting Manual, Vol. 1.
2. SSPC-SP 1 -- Solvent Cleaning.
3. SSPC-SP 2 -- Hand Tool Cleaning.
4. SSPC-SP 3 -- Power Tool Cleaning.

E. U.S. Code of Federal Regulations (CFR):
1. U.S. Environmental Protection Agency:
a. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings.

1.04 SUBMITTALS

A. General:

1. For submittal procedures, see General Conditions, Supplementary Conditions, and Section 01300.

B. Product Data: Provide complete list of all products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. MPI product number (e.g. MPI #47).
   3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
   4. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

C. Samples:
   1. Selection Samples: Submit three sets of paper "draw down" samples, illustrating range of colors available for each top coat product specified.
      a. Where sheen is specified, submit samples in only that sheen.
   2. Verification Samples: Submit two painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded.
      a. Submit on aluminum sheet, 12 x 12 inch (300 x 300 mm) in size.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section with minimum five years documented experience and approved by manufacturer.

B. Maintain one copy of relevant portions of MPI (APSM) on project site at all times.

C. Mock-Up:
   1. Provide interior wall panel, 10 feet (3 m) long by 10 feet (3 m) wide, illustrating coating color, texture, and finish.
      a. If requested by OWNER, provide additional mock-ups for color and sheen selection.
   2. Provide exterior wood trim assembly, 10 feet (3 m) long, illustrating coating color, texture, and finish.
      a. If requested by OWNER, provide additional mock-ups for color and sheen

selection.

3. Provide one interior and one exterior door and frame assembly illustrating coating color, texture, and finish.
    a. If requested by OWNER, provide additional mock-ups for color and sheen selection.
4. Locate mock-ups where directed.
5. Approved mock-ups may remain as part of the Work.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.07 EXTRA MATERIALS

A. Supply 1 gallon (4 L) of each paint type, color and sheen used; store where directed.
    1. Label each container with color in addition to the manufacturer's label.

1.08 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply exterior coatings during rain or when relative humidity is outside the humidity ranges required by the paint product manufacturer.

D. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

1.09 WARRANTY

A. Labor and Material Warranty: Submit manufacturer’s ten (10) year labor and material warranty for specified systems. Approval of warranty period and confirmation of system compatibility with substrates and joint sealants is required prior to system application.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.

B. Provide all paint and coating products from the same manufacturer.
   1. In the event that a single manufacturer cannot provide all specified products, minor exceptions will be permitted provided approval by OWNER is obtained using the specified procedures for substitutions.

C. Paints:
   1. Sherwin-Williams Company: www.sherwin-williams.com.
   2. PPG Architectural Finishes, Inc: www.ppgaf.com.
   3. Benjamin Moore & Co: www.benjaminmoore.com.
   4. or approved or equal by owner

D. Primers and Block Fillers: Same manufacturer as top coats.

2.02 PAINTS AND COATINGS - GENERAL

A. Material Compatibility: Provide block fillers, primers, undercoats', and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
   1. Patching materials used in conjunction with coating system shall be compatible with such coating system.

B. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
   1. Where MPI paint numbers are specified, provide products listed in MPI (APL) for specified MPI categories, except as otherwise indicated.
   2. Provide Premium Grade systems (2 top coats) as defined in MPI (APSM), except as otherwise indicated.
      a. Where a specified paint system does not have a Premium Grade, provide Custom Grade system.
   3. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   4. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
   5. Supply each coating material in quantity required to complete entire project's work from a single production run.
   6. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

C. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

D. Volatile Organic Compound (VOC) Content:
   1. Provide coatings that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
   2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base

and water added at project site; or other method acceptable to authorities having jurisdiction.

E. Flammability: Comply with applicable code for surface burning characteristics.

F. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by OWNER from the manufacturer's full line.

G. Colors: To be selected from manufacturer's full range of available colors.
   1. Selection to be made by OWNER after award of contract.
   2. Extend colors to surface edges; colors may change at any edge as directed by Architect.
   3. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

2.03 PAINT SYSTEMS - EXTERIOR

A. Concrete / Cement Plaster (Stucco) / CMU: High-build acrylic waterproof coating system; refer to Section 099723 - Acrylic Waterproof Coating System.

B. Paint WE-OP-3L - Wood, Opaque, Latex, 3 Coat:
   1. Preparation as specified by paint manufacturer.
   2. Two top coats, over one coat of latex primer sealer.
   3. Top Coat(s): MPI #311 (Latex, Exterior, High Performance Architectural, Semi-Gloss, MPI Gloss Level 5), meeting the following criteria:
      a. Vehicle Type: 100-percent acrylic latex.
      b. Mildew Resistance (ASTM D3273): Pass; no growth.
      c. Flexibility (ASTM D522): Pass; no cracking.
      d. Alkali Resistance (ASTM D1308): Pass.
      e. Wind Driven Rain Resistance (ASTM D6904): Pass.
      f. Product Sherwin Williams Duration Exterior latex satin @ 250-300sq ft per gal. 5.9 mils wet 2.4 mils dry, or equal.
   4. Primer(s): As recommended by manufacturer of top coat product.

C. Paint WE-TR-VS - Wood, Transparent, Varnish, Stain: N/A.

D. Paint ME-OP-3L - Ferrous Metals, Latex, 3 Coat:
   1. Preparation as specified by paint manufacturer.
   2. Two top coats and one coat primer.
   3. Top Coat(s): MPI #311 (Latex, Exterior, High Performance Architectural, Semi-Gloss, MPI Gloss Level 5), meeting the following criteria:
      a. Vehicle Type: 100-percent acrylic latex.
      b. Mildew Resistance (ASTM D3273): Pass; no growth.
      c. Flexibility (ASTM D522): Pass; no cracking.
      d. Alkali Resistance (ASTM D1308): Pass.
      e. Wind Driven Rain Resistance (ASTM D6904): Pass.
      f. Product: Sherwin Williams Duration Exterior latex satin @ 250-300sq ft per gal. 5.9 mils wet 2.4 mils dry, or equal.
   4. Primer(s): As recommended by manufacturer of top coat product.

C. Paint MgE-OP-3L - Galvanized Metals, Latex, 3 Coat:

1. Preparation as specified by paint manufacturer.
2. Two top coats and one coat primer

3. Top Coat(s): MPI #311 (Latex, Exterior, Gloss, MPI Gloss Level 6), meeting the following criteria:

a. Vehicle Type: 100-percent acrylic latex.
b. Mildew Resistance (ASTM D3273): Pass; no growth.
c. Flexibility (ASTM D522): Pass; no cracking.
d. Alkali Resistance (ASTM D1308): Pass.
e. Wind Driven Rain Resistance (ASTM D6904): Pass.
f. Product: Sherwin Williams Exterior, or equal.

4. Primer(s): As recommended by manufacturer of top coat product.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
   1. Patched/repaired cement plaster/stucco substrates must be fully cured in accordance with recommendations of paint/coating manufacturer.

C. Test shop-applied primer for compatibility with subsequent cover materials.

D. Measure moisture content of surfaces using an electronic moisture meter.
   1. Do not apply finishes unless moisture content of surfaces is within acceptable tolerances recommended by the coating manufacturer.

E. Check adhesion of old paint using ASTM D3359, measuring adhesion by Tape Method

3.02 PREPARATION

A. General:
   1. Clean surfaces thoroughly and correct defects prior to coating application.
   2. Prepare surfaces using the methods recommended by the coating manufacturer for achieving the best result for the substrate under the project conditions.
   3. Remove or repair existing coatings that exhibit surface defects.

4. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
5. Seal surfaces that might cause bleed through or staining of topcoat.
6. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
7. Concrete and Unit Masonry Surfaces to be Painted:
    a. Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter.
    b. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry.
    c. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
8. Cement Plaster (Stucco) Surfaces to be Painted:
    a. Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces.
    b. Wash and neutralize high alkali surfaces.

9. Insulated Coverings to be Painted: Remove dirt, grease, and oil from canvas and cotton.
10. Concrete Floors to be Painted: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
11. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
12. Corroded Steel and Iron Surfaces to be Painted: Prepare using at least SSPC-SP 2 or SSPC-SP 3, followed by SSPC-SP 1.
13. Uncorroded Uncoated Steel and Iron Surfaces to be Painted:
    a. Remove grease, mill scale, weld splatter, dirt, and rust.
    b. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; clean by washing with solvent.
    c. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned.
    4. Prime paint entire surface; spot prime after repairs.
14. Shop-Primed Steel Surfaces to be Finish Painted:
    a. Sand and scrape to remove loose primer and rust.
        a. Feather edges to make touch-up patches inconspicuous.
    b. Clean surfaces with solvent.
    c. Prime bare steel surfaces.
    d. Re-prime entire shop-primed item.

B. Additional Requirements for Surfaces with Existing Coatings:
1. Before application of new coatings, perform the following on surfaces covered by soundly-adhered coatings, defined as those which cannot be removed with a putty knife:
    a. Sand existing glossy surfaces to be painted to reduce gloss.

(1) Brush, and wipe clean with a damp cloth to remove dust.

b. Previously painted surfaces specified to be repainted or damaged during construction shall be thoroughly cleaned of all grease, dirt, dust or other foreign matter.

c. Blistering, cracking, flaking and peeling or other deteriorated coatings shall be removed.

d. Chalk shall be removed so that when tested in accordance with ASTM D4214, the chalk resistance rating is no less than 8.

e. Slick surfaces shall be roughened. Damaged areas such as, but not limited to, nail holes, cracks, chips, and spalls shall be repaired with suitable material to match adjacent undamaged areas.

f. Edges of chipped paint shall be feather edged and sanded smooth.

g. Rusty metal surfaces shall be cleaned in accordance with SSPC requirements.

(1) Solvent, mechanical, or chemical cleaning methods shall be used to provide surfaces suitable for painting.

h. New, proposed coatings shall be compatible with existing coatings.

2. Existing Coated Surfaces with Minor Defects:

a. Sand, spackle, and treat surfaces with minor defects (i.e., scratches, nicks, cracks, gouges, spalls, alligatoring, chalking, or irregularities due to partial peeling of previous coating) as necessary to render such surfaces to a uniform smooth finish.

b. Remove chalking by sanding or blasting so that when tested in accordance with ASTM D4214, the chalk rating is not less than 8.

3. Removal of Existing Coatings: Remove existing coatings from the following:

a. Surfaces containing large areas of minor defects.

b. Surfaces containing more than 20 percent peeling area.

c. Surfaces where rust is visible/apparent through existing coating.

4. Cement Plaster (Stucco) Substrate Repairs:

a. Repair cracks, holes, spalled/delaminated areas, and other defects in existing cement plaster/stucco surfaces using appropriate repair materials; verify compatibility of repair materials with coating system prior to use.

b. Remove any protruding concrete accessories and patch to smooth out any irregularities.

c. For additional requirements, refer to Section 092410 - Portland Cement Plaster Repairing.

5. Other Substrate Repairs:

a. Repair substrate surface damaged during coating removal.

b. Sand edges of adjacent soundly-adhered existing coatings so they are tapered as smooth as practical to areas involved with coating removal.

c. Clean and prime the substrate as specified.

C. Additional Requirements for New (Previously Uncoated) Surfaces:

1. Surface Appurtenances: Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

2. Surfaces:

b. Remove or repair existing coatings that exhibit surface defects.

c. Mask surfaces that are not to be finished, or that are to be finished at a later time.

3. Marks: Seal with shellac that which may bleed through surface finishes.
4. Impervious Surfaces:
   a. Remove mildew by scrubbing with solution of tetra-sodium phosphate and bleach.
   b. Rinse with clean water and allow surface to dry.
5. New Cement Plaster (Stucco) Surfaces to be Painted:
   a. Fill hairline cracks, small holes, and imperfections with same patching materials used for similar repairs to existing plaster; for additional requirements, refer to Section 092400 - Portland Cement Plastering.
   b. Make smooth and flush with adjacent surfaces.
   c. Wash and neutralize high alkali surfaces.
6. Galvanized Surfaces to be Painted:
   a. Remove surface contamination and oils and wash with solvent.
   b. Apply coat of etching primer.

3.03 APPLICATION

A. General:
   1. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
   2. Apply products in accordance with manufacturer's instructions.
   3. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
   4. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
   5. Apply each coat to uniform appearance.
   6. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
   7. Sand wood and metal surfaces lightly between coats to achieve required finish.
   8. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
   9. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

B. Additional Requirements for Cement Plaster (Stucco):
   1. For uniformity of color, texture and sheen, use consistent application techniques throughout the Project.
   2. Apply coating material in two (2) coats; total dry film thickness (DFT) per manufacturer's requirements for 10-year warranty, but not less than 12 mils.
   3. Multiple coats may be required when color difference between existing and new coatings is significant.
   4. Maintain proper wet film thickness (WFT) during application, to ensure performance characteristics desired.
   5. Work to natural break in surfaces before stopping work.
   6. Work from wet edge with 50 percent overlap.

7. Use sufficient material to obtain pinhole-free, consistent film build on treated surfaces.
8. Priming:
    a. Apply primer to all previously unpainted plaster/stucco, and to previously painted plaster/stucco that are chalking or friable (powdery) after power washing.
    b. Fill porous surfaces with primer, and back-roll to eliminate pinholes. Apply by working material into pores, crevices and joints. Allow primer to dry before proceeding (typically 24 to 48 hours).
    c. Apply finish coats after primer has dried, and in accordance with manufacturer's instructions.
9. Application:
    a. By Brush:
        (1) Application by brush is recommended only for small inaccessible areas such as touch-ups.
        (2) Use only nylon brushes.
    b. By Roller:
        (1) Use a 3/4 inch to 1-1/4 inch (12/5 mm to 32 mm) nap roller cover (lamb's wool)
        (2) Completely saturate roller and keep it loaded with coating to building required thickness
        (3) Roll coating in consistent fan-like pattern, to achieve uniform coating thickness.
        (4) Cross-roll to achieve uniform thickness and maintain wet edge. Back-roll material in one direction, as stroke variations may result in uneven color and texture.
    c. By Spray:
        (1) Smooth Texture: Use airless equipment.
        (2) Fine or Coarse Texture: Use heavy-duty sprayer designed for application of coatings that contain sand particles, with gun pressure of approximately 30 psi (0.21 MPa).
        (3) Back-rolling after spray application is strongly recommended, to achieve uniform coating thickness and texture.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

A. Protect finished coatings until completion of project.

B. Touch-up damaged coatings after Substantial Completion.

END OF SECTION

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SECTION 099723

ACRYLIC WATERPROOF COATING SYSTEM

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Surface preparation and field application of high-build acrylic waterproof coating system over exterior cement plaster (stucco) substrates.

1.02 RELATED REQUIREMENTS

A. Section 079005 - Joint Sealers: Removal and replacement of joint sealers, backing and bond breakers; joint sealer for cement plaster (stucco) crack repair.

B. Section 092410 - Portland Cement Plaster Repairing: Patching and repair of damaged or defective cement plaster (stucco) work.

C. Section 099000 - Painting and Coating: Surface preparation and field application of paints, stains, varnishes, and other coatings.

1.03 REFERENCE STANDARDS

A. For requirements relating to reference standards, see Section 014219 - Reference Standards.

B. American Society for Testing and Materials (ASTM):
   1. ASTM D235 -- Standard Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent).
   2. ASTM D562 -- Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer.
   3. ASTM D1475 -- Standard Test Method For Density of Liquid Coatings, Inks, and Related Products.
   4. ASTM D3960 -- Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
   5, ASTM D4214 -- Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films
   6. ASTM D5201 -- Standard Practice for Calculating Formulation Physical Constants of Paints and Coatings.

C. Florida Building Code, 2010 edition (FBC):
   1. FBC-B -- Florida Building Code, Building (including 2012 Supplement).

D. Master Painters Institute, Master Painters and Decorators Association (MPI):
   1. MPI (APSM) -- Master Painters Institute Architectural Painting Specification Manual.

E. The Society for Protective Coatings (SSPC).
   1. SSPC (PM1) -- Good Painting Practice: SSPC Painting Manual, Vol. 1; Society for

Protective Coatings.
2. SSPC-SP 2 -- Hand Tool Cleaning; Society for Protective Coatings.
3. SSPC-SP 3 -- Power Tool Cleaning; Society for Protective Coatings.

F. U.S. Code of Federal Regulations (CFR):
1. U.S. Environmental Protection Agency:
a. 40 CFR 59, Subpart D -- National Volatile Organic Compound Emission Standards for Architectural Coatings.

1.04 SUBMITTALS

A. Product Data: Provide data on all finishing products, including VOC content and Gloss Level.
1. Include manufacturer's instructions for surface preparation, application, storage, tinting, film thickness (wet and dry), general cautions, and warranty requirements.

B. Samples:
1. Verification Samples: For each surface to be painted, submit two painted samples illustrating field-verified existing color. Include a Color Schedule, indicating applicable locations where each color is to be used.

C. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.

D. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the work of this section with minimum five years documented experience and approved by manufacturer.

B. Source Limitations: Obtain block fillers, primers and undercoat materials for each coating system from the same manufacturer as the finish coats.

C. Safety during construction and the protection of adjacent public and private properties shall conform to applicable requirements of the following:
1. The governing building code, including but not limited to FBC-B CHAPTER 13.
2. Industrial Health and Safety Regulations (current edition), issued by the authorities having jurisdiction.
3. Local, State and Federal regulations.

D. Flame and smoke rating requirements for products and finishes shall conform to applicable requirements of the governing building code.

E. Mock-Ups
1. General:
a. For general requirements for mock-up, see Section 99000 – PAINTING AND COATING
b. Locate where directed.
c. Mock-ups may remain as part of the Work.
2. Plaster Walls: Provide panel, 10 feet (3 m) long by 10 feet (3 m) wide, illustrating

coating color, sheen, and finish.

3. Steel Doors and Frames: Provide door and frame assembly illustrating paint coating color, sheen, and finish.

F. Field Quality Control: Provide Manufacturer's Field Service consisting of a minimum of one weekly site visit by manufacturer's representative or its distributor's representative, for observation of coating system application.
   1. Owner reserves the right to complete recommended testing required by the manufacturer at completion of work, to assure that warranty and contract requirements are met.
   2. Submit copies of Manufacturer's Field Service Reports, indicating observation before, during and after application of coating system.

1.06 DELIVERY, STORAGE, AND PROTECTION

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

D. Storage, mixing, application and disposal of all paint and related waste materials shall conform to requirements of local authorities having jurisdiction.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Do not apply exterior coatings during rain, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.

C. Minimum Application Temperatures for Paints:
   1. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 degrees F (10 and 32 degrees C).
   2. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 degrees F (7.2 and 35 degrees C).
   3. Do not apply paint in rain, fog or mist, or when the relative humidity exceeds 85 percent, or at temperatures less than 5 degrees F (3 degrees C) above the dew point, or to damp or wet surfaces.
      a. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and within temperature limits specified by manufacturer during application and drying periods.

D. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

1. Perform no painting or decorating work unless a minimum lighting level of 323 Lux (30 foot candles) is provided on surfaces to be painted.
2. Adequate lighting facilities shall be provided by the Contractor.

E. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

F. Concrete surfaces must be installed at least 28 days prior to painting and decorating work, and must be visually dry on both sides.

1.08 WASTE MANAGEMENT AND DISPOSAL

A. Paint, stain and wood preservative finishes and related materials (thinners, solvents, etc.) are regarded as hazardous products and are subject to regulations for disposal. Obtain information on these controls from applicable government authorities having jurisdiction.

B. All waste materials shall be separated and recycled. Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility. Materials that cannot be reused must be treated as hazardous waste and disposed of in an appropriate manner.

C. Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.

D. To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into the ground the following procedures shall be strictly adhered to:
1. Retain cleaning water for water-based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.
2. Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
3. Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
4. Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
5. Empty paint cans are to be dry prior to disposal or recycling (where available).
6. Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate temperature.

E. Set aside and protect surplus and uncontaminated finish materials not required by the Owner and deliver or arrange collection for verifiable re-use or re-manufacturing.

1.09 WARRANTY

A. Submit manufacturer’s ten (10) year labor and material warranty for specified systems. Approval of warranty period and confirmation of system compatibility with substrates and joint sealants is required prior to system application.

1.10 EXTRA MATERIALS

A. For additional provisions, see Section 99000 PAINTING AND COATING.

B. Supply 1 gallon (4 L) of each color, type, and surface texture; store where directed.

C. Label each container with color, type, texture, and room locations in addition to the manufacturer's label.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Paints (for use on surfaces other than exterior cement plaster/stucco, masonry, or concrete): Refer to Section 099000 - Painting and Coating.

B. Acrylic Waterproof Coating System (for use on exterior cement plaster/stucco and concrete surfaces):
   1. Basis of design: BASF
   2. Substitutions: Not allowed, except with written approval by OWNER.
   3. Sherwin-Williams Company: www.sherwin-williams.com.
   4. PPG Architectural Finishes, Inc: www.ppgaf.com.
   5. Benjamin Moore & Co: www.benjaminmoore.com.

C. Patching Materials:
   1. Basis of Design: BASF.
   2. Patching materials used in conjunction with coating system shall be compatible with such coating system.
   3. Sherwin-Williams Company: www.sherwin-williams.com.
   4. PPG Architectural Finishes, Inc: www.ppgaf.com.
   5. Benjamin Moore & Co: www.benjaminmoore.com.

2.02 PAINTS AND COATINGS - GENERAL

A. Material Compatibility: Provide primers and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Paints and Coatings: Ready mixed, except field-catalyzed coatings. Prepare pigments:
   1. To a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
   2. For good flow and brushing properties.
   3. Capable of drying or curing free of streaks or sags.

C. Volatile Organic Compound (VOC) Content:
   1. Provide coatings that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D.
      b. Architectural coatings VOC limits of State of Florida.
   2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

D. Provide Premium Grade systems (2 top coats) as defined in MPI (APSM), except as otherwise indicated.
   1. Where a specified paint system does not have a Premium Grade, provide Custom Grade system.

E. Colors: As indicated on Drawings; or if not indicated, then as selected by Architect.

2.03 PRIMER AND COATING MATERIALS

A. Primer (Acrylic Primer for Use With Acrylic Waterproof Coating System): White-pigmented, acrylic copolymer primer, designed to enhance bond strengths of acrylic coating to substrate (including chalky surfaces).
   1. Physical Characteristics:
      a. Density (ASTM D1475): 9.0 lbs/gal (1.08 kg/L).
      b. Solids Content (ASTM D5201): 28 percent by weight; 19 percent by volume.
      c. VOC Content (ASTM D3960): 2.58 lbs/gal (309 g/L).
   2. Product: "Thoro Primer 2K" by BASF.
   3. Sherwin-Williams Company: www.sherwin-williams.com.
   4. PPG Architectural Finishes, Inc: www.ppgaf.com.
   5. Benjamin Moore & Co: www.benjaminmoore.com.

B. Acrylic Waterproof Coating System: Water-based, high-build, 100-percent acrylic waterproof coating, designed for exterior application over concrete and plaster/stucco surfaces.
   1. Texture: Smooth.
   2. Physical Characteristics:
      a. Density (ASTM D1475): 11.4 to 12.4 lbs/gal (1.37 to 1.49 kg/L).
      b. Solids Content (ASTM D5201): 56.2 percent by weight; 38 percent by volume.
      c. Viscosity (ASTM D562): 102 to 110 KU.
      d. VOC Content (ASTM D3960): 0.76 to 0.77 lbs/gal (91 to 92 g/L).
   3. Performance Characteristics:
      a. Resistance to Wind-Driven Rain (FS TT-C-555B): Shall meet requirements; no water penetration.
      b. Accelerated Weathering (ASTM G23, Type D, 5000 hrs): Pass.
      c. Visual Color Change (ASTM D1729, 5000 hrs): Pass.
      d. Water-Vapor Permeance (ASTM D1653): 13 perms.
      e. Salt Spray (fog) Resistance (ASTM B117, 300 hrs): Pass.
      f. Flexibility (ASTM D1737, 1-inch mandrel): No cracking.
      g. Dirt Pick-up (ASTM D3719, 6 month exposure): 92.02; Pass.
      h. Sand Abrasion Resistance (ASTM D968, Method A): Pass.
      i. Impact Resistance (ASTM D2794, 30 lbs): Pass.
      j. Fungus Resistance (ASTM D3273): Shall meet requirement; no growth.
      k. Mildew Resistance (FS TT-P-29; Fed Std 141, Method 6152 and 6271.1):
         (1) Aspergillus Oryzae (7 days): No growth.
         (2) Aspergillus Niger (21 days): No growth.
      l. Surface Burning Characteristics (ASTM E84):
         (1) Flame Spread: 1.
         (2) Smoke: 4.
         (3) Fuel Contributed: 7.
      m. Flash Point (ASTM D56, Tag Closed Tester): Greater than 200 degrees F (93 degrees C).
   4. Product: "MasterProtect HB 400 Smooth" (formerly “Thorocoat Smooth”) by BASF.
   1. Sherwin-Williams Company: www.sherwin-williams.com.

2. PPG Architectural Finishes, Inc: www.ppgaf.com.
3. Benjamin Moore & Co: www.benjaminmoore.com.

2.04 ACCESSORY MATERIALS

A. Patching Materials (for repairing cracks and other defects in exterior cement plaster/stucco):

1. Patching Material Type 1 (for static hairline cracks caused by plastic or drying shrinkage): Use specified Acrylic Waterproof Coating in accordance with manufacturer's instructions.
2. Patching Material Type 2 (for static cracks hairline to 1/4-inch in width): Water-based, acrylic elastomeric crack filler for repairing cracks.
   a. Performance Characteristics:
      (1) Tensile Strength (ASTM D412): 100 psi (0.7 MPa).
      (2) Ultimate Elongation at Break (ASTM D412): 275 percent.
   b. Product:
      (1) Smooth: "MasterProtect FL 748" (formerly "Sonocoat Acrylic Patching Compound 748") by BASF.
      (2) Textured: "MasterProtect FL 746" (formerly "Sonocoat Acrylic Patching Compound 746T") by BASF.
3. Patching Material Type 3 (for patching dynamic cracks more than 1/4-inch in width): Joint Sealant Type S-5; for additional requirements, refer to Section 079005 - Joint Sealers.
4. Patching Material Type 4 (for repair/replacement of small areas of damaged cement plaster/stucco): Repair Mortar; for additional requirements, refer to Section 092410 - Portland Cement Plaster Repairing.
5. Patching Material Type 5 (for repair/replacement of large areas of damaged or delaminated cement plaster/stucco): Cement plaster (stucco); for additional requirements, refer to Section 092410 - Portland Cement Plaster Repairing.
6. Primer / Surface Conditioner: As recommended by Patching Material manufacturer.

B. Fastener Head Cover Material: Use Patching Material Type 2.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that substrates and surfaces are ready to receive Work in accordance with the paint/coating manufacturer's instructions.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
   1. Patched/repaired cement plaster/stucco substrates must be fully cured in accordance with recommendations of paint/coating manufacturer.

C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is within acceptable tolerances recommended by the coating manufacturer.

3.02 SURFACE PREPARATION

A. General:
   1. Surface should be clean and sound. Cement plaster/stucco substrates should be fully cured and be free of all bond-inhibiting contaminants.
   2. For pressure cleaning requirements, refer to Section 092410 - Portland Cement Plaster Repairing.

3. Remove dirt, splinters, loose particles, grease, oil, disintegrated coatings, and other foreign matter and substances deleterious to coating performance as specified for each substrate before application of paint or surface treatments.
    a. Oil and grease shall be removed prior to mechanical cleaning.
    b. Cleaning shall be programmed so that dust and other contaminants will not fall on wet, newly painted surfaces.
4. Exposed ferrous metals such as nail heads on or in contact with surfaces to be painted with water-thinned paints, shall be spot-primed with a suitable corrosion-inhibitive primer capable of preventing flash rusting and compatible with the coating specified for the adjacent areas.
5. Remove any blisters or delaminated areas and sand edges to smooth rough areas and provide transition to old paint areas.
6. Check adhesion of old paint using ASTM D3359, measuring adhesion by Tape Method A.

B. Additional Requirements for Surfaces with Existing Coatings:
1. Before application of new coatings, perform the following on surfaces covered by soundly-adhered coatings, defined as those which cannot be removed with a putty knife:
    a. Wipe previously painted surfaces to receive solvent-based coatings, except stucco and similarly rough surfaces clean with a clean, dry cloth saturated with mineral spirits, ASTM D235.
        (1) Allow surface to dry. Wiping shall immediately precede the application of the first coat of any coating, unless specified otherwise.
    b. Sand existing glossy surfaces to be painted to reduce gloss.
        (1) Brush, and wipe clean with a damp cloth to remove dust.
    c. The requirements specified are minimum. Comply also with the application instructions of the paint manufacturer.
    d. Previously painted surfaces specified to be repainted or damaged during construction shall be thoroughly cleaned of all grease, dirt, dust or other foreign matter.
    e. Blistering, cracking, flaking and peeling or other deteriorated coatings shall be removed.
    f. Chalk shall be removed so that when tested in accordance with ASTM D4214, the chalk resistance rating is no less than 8.
    g. Slick surfaces shall be roughened. Damaged areas such as, but not limited to, nail holes, cracks, chips, and spalls shall be repaired with suitable material to match adjacent undamaged areas.
    h. Edges of chipped paint shall be feather edged and sanded smooth.
    i. Rusty metal surfaces shall be cleaned as per SSPC requirements.
        (1) Solvent, mechanical, or chemical cleaning methods shall be used to provide surfaces suitable for painting.
    j. New, proposed coatings shall be compatible with existing coatings.
2. Existing Coated Surfaces with Minor Defects:
    a. Sand, spackle, and treat minor defects to render them smooth.
        (1) Minor defects are defined as scratches, nicks, cracks, gouges, spalls,

alligatoring, chalking, and irregularities due to partial peeling of previous coatings.

b. Remove chalking by sanding or blasting so that when tested in accordance with ASTM D4214, the chalk rating is not less than 8.

3. Removal of Existing Coatings: Remove existing coatings from the following surfaces:
   a. Surfaces containing large areas of minor defects.
   b. Surfaces containing more than 20 percent peeling area.
   c. Surfaces designated by the OWNER, such as surfaces where rust shows through existing coatings.
4. Cement Plaster/Stucco Substrate Repairs:
   a. Repair cracks, holes, spalled/delaminated areas, and other defects in existing cement plaster/stucco surfaces using appropriate repair materials; verify compatibility of repair materials with coating system prior to use. Remove any protruding concrete accessories and smooth out any irregularities.
   b. For additional requirements, refer to Section 092410 - Portland Cement Plaster Repairing.

C. Additional Requirements for New (Previously Uncoated) Surfaces:
1. Surface Appurtenances: Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
2. Surfaces:
   a. Correct defects and clean surfaces that affect work of this section.
   b. Remove or repair existing coatings that exhibit surface defects.
   c. Mask surfaces that are not to be finished, or that are to be finished at a later time.
3. Marks: Seal with shellac that which may bleed through surface finishes.
4. Impervious Surfaces:
   a. Remove mildew by scrubbing with solution of tetra-sodium phosphate and bleach.
   b. Rinse with clean water and allow surface to dry.
5. New Cement Plaster Surfaces to be Painted:
   a. Fill hairline cracks, small holes, and imperfections with same patching materials used for similar repairs to existing plaster; for additional requirements, refer to Section 092410 - Portland Cement Plaster Repairing.
   b. Make smooth and flush with adjacent surfaces.
   c. Wash and neutralize high alkali surfaces.

3.03 APPLICATION

A. General:
1. Apply products in accordance with manufacturer's instructions and recommendations as indicated in Product Data.
   a. Primer and coating application shall conform to manufacturer's film thickness recommendations.
2. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.

3. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
4. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.

B. Additional Requirements for Cement Plaster (Stucco):
1. For uniformity of color, texture and sheen, use consistent application techniques throughout the Project.
2. Apply coating material in two (2) coats; total dry film thickness (DFT) per manufacturer's requirements for 10-year warranty, but not less than 12 mils.
3. Multiple coats may be required when color difference between existing and new coatings is significant.
4. Maintain proper wet film thickness (WFT) during application, to ensure performance characteristics desired.
5. Work to natural break in surfaces before stopping work.
6. Work from wet edge with 50 percent overlap.
7. Use sufficient material to obtain pinhole-free, consistent film build on treated surfaces.
8. Priming:
   a. Apply primer to all previously unpainted plaster/stucco, and to previously painted plaster/stucco that are chalking or friable (powdery) after power washing.
   b. Fill porous surfaces with primer, and back-roll to eliminate pinholes. Apply by working material into pores, crevices and joints. Allow primer to dry before proceeding (typically 24 to 48 hours).
   c. Apply finish coats after primer has dried, and in accordance with manufacturer’s instructions.
9. Application:
   a. By Brush:
      (1) Application by brush is recommended only for small inaccessible areas such as touch-ups.
      (2) Use only nylon brushes.
   b. By Roller:
      (1) Use a 3/4 inch to 1-1/4 inch (12/5 mm to 32 mm) nap roller cover (lamb’s wool)
      (2) Completely saturate roller and keep it loaded with coating to building required thickness
      (3) Roll coating in consistent fan-like pattern, to achieve uniform coating thickness.
      (4) Cross-roll to achieve uniform thickness and maintain wet edge. Back-roll material in one direction, as stroke variations may result in uneven color and texture.
   c. By Spray:
      (1) Smooth Texture: Use airless equipment.
      (2) Fine or Coarse Texture: Use heavy-duty sprayer designed for application of coatings that contain sand particles, with gun pressure of approximately

30 psi (0.21 MPa).

(3) Back-rolling after spray application is strongly recommended, to achieve uniform coating thickness and texture.

3.04 CLEANING

A. Collect waste material that may constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 SURFACES TO BE FINISHED

A. Paint the surfaces as specified in the Painting Schedule at end of this Section.

B. Do Not Paint or Finish the Following Items:
   1. Items fully factory-finished (e.g., aluminum window frames and storefronts, fixed wall louvers, etc.), unless specifically noted.
   2. Fire rating labels, equipment serial number and capacity labels.
   3. Stainless steel items.
   4. Interior surfaces, except as follows:
      a. Interior surfaces of exterior steel doors and frames shall be painted to match exterior surfaces.

3.06 PAINTING SCHEDULE

A. Exterior Cement Plaster (Stucco) Surfaces:
   1. Primer: One coat of Primer (Acrylic Primer for Use With Acrylic Waterproof Coating System).
   2. Intermediate and Finish Coats: Two (2) coats of Acrylic Waterproof Coating System.
      a. Total Dry Film Thickness (DFT): Per manufacturer's requirements for 10-year warranty, but not less than 12 mils.

END OF SECTION